



Southland District Council

DRAFT 30 year infrastructure strategy (LTP 2031)

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Executive summary

Introduction

The infrastructure strategy sets out Council's strategic direction for providing and managing its infrastructure assets over the next 30 years. It outlines a 30 year view of strategic issues, expenditure requirements and significant decisions that will need to be made. Projects identified in the first 10 years of the strategy are funded as part of Council's 10 year LTP 2031 (Long Term Plan).

The infrastructure assets and services covered by this strategy include the following:

| ASSET/SERVICE | REPLACEMENT VALUE |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| Core infrastructure | |
| Roads and footpaths | \$1,802M |
| Water supply | \$97.9M |
| Wastewater | \$133.1M |
| Stormwater | \$38.8M |
| Community infrastructure | |
| Waste services | Not valued |
| Community services | \$10.03M* |
| Open spaces | \$5.0M* |
| Community facilities | \$109.7M* |
| Stewart Island Electrical Supply Authority (SIESA) | \$2.8M* |
| Water facilities | Not valued |
| TOTAL: | \$2,199M |
| <p><i>*These values are based on the most recent insurance valuation. All other values are replacement values from the 2020 asset valuation</i></p> | |

Significant infrastructure issues

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

- infrastructure deficits
- changing government priorities and legislation
- climate change
- resilience.

The strategic context that Council is operating within includes those posed by demographic changes, tourism, new technologies, economic activity and constraints, and infrastructure resilience. Council is committed to working closely with its iwi partners, as well as communities and stakeholders, to address the challenges outlined in this infrastructure strategy.

Infrastructure deficits

There are a significant number of assets that have already passed their end of useful life, and as such constitute an infrastructure deficit. There is a bow wave of assets nearing the end of their useful lives in the coming years. Council has been working towards integrating depreciation funding into the financial strategy over recent years. This funding has been phased in slowly, and while Council has to date avoided the need to access external debt, the required funding reserves are not available to fund the required works. The risk of prolonged under-investment is that in time these assets reach their use-by date, are no longer fit for purpose and, in some cases, pose a threat to public safety. This is the position that we are in now. This is considered one of the key issues Council faces over the 30 years of this infrastructure strategy.

Resolving this challenge means that that a critical focus for Council is to ensure the required step change in investment is undertaken. The average age of roads is increasing and the remaining lifespan of a number of wooden bridges in the District is low, to the extent that significant renewals are required within the LTP 2031 period.

Infrastructure deficits are also evident in relation to the delivery of Three Waters services (water supply, wastewater and stormwater). One known issue is the failure of certain types of asbestos cement water main pipes (some ahead of theoretical asset life). Council has developed a range of options to replace the pipes ahead of time and will consider these through LTP 2031. It is estimated that there is 106km of pipe remaining across all water supply networks with an estimated cost to replace being between \$30M to \$40M.

The community facility and open spaces activities includes buildings, structures and recreational assets that are used by the community to participate in a range of activities and access Council services. This includes halls, Council offices, libraries, public toilets and playgrounds. The general condition of assets associated with these activities is poor, as a result of ongoing underinvestment. Due to socio-demographic change and the evolving needs of communities, many of these facilities are no longer fit for purpose. We propose to engage with communities over the next three years and to undertake a programme of work to modernise and improve the facilities that best serve their surrounding communities, while maintaining a consistent level of service across the District.

Appropriate infrastructure strikes a balance between community expectations, the levels of service (LoS) that Council provides, and the cost to do so. It does not mean a straight replacement of existing assets. Addressing the challenge of our infrastructure deficits involves examining how infrastructure is used, changing demographics, competing priorities, community needs as well as meeting new legislative requirements. In some cases, Council will need to engage with specific communities to ascertain the acceptable balance between maintain existing LoS and the cost of doing so. Further, increased investment in existing facilities is anticipated in order to ensure continuity of service delivery over the long term. It is anticipated that this will require rationalisation and consolidation of existing assets in a bid to improve LoS in particular identified areas.

Changing government priorities and legislation

In recent years, people have begun to expect a higher standard of service. During the course of this LTP, the way Three Waters services are regulated is proposed to change through the establishment of Taumata Arowai, which will become Aotearoa's regulatory agency. Alongside these regulatory changes, central government is also proposing changes to the way these services are delivered nationally, with a view to establish a more centralised model. Whilst it is a key challenge that Council respond and adapt to any subsequent and potentially substantial changes in the legislative environment, our communities will continue to need Three Waters Services. Council will take a proactive response to changes to water regulation and service delivery. This strategy presents the likely requirements of providing water services under present delivery arrangements and the current/expected future regulatory settings.

Climate change

The effects of climate change are likely to impact sea levels, ground water levels, rainfall and temperatures within the District, among other things. Council is factoring the effects of climate change into all of its infrastructure decision making. Council has contributed funding towards the regional LiDAR (Light Detection and Ranging) regional mapping project, which will model and help understand the impacts of climate change in the Southland region. Information provided through LiDAR can better inform infrastructure decisions and could potentially save many millions of dollars in infrastructure spend in locations with high hazard exposure. Further work to determine the impacts of climate change on Council's activities and services is anticipated in the early years of the LTP 2031.

Climate change challenges are identified and discussed in this strategy as they apply to several aspects of Council's infrastructure. Challenges are considered at a high level and in more detail within each activity where they will have an impact.

Resilience

Council has to consider managing and mitigating the risks to, and the resilience of, its infrastructure assets from natural disasters. 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 neighbour, educate, access to household resilience items, etc)
- supporting community organisations
- the built environment and asset systems which are robust.

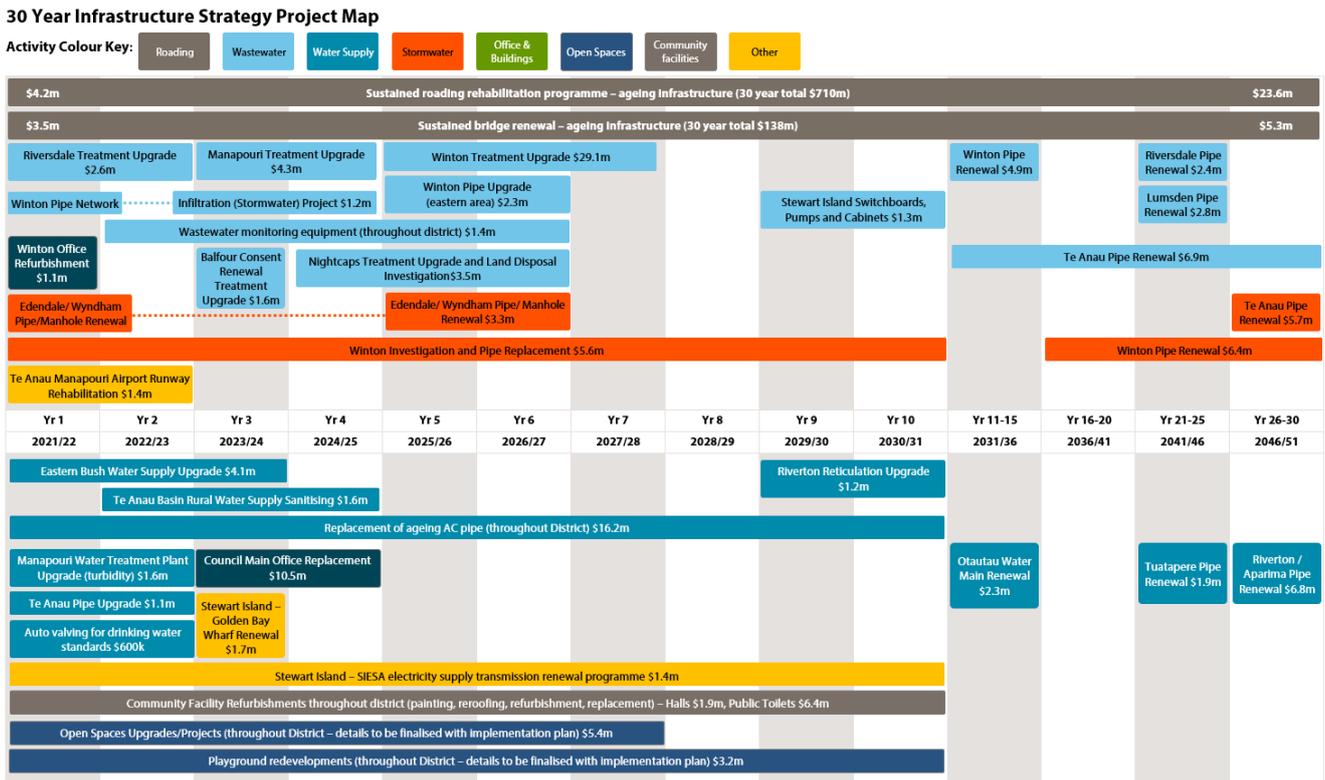
Council's forecasting assumptions have identified that the next severe earthquake on the Alpine Fault is likely to occur within the lifetime of most of us or our children. Council is assuming that no significant earthquakes, flooding, tsunamis and other hazards outside of expected risk assessments will occur within the ten years covered by the LTP 2031. Additionally, under almost every climate change scenario, storms and therefore flooding will become more frequent and intense and communities will feel the effects more regularly and intensively.

It is assumed that these events can be managed within current budgets. Borrowing 'headroom' to fund Council's share of a rebuild in relation to a 'maximum probable loss' scenario is provided for within Council's Financial Strategy.

Timeline for major capital projects

The key decisions Council are likely to make during the next 30 years have been identified in Figure 1 below. The figure outlines a timeline of Council's major projects, and shows the most likely scenario.

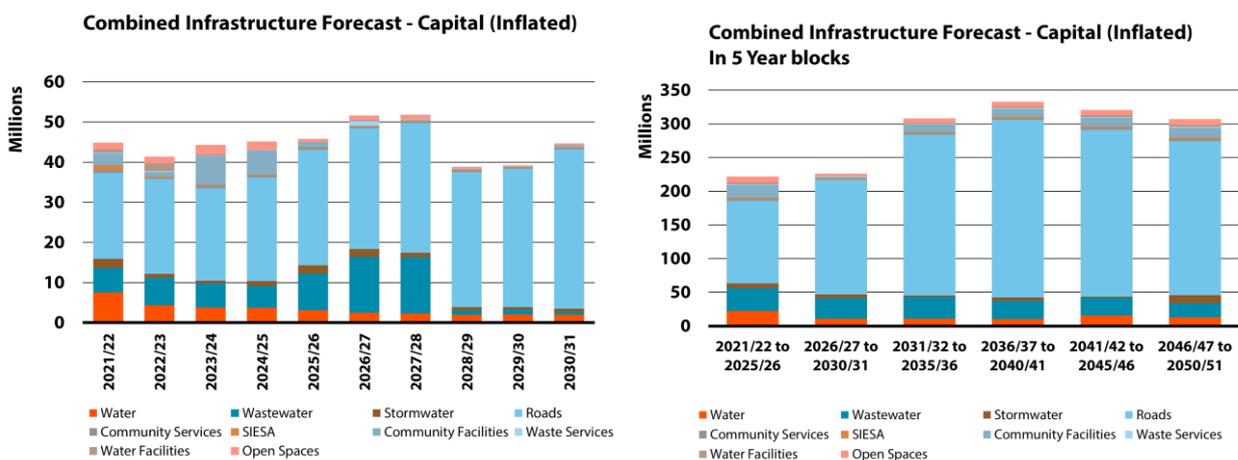
Figure 1: Significant infrastructure decisions graphic across 30 years of strategy



30 year capital expenditure forecast

Figure 2 shows that over the next 30 years the Council expects spending of approximately \$45 million per year for the first 3 years. Later years have a relatively consistent level of capital expenditure. This is on average between \$40 million and \$50 million per annum. It is important to note that these figures represent a significant increase on the previous LTP and associated infrastructure strategy. Council have recognised there has been a period of underinvestment. Further, the increasing regulatory and legislative pressures are anticipated to result in significant additional expense.

Figure 2: Forecast Capital Expenditure – All Infrastructure



Funding our infrastructure

Council has developed its financial strategy as part of the development of its LTP 2031. This reflects the directions contained in the LTP and infrastructure strategy and models the financial effects on Council and the District. It is evident that Council's finances have the capacity to access the debt funding required to undertake the proposed works. The extent to which this mechanism is able to be used over the long-term is covered in Council's latest financial strategy.

The financial strategy is aimed at responding to the needs of the community in an affordable way, while funding long term projects, so that future generations who benefit from community infrastructure, pay their share. Balancing community expectation and LoS with costs, as well as the requirements of national standards, are cost drivers putting a constant pressure on increases in rates. In addition, an ageing population means there is an increasing proportion of ratepayers who are on fixed incomes, placing greater pressure on the affordability of annual rates increases.

Council has previously indicated an affordability threshold of 5% for rates a percentage of median household income. In 2019/20, median rates (for Southland District and Environment Southland combined) made up 3.95% of median household income at an aggregate level. This threshold is forecast to be exceeded in year four of the LTP 2031 period.

Conclusion

Council's infrastructure strategy has been developed based on the best information available to it and Council has used assumptions based on what it reasonably considers could occur over the next 30 years. This strategy shows that a step change in investment in our infrastructure is required. The actual outcomes will likely vary to those contained within this infrastructure strategy as better information comes to hand. Council will continue to monitor and review the information available to it and will refine and update its infrastructure strategy every three years to reflect any significant changes.

Introduction

This is Southland District Council’s third infrastructure strategy, which supersedes the infrastructure strategy adopted in 2018. It is part of the strategic planning framework which includes activity management plans, the Long Term Plan (LTP) 2031 and the financial strategy.

Purpose

The purpose of the infrastructure strategy is to identify the significant issues relating to Council’s core infrastructure over the next thirty years. The strategy shows the principal options for managing these issues and the implications of the options. It is intended to bring infrastructure management issues, and their consequences, to the attention of Council and the community. The 30 year timeframe places a focus on the significant issues faced by the District and the consequences of long-term investment and decision making.

This strategy should be read alongside Council’s financial strategy, which provides context and guidelines against which to consider Council’s proposed expenditure. Funding sources are not the focus of the infrastructure strategy. The detail about how Council intends to fund its activities can be found in the Revenue and Financing Policy.

Background

‘Murihiku’ is the Māori name used to describe the Southland region. The name means the tail end (of the land). Southland District is divided into five electoral wards represented by a mayor, 12 ward councillors and nine community boards. The District covers 11% of New Zealand’s land mass and its roading network is the second largest of any territorial authority in the country (5,000 km). In 2018 there were 30,864 people living in the District, which amounts to 0.66% of New Zealand’s population. Our population is expected to grow to 36,700 by 2043.

In its role as local authority, Southland District Council will comply with all relevant New Zealand legislation. The Council’s vision and community outcomes are strategic statements that guide its decision-making in implementing the LTP 2031 and infrastructure strategy. The community outcomes are recorded in the LTP 2031 document.

Document structure

The infrastructure strategy sections and corresponding Local Government Act 2002 (LGA) sections are tabled below:

Table 1: Strategy Layout

| STRATEGY SECTION | | LGA, S.101B |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Executive summary/ Introduction | Identifies the purpose of the infrastructure strategy and provides a summary of the document. | |
| Strategic context | Positions the infrastructure strategy in the strategic planning framework and describes the environment we are working in, and relevant forecasting assumptions. | |
| Infrastructure | Describes the District’s infrastructure, its condition and performance while recording the significant assumptions, risks and mitigation. | 2 |

| STRATEGY SECTION | | LGA, S.101B |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Significant infrastructure issues | Describes significant issues and identifies the response options for the significant issues and documents the benefits, cost, when and funding source. | 2 |
| How we manage our infrastructure | Describes our approach to activity management, including Council's Asset Management Policy, how we plan for asset renewals, respond to growth, LoS and delivering our capital works programme. | 3 |
| Most likely scenarios | Discuss Council's response to the issues and significant decisions about capital expenditure to be made during the term of this strategy. | 4(a, b) |
| Financial summary | Identifies the costs associated with the most likely scenario. | 4(a) |

Strategic context

Strategic direction

This infrastructure strategy aims to give effect to Council's strategic direction.

| MISSION | WORKING TOGETHER FOR A BETTER SOUTHLAND |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Vision | Southland – one community offering endless opportunities |
| Community outcomes | <ul style="list-style-type: none"> • environment - kaitiakitanga for future generations • culture - inclusive, connected communities • economic - a diverse economy creating healthy and affordable lifestyles • social - empowered communities with the right tools to deliver the best outcomes |
| Strategic priorities | <ul style="list-style-type: none"> • improve how we work to build resilience • better preparing our communities and council for future changes • provision of appropriate infrastructure and services • support healthy environments and sustainable communities |

Council's priorities

The main theme of this Infrastructure Strategy is to demonstrate Council is a responsible custodian of key infrastructure. At a high level, Council's priorities are:

- working closely with its iwi partners, as well as communities and stakeholders on district-wide 30 year strategy development
- maintaining existing LoS at a minimum
- compliance with legislative requirements
- addressing Council's infrastructure deficit
- planning for and being able to respond to natural events and climate change
- providing long term affordable services.

The infrastructure strategy will help in delivering this by focusing on:

- continuous improvement of data and information
- meeting regulatory requirements
- adapting to changing communities and finding alternative solutions
- developing better understanding of the reliability of prediction models for asset lives.

Strategic environment

The strategic context that Council is operating within includes those posed by demographic changes, tourism, new technologies and economic activity and constraints. In 2020, Council launched a work programme to identify a vision for the District and to develop appropriate community and Council strategies. It is intended the strategy work will also enable Council to identify appropriate community outcomes. The strategies and vision will extend well beyond the course of this LTP, to 2050. The strategy work, Council's LTP, and the subsequent commitment and alignment required for Council's infrastructure and services, will all be interconnected. Council's response to both the significant issues outlined in the infrastructure strategy, will be guided by the vision and strategies that are developed.

Demographic changes

The estimated resident population of the District in 2017 was 30,300 and is projected to grow to 36,700 by 2043 (source: BERL (Business and Economic Research Limited) detailed Southland population projections).

The population of the Southland region is ageing at a high rate in line with global and national trends, although the ratio of youth to elderly will vary across different communities. An ageing population also has implications for service provision, rates affordability and asset management.

In the wake of the Covid-19 pandemic, it is predicted that:

- provincial areas such as rural Southland, where the economy is mainly based on sheep, dairy and beef, are likely to retain their populations
- there may be migration out of areas highly depending on international tourism such as Te Anau and neighbouring Queenstown
- there will probably be significantly less migrant workers present, but numbers are likely to increase again over time.

More information is needed to inform decisions such as the potential to decrease or remove any community infrastructure or services.

Tourism

Domestic and global measures to stop the spread of Covid-19 essentially stopped tourism revenue during 2020, and the recession to follow is projected to reduce spending in the sector. The total annual tourism spend in New Zealand in 2019 was \$41 billion. 40% was spent by overseas visitors, and the remainder was domestic. Tourist spending for the District as a whole was largely domestic prior to Covid-19. However, Fiordland's tourism spend was 35% domestic and 65% international (\$238m) in the year to August 2019, meaning that it has been and will be disproportionately affected by the tourism downturn compared to the rest of the District.

Tourism is a significant earner for Southland. The challenge for the District is to support and plan for appropriate infrastructure for tourism in light of the uncertainties to this industry caused Covid-19.

Council, through its relationship with our regional development agency Great South, will be responding to the impacts of Covid-19 on the tourism industry by focussing on:

- administering Covid-19 funding that businesses can access to connect with expert advice and support
- building operator capability
- administering the Regional Events Fund (an event fund for tourism-related events in Southland)
- Southland's unique offerings
- helping to deliver what visitors want to see
- growing Southland's visitor economy sustainably
- collaboration opportunities
- operating with two regional tourism organisations from 1 April 2021
- reviewing the Southland Murihiku Destination Strategy.

New technologies

Main stream discussion around new technologies and changes brought about by responses to Covid-19 suggest that there will be a considerable shift in the coming years in what work is done, how it is done (working from home/remotely etc), and then how this flows on to affect economic and social paradigms. Consideration of the following issues should be taken into account in future development planning and discussions. 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 and/or 'work-from-home' type arrangements
- in the retail and public services sector, a shift towards an on-line model.

As a result, the traditional concept of the central business district (CBD) is coming under pressure and future investment in infrastructure will need to consider the changing needs and impacts.

New technologies and systems could have a significant impact on waste services, diversion activities, assets and funding models. A wide range of new technologies can be considered and deployed within the community services area. This includes but is not limited to booking systems, telemetry, CCTV, electronic counters (usage) and remote messaging.

Economic activity and constraints

The economic prosperity of Southland as a whole is vitally important to the well-being of our communities.

Half of the businesses operating in Southland District are in the primary sector. Ninety eight percent of these primary sector businesses operate in the industries of agriculture or forestry (BERL (2018) Southland District – Shaping positive community futures, Compendium report.). BERL estimate that 18.3% of total employment (measured in full-time equivalents) in the District is in dairy farming. Some communities in the District are almost entirely dependent economically on dairy farming, and this makes them vulnerable to a significant decline in global dairy prices or a major livestock disease outbreak. Tourism is another key

player in the Southland economy which is facing an uncertain long-term outlook due to Covid-19, discussed above.

Council, through Great South, will be responding to the impacts of Covid-19 on the economy by leveraging economic, business and tourism opportunities. Great South is identifying opportunities for regional economic diversification, which is pivotal to ensuring the development of a diverse, strong and enduring economy that profiles Southland as a preferred place to live, work and invest. Council will also complete a number of three waters stimulus funding projects in the District, and has proposed to achieve public value (which includes supporting local suppliers where appropriate) in its procurement practices.

Council’s workforce includes a large component (40%) of baby boomers who are likely to retire within the next 10 years. This may result in a loss of staff resource and knowledge to deliver projects. The failure to retain and transfer institutional knowledge may result in a steady increase of staff turnover and further loss of knowledge, translating into higher costs and lower efficiencies.

Strategic alignment

Assumptions

In developing this strategy, we have made a number of assumptions. Those that apply across Council are outlined in more detail in the significant forecasting assumptions in the LTP 2031 document. Assumptions of specific relevance to this strategy include:

| | |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ASSET DATA | This is an issue of particular relevance to the infrastructure strategy. Council has a number of asset data gaps and quality deficiencies across its suite of infrastructure activities covered in this strategy. Council will work over the first three years of the LTP 2031 and beyond to improve and resolve these data issues. It is assumed that data confidence is moderate as an average across all of its assets and activities for the purposes of this infrastructure strategy. |
| DEMOGRAPHICS | As at June 2020 the total population of Southland District was estimated to be 32,500. Our forecasts suggest that the population will gradually increase over the next 10 years to reach around 35,000 by 2031 and approximately 38,400 by 2051. |
| CLIMATE CHANGE | <p>Council has made the assumption that climate changes will occur over the course of this LTP. It is assumed that:</p> <ul style="list-style-type: none"> • changes and associated impacts such as risk based insurance will influence investment in built development (ie coastal and flood plain development) and types of farming • climate change will have a significant impact on the coastal settlements within Southland. It is known that areas of Colac Bay, Orepuki, Fortrose and Stewart Island/Rakiura are subject to coastal processes that are causing erosion resulting in loss of land and council roading infrastructure • floods are expected to become larger across the region • the central-northern part of the Southland region is projected to experience the largest increases in drought • warmer temperatures, particularly with milder winters, could increase the spread of pests and weeds • the occurrence of heat waves will double by 2040. |

| | |
|----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SIGNIFICANT, UNPLANNED ADVERSE EVENTS | Council has assumed that no significant earthquakes, flooding or tsunami will occur outside of expected risk assessments. The level of uncertainty of this assumption is assessed as high. Council needs to be prepared by maintaining insurance cover for emergency events and by ensuring there are reserves available to sustain any upgrade or urgent replacements that maybe required. |
| ENVIRONMENTAL STANDARDS, RESOURCE CONSENTS AND LAND USE | The level of uncertainty has been assessed as very high that Council may be required to undertake significant capital works in relation to drinking, stormwater and wastewater. Further it is evident that there is likely to be significant reform in the way that Three Waters is both regulated and delivered. |
| GENERAL ECONOMIC GROWTH TRENDS | It is Council's assumption that in the long term economic growth will continue to be consistent with trends. |
| USEFUL LIVES OF SIGNIFICANT ASSETS | Council operates on the assumption that that the useful life of significant assets will be the same as set out in the accounting policies of Council. There is a moderate risk that some assets may wear out and fail sooner, or later than estimated. |
| COST ESTIMATES AND PRICE LEVEL CHANGES | Council has made the assumption that the rate of inflation will remain consistent with what is provided for in the financial strategy. |
| CAPITAL EXPENDITURE DELIVERY | The LTP assumes that the timing and cost of capital projects and associated operating costs are as determined through the Council's activity management planning process. |

Financial strategy

Council has also developed a financial strategy which sets the financial parameters within which Council needs to operate (such as debt levels and rates increases). The infrastructure and financial strategies need to be aligned to ensure both are deliverable. Depending on the financial goals of Council, the infrastructure strategy may need to consider options to balance the service delivery needs and programme of works against what is achievable financially.

The 10 year programme of work outlined in the Infrastructure Strategy is currently in alignment with the Council's Financial Strategy.

Linkage with activity management plans

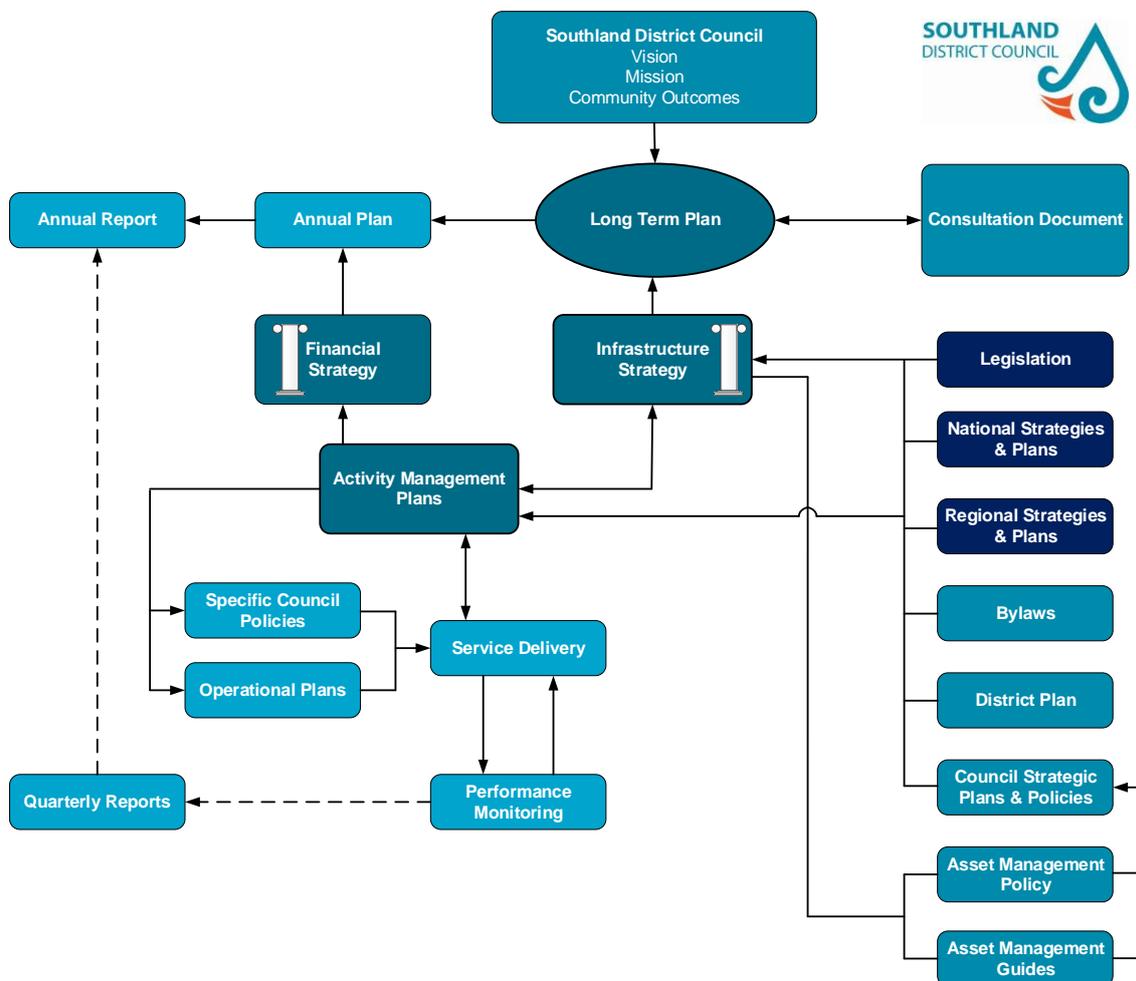
The Infrastructure Strategy informs and is informed by Activity Management Plans (AMPs). Firstly, it informs the development of the AMPs by identifying and discussing the key strategic issues facing Council. These are the issues that are generic across many activities. The implication of each issue may be different for each activity though and those differences are described in the individual AMPs.

Linkages with other documents

The infrastructure strategy and financial strategy underpin the LTP. Planning for the activities included in the infrastructure strategy is covered within the relevant activity management plan, as well as being informed by other strategies, policies, plans and legislation as shown in the Figure 3 below.

The diagram illustrates the number and complexity of sources that contribute to the infrastructure decision making environment.

Figure 3: Infrastructure Strategy- linkages with other documents



The infrastructure strategy and financial strategy form the pillars that support the Long Term Plan and consultation document.

Council’s 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.

Critical assets that are significant to our community at a high level are summarised in the following table by activity. Should LoS trade-offs be required due to affordability issues in future, Council will prioritise expenditure on the assets listed below.

Table 2: Critical assets by activity

| ACTIVITY | CRITICAL ASSET CLASSES |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Roads and footpaths | Council has approximately 850 bridges within the roading network, these structures are critical to ensuring the operation of the wider transportation network. |
| Water supply | <ul style="list-style-type: none"> • rising mains from intake to reservoir and / or to the treatment plant • well and chlorine pumps • chlorinator, UV disinfection, aerator, sand filters, cartridge filters • pump stations • treatment plants |
| Waste water | <ul style="list-style-type: none"> • rising mains • process blower |

| | |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <ul style="list-style-type: none"> • pump stations • treatment plants. |
| Stormwater | No critical assets have been identified historically, but we know this needs to be reviewed. It is likely this may include culverts and large diameter pipelines. |
| Waste services | The transfer station in Invercargill, the Kings Bend landfill and the material recycling facility are all critical assets to the District in terms of managing waste product. However, it is noted that none of these assets are owned directly by Council. |
| SIESA | Although not critical to the wider District, the Stewart Island Electricity network is critical infrastructure to this community. |

Infrastructure

Our infrastructure is made up of core infrastructure and community infrastructure as described below:

CORE INFRASTRUCTURE:

- roads and footpaths
- water supply
- wastewater
- stormwater

COMMUNITY INFRASTRUCTURE

- waste services
- community services
- open spaces
- community facilities
- SIESA
- water facilities

Infrastructure overview

Southland District Council's infrastructure assets are tabled with 2020 replacement values below:

Table 3: Southland District Infrastructure Assets

| ASSET | DESCRIPTION | DETAIL | REPLACEMENT VALUE | % OF TOTAL |
|-------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|------------|
| Core infrastructure. Assets required to be included in the infrastructure strategy by the LGA. | | | | |
| Roads and footpaths | Roads (arterial, collectors, local; curbs and gutters), bridges, footpaths | 4,961km of roads (40% sealed, 60% unsealed) 852 bridges cycle trail airport runway | \$1,802M | 82.0% |
| Water | Water extraction, treatment and distribution | 21 schemes (10 urban, 11 rural stock water) 6,900 connections 499 km of drinking water reticulation 219 km of rural stock water reticulation | \$97.9M | 4.5% |

| ASSET | DESCRIPTION | DETAIL | REPLACEMENT VALUE | % OF TOTAL |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------|
| Wastewater | Wastewater collection, treatment and discharge | 19 schemes 8200 properties 245 km of reticulation | \$133.1M | 6.1% |
| Stormwater | Stormwater collection and discharge | 25 schemes 113 km of reticulation | \$38.8M | 1.8% |
| Community infrastructure. Assets/activities that provide a complete reflection of the Council's asset-based activities. Council also considers these to be a valuable contribution towards the strategic planning for these activities to be extended to a 30 year timeframe | | | | |
| Waste services | Collection and disposal of solid waste, management of closed landfills | 20 sites (transfer stations, recycling depots, greenwaste) | Not valued | |
| Community facilities | Provision of accessible facilities for communities, clubs, organisations and individuals to enjoy for sporting, social, cultural, educational and recreational pursuits. Including buildings from which Council's activities are delivered | 70 public toilets 7 dump stations 32 community halls 1 airport (terminal building; airport land) 34 buildings including offices and libraries | \$109.7M* | 4.9% |
| Community services | Provision of: <ul style="list-style-type: none"> good quality affordable housing to a group with specific needs cemeteries to protect public health library services | 69 community housing units 15 operational cemeteries 7 closed cemeteries local + mobile library services | \$10.03M* | 0.5% |
| Open spaces | Provision of a blend of urban and rural reserves and open spaces. | 151 local reserves 5 District reserves 40 playgrounds 1 pool | \$5.0M* | 0.2% |
| Stewart Island Electrical Supply Authority (SIESA) | Generation, distribution and retailing of electricity on Stewart Island | Generation powerhouse Distribution network | \$2.8M* | 0.1% |
| Water facilities | Provision of access to rivers, lakes and sea for both commercial and recreational opportunities. | 9 wharfs/jetties 10 boat ramps 2 retaining walls 1 navigation aid, swimming pontoon, viewing platform | Not valued | |
| TOTAL | | | \$2,199M | 100% |
| <p><i>*These values are based on the most recent insurance valuation.</i></p> <p><i>All other values are replacement values from the 2020 Asset Valuation</i></p> | | | | |

The following is a summary of Council's infrastructure assets for each activity group considered in the infrastructure strategy.

Roads and footpaths

The Southland roading network is the second largest of any territorial authority in the country. The network consists of a total of 4,961 km of roads, 852 bridges, 207 km of footpaths, 238 stock underpasses and 2,686 streetlights. There are also eight state highways in the District (1, 6, 94, 95, 96, 97, 98 and 99). These are managed by the Waka Kotahi NZ Transport Agency (Waka Kotahi) and are not part of Council's network.

Roads and footpaths deliver both assets (such as roads, signs, bridges and lighting) and non-asset functions (such as road safety promotion). Overall management of the facilities is provided by Council, with operational work carried out by contractors. Funding for the management and maintenance of the roading and footpaths network is provided from rates, loans and user charges, together with financial assistance received from central government through Waka Kotahi.

Council also operates the Around the Mountains Cycle Trail that runs from Kingston around to Walter Peak Station on the shores of Lake Wakatipu. The majority of other off-road walkways and cycleways are managed under Council's open spaces activity.

A key regulatory instrument that has the potential to impact this activity is the Government Policy Statement (GPS) on Land Transport. The strategic priorities for the 2021 GPS are safety, better travel options, improving freight connections and climate change.

Water supply

Council provides ten community potable water supplies, two treated rural supplies and nine untreated rural water supplies for stock water only. The Council owned and provided facilities are:

- community supplies: Edendale/Wyndham, Manapouri, Mossburn, Ohai/Nightcaps/ Wairio, Orawia, Otautau, Riverton, Te Anau, Tuatapere and Winton
- treated rural: Eastern Bush/Otahu Flat and Lumsden/Balfour
- rural (stock): Duncraigen, Five Rivers, Homestead, Kakapo, Matuku, Mount York, Princhester, Ramparts, Takitimu

Currently our community drinking water supplies provide multi barrier protection as recommended by the Havelock North water inquiry. However Council has identified further upgrades required to ensure continued and improved compliance with protozoa status (further detailed in the LoS section below) and to provide further protection following removal of 'Secure Status', in particular for the Riverton deep bore supply source.

Wastewater

19 towns within the District are reticulated with Council owned and maintained wastewater infrastructure. The Council owned facilities are in the following locations:

- Balfour, Browns, Edendale/Wyndham, Gorge Road, Lumsden, Manapouri, Monowai, Nightcaps, Ohai, Riversdale, Riverton, Stewart Island, Te Anau, Tokanui, Tuatapere, Otautau, Wallacetown and Winton

A further treatment plant recently installed at Curio Bay currently services a Council reserve and is considered under the appropriate Open Spaces Activity Management Plan.

Stormwater

There are 26 towns in the District that have varying levels of reticulation from Council owned and maintained infrastructure. Council owned stormwater networks are in the following locations:

- Balfour, Browns, Colac Bay, Dipton, Edendale, Limehills, Lumsden, Manapouri, Monowai, Mossburn, Nightcaps/Wairio, Ohai, Otatau, Riversdale, Riverton, Stewart Island, Te Anau, Thornbury, Tokanui, Tuatapere, Waianiwa, Waikaia, Wallacetown, Winton, Woodlands and Wyndham.

Infrastructure in Wyndham is the oldest in the District and based on the standard estimated useful life it is due for replacement towards the second five year window of the Infrastructure Strategy. Maximising the economic life of these assets and determining the optimal time for replacement are important challenges.

Three Waters changing legislative environment

Legislation and regulatory instruments that have or are undergoing change that impact the Three Waters activities include:

Taumata Arowai—the Water Services Regulator Act 2020 and Water Services Bill. The act establishes Taumata Arowai, the water services regulator, as a crown agent and provides for its objectives, functions, operating principles. When the complementary bill, the Water Services Bill, is enacted, Taumata Arowai will become Aotearoa's dedicated regulator of Three Waters: drinking water, wastewater and stormwater. The bill will give effect to decisions to implement system wide reforms to the regulation of drinking and source water and targeted reforms to improve the regulation and performance of wastewater and stormwater networks and will include consideration of future service delivery arrangements.

National Policy Statement for Freshwater Management and related national statements. These statutory instruments set national policies and bottom line standards for freshwater management and provides regional councils with the authority and responsibility to develop policies, objectives and rules around how freshwater is managed across the country.

Proposed Water and Land Plan for Southland. This plan builds on the provisions of the current active plan but also indicates a strong preference for wastewater discharges to be land based rather than to water. The objectives and policies are very explicit on this point with a specific rule identifying water based discharges as a non-complying activity.

Climate Change Response (Zero Carbon) Amendment Act 2019. This act provides a framework by which New Zealand can develop and implement clear and stable climate change policies to meet international obligations and allow preparation and adaptation to the effects of climate change.

Waste services

Council provides the following waste services:

- kerbside collection of recyclables and residual waste to all townships and those along collection routes in rural areas (optional)
- operation and maintenance of seven waste transfer stations
- operation and maintenance of eleven recycling only drop-off centres
- operation and maintenance of two greenwaste only sites

- promotion of waste minimisation activities and other education initiatives.

Council is part of WasteNet Southland, a shared services arrangement between Southland District Council (SDC), Gore District Council (GDC) and Invercargill City Council (ICC). WasteNet Southland manages the collection and disposal contracts, and promotes and advocates waste minimisation initiatives. At the time of writing this strategy, Council is actively looking for an alternative recyclables processing arrangement. WasteNet Southland has overall responsibility for setting the strategic direction of the three councils in matters relating to waste management.

Council also retains ownership of a number of historic closed landfill sites that may be vulnerable to either riverine or coastal erosion. There will likely be a need to consider a range of interventions at such sites including embankment strengthening through to removal of the most vulnerable sites. An assessment and investigation process has been funded through the earlier years of the LTP 2031 with a view to determine any remedial works and associated costs following this process. These costs and the extent of the work will become clearer through the LTP 2034.

A regulatory instrument that has the potential to impact this activity during the course of this LTP is the Proposed Water and Land Plan for Southland. The plan contains rules around the management of closed landfill which could impact on this activity by requiring certain closed landfills to have a resource consent. There is budget allowance in the LTP 2031 to apply for a global consent covering any discharges that may require consenting. This is anticipated to be determined through the investigation works mentioned above.

Community services

Council owns and manages 22 cemeteries in the District, with seven closed and 15 still in use for burials. Council also maintains records associated with lone graves. There are 12 cemeteries managed by cemetery trusts in Southland.

Council provides 69 individual housing units for rent in 10 townships in the District. The units offer good-quality, affordable housing to groups with specific needs – mainly elderly residents. The community housing portfolio requires a programme of refurbishment to lift the general condition.

Library services includes 10 local community libraries spread across the region, a mobile library service, and access to a range of library and information resources via the internet. A number of libraries also run community-based learning programmes in partnership with community organisations and double as area offices providing Council services. The Winton library operates as the District library and from here managerial, technical, administrative and daily operational support is provided. Southland libraries co-operate regionally and nationally to enable access to other library collections, interloan services and various online databases. Free broadband and computer use are provided via the Aotearoa People's Network Kaharoa.

Community facilities

Community facilities includes buildings and structure which are used by the community to participate in a range of activities and access Council services. This activity includes 32 community centres and 31 Council offices, libraries or amenity buildings. Council also provides 69 public toilets and seven dump stations throughout the District. These are in both rural and urban areas and the type of facilities provided range from multipurpose facilities with showers, to Norski toilets in remote areas. Services associated with public toilets (eg cleaning, maintenance) are managed by Council and carried out by contractors.

This activity has been redefined since the 2018-2028 LTP and it is now a combination of the existing community facilities activity as well as the public toilets activity.

Open spaces

Council manages around 1,250 hectares of open space including 155 reserves throughout the District and several beautification areas within towns. These vary in size and use, and include parks, gardens, sports and recreation facilities, playgrounds and picnic areas. Some of the key parks and reserves in the District include Curio Bay Reserve, Mores Reserve at Riverton and Ivon Wilson Park at Te Anau. There are a combination of local and District funded reserves. Services associated with these open spaces (eg, mowing, gardening) are managed by Council and carried out by contractors.

Whilst the District is fortunate to have a healthy number of open spaces and recreational assets, there is significant investment in playgrounds required to align with national standards.

Stewart Island Electrical Supply Authority (SIESA)

This activity involves the generation and supply of electricity to consumers on Stewart Island/Rakiura by the Stewart Island Electrical Supply Authority (SIESA). This is a critical service for this remote island community. Stewart Island/Rakiura has 456 permanent electricity consumers (as at end 2017) connected to a network powered by up to five diesel generators at a central power station at Hicks Road.

Water facilities

Council manages a variety of assets that come under the banner of water facilities. These assets provide access to rivers, lakes and the sea for both commercial and recreational users. They range from jetties/wharves, boat ramps, navigation aids, a swimming pontoon and retaining walls.

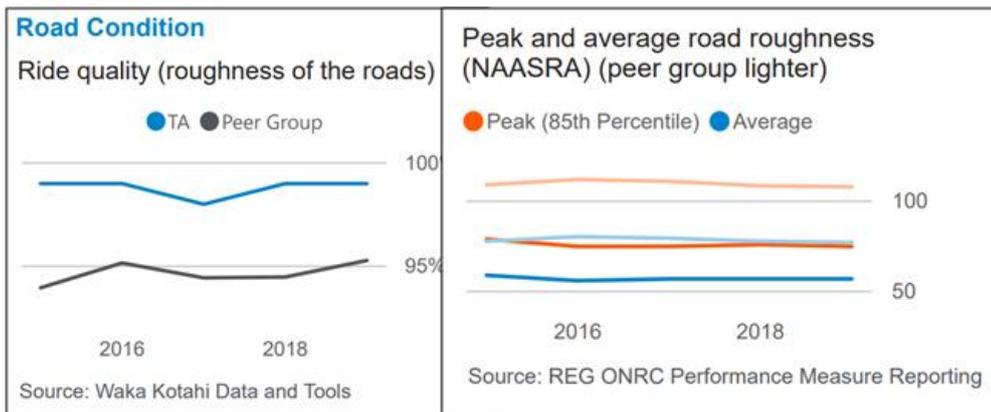
The major water structures are located at Stewart Island/Rakiura and Riverton. Some assets have been inherited by default in the past and do not necessarily add value to Council's asset portfolio or meet community needs. Council's intention is to maintain the assets at a base level that meets the needs of the community, ensure that they are safe to use and meet relevant resource consent standards and other regulatory requirements.

Asset condition and performance

Roads and footpaths

The condition of the roading network is generally good. Our ride quality in terms of smooth travel exposure scores well above our peer group as shown in the graph on the left. (above being better condition). The peak and average roughness of our road network is better (lower) than our peer group as shown in the graph on the right. Network audits and condition rating and modelling using information gathered from sources such as high speed data. This is used to look at aspects such as smooth travel exposure and road roughness which can then be compared nationally.

Figure 4: Southland District roads ride quality and roughness compared to peer group



However, it is evident that our investment in this activity has not been keeping pace with projected design lives and subsequent expected renewals.

Bridges are a sub-activity within the network that is not performing particularly well. Approximately 10% of bridges are currently posted with speed and/or weight restrictions, or are closed. There are approximately 161 bridges that require replacement in the next ten years. However, opportunities for rationalisation, where reasonable detours exist, are being explored with Council.

The Around the Mountains Cycle Trail is currently managed internally and is maintained in good condition in line with Great Ride classification requirements.

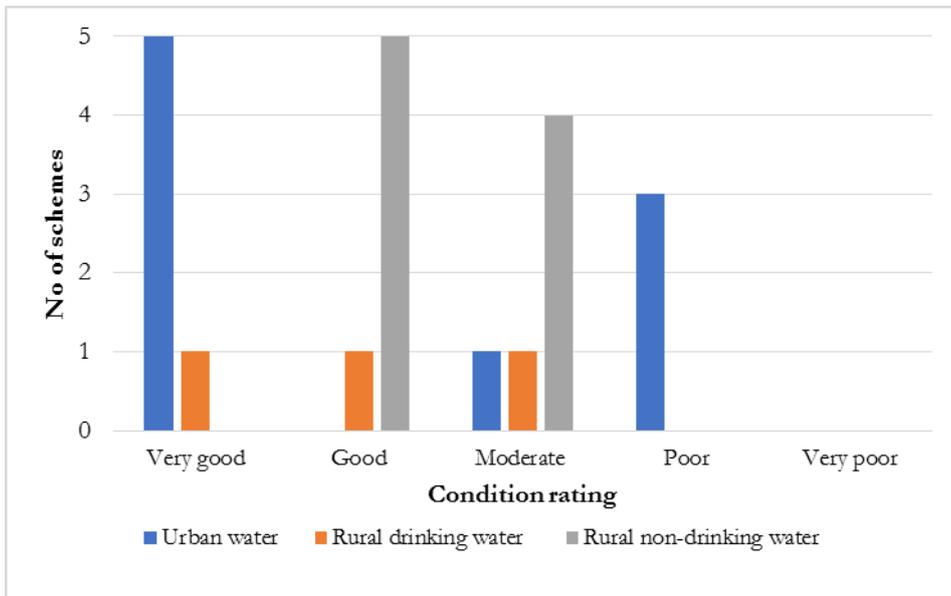
Overall, the network performs well and meets accepted standards. Given the reliance on primary industries in Southland, it is evident that heavy vehicles will continue to put pressure on the road network. This will present areas of accelerated deterioration in some areas.

The confidence in the asset data is considered to be highly reliable to reliable, with some uncertainty around drainage, retaining walls and streetlights.

Water supply

The condition of water supply assets is shown in Figure 5 by scheme types. The condition rating is based on joint inspection by Council staff and service provider Downer. All assets within IPS have regular scheduled maintenance programmed at recommended frequencies. This applies to above ground assets and below ground assets such as valves and hydrants on water supplies and manholes and pump stations on wastewater schemes. Frequency of maintenance inspections and assessment varies depending on task and asset type. Below ground piped networks do not receive scheduled maintenance but are assessed if there are known issues or if they are approaching end of life. This shows most schemes have been assessed at very good to moderate. Otautau, Riverton and Te Anau have been assessed as poor where the networks have been identified for further targeted renewals.

Figure 5: Water supply asset condition by scheme type



Significant portions of the pipe networks in the District are approaching the end of their useful life within the thirty year span of this strategy. Projected renewals are mainly based on 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.

Asset performance of Council's water supply network is assessed in terms of water leakage and water quality as follows:

Water leakage - Water loss can happen for a range of reasons, including leaks and breaks in the network and this results in Council treating more water than is needed. Council assesses its water losses through targeted surveys. Council intends to move to using Infrastructure Leakage Index as a water loss performance indicator which is consistent with industry best practice. Actual leakage is measured via surveys and water balance studies. There has been increased leak detection and repairs in 2019/2020 as well as a continuation of renewals in Te Anau and Otautau which has contributed to reduced water loss.

Water quality - Council has a suite of plans and processes to provide assurance that it is providing safe drinking water. These include water safety plans, operating procedures, and operations and maintenance manuals for the treatment plants. Council's water quality is measured monthly against the mandatory performance measures and reported in the Annual Report. Nine plants out of eleven achieved compliance for Drinking Water Standards for bacterial and protozoa compliance in 2019/2020. A new plant is being built for Eastern Bush/Otahu Flat which will address any water quality non-compliance issues.

In relation to protozoal compliance, Council achieved 91% in 2020. Measuring protozoal compliance required significant data capture of a number of parameters including pH, turbidity and UV transmission. Loss of even a small amount of such data can result in a non-compliance for the complete year. Council are currently budgeting to improve, and in some instances install, back up data capture and storage hardware to further reduce this risk. In addition, proposed changes to reporting requirements may drive need to review how this data is managed.

Council's current approach is to meter and charge larger commercial properties (eg hotels, factories) and charge volumetrically. Previously we have installed a number of meters at strategic locations across our water networks, primarily to help identify areas of high consumption where more detailed leakage detection programmes could then be undertaken. Universal metering is an accepted tool for management of demand and it is anticipated that it will continue to be promoted through ongoing reform programmes. In anticipation of this happening, we have made allowances in the upcoming LTP to install Acuflo manifolds on all connections across our networks that will allow meters to be readily fitted if and when the decision is made to universally meter all supplies.

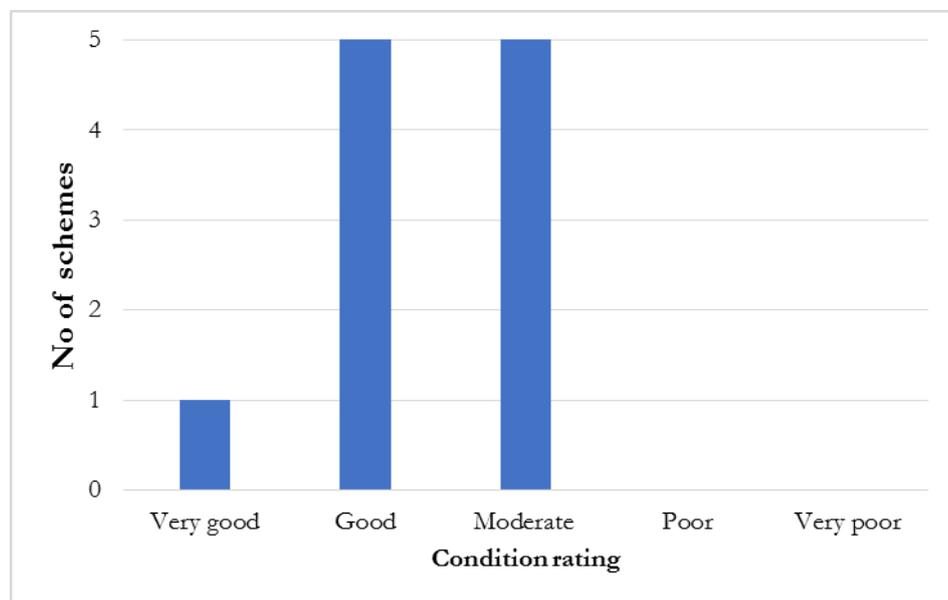
One known issue is the failure of certain types of asbestos cement water mains in Winton (some ahead of theoretical asset life). Council has developed a range of options for their replacement ahead of time and will consider these through the LTP 2031. It is estimated that there is 106 km of AC pipe remaining across all water supply networks with an estimated cost to replace being between \$30M to \$40M. Riverton, Otautau and parts of Te Anau are other networks that may be affected by this issue.

Information on age and asset performance is used to help develop the overall capital works delivery programme. Where assets are known to be in poor condition or showing poor performance, these are programmed for renewal. Information relating to age, condition and performance of water supply assets is well understood with relatively accurate information in Infor Public Sector (IPS). The confidence in the asset data held in the IPS database is considered to be reliable.

Wastewater

The condition of wastewater assets is shown in Figure 6 by scheme types. This shows that all 18 wastewater schemes have been assessed at very good to moderate.

Figure 6: Wastewater asset condition by scheme type (source: Condition surveys, Downer)

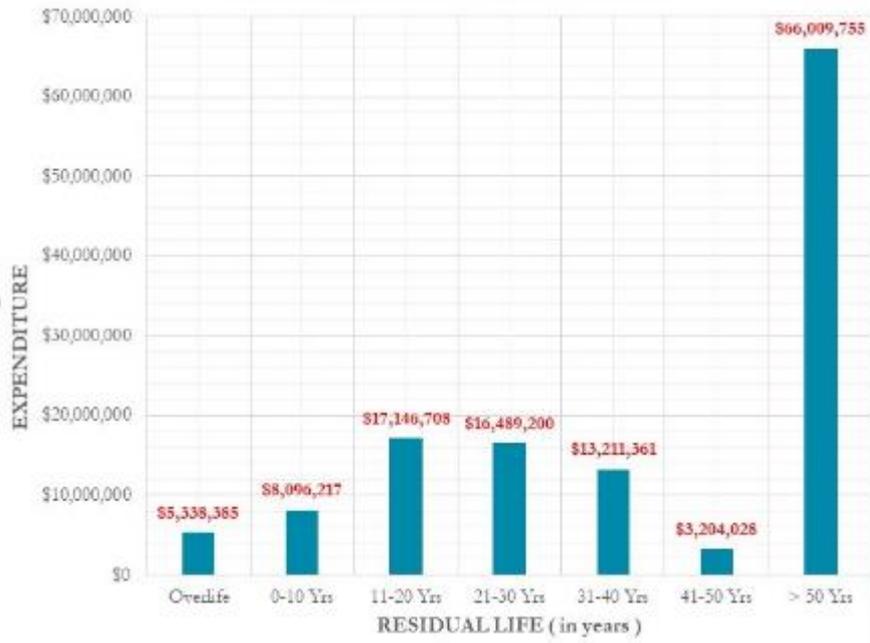


Condition monitoring of pipes is undertaken on sewer pipes and rising mains between two and five years prior to upcoming renewals to help target expenditure. All above ground mechanical and electrical assets are serviced in accordance with the manufacturer’s specifications with joint inspections undertaken to agree condition of above ground assets and to prioritise future capital work.

Remaining life of all wastewater infrastructure across the District is presented in the following figure. This indicates that a significant percentage of wastewater infrastructure still has greater than 50 years remaining life which is reflective of the relatively recent construction of a number of wastewater schemes. It is proposed to continue with detailed condition assessment on infrastructure close to reaching identified end of life so as to allow future prioritised renewals, consistent with good industry practice.

Figure 7: Residual life for wastewater assets

WASTEWATER RESIDUAL LIFE



Asset performance of Council’s wastewater network is assessed in terms of overflows and inflow and infiltration as follows:

Dry weather overflows. A dry weather overflow is an uncontrolled wastewater discharge that is not associated with a rain event. All pump stations are connected to a monitoring system so we can monitor and report failures. This helps us to effectively mitigate dry weather overflows from entering the environment and for reporting to Environment Southland. Dry weather overflows are reported as a mandatory performance measure and provided to Environment Southland. Blockage incidences occur from time to time but our asset performance for dry weather overflow events meet the industry accepted benchmarks and Department of Internal Affairs mandatory performance measure for 2019/2020.

Inflow and infiltration. We know operationally that some of our catchments are leaky. This is the term used to describe groundwater and stormwater entering into dedicated wastewater system resulting in the system becoming overloaded and overflows occurring. An ongoing programme of investigation will continue through the LTP 2031 in a bid to inform both renewals programmes and operational contract repairs.

Information on age and asset performance is used to help develop the overall capital works delivery programme. Where assets are known to be in poor condition or showing poor performance, these are programmed for renewal. To date there has been less maintenance issues across wastewater networks than the water supply networks. This is largely due to the age of the networks relative to both water and stormwater networks.

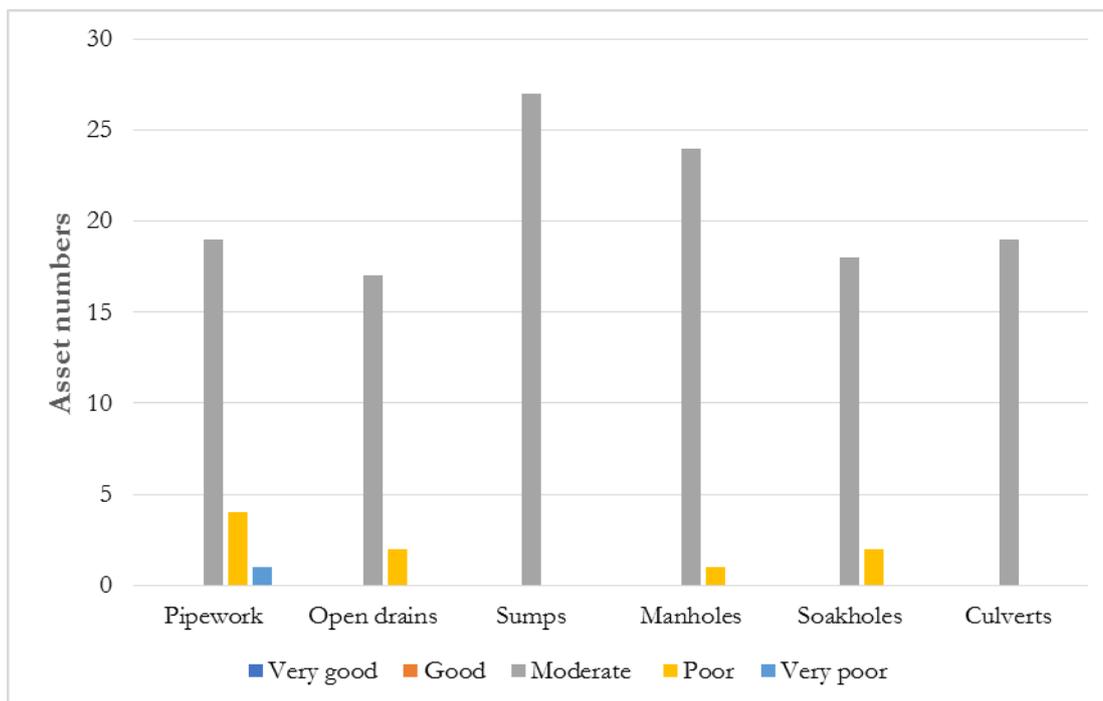
Information relating to age, condition and performance of water supply assets is well understood with relatively accurate information in IPS. The confidence in the asset data held in the IPS database is considered to be reliable.

Stormwater

There is limited information available on the current condition of our stormwater assets. The asset condition has been assessed mainly from operational knowledge and based on data recorded in Council’s asset management system.

The current condition of stormwater assets is shown in Figure 8. This shows most townships have stormwater assets assessed as moderate. Dipton, Manapouri, Riverton and Te Anau have pipework assessed as poor.

Figure 8: Stormwater asset condition by township (source: Council's INFOR (IPS) database)

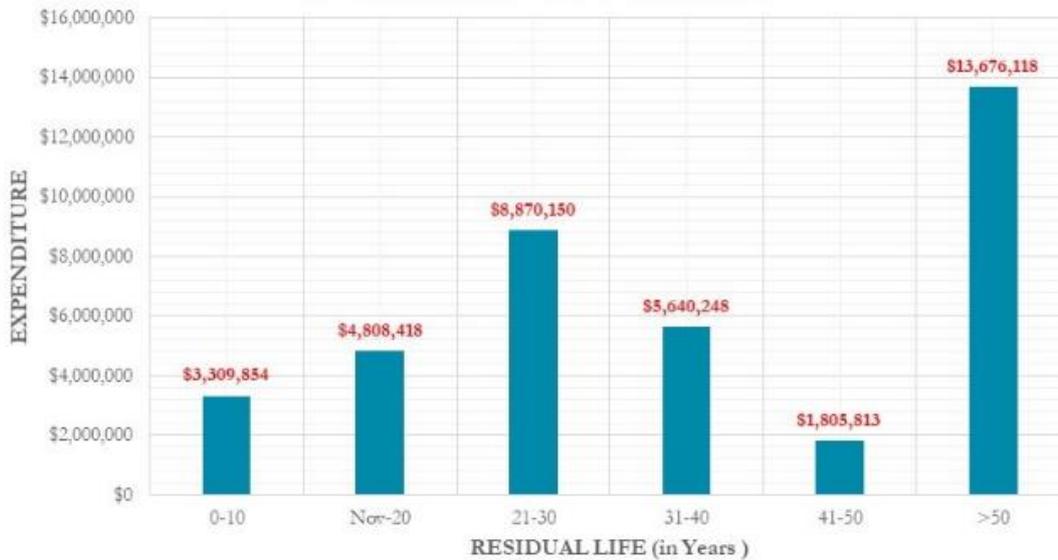


Projected renewals are mainly based on end of useful life in consideration of further condition assessments. In order to improve confidence in asset conditions, operating budgets will be increased to cover the development of more detailed condition assessments across all of Councils stormwater networks, with a focus on the critical assets.

Remaining life of all stormwater infrastructure across the District is presented in Figure 9 below. This indicates that a step change in capital investment is required to replace these ageing assets and maintain the current LoS. This is particularly relevant in townships including Winton and Wyndham where the oldest infrastructure dates back to the 1930's, and should therefore be considered as aged and therefore ready for replacement.

Figure 9: Residual life for stormwater assets

STORMWATER RESIDUAL LIFE



Asset performance of Council's stormwater network is assessed in terms of capacity constraints (flood protection) and stormwater quality. Further work is required to evaluate specific context in relation to capacity constraints, secondary flow path assessments are also necessary as part of this work. Secondary flow path protection is identified as an issue to address through the upcoming work on the District Plan, funded as part of the LTP 2031.

The confidence in the asset data held in the IPS database is uncertain. However, the impact of this uncertainty on reactive maintenance is minimal, as Council has been operating within budgeted amounts set for reactive maintenance. Council recognises that this is a risk, until the uncertainty is addressed in the IPS. This means that decisions around asset data (quantity, material, age, location, condition) are mainly based on assumptions. This may cause difficulty in developing accurate renewals programmes.

Waste services

The principal assets for this activity are approximately 20,000 wheelie bins, eleven recycling containers and seven transfer stations (two with waste compactors). These assets are inspected annually and generally known to be in good condition with budgets in place to undertake routine maintenance and minor improvements. Incremental wheelie bin replacements are assumed and incorporated into budgets. In relation to closed landfills retained in Council ownership, to date a programme of sampling and monitoring has not been established. However, in the first three years of the LTP 2031 there is funding set aside for investigation, programme development and potential remedial works identification.

Community services

There is increased investment required in order to improve the general condition of the libraries resource across the District. It is also evident that the way in which communities interface with library services is also changing.

Our libraries are currently undergoing an upgrade to the RFID system and a number of fitout and refurbishment upgrades have been identified for the buildings in which the library services are provided within the period of the LTP 2031.

Although Council's portfolio of community housing is maintained to Healthy Home standards, the age of the housing stock is such that increased investment is required in the coming years. This expenditure has been integrated into the LTP 2031.

Community facilities

The general condition of the community halls across the District is poor. There is an extensive programme of maintenance and refurbishment required over the course of the thirty year infrastructure strategy. However, it is recognised that in the first instance, further work is required to understand seismic capacity, utilisation, community needs and to ascertain whether the assets are fit for purpose. This work is scheduled for the early years of the LTP 2031.

The condition of public toilets across the District is generally acceptable and in some instances good. Following a period of underinvestment, Council have recently reviewed all assets in detail including updated detailed structural assessments. Renewals have been prioritised based on condition and criticality with a view to achieve 100 percent compliance with NZS 4241. There has been increased investment over recent years and this investment is programmed to continue over the LTP 2031 and beyond.

Open spaces

Generally, Council's open space assets are in an acceptable condition. However, as above, investment is required to ensure service levels are appropriate and fit for purpose to meet communities' needs. Council has started a programme of asset data capture so that it is in a position to use an asset management application to manage the activity and make sure that the appropriate level of funding is available. This has started with a playground and green asset assessment, and will continue so that all assets will have condition, age and utilisation data captured in Council's activity management application, Infor property services management system (IPS).

The asset data and condition capture process prioritised investment requirements based on compliance with national standards, condition and minimum LoS, identified a number playgrounds in particular that required relatively urgent attention. This next phase through the LTP 2031 will entail a more considered and strategic approach to portfolio management in a bid to ensure that assets are fit for purpose and in the right location to meet community needs.

SIESA

The condition of the SIESA network is fair. There are significant distribution network renewals necessary within the thirty year timeframe of this strategy. In recent years, the renewals programme has not kept pace with the depreciation of SIESA assets. As a result, the average age across generation and distribution assets has been increasing.

Although there is an ongoing programme of routine maintenance, the impact of deferred renewals on the average age and condition of generation and distribution assets should be acknowledged. An increased focus on renewals and the development of further resilience and up to date technology is planned from the first year of the LTP 2031.

In terms of performance, the network continues to operate well with minimal outages and KPI performance well within specified limits. Limits are set by Council based on commensurate performance expectations from mainland electricity networks. Ensuring the LoS received by the Island's residents is important. This is reflective of the maintenance and operations service provision capability.

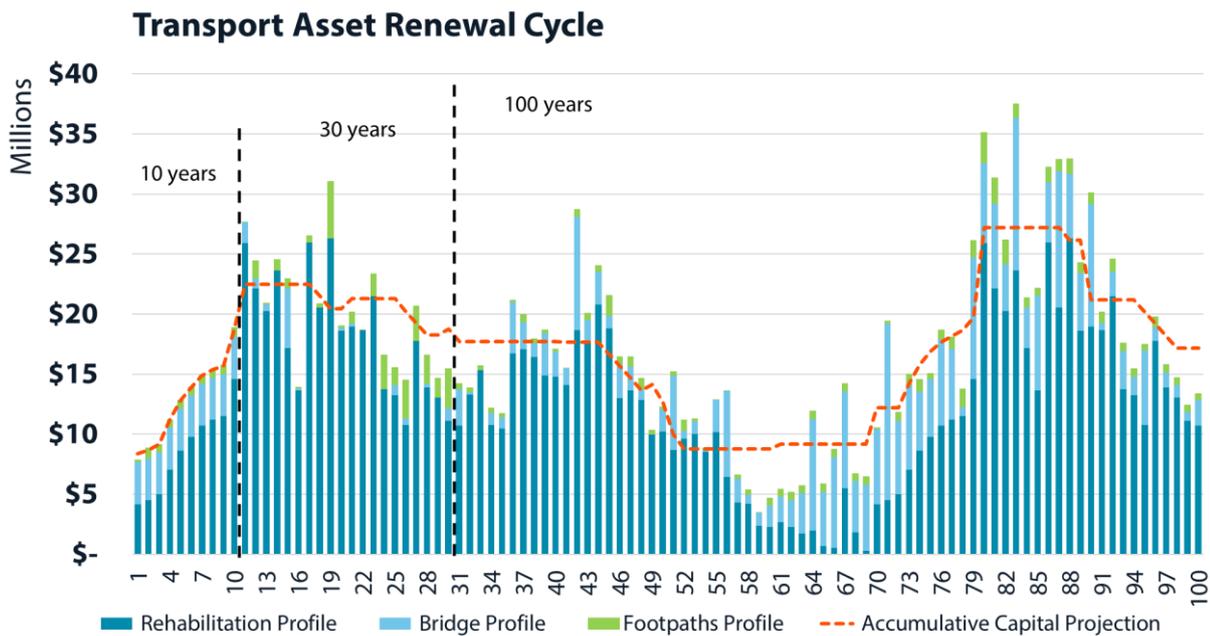
Water facilities

The average condition of Council's water facilities is fair. There are some performance concerns regarding the extent to which the main assets within this portfolio meet community needs. Significant investment is programmed in the LTP 2031 to address these issues. This relates to Ulva Island Jetty and Golden Bay Wharf, the two largest assets within this activity.

Strategic issues and priorities

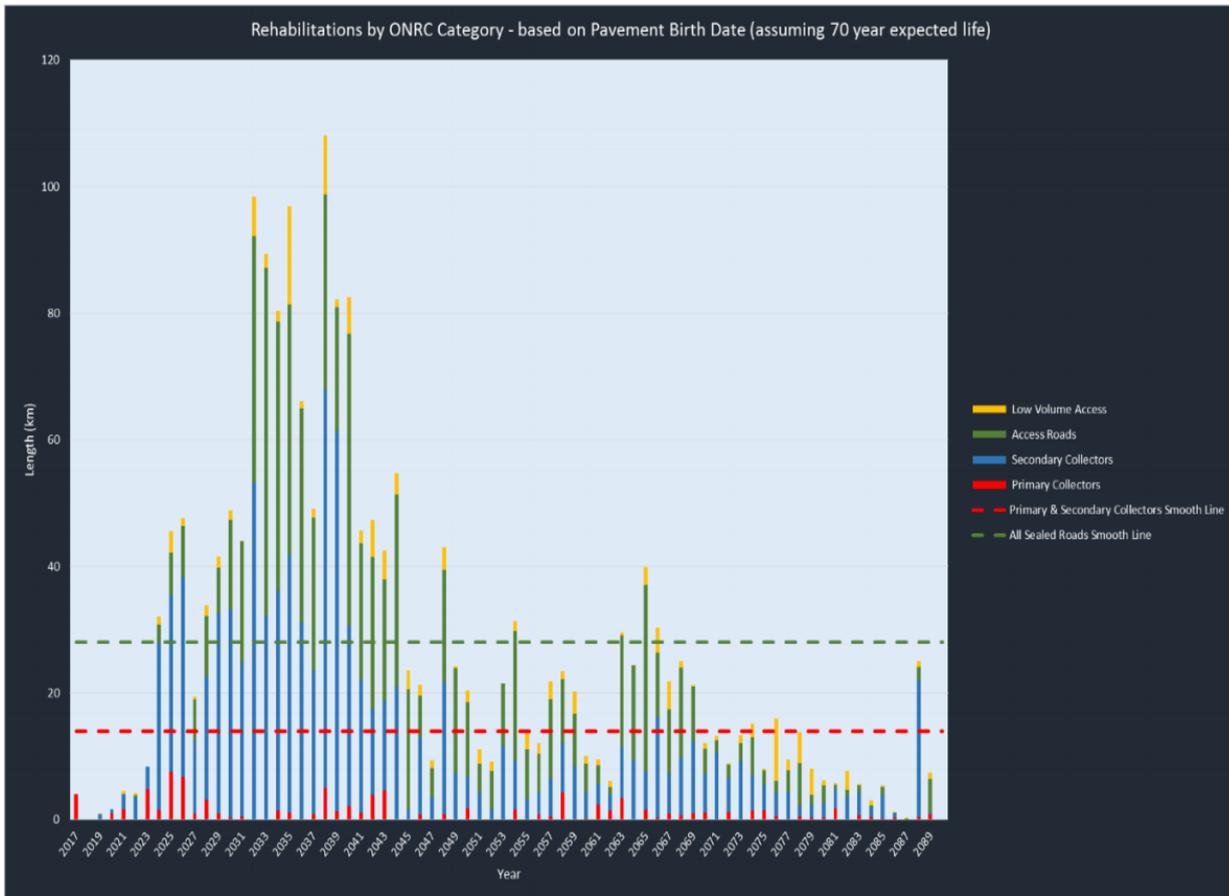
Roads and footpaths

It is estimated that both the bridge network and road rehabilitations are currently underfunded by a significant amount. Based on 2018 valuation figures, it is projected that the programme of bridge replacements requires investment of approximately \$35M over the next 10 years. The 2018-2028 LTP has a funding commitment of approximately \$14M. The following graph provides an indication of the renewals profile. It is important to note that the LTP 2031 seeks to smooth the funding requirement to resolve the renewals funding shortfall. The Roads and Footpaths Activity Management Plan provides context as to the strategy for prioritising the programme of replacements to ensure efficiency of ongoing network operations.



In relation to the programme of rehabilitations, the 2018-2028 LTP established an approach of focussing on the 20% of roads that carry approximately 80% of the traffic volumes (primary and secondary collectors). In the next ten years through the LTP 2031, Council are continuing to focus on the higher volume roads and are planning to rebuild all of the programmed primary and secondary collector roads – 168 km in total. This represents a significant increase from current annual pavement rehabilitation funding of approximately \$3.5M in 2020/2021, to \$18.9M in 2030/2031. The following graph illustrates the renewals profile for Council’s sealed pavement network.

Figure 10: Renewals profile for sealed pavement network



The scale of the network is an issue, in conjunction with the revenue currently generated to maintain the network. In the long-term, it is considered that there is a sustainability issue for the network. Options to close this gap include rationalisation, a reduction in LoS, or an increase in revenue generation.

It is anticipated that climate change will introduce a number of issues over time. These issues will predominantly be associated with increased rainfall intensity. This is likely to cause capacity issues for culverts and other drainage assets, extensive surface flooding, erosion and increased reactive maintenance costs.

Three Waters

Strategic issues and priorities for Three Waters activities include:

Ageing infrastructure and the risks associated with delaying replacements at end of life. Council has included a more extensive renewals programme through the LTP 2031 and beyond. An example is the planned accelerated replacement of all asbestos pipework within water supply networks utilising Three Waters stimulus funding from central government

Over the medium to long term, Council will need to be more proactive in considering the implications of climate change on both communities and infrastructure. For Three Waters activities, this is likely to be related to issues of resilience during more prolonged drought, or intense rainfall periods

- ongoing compliance with increasing requirements of regional and national regulations and legislation. In particular this relates to Environment Southland's proposed People, Water and Land Plan, the Water Services Bill and Taumata Arowai. These new frameworks will pose challenges for our water supply, wastewater and storm water networks. Opex and capex budgets have been increased over the LTP 2031 period and beyond in order to respond to this

- funding and affordability of Three Waters service delivery is anticipated to continue to increase over the coming years, given the implications of the issues outlined above. The extent of this challenge will largely be determined by the upcoming changes to the regulatory and service delivery frameworks
- improving asset data knowledge is a high priority in ensuring effective and efficient Three Waters delivery and management. The focus is on critical assets. This is a challenge and a priority for all of Council's Three Waters networks.
- understanding the implications of the proposed service delivery and regulatory reforms in relation to not only Three Waters, but also all other Council services. At this stage there are a number of unknowns as the details of the reforms are yet to be finalised and communicated to local government.

Waste services

The most important issues affecting this service over the upcoming ten year period are:

- gaining an understanding of the global recyclables market and how best New Zealand as a whole should adapt to best deal with any changes. This will likely require more reliance on on-shore processing and sale of recyclables as well as legislating certain products out of the marketplace, for example lower grade plastics
- the need to identify a long term solution for recycling. This is likely to require a change to the service and a need to consider a more regional collaborative approach potential across a number of regions
- the need to secure future long term contracts for rubbish and recycling services, noting the likely move to more standardised collections both in terms of recycling to be collected as well as how these should be presented
- management of contamination of collected product to maximise returns and avoid sending to landfill
- the need to achieve targets for waste minimisation and diversion of material from landfill to minimise the impact of any increase in the landfill levy
- the potential need for glass to be separated from other recyclables should wider regional collaboration become viable, or government mandated
- the need to investigate, monitor and identify any required remedial works for retired landfills in Council ownership.

Community services

There have been recent amendments to the responsibilities for landlords. It is important that Council keeps pace with these responsibilities in relation to its community housing stock and services.

Acquisition of trained staff in library services is limited in the District. Further, as socio-demographics and economics change in the District, it is important to recognise the impact this will have on Council to meet the needs of its residents in association with community housing and library services.

There are pending changes to the way in which cemeteries and interments are regulated. This will have an impact on Council's service provision in this space.

As technology changes and the way in which communities interface with library related resources and services, it is important that the Council remains reactive and agile to these changes.

Community facilities

There are a number of strategic issues and priorities associated with the community facilities activity. Some of the most pertinent issues and priorities include:

- ongoing underinvestment in Council buildings (community halls/centres, libraries, offices, toilets etc)
- seismic capacity assessments and resolution of subsequent issues. These assessments have already been undertaken for public toilets and Council offices. The next priority is libraries, community halls and other Council-owned buildings (eg sports clubs)
- strategic network assessment and prioritisation process
- as socio-demographics and economics change, the changing needs of the community and the way in which they interface with assets within this activity needs to be better understood in order to ensure that the assets and subsequent LoS are appropriate.

Open spaces

A key priority that has been identified by Council is the need to take a more strategic approach to the way that open spaces (including parks and reserves) are managed and developed. In 2019, Council staff had new minimum LoS prepared for all activities within the open spaces portfolio. These will be implemented as contracts are renewed and facilities are replaced.

In 2017 Council commissioned a report to assist with setting priorities around the work needed to improve Council's open spaces, in line with the objectives of the 2014 Open Spaces Strategy, and as a result of increased use putting pressure on existing facilities in some areas. The report identified that considerable investment in the design and improvement of facilities is required, to make Southland's public spaces attractive and to meet the expectations and needs of the increasing number of users. Compliance with relevant national standards for playgrounds in particular is a priority for the open spaces activity.

Council have been gathering asset data and developing investment criteria to make sure that the funding that has been identified in the LTP 2031 is used to satisfy the recommendations in the open spaces strategy.

SIESA

The activity is currently funded through electricity consumer fees and charges. The necessary addition of a third island-based operator in recent years due to increasing health and safety legislative standards has resulted in an operational budget deficit which is currently being funded via reserves.

A rates funding stream is proposed to be added through the LTP 2031 period in order to ensure any budget deficits are resolved and reserves are not depleted other than for renewals.

As indicated above, renewals in recent years have been minimal and relatively discretionary as funding/need dictates. It is proposed to change this approach and invest more consistently in line with depreciation rates to ensure asset and network condition and service resilience.

Water facilities

The water facilities on Stewart Island/Rakiura have struggled to get sufficient funding to undertake basic maintenance. The capital projects that have been identified rely on funding from grants or loans which means that they may or may not go ahead. There is a heavy reliance of the Stewart Island Visitor Levy to

fund work associated with water facilities on Stewart Island/Rakiura. The affordability to fund maintenance and renewals on these structures for the island community has been identified as an issue.

In recent years there has been no specific budget identified for the water structures outside Stewart Island/Raikiura and the Riverton harbour. This has been addressed in the LTP 2031.

In addition to a lack of funding, a key limitation in recent years was the lack of formal condition assessment information on which to base future maintenance and renewal requirements. As part of the development of the water facilities activity management plan, assessment of these assets has been undertaken. The condition of the majority of jetties assets (79%) are rated as good or very good condition, with a minority assessed as poor. Recommended work is outlined in the activity management plan, particularly in relation to the Ulva Island and Golden Bay jetties. A maintenance plan for boat ramps is also part of the management of this activity over the course of the LTP 2031.

Key risks

Roads and footpaths

Lack of accurate data and underinvestment in infrastructure are the top two identified risks for Southland District Council as a whole. These risks are relevant to the roads and footpaths activity. However, accurate data is less of a risk than underinvestment. A move towards improving the level of meta-data filtered through operations and maintenance contracts is a focus. Another focus is improving the quality of the handover documentation and data through the capital works programme.

It is proposed to increase the level of investment in rehabilitations and the bridge network in particular, in order to better manage the risk of underinvestment.

Other risks to the roads and footpaths activity include security of funding levels from Waka Kotahi as a major funding partner, climate change impacts, and industry resources both internally for Council and externally amongst contracting and professional services.

Three Waters

The dominant risk for this activity is the capacity of Council to respond appropriately to regulatory and service delivery reforms. The key issues and risks for Three Waters align closely with a number of key strategic risks identified at a corporate level for all of Council's activities. The most relevant ones include:

- inaccurate data leading to bad decisions/asset failure
- underinvestment in infrastructure
- infrastructure not fit for purpose to withstand climate change
- natural or biosecurity event impacts the wellbeing of the District
- health and safety controls fail to protect staff and contractor safety
- difficulty retaining or recruiting staff affects service levels
- over-commitment leads to inability to deliver agreed work programme.

The activity management plans for Three Waters activities outline options for managing these risks along with an assessment of the implications.

Waste services

New Zealand places a heavy reliance on sending collected recyclables off shore for further processing. This leaves the country very vulnerable to changes in the global market place, as initiatives such as China Sword have demonstrated. Changes to the levy on waste to landfill have been proposed with the view of increasing our resilience in this space and moving away from relying on overseas markets. However, it is noted and generally accepted that the establishment of such facilities is still a number of years away and that short term solutions will still be required. These include limiting products capable of being processed as well as sending product to landfill if it is no longer suitable for recycling. This need to establish on-shore facilities will ultimately drive the need for a more regional collaborative approach to how we manage waste into the future.

The risk posed by retired landfills within close proximity to water catchments is another key risk for waste services. Particularly given anticipated changing weather patterns and increasing rainfall intensity. As is noted elsewhere in this strategy funding to undertake investigation and monitoring needed to determine any subsequent remedial work has been included in the first three years of the LTP 2031.

Community services

There are a number of critical risks relating to Council's provision of the community services activity as follows:

- service obsolescence (keeping pace with changes)
- under-investment in supporting facilities
- limited asset data on condition and performance upon which to make sound decisions
- inability to recruit trained staff
- affordability of maintaining existing LoS
- failing to understand the changes needs of communities.

Community facilities

The following are a list of the critical risks in relation to the community facilities activity:

- ongoing deterioration of community facility assets
- further community disengagement with the activity and assets
- lack of affordability in maintaining existing LoS
- community discord in relation to proposed rationalisation and prioritisation.

Further to the above, it is important to note that the top two identified corporate risks for the organisation are the lack of accurate data to inform decision-making and the underinvestment in infrastructure. These risks are relevant to this activity.

Open spaces

There are a number of critical risks relating to Council's provision of the open spaces activity as follows:

- service obsolescence (keeping pace with changes)
- under-investment in supporting facilities

- inability to recruit trained staff
- affordability of maintaining existing LoS
- failing to understand the changes needs of communities.

SIESA

The number of consumers has remained fairly constant year on year. Given that current per kilowatt hour pricing is approximately three times the cost of electricity on the mainland, there is a concern that increases to the consumer price will risk loss of consumers and by implication a subsequent increase in price to remaining consumers.

The variability of the diesel costs is a risk. A number of assessments have been undertaken in recent years to determine whether renewable energy is feasible at current costs. To date it is not considered viable.

Resource capability and scarcity is also an issue for this activity. An expression of interest exercise and recent enquiries concluded that there is limited resource available in the market, outside of the incumbent, for the management and operation of the network. Whilst limiting the ability for competitive market pricing, this also has the potential to cause issues in coming years if the incumbent contractor opts to exit the contract or loses existing staff expertise. Given this, a recent focus has been around shoring up the services provision contract and adopting a more collaborative approach.

Water facilities

The major risks associated with Council's water facilities activity include:

- public health and safety risk associated with the condition of some water facilities
- the degree to which the facilities meet the needs of the community
- the capacity of local communities to meet the funding needs for the facilities, given the local and variable nature of the funding mechanisms.

Each of the risks identified above are addressed through the LTP 2031 through the proposed programme of investment, the planned asset data improvement and the proposed change to funding mechanisms, with district contribution introduced.

Levels of service (LoS)/ anticipated growth and demand

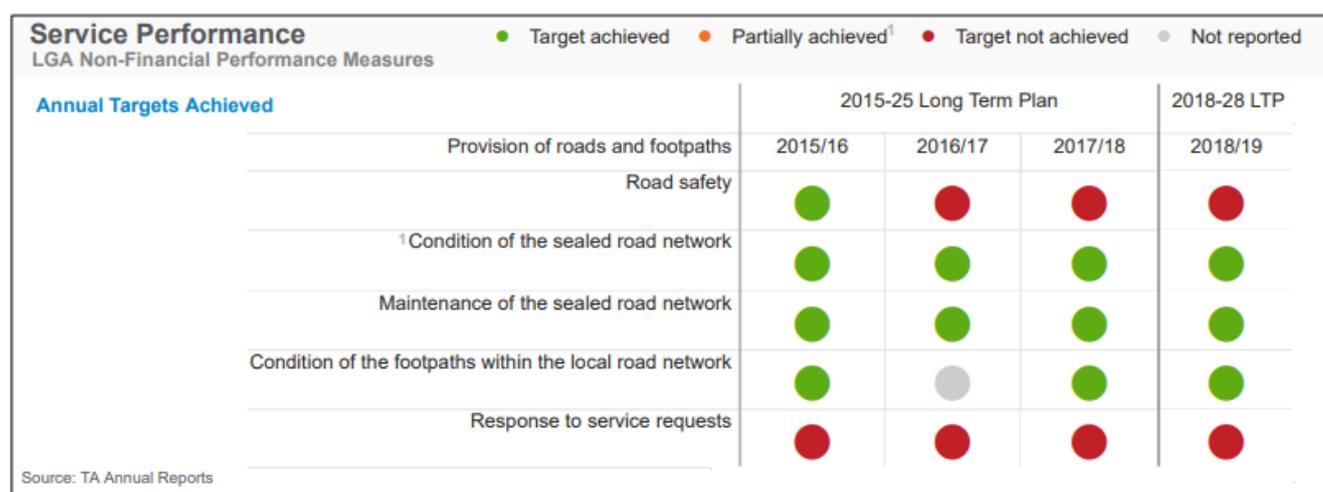
Roads and footpaths

The focus for this activity is maintaining existing LoS. However, we anticipate that a significant step change in investment will still be required to maintain existing LoS. In the future, the LoS that network users are currently accustomed to will likely need to be reduced in coming years manage the level of investment required. It will be necessary to ensure that clear communication and consultation options are provided through the long term planning processes over coming years in order to strike the right balance and agree on trade-offs with the community between cost and levels of service provision. This will likely result in a conflict between community expectations and levels of service.

Table 4: Current roads and footpaths LoS and performance

| LEVEL OF SERVICE | PERFORMANCE MEASURE | CURRENT PERFORMANCE |
|----------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------|
| Roads are fit for purpose and provide for comfortable and efficient travel | Average quality of ride on sealed local roads | Pass |
| | Percentage of sealed local road network resurfaced | Pass |
| | Percentage of customer service requests responded to within required timeframes | Fail |
| | Percentage of gravel road tests where road roughness meets acceptable standards | Pass |
| A safe roading network | Annual change in the number of fatalities and serious injury crashes | Fail |
| Footpaths are safe, well designed, and well maintained | Percentage of footpaths in reasonable or better condition | Pass |

Figure 11: Roading service performance



Water supply

Our communities expect a safe and reliable supply and that this is delivered in an efficient and effective manner with minimal environmental harm. The focus for the water supply activity is maintaining existing LoS. These are to meet the mandatory performance measure as defined by the Department of Internal Affairs (this also applies to wastewater and stormwater). There are differing service level requirements for drinking water in comparison to rural stock water systems. However, as with roading, we anticipate that a significant step change in investment will still be required to maintain existing LoS across Three Waters activities.

The KPI's demonstrate how well we are meeting LoS. The majority of the KPIs established for the water supply activity are mandatory performance measures determined by the Department of Internal Affairs. It is evident that these are likely to change in the coming years following the regulatory reforms and the establishment of the new water regulator, Taumata Arowai. Council is meeting its LoS for drinking water safety and attendance and resolution of faults. Council is performing just below the LoS set for customer satisfaction and the percentage of water lost from networked reticulated system. In addition, residents are consuming 924 litres of water per day, compared to the KPI of less than 850 litres per day. Council is increasing its investment in leak protection and renewals, to improve water loss. Water consumption is predicted to decrease as a result. Further information on how the performance is measured is presented through the activity management plan for the water supply activity.

Wastewater

The focus for the wastewater activity is maintaining existing LoS. However, we anticipate that a significant step change in investment will be required to maintain existing LoS across all Three Waters activities, given the proposed changes to both regulatory and legislative compliance obligations. As an example, Environment Southland's People, Water and Land Plan proposes an amendment in activity status for the discharge of wastewater to water, from discretionary to non-compliant. As a result of this, the cost to re-consent our wastewater treatment infrastructure has significantly increased. The Te Anau wastewater treatment system is a good example of this where the budgeted cost has effectively doubled through project development, consenting and delivery. Further, more often than not, the re-consenting process is required ahead of assets reaching the end of their useful lives.

The KPI's demonstrate how well we are meeting LoS. The majority of the KPIs established for the wastewater activity are mandatory measures determined by the regulator. It is evident that these are likely to change in the coming years following the regulatory reforms and the establishment of the new regulator, Taumata Arowai. Council is meeting all of its LoS for the wastewater network. This includes KPI's for system adequacy, response time to wastewater issues, management of environmental impacts and customer satisfaction. Further information on how the performance is measured is presented through the activity management plan for the wastewater activity.

Stormwater

The focus for stormwater is maintaining existing LoS. However, we anticipate that a significant step change in investment will still be required to maintain existing LoS, keep pace with renewal requirements and meet proposed regulatory and legislative changes. Council has recently obtained four global consents covering 17 of our 22 stormwater networks. These consents and the subsequent conditions have significantly increased the monitoring and compliance obligations across these networks. It is anticipated that a number new mandatory measures are also likely to be introduced in the coming years, following the regulatory reforms and the establishment of Taumata Arowai. Further exacerbating the issue for stormwater, is the likely impact of climate change on the ability of existing networks to cope with

increasing rainfall intensity. Climate change is likely to drive the need to reassess capacity limitations and subsequent pipe sizes as opposed to replacing like for like. While the service provision remains the same for the community, the implications for network investment has the potential to be significant. It is important to note that due to data deficiencies in association with our stormwater activity, this picture will become clearer in the first three years of the LTP 2031 with the increased investment in condition assessments and monitoring.

The Stormwater activity management plan identifies the LoS that provide the basis for management strategies and works programmes for this activity. Council is meeting all of its LoS for the stormwater network. This includes KPI's for system adequacy, response time to stormwater issues, management of environmental impacts and customer satisfaction.

Waste services

Ultimately, the community expects that waste management and recycling is a core service provided by local government. There will be a need to revisit current LoS, as it is evident that changes to this activity are likely over the coming years, due to regulatory mandates and incentives / disincentives established by central government.

Further, if there is an opportunity to look at regional collaboration in relation to recycling services, there will be a need to clean up contamination levels in our recyclables stream, in particular the removal of glass.

Service level commitments relating to diversion of recyclables from waste streams are not currently being met. Our commitment is 40%, however in recent years we have averaged only 29%. With a shrinking global recycling market there is concern that this will be further exacerbated in the short term at least.

The Solid Waste Activity Management Plan provides more detail on these anticipated changes and how the current LoS are measured and performance against targets.

Community services

This activity provides funding or facilities that enable communities and visitors to participate in a range of educational, commercial, social and cultural activities. This ultimately assists in encouraging communities to be more socially connected and active, and contributes to Southland being a desirable place to live, work and play.

Committed services levels are currently being met in relation to community services. However, as socio-demographics and economics change, Council's LoS in this space need to be revisited in order to keep pace with community needs and expectations. Further work is required in order to better understand both community needs and expectations in association with this activity, as well as acknowledging a step change in investment required based on ageing infrastructure and substandard LoS in some instances.

Community facilities

This activity enables communities to be more socially connected and active in assisting in making Southland a desirable place to be. These facilities provide a local hub where both residents and visitors can congregate to access services or engage in social activities. There are benefits to communities and the environment by reducing the likelihood of uncontained human waste impacting on the District, through the provision of toilet facilities.

Although LoS are largely being met in relation to community facilities, there will be a need to revisit current LoS, due to changing demographics and the way communities and visitors interact with these assets. Further, acknowledging a step change in investment, based on ageing infrastructure and

substandard LoS in some instances is anticipated. It is likely that this will require rationalisation and consolidation of existing assets in a bid to improve LoS in particular identified areas. Council is committed to working with its communities to better understand needs and desired outcomes.

The community facilities Activity Management Plan provides more detail on how the LoS are measured and performance against targets.

Open spaces

Open space/parkland facilities are an important part of the community network of spaces and places which both residents and visitors enjoy. LoS are largely being met. However, the outcome of the 2019 representation review change has brought a different perspective to how community boards need to look at the locally funded assets they have within their areas. There has been a shift from a localised focus to a holistic approach when planning the governance of the assets. A holistic approach requires looking at societal changes, including population, access (roading and vehicles), use, operational cost and community views. It is necessary to look at appropriate LoS that will allow the open spaces activity to provide consistency throughout each community board's area of responsibility, as well as to acknowledging a step change in investment required based on ageing infrastructure and substandard LoS in some instances.

Council has identified in its strategic assumptions that due to the aging demographic and the increased demand on existing contractors, it may be difficult to deliver some existing services using traditional service providers. An alternative to this is to use Council's internal resource to cover more isolated areas that are not attractive to the larger contractors.

SIESA

The current LoS is comparable with mainland power networks and relies on a staff of three operators. Due to the relatively few number of connections over which to distribute the cost of providing this service, Stewart Island/Rakiura consumers pay approximately three times more than mainland consumers.

Particularly in the context of the current operational contract renegotiation, there is an opportunity to scrutinise what an appropriate LoS is to the community, and balance this with the cost of providing that service. There also needs to be consideration to this question in the context of developing KPIs under a renewed contract.

Water facilities

Water infrastructure in the form of boat ramps, jetties, wharves and navigation aids enable recreational and commercial access to waterways, as well as the ability for residents and visitors to access services where the only available access is by water. The Stewart Island/Rakiura community have identified that water facilities are an extension to their roading network.

Although technically LoS are currently being met in relation to water facilities, with the intended improvement in asset data it is anticipated that LoS across the portfolio will need to be revisited in the lead up to the 2024-2034 LTP to ensure community needs are being met. Acknowledging a step change in investment required is also indicated, based on ageing infrastructure and substandard LoS in some instances.

Evidence base for core infrastructure

Council acknowledges there are limitations with its data that affect decision-making. A commitment to improving data collection and analysis is indicated below.

Table 5: Data improvements

| ACTIVITY | ASSET SYSTEMS | DATA GAPS | DATA ANALYSIS | VALUE THIS DATA PROVIDES |
|---------------------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Roading | RAMM GIS | Asset inventory and condition information for culverts Basic information is missing for culverts whereas extensive information exists for most other roading assets | Maintenance requirements and condition assessment informing-remaining life of assets | Proactive maintenance can be programmed Long term renewal requirements can be mapped out The value of these assets is a small percentage of the total roading assets but they serve an important function. Better data will allow better preventative maintenance and renewal programmes to be developed |
| | | Asset inventory and condition information for sealed pavements Extensive inventory and condition information exists now but ongoing data collection is essential | Condition information and renewal strategies | Development of more refined prediction models that aligns with the 80/20 principle and so gives a more accurate financial profile for 30 years. This will give a higher level of confidence to future long term plans |
| Water supply | IPS GIS | Underground assets condition information | Remaining life of assets | Allows for more accurate assessment of renewal profiles and the likely costs. This will help create a more accurate model for calculating depreciation. This will give a higher level of confidence to future long term plans |
| Wastewater | IPS GIS | Existing condition information is limited | | |
| Stormwater | IPS GIS | Underground assets condition information Existing condition information is only available for a small percentage of assets | Remaining life of assets and condition assessment | |

| ACTIVITY | ASSET SYSTEMS | DATA GAPS | DATA ANALYSIS | VALUE THIS DATA PROVIDES |
|---------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Waste services | Excel GIS Pathway External shared services data system | Asset inventory and condition information for local disposal site and Material Recycling Facility (externally owned but critical infrastructure) | Condition information and renewal strategies | Allows for accurate assessment and development of investment profiles |
| Community facilities Community services SIESA Open spaces Water facilities | Excel GIS Pathway | Asset inventory and condition assessment for: <ul style="list-style-type: none"> • cemeteries • Council offices and buildings • community facilities • community housing • parks and reserves including playground equipment, furniture and green assets • public conveniences • water structures | Assets assessment and identification Condition information assessment Remaining life of assets | Proactive maintenance can be programmed. Long term renewal requirements can be mapped out along with a works programme that will give a higher level of confidence to future long term plans |

Condition and performance are currently assessed through review of data in the IPS database relating to planned and reactive maintenance activities. It is intended that that IPS database integrate community facilities data by June 2021. Council also relies on local operator knowledge and experience. Age and condition data within the IPS database will be regularly updated based on best available knowledge at the time. This will result in alterations being made to asset lives within individual systems.

Depending on the criticality of the asset, when an asset is nearing its expected useful life the asset is assessed and its remaining useful life determined. A run to failure strategy is applied to low criticality assets as the consequence of failure is not major and the costs of ongoing condition monitoring may outweigh the costs of failure. A risk and condition-based strategy is applied where there are significant implications due to failure, such as a major health and safety risk, significant reliability of supply consequence or significant expense in repair.

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

Significant infrastructure issues

The task of building, operating and maintaining our infrastructure assets in an **affordable** and **sustainable** manner is becoming increasingly difficult in view of the significant infrastructure issues we are facing. Managing affordability and sustainability is extremely complex in the context of:



- the intense infrastructure challenges Council is facing
- our communities being geographically dispersed
- our low ratepayer base.

Council endeavours to always act in the best interest of the community, and as a result sustainability and affordability is at the forefront of any plan, design and operational tasks that Council undertakes in relation to the provision of assets and services.

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

Council's response to the affordability challenge will focus on critical assets and activities. Should LoS trade-offs be required due to affordability issues in future, Council will prioritise expenditure on the critical assets discussed in the strategic context section earlier in the strategy (roads and footpaths, Three Waters activities). Council will use targeted rates in order that customers who benefit pay for a service. The financial strategy will continue to reflect the balancing of ratepayer affordability against community needs and aspirations. 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 significant infrastructure issues for Council are infrastructure deficits, changing government priorities and legislation, climate change and resilience. These are discussed in detail below, as well as Council's response to them.

Infrastructure deficits

Our infrastructure has been built over multiple decades. There are a significant number of assets (including critical assets) across our suite of infrastructure that have already passed the end of their useful life, which constitute an infrastructure deficit. As infrastructure ages, reactive maintenance needs 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.

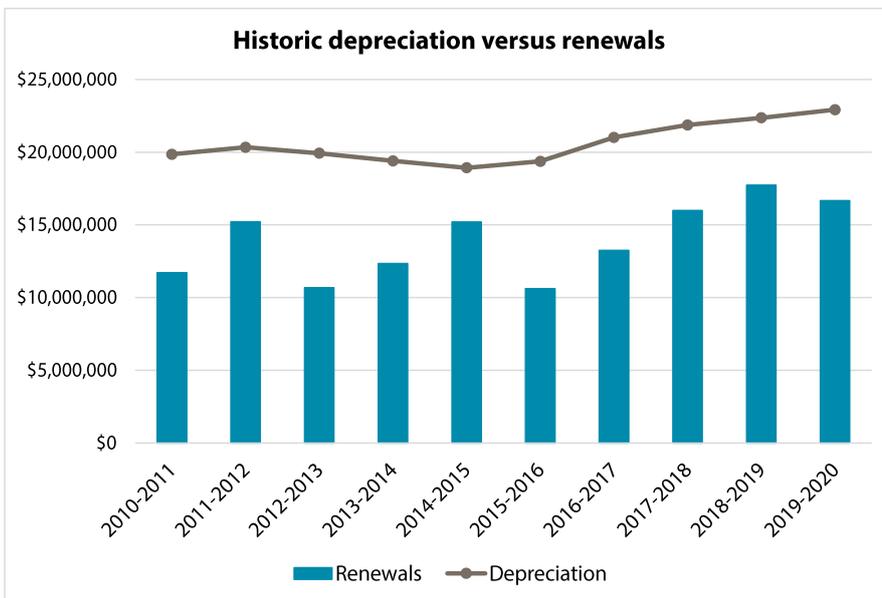
Infrastructure deficits are not isolated to ageing infrastructure, but also to infrastructure that is no longer fit for purpose. Assessing whether infrastructure is appropriate takes into account location, utilisation, changing demographics, competing priorities, and changes in the way our communities interact with infrastructure.

| ASSET | ISSUE | CONSEQUENCE | STRATEGY |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Roads | The average age of roads is increasing. | This increase will continue as more value is extracted from roads beyond their original intended value-exchange, especially low use roads that are pushed further out before renewal is justified. | It is critical to ensure that roading assets are not pushed beyond the efficiency threshold, which would mean maintaining the asset is more expensive than renewing it. |
| Bridges | The remaining lifespan of a number of wooden bridges in the District is reducing to the extent that renewal or significant structural upgrading is needed soon. | Over 10% of Council's bridging stock is posted (have weight and speed restrictions). A risk still remains from road users ignoring the restriction signs and driving overweight vehicles over the bridge which could cause catastrophic failure. | The strategy for managing the risk posed by sub-standard bridges is to impose weight and or speed restrictions so they are not subjected to unsustainable loads. |
| Reticulation assets | The age of reticulation assets is a risk because there is a deficiency of accurate inventory information. | The lack of inventory also means a lack of condition information. There is the potential for failures given the ageing condition of this asset. | Together these two factors make up the most critical asset management components for predicting remaining life and therefore planning renewals. An increased investment in reticulation assets across the Three Waters network as well as increased investment in condition assessment, particularly for stormwater. |
| Three Waters | Recent years have seen a number of reticulation failures requiring unplanned works and expenditure. Meeting current and proposed regulatory requirements. | The performance of asbestos pipes in particular is a concern, and a significant extent of this pipe type remains across our Three Waters networks. In many instances this type of pipe has not performed as well as was expected. Consequently, in some locations the expected lives are not being achieved and unplanned renewals are likely. | The water supply and wastewater assets are generally newer than the stormwater assets and the inventory and condition information is more accurate and complete for these assets. Increased investment for these assets. |
| Community facilities | Many of the Council buildings, libraries, halls, community housing and | In view of the updated detailed structural assessment legislation, it is evident that | Increase in prioritised DSA assessments of Council buildings. |

| ASSET | ISSUE | CONSEQUENCE | STRATEGY |
|-------|--------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| | playground equipment are at or nearing the end of their lifespans. | seismic performance has the potential to be an issue across the portfolio of buildings. | Allocation of appropriate maintenance budgets for these assets. |

The Southland District covers a significant geographical area and is not particularly populous. As such, there is a large portfolio of assets and infrastructure for residents to maintain across a significant number of small communities.

It is evident there has been a period of underinvestment in recent times. In terms of financial capacity to respond to the challenges in the table above, Council has only in recent years been working towards fully funding depreciation, and thereby ensuring the capacity to invest in line with asset and activity renewals requirements. Depreciation is not fully-funded in the road and footpaths and Three Waters activities, and is not funded at all in relation to other infrastructure. Renewals have not kept pace with the committed works programmes, nor have they been programmed at a volume and value that is commensurate with acceptable industry depreciation indicators in some areas. As such, it is evident that Council has effectively been consuming assets at an unsustainable level.



There is the potential for funding capacity issues to emerge in years 2031-2051 of this strategy. This is particularly the case if increased investment is required due to assets failing to reach the end of their useful lives as a result of incorrect forecasting, increased regulatory compliance requirements or the impacts of climate change.

Council’s financial strategy assumes that affordability of rates will be maintained such that median household rates sit below 5% of median household income. In 2019/2020, median rates (for Southland District and Environment Southland combined) made up 3.95% of median household income at an aggregate level. This is forecast to climb to approximately 6% by the end of the 2021-2031 LTP period.

Council has further work to do to better understand the longer term implications of its infrastructure funding requirements. Most notably, amendments to funding mechanisms, rationalisation of assets and LoS amendments might be required in order to ensure Council infrastructure is affordable over the long term.

Response to infrastructure deficits

Addressing the challenge of infrastructure deficits involves assessing the utilisation of Council's infrastructure, changing demographics, competing priorities and community needs. A balance will need to be achieved between LoS and cost, which are in competition with each other. In some cases, Council will need to engage with specific communities to ascertain the acceptable balance between providing a higher level of service and the cost of doing so.

Council will:

- closely monitor maintenance costs to show trends in failing assets as a guide to optimum renewal times
- apply a run to failure strategy to non-critical assets, as the consequence of failure is not major and the costs of ongoing condition monitoring outweigh the costs of failure
- improve condition monitoring
- study in more detail the performance of roads, including increased inspections of critical components, to be more certain about the useful lives of these assets and so manage the risk of unplanned failure or rapidly increasing maintenance costs. This will also lead to better alignment between asset management plans and depreciation models
- develop more reliable renewal programmes and improve the alignment between activity management plans and depreciation models
- drive its asset management interventions by data about the factors that determine the cost of service to our customers, including information about:
 - performance, condition and works, to understand the cost of service delivery and trends
 - forecast maintenance and renewal need and cost
 - trends in the effectiveness and efficiency of maintenance and renewal programmes.

Furthermore, there are a number of elements identified above in conjunction with Council's infrastructure deficits that also have an impact on the resilience of the infrastructure. For example, the maturity of the asset management system, including the accuracy and robustness of asset data, the condition and criticality of the assets, and the capacity and capability of the organisation and local market to deliver on commitments made. Each of these elements has been identified as areas of focus requiring improvement. Staff have been working towards incremental improvements in relation to each of these elements.

Asset management system

The organisation has commenced an asset management maturity assessment with a view to develop a prioritised asset management improvement roadmap for the short-medium term (3-5 years). Meta-data standards have been reviewed and updated, and asset registers established for community facilities and open spaces and additional modules purchased to migrate excel-based registers into our asset management system.

Delivery capacity

There has been significant focus on increasing both internal and external delivery capacity in recent years in a bid to ensure Council and the local market is well placed to respond to the increased expenditure anticipated over the next 30 years. A number of these areas include:

- changes to procurement policy with a view to increase efficiency and build capacity within the local market through work continuity confidence, larger packages for delivery and a variety of fit for purpose procurement procedures
- standardisation of contract documentation, payment terms, infrastructure design standards and asset handover documentation

- project workflow and gateway development
- programme management software system established
- establishment of an internal project management office with dedicated delivery staff
- a more robust reporting framework.

Changing government priorities and legislation

There are a number of areas that have been the subject of increasing regulatory and legislative pressures. These pressures are anticipated to grow in coming years. The resulting compliance thresholds have, and are likely to continue to, significantly impact the cost of service delivery in relation to these activities.

Water

Regulatory reform that is occurring in this space centres on the Water Services Regulator Act 2020, which establishes Taumata Arowai. Taumata Arowai will become Aotearoa's dedicated regulator of the Three Waters: drinking water, wastewater and stormwater. When implemented, this legislation will give effect to decisions to carry out system wide reforms to the regulation of drinking and source water, and targeted reforms to improve the regulation and performance of wastewater and stormwater networks. It will include consideration of future service delivery arrangements.

In addition to regulatory changes, reforms to the way Three Waters services are delivered are also proposed. A more centralised model of delivery is likely to occur during the course of this LTP 2031.

Whilst it is a key challenge that Council adapt to these substantial proposed changes, our communities will continue to need Three Waters services. This strategy presents the likely requirements of providing water services under present delivery arrangements and current/expected future regulatory settings.

The National Policy Statement (NPS) for freshwater requires that Council have an accurate inventory of existing infrastructure in order to assess where investment is necessary to ensure compliance. This NPS also affects the District Plan and will require strategic thinking across the organisation as changes will impact different activity groups (water, building, communications, etc.).

These government and industry directives signal that additional capital expenditures will need to be made to the management, operation, maintenance, monitoring and reporting of Three Waters assets and services. The focus of Council's response to these changes is to be pro-active. Council is working with central government and cross regionally to be pre-emptive and better understand the proposed changes and the impacts they may have on Council services. This is with a view to ensuring robust service delivery for our communities. Additionally, Council commits to working closely with our iwi partners as an integral part of the decision making process.

Land transport

The Government Policy Statement on Land Transport 2021 will take effect from 12 July 2021. The strategic priorities are:

- safety
- better travel options
- improving freight connections
- climate change.

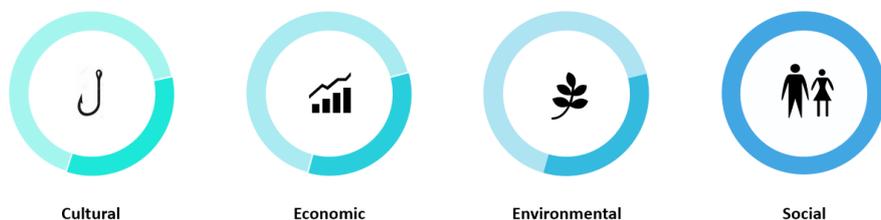
The Road to Zero Strategy 2020-2030 supports a significant and sustained improvement in road safety outcomes. Council is working with the Ministry of Transport Te Manatū Waka to implement the improvements to road safety in this strategy.

The four well-beings



The Local Government (Community Well-being) Amendment Act 2019 moved away from the previous efficient, effective and appropriate service delivery focus by restoring the four community well-beings (cultural, economic, environmental and social). Council welcomes this move as it acknowledges its broader role in looking after communities, rather than simply providing core services. The four well-beings are being integrated into Council’s procurement activities, in line with the Office of the Auditor

General (OAG), the Government Procurement Rules, and the requirements of the LGA. Council will consider, in addition to quality and whole-of-life costs, other outcomes that can be generated from procurement activities. These outcomes can be social, environmental, cultural or economic, and include costs and benefits to the District.



Council’s initial assessment of each significant infrastructure project’s contribution to the four well-beings are included in discussion of the most likely scenarios in this strategy. This assessment is subjective, and Council will further develop these contributions to the four well-beings in alignment with national guidance.

Resource Management Act 1991 (RMA)

Central government has signalled major reforms to the RMA in the proposals from the 2020 New Directions for Resource Management in New Zealand (Randerson report). Though these changes will have a significant impact on Council’s involvement in the resource management system, substantial lead time will be needed to make the transition to any new arrangements. It is appropriate that for the purposes of the LTP 2031, Council plans on the basis of the status quo.

Summary

The aggregate impact of the changes described above have the potential to significantly change the form and function of local government responsibilities in relation to what has traditionally been considered local government core infrastructure activities. Further, these changes will further exacerbate the funding capacity for these, and subsequently, all other Council activities potentially requiring a review of priorities and service levels.

Planning for climate change

The effects of climate change are likely to impact sea levels, ground water levels, rainfall and temperatures within the District, among other things. Council’s long term infrastructure planning must promote

resilience to the effects of climate change to ensure it meets the future needs of communities. Council has already brought the effects of climate change to the fore in its decision-making around infrastructure. It has contributed funding towards the LiDAR (light detection and ranging) regional mapping project, in conjunction with Environment Southland, Invercargill City Council and Gore District Council. The information produced is valuable for spatial, land use and infrastructure planning, and civil defence/emergency management. Information provided through LiDAR can better inform infrastructure decisions and could potentially save many millions of dollars in infrastructure spend in locations with high hazard exposure.

In addition to the key assumptions for the Southland region relating to climate change, the following impacts and proposed actions that specific to Council infrastructure have been identified:

| ACTIVITY | IMPACT OF CLIMATE CHANGE | PROPOSED ACTIONS |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Roading | One of the main considerations is the potential for greater damage to bridges and roads in close proximity to rivers due to flood events caused by extreme rainfall, snowfall or snowmelt runoff. The issue of management and maintenance of all coastal roads under climate change needs to be considered due to the projected increase in sea level combined with spring tides. Another consideration for roading is frost occurrence, which is projected to decrease significantly by the end of the century. However, higher temperatures may cause issues with road construction and heat damage (eg to bitumen). | Following completion of the LiDAR mapping project, surface flooding and secondary flow path modelling will be undertaken to better understand resilience investment requirements and implications for the District Plan. |
| Water supply | Demand for potable water is likely to increase as temperatures rise, together with a likely increase in urban development across the region. Climate change impact on hydrological processes associated with increased temperature, current land practices and freshwater ecological demand are likely to increase competition for access to freshwater systems and current water supply capacities (quantity and quality). | Given our assumptions associated with increased rainfall intensity and periods of drought, it will be necessary to monitor water supply sources to ensure sufficient supply capacity remains over time. |
| Stormwater and wastewater | Stormwater and wastewater systems are particularly vulnerable to climate change as the discharge points of these systems are often at the lowest elevation of populated areas. As a result, small changes in rainfall extremes (intensity or duration), can overwhelm the current design capacity of these systems. In low-lying areas where groundwater is linked to the sea, sea-level rise will affect the performance of stormwater systems and wastewater systems where infiltration occurs. Droughts will also affect the performance and maintenance of wastewater systems, through reduction of the hydraulic loading with attendant increases in concentration of bio-chemical oxygen demands. | Council will consider rainfall forecasting to ensure pipe capacity is adequate for stormwater and wastewater activities. |
| Waste | In urban areas, climate change could impact the handling of waste sludge with increased maximum | As discussed elsewhere in this strategy, Council is committed |

| ACTIVITY | IMPACT OF CLIMATE CHANGE | PROPOSED ACTIONS |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <p>temperatures combined with increase in green-waste volume (due to increase in favourable growing conditions).</p> <p>Further, the resultant increasing rainfall intensity has the potential to cause issues for closed landfills within close proximity to waterways and overland flowpaths.</p> | <p>to investigation and monitoring in association with closed landfills, with a view to implement required remedial action or resource consents as necessary.</p> |

Council will also:

- participate in the development of a regional climate model so as to base future decisions on a model commonly used across the region
- 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.

Resilience

Council customers have a high expectation of continuing functionality and service delivery. Resilience is based on a design philosophy which 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 in this regard, but there is still a significant need to increase actual preparedness, both in general terms (eg household plans and emergency supplies) and for specific circumstances (eg tsunami preparedness in coastal communities). However, resilience is not only applicable to natural hazards, but also needs consideration at an operational level where an asset failure is not necessarily a service failure.

Council has to consider managing and mitigating the risks to, and the resilience of, its infrastructure assets from natural disasters. 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 neighbour, education, access to household resilience items, etc)
- supporting community organisations
- the built environment and asset systems which are robust.

Council's forecasting assumptions have identified that the next severe earthquake on the Alpine Fault is likely to occur within the lifetime of most of us or our children. Council is assuming that no significant earthquakes, flooding, tsunami and other hazards outside of expected risk assessments will occur within the ten years covered by the LTP 2031. Under almost every climate change scenario, storms and therefore flooding will become more frequent and intense and communities will feel the effects more regularly and intensively. It is assumed that these events can be managed within current budgets. Borrowing 'headroom' to fund Council's share of a rebuild in relation to a 'maximum probable loss' scenario is provided for within the financial strategy.

Council is a member of the Local Authority Protection Programme Disaster Fund (LAPP), a cash accumulation mutual pool. Civic Financial Services is the fund's administration manager. The LAPP Fund was established in 1993, to help its New Zealand local authority members pay their share of

infrastructure replacement costs for water, sewage and other uninsurable essential services damaged by natural disaster.

The fund is designed to cover local authority owned infrastructural assets which are considered generally uninsurable. These include:

- water reticulation, treatment and storage
- sewage reticulation and treatment
- storm water drainage
- dams and canals
- flood protection schemes including stop banks
- floodgates, seawalls and harbour risks such as buoys, beacons and uninsurable foreshore lighthouses.

Roads and bridges are not covered by the fund as local authorities have access to Transfund subsidies.

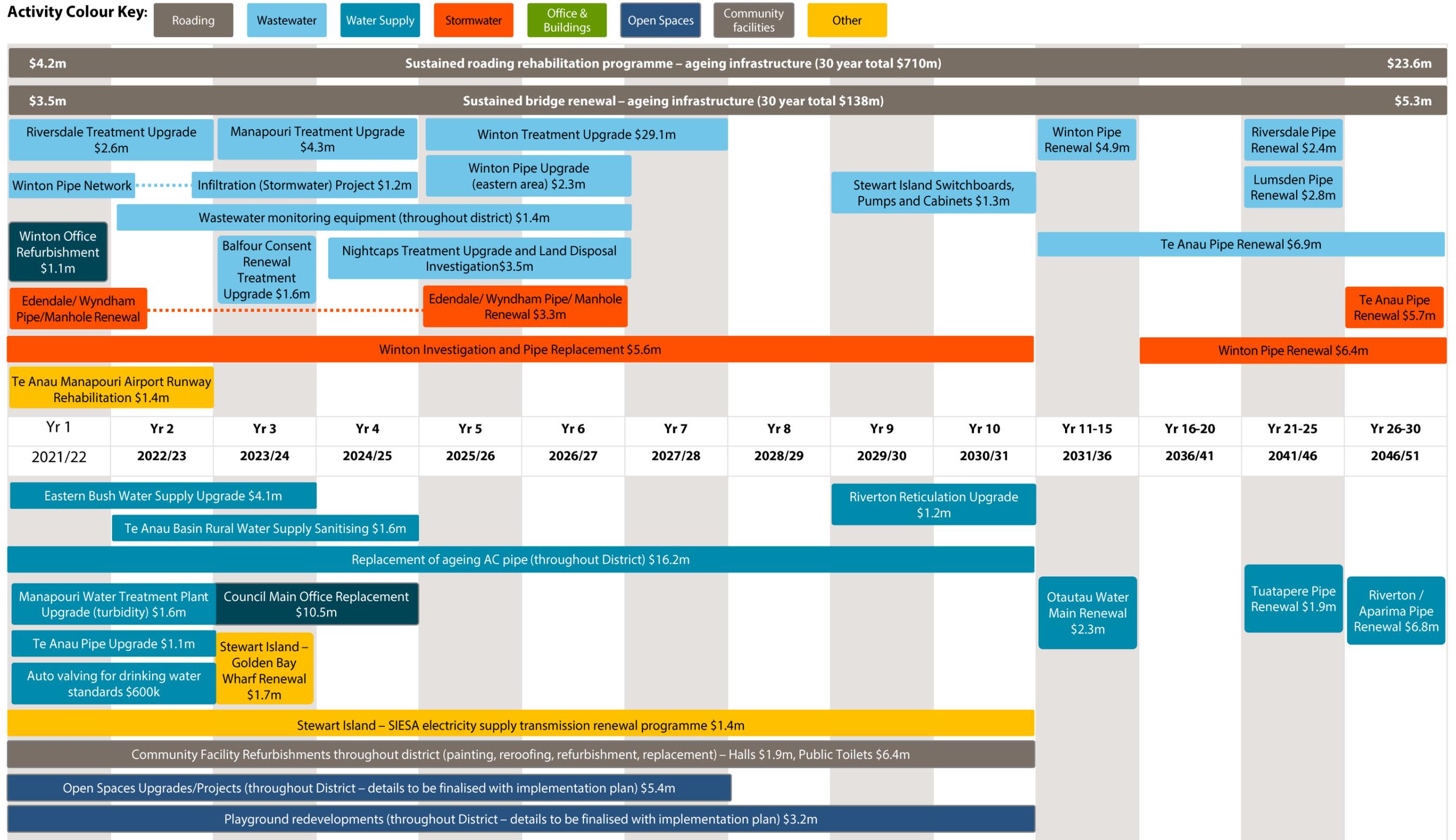
This fund is designed as catastrophe protection only, covering serious disruptive loss or damage caused by sudden events or situations which may or may not involve the declaration of a Civil Defence Emergency.

Perils include but are not necessarily limited to earthquake, storms, floods, cyclones, tornados, volcanic eruption, tsunami and other disasters of a catastrophic nature such as a major gas explosion.

Significant decisions required

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

Figure 12: Significant decisions required - 30 Year Infrastructure Strategy Project Map



How we manage our infrastructure

Our approach to activity management

Asset Management Policy

In providing services to residents and visitors through the use of infrastructural assets, Council has an Asset Management Policy. The current policy's purpose is "to provide a desired level of service (as defined by the community of Southland District) through the management of assets in the most cost effective and sustainable manner for present and future customers. Asset and activity management planning provides direction for future management of assets and activities and a robust basis for long term financial forecasts."

Council's Asset Management Policy provides direction as to the appropriate focus and level of asset management practice expected within the District.

Each activity management plan will show the gap between the existing level of asset management planning and the desired level of asset management planning. The activity management plans will contain improvement projects that when achieved will close the gap towards the desired level.

Renewals

Renewals planning involves the culmination of a number of data sets including the assessment of asset age, condition, and criticality, coupled with a rationalisation against available budgets. Asset lives are generally determined using a combination of best practice design life information, from sources such as the International Infrastructure Management Manual (IIMM) and ISO 55000, and condition data gathered from asset assessment processes. The data informing renewals planning is more mature in association with our core infrastructure (roads and footpaths and Three Waters), than it is in relation to community infrastructure. This is covered elsewhere in this strategy and in activity management plans.

Prior to undertaking renewals, an assessment of service level requirements and demand requirements is also considered.

Demand

Changes in demand in Southland have traditionally not been significant. However, there are cases of both demand increases and decreases in recent years. Some of the factors that have the potential to impact demand and subsequent capacity implications include: population numbers and demographic changes sourced from census data, tourism visitor numbers, and changes to industry make up ie business diversification or increases. Council works closely with Great South, our Regional Economic Development Agency, along with other providers in the space such as BERL, to ensure our data remains current. Further, there are monitoring mechanisms employed across our networks, such as traffic counters and flow meters tracking volumetric data that similarly record demand trajectories.

Levels of service (LoS)

Levels of service are established in conjunction with our communities through consultation processes either in isolation or as part of the Long Term Plan process. Council LoS performances are measured and reported quarterly through the corporate performance framework. Each LoS has at least one (and more often than not, additional) key performance indicators (KPIs) that enable Council to measure and track performance against specified LoS.

A number of service levels and subsequent KPIs in relation to core infrastructure are mandatory. Council adhere in these instances to local government industry requirements. However, in association with our core infrastructure, Council also seek to establish additional management levels of service to ensure useful metrics are available in determining whether community needs and expectations are being met in conjunction with commitments made.

Delivering capital programmes

The delivery of the capital works programme has been the subject of focus over recent years, particularly in light of the step-change in investment levels that Council is endeavouring to undertake. The programme has seen marked volume improvement in recent years, however further work is still required in order to ensure committed work is delivered.

Council have established and resourced an internal project management office (PMO) to build both delivery capacity and capability. In conjunction with the establishment of the PMO, Council have implemented CAMMS programme management software to track programme and project performance, provide appropriate reporting and manage project phasing. Contract management and procurement activities have been overhauled with a policy update and production of a procurement manual to better assist with efficiency in this space.

With regard to specialist areas, Council has been working closely with the market to ensure the capability is available and capacity is able to be developed through surety of works continuity. Our design and build bridge programme and Three Waters reticulation panel are good examples of this.

Lastly, concerted effort has been focused on ensuring existing delivery mechanisms are being used efficiently including existing operational contracts, in particular in relation to Council’s water and wastewater contract, and the roading alliance contracts.

Most likely scenarios

Principle options for managing issues

Section 101B(2) of the LGA states that 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, Council identified the anticipated significant infrastructure issues over the next 30 years and considered each significant action and the benefits of the action. The significant infrastructure issues faced by Council with the benefits and costs are tabled below. The preferred option for each issue are shaded, and have been provided for in the budgeted financial modelling. The time period in each table indicates the dates when the works are proposed to occur. Adoption of this strategy through the LTP 2031 is part of the decision making process for these projects.

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 |  |

Roads and footpaths

The following graph highlights the proposed overall expenditure for the roads and footpaths activity:

Figure 13: Roads and footpaths total expenditure

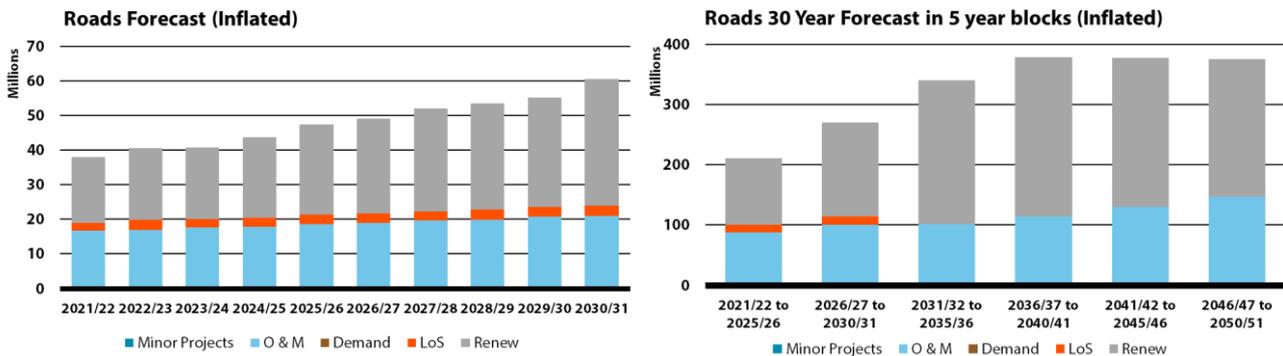
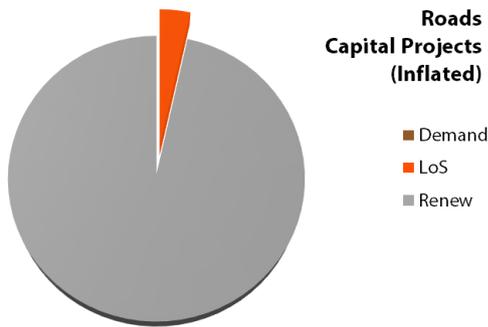


Figure 14: Drivers for roads and footpaths capital projects



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

BRIDGE NETWORK DEFICITS

There are over 161 bridges that require replacement over the next 10 years at an approximate cost of \$35M (2018 valuation). There is an increased risk to road users if the bridges are kept open but with reduced postings (weight restrictions). Unless appropriate funding is allocated to resolve this issue, a number of bridges will require closure resulting in a drop in level of service for road users.

| | | |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| Option 1 - status quo | If bridge renewal investments remain the same, the LoS will reduce and will increase the risk of bridge failure. | |
| Option 2 – increased investment | Increase the annual bridge renewal investment to \$3.5M and bridge maintenance investment to \$0.5M. This option ensures that the existing level of service is able to be retained. This option assumes that will continue to receive a 52% subsidy from Waka Kotahi NZ Transport Agency for our total roading programme. | |
| Time period | 2021 onwards | |
| Cost | \$3.5M capex in 2021 to \$4.3M in 2030/31 \$0.5M - \$0.6M/annually opex from 2021 | \$ 30.0M (inflated) over 10 years |

Project Contribution to the Four Well Beings



Cultural
The transport system ensures communities are connected and desirable



Economic
Providing 24/7 access for 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

SEALED ROAD MANAGEMENT

Ageing pavements along with increasing numbers of seal layers will prove to be a challenge to maintain existing LoS. Much of Council's pavement is expected to reach the end of its useful life at roughly the same time due to being constructed between the mid-1950's and 1970's. Some pavement is going to require rehabilitation early due to the number of seal layers leading to seal layer instability (6+ layers). Seven seal layers pavements are expected to reach a 65 year life (30km/p/a ≈ \$12M p/a). \Six seal layers - 58 year life (≈ 30km/p/a ≈ \$14M p/a).

| | | |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
| Option 1 - status quo | If sealed road management investments remain the same, the LoS will reduce and will increase the risk of failure. Some roads may have to revert to gravel if no additional investment is carried out. | |
| Option 2 – increased investment | Steadily increase the annual sealed road rehabilitation investment over the first 10 years of the strategy from \$4.2M in 2021/2022, to \$18.9M by 2030/2031 at which point this number is proposed to be smoothed to an extent for the remaining period of the strategy. The risk of not responding proactively to the known underinvestment is moderate (short term) to high (longer term) for the transport activity. This risk will continue to increase over the next LTP period unless there is a significant increase in investment now, or a lower LoS is agreed. This option assumes that will continue to receive a 52% subsidy from Waka Kotahi NZ Transport Agency for our total roading programme. | |
| Time period | 2021 onwards | |
| Cost | Steady increases from \$4.2M in 2021/22 to \$18.9M/annum by 2031 \$3M to \$4M per annum opex | \$ 138M (inflated over LTP 2021-2031) |

Project Contribution to the Four Well Beings



Cultural
The transport system ensures communities are connected and desirable



Economic
Providing 24/7 access for 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

TE ANAU MANAPOURI AIRPORT – BALANCING STRATEGIC IMPORTANCE WITH AFFORDABILITY

The majority of airport operational expenditure is funded from rates that are levied at the community level rather than District level. This is supplemented with fees from airport operations. The airport currently complies with Part 139 of the NZ Civil Aviation rules. Removal of this certification would result in scheduled aircraft over 3500kg being unable to use this airport. Without change, the burden on local ratepayers may outweigh the strategic benefit to the local community. Furthermore, maintenance demands will place increasing pressure on operational budget unless pavement interventions are implemented on the airport runway.

| | | |
|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| Option 1 – status quo | The operational and capital works budgets remains largely unchanged. This option risks inadequate funding for maintaining the facility to a minimum standard and likely results in Part 139 certification non-compliance. | |
| Option 2 – moderate increase to capex budgets | Further investment to maintain the existing LoS including the runway and retention of the Part 139 certification. | |
| Option 3 – further focus investigation | <p>Invest in better understanding the following:</p> <ul style="list-style-type: none"> • the strategic benefits of the airport for the Te Anau basin and wider District • ongoing asset management investment requirements for the facility • maintenance of the Part 139 certification <p>This option is expected to result in a better informed decision-making environment as to the next steps associated with this facility.</p> | |
| Time period | 2021-2023 | |
| Cost | The proposed option involves approximately \$1.4M of capex investment over the next 3 years. | \$1.4M (inflated) |

Project Contribution to the Four Well Beings



Cultural
The transport system ensures communities are connected and desirable



Economic
Providing 24/7 access for 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

Water supply

The following graph highlights the proposed overall expenditure for the water supply activity:

Figure 15: Water supply total expenditure

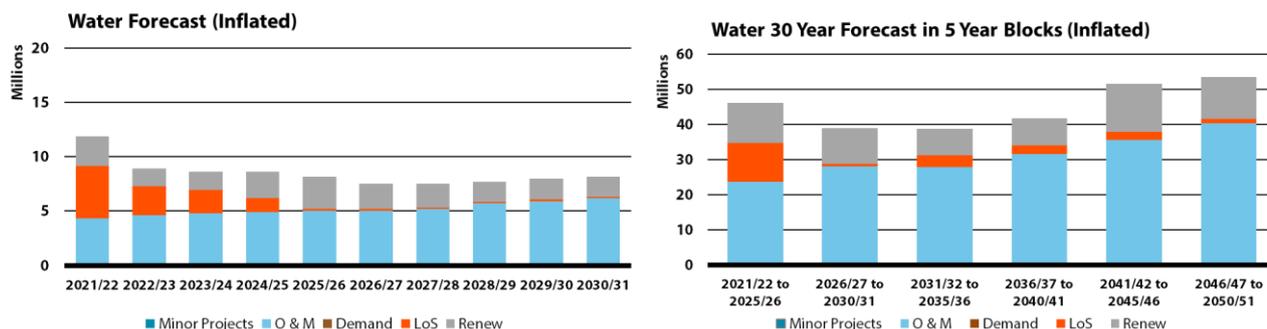
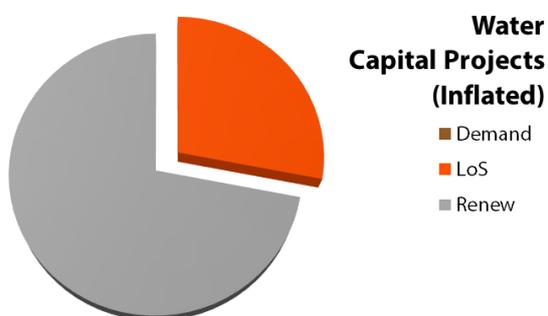


Figure 16: Drivers for water supply capital projects



Factors driving an increase in operational expenditure include:

- new operations and maintenance contract will be in place mid 2022
- increased condition assessment programme
- increase in depreciation funding
- change to the way that corporate costs related to the Three Waters and Waste Services have been allocated compared to prior years.

Factors driving increases in capital expenditure include:

- improvement to rural water supplies
- improved protozoal compliance and resilience
- accelerated renewals programme
- increased resilience in relation to data capture.

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

CHANGING DEMOGRAPHICS AND TOURISM IMPACTING DEMAND

It is assumed that changing demographics, population growth and increased tourism will increase the demand requirements for the water supply networks in some parts of the District. An example of this to date is the Te Anau water supply scheme.

The Te Anau water supply is operating at full capacity at peak times of the year. A reduced LoS is likely during high demand period if this issue is not addressed.

| | |
|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | |
| Option 1 - status quo | In an effort to maintain existing agreed LoS the assets will be ‘sweated’ beyond end of life. This will result in increased supply interruptions and maintenance. If assets are not maintained there will be a significant reduction in LoS. |
| Option 2 – Optimum service delivery to match demand | Maintain existing supply and reticulation capacity noting this is anticipated to meet future demand. This will ensure continuity of existing service level commitments. |
| Option 3 – Increased investment | Extension of the treatment and reticulated network to rural parts of the District. This is an increase in existing service levels and will significantly increase both the capital and maintenance commitments for the activity. |
| Time period | 2021 onwards |
| Cost | This will change proportionally, depending on where the project occurs and the detailed analysis to determine capacity 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

ENVIRONMENTAL STANDARDS, RESOURCE CONSENTS AND LAND USE

Changes to the regulatory and delivery environment for Three Waters activities brought about by the national Three Waters review currently underway is likely to result in significant additional costs to both operational and capital works.

These changes have the potential to affect the scope of supplies under Council mandate, the treatment and supply requirements, and increased complexity in terms of compliance.

Though the extent and timing associated with these changes is not yet clear, it is assumed that these changes will start to have an immediate impact to the way in which Council is required to manage these networks.

| Main options | Implication of options |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Option 1 - status quo | Manage response to changing regulatory environment within current investment levels. Involves significant risk of failure to meet LoS due to increased public health and environmental standards, as well as climate change stress on the system. There is concern that this approach would result in ongoing compliance issues with the national regulator ultimately jeopardising Council's mandate to provide these services. |
| Option 2 – increased investment | Increase resource and investment over 10 years to continue to deliver the agreed LoS while meeting new regulatory requirements. Additional resource and investment will determine adequacy of LoS provision. Affordability and availability of additional resource may continue to pose an issue for Council as markets seek to bolster their resources in this area. |
| Time period | 2021 onwards |
| Cost | Significant impact, but extent is unknown at the time of writing this strategy |

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

RETICULATION RENEWALS

A significant amount of water supply reticulation across the District is nearing the end of its useful life. In some areas, pipework has been subject to earlier than anticipated failures. Further, it is evident that there are reasonably significant water losses in some areas of the District.

| Main options | Implication of options | |
|---------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| Option 1 - status quo | Continue to work through the current renewal programme assuming design lives are able to be achieved. There is a risk that this approach will result in increased supply interruptions and maintenance costs. Knowing what we know regarding design vs actual lives and water loss data from our networks, this option is effectively accepting a reduction in LoS over the long term. | |
| Option 2 – Optimum service delivery to maintain LoS | Minor acceleration of remaining asbestos cement pipes renewal over the first 20 years of the strategy, ramping up initially from an estimated \$1M capex per year to an estimated \$3M in later years. As reticulation continues to fail at an accelerated rate, an increase in maintenance cost is also anticipated. | |
| Option 3 – Accelerated renewal programme to reduce likelihood of failures | This option involves the inverse of option 2 whereby a more aggressive renewals programme is undertaken in the first 10 years with a reduction over the second 10-year period. This option would reduce the risk of failures and potentially reduce the reticulation maintenance cost over the entire 20-year period. | |
| Time period | 2021 to 2041 | |
| Cost | \$1.4M/annum on average over a 20 year period | \$ 29M (inflated) |

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

Wastewater

The following graph highlights the proposed overall expenditure for the wastewater activity:

Figure 17: Wastewater total expenditure

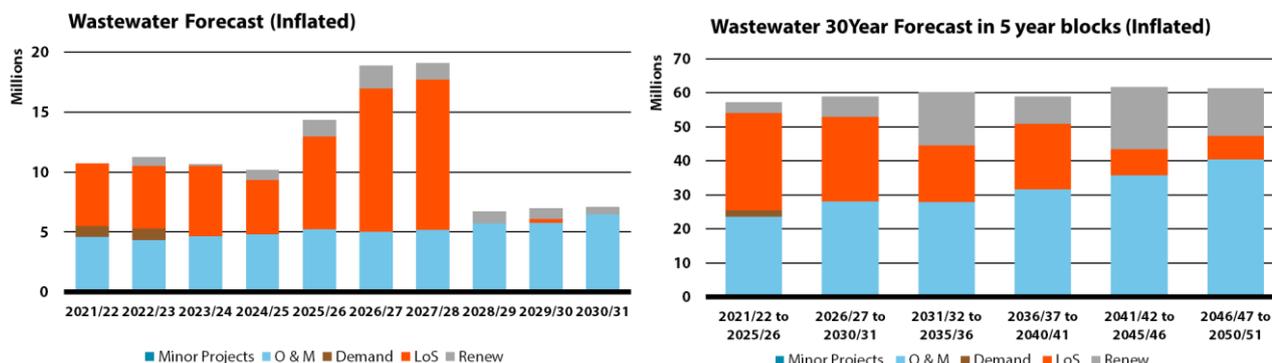
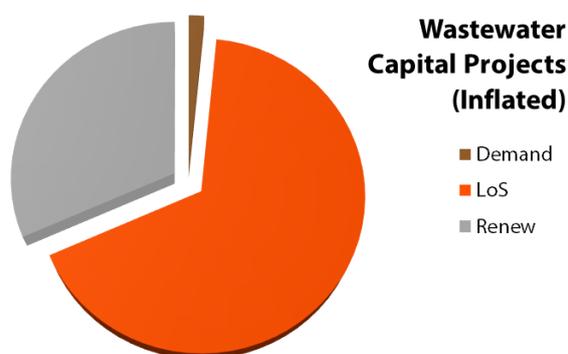


Figure 18: Drivers for wastewater capital projects



Factors driving an increase in operational expenditure include:

- a new operations and maintenance contract will be in place mid 2022
- increased condition assessment programme
- increase in depreciation funding
- change to the way that corporate costs related to the Three Waters and Waste Services have been allocated compared to prior years.

Factors driving increases in capital expenditure include:

- significant upgrades of wastewater treatment given regulatory changes
- accelerated renewals programme.

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

WASTEWATER ENVIRONMENTAL STANDARDS, RESOURCE CONSENTS AND LAND USE

There is increased focus from central government and local regulatory authorities on the sensible, sustainable management of water. It is assumed that there will be changes to both the regulatory and delivery mechanisms for Three Waters over the coming years. As an example, the proposed Land and Water Plan for Southland proposes that discharge of wastewater to water is no longer an acceptable practice. Most of Council's wastewater treatment plants discharge to water and will require new consents over the next 15 years. This will necessitate alternative treatment and discharge technologies at wastewater treatment plants.

| Main options | Implication of options |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Option 1 - status quo | Manage response within current investment levels. This will result in continued non-compliance of environmental standards. |
| Option 2 – increased investment | Increased budgets to meet anticipated investment in line with revised regulatory framework. |
| Time period | 2021 onwards. |
| Cost | Significant impact, but full cost extent is unknown at the time of writing this strategy. Current approach is to increase budgets for upcoming treatment plant consents and renewals at end of consenting period through the 2021-2031 LTP. |

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

Stormwater

The following graph highlights the proposed overall expenditure for the stormwater activity:

Figure 19: Stormwater total expenditure

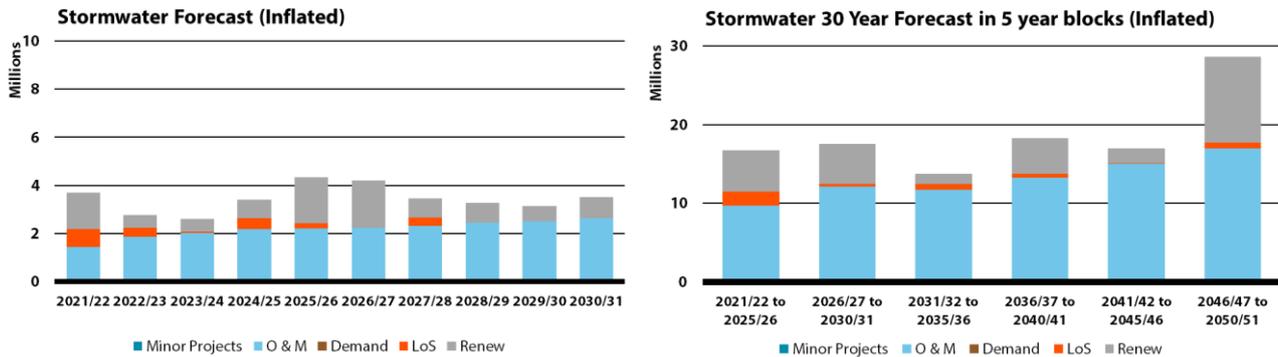
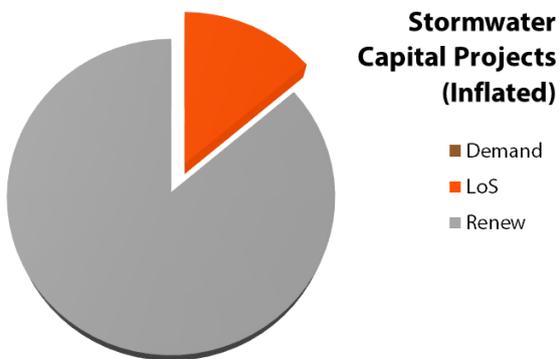


Figure 20: Drivers for stormwater capital projects



Factors driving an increase in operational expenditure include:

- new operations and maintenance arrangements increased budgets
- increased condition assessment programme
- increased costs for compliance and audits of consented sites
- change to the way that corporate costs related to the Three Waters and Waste Services have been allocated compared to prior years.

Factors driving increases in capital expenditure include:

- improvements to discharges not meeting consent compliance conditions
- overdue renewals programme.

STORMWATER REGULATORY FRAMEWORK

There is increased focus from central government on the sensible, sustainable management of water with a National Environment Standard (NES) associated with discharges from wastewater and stormwater networks currently being developed. Further to this, 17 towns across the District now have stormwater consents that involve the introduction of extensive sampling and monitoring requirements. Council will need to undertake further investigation to understand the impact on budgets moving forward. However, the assumption is that in order for councils to remain compliant with the tightening regulatory environment, it will be necessary to increase investment in this area.

| Main options | Implication of options | |
|---------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| Option 1 - status quo | Manage response within current investment levels. This will result in continued non-compliance of environmental standards. | |
| Option 2 – staged increase in investment to address identified issues | Increasing condition survey and sampling programmes to determine remaining life of assets, capital investment requirements in future years and subsequent prioritisation. Non-compliances are still expected over the short-medium term. | |
| Option 3 – Aggressive increase in investment to address identified issues | Aggressive increase in condition survey and sampling programmes to determine remaining life of assets, capital investment requirements and subsequent prioritisation. Aggressive increase in capital investment to address identified / expected shortfalls. Minimal non-compliances expected moving forward. | |
| Time period | 2025 -onwards | |
| Cost | \$0.6M-2.3M /annum capex \$0.4M to \$1Mannum opex | \$ 20.8M (inflated) |

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

STORMWATER / WASTEWATER RETICULATION RENEWALS

Reticulation across the District is ageing and in some instances is past useful life. In addition, we are seeing an increase in flooding events across the District and rainfall intensity increases.

| Main options | Implication of options | |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| Option 1 - status quo | <p>Continue to work through current renewal programme. In an effort to maintain existing agreed LoS the assets will be ‘sweated’ beyond end of life. This will result in an increased supply interruptions and maintenance. If assets are not maintained there will be a significant reduction in LoS</p> <p>Manage response within current investment levels. This will result in continued non-compliance of environmental standards</p> | |
| Option 2 increased investment | <p>Increased condition survey assessment of underground infrastructure to determine remaining life of assets and develop prioritised programmes of work.</p> <p>Increased capital investment on both the stormwater and wastewater networks and treatment systems to keep pace with end of life renewals.</p> | |
| Time period | 2021 to 2041 | |
| Cost | \$0.6M-2.3M /annum capex \$0.4M - \$1M/annum opex | \$ 20.8M (inflated) |

Project Contribution to the Four Well Beings



Cultural
Our water services acknowledge and considers the cultural values



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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

Waste services

The following graph highlights the proposed overall expenditure for the waste services activity.

Figure 21: Waste services total expenditure

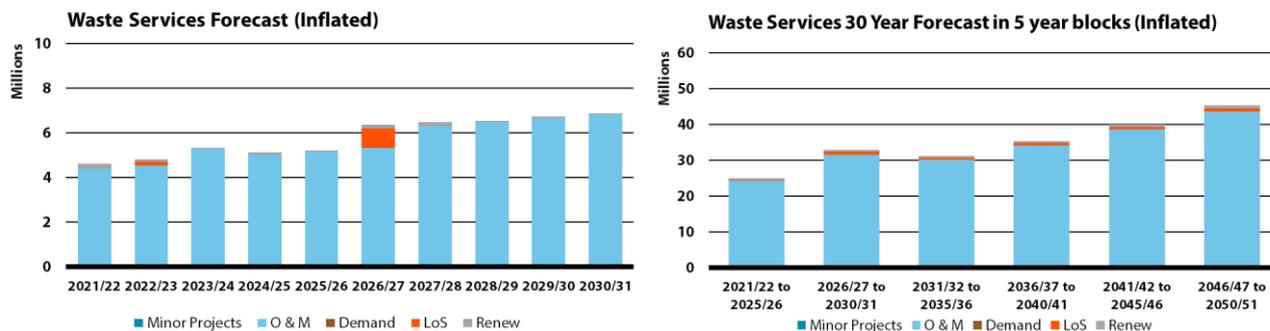
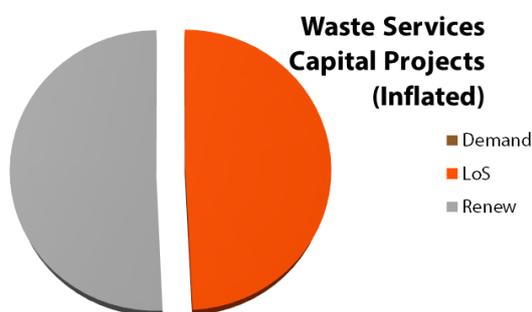


Figure 22: Drivers for waste services capital projects



Key factors impacting on operational expenditure over the period of the plan are listed as follows:

- inclusion of funding for management of closed landfill sites identified as vulnerable to erosion and washout
- new collection contract will likely result in an increase in contract price
- changes to services provided including provision of separate glass collection
- stepped increase in national waste levy for landfills from \$10 per tonne to \$60 per tonne
- increased external consultancy costs to manage resource consenting activities across closed landfills
- change to the way that corporate costs related to the Three Waters and Waste Services have been allocated compared to prior years.

Key factors impacting on capital expenditure over the period of the plan are listed as follows:

- requirement to purchase additional bins for separate glass collection
- incremental purchase of new bins for future rubbish and recycling collection
- improved LoS at community disposal sites

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

CLOSED LANDFILLS

Climate change is anticipated to progressively impact low lying coastal areas, affecting ecology and settlements. Further, increased intensity and frequency of significant rainfall events is expected. Given that there are a number of retired landfills within close proximity of waterways this introduces and elevates a risk associated with these landfills and their vulnerability to erosion and exposure. The Ministry for the Environment has commissioned a national survey to understand the scale of the issue across the country.

| Main options | Implication of options |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Option 1 - status quo | Manage response within current investment levels. Participate in Ministry for the Environment work and wait for outcome and guidance. |
| Option 2 – Increased investment | Increase investment and consider options for dealing with landfills in flood-prone areas and subject to coastal erosion. This will require significant investment to deal with at risk landfill sites. This could involve a range of options including reinforcement through to removal of at risk material. |
| Time period | 2023 onwards |
| Cost | \$0.5M in 23/24 for the investigation. Remedial costs if any are not known at time of writing this strategy. |

Project Contribution to the Four Well Beings



Cultural
Our waste services acknowledge and considers the cultural values



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



Environmental
Our waste services support the sustainable use of natural resources



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

VOLATILITY OF GLOBAL RECYCLING MARKETS

From 2016/17 onwards there has been some significant changes to the global recycling markets that are now starting to impact on the services we deliver. Many countries are now refusing to accept lower grade plastics and fibre with these now potentially being sent to landfill. In addition, there are moves to remove glass from the recyclables stream and have a separate glass only collection service. It is assumed that Council will continue to provide this service.

| Main options | Implication of options |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Option 1 - status quo | We are currently reviewing options to continue providing a recyclables service however it is recognised that long term landfilling of recyclable material is not an option and will not meet our obligations under the Waste Minimisation Act 2008. |
| Option 2 – Increased investment | Future provision of service is likely to incur costs both for the provision of a glass only collection service but also for a Council share in the development of a new material recovery facility (MRF) processing facility and associated infrastructure. |
| Time period | 2021 onwards |
| Cost | This has the potential to have a significant impact, but extent is unknown at the time of writing this strategy |

Project Contribution to the Four Well Beings



Cultural
Our waste services acknowledge and considers the cultural values



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



Environmental
Our waste services support the sustainable use of natural resources



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

Community services

The following graph highlights the proposed overall expenditure for the community services activity.

Figure 23: Community services total expenditure

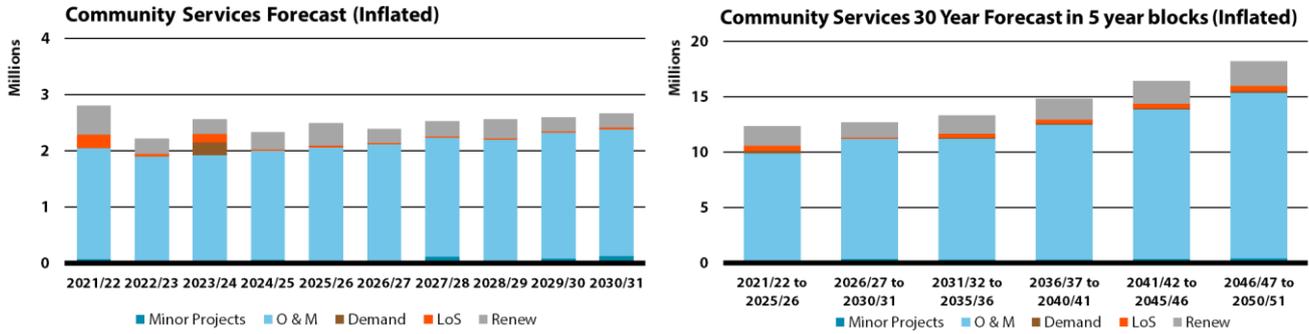
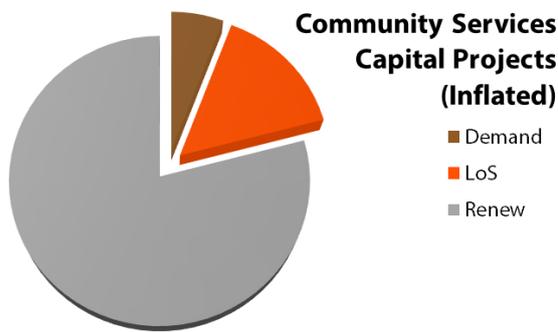


Figure 24: Drivers for community services capital projects



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

COMMUNITY HOUSING

Community housing units are suffering from a lack of investment in refurbishments. Further, this activity has morphed over time to incorporate elements of pensioner housing, social housing and community housing. With changing demographics and an aging population it is necessary to revisit community needs and subsequently the future for the community housing activity.

| Main options | Implication of options |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Option 1 - status quo | Manage community housing at current investment levels. Existing units may not be able to meet increased demand. Reduced LoS are likely. |
| Option 2 – complete a business case | Complete a business case to determine the future commitment or otherwise to community housing including the financial implications of retaining this activity and investing in a programme of renewals and refurbishments. |
| Time period | 2021 onwards |
| Cost | Investment requirements for this activity are to be determined through the development of the business case. \$50k has been allowed in 2021 to complete the business case. |

Project Contribution to the Four Well Beings



Cultural
Provide facilities to connect, socialise, learn skills and participate in cultural events.



Economic
Facilities are fit for purpose, affordable and contribute to development in the District



Environmental
Support the sustainable use of natural resources



Social
Provide facilities to participate in social, recreational, educational, health programmes

Community facilities and open spaces

These activities enable communities to be more socially connected and active, and makes Southland a desirable place to live. These activities encourage social connectivity.

The following graph highlights the proposed overall expenditure for the community facilities activity.

Figure 25: Community facilities total expenditure

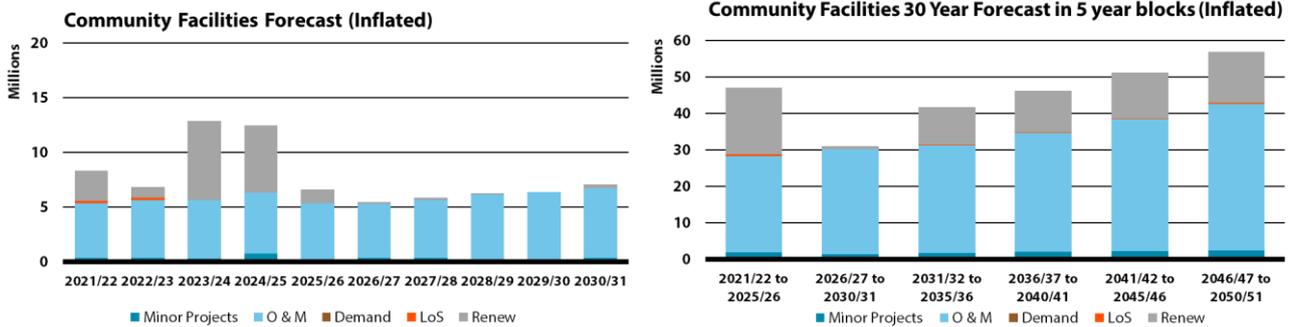
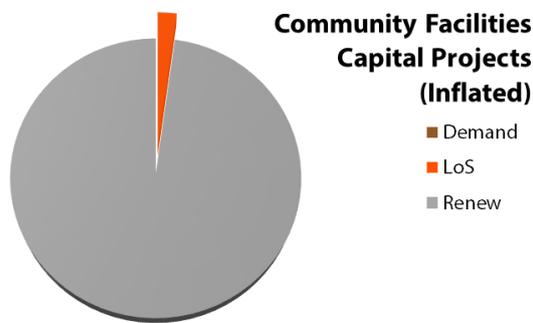


Figure 26: Drivers for community facilities capital projects



The following graph highlights the proposed overall expenditure for the open spaces activity.

Figure 27: Open spaces total expenditure

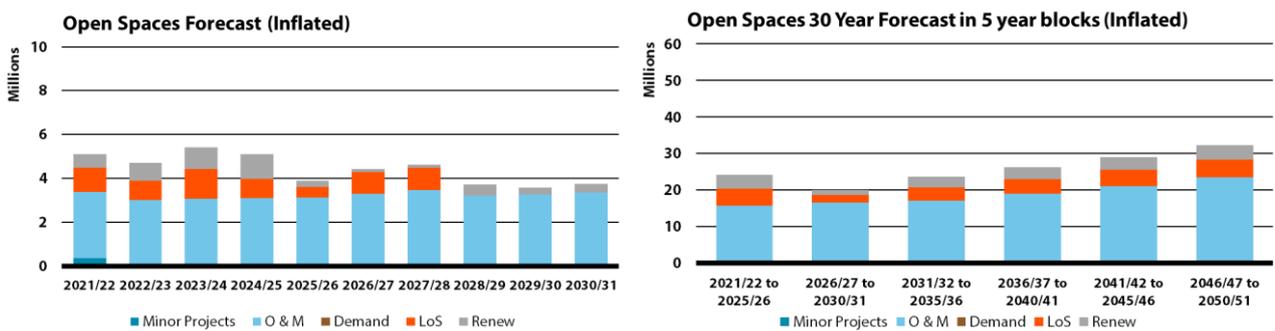


Figure 28: Drivers for open spaces capital projects



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

| ASSET UTILISATION AND ACTIVITY LEVELS OF SERVICE | | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| <p>There are a significant number of community facilities and open spaces assets throughout the District. Some of these assets are not being well utilised and it is evident that there are inconsistent LoS. With the passage of time, the needs of communities have changed and the way in which communities interact with services and assets has also changed.</p> <p>Disestablishing, or changing a community asset or level of service is not something to be done lightly.</p> | | | | | |
| Main options | Implication of options | | | | |
| Option 1 - status quo | Manage response with current investment levels. Changing demographics dictate that the way in which communities interact with services and assets. The implications of this option is that Council would not be taking the time to understand these changes trends and needs. | | | | |
| Option 2 – investigate | Investigate whether the facilities are fit for purpose, appropriately distributed and sustainable. This investigation would support any potential rationalisation process. Council will continue to maintain facilities to current standards during investigation | | | | |
| Time period | 2021-25 investigate 2023-28 consult 2025–50 construct | | | | |
| Cost | This investment profile will be determined through the investigation and subsequent consultation process and is as yet unknown. ~\$5M has been set aside in years 2021-2028 of the 2021 LTP to assist with this process. | | | | |
| Project Contribution to the Four Well Beings | | | | | |
|  | | | | | |
| <table border="0"> <tr> <td style="text-align: center; width: 25%;"> Cultural Provide facilities to connect, socialise, learn skills and participate in cultural events. </td> <td style="text-align: center; width: 25%;"> Economic Facilities are fit for purpose, affordable and contribute to development in the District </td> <td style="text-align: center; width: 25%;"> Environmental Support the sustainable use of natural resources </td> <td style="text-align: center; width: 25%;"> Social Provide facilities to participate in social, recreational, educational, health programmes </td> </tr> </table> | | Cultural Provide facilities to connect, socialise, learn skills and participate in cultural events. | Economic Facilities are fit for purpose, affordable and contribute to development in the District | Environmental Support the sustainable use of natural resources | Social Provide facilities to participate in social, recreational, educational, health programmes |
| Cultural Provide facilities to connect, socialise, learn skills and participate in cultural events. | Economic Facilities are fit for purpose, affordable and contribute to development in the District | Environmental Support the sustainable use of natural resources | Social Provide facilities to participate in social, recreational, educational, health programmes | | |

PROPERTY PORTFOLIO SEISMIC CAPACITY

Council owns and manages a significant portfolio of buildings, many of which are aging and nearing end of useful life without significant investment. In 2017, the way in which buildings are assessed for seismic performance was changed. Council's portfolio of building assets are located in areas considered either medium or low risk for seismic activity. As such, the subsequent Detailed Structural Assessment (DSA) need to be undertaken within the next 10 to 15 years respectively.

A recent DSA was completed on the Invercargill office facilities. This assessment identified significant deficiencies in the older part of the facility prompting Council to vacate these premises. There is concern that similar issues may become evident elsewhere within the portfolio.

| Main options | Implication of options |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Option 1 - status quo | Manage Council building portfolio at current investment levels. Existing public facilities may not be able to meet current recommended standards for seismic capacity ratings. Reduced LoS and closures are likely. |
| Option 2 – Dispose and lease | This option involves the transfer of maintenance and renewals costs to operational costs associated with leasing. A limiting factor in relation to this option is the availability of suitable building stock. |
| Option 3 – increased investment | This option would see an increase in prioritised DSA assessments undertaken across the portfolio of Council buildings. Subsequent investment would likely be required. |
| Time period | 2021 onwards |
| Cost | The cost of this exercise is not yet known. However, it is anticipated to be developed and communicated through the 2024 LTP. |

Project Contribution to the Four Well Beings



Cultural
Provide facilities to connect, socialise, learn skills and participate in cultural events.



Economic
Facilities are fit for purpose, affordable and contribute to development in the District



Environmental
Support the sustainable use of natural resources



Social
Provide facilities to participate in social, recreational, educational, health programmes

The following graph highlights the proposed overall expenditure for SIESA.

Figure 29: SIESA total expenditure

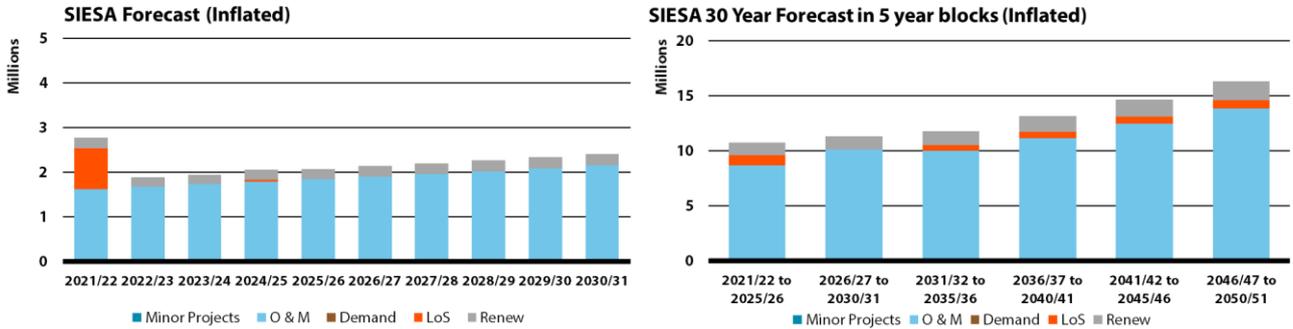
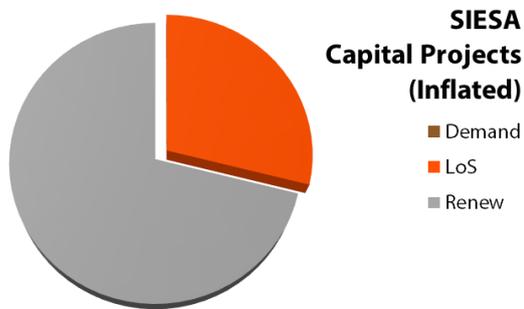


Figure 30: Drivers for SIESA capital projects



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

| FUNDING CONSTRAINTS | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>In general, the age of SIESA infrastructure assets are approaching the end of their useful life. The depreciation funding on assets is insufficient to keep pace with the renewals programme. Further there is a funding deficit of operational costs due to a significant increase when the contract was recently re-established.</p> | | | |
| Main options | Implication of options | | |
| Option 1 - Status quo | <p>Manage response to asset useful lives within current investment levels. Rely on high level assumptions around age for renewals planning. Increased reliance on reactive maintenance or unbudgeted expenditure to deal with assets that fail before their estimated life. Renewals are deferred where possible. Asset depreciation is significantly underfunded. Reserves are depleted.</p> | | |
| Option 2 –Investment | <p>Deliver an economically sound renewal program that optimally balances investment with operational expenditure including maintenance. Depreciation of transmission and conventional generation is appropriately funded. A targeted rate is proposed to increase revenue and assist with maintenance, operations and capital investment requirements.</p> | | |
| Option 3 – Thriving | <p>The renewal programme contemplates alternative generation such as wind generation at the end of its useful life, as well as the existing network and conventional generation. The depreciation of alternative generation is fully funded. This may result in an unacceptable funding burden on consumers or ratepayers.</p> | | |
| Time period | 2021 onwards | | |
| Cost | <p>\$0.2M - \$0.3M/annum Capex \$1.2M - \$1.6M /annum Opex</p> | \$16.5M (inflated total for 2021 LTP period) | |
| Project Contribution to the Four Well Beings | | | |
|  <p>Cultural Our electrical services acknowledge and considers the cultural values</p> |  <p>Economic Our electrical services are reliable, affordable and enable development in the District</p> |  <p>Environmental Our electrical services support the sustainable use of natural resources</p> |  <p>Social Our electrical services endeavours to keep our people safe and healthy</p> |

Water facilities

Water structure infrastructure like boat ramps, jetties, wharves and navigation aids enable recreational and commercial access to waterways as well as to access to services that are only available by water. This activity also supports the environment by having stop banks and marine walls which protect the environment from flooding as well as safety by having aids which improve navigation.

The following graph highlights the proposed overall expenditure for water facilities.

Figure 31: Water facilities total expenditure

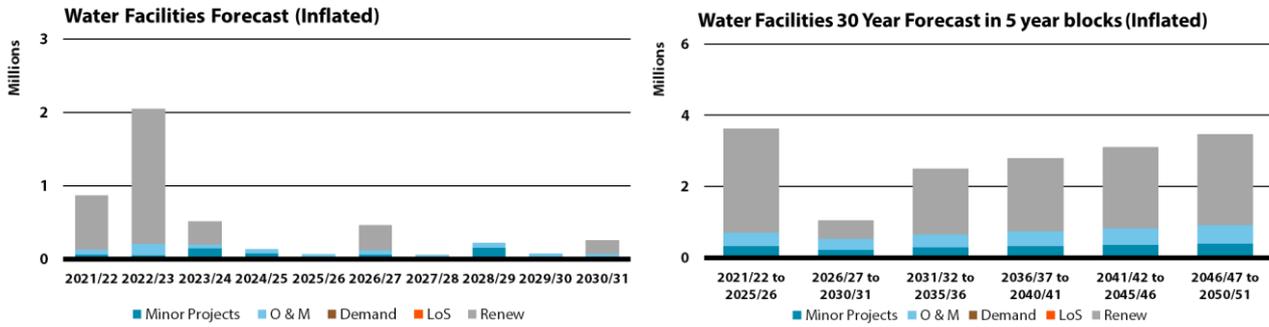
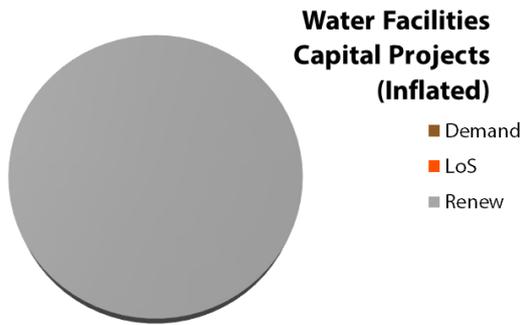


Figure 32: Drivers for water facilities capital projects



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

WATER STRUCTURES FUNDING

There are a number of water structures across the District that are nearing the end of their expected lives and no longer sustainable. With increasing pressure from visitors and insufficient funding sources, the condition of these assets risk further deterioration without appropriate investment.

| Main options | Implication of options | |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| Option 1 - status quo | Manage response with current investment levels. The growing population will impact the boat ramps in Riverton. Existing jetties on Stewart Island may not be able to meet increased demand. There is a risk that Council won't meet the identified level of service if current practices are maintained. Potential rationalization discussion to continue with the local community board as renewals fall due. A District rate contribution mechanism has been provided for through the Revenue and Financing Policy with the amount to be determined by Council once final costs are known. | |
| Option 2 – rationalise | Rationalise the assets. A negative impact on the local community's recreation and tourism industries is anticipated with this option, but this would be mitigated by an increase in affordability of rates | |
| Option 3 – divest | Divest all assets in the activity. A negative impact on the local community's recreation and tourism industries is anticipated with this option, but this would be mitigated by an increase in affordability of rates | |
| Option 4 – increase rates | Increase the funding and resources to meet the level of service using local rates | |
| Time period | 2021- 2031 | |
| Cost | \$3.4M capex (2021 LTP period) \$0.1M/annum opex average | \$ 4.4M (inflated) |

Project Contribution to the Four Well Beings



Cultural
Our water facilities acknowledge and considers the cultural values



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



Environmental
Our water facilities support the sustainable use of natural resources



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

ACROSS ALL ACTIVITIES: ASSET MANAGEMENT MATURITY

There are a number of areas requiring improvement in relation to Council’s asset management approach. These improvements are required in order to ensure LoS commitments are able to be maintained across the various activity and asset portfolios.

| Main options | Implication of options |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Option 1 - status quo | Option one involves a continuation of current asset management system deficiencies that have the potential to further hamper informed decision-making and robust investment prioritisation. Increased infrastructure deficits and substandard service levels would be expected. |
| Option 2 – Increased focus | <p>This approach requires a more proactive focus on Council’s asset management function. A review of the Asset Management Policy, the development of a Strategic Asset Management Plan and a resourced prioritised Asset Management Improvement Roadmap is critical. Asset data and system development relating to criticality, condition, utilisation and established meta-data standards would also be considered a priority.</p> <p>It is anticipated that this approach would result in a more efficient, better informed suite of services and activities that ultimately produce more resilient and fit for purpose service levels.</p> |
| Time period | 2021-2024 |
| Cost | ~\$257k \$257k (inflated) |

Project Contribution to the Four Well Beings



Cultural
Our water facilities acknowledge and considers the cultural values



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



Environmental
Our water facilities support the sustainable use of natural resources



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

Summary of significant infrastructure issues

| ACTIVITY | ISSUE # | DESCRIPTION | CAPEX INFLATED | OPEX INFLATED | YEAR |
|--------------------------------------|---------|--------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------|
| Roads and footpaths | 1 | Ageing bridges | \$3.5M- \$4.3M/annum | \$0.5M - \$0.6M/annum | 2021 onwards |
| | 2 | Sealed road management | \$4.2M - \$18.9M/annum | \$3M/annum | 2021 onwards |
| | 3 | Airport | Significant impact, but extent is unknown at the time of writing this strategy | | |
| Water | 1 | Demographics and tourism | This will change proportionally, depending on where the project occurs and the detailed analysis to determine capacity requirements. | | |
| | 2 | Environmental standards, resource consents and land use | Significant impact, but extent is unknown at the time of writing this strategy | | |
| | 3 | Reticulation renewals | \$1.4M/annum on average | | 2021 onwards |
| Stormwater and wastewater | 1 | Stormwater environmental standards, resource consents and land use | \$0.6 - \$2.3M/annum | \$0.4M- \$1M/annum | 2021 onwards |
| | 2 | Reticulation renewals | \$0.6 - \$2.3M/annum | \$0.4M- \$1M/annum | 2021 onwards |
| | 3 | Wastewater environmental standards, resource consents and land use | Significant impact, but full cost extent is unknown at the time of writing this strategy. Current approach is to increase budgets for upcoming treatment plant consents and renewals at end of consenting period through the 2021-2031 LTP. | | |
| Solid waste | 1 | Retired landfills | | \$0.5M | 2023/24 year |
| | 2 | Volatility of global recycling markets | This has the potential to have a significant impact, but extent is unknown at the time of writing this strategy | | |
| Community facilities and open spaces | 1 | Utilisation and level of service | This investment profile will be determined through the investigation and subsequent consultation process and is as yet unknown. ~\$5M has been set aside in years 2021-2028 of the 2021 LTP to assist with this process. | | |
| | 2 | Seismic capacity | The cost of this exercise is not yet known. However, it is anticipated to be developed and communicated through the 2024 LTP. | | |

| ACTIVITY | ISSUE # | DESCRIPTION | CAPEX INFLATED | OPEX INFLATED | YEAR |
|--------------------|---------|---------------------------------------|-----------------------|-----------------------|--------------|
| Community services | 1 | Community housing | | \$0.05M | 2021 |
| SIESA | 1 | Funding levels | \$0.2M - \$0.3M/annum | \$1.2M - \$1.6M/annum | 2021 onwards |
| Water facilities | 1 | Water structures funding | \$3.4M | \$0.1M/annum average | 2021-31 |
| Asset management | 1 | Asset management maturity improvement | | \$0.26M | 2021-2024 |

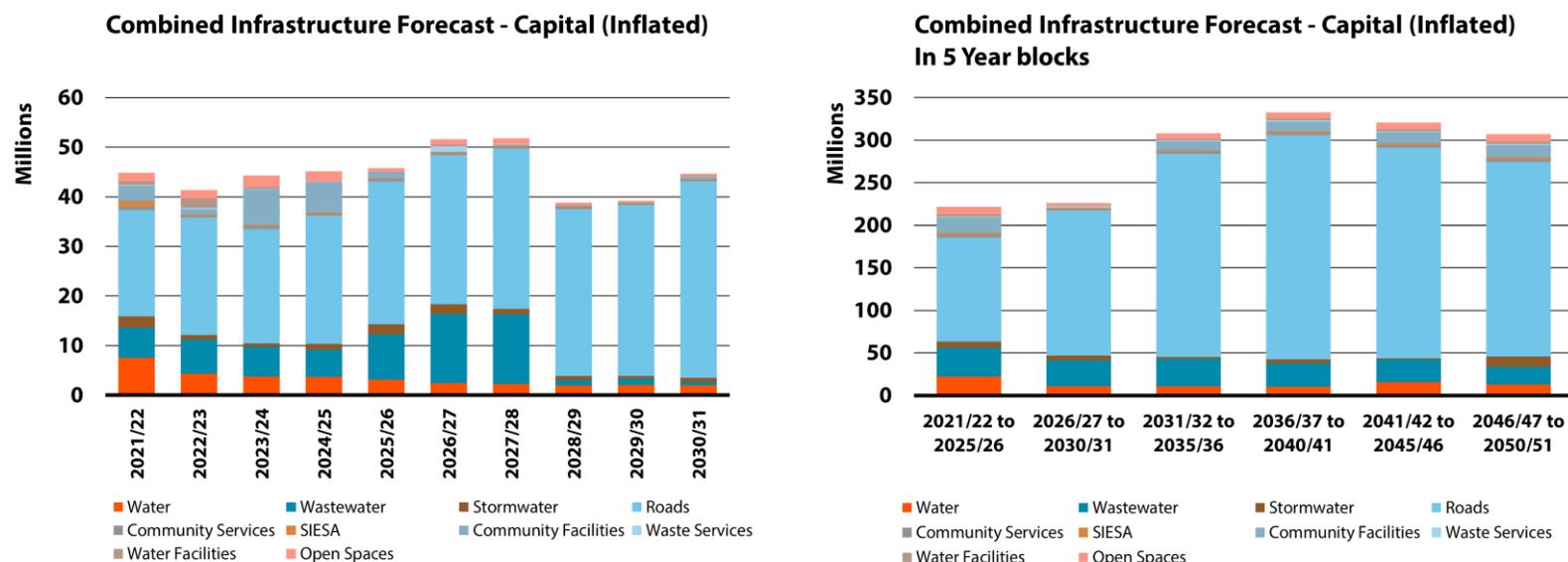
Financial estimates

Council has developed a financial strategy in conjunction with the development of its’ LTP 2031. The purpose of the Financial Strategy is to identify and model the financial effects of the LTP and IS on Council and the District.

As is indicated in this infrastructure strategy, Council has a significant programme of projected capital and operating expenditure. Council uses a number of different funding sources and mechanisms for different types of expenditure. Some examples of these funding tools include; rates (general and targeted), user fees and charges, grants, reserves, debt, financial and development contributions. The step change in investment required to fund the roading activity will be funded by rates. Any changes to LoS for Three Waters activities requiring increased funding will be due to changes to regulatory requirements. This will be funded by external debt, through the transition of internal debt to external debt.

The projected capital expenditure associated with the infrastructure covered in this strategy is represented graphically below:

Figure 33: Projected capital expenditure- infrastructure assets



The projected operational and maintenance expenditure associated with the infrastructure covered in this strategy is represented graphically below

Figure 34: Projected operational and maintenance expenditure –infrastructure assets

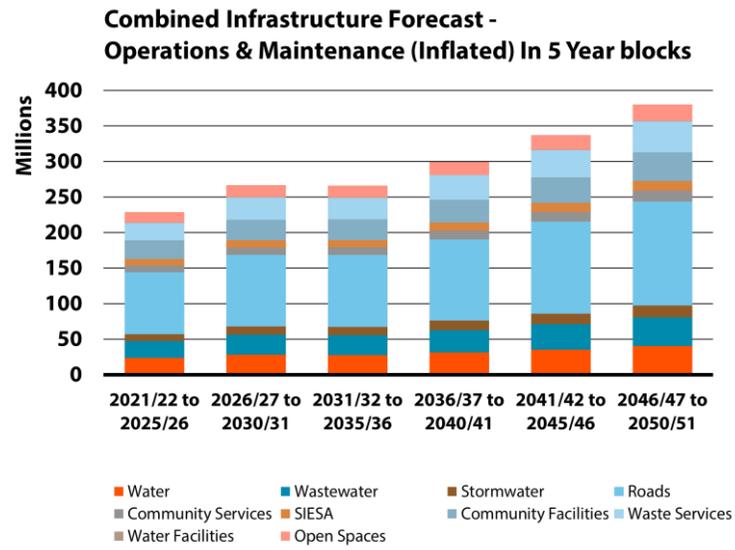
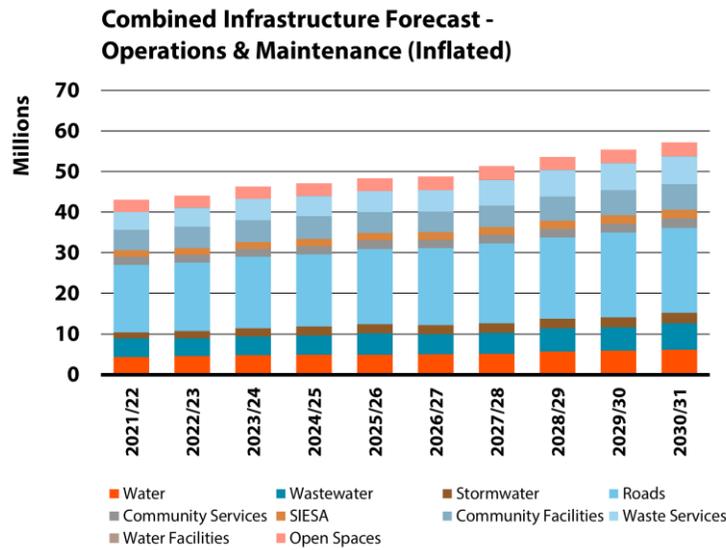


Figure 35: Projected minor projects –infrastructure assets

