



30YEAR INFRASTRUCTURE STRATEGY



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Quality Record Sheet

Gore District Council
30 Year Infrastructure Strategy
2021 - 2051

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EXECUTIVE SUMMARY

Welcome to the third Gore District Council Infrastructure Strategy. Section 101B of the Local Government Act 2002 requires the Council to develop an Infrastructure Strategy (IS). This document sets out the Gore District Council's (GDC) strategic direction for providing and managing infrastructure assets over the next 30 years and beyond. This strategy outlines a 30-year view of strategic issues, expenditure requirements and significant decisions that will need to be made.

The projects identified in the first 10 years of the strategy are funded as part of the GDC's ten-year plan. There is less certainty around the issues and options for the period 2031 to 2051. The information in this infrastructure strategy is drafted as a supporting document to the GDC's 2021 - 2031 10-Year-Plan. It will continue to be refined to reflect feedback into and decisions resulting from the formal consultation process.

1.1 Asset Renewals

Aging infrastructure assets and flood damage mean that a large number of asset renewals are needed. The infrastructure installed during the early days is reaching the end of their effective lives, and there is now a growing number of assets requiring renewal. The recent flood has saturated the ground and shortened the remaining life of many 3-Waters assets causing slumps of sealed roads.

While significant water leak detection and CCTV work was completed in the last three years, a considerable amount of water and wastewater leaks/infiltration remains to be investigated and repaired. Over the next 30 years, \$139.1M is planned to be spent on renewals. The Council will deliver \$178.6M in new capital projects over the next 30 years. This expenditure is the most significant component of the Council's planned capital spending, including funding. It is essential to fulfilling one of the two purposes of local government, which is to meet the current and future needs of communities for good-quality local infrastructure and local public services.

1.2 Climate Change

Based on current information, climate change is expected to affect Gore District in the following ways:

- Extended dry weather
- Lower average annual rainfall may result in rivers with lower flows
- Low groundwater levels in shallow bores
- increased rainfall intensity and extensive flooding

Learning to adapt to a changing environment and make decisions in the face of uncertainty will be important steps in addressing the impacts of climate change.

Identifying adaptive pathways, which allow changes to be made in the future as circumstances change, will be key to appropriate infrastructure investment across a range of the Council's core services.

The Council is working across the region on climate change initiatives. Partnering with other Councils, we have invested in baseline reports and are using the NIWA study as an agreed baseline for planning. We have also collectively invested in Great South's work on climate change – and are currently awaiting the publication of the report commissioned by Great South that provides an analysis of climate change in the Southland region.

We are first developing a climate change strategy before setting domain-related targets and action plans (and activities). The Council, in its activities, will be looking at both adaptation and mitigation activities.

Climate change impacts are integrated into our activity management planning and therefore incorporated into our infrastructure planning estimates. Climate change policy work is currently being incorporated into the District Planning review, which leverages the regional approach. Specific funding for climate change action is not identified, as this will be incorporated into our business-as-usual activities as we roll out a council-specific action plan in time.

The Council has not declared a climate change emergency. The Council recognises climate change impacts by developing a climate change strategy and subsequent action plan, and district plan review work. This work has been allocated to the respective General Managers (GM) for integration into business-as-usual planning (GM Regulatory and Community Services for the policy work; GM Infrastructure for the asset planning).

1.3 Affordability

The Council needs to determine the priority of issues to be addressed and the associated timing and funding for the relevant infrastructure projects. These decisions need to consider the costs and benefits of those projects over the short, medium and long term. Decisions made now must consider the costs and benefits for future generations as well as the current generation.

By necessity, the additional investment by the Council in recent years has in part been funded through deferring otherwise planned renewals. Compounding this situation, the District is approaching the end-of-life for many infrastructure assets built in Gore and Mataura during earlier industrial/ farming booms such as in the 1950s.

Within this context, the Council may have to increase rates to service the District – above the inflation rate – in each year since the flooding. All avenues need to be explored to keep rate increases at the minimum possible. This includes exploring alternative ways of funding the work that needs to be done, alongside prioritising capital investment (both in new assets and replacement of assets) and being prudent with day-to-day operational expenditure. This needs to be done while trying to achieve the strategic priorities, regulatory obligations and community outcomes.

1.4 Our Infrastructure

This strategy covers infrastructure assets and services provided by GDC specifically:

- Roding
- Water
- Wastewater
- Stormwater

The information considered in developing this Infrastructure Strategy includes:

- Asset details
- The condition and performance of assets
- What assets are critical to service delivery?
- The level of service delivered (does it meet the agreed standard?)
- What demands do we expect in the future?
- What changes do we anticipate (e.g. climate change)?
- Where have we identified improvements?

The Council is focussed on engaging with the wider community and making sound decisions. This requires reliable information (the evidence base). This also means there is an action item for improving data. This is especially important where there are data gaps, and decision making could be compromised.

It is essential to know what we don't know.

1.5 Our Challenges

The task of building, operating, and maintaining these infrastructure assets affordably and sustainably is becoming increasingly difficult in view of:

1.5.1 Legislative Environment

There have been increasing expectations from the Central Government and the public about the standards to which services are provided. National standards and National Policy Statements require New Zealand's drinking water standards to be met and increased wastewater and stormwater treatment and disposal standards.

The Government Three Waters Review led to the establishment of a Water Regulator and a Water Services Bill. This will lead to a significant increase in responsibilities as regulatory coverage extends to all water suppliers, except single household self-suppliers.

Add to this improved stewardship of wastewater and stormwater services and increased community consultation requiring a significantly more holistic approach to Three Waters management.

1.5.2 Aging Infrastructure

The District's infrastructure is aging, and the asset should not be pushed beyond the efficiency threshold, which would mean maintaining the asset is more expensive than renewing it.

Increased investment in our sealed road surfacing is required to return to a sustainable replacement cycle and prioritised drainage maintenance to maximise our underlying pavements' lives. At the same time, the Council (the community share) and our co-funders (NZTA) can afford to do so.

Bridge inspections enabled the development of a robust forward plan of bridge renewal and component replacement.

Water and wastewater mains deteriorate over time and will present a bow wave of breakages or replacements. The mains will not be fit-for-purpose, and failure/breakages will be an ongoing issue resulting in increased interruptions and contamination opportunities. Our Water, Wastewater and Stormwater Renewals Strategies will guide our decision-making to develop a robust Renewal Plan.

1.5.3 Demographic Changes

Our population is ageing, and as a result, there is an increasing proportion of ratepayers who are on fixed incomes, placing greater pressure on the affordability of annual rates increases while addressing changes in levels of service and expectations.

1.5.4 COVID-19

The 2019–21 coronavirus pandemic is ongoing at the time of writing this strategy. The impacts will be wide-ranging, and likely include a significant and protracted recession. Taituarā (SOLGM) has set up the COVID-19 Response Unit to guide and support the local government sector through the COVID-19 pandemic. The focus of the COVID-19 Response Unit is on supporting the sector in its response to the pandemic and ensuring that individual councils are prepared with:

- Business Continuity Planning (BCP) and crisis response planning
- Dealing with essential services, including water and solid waste
- Dealing with cemeteries and burials
- Staffing and employer responsibilities.

To date, the COVID-19 Response Unit has provided guidance to the sector on finance and recovery, governance, PPE for non-health essential workers, and drinking and wastewater. Workstreams have been established for essential services, governance, finance and recovery, social well-being and project management.

The indication is that the Gore district will be able to weather the storm as the district's primary industries, agriculture, and forestry are less affected than, for example, tourism. The pandemic presented the Council with an opportunity to collaborate with Central Government to invest and progress infrastructure projects.

1.5.5 Other challenges

Other challenges include

- Infrastructure resilience
- New technologies

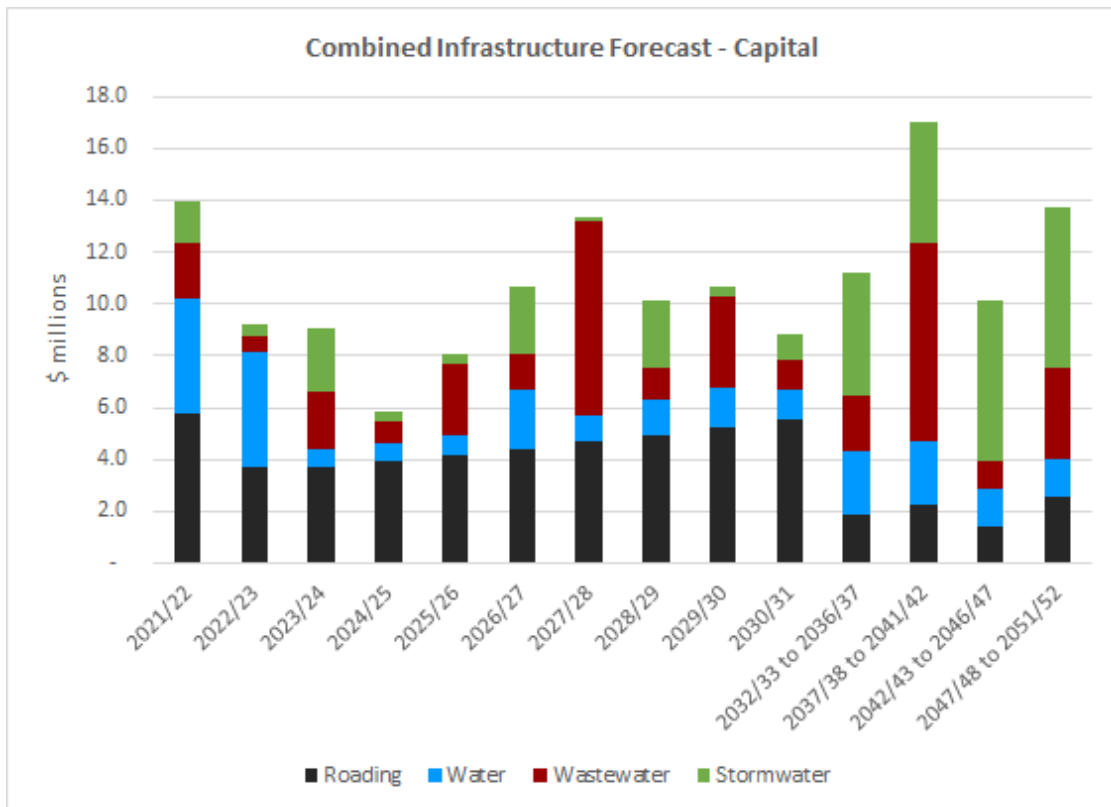
An extremely complex challenge for Council is to manage affordability and sustainability in the context of the abovementioned challenges and our modest ratepayer's base.

The Council's response to the affordability challenge will focus on critical assets and activities. The Council will use targeted rates for customers who benefit from paying for the service. The Financial Strategy will continue to reflect the balancing of ratepayer affordability against community needs and aspirations.

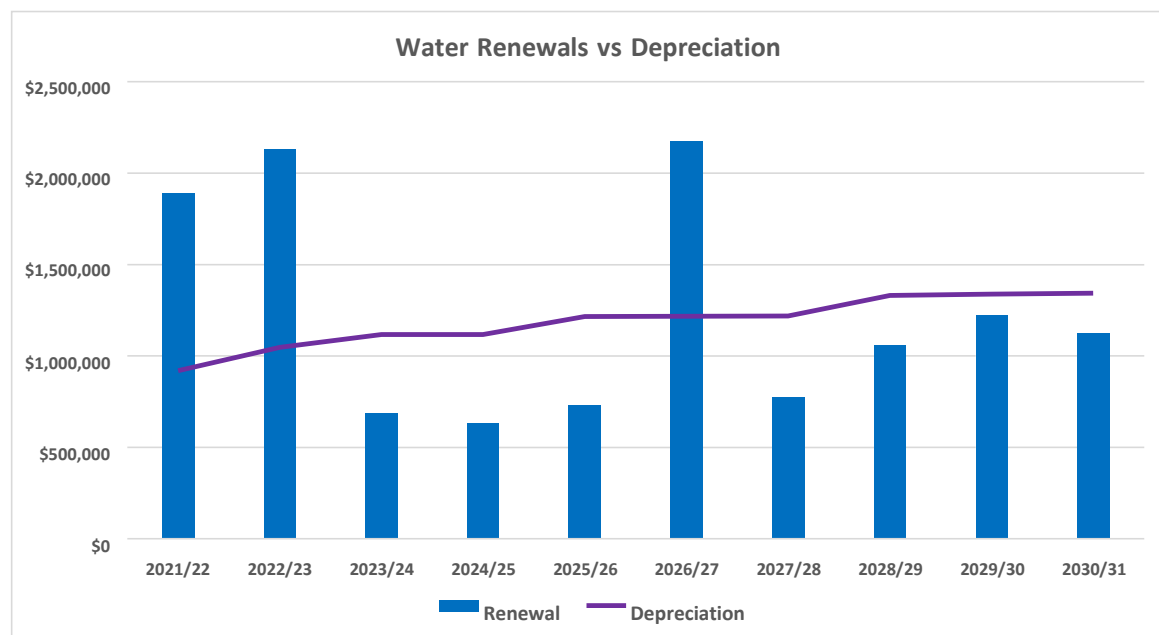
1.6 Key Infrastructure issues

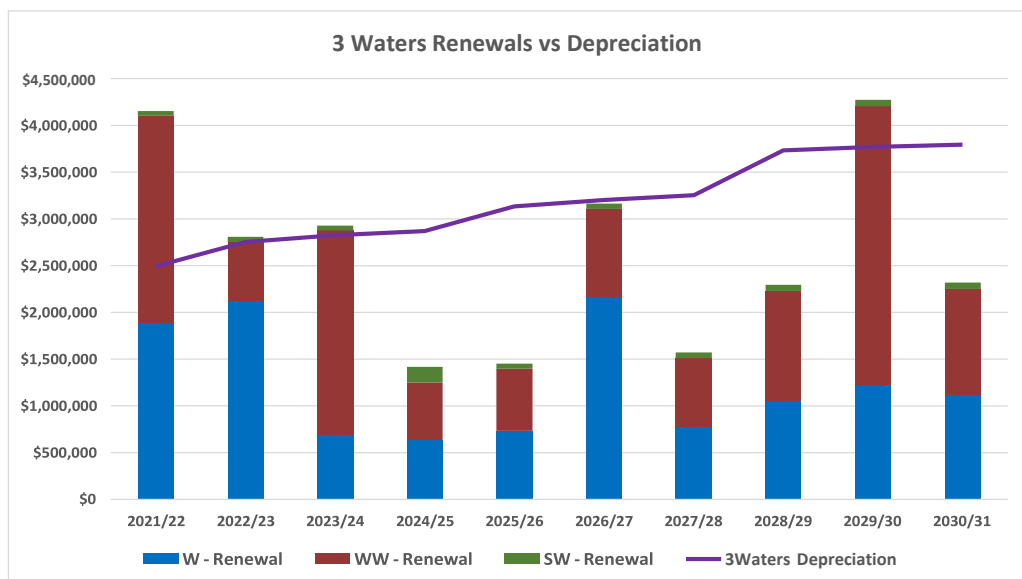
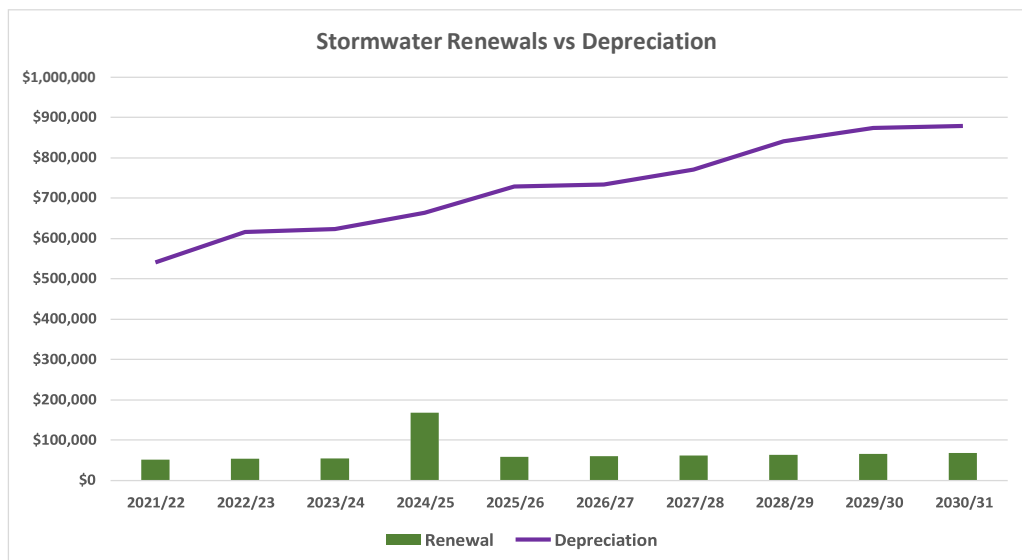
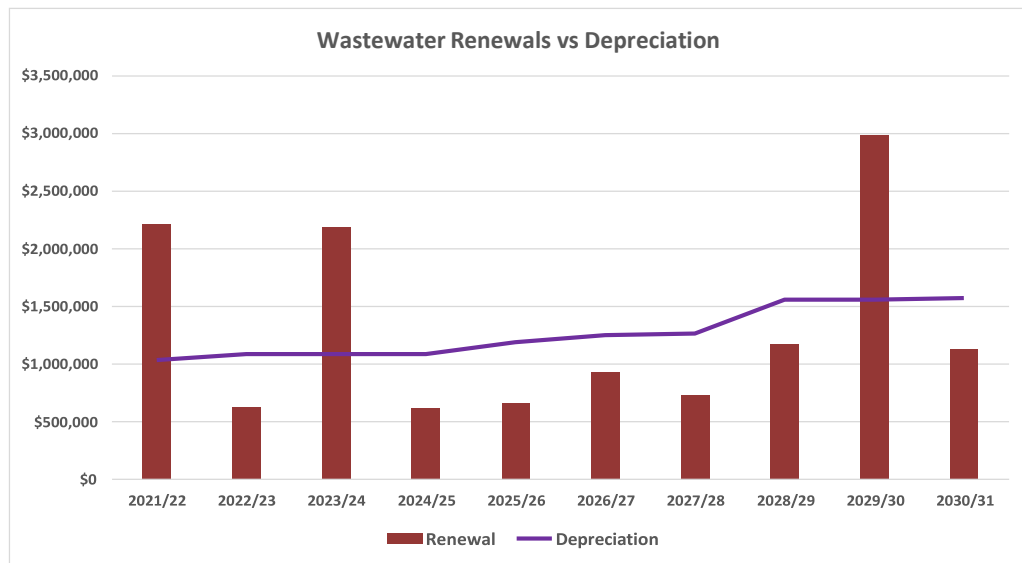
Taking a long term view to the management of infrastructural assets and the core services, Gore District Council needs to make key strategic decisions in a timely manner. In addressing community desires and priorities, the following key decisions have been identified.

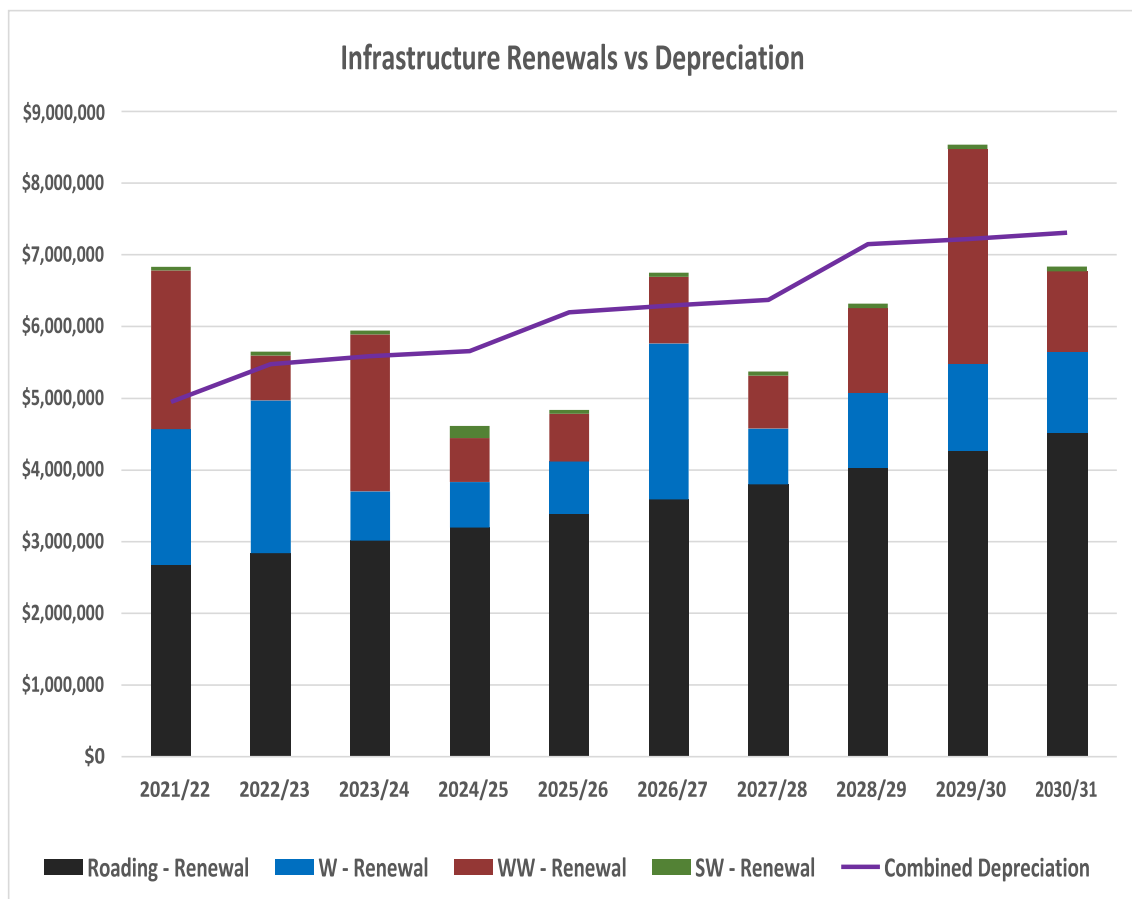
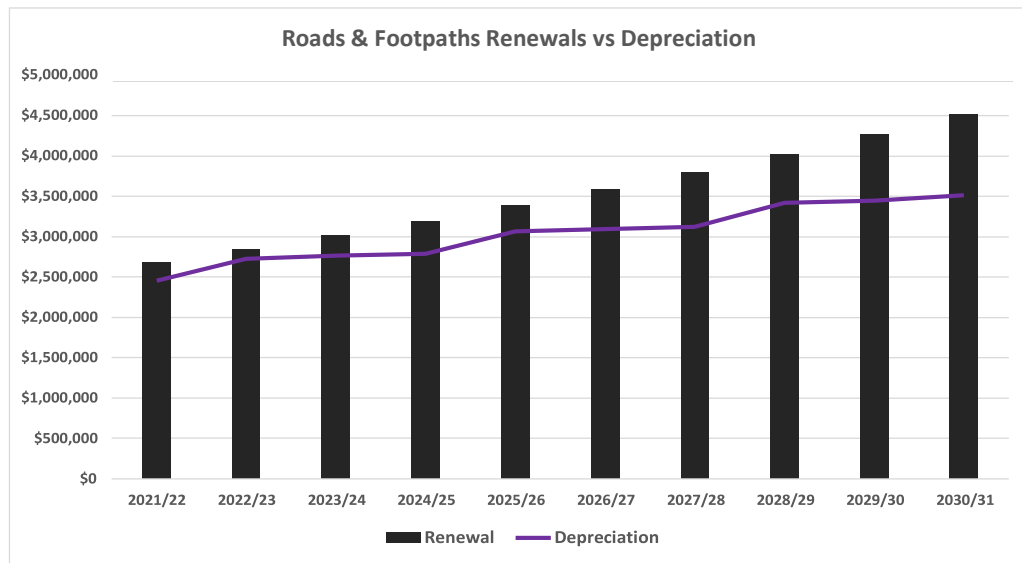
The projected capital expenditure associated with the significant infrastructure assets are graphically represented below:



The following graphs clearly show that the Council's planned Capex (renewals + upgrade works) exceed the projected depreciation take. This confirms the Council's significant reinvestment in infrastructure assets with no renewals gap.







INTRODUCTION

This is Gore District Council's third Infrastructure Strategy, and it supersedes the Infrastructure Strategy adopted in 2018. It is part of a strategic planning framework, including Activity Management Plans, the Ten- year Plan (TYP) and the Financial Strategy, all based on Significant Forecasting Assumptions.

The issues discussed reflect the current legislative environment and the communities' priorities across the District.

The financial forecasts are estimates, and the forecasts' reliability decreases beyond ten years and towards the thirty-year planning horizon.

2.1 Strategy Layout

The Strategy document sections and corresponding LGA Act sections are tabled below:

Table 1: Strategy Layout

Strategy Section		LGA 2002 (Section 101B)
1	Executive Summary	
2	Identifies the purpose of the Infrastructure Strategy and the core infrastructure included in this Strategy	2(a) and 6
3	Describe the district/city and illustrate the linkage between strategic documents	2(a)
4	Describe the core infrastructure, its condition and performance while recording the significant assumptions, risks and mitigation	2, 3(e), 4 (c) & (d)
5	Discuss the emerging issues that will impact the core infrastructure assets	3 (b) to 3(e)
6	Discuss Council's response to the emerging issues and the significant decisions to be made during the term of this Strategy	2(b), 4(b)
7	Identifies the response options for the significant issues and documents the benefits, cost, when and funding source	2(b); 3(a) to (e) & 4(a) to (c)
8	Identifies the costs associated with the actions proposed	4(a)

2.2 Purpose

The purpose of the Infrastructure Strategy (the Strategy), as required by the Local Government Act 2002, is to identify the significant infrastructure issues for the Gore District Council over the next thirty years, the principal options for managing these issues and the implications of the options. In this regard, it is intended to bring infrastructure management issues and their consequences to the attention of the Council and its communities. Its 30-year focus helps make explicit the longer-term options faced by the District and the consequences of investment and service level decisions.

The Strategy should be read alongside the Council's Financial Strategy, which provides context and guidelines against which to consider the Council's proposed expenditure. Funding sources are not the Strategy's focus as the detail about how the Council intends to fund its activities can be found in the Revenue and Financing Policy.

2.3 Gore District Core Infrastructure Assets

The Gore District Council Infrastructure Assets are tabled with 2019 replacement values below:

Table 2: Gore District Key Assets

Asset	Description	Replacement Value	% of the total
Roads and footpaths	Roads (arterial, collectors, local; curbs and gutters), bridges, footpaths	\$395m	75%
Water	Water abstraction, treatment and distribution	\$52.5m	10%
Wastewater	Wastewater collection, treatment and discharge	\$47.8m	9%
Stormwater	Stormwater collection and discharge	\$32.5m	6%
TOTAL		\$528m	100%

2.4 Infrastructure Achievements

Over the last three years, we have:

- Maintained, replaced, and constructed various infrastructure
- Identified and investigated infrastructure issues,
- Undertook strategic actions.

The following details improvements achieved over the last number of years:

2.4.1 Roads and Footpaths

- Resurfaced roads, renewed kerb and channel and footpaths
- Maintained unsealed roads and drainage channels
- Bridge repair and renewals
 - River Road bridge abutments shored up
 - Kennedy Road bridge replacement
 - Landslip Valley bridge improvement work
 - Pyramid bridge replacement

2.4.2 Water

- Mataura Water Treatment Plant improvements
- Coopers Well-field “emergency water abstraction” infrastructure and new deeper bore
- Installation of permanent infrastructure at Coopers Well-field to allow “emergency water abstraction” from the Mataura River.
- Resource consent renewals (Pleura dam and Waikana Stream)
- Upgrade and centralisation of the Water Treatment Plants (underway).

2.4.3 Wastewater

- Commissioning new "Industrial Hub" wastewater treatment plant
- Ajax pump station upgrade
- Renewals
 - Gore Wastewater Treatment plant inlet screen
 - Resource consents (underway)
 - Replacement of Mains at Stuart Street, Hope Street and Culling Terrace

2.4.4 Stormwater

- Development of a Stormwater master plan (SMP) adopted
- Stage one implementation-Elizabeth Street stormwater and wastewater separation design (underway).

GORE DISTRICT

The Gore District is located within the Southland region and covers 1,251 km². Our neighbouring councils are Southland District and Clutha District. The main township of Gore is 50 minutes from Invercargill and 1.5 hours from Queenstown. The Mataura River runs through the District with Gore and Mataura townships situated on its banks. The river is a focus for the District and provides many recreational opportunities. The District has a strong agricultural-led economy with complementary industries established. Our population was 12,033 in the 2013 Census, but in 2019 it was estimated to be 12,800. We have 3,996 rating units in Gore, 800 rating units in Mataura and 1374 rural rating units. The urban rating units consist of 4,212 residential, 392 commercial and six industrial properties. Gore is the largest urban area with a population of 7,350. Mataura has a population of 1,509. Our Council, in many ways, is a typical example of the majority of its namesakes as a provider of "core" activities. Core activities are considered to be the delivery of roads, water (urban and rural), wastewater, and stormwater services.



3.1 Strategic Context

This Strategy aims to give effect to the Council's strategic direction.

The Council's Vision: - **To provide an environment that allows people to enjoy the lifestyle and culture of their choice**

Mission	Community Outcomes
Ensuring a sustainable environment for future generations Encouraging participation by the people Providing efficient quality services and facilities that meet the affordable needs and aspirations of the people	We value our history and heritage We live in a creative place We have a choice of quality places to go and things to do We have a quality infrastructure with the potential for growth We live in a compassionate, caring community We value and respect our environment

The Infrastructure Strategy will help in part in delivering this by focusing on;

- Asset data: Continuous validation, improvement of asset conditions and GIS layer update

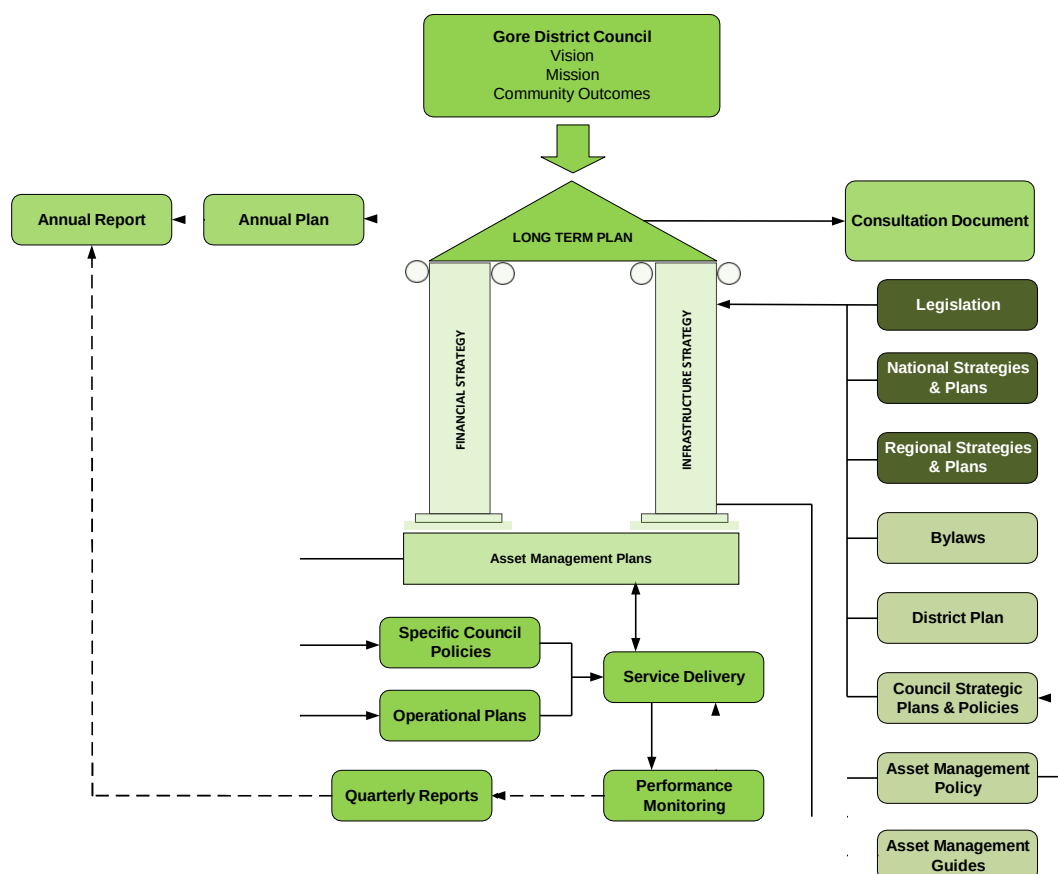
- Meeting regulatory requirements
- Adapting to changing communities and finding alternative solutions
- Developing a better understanding of the reliability of prediction models for asset lives.
- Cabinets decisions on Three Waters Reform

This will put the Council in a better position to plan for the next TYP period by having more confidence in long term renewal investment decisions.

3.1.1 Linkage with Other Documents

The Infrastructure Strategy and Financial Strategy underpin the Long Term Plan. Planning for the Infrastructure Strategy activities is covered within the relevant Activity Management Plans and being informed by other strategies, policies, plans, and legislation, as shown in Figure 1 below.

Figure 1: Infrastructure Strategy- Linkages with other Documents



The Infrastructure Strategy and Financial Strategy form the pillars that support the Long Term Plan and Consultation document.

A number of other strategic, tactical and operational plans relate to and support our infrastructure services delivery and are linked with this Strategy.

The Significance and Engagement Policy identifies the degree of significance attached to particular issues, proposals, assets, decisions and activities.

The Significance and Engagement Policy provides the criteria to determine significance and the approach to appropriate engagement. The Council considers the following assets, or a network of assets, to be strategic assets:

- Water supply
- Roding
- Stormwater (Land drainage)
- Wastewater.

3.1.2 Asset Management Policy

The objectives of the Council's Asset Management Policy are to:

- support continuous improvement in the asset management system to ensure service delivery is optimised to deliver agreed community outcomes and levels of service for residents, visitors and the environment;
- optimise expenditure over the life cycle of the assets;
- ensure risks are managed appropriately;
- provide confidence to the community and stakeholders of value for money; and
- integrate asset management into Council's strategic, tactical and operational planning frameworks, including corporate, financial, and business planning

The following principles guide activity management planning and decision making:

- Provision of a safe and healthy work environment.
- Effective consultation to determine appropriate levels of service
- Informed decision making using a lifecycle and risk management and inter-generational approach
- Transparent and accountable asset management decision making
- Professional development to improve asset management capability.
- Efficient and effective service delivery models

3.2 Gore District Council

3.2.1 Past

The Gore District Council was established in 1989 following the amalgamation of two former territorial authorities of Gore and Mataura Borough Councils and parts of Southland County Council.

3.2.2 Present

Our District consists of two prominent urban areas – Gore and Mataura. Gore is a well-established town, and the primary focus of businesses and industries is to service the robust agricultural sector in the surrounding rural areas. We are known for the events that take place here, such as the Hokonui Fashion Design Awards, Southern Field Days and Hokonui Moonshiners Festival. We have many recreational attractions that appeal to national and overseas visitors. The District is a very safe place to live. It's family-friendly. We are aware that people return to Gore to start their families due to the facilities and community vibrancy. We are committed to prudently investing in

creating a vibrant and satisfying lifestyle, a place where people want to live and businesses want to establish. We are focused on providing our core services to our communities. We are financially responsible and consider affordability for our residents. We strive to improve our services for everyone in our District continuously. We are positive about facilitating appropriate growth in our District.

Affordability and balance will continue to be our theme for our services. Overall, economic and social changes are not expected to drive any significant changes in demand for services; however, rates are likely to be a key area of concern for our community.

The District is divided into five electoral wards represented by a mayor, eleven ward councillors and one community board.

As a local authority, the Gore District Council will comply with any relevant New Zealand legislation. The Council's vision and community outcomes are strategic statements that guide its decision-making in implementing the 2021-31 Long Term Plan and 30 Year Infrastructure Strategy. The community outcomes are recorded in the 2021-31 Long Term Plan document.

3.2.3 Future

We have aspirations and goals as a Council to continue to develop our communities and District to become an even better place to live and work by providing efficient, quality services and facilities that meet the affordable needs and aspirations of our community. Ready for Growth is a community-led development strategy for the Gore District, with an overall objective is to grow the Gore District's population by 1,500 people by 2030.

We believe by 2051; we can provide our residents with the Best Quality of Life in New Zealand. We want to encourage more tourism ventures and attract more visitors. A tourism strategy is to be developed in the near future. We know we have an ageing population, and these residents wish to remain active in society during their retirement; they will expect different levels of service in the future. We want to continue to maintain facilities and recreational amenities that are exceptional for our District's size whilst meeting expected levels of service. We wish to maximise our opportunities whilst we have a buoyant economy and encourage more industry and businesses to establish or grow within our District. This will create employment opportunities and attract new residents. To reach our goal, we need to ensure our core infrastructure is working effectively and efficiently whilst providing an affordable service that meets our residents' expectations. We want to combine best practice infrastructure management with enhancing our district's liveability.

CORE INFRASTRUCTURE

The core infrastructure is made up of:

- Roothing
- Water
- Wastewater
- Stormwater.

4.1 Asset Description

Following is a brief summary of the Council's infrastructure assets for each group considered in the Strategy.

4.1.1 Roothing

The rooting network consists of 901km of roads, 130 bridges, 99km of footpaths, 1,601 streetlights, 124km of surface drainage and 3,835 culverts, mud tanks and soak pits. There are also five State Highways in the District (SH-1, -90, -93, -94 and -96). The One Network Road Classification (ONRC) is a classification system that divides New Zealand's roads into six categories based on how busy they are and whether they connect to important destinations. Under ONRC, Gore District Council's roads are classified as 24km primary collector, 167km secondary collector, 301km access and 405km low volume roads.

Our roads underpin Gore's ability to do business with the world. The agricultural forestry sectors and manufacturing, particularly primary production manufacturing (meat, milk powder, sawmill & panel products), are the District's top employers. Our roads provide connectivity between productive farmland, processing facilities and our workforce.

The rooting team deliver both assets (such as roads, signs, footpath, bridges and lighting) and non-asset functions (such as road safety promotion). Overall management of the facilities is provided by the Council, with operational work carried out by contractors. Funding for the management and maintenance of the rooting and footpaths network is provided from rates, loans and user charges, together with the central government's financial assistance through NZTA. The Council also utilises professional engineering services to help develop and deliver its renewal and capital programmes.

It is anticipated that bridge maintenance/renewal and pavement rehabilitation needs will substantially increase over the next 10-20 years as our bridges and pavements age and approach the end of their useful lives.

Over the last three years, there has been a focus on network data. The present data confidence (historical data) sits around 60/70%, with an improvement plan to further improve and validate data quality.

4.1.2 Water

The Council owns and operates two community potable water supplies and one rural stock water supply located at:

- Community supplies:
 - Gore
 - Maitāura
- Rural stock water
 - Otama.

The management and operation of the water supplies are mainly through Council committees, with the Otama scheme governed through a private scheme committee. Note – It is planned to transfer ownership of the Otama Rural Stockwater Scheme to a private company before 30 June 2021.

Council engineers consider the condition and performance of the water supply assets to be moderate to poor. Improving the accuracy and reliability of asset data is critical in developing a robust renewals programme, and evidence-based decision making is a major focus moving forward.

Some of the District's pipe networks are approaching the end of their useful life within the thirty-year window. Projected renewals are mainly based on the end of useful life in consideration of further condition assessments. Maximising the economic life of the assets and determining the optimal time for replacement are important challenges.

The upgrade of the Gore water treatment plant is expected to be completed by August 2021. Currently, the Council is reviewing the options for treating Maitāura water supply to meet the Drinking Water Standards for New Zealand (2018).

The new drinking water regulatory framework will significantly impact the source, treatment, and delivery of drinking water services. The impacts of the new regulatory framework are mainly unknown.

4.1.3 Wastewater

The Council owns and operates three wastewater systems that collect, treat and dispose of liquid waste to acceptable environmental standards located at:

- Gore
- Maitāura
- Waikaka.

The management and operation of the wastewater systems are via the Council organisation.

The Council engineers consider the condition and performance of the wastewater assets to be moderate to good. The confidence of the asset data held in AssetFinda is considered to be reliable, except for the age. Some of the pipe networks in the District are approaching the end of their useful life certainly within the thirty-year window. Projected renewals are mainly based on the end of useful life in consideration of further condition assessments, including CCTV works. Maximising the economic life of the assets and determining the optimal time for replacement are important challenges.

Separation of the stormwater and wastewater systems and environmental compliance are significant challenges moving forward. Our existing treated effluent discharges are to water that doesn't meet current environmental standards.

4.1.4 Stormwater

The Council owns and operates five stormwater systems that provide a degree of protection against rainfalls of a moderate intensity, located at:

- Gore
- Mataura
- Mandeville
- Pukerau
- Waikaka.

The management and operation of the stormwater systems are via the Council organisation.

The existing stormwater systems are basic, and Council engineers consider the stormwater assets' condition to be moderate to good. However, the systems' capacity is very limited, causing flooding of private properties and the road reserve, including overflows during significant rainfall events.

The confidence of the asset data held in AssetFinda is considered to be moderate. Renewals are typically triggered by a failure or rapid decline in the level of service performance.

Separation of the stormwater and wastewater systems and delivery of an effective capital work programme to improve stormwater collection and capacity, treatment and disposal across the District while complying with the ever-increasing environmental compliance framework and standards are significant challenges moving forward.

4.2 Assumptions and Risk

4.2.1 Asset Life Cycle Assumptions

Asset information was updated last on 30 June 2019. This is based on GIS and historical asset data. Note- there is currently some confusion regarding the ownership and responsibility of cesspits/sumps/mud tanks and public soakholes. These are included in the 3-Waters Asset register however are maintained and budgeted by the Roading department. A review of this to ensure the responsibility of these assets is clarified will be completed over the next three years.

Maintenance and operations allocation is based on maintaining current service levels.

No backlogs in maintenance or renewals are currently identified. However, it is expected that as the Council improves the asset data management system, backlogs will be identified. This assumption is based on the number of reactive renewals that are being completed on an ad-hoc basis.

The asset condition data is currently under review. The 2019 condition rating is summarised below:

- Wastewater: 60% good, 35% fair, 5% poor
- Water: 60% good, 35% fair, 5% poor
- Stormwater: 80% good, 20% poor

4.2.2 Levels of Service (LoS) Assumptions

LoS are key business drivers and influence all asset management decisions. Council's Wastewater, Water and Stormwater activities contribute to the following community outcomes:

- Reliable and Affordable Infrastructure
- Community Needs
- Valuing Our Environment

The key individual LoS provision statements for the Three Waters

Water LoS

- Provide a quality, continuous, safe, uninterrupted, cost-effective and adequate urban water supply system accessible throughout the District's urban and commercial areas that comply with the Drinking Water Standards.
- Customers are provided with adequate safe drinking water with reasonable pressure and flow.
- Managing the effects of development upon the existing network and provide sustainable solutions for future generations and educating communities about water conservation and demand management.

Wastewater LoS

- To provide high quality, efficient and reliable wastewater systems that are affordable and meet the needs of the urban and commercial areas.
- Minimise any possible health hazards from the collection or management of wastewater
- Facilities provided are safe with no danger of accident injury to users
- Protection of the environment by mitigating the quantity of contaminants discharged into receiving waters.

Stormwater LoS

- Provide a quality continuous, safe, uninterrupted, cost-effective and adequate urban stormwater system accessible throughout the District's urban and commercial areas.

- Protection of public health and property by collecting, conveying, appropriate treatment and disposal of stormwater run-off.
- Protection of the environment by mitigating the quantity of contaminants discharged into waterways.

We have a comprehensive approach to risk management across all of our activities. Independent assessments have been completed for our core infrastructure activities. The establishment of a risk framework has developed a risk-aware culture across our organisation. The framework applies a logical and systematic way of determining risks, their likely consequences and the most effective way of managing and monitoring risks to minimise potential losses and ensure optimal operation of services. We are also currently undergoing an organisational review on risk management to ensure our risk exposure is appropriately managed. We also have a designated Council committee that considers risk associated with our activities.

Through the Department of Internal Affairs, the Government is currently undertaking reform of 3-Waters services provision to address affordability challenges associated with meeting the current drinking water standards and soon to be developed wastewater discharge standards. In the Government's view, the most effective means to achieve this is to aggregate 3-Waters service provision into large asset-owning multi-region corporate entities. The Otago and Southland Councils have jointly formed a water secretariat office to carry out a comprehensive option and impacts assessment of this reform programme. The evaluation is already underway and will soon be put to elected members to discuss and evaluate.

The scope of the reforms are far-reaching and will have significant implications for our Council and the communities we serve. Moreover, we spend an average of 25 per cent of the operational expenditure on 3-Waters annually.

The Council must have a thorough understanding of reforms and the choices ahead by weighing up the costs and benefits of this process. The Council decided to sign the '3-Waters reform Memorandum of Understanding (MoU)', and following negotiations with the other Southland local authorities, the Council is expected to receive \$2,707,702 of stimulus funding. The Council has also approved a delivery plan, which outlines how stage 1 of the 3-Waters Reform Stimulus funding will be allocated and implemented.

4.2.3 Implications of uncertainty

Much of the transportation programme planned over the next 30 years is greatly reliant on NZTA funding investment. If the level of investment changes significantly, this could substantially impact the programme Council delivers. This could affect the level of service provided.

Table 3: Significant Assumptions

Assumption	Risk	Level of uncertainty (Year 1-10)	Level of uncertainty (Year 11-30)	Potential impact consequence if the assumption is wrong	Mitigation measures
Financial data, as provided in the June 2019 asset valuation, using BERL inflationary index, has been used for planning purposes.	BERL inflationary rates do not reflect actual market values.	Medium	Medium	Financial forecasts for operational and capital programmes do not reflect actual market values.	Utilise valuation and known market rates for construction, where available for budget planning.
Outside of capital projects identified in the previous Strategy to replace/improve assets, levels of service within the planning period shall remain the same.	Demand for services may change due to changes in zoning, and new industrial activities.	Medium	Medium	Unplanned increase or decrease in levels of service expectations. Non-forecast capital or operational expenditure.	Review of Levels of Service triennially. Annual customer satisfaction survey to audit asset performance from residents' point of view. 6-weekly levels of service performance reporting to Council.
The District will experience slight growth, which will have minimal impact on the rating income. Initiatives from the Southland Regional Development Strategy and Industrial development like the Mataura Valley Milk plant will continue to attract people to the district. The average age of the population is older. The arrival of new migrants may create a more diverse society than at present, with more vibrancy, choice, and skill sets.	Major industry closes or does not perform well. Local young people keep leaving the District and immigration does not continue at the same rate, resulting in a hole in the population.	Medium	Medium	The rapidly ageing population means that we are likely to see existing residents shifting out of the workforce and into retirement, without the replacement workforce coming through. This also impacts on the type and level of service needed to support the community.	Use of best information available for population forecasting. Financial Strategy considers affordability across the long term.
Effects of climate change – The Council shall continually support implementing the stormwater master plan, based on forecast rainfall data used in the modelling for the forecast of climate change impacts.	Climate change-related impacts occur faster than expected, and/or the effects are greater than what was projected. The community may assume that the Council will protect their property against natural hazards, in particular against flooding.	High	High	Where requirements change or work is required for consent conditions, the Council would have to provide additional funding through rates and/or loans to meet the capital projects requirements or request a change of consent conditions.	The Council will continue to monitor the response of the central government and adapt its response where required. The Council will integrate climate change impacts into infrastructure and town planning and design considerations.
There will be no major legislative changes or change in government policy that will significantly impact the Council.	Legislative change is usually signalled over a reasonable time period. The risk is usually associated with uncertainty around implementation.	High	High	Unrealised impacts of legislation may create greater than expected impacts on operating budgets, staff workloads, increased time and resource availability. These may lead to additional or less costly for the resident or ratepayer.	The Council will regularly review existing and potential legislative change. The Council may jointly or independently submit on legislation where appropriate to encourage reduced or improved impacts. The Council will seek to achieve the most efficient and cost-effective way forward.
There will be no significant earthquakes, flooding, or other hazards outside of expected risk assessments.	The Council may not be adequately prepared or resourced to respond to a major natural disaster event or succession of events.	High	High	A significant natural event would demand immediate funding, including high unforeseen costs and resources to manage recovery and response rapidly.	The Council is part of Civil Defence planning preparing for natural events. Any major natural disaster that results in significant repair costs to the Council is likely to be funded largely by insurance and/or government assistance. Additional borrowing required may also impact future rating levels.
The Council will be required to provide service delivery for 3-Waters and	Conditions of discharge consents are altered	High	High	Where requirements change or work is required for consent conditions, the Council would have	The Council will monitor the development of relevant standards and review the impact on any

Assumption	Risk	Level of uncertainty (Year 1-10)	Level of uncertainty (Year 11-30)	Potential impact consequence if the assumption is wrong	Mitigation measures
maintain asset ownership throughout the life of the 10YP.	significantly, requiring the Council to undertake significant capital works in relation to 3-Waters compliance requirements by the consents.			to provide rate funding/ loan to meet the capital projects requirements or request a change of consent conditions.	significant changes. The Council works closely with Environment Southland and other agencies to understand and stay abreast of changing standards and DIA decisions in forming a new entity. The Council will use these standards when planning projects and undertaking monitoring. Compliance monitoring ensures that work is in accordance with new consent conditions.
New Zealand Transport Agency (NZTA) requirements and specifications for the performance of subsidised work will not alter to the extent that they impact adversely on operating costs. The NZTA subsidy the Council has used in the LTP is: Years 1 - 3 59% Years 4 - 10 55%	Changes in subsidy rate and variation in criteria for inclusion in subsidised works programme.	High	High	NZTA funding priorities may change as a result of the Land Transport Management Act 2003. Funding constraints on the NZTA may result in a revision and smaller programme of work.	The Council will review the budget annually through the LTP/Annual Plan process and may adjust work programmes/budget where necessary.
The LTP assumes that the effect of COVID-19 going forward will be minimal.	That lockdowns become more frequent and lockdown at higher levels are sustained.	High	Medium	LOS are not met, income is impacted in the Multisports, parking and solid waste areas.	The Council will reduce spending in ways that do not require reductions to service levels and potentially defer large capital projects. Levels of Service review as and when required. The Council is likely to require government assistance. Additional borrowing may be required.

THIRTY YEAR STRATEGY

This 30-year Infrastructure Strategy is part of the Council's continued shift from the traditional siloed approach of infrastructure provision to a collaborative strategic approach based on a well-informed understanding of stakeholder requirements obtained through appropriate engagement and supported by data-based analysis of asset condition and performance data to provide appropriate and effective assets to the community in the most efficient means practicable.

5.1 The Organisation's Priorities

The main theme of this Infrastructure Strategy is to demonstrate:

- Gore District Council as a responsible custodian of key infrastructure.

Our goal is to shape our District to provide the 'Best Quality of Life in NZ'. We wish to continue to encourage the trend of being a family-friendly district. We are a place that people want to 'come home to' and start their families. We also wish to explore and develop tourism opportunities and enhance the existing tourism economy, bringing visitors to our District. To do this, we need to provide the infrastructure that is affordable yet also performs appropriately. We want to continue to ensure our District is 'A Great Place to Live' by enhancing the liveability of our urban areas.

At a high level, the Council's priorities are:

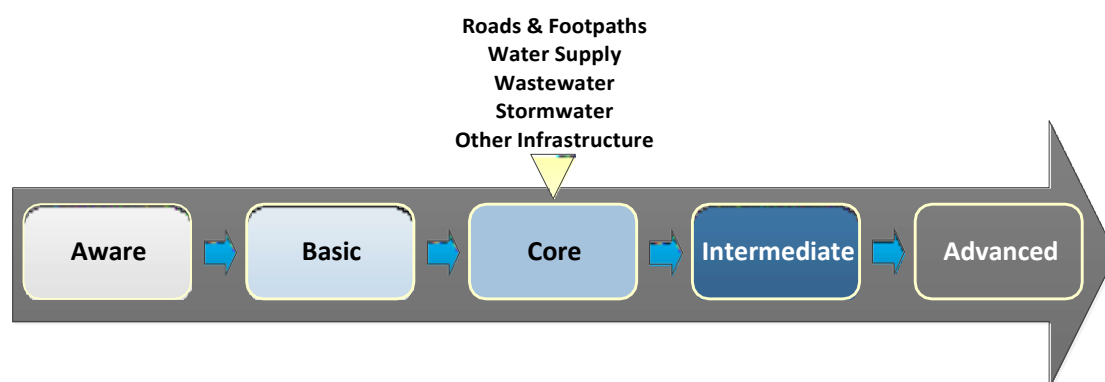
- At a minimum, maintaining existing levels of service
- Compliance with legislative requirements
- Replacing ageing infrastructure in a timely manner
- Plan for and being able to respond to natural events and climate change
- Providing long term affordable services.

5.2 Asset and Service Management Strategy

In providing services to residents and visitors through the use of infrastructural assets, the Council has an Asset Management Policy. This policy is to be reviewed by 2023 for improving AMP. However, the current policy stated purpose is:

"The purpose of Asset and Activity Management (AM) is to provide a desired level of service (as defined by the community of Gore District) through the management of assets in the most cost-effective and sustainable manner for present and future customers. AM planning provides direction for future management of assets and activities and a robust basis for long term financial forecasts".

The Council's Asset Management Policy defines the appropriate level of asset management planning in line with the discussion contained in the International Infrastructure Management Manual (2015). The appropriate levels are shown in the diagram below:



Each activity plan will list improvements to close the gap between the existing level of asset management planning and the desired level of asset management planning.

5.3 Sustainable Service Delivery

Sustainability can be defined as meeting the needs of the current generation without compromising the ability of future generations to meet their own needs.

The LGA 2002 requires Local Authorities to take a sustainable development approach while conducting their business.

Section 10 of the LGA 2002 states –

Purpose of local government

1. The purpose of local government is—
 - a. to enable democratic local decision-making and action by, and on behalf of, communities; and
 - b. to promote the social, economic, environmental, and cultural well-being of communities **in the present and for the future.**

5.3.1 How will the Council respond to Affordability and Sustainability?

The Council would like to provide all services to a level of excellence. However, this is not a sustainable or affordable practice, and all services are managed, operated and maintained to an optimum level appropriate for that specific service. The Council endeavours to always act in the best interest of the community. As a result, affordability and sustainability are at the forefront of any plan, design, and operational tasks that the Council undertakes in relation to the assets and service provision.

The relationship between costs, levels of service and levels of satisfaction is close and will require careful balancing. In some cases, an effort may need to be put into lowering expectations rather than raising service levels. In any event, the Council will continue to pay close attention to managing any debt that it may take on in the next decade and the level of rates and fees and charges and the relationship of all of this to the cost of living.

The Council's response to the affordability challenge will focus on critical assets and activities. The Council will use targeted rates in order for customers who benefit pay for the service. The Southland Regional Development Strategy Action Plan includes a

range of projects to give the region a broader and more resilient base by targeting population growth, economic diversity, and strengthening employment, skills and incomes. This forms part of the Council's response and aims to grow the rating base. Furthermore, the Council will consider alternative revenue streams and increase existing revenue streams where possible. While keeping rates as affordable and sustainable as possible through prudent financial management that complements asset management. The Financial Strategy will continue to reflect the balancing of ratepayer affordability against community needs and aspirations.

The Council's approach to all challenges and emerging trends focus on affordability and sustainability.

Managing affordability and sustainability is extremely complex in the context of:

- the intense infrastructure challenges the Council is facing
- our modest ratepayer base.

MANAGING CHALLENGES AND EMERGING TRENDS

The task of building, operating and maintaining these infrastructure assets in an **affordable** and **sustainable** manner is becoming increasingly difficult in view of:

- Continually changing legislative environment (central and regional Government)
- Demographic changes
- Climate change
- Ageing infrastructure
- Infrastructure resilience
- Customer aspirations/New technologies.

6.1 Changing Legislative Environment

Any significant unannounced change in the regulatory or legislative environment poses a risk to the Council. The ever-changing legislative environment is discussed below:

6.1.1 Four Well-beings

Section 10 of the Local Government Act restores the four aspects of **community well-being** by requiring local authorities to promote the social, economic, environmental, and cultural well-being of communities in the present and for the future. The reinstatement of the four well-beings acknowledges that the Council has a broader role in looking after our communities than simply providing core services.

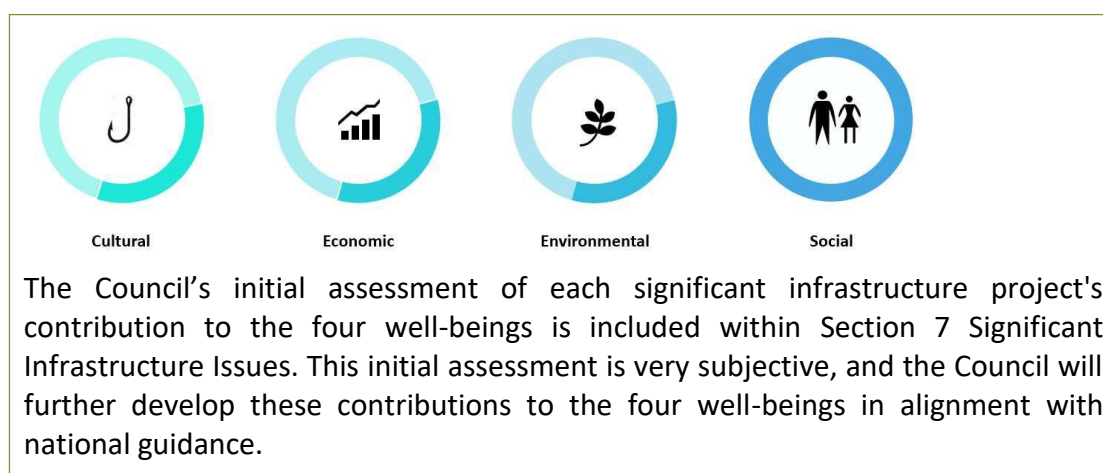


Our response to the four Well-beings

The Local Government (Community Well-being) Act moved away from the previous efficient, effective and appropriate service delivery focus by restoring the four community well-beings of:

- Cultural
- Economic
- Environmental
- Social.

The Council welcomes this move as it acknowledges the Council's broader role in looking after our communities than merely providing core services.



6.1.2 Land Transport

The Government Policy Statement on Land Transport (GPS) sets out the government's priorities for expenditure from the National Land Transport Fund over the next 10 years (2018 – 2028). These priorities include:

- safety on local roads
- public transport
- walking and cycling
- regional improvements
- network resilience.

Waka Kotahi (NZTA) announced the People pilot fund in 2020 for supporting the projects that transition streets to be safer and more liveable by building sector capability in 'tactical urbanism'. The fund offered approximately \$7 million in 2020/21 nationally to co-fund projects from councils (with a 90% Funding Assistance Rate), so the Council can test out transitional street changes that support the great quality of life and reduce the dominance and dependency on private vehicles in our towns and cities.

6.1.3 Water

Te Mana o te Wai is a concept for freshwater that encompasses several different aspects of the integrated and holistic health and well-being of a water body. The Statement of National Significance in the Freshwater NPS describes the concept of Te Mana o te Wai as the integrated and holistic well-being of the water. It is up to communities and councils to consider and recognise Te Mana o te Wai in their regions.

There is increased focus from the Central Government on the sensible, sustainable management of water. The Havelock North water incident provided the catalyst for the Three Waters Review. Outcomes from the HN Water Inquiry and Three Waters Review include establishing a **Water Regulator (Taumata Arowai)** and a **Water Services Act**, expected to be enacted and operational by mid-2021.

In July 2020, the Government announced a stimulus funding package (the funding) of \$761 million to provide post-COVID-19 stimulus, as part of the three-year programme of reform of local government water service delivery arrangements and to support the establishment and operation of Taumata Arowai (the new Water Services Regulator). This \$761 million funding package is stage one of three planned funding packages as part of proposed 3-Waters reforms.

Access to the funding was conditional on each Council signing a Memorandum of Understanding (MoU) which committed the Council to participate in the first stage of the reform process. At the Council meeting held on 11 August 2020, the Council resolved to sign the MoU.

Regulatory coverage will extend to all water suppliers, except individual household self-suppliers. It will also include a multi-barrier approach to drinking water safety, including mandatory disinfection of water supplies, stronger obligations on water suppliers and local authorities to manage risks to drinking water sources, and strengthened compliance, monitoring and enforcement of drinking water regulation.

Gore's water infrastructure is well overdue for investment as the treatment plants, reservoir, and pipes reach the end of their useful lives. Environmental expectations are increasing, and the consequences of climate change, including more frequent and more intense droughts or floods, require urgent attention. On top of that, most wastewater treatment plants will require re-consenting within the next two years, and almost a quarter are operating on expired consents. All of this adds up to high costs for the Council and ratepayers. Conservative estimates are that the cost of upgrades and renewals will be measured in multimillion dollars. This would potentially add thousands of dollars to annual rates bills.

These are all issues the Government's Three Waters review is bringing to the fore. The review is considering how to improve New Zealand's 3-Waters service delivery and funding arrangements. It has been examining whether local councils, which primarily own and deliver 3-Waters assets and services, are best placed to manage this. Bold, decisive actions are required to achieve better long-term outcomes. Recently, the Government confirmed its commitment to partnering with local government to consider options for transitioning to new service delivery arrangements regionally, allowing for safer, more affordable and reliable 3-Waters services across the country.

6.1.4 Urban Development

Central Government is consulting on a proposal for a new National Policy Statement on Urban Development (NPS-UD). The NPS-UD will provide clear direction to local government about how to enable development opportunities in New Zealand's urban areas in a way that delivers quality urban environments for people, now and in the future. The NPS-UD will replace the National Policy Statement on Urban Development Capacity 2016.

6.1.5 Fresh Water Reforms

The Minister for the Environment and the Minister for Agriculture have announced the Action for Healthy Waterways package. It introduces new rules and regulations to:

- stop further degradation of New Zealand's freshwater resources and improve water quality within five years; and
- reverse past damage and bring New Zealand's freshwater resources, waterways, and ecosystems to a healthy state within a generation.

The current Central Government trajectory signals improved stewardship of wastewater and stormwater services. This has renewed the focus on the very high standard of care and diligence required to supply drinking water and collect, treat and discharge wastewater and stormwater. A significantly more holistic approach to Three Waters management is dawning.

6.1.6 New Zealand Coastal Policy Statement

The New Zealand Coastal Policy Statement guides local authorities in their day to day management of the coastal environment. It sets out the policies and objectives that will help achieve the RMA's purpose in relation to the coastal environment. The Council must give consideration to the Policy during consent consideration of activities along the coast.

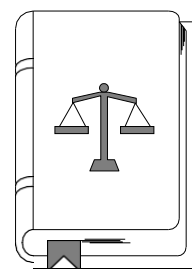
6.1.7 Climate Change Response (Zero-Carbon) Amendment Act

The Zero Carbon Act will drive climate change action in New Zealand. The Act will commit New Zealand to zero carbon by 2050 or sooner, set a legally binding pathway to this target, and require the Government to take action.

Our response to the Changing Legislative Environment

The ever-changing legislative environment has resulted in the need to upgrade infrastructure, particularly in terms of water supply. The following government directives will impact on the Council:

- National Policy Statement for Freshwater – Te Mana o te Wai
- Action for Healthy Waterways
- New Water Services Act & Water Regulator



Additional capital expenditures will need to be made to the management, operation, maintenance, monitoring and reporting of infrastructure assets and service delivery.

The current levels of service that the Council provides for its infrastructure assets are also being put under pressure by increasing community expectations for an increase in the level of provision.

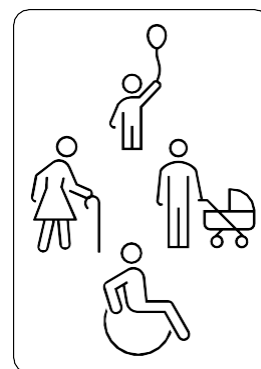
Higher regulatory standards arising from new legislation, national standards and regional plans will result in the need to upgrade infrastructure, particularly in terms of water supply, wastewater and stormwater discharges. Governments will change over time, but it is not expected that the drive for an increased level of service across all activities will falter.

The Council will:

- Maintain a close watching brief on the Government's intentions and be open to finding optimum solutions that meet new Government requirements
- Anticipate future directions signalled and plan changes accordingly
- Communicate with Environment Southland on Regional Plan changes
- Take part in the Southland Economic Project as part of a Territorial Authority Working Party to assist decision making for the limit setting process.

6.2 Demographic Changes

Population: the population is likely to grow slightly. The Mataura Valley Milk plant is operational and created a number of full-time jobs. Gore doesn't attract as many "out of town" people as other towns and cities, so it is reasonably dependent upon locals staying in the District. However, the percentage of people born overseas has increased, indicating that Gore is an attractive place for immigrants. Demand for overall services is likely to remain static with an extension of existing services in approved areas.



It is important to note that the Southland Regional Development Strategy aims to grow Southland's population by 10,000 over the next ten years.

Household Occupancy and Elderly: We have a lower occupancy rate than average, and we expect our residents will remain active throughout their retirement. The household occupancy rates remained the same from 2006 to 2013 at 2.4 compared with the national average of 2.7. The 65+ age group makes up 19% of the population. It is also important to note that people are generally healthier than 40 years ago, and with the predicted wave of baby boomers starting to retire, they are more likely to be active and travel. This generation is expected to remain very active in society during retirement and want recreational opportunities. This could lead to requirements for additional smaller properties (units etc.) and increases in the number of people living alone. This may increase water demand, wastewater discharge volumes and stormwater runoff. The increasing 65+ age group want to utilise good quality footpaths and road infrastructure with low risk of trip hazards. This generation tends to utilise pedestrian assets much more, and planning for asset upgrades and replacements takes this expectation into account.

Economic Growth: We want to see our District continue to prosper and attract residents. The Mataura Valley Milk Plant provided new employment opportunities and will feed into the maintenance and service sector. Our District is heavily dependent on the economic success of our agricultural sectors. Our communities flourish when these sectors are buoyant. Many of our residents are employed within

this sector. Primary industries (eg agriculture, forestry) accounted for the largest proportion of GDP in the District, followed by secondary industries (eg mining, manufacturing). We are aware that these industries experience cyclical highs and lows. Affordability is regularly considered in our financial planning and reporting.

Employment: Employment is heavily dependent upon local industries, so if these were to close, there would be a corresponding impact upon the population. However, it appears that employment opportunities are reasonably sound with the current low unemployment rate.

Changes in the industry could have a reasonable impact on the water supply infrastructure.

The 2019–21 coronavirus pandemic is ongoing at the time of updating this Infrastructure Strategy. The impacts will be wide-ranging, and likely include a significant and protracted recession. This may affect the expected economic and population growth of the District.

Our response to Demographic Changes

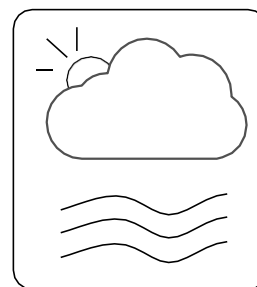
The Council will continue to:

- Commission detailed population and household forecasts
- Maintain existing infrastructure and add on to existing systems where required
- Investigate options to grow our communities
- Review Levels of Service
- Consult with communities

6.3 Climate Change

Climate change is an important consideration in the Council's long-term planning. Guidance from the New Zealand government, based on the best available climate science, is used to support the planning.

The Ministry for the Environment information on <https://www.mfe.govt.nz/climate-change/likely-impacts-of-climate-change/how-could-climate-change-affect-my-region/Southland> provides a summary of projected climate changes over the period 2031-2050 and 2081-2100, compared with 1986-2005 and the key impacts this is likely to have.



- Temperatures are likely to be 0.6°C to 0.9°C warmer by 2040 and 0.6°C to 2.8°C warmer by 2090.

- Southland is expected to become wetter, particularly in winter and spring. Seasonal projections show winter rainfall increasing by 7 to 22 per cent in Invercargill by 2090.
- The region is likely to experience significant decreases in seasonal snow.
- Less winter snowfall and an earlier spring melt may cause marked changes in the annual cycle of river flow in the region. For rivers where the winter precipitation currently falls mainly as snow and is stored until the snowmelt season, there is the possibility for larger winter floods.
- The frequency of extremely windy days in Southland by 2090 is likely to increase by between 2 and 7 per cent.
- Future changes in the frequency of storms are likely to be small compared to natural inter-annual variability. Some increase in storm intensity, local wind extremes and thunderstorms is likely to occur.
- New Zealand tide records show an average rise in relative mean sea level of 1.7 mm per year over the 20th century. Globally, the rate of sea-level rise has increased, and further rise is expected in the future.

For Southland/Gore, this means:

Flooding – Climate change is expected to increase the risk of flooding, landslides and erosion in Southland. The capacity of stormwater systems may be exceeded more frequently due to heavy rainfall events, which could lead to surface flooding, damage to infrastructure and road closures.

Water availability – Water security is most likely to be an issue in parts of Southland where drought is already a major constraint. Droughts are likely to increase in both intensity and duration over time. In other areas, such as around Invercargill, drought severity and irrigation demand may decrease slightly as average annual rainfall increases.

Coastal hazards – There is likely to be increased risk to coastal roads and infrastructure from coastal erosion and inundation, increased storminess and sea-level rise.

Biosecurity – Warmer temperatures, particularly with milder winters, could increase the spread of pests and weeds.

Agriculture – Warmer temperatures, a longer growing season and significantly fewer frosts could provide opportunities to grow new crops. Farmers might benefit from faster growth of pasture and better-growing conditions. However, these benefits may be limited by climate change's negative effects, such as increased flood risk or greater frequency and intensity of storms.

The Council will factor these likely key impacts into the planning for our infrastructure assets. It is expected that the central government will provide more information to assist and guide local government in its decision making.

Our response to Climate Change

The impacts of climate change are real and present. Our long-term infrastructure planning must promote resilience to the effects of climate change to ensure we meet communities' future needs.

The Council will:

- Participate in the development of a regional climate model so as to base future decisions on a model commonly used across the province.
- Require engineers to be aware of changing weather patterns and to make every effort to acquire the latest available rainfall data when calculating hydraulic capacities for relevant infrastructure design
- Work with other local authorities and Environment Southland to ensure a coordinated response
- Work with Environment Southland on flood mitigation measures and emergency response.

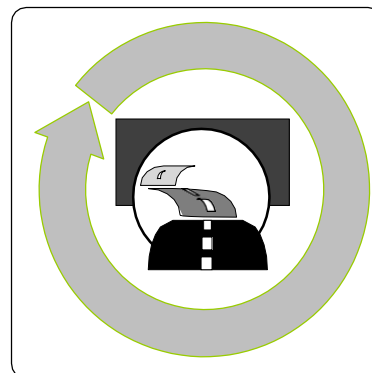
6.4 Ageing Infrastructure

The District's infrastructure is ageing, and the District is approaching a critical period to ensure that its infrastructure assets continue to meet the community's current and future needs.

Areas of the District have been built over decades, and today there are infrastructure (underground and aboveground) that is well past its expected life. As infrastructure ages, reactive maintenance will increase. A key challenge for the District is the balance between reactive maintenance, programmed maintenance, and the inevitable rehabilitation or replacement of assets that have both physically and economically run past the point of repair.

A review of the Roding activity's asset management practices has identified that we are managing our assets at a basic level. Previously a lot of decision making for renewals was based on the institutional knowledge of the key staff. It is clear there needs to be a re-focus on the fundamentals of asset management for the roading activity to ensure renewals programming is adequate. It appears that the rehabilitation of pavement via Area Wide Treatments and bridge replacements has been underfunded historically. To ensure we have an accurate understanding of these assets' remaining life, we plan to assess the condition and performance of these assets in the short term and develop our asset management practices to better interpret information for planning purposes.

The majority of piped assets were installed during the 1950s-80s. Assets that were built at the same time generally require renewal at the same time, causing peaks in



renewals cost. There is a need for renewal planning to reduce the impact of a bow-wave of pipe renewals. We have annual capital expenditure for replacing pipe that is reaching the end of its economic life. Renewal planning for piped assets is a work in progress and will improve as we collect more and improved asset condition and performance data. Our renewal plans need to include consideration for capacity issues that may exist. Our Stormwater Management Plan has highlighted the need to include performance and capacity as part of our renewal planning.

To date, the Council managed the risk associated with limited asset data through practical experience and skilled staff to maintain the level of service. This approach has generally been sufficient. As the value of the built asset rises, levels of service expectations rise, and threshold limits for cultural and environmental impacts tighten, the need for improved asset data increases.

Currently, the condition of assets is ascertained when carrying out repairs or renewals. The Council plans to formalise condition assessment of underground assets to aid the long term planning of asset renewals. Condition assessments to date indicate that the pipes are in moderate condition.

An extensive CCTV inspection programme is planned for the wastewater piped assets to improve the quality of information, understand the condition and performance of assets to allow evidence-based decision-making.

6.4.1 Renewals Strategies

The Water Renewals Strategy will build on:

- Asset criticality
- Water Treatment compliance (DWSNZ 2018)
- Demand management

The Wastewater and Stormwater Renewals Strategy will focus on:

- Asset criticality
- Stormwater Master Plan
- Environmental Standards

These Renewal Strategies identify three focus areas and detail the forward programme with specific reference to high criticality facilities and mains, assessments, implications and development of a robust renewal programme.

Our response to Aging Infrastructure

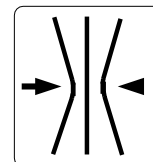
The Council will:

- Closely monitor maintenance costs to show trends in failing assets as a guide to optimum renewal times
- Identify critical assets, capture better data and maintenance information and use optimised decision-making processes for our capital programmes
- Assess the condition and performance of assets
- Develop our asset management practices to better interpret information for planning purposes
- Improve and formalise condition monitoring

- Develop more reliable and doable renewal programmes
- Drive our asset management interventions by data about the factors that determine the cost of service to our customers.

6.5 Infrastructure Resilience

From the Office of Auditor- General (OAG)– Matters arising from our audits of the 2018-28 long-term plans, we consider *a need for councils to have a comprehensive discussion about resilience and climate change issues with the communities. The discussion needs to cover financial and non-financial effects.*



Council customers have a high expectation of continuing functionality and service delivery. Resilience is based on a design philosophy that acknowledges that failure will occur. Resilience requires early detection and recovery, but not necessarily through re-establishing the failed system.

Recent high profile natural disasters have raised public awareness, but there is still a significant need to increase actual preparedness – both in general (eg household plans and emergency supplies) and for specific circumstances, eg flood preparedness.

However, resilience applies to natural hazards and needs consideration at an operational level where an asset failure is not necessarily a service failure.

Redundancy (duplication) does not provide resilience. Resilience requires early detection and recovery, but not necessarily through re-establishing the failed system. Robust systems are designed to prevent failure. Resilience is about the ability to plan and prepare for adverse events, the ability to absorb the impact and recover quickly, and the ability as a community to adapt to a new environment.

We have to consider managing and mitigating the risks and the resilience of our infrastructure assets from natural disasters. The Council acknowledges that resilience is not only about physical assets; it is about the people. It includes but is not limited to:

- connecting people and communities (neighbour to a neighbour; educate; access to household resilience items, etc.)
- supporting community organisations
- the built environment and asset systems, which are robust

Our response to Infrastructure Resilience

Adverse events/natural disasters/climate change and the related impacts cannot be avoided, and as a result, the Council has to factor this into long term planning, civil defence planning and determining the infrastructure requirements moving forward to ensure the community's expectations are met with regard to safe and reliable services and general wellbeing.

Both physical and system resilience are crucial. This means:

- Design and construction standards (where cost-effective) that ensure infrastructure is able to withstand natural hazards and long term changes in circumstances such as those resulting from climate change.
- Organisations and networks of organisations with the ability to identify hazards must share information, assess vulnerabilities, and plan for and respond to emergencies.
- Acknowledging the value of adaptability and redundancy in the network to improve business confidence.
- Identifying and managing cross-sector dependencies, such as power supply for communications infrastructure. Engineering Lifelines groups have already undertaken work in this area (NIP 2011).

In order to improve resilience, the Council's approach will be to:

- Actively participate in CDEM planning and activities at both regional and local levels
- Investigate options for alternative service provision and system redundancy
- Identify critical assets and ensure mitigation methods are developed
- Obtain insurance where this is deemed to be the most cost-effective approach
- Apply lessons learnt from Canterbury earthquakes and incorporate them into planning, design and operation
- Complete organisation-wide risk assessments & business continuity plans.

6.6 New Technologies

Mainstream discussion around new technologies suggests that there will be a considerable social shift over the coming years as these technologies affect what work is done, how it is done, and then how this flows on to affect economic and social paradigms. Consideration of the following issues should be considered in future development planning and discussions.

Businesses	Transportation	3-Waters
There is an increasing amount of discussion around: • A shift toward intellectual service economies resulting in workers offering services to multiple employers as opposed to the traditional model of working for one organisation. • Historical large central office spaces will potentially be replaced by small satellite office spaces based on a time-share basis and/or 'work-from-'home' type arrangements. • In the retail and public services sector, a shift towards an online model As a result, the traditional concept of the CBD is coming under pressure, and future investment in infrastructure will need to consider the changing needs and impacts.	Autonomous vehicles, electric vehicles and electric bikes are three examples of vehicle technologies that are currently emerging. The New Zealand Ministry of Transport states - <i>New technologies are rapidly developing, which promise to revolutionise transport. Many of these technologies have the potential to help make New Zealand's transport system more effective, efficient, clean, resilient, safe and responsible.</i> <i>The Government has a key role in encouraging these technologies by ensuring that New Zealand's laws enable new beneficial technologies to be used.</i> <i>The Government's transport technology work is focused particularly on intelligent transport systems (ITS) across air, sea, road and rail transport, and in June 2014, published the ITS Technology Action Plan.</i>	New technology is more evident in the areas of: • new pipe materials, • non-destructive condition assessments, • environmentally sustainable treatment processes, • monitoring and data capture • Alternative wastewater systems (eg low pressure, vacuum) eliminating the need for 'deep' gravity systems.
Industry practices are constantly evolving, and technological advancements are an ongoing improvement. The Council will: • Investigate, consider and use new technologies as and when appropriate to improve the efficiency and effectiveness in service delivery.		

6.7 Other trends

Apart from the challenges mentioned earlier, there are also other challenges emerging that Council should also consider. These include but are not limited to:

- Economic activity and constraints
- Tourism
- Skills shortage (capacity and capability).

6.8 Evidence Base

The Council acknowledges there are limitations with its data that affect decision-making. While preparing the AMPs and this Strategy, it has become clear that asset management practices for core infrastructure activities need to be refocussed and improved. We need to be as efficient as possible in managing our assets, and this goal cannot be achieved without sound asset management planning practices being undertaken. The AMPs have comprehensive asset management improvement programmes. A commitment to improving data collection and analysis is indicated below by identifying key data improvement actions.

Table 4: Data Improvements

Activity	Data to be collected	Data analysis	Value this data provides
Roading	Condition and performance of pavement assets	Remaining life	Improve confidence for decision making and prioritisation
	Condition and performance of pavement assets		Assist with developing an affordable long term bridge replacement programme
Water Supply	Condition and performance of piped assets & non piped assets	Remaining life & capacity	Assist in developing an affordable long term renewal programme with priorities
Wastewater			
Stormwater			

6.8.1 Information Systems

Information and Data Systems provide Council staff with the ability to obtain, store, analyse and report on the significant quantities of data associated with the 3-Waters and roading activities.

Infrastructure information management is a core aspect of asset management, and there are a range of process and systems across the Council's asset portfolio. The core

infrastructure activities have more complex and detailed asset systems. Continuous asset data improvement is applied across the asset portfolio.

Asset information informs a wide range of asset management activities, including:

- Asset performance monitoring
- Asset condition assessments
- Customer complaints and mitigations
- Maintenance and repairs record keeping and analysis
- Consent monitoring and management
- Modelling
- Renewal planning
- Growth planning
- Asset revaluations
- Financial forecasting
- Performance reporting

6.8.2 3-Waters data confidence

Managing our assets for their full lifecycle requires integrated planning and good underlying data. Decision-makers need reliable information about assets to manage maintenance and renewal needs and to make sound decisions about when to invest in new infrastructure assets. Accurately and regularly assessing the condition of many of our infrastructure assets can be difficult, particularly for those that are underground, like water supply pipes.

Wastewater, Water and Stormwater data were given a combined rating of B – C which is a confidence level ($\pm 25\%$). The asset confidence rating is current as of the 2019 valuation.

The B – C rating clearly shows the Council's data within the current database (Univerus, formerly AssetFinda) has anomalies and requires further attention. To address this Council is considering increased condition assessments and training staff to the improved Asset Management (AMS) system for Three Waters.

As shown above, we have moderate information about some of our 3-Waters assets' age and condition. This will continue to be a focus over the next few years.

The data collection approach and its improvement will be discussed in the respective activity management plans, and budgets included where appropriate.

6.9 Significant Decisions Required

Taking a long term view to the management of infrastructural assets, Gore District Council needs to make key decisions in a timely manner. In addressing community desires and priorities, the following key decisions have been identified.

Figure 2: Significant Infrastructure Decisions

SIGNIFICANT INFRASTRUCTURE ISSUES

Section 101B of the Local Government Act 2002 states:

(2) The purpose of the infrastructure strategy is to—

(a) identify significant infrastructure issues for the local authority over the period covered by the Strategy; and

(b) identify the principal options for managing those issues and the implications of those options.

In developing this 30-Year Strategy, the Council identified the anticipated significant infrastructure issues over the 30 years and considered each significant action and its benefits. The significant infrastructure issues faced by Gore District Council with the benefits and costs are tabled below.

Each project includes an assessment of the project contribution to the four well-beings. The project contribution assessments consist of Low, Moderate and High.

Low	
Moderate	
High	

7.1 Roding

The Council's goal for the roading activity is:

- A transport system that is safe
- A transport system that delivers appropriate levels of service
- A transport system that supports economic activity and productivity
- A transport system that provides appropriate transport choices.

Significant infrastructure issues are tabled below. The highlighted option is the preferred approach for addressing the identified issue.

7.1.1 Roding Issue 1

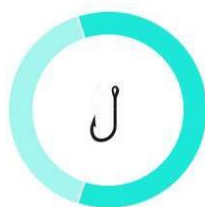
Issue – Preserving our Pavement Assets

Sealed road condition and smoothness is projected to deteriorate due to under-investment in the past three years. If not restored to sustainable replacement rates, the customer will begin to experience rougher roads, more frequent road maintenance and cost increases. We propose increased investment in our sealed road surfacings back to a sustainable replacement cycle and prioritised drainage maintenance in order to maximise the life of our underlying pavements. Provided the community and our co-funders (NZTA) can afford to do so.

Main Options	Implication of Options
Option 1 - Status Quo	Maintain existing surface renewal programme and investment of 21km per year. Pros: No change to rates Cons: Pressure from NZTA to preserve pavements. Potential premature pavement failure causing costs increases in the future and service level decline. Decision: Not recommended

Option 2 – Restore to sustainable levels	Increase annual resurfacing rates to 23 km per year and the budget by 10% from \$1.1m to \$1.2m pa over ten years. Pros: Pavement condition preserved with roughness levels of service maintained until at least 2040. The average surface age improves to 7.5 years until 2034. Likely to get support from your co-funder (NZTA), who do not want to see their investment increase over time. Cons: Increase in rates (circa 3%). Still a net consumption of pavement over the long term with roughness increasing each year. Requires a strong focus on keeping unit rates stable. Decision: Consider
Option 3 – Invest now for the future	Increase overall resurfacing rates to 22km per year. Increase annual budget by 10% from \$1.5m to \$1.27m in year one and then 3% per annum. Pros: Pavement condition preserved with roughness levels of service maintained beyond 2040. NZTA will more likely support the least lifecycle cost option. Cons: Increase in roading rates (circa 6%). Decision: Recommended
Time period	2021 - 51
Cost	\$49.5m Capex
What is the driver	LoS/Renewal
Assumption	That the useful life of significant assets will be the same as set out in the accounting policies of the Council

Project Contribution to the Four Well Beings



Cultural
The transport system ensures communities are connected and desirable



Economic
Providing 24/7 access for industry, businesses and consumers for the efficient movement of people and goods



Environmental
Council endeavours to avoid, where practicable, adverse effects on the environment and mitigate others.



Social
Progressive and proactive improvement of safety features of roads and footpaths

7.1.2 Rooding Issue 2

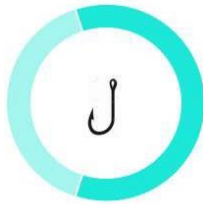
Issue – Bridge Replacement

Our bridges are nearing the end of their economic life within the next 30 years, with some requiring significant renewal works. The number and weight of trucks on our bridges are also increasing due to regulatory changes and improvements in land productivity.

From the last two bridge inspections, we now have a good set of data showing how our structures are deteriorating, enabling the development of a robust forward plan of bridge renewal and component replacement.

Main Options	Implication of Options
Option 1 - Status Quo	Bridges will continue to deteriorate at a faster rate than our level of attendance. If bridge renewal investments remain the same, the service levels will reduce, which will increase the risk of bridge failure. Further Bridge load restrictions will become necessary. This will restrict access to large, heavy vehicles, leading to increased travel times and increased freight costs that will potentially limit economic growth in the district. Not recommended
Option 2 – Increase investment	Increase the annual bridge renewal investment by almost \$100,000 and bridge maintenance investment by \$40,000 in year one. This will allow a small bridge replacement each year along with more component replacement. Then a 3% increase per annum. in renewals and maintenance: Recommended
Time period	2021 - 51
Cost	\$8.7m Capex \$94k average Opex/year
What is the driver	LoS/Renewal
Assumption	That the useful life of significant assets will be the same as set out in the accounting policies of Council.

Project Contribution to the Four Well Beings



Cultural

The transport system ensures communities are connected and desirable



Economic

Providing 24/7 access for industry, businesses and consumers for the efficient movement of people and goods



Environmental

Council endeavours to avoid, where practicable, adverse effects on the environment and mitigate others.



Social

Progressive and proactive improvement of safety features of roads and footpaths

7.2 Water

The Council's goal for the water activity is:

- complete renewals at an appropriate time to optimise investment
- provide sustainable and safe water for domestic, commercial and industrial use, as well as for firefighting purposes
- improve water consumption through demand management practices

Significant infrastructure issues are tabled below. The highlighted option is the preferred approach for addressing the identified issue.

7.2.1 Water Supply Issue 1

Issue – Hilbre Avenue Reservoir Replacement

The Hilbre Avenue Reservoir has been identified as a critical risk during an earthquake, and it provides limited storage capacity, especially during high demand periods.

Main Options	Implication of Options
Option 1 - Status Quo	Maintaining the existing asset may result in insufficient storage during high demand periods and risk failure during a natural event.
Option 2 – Replace	Replace the existing reservoir with no increase in capacity will reduce the risk of failure during a natural event but not provide sufficient storage during high demand periods.
Option 3 – Increase investment	Replace the existing reservoir and increase capacity to optimise the treated water storage capacity and strengthen infrastructure resilience.
Time period	2021/22
Cost	\$1.5m Capex
What is the driver	LoS/Renewal
Assumption	That the useful life of significant assets will be the same as set out in the accounting policies of the Council. A new regulatory agency will be formed, which will bring a change to the regulatory standards for drinking water. It is assumed that the Council will continue to be responsible for delivering its existing range of water, wastewater and stormwater services.

7.2.2 Water Supply Issue 2

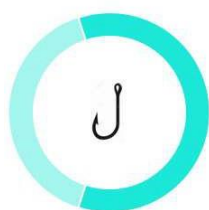
Issue – Mataura WTP Upgrade

Upgrade the Mataura WTP to meet the DWSNZ 2018 and comply with the Health Act. Refer to the Mataura Water Treatment Plant Options Summary report completed by Beca in 2020 for further details.

Main Options	Implication of Options
Option 1 - Status Quo	Maintaining the existing asset will not comply with the DWSNZ 2018 and the Health Act
Option 2 – Mataura water treatment upgrade	Upgrade the existing treatment system and addition of ultra-violet radiation to meet DWSNZ at the cost of \$2.12 million. Note this will also require the future replacement of the raw water main from the Pleura Dam in the next 10 - 15 years at the cost of \$4.8 million.
Option 3 – Full replacement of the Mataura Water treatment plant with a membrane plant	This option's estimated capital cost is \$3.7 million (plus the required \$5.5 million to renew the Pleura Dam pipeline in the future. Additionally, the annual operating costs would be \$60,000 per annum more than option 2. This option would, however, provide increased resilience against an earthquake.
Option 4 – Supply Mataura from Gore	This would require the installation of a \$9.5 million pipeline between Gore and Mataura. It is expected that this level of investment will be deemed unaffordable by the Council.
Option 5 – A joint water supply with Alliance Meat works	Although the option of working in collaboration with Alliance could have merit, there are a number of issues that would need to be addressed due primarily to the differing priorities between an industrial site and municipal water treatment. The estimated capital cost costs are expected to exceed the option of upgrading the existing plant, and hence this option is not recommended.
Time period	2022/23
Cost	Stage 1 \$2.2m Capex \$140,000/ annum Opex Stage 2 – Pleura Dam pipeline renewal \$4.8m Capex (2035/36)

What is the driver	LoS/Renewal The lower discount rate of 3% favours higher upfront capital cost. The long-term water supply from Gore to Mataura is estimated to be similar to the long-term cost upgrading and continue to operate the existing WTP. East Gore's supply should be preferred between these two options, as it is likely to have lower risks and drought-resistant supply. Recommending this option is possible only if we prove adequate raw water supply at Gore. The compliance monitoring and reporting costs are likely to increase with time, favouring the centralisation of the treatment. However, this option does have a high capital cost. A workshop is planned with the Council to explore the options further. In the interim, the existing Mataura plant's lower-cost upgrade can be completed after updating the Water Safety Plan as per New Zealand Drinking-water Safety Plan Handbook dated May 2019.
Assumption	That the useful life of significant assets will be the same as set out in the accounting policies of the Council. A new regulatory agency will be formed, which will bring a change to the regulatory standards for drinking water. It is assumed that the Council will continue to be responsible for delivering its existing range of water, wastewater and stormwater services.

Project Contribution to the Four Well Beings



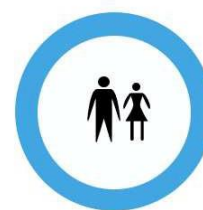
Cultural
Our water services acknowledge and considers the cultural values



Economic
Our water services are reliable, affordable and enable development in the District



Environmental
Our water services support the sustainable use of natural resources



Social
Our water services endeavours to keep our people safe and healthy

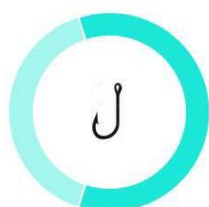
7.2.3 Water Supply Issue 3

Issue – Trunk Main Renewals

There are more than 10km of mains of DN250 and greater. This is mainly Asbestos Cement which will reach the end of its expected useful life within the next 30 years.

Main Options	Implication of Options
Option 1 - Status Quo	The mains will deteriorate over time and will present a bow wave of breakages or replacements. The trunk mains will not be fit-for-purpose, and failure/breakages will be an ongoing issue resulting in increased interruptions and contamination opportunities.
Option 2 – Programmed trunk main renewals	Undertake condition assessment of critical pipelines and programme proactively trunk main renewals to ensure continuity of service and integrity of the distribution network.
Time period	2021/22 to 2050/51
Cost	\$15.3m Capex
What is the driver	Renewal
Assumption	That the useful life of significant assets will be the same as set out in the accounting policies of the Council. A new regulatory agency will be formed, bringing a change to the regulatory standards for drinking water. It is assumed that the Council will continue to be responsible for delivering its existing range of water, wastewater and stormwater services.

Project Contribution to the Four Well Beings



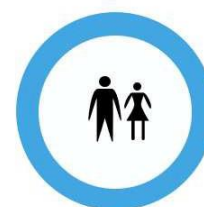
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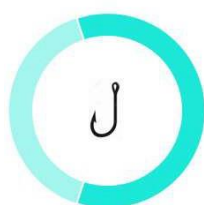
7.2.4 Water Supply Issue 4

Issue – Network Renewals

There are more than 166km of mains of DN100 to DN 225. The majority of this is Asbestos Cement and Cast Iron, which will reach the end of its expected useful life within the next 30 years.

Main Options	Implication of Options
Option 1 - Status Quo	The mains will deteriorate over time and will present a bow wave of breakages or replacements. The mains will not be fit-for-purpose, and failure/breakages will be an ongoing issue resulting in increased interruptions and contamination opportunities.
Option 2 – Programmed main renewals	Programme main renewals to ensure continuity of service and integrity of the distribution network.
Time period	2021/22 to 2050/51
Cost	\$27.5m Capex
What is the driver	Renewal
Assumption	That the useful life of significant assets will be the same as set out in the accounting policies of the Council. A new regulatory agency will be formed, which will bring a change to the regulatory standards for drinking water. It is assumed that the Council will continue to be responsible for delivering its existing range of water, wastewater and stormwater services.

Project Contribution to the Four Well Beings



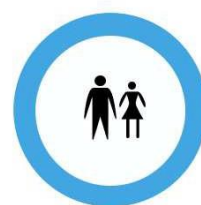
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7.2.5 Water Supply Issue 5

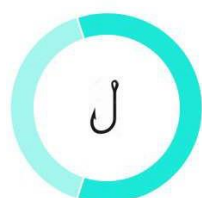
Issue – Resilience to Climate Change

It is anticipated that climate change will result in increased frequency and intensity of severe events such as severe droughts and floods. Therefore, the Council must be aware of the effects of climate change and integrate these into the standard council considerations to ensure the water activity in the District is sustainable for the future. Water may become scarcer in quantity and quality due to changes in climate and rainfall patterns, resulting in an increased frequency of flooding and droughts. Many factors contribute towards the scarcity of drinking water: consumption and run-off; an increase in water-intensive industrial activities; a lack of adequate pre-treatment arrangements; leaks and losses from inefficient water distribution.

Additional information on the effect of climate change on water supplies is expected to be available over the next decade. The Council will consider the impact that climate change may have on the security of supplies when additional information is available and there is greater certainty on the impact that this may have locally.

Main Options	Implication of Options
Option 1 - Status Quo	Employ a reactive approach to potential climate change impacts.
Option 2 – Plan and secure sustainable water resources	Develop a Climate Change Strategy, including considering raw water storage and/or developing a deep groundwater source.
Time period	2021/51
Cost	\$550k Capex (2021-23) \$5.1m Capex (2040/41)
What is the driver	Level of Service
Assumption	Climate change will have a significant impact on water security, quality and quantity. Floods are expected to become larger across the district.

Project Contribution to the Four Well Beings



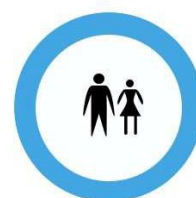
Cultural
Our water services acknowledge and considers the cultural values



Economic
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Environmental
Our water services support the sustainable use of natural resources



Social
Our water services endeavours to keep our people safe and healthy

7.3 Wastewater

The Council's goal for the wastewater activity is:

- the collection, treatment and disposal of wastewater to safeguard public health and safety
- protect property
- minimising adverse environmental impacts to the extent possible.

Significant infrastructure issues are tabled below. The highlighted option is the preferred approach for addressing the identified issue.

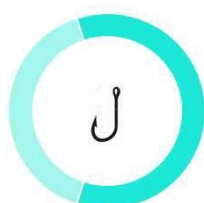
7.3.1 Wastewater Issue 1

Issue – Maitua WWTP Upgrade

The Maitua WWTP resource consent to discharge expires in 2021. The existing discharge is to water, while current environmental standards require discharge to land. The existing system is not expected to meet increased environmental standards.

Main Options	Implication of Options
Option 1 - Status Quo	Maintaining the existing system will not meet environmental standards and neither comply with regional rules. This will not contribute to social, cultural and environmental well beings.
Option 2 – Upgrade Maitua WWTP	Consider all the options and upgrade the Maitua WWTP. The Council will work with Environment Southland, local iwi and other stakeholders to find appropriate long term solutions for wastewater discharge that meet National Freshwater Policy and Te Mana o te Wai principles. Provide interim upgrade and desludging to extend long term resolution.
Time period	2024-26
Cost	\$2m Capex 2024-26 \$70,000/annum Opex
What is the driver	LoS/Renewal
Assumption	There will be a change to the regulatory standards for drinking water, and a new regulatory agency (Taumata Arowai) will be functional. It is assumed that the Council will continue to be responsible for delivering its existing range of water, wastewater and stormwater services. Changing delivery models and increasing standards impacts The Council's regulatory, monitoring and infrastructure requirements.

Project Contribution to the Four Well Beings



Cultural
Our water services acknowledge and considers the cultural values



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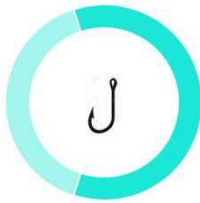
7.3.2 Wastewater Issue 2

Issue – Gore WWTP Upgrade

The Gore WWTP resource consent to discharge expires in 2023. The existing discharge is to waterways, while current environmental standards require discharge to land. The existing system is not expected to meet high environmental standards without significant external agency/government assistance.

Main Options	Implication of Options
Option 1 - Status Quo	Maintaining the existing system will not meet environmental standards and neither comply with regional rules. This will not contribute to social & cultural, and environmental well beings
Option 2 – Upgrade Gore WWTP	Consider all the options and upgrade the Gore WWTP. Council will work with Environment Southland and local iwi to find appropriate long term solutions for wastewater discharge that meet National Freshwater Policy and Te Mana o te Wai principles. Provide interim upgrade and desludging to extend long term resolution
Time period	Stage 1: 2025 - 2029 Stage 2: 2037 – 2039 Stage 3: 2047 - 2049
Cost	Stage 1: \$6m Capex/ \$300,000 per annum Opex – this assumes additional \$6M industry (SFF) funding will be obtained. Stage 2: \$32.8m Capex/ \$800,000 per annum Opex Stage 3: \$12.3m Capex/ \$300,000 per annum Opex
What is the driver	LoS/Renewal (New works)
Assumption	There will be a change to the regulatory standards for drinking water, and a new regulatory agency will be formed. It is assumed that the Council will continue to be responsible for the delivery of its existing range of water, wastewater and stormwater services Changing delivery models and increasing standards impacts the Council's regulatory, monitoring and infrastructure requirements.

Project Contribution to the Four Well Beings



Cultural
Our water services
acknowledge and
considers the cultural
values



Economic
Our water services
are reliable,
affordable and enable
development in the
District



Environmental
Our water services
support the
sustainable use of
natural resources



Social
Our water services
endeavours to keep
our people safe and
healthy

7.3.3 Wastewater Issue 3

Issue – WW Trunk Main Renewals

There are more than 6km of mains of DN600 and greater. This is mainly concrete pipe installed during the early 1900s. These mains will potentially reach the end of their expected useful lives within the next ten years – Note one of these mains (Wigan Street) has recently failed, and 135 m of its failed part has been renewed. The CCTV data suggests that the remaining part of this main also requires immediate replacement.

Main Options	Implication of Options
Option 1 - Status Quo	The mains will deteriorate over time and will present a bow wave of breakages or replacements. The trunk mains will not be fit-for-purpose, and failure/breakages will be an ongoing issue resulting in increased interruptions and environmental contamination opportunities.
Option 2 – Programmed trunk main renewals	Undertake a condition assessment and programme trunk main renewals to ensure continuity of service and integrity of the collection network
Time period	2022-33
Cost	\$10.2m Capex
What is the driver	Renewal
Assumption	That the useful life of significant assets will be the same as set out in the accounting policies of the Council. A new regulatory agency will be formed, which will bring a change to the regulatory standards for drinking water. It is assumed that the Council will continue to be responsible for delivering its existing range of water, wastewater and stormwater services.

Project Contribution to the Four Well Beings



Cultural
Our water services acknowledge and considers the cultural values



Economic
Our water services are reliable, affordable and enable development in the District



Environmental
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Social
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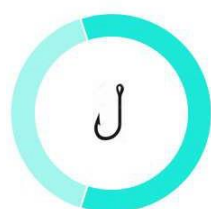
7.3.4 Wastewater Issue 4

Issue – WW Main Renewals

There are more than 98km of mains of DN150 to DN500. A significant portion of this is earthenware installed during the early 1900s. These mains will reach the end of their expected useful lives within the next 30 years.

Main Options	Implication of Options
Option 1 - Status Quo	The mains will deteriorate over time and will present a bow wave of breakages or replacements. The mains will not be fit-for-purpose, and failure/breakages will be an ongoing issue resulting in increased interruptions and environmental contamination opportunities.
Option 2 – Programmed main renewals	Programme main renewals to ensure continuity of service and integrity of the collection network.
Time period	2021-51
Cost	\$26.4m Capex
What is the driver	Renewal
Assumption	That the useful life of significant assets will be the same as set out in the accounting policies of the Council. A new regulatory agency will be formed, which will bring a change to the regulatory standards for drinking water. It is assumed that the Council will continue to be responsible for delivering its existing range of water, wastewater and stormwater services.

Project Contribution to the Four Well Beings



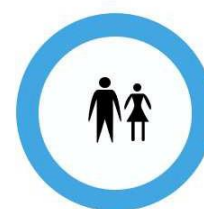
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Environmental
Our water services support the sustainable use of natural resources



Social
Our water services endeavours to keep our people safe and healthy

7.4 Stormwater

The Council's goal for the stormwater activity is:

- the collection and disposal of stormwater to safeguard public health and safety
- to protect property
- minimising any adverse environmental impacts.

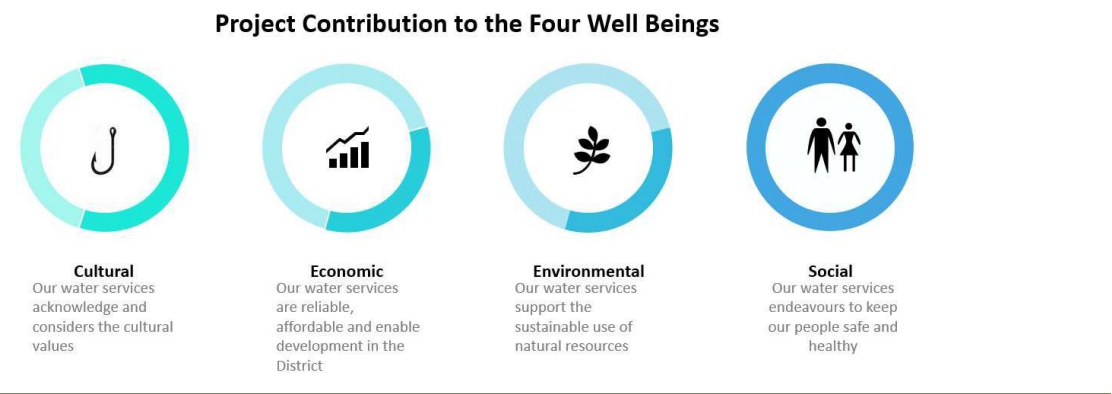
Significant infrastructure issues are tabled below. The highlighted option is the preferred approach for addressing the identified issue.

7.4.1 Stormwater Issue 1

Issue – Stormwater Separation (Gore+ Mataura)

Approximately 40% of the Gore and 25% of the Mataura wastewater network consists of a combined wastewater/stormwater system. This is a prohibited activity under adopted Regional Plan rules and environmental standards. The existing drainage work has significant capacity constraints, which leads to flooding, often contaminated with wastewater. The drainage networks combined nature also results in high flows through the Council's wastewater treatment plant affecting its treatment performance and/or resulting in raw wastewater overflows to the environment. Please refer to the Councils 2018 Stormwater Master Plan and current asset management plan for further details.

Main Options	Implication of Options
Option 1 - Status Quo	Maintaining the existing system will not meet environmental standards and neither comply with Regional Plan rules. This will not contribute to social, cultural and environmental well beings.
Option 2 – Increased Investment	Separate the stormwater and wastewater systems. Address stormwater capacity constraints and meet the required standards (1:5 year event). Apply an integrated approach to stormwater management.
Time period	2021 - 71
Cost	\$200 m Capex over 50 years (<i>\$77.5m over first 30 years</i>) \$300,000/annum Opex (increasing gradually over the next 50 years)
What is the driver	LoS/Renewal
Assumption	There will be a change to the regulatory standards for drinking water, and a new regulatory agency will be formed. It is assumed that the Council will continue to be responsible for delivering its existing range of water, wastewater and stormwater services. Changing delivery models and increasing standards impacts the Council's regulatory, monitoring and infrastructure requirements.



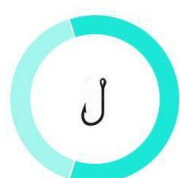
7.4.2 Stormwater Issue 2

Issue – Stormwater Quality Improvements

There is increased focus from the Central Government on the sensible, sustainable management of water. Stormwater management moves from “to collect, convey, discharge” to a more integrated approach of “slow it down, spread it out, and soak it in”. This approach includes quantity and quality considerations, multiple-use facilities, riparian corridors, recreation, wetland preservation and groundwater recharge.

Main Options	Implication of Options
Option 1 - Status Quo	Maintaining the existing system will not meet environmental standards and neither comply with Regional Plan rules. This will not contribute to social, cultural and environmental well beings.
Option 2 – Increased Investment	Develop and construct infrastructure to improve the stormwater discharge quality and meet regional rules and environmental standards. Apply an integrated approach to stormwater management.
Time period	2031 - 51
Cost	\$40.1m Capex over 20 years Increasing to \$200,000 /annum Opex
What is the driver	LoS/Renewal
Assumption	There will be a change to the regulatory standards for drinking water, and a new regulatory agency will be formed. It is assumed that the Council will continue to be responsible for delivering its existing range of water, wastewater and stormwater services. Changing delivery models and increasing standards impacts the Council's regulatory, monitoring and infrastructure requirements.

Project Contribution to the Four Well Beings



Cultural
Our water services acknowledge and considers the cultural values



Economic
Our water services are reliable, affordable and enable development in the District



Environmental
Our water services support the sustainable use of natural resources



Social
Our water services endeavours to keep our people safe and healthy

7.5 Summary of Significant Infrastructure Issues (30 years)

Activity	Issue #	Description	Capex	Opex/ Yr	Period	New Capital	Renewal
Roading	1	Pavement Rehabilitation	\$49.5m	-	2021-51		\$49.5m
	2	Bridge Replacement	\$8.7m	\$94k	2021-51		\$8.7m
Water	1	Hilbre Reservoir Replacement	\$1.5m	-	2021-23		\$1.5m
	2	Mataura WTP Upgrade	\$2.2m	\$140k	2021-23	\$2.2m	
			\$4.8m Pleura dam pipeline included in Trunk main renewals			Included below	
	3	Trunk Main Renewals	\$15.3m	-	2021-51		\$15.3
	4	Reticulation Renewals	\$27.5m	-	2021-51		\$27.5
	5	Climate Change Resilience	\$550k	-	2021-30	\$0.55m	
			\$5.1m	-	2040/41	\$5.1m	
Wastewater	1	Mataura WWTP Upgrade	\$2m	\$70k	2024-26	\$2m	
	2	Gore WWTP Upgrade	\$6.0m	\$300k	2025-28	\$6.0m	
			\$32.8m	\$800k	2037-39	\$32.8m	

Activity	Issue #	Description	Capex	Opex/ Yr	Period	New Capital	Renewal
			\$12.3m	\$300k	2047-49	\$12.3m	
	3	Trunk Main Renewals	\$10.2m	-	2022-33		\$10.2m
	4	Network Renewals	\$26.4m	-	2021-51		\$26.4m
Stormwater	1	Stormwater Separation	\$200m	\$75 -300k	2021-71	\$77.5m	
	2	Stormwater Quality Improvements	\$40.1m	\$50-200k	2031-51	\$40.1m	
TOTALS						\$178.55	\$139.1

FINANCIAL ESTIMATES

The Local Government Act 2002 Section 101B – Infrastructure Strategy states:

(4) The infrastructure strategy must outline the most likely scenario for the management of the local authority's infrastructure assets over the period of the Strategy and, in that context, must—

(a) show indicative estimates of the projected capital and operating expenditure associated with the management of those assets—

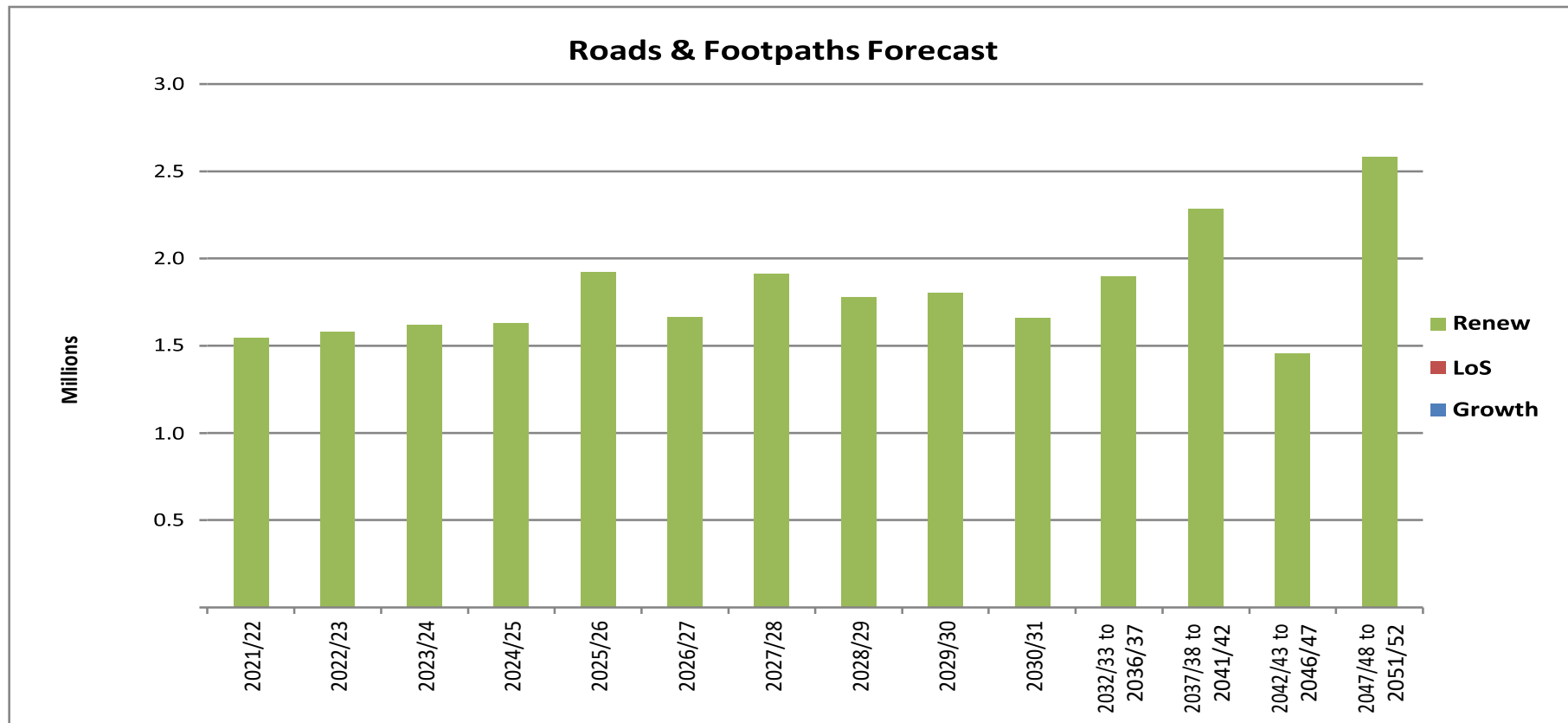
(i) in each of the first ten years covered by the Strategy; and

(ii) in each subsequent period of five years covered by the Strategy.

8.1 Roads and Footpaths

The projected capital expenditure associated with the roading infrastructure assets are graphically represented below:

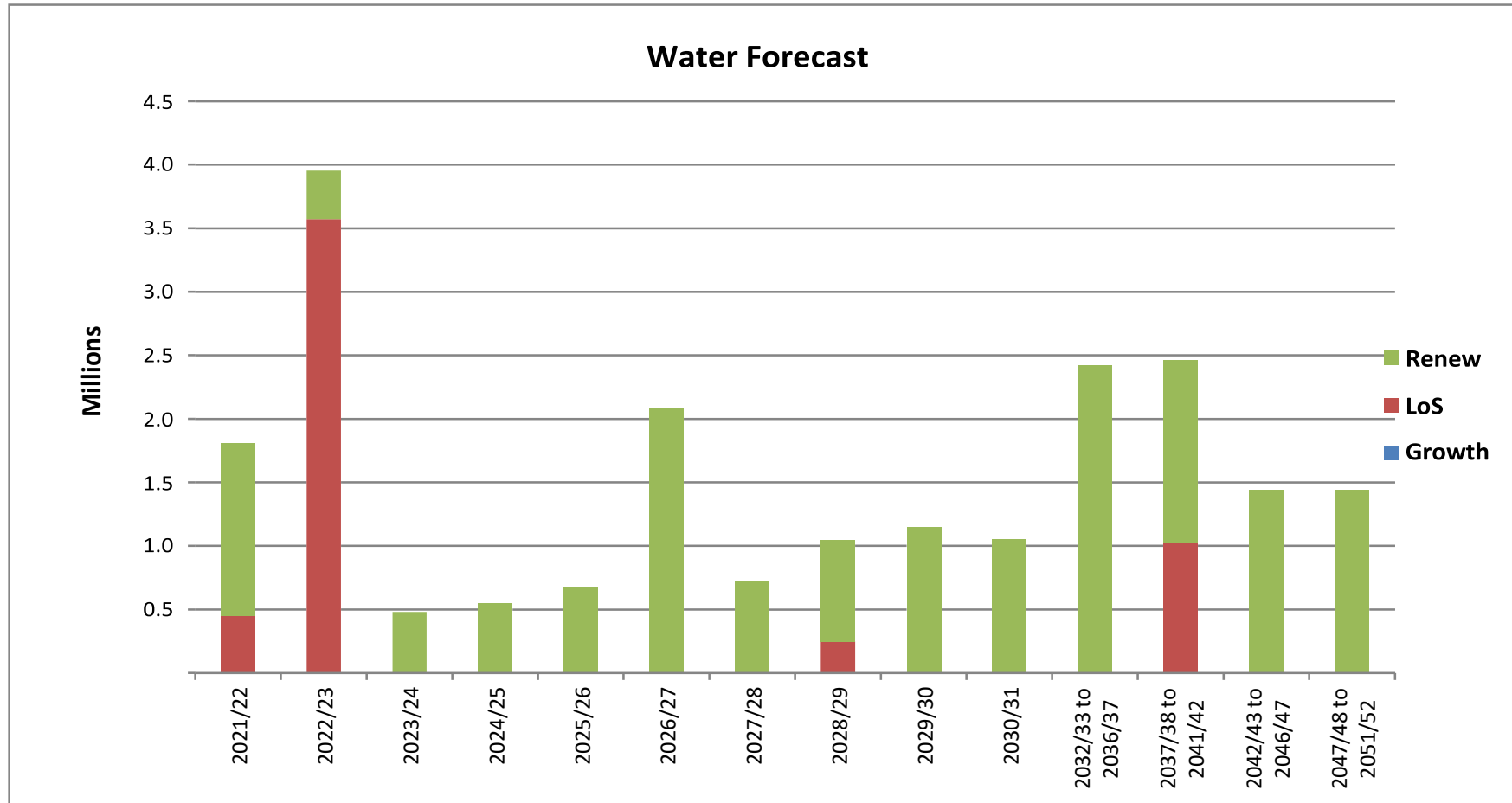
Figure 3: Projected Capital Expenditure – Roads and Footpaths



8.2 Water

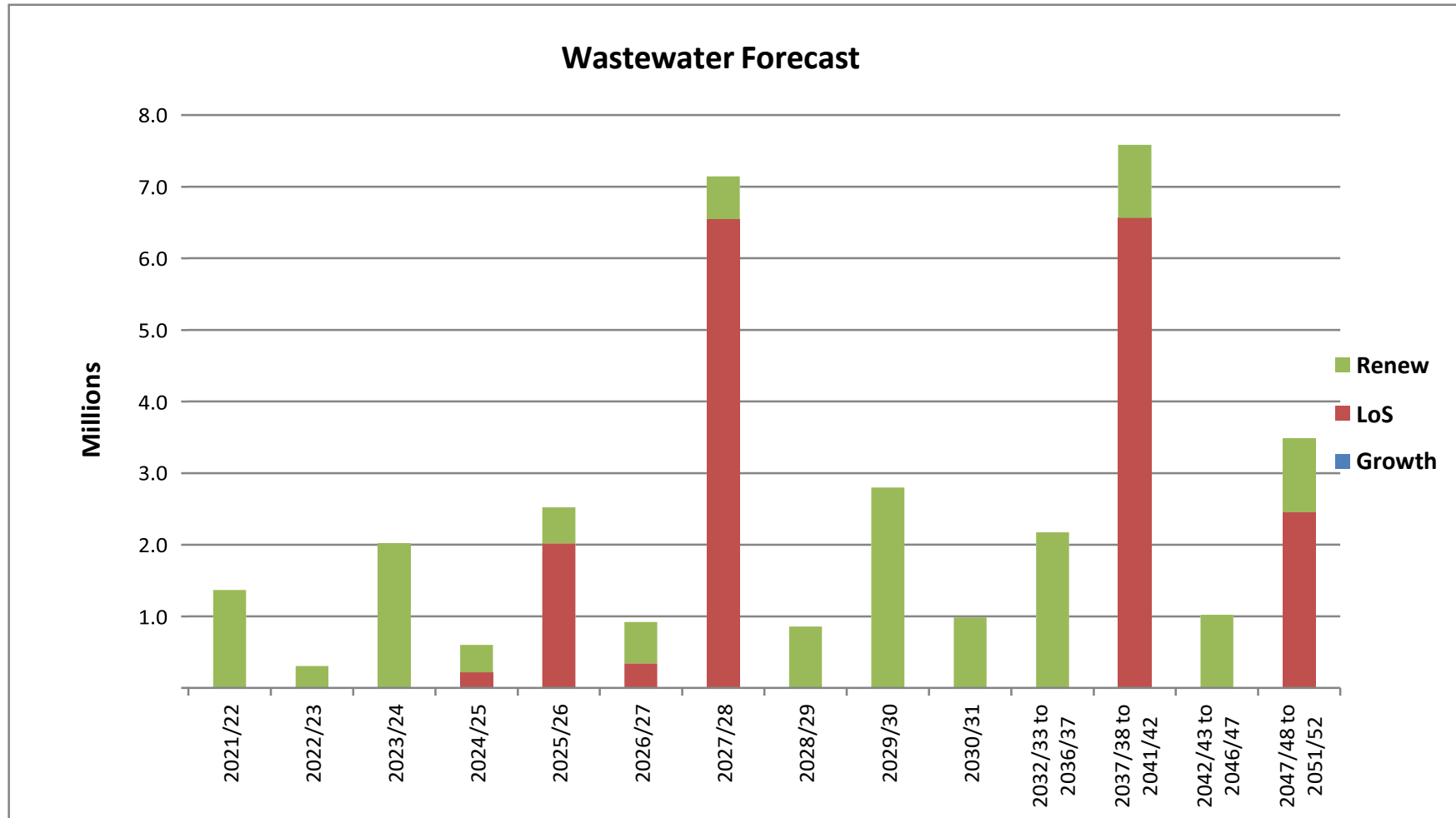
The projected capital expenditure associated with the water infrastructure assets are graphically represented below:

Figure 4: Projected Capital Expenditure - Water



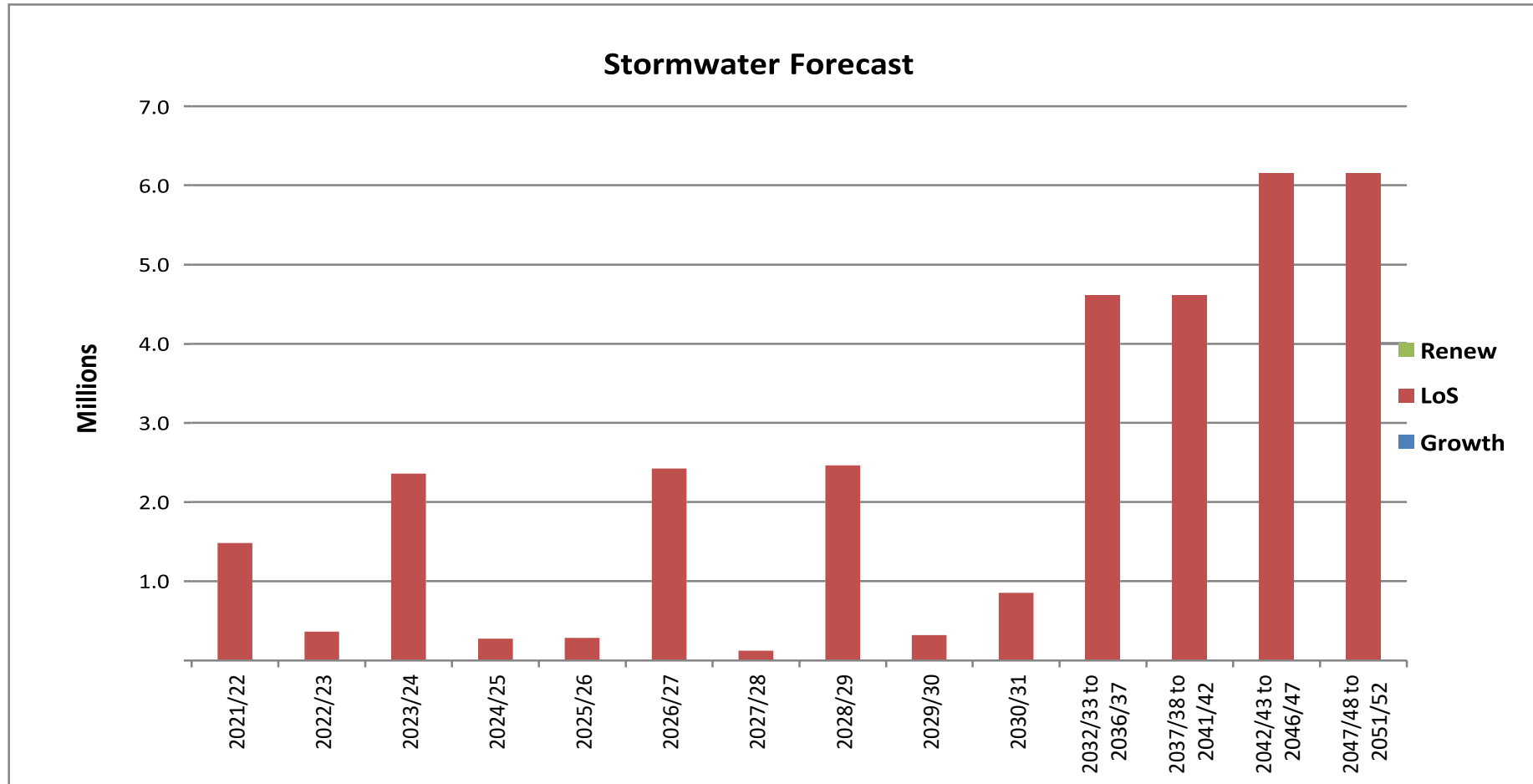
8.3 Wastewater

Figure 5: Projected Capital Expenditure - Wastewater



8.4 Stormwater

Figure 6: Projected Capital Expenditure – Stormwater



8.5 Total Expenditure

The projected capital expenditure associated with the significant infrastructure assets are graphically represented below:

Figure 7: Projected Capital Expenditure- Infrastructure Assets

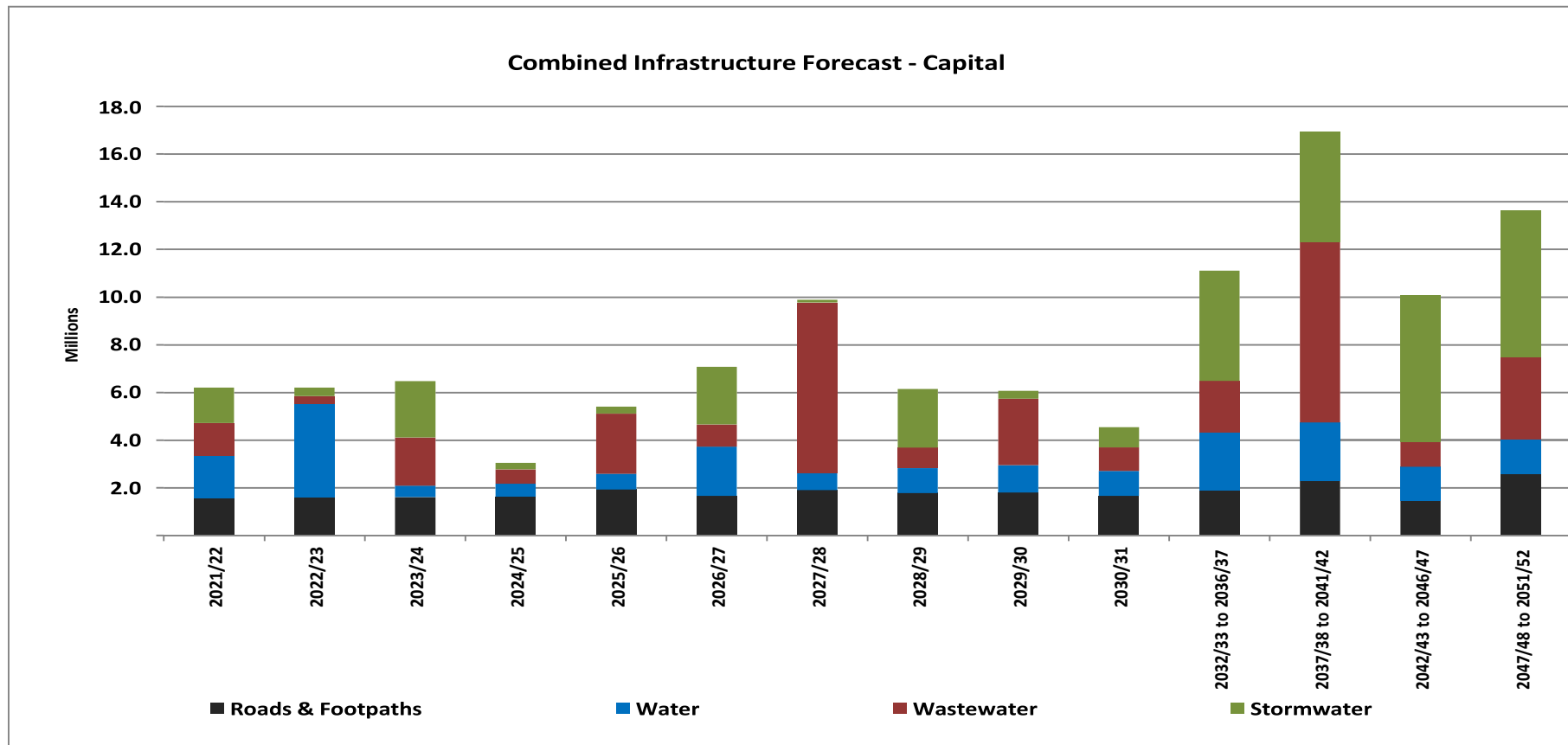
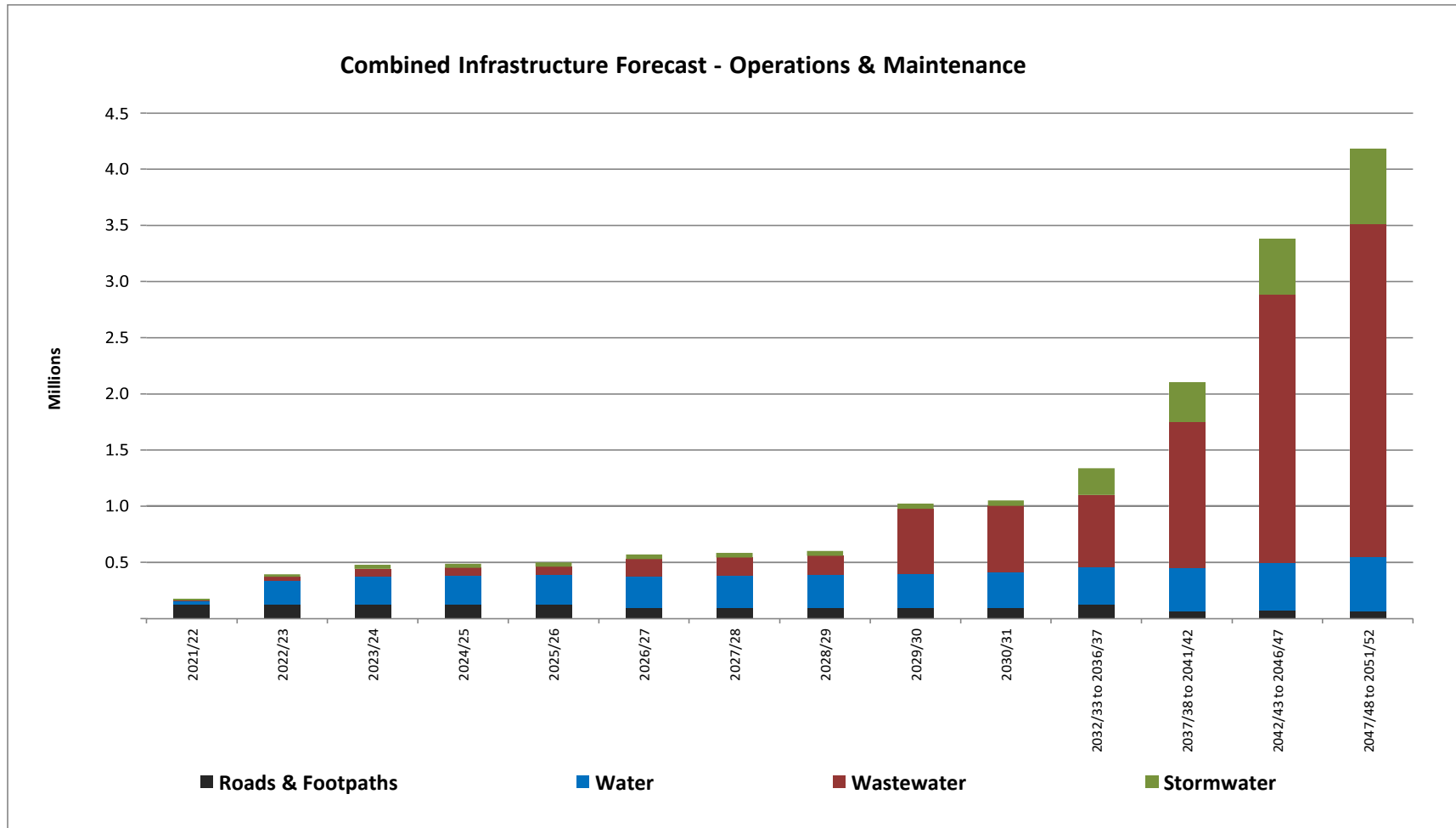


Figure 8: Projected Operational Expenditure –Infrastructure Assets

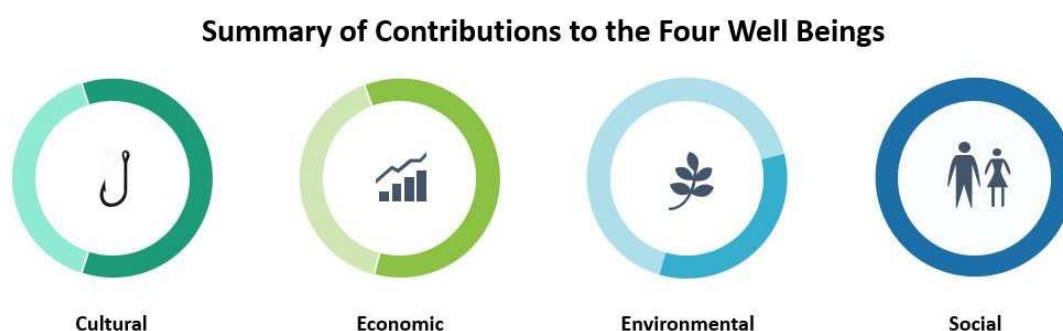


SUMMARY OF WELL-BEING CONTRIBUTION

The Council welcomes the four well-beings reinstatements as it acknowledges the Council's broader role in looking after our communities than simply providing core services.

Each project identified in the Infrastructure Strategy includes an assessment of its contribution to the four well-beings. A summary of contributions to the Four Well-beings is graphically shown below:

Figure 9: Summary of Contributions to the Four Well Beings



- **Cultural – Overall Moderate Contribution**
 - Our activities acknowledge and consider cultural values
 - Our activities encourage connected communities and participation in cultural events
 - Our activities may also have adverse effects on the cultural wellbeing of our communities.
- **Economic – Overall Moderate Contribution**
 - Our activities provide access and services for industry and business
 - Our activities encourage growth and development
 - Our activities create employment opportunities
 - Our activities come at a cost.
- **Environmental – Overall Low Contribution**
 - Our activities endeavour to avoid, where practicable, adverse effects on the environment
 - Our activities support the sustainable use of natural resources
 - Our activities have adverse effects on the environment.
- **Social – Overall High Contribution**
 - Our activities endeavour to keep our people safe and healthy
 - Our facilities encourage participation in social, recreational, educational and health activities.

This initial assessment is very subjective, and the Council will further develop these contributions to the four well-beings in alignment with national guidance.