Rautaki Tūāhaka
Infrastructure Strategy

July 2024

Rautaki Tūāhaka Infrastructure Strategy

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)
- Resource Recovery and Waste.

Priorities for 2024-54

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 well-being, mitigate negative effects on the climate and our environment, and enhance the resilience of communities and the infrastructure that supports them.

Asset and service management strategy

The Council's 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.

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 Infrastructure Strategy 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	$3.248b
Maintain and renew our existing assets	$3.667b
Meet changing expectations /level of service	$1.443b

The dollars

Current value (2023)	**$1.70b**
Operating costs	**$1.98b**
Capital costs	**$2.03b**
Vesting assets	**$257m**

Current value (2023)	**$1.1b**
Operating costs	**$1.81b**
Capital costs	**$5.43b**
Vesting assets	**$224m**

Current value (2023)	**$447m**
Operating costs	**$2.75b**
Capital costs	**$884.9m**
Vesting assets	**$122m**

Current value (2023)	$7m
Operating costs	$2.33b
Capital costs	$17.3m

Our plans in summary (uninflated)

Upgrade sports lighting
Staged: 2024/25 - 2038/39
$5.0m

Whata Rau (Leeston Library/Cultural/Community Centre)
2024/25 - 2027/28
$16m

Eastern Selwyn Community Centres (new or redeveloped)
Rolleston - 2026/27 - 2028/29 - **$8.5m**
Prebbleton - 2026/27 - 2028/29 - **$8.0m**
Rolleston Southwest - 2030/31 - 2032/33 - **$6.1m**
Lincoln Events Centre - 2036/37 - 2037/38 - **$13.6m**

Malvern Recreation and Sports Facility
2029/30
$11.3m

Leeston Park
2024/25 - 2038/39
$3.4m

Eastern Selwyn Indoor Courts: Strategy & New/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 - 2051/52
$101.2m

Additional Land for Active Recreation & Protect Natural Areas
Purchase: 2030/31 Develop: From 2036/37
$11m

Ellesmere Aquatic Facility
2040/41 - 2041/42
$15.0m

Roading updgrades to meet additional demand (e.g., intersections and road widening) including the following projects: 2024/25 to 2053/54 – **$1,072m**

SH1 access local road upgrades
2024/25 to 2032/33
$19m

Lincoln Town Centre
2024/25 - 2029/30
$46m

Park and Ride Facilities
Lincoln – 2026/27 – **$4.0m**
Rolleston (Kidman St) – 2029/30 – **$4.5m**
Rolleston (Jones/Hoskyns Rd) – 2032/33 – **$5.5m**

Cycletrails – Waikirikiri Alpine to Sea and Te Waihora
2029/30 - 2033/34
$15m

Replace Refuse Building
2024/25 - 2028/29
$9,650,000

Replace Refuse Compactor
2028/29 - **$400,000**
2048/49 - **$400,000**

New Water Source Requirements, Infrastructure Uprades and Consenting
2024/25 - 2053/54
$374.9m

Renewal of Water, Wastewater, Stormwater and Land Drainage Consents
2024/25 - 2053/54
$8.6m

Investigations into Centralised Water Supply Treatment and Construction (if feasible) – 2034/35 - 2042/43
$405.3m

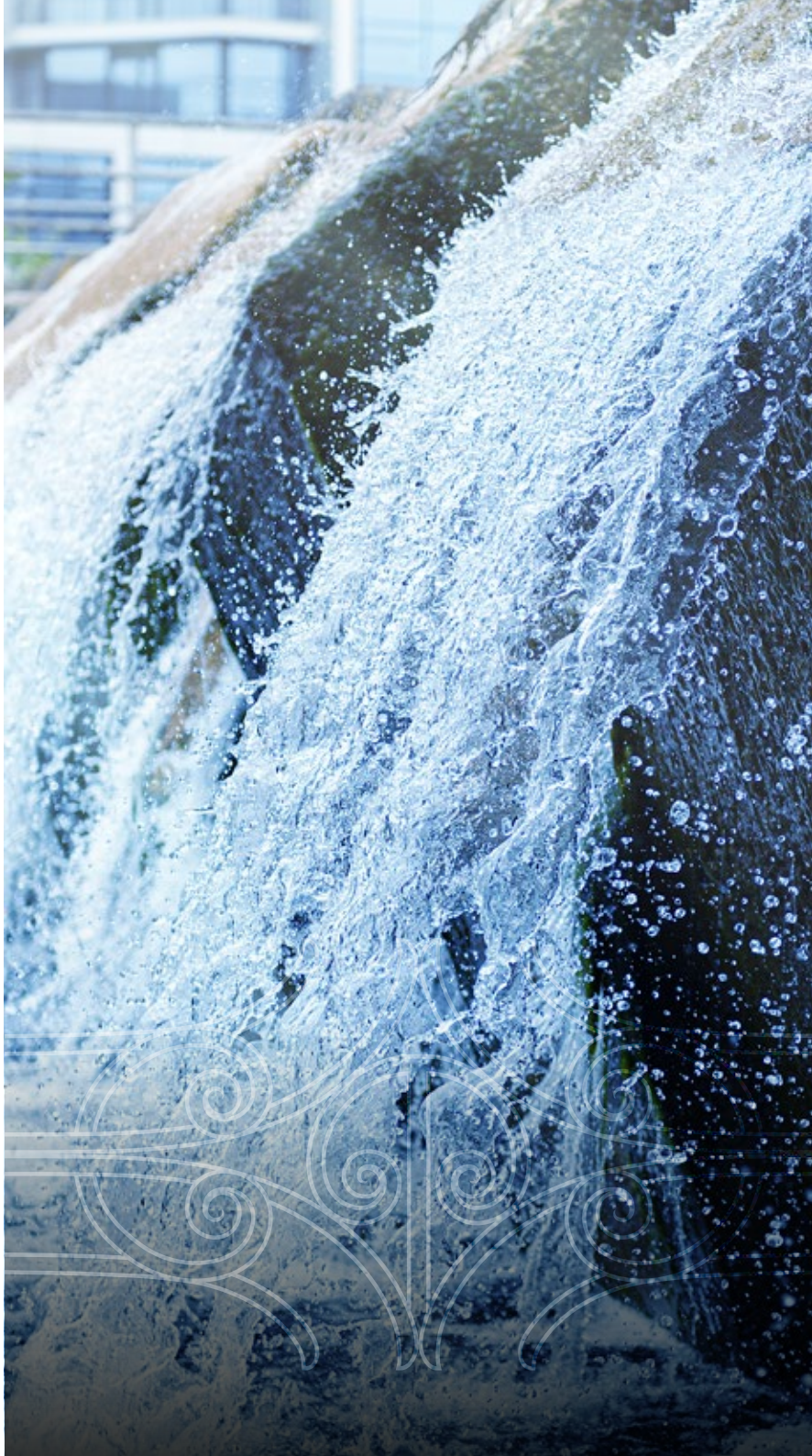
Identify and Address Water Leakage/Loss Through Metering & Renewals
2024/25 - 2053/54
$117.4m

Investigate Stormwater Treatment Options
2024/25 - 2053/54
$6.8m

Staged WWTP Upgrades at the Pines to Meet Increasing Demand
Staged from 2024/25 - 2053/54
$163.2m

Identify and Manage Backflow and Inflow/Infiltration
2024/24 - 2032/33 – **$1.7m (backflow)**
2024/24 - 2053/54 – **$34.6m (I/I renewals)**

Pipeline Renewals
2024/25 - 2053/54
$178m



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 Section
Introduction	Describes the IS purpose and Council's strategic direction and links to other strategic documents	1, 6
Our District	Introduces our District	2(a)
Our Infrastructure	Describes the core infrastructure, and our management approach to infrastructure	3
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.

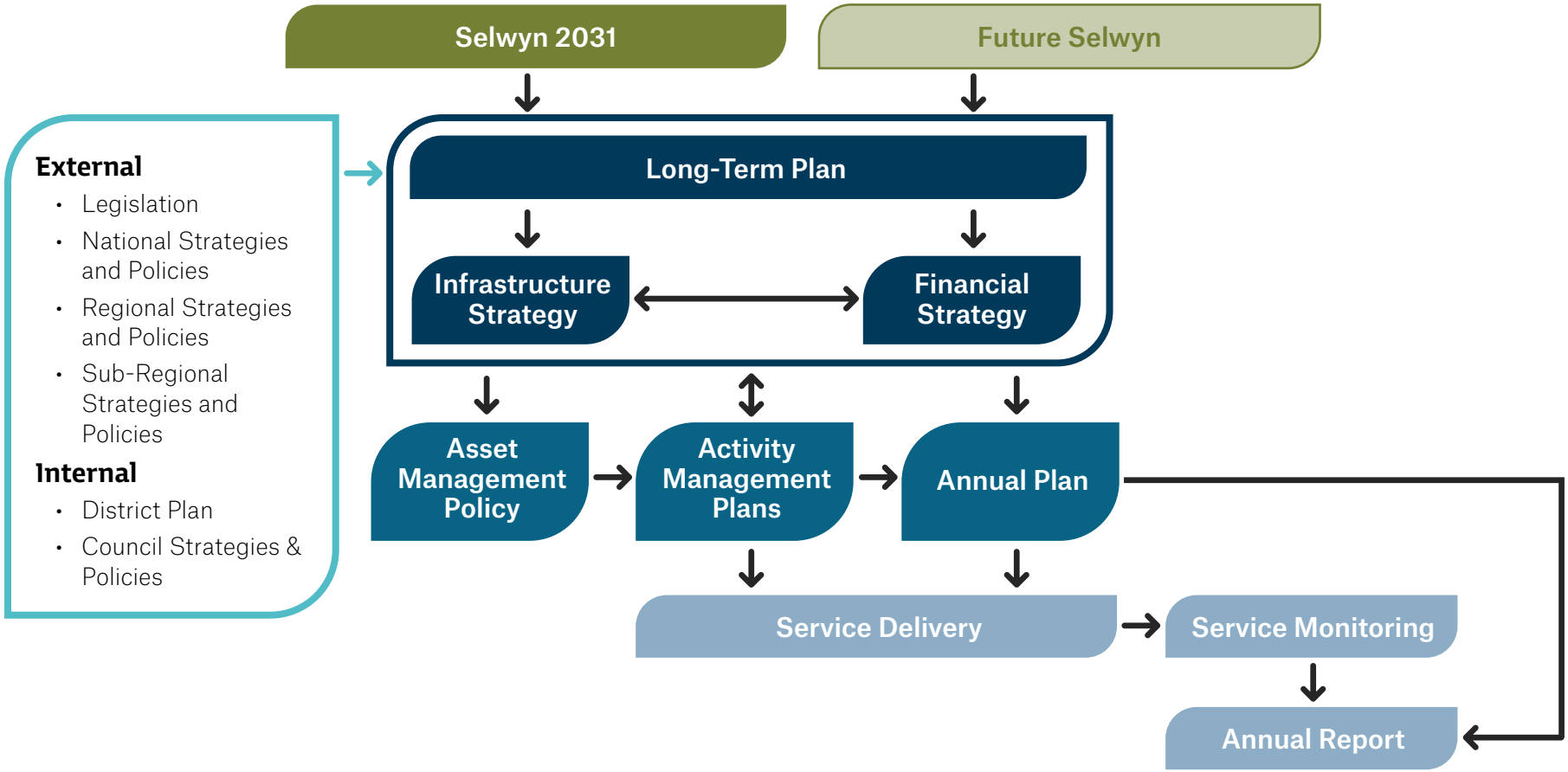
All of our AMPs, strategies, plans and policies that provide the framework for decision making and delivery of services can be found on our website.

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

The Long-Term Plan 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 Long-Term Plan, 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 Long-Term Plan and IS. Infrastructure activity expenditure forms a large proportion of our spending (an average of 75% 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. We are currently reviewing our District Plan, with initial decisions included in our Partially Operative District Plan.

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 Bicultural strategy

Our Te Rautaki Tikaka Rua Bicultural 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 takata 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 rūnaka. 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.

Our District

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), NZ Transport Agency Waka Kotahi 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.

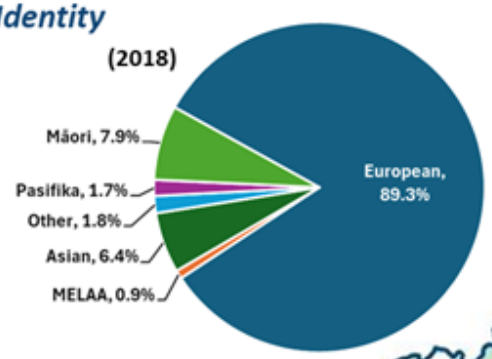
Selwyn District falls within the takiwā of Ngāi Te Ruahikihiki and Ngāi Tūāhuriri. The Council acknowledges their status as mana whenua and that the two hapū are represented formally by Te Taumutu Rūnanga and Te Ngāi Tūāhuriri Rūnanga and recognises the role of mana whenua as the kaitiaki, holders of 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 Bicultural Strategy, and the four pou of:

- **He 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.

Cultural Identity

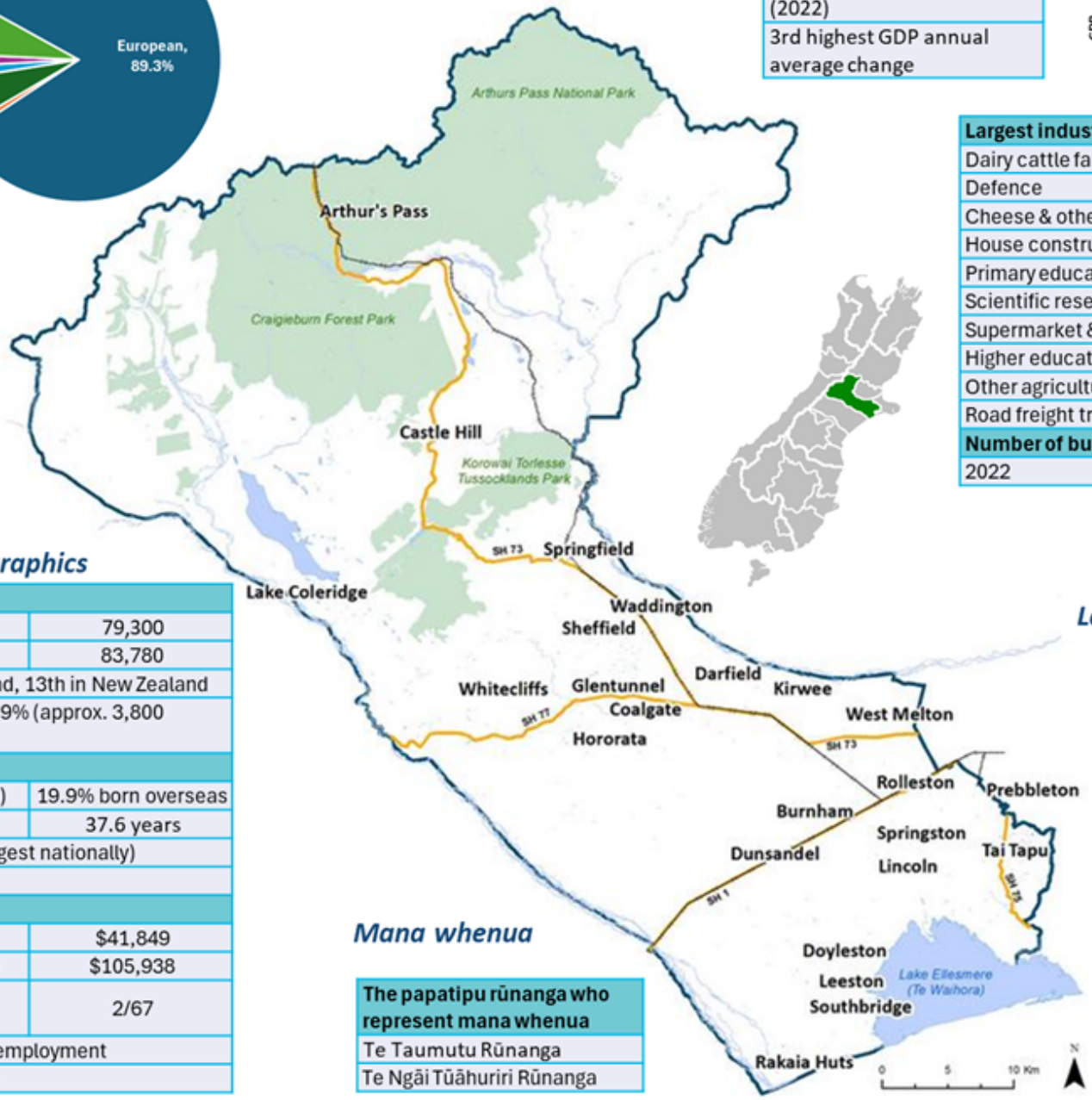


Languages Spoken (2018)	
English	97.1%
Te Reo Māori	1.2%
NZ Sign language	0.5%
Samoan	0.3%
Other	8.7%
None (infants etc)	2.2%

Economy

GDP growth
5.7% per annum GDP growth (2022)
3rd highest GDP annual average change

Largest industries (2022)	Jobs
Dairy cattle farming	1,343
Defence	1,244
Cheese & other dairy product manufacturing	1,163
House construction	825
Primary education	757
Scientific research services	733
Supermarket & grocery stores	699
Higher education	689
Other agriculture & fishing support services	622
Road freight transport	529
Number of businesses	
2022	7,929



Population and demographics

Total population	
Total population (June 2022)	79,300
Estimated popultion (mid 2023)	83,780
3rd largest district in South Island, 13th in New Zealand	
2nd fastest growing district at 4.9% (approx. 3,800 people) per year	
Demographics	
Total population migrants (2018)	19.9% born overseas
Median age (2018)	37.6 years
Younger than average (3rd youngest nationally)	
Low mortality rates	
Income and deprivation	
Mean per capita income (2023)	$41,849
Mean household income (2023)	$105,938
Deprivation score (2018) *1=least, 67=most deprived*	2/67
Lower than national average unemployment	
Higher GDP and housing quality	

Land Use

Land area	6,400km²
Dwellings	
Estimated dwellings (2022)	30,559 69% Urban; 31% Rural
Land use	
Reducing sheep and beef farming, increasing dairy, wetlands and township expansion	
Land features	
Arthurs Pass National Park	
Craigieburn Forest Park	
Te Waihora (cultural and ecological significance) - Canterbury's largest lake (5th largest in NZ)	

Mana whenua

The papatipu rūnanga who represent mana whenua
Te Taumutu Rūnanga
Te Ngāi Tūāhuriri Rūnanga

Our Infrastructure

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 well-being and resilience.

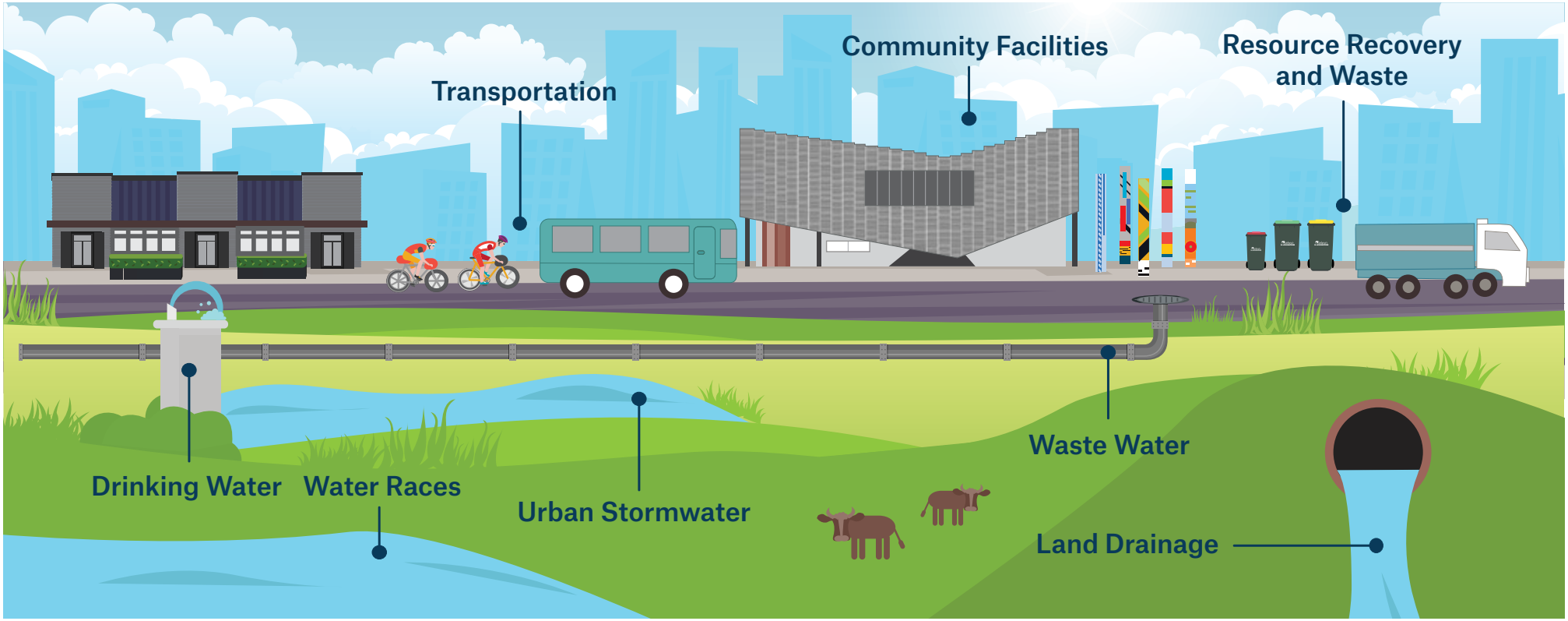
Selwyn District's assets are split between older, established townships and newer growth areas, with changes also occurring in the rural areas through intensification, increasing irrigation and rural, lifestyle and commercial development.

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.



Five Waters
(drinking water, wastewater, stormwater, land drainage, water races)

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 taoka 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 rūnaka. 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:

26
Drinking water schemes

- 36 Treatment plants
- 96 Reservoirs
- 17 Pump Stations
- 1528 km of Pipe 'in Service'
- 17 Groundwater Supplies
- 9 Surface Water Supplies

3
Water Race Schemes

- 7 Intakes
- 34 km of Pipe 'in Service'
- 372 km of Channels
- 11 Monitoring Sites
- 263 Divides
- 166 Gates
- 10 Fish Screens
- 6 Ponds
- 13 Weir

22
Stormwater Management Areas

- 292 km of Pipe 'in Service'
- 31.9 km of Channels (Drains)
- 73.7 km of Channels (Swales)
- 104 Stormwater Basins
- 80 Proprietary Devices
- 98 Manhole/Inspection Chambers
- 93 Soakholes

17
Wastewater Schemes

- 7 Treatment Plants
- 60 Pump Stations
- 2 Monitoring Sites
- 11 Oxidation Ponds
- 690 km of Pipe 'in Service'

9
Land Drainage Schemes

- 7 Land Drainage Schemes
- 2 River Management Schemes
- 1.25 km of Pipe 'in Service'
- 372 km Channels (Drain)
- 2 Stopbanks
- 1 Floodgate
- 46 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

Strategic Assets *(Council Significance and Engagement Policy)*[1]	Lifeline Utility *(Civil Defence and Emergency Management Act)*[1]
All water supplies, including reservoirs, pump stations and reticulation	An entity that supplies or distributes water to the inhabitants of a city, district, or other place
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	

[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).
[2] Currently under development through co-design with mana whenua
[3] Will be replaced by One Water Strategy (when finalised)

Sustainable Development Goals

- Good health and well-being
- Clean water and sanitation
- Decent work and economic growth
- Industry, innovation and infrastructure
- Sustainable cities and communities
- Climate action
- Life below water
- Life on land

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 Assessments	
Mana Whenua	
Ngāi Tahu Freshwater Policy Statement 1999	
Regional	
Canterbury Water Management Strategy	Te Waihora Joint Management Plan 2005
Floodplain Management Strategies	Biodiversity Strategy
National	
NPS Freshwater	

Transportation

We provide an extensive transportation network covering the length and breadth of the district. This network, when combined with the State Highways , 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):

2,694km
of Roads Consisting of:

- 1,122 **km Sealed**
- 1,572 **km Unsealed**
- 14.6% **Urban**
- 85.4% **Rural**

Walking and Cycling

- 439 **km of Footpaths**
- 32 **km of Shared Paths**
- 45 **m of Cycleways**

Structures

- 174 **Bridges**
- 39 **Roundabouts**
- 760 **Traffic Islands**
- 125 **Bus Stops**
- 6,801 **m of Railing**
- 8,857 **Streetlights**

Drainage

- 12,257 **Drainage Assets**
- 580 **km Stormwater Channels**

Signs and Signals

- 20,015 **Road Signs**
- 33 **Traffic Signals**

Transportation Significance

We work in partnership with NZ Transport Agency Waka Kotahi to plan, fund and provide important local transportation services and infrastructure. Our programme is dependent on the level of co-funding we receive from Waka Kotahi NZ Transport Agency.

Strategic Assets *(Council Significance and Engagement Policy)*[5]	Lifeline Utility *(Civil Defence and Emergency Management Act)*
Selwyn District transportation network	An entity that provides a road network

Sustainable Development Goals

- Good health and well-being
- Decent work and economic growth
- Industry, innovation and infrastructure
- Reduced inequalities
- Sustainable cities and communities
- Climate action
- Life on land
- Partnerships 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 and Programme Business Cases
Road Safety Strategy	Walking and Cycling Strategy
Parking Strategy	
Regional	
Regional Land Transport Plan	Greater Christchurch Transport Plan
Canterbury Regional Public Transport Plan	Greater Christchurch Public Transport (PT) Futures
National	
GPS Land Transport	NZ Transport Strategy
Road to Zero Road Safety Strategy	

[4] Managed by Waka Kotahi New Zealand Transport Agency
[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 Facilites

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 contribute 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:

Play Spaces

- 106 Playgrounds (over 148ha)
- 12 BMX Pump Tracks
- 7 Skate/Scooter Parks

24 Active Gravel Pits

36 Public Toilets (Grades I - III)

54 Afforested Sites (101.2ha)

16 Rental Houses

19 Cemeteries

Swimming Pools

- 1 District Aquatic Centre
- 2 Sub-District Community Pools
- 4 Community Pools

Property and Buildings

- 1 Rolleston HQ
- 1 Te Ara Ātea - Keystone Library/Community Space
- 3 Community Libraries
- 1 Outreach Library Vehicle
- 2 Volunteer Libraries
- 1 Campground
- 15 Strategic Properties
- 13 Heritage Buildings

Recreation Reserves

- 32 Sports and Recreation Reserves
- 30 Nature Reserves (447ha)
- 93 Sports Courts
- 50+ Sports Fields
- 4 Dog Parks

Community Centres and Halls

- 11 Indoor Sports Courts
- 26 Community Halls
- 1 Selwyn Sports Centre
- 26 Other Sports Centres

Community Facilities Significance

Strategic Assets *(Council Significance and Engagement Policy)*[6]	Lifeline Utility *(Civil Defence and Emergency Management Act)*[1]
The libraries and service centres in Darfield, Leeston, Lincoln, Rolleston and related services	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.
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	

[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).
[7] Under review
[8] Under review, including Malvern and Ellesmere aquatic provision clarity

Sustainable Development Goals

- Good health and well-being
- Decent work and economic growth
- Industry, innovation and infrastructure
- Reduced inequalities
- Sustainable cities and communities
- Climate action
- Life on land
- Partnerships for the goals

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 Facilities activity:

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

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.

Kerbside Waste

96% of District with access to kerbside collection services

16,679 80 litre rubbish bins in service

12,325 240 litre rubbish bins in service

28,997 recycling bins in service

16,905 organics bins in service

Resource Recovery Park, Cleanfill and Landfills

1 RRP – Pines

2 'Pop up' Temporary RRP's held in Malvern and Ellesmere 2x/year

1 Cleanfill Pit

5 Monitored Closed Landfills

Public Litter Bins

47 Large Residual Waste Litter Bins

13 Large Recycling Litter Bins in High Street Areas

Resource Recovery and Waste Signficance

Strategic Assets *(Council Significance and Engagement Policy)*[9]	Lifeline Utility *(Civil Defence and Emergency Management Act)*
The Pines Resource Recovery Park	No lifeline utility services identified within solid waste[10]

Sustainable Development Goals

- Good health and well-being
- Decent work and economic growth
- Industry, innovation and infrastructure
- Sustainable cities and communities
- Responsible consumption and production
- Climate action
- Life below water
- Life on land
- Partnerships for the goals

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 Plan
Waste Audit	
National	
Te Rautaki Para New Zealand Waste Strategy	

[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).
[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

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 well-being, 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 well-being.

	Five Waters (drinking water, wastewater, stormwater, land drainage, water races)	Transportation	Community Facilities	Resource Recovery and Waste
Environmental: Waikirikiri Selwyn's whenua land, wai water and kanorau koiora biodiversity are protected and enhanced. Our towns are cleaner and greener and we address climate change				
A clean taiao environment				
We will live within our air, soil, water, and kanorau koiora 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		✓	✓	

	Five Waters (drinking water, wastewater, stormwater, land drainage, water races)	Transportation	Community Facilities	Resource Recovery and Waste
Protect productive and diverse land				
Important land, landscapes, and features are valued			✓	
Our biodiversity, including indigenous taoka 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, enjoy spending time together and feel a sense of he honoka connection				
He 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 well-being			✓	
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.			✓	
Strong neighbourhoods				
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	✓	✓	✓	✓

	Five Waters (drinking water, wastewater, stormwater, land drainage, water races)	Transportation	Community Facilities	Resource Recovery and Waste
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 towns and communities				
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		✓	✓	

	Five Waters (drinking water, wastewater, stormwater, land drainage, water races)	Transportation	Community Facilities	Resource Recovery and Waste
Cultural: Waikirikiri Selwyn is a collection of connected multicultural and diverse communities. We have mana upholding partnerships which 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 taoka places of tribal significance, wāhi tapu sites of special association, and tapatapa 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 takata 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:

Five Waters (drinking water, wastewater, stormwater, land drainage, water races)

Activity	Achievement	Description	Status
Strategy	Co design of draft One Water Strategy with rūnaka	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
	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, Hororātā, 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. Hororātā 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

Five Waters (drinking water, wastewater, stormwater, land drainage, water races)

Activity	Achievement	Description	Status
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 Wastewater Treatment Plant to benefit the camp, wider community and the environment. It replaced an on-site oxidation pond and border dyke irrigation system.	Completed
	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
	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

Transportation

Activity	Achievement	Description	Status
Upgrades	Intersections and access	Weedons Ross Road/SH73 intersection upgrade coordinated with NZTA	Completed
		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.	Completed
		Railway Road upgrade: Widening and sealing between Detroit Drive and West Melton Road to improve access to Izone	Completed
		Maddisons/Dawsons Road improvements: Provide a "standard" rural crossroad intersection safety upgrade – localised widening, quadrant kerbing, median islands, lighting, signage and markings.	Underway
		Leeston/Goulds Road improvements: Provide a "standard" rural crossroad intersection safety upgrade – localised widening, quadrant kerbing, median islands, lighting, signage and markings.	Underway
	Major roundabouts	Shands/Hamptons Road roundabout: Safety upgrade – Prebbleton arterial network	Underway
		Goulds/East Maddisons Road: Roundabout installation to improve safety and 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

Transportation

Activity	Achievement	Description	Status
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: 80km completed	Underway
Extensions and widening	Wordsworth Street north extension	New access road south of Moore Street to access reserve, retail developments and car parking	Completed
	Road widening	Blakes Rd and Weedons Ross Road	Completed
		Trents Rd widening between Oakely Drive and Shands Road	Underway
Shared path, walkways and cycleways	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
	Villa Mews	100m long shared use path connecting Villa Mews to East Maddisons.	Underway
	Templeton to Prebbleton Cycleway	Off road cycleway alongside Trents Road between SH1 and Shands Road - links between planned City, Selwyn and Rail Trail networks	Completed
	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
Carparks	Rolleston public carparks	Part of a series of public carparks for the new town centre staged to match development	Completed
Public Transport infrastructure	Bus stops and real time information	8 bus stop shelters and 6 Real Time Information signs across Rolleston, Lincoln and Burnham	Completed
Bridges	Bridge replacement - Harper Rover Diversion	Replacement of small weight restricted or damaged bridges - Harper River Diversion Bridge	Completed

Transportation

Activity	Achievement	Description	Status
Resilience and recovery	Adverse weather repair works	Around $6 million in late May 2021 for repairs of more than 500km of roads and 14 bridges	Completed
		$1.6 million in July 2021 for repair of 2 bridges 1 culvert, 5 fords, roads and other drainage assets	Completed
		$400,000 in February 2022 for bridge, road and ford repairs	Completed
		$2.2 million in July 2022 for assets affected by flood including culverts, ford and road repairs	Completed
		$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 Dunns Crossing Road between Burnham School Road and Lowes Road, and Lincoln Rolleston Rd west side from Helpet to Levi/ Lowes Road intersection.	Completed
	Street lamps	Replace over 5,000 streetlights with LED type.	Underway

Community Facilities

Activity	Achievement	Description	Status
Reserves	Foster Park - turfs	Installation of new full-size artificial hockey and football turfs.	Completed
	Lincoln Domain Extension – strategic land purchase	Purchase of 5.6 ha of land for an extension to Lincoln Domain. This is a critical parcel of land that provides extra sports and 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 and 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.	Completed
	Kahaka Park: Stage One (1a and 1b)	The first stages of Kakaha Park (13ha) between Prebbleton and Lincoln, featuring a new 2ha dog park, three full and 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 and boardwalks, a snake run, directional signage, and over 400 carparks. The name Kakaha Park has been gifted by Te Taumutu Rūnanga and Te Ngāi Tūāhuriri Rūnanga for the 22-hectare park. Kakaha is the Māori word for Astelia fragrans or bush lily — a native flax-like plant often used for weaving.	Completed
	Kirwee Reserve extension	Next stage of the extension development with a new playground, cricket nets and landscape upgrades.	Completed
	Rolleston town centre and reserve Youth Zone	$2.7 million Youth Zone including an eagles claw basket swing, outdoor furniture, basketball and netball hoop, gaga ball pit, hangout zones, and skate facilities (pool bowl, flow bowl and snake run).	Completed
	West Melton Community Park	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

Community Facilities

Activity	Achievement	Description	Status
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 and Sheffield, and a replacement facility for Lincoln Township. New public toilets have also been constructed at Hororātā Domain, Lake Lyndon Reserve and to service the Rail Trail (Neills Rd). New facilities are planned for development in Kirwee and Te Whāriki, Lincoln in 2024.	Underway
Swimming pools	Darfield Pool: Stages One and Two	$2.4 million redevelopment including changing room and structural upgrades, new facility signage, fence replacement and external landscaping. The second stage offered new additions for leisure swimming, a toddler splash pad, water play area, three metre hydro slide, picnic tables and seating areas and new heating and filtration to all pools.	Completed
Community centres and halls	Selwyn Sports Centre	New 8,000m^2 indoor sport and recreation facility containing 8 multi-use courts (4 sprung wooden and 4 polyurethane), a 240m walking track, 3 multi-purpose spaces, a spin room, sports house, event control room, toilet and change facilities and the Lu Uno interactive wall on court 8- the first of its kind in NZ.	Completed
	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 July 2024.	Underway
Property and buildings	Te Ara Ātea	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 taoka, cutting edge technology, and sensory, performance and workshop spaces, along with a café and lounge and 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 Well-being, 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

Activity	Achievement	Description	Status
Pines RRP	Recycling upgrades	Upgrades and development of drop-off Area, Canopy, Parking and Utilities infrastructure	Completed
ReConnect Project	ReDiscover Education Centre	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.	Completed
	ReUse Shop and Salvage Yard	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 open in late 2024.	Underway
	Garden Hub Development	The Garden Hub Stage One (named "ReNourish") has now opened and includes initial boundary planting and an edible hedge of fruit trees. The foundations of a food forest have been established, as well as the beginnings of a herb and tea garden before community driven development progresses future works and use.	Completed

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.

	Data Confidence				
Activity	Very high	High	Medium	Low	Very low
Five Waters					
Transportation					
Community Facilities					
Resource Recovery and Waste					

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%.

Grade

1 Data to the expected standard

2 Minor data quality issues present

3 Major data quality issues present

Results by Quality Dimension

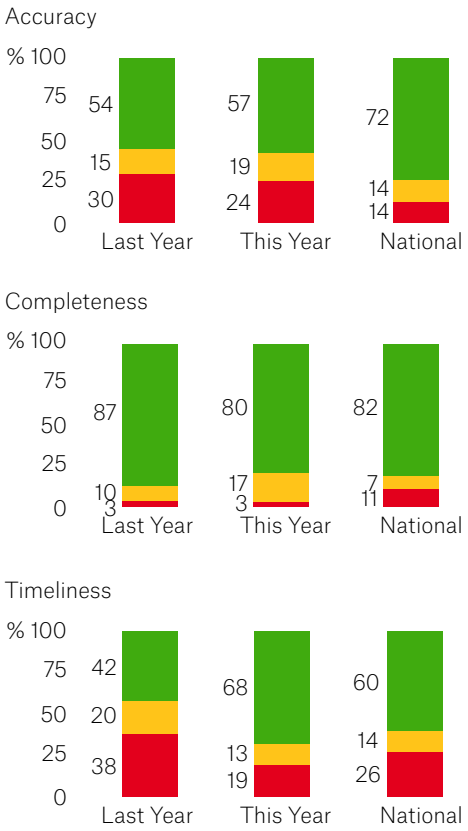


Figure 1: Te Ringa Maimoa Transport Insights Data Quality

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.

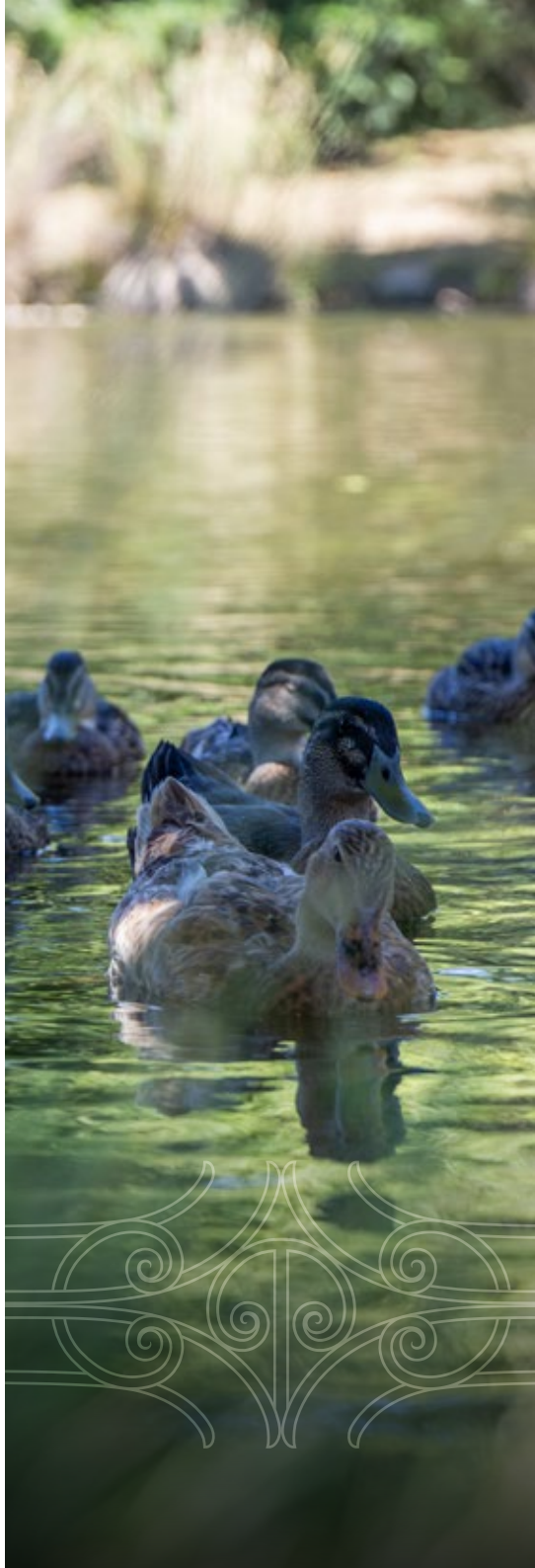
Methods for assessing the condition of our infrastructure varies by asset type but typically involves visual or physical inspection, with specialist assessment and engineering advice used as required. Full detail of condition assessments for each of our infrastructure activity groupings can be found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

A high-level summary of asset condition information is provided in the following table.

	Asset Condition					
Activity	Very good	Good	Moderate / Adequate	Poor	Very poor	Unknown
Five Waters	44%	30%	11%	1%	1%	13%
Drinking Water	32%	58%	4%	1%	1%	4%
Wastewater	59%	35%	0%	3%	1%	2%
Stormwater	63%	14%	7.5%	0.3%	0.01%	15.2%
Land Drainage	30%	28%	38%	0%	0.3%	3.7%
Water Races	38%	17%	8%	0.6%	0.4%	36%
Transportation	10%	40%	43%	5%	2%	-
Community Facilities	2.5%	51.9%	39.5%	5.3%	0.8%	-
Facilities	37.8%	37.8%	20.7%	3%	0.6%	-
Open Spaces	2%	52%	40%	5%	1%	-
Resource Recovery and Waste	0%	90%	5%	5%	0%	-

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	Transportation	Community Facilities	Resource Recovery and Waste
Community and users	✓	✓	✓	✓
Mana whenua	✓	✓	✓	✓
Community Boards and subcommittees	✓	✓	✓	✓
Environment Canterbury	✓	✓	✓	✓
Greater Christchurch partners	✓	✓		
Neighbouring Councils	✓	✓	✓	✓
NZ Transport Agency Waka Kotahi		✓		
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			✓	✓
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:

	AM Level		
Activity	Advanced	Intermediate	Core
Five Waters[11]		■	■
Transportation[12]		■	■
Community Facilities[13]			■
Resource Recovery and Waste			■

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:

1. Plan
2. Build
3. Operate and Maintain
4. Renew and Replace
5. Improve and Develop
6. Dispose

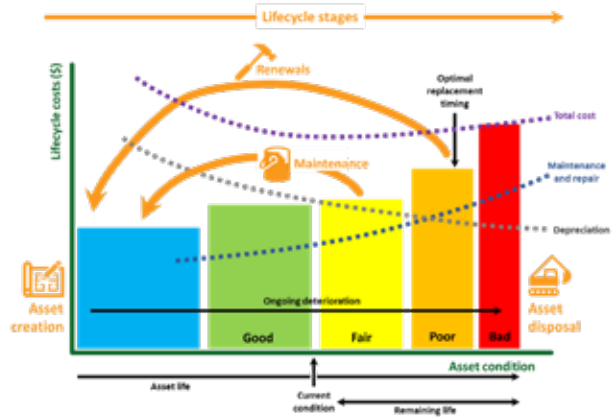
With current growth in our District remaining at amongst the highest in New Zealand, we place robust planning for the future (see below) at the forefront of our lifecycle management processes – ensuring that we can deliver and maintain each activity's Levels of Service for the anticipated increases in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

Council may face additional renewal expenditure beyond that which has been allowed for in the Long-Term Plan. 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



[11] Five Waters – some additional requirements as driven by regulator

[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

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:

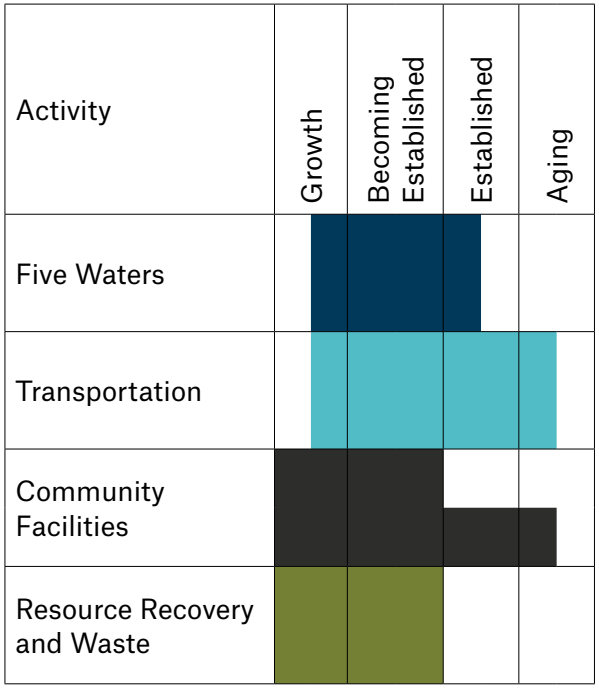
Stage	Characteristics
Growth	Minimal maintenance; no renewals
Becoming established	More maintenance; renewal of short life assets
Established	Regular maintenance; increasing renewals and replacements
Aging	Considerable maintenance; ongoing renewals needed

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 performance
- 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 our assets do range from brand new which we can see and know a lot about, to others that may be 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?
- 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 on projections and forecasts, informed by historic data. Our projected growth, and how this guides our planning is described in this section.

In Selwyn District, with the continuing experience of 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 provision of 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 urbanisation can drive shifts in level of service expectation.

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 and Demand Report".

Growth to date

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 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.

[15] University of Otago: New Zealand Deprivation Index 2018

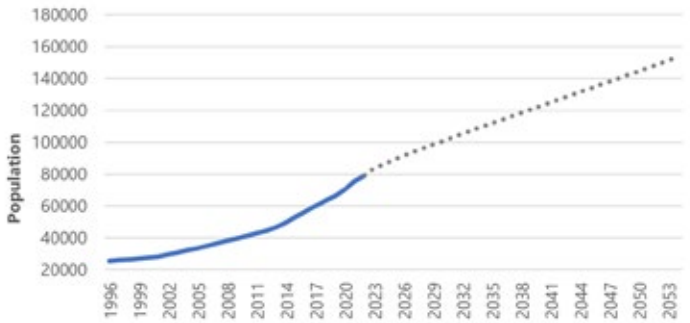


Figure 3: Selwyn District Population Estimates and Projections. Selwyn District Growth and Demand Report 2023/2024.

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

The Greater Christchurch Partnership (GCP) recently developed a Spatial Plan, which Council adopted in March 2024. This outlines the broad direction of growth for the sub-region and how we will address the shortfall which may eventuate beyond 2050 (shortfalls of 3,250 houses, and 20 hectares of commercial land) as identified in the Selwyn Residential Capacity and Demand Model 2023 and the Greater Christchurch Spatial Plan.

The key direction seeks increased intensification in the right areas to support public transport and economic growth. There are a series of actions underway now to improve the feasibility of intensification through regulatory and non-regulatory methods, with infrastructure playing a core role.

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.

A primary requirement of the NPS-UD is to ensure councils understand business and housing sufficiency over 30 years and can respond accordingly. We are meeting this requirement through the Greater Christchurch Partnership (GCP), with co-development of capacity assessments and a Future Development Strategy. This long-term (30 year) growth planning will be directed by the GCP Spatial Plan and updates to the council's own strategic direction will outline the opportunities for growth. Planning will continue to be refreshed on a minimum of three years, to ensure our approach can adapt to changing demands.

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. This contributes to addressing the potential shortfalls.

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. Where intensification occurs within pockets, this may challenge the efficiencies and capacity within some services. Council will continue to monitor where this intensification occurs and ensure that infrastructure modelling and master plan work is continuously updated to monitor capacity constraints and implement capital work programmes to address any deficiencies identified.

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.

Five Waters

(drinking water, wastewater, stormwater, land drainage, water races)

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.

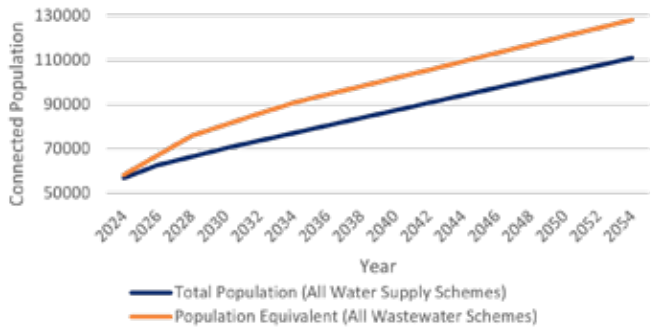


Figure 5: Growth projections by scheme/community - Water and Wastewater

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

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.

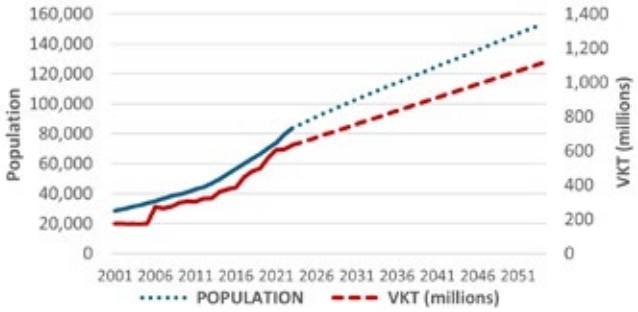


Figure 6: Population and VKT forecasts

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.

Community Facilites

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.

Resource Recovery and Waste

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.

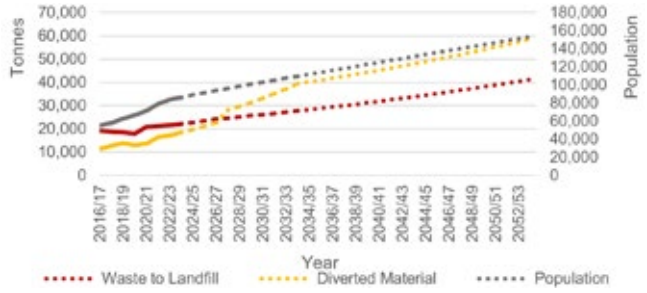


Figure 7: Residual waste and diverted material tonnages: actual (2016-2023) and projected (2024-2054)

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.

Five Waters
(drinking water, wastewater, stormwater, land drainage, water races)

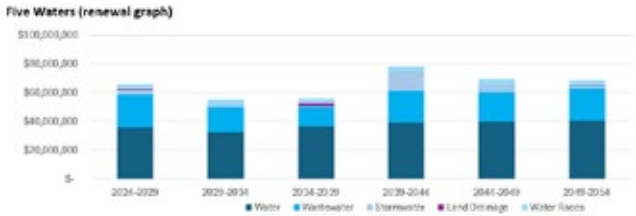


Figure 8: Five Waters renewal profile (5 year grouping) 2024-2054

Transportation

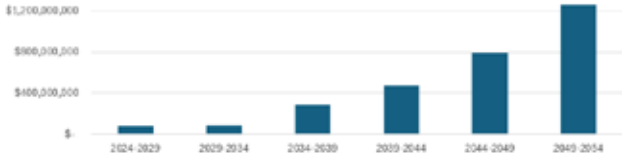


Figure 9: Transportation renewal profile (5 year grouping) 2024-2054

Community Facilites

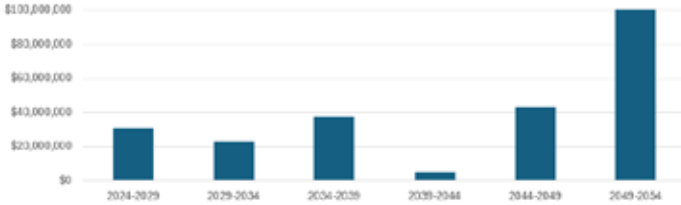


Figure 10: Community Facilities renewal profile (5 year grouping) 2025-2054

Resource Recovery and Waste

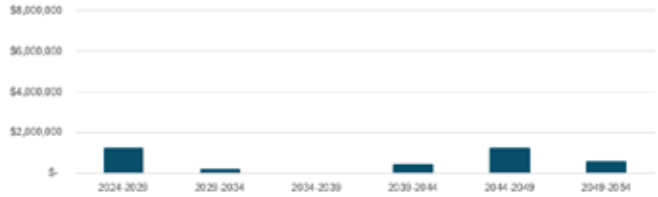


Figure 11: Resource Recovery and Waste renewal profile (5 year grouping) 2024-2054

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 and Infrastructure
- Financial / Audit
- Customer Relations / Service Delivery
- Health, Safety and Well-being
- Compliance
- Environment
- People and Capabilities
- Political / Reputation

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

		Consequence				
		Insignificant	Minor	Moderate	Major	Catastrophic
Likelihood	Frequent	Moderate	Significant	Extreme	Extreme	Extreme
	Often	Moderate	Significant	Significant	Extreme	Extreme
	Likely	Low	Moderate	Significant	Significant	Extreme
	Possible	Low	Moderate	Moderate	Significant	Significant
	Rare	Low	Low	Low	Moderate	Moderate

Risk Priority Rating		
Risk Score	**Level of Risk**	**Risk Response**
15 - 25	Extreme	Requires immediate assessment of actions
8 - 12	Significant	Requires remedial assessments and action via the annual planning process
4 - 6	Moderate	Address 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.

Risks and Issues	Priorities and Challenges	
Asset and 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. Not following established policies, processes or procedures. Poor operational control results in service failure and adverse health effects or environmental damage.	Operations Manuals not up to date or non-existent. Failure of operational systems or service due to maintenance work not being completed on time. 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.	Significant
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
Demand places pressure in managing water resources, our environment, and culture	Urban stormwater quality, environmental contamination, health risks to public. Agricultural Intensification: cumulative effects of diffuse nutrient discharges from agricultural land on water quality is recognised as a nationally and regionally significant resource management issue.	Significant

Risks and Issues	Priorities and Challenges	
Compliance		
Wastewater or potable water not treated to acceptable standard: Potential for significant public health and environmental impacts. Legal action and cultural 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 user requirements against changing regulatory frameworks or organisational constraints.	Managing consent compliance, monitoring and priorities for upgrades.	Significant
Financial / Audit		
Cost impacts of programming and 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 insurance cover	Cover does not provide funds or necessary asset replacement following an insurable event.	Significant
Financial Management (organisational and political) Planning and Delivery of Capital Programmes and Projects	Growth projections do not occur as anticipated and affect project affordability. Growth exceeds projections and costs to increase capacity and maintain service levels cannot be met in the short-term.	Significant

Risks and Issues	Priorities and Challenges	
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 demonstration of the transition to a carbon neutral district.	High Infiltration and Inflow rates in pipe and treatment assets exacerbated by Climate Change. 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 Well-being		
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

Risks and Issues	Priorities and Challenges	
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 well-being 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.

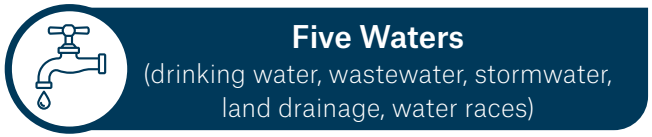
The risk assessment of climate change impacts is summarised in Table 5. Details on how we are responding to climate change and how it might impact on our infrastructure can be found in the Our Sustainable and Resilient Future section.

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.

	All zones					Alpine hills and high-country				Plains			Coastal and lower plains		
	Temperature (excl. ET impacts)	Annual rainfall	Drought	Evapotranspirations (ET)	Wind (excl. 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, wastewater, stormwater, land drainage, water races)															
Drinking water	M	L	H	M	M	M	H	H	L	L	L	M	L	H	L
Wastewater	M	L	L	L	M	L	H	L	L	H	L	L	M	H	L
Stormwater	M	L	L	L	L	L	H	L	L	H	L	L	M	H	L
Land Drainage	M	L	L	L	L	L	H	L	L	H	L	L	H	H	M
Water Races	H	L	M	L	L	H	H	H	L	H	L	L	L	M	L
Transportation															
Transportation	H	L	L	L	L	M	H	H	L	H	L	L	M	H	L
Community Facilites															
Community Facilities	H	L	L	L	H	L	H	H	L	H	L	L	M	H	L
Developed Open Spaces	H	L	H	M	H	M	H	H	L	H	L	L	H	H	M
Natural Open Spaces	M	L	M	L	H	M	H	M	L	H	L	L	M	H	L

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

Climate change impacts on infrastructure include:



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.

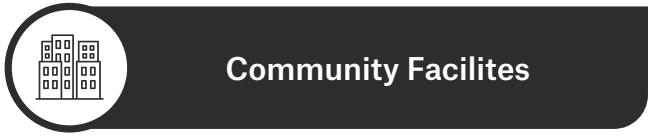
Land drainage

- 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.

- 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



- 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.

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, Council 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.

Council is working towards a 30% reduction in category 1 and 2 emissions by 2030. This means Council target does not yet include sources such as staff commuting (a component of category 3) and embodied carbon data from suppliers (a component of category 4) in our full supply chain.

While Council's target does not yet include all the value chain emissions (ISO category 3-6) we are working to analyse and respond to these and once these emissions are understood we will incorporate them into future emission reduction targets through the Emissions Reduction Plan.

Council are currently working through developing our Emissions Plan on how we are going to achieve this target. We have identified and funded some emission reduction opportunities within this Long-Term Plan and will consider the implications of further opportunities once the Emissions Plan has been developed. This includes whether Council will purchase offsets or not.

Council have also set a longer-term aspirational goal of being net zero by 2040, however we are still in the process of defining what this means for the Council, whether it is achievable, whether we will utilise offsets, and what the financial implications of such a goal would be.

The first step towards a low emissions future, is understanding the impact of Council 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:

Rank	Emissions Source	Total tCO_2e	% of tCO_2e
1	Wastewater (CH4 and N2O) 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 5 Waters 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 5 Waters network operation	247.7	3.3%

Table 6: Council operations top ten emissions sources 2020/21. Carbon Emissions Assessment Report 2022

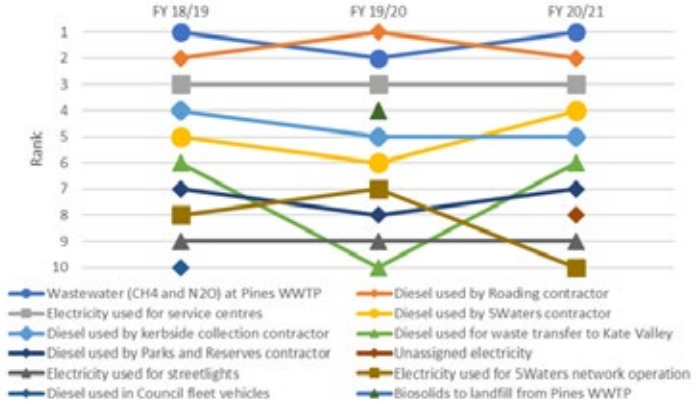


Figure 12: Council operation's top ten emissions sources per financial year. Carbon Emissions Assessment Report 2022

We remain focused on our own emissions reduction but also acknowledge our role within the wider community and will continue to promote and support the emissions reduction actions of our district. This is enabled through our own infrastructure, such as better walking and cycling.

Council remain focussed on it's own emissions reduction, but acknowledge its role in the wider community and will continue to promote and support emissions reduction, of which our infrastructure such as walking and cycling can be a key component.

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
(drinking water, wastewater, stormwater, land drainage, water races)

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.

Transportation

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.

Community Facilites

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.

Resource Recovery and Waste

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:

- 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	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	-	-	-	-	-	-
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

Long-term planning is based on assumptions about the future, which affect future operations and future capital spending. Infrastructure planning must 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
Adverse events	
No major 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.
Legislation	
Water Reform It is assumed that Council will continue to deliver Five Waters (water supply, wastewater, land drainage, stormwater, water races).	There is a risk that there will be 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. Assets and liabilities of part or the whole of the Council's Five Waters activity could be transferred to another body with financial forecasts and capital programme outlined in this document being the responsibility of the new body. If assets and debt are not transferred, there will be higher debt servicing costs on Council.

Assumption	Potential Effects
Financial	
Timing and level of capital expenditure The Long-Term Plan assumes that the timing and cost of capital projects and associated operating costs are as determined through the Council's activity management planning process. The financial impact of changes to timing of capital expenditure would be impacted by inflation, cost of borrowing and in the case of facilities, savings in operating costs for the period the capital expenditure is delayed.	Capital projects may not occur as planned which may have an impact on the costs. In periods of high inflation and cost escalations there is also the risk that actual project costs will vary from forecasts. The GPS on Transport provides the direction for national transport funding allocations which can change. Transport projects seeking subsidy will need to be developed through a Business Case approach to NZTA which may change originally anticipated outcomes. If projects do not occur as planned, capital expenditure in any year may differ from that forecast and delay may change the cost of individual projects. The Council will consider the impact of any change as part of the annual budget process and consider the funding implications of any cost changes.
NZTA revenue It is assumed that funding from Waka Kotahi NZTA will be as follows: 1. The financial assistance rate of 51% will apply to all maintenance, operations and renewals works included in the submission to the Land Transport Programme. 2. The financial assistance rate of 51% will apply to all capital works included in the submission to the Land Transport Programme, 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. If NZTA-approved budget is less than requested, council funds allocated to cover the council share under the initial request remains available for MOR. 5. In addition, council has budgeted an unsubsidized supplemental transport funds that can be used to cover the shortfall resulting reduced NZTA subsidy. 6. If the shortfall is too large (beyond $3m/year), additional funding will be sought from the council. 7. As a last resort, MOR programs will be reprioritised to fit the budget, with the reduced level of service. 8. 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	There is a risk that sufficient funds will not be available to pay for the planned capital projects. For example, subsidy is not available from national transport funding sources or because growth does not provide sufficient funding from 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 reprioritisation of NZTA funding which may result in capital projects being deferred for funding. The Council will assess the availability of NZTA funds as part of the annual budget process and if funds are not available, it may revise its roading and transport programme that is set out in the Long Term Plan. This may include deciding to defer activities or providing further funding.

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.

Our sustainable and resilient future

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 well-being, 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:

- 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

Managing what we have while planning for the future

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 well-being. 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.

Balancing funding and resource constraints

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.

Managing change: responding to legislative reform

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

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

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 well-being 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 well-being. 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 well-being 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 assessment and translated to impacts on our infrastructure and assets through an updated district analysis report.

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 well-being 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 principal 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? (Principal option)	What is the benefit?	How much will it cost? (in 2023 $)	When are we doing it?	Growth	LOS	Renew
Five Waters (drinking water, wastewater, stormwater, land drainage, water races)							
Pipelines will deteriorate as they come to the end of their useful lives which could result in failures.	**Project:** Optimised, proactive pipe replacement programme based on asset condition and criticality 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.	$178m	2024/25 to 2053/54			✓
	Assumptions	• Replacement programmes can be developed to extend the asset lives of pipes, and enable infrastructure work across Council activities to be co-ordinated at the same location requiring minimal establishments and re-work. • Works can be completed within planned programme budgets and resourcing • Pipes do not deteriorate to failure point prior to programmed replacement • Asset information used for renewals programming are sufficiently complete and accurate					
	Alternative options and implications	Replacement programmes are developed based solely on asset lives and condition assessments and are not optimised alongside Council's infrastructure programmes	**-LOS:** Increased disruption resulting from multiple works		**+$:** Lost cost efficiencies if works aren't completed together in a coordinated way		
		Reactive pipe repair of failures or replacement as failures occur	**-LOS:** Pipe failures will result in service disruption and potential for public health and environmental harm		**+$:** Reactive repairs are more costly. Loss of service has financial impacts on community		
	Sustainability impact	• Minimised environmental harm from potential failures • Co-ordinated infrastructure works supports potential for "Build efficiently" carbon reduction equating to 0-20% reduction in carbon emissions (t-CO2e)					

Issue	What are we doing? (Principal option)	What is the benefit?	How much will it cost? (in 2023 $)	When are we doing it?	Growth	LOS	Renew
Five Waters (drinking water, wastewater, stormwater, land drainage, water races)							
Growth and demand is placing pressure on available water take volumes and capacity	**Future Decision and Project:** Programme to plan for new water source requirements, including infrastructure upgrades, and securing of necessary consents.	Increases security, resilience and redundancy of supply. Maintains current LOS (without the need to implement the Demand Management Strategy).	$629m	2024/25 to 2053/54	✓	✓	
	Assumptions	• Growth occurs in line with projections • Per capita water demand is static or decreases slightly • Additional water sources can be consented and developed or existing consents transferred • Current consents can be renewed with the same level of water take or additional water take to service demand					
	Alternative options and implications	Reduce water use – implement Demand Management Strategy. Restrictions would be required to increase as growth continues	**-LOS:** Demand management requires reduction in water use by our communities. Will reduce current LOS	**-$:** Less cost to Council but community well-being, including economic likely to be negatively impacted			
		Limit growth to acceptable level within existing consent takes	**-LOS:** Reduced growth opportunity within District. Inconsistent with broader growth outcomes (Council, Greater Christchurch and national planning)	**-$:** Less cost to Council but community well-being, including economic likely to be negatively impacted			
	Sustainability impact	• Water demand must be managed to give effect to Te Mana o te Wai for all sources used to supply water schemes, including surface water and groundwater					

Issue	What are we doing? (Principal option)	What is the benefit?	How much will it cost? (in 2023 $)	When are we doing it?	Growth	LOS	Renew
Five Waters (drinking water, wastewater, stormwater, land drainage, water races)							
Some of our resource consents for water takes will be expiring over the next thirty years. The changing regulatory environment may impact on our ability to renew some consents in their current form	**Future Decision and Project:** Planned programme of consent renewals to plan for new water source requirements, including infrastructure upgrades, and securing of necessary consents.	Increases security, resilience and redundancy of supply. Maintains current LOS (without the need to implement the Demand Management Strategy).	$3.8m	2024/25 to 2053/54	✓	✓	
	Assumptions	• Growth occurs in line with projections and demand does not exceed capacity • Additional water sources are able to be consented and developed or existing consents transferred • Current consents can be renewed with the same level of water take or additional water take to service demand					
	Alternative options and implications	Reduce water use – implement Demand Management Strategy. Restrictions would be required to increase as growth continues	**-LOS:** Demand management requires reduction in water use by our communities. Will reduce current LOS	**-$:** Less cost to Council but community well-being, including economic likely to be negatively impacted			
		Limit growth to acceptable level within existing consent takes	**-LOS:** Reduced growth opportunity within District	**-$:** Less cost to Council but community well-being, including economic likely to be negatively impacted			
	Sustainability impact	• Water demand must be managed to give effect to Te Mana o te Wai for all sources used to supply water schemes, including surface water and groundwater					

<table>
<tr><th>Issue</th><th>What are we doing? (Principal option)</th><th>What is the benefit?</th><th>How much will it cost? (in 2023 $)</th><th>When are we doing it?</th><th>Growth</th><th>LOS</th><th>Renew</th></tr>
<tr><td colspan="8">Five Waters
(drinking water, wastewater, stormwater, land drainage, water races)</td></tr>
<tr><td rowspan="4">Some of our resource consents for discharges (wastewater, stormwater and land drainage) will be expiring over the next thirty years. The changing regulatory environment may impact on our ability to renew some consents in their current form</td><td>Future Decision and Project: Renewal of discharge and disposal consents. Catchment management planning for stormwater and land drainage.</td><td>Continuity of supply/services – maintains current LOS. Improved environmental and cultural outcomes</td><td>$1.3m (wastewater)

$1.5m (stormwater)

$0.64m (land drainage)</td><td>2024/25 to 2053/54</td><td></td><td>✓</td><td>✓</td></tr>
<tr><td>Assumptions</td><td colspan="6">• Council can secure consents for continued operation of Five Waters assets
• Future restrictions on disposal methods/water quality can be managed operationally
• Climate impacts will be as projected
• Change in land use does not significantly impact groundwater levels or quality</td></tr>
<tr><td rowspan="2">Alternative options and implications</td><td>Infrastructure upgrades (i.e., retrofit stormwater treatment; improve wastewater treatment processes) to achieve new consent requirements</td><td colspan="2">/LOS: Unlikely to affect LOS</td><td colspan="3">+$: Likely to result in increased cost</td></tr>
<tr><td>Limit growth in catchments with restrictive resource consent conditions</td><td colspan="2">-LOS: Reduced growth opportunity within District. Inconsistent with broader growth outcomes (Council, Greater Christchurch and national planning)</td><td colspan="3">-$: Less cost to Council but community well-being, including economic likely to be negatively impacted</td></tr>
<tr><td>Sustainability impact</td><td colspan="6">• Catchment management planning and investments to achieve consent renewals is likely to lead to better environmental outcomes</td></tr>
</table>

Issue	What are we doing? (Principal option)	What is the benefit?	How much will it cost? (in 2023 $)	When are we doing it?	Growth	LOS	Renew
Five Waters (drinking water, wastewater, stormwater, land drainage, water races)							
Growth and increasing demand requiring additional capacity provision in The Pines WWTP	**Project:** Upgrade to 80,000PE by FY33/34. Develop design to ensure that appropriate capacity levels are reserved to match growth and 50-year treatment and disposal projections. Options for treatment and staging of further upgrades to increase capacity to 130,000PE by FY53/54 are developed. Ultimate planning for expansion to 180,000 PE in 50 years. Heat and Power (radiant heat recovery systems) upgrade.	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).	$163.3m	Staged: 2024/25 to 2053/54	✓	✓	✓
	Assumptions	• Growth occurs at projected rates and capacity is available as modelled • Additional land for disposal can be secured • Required resource consents can be secured • Options to replace existing aerobic digestion with anaerobic digestion treatment processes can be implemented as part of future renewal requirements • Existing methods for managing biosolid waste will become unaffordable and unavailable for increasing quantities in the longer term • Biosolids can be used locally (reducing transport emissions) • Viable alternative electricity sources can be established					
	Alternative options and implications	Expansion option occurs based on aerobic treatment, with different costs and environmental benefits	**-LOS:** Greater impact of operations on environment, including carbon emissions	**+$:** Increased operational costs to management of produced biosolids including (electricity, land requirement, transport of biosolids)			
		Limited upgrade(s) restricting additional capacity	**-LOS:** Constrained growth opportunity within District	**-$:** Less cost to Council but community well-being, including economic likely to be negatively impacted through restriction of growth			
	Sustainability impact	• Support efforts to reduce carbon from wastewater treatment plant operations • Requirements for biosolids (sludge) removal to landfill are minimised • Reduced power use, from the grid, at Pines WWTP • Reduced emissions on a per capita/volumetric basis					

Issue	What are we doing? (Principal option)	What is the benefit?	How much will it cost? (in 2023 $)	When are we doing it?	Growth	LOS	Renew
Five Waters (drinking water, wastewater, stormwater, land drainage, water races)							
Management and cost inefficiencies of dispersed water treatment supplies, limited resilience and increasing nitrate levels	**Future Decision:** Investigations for viability and concept design for centralised water supply treatment. May enable future decommissioning of some existing WTP facilities.	Maintain LOS. Improve public health and environmental outcomes or mitigate adverse effects. Utilise low nitrate water sources. Achieve efficiencies of scale including operational costs	$400m	2034/35 to 2042/43	✓	✓	
	Assumptions	• Centralised water takes for high growth areas of plains can be consented including transfer of existing consents • Growth occurs at projected rates • Low nitrate water is available at required rates • Nitrate concentrations in groundwater remain high across the Plains					
	Alternative options and implications	Water supply schemes across the District retain separated sources and treatment plants	**-LOS:** Does not achieve efficiencies and resilience improvements. Does not address high nitrate levels in some schemes	**-$:** Reduced upfront investment costs			
		Council invests in nitrate removal technologies rather than providing low-nitrate source water	**-LOS:** Investment reduces nitrate but does not provide other efficiencies and resilience improvements	**+$:** Increased cost to implement			
	Sustainability impact	• Support efforts to reduce carbon through building efficiently and adopting innovative technologies where possible. May extend to carbon reductions in-line with "build less" potential as fewer assets and facilities are required to maintain service delivery.					

Issue	What are we doing? (Principal option)	What is the benefit?	How much will it cost? (in 2023 $)	When are we doing it?	Growth	LOS	Renew
Five Waters (drinking water, wastewater, stormwater, land drainage, water races)							
Increasing need to treatment of stormwater prior to discharge to meet compliance and ensure protection of receiving environment, health and cultural outcomes	**Future Decision:** Look for opportunities for retro-fitting stormwater treatment processes; Set strategic direction for stormwater treatment in areas of discharge to ground.	Environmental impacts of surface water discharges are mitigated; Compliance with changing regulations proactively managed.	$53m	2024/25 to 2053/54		✓	✓
	Assumptions	• Strategic planning can identify land available for stormwater retention/detention/treatment where centralised facilities are required (i.e., in wet areas) • Future resource consents will require treatment for discharges to ground. Retrofitting of urban areas may be required					
	Alternative options and implications	Adopt a wait and see approach to implement the requirements for stormwater management as changes to regulatory requirements are confirmed/ at consent renewal	**-LOS:** Does not achieve improvements now		**+$:** Delayed action may increase ultimate costs to Council and decrease the number of viable options including for land purchase		
	Sustainability impact	• Ability to treat stormwater to remove pollutants as well as control its volume and rate of discharge • Biodiversity and habitat improvements/protection - improve the mana and ecosystem health of downstream waterbodies, including Te Waihora					

Issue	What are we doing? (Principal option)	What is the benefit?	How much will it cost? (in 2023 $)	When are we doing it?	Growth	LOS	Renew
Five Waters (drinking water, wastewater, stormwater, land drainage, water races)							
Potable water losses (approx. 20% in 2022/23)	**Project:** Identification of water leakage/loss. Leakage addressed through metering and renewals.	Improved water efficiencies. Water treatment demands managed from existing resources.	$15,000/ year (measuring) $115.7m (renewals)	2024/25 to 2053/54		✓	✓
	Assumptions	• Appropriate cost recovery based on development contributes to works • Parts of network causing water losses can be identified					
	Alternative options and implications	Demand management for treated potable water consumption to account for losses	**-LOS:** Demand management requires reduction in water use by our communities. Will reduce current LOS	**-$:** Less cost to Council but community well-being, including economic likely to be negatively impacted			
	Sustainability impact	• Mitigates the risks of disruption incidents through making additional capacity available within existing networks • Supports climate change mitigation by maintaining an acceptable Level of Service through managing resource consumption alongside the risks of drought or lowering groundwater levels					

Issue	What are we doing? (Principal option)	What is the benefit?	How much will it cost? (in 2023 $)	When are we doing it?	Growth	LOS	Renew
Five Waters (drinking water, wastewater, stormwater, land drainage, water races)							
Potential for contamination from wastewater pipe networks inflow/infiltration (I/I) and backflow	**Project:** Identification and management of I/I risks. Backflow prevention programme as part of managing urban and commercial expansion supported by policy and funded maintenance / monitoring practices.	Capacity increased within existing infrastructure. Reduced contamination risk – public health and environmental benefits.	$1.7m (backflow) $34.6m (I/I renewals)	2024/25 to 2032/33 2024/25 to 2053/54	✓	✓	✓
	Assumptions	• Climate impacts will be as projected and not reach tipping point in this period (increasing weather events which could result in I/I and changes to groundwater levels) • Parts of network at risk of I/I can be identified					
	Alternative options and implications	Status quo – minimal addressing of identified I/I and potential contamination through backflow. This may not be compliant with current and future changes in consents and water standards.	**-LOS:** Higher risk including public health and environmental outcomes, as well as continuity of service if issue arises	**+$:** Delayed action may increase ultimate costs to Council			
	Sustainability impact	• Climate change adaptation to partially manage the anticipated impacts of extreme rainfall events and high groundwater levels					

Issue	What are we doing? (Principal option)	What is the benefit?	How much will it cost? (in 2023 $)	When are we doing it?	Growth	LOS	Renew
Transportation							
Aging and deterioration of the growing sealed roads network, including those established to a higher level of service (e.g., AC)	**Future Decision and Project:** Differentiate LOS. Develop a strategy for AC renewals. Set optimal targets reseals and AC renewals and ensure delivery	Minimised lifecycle cost for specified LOS.	$683m	Annual 2024/25 to 2053/54		✓	✓
	Assumptions	• Urban growth and vesting of assets to Council continue in line with projections					
	Alternative options and implications	Renewal at higher level of surface to reflect development driven use of AC (like-for-like on a case by case basis)	**+LOS:** Will increase level of service including renewal of AC roads		**-$:** Increased cost to Council as higher LOS (AC renewal) is unlikely to attract co-funding		
	Sustainability impact	• Lifecycle cost reduction contributes to financial and environmental sustainability					

Issue	What are we doing? (Principal option)	What is the benefit?	How much will it cost? (in 2023 $)	When are we doing it?	Growth	LOS	Renew
Transportation							
Rapid growth driving demand for improvements (intersection upgrade, road widening, public transport infrastructure, walking and cycling facilities)	**Future Decision and Project:** Coordinate land use and transport infrastructure planning. Focus infrastructure improvements in key areas and corridors. Promote efficient use of public transport and active transport.	Efficient infrastructure provision that meets the activity needs of residents.	$1,060m	Staged over 2024/25 to 2053/54	✓		
	Assumptions	• Continued rapid population growth; funding and environmental constraints					
	Alternative options and implications	Transport infrastructure responds on an ad hoc basis	**-LOS:** Delayed attention to actioning improvements in relation to growth may occur due to timing of funding and approval processes		**+$:** Greater cost of ad hoc improvements due to reduced of efficiencies		
	Sustainability impact	• Efficient urban form contributes to financial, social, and environmental sustainability					

Issue	What are we doing? (Principal option)	What is the benefit?	How much will it cost? (in 2023 $)	When are we doing it?	Growth	LOS	Renew
Community Facilites							
Capacity need for outdoor sport and recreation demand (existing and future demand)	**Project:** Building new or extended sports and recreation parks at various locations (Rolleston – District Park; Kakaha Park stage 2; West Melton Domain; Broadfield Reserve; Lincoln Domain extension)	Growing population have adequate space and facilities for sport and recreation	$40.8m $60m	Staged: 2024/25 to 2033/34; 2036/37 to 2051/52	✓		
	Assumptions	• Population growth with be in line with forecasts • Current trends in sports and recreation use and preferences continue as forecast					
	Alternative options and implications	Reduce level of provision of outdoor sports and recreation facilities across the district	**-LOS:** reduced provision will not meet demand (current and future) resulting in reduced LOS per head of population.		**-$:** Lower costs associated with reduced provision		
	Sustainability impact	• Increase maintenance costs and impacts e.g., water use (irrigation) and mowing					

Issue	What are we doing? (Principal option)	What is the benefit?	How much will it cost? (in 2023 $)	When are we doing it?	Growth	LOS	Renew
Community Facilites							
Recreation and community facilities in Leeston do not meet current and future community needs	Projects: a. Building a new combined Library/Cultural/ Community centre (Whata Rau) at Leeston Park with the design to be confirmed following further community engagement. b. Implementing a master plan to upgrade facilities and undertake improvements at Leeston Park. Both projects form part of the broader Waihora Whata Rau project.	Replaces earthquake prone and deteriorating building. Meets existing and future demand for community space. Renewal of aging facilities. Improved recreation and supporting facilities for the Leeston community.	Whata Rau $16 – 19.2m Leeston Park $3.4m	2024/25 to 2026/27 Staged: 2024/25 to 2033/34	✓	✓	✓
	Assumptions	• Planned facility will meet identified community needs • Growth in Leeston and the surrounding catchment will continue at forecast levels • Current trends in sports and recreation use and preferences continue as forecast					
	Alternative options and implications	A. Retain and continue to operate existing Library facility and make building watertight until upgrade / demolition is required (2035)	**-LOS:** Potential reduction in LOS as facility ages and current gap in LOS for community space is not addressed	**-$:** Lower cost to Council to implement			
		A. Build the new facility with larger spaces (community or courts)	**+LOS:** Increased LOS for improved service	**+$:** Increased cost to Council			
		A. Build a new facility with simplified, standard design reducing opportunity to improve community space	**-LOS:** Lower LOS resulting from reduced plans.	**-$:** Lower cost to Council to implement			
		B. Undertake a reduced improvement programme on Leeston Park	**-LOS:** Lower LOS resulting from reduced plans. Impacts to community well-being.	**-$:** Lower cost to Council to implement			
	Sustainability impact	• More efficient use of water if automated irrigation is installed • Lower energy consumption for sports lighting • Removal/disposal of old assets increases waste stream • Embodied construction carbon - planned building will incorporate Green Star/equivalent low carbon specifications					

Issue	What are we doing? (Principal option)	What is the benefit?	How much will it cost? (in 2023 $)	When are we doing it?	Growth	LOS	Renew
Community Facilites							
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	**Projects:** a. Considering provision of a new community facility to service the Prebbleton Community. b. Assessing requirements to improve the operation and spaces at Lincoln Event Centre (LEC) including seismic strengthening. c. Undertaking an assessment to understand needs and develop a redevelopment plan for Rolleston Community Centre (RCC) and providing a provisional budget for repurposing.	Provides community space to meet existing and future demand. LEC can be safely used for emergency 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 upgrade can be implemented as part of the work.	Prebbleton CC $8.0m LEC $13.6m RCC $8.8m	2027/28 Assessment in 2026/27, budget in 2036/37 to 2037/38 Assessment in 2025/26, budget in 2026/27 to 2028/29	✓	✓	✓
	Assumptions	• A needs assessment and business case with confirm the demand and type of facility needed • The current seismic rating of buildings will not alter • LEC and RCC can be cost-effectively reconfigured to meet needs					
	Alternative options and implications	Do nothing – community to rely on existing community spaces and continue to operate buildings (RCC, LEC) in their current form	**-LOS:** Projects required due to demand – capacity of existing facilities will be inadequate and LOS gap in Prebbleton will not be addressed	**-$:** No immediate cost to Council through inaction			
		Consider alternative provision options e.g., partnerships	**?LOS:** Change to LOS dependent upon other options considered	**?$:** Impact to costs dependent upon other options considered			
	Sustainability impact	• Operating impacts for heating/cooling • Embodied construction carbon - planned new building will incorporate Green Star/equivalent low carbon specifications and redeveloped buildings will include energy efficiency upgrades					

Issue	What are we doing? (Principal option)	What is the benefit?	How much will it cost? (in 2023 $)	When are we doing it?	Growth	LOS	Renew
Community Facilites							
Darfield and its wider catchment is growing and there is a need to provide sufficient community facilities to meet current and future needs	**Future Decision and Project:** a. Construction of two court indoor facility in Darfield. b. Reviewing need for aquatic facilities across the district including construction of an indoor facility in Darfield.	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 $15.0m	2026/27 to 2028/29 2034/35	✓	✓	
	Assumptions	• Growth in Darfield and the surrounding catchment will continue at forecast levels					
	Alternative options and implications	A. Do nothing – rely on existing, limited court space (Darfield High School)	**-LOS:** Demand challenges are not addressed resulting in lower LOS	**-$:** No immediate cost to Council through inaction			
		A. Build a single court facility (meet current demand without capacity for future demand and preferences)	**-LOS:** Future demand is not addressed resulting in reduction in LOS when court meets capacity limit	**-$:** Reduced initial cost to Council but increasing cost to subsequently increase capacity at a later point			
		B. Do nothing – continue to maintain the existing seasonal pool that has recently been upgraded	**/LOS:** Demand challenges are not addressed resulting in lower LOS when capacity limits are reached	**-$:** No immediate cost to Council through inaction but increasing maintenance costs could be expected			
	Sustainability impact	• Operating impacts for heating/cooling • Water use for pool • Embodied construction carbon - planned building will incorporate Green Star/equivalent low carbon specifications					

Issue	What are we doing? (Principal option)	What is the benefit?	How much will it cost? (in 2023 $)	When are we doing it?	Growth	LOS	Renew
Community Facilites							
Southbridge pool coming to the end of its useful life	Future Decision: Reviewing the need for aquatic facilities across the district including the construction of an indoor facility in Ellesmere to meet future needs	Provides a year-round swimming pool to service wider Ellesmere community. Replacement of asset coming to end of useful life.	$15.0m	2040/41	✓	✓	✓
	Assumptions	• Growth in Ellesmere and the surrounding catchment will continue at forecast levels • The existing Southbridge Pool will reach end of life within 20 years					
	Alternative options and implications	Do nothing – continue to maintain the existing seasonal pool at Southbridge and the small learners pool at Leeston.	/LOS: No change to current LOS but does not address identified future need	-$: 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					

Issue	What are we doing? (Principal option)	What is the benefit?	How much will it cost? (in 2023 $)	When are we doing it?	Growth	LOS	Renew
Community Facilites							
Identified need for more space for active and informal recreation especially in natural settings	**Project:** Strategic purchase of additional land to cater for active recreation and protect natural areas. Undertake sensitive development to provide for recreation.	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.	$11m	Purchase 2030/31, Develop from 2036/37	✓	✓	
	Assumptions	• Growth in district will continue at forecast levels • Land that meets requirements will be available for purchase • Sports and recreation use trends continue as forecast with a move to more informal activities					
	Alternative options and implications	Do nothing and rely on other providers (e.g., Te Papa Atahwai Department of Conservation, Environment Canterbury Regional Council, Christchurch City Council)	**/LOS:** No change to LOS but does not address identified need (existing LOS gap)		**-$:** No immediate cost to Council through inaction		
	Sustainability impact	• Potential to incorporate biodiversity enhancement and natural area protection					

Issue	What are we doing? (Principal option)	What is the benefit?	How much will it cost? (in 2023 $)	When are we doing it?	Growth	LOS	Renew
Community Facilites							
Poor condition sports park practice and play lighting, non-compliant, below minimum standards and replacement lamps/ fittings cannot be sourced	**Project:** Implement a prioritised renewal, upgrade and new installation programme for sports lighting.	Sports lighting meets the needs of users, is safe and compliant and more efficient to operate	$5.7m	Staged: 2024/25 to 2038/39	✓	✓	✓
	Assumptions	• Lights are owned by Council (not clubs) • Demand for lit areas for training and play will continue on existing sites already used for that purpose					
	Alternative options and implications	Do nothing and continue to try and maintain lighting schemes	**-LOS:** Lighting retained that is not fit for purpose	**+$:** Increased cost to securing and operating current lighting anticipated			
		Undertake a reduced renewal and upgrade programme	**-LOS:** Lighting retained that is not fit for purpose	**-$:** 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					

Issue	What are we doing? (Principal option)	What is the benefit?	How much will it cost? (in 2023 $)	When are we doing it?	Growth	LOS	Renew
Community Facilites							
Based on population projections and demand profiles there will be a need to provide additional indoor court space to meet capacity requirements	**Project:** Prepare a strategy for indoor courts based around the new National Strategy for Indoor Courts. Based on population growth forecasts indicating the requirement for a new or extended facility (minimum 4 courts)	Meets projected demand for indoor sports space and responds to changing preferences in sports and recreation activities	$16m	Strategy: 2027/28 Build 2041/42	✓	✓	
	Assumptions	• District growth especially in eastern Selwyn will continue at forecast levels					
	Alternative options and implications	Do nothing and rely on existing court space and other providers (CCC, ADC, schools)	**/LOS:** No change to current LOS but does not address identified need	**-$:** No immediate cost to Council through inaction			
		Build a facility earlier to meet some latent demand and future capacity	**+LOS:** Increased LOS and capacity to meet demand earlier	**+$:** Increased initial cost to cater for demand sooner			
		Build a larger facility to cater for anticipated demand over a longer period	**+LOS:** Increased LOS and capacity to meet future demand	**+$:** Increased initial cost to cater for future demand			
	Sustainability impact	• Operating impacts for heating/cooling • Embodied construction carbon - planned building will incorporate Green Star/equivalent low carbon specifications					

Issue	What are we doing? (Principal option)	What is the benefit?	How much will it cost? (in 2023 $)	When are we doing it?	Growth	LOS	Renew
Resource Recovery and Waste							
Refuse compactor coming to the end of life	**Project:** Replacing the refuse compactor, including increased capacity	Replacement of end of life asset and increased processing capacity for tonnage growth	$800,000	2028/29 2048/49	✓		✓
	Assumptions	• Existing compactor can meet need until 2028/29 and then to 2048/49 (2028/29 replacement)					
	Alternative options and implications	Replace contractor with current model, and remove additional capacity component (lower cost)	**-LOS:** Replacement will not cater for additional capacity needed to meet additional demand		**-$:** Reduced cost to initial replacement. Does not factor in meeting of increasing demand		
	Sustainability impact	• Expect some reduction in loader fuel usage through more efficient processing					

Issue	What are we doing? (Principal option)	What is the benefit?	How much will it cost? (in 2023 $)	When are we doing it?	Growth	LOS	Renew
Resource Recovery and Waste							
Structural concerns / limitations identified in refuse building	**Project:** Replacing the refuse building	Address structural concerns / limitations. New building design would allow increased waste diversion, improved safety and user and staff experience, and environmental outcome (litter)	$9,650,000	2024/25 to 2028/29	✓	✓	✓
	Assumptions	• Existing structure can meet needs until 2028/29 • Structural concerns do not worsen ahead of replacement					
	Alternative options and implications	Repair existing structure	**-LOS:** Replacement will not cater for additional capacity	**-$:** Reduced initial costs. Does not factor in meeting of increasing demand			
	Sustainability impact	• Increased waste diversion (especially C&D waste) and public drop off, resulting in reduced GHG emissions • Litter reduction					

Balancing funding and resource constraints

Issue	What are we doing? (Principal option)	What is the benefit?	How much will it cost? (in 2023 $)	When are we doing it?	Growth	LOS	Renew
Increased construction and operating costs	**Future Decision:** Prioritising programme within available funding and debt limits.	Ensure programme affordability.	Unknown	Ongoing			
	Assumptions	• Cost increases will not exceed forecasts (including inflation)					
	Alternative options and implications	Complete programmes without prioritisation, and alignment with other works	**-LOS:** Increased disruption to non-prioritised works		**+$:** Non-prioritised programme increases costs		
	Sustainability impact	• None identified					
Cost of supply change shift to low carbon/zero carbon	**Future Decision:** Prioritising low carbon/ zero carbon to meet targets.	Meet net zero carbon target. Regulatory compliance.	TBC	Ongoing			
	Assumptions	• Market movements will support financially viable alternatives and low/zero carbon options					
	Alternative options and implications	• No alternative option to transition to compliance with changing legislative requirement					
	Sustainability impact	• Reduce GHG emissions, supporting transition to net zero carbon.					

Issue	What are we doing? (Principal option)	What is the benefit?	How much will it cost? (in 2023 $)	When are we doing it?	Growth	LOS	Renew
Under insured and uninsured assets	**Project:** Review insurance requirement of assets.	Support potential recovery from adverse events (including climate change related).	Unknown	Ongoing			
	Assumptions	• Adequate insurance can be achieved on priority assets					
	Alternative options and implications	Status quo – no change to insurance arrangements	**-LOS:** resulting from impacts of underinsured assets, including potential delays to recovery		**+$:** Lower costs associated with initial cost to cater for future demand		
	Sustainability impact	• Supports recovery of services and assets					
Financial sustainability of Council infrastructure activities	**Future Decision:** Participating and advocation in sector changes, Local Government review relating to funding models.	Appropriate and adequate funding models. Financially viable delivery of services.	No funding requirement known	Ongoing			
	Assumptions	• Opportunity to review local government funding at a national level					
	Alternative options and implications	• No viable alternative options identified					
	Sustainability impact	• Financial sustainability of infrastructure services					

Managing change: responding to legislative reform

Issue	What are we doing? (Principal 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 reforms	Future Decision: Participating in sector changes and advocating for our communities; Routine (operational) consent compliance monitoring and trending.	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	✓		✓
	Assumptions	• 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	• No alternative option to compliance with legislative environment					
	Sustainability impact	• None identified at this stage of reform					

Issue	What are we doing? (Principal option)	What is the benefit?	How much will it cost? (in 2023 $)	When are we doing it?	Growth	LOS	Renew
Five Waters (drinking water, wastewater, stormwater, land drainage, water races)							
Changing regulatory and operating framework including Local Water Done Well water reforms	**Future Decision:** Participating in sector planning and advocating for the best outcomes for our communities in future water services delivery.	Compliance with changing regulations.	No funding requirement known	Ongoing		✓	
	Assumptions	• Three waters reform legislation will be repealed and water reform (Local Waters Done Well) will progress as indicated by Government. • Legislative frameworks do not change significantly (e.g., drinking water quality rules, planning frameworks) • 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 year planning period					
	Alternative options and implications	• No alternative option to compliance with legislative environment					
	Sustainability impact	• Non identified at this stage of reform					
Resource Recovery and Waste							
Requirement for compulsory food waste collections from 2027	**Project:** Introduction of organics collections requiring additional bins, collection service, additional tonnes to process and potential compost plant upgrades for odour management	Compliance with changing legislation. Diversion of food waste from landfill material.	TBC	Dec 2026		✓	
	Assumptions	• Government continues previous commitment to require food waste collections					
	Alternative options and implications	• No alternative option to compliance with legislative environment					
	Sustainability impact	• Increased organic diversion from landfill, and resulting reduced GHG emissions					

Responding to risk, sustainability and climate change

Issue	What are we doing? (Principal option)	What is the benefit?	How much will it cost? (in 2023 $)	When are we doing it?	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.	Reduction in diesel use – GHG emissions reduction	TBC	TBC		✓	
	Assumptions	• Technological advances in EV or other low emission fuels will become viable and commercially available within an appropriate timeframe to comply with net zero emissions targets					
	Alternative options and implications	• Alternative options are dependent on emergence of technologies and available options					
	Sustainability impact	• Reduced GHG emissions through replacement/reduction of diesel use					

Issue	What are we doing? (Principal option)	What is the benefit?	How much will it cost? (in 2023 $)	When are we doing it?	Growth	LOS	Renew
Carbon neutral/renewable electricity sources	**Future Decision:** Review electricity contract to include carbon neutral supply. Explore opportunities to install renewable energy generation in conjunction with building construction or retrofitting projects.	Reduced GHG emissions. Reduce electricity cost/requirement through installation of renewable energy on Council buildings.	TBC	2027/28 (carbon neutral electricity) and ongoing			✓
	Assumptions	• Available commercial option to secure carbon neutral electricity contract • Ability to include renewable energy generation within projects/renewals					
	Alternative options and implications	Status quo – no change to electricity contract or generation	**-LOS:** no impact on ability to reduce carbon emissions	**/$:** no change to current operating costs			
		Dedicated programme to develop renewable energy generation across Council building and site assets	**+LOS:** Improved energy generation and use. Reduced carbon emissions	**+$:** Increased costs to implement, with whole of life return / minimisation of operational costs			
	Sustainability impact	• Reduced GHG emissions through reducing/replacement of energy needs with renewable source and contracted supply of electricity to carbon neutral					

Issue	What are we doing? (Principal option)	What is the benefit?	How much will it cost? (in 2023 $)	When are we doing it?	Growth	LOS	Renew
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 change and sea level inundation)	**Future Decisions and Projects:** Monitoring risk to service delivery. Reviewing catchment strategies particularly coastal and affected areas. Infrastructure upgrade to protect wastewater assets in Rakaia Huts and Upper Selwyn Huts, including relocating assets where required. Adaptation of stormwater, land drainage, and water race networks. Developing and restoring wetlands.	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) $28.84m (Ellesmere conveyance) TBC (others)	2024/25 and ongoing		✓	✓
	Assumptions	• Climate impacts will be as projected and not reach tipping point in this period • Change in land use does not significantly impact groundwater levels or quality					
	Alternative options and implications	Do nothing: do not prioritise resilience	**-LOS:** will impact on asset and community resilience and ability to recover. Disruption to services resulting from events		**+$:** initial cost savings through lack of investment in resilience improvements but this will incur significant costs when assets are impacted, and require recovery		
	Sustainability impact	• Investment in infrastructure upgrades and renewals can be focussed on areas where the risks are already well understood and will remain in-service for longer periods.					

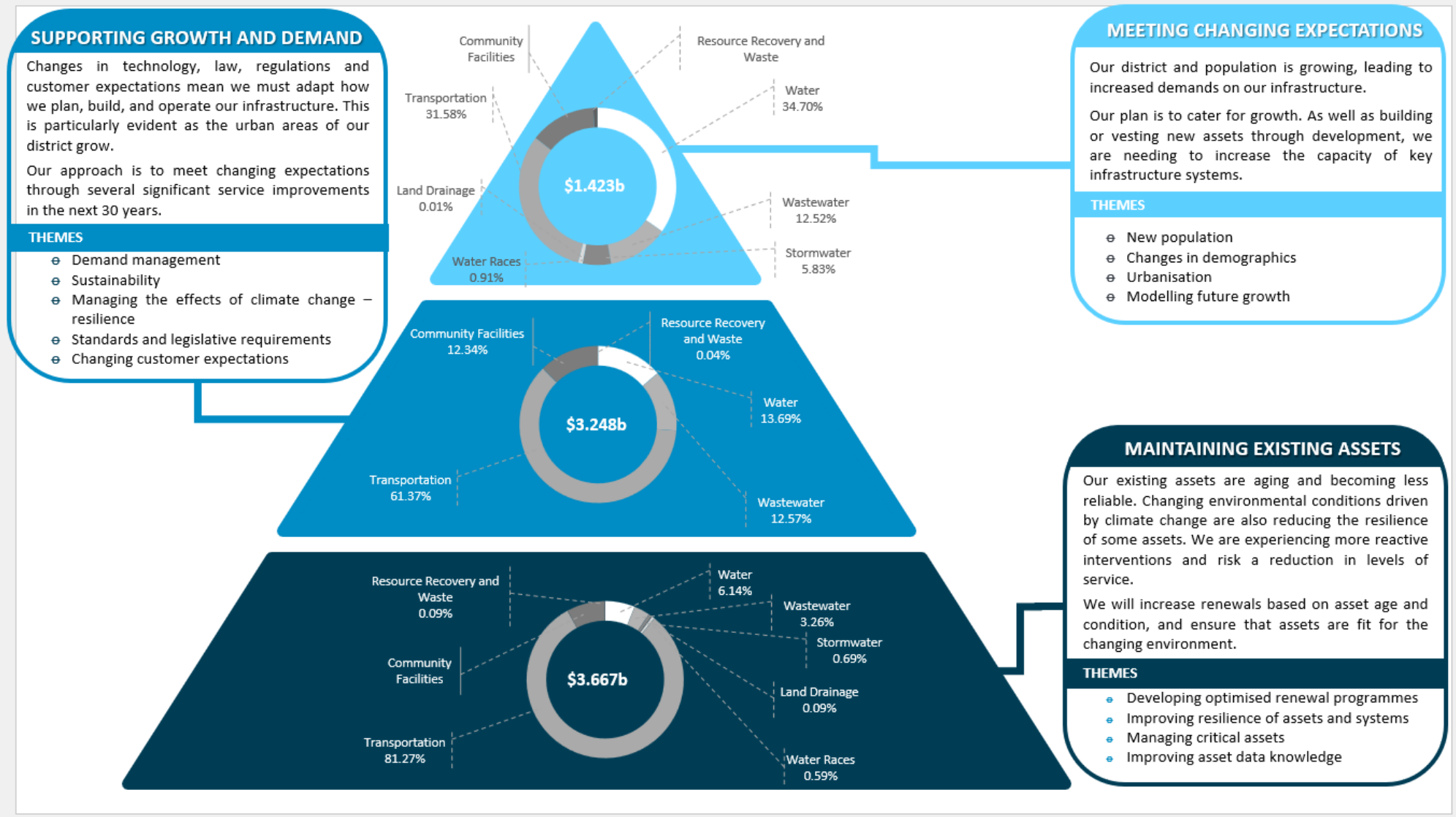
Issue	What are we doing? (Principal option)	What is the benefit?	How much will it cost? (in 2023 $)	When are we doing it?	Growth	LOS	Renew
Five Waters (drinking water, wastewater, stormwater, land drainage, water races)							
Need for increased resilience to asset failure or service interruption due to climate change	**Future Decision and Project:** Climate Adaptation Planning (investigations/design stage)	Infrastructure is more resilient to interruptions and events, return of services more promptly following an event	$1.29m	2024/25 to 2032/33		✓	✓
	Assumptions	• Climate impacts will be as projected and not reach tipping point in this period • Number of weather events will be in line with previous years					
	Alternative options and implications	Business as usual (i.e. no adaptation to natural hazards)	**-LOS:** risk of service disruption		**+$:** initial cost savings through lack of investment in resilience improvements but this will incur significant costs when assets are impacted, and require recovery		
	Sustainability impact	• Supports climate change mitigation by maintaining an acceptable Level of Service through managing the currently understood risks of extreme natural events					

Issue	What are we doing? (Principal option)	What is the benefit?	How much will it cost? (in 2023 $)	When are we doing it?	Growth	LOS	Renew
Transportation							
Climate change poses risk for network, e.g., more frequent high-impact emergency events	**Future Decision and Project:** Identify critical infrastructure and improve resilience including proactive improvement ofroad drainage.	More resilient road network that handles adverse weather events without costly remedials.	$97m (road drainage maintenance and renewal)	Annual 2024/25 to 2053/54	✓	✓	✓
	Assumptions	• Climate change will lead to more frequent extreme weather events.					
	Alternative options and implications	Reactive response to weather event damage with resilience improvements subsequently considered on an ad hoc basis	**-LOS:** Not addressing lack of resilience based on criticality and awaiting response to damage will reduce LOS	**+$:** Reactive repair and ad hoc recovery and improvements occurs increased costs			
	Sustainability impact	• Resilient road network means less disruptions to travel and reduced cost on emergency repairs.					

Issue	What are we doing? (Principal option)	What is the benefit?	How much will it cost? (in 2023 $)	When are we doing it?	Growth	LOS	Renew
Transportation							
Road safety is a major concern for Selwyn District. The number of deaths and serious injuries (DSI) remain high, particularly on rural roads.	**Project:** Continued investment in road safety to maximise co-funding and Council commitment to fully fund priority programmes/projects. Priority focus on projects which have been identified through the Safe Network Plan (pipeline development tool) and moderated and progressed through the Road to Zero/Safety work group.	Improved road safety outcomes, reduction in deaths and serious injuries	$600m	2024/25 to 2053/54	✓	✓	
	Assumptions	• Council's road safety programmes will continue to be prioritised for co-funding by NZ Transport Agency Waka Kotahi					
	Alternative options and implications	Accelerate road safety programme and priorities	**+LOS:** Addresses identified road safety concerns, supporting reduction in DSIs.	**+$:** Additional cost to Council through acceleration of programmes outside of co-funding. Reduction in DSIs reduces social costs			
		Reduction in road safety programme limited to co-funded programmes	**-LOS:** Impact to safety outcomes achieved through reduced programme	**-$:** Less cost to Council (co-funding commitment only) but lower reduction in social costs of DSIs			
	Sustainability impact	• A safer road network means less disruptions to travel.					

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.

We are also carrying forward previously planned infrastructure projects which we haven't delivered yet. This has been due to a range of factors including navigating consenting requirements, disruptions from the economic impacts of the COVID-19 pandemic, supply chain challenges and work force availability. We have reviewed all projects identified for 'carry forwards', rephasing based on deliverability and the ability to maintain sufficient headroom within our debt limits. The budgets presented in this IS, include the following rephased projects within the infrastructure activities:

Operating expenditure ($000's)	24/25	25/26	26/27	27/28
Five Waters	774	-	-	-
Drinking Water	149	-	-	-
Wastewater	92	-	-	-
Stormwater	50	-	-	-
Land Drainage	339	-	-	-
Water Races	145	-	-	-
Transportation	62	-	-	-
Community Facilities	1,327	-	-	-
Resource Recovery and Waste	668	-	-	-
Total	**2,841**	**-**	**-**	**-**

Capital expenditure ($000's)	24/25	25/26	26/27	27/28
Five Waters	36,292	10,522	1,941	228
Drinking Water	4,272	-	507	-
Wastewater	29,476	9,945	348	228
Stormwater	851	473	1,807	-
Land Drainage	194	4	-	-
Water Races	1,499	100	-	-
Transportation	18,922	4,229	3,922	1,366
Community Facilities	5,933	6,235	3,281	-
Resource Recovery and Waste	888	600	-	-
Total	**62,034**	**21,586**	**9,144**	**1,594**

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.

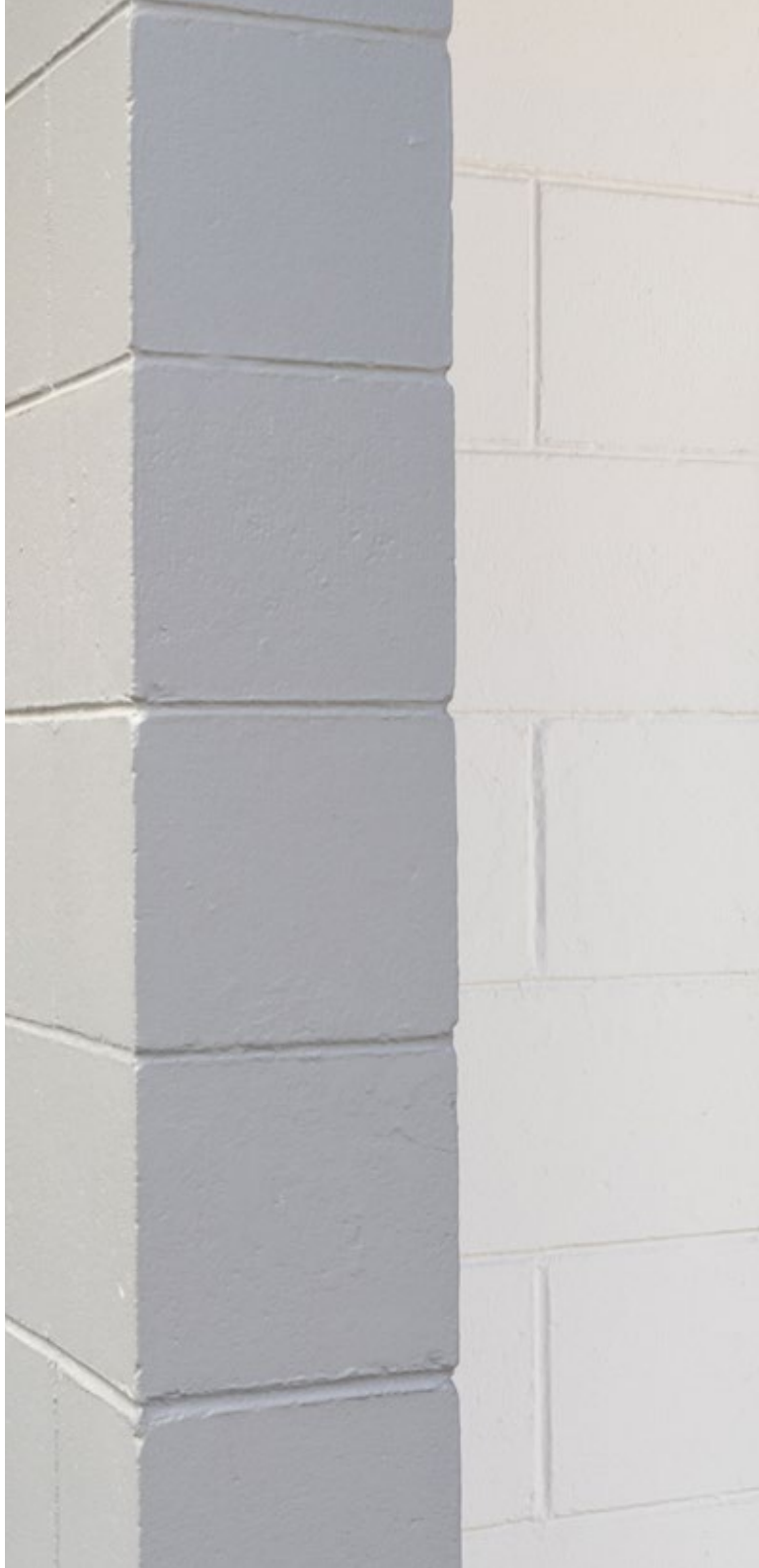
As a rapidly growing Council, we are confronted with substantial capital and operational programmes ahead. Navigating this programme needs effective project management and capable delivery resources.

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. This includes rescheduling projects which haven't been completed within the planned timeframes within our last financial year.

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 and delivery, reviewing growth models and 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 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.

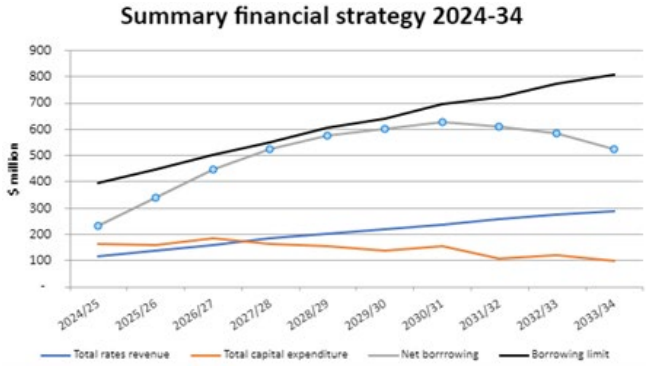


Figure 13: Summary Financial Strategy 2024-2034

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 Long-Term Plan. The next FS and IS will be developed accordingly.

Financial policies

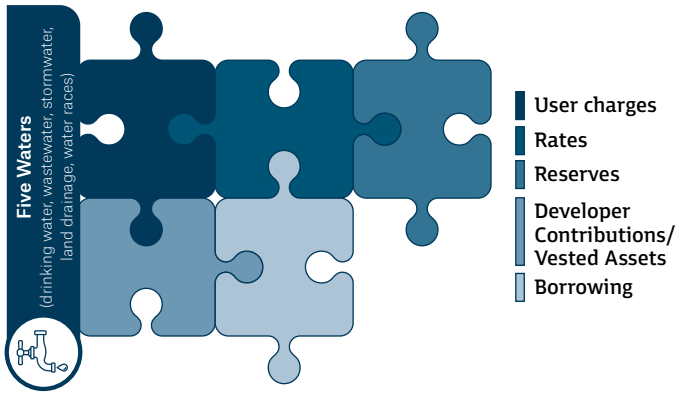
The Council has designed its financial policies to be prudent and fair to current and future ratepayers. Current ratepayers pay for the services they enjoy, including a contribution to the cost of replacing the infrastructure they use. The cost of expanding our infrastructure to allow for new residents 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.

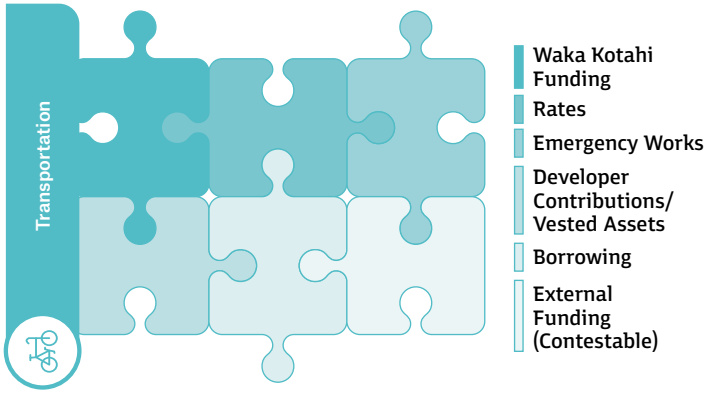
Funding our infrastructure

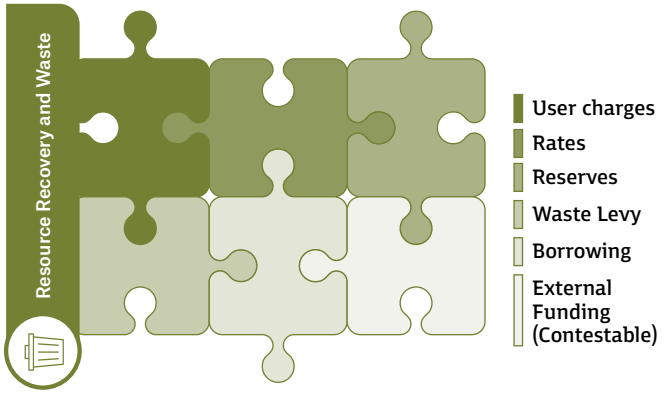
Activities associated with our infrastructure assets are funded through a variety of means for capital and operational expenditure. Funding is applied in accordance with Council's Revenue and Financing Policy.

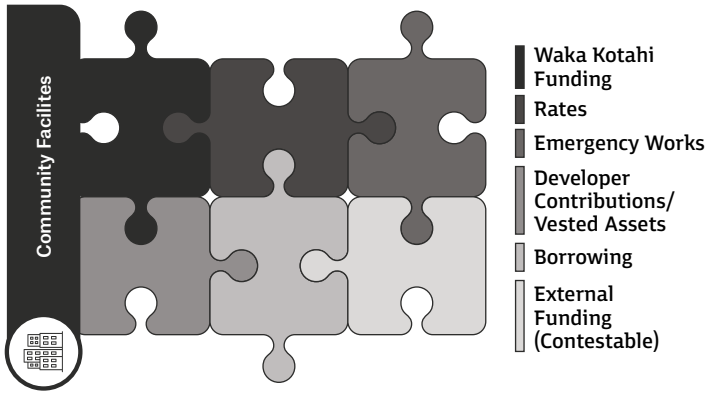
Programmes including external funding or investment are dependent on receiving this funding. In particular, Transportation funding is approved as part of the National Land Transport Fund. Waka Kotahi NZTA's final agreement to co-fund Selwyn District Council's transportation programmes are determined by September 2024, covering the 2024/25-2026/27 financial years.

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

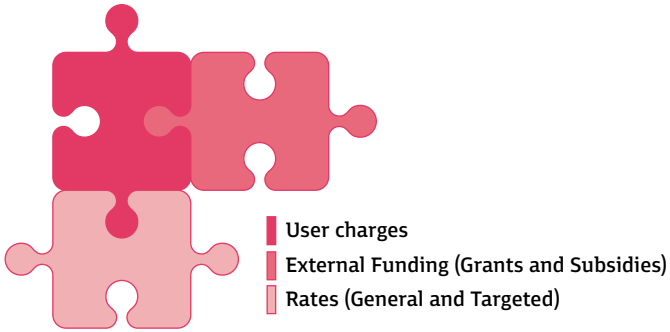








Operating expenditure for our infrastructure is funded through:



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).

Within our Financial Strategy, we have capped rates increases at 16% across the 10 years of this Long-Term Plan: 2024-2034.

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 Long-Term Plan 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 NZ Transport Agency Waka Kotahi . 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 Long-Term Plan, 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, targeted rates, general rates, development contributions, user charges, 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 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
Five Waters (drinking water, wastewater, stormwater, land drainage, water races)	37,559	40,194	42,819	45,477	50,012	51,859	55,043	59,161	59,696	61,387	271,050	332,616	399,790	474,046	1,980,709
Drinking Water	15,158	16,346	17,729	19,093	20,657	22,260	23,558	24,587	25,403	25,842	117,510	144,881	174,567	207,697	855,288
Wastewater	11,501	12,857	13,859	14,914	16,291	17,675	19,185	20,465	21,155	21,513	80,092	98,847	119,634	142,324	610,311
Stormwater	3,432	3,268	3,514	3,655	4,208	4,197	4,317	4,508	4,677	5,076	20,520	25,271	30,515	36,255	153,413
Land Drainage	3,130	3,007	2,754	2,562	3,305	2,126	2,129	3,484	2,128	2,276	14,861	16,635	18,252	20,145	96,795
Transportation	19,938	21,661	23,109	25,279	27,275	29,374	31,268	32,678	34,038	35,199	183,586	284,294	429,712	637,121	1,814,531
Community Facilites	45,993	44,903	46,832	47,515	48,798	50,022	50,862	51,949	53,040	51,845	371,837	487,112	623,130	779,161	2,752,999
Resource Recovery and Waste	18,792	19,248	20,494	23,479	24,543	25,782	26,989	28,145	29,396	30,710	311,076	429,038	578,222	764,619	2,330,533
Total	122,282	126,006	133,254	141,750	150,628	157,037	164,162	171,933	176,170	179,141	1,137,459	1,533,059	2,030,854	2,654,947	8,878,772

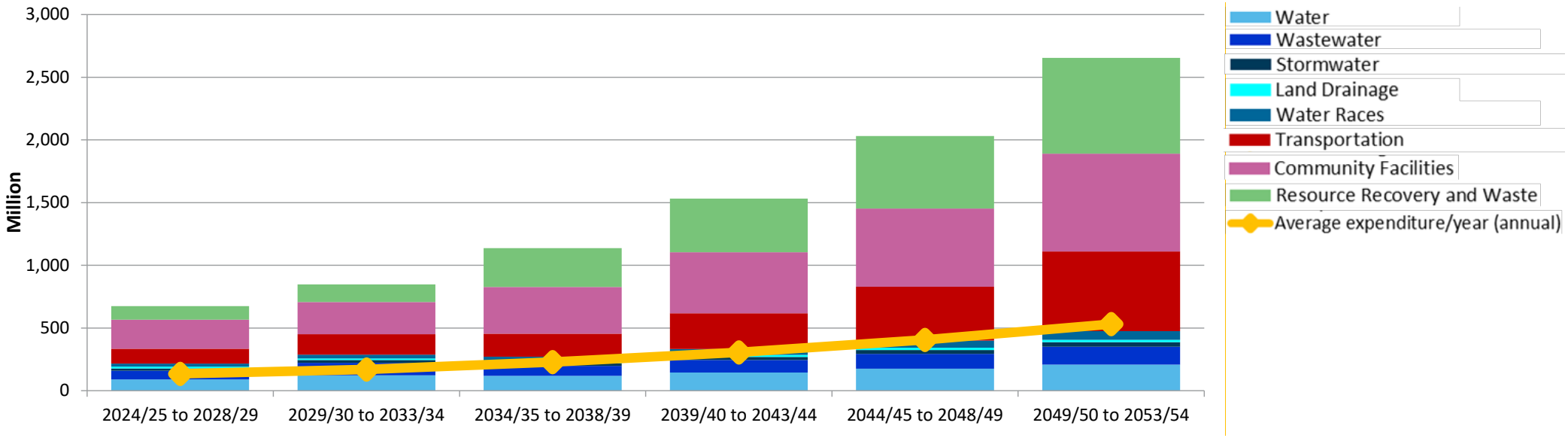
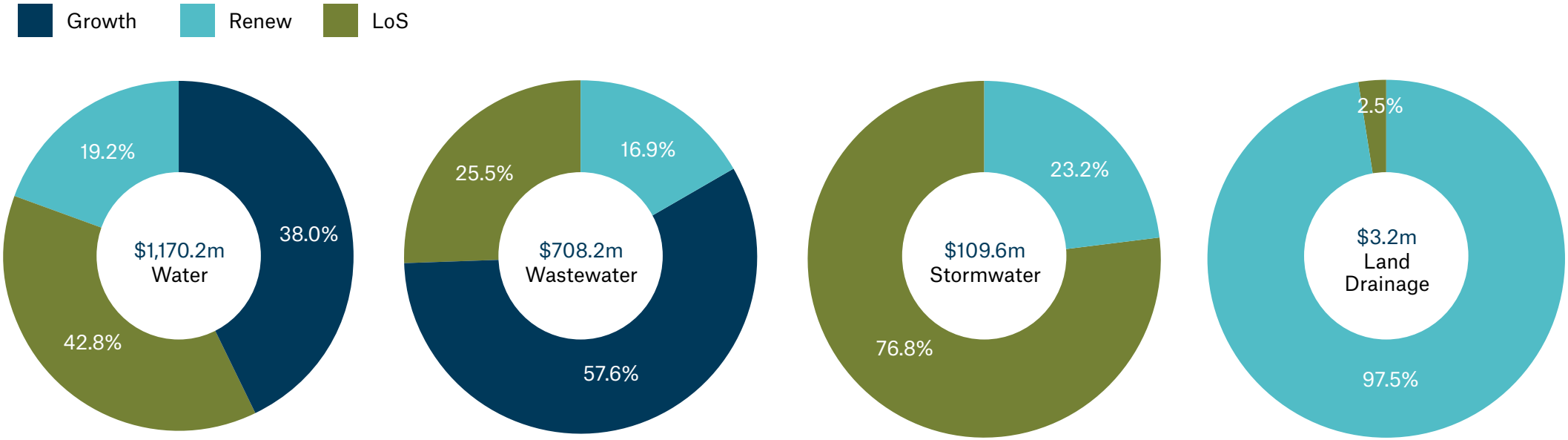
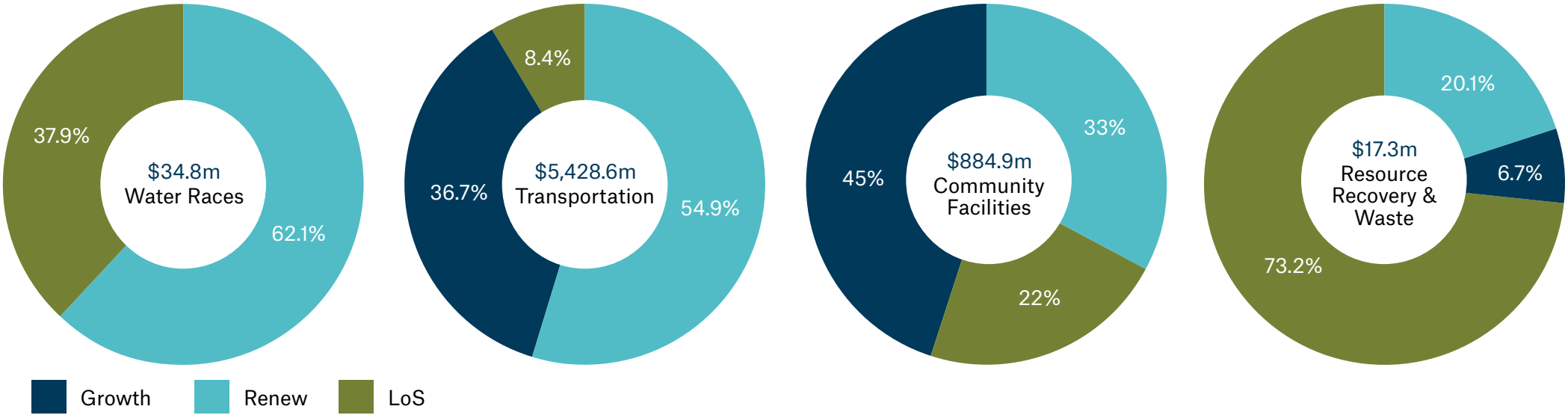


Figure 1: Infrastructure Operational Expenditure (5 year intervals) 2024-2054

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
Five Waters (drinking water, wastewater, stormwater, land drainage, water races)	88,920	73,395	70,684	67,579	55,901	53,239	65,688	33,346	34,818	28,524	482,619	608,831	188,243	174,267	2,026,054
Drinking Water	28,622	35,161	35,292	28,930	20,872	20,445	25,447	13,025	13,232	12,616	314,136	485,057	70,370	66,987	1,170,192
Level of Service	6,702	12,689	11,653	12,913	12,402	10,795	8,510	4,165	2,299	3,566	140,539	230,619	21,379	22,400	500,631
Growth	15,953	15,748	16,020	7,619	1,584	1,973	10,891	1,946	5,562	2,340	136,715	215,308	9,070	3,793	444,522
Renewal	5,967	6,724	7,619	8,398	6,886	7,677	6,046	6,914	5,371	6,710	36,882	39,130	39,921	40,794	225,039
Wastewater	55,541	35,156	30,526	34,366	32,950	28,577	38,354	17,925	18,779	11,346	140,920	90,762	90,984	82,038	708,223
Level of Service	16,987	7,414	10,320	5,429	5,358	8,024	6,816	2,132	2,178	2,580	33,103	14,793	16,303	49,233	180,669
Growth	34,976	24,287	17,119	21,337	22,149	14,430	28,694	13,430	13,300	5,728	94,549	53,472	53,995	10,674	408,139
Renewal	3,578	3,455	3,087	7,600	5,443	6,123	2,844	2,363	3,301	3,038	13,268	22,497	20,686	22,131	119,414
Stormwater	2,581	1,570	3,791	3,266	1,296	3,365	873	1,545	2,247	3,666	20,192	27,101	20,173	17,907	109,624
Level of Service	2,092	1,362	3,536	1,299	1,168	2,707	843	1,545	1,884	3,666	19,465	13,487	14,864	16,241	84,157
Growth	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Renewal	539	208	255	1,967	128	658	30	-	363	-	728	13,615	5,310	1,667	25,467
Land Drainage	195	159	211	185	213	95	-	58	-	57	1,576	14	229	248	3,241
Level of Service	78	2	-	-	-	-	-	-	-	-	-	-	-	-	80
Growth	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Renewal	117	157	211	185	213	95	-	58	-	57	1,576	14	229	248	3,161
Water Races	1,931	1,349	864	832	570	757	1,014	793	560	839	5,794	5,896	6,487	7,088	34,774
Level of Service	528	877	432	147	115	57	59	60	61	329	2,243	2,498	2,753	3,008	13,165
Growth	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Renewal	1,403	472	432	685	455	700	955	733	499	510	3,552	3,399	3,761	4,080	21,609
Transportation	46,365	51,700	71,297	58,934	61,402	59,103	62,859	52,837	66,268	55,960	562,635	930,903	1,352,805	1,931,516	5,428,589
Level of Service	10,704	8,537	10,743	9,137	9,506	13,025	7,394	5,148	5,671	6,693	65,082	81,957	100,686	121,268	455,552
Growth	20,862	29,995	43,397	33,271	34,640	28,082	34,560	25,966	38,011	23,246	296,484	373,361	458,682	552,445	1,993,002
Renewal	14,799	13,168	17,157	16,526	17,256	17,996	20,905	21,723	22,586	25,751	291,069	475,584	793,437	1,257,803	2,980,035

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 Facilites	19,834	29,027	35,541	26,142	27,056	19,017	18,644	17,229	15,938	11,476	147,999	150,734	150,272	215,995	884,904
Level of Service	5,387	6,516	9,133	9,006	11,814	7,493	3,457	4,995	3,593	2,318	22,767	30,759	34,126	44,366	195,730
Growth	9,965	13,554	18,215	13,573	9,733	7,773	9,672	8,747	5,934	5,295	87,903	74,398	72,960	63,034	400,757
Renewal	4,482	8,957	8,193	3,563	5,509	3,751	5,515	3,487	6,411	3,863	37,329	45,577	43,185	108,595	288,417
Resource Recovery and Waste	1,738	1,007	398	6,300	4,379	-	137	-	-	-	-	372	2,424	545	17,300
Level of Service	850	390	398	5,443	4,379	-	-	-	-	-	-	-	1,212	-	12,672
Growth	684	475	-	-	-	-	-	-	-	-	-	-	-	-	1,159
Renewal	204	142	-	847	-	-	137	-	-	-	-	372	1,212	545	3,469
Total	156,857	155,129	177,920	158,955	148,738	131,359	147,328	103,412	117,024	69,965	1,283,253	1,690,840	1,693,744	2,322,323	8,365,857
Level of Service	43,328	37,787	46,215	43,374	44,742	42,101	27,079	18,045	15,686	19,152	283,199	374,111	191,323	256,515	1,442,656
Growth	82,440	84,059	94,751	75,800	68,106	52,258	83,817	50,089	62,807	36,609	615,650	716,540	594,707	629,946	3,247,579
Renewal	31,089	33,283	36,954	39,781	35,890	37,000	36,432	35,278	38,531	14,204	384,404	600,189	907,715	1,435,862	3,666,612





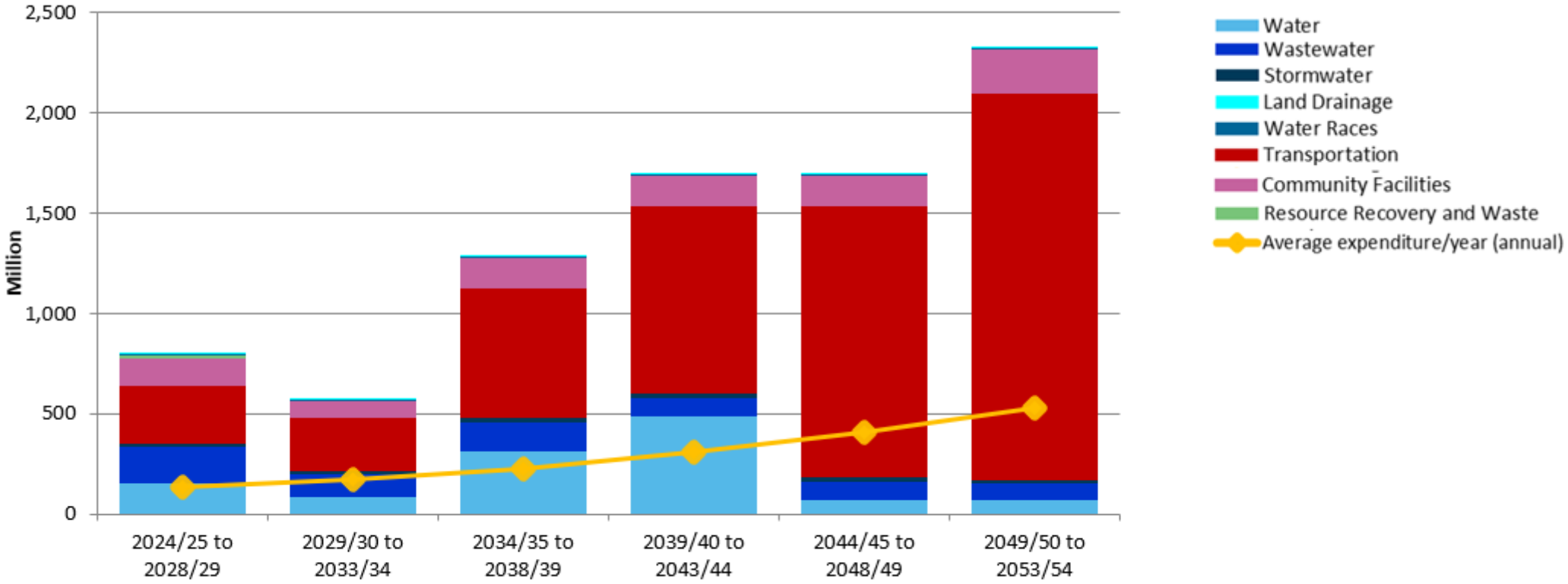


Figure 16: Infrastructure Capital Expenditure (5 year intervals) 2024-2054

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.

Five Waters
(drinking water, wastewater, stormwater, land drainage, water races)

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

Transportation

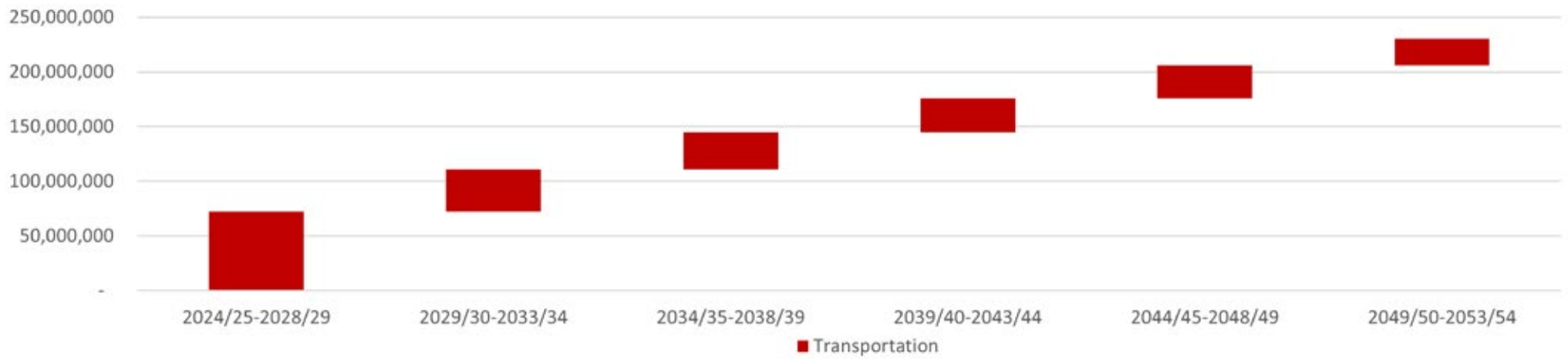


Figure 18: Transportation vested assets projections (5 year intervals) 2024-2054

Community Facilites

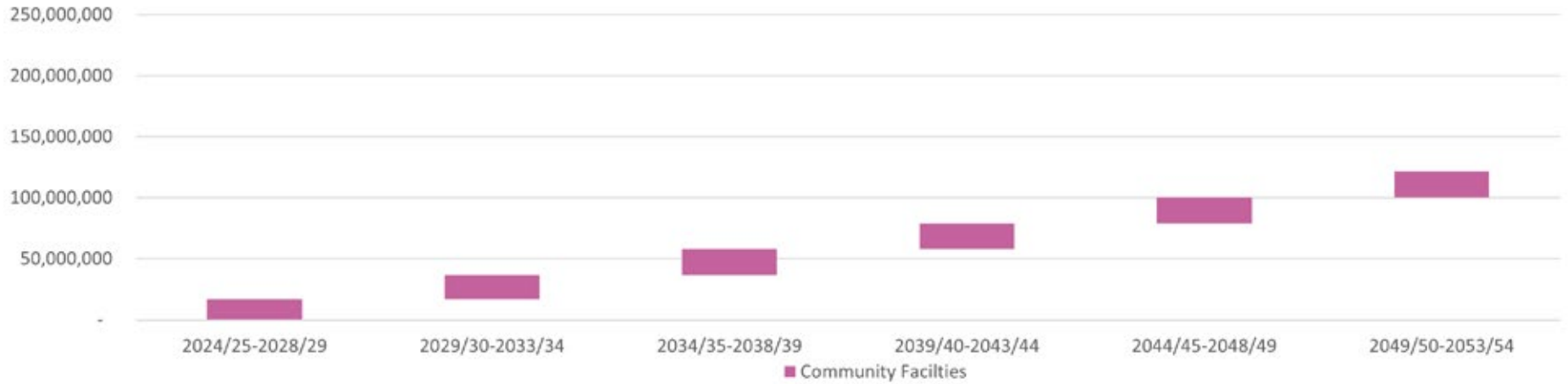


Figure 19: Community Facilities vested assets projections (5 year intervals) 2024-2054

Pūroko a te Kaitātari
Independent Auditor's Report

AUDIT NEW ZEALAND
Mana Arotake Aotearoa

To the readers:

Independent auditor's report on Selwyn District Council's 2024-34 long-term plan

I am the Auditor-General's appointed auditor for Selwyn District Council (the Council). The Local Government Act 2002 (the Act) requires the Council's long-term plan (the plan) to include the information in Part 1 of Schedule 10 of the Act. Section 94 of the Act requires an audit report on the Council's plan. Section 259C of the Act requires a report on disclosures made under certain regulations. I have carried out this work using the staff and resources of Audit New Zealand. We completed our report on 3 July 2024.

Opinion

In our opinion:

- the plan provides a reasonable basis for:
    - long-term, integrated decision-making and co-ordination of the Council's resources; and
    - accountability of the Council to the community; and
- the information and assumptions underlying the forecast information in the plan are reasonable; and
- the disclosures on pages 233 to 235 represent a complete list of the disclosures required by Part 2 of the Local Government (Financial Reporting and Prudence) Regulations 2014 (the Regulations) and accurately reflect the information drawn from the plan.

In accordance with clause 45 of Schedule 1AA of the Local Government Act 2002, the consultation document on the Council's plan did not contain a report from the Auditor-General. The consultation document is therefore unaudited. Our opinion on the plan does not provide assurance on the consultation document or the information that supports it.

Our opinion on the plan also does not provide assurance that the forecasts in the plan will be achieved, because events do not always occur as expected and variations may be material. Nor does it guarantee the accuracy of the information in the plan.

Emphasis of matter

Without modifying our opinion, we draw attention to the following disclosure.

Uncertainty over the delivery of the infrastructure capital programme

Pages 482 and 546 outline that the Council is proposing a significant increase in its infrastructure capital programme over the next 10 years. Although the Council has endeavoured to budget for a programme that is deliverable, there is uncertainty over whether the Council can deliver the projects it has planned. There is also uncertainty whether the infrastructure construction industry will be able to meet local government demand in the coming years. If the Council is unable to deliver on the planned programme, projects may need to be delayed which could affect cost and intended levels of service.

Basis of opinion

We carried out our work in accordance with the International Standard on Assurance Engagements (New Zealand) 3000 (Revised) *Assurance Engagements Other Than Audits or Reviews of Historical Financial Information*. In meeting the requirements of this standard, we took into account particular elements of the Auditor-General's Auditing Standards and the International Standard on Assurance Engagements 3400 *The Examination of Prospective Financial Information* that were consistent with those requirements.

We assessed the evidence the Council has to support the information and disclosures in the plan and the application of its policies and strategies to the forecast information in the plan. To select appropriate procedures, we assessed the risk of material misstatement and the Council's systems and processes applying to the preparation of the plan.

Our procedures included assessing whether:

- the Council's financial strategy, and the associated financial policies, support prudent financial management by the Council;
- the Council's infrastructure strategy identifies the significant infrastructure issues that the Council is likely to face during the next 30 years;
- the Council's forecasts to replace existing assets are consistent with its approach to replace its assets, and reasonably take into account the Council's knowledge of the assets' condition and performance;
- the information in the plan is based on materially complete and reliable information;
- the Council's key plans and policies are reflected consistently and appropriately in the development of the forecast information;
- the assumptions set out in the plan are based on the best information currently available to the Council and provide a reasonable and supportable basis for the preparation of the forecast information;
- the forecast financial information has been properly prepared on the basis of the underlying information and the assumptions adopted, and complies with generally accepted accounting practice in New Zealand;
- the rationale for the Council's activities is clearly presented and agreed levels of service are reflected throughout the plan;
- the levels of service and performance measures are reasonable estimates and reflect the main aspects of the Council's intended service delivery and performance; and
- the relationship between the levels of service, performance measures, and forecast financial information has been adequately explained in the plan.

We did not evaluate the security and controls over the electronic publication of the plan.

Responsibilities of the Council and auditor

The Council is responsible for:

- meeting all legal requirements affecting its procedures, decisions, consultation, disclosures, and other actions relating to the preparation of the plan;
- presenting forecast financial information in accordance with generally accepted accounting practice in New Zealand; and
- having systems and processes in place to enable the preparation of a plan that is free from material misstatement.

We are responsible for expressing an independent opinion on the plan and the disclosures required by the Regulations, as required by sections 94 and 259C of the Act. We do not express an opinion on the merits of the plan's policy content.

Independence and quality management

We have complied with the Auditor-General's independence and other ethical requirements, which incorporate the requirements of Professional and Ethical Standard 1 *International Code of Ethics for Assurance Practitioners (including International Independence Standards) (New Zealand) (PES 1)* issued by the New Zealand Auditing and Assurance Standards Board. PES 1 is founded on the fundamental principles of integrity, objectivity, professional competence and due care, confidentiality, and professional behaviour.

We have also complied with the Auditor-General's quality management requirements, which incorporate the requirements of Professional and Ethical Standard 3 *Quality Management for Firms that Perform Audits or Reviews of Financial Statements*, or *Other Assurance or Related Services Engagements (PES 3)* issued by the New Zealand Auditing and Assurance Standards Board. PES 3 requires our firm to design, implement and operate a system of quality management including policies or procedures regarding compliance with ethical requirements, professional standards, and applicable legal and regulatory requirements.

Other than our work in carrying out all legally required external audits, and an assurance report on certain matters in respect of the Council debenture trust deed, we have no relationship with or interests in the Council or any of its subsidiaries.

Julian Tan, Audit New Zealand
On behalf of the Auditor-General, Christchurch, New Zealand

Council Information

Mayor

Sam Broughton
027 223 8345
mayor@selwyn.govt.nz

Deputy Mayor

Councillor Malcolm Lyall
027 433 9964
crmalcolm.lyall@selwyn.govt.nz

Rolleston Ward

Councillor Nicole Reid
027 548 6157
crnicole.reid@selwyn.govt.nz

Councillor Phil Dean
027 337 0670

Councillor Sophie McInnes
021 552 877
crsophie.mcinnes@selwyn.govt.nz

Springs Ward

Councillor Debra Hasson
027 435 5055
crdebra.hasson@selwyn.govt.nz

Councillor Grant Miller
027 381 7032
crgrant.miller@selwyn.govt.nz

Malvern Ward

Councillor Bob Mugford
027 511 0395
crbob.mugford@selwyn.govt.nz

Councillor Lydia Gliddon
027 318 1432
crlydia.gliddon@selwyn.govt.nz

Ellesmere Ward

Councillor Elizabeth Mundt
027 702 0023
crelizabeth.mundt@selwyn.govt.nz

Councillor Shane Epiha
027 561 7035
crshane.epiha@selwyn.govt.nz

Community Board Members contact details

Malvern Community Board

Phil Freeman 027 523 7741
John Verry 027 087 3463
Sharn Nu'u 027 337 4726
Calvin Payne 027 201 7453
Bruce Russell 027 436 1727

Where to go for more information

The Long-Term Plan is also available at **www.selwyn.govt.nz** or you can get a copy at any Selwyn Library or Service Centre (see list below).

Customer services

For general enquiries, assistance and information, phone **0800 SELWYN (735 996).**

Website: **www.selwyn.govt.nz**

Selwyn District Council Offices

2 Norman Kirk Drive
PO Box 90
ROLLESTON 7643

Service Centres

Leeston Library and Service Centre

19 Messines Street
Private Bag 1
LEESTON
Phone: (03) 347 2871

Lincoln Library and Service Centre

Gerald Street
LINCOLN 7608
Phone: (03) 347 2876

Darfield Library and Service Centre

1 South Terrace
DARFIELD
7510 Phone: (03) 347 2780

Te Ara Ātea

56 Tennyson Street,
ROLLESTON 7614
Phone (03) 347 2880

Auditor Julian Tan

Audit New Zealand
PO Box 2
CHRISTCHURCH 8140
On behalf of the Auditor-General

Bankers

Westpac New Zealand Limited
PO Box 934
Shortland Street
Auckland 1140

Solicitors

Buddle Findlay
83 Victoria Street
Christchurch 8013

PO Box 322
Christchurch 8140
New Zealand

03 379 1747
03 379 5659

Sister districts

Akitakata City

City Office,
Yoshida 791
Yoshida Cho, Akitakata city
Hiroshima
731 0592
JAPAN

Akitakata City has temporarily suspended international relationship activities.

Town of Yubetsu

Town office
318 Kamiyubetsutonden Shigaichi,
Yubetsu,
Mombetsu District,
Hokkaido
099-6592,
JAPAN

The Malvern Community Board has been delegated the authority to facilitate relationships with Yubetsu-Cho.

Shandan County

Government North Road No 3
Qingquan Town
Shandan County
Gansu Province
CHINA 734100

Rhode Island

1670 Flat River Rd
COVENTRY RI 02816
Toraja
Kompleks Perkantoran Pemkab.
Toraja Utara Marante,
JL. Poros Rantepao-Palopo,
Kec. Tondon,
SULAWESI SELATAN 91831

Council controlled trading organisations

Council companies

Corde Limited Head Office (100% owned by Selwyn District Council)

85 Hoskyns Road ROLLESTON 7675
Phone: (03) 318 8320
Email: connect@corde.nz
Website: www.corde.nz

Board: Steve Grave, Murray Harrington, Pat McEvedy, Ben Kepes, Chris Hall

Other council organisations

Central Plains Water Trust (50% owned by Selwyn District Council)

PO Box 90
14 Nga Mahi Road, Sockburn,
Christchurch 8042
Phone: 027 430 3818 (03) 982 4267

Trustees: Pat McEvedy (Chairman), Elle Archer, Les Wanhalla, Olive Webb, Rob Lawrence