Infrastructure Strategy

2024-2054



Table of Contents

INTRODUCTION	2
IS Summary	3
WHAT IS AN INFRASTRUCTURE STRATEGY?	5
Purpose	5
Strategy layout	5
Scope	5
STRATEGIC CONTEXT	6
Links with other Council documents	6
Mana whenua plans and guidance	7
Links with regional and national documents	8
OUR DISTRICT	Q
Waikirikiri Selwyn – our place in Canterbury	
Walkinkin Schwyn San place in Canterbary	10
OUR INFRASTRUCTURE	
	12
OUR INFRASTRUCTURE	12
OUR INFRASTRUCTURE WHERE ARE WE NOW?	12 13
OUR INFRASTRUCTURE WHERE ARE WE NOW? Our core infrastructure Infrastructure contribution to Waikirikiri Selwyn Community	12 13 13
OUR INFRASTRUCTURE WHERE ARE WE NOW? Our core infrastructure Infrastructure contribution to Waikirikiri Selwyn Community Outcomes	12 13 13 20
OUR INFRASTRUCTURE WHERE ARE WE NOW? Our core infrastructure Infrastructure contribution to Waikirikiri Selwyn Community Outcomes Our infrastructure achievements.	12 13 20 22 27
OUR INFRASTRUCTURE WHERE ARE WE NOW? Our core infrastructure Infrastructure contribution to Waikirikiri Selwyn Community Outcomes Our infrastructure achievements How well do we know our assets?	12 13 20 22 27 29
OUR INFRASTRUCTURE WHERE ARE WE NOW? Our core infrastructure Infrastructure contribution to Waikirikiri Selwyn Community Outcomes Our infrastructure achievements. How well do we know our assets? Managing our infrastructure	12 13 20 22 27 29 32

	Growth modelling	34
	Forecasting and managing demand	36
	Renewal profile	40
	Risk management	41
	Key assumptions and uncertainties	50
	The most likely scenario	51
)	UR SUSTAINABLE AND RESILIENT FUTURE	52
	SIGNIFICANT INFRASTRUCTURE ISSUES AND OPPORTUNITIES FOR	
	WAIKIRIKIRI SELWYN	53
	Our infrastructure priorities	53
	MAJOR PROJECTS AND DECISIONS	60
	Our approach in summary	80
	DELIVERING OUR PROGRAMME	81
	Ability to deliver on the planned capital programme	81
	Financial planning	82
	Funding our infrastructure	83
	Key funding mechanisms	84
	Further funding considerations	85
	FINANCIAL FORECASTS	86
	Operational expenditure	86
	Capital expenditure	88
	Vested assets	91

2024-2054



SELWYN DISTRICT INFRASTRUCTURE STRATEGY 2024-2054

Our Infrastructure Strategy highlights the significant infrastructure issues and challenges we think we're going to face in managing our infrastructure over the next 30 years. It identifies options of how we might address these, and the implications of those options.

Our IS includes core infrastructure activities of Council: Five Waters (drinking water, wastewater, stormwater, land drainage and water races), Transportation, Community Facilities (including open spaces) and Resource Recovery and Waste.

Managing our assets

Our Asset and Service Management Strategy is to:

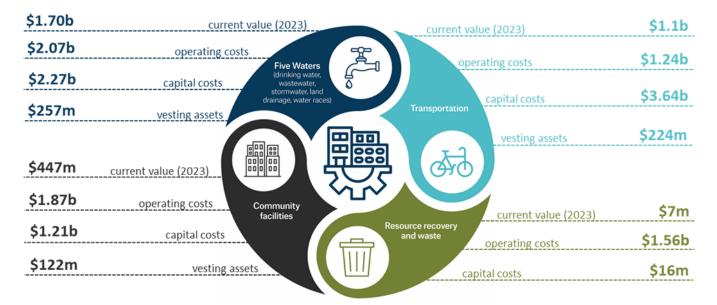
- maintain the existing networks (including routine renewals)
- implement upgrades required to meet legislative and regulatory compliance
- undertake asset renewals through coordinated programmes
- consider the level of demand for services and plan infrastructure response accordingly
- ensure vested assets are appropriate and of the standard required.

Priorities for 2024-2054

Responding to growth and addressing increasing community expectations, remains a focus for us. We are also facing emerging pressures of ensuring that renewals of existing assets are supported, particularly where previous growth driven assets are coming to the end of their useful lives in a bow wave.

In this IS, we acknowledge the need to make development more sustainable, to ensure ongoing community wellbeing, mitigate negative effects on the climate and our environment, and enhance the resilience of communities and the infrastructure that supports them.

The dollars



Our challenges



Managing what we have while planning for the future

Balancing funding and resource constraints

Managing change: responding to legislative reform

Responding to risk, sustainability and climate change

Our IS provides an overview of the most likely scenario for managing our infrastructure, in response to these challenges.

Capital expenditure

Our new capital expenditure on our assets can be broken down into work required to:

Support growth and demand: \$2.642b

Maintain and renew our existing assets: \$2.555b

Meet changing expectations / level \$1.385b of service:

Our plans in summary (uninflated)



Upgrade sports lighting Staged: 2024/25 to 2038/39 \$5.7m



Whata Rau (Leeston Library/Cultural/Community Centre) 2024/25 to 2027/28 \$16 – 19.2m



Eastern Selwyn Rolleston 2025/26 \$8.8m Community Centres Lincoln 2026/27 \$13.6 (new or redeveloped) Prebbleton 2027/28 \$8.0m



Darfield indoor courts construction 2027/28 \$11.3m



Leeston Park 2024/25 to 2038/39



Eastern Selwyn Indoor courts: strategy and new or extended facility Strategy: 2027/28 Build 2041/42 \$16m



New/Upgraded Parks (District Park, Kakaha Park stage, West Melton Domain, Broadfield Reserve, Lincoln Domain) 2024/25 to 2051/52 \$100.8m



Additional land for active recreation and protect natural areas Purchase 2030/31 Develop from 2036/37 \$11m



Southbridge pool aquatic facilities review 2040/41 \$15.0m



Upgrades to meet increasing demand 2024/25 to 2053/54 \$1,072m



Sealed Roads Resurfacing and Rebuilding 2024/25 to 2053/54 \$683m



Identify and manage backflow and inflow/infiltration 2024/25 to 2032/33 \$1.7m (backflow) 2024/25 to 2053/54 \$34.6m (I/I renewals)



New water source requirements, infrastructure upgrades, and consenting 2024/25 to 2053/54 \$315m



Renewal of wastewater and stormwater consents 2024/25 to 2053/54



Staged WWTP Upgrades at the Pines to meet increasing demand Staged from 2024/25 to 2053/54 \$163.2m



Investigate stormwater treatment options 2024/25 to 2053/54 \$68m



Pipeline renewals 2024/25 to 2053/54 \$178m



Identify and address water leakage/loss through metering and renewals 2024/25 to 2053/54 \$116.2m



Investigations into centralised water supply treatment 2034/35 to 2042/43 $$405\mbox{m}$



Replace refuse building 2024/25 to 2028/29 \$9.650.000



Replace refuse compactor 2028/29 \$400,000 2048/49 \$400,000

WHAT IS AN INFRASTRUCTURE STRATEGY?

Purpose

The purpose of this Infrastructure Strategy (IS) is to identify the significant infrastructure issues for Waikirikiri Selwyn over the next 30 years, to identify the principal options for managing those issues and the implications of those options, in compliance with the Local Government Act 2002 Section 101B (LGA) requirements.

When setting out how we intend to manage the District's infrastructure assets and services, the IS must also consider how to:

- respond to growth or changes in demand
- manage the renewal or replacement of key assets over their lifetime
- allow for planned increases or decreases in levels of service
- maintain or improve public health and environmental **outcomes**
- manage risk in terms of infrastructure resilience and financial planning.

Strategy layout

The components of this IS matched to the requirements of the LGA are as follows:

IS Section		LGA
Introduction Describes the IS purpose and Council's strategic		
	direction and links to other strategic documents	
Our District	Introduces our District	2(a)
Our	Describes the core infrastructure, and our	3
Infrastructure management approach to infrastructure		
Our Sustainable and Resilient Future	Discusses emerging issues, challenges, assumptions and uncertainties that will impact our infrastructure assets, significant decisions and response options, benefits, timing and costs and the associated funding sources	2,3,4

Scope

This IS covers the following essential infrastructure:



This Strategy has a 30 year planning horizon and will be reviewed every three years. More in depth detail of the first ten years can be found in the Long Term Plan and respective Asset/Activity Management Plans (AMPs), which are guided by this Strategy as well as providing content for the IS.

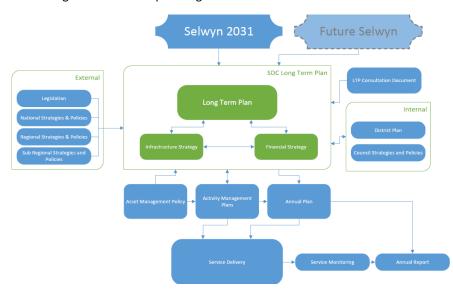
All of our AMPs, strategies, plans and policies that provide the framework for decision making and delivery of services can be found on our website.

All financial information provided in this Strategy include inflation and exclude GST unless otherwise stated.

STRATEGIC CONTEXT

Links with other Council documents

This IS is part of a suite of strategies, plans and operational documents which guide our strategic direction and planning.



Key interconnections are identified in this section, with activity specific context identified in **Our Infrastructure** or in the respective AMPs.

Long Term Plan (LTP)

The LTP presents a blueprint for the delivery of Council services over the next ten years, including our major projects, expected income and costs, and what rates will be needed during this time.

How does our IS relate?

Our IS is a supporting part of the LTP, providing an additional 20 year outlook on our infrastructure assets.

Financial Strategy (FS)

Alongside this IS, we also prepare a FS which outlines our financial vision for the next 10 years and the impacts on rates, debt, levels of service and investments. It guides our future funding decisions and, along with this IS, informs the capital and operational spending for our LTP and IS.

Infrastructure activity expenditure forms a large proportion of our spending (an average of 72% of operational and 98% of capital expenditure over the next 10 years). Consequently, the IS and FS are closely linked, ensuring the right balance between providing agreed levels of service within appropriate financial limits.

How does our IS relate?

Our IS informs planned expenditure in infrastructure and incorporates FS considerations into our planning (find out more in **Delivering our Programme** section).

Asset Management Policy

Council has established a level of assessment management for each key activity through our Asset Management Policy to ensure that AMPs developed are fit for purpose in the Waikirikiri Selwyn context.

How does our IS relate?

Our IS aligns with the Asset Management Policy.

Asset/Activity Management Plans (AMPs)

AMPs developed for each activity or asset group detail analysis of issues and actions proposed to ensure appropriate levels of service are provided to the community, ranging from maintenance, responding to growth and planning new projects.

How does our IS relate?

AMPs are the base information for the IS.

Spatial and Strategic Planning

'Selwyn 2031' is our current District Development Strategy. It provides the overarching strategic framework for achieving sustainable growth across the district. Selwyn 2031 guides future development and informs our investment decisions. It outlines where development should be focused and what pattern of land use, infrastructure, and transport, is needed to achieve and integrate its outcomes. It also identifies existing infrastructure constraints that need to be overcome prior to further development occurring.

Master Plans and Area Plans have been prepared for locations such as Lincoln Town Centre, Rolleston Town Centre and Foster Recreation Park, along with Ellesmere and Malvern areas. These plans follow *Selwyn 2031*'s direction and indicate how areas will develop over time, with specific projects developed over time through the long-term and annual plans.

'Future Selwyn' is currently being developed, to replace and expand on 'Selwyn 2031'. It will become the high-level plan that outlines how the District will grow to achieve desired outcomes and inform how Council will meet its duties and functions to assist in delivering community well-being and fit for purpose infrastructure.

How does our IS relate?

Our IS is a key support for *Future Selwyn* planning, considering the future of our infrastructure assets, service delivery, growth and demand and constraints.

District Plan

Our District Plan (currently under review) determines resource management issues, objectives, policies, methods and sets rules which control and manage development while ensuring that the important characteristics of our district can be protected. The District Plan identifies the form and scale of development which impacts the form and scale of infrastructure required.

How does our IS relate?

Our IS is guided by the provisions of the District Plan (and review), and development standards.

Operational Strategies, Plans and Policies

Council has a range of plans and policies which guide the operations of activities. These include Council's Walking and Cycling Strategy, Five Waters Strategy (currently under review to become a One Water Strategy), Waste Management and Minimisation Plan, Reserve Management Plans, Procurement Strategy and Policy, Revenue and Financing Policy, Development Contributions Policy and Engineering Code of Practice.

How does our IS relate?

Our IS and how we manage and plan for our infrastructure is in line with these plans and policies.

Te Rautaki Tikaka Rua | Bi-cultural Strategy

Our Te Rautaki Tikaka Rua | Bi-cultural Strategy guides our maturing status as a partner under Te Tiriti o Waitangi | Treaty of Waitangi. The Strategy is key to supporting our bi-cultural capability and capacity growth.

How does our IS relate?

Our IS is guided by Te Rautaki Tikaka Rua | Bi-cultural Strategy in our partnership.

Mana whenua plans and guidance

Mahaanui Kurataiao Iwi Management Plan and Te Taumutu Rūnanga Natural Resources Plan 2003

Iwi Management Plans are afforded explicit statutory recognition under the Resource Management Act (1991). Council has statutory obligations under the Local Government Act 2002 and Resource Management Act 1991 to appropriately recognise, protect and provide for Tāngata Whenua values and interests. These IMPs assist Council to do this. The Mahaanui Iwi Management Plan (IMP) provides a statement of Ngāi Tahu objectives, issues and policies for natural resource and environmental management in the takiwā of the IMP rūnanga. The Te Taumutu Rūnanga Natural Resources Plan 2003 sets out Ngāi Te Ruahikihiki ki Taumutu values and policies with regard to natural resource management in the Taumutu takiwā.

Te Rūnanga o Ngāi Tahu He Rautaki Mō Te Huringa o Te Āhuarangi Climate Change Strategy

This strategy provides direction for Ngāi Tahu interests, assets and activities reflecting the broad impact of climate change. The purpose of this strategy is to create Ngāi Tahu responses to the risks and opportunities presented by climate change, referencing the entire tribal structure, so that iwi, hapū and whānau aspirations can be met in the face of climate change. Aligned to *Ngāi Tahu 2025*, a vision and strategic direction is established, followed by short/medium term actions to be achieved by 2025 and longer term actions to be achieved by 2050.

How does our IS relate?

Infrastructure planning should consider mana whenua guidance through a partnership-based approach.

Links with regional and national documents

A raft of regional and national regulatory and guiding documents have been considered in the development of this Strategy.

Greater Christchurch Partnership

The *Greater Christchurch Partnership* (GCP) is a voluntary coalition of local government, mana whenua and government agencies working collaboratively to address strategic challenges and opportunities for Greater Christchurch. The key work is a spatial plan for the sub-region, called the Greater Christchurch Spatial Plan (GCSO). This plan aims to manage urban development that protects water, enhances open spaces, improves transport links, creates more liveable centres and manages sustainable population growth through targeted intensification in centres and along public transport corridors. The GCSP provides the primary strategic direction for the Greater Christchurch area, including the location of future housing, development of social and retail activity centres, areas for new employment and integration with infrastructure networks. The GCSP area includes the Springs and Selwyn Central Wards of the District.

Canterbury Regional Plans and Policy

The Canterbury Regional Policy Statement provides an overview of the resource management issues in Canterbury, and the objectives, policies and methods to achieve integrated management of natural and physical resources, including directions for provisions in district and regional plans.

The Land and Water Regional Plan identifies the resource management outcomes for managing Canterbury land and water resources, and identifies the policies and rules needed to achieve the objectives.

Rautaki Hanganga o Aotearoa | National Infrastructure Strategy

This Strategy sets a pathway to transform New Zealand's infrastructure to 2050. The Strategy highlights New Zealand's infrastructure challenges, and sets five strategic objectives for infrastructure management:

- "Enabling a net-zero carbon emissions Aotearoa through rapid development of clean energy and reducing the carbon emissions from infrastructure.
- Supporting towns and regions to flourish through better physical and digital connectivity and freight and supply chains.
- Building attractive and inclusive cities that respond to population growth, unaffordable housing and traffic congestion through better long-term planning, pricing and good public transport.
- Strengthening resilience to shocks and stresses by taking a coordinated and planned approach to risks based on good-quality information.
- Moving to a circular economy by setting a national direction for waste, managing pressure on landfills and waste-recovery infrastructure and developing a framework for the operation of waste-to-energy infrastructure."

How does our IS relate?

Our IS aligns with applicable regional and national documents, including these themes and challenges.



Waikirikiri Selwyn – our place in Canterbury

Selwyn District is strategically situated in central Canterbury, positioned to the south of Christchurch. Encompassing a vast expanse from the majestic Alps to the shores of the Pacific Ocean, our district is bordered by the Waimakariri and Rakaia Rivers, as well as the Port Hills. The district boasts a diverse topography, featuring majestic mountains, rolling foothills, expansive plains, and Te Waihora.

Over the years, Waikirikiri Selwyn has undergone a noteworthy transformation, evolving from a small and tranquil locale into a dynamic and rapidly growing district. The district's large eastern towns have become focal points for attracting new residents, contributing to the district's overall growth. Simultaneously, our smaller towns continue to play a pivotal role by supporting essential rural communities and sustaining their local economies, all while preserving their inherent charm and character and the open rural landscape of western Selwyn which transitions to the Alps. More information about our population and demographics, and growth is detailed in the **Planning for the Future** section.

While our main focus is on Waikirikiri Selwyn, we are also thinking beyond our boundaries. We are part of Greater Christchurch, which incorporates Christchurch city, and nearby areas within the Selwyn and Waimakariri districts, including Rolleston, Prebbleton, Lincoln, Tai Tapu, and West Melton. We're working with our Greater Christchurch partners (our neighbouring councils – Christchurch City Council and Waimakariri District Council – along with Environment Canterbury, Te Rūnanga o Ngāi Tahu, Te Whatu Ora | Health NZ (Waitaha Canterbury), Waka Kotahi NZ Transport Agency and the Department of Prime Minister and Cabinet) to make the most of our collective strengths and differences to attract and retain people, business and investment, while protecting what is important to us.

A summary of our district is provided on the next page.

Te Mana o Te Tiriti – giving effect to partnership

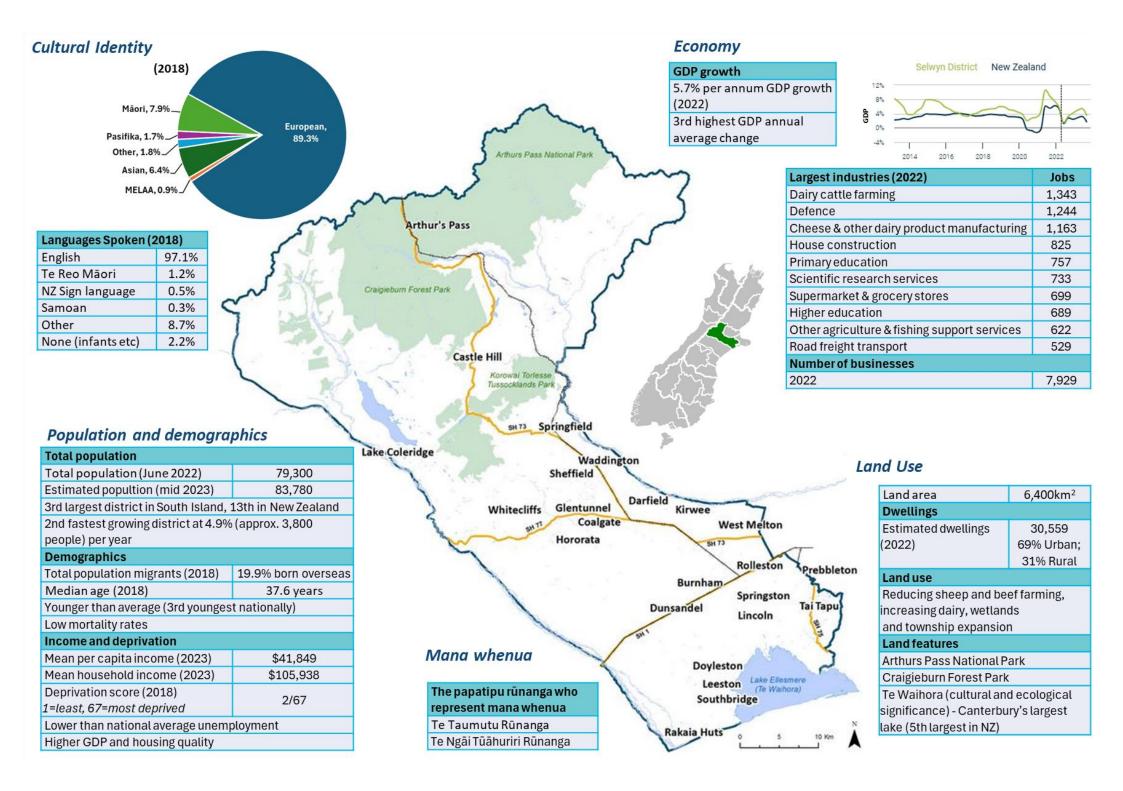
Ngāi Tahu descendants, and the hapū of Ngāi Te Ruahikihiki and Ngāi Tūāhuriri have resided in the district for over 40 generations. The two hapū are acknowledged as the primary kaitiaki and puna mātauraka, the traditional knowledge holders, on behalf of Ngāi Tahu, for the district.

Selwyn District falls within the takiwā of Ngāi Te Ruahikihiki and Ngāi Tūāhuriri. The Council acknowledges their status as mana whenua and that the two hapū are represented formally by Te Taumutu Rūnanga and Ngāi Tūāhuriri Rūnanga and recognises the role of mana whenua as the kaitiaki, holders of customary tribal authority over land, water, and environment. The expression of these relationships is set out in various iwi management plans and relationship agreements with Council and other entities.

Council recognises its role as partner with mana whenua through Te Tiriti o Waitangi | Treaty of Waitangi and any direct relationship agreements with rūnaka. Engagement and our relationships with rūnaka are supported by our Te Rautaki Tikaka Rua | Bi-cultural Strategy, and the four pou of:

- Te Takata | Our People Our people are culturally competent and positive role models for our treaty based future.
- Kā mahi | Our Work Our systems, processes and institutional culture actively empowers and embeds bicultural practices.
- Kā Honoka | Our Relationships Deep relationships with mana whenua drive our treaty-based partnership.
- He Huarahi Hou | A New Way We walk confidently into the future looking backwards we reflect, learn, adapt, innovate.

Council is committed to improving its cultural competency and relationships, including through partnership-based participation in decision making and key projects, which will be a key component of infrastructure planning moving forward.





WHERE ARE WE NOW?

Infrastructure is the term for the pipes, treatment plants, roads, bridges, community facilities and other assets that are essential for sustaining public health, getting around and doing business. Infrastructure is recognised as an enabler of community wellbeing and resilience.

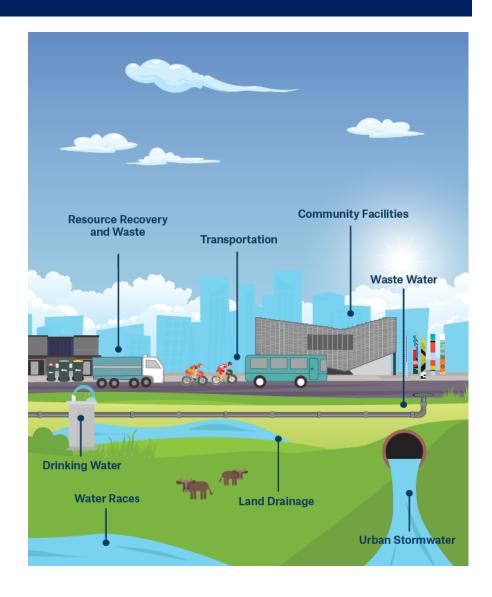
Selwyn District's assets are split between older, established townships and newer growth areas, with changes also occurring in the rural areas through intensification, increasing irrigation and rural, lifestyle and commercial development.

Over the last twenty years of high growth across the district new infrastructure has been vested in Council from urban subdivision and other private developments which then has to be maintained and eventually renewed.

Our core infrastructure

Council manages a substantial portfolio of infrastructure assets for the District. In addition to the requirement of Section 101B of the LGA 2002, to cover roading and footpaths (transportation), water supply, wastewater, and stormwater in an IS, Council has opted to also include land drainage and water races (as part of Five Waters), community facilities (Liveability Assets) and Resource Recovery and Waste in this IS.

Infrastructure networks across Waikirikiri Selwyn are not isolated from activity occurring at a regional and national level, and some of our infrastructure is shared or co-managed with other organisations, in particular with Waka Kotahi NZ Transport Agency, Environment Canterbury and neighbouring Councils. We collaborate with these organisations to ensure consistency, efficiency and effectiveness in our respective infrastructure work.





Our Five Waters activity covers Council management of community water supplies (drinking water), wastewater, stormwater, water races, and land drainage.

The availability of clean, safe drinking water and the safe disposal of wastewater are fundamental to the health and welfare of our community. Appropriate treatment of waters, including waste and stormwater, contribute to the protection of our environment, surface waterways and communities. Reduction of flood risk, through appropriate stormwater management supports the resilience of our communities, while land drainage networks and rural water supplies support agriculture and form a part of our rural landscape. Some of these also offer the last remaining habitats for precious native species including Kōwaro, the Canterbury Mudfish. Protecting these environments is key to the continuation of local biodiversity and taonga species.

Managing our water into the future requires an integrated approach to managing all waters, across management responsibilities. We are building on our Five Waters approach by moving towards a One Water philosophy. This is the basis of our One Water Strategy that we are currently co-designing with rūnanga. A One Water approach recognises the role of the natural water cycle and the interconnected nature of all water, the relationship between water and our wider environment (land, biodiversity and people), and takes a whole environment view to explore relationships within and between catchments. It also acknowledges the principles of Te Mana o Te Wai. The One Water Strategy, once finalised, will guide the operation of all of our water activities, and the interconnections with land development, recreation and biodiversity.

We manage a range of assets in support of our Five Waters services, including:



River management

km of pipe 'in service'

schemes

Oxidation ponds

km of pipe 'in service'

Floodgate

Headwall

The optimised replacement values (2023) of our Five Water assets are summarised in the following table:

Drinking Water	Wastewater	Stormwater	Water Races	Land Drainage
\$ 537.75m	\$ 626.86m	\$ 183.78m	\$ 252.51m	\$ 96.72m

Five Waters Significance

0					
Strategic Assets (Council Significance & Engagement Policy) ¹	Lifeline Utility (Civil Defence and Emergency Management Act)				
All water supplies, including reservoirs, pump stations and reticulation					
All sewage collection treatment and disposal systems including the pipes, pump stations, treatment and disposal works	An entity that provides a wastewater or sewerage network or that disposes of sewage				
All stormwater systems including the pipe network, the open conveyance systems, wetlands, retention basins and stormwater devices	An entity that disposes of stormwater				
All land drainage and water races systems including the pipe network, the open river system, waterways, wetlands and retention basins					



Five Waters Key Documents

In addition to the Council, regional and national plans and documents identified in the **Strategic Context** section, the following are key documents relating to our Five Waters activity:

Council			
Five Waters AMP	One Water Strategy ²		
Water Safety Plans	Five Waters Strategy ³		
Selwyn Biodiversity Strategy	Draft Five Waters Blueprints		
Draft Water and Sanitary Services Asses	ssments		
Mana whenua			
Ngāi Tahu Freshwater Policy Statement	1999		
Regional			
Canterbury Water Management	Te Waihora Joint Management Plan		
Strategy	2005		
Floodplain Management Strategies	Biodiversity Strategy		
National			
NPS Freshwater			

¹ For the purposes of a significance assessment, strategic assets listed are considered the assets in total and not every element (refer to Significance and Engagement Policy).

 $^{^{\}rm 2}$ Currently under development through co-design with mana whenua

³ Will be replaced by One Water Strategy (when finalised)

Transportation

We provide an extensive transportation network covering the length and breadth of the district. This network, when combined with the State Highways⁴, provides a diverse range of linkages that enable our residents and visitors to move around and through our district. Our transportation activity provides the key roading and transport infrastructure and services needed for economic and social linkages. While our geographic size means travel is predominantly by private motor vehicles, opportunities to enhance public transport and walking and cycling are being continually sought to provide a wider range of transport choices, encourage transport mode shift and reduce vehicle kilometres travelled (VKTs) while continuing to ensure whole network is fit for purpose.

Our network consists of \$1.1 billion of assets (2023 optimised replacement value):



⁴ Managed by Waka Kotahi New Zealand Transport Agency

We work in partnership with Waka Kotahi | NZ Transport Agency to plan, fund and provide important local transportation services and infrastructure.

Transportation Significance

Strategic Assets (Council Significance & Engagement Policy) ⁵ Selwyn District transportation network				Utility (Civ	vil Defence ment Act)	and
			An entity that provides a road networ			
Sustainable Development Goals						
	3 GOOD HEALTH AND WELL-BEING	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	10 REDUCED INEQUALITIES		
	<i>-</i> ₩•	M				
	11 SUSTAINABLE CITIES AND COMMUNITIES	13 CLIMATE	15 DIFE ON LAND	17 PARTHERSHIPS FOR THE GOALS		

Transportation Key Documents

In addition to the Council, regional and national plans and documents identified in the **Strategic Context** section, the following are key documents relating to Transportation:

Council			
Transportation AMP	Strategic & Programme Business Cases		
Road Safety Strategy	Walking and Cycling Strategy		
Regional			
Regional Land Transport Plan	Greater Christchurch Transport Plan		
Canterbury Regional Public	Greater Christchurch Public Transport (PT)		
Transport Plan	Futures		
National			
GPS Land Transport	NZ Transport Strategy		
Road to Zero Road Safety Strategy			

⁵ For the purposes of a significance assessment, strategic assets listed are considered the assets in total and not every element (refer to Significance and Engagement Policy).

Community Facilities

Our community facilities activity plans for, constructs, operates, repairs and maintains a range of physical infrastructure and land holdings which support a diverse range of services aimed at providing places for recreation, leisure and community activities as well as the accommodation needs of other Council services. In addition, Community Facilities contributes to the amenity of both rural and urban environments. Overall, this activity is aimed at supporting Council services focussed on making Waikirikiri Selwyn a great place in which to live, work and play.

Our community facilities assets include cemeteries, community centres and halls, libraries, dog parks, forestry holdings, gravel pits, public toilets, reserves (recreational and natural), sports fields, sports courts/centres and swimming pools. These support the provision of key services to our community which have a major impact on both the social and cultural quality of life for the District's residents while contributing to the creation of an attractive living environment, preserving natural areas and protecting heritage features.



Key assets within Community Facilities totalling \$447.19m (optimised replacement value), consisting of \$286.16m of land value and \$161.03m total improvements value. Community Facilities assets include:



Community Facilities Significance

Strategic Assets (Council Significance & Engagement Policy) 6

The libraries and service centres in Darfield, Leeston, Lincoln, Rolleston & related services

Reserve land including land held under the Reserves Act and land used for parks, gardens, sports fields, recreational areas and cemeteries

All Council swimming pools and built recreational facilities (e.g., halls, community centres, pavilions, sport, and recreation centres)

Rolleston headquarters building and the land on which the building is directly located

Lifeline Utility (Civil Defence and **Emergency Management Act)**

No lifeline utility services identified within community facilities.

It is noted that the Civil Defence and Emergency Management Centre (EOC) is located within the Rolleston headquarters building.

Sustainable Development Goals















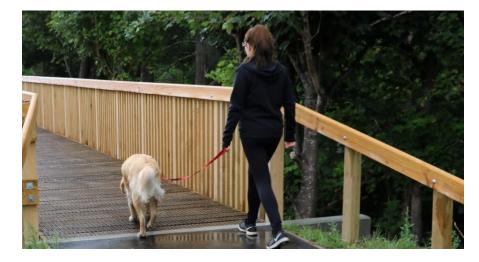
10 REDUCED INEQUALITIES



Community Facilities Key Documents

In addition to the Council, regional and national plans and documents identified in the Strategic Context section, the following are key documents relating to our Community Services activity:

Council				
Community Services and Facilities	Parks, Reserves and Open Spaces			
AMP	Strategy			
Community Centres, Halls and	Sport, Recreation and Play Spaces and			
Libraries Network Plan	Places Plan			
Walking and Cycling Strategy ⁷	Strategic Heritage Plan 2023-2027			
Aquatic Facilities Plan ⁸	Reserve Management Plans			
Eastern Selwyn Community Spaces	Play, Active Recreation and Sports			
Plan	Strategic Action Plan 2024-2027			
Selwyn Biodiversity Strategy				
Regional				
Canterbury Spaces and Places Plan	Biodiversity Strategy			



⁷ Under review

⁶ For the purposes of a significance assessment, strategic assets listed are considered the assets in total and not every element (refer to Significance and Engagement Policy).

⁸ Under review, including Malvern and Ellesmere aquatic provision clarity

Resource Recovery and Waste

Our Resource Recovery and Waste activity includes all the work the Council does in managing or minimising rubbish and recycling in the district. These activities are undertaken in compliance with the Waste Minimisation Act 2008. The Council provides a variety of services related to the management of waste in the district. Waste is mostly collected through rubbish, recycling and organic kerbside collection system. The remainder of the waste, recycling and organics is taken directly by residents to the Pines Resource Recovery Park. Our assets total \$6.91 million (depreciated value). This mostly consists of structures within our Pines RRP.



Our activity is less reliant on assets than other infrastructure activities. This is because core services within our Resource Recovery and Waste activity are contracted. Collection bins and trucks are owned by the contractor for use within the district. This operating model gives Council the opportunity to revisit its

requirements on a cyclical basis and prioritise waste minimisation activities. At the end of the contract term, Council retain the right to purchase the bin stock at depreciated value. These could then be 'sold' at the same value to the contractor on establishment of a new contract. This temporary increase to our asset portfolio serves to level the playing field at the time of a new contract being tendered.

Resource Recovery and Waste Signficance



Resource Recovery and Waste Key Documents

In addition to the Council, regional and national plans and documents identified in the **Strategic Context** section, the following are key documents relating to our Solid Waste activity:

Council	
Resource Recovery and Waste AMP	Waste Management and Minimisation
Waste Audit	Plan
National	
Te Rautaki Para New Zealand Waste S	itrategy

 $^{^{10}}$ It is noted that the CDEM Act in under review, including the assessment of lifeline utilities (critical infrastructure). Solid Waste is an important service which is prioritised for recovery efforts following an emergency event.

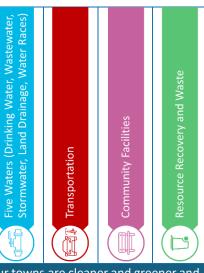
service

⁹ For the purposes of a significance assessment, strategic assets listed are considered the assets in total and not every element (refer to Significance and Engagement Policy).

Infrastructure contribution to Waikirikiri Selwyn Community Outcomes

Everything that the Council does in its day-to-day work is focused on achieving community outcomes. All activities outlined in this Strategy aim to deliver the results required to achieve these outcomes, contribute to community wellbeing, align with Council strategies, and meet legislative requirements.

More information on our Community Outcomes can be found in the LTP, including the roles Council will take and who we will partner with to contribute to and advance community wellbeing.



Environmental: Waikirikiri Selwyn's whenua land, wai water and Taonga o te Taiao biodiversity are protected	d and enhanced. Our town	s are clear	ner and gre	ener and
we address climate change				
A clean taiao environment				
We will live within our air, soil, water, and Taonga o te Taiao biodiversity limits	/	~	/	/
Healthy wai water, wetlands, and waterways	✓		/	/
We utilise smart and toitū sustainable practices	✓	~	/	~
Te Waihora / Ellesmere being restored	/		/	
Liveable low carbon towns				
Growth that consolidates and intensifies towns	✓	~		
A town network supported through their strong inter-connections		~	/	
Protect productive and diverse land				
Important land, landscapes, and features are valued			/	
Our biodiversity, including indigenous Taonga o te Taio flora and fauna, is thriving	✓		/	
Social: Waikirikiri Selwyn is a resilient district and a great place to live, work, and play; where our takata people	support each other, enjo	y spendin	g time toge	ther and
feel a sense of honoka connection				
Honoka Connected community				
We have good health, social, and community facilities that are accessible to all residents of the district			/	
We have access to a range of community services and activities that support wellbeing			/	

We have access to housing which suits the changing needs of the diverse demographics within our district				
We have affordable ways to easily connect with the facilities, services, and communities within and outside of our district		~		/
We have cohesive communities that support volunteering and build capacity.			V	
Strong neighbourhoods	<u>'</u>	'	<u>'</u>	
We are safe at home and in the community		~	/	
We are ready for emergency events and disasters	/	~	/	~
We can effectively respond to, and recover from, emergency and disaster events	~	~	/	/
Active and educated community				
We have access to good quality information and a range of lifelong learning opportunities			/	
Everyone who lives in and outside of the district can enjoy our environment		~	/	
We have access to resources to help our takata people increase their bi-cultural competency and cultural knowledge			~	
We can participate in community life			/	
We can play and be physically active		~	~	
Economic: Waikirikiri Selwyn is a prosperous diverse economy that employs and empowers our takata people and invests in our	r towns ar	d commu	nities	
A district of opportunity				
Local businesses support each other			/	
There are employment opportunities for our takata people			/	
Innovation and investment are fostered			/	
There is a strong diverse economy, supported by a sustainable rural sector	/	~	/	
The district is a key regional freight and logistics hub supported by an efficient freight network		~		
Quality innovative infrastructure				
Our infrastructure is adaptive and resilient	/	~	/	/
Our transport system is effective and accessible with a range of choices		~	~	
Cultural: Waikirikiri Selwyn is a collection of connected multicultural and diverse communities. We have mana upholding partne	rships whi	ch allows	our takata	people
to thrive, and everyone has a place to call home				
A district which values its culture and heritage				
Our district celebrates its arts and culture; our traditions are carried with us			/	
Local and cultural history and heritage are preserved, shared, and promoted.			/	
Our wāhi taonga places of tribal significance, wāhi tapu sites of special association, and wāhi ingoa place names are protected				
Inclusive communities				
Each town's unique identity as well as the rural identity, are promoted			/	
Active, responsive, and respectful partnerships with Mana whenua and Tangata whenua	~		~	
The identity of Mana whenua communities is promoted			/	

Our infrastructure achievements

Over the last three years, we have continued to manage our infrastructure assets in the most resilient, sustainable and affordable way, while getting maximum benefit for our communities. We have also responded to continued growth with our District, building and maintaining increasing infrastructure and ensuring planning aligns with development. Our key projects and achievements are summarised below (as at January 2024):

Activity	Achievement	Description	Status
	iters (Drinking Water, Wastewater, ater, Land Drainage, Water Races)		
	Co design of draft One Water Strategy with rūnanga	Shared vision on how we will improve water and biodiversity outcomes, protect water sources, minimise the impact of our infrastructure on water and uphold the value of water over the next 50 years.	Underway
Strategy	Water and Wastewater Master Plans	Integrated planning for growth within water and wastewater networks.	Continuing
	Land Drainage Catchment Management Plans	Provide a road map for improvement the health of our catchments for the benefit of future generations.	Underway
Drinking Water	Water treatment plant upgrades including treatment approach	Significant Water Treatment Plant upgrades were completed on the Darfield, Sheffield, Hartleys, Hororata, Prebbleton and West Melton schemes, while an upgraded treatment plant and new reticulation were installed for the Taumutu water supply. Significant investment in upgrades and a multi barrier approach to treatment to meet and new drinking water compliance criteria and keep our communities safe. All water treatment plants now have protozoa and bacteria barriers.	Completed
	Public Drinking Water Supplies residual disinfection	In response to the Water Services Act 2021 all public drinking water supplies now have residual disinfection (chlorination). Nine of our 27 supplies were already permanently chlorinated and residual disinfection was added to the remaining supplies.	Completed
	New pipelines	Water supply interconnecting schemes e.g. Hartleys to Darfield connection and increasing storage e.g. Hororata established to increase resilience of existing networks. New pipeline to provide additional drinking water and help address the township's ongoing water issues. The new \$1.2 million pipeline from Sheffield to Springfield supplements the existing Springfield supply, and the additional capacity will also improve water quality.	Completed
Wastewater	Connecting townships to the wastewater system via new pipelines	Darfield and Kirwee to the Pines Wastewater Treatment Plant pipeline: Construction of the 27km wastewater pipeline connecting Darfield and Kirwee to the Pines Wastewater Treatment Plant. The pipeline is the first step in a new wastewater system for Darfield and Kirwee to reduce the reliance on On Site Wastewater Systems. The \$21m project was supported by \$10.66m of funding from the Government post-COVID stimulus package. Burnham to Pines Wastewater Treatment Plant pipeline (NZDF vested asset): Connection of the New Zealand Defence Force base at Burnham to the Pines	Completed

		Wastewater Treatment Plant to benefit the camp, wider community and the environment. It replaced an on-site oxidation pond and border dyke irrigation system.	
	Expansion of the Pines Wastewater Treatment Plant (120,000 population capacity)	Continued upgrade to the capacity to service a population of 120,000, brought forward to accommodate rapid growth, including a second solar drying hall doubling the plant's ability to process solid waste with the ability to add a heating system in the future to supplement drying in the cooler months, construction of Clarifier 3 and Bioreactor 4. Solid stream upgrade including mechanical thickeners, improved aeration and mixing and new centrifuge is planned for completion in 2024.	Underway
Stormwater	New stormwater conveyance and treatment	Continued construction in areas of growth including water quality treatment facilities.	Continuing
Stormwater	Leeston Stormwater Bypass Stage 4	Continued construction to divert water away from the township during heavy rainfall events. Subject to consenting completion of the remainder of the bypass is budgeted for in FY24/25.	Underway
Water Races	Water races rationalisation	Continued rationalisation where demand for the services no longer exists and races are not strategically important or of high ecological value. Retention and enhancement of strategic and high ecological value races.	Underway

Transportati	on	
		Wee

		Weedons Ross Road/SH73 intersection upgrade coordinated with NZTA	Completed
	Intersections and access	Upgrade of Rolleston Drive and the Rolleston Drive-Tennyson Street intersection: Incorporating new lane layouts, traffic lights, and improved access for pedestrians and cyclists, along with new footpaths, cycleways, and lighting along both roads.	
		Railway Road upgrade: Widening and sealing between Detroit Drive and West Melton Road to improve access to Izone	Completed
Upgrades		Maddisons/Dawsons Road improvements: Provide a "standard" rural crossroad intersection safety upgrade – localised widening, quadrant kerbing, median islands, lighting, signage & markings.	Underway
opg.uuoo	Roundabouts	Shands/Hamptons Road roundabout: Safety upgrade - Prebbleton arterial network	Underway
		Goulds/East Maddisons Road: Roundabout installation to improve safety & associated pavement renewal of Goulds Road.	Completed
		Shands Rd-Blakes Rd and Springs Rd-Marshs Road: New roundabouts instated as part of intersection upgrades featuring new road and lane layouts, cycle lanes, landscaping, and street lighting improvements, contributing to improved road safety and connections to the motorway system.	Completed
		Shands/Trents Road Roundabout: Safety upgrade - Prebbleton arterial network	Underway

Reseals Annual reseals		2021/22: Just over 50km of resealing completed (less than planned due to rising costs and COVID-19 restrictions); 2022/23: 23km; 2023/24: 75km on track to be completed (60% as at January 2024)	
Extensions δ	Wordsworth Street north extension	New access road south of Moore Street to access reserve, retail developments and car parking	Completed
widening	Road widening	Blakes Rd and Weedons Ross Road	Completed
		Trents Rd widening between Oakely Drive and Shands Road	Underway
	Whitecliffs shared path extension	Created better connectivity between the communities of Glentunnel and Whitecliffs.	Completed
	George Holmes Rd Upgrade	Kerbing and footpath extensions from Jones Road	Underway
Shared path	Villa Mews	100m long shared use path connecting Villa Mews to East Maddisons.	Underway
walkways and cycleways	Templeton to Prebbleton Cycleway	Off road cycleway alongside Trents Road - links between planned City and Rail Trail networks	Underway
	Springston Rolleston Rd Shared Path	Shared path	Underway
	West Melton to Rolleston Cycle	Extends existing Hoskyns Road cycleway and new off-road cycleway on West Melton Road	Underway
Causa aulaa	Rolleston public carparks	Part of a series of public carparks for the new town centre staged to match development	Underway
Carparks	Park n Ride – Foster Park Addition of Park n Ride at Foster Park		Underway
Public Transportinfrastructure	Bus stops and real time information	8 bus stop shelters and 6 Real Time Information signs across Rolleston, Lincoln and Burnham	
Bridge replacemen Harper Rover Diversion		Replacement of small weight restricted or damaged bridges - Harper River Diversion Bridge	Completed
		Around \$6 million in late May 2021 for repairs of more than 500km of roads & 14 bridges	Completed
		\$1.6 million in July 2021 for repair of 2 bridges 1 culvert, 5 fords, roads and other drainage assets	Completed
	Adverse weather repair	\$400,000 in February 2022 for bridge, road and ford repairs	Completed
Resilience and	works	\$2.2 million in July 2022 for assets affected by flood including culverts, ford and road repairs	Completed
ecovery		\$4 million in July 2023 for repairs including 9 bridges, 1 culvert, 16 fords and pothole repairs	Completed
		\$390,000 used in October 2023 for road signs and trees damaged by wind	Completed
	Whitecliffs Culvert renewal	To reduce flooding risk and future proof the erosion of the road in future flood events	Completed
Streetlighting	Dunns Crossing Rd streetlighting	Install matching new arterial street lighting to fill in missing gap on Lincoln Rolleston Rd west side from Helpet to Levi/Lowes Road intersection.	Completed
	Street lamps	Replace streetlights with LED type.	Underway



Foster Park - turfs Instal		Installation of new full-size artificial hockey & football turfs.	Completed
Reserves	Lincoln Domain Extension – strategic land purchase Kahaka Park: Stage One (1a and 1b)	Installation of new full-size artificial hockey & football turfs. Purchase of 5.6 ha of land for an extension to Lincoln Domain. This is a critical parcel of land that provides extra sports & recreation space to meet the growing needs of the Lincoln community. Part of the land will also be used to construct an extension to Meijer Drive linking Boundary Road, as an alternative route to the town centre & a frontage for the park. The land offers contiguous green link from the existing Domain and Lincoln Event Centre to Lincoln High School, Lincoln Cemetery, Golf Course and Mahoe Reserve and to the residential areas to the north of Boundary Road. Some initial clearing work has been carried out and planning is now underway for the development of the land. The first stages of Kakaha Park (13ha) between Prebbleton & Lincoln, featuring a new 2ha dog park, three full & one half sports fields, LED lighting to sports fields, changing room pavilion with public toilets, storage areas for sports clubs, an outdoor covered pergola, playground, cycle trails & boardwalks, a snake run, directional signage, & over 400 carparks. The name Kakaha Park has been gifted by Te Taumutu Rūnaka and Te Ngāi Tūāhuriri Rūnaka for the 22-hectare park. Kakaha is the	Completed
reserves	Kirwee Reserve extension Rolleston town centre	Māori word for Astelia fragrans or bush lily — a native flax-like plant often used for weaving. Next stage of the extension development with a new playground, cricket nets & landscape upgrades. \$2.7 million Youth Zone including an eagles claw basket swing, outdoor furniture, basketball & netball	Completed
	and reserve Youth Zone West Melton Community Park	hoop, gaga ball pit, hangout zones, & skate facilities (pool bowl, flow bowl & snake run). A new community park, including a new barbecue area, playground, skate area and basketball half-court has been constructed in West Melton.	Completed
	Tārerekautuku/Yarrs Lagoon Restoration	The 81-hectare Tārerekautuku/Yarrs Lagoon restoration project is progressing well. The project started in 2022. Work to date includes willow control (approximately one-third of the site), 7,000 native seedlings planted, predator control, and construction of two bridges providing improved site access. Tārerekautuku is one of Canterbury's largest freshwater wetlands, and it plays a significant part in the ecology of Te Waihora/Lake Ellesmere and its catchment. The project received \$796,980 in funding from the Ministry for the Environment's Freshwater Improvement Fund.	Underway
Public toilets	Public Toilets Network Improvements	Funding received from Government's Tourism Infrastructure Fund has enabled provision of new public toilet facilities including on SH73 at West Melton & Sheffield, & a replacement facility for Lincoln Township. New public toilets have also been constructed at Hororātā Domain, Lake Lyndon Reserve & to service the Rail Trail (Neills Rd). New facilities are planned for development in Kirwee and Te Whariki, Lincoln in 2024.	Underway
Swimming pools	Darfield Pool: Stages One and Two	\$2.4 million redevelopment including changing room & structural upgrades, new facility signage,	

Community	Selwyn Sports Centre	New 8,000m2 indoor sport & recreation facility containing 8 multi-use courts (4 sprung wooden & 4 polyurethane), a 240m walking track, 3 multi-purpose spaces, a spin room, sports house, event control room, toilet & change facilities & the Lu Uno interactive wall on court 8- the first of its kind in NZ.	Completed
Community centres and halls	Castle Hill Community Centre Extension	Extension by one bay (floor area increase by approximately 25%). The project also involves some internal reconfiguration to enable improved use of spaces. This work will provide additional community space for the expanding Castle Hill community and the building also serves as a civil defence welfare centre. Work is planned to be completed by June 2024.	Underway
Property and buildings		Multipurpose community facility with community, cultural and library spaces in Rolleston. The name Te Ara Ātea was gifted by Te Taumutu Rūnanga, who worked in partnership with Council on the building and landscaping. It signifies 'the unobstructed trail to the world and beyond'. The facility incorporates displays of nationally significant taonga, cutting edge technology, & sensory, performance &workshop spaces, along with a café & lounge & a wāhi tamariki for younger users. The \$22.69 million building sits within a specially designed landscape opening to the town square of the new town centre. The facility won the 2022 Local Government New Zealand Excellence Award for Cultural Wellbeing, reflecting the strong collaboration between Council and Te Taumutu Rūnanga.	Completed
	Toka Hāpai Selwyn Health Hub	Health Hub supporting key services, including Te Whatu Ora's Oromairaki Maternity Unit, Community Dental Service, Child Adolescent and Family (CAF) Mental Health Service, and Public Health Nursing spaces. This followed the earlier opening of radiology and physiotherapy services. Council is currently progressing provision of General Practice and Blood Collection services at the hub. The hub was developed by the Council to provide increased capacity for health services as the district grows.	Completed



Resource Recovery and Waste

Recycling upgrades	Upgrades and development of drop-off Area, Canopy, Parking & Utilities infrastructure	Completed
ReDiscover Education Centre ReUse Shop & Salvage Yard	Our waste and sustainability Education Centre 'ReDiscover' at the Pines Resource Recovery Park officially opened in April 2023. ReDiscover is a component of the wider ReConnect Project. This is Selwyn's first waste minimisation educational facility, offering free waste minimisation and sustainability programmes for schools and community groups across the district. The reuse shop projects offers a space and support for displaying and selling a wide variety of items, supporting waste diversion, reuse and sustainable product development. The intention is to receive reusable items from the public and businesses, dropped off beneath the recycling canopy, or recovered from the waste. These would then be cleaned, checked and priced before being placed in	Completed
Garden Hub Development	The Garden Hub Stage One (expected early 2024) includes initial boundary planting & an edible hedge of fruit trees. The foundations of a food forest will be established, as well as the beginnings of a herb	Underway
	ReDiscover Education Centre ReUse Shop & Salvage Yard	ReDiscover Education Centre Selwyn's first waste minimisation educational facility, offering free waste minimisation and sustainability programmes for schools and community groups across the district. The reuse shop projects offers a space and support for displaying and selling a wide variety of items, supporting waste diversion, reuse and sustainable product development. The intention is to receive reusable items from the public and businesses, dropped off beneath the recycling canopy, or recovered from the waste. These would then be cleaned, checked and priced before being placed in the reuse shop. The shop is expected to be completed mid 2024. The Garden Hub Stage One (expected early 2024) includes initial boundary planting & an edible hedge of fruit trees. The foundations of a food forest will be established, as well as the beginnings of a herb

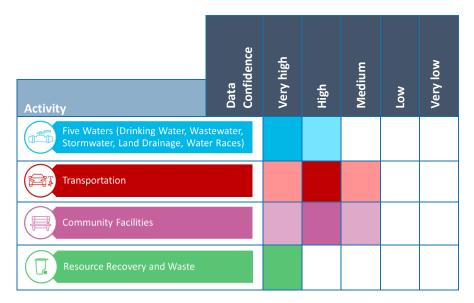
How well do we know our assets?

Asset data

We know our assets pretty well, but there is also a lot we don't know. Some of our assets were built a hundred years ago, and it's not always easy to understand the condition they're in or to predict exactly when they'll fail.

We've been working on improving our knowledge and understanding of our assets so that we can make informed decisions.

Data confidence is assessed through the asset valuation process. An average of scores per activity is summarised in the following table. Further detail can be found in the relevant AMPs.



Structured programmes for data collection and assessing data quality are well developed for transportation. This allows for comparison with others and tracking of progress over time. The overall score at the end of 2022/23 was 81%.



Figure 1: Te Ringa Maimoa Transport Insights Data Quality

Asset data collected, including, as-built information, capacity evaluation and modelling, maintenance costs, criticality assessment of assets, failure analysis, and condition assessments informs our forecasts and renewals strategies to ensure we are renewing assets (in the "right place") at the optimum and most cost-effective moment (at the "right time").

Assessing the condition of our assets

Selwyn has a wide range of assets of various ages. While much of the urban area is newer, we have a number of assets which are older, like the Waimakariri Gorge Bridge which is near 150 years old.

While the age of an asset can tell part of the story about condition, often it is more important to ensure they have remaining ability to serve the purpose they were built for. The service they need to provide can also change, such as the traffic on

our roads being much bigger and heavier than when they were built. We measure the state of the infrastructure against both levels of service (see relevant AMPs) and technical standards.

Some assets are inspected more easily and more regularly than others, such as bridges or fire hydrants. Others are more difficult to inspect, such as underground pipes, or are less well-documented, such as retaining walls. Replaced or new assets come with high-quality data, which improves our overall knowledge.

Methods for assessing the condition of our infrastructure varies by asset type but typically involves visual or physical inspection, with specialist assessment and engineering advice used as required. Full detail of condition assessments for each of our infrastructure activity groupings can be found in the respective AMPs.

A high-level summary of asset **Asset Condition** condition information is provided in the following Very good Adequate **Moderate**, Unknown table. Good Five Waters (Drinking Water, Wastewater 44% 13% 30% 11% 1% 1% Stormwater, Land Drainage, Water Races **Drinking Water** 32% 58% 4% 1% 1% 4% Wastewater 59% 35% 0% 3% 1% 2% Stormwater 0.3% 0.01% 63% 14% 7.5% 15.2% Land Drainage 28% 38% 0% 0.3% 3.7% 30% **Water Races** 0.6% 36% 38% 17% 8% 0.4% Transportation 10% 40% 43% 5% 2% 2.5% 51.9% 39.5% 5.3% 0.8% **Community Facilities** 37.8% 37.8% 20.7% **Facilities** 3% 0.6% **Open Spaces** 2% 52% 40% 5% 1% 0% 90% 5% 5% 0% Resource Recovery and Waste

The following is noted with regard to asset condition:

- Piped assets are generally well understood, ongoing renewal programmes are required to keep service levels to the required standard;
- Road resurfacing and reconstruction is needed to address assets that are poor and very poor, this proportion increases when we can't afford to keep the programme up and in the face of increasing traffic demand (including heavy vehicles);
- Some community facilities and swimming pools are showing their age with poorer condition evident;
- Newly constructed facilities such as Selwyn Aquatic Centre and Selwyn Sports Centre have had a much higher utilisation than expected resulting in a higher level of wear and tear;
- For some asset groups e.g. internal lighting fixtures, we are experiencing rapid obsolescence, resulting in the early replacement of entire asset types due to not being able to source replacement parts. There is the potential for this to continue to wider asset types over the 30 year period.



Managing our infrastructure

Managing our infrastructure assets means taking care of important parts of our services and the assets that underpin them like roads, bridges, buildings, and waters utilities in a smart way. We do this by planning carefully from the time we decide to build something until it's time to replace or retire it. We involve and consider many stakeholders including our community and service users, mana whenua interest groups, and government agencies and community members, have a say in how we manage these assets.

We have to think about the entire lifespan of an asset, from when it's first built until it's no longer fulfilling its purpose. This means making smart decisions about how to spend money on maintaining and fixing things while keeping the needs and expectations of our communities and co-funders in mind.

Sometimes it's tricky to balance how much money we spend with what the community needs. We have to consider how well an asset is working, what rules and regulations we need to follow, and the cost and benefit to our community.

It's important to always keep an eye on how things are going and be ready to change our plans if needed. By working together and being careful about how we manage our infrastructure, we can make sure that our communities have the things they need to thrive now and in the future.

This section outlines our approach to managing what we have now. More information about our future direction, and how we will get there is found in the **Planning for the Future** section.

Our stakeholders

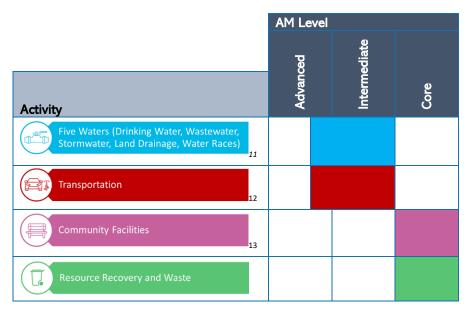
Working together is key to delivering this Strategy. Our key stakeholders are summarised in the following table:

	Five Waters (Drinking Water, Wastewater, Stormwater, Land Drainage, Water Races)	Transportation	Community Facilities	Resource Recovery and Waste
Community and users	~	~	~	V
Mana whenua	/	~	~	V
Community Boards & subcommittees	/	~	~	/
Environment Canterbury	~	~	~	V
Greater Christchurch partners	/	~		
Neighbouring Councils	/	~	~	V
Waka Kotahi NZ Transport Agency		~		
Taumata Arowai	~			
Manatū Mō Te Taiao Ministry for the Environment	~			~
Manatū Hauora Ministry of Health	/			
Te Papa Atahwai Department of Conservation	~		/	
Te Manatū Waka Ministry of Transport		~		
Pouhere Taonga Heritage NZ			~	
Te Waihora Co-Governance Group	/		~	
Local community groups and clubs			~	V
Tenants and lessees			~	
Developers	~	~	~	/
Contractors	~	~	~	/
Council's insurers and lenders	~	~	~	/
Mahi Haumaru Aotearoa Worksafe	/	/	/	/

Our approach to asset management planning

Council aims to achieve best practice asset management to meet the agreed levels of service for the community and our customers. Planning and understanding the needs and wants of our communities is a key part of our approach to asset management and to address the identified issues and challenges. Council has a coordinated approach across the entire lifecycle of our assets. We understand that poor asset management and asset failures lead to risks and poor outcomes for our community. We have comprehensive asset management plans for our infrastructure assets. We review and update these plans every three years to inform the Long-term Plan and Infrastructure Strategy and to ensure that we are meeting the intended outcomes for our community.

Appropriate levels of asset management practice for each of our infrastructure activities are set in Council's Asset Management Policy:



¹¹ Five Waters – some additional requirements as driven by regulator

Lifecycle management planning

Council takes a whole-of-life approach to understanding the requirements for managing the roads, bridges, pipes, buildings, and specialist facilities and equipment that provide our services. To achieve the desired outcomes, understanding where our asset base is performing at each stage of the lifecycle – which can range from just a few years to 100 years or more – is critical to taking optimal decisions on what we fund. Our Asset Management lifecycle strategy follows New Zealand and international best practice in having a co-ordinated structure and approach to each stage:



With current growth in our District remaining at amongst the highest in New Zealand, we place robust planning for the future (see below) at the forefront of our lifecycle management processes – ensuring that we can deliver and maintain each activity's Levels of Service for the anticipated increases in demand.

A significant part of our asset management approach is to operate, maintain and manage the assets we already have. This ensures that our services keep running smoothly — with Council's staff, contractors, and other stakeholders all collaborating to ensure that our day-to-day activities deliver both routine operations, and enable us to respond to issues which require a reactive response, within expected budget constraints.

Our renewals planning includes the collection of an extensive amount of asset data, including, as-built information, capacity evaluation and modelling, maintenance costs, criticality assessment of assets, failure analysis, and condition assessments. This data informs our forecasts and renewals strategies to ensure we are renewing assets (in the "right place") at the optimum and most cost-effective moment (at the "right time").

¹² Transportation additional as driven by Waka Kotahi requirements

¹³ Community Facilities: Some elements at intermediate level – future demand, justification for asset maintenance, renewal and development programmes

Council may face additional renewal expenditure beyond that which has been allowed for in the LTP. This may result from condition assessments highlighting previously unidentified issues or early failure of assets. Should this occur, Council will evaluate the options available to continue to manage the asset and maintain service to the community.

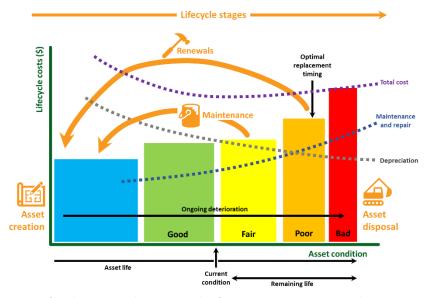


Figure 2: Lifecycle stages and costs. Waugh Infrastructure Management Ltd

The risks of delay in renewing assets at the optimal point in time include an increased probability of a significant failure, higher maintenance and operational costs, an increased probability of not delivering levels of service and creating a backlog of renewals. Longer-term Forward Works Programmes are developed which focus on delivering affordable and deliverable replacement of assets with the resources available.

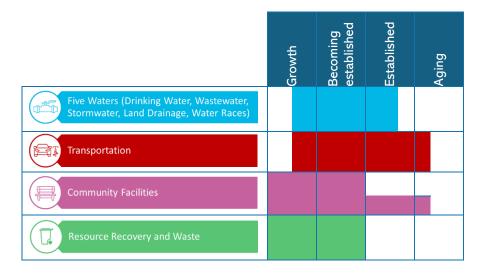
When infrastructure assets are not performing as required, or are unable to meet new standards, capital projects are scoped so deficiencies can be addressed. These projects are prioritised based on the criticality of the assets and the likely impact of any loss of service. Increasingly, considerations of how assets will be disposed of at the end of their useful lives also influences our final decisions.

Activity lifecycle stages can be summarised as in the following categories:

Stage	Characteristics
Growth	Minimal maintenance; no renewals
Becoming established	More maintenance; renewal of short life assets
Established	Regular maintenance; increasing renewals and
	replacements
Aging	Considerable maintenance; ongoing renewals needed

Growth is a significant factor in our approach to infrastructure management, requiring increased provision of services, and responding to changes in demand and the creation and vesting of assets. As our portfolio of assets increases through land development activity, maintenance and operations costs increase and the requirement for future renewals increases. While growth continues to drive our programmes, some of our activities have increasing renewals requirement. This is particularly the case with Transportation which has a significant portion of the network requiring renewals with the next 30 years. A summary of lifecycle stages across our infrastructure activities is in the following table.

Table 1: Activity lifecycle stage overview



PLANNING FOR OUR FUTURE

Managing infrastructure is increasingly complex within an environment fraught with uncertainties and challenges arising from the dynamic interplay of demographic shifts, technological advancements, environmental pressures, land development and growth and regulatory frameworks.

With a growing population and evolving urban landscapes, planning must contend with the changing demands for infrastructure and increasing levels of service expectations, balancing sustainability and environmental protection, financial and affordability constraints amidst uncertainties surrounding climate change impacts and natural hazards.

Addressing infrastructure planning uncertainty requires adaptive structures, evidence-based decision making, long-term strategic planning, and collaboration with stakeholders. We must incorporate resilience, sustainability, and equity considerations to navigate uncertainties and ensure that infrastructure enhances quality of life, promote economic prosperity, and safeguard environmental integrity for future generations.

Several factors are considered when managing our infrastructure.

- asset age, condition and performance¹⁴
- growth and demand and changes to population or land use
- changes to legislative and regulatory requirements, such as standards and national policy statements, and technological advancements
- heightened risk to assets through natural hazards and changing environmental conditions and weather patterns (such as rainfall intensity and drought frequency)
- maintenance requirements to preserve and optimise remaining life of assets.

This section identifies core activities and information which inform our long term infrastructure planning.

Data driven decision making

Knowing about our assets and how well they deliver services to communities and visitors is key to effective and efficient management.

At a high-level data quality and asset condition are 'good' but assets do range from brand new which we can see and know a lot about, to other that are hidden, worn out, and possibly due for replacement.

Data driven decision making means understanding what infrastructure we are responsible for at a detailed level, along with what needs to be done and when to provide a reliable service. Older assets and those that don't last as long need to be monitored and understood to ensure they don't fail and affect the services we deliver. At the same timed it would be expensive to replace assets long before replacement is needed.

Capital improvements are also needed to ensure services comply with standards and legislation, as well as we have capacity in our systems.

Data driven decision making includes knowing and balancing:

- How vital is the service and the assets involved?
- What is the capacity, condition and age of the asset?
- What regular maintenance is needed?
- When will the asset need to be replaced?
- How difficult is the replacement and how much inconvenience will that process cause?

¹⁴ Level of service measures are set out in the LTP and AMPs

- Can we combine renewal and upgrade (capital) work to get the best outcome?
- What does all this cost now and over multiple generations of users?
- What resilience, emissions reduction or sustainability components can be integrated? – balancing the cost of action now versus later.

Table 2: Data driven decision making summary

Action	Maintenance and operations	Renewal	Upgrade (capital)
Reason	Provides the service and prevent deterioration.	Replaces an asset where it is not cost effective or risky to keep using it.	The existing asset is no longer fit for purpose – worn out, too expensive to keep in service, too small or unsuitable.
Data	Work done, cost and any changes in condition.	Cost or repair vs replacement, work done, life expected out of the new asset and the maintenance required to ensure it lasts for as long as possible.	What is needed to meet the current and long terms level of service. Demand and use information, technical requirements, suitability of options.
Example	Pothole or pipe break repaired.	Roof on community hall.	Water reservoir and pumps where there is residential growth.

The data needed does vary for each activity and a consistent approach is taken where possible – such as understand growth and where services will need to be upgraded. Each activity has assessments of data needs and the current quality of

the data. This is included in the AMPs and where there are gaps these are included in the AMP data management strategies and/or improvement plans.

The combination of increasing demand and meeting compliance is currently a key focus, so these areas are the priority for data collection and analysis. We need to ensure we understand the future renewals are known, as there are some 'bow waves' ahead that reflect peaks of construction in the past. For example, we are planning for the need for a number of Asphaltic cement (hotmix) roads coming up for resurfacing which are very expensive comparted to chips sealing.

We use data to underpin our future planning, and identify gaps in our AMPs, including plans to improve the type and quality of data we collect, record and use for decision making.



Growth modelling

Infrastructure is essential for growing communities. Our planning incorporates trends to date, and relies of projections and forecasts, informed by historic data.

In Selwyn District, with the continuing experience of such rapid development and urbanisation, projecting growth, including demographics factors, changes to demand and new development, is key to long term planning of infrastructure.

New assets and increased capacity within systems is required as our district and communities grow. In particular, our asset portfolio increases as private development occurs and infrastructure assets are vested. Council then becomes responsible for the maintenance, operations and eventual renewal of an increasing asset portfolio.

Changes to demographics and an urbanisation can drive shifts in level of service expectation. Our projected growth, and how this guides our planning is described in this section.

For a full insight into the current and projected state of Selwyn District, please refer to the Selwyn District Long-Term Plan 2024-34 "Growth & Demand Report".



The district has experienced substantial growth over the past decade, with a remarkable 78.6% population increase in the last decade, adding 34,900 residents. This surge is reflected in the construction of 1,500 dwellings annually over the last six years. Notably, most of this growth stems from internal migration, particularly from Christchurch.

The district bucked national trends during COVID-19, experiencing a positive impact on population growth. Migration patterns have predominantly consisted of young families and first-time homebuyers, resulting in a younger age structure compared to other districts median age of 37.3. However, it is worth noting that there are pockets within the district that boast a robust population of individuals aged 65 and over, constituting 12.4% of the population as of 2022.

Key development and rezoning has contributed to rapid growth within the district. While largely driven by private development activity, there are considerable interactions with our existing infrastructure, including increasing demand, as well as the need for new infrastructure to be developer and/or Council led.

Our economic landscape has undergone significant positive transformations in the last decade, boasting an impressive 5.3% annual GDP growth compared to the national average of 3%. This growth has been fuelled by a noteworthy expansion in various sectors, including professional services, manufacturing, logistics, retail, construction, wholesale trade, and education. The economic base has diversified substantially since 2011, contributing to a resilient and dynamic local economy. Over the past 10 years, there has been a remarkable 40% increase in businesses, reflecting a vibrant entrepreneurial environment and a robust demand for commercial land. The job market has also experienced a notable upswing, with a 50% increase in filled positions and an impressively low unemployment rate of 2.2% in 2023. In terms of deprivation, Selwyn is 36% more advantaged compared with national levels, is the least deprived and ranks 2/47 overall ¹⁵.

Growth to date

¹⁵ University of Otago: New Zealand Deprivation Index 2018

Growth projections

Looking ahead, projections indicate a continuous upward trajectory for the district's population. The estimate is set to reach 109,664 by 2034, representing an addition of 43,696 residents in the next 12 years. By 2054, the population is expected to reach 153,360, with a substantial increase of 74,060 residents over the following 32 years.

This growth will also impact the age demographics, with the 65 and over population expected to rise to 17.8% in 2034 and further to 24.2% by 2054. The district's demographics, characterised by a blend of youth and a growing senior population, reflect a dynamic and evolving community.

Economic projections paint a positive picture, with employment expected to continue its upward trajectory. The estimate anticipates an increase from approximately 25,524 jobs in 2022 to around 34,838 jobs by 2034, further escalating to 49,400 jobs by 2054. These projections underscore the district's resilience, economic vitality, and potential for sustained growth in the coming years.

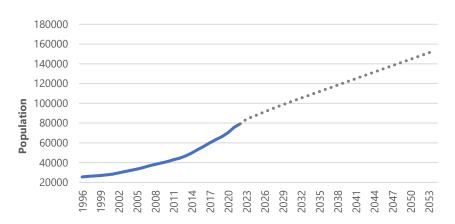


Figure 3: Selwyn District Population Estimates and Projections. Selwyn District Growth and Demand Report 2023/2024



Figure 4: Growth Projections 2024-2054, Selwyn District Growth and Demand Report 2023/2024

Incorporating growth trends into our planning

Recently, planning for future growth within Selwyn District has been driven by the District Plan Review and Private Plan Changes. These have largely been fulfilling the broader growth pattern outlined in the Canterbury Regional Policy Statement. The review and plan changes have also overlapped with government directions, notably the National Policy Statement on Urban Development (NPS-UD) 2020, the Resource Management - Enabling Housing Supply and Other Matters Amendment Act 2021 (EHS Act), and the National Policy Statement on Highly Productive Land 2022 (NPS-HPL). The NPS-UD has provided a pathway for unanticipated plan changes and intensification in the right locations. The EHS Act has enabled three houses up to three storeys on all sites. While the NPS-HPL has limited urban expansion onto the most versatile soil.

The NPS-UD has presented increased opportunities for private plan change development in recent years, driving increased urban development in the Prebbleton, Lincoln, Rolleston and West Melton. As these progress, significant new infrastructure will eventually be vested in Council, Council is also required to provide wider upgrades to its adjoining roading and water services networks to cater for this urbanisation and growth. In some cases, the approved developments cannot proceed until upgrades are completed by Council. This puts pressure on Council to fund and programme upgrades in response to developers expectations.

These directions have required changes to the District Plan and shape the capacity of development potential in the district. Long-Term growth areas around Rolleston have been rezoned, while the towns of Rolleston, Lincoln, and Prebbleton have been enabled for greater intensification in line with the EHS Act.

Further long-term (30 year) growth will be directed by the Greater Christchurch Spatial Plan and updates to the council's own strategic direction will outline the opportunities for growth into the future.

Infrastructure planning to address new development including service area extensions and increased demand within an existing service area, aligns with District Plan zoning, in recognition of intended land use activities and necessary infrastructure provision.

Growth projections are also incorporated into demand profiles within each of our infrastructure activity groups in the **Managing demand section**.

Forecasting and managing demand

Forecasting demand for infrastructure assets is crucial because it enables us to anticipate future needs and prepare accordingly. By understanding how populations grow, the makeup of our communities and needs change and how our operating environment evolves, we can estimate how much our infrastructure will be used and what kinds of stresses it will face. We can also make some assumptions and plan for changes in our operating framework. This foresight allows us to plan strategically, allocate resources effectively, and prioritise investments in the most critical areas.

By forecasting demand, we can identify potential bottlenecks or areas of strain in advance, allowing us to take proactive measures to address them. Accurate forecasts enable us to make informed decisions about where to invest limited resources, ensuring that infrastructure systems can support the needs of communities both now and in the future. Ultimately, forecasting demand for infrastructure assets is essential for building resilient, adaptable and sustainable infrastructure that can serve the needs of our future communities.

Demand management strategies are integral to infrastructure management as they optimise resource use and align services with community needs, while maintaining operations within asset, environmental and regulatory limits. Demand management strategies provide alternatives to the creation of new assets in order to meet demand. They look at ways of modifying customer behaviour and demand in order that the utilisation of existing assets is maximised and the need for new assets is deferred or reduced. Demand management initiatives are important to help us to maintain the total demand at reasonable and sustainable levels, balancing the need for new or upgraded assets with the cost to our communities.

We have forecast demand in each of our infrastructure activity areas, noting our assumptions, limitations and pressure points. Where appropriate, this section describes the demand management strategies available.



Demand for our Five Waters services and infrastructure needs are already a significant driver for Selwyn's activities, with investment in increased Water Supply and Wastewater Treatment Plant capacity ensuring we can manage expected demand within the current LTP cycle. Anticipated growth across the District will result in large increases in service connections for both residential and commercial users. Much of this development will include expanded water supply, and wastewater and stormwater drainage networks to cater for this in our urban centres, townships, and rural schemes – which will be in addition to our significant asset base growth experienced over the last 20 years.

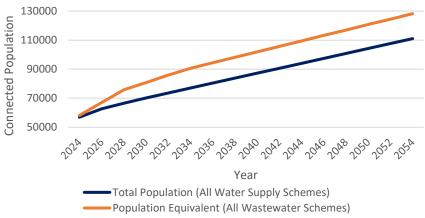


Figure 5: Growth projections by scheme/community - Water and Wastewater

Water Supply

Urban centre growth of water supply connections (excluding additional commercial growth demand) is modelled to increase by 130% - 145% for Rolleston and Lincoln to 2053/54. Township growth is modelled at growth rates between 60% - 170% over the same 30-year period. Our planned response includes the continued investigation of a "Centralised Treatment" water supply scheme to

meet anticipated challenges in meeting Drinking Water Standards and maintaining security of supply in an environmentally sustainable manner.

We have opportunities to manage water loss of from pipes and storage reservoirs, enabling more efficient use of treated water. Our *Water Conservation and Demand Management Plan* can be implemented to limit use and provide for growth in adapting to Climate Change or supply issues resulting from future water take constraints.

Wastewater

Urban centre growth of population served by wastewater connections (excluding additional commercial growth demand) have identified capacity upgrade requirements for piped networks and pump stations in Rolleston, Lincoln, and Prebbleton in the current LTP. This is being delivered in conjunction with phased upgrades of treatment processes and total capacity at The Pines facility over the next 30 years to cater for a Population Equivalent of 130,000 from all connected schemes in a sustainable manner.

Changes in legislation and regulation for wastewater treatment and disposal may have impacts on the scale and complexity of existing scheme facilities, potential upgrades, or the extension of wastewater services and infrastructure for the Council's 2024-2054 Infrastructure Strategy. Efficient disposal of treated wastewater, allowing for expected changes in the requirements and regulatory frameworks governing water quality and the environment, remains a key challenge during this Infrastructure Strategy period.

Stormwater

Urban growth and development will result in increased surface water run-off, needing to comply with anticipated future water quality requirements for storm water discharge, over the period of this IS. Current strategic planning is focussed on the following priorities:

- Anticipated changes in legislation and regulatory frameworks requiring improved water quality of stormwater discharges, including potential retrofitting of existing areas
- Identifying land for stormwater retention and detention facilities
- Investigating options to reduce run-off through design
- Climate change adaptation considering the impacts of extreme rainfall events resulting in inundation of existing stormwater networks and infrastructure, increasing the risks of localised flooding within network catchments, and downstream.

Changes in both land use and demand with continuing high growth can be managed in a way which will not result in significant impacts on communities from surface water flooding (for example, through Engineering Code of Practice standards). Management of stormwater infrastructure include measures to invest in increased resilience from the effects of natural hazards through existing planned programmes and investment.

Land Drainage and Water Races

We do not anticipate significant growth from population in these activities. Management of demand within our land drainage scheme and water race infrastructure is focussed on:

- Servicing rural communities and receiving stormwater from urban areas to the lowland land drainage network
- Maintaining water race infrastructure to continue to provide for declining stockwater and irrigation demand where there is potential for increased drought conditions
- Retaining remnant surface water ecological corridors through the district ki uta ki tai | from the mountains to the sea.

Current plans for operations and management of land drainage and water race infrastructure, in conjunction with stormwater, are to continue to provide levels of service to the community where demand remains while improving waterway health and maintaining key ecological corridors.



Transportation demand includes understanding and providing appropriate services for cars, trucks, busses, pedestrians and cyclists. Development and land use change across a diverse range of urban and rural areas prompts changes in travel patterns, which challenge transport system levels of service, and choice.

Population growth drives increases in general road use, whilst changes in dominant industries help to explain the spatial distributions of heavy vehicles and how these patterns have changed with time. Population growth in the last 5 years (as shown in Figure 6) has seen similar increases in traffic growth to around 600m VKT (vehicle kilometres travelled) on our roading network. On Arterial and Primary Collector routes servicing links between our urban centres, commercial development, and Greater Christchurch, this has resulted in around 10% of our roading network carrying over 60% of all VKT. Some roads carry very high numbers of trucks (up to 30% of the total traffic being classed as heavy vehicles) and this is causing them to wear out quickly. In other situations, assets need to be upgraded such as bridges that cannot take heavy vehicles. While VKT's are modelled to increase based on population growth, they begin to diverge, signalling VKT reduction/per head of population.

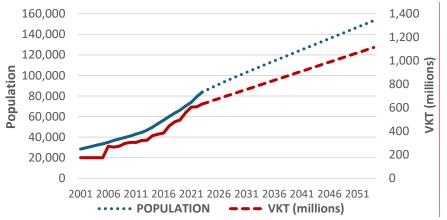


Figure 6: Population and VKT forecasts

Traffic modelling is undertaken within Selwyn and across Greater Christchurch to understand our required actions. Modelling considers the impact of growth areas and new developments, so we keep up with what is needed. Asset growth has kept up with this expansion, with large lengths of new road, footpaths, and amenities vested to Council. Accommodating increases in the quantities of maintenance and renewals work required for roading assets as part of our budgets.

For walking and cycling, convenient linkages are key to ensure there is a safe option available. Similarly, demand for alternative modes of travel using public transport is also increasing, particularly as urban populations increase. We are continuing to invest in public transport support infrastructure (bus stops, park n ride etc) to align with bus service planned by Environment Canterbury. Travel demand management is key to managing growth within our Transportation network, and to defer or minimise required capacity upgrades.

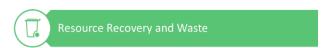


Recreation and leisure trend data indicates a gradual but sustained movement away from competitive, organised sports to other forms of active recreation. This continued trend has implications for provision of sports and recreation facilities and specifically a lower need for organised sport space and facilities relative to population and increased need to provide for more informal recreation activities.

Changes in preferences in sports activities are noted through both Sport NZ data and locally captured data. This indicates a decline in some traditional sports (e.g. rugby, netball) and increase in participation in sports such as basketball that are primarily reliant on indoor venues. This trend is strengthened with changes in the ethnicity of communities where participation in indoor sports activities is more prevalent. Growth in most sports is still expected resulting from the increase in population but the changes to sport preferences is likely to increase demand for indoor court space with the consequential need for more indoor facilities. The projected changing demographics sees a higher proportion of people in the older (65+) age group. This change will also have an impact on the types of sports and

recreation facilities to be provided. The overall requirement especially for outdoor competitive sports space is likely to decline or require different facilities. This change may also signal the need to decommission some assets such as playgrounds at end of life with no replacement.

The aging population means that the death rate will continue to rise from about 220 per year in 2023 to over 740 by 2054. This has implications for cemeteries provision. Based on the forecast uptake of burial plots over next 30 years and the available capacity in Council cemeteries, it is expected that the available burial capacity will be reduced by 85%. This signals the need to progressively develop extensions to our cemeteries where land is already available and to acquire land for a new cemetery in the eastern Selwyn area to meet future demand.



Our waste audits highlight how different waste streams within our service are being used and provides opportunities to further reduce waste to landfill. This analysis informs our forward planning and is essential to meet the growing demand for sustainability and waste reduction efforts. The following graph maps projected demand and population changes.

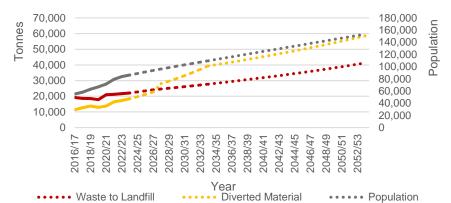


Figure 7: Residual waste and diverted material tonnages: actual (2016-2023) and projected (2024-2054)

Our approach to demand management is based on the waste hierarchy (Ministry for the Environment) and the circular economy principle to minimise waste and increase diversion. This is achieved through waste management methods like recycling and disposal by addressing the root causes of waste generation. By encouraging responsible consumption, sustainable production, and circular economy practices, waste demand management contributes to reducing the environmental impact of waste and promoting a more sustainable future. Council is committed to the use of a range of demand management strategies to ensure ongoing functioning of the assets and activity, and the principles of waste minimisation.

Renewal profile

Renewal projects restore or replace components of an asset or the entire asset to return it to its original level of service (size, condition, or capacity). Not addressing deferred renewals has serious implications, including running the risk of breakdowns, service disruption, extra costs for ongoing maintenance and potentially total failure of our services.

The following summarises renewal programmes across our asset groups. It is noted that there are no planned renewals in Land Drainage or Water Races.

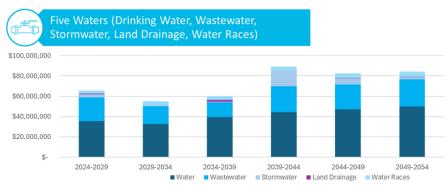


Figure 8: Water, Wastewater and Stormwater renewal profile (5 year grouping) 2024-2054

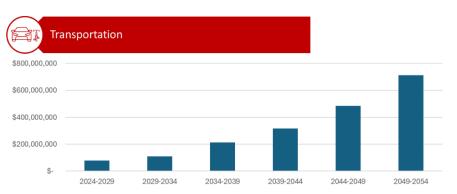


Figure 9: Transportation renewal profile (5 year grouping) 2024-2054

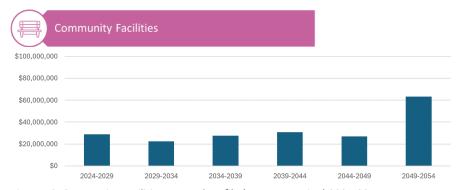


Figure 10: Community Facilities renewal profile (5 year grouping) 2025-2054



Figure 11: Resource Recovery and Waste renewal profile (5 year grouping) 2024-2054

Renewal projects funding may include depreciation, or capital reserves. If the reserve is not sufficient to meet the programmed renewals, loans will be utilised and repaid from a contribution from the reserve that best fits intergenerational equity and/or the operational funding sources for the particular activity as per the Revenue and Financing Policy.

Risk management

Risk management involves understanding the likelihood and consequences of any risk we consider eventuating. Often risks are posed through potential issues with; planning (we are unsure of what may happen, or have not adequately considered possible outcomes), management (plans, policies, and processes do not sufficiently address negative effects of events, non-compliance, legal, and political issues), delivery (capacity, capabilities, and physical/financial resources may not support Council's operations) and physical assets (where failure of critical assets, systems operating above capacity, or damage from natural hazards such as extreme weather and earthquakes).

By identifying risks we try to understand them better and introduce practices which can eliminate, minimise, or mitigate the effects and recover if they do happen. Some risks will materialise regularly (such as high rainfall or a slip on a hillside road) while we may not experience others in our lifetime. The impact or consequences of the risk occurring range from insignificant and can be addressed as part of our business-as-usual work, through to catastrophic.

Council has established a Risk Policy to guide the approach to the management of risk and ensure is consistency across the organisation. This is worked through by each activity and planning for key risks undertaken. This could include upgrading of assets to make the more robust or resilient to events occurring, or ensuring emergency management programmes are appropriate. Critical assets are also identified to ensure there is a priority put on managing infrastructure that has the greatest impact on safety and continuity of services.

Our Risk Policy identifies the following risk types:

Asset & infrastructure	Compliance
Financial / Audit	Environment
Customer relations / service delivery	People and capabilities
Heath, Safety & Wellbeing	Political / Reputation

The grid and key below shows the combination of likelihood and consequences, and actions required to treat risk.

Table 3: Risk ratings and risk priority ratings. Selwyn District Council Risk Policy

		Consequenc	e			
		Insignificant	Minor	Moderate	Major	Catastrophic
	Frequent	Moderate	Significant	Extreme	Extreme	Extreme
75	Often	Moderate	Significant	Significant	Extreme	Extreme
ikelihood	Likely	Low	Moderate	Significant	Significant	Extreme
i≡	Possible	Low	Moderate	Moderate	Significant	Significant
Ě	Rare	Low	Low	Low	Moderate	Moderate

Risk pric	Risk priority rating							
Risk	Level of risk	Risk response						
score								
15-25	Extreme	Requires immediate assessment of actions						
8-12	Significant	Requires remedial assessments and action via the						
		annual planning process						
4-6	Moderate	Adress via new procedures and/or modification of						
		existing practices and training						
1-3	Low	No formal requirement for further action, unless						
		escalation of risk is possible						

Our key risks identified within the Extreme and Significant residual risk classifications, and considered management strategies can be summarised at a whole of infrastructure activity level, as in the following table. More detailed description of risk at an activity level can be found in the respective AMPs.

Table 4: Risk summary - infrastructure assets

Risks & Issues	Risks & Issues Priorities & Challenges			
Asset & Infrastructure				
Unknown poor asset condition resulting from assessment processes, or data quality and accuracy.	Understanding condition and performance of assets particularly those that are inaccessible/on private property.	Significant		
Activity management and delivery impacting on environmental and community well-being.	Operations Manuals not up to date or non-existent.			
Not following established policies, processes or procedures. Poor operational control	Failure of operational systems or service due to maintenance work not being completed on time.			
results in service failure and adverse health effects or environmental damage.	Closed landfills are at risk of river erosion and associated impacts such as pollution or affecting drinking water sources.	Significant		
Asset Management and Systems impact on decision-making and service delivery.	Asset Management system not kept up to date with data on the condition, performance or maintenance history of assets. Asset Risk Register and Risk Plan not implemented.	Significant		
Critical asset failure leading to significant disruption/loss of service.	Failure of a structure (bridge /retaining wall) leads to road closure or reduction in service. Major (multi day) breakdown of any critical and specialised equipment.			
Inability to fund required work (internal and external sources)	Reservoirs have insufficient capacity at peak times: pressure and flows reduce, insufficient fire flow water, siphoning.	Significant Significant		

Demand places pressur in managing water resources, ou environment, an culture	r Agricultural Intensification: cumulative effects of diffuse nutrient discharges from	Significant
Compliance		
Wastewater or potabl water not treated t acceptable standard: Potential for significar public health an environmental impacts. Legal action and cultura offence.	Water quality: Growing awareness of the potential impacts of nitrates on drinking water and the high cost for treatment/removal.	Extreme
Consent compliance meeting the costs of use requirements against changing regulator frameworks organisational constraints.	r t Managing consent compliance monitoring	Significant
Financial / Audit		
Cost impacts of programming an planning	Covering cost of scheme operation and addressing Increasing number of capacity upgrades/increased expectations from ratepayers. Cost of materials escalates making works unaffordable.	Extreme
Inappropriate insuranc cover	Cover does not provide funds or necessary asset replacement following an insurable event.	Significant Extreme

Financial Management (organisational and political)	Growth projections do not occur as anticipated and affect project affordability.	
Planning and Delivery of Capital Programmes and Projects	Growth exceeds projections and costs to increase capacity and maintain service levels cannot be met in the short-term.	Significant
Environment		
Disruption to activities and services from Natural Hazards	Effects including, physical damage, contamination, reduced capacity or loss of service, and loss of automation capability. Communities and individuals at risk of injury or death.	Extreme
Climate Change: the impacts, and need for climate adaptation, including recognition and	High Infiltration and Inflow rates in pipe and treatment assets exacerbated by Climate Change	
demonstration of the transition to a carbon neutral district.	Assets are inappropriately sized, protected or located making vulnerable to climate impacts and environmental changes.	Extreme
People and capabilities		
Staff and facilities retention	Inadequate portfolio management leads to non-achievement. Loss of information and knowledge (systems and personnel).	Significant
Skills shortage Suppliers and materials shortages Contractor management	Addressing below standard provision of professional services and physical works delivery: Poor quality delivery or delay in delivery of projects. Possible rework impacts on subsequent projects and programmes.	Significant

Health, Safety and Wellb	eing	
Public health and safety risks	Mitigating known issues where significant risks to the public are identified, e.g. serious road crashes, drowning as a result of flooding, drowning at community pool. Inadequate signage or markings contribute to road crashes. Injury or drowning through lack of suitable supervision.	Extreme
Staff Health and Safety Risks	Long travel times for maintenance of remote assets. Schemes are becoming management intensive due to system development/growth, environmental requirements and public expectations. Council's reliance on volunteers (Committee Members) to operate Council Assets and ensuring that work carried-out and health and safety standards are met.	Extreme
Political / Reputational		
Operating in a way that leads to legal liability	Not meeting legislative requirements: Inadequate legal protection / enforcement powers. Legal action taken against council.	Significant
Council/Elected Members negatively influencing decision- making	Lack of political/priority alignment between national/regional/local priorities. Inability of elected members to fulfil roles and responsibilities, or act on staff and community concerns.	Significant

Emergency Levels of Service

Planning Emergency Levels of Service are service delivery goals for infrastructure providers during and after an emergency event. These goals could be delivered through the existing infrastructure (e.g., pipes, lines, cables), or through other means (trucked water or the provision of generators).

In 2016, OPUS undertook an exercise to map out levels of service for drinking water delivery as could be anticipated under a range of severity of impact through to emergency events where this lifeline service may be significantly affected. This assessment is based on a review of the network risk and resilience within the current systems, mapping this through to service delivery to communities. While there is work progressing in drinking water at a national level, no update is available at this time.

Detour routes are jointly planned with Waka Kotahi NZTA to ensure when planned or unexpected events happen, an alternative is available. This information is posted on Council/Waka Kotahi NZTA websites or directed on the ground. It is acknowledged some roads do not have alternatives, so criticality planning is undertaken to manage these routes appropriately.

No wider emergency levels of service work is programmed within Council.

Incorporating resilience

Resilience (and resilient infrastructure) is based on a design philosophy which acknowledges that failure will occur. Resilience requires early detection and recovery, but not necessarily re-establishing a failed system. Resilience is about the ability to plan and prepare for adverse events, the ability to absorb the impact and recover quickly, and to support a community to adapt to a new environment.

Adverse events, natural disasters, climate change and the related impacts cannot be avoided and as a result Council has to factor this into our long term planning, civil defence planning and how we determine the most appropriate infrastructure requirements (design and location) moving forward to ensure the community's expectations for safe and reliable services and general wellbeing can be met, a risk minimised. In particular, the Canterbury Regional Transport Committee has

identified that improving the resilience of the regions key transport networks is of emerging importance needing to be reflected in our planning and its RLTP.

The 2010 and ongoing Canterbury Earthquake sequence and subsequent recovery and rebuild, highlighted the need for resilience as a key component of infrastructure provision and planning. The rebuild following the earthquakes has resulted in accelerated growth within the District. The rebuild also involved changes to design of infrastructure recognising past earthquake sequences. We continue to develop our planning around emerging understanding of risk, including the standards for assets to be vested to Council by developers through our Engineering Code of Practice.

Valuations of our infrastructure assets consider criticality, capacity and performance which factors into funding. Maintenance and operations have begun to be linked to Council's criticality framework — which requires on going requirement to ensure funding is not misdirected to works with lower resilience value.

More information about our resilience planning in the next thirty years can be found in our **Infrastructure Priorities** and **Major Projects and Decisions** (Challenge Four: Responding to Risk, Sustainability and Climate Change) sections.

Climate change

The main threats to our infrastructure from climate change come from extreme weather events: heat, cold, rain and wind. We have a few assets in areas likely to be affected by sea-level rise within the next thirty years, in particular wastewater systems and land drainage in coastal areas. Flooding and storm damage threatens bridges and culverts, some of which also carry water assets. Wetter weather places greater demands on wastewater and stormwater systems and increases the risks of overflows and flooding. Warmer summers increase peak water demand, while less alpine snow can reduce groundwater recharge and affect bore levels.

Climate modelling, including assessment of high-level impacts to key infrastructure activities (Five Waters, Transportation and Community Facilities) was undertaken by Aqualinc in 2023 (*Impact of Climate Cycles and Trends on Council Assets - 2023 Update*), updating an earlier report focused on Five Waters.

The risk assessment of climate change impacts is summarised in Table 5. Details on how we are responding to climate change and how it might impact on our infrastructure can be found in the **Our Sustainable and Resilient Future** section.

It is noted that environmental factors assessed as high risk of impacting assets relate to the occurrence of more extreme weather events with the occurrence of extreme weather events is likely to increase.

Table 5: Summary risk assessment of climate change impacts on SDC assets projecting to 2050. Aqualinc. 2023.

	All zon	es					hills and	t		Plains			Coasta		
						high-co	ountry						lower	olains	
	Temperature (excl. ET impacts)	Annual rainfall	Drought	Evapotranspiration (ET)	Wind (excluding ET impacts)	Alpine rivers flows	Extreme rainfall events (foothills and alpine)	Foothills-sourced river flows	Snow levels and ice	Extreme rainfall events (Plains)	Snow levels and ice	Ground water levels (upper/mid/plains)	Sea level rise	Extreme rainfall events (Coastal)	Groundwater levels (Lower Plains)
Five Waters (Drinking Water, Wastewar Stormwater, Land Drainage, Water Rac	ter, es)														
Drinking Water	M	L	Н	M	M	M	Н	Н	L	L	L	М	L	Н	L
Wastewater	M	L	L	L	М	L	Н	L	L	Н	L	L	M	Н	L
Stormwater	M	L	L	L	L	L	Н	L	L	Н	L	L	M	Н	L
Land Drainage	M	L	L	L	L	L	Н	L	L	Н	L	L	Н	Н	M
Water Races	Н	L	M	L	L	Н	Н	Н	L	Н	L	L	L	M	L
Transportation															
Transportation	Н	L	L	L	L	M	Н	Н	L	Н	L	L	M	Н	L
Community Facilities															
Community facilities	Н	L	L	L	Н	L	Н	Н	L	Н	L	L	М	Н	L
Developed open spaces	Н	L	Н	M	Н	M	Н	Н	L	Н	L	L	Н	Н	М
Natural open spaces	M	L	M	L	Н	M	Н	M	L	Н	L	L	M	Н	L

Climate change impacts on infrastructure include:



Five Waters (Drinking Water, Wastewater, Stormwater, Land Drainage, Water Races)

Water supply

 Based on current projections, significant longer-term impacts on environmental factors like groundwater levels up to mid-century may be relatively small.

Wastewater

- Higher alpine rainfall and flood flows will likely result in an increase of stormwater inflows for the Arthurs Pass, Castle Hill and Lake Coleridge wastewater systems.
- An increase in sea level rise of ~0.21 m may impact Upper Selwyn Huts and Rakaia Huts wastewater systems.

Stormwater

- Higher alpine rainfall and extreme rainfall events may result in an increase in occurrence of surface flooding at Arthurs Pass, Castle Hill and Lake Coleridge.
- An increase in sea level rise of ~0.21 m may impact the efficacy of the stormwater system during coastal storm events at Rakaia Huts.

Land drainage

- Higher alpine rainfall and extreme rainfall events may result in an increase in occurrence of surface flooding in the Arthurs Pass land drainage (flood protection) systems.
- An increase in sea level rise of ~0.21 m will impact Te Waihora /Lake
 Ellesmere levels and parts of the land drainage network.

Water races

- An increase in alpine flood flows could result in an increase in flood damage to intakes. Conversely, higher alpine flows would improve reliability of water supply.
- Potential minor reduction in flows in the Kowai River may impact supply reliability.



Transportation

- Under all emissions scenarios, the incidence of extreme events is expected to increase resulting in more frequent road and ford closures and repairs.
- Flood events previously categorised as 1 in 100 year events may become
 1 in 10 year events



Community Facilities

- Under all emissions scenarios, the incidence of extreme events is expected to increase resulting in more frequent inundation of areas.
- More frequent occurrence of extreme events will impact on building envelopes and systems, and the accessibility and usability of facilities that are required as part of emergency response.



Resource Recovery and Waste

Although the Resource Recovery and Waste activity was not included in the Aqualinc assessment, the following is provided as a high-level summary of the impact of climate change.

Closed landfills:

 A small number of closed landfills are at risk of climate change related impacts – predominantly river erosion. Council has been working through prioritising investigation of landfills potentially at risk from climate change, while balancing the risks that closed landfills may have in other ways, such as risk to drinking water.

Pines Resource Recovery Park:

- Climate change risks include winds damaging structures, and increased risk to structures and machinery from more frequent wildfires.
 Increased gale or strong winds could also impact compost operations due to dust – this may limit operational days and increase water use.
- Increased temperatures could increase odour risk and consent breaches from organic waste and composting activities.
- No significant additional risk is expected from increased rainfall event severity, due to the nature of the free draining soil structure.

Carbon and greenhouse gas emissions (GHG)

Within the life of this IS, we will be transitioning to a net-zero carbon emissions environment in line with the national target and the Climate Change Response (Zero Carbon) Amendment Act 2019. In addition, Council is working towards a 30% reduction in emissions by 2030, and a net zero target for 2040.

The first step towards a low emissions future, is understanding the impact of our activity on carbon and greenhouse gases emissions. We have begun to quantify the carbon footprint of our some of our activities which will help us to monitor the success of mitigation measures.

Council have commissioned reporting of Council's carbon emissions, compared to the 2018/19 financial year, which was audited by Toitū, as a baseline. Emissions detailed in this IS are from the 2020/21 financial year. Assessment includes activities contracted out (taking an enlarged supply chain approach).

The top 10 emissions identified account for 84.9% of Council's total tCO₂e, with our infrastructure activities significant contributors to these:

Table 6: Top ten emissions sources 2020/21. Carbon Emissions Assessment Report 2022

Rank	Emissions source	Total tCO₂e	% of tCO₂e
1	Wastewater (CH ₄ and N ₂ O) at Pines WWTP	1,521	20.5%
2	Diesel used by Roading contractor	1,088	14.6%
3	Electricity used for service centres	842	11.3%
4	Diesel used by 5Waters contractor	737.7	9.9%
5	Diesel used by kerbside collection contractor	655.1	8.8%
6	Diesel used for waste transfer to Kate Valley	337.7	4.5%
7	Diesel used by Parks and Reserves contractor	330.6	4.4%
8	Unassigned electricity	302.1	4.0%
9	Electricity used for streetlights	269.8	3.6%
10	Electricity used for 5Waters network operation	247.7	3.3%

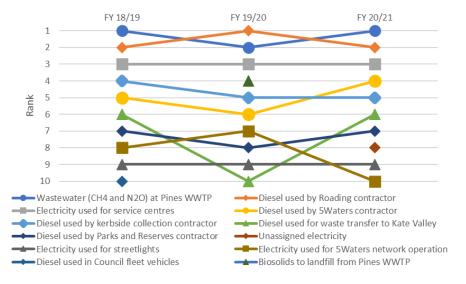


Figure 12: Top ten emissions sources per financial year. Carbon Emissions Assessment Report 2022

Key emissions reduction planning includes the following actions. More information on our projects can be found in the **Major Projects and Decisions** section.



Five Waters contributes significantly to the whole-of-Organisation carbon and greenhouse gases emissions, with operation of The Pines Wastewater Treatment Plant, and management and disposal of resulting sludge (biosolids) accounting for up to a quarter of the total emissions. Combined with contractor (e.g., diesel usage for vehicles and plant) and operations (e.g., pump station and treatment plant electricity usage).

Key actions to reduce GHG emissions include:

- Change from aerobic to anaerobic treatment processes and technologies at Pines WWTP.
- Water/Wastewater Treatment Plant renewals and replacement programmes ensure that low-energy alternative technologies are prioritised where these are viable
- Working with our contractors to deliver expected service with reduced carbon emissions, including travel, service operations and maintenance
- Proactive management of other small settlements water and wastewater community schemes – planned upgrades supporting the use of renewable energy sources, and increased remote operations
- Management of biosolids from treatment processes minimise to emissions, and provide opportunities for future resource (heat recovery for wastewater treatment) improvements.
- Other overall reductions achieved through our Water demand management, measures to reduce total volumes of treated water and wastewater (e.g., reduce water loses and inflow and infiltration), continued metering to manage growing demand, and appropriate upgrading of water and wastewater treatment plants balancing growth with renewable energy uptake and demand management.



In addition to the carbon emissions profile of our activity, including contractor (diesel usage for vehicles and plant) and operations (e.g., streetlighting electricity usage), our activity is also key to supporting our communities transition to a low emissions future through providing and supporting alternatives to private vehicle-based travel.

Key actions to reduce GHG emissions include:

- Seek to reduce emissions through change in vehicle fleets (including contracted operations).
- Adopt new material, technologies and methods that reduce emissions.
- Make supply chain and material sourcing more efficient (including scheduling and combining works to minimise carbon emissions).
- Promote and support mode shift including the provision of coordinated infrastructure.

For the emissions that cannot be reduced, it is expected that these will be partially offset by emissions reduced from better transport outcomes delivered through Council's transport activities, e.g. smooth roads and uncongested intersections reduce carbon emissions from transport activities of the public. In addition, travel demand management will also help offset emissions while also improving air quality.



Emissions within the Community Facilities activity are split into:

 Community Facilities and Service Centres: electricity consumption as the largest contributor. Waste, mixed recycling and LPG are minor contributors. Property: Parks and reserves contractor diesel use is the largest contributor, followed by mixed waste from rubbish collection and organic waste generated directly from reserves maintenance. Electricity, petrol, oil and LPG are minor contributors.

Key actions to reduce GHG emissions include:

- Energy Efficiency Net Zero Carbon Programme: Assessment, options analysis, and recommendations for carbon reduction actions for various asset groups.
- Energy efficiency upgrades for buildings: Energy audit assessments and recommendations followed by lighting/heating conversion, installation of insulation and double glazing of existing buildings to reduce electricity consumption.
- Hot water heating conversions for change rooms: Conversion of gas water heating systems to heat pumps (may be in combination with solar panels).
- Sustainable and low carbon builds for new buildings/facilities: All new building and extensions to be built to principles of Green star or equivalent low carbon specifications Buildings to consider "whole life costs" and environmental impacts by including measures such as: rainwater harvesting; installation of solar panels to achieve net zero energy costs; construction to minimise carbon emissions and embodied carbon, waste generation and the use of harmful chemicals and materials in the manufacturing process
- Waste minimisation on reserves: Programme to install recycling stations on some reserves; Reduction of waste to the waste stream by recycling/re-using assets when at end of life and to be removed.
- Solar energy systems: Installation of solar panels on buildings/facilities to generate on-site renewable electricity.
- Maintenance contract incentives/requirements: Introduction of requirements/incentives in maintenance contracts to promote use of low emission machinery/vehicles for maintenance activities and ensure organic green waste is used for composting rather than to landfill.



Waste management plays a crucial role in addressing climate change by mitigating greenhouse gas emissions, reducing environmental pollution, and promoting sustainable resource use.

Emissions within the Resource Recovery and Waste activity are generated primarily through contracted services, with the largest contributors being diesel use of kerbside collection vehicles and transport of waste from the Pines RRP to the Kate Valley landfill site, and operations of the Pine RRP. GHG emissions arising from the landfill site itself are considered out of scope when calculating the Council's organisational emissions.

Key actions to reduce GHG emissions include:

2024-2054

- Electric or low emissions vehicles for RRP operations, kerbside collection and transfer of waste: awaiting technological advancements.
 We anticipate that developments may be able to be incorporated into future contracts.
- Reduction to fortnightly waste collections: this remains the most viable short-term option to reduce emissions with a potential reduction of 17% of current collection emissions.
- Waste stream changes: separate glass collections have the potential to increase collection emissions, but recycling opportunities present potential reduction; container return scheme will transfer emissions accounting from Council to users; and continued and increasing diversion of organics will reduce waste to landfill.
- Incorporation of energy technologies: installation of solar on the ReUse shop will reduce electricity use across the wider RRP site.

Consenting and compliance

Resource consents are key 'assets' underpinning the delivery and operations of our core activities. The following table summarises the consents we hold and timeframes for renewals.

	2024/25 – 2029/30	2030/31 – 2034/35	2035/36 – 2039/40	2040/41 – 2044/45	2045/46 – 2049/50	2050/51 – 2054/55
Five Waters (Drinking Water, Wastewater, Stormwater, Land Drainage, Water Races)	30	37	23	23	8	3
Drinking Water	8	25	11	2	1	-
Wastewater	15	2	3	3	-	-
Stormwater	-	-	4	17	7	3
Land Drainage	4	2	-	-	-	-
Water Races	3	8	5	1	-	-
Transportation	-	-	1	-	-	-
Community Facilities	11	5	3	14	4	1
Resource Recovery and Waste	1	6	3	-	-	-

In anticipation of higher standards, additional capital expenditure may be needed to improve mitigation of adverse effects. We have more information on this in our **Major Projects and Decisions** section.

Key assumptions and uncertainties

All long-term planning is based on assumptions about the future, which affect future operations and future capital spending. Infrastructure planning has to be set in a wider context of what else is happening in the district, the country and the world.

Council has a structured approach to establishing and assessing the impact of assumptions. Assumptions are made to allow a way forward with planning where there is uncertainty. The level of uncertainty and the consequences are assessed and reviewed regularly. Our assumptions are detailed in the LTP. A summary of those assumptions with a high level of uncertainty that impact upon our infrastructure assets is provided in the following table:

Table 7: High uncertainty assumptions

Assumption	Potential effects
Financial	
The Long Term Plan assumes that	There is a risk that capital projects may
the timing and cost of capital	not occur as planned. This may have an
projects and associated operating	impact on the costs of the project. In
costs are as determined through	periods of high inflation and cost
the Council's activity management	escalations there is also the risk that
planning process. The financial	actual project costs will vary from those
impact of changes to timing of	forecasts. The GPS on Transport provides
capital expenditure would be	the direction for national transport
impacted by inflation, cost of	funding allocations which can change.
borrowing and in the case of	Transport projects seeking subsidy will
facilities, savings in operating costs	need to be developed through a Business
for the period the capital	Case approach to NZTA which may
expenditure is delayed.	change originally anticipated outcomes
It is assumed that Transportation	There is a risk that sufficient funds will
funding from Waka Kotahi NZTA will	not be available to pay for the planned
be as follows:	capital projects. For example, subsidy is
1. The financial assistance rate of	not available from national transport
51% will apply to all maintenance,	funding sources or because growth does
operations and renewals works,	not provide sufficient funding from

and capital works, unless an alternative (enhanced or targeted) rate has been approved.

- 3. Emergency works funding above the funding programme will be provided to remedial works whenever qualifying events occur.
- 4. The overall value of the funding estimated for the Land Transport Programme shall be based on the activity management plan/programme business case, informed by published guidance from Waka Kotahi NZTA.

development contributions or the community considers that required rate rises are not affordable. The full range of funding expected initially in a NLTP may be reduced during its period if NZTA face significant national cost increases requiring a reprioritization of NZTA funding which may result in capital projects being deferred for funding.

Legislation

Council will continue to operate Water Supply, Wastewater and Stormwater services until 1 July 2026.

There is a risk that there will be a significant change resulting from Local Waters Done Well or Council decision to progress a CCO delivery model, including potential alignment with neighbouring TAs or that legislative change could have an impact on the Council's asset base and revenue streams.

Activity Management Planning and Long Term Plans will reflect the two years (2024/25 and 2025/26) prior to the transfer of responsibility to the new entity, 10 year plans will be developed due to uncertainty.

Planning is required for a different timeframe if at all.

Adverse events

It is assumed that there will be no major impact from an adverse event, should one occur during the period covered by the LTP, for example, earthquake, pandemic or significant flood. While events may occur at any time, Council's planning will focus on operational resilience and Emergency Management.

There is a risk that a major adverse event will occur and result in damage to assets and additional costs to the Council.

Any major adverse event will have a significant impact on the Council and the community. The Council seeks to mitigate this risk through its Civil Defence, Risk Management and Insurance Policies.

The most likely scenario

This Strategy provides an overview of the most likely scenario for managing our infrastructure. In general, we plan to maintain our current levels of service while focusing on the key themes identified in **Our Sustainable and Resilient Future** section.

We have included our preferred options for significant capital expenditure in our Long Term Plan budgets. The forecasts for the first three years are the most detailed, while those in years four to ten are a reasonable outline of the most likely scenario which will be reviewed in future LTP cycles. The forecasts beyond year ten are indicative estimates and will be developed further as more information becomes available.



SIGNIFICANT INFRASTRUCTURE ISSUES AND OPPORTUNITIES FOR WAIKIRIKIRI SELWYN

The focus of our last Strategy, was on catering for growth, and addressing increasing community expectations. These continue to be a major part of our strategic focus, with emerging pressures of ensuring that renewals of existing assets are supported, particularly where previous growth driven assets are coming to the end of their useful lives in a bow wave. In this Strategy Council acknowledges the need to make development more sustainable, to ensure ongoing community wellbeing, mitigate negative effects on the climate and our environment, and enhance the resilience of communities and the infrastructure that supports them.

Data based decision masking is key so we can consider the issues and priorities before us.

Our infrastructure priorities

We will ensure that our infrastructure is well maintained, meets the needs of today's community and caters for growth in a sustainable manner by:





Selwyn District has been one of the fastest growing districts in New Zealand in recent years, and it is projected that this growth will continue, at a high rate. While growth creates opportunities, it also places stress on systems and infrastructure that support and sustain community wellbeing. This rapid growth and development has increased our portfolio of assets, with a higher proportion of new assets than many other authorities.

Managing infrastructure in our high-growth district presents significant challenges due to limited resources and rapid population and built area expansion. We must grapple with competing demands as we attempt to address essential infrastructure needs. Growth places increasing pressure on existing systems, such as transportation, water, wastewater and stormwater, which we must respond to by maintaining service standards while accommodating growing demand.

Good asset data and a well informed renewal programme reduces the need, and consequent cost, for reactive maintenance when an asset fails or becomes high risk. The Council continues to survey the community to understand its needs, and respond accordingly. Continuing to deliver current levels of service remains a high priority for the Council. Renewal and maintenance programmes are in place to ensure service levels are consistently met.

Balancing the urgent need for immediate improvements with the long-term viability of infrastructure assets becomes increasingly challenging in the face paced and dynamic environment of Waikirikiri Selwyn. As a result, Council faces constant pressure to find innovative solutions and strategies to address the

infrastructure needs of a rapidly growing community while mitigating the impacts of rapid development.

Looking after the very significant investment that has been made over many years in our infrastructure is a high priority. Much like looking after a house, it is important we maintain the condition of our infrastructure assets to make sure they perform, that they are safe and that they have as long and useful life as possible. With growth occurring at such a rapid pace, many of our assets have been established in a short period of time. Where expected lives align, this means that we will be faced with future bow waves of renewals and replacements. We are beginning to see this impacting our Transportation network, as many roading assets have short lives compared to other infrastructure assets.

Most likely scenario for our District

We anticipate that the District will continue to grow at a high rate. More details on our projected growth are included in the **Planning for Our Future** section.

As much of the growth is private developer driven, we expect that this may occur in surges rather than a smooth change in demand.

Impact on our infrastructure

Key impacts being considered include:

- Rapid growth and land development will continue to increase Council's
 asset portfolio. This will have a financial and capacity impact on Council
 systems for managing new infrastructure (including Land Development
 processes), vesting of assets, and ongoing operations and maintenance
 (including eventual renewals).
- Emerging and ongoing bow wave of renewals with a large number of assets being created and vesting to Council in recent years, we will have a significant renewal challenge in the future, with multiple renewals and replacements occurring at the same time.
- Increasing levels of service expectations resulting from urbanisation.
 This is particularly evident in Community Facilities. Planning will require careful consideration of the balance of increasing service levels and

- cost. Greater Christchurch shared solutions may support improvements while minimising further costs.
- The need for Council planning and operations to remain flexible and accelerate or defer upgrades and construction of assets planned in response to projected growth.
- Developing and committing to multi-party agreements so appropriate infrastructure improvements are funded and created efficiently.
- Increased need for Land Development Engineering requirements to manage infrastructure development and vesting, including the required data quality, opportunities for partnership with Council to increase capacity of new assets, and increased incorporation of sustainable and resilient infrastructure standards.
- Increased financial impact associated with additional asset holdings.





Working within funding and resource constraints is a critical challenge in planning and managing our infrastructure. With growing demands for new infrastructure projects and the need to maintain existing assets, we must balance significant pressures to allocate limited resources effectively. This balancing act requires careful prioritisation and strategic decision-making to ensure that investments address the most pressing needs while maximising the value of our investment.

As infrastructure service providers, we rely on a combination of funding sources, including rates paid for by our communities, user fees, developer contributions, borrowing and central government grants (you can find out more about our funding sources in the **Financial Planning** section). However, competing priorities and fiscal constraints can limit the capacity to undertake all planned projects simultaneously. Rigorous cost-benefit analysis and risk assessment are essential to identify projects with the highest potential for delivering long-term benefits to communities. We are particularly aware of the impact of spending on the level of rates required and the user charges for our services and rates affordability is a key factor Council considers when deciding on the programme for the IS. This is important so that we can secure appropriate investment from our co-funders, like Waka Kotahi NZTA.

While rapid growth drives investment in our district, and the development of infrastructure, this comes at a cost. Once vested to Council, we are responsible for the ongoing maintenance and operations, including eventual asset renewals.

We are also continuing to experience the financial and economic effects of global conditions including COVID-19, the impact of which continues to present challenges with cost escalation's being seen in a number of areas giving rise to an

inflationary environment. It is noted that, in recent years, actual inflation has exceeded forecasts, placing additional pressures on delivery and affordability.

In addition to financial considerations, managing resource constraints involves optimising the use of available labour, materials, and technology. Delays to capital delivery and renewal programmes are increasingly characterised by shortages in materials and/or skilled workforce.

Embracing sustainable practices, incorporating asset management principles, and leveraging digital tools for planning and maintenance can enhance our operational efficiency and extend the lifespan of infrastructure assets. Effective planning and management of infrastructure requires a balanced approach that considers short-term budgetary constraints, intergenerational affordability and long-term community needs.

Most likely scenario for our District

We anticipate that we will continue to face financial and resource constraints requiring balancing of our programmes, with deliverability, capability and capacity in mind.

Impact on our infrastructure

Key impacts being considered include:

- Material and/or skilled labour shortages may delay infrastructure projects, including critical works, as well as maintenance programmes.
- Heightened need for innovative financing mechanisms, including public-private partnerships (PPPs) and infrastructure funds to leverage private sector expertise and investment capital. These partnerships could help alleviate some of the financial burdens on council while facilitating the delivery of complex infrastructure projects. Council's planned Investment Strategy will further explore funding options.
- Challenges to the delivery of capital and maintenance programmes subject to material shortages and/or workforce availability causing delays to progress, and subsequent cost escalations.
- Increased financial impact associated with constraints, impacting on ability to deliver required capital programmes.



Regulatory reform in New Zealand has and will continue to affect how councils deliver services, particularly in the face of increasing uncertainty and heightened requirements. These reforms have prompted councils to navigate a complex landscape marked by evolving regulations and potential changes to our operating framework.

Amidst these challenges, councils including Selwyn District Council, have had to adapt swiftly, often grappling with uncertainties surrounding resource allocation, compliance, and changing community expectations.

Despite the hurdles, regulatory reform has compelled councils to adopt more agile and responsive approaches to service delivery, fostering innovation and efficiency in how they address the evolving needs of their constituents. In essence, while regulatory reform presents formidable challenges, it also serves as a catalyst for local government to rethink traditional patterns and embrace new strategies to enhance service delivery in an ever-changing environment.

Most likely scenario for our District

We expect that our operating environment will continue to evolve, with changes prompted by increasing regulatory environments, and response to reform. As a council, we will remain focussed on the core function of local government, to enable democratic local decision-making and to promote the social, economic, environmental and cultural well-being of our present and future communities.

Current regulatory reform/changes, or signalled intentions of the Government include:

Review/Reform	Focus	Future Direction
The Future of	How councils can maintain and	Final Report
Local	improve wellbeing in the	released; next
Government	communities they serve, long into the	steps unknown.
	future.	
Water Services	Considering reform of the way water	Three Waters
	services (drinking water, stormwater	Reform being
	and wastewater) are delivered.	revoked. Local
		Water Done Well
		announced.
Resource	Reform of the RMA resulting in	Introduced reform
Management	significant changes to the existing	legislation/bills
Act 1991 (RMA),	resource management system, with a	rolled back.
including	number of implications for councils,	Development of
Climate Change	particularly in respect of planning	new legislation
and Adaptation	processes and decision making.	signalled.
Transportation	Signalled to include changes to road	Awaiting new GPS
Government	safety, mode shift and VKT reduction	from current
Policy	and inclusion of Roads of significance	government.
Statement	and public transport priorities.	
Speed	Changes to the Land Transport Rule:	Awaiting new Rule
Management	Setting of Speed Limits 2022, and	development.
	replacement of the Rule	
Housing	Work to enable more houses to be	Awaiting new
Development	built, by implementing the Going for	Policy.
	Housing Growth policy and making	
	the Medium Density Residential	
AL II	Standards optional for councils.	D
National	Coordinate government funding, and	Potential impact to
Infrastructure	investors with NZ infrastructure, and	local authorities
Agency	improve funding, procurement and	unknown.
	delivery.	

For this IS we have assumed that it will be business as usual for the delivery of our services, including the three waters. Taking this assumption means that we are planning for what we believe is necessary and reasonable. We are also assuming there will be changes to standards and compliance rules which we, or any future

service provider will need to comply with. More information about our assumptions can be found in **Key Assumptions and Uncertainties**.

Impact on our infrastructure

The current legislative and regulatory environment is uncertain, creating numerous complexities in the management of our infrastructure assets, now and into the future. We are aware there are changes signalled which do not reflect current legislation, while existing legislation is the control in place we remain mindful of what changes are likely in time.

Key impacts being considered include:

- With the previous progress of the Three Waters reform (drinking water, wastewater and stormwater) and the recent change of Government, we are awaiting further information on wider waters reform, including the Local Water Done Well programme and any intention to change waters service delivery. Until that time the Council will continue to discharge its stewardship responsibilities on the presumption that it will be the continuing owner and operator of those services.
- Continually increasing standards, particularly in terms of ensuring the
 quality of drinking water and treating stormwater discharged into
 lowland streams and waterways, is requiring the Council to invest
 significantly in understanding the implications and provide for any
 capital works required to ensure those standards are met.
- In respect of improving waterways, substantial investment is likely to be needed over the next two decades.
- Unknown detail of Government prioritisation, impacting transportation planning and funding prioritisation.
- Future challenges in securing resource consents for current (and growth) activities may impact on ability to provide services or the need for additional mitigation of environmental effects. This is particularly relevant to water takes, and discharges of wastewater and stormwater.
- Potential financial impacts of increased compliance and acceptable solutions, including increased upfront capital investments that minimise operational costs and reduce whole of life costs.



Responding to risk, sustainability, and climate change is a critical component of planning and managing our infrastructure and ensuring reliable, cost effective, safe, resource efficient and resilient service delivery that meets the needs of our current and future communities.

Resilience is the ability of our infrastructure networks to remain as fully functional as possible when subject to a range of potential shocks and stresses, including any resultant disruption to parts of it, and how quickly service recovery can be affected.

Sustainability refers to the potential positive and negative impacts our infrastructure can have on wellbeing in the district, in this case with particular regard for the resource and environmental consequences associated with infrastructure planning, construction, operation, renewal and decommissioning.

By their very nature, our infrastructure and critical services are subject to a significant level of risk and entail substantial resource use, with potentially major consequences should any disruption occur. Potential consequences include financial, and reputational costs and wider impacts to environmental quality, public health and community wellbeing. Ensuring the resilience and sustainability of our service delivery and infrastructure assets are therefore priority concerns for Council.

Proactive management of risk, including the impacts of climate change, and the incorporation of sustainability ensures that our infrastructure and services contribute to the overall wellbeing of our communities, is able to withstand significant challenges, and aligns with our commitment to a sustainable and resilient future.

Risk and resilience

Most likely scenario for our District

Our assets are expected to be exposed to increasing risk and significant events over their useful lives. This includes a reasonable probability of a significant earthquake in the life of our infrastructure assets. Climate change is also expected to lead to more frequent and more extreme weather events, including heavy rain and flooding, and drought conditions. These exacerbated climate-related risks have been outlined in a regional climate change risk assessment¹⁶ and translated to impacts on our infrastructure and assets through an updated district analysis report¹⁷.

Impact on our infrastructure

There is a complex landscape of risk which has the potential to disrupt or otherwise impact the delivery of infrastructure services and the management of our assets.

Key impacts being considered include:

- The need to plan and design new and renewed infrastructure to be resilient, or be quickly repaired, following a significant event or natural disaster. This will affect construction priorities and methodologies.
- Prioritised replacement of critical or vulnerable assets as part of our regular renewal programmes. We will consider the resilience of the replacement solutions at the design phase recognising an opportunity to use asset renewal programmes to make infrastructure more resilient.
- The future threat to all types of water sources in the longer-term, which may require alternatives, more secure sources and/or storage options.
- The effect of increased inflow and occurrences of inundation of wastewater, stormwater water races and land drainage systems through flooding and changes to sea level, particularly the Upper Selwyn Huts and Rakaia Huts wastewater systems.

- Resilience of transport routes is key to response and recovery. Our large grid-like road network means the district is relatively well-placed to withstand long-term disruption, with river crossings remaining the main weak points.
- Flooding being a risk to water extraction infrastructure, facilities and open spaces, our transport network and the operation of water services.
- Increased financial impact associated with recovery from more frequent significant events, any late adoption of prudent risk management and resilience approaches and increasing insurance costs.
- Management of waste streams following emergency events and in recovery, particularly construction and demolition (C&D) waste streams.

Considering how Council can transition itself and the community it serves to a carbon zero economy by 2050 (refer **Sustainability**), and adapt to the effects of climate change, while continuing to promote community and environmental wellbeing will also need to be key focus areas for the next few years.



¹⁶ Canterbury Climate Change Risk Assessment (2022), Canterbury Mayoral Forum

¹⁷ Impact of Climate Cycles and Trends on Council Assets (2023), Aqualinc for SDC

Sustainability

Most likely scenario for our District

Our assets are expected to be required to meet increasingly more stringent environmental performance standards, especially regarding carbon emissions, waste minimisation and resource consent regulatory compliance standards.

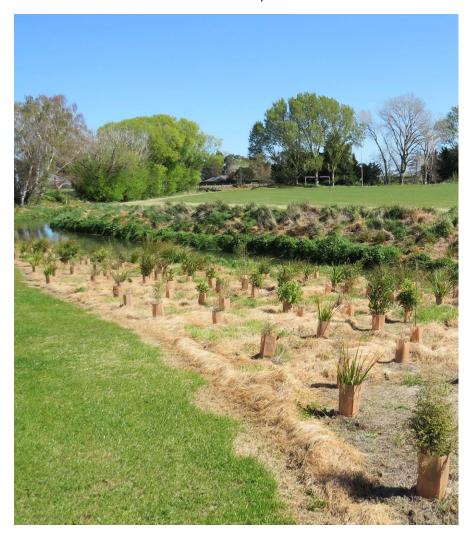
Impact on our infrastructure

Impacts are likely to affect infrastructure and service delivery at both incremental and system-wide levels.

Key impacts being considered include:

- The need to plan and design new and renewed infrastructure to minimise resource use, increase operation efficiency and reduce impacts on environmental quality in the district. This will affect construction priorities and methodologies, including consideration of carbon neutral building and infrastructure construction and the implementation of nature-based solutions.
- Increasing resource consent regulatory requirements (compliance standards and securing of consents) for example discharges from stormwater networks and wastewater facilities, or water take volumes.
- Implementing demand management practices and charging regimes to foster resource conservation and ensure the full costs of infrastructure provision and use is accounted for.
- Potential financial impacts of implementing sustainable asset planning and management approaches, including increased upfront capital investments that minimise operational costs and reduce whole of life costs.
- Transition to low carbon (initial period) and carbon neutral (2050): Net zero emissions of all greenhouse gas emissions other than biogenic methane by 2050.
- Utilise forestry assets in offsetting emissions to achieve carbon net zero by 2050.

Invest in new infrastructure or direct outcomes that provide more sustainable travel options through Council strategies and polices for travel that reduces the reliance on private vehicles.



MAJOR PROJECTS AND DECISIONS

This section shows the major infrastructure projects and key infrastructure decisions over the next 30 years. Significant future decisions are subject to our Policy on Significance and Engagement, and within the context of decisions about our future 10 year plans (LTPs). Further information on the first ten years can be found in the Long Term Plan and relevant AMPs.

The following tables identify our plans (principal option) for responding to each of our key challenges and identified issues. This 'plan' is the assessed for benefit, cost, and sustainability impact. Where we know more detail about our intended response, we have provided costs estimates (uninflated) and identified the driver of capital works: growth, maintaining level of service and/or renewing our assets) as well as the timing of works.

As a number of these projects are scheduled over the next thirty years, there is a level of uncertainty with each. We have identified our planning assumptions underpinning each of our projects or big decisions.

Finally, we have looked at alternative options, assessing these against the principle option (what we are planning to do) in terms of impacts to levels of service and cost compared to the principal option:

	Level of Service (LOS)	Cost (\$)
+:	Improvement to LOS	Increased cost
∹ :	Reduced LOS	Lower cost
/ :	No change to LOS	No change to cost
?:	Unknown impact to LOS	Unknown cost implication



MANAGING WHAT WE HAVE WHILE PLANNING FOR THE FUTURE

Issue	What are we doing option)?	ng (principal	What is the benefit?	How much will it cost? (in 2023 \$)	When are we doing it?	Growth	LOS	Renew
	g Water, Wastewater, rainage, Water Races)							
Pipelines will deteriorate as they come to the end of their useful lives which could result in failures.	Project: Optimised, preplacement programmesset condition and assessments.	• •	Limits potential risk of failure. Minimises disruption and maintains LOS. Improve public health and environmental outcomes or mitigate adverse effects on them. Optimises the whole-of-life cost of assets.	\$178m	2024/25 to 2053/54			~
	Assumptions	=	nent programmes can be developed to nuncil activities to be co-ordinated at the					

Issue	What are we doption)?	oing (principal W	/hat is the benefit?	How much will it cost? (in 2023 \$)		Growth	LOS	Renew
		 Pipes do not 	e completed within planned progran deteriorate to failure point prior to lation used for renewals programmin	programmed r	eplacement	nd accurate		
	Alternative options and implications	solely on asset liv are not optimised programmes	ogrammes are developed based yes and condition assessments and d alongside Council's infrastructure pair of failures or replacement as	resulting from -LOS: Pipe fa	public health a	works togeth way tin +\$: Re nd costly.	aren't der in a control active repai Loss of so ial impa	ficiencies if completed coordinated rs are more service has acts on
	Sustainability impact	Co-ordinated	nvironmental harm from potential fa d infrastructure works supports pote carbon emissions (t-CO2e)		d efficiently" ca	arbon reduc	tion equatir	ng to 0-20%
Growth and demand is placing pressure on available water take volumes and	Future Decision a Programme to plan for source requirements infrastructure upgrades, a necessary consents.	r new water redu , including curr and securing of imp	eases security, resilience and undancy of supply. Maintains rent LOS (without the need to lement the Demand Management itegy).	\$315m	2024/25 to 2053/54	~	~	
capacity	Assumptions	 Growth occurs i Per capita wate Additional wate	in line with projections or demand is static or decreases slighter er sources can be consented and deve ts can be renewed with the same lev	eloped or exist	•		to service de	emand
	and implications		implement Demand Management would be required to increase as	requires red	ind manageme duction in wat communities. W nt LOS	ter comm Vill includ	unity	Council but wellbeing, ic likely to acted
		Limit growth to accep takes	ptable level within existing consent	-LOS: Re opportunity Inconsistent growth out	with broad	ict. comm der includ	unity	Council but wellbeing, ic likely to acted

Issue	What are we option)?	doing (principal	What is the benefit?	How much will it cost? (in 2023 \$)		Growth	LOS	Renew	
				Greater Ch national plan	nristchurch ar ning)	nd			
	Sustainability impact		nd must be managed to give effect to T face water and groundwater	Te Mana o te \	Wai for all sourc	es used to	supply wate	er schemes,	
Some of our resource consents for water takes will be expiring over the next	Future Decision and P programme of consent r for new water source including infrastructure securing of necessary co	renewals to plan re requirements, cu upgrades, and ir	ncreases security, resilience and edundancy of supply. Maintains urrent LOS (without the need to mplement the Demand Management trategy).	\$8.6m	2024/25 to 2053/54	~	~		
thirty years. The changing regulatory	Assumptions	 Additional wa 	rs in line with projections and demand of ater sources are able to be consented a ents can be renewed with the same leve	nd developed	or existing conse			emand	
environment may impact on our ability to renew some consents in	Alternative options and implications		e — implement Demand Management ons would be required to increase as	requires red	nd managemen luction in wate communities. W nt LOS	er comm	er community well		
their current form		Limit growth to ac takes	ceptable level within existing consent		duced growl within District	vth -\$: Less cost to Council community wellbei including economic likely be negatively impacted			
	Sustainability impact		nd must be managed to give effect to T face water and groundwater	Te Mana o te \	Vai for all sourc	es used to	supply wate	er schemes,	
Some of our resource consents for discharges (wastewater and	Future Decision and I discharge and disposal of management planning land drainage.	consents. Catchmen	maintains current LOS. Improved	\$8.6m	2024/25 to 2053/54		~	~	
stormwater) will be expiring over the next thirty years. The	Assumptions	Future resClimate in	an secure consents for continued operat strictions on disposal methods/water qu npacts will be as projected I land use does not significantly impact §	uality can be m	anaged operation	onally			

Issue	What are we option)?	doing (principal W	/hat is the benefit?	How much will it cost? (in 2023 \$)	When are we doing it?	Growth	LOS	Renew
changing regulatory environment may	Alternative options and implications		ades (i.e., retrofit stormwater vastewater treatment processes) to requirements	/LOS: Unlikely	to affect LOS		ikely to ed cost	result in
impact on our ability to renew some consents in their current form		Limit growth in cate consent conditions	chments with restrictive resource	opportunity Inconsistent growth outc	with broad comes (Cound ristchurch a	ct. commu ler includi		-
	Sustainability impact		management planning and investm tal outcomes	nents to achiev	e consent rer	newals is lik	ely to lead	l to better
Growth and increasing demand requiring additional capacity provision in The Pines WWTP	Project: Upgrade to 80 Develop design to ens capacity levels are reser and 50-year treatm projections. Options staging of further up capacity to 130,000P developed. Ultimate plato 180,000 PE in 50 yes (radiant heat recovery s	ure that appropriate rved to match growth hent and disposal for treatment and ogrades to increase E by FY53/54 are anning for expansion hars. Heat and Power	Expansion is delivered with the lowest possible impact on emissions for the whole-of-lifecycle. Expansion of the Eastern Selwyn Sewerage Scheme (ESSS) may enable future decommissioning of less efficient WWTP facilities (i.e., Leeston WWTP and Upper Selwyn Huts).	\$163.2m	Staged: 2024/25 to 2053/54	~	~	~
	Assumptions	 Additional lar Required reso Options to re part of future Existing methin the longer Biosolids can 	rs at projected rates and capacity is and for disposal can be secured ource consents can be secured place existing aerobic digestion with erenewal requirements nods for managing biosolid waste will term be used locally (reducing transport eative electricity sources can be estab	anaerobic diges Il become unaffo emissions)	tion treatmen		·	

Issue	What are we option)?	doing (principal	What is the benefit?	How much will it cost? (in 2023 \$)	When are we doing it?	Growth	LOS	Renew
	Alternative options and implications Expansion option occurs based on aerobic treatment with different costs and environmental benefits			operations on including carbo		to mana biosolids land req biosolids	5)	produced (electricity, ransport of
		Limited upgrade(s) ı	restricting additional capacity	-LOS: Constra opportunity w	ained growth ithin District	commun including negative		d through
	Sustainability impact	RequiremeReduced po	forts to reduce carbon from wastewate ints for biosolids (sludge) removal to la ower use, from the grid, at Pines WWT missions on a per capita/volumetric ba	ndfill are minimi P	= -			
Management and cost inefficiencies of dispersed water treatment supplies, limited resilience and	Future Decision: Investigated and concept design of supply treatment. In decommissioning of facilities.	or centralised wate May enable future	health and environmental outcomes or mitigate adverse	\$405m	2034/35 to 2042/43	~	~	
increasing nitrate levels	Assumptions	Growth occLow nitrate	I water takes for high growth areas of pours at projected rates water is available at required rates accentrations in groundwater remain high			ng transfer	of existing of	consents
	Alternative options and implications	Water supply sch	nemes across the District retain and treatment plants	-LOS: Does efficiencies improvements	not achiev and resilienc s. Does no nitrate levels i	e investr	Reduced ment costs	upfront
			nitrate removal technologies rather nitrate source water	nitrate but do	ment reduce pes not provid ciencies an rovements	e implen	Increased nent	cost to

Issue	What are we option)?	doing (principal	What is the benefit?	How much will it cost? (in 2023 \$)	When are we doing it?	Growth	LOS	Renew
	Sustainability impact	May extend	orts to reduce carbon through building I to carbon reductions in-line with "b rvice delivery.	•			-	•
Increasing need to treatment of stormwater prior to discharge to meet compliance	Future Decision: Look retro-fitting storm processes; Set strat stormwater treatment to ground.	water treatment regic direction for	water discharges are mitigated; Compliance with changing	\$68m	2024/25 to 2053/54		~	~
and ensure protection of receiving environment,	Assumptions	facilities are	anning can identify land available for required (i.e., in wet areas) urce consents will require treatment		•	•		
health and cultural outcomes	Alternative options and implications	requirements for sto	see approach to implement the rmwater management as changes to nents are confirmed/at consent	-LOS: Does improvements	not achieve s now	increas Council numbe	elayed ac e ultimate I and dec r of viabl ng for land p	rease the e options
	Sustainability impact	 Biodiversity 	eat stormwater to remove pollutants a and habitat improvements/protections, including Te Waihora				•	ownstream
Potable water losses (approx. 20% in 2022/23)	Project: Identification of Leakage addressed the renewals.			\$15,000/year (measuring) \$115.7m (renewals)	2024/25 to 2053/54		~	~
	Assumptions		cost recovery based on development work causing water losses can be iden		works		•	
	Alternative options and implications	Demand managem consumption to acco	ent for treated potable water ount for losses	-LOS: Deman requires redu use by our co reduce curren		commu l includii be nega	ng economi atively impa	wellbeing, c likely to cted
	Sustainability impact	 Mitigates th 	e risks of disruption incidents through	n making additio	nal capacity ava	ilable with	iin existing r	etworks

Issue	What are we option)?		What is the benefit?	How much will it cost? (in 2023 \$)	When are we doing it?	Growth	LOS	Renew
		1 1	mate change mitigation by maintain n alongside the risks of drought or lov	-		ervice throu	gh managir	ng resource
Potential for contamination from wastewater pipe networks inflow/infiltration	Project: Identification a risks. Backflow preventi of managing urban expansion supported by maintenance / monitori	on programme as part and commercial by policy and funded		\$1.7m (backflow) \$34.6m (I/I renewals)	2024/25 to 2032/33 2024/25 to 2053/54	~	~	~
(I/I) and backflow	Assumptions	could result	acts will be as projected and not read in I/I and changes to groundwater lev work at risk of I/I can be identified		in this period	(increasing	weather ev	vents which
	Alternative options and implications	potential contaminat	al addressing of identified I/I and ion through backflow. This may not rrent and future changes in consents	-LOS: Higher public henvironmenta well as continissue arises	ealth ar I outcomes,	nd increas as Counci	e ultimate	ction may e costs to
	Sustainability impact	 Climate cha groundwate 	nge adaptation to partially manage r levels	the anticipated	d impacts of	extreme ra	infall event	s and high
Transportation								
Aging and deterioration of the growing sealed roads network,	Future Decision and LOS. Develop a strategy optimal targets reseals ensure delivery.	for AC renewals. Set	Minimised lifecycle cost for specified LOS.	\$683m	Annual 2024/25 to 2053/54		~	~
including those	Assumptions		th and vesting of assets to Council cor	ntinue in line wit	h projections			
established to a higher level of service (e.g., AC)	Alternative options and implications		el of surface to reflect development -for-like on a case by case basis)	+LOS: Will in service includ AC roads		of as high	er LOS (AC	to Council renewal) is co-funding
	Sustainability impact	 Lifecycle cos 	t reduction contributes to financial ar	nd environment	al sustainabilit	У		

growth

demand

for improvements

(intersection

Future Decision and Project: Coordinate land

use and transport infrastructure planning.

Focus infrastructure improvements in key

Rapid

driving

residents.

Efficient infrastructure provision

that meets the activity needs of

Staged

2024/25 to

2053/54

over

\$1,072m

Issue	What are we option)?	doing (principal	What is the benefit?	How much will it cost? (in 2023 \$)	When are we doing it?	Growth	LOS	Renew
upgrade, road	areas and corridors. Pro	omote efficient use of						
widening, public	public transport and act	tive transport.						
transport infrastructure,	Assumptions	 Continued r 	rapid population growth; funding and	environmental o	constraints			
walking & cycling facilities)	Alternative options and implications	Transport infrastruct	ture responds on an ad hoc basis	-LOS: Delayer actioning im relation to group due to timing approval process.	owth may occ of funding a	in improvur reduce	eater cost ements d of efficie	of ad hoc due to ncies
	Sustainability impact	 Efficient urb 	oan form contributes to financial, socia			bility		

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Community Facilities

Capacity need for	Project: Building new				Staged:			
outdoor sport and	and recreation parks a	it various locations	Growing population have adequate	\$40.8m	2024/25 to	•		
recreation	(Rolleston – District Parl	k; Kakaha Park stage	space and facilities for sport and		2033/34;			
demand (existing	2; West Melton D	omain; Broadfield	recreation	\$60m	2036/37 to			
and future	Reserve; Lincoln Domaii	n extension)			2051/52			
demand)	Assumptions	 Population 	growth with be in line with forecasts					
		 Current tre 						
	Alternative options	Reduce level of	provision of outdoor sports and	-LOS: reduced	d provision will	-\$: Low	ver costs	associated
	and implications	recreation facilities	across the district	not meet dema	and (current and	with rec	duced provis	ion
				future) result	ing in reduced			
				LOS per head	of population.			
	Sustainability impact	 Increase m 	aintenance costs and impacts e.g., wat	er use (irrigatio	n) and mowing			
Recreation and	Projects:							
community	A. Building a	new combined	Replaces earthquake prone and		2024/25 to			
facilities in	Library/Cultural/ C	Community centre	deteriorating building. Meets	Whata Rau	2027/28			
Leeston do not	(Whata Rau) a	t Leeston Park	existing and future demand for	\$16 – 19.2m				
meet current and	incorporating cultura	al design elements.	community space. Renewal of aging	_	Staged:			
future community	B. Implementing a mas	-	facilities. Improved recreation and	Leeston Park	2024/25 to			
needs	·		supporting facilities for the Leeston	\$9.5m	2038/39			
	facilities and under	take improvements	community.		2030,33			
	at Leeston Park.							

Issue	What are we option)?	doing (principal	What is the benefit?	How much will it cost? (in 2023 \$)	When are we doing it?	Growth	LOS	Renew
	Both projects form p Waihora Whata Rau pr							
	Assumptions	 Growth in 	cility will meet identified community ned Leeston and the surrounding catchment ends in sports and recreation use and pro	will continue at				
	Alternative options and implications	and make bu demolition is re	cinue to operate existing Library facility uilding watertight until upgrade / quired (2035)	LOS as facility		implen ty	Council to	
		reducing oppor	cility with simplified, standard design tunity to improve community space educed improvement programme on	from reduced -LOS: Lower	LOS resultir plans. LOS resultir plans. Impac	implen	nent wer cost to	Council to
	Sustainability impact	Lower eneRemoval/o	ient use of water if automated irrigation rgy consumption for sports lighting lisposal of old assets increases waste str construction carbon - planned building v	eam	Green Star/equ	uivalent low	ı carbon spe	ecifications
As communities in Eastern Selwyn grow there is a need to ensure there is adequate indoor space and facilities to meet demand for community, arts, sports and recreation activities	community facilit Prebbleton Commu B. Assessing requirem	anity. nents to improve the ces at Lincoln Event including seismic assessment to	welfare purposes, improves utilisation and operating efficiency, potential to integrate the project with sports hub proposal. RCC can be re-used to cater for alternative activities where there is high demand for space; a seismic	Prebbleton CC \$8.0m LEC \$13.6m RCC \$8.8m	2027/28 Assessment in 2026/27 Assessment in 2025/26	~	~	~

Issue	What are we option)?	doing (principal	What is the benefit?	How much will it cost? (in 2023 \$)	When are we doing it?	Growth	LOS	Renew	
	redevelopment p Community Centre								
	Assumptions	A needs assThe currentLEC and RCC	ity needed						
	Alternative options and implications	Do nothing – comm	nunity to rely on existing community e to operate buildings (RCC, LEC) in	-LOS: Projects required due to -\$: No immed					
		Consider alternative	?LOS: Char dependent up considered	s depend	· ·				
	 Operating impacts for heating/cooling Embodied construction carbon - planned new building will incorporate Green Star/equivospecifications and redeveloped buildings will include energy efficiency upgrades 							ow carbon	
Darfield and its wider catchment is growing and there is a need to provide sufficient community facilities to meet current and future needs	A. Construction of two in Darfield. B. Reviewing need for across the district in construction of an in Darfield.	aquatic facilities	Meets existing and future demand for indoor court space in Darfield. Responds to changes in sport preferences. Provides a year-round swimming pool to service Darfield and the wider community.	Indoor Courts \$11.3m Aquatic Facility \$15.0m	2027/28	~	~		
	Assumptions	Growth in Darfield and the surrounding catchment will continue at forecast levels							
	Alternative options and implications	A. Do nothing – re (Darfield High Sch	ely on existing, limited court space hool)	-LOS: Demand challenges are not addressed resulting in lower LOS		1 1	Council through inaction		
			ourt facility (meet current demand for future demand and preferences)	addressed	LOS when cour	in Council but increasing		sing cost to increase	

Issue	What are we option)?	doing (principal	What is the benefit?	How much will it cost? (in 2023 \$)	it?	Growth	LOS	Renew	
			continue to maintain the existing at has recently been upgraded	not addresse	d challenges are ed resulting in en capacity limits	Council increas	immediate through in ing mainten e expected	action but	
	Sustainability impact	Water use	mpacts for heating/cooling for pool construction carbon - planned building v	will incorporate	Green Star/equ	ivalent low	v carbon spe	cifications	
Southbridge pool coming to the end of its useful life	Future Decision: Review aquatic facilities across including the construction facility in Ellesmere to re	the district ion of an indoor meet future needs	Provides a year-round swimming pool to service wider Ellesmere community. Replacement of asset coming to end of useful life.	\$15.0m	2040/41	~	~	~	
	Assumptions		 Growth in Ellesmere and the surrounding catchment will continue at forecast levels The existing Southbridge Pool will reach end of life within 20 years 						
	Alternative options and implications	Do nothing – contir pool at Southbridg Leeston.	-	-\$: No immediate cost to Council through inaction but end of life asset will be required to be addressed					
	Sustainability impact	 Operating impacts for heating/cooling facility Water use Embodied construction carbon - planned building will incorporate Green Star/equivalent low carbon specifications 							
Identified need for more space for active and informal recreation especially in natural settings	Project: Strategic pur land to cater for act protect natural areas. development to provide	tive recreation and Undertake sensitive	Helps to balance the reserves network with more space for active (informal) recreation which has higher participation levels than organised sports; potential to protect natural areas and biodiversity.	\$11m	Purchase 2030/31, Develop from 2036/37	~	~		
	Assumptions	 Land that m 	listrict will continue at forecast levels neets requirements will be available for recreation use trends continue as forec	•	to more inform	ıal activitie	·S		

Issue	What are we option)?	doing (principal	What is the benefit?	How much will it cost? (in 2023 \$)	When are we doing it?	Growth	LOS	Renew	
	Alternative options and implications	Do nothing and rely Atahwai Departm Canterbury Regional	/LOS: No cha does not add need (existing						
	Sustainability impact	Potential to incorporate biodiversity enhancement and natural area protection							
Poor condition sports park practice and play	Project: Implement a upgrade and new inst for sports lighting.	•	Sports lighting meets the needs of users, is safe and compliant and more efficient to operate	\$5.7m	Staged: 2024/25 to 2038/39	~	/	~	
lighting, non-	Assumptions	•	wned by Council (not clubs)						
compliant, below			lit areas for training and play will cont	_					
minimum standards and replacement	Alternative options and implications	Do nothing and conschemes	-LOS: Lighting not fit for purp	+\$: Increased cost to securing and operating current lighting anticipated					
lamps/fittings cannot be sourced		Undertake a reduced	-LOS: Lighting not fit for purp	-\$: Reduced initial cost to Council, but ongoing need for full replacement					
	Sustainability impact		 Move to LED lights and remote timers reduces overall energy consumption and extends life of lamps Some LED lamps can cause negative effects on night glow and on birds and flying invertebrates 						
Based on population projections and demand profiles there will be a	Project: Prepare a strate based around the new I Indoor Courts. Based of forecasts indicating the new or extended facility	National Strategy for n population growth e requirement for a	Meets projected demand for indoor sports space and responds to changing preferences in sports and recreation activities	\$16m	Strategy: 2027/28 Build 2041/42	~	~		
need to provide	Assumptions	District growth especially in eastern Selwyn will continue at forecast levels							
additional indoor court space to meet capacity	and implications providers (CCC, ADC,		y on existing court space and other , schools)					mmediate cost to rough inaction	
requirements			er to meet some latent demand and	+LOS: Increased LOS and capacity to meet demand earlier		+\$: Increased initial cost to cater for demand sooner			
		Build a larger facility a longer period	to cater for anticipated demand over	+LOS: Increa capacity to demand	sed LOS and meet future	'	reased initi or future dei		

Issue	What are we option)?	_ " " "	What is the benefit?	How much will it cost? (in 2023 \$)	When are we doing it?	Growth	LOS	Renew
	Sustainability impact		pacts for heating/cooling					
		 Embodied co 	nstruction carbon - planned building	will incorporate	e Green Star/equ	uivalent lov	v carbon spe	ecifications
Resource Reco	very and Waste							
Refuse compactor	Project: Replacing the	refuse compactor	Replacement of end of life asset	_	2028/29			
coming to the end of life	including increased capa	• • •	and increased processing capacity for tonnage growth	\$800,000	2048/49			
	Assumptions		npactor can meet need until 2028/29	and then to 204	48/49 (2028/29	replaceme	nt)	
	Alternative options		with current model, and remove		ement will no		duced cost	
	and implications	additional capacity co	omponent (lower cost)		ditional capacit		ement. Does	
					meet additiona		eeting of	increasing
	Sustainability impact	Expect some	e reduction in loader fuel usage throu	demand	nt processing	deman	<u>u</u>	
	Sustainability impact	• Expect some		ign more emcie	int processing			
Structural concerns / limitations identified in refuse building	Project: Replacing the re	efuse building	Address structural concerns / limitations. New building design would allow increased waste diversion, improved safety and user and staff experience, and environmental outcome (litter)	\$9,650,000	2024/25 to 2028/29	~	~	~
	Assumptions	 Existing stru 	icture can meet needs until 2028/29					
		Structural co	oncerns do not worsen ahead of repla					
	Alternative options	Repair existing struct	ture	•	ement will no		uced initial o	
	and implications			cater for addit	tional capacity		actor in m ing demand	eeting of
	Sustainability impact	 Increased w 	raste diversion (especially C&D waste)	and public dro	p off, resulting i	n reduced	GHG emission	ons
		 Litter reduct 	tion					



BALANCING FUNDING AND RESOURCE CONSTRAINTS

Issue	What are we doing?		What is the benefit?	How much will it cost? (in 2023 \$)	When are we doing it?	Growth	LOS	Renew
Increased construction and	Future Decision: Price within available funding		Ensure programme affordability.	Unknown	Ongoing			
operating costs	Assumptions	 Cost increase 	es will not exceed forecasts (including	g inflation)				
	Alternative options and implications Sustainability impact	Complete programmalignment with other None identif		-LOS: Increase non-prioritised	•		n-prioritised mme increas	
	Sustainability impact	• None identii	iea					
Cost of supply change shift to low	Future Decision: Prioriti carbon to meet targets.	sing low carbon/zero	Meet net zero carbon target. Regulatory compliance.	ТВС	Ongoing			
carbon/zero	Assumptions	 Market mov 	ements will support financially viable	alternatives an	d low/zero car	bon options	i	
carbon	Alternative options and implications	No alternative	ve option to transition to compliance	with changing I	egislative requ	iirement		
	Sustainability impact	 Reduce GHG 	emissions, supporting transition to r	net zero carbon.				
Under insured and uninsured assets	Project: Review insura assets.	nce requirement of	Support potential recovery from adverse events (including climate change related).	Unknown	Ongoing			
	Assumptions	Adequate in	surance can be achieved on priority a	assets				
	Alternative options and implications	Status quo – no chan	ge to insurance arrangements	 -LOS: resulting underinsured potential delay 	assets, includi	ng with in	wer costs a litial cost to demand	
	Sustainability impact	 Supports red 	overy of services and assets					
Financial sustainability of Council	Future Decision: Particip in sector changes, Local relating to funding mode Assumptions	Government review	Appropriate and adequate funding models. Financially viable delivery of services. to review local government funding	No funding requirement known at a national lev	Ongoing			

infrastructure	Alternative options	•	No viable alternative options identified
activities	and implications		
	Sustainability impact		Financial sustainability of infrastructure services



MANAGING CHANGE: RESPONDING TO LEGISLATIVE REFORM

Issue	What are we doing (pri	ncipal option)?	What is the benefit?	How much will it cost? (in 2023 \$)	When are we doing it?	Growth	LOS	Renew	
Changing regulatory and operating framework including Resource Management	Future Decision: Part changes and advocating Routine (operational) monitoring and trending	for our communities; consent compliance	Managing land and resources efficiently. Compliance with changing regulations. Improve public health and environmental outcomes or mitigate adverse effects on them.	No funding requirement known	Ongoing	~		~	
reforms	Assumptions	planning framule planni	 Ability to secure new consents and renew existing consents (particularly for 5 Waters services) under existing planning frameworks, with new regional planning framework coming into effect in late 2024. Legislative frameworks do not change significantly (drinking water quality rules, planning frameworks, etc.) Changes to wider regulatory and operational framework can be incorporated into activity 						
	Alternative options and implications Sustainability impact		ve option to compliance with legislat fied at this stage of reform	ive environmen	t				

Five Waters (Drinking Water, Wastewater, Stormwater, Land Drainage, Water Races)
The state of the s

Changing regulatory operating framework	and	Future Decision: Part planning and advoca outcomes for our cor water services delivery.	ting for the best	•	with	changing	No funding requirement known	Ongoing		~	
including	Local	Assumptions	 Three water 	rs reform legisla	ation will	be repealed	d and water ref	orm (Local W	aters Done	Well) will pr	rogress as
			indicated by	Government.							

What are we doing (pri	ncipal option)?	What is the benefit?	will it cost?	we doing	Growth	LOS	Renew
	 Legislative 	frameworks do not change sig	gnificantly (e.g., drinking	water quality	rules, plann	ing framev	vorks)
	 Changes to wider regulatory and operational framework can be incorporated into activity 						
	 No significa 	gnificant changes to the operation of Waters activities will occur within the initial 3 year planning p					
Alternative options	 No alternat 	ive option to compliance with	legislative environment	t			
and implications							
Sustainability impact	 Non identif 	ied at this stage of reform					
	Alternative options and implications	Changes to No significations No alternative options of the implications No alternative options of the implications of the implications of the implications of the implication	Legislative frameworks do not change sig Changes to wider regulatory and operation. No significant changes to the operation of th	What are we doing (principal option)? What is the benefit? (in 2023 \$) • Legislative frameworks do not change significantly (e.g., drinking • Changes to wider regulatory and operational framework can be i • No significant changes to the operation of Waters activities will of the compliance with legislative environments and implications	 Legislative frameworks do not change significantly (e.g., drinking water quality Changes to wider regulatory and operational framework can be incorporated in No significant changes to the operation of Waters activities will occur within the Alternative options and implications 	What are we doing (principal option)? What is the benefit? (in 2023 \$) it? Growth Legislative frameworks do not change significantly (e.g., drinking water quality rules, plant Changes to wider regulatory and operational framework can be incorporated into activity No significant changes to the operation of Waters activities will occur within the initial 3 yes Alternative options and implications What is the benefit? (in 2023 \$) it? Growth Growth Order of Water activities will occur within the initial 3 yes	What are we doing (principal option)? What is the benefit? (in 2023 \$) it? Growth LOS • Legislative frameworks do not change significantly (e.g., drinking water quality rules, planning framework can be incorporated into activity • No significant changes to the operation of Waters activities will occur within the initial 3 year planning and implications • No alternative option to compliance with legislative environment



Resource Recovery and Waste

Requirement for	Project: Introduction of	organics collections					
compulsory food	requiring additional bin	s, collection service,	Compliance with changing				
waste collections	additional tonnes to p	rocess and potential	legislation. Diversion of food	TBC	Dec 2026		
from 2027	compost plant upg	rades for odour	waste from landfill material.				
	management						
	Assumptions	 Government 	continues previous commitment to	require food wa	ste collections	S	
	Alternative options	 No alternative 	ve option to compliance with legislat	ive environment	:		
	and implications						
	Sustainability impact	 Increased or 	ganic diversion from landfill, and res	ulting reduced G	HG emissions	3	



RESPONDING TO RISK, SUSTAINABILITY AND CLIMATE CHANGE

Issue	What are we doing?	What is the benefit?	How much will it cost? (in 2023 \$)	we doing	Growth	LOS	Renew
Diesel use and GHG emissions.	Future Decision: Seeking technological and fuel improvements to reduce diesel consumption in our activities, including all infrastructure contracts.		ТВС	ТВС		~	

Issue	What are we doing?	What is the benefit?	will it cost?	When are we doing it?	rowth	LOS	Renew
	Assumptions	 Technological advances in EV or other low emissi appropriate timeframe to comply with net zero expenses. 			ommercia	ally availat	ole within an
	Alternative options and implications	Alternative options are dependent on emergence	e of technologies	and available op	otions		
	Sustainability impact	 Reduced GHG emissions through replacement/re 	eduction of diesel	use			
Carbon neutral/renewable electricity sources	Future Decision: Review to include carbon neu opportunities to instal generation in conjunctionstruction or retrofitt	tral supply. Explore I renewable energy ction with building Reduced GHG emissions. Reduce electricity cost/requirement through installation of renewable energy on Council buildings	ТВС	2027/28 (carbon neutral electricity) & ongoing			~
	Assumptions	 Available commercial option to secure carbon n Ability to include renewable energy generation n 	•				·
	Alternative options and implications	Status quo – no change to electricity contract or generation	-LOS: no impac reduce carbon e	•	operati	change ing costs	to current
		Dedicated programme to develop renewable energy generation across Council building and site assets	+LOS: Improgeneration and carbon emission	use. Reduced	implem return		costs to whole of life nisation of
	Sustainability impact	 Reduced GHG emissions through reducing/replased supply of electricity to carbon neutral 	acement of energ	y needs with re	newable :	source and	d contracted



Five Waters (Drinking Water, Wastewater, Stormwater, Land Drainage, Water Races)

Increasing need for protection of 5 Water assets and / or services in changing environmental conditions (including climate	_	Protection of 5 Waters infrastructure assets and security of service where appropriate. Reduced environmental impact due to relocating wastewater schemes from wet areas (Upper Selwyn Huts and Leeston WWTPs) to Pines WWTP.	\$3.08m (Upper Selwyn Huts) \$28.84m (Ellesmere conveyance) TBC (others)	2024/25 & ongoing		~	~	
--	---	---	--	----------------------	--	----------	----------	--

Issue	What are we doing?		What is the benefit?	How much will it cost? (in 2023 \$)	When are we doing it?	Growth	LOS	Renew		
change and sea	Assumptions	 Climate imp 	pacts will be as projected and not rea	ach tipping point	in this period					
level inundation)		 Change in I 	and use does not significantly impact	t groundwater levels or quality						
	Alternative options and implications	Do nothing: do not μ	c			-LOS: will impact on asset and community resilience and ability to recover. Disruption to services resulting from events this will incomplete when assess and require				
	Sustainability impact		in infrastructure upgrades and rene and will remain in-service for longe	newals can be focussed on areas where the risks are already we						
Need for increased resilience in managing water supply quality	Future Decisions an resilience and critic Network master plar resilience. Investigating water treatment inves improve compliance reporting for water quality	rality assessments. Ining incorporating option of centralised ting in software to monitoring and lity; addressing risks	Improve public health and environmental outcomes. Comply with legislative requirements. Centralised water treatment: access of higher quality source water.	\$766.9m	2024/25 to 2053/54		~	~		
	Assumptions	Number ofNo significaWater demNo significaCouncil will	pacts will be as projected and not rea weather events will be in line with p ant further legislative change, including and will be as projected ant new sources of contaminants or coll not secure chlorine exemptions for	revious years ng no change to other threats to s any further wate	water quality lin source water quer supplies	ality				
	Alternative options and implications	Seek chlorine exe schemes	mptions for other water supply		quality scheme vater withou issues	it stand	requires a ard of inve tructure and i			
	Sustainability impact		imate change mitigation by maintain I risks of extreme natural events	ing an acceptabl	e Level of Servic	e through	managing th	e currently		
Need for increased resilience to asset failure or service	Future Decision and Adaptation Planning (ir stage)	•	Infrastructure is more resilient to interruptions and events, return	\$1.29m	2024/25 to 2032/33		/	~		

Issue	What are we doing?	What is the benefit?	How much will it cost? (in 2023 \$)	When are we doing it?	Growth	LOS	Renew							
interruption due		of services more promptly												
to climate change		following an event												
	Climate impacts will be as projected and not reach tipping point in this period													
	Number of weather events will be in line with previous years													
	Alternative options and implications	Business as usual (i.e. no adaptation to natural hazards)	-LOS: risk of service disruption +\$: initial cost through lack of inverse improvement this will incur signification when assets are in and require recovers											
	Sustainability impact	 Supports climate change mitigation by maintaini understood risks of extreme natural events 	ng an acceptable	Level of Service	e through	managing	the currently							

Transportatio

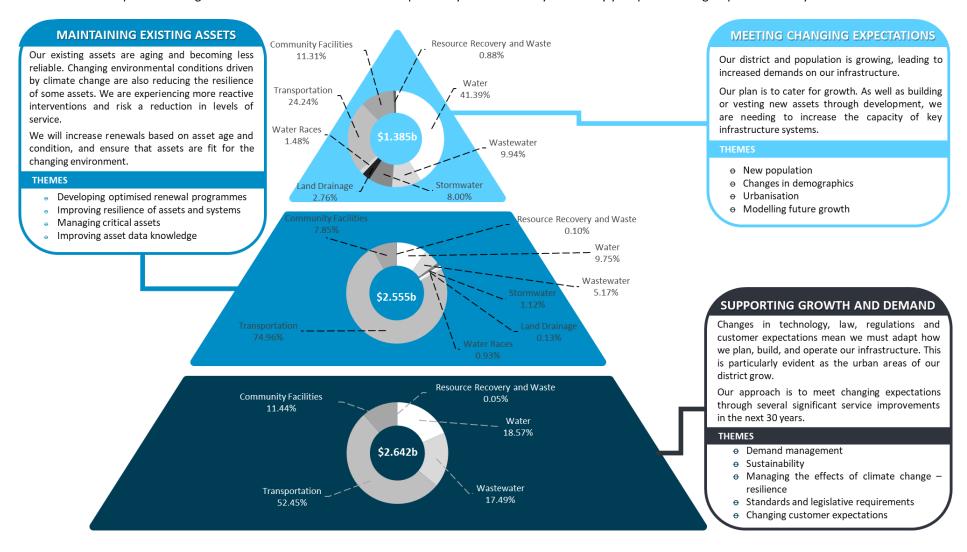
Climate change poses risk for network, e.g.,	including proactive in	mprove resilience	More resilient road network that handles adverse weather events without costly remedials.	\$97m (road drainage maintenance	Annual 2024/25 to 2053/54	~	~			
more frequent high-impact	drainage. Assumptions	Climate cha	nge will lead to more frequent extre	and renewal) me weather ever	·					
emergency events	Alternative options and implications	Reactive response	to weather event damage with nents subsequently considered on	-LOS: Not add resilience base and awaiting damage will red	dressing lack ed on critical response	ity hoc to improv	+\$: Reactive repair hoc recovery improvements increased costs			
	Sustainability impact	Resilient roa	ad network means less disruptions to	travel and redu	ced cost on en	nergency re	gency repairs.			
Road safety is a major concern for Selwyn District. The number of deaths and serious injuries (DSI) remain high,	Project: Continued investo maximise co-function commitment to full programmes/projects. projects which have been the Safe Network Plan (ptool) and moderated and the Road to Zero/Safety	ding and Council ly fund priority Priority focus on in identified through ipeline development progressed through	Improved road safety outcomes, reduction in deaths and serious injuries	\$600m	2024/25 to 2053/54	~	~			

			How much When ar will it cost? we doin	ng											
Issue		What are we doing?	What is the benefit? (in 2023 \$) it?	Gr	rowth	LOS	Renew								
particularly on	۱ [Assumptions	 Council's road safety programmes will continue to be prioritised for co-funding by Waka Kotahi NZTA 												
rural roads.		Alternative optio	Accelerate road safety programme and priorities +LOS: Addresses identified	l road	+\$: Additional cost to Council										
		and implications	safety concerns, supported reduction in DSIs.	orting	prograi funding	through acceleration of programmes outside of co- funding. Reduction in DSIs reduces social costs									
				safety rough	funding	g commitn ver reduction	council (co- nent only) on in social								
		Sustainability impac	 A safer road network means less disruptions to travel. 		, in the second second										



Our approach in summary

Our capital programme can be classified in three ways: projects to maintain and renew our current asset base, new infrastructure in response to growth and demand and work needed to respond to changes in demand or the level of service expected by our community. Our thirty year plan can be grouped in this way:



DELIVERING OUR PROGRAMME

There are a large number of projects programmed in the early part of our IS. The relatively small number of projects later on is partly due to these projects not being identified. One of the main drivers of our work programme is new regulations and standards — any future changes are not yet known for the later years. Our waters space has a relatively high number of projects early on for drinking water which reflects a need for work to meet current and imminent drinking water standards.

Ability to deliver on the planned capital programme

Our ability to develop and coordinate infrastructure capital works programmes is pivotal in shaping the overall delivery of the infrastructure we need.

There are inherent challenges associated with managing a large and complex programme, including consideration of resource limitations and uncertainties in the delivery supply chain. Identifiable risks include shortages in specialised roles, capacity gaps, regulatory compliance, quality control, market constraints and weather events.

Cost escalations are hard to predict and have a real impact on achievement. All of these challenges have been exacerbated by the aftermath of the COVID-19 pandemic, affecting our capital delivery efforts in recent years.

As a rapidly growing Council, we are confronted with substantial capital and operational programmes ahead. Navigating this programme needs effective project management and capable delivery resources. We are committed to an ambitious timetable and seek to be flexible and responsive to evolving circumstances. An internal Council Capital Delivery Team has been established, dedicated to developing designs, securing relevant consents and approvals, progressing procurement and overseeing project delivery. In addition updates on our progress against the planned program are provided in our Annual Reports, ensuring stakeholders are informed and engaged in our ongoing efforts to drive successful infrastructure development.

Programme prioritisation and phasing for effective implementation ensures that scheduled works are realistically achievable.

Proactive measures have been taken to enhance our organisational readiness, emphasising that success is achieved through a combination of internal capacity and market resources. This includes implementing streamlined management processes, reporting mechanisms to effectively manage capital program risks and ensure projects are delivered within the planned timeframes. We have also readied our organisation, placing more emphasis on building internal capacity so that appropriate management disciplines and reporting are in place to manage capital programme risks and deliver projects within planned timeframes. We established an internal Capital Delivery Team focused on developing plans, obtaining relevant consents and approvals, progressing procurement and overseeing delivery.

Future approaches may include consolidating project work into larger packages for an area in the district, phasing resourcing & delivery, reviewing growth models & asset management and exploring collaborations with neighbouring Council led suppliers to facilitate efficient project execution.

We will provide updates on progress against our planned programme in our Annual Reports.



Financial planning

Financial Strategy – affordability and limits

The Infrastructure Strategy is closely linked to the Financial Strategy. The Financial Strategy considers affordability for ratepayers and Council as a whole and provides strategic financial limits for rates and debt and discusses other funding sources which guide our infrastructure planning.

Within the next 10 years, forecast rate income increases and debt levels are projected to come very near our self-imposed financial limits due to the substantial level of capital investment over the next few years resulting in an increase in the level of borrowing. This also shows how increasing rates revenue will allow the borrowing to be kept under control so that it starts to reduce towards the end of the 10 year period. We have had to work hard to prepare and prioritise a work programme that addresses the most pressing key issues while staying within these financial limits. This means there is very little scope to add further work to the programme within the next ten years.

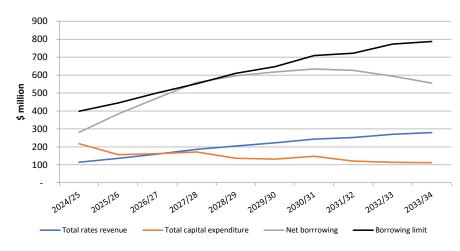


Figure 13: Summary Financial Strategy 2024-2034

We have attempted to balance the competing tensions of affordability, the need to maintain our assets, while responding to future challenges and investing for the

future. This is all in balance with addressing the financial challenges of increasing costs, ability to deliver large capital projects, increasing infrastructure portfolio and increasing need for network renewals.

A thirty year outlook

There are limitations in the relationship between the FS and IS. The limits described in the FS and the affordability challenges relate to all Council activities of which infrastructure is a significant component but not the sole driver. The FS also looks at the requirements for 10 years, however modelling out to thirty years would support the IS planning to ensure that longer-term financial considerations can be considered, or flagged a future challenges.

Strategic Investment Strategy

Council is in the early stages of developing a Strategic Investment Strategy. The key focus of this will be re-defining what we class as a strategic asset and having a clear set of criteria around future investment/s. This will also include reviewing our existing asset base for divestment opportunities. This will be progressed through the next three years, informing the 2027 LTP. The next FS and IS will be developed accordingly.

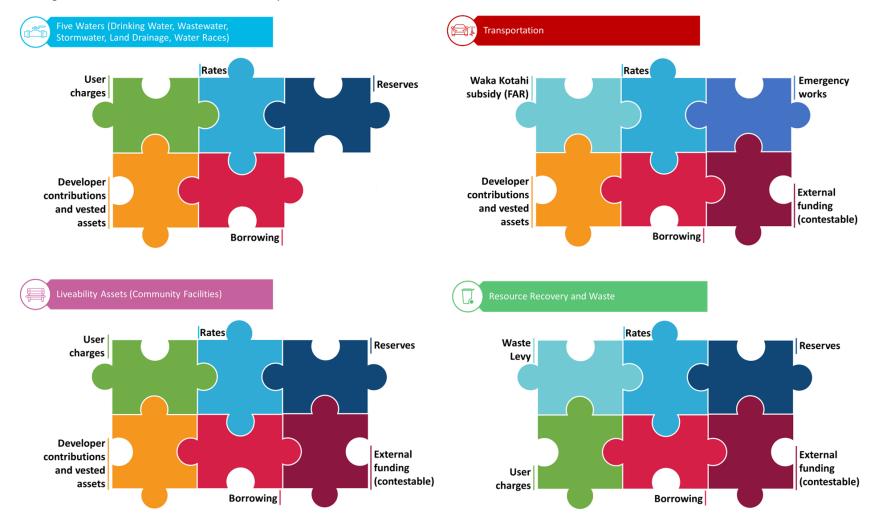
Financial policies

The Council has designed its financial policies to be prudent and fair to current and future ratepayers. Current ratepayers pay for the services they enjoy, including a contribution to the cost of replacing the infrastructure they use. The cost of expanding our infrastructure to allow for new residents is partly paid for by developers. All ratepayers, current and future, pay for the costs involved in improving the quality of services. This approach will maintain the Council's healthy financial position over the next 10 years and provide a sound base for maintaining the well-being of future generations.

Funding our infrastructure

Activities associated with our infrastructure assets are funded through a variety of means for capital and operational expenditure. Funding is applied in accordance with Council's Revenue and Financing Policy.

Capital funding sources are summarised for each activity area as follows:



Operating expenditure for our infrastructure is funded through:



Key funding mechanisms

Key funding mechanisms supporting our infrastructure activity are summarised in this section. More information about all funding sources, and our limits can be found in the FS or Revenue and Financing Policy.

Rates

The rating system is the primary mechanism used by the Council to fund the operating and capital expenditure planned for the district. Rates are collected through general rates (for the general purpose of Council or wider benefit of the district), Uniform Annual General Charge (UAGC – a fixed rate for remainder of the general rate requirement), and targeted rates (levied for a particular purpose).

Rates increases are capped at 20% in the ten years of this Strategy (the LTP years). We anticipate that this limit can reduce in years 2025/26 and 2026/27 with a further reduction for the last seven years of the LTP.

Debt – intergenerational funding

We recognise that the infrastructure we build, maintain, and operate serves the community over many generations. We use debt to fund new infrastructure, reflecting the intergenerational value of our infrastructure.

Gross debt levels are capped at 220% of net borrowing as a percentage of our income in the first ten years of this IS (the LTP years).

External funding

Some Council activities attract external funding, from our government partners, or contestable funding. In particular, programmes within our Transportation activity which are approved and included in the Regional Land Transport Plan attract a 51% Funding Assistance Rate (FAR) from National Land Transport Fund (NLTF) administered by Waka Kotahi | NZTA. Approved emergency transportation works may attract a higher subsidy rate. The Resource Recovery and Waste activity also attracts external funding through the Waste Levy administered by MFE. This Levy is imposed to support waste reduction and raise funds to encourage resource recovery, with 50% of the Levy raised being paid to Council for the promotion or achievement of the waste minimisation activities set out in our WMMP.

Development contributions – growth funding

Additional assets required to serve growth in demand for existing services due to new areas being serviced will be funded from developer's financial contributions. These are managed in accordance with our Development Contributions Policy.

As part of the 2024-2034 LTP the Development Contributions Policy has been revised to incorporate community infrastructure. This change allows for the recovery of development contributions to contribute to additional community infrastructure capacity necessitated the growth. Going forward development contributions will include:

- Cemeteries acquisition and development for land used as a cemetery
- Public toilets provision of public convenience facilities including public toilets, restrooms.
- Aquatic centres public swimming pools, splash pads, paddling pools etc.
- Sports halls indoor venues for court sports
- Libraries provision of new library facilities
- Community centres provision of new community centres and meeting spaces.

Vested assets

As our district grows and land development and subdivision occurs, developers construct new assets to service development, or replace existing assets with greater capacity. Once constructed and commissioned, these assets vest to Council to own and maintain. This increases Council's asset holding and value, but also carries a liability of operating and renewal costs.

Funding of renewals and depreciation

Depreciation is an accounting measure that we can use to represent how much of an asset value has been used up. For example, if a road surface lasts 10 years, the current ratepayers are assumed to have used up one tenth of the value of the road each year. The annual depreciation charge forms part of the Council's operating expenses for the year. As the asset has been previously paid for depreciation is a non-cash expense (just a 'book entry') and does not involve any payments.

Renewal costs are the actual cost of replacing assets at the end of their life. It is the actual cash payment required to replace the old asset.

Over the long term the renewal cost and the depreciation charge for the Council's infrastructure assets (roads, water and wastewater systems) should be similar. But in any one year they can be very different — depreciation is a regular annual operating expense, and the corresponding renewal is an irregular capital cost.

Renewal of our infrastructure assets are funded through a mix of depreciation and renewal funding, with external debt utilised where there is a funding shortfall.

Because many of the Council's assets are relatively new and have been fairly recently paid for by ratepayers through rates and development contributions, we don't consider it fair to charge the full cost of depreciation to current ratepayers. The Council has therefore adopted a mixed approach to funding the cost of renewing its assets:

 Water, Wastewater, Stormwater and Water Races: the average cost of renewal work that will be required over the next 30 years is included in the calculation of the amount of rates required each year. This is because renewal costs are variable year to year and this approach

- smooths the rates funding required. Land Drainage is not funded as majority of assets have an infinite life, limited assets requiring renewal are assessed for funding as part of renewal planning;
- Roading: the estimated cost of actual renewals work is included in the calculation of the amount of rates required each year. This is because renewals costs are less variable and are part funded by the New Zealand Transport Agency;
- Community Facilities, the estimated actual cost of renewals is included in the calculation of the amount of rates required each year. This is because most of the large facilities are relatively new, and ratepayers are still funding the initial construction of the facility. The Council intends to move to longer term renewals or depreciation funding in the future once more of the initial construction cost has been paid off;
- Resource Recovery and Waste: the average cost of renewal work that will be required over the next 30 years is included in the calculation of the amount of rates required each year. This is because renewal costs are variable year to year and this approach smooths the rates funding required.

Further funding considerations

Transportation programmes are prioritised to maximise available funding support, to amplify works. The following prioritisation is applied to Transportation planning:

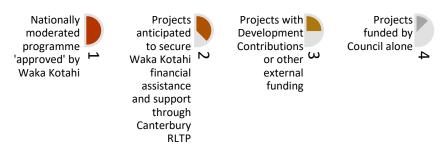


Figure 14: Transportation programme funding priorities

FINANCIAL FORECASTS

Our financial forecasts for the next thirty years are based on the most likely scenario (the preferred/likely options we have identified against each of our key issues/challenges and big decisions). These will be refined as we continue our planning, through future AMPs, Long Term Plans, Annual Plans and operational plans or project scopes.

Council expenditure is categorised as:

Operational expenditure	funded per activity through targeted rates, general rates, grants and subsidies, capital contributions or a mix of these.
Capital expenditure	projects categorised as renewals, extending level of service or growth related, which are funded through debt, development contributions, and or reserves.

With the high levels of growth experienced in Waikirikiri Selwyn, Council receive significant infrastructure assets each year. These are established by developers, in line with the requirements of their resource consents, and Council Engineering Code of Practice, before being vested to Council. This increases Council's asset holding, driving rising operational expenditure (operations and maintenance). Renewal requirements (and funding) also increase, as Council's asset portfolio grows.

All numbers are inflated, unless otherwise specified.



Operational											34/35	39/40	44/45	49/50	
expenditure											- -	-	-	-	
(\$000's)	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	38/39	43/44	48/49	53/54	Total
Five Waters (Drinking Water, Wastewater, Stormwater, Land Drainage, Water Races)	37,430	40,328	42,376	44,594	51,582	53,243	56,151	60,021	60,406	62,085	263,810	343,101	431,255	530,218	2,076,598
Drinking Water	14,918	16,155	17,436	18,584	22,626	24,170	25,426	26,462	27,429	28,177	116,178	151,599	190,535	234,748	914,443
Wastewater	11,834	13,444	14,057	14,978	16,350	17,684	19,050	20,143	20,635	20,792	80,857	105,411	133,143	163,903	652,281
Stormwater	3,340	3,111	3,319	3,413	3,970	3,940	4,005	4,136	4,236	4,527	18,613	24,311	30,737	37,894	149,553
Land Drainage	3.034	2,956	2,671	2,455	3,187	1,963	1,936	3,284	1,888	2,013	8,342	9,882	11,339	13,037	67,989
Water Races	4,303	4,661	4,893	5,164	5,448	5,485	5,733	5,996	6,217	6,576	39,819	51,898	65,501	80,635	292,332
Transportation	19,968	22,186	23,758	26,061	28,225	30,718	33,081	35,161	37,160	38,803	133,712	189,151	263,143	361,384	1,242,510
Community Facilities	42,074	40,751	41,829	41,604	41,883	41,786	41,575	42,149	43,100	42,355	274,824	330,694	391,168	454,852	1,870,642
Resource Recovery and Waste	18,771	19,129	20,337	23,295	24,328	25,510	26,652	27,749	28,934	30,181	227,395	287,366	357,368	438,680	1,555,69
TOTAL	118,242	122,394	128,300	135,554	146,017	151,256	157,459	165,079	169,600	173,425	899,740	1,150,312	1,442,934	1,785,134	4,668,84
1,800												Wa	ater		
,													astewater		
1,600												Sto	ormwater		
1,400												Lar	nd Drainag	ge	
1,700	100											Wá	ater Races		

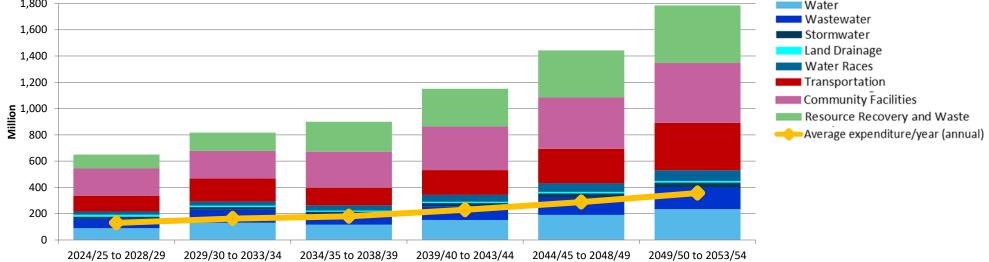
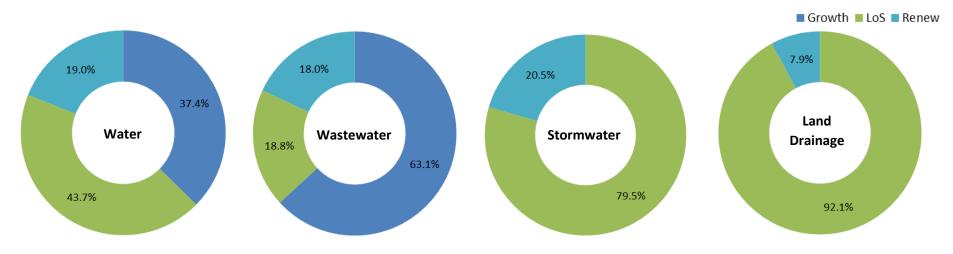


Figure 15: Infrastructure Operational Expenditure (5 year intervals) 2024-2054

											34/35	39/40	44/45	49/50	
Capital expenditure											_	-	_	-	
(\$000's)	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	38/39	43/44	48/49	53/54	Total
Five Waters (Drinking Water, Wastewater, Stormwater, Land Drainage, Water Races)	118,239	68,884	65,115	69,180	57,981	55,889	63,627	36,272	29,226	27,369	500,644	725,003	246,863	205,773	2,270,064
Drinking Water	39,160	40,390	34,339	29,143	21,446	22,604	23,386	15,951	7,946	13,026	344,341	556,640	85,433	79,285	1,313,090
Level of Service	11,386	12,603	12,815	11,238	12,976	13,518	11,297	4,165	2,299	3,566	158,113	266,837	27,632	24,913	573,358
Growth	21,807	21,063	13,905	9,507	1,584	1,409	6,043	4,872	276	2,750	146,632	245,502	10,701	4,625	490,677
Renewal	5,967	6,724	7,619	8,398	6,886	7,677	6,046	6,914	5,371	6,710	39,596	44,301	47,100	49,746	249,054
Wastewater	73,364	26,054	26,972	34,117	32,950	28,577	38,354	17,925	18,779	11,346	118,165	116,448	110,585	78,298	731,934
Level of Service	13,926	4,805	10,177	5,429	5,358	8,024	6,816	2,132	2,178	2,580	3,603	24,408	22,474	25,751	137,661
Growth	55,474	17,794	13,719	21,337	22,149	14,430	28,694	13,430	13,300	5,728	100,318	66,569	63,705	25,559	462,207
Renewal	3,964	3,455	3,076	7,351	5,443	6,123	2,844	2,363	3,301	3,038	14,244	25,470	24,406	26,988	132,066
Stormwater	3,732	1,040	2,729	4,903	2,801	3,856	873	1,545	1,941	2,101	21,564	34,981	29,067	28,279	139,411
Level of Service	3,380	832	2,474	2,936	2,673	3,198	843	1,545	1,578	2,101	20,783	19,567	22,802	26,122	110,834
Growth	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Renewal	352	208	255	1967	128	658	30	-	363	-	781	15,414	6,265	2,157	28,578
Land Drainage	185	154	211	185	213	95	0	58	-	57	9,304	8,968	12,585	9,439	41,454
Level of Service	185	-	-	-	-	-	-	-	-	-	7,612	8,951	12,315	9,136	38,199
Growth	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Renewal	-	154	211	185	213	95	-	58	-	57	1,692	16	270	303	3,255
Water Races	1,798	1,245	864	832	571	757	1,014	793	560	839	7,270	7,967	9,192	10,473	44,175
Level of Service	531	824	432	147	115	57	59	60	61	329	3,456	4,120	4,786	5,498	20,476
Growth	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Renewal	1,267	422	432	685	455	700	955	733	499	510	3,813	3,848	4,406	4,976	23,699
Transportation	63,927	55,986	64,154	53,820	57,481	59,103	62,859	64,523	66,268	70,280	475,335	619,363	828,417	1,095,585	3,637,101
Level of Service	20,959	6,020	6,768	7,679	9,506	13,025	7,394	5,148	5,671	21,283	47,401	54,529	61,657	68,785	335,826
Growth	28,182	36,798	40,229	29,615	30,719	28,082	34,560	37,652	38,011	23,246	215,939	248,411	280,883	313,355	1,385,681
Renewal	14,786	13,168	17,157	16,526	17,256	17,996	20,905	21,723	22,586	25,751	211,995	316,423	485,877	713,445	1,915,594

Capital expenditure (\$000's)	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	34/35 - 38/39	39/40 - 43/44	44/45 - 48/49	49/50 - 53/54	Total
Community Facilities	30,886	28,938	29,638	40,913	15,351	14,906	19,499	18,101	16,829	12,383	109,386	102,331	94,333	126,092	659,584
Level of Service	7,072	7,221	9,346	19,765	5,370	4,944	4,313	5,867	4,483	3,225	16,827	20,882	21,423	25,899	156,637
Growth	15,466	15,680	15,136	16,632	4,998	6,748	9,672	8,747	5,934	5,295	64,969	50,508	45,801	36,798	302,383
Renewal	8,349	6,036	5,156	4,517	4,982	3,213	5,515	3,487	6,411	3,863	27,590	30,941	27,109	63,395	200,564
Resource Recovery and Waste	2,415	390	398	6,300	4,379	-	137	-	-	-	-	249	1,498	312	16,079
Level of Service	850	390	398	5,443	4,379	-	-	-	-	-	-		749	-	12,209
Growth	1,205	-	-	-	-	-	-	-	-	-	-	-	-	-	1,205
Renewal	360	-	-	857	-	-	137	-	-	-	-	249	749	312	2,665
TOTAL	215,467	154,198	159,305	170,213	135,192	129,897	146,122	118,896	112,323	110,032	1085,365	446,947	1,171,111	1,427,762	6,582,829
Level of Service	58,288	32,695	42,410	52,637	40,378	42,766	30,721	18,917	16,271	33,084	257,795	399,294	173,838	186,105	1,385,199
Growth	12,2134	91,335	82,989	77,091	59,450	50,669	78,969	64,701	57,521	37,019	527,859	610,991	401,090	380,337	2,642,154
Renewal	35,045	30,167	33,906	40,486	35,364	36,462	36,432	35,277	38,531	39,929	299,712	436,663	596,183	861,320	2,555,476



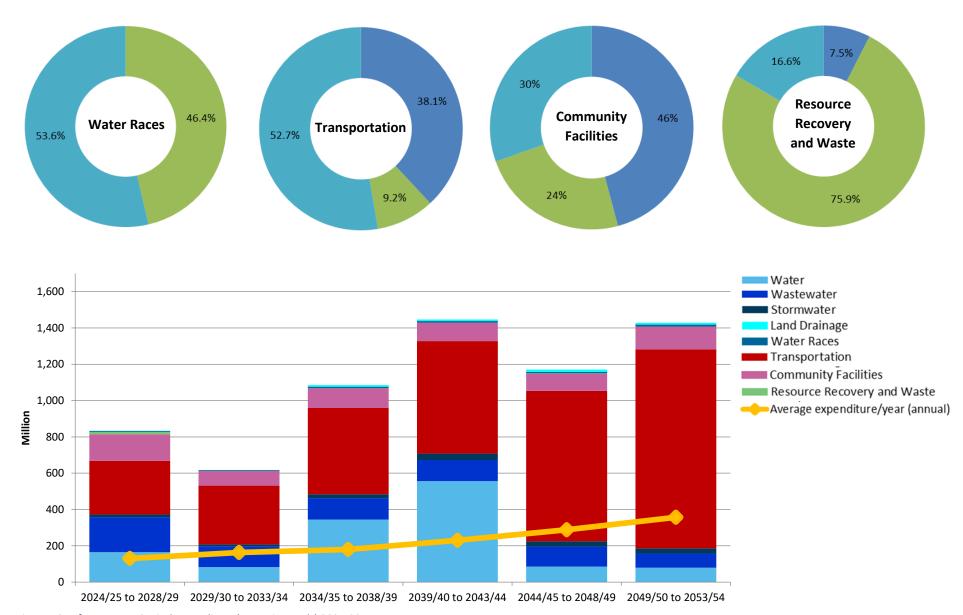


Figure 16: Infrastructure Capital Expenditure (5 year intervals) 2024-2054

Vested assets

Assets are vested to Council by developers constructing infrastructure in support of private land development and subdivision. These assets are transferred to Council to own and maintain. This increases Council's asset holding and value, but also carries a liability of ongoing operating and renewal costs. Vested asset forecasts are uninflated.

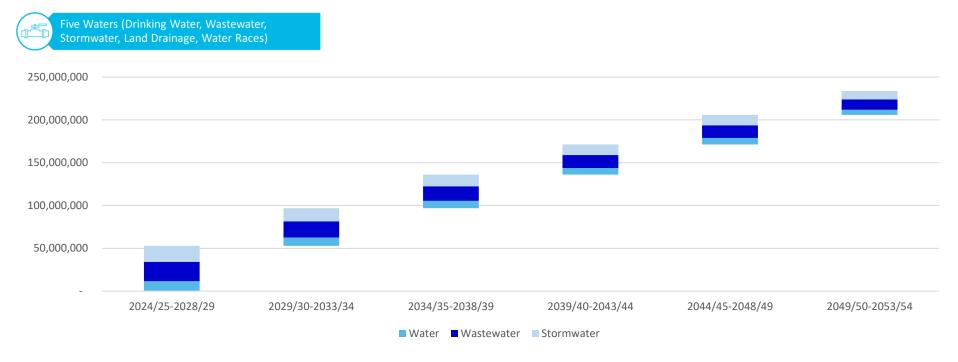


Figure 17: Drinking Water, Wastewater and Stormwater vested assets projections (5 year intervals) 2024-2054

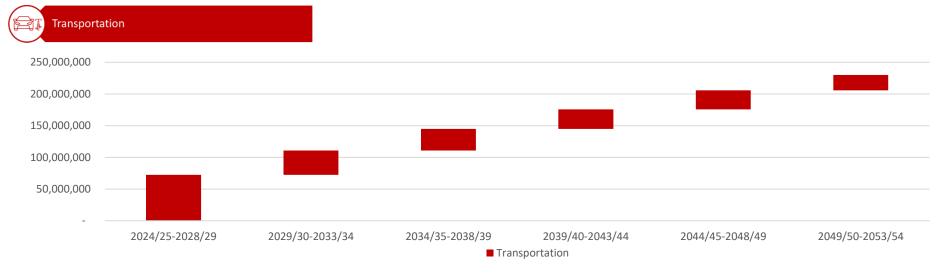


Figure 18: Transportation vested assets projections (5 year intervals) 2024-2054

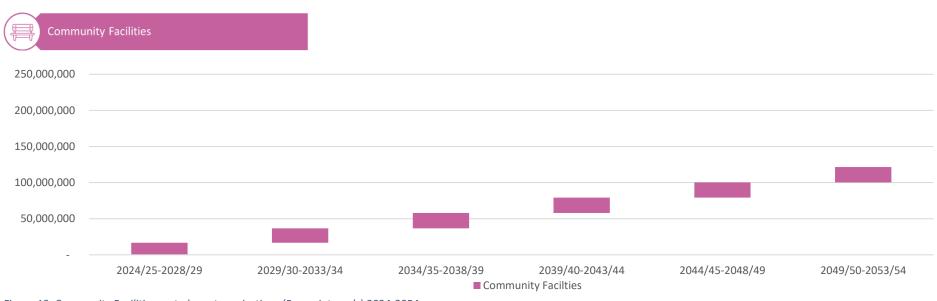


Figure 19: Community Facilities vested assets projections (5 year intervals) 2024-2054