

Infrastructure Strategy

EXECUTIVE SUMMARY

The Infrastructure Strategy is a critical component of our community's long-term success, developed in conjunction with the Financial Strategy as part of the Long Term Plan (LTP). This strategy acts as a 30-year roadmap, focusing on crucial areas such as water supply, wastewater management, stormwater systems, transport, facilities, parks, and waste management. It is framed within the Council's revised strategic framework, emphasizing inclusivity, sustainability, financial wisdom, and adaptability to climate change and demographic changes.

At the core of managing our extensive infrastructure are the Asset Management Plans and Activity Plans. These plans ensure efficient, sustainable, and climate-resilient operations across all key sectors. The strategy confronts several significant challenges, including the need for improved data-driven management, sustainable asset maintenance, heightened climate resilience, and fostering sustainable urban growth.

To address these challenges, the strategy outlines key action areas. First is the enhancement of data management systems to support better decision-making

and asset management. The strategy also emphasizes long-term sustainability, advocating for a balanced approach to funding asset renewals and maintenance while considering the whole life-cycle costs and potential divestment of underutilized assets. Another focal point is building resilience against climate change and natural hazards, which involves developing guiding principles for climate-conscious investments and increasing community engagement in adaptation planning. Lastly, the strategy supports sustainable growth, encouraging integrated planning for infrastructure that promotes active travel, public transport, and road safety.

Over the next 30 years, the strategy anticipates investing approximately \$24.67 billion (adjusted for inflation)¹, focusing on maintaining assets, enhancing climate resilience, and planning for sustainable growth. The first decade's spending aligns with the LTP, providing detailed budget allocations, while the subsequent 20 years are guided by broader estimates based on the Asset Management Plans. This forward-thinking approach ensures that our infrastructure not only meets the current needs of the community but also adapts and evolves to meet future challenges and growth.

¹¹ Note: this figure is less than the overall Capital Programme, as it excludes Te Kaha, Corporate Capital, Regulatory and Compliance, Strategic Planning and Activities, and Internal Activities.

BACKGROUND AND STRATEGIC CONTEXT

What is an Infrastructure Strategy?

For our community to thrive both now and in the future, it's crucial that we plan with clarity and vision. At the heart of our forward planning is the Long Term Plan (LTP), which details our investment and operational priorities for the next 10-years, how we'll allocate resources, and the steps we'll take to make our long-term vision a reality.

As part of the LTP, we develop the Infrastructure Strategy – which serves as our overarching infrastructure roadmap. It identifies the cross-cutting infrastructure challenges we might encounter over the next 30 years, explores the best solutions, and examines what these choices mean for our community. It's about ensuring that our city's foundational services and structures are not only strong and dependable but also prepared to adapt to the ever-changing landscapes of growth, technology, and environment.

The infrastructure that it will focus on are:

- Water supply
- Wastewater – collection, treatment, and disposal
- Stormwater drainage, flood protection and control works
- Transport – roads, footpaths, active travel, public transport
- Facilities
- Parks
- Solid waste and recycling

The LTP then provides the detailed work programmes and budgets for the coming decade. It breaks down the broad visions of the Infrastructure Strategy

into tangible projects, services, and investments that you can see and experience in our community.

Alongside this, we produce the Financial Strategy, which directs us on a financially sustainable path. It lays out how we'll manage funds, keep community services running, and how much we can invest in new developments. This strategy sets the financial boundaries within which we operate, making clear how much we can raise through rates and how much we can responsibly borrow. It's a crucial piece that ensures our Infrastructure Strategy and the LTP are not just aspirational but grounded in financial reality, ensuring that our plans are viable for the long haul.

Our strategic context

[The infrastructure strategy is guided by the council's revised strategic framework](#)

The Council's Strategic Framework is the cornerstone for our long-term vision, steering how we dedicate our energy and resources. As we looked forward to our Long-Term Plan (LTP), adjustments were made to the framework, refining our community outcomes, and setting the strategic priorities for this Council's term.

Central to our approach is our guiding vision: Ōtautahi being a place of opportunity for all... open to new ideas, new people, new investment, and new ways of doing things – a place where anything is possible.

From this vision springs our community outcomes. They paint a picture of the Christchurch we're aiming for. Achieving these long-term objectives is a team effort, involving partnerships with our communities, as well as collaborations with governmental and non-governmental entities.

These outcomes are:

- *A collaborative confident city:* Our residents can actively participate in community and city life, have a strong sense of belonging and identity, and feel safe.
- *A green, liveable city:* Our neighbourhoods and communities are accessible and well-connected, supporting our goals to reduce emissions, build climate resilience and protect and regenerate the environment, especially our biodiversity, water bodies and tree canopy.
- *A cultural powerhouse city:* Our diverse communities are supported to understand and protect their heritage, pursue their arts, cultural and sporting interests, and contribute to making our city a creative, cultural and events powerhouse.
- *A thriving prosperous city:* Our city is a great place for people, business, and investment where we can all grow our potential, where enterprises are innovative and smart, and where together we raise productivity and reduce emissions.

To make these community visions a reality, the Council anchors its actions in strategic priorities. These aren't just guidelines for us; they're commitments to the community, showcasing areas where our elected members aim to deepen their focus and bring transformative changes during their term. These priorities shape our approach, especially when it comes to the Infrastructure Strategy.

Our strategic priorities are:

- Be an inclusive and equitable city which puts people at the centre of developing our city and district, prioritising wellbeing, accessibility and connection.
- Champion Ōtautahi-Christchurch and collaborate to build our role as a leading New Zealand city.

- Build trust and confidence in the Council through meaningful partnerships and communication, listening to and working with residents.
- Reduce emissions as a Council and as a city, and invest in adaptation and resilience, leading a city-wide response to climate change while protecting our indigenous biodiversity, water bodies and tree canopy.
- Manage ratepayers' money wisely, delivering quality core services to the whole community and addressing the issues that are important to our residents.
- Actively balance the needs of today's residents with the needs of future generations, with the aim of leaving no one behind.

In laying out our Infrastructure Strategy, these priorities and community outcomes are paramount. They will serve as a beacon, ensuring that our infrastructure decisions align with the broader aspirations of Christchurch. Through the Infrastructure Strategy, we commit to uphold these guidelines, ensuring that every initiative, project, and effort resonates with our commitment to build a thriving, inclusive, and sustainable city for all.

[The wider strategic environment](#)

This Infrastructure Strategy builds on previous strategies to maintain consistency in long-term asset management and investment. It aligns with a variety of local and national plans and is mandated via the Local Government Act (LGA).

Notably, the recent Government's National Infrastructure Strategy Action Plan² resonates with our approach, emphasising resilience against climate change, better infrastructure governance, and fostering partnerships with various sectors, including Māori, local government, and the private sector.

We are not strangers to collaboration. We've been a part of the Greater Christchurch Partnership³ since 2007, influencing urban planning and transport investments. In 2022, the Whakawhanake Kāinga Komiti prioritised the development of a Greater Christchurch Spatial Plan, a pivotal driver for infrastructure planning. This plan, which will be considered for adoption in March 2024, focuses on targeted intensification along public transport corridors and enabling prosperous development of kāinga on Māori land and within urban areas.

For Ōtautahi Christchurch, this Spatial Plan will shape our city's future, guiding investment and integrated land-use planning to accommodate expected growth, intensification, and economic uplift.

At the city level, ongoing spatial and transport initiatives reinforce the Greater Christchurch Spatial Plan by emphasising safe neighbourhoods and promoting active travel. Our planning is regenerative, aiming to rejuvenate natural processes, combat climate change, and fortify community resilience.

These plans collectively are vital for our city's trajectory, pushing towards a sustainable, low emission environment that values indigenous biodiversity and overall well-being. Given that the Banks Peninsula constitutes 70% of the

Council's district land area, it's essential to acknowledge that a uniform approach across the district is impractical.

The earthquakes' legacy

The 2010-11 Canterbury earthquakes left an enduring mark on our city, including significant damage to our infrastructure. The cost of the earthquake rebuild has been estimated at an additional (to pre-event budgets) \$10 billion expenditure for the Council⁴, including between \$2 billion and \$3.4 billion to repair infrastructure. Additionally, when the Global Settlement was signed in 2019, it was estimated that a further \$4 billion earthquake-related capital expenditure would be required over the next 30 years⁵. (The total economic loss and cost of the earthquakes including the Crown, insurers and other parties is estimated at \$40 billion)⁶.

Much of the Council's horizontal infrastructure was repaired by the SCIRT alliance (Stronger Christchurch Infrastructure Rebuild Team⁷). Its \$2.22 billion, five-and-a-half-year programme involved more than 740 individual projects across the city, repairing and rebuilding underground water and wastewater pipes, surface water and waterways, wastewater pump stations, and roads, bridges and retaining walls. Not all damage to the Council's horizontal infrastructure was surveyed nor repaired by SCIRT and remaining earthquake repairs are part of the Council's renewal programme.

While recovery efforts were immense and the legacy will remain for some time, as with our previous Infrastructure Strategy, this strategy is focused on

² <https://www.treasury.govt.nz/sites/default/files/2023-05/infrastructure-action-plan-2023.pdf>

³ <https://greaterchristchurch.org.nz/>

⁴ Deloitte, Cost of the earthquake to the Council, December 2017, <https://ccc.govt.nz/assets/Documents/The-Council/Plans-Strategies-Policies-Bylaws/Strategies/Global-Settlement/Cost-of-the-earthquakes-Deloitte-Report-Final.pdf>

⁵ Crown and Christchurch City Council, Global Settlement Agreement, 23 September 2019, <https://ccc.govt.nz/assets/Documents/The-Council/Plans-Strategies-Policies-Bylaws/Strategies/Global-Settlement/CCC-Release-Global-Settlement-Agreement-23-Septmeber-2019.pdf>

⁶ The Treasury's advice, reported variously following the earthquakes

⁷ A significant programme of assessment and rebuilding followed the Canterbury earthquakes, carried out by the SCIRT alliance. Alliance members included the Council, Christchurch Earthquake Recovery Authority, NZ Transport Agency, McConnell Dowell, Downer, Fletcher Construction, City Care, and Fulton Hogan.

proactive planning for the future. We will continue to build upon the invaluable lessons learned during the rebuild phase and embrace the opportunity to create a more resilient and sustainable infrastructure network, one that anticipates and prepares for future challenges.

Considering the reality of climate change

Climate change is real, and its effects are becoming more evident each year. We're seeing it in the longer droughts, more intense storms, and higher temperatures. As a city, we understand just how critical this issue is. It's not just about the environment; it's about our homes, our health, and our future.

The way we build our city - from the pipes underground to the roads we travel on - needs to reflect this new reality. We're at a point where we must bring a sharper focus to investing with the climate in mind. This means choosing projects that lower our risk when bad weather hits and making sure our community has the green spaces, clean air, and strong buildings it needs to thrive in a changing climate.

This Infrastructure Strategy provides an opportunity to think long-term about how we can live and grow sustainably. As we plan our city's infrastructure, from water to transport to waste management, we need to consider how each decision helps us adapt to climate change or reduce its impact. It's not just about reacting to the problems we face today; it's about preparing our city to be resilient and resourceful for the future.

To support and guide our long-term planning for 2025-34 amidst evolving national legislation, the Council is implementing a 'climate framework'. This framework is designed to inform our infrastructure decisions, ensuring they not only adhere to legal requirements but also support the community be more resilient to the economic, social, and environmental impacts of climate change.

We utilise several tools to understand climate-related risks. The Christchurch District Risk Screening, for instance, points out significant risks in coastal and inland districts, helping prioritise areas that need urgent attention. Another

instrument, BraveGen, helps monitor operational emissions, shedding light on our energy consumption patterns and prompting us to explore sustainable alternatives. To increase our resilience to the impacts of climate change, we're running numerous initiatives, like the Coastal Hazards Adaptation Planning, which involves community and Rūnanga collaboration to prepare for coastal climate impacts. We're also revising the Christchurch District Plan to factor in known climate risks, and ensuring urban resilience through strategies like the Greater Christchurch Spatial Plan.

All our service managers are proactively considering climate change impacts on their respective areas. They're analysing emission sources and seeking reduction strategies. An overarching message we're emphasising is the value of early and proactive planning in managing climate risks and reducing emissions effectively.

Social and demographic influences

The age distribution in Christchurch skews slightly older compared to the national median, though notable shifts are anticipated in the coming years. By 2048, we project a twofold increase in residents over 65, with the majority of our population growth centred on those aged 75 and above. Predictions indicate a surge in one and two-person households, accounting for over 80% of new housing demand. Additionally, around 2050, we anticipate 58,000 residents living solo, influencing housing patterns and infrastructure demands, such as those for water systems.

Furthermore, the cultural tapestry of Christchurch is undergoing transformation, marked by an increase in overseas-born residents. Consequently, as the city embraces a wider range of lifestyle and cultural choices, expectations for housing, community amenities, and other services will evolve, mirroring the richness and variety our diverse populace brings.

The Council's infrastructure planning supports the achievement of the urban form by planning for projected demand, both in greenfield areas and infill

development. It is noted that the Greater Christchurch Spatial Plan reinforces direction in earlier strategies for growth and anticipates a compact urban form over the long term, focussed on intensification of the existing urban area. A component of intensification will be redevelopment of existing developed land and this is accounted for in the growth modelling.

National Policy Statement on Urban Development

The growth projections are derived from modelling undertaken by Council that informs and is the basis of estimating demand across the city in the Housing and Business Capacity Assessments prepared under the NPS-UD as well as the Long Term Plan. This includes a competitiveness margin over and above projected demand in accordance with 3.22 of the NPS-UD. The methodology behind the modelling is explained in Appendix 2 of the Housing Capacity Assessment.⁸

The LTP Activity Plan for Planning and Consents also expresses how we give effect to national direction including the National Policy Statement on Urban Development through preparation of Housing and Business Development Capacity Assessments (HBAs) and a spatial plan to define the urban form outcomes that infrastructure planning aligns with.

Ultimately, there is alignment in how Council is planning for growth to implement the NPS-UD and the capacity assessments prepared in 2021 and 2023 have informed the LTP as required by the NPS-UD.

Things that matter most to our community

People are the heart of our city, and the Infrastructure Strategy is intended to respond to their long-term aspirations.

Between July 6th and August 13th 2023, we collected community feedback on investment priorities for Council using a participatory budgeting exercise⁹. With 4,000 participants, some common themes arose, but there were also varying priorities among different community groups.

The top five themes identified were:

- Climate Change: Important for all demographics. Fewer participants chose it, but they allocated higher points (67% participants / average 16.2 points).
- Drinking Water: Mainly due to dissatisfaction with chlorination (83% participants / average 14 points).
- Roads and Footpaths: A common concern (71% participants / average 12.8 points), with an interesting emphasis on travel choices (58% participants / average 11.7 points).
- Parks and Gardens: Highly valued (78% participants / average 11.1 points). Special importance was given to areas like Port Hills, Banks Peninsula reserves, Hagley Park, the Botanic Gardens, and local parks and playgrounds.

Additionally, feedback received during the LTP consultation period was strongly aligned with the principles outlined in the Infrastructure Strategy. In particular:

- Sustainable Focus: Feedback had a strong emphasis on environmentally sustainable infrastructure, supporting the Infrastructure Strategy's objective of building long-term resilience and meeting climate goals.
- Proactive Investment: There were consistent calls for increased investment and minimising deferred maintenance, aligning to the

⁸ <https://www.greaterchristchurch.org.nz/assets/Documents/greaterchristchurch-/HuiHui-Mai/Greater-Christchurch-Housing-Development-Capacity-Assessment-March-2023-v3.pdf>

⁹ <https://letstalk.ccc.govt.nz/whatmattersmost>

Infrastructure Strategy's commitment to a balanced approach, ensuring both the upkeep of existing assets and proactive development to meet future needs.

- **Fiscal Responsibility:** Diverse views on funding highlight the community's awareness of the financial challenges inherent in infrastructure development. The Infrastructure Strategy highlights the need to balance investment with long-term affordability.
- **Climate Imperative:** Submissions stressing the urgency of climate action reaffirm the Infrastructure Strategy's focus on adaptation and mitigation measures.

This feedback provides a critical perspective on the community's priorities and concerns and has been thoughtfully considered in developing the Infrastructure Strategy. While the feedback has played an influential role, we have also balanced it with other factors such as legislative requirements, strategic goals, and the broader context of community needs. The survey, therefore, has been one of several important components that inform our decision-making as we chart the future course for our infrastructure.

Partnering with mana whenua

In partnership with Ngā Papatipu Rūnanga, the Council acknowledges the intertwined histories, values, and aspirations that shape Ōtautahi Christchurch. We recognise the takiwā of Ngāi Tūāhuriri Rūnanga, Te Hapū o Ngāti Wheke, Te Rūnanga o Koukourārata, Ōnuku Rūnanga, Wairewa Rūnanga, and Te Taumutu Rūnanga within our district. Since 2015, the relationship anchored by the Te Hononga Council – Papatipu Rūnanga Committee ensures both governance and ongoing kōrero between the Council and these Rūnanga.

Guided by the principles of partnership, the mana whenua values of Ngāi Tahu and Papatipu Rūnanga are woven into our infrastructure planning, aligning with

our commitments under the LGA and the Resource Management Act 1991. The Mahaanui Iwi Management Plan and insights from the Rūnanga further inform our path.

In 2023, Ngā Papatipu Rūnanga shared their priorities during the early phases of the LTP, many of which are rooted in infrastructure. These insights reflect the shared desire to nurture the wellbeing of the land and its people. These included:

- Enabling and providing affordable housing
- Access to safe drinking water supply and sources, protection of water sources; water quality monitoring
- Management of stormwater systems to protect land and property, waterways and mahinga kai; sediment reduction.
- Protection and enhancement of reserves and native biodiversity
- Adaptation planning by and with local communities and marae at risk of coastal hazards
- Fit-for-purpose infrastructure, such as roads, footpaths and wharves, that enable access to local areas, sites of significance, waterways and coastal waters
- Exploration of potential transfer of Council-owned land of importance to mana whenua

These priorities, along with others, will be raised as part of the ongoing partnership commitment and kōrero between the Council and Ngā Papatipu Rūnanga and will help shape our investment in infrastructure for today and our future generations of guardians of our wai and whenua.

MANAGING OUR INFRASTRUCTURE

We invested \$431 million in 2022-23 to the maintenance, renewal, and development of various infrastructure assets. Due to this substantial expenditure, there's a need for solid methodologies to monitor and manage these assets throughout their life—from planning to disposal. Understanding an asset's performance and condition helps us prioritise investment towards maintaining infrastructure to required service levels and supporting efficient maintenance and adjustments for climate change.

Day to day, we do this via our Asset Management Plans and Activity Plans¹⁰.

Asset Management Plans (11 in total), dive deep into the specifics of each infrastructure asset—where it's located, its current value, where it is in its lifecycle, and its condition, including how it might be affected by climate change. The focus of the Asset Management Plans is on optimising how we manage these assets. These plans also give us a picture of expected spending and the investment we'll likely make for each type of asset.

Activity Plans¹¹ (40 in total), lay out the services the Council provides, and the assets required to deliver those services. Each plan articulates the Levels of Service we will provide, which helps us understand the investment needed to deliver on the commitments in the Long Term Plan (LTP). They also point out if there's any change in the quality of services and how that might affect the wellbeing of our community.

This Infrastructure Strategy pulls everything together. Using the information from both the Asset Management Plans and Activity Plans, this strategy summarises our big-picture approach to infrastructure investment for the next three decades.

Assessing condition

We use a range of tools to understand the condition of our assets, including the Asset Assessment Intervention Framework (AAIF) for understanding the condition of our water, wastewater and stormwater pipes and the RAMM database to capture data (including about condition), of transportation assets.

We are also undergoing an SAP Improvement Programme (which is our core enterprise software to manage business operations), which will lead to Council using best practice data standards, along with a mobile solution to support data capture by internal teams. We are also working with our maintenance partners to integrate their data into our SAP Asset Management System.

Renewing our assets

Key assets managed by the Council include water supply, wastewater, stormwater, roads and footpaths, parks and community facilities. It is critical that planning is in place to renew these assets at the right time in their lifespan before they fail or are no longer fit-for-purpose.

This renewal process is managed in several ways. For water, wastewater, and stormwater pipes we use the Asset Assessment Intervention Framework (AAIF) model. For other assets we manage renewals by balancing age and condition of the asset, but also taking account of criticality. This ensures that risk is managed through a prioritisation process, rather than simply renewing assets that are still fit for purpose, or less critical to the city than others.

¹⁰ <https://ccc.govt.nz/the-council/plans-strategies-policies-and-bylaws/plans/long-term-plan-and-annual-plans/long-term-plan-2024-to-2034/>

The planned expenditure set aside for asset renewal over the life of this LTP is in the range of 40-96% of depreciation across the various infrastructure activities, which is common across local authorities. The Council is well-positioned to manage any issues arising from the gap between planned expenditure and depreciation by using two different approaches. The criticality processes mentioned above (use of performance and maintenance data, regular condition checks and prioritisation) will ensure that critical renewals occur.

Secondly, Council's strong balance sheet means that any renewals that may arise in the gap between expenditure and renewal can be funded through debt.

These two approaches mean that levels of service that rely upon these assets are expected to be maintained across the life of the LTP and their performance standards have been set accordingly.

It is worth noting that two activities are planned for a lower level of renewal during this LTP. Planned renewals expenditure as a % of depreciation over the LTP period for wastewater is at 60% and stormwater at 40%.

Context is crucial to this proposed approach. Both wastewater and stormwater have been the subject of intense focus from the Council and central government since the Canterbury earthquake sequence. Over the past nine years expenditure on wastewater has been at a far higher rate than normal (a total of 162% of depreciation) while stormwater has also been at double the normal rate over those years (203%.) While this level of investment is unusually high, it reflects the post-quake needs of the city.

The strategy for managing the proposed renewals approach for wastewater and stormwater has three parts. Firstly, the very high rate of expenditure in the decade before this LTP, combined with a significant increase in renewals in later years of the proposed 2024 LTP, mean that these assets can be renewed at a reduced rate during the interim years without significant impact on levels of service.

Secondly, the criticality processes mentioned above around use of performance and maintenance data, as well as condition checks, ensure that critical renewals will occur.

A three waters example where we are working to re-balance our capital spending is the watermain renewal program. Over the LTP planned expenditure increases each year from \$30M in year one to \$43M in year ten (uninflated figures). The planned expenditure allows the program to increase the momentum in renewals, whilst remaining affordable.

Finally, Council's funding options mean that any critical renewals and repairs not planned for are able to be funded.

Transport Renewal Approach

In managing our transport infrastructure, we use a blend of data, including the age and condition of assets, to shape our renewal programs. This strategic approach ensures we renew assets at the optimal point in their lifecycle, prioritising critical assets such as arterial roads over less critical ones like cul-de-sacs. This method aligns with both the One Network Framework from NZTA and the Department of Internal Affairs' service level requirements. Our goal is to renew 5% of the road network each year, ensuring 100% renewal occurs long before the 30 year life of the IS. The first few years of the Long-Term Plan (LTP) detail specific projects, while later years are planned at a more general program level, a common practice among metropolitan authorities.

Three Waters Renewal Approach

For Three Waters (drinking water, wastewater, and stormwater), our early LTP years (2024-27) outline specific renewal projects, transitioning to broader program-level planning in later years. Our renewal strategy is informed by assessing asset conditions and employing predictive models, such as AAIF. This ensures renewals are both achievable and financially sustainable. However, it's important to note that the funding allocated in the Long-term Plan does not

aim to renew all assets before they fail. Such a comprehensive approach would be neither economically feasible nor practical. Instead, renewals are prioritised based on asset criticality, with more significant assets like major water mains along state highways being renewed proactively. Funding over the 30-year infrastructure strategy period is calibrated to meet these strategically determined renewals, ensuring a balanced and sustainable management of our infrastructure.

Our infrastructure assets at a glance

Water supply

The Council supplies potable drinking water to approximately 160,000 residential and business customer connections, through seven urban water supply schemes and six rural water supply schemes. Our drinking water infrastructure includes 1,700km each of mains and sub-mains, 108 reservoirs and tanks, 127 pump stations, 172 wells, seven stream intakes and water treatment plants.

Wastewater – collection, treatment, and disposal

The Council collects, treats, and disposes of wastewater from approximately 160,000 customers. This is achieved through 945km of laterals, nearly 2,000km of wastewater mains, 150 pump stations, 84 lift stations, and 34 odour control sites. We provide treatment at eight wastewater treatment plants and disposal through one outfall pump station, six ocean/harbour outfalls, and two land integration schemes. 98% of wastewater generated within Christchurch is serviced by the Christchurch wastewater network for treatment at the Christchurch wastewater treatment plant.

Stormwater drainage, flood protection and control works

Key physical assets include underground conveyance networks (915km of pipes, manholes, sumps, inlets and outlets), open channels and overland flow

path (natural waterways such as rivers, streams, creeks, constructed drainage channels, in-channel structures, lining and retaining walls), 45 pump stations and water flow control devices and structures such as valve stations, 12km of stop banks, tide gates and basins, water quality treatment devices such as basins (710), wetlands, tree pits, raingardens, filtration devices, and hydrometric monitoring devices, measuring rainfall along with surface water, sea and groundwater levels.

Transport – roads, footpaths, active travel, public transport

We own, plan, and manage the 2,500km local roading network that supports all transport activities. Council will continue to operate and optimise the public road network to provide an efficient, safe, and sustainable network for all users to all parts of the city.

Facilities

We manage a wide range of facilities across Christchurch and Banks Peninsula, including our network of recreation and sports facilities, the art gallery, museums, our network of libraries, community centres, community housing, and early learning centres.

Council's newly adopted Strengthening Communities Together Strategy and its associated implementation plan guides our work and investment in this area as we align the strategy goals with levels of service, reporting and accountability processes across the organisation.

Parks

The Parks Unit manages around 1,250 sites, covering over 9,378 hectares of park land and improvements. Our Regional Parks continue to deliver biodiversity and recreation programmes and investment in these areas continues.

Solid waste and recycling

Assets covered under the Resource Recovery activity are mostly managed through operations and maintenance contracts, which include individual asset management processes and a return of assets at the end of the contract. These

assets include transfer stations and community collection points, a material recovery facility, an organics processing plant, the Burwood landfill (gas collection and treatment plant), and 50 closed landfills owned by the Council (with a further 80 across the district).

TAKING A STRATEGIC VIEW OF OUR INFRASTRUCTURE NEEDS

This strategy has identified four significant strategic challenges that underpin all our infrastructure assets and outlines the actions Council will take to fix them.

Planning for our city's infrastructure goes beyond just building and maintaining. It's about making sure our community is set up for success now and in the future, by thinking ahead and tackling challenges as they come. This means using the latest data and technology to make smart choices that will keep our city going strong for many years. It's all about understanding what we need right now, and in the future, and being ready to make decisions to meet those needs. We're focused on keeping our city running well for everyone, making sure we spend wisely, and our plans match what our community wants.

Beyond the tangible assets lies a broader challenge – the impending impacts of climate change and the need for sustainable growth. We cannot ignore the ever-present risks posed by natural hazards, and it's critical that our infrastructure can stand resilient against such challenges. On the other hand, as our city grows, we must navigate this growth conscientiously. Urban growth needs to align with our commitment to a sustainable, low-emission future.

Identifying our significant strategic challenges

1: Understanding our infrastructure and its needs: There's a pressing need to refine our data collection methods and harness asset data effectively for evidence-based decisions, ensuring they align with community priorities.

The quality of our current systems for understanding asset condition varies across asset groups, some of which are well behind best practice standards. New technologies like the use of digital twins for planning, construction and maintenance are shown to significantly reduce whole of life costs of infrastructure by allowing us to model the impact of time and changes on our infrastructure. We need to be able to rely on accurate asset condition

information so that we can forward plan our renewals programme, and associated funding requirements. Data helps us decide our priorities, identify what is most critical, and directs us how and when to respond.

Challenge	Impact
Diversity of our portfolio and expectations around data collection	Maintenance of information on condition including costs and maintenance is inconsistent, this limits our ability to understand the big picture and respond to opportunities
Keeping up with technology advances in data collection and management	Reduced ability to collect and analyse information in a timely way
Incomplete data provides poor evidence for decision making	Reduced confidence when decision making and reliance on less rigorous methods

How can we improve data collection and the way we use it in evidence-based decision making for our communities?

2: Looking after what we've got, and delivering what we say we will: How to balance enhanced deliverability and affordability without compromising the attention and care our existing assets require.

We are working proactively to re-balance our capital and operational spending to address renewals that have not been occurring fast enough to meet the needs of the city's networks. For example, returning the city's roads to pre-quake condition would have taken many decades at the rate set by the 2018 LTP (2% renewal per annum.) That legacy of underspending has been addressing by doubling road renewals to 4% in years 1 and 2 of the proposed LTP, increasing to 5% thereafter.

In addition to this we apply a criticality overlay to ensure we are renewing our assets at the appropriate time (i.e. prioritising the renewal of our critical assets). We are also working towards having processes across all assets that enable us to be responsive to the changing (and growing) needs of our community (prioritising the basics). Our challenge is to make the right decisions to prioritise and invest our limited resources based on a data-driven approach to decision making – to work smarter, more efficiently and effectively for our community.

Challenge	Impact
Increasing costs and regulatory changes reduce affordability and deliverability	Maintenance has been deferred resulting in a larger number of assets in poor condition and an increase in unplanned maintenance.
Reduced deliverability	Reduced community satisfaction, assets again beyond acceptable limits

How do we improve deliverability and affordability, whilst still prioritising our existing assets?

3: Ensuring resilience to the impacts of climate change and natural hazards: In the face of ever-changing environmental context, we must determine and act upon the immediate, and long-term, actions required to reinforce the resilience of our infrastructure and the communities they serve.

A lack of consistent data about greenhouse gas emissions and vulnerability to hazards and risks for some of our infrastructure compromises our ability to make well-informed decisions that will future-proof infrastructure and risks maladaptation. Strategic decisions need to be made about the location, maintenance, and renewal of infrastructure so that communities can live safely. By prioritising maintenance and renewals that are fit-for-purpose in the future we can contribute to Christchurch being a low emission city and making sure growth occurs in low-risk areas.

Challenge	Impact
Limited understanding how climate change is impacting the condition of assets	Low rigour when planning maintenance, renewal, and new infrastructure investments.
Embedding prioritisation of investment decisions in a way that improves infrastructure resilience	Scarce \$ are spent without a clear understanding of realistic lifespan

What are the urgent actions we need to take to adapt and increase resilience of our infrastructure and community?

4: Planning and investing for sustainable growth: Growth is inevitable, meaning there is a pressing need to identify and adopt optimal pathways to couple urban growth with a transition to a low-emission future.

Our city is on a trajectory of growth and we need to ensure that this growth does not come at the expense of our environment or the well-being of our residents. Traditional models of urban development have often prioritised short-term gains over long-term sustainability. This has led to increased emissions, strained resources, and imbalances in the quality of life offered to different parts of our community.

Challenge	Impact
Investment for growth needs to take into account a range of factors and interests	Increasing complexity and need for joined up planning and investment for growth
Changes in housing density requirements	Infrastructure capacity is outmatched by growth
Meeting our commitments re climate change while growing our infrastructure	Implementation and management of infrastructure not in step with emissions reduction activities

What are the best ways for us to respond to growth and simultaneously become a low-emission city?

OUR STRATEGIC RESPONSE TO OUR INFRASTRUCTURE CHALLENGES

Understanding and addressing our city's infrastructure needs is no small task. As we look ahead, it's essential that we make informed, forward-thinking choices that guide us over the next 30 years. This section delves into our chosen approach to tackle the key challenges and opportunities we've identified.

The actions outlined below have been developed through a lot of engagement, planning, and analysis of asset data. We've drawn from our strategic framework, especially focusing on the outcomes our community wants and our key strategic policies. Our city's representatives have weighed in with their perspectives, ensuring we're aligned with the community's aspirations. Furthermore, the valuable input we received during the development of the Long Term Plan has been crucial, giving us insight into services and their intricacies.

With this foundation, below are our primary action areas. These are essentially our strategic response — the core actions and principles we'll use to make sure we're taking the best care of what we have, while also investing smartly for Christchurch's future.

Options for responding to our strategic challenges

We propose to concentrate on four action areas, each of which includes the things we need to do when deciding how to manage our assets, prioritise investment and deliver programmes and projects. They will also be used to guide Council's consideration of infrastructure investment for the next 30 years.

Significant Challenge	Our Actions in Response
Understanding our infrastructure and its needs. <i>How can we improve data collection and the way we use it in evidence-based decision making for our communities?</i>	1. Build the framework for decisions, starting with improved consistency and quality of data
Looking after what we've got, and delivering what we say we will. <i>How do we improve deliverability and affordability, whilst still prioritising our existing assets?</i>	2. Embed long-term sustainability and affordability into planning
Ensuring resilience to the impacts of climate change and natural hazards. <i>What are the urgent actions we need to take to adapt and increase resilience of our infrastructure and community?</i>	3. Make well informed decisions about infrastructure in vulnerable areas and consider climate risks in all planning
Planning and Investing for Sustainable Growth. <i>What are the best ways for us to respond to growth and simultaneously become a low-emission city?</i>	4. Invest in and supporting sustainable growth

Action area 1: Build the framework for decisions starting with improved consistency and quality of data (years 1-3).

Across the organisation:

- Ensure Asset Management activity is effectively resourced.
- Deliver the 2023 Asset Management Maturity Assessment (AMMA)
- Deliver Asset Management Improvement programmes based on the AMMA assessment and the needs of the service units.
- Ensure that Asset Management is organisationally reinforced, and roles and responsibilities are clear at business unit level.
- Ensure a centralised Asset Management System (AMS) is available across the organisation and provides consistent information (through our SAP software Improvement programme).
- Develop and deliver consistent condition and performance assessment programmes organisational-wide.
- Prioritise optimal asset renewals within the capital and operational programmes using quality asset condition data.

Action area 2: Embed long-term sustainability and affordability into our planning.

- Right size the scale of our Capital Programme, to ensure it is deliverable and affordable while providing efficient and cost-effective infrastructure and services.
- Prioritise funding to the renewals programme.
- Support a more integrated system approach to the planning and delivery of capital projects.

- Budget for whole-of-life operating costs of assets in projects.
- Consider divestment of surplus and under-utilised land/facilities.

Action area 3: Make well informed decisions about infrastructure in areas vulnerable to climate and natural hazard risks and consider climate risks in all planning.

- Develop and apply guiding principles to investment decisions.
- Prioritise adaptation planning with climate-impacted communities.
- Increase climate risk and emission data quality, and strengthen our capability to use this data in our decision making.
- Prioritise options for lower emissions and enhanced resilience at project initiation stage.

Action area 4: Invest in and support sustainable growth.

- Support a more integrated system approach to the planning and delivery of capital projects.
- Partner and collaborate with central government, developers, mana whenua and communities to identify and take opportunities to invest in infrastructure.
- Prioritise investment in infrastructure that promotes active travel, public transport usage and road safety.

How will we know we are on the right path?

Moving forward with these action areas is a long-term programme, and tracking implementation and impact is critical. We need to make sure we're going in the right direction and adjust our approaches if something changes, or we aren't getting the results we expect.

We will develop a fit for purpose approach to help us manage implementation and track our progress. This approach, or "framework", will help us see how well we're doing and where we might need to make changes. It's like having signposts on our journey to make sure we're on track. And, it's not just for us – it's a way for everyone in the community to see how things are going, what's working and what might need a rethink.

We anticipate being able to report on progress in future iterations of the Infrastructure Strategy, and will seek ways to integrate progress reports within our current systems.





Timeline of how we will implement our strategic response over the lifecycle of the Infrastructure Strategy

For the first three years, at least, of this Strategy's implementation, our strategic response and asset investment decisions are shaped by:

- Improving our understanding of our infrastructure so we can make the best investment decisions for our community.
- Refining our capital programme delivery, emphasising sustainable asset maintenance.
- Enhancing planning and project delivery processes, ensuring comprehensive project cost analysis.
- Assessing asset utilisation for potential divestment.

- Developing and embedding guiding principles for climate-conscious investments, enhancing community planning for adaptation, improving Council's climate knowledge, and initiating low-emission and resilient infrastructure tools.
- Partnering with the community to identify and prioritise infrastructure investments so we can sustainably grow and meet changing demands.
- Developing and implementing a monitoring and reporting framework so we can track our progress towards our strategic goals.

This will set the foundation for us to make confident, long term infrastructure investment decisions that support sustainability, growth, and best value for money. More detail can be found in the timeline below.

Look after what we've got, and deliver what we say			
	Short term (years 1 -3 of the LTP)	Medium term (years 4-10 of the LTP)	Long term (years 11-30 of the LTP)
\$	Scale the size of our capital programme to ensure it is deliverable		Continue to right-size the capital programme through subsequent LTPs
\$	Prioritise capital and operating funding to the renewals and maintenance programme so we can sustainably look after our existing assets		Continue to prioritise the renewals and maintenance programme long-term
\$	Investigate systemic process change to planning and delivery of capital projects	Implement systemic process change to planning and delivery of capital projects	Review and adjust processes if required, so they support smart project delivery
\$	Require whole-of-life operating costs be provided for consideration of all projects	Update budgets as required to account for whole-of-life operating costs in all projects	Ensure whole-of-life operating costs are consistently identified and budgeted in projects
\$	Consider opportunities for divestment of under-utilised land and facilities	Continually investigate opportunities for divestment, including exploring partnership and locally-driven initiatives, through Annual Plans and Long Term Plans	
Ensure our infrastructure is resilient to impacts of climate change and natural hazards			
	Short term (years 1 -3 of the LTP)	Medium term (years 4-10 of the LTP)	Long term (years 11-30 of the LTP)
	Apply guiding principles to investment decisions: continue to meet legal obligations; take a 'first do no harm' approach; consider deferring renewals/replacements of non-critical assets in medium-high risk areas; prioritise sustainable risk reduction approaches, and nature-based solutions	Apply national directives, relevant legislation and Council asset and adaptation response policies developed in the first three years of the LTP, to decisions relating to coastal and natural hazards' adaptation, that will increase community and infrastructure climate resilience	
	Increase planning with climate-impacted communities for local adaptation pathways	Prioritise engagement across the city on the challenges ahead in responding to climate change impacts, while continuing community-based adaptation planning	Allocate adequate funding in subsequent LTPs to address the findings of community engagement and local adaptation pathways, to avoid intergenerational inequity
	Increase Council knowledge, data and capability in understanding the effects of climate risks and emissions' reduction, particularly through piloting key projects	Use increased knowledge and data to make decisions based on the effects of climate risks and emissions' reduction	Expand pilot projects that show effectiveness and provide further funding for key systems and processes that embed knowledge, data and capability in Council
	Develop assessment tools and guidance material so that options for low emission impact and enhanced resilience for new and renewed infrastructure can be included at project initiation phase	Require information on/assessment of options for low emission impact and enhanced resilience for new and renewed infrastructure to be included at project initiation phase	Make decisions on infrastructure projects based on the potential for low emission impact and enhanced resilience

Plan and invest for growing and changing demand			
	Short term (years 1 -3 of the LTP)	Medium term (years 4-10 of the LTP)	Long term (years 11-30 of the LTP)
✂	Identify and prioritise integrated infrastructure planning that stimulates regeneration in prioritised local areas - supporting liveable neighbourhoods and business growth		Extend and continue local regeneration programmes
✂	Partner and collaborate with central government, developers, mana whenua and communities to identify and take opportunities to deliver, adapt, enhance or divest infrastructure		
✂	Identify opportunities for investment in infrastructure that promote active travel, public transport usage and improved road safety, and to 'hub' facilities and services	Prioritise funding to projects that support our transition to a low emission city	
✂	Identify and prioritise projects that attract central government funding	Continue to prioritise external funding opportunities, while also exploring alternative funding models, such as user pays, as a means to deliver infrastructure	
Improve our understanding of our infrastructure so we can make the best investment decisions for our community			
	Short term (years 1 -3 of the LTP)	Medium term (years 4-10 of the LTP)	Long term (years 11-30 of the LTP)
✂	Identify and implement improvements for how we collect, collate and use data	Review and maintain process and systems improvements	Maintain consistent and integrated data across Council to inform decision-making
✂	Partner with other councils, central government and the private sector to share and improve data processes and systems; identify and trial forward-facing technologies; and maximise any external funding opportunities		
✂	Improve our capture and understanding of social and cultural data	Use improved social and cultural data to inform planning and decisions relating to climate change, city growth and demand on our infrastructure	

SIGNIFICANT DECISIONS WE NEED TO MAKE IN THE NEXT THREE YEARS

The Council will need to make some critical decisions regarding our future infrastructure investments, particularly over the next decade.

Implementing “Local Water Done Well” reforms

Decision required in years 1-3

The passing of the Water Services Acts Repeal Bill on 13 February 2024 marked a significant shift in the landscape of water service management in New Zealand. It directly affects how local governments, including ours, will approach water services moving forward.

This legislative change has repealed the previous government’s framework for water services, which is to be replaced by the Local Water Done Well approach. This new direction will unfold through new legislation expected in the middle of 2024. This will aim to enable councils to reconfigure their water service delivery

in a financially sustainable way by mid-2024 and then to mandate the establishment of financially independent council-controlled organisations (CCOs) for water management by mid-2025.

The Council must now integrate these changes into our 2024–34 LTP and consider the impacts for future Infrastructure Strategies. Significantly, the shift away from central government providing direct financial assistance for water service delivery will require us to investigate collaborative models and partnerships, that will support efficient and cost-effectiveness water service management.

While there is still some uncertainty on how this will unfold, we are continuing to focus on protecting our water supply, and ensuring Christchurch’s water is safe and secure. We are also continuing to invest in the infrastructure required for the collection and disposal of wastewater and stormwater.

SUMMARY OF OUR INFRASTRUCTURE INVESTMENT OVER THE NEXT 30 YEARS

The next 30 years are going to be about making our infrastructure more resilient and prepared for changing conditions and growth. At the same time, we want to support the health and wellbeing of our communities by addressing things like climate change and reducing harmful emissions.

This is where our most likely 30-year infrastructure investment scenario helps us out – informed by the detailed planning and analysis within our Asset Management Plans, it provides an overarching view of where we intend to concentrate our activity and allocate resources over the next 30-years.

For the first 10 years, our plans are detailed in LTP 2025-34, which sets out specific projects we're aiming to complete, which is supported by the Council's Financial Strategy. This ensures we balance financial prudence and moving our city forward effectively. After that, for the next 20 years, our Asset Management Plans provide the longer term detail. These describe what we intend to build or improve and when – and signals what we need to consider in future planning cycles.

Basis of our most likely infrastructure investment scenario

Our four action areas, set in response to our significant strategic challenges, will set the framework for how we address our major infrastructure challenges ahead. We are also taking into account certain assumptions reflecting:

- Christchurch's progression over the forthcoming 30 years.
- Predicted surges or declines in service demands.

- Insights into the lifecycle of our assets and the ensuing implications on their condition and renewal strategies.
- Necessary initiatives for the improvement and replacement of assets to ensure they support our agreed service standards.
- Estimated costs for this infrastructure development and the Council's expected position over the next three decades.

This outlined scenario derives insights from the specific Asset Management Plans and Activity Plans¹².

Looking at the scenario across all assets

Based on our Asset Management Plans, our most likely infrastructure investment scenario anticipates that we'll need to invest \$24.67 billion¹³ (after inflation adjustments) across the upcoming 30 years. The first 10 years offers a confident budget breakdown, whereas the next two decades provide broader estimates so we can anticipate accordingly.

In the first decade, our projected spending is outlined in the LTP. Our main goals are to looking after the assets that we've got, ensuring resilience to the impacts of climate change and natural hazards, and planning and investing for sustainable growth. We do this by applying a criticality overlay across our assets to ensure we are renewing them at the appropriate time (i.e. prioritising the renewal of our critical assets).

¹² <https://ccc.govt.nz/the-council/plans-strategies-policies-and-bylaws/plans/long-term-plan-and-annual-plans/long-term-plan-2024-to-2034>

¹³ Note: this figure is less than the overall Capital Programme, as it excludes Te Kaha, Corporate Capital, Regulatory and Compliance, Strategic Planning and Activities, and Internal Activities. This also applies to any subsequent breakdowns or asset specific projections.

We expect to spend between \$491 to \$631 million each year for the first three years, and \$573 to \$627 million for the following seven years. This budget includes replacing existing assets, meeting additional demand, and improving the level of service.

From year 11 to 30, our financial predictions come from our Asset Management Plans. These numbers might change based on things like improved asset condition data, changes in growth, new rules and regulations, changes in how we fund projects, and as we get more details about specific projects. For these years, our predictions for day-to-day running costs are based on current prices adjusted for expected inflation and growth.

[Reconciling planning horizons: 30-year view of the Infrastructure Strategy versus the 10-year view of the Long Term Plan](#)

The Infrastructure Strategy considers the 30-year view taken in our Asset Management Plans, which detail our activity and the most likely investment

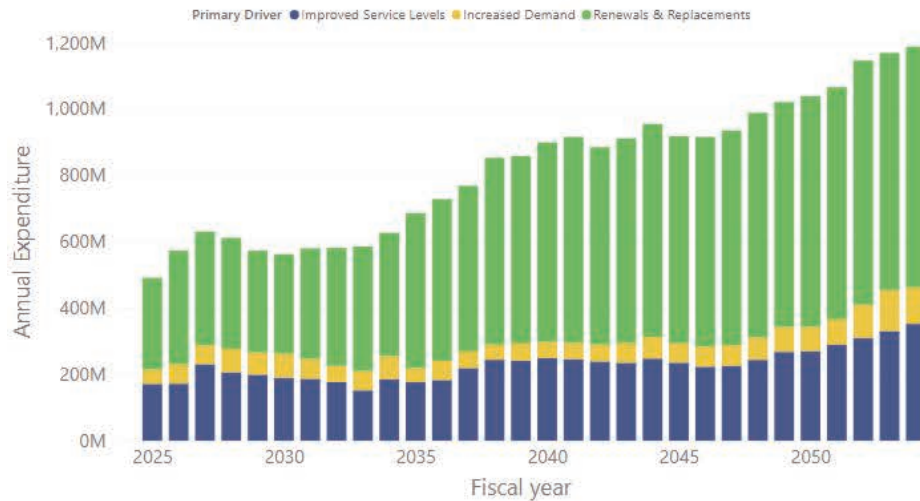
required over the next 30 years. This is a bigger picture compared to the LTP and Financial Strategy, which focus on the budget for the next 10 years.

For the coming decade, our Financial Strategy expects rates to go up initially. This is to pay for important projects, but the plan is to bring these rate increases down and keep them steady as we get towards the end of the LTP period. On the other hand, our Infrastructure Strategy looks further ahead and expects we'll need to spend more on infrastructure after these 10 years. This difference means that when we start working on the next set of plans in 2027 – the next Infrastructure Strategy, Financial Strategy, and LTP – we'll have some big decisions to make. We'll need to figure out how to keep things affordable while making sure we meet the growing need for better and more infrastructure.

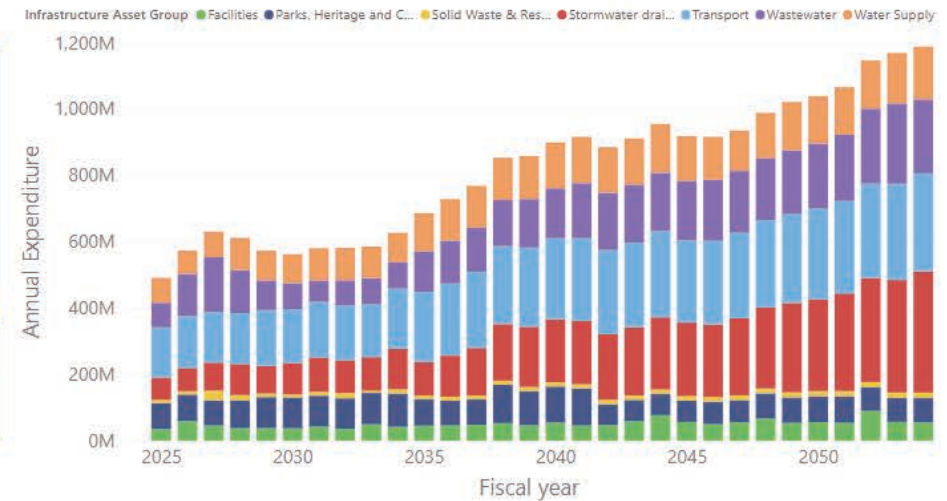
Projected capital investment over the next 30 years (Inflation adjusted, 2025-2054)

Primary Driver	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	Total
Improved Service Levels	171M	172M	231M	206M	199M	190M	187M	177M	152M	186M	177M	183M	219M	244M	242M	249M	246M	239M	235M	248M	235M	223M	226M	244M	268M	269M	289M	309M	331M	353M	6,901M
Increased Demand	43M	58M	56M	71M	67M	72M	59M	49M	59M	69M	42M	58M	50M	45M	51M	49M	49M	51M	59M	65M	58M	60M	62M	67M	75M	75M	76M	101M	123M	109M	1,929M
Renewals & Replacements	277M	343M	343M	335M	307M	300M	334M	356M	375M	372M	467M	488M	499M	564M	565M	601M	622M	595M	617M	642M	625M	633M	647M	678M	678M	695M	700M	736M	715M	726M	15,836M
Total	491M	573M	631M	612M	573M	562M	580M	581M	586M	627M	686M	729M	769M	853M	858M	899M	916M	885M	911M	955M	918M	916M	935M	989M	1,021M	1,039M	1,066M	1,146M	1,169M	1,188M	24,667M

Capital investment by primary driver (2025-2054)



Capital investment by asset group (2025-2054)



Projected Operating Expenditure (2025-2034)

Infrastructure Asset Group	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Total
Facilities	317M	184M	193M	190M	199M	206M	210M	216M	219M	223M	2,157M
Parks, Heritage & Coastal Environment	176M	92M	98M	101M	104M	106M	109M	112M	115M	118M	1,129M
Solid Waste & Resource Recovery	105M	56M	59M	58M	62M	64M	66M	69M	72M	75M	686M
Stormwater drainage, flood protection and control works	137M	73M	77M	80M	84M	87M	91M	94M	97M	100M	919M
Transport	144M	77M	97M	119M	141M	149M	160M	171M	173M	186M	1,416M
Wastewater	291M	150M	157M	173M	182M	188M	193M	198M	202M	206M	1,940M
Water Supply	190M	101M	107M	112M	116M	120M	124M	128M	132M	134M	1,264M
Total	1,358M	733M	787M	833M	889M	919M	953M	988M	1,009M	1,042M	9,511M

Note: these figures are less than the overall Capital Programme, as it excludes Te Kaha, Corporate Capital, Regulatory and Compliance, Strategic Planning and Activities, and Internal Activities.

ASSET SPECIFIC EXPENDITURE PROJECTIONS

Water supply

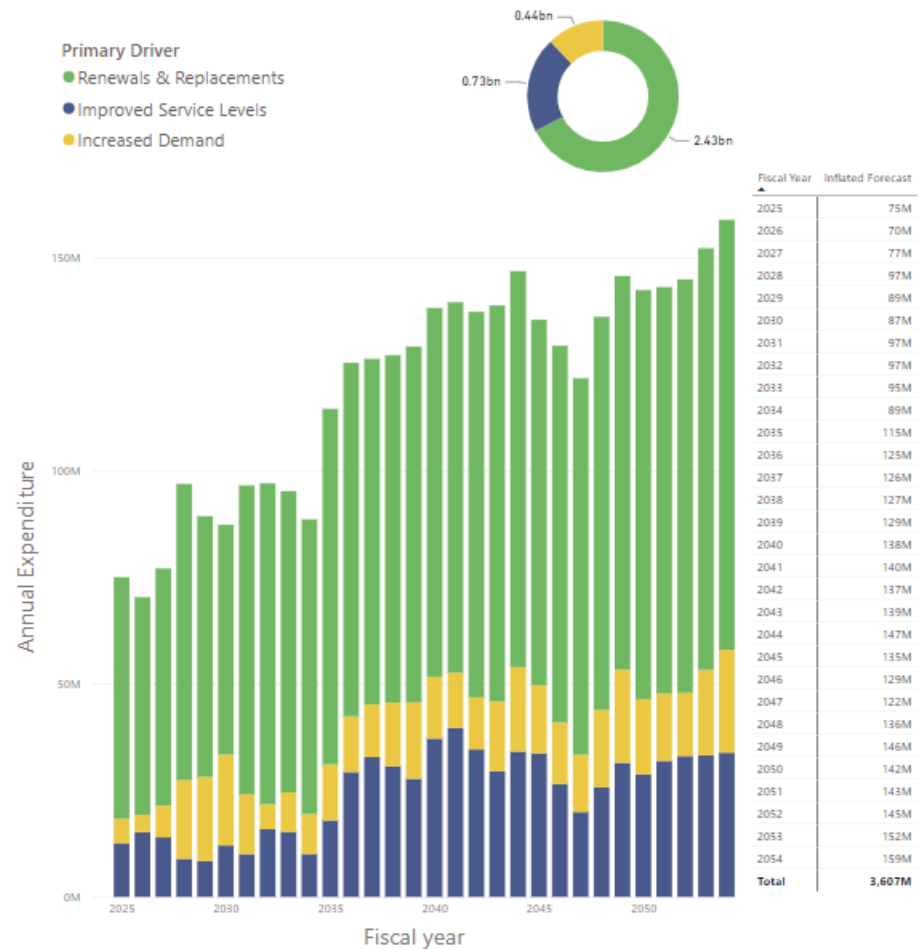
Our commitment is to deliver a high-quality, clean, safe, and sustainable drinking water supply to approximately 160,000 homes, businesses, and industries. Our water supply assets, including water treatment plants, pump stations, reservoirs, and reticulation networks, hold a total replacement value of \$2.87 billion.

We own, plan, manage and operate three urban and four rural water supply schemes supplying water to Christchurch City and Lyttelton Harbour Basin, Akaroa and Takamatua, Duvauchelle, Wainui, Birdlings Flat, Little River and Pigeon Bay.

We aim to protect the community from water-borne diseases and ensure our water supplies meet rigorous safety and health risk standards. Our goals extend to contributing to safe and healthy communities, providing top-quality drinking water, using resources sustainably, and maintaining modern, robust infrastructure and facilities.

Snapshot of planned projects and programmes over the next 10-years ¹⁴	
Reticulation Renewal Programme	\$493m
New and Upgraded Pump Stations Programme	\$182m
New Chlorination Equipment	\$51m
Ferrymead Water Supply Zone Upgrade	\$22m
Averill Pump Station Replacement	\$18m
Kerrs Pump Station Replacement	\$17m
Koukourāata Drinking Water Scheme	\$11m

Capital Expenditure Over 30 Years (Inflation Adjusted)



¹⁴For more detailed information (including assumptions), please refer the [Water Supply Activity Plans and Asset Management Plans](#).

Stormwater drainage, flood protection, and control works

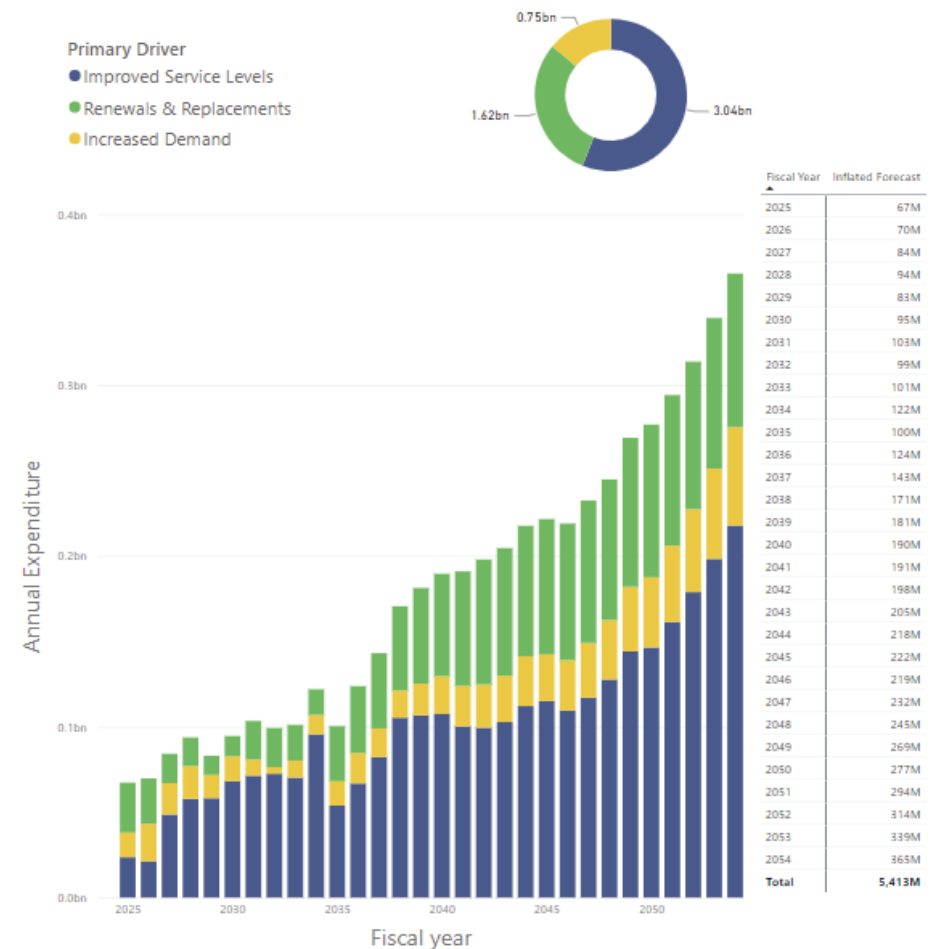
We own and are responsible for planning, constructing, and managing the city's stormwater disposal network and flood protection and control assets. The stormwater network is designed to collect and channel water during rainy periods, integrating secondary flow paths like roads. Our flood protection efforts focus on maintaining floodplains and related infrastructure to enhance surface water quality.

Notably, some Council-owned stormwater and flood protection assets fall under other asset groups: Transport oversees street drainage assets, including sumps and pipes, while Parks and Foreshore manage assets like sea walls.

Our investment prioritises our ability to meet established service levels by maintaining and renewing our assets, investing capital to cater to growth demands (both in greenfield and infill developments), and improving stormwater discharge quality to mitigate waterway degradation. This ensures a resilient, efficient, and sustainable infrastructure system for Christchurch.

Snapshot of planned projects and programmes over the next 10-years ¹⁵	
Flood Protection: Surface Flooding Protection Programme	\$183m
Flood Protection: Pūharakekenui -Styx Detention and Treatment Programme	\$106m
Flood Protection: Ōtākaro - Avon Waterway Detention & Treatment	\$42m
Flood Protection: Addington Brook and Riccarton Drain Filtration	\$25m
Flood Protection: Opawaho-Heathcote Waterways Detention and Treatment	\$18m
Stormwater: Waterway Lining Renewal Programme	\$90m
Stormwater: Reticulation Renewal Programme	\$42m
Stormwater: Port Hills Revegetation and Sediment Control Stage 1	\$6m
Stormwater: Port Hills and Lyttelton Erosion and Sediment	\$3.5m

Capital Expenditure Over 30 Years (Inflation Adjusted)



¹⁵ For more detailed information (including assumptions), please refer the [Stormwater drainage, flood protection, and control works Activity Plans and Asset Management Plans](#).

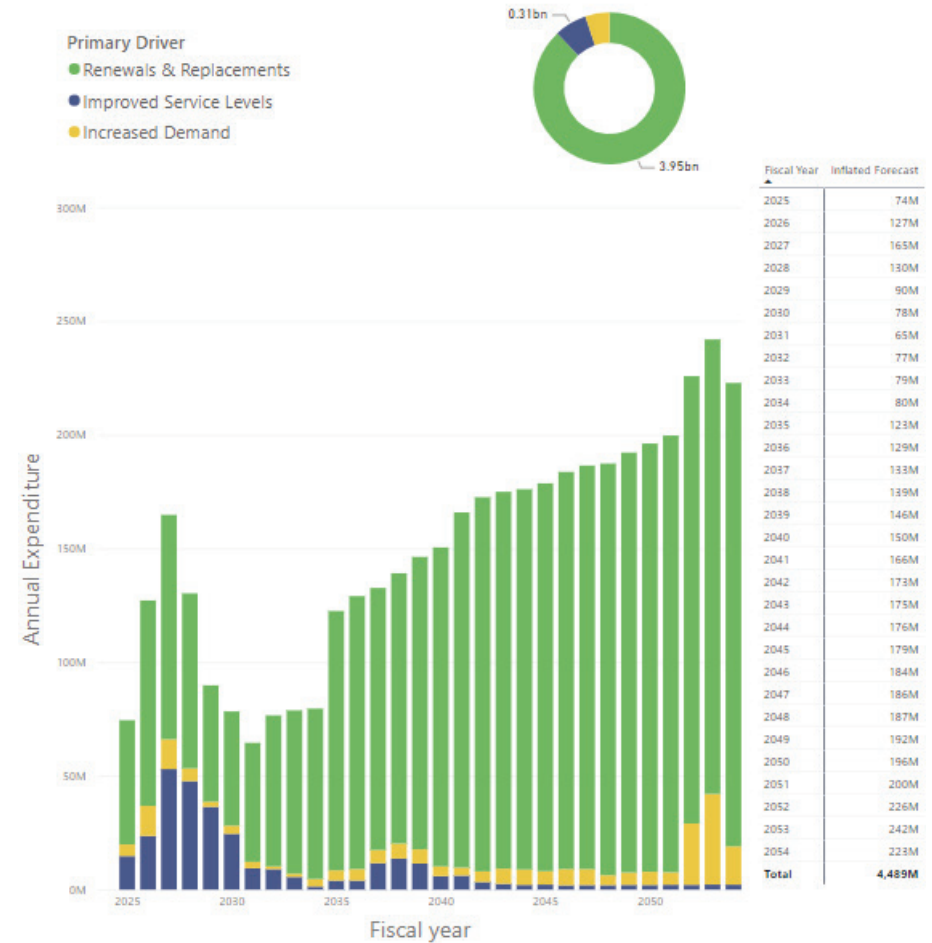
Wastewater – collection, treatment, and disposal

Wastewater collection, treatment and disposal is an essential service that protects public health and the environment. We collect wastewater from around 160,000 homes, businesses and industries. To do this we own, plan, manage and operate seven wastewater schemes collecting, treating and disposing of wastewater from Christchurch City, Lyttelton and Governors Bay, Diamond Harbour, Akaroa, Duvauchelle, Wainui and Tikao Bay.

Our seven wastewater schemes consist of reticulation networks, pump stations, odour control stations and treatment plants with a total replacement cost of \$5.11 billion.

Snapshot of planned projects and programmes over the next 10-years ¹⁶	
Reticulation Renewal Programme	\$346m
Wastewater Treatment Plant renewals & replacements	\$181m
Akaroa Wastewater Reclaim and Reuse	\$94m
Selwyn Street Pump Station and Pressure Main	\$52m
Grassmere Wet weather Storage	\$31m
Fitzgerald Ave Brick Barrel Mains Renewal	\$21m
Duvauchelle Wastewater Treatment & Disposal Upgrade	\$18m

Capital Expenditure Over 30 Years (Inflation Adjusted)



¹⁶ For more detailed information (including assumptions), please refer the [Wastewater Activity Plans and Asset Management Plans](#).

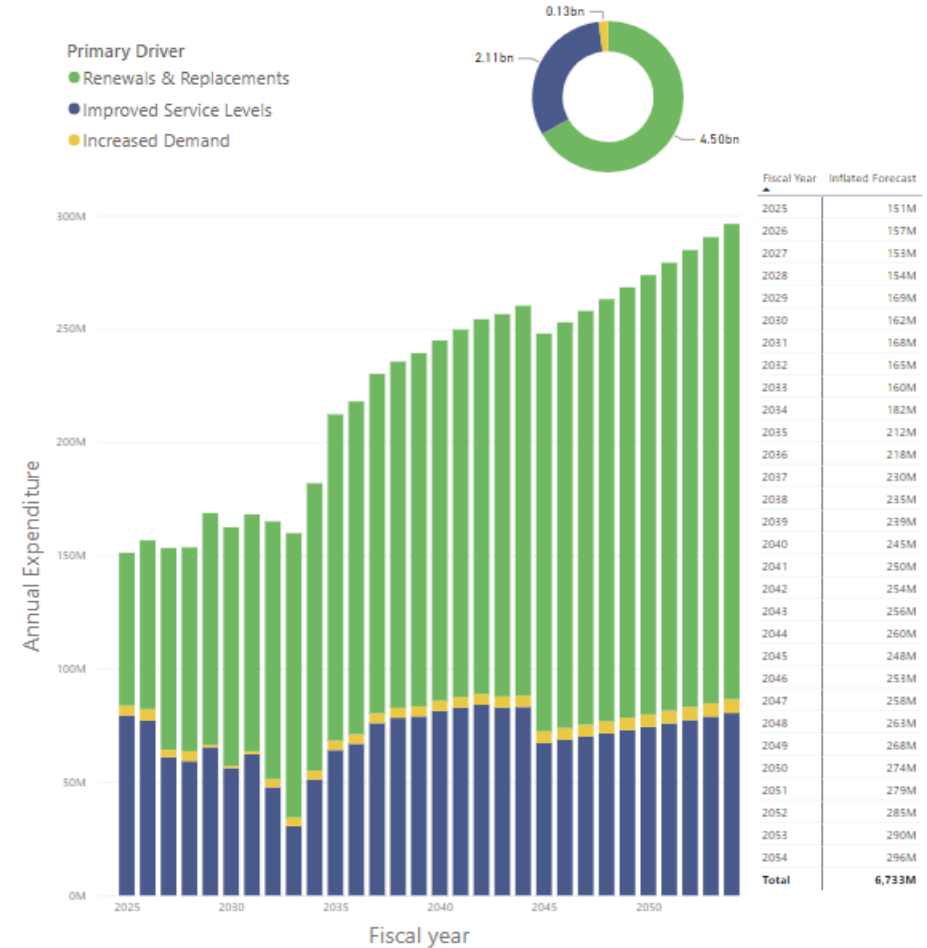
Transport

We are responsible for the day-to-day activities that plan for, fund, construct and then keep our transport systems functioning. We do this in close liaison with our Greater Christchurch local authority partners and neighbours – and directly alongside NZ Transport Agency Waka Kotahi, which manages the state highways and act as co-funders of many of our day-to-day transport network investments. We also work closely with Environment Canterbury, who are responsible for planning, procuring, and managing passenger transport services. Along with the Greater Christchurch Partnership, the Council views significant improvement of passenger transport services and supporting infrastructure as key goals for the transformation of our travel networks and choices for work, education, and leisure through this coming long term plan period.

While we deliver and manage these networks and services, we also work to build trust and confidence in our services through programmes such as our travel choice and road safety outreach programmes with schools, employers, and community groups.

Snapshot of planned projects and programmes over the next 10-years ¹⁷	
Carriageway Renewal Programme	\$591m
Major Cycleways	\$199m
Structure Renewal Programme (including Pages Road bridge)	\$168m
Signal Signs & Light Renewals Programme	\$119m
Public Transport	\$99m
Footpaths and Cycleways Renewals	\$58m
Street Asset Renewals	\$56m
Network Improvements	\$37m
Transport Subdivision Infrastructure	\$35m
Safety Ancillary Projects	\$30m

Capital Expenditure Over 30 Years (Inflation Adjusted)



¹⁷ For more detailed information (including assumptions), please refer the [Transport Activity Plans and Asset Management Plans](#).

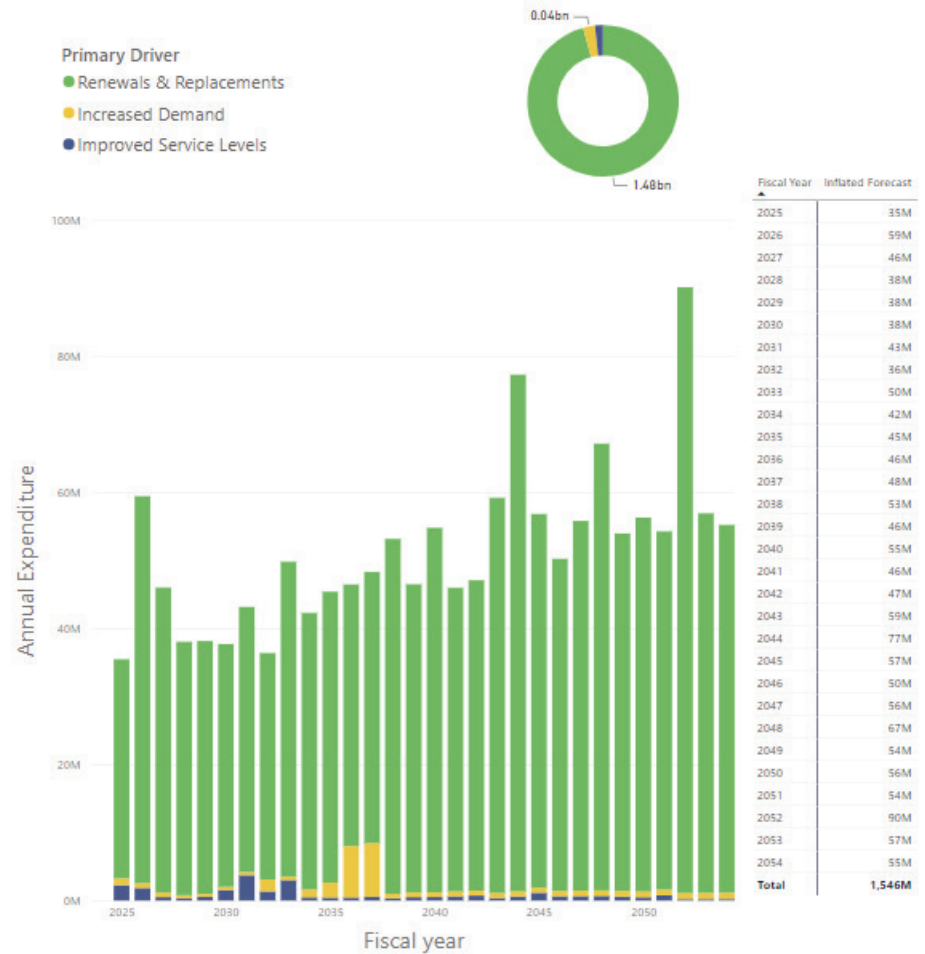
Facilities

We manage a wide range of facilities across the Christchurch and Banks Peninsula, including the art gallery, museums, our network of libraries, community centres, community housing, and early learning centres.

Council’s newly adopted Strengthening Communities Together Strategy and its associated implementation plan guides our work and investment in this area as we align the strategy goals with levels of service, reporting, and accountability processes across the organisation.

Snapshot of planned projects and programmes over the next 10-years ¹⁸	
Art Gallery: Art Collection Storage & Fittings	\$8.3m
Art Gallery: Renewals & Replacements	\$7.5m
Community Centre Renewals and Replacements	\$23.8m
Multicultural Recreation and Community Centre Refurbishment - \$800k FY30	\$0.8m
Phillipstown Community Centre	\$3.7m
Shirley Community Centre	\$3.7m

Capital Expenditure Over 30 Years (Inflation Adjusted)



¹⁸ For more detailed information (including assumptions), please refer the [Facilities Activity Plans and Asset Management Plans](#).

Parks

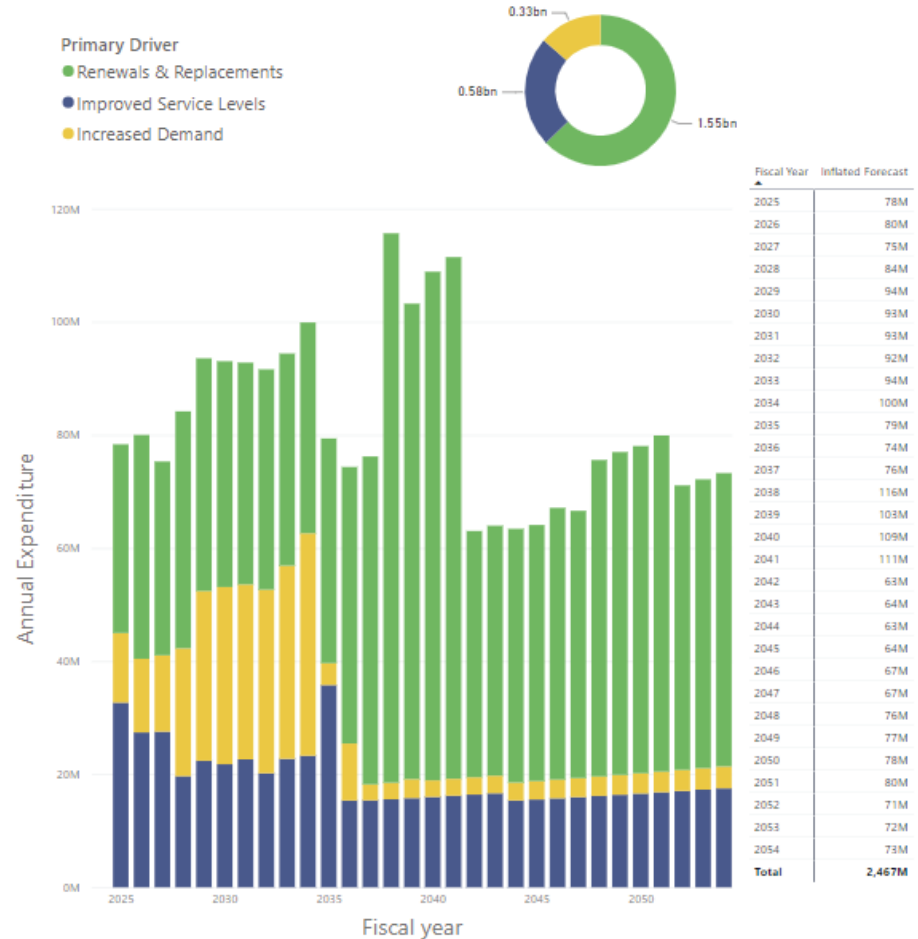
We oversee the city's expansive network of parks, reserves, and foreshore areas. These spaces, totalling over 1,279 sites and spanning more than 9,874 hectares, play a critical role in defining Christchurch's natural character and landscape.

These public spaces form an accessible network that significantly enhances the health, recreation, and liveability for both residents and visitors of Christchurch.

Our parks include community parks, the Botanic Gardens, heritage garden parks, regional parks, Hagley Park, Ngā Puna Wai, cemeteries, a plant nursery, residential red zone parks, and foreshore and marine access structures. This portfolio continues to grow, driven by subdivision processes, transfers of residential red zone land, and new developments, thus enriching our city's green infrastructure.

Snapshot of planned projects and programmes over the next 10-years ¹⁹	
Canterbury Provincial Chambers earthquake repair	\$19.5m
Robert McDougall Gallery Strengthening & Base Isolation	\$14.5m
Cunningham Glasshouse upgrade and repair	\$8.5m
Akaroa Wharf Renewal	\$23.2m
Botanic Gardens Gondwana Land and Childrens Garden	\$3.9m
Naval Point Development Plan	\$19.3m
Sports Field Network Plan	\$87m
Takapūneke Reserve Development	\$21m
Urban Forest Implementation	\$18m

Capital Expenditure Over 30 Years (Inflation Adjusted)



¹⁹ For more detailed information (including assumptions), please refer the [Parks Activity Plans and Asset Management Plans](#).

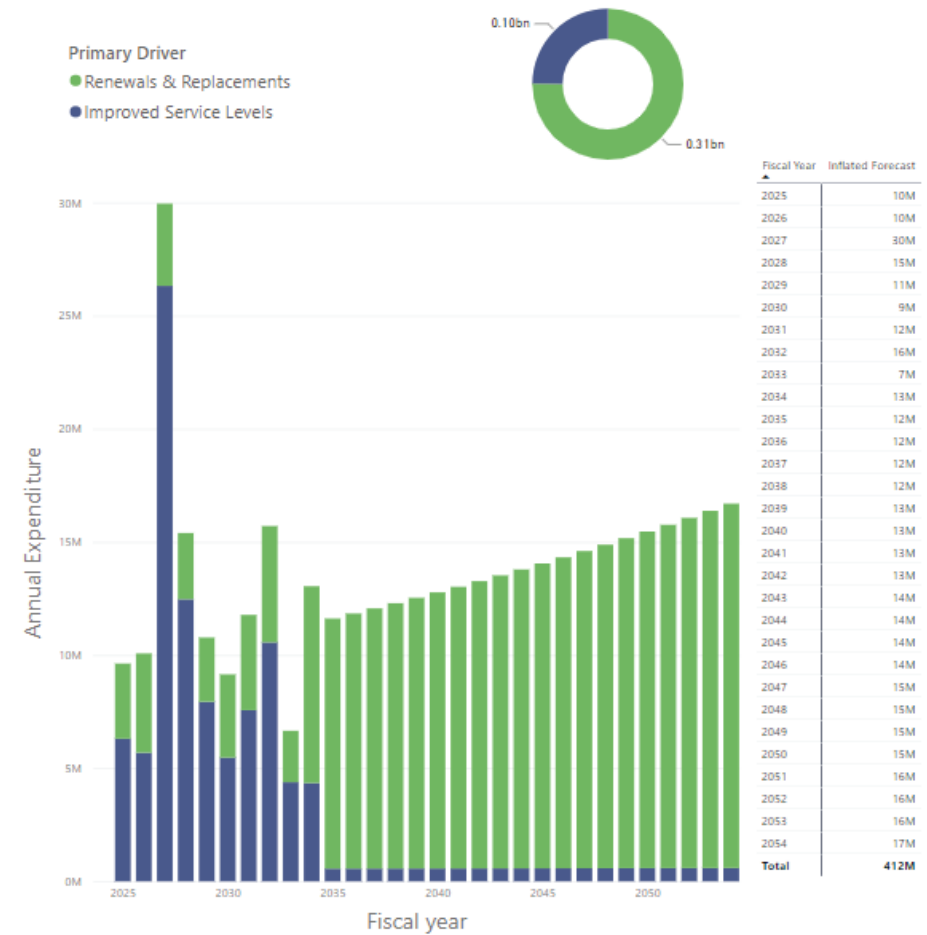
Solid Waste and Recycling

We are responsible for waste management and minimisation, with the aim of reducing the amount of waste that goes to landfill. Our work in this area includes: Education initiatives; Kerbside collection services; Used products reuse; Organics processing; Materials recycling; and, Transfer stations and community collection centres

Assets covered under the Resource Recovery portfolio are largely managed through operations contracts, which include asset management requirements and return of assets at the end of a contract. These include: Transfer stations and community collection points; The Material Recovery Facility; The Organics Processing Plant (until 2027); Burwood Landfill gas collection and treatment plant; and, Closed landfills.

Snapshot of planned projects and programmes over the next 10-years ²⁰	
Recycling and Transfer Station Improvements Programme	\$63.7m
Organics processing Plant Redevelopment	\$18.4m
Recycling and Transfer Station Renewals	\$10m
Solid Waste Plant & Equipment Renewals	\$8.6m
Kerbside Monitoring Programme	\$6.6m

Capital Expenditure Over 30 Years (Inflation Adjusted)



²⁰²⁰ For more detailed information (including assumptions), please refer the [Solid Waste and Recycling Activity Plans and Asset Management Plans](#).

CONCLUSION AND NEXT STEPS

Summary

The Infrastructure Strategy provides a comprehensive 30-year view of our city's infrastructure development, supported by the Financial Strategy as part of the Long Term Plan (LTP). This strategy encompasses critical sectors including water supply, wastewater management, stormwater systems, transport, facilities, parks, and waste management, ensuring they are robust, sustainable, and adaptable to future challenges. Managed through the Asset Management Plans and Activity Plans, our infrastructure assets are set for efficient and sustainable operation, prioritizing climate resilience and demographic responsiveness.

Key challenges addressed include enhancing data-driven management, maintaining and renewing assets sustainably, bolstering infrastructure against climate change and natural hazards, and integrating sustainable practices in urban growth. The strategy outlines decisive action areas: upgrading data systems, balancing funding for asset maintenance, developing climate-conscious investment principles, and supporting sustainable urban infrastructure development.

Over the next 30 years, based on our Asset Management Plans, we anticipate a \$24.67 billion infrastructure investment (adjusted for inflation), focusing on asset maintenance, climate resilience, and sustainable growth. The first decade is supported within the budget of the 2025-34 LTP, with the longer term estimates being used to guide continual planning and budgeting in subsequent LTPs.

Next Steps

Data System Enhancement: Implement improvements in data collection and management systems to provide reliable and accurate information for asset management and decision-making.

Sustainable Asset Management: Develop a balanced approach for capital and operational spending on asset renewals and maintenance. This includes considering divestment options for underutilized assets and accounting for whole-of-life costs in budgeting.

Climate Resilience Planning: Establish guiding principles for climate-resilient investments and engage with communities in adaptation planning. Increase the Council's capacity to understand and respond to climate risks and emissions reduction.

Supporting Sustainable Growth: Foster integrated infrastructure planning aligned with sustainable growth objectives. Focus on infrastructure that promotes active travel, public transport, and road safety, collaborating with central government, developers, mana whenua, and communities.

Monitoring and Reporting: Develop and implement a framework to monitor and report on the implementation and impact of the strategic actions. This framework will help in tracking progress, identifying areas for adjustment, and ensuring transparency and accountability.

Community Engagement and Feedback: Continue to engage with the community, seeking feedback on implementation progress and adapting strategies based on evolving community needs and expectations.

Regular Strategy Review and Update: Periodically review and update the Infrastructure Strategy to reflect changing circumstances, new technologies, legislative changes, and emerging community needs.

Appendix One: Citywide Population & Household Projections

At a Glance

- From early 2021 to June 2022 migration loss (in part due to COVID-19) coupled with a lower natural increase resulted in lower actual and projected growth nationally.
- In October 2023 StatsNZ released subnational population estimates for the year to June 2023. These indicated that **growth in the past year (July 2022 – June 2023) has been higher than projected**, with the city's **population estimated to be 396,200 at June 2023**.
- This significant increase has been driven by high international migration gains.
- The latest projections produced by StatsNZ are population projections from December 2022. [Advice from StatsNZ](#) suggests that household projections released in March 2021 may now be a better indication of future growth, especially in the short-term and medium (through to the end of the 2020's). In the longer term (2030's onwards) they are suggesting that we use the December 2022 projections, which project a lower level of growth than the March 2021 projections.

Future Growth Scenarios

For this LTP we have prepared two growth scenarios, both based on StatsNZ medium projections:

1. Future growth scenario one for all activities excluding Transport and Three Waters
2. Future growth scenario two for Transport and Three Waters

There are two scenarios (one for Transport and Three Waters and one for all other activities) due to the need to meet our obligations under the National Policy Statement on Urban Development, which directs us to factor in feasible development capacity over and above projected demand, which may not be developed.

We must include the NPS-UD competitiveness margins in the projections we use for planning for transport and three waters.

Future Growth Scenario One (All activities except for Transport and Three Waters)

Tables 1 sets out the high-level growth projections that should be used for all activities, with the exception of transport and three waters. **The projections used by transport and three waters are set out in Future Growth Scenario Two.**

Table 1: Future Growth Scenario One (All activities **except for Transport and Three Waters**)

Year	Population	Households	Household Growth
2024	400,360	156,120	
2034	432,920	167,471	+ 11,351 (2024 – 2034)
2054	474,880	183,776	+ 27,656 (2024 – 2054)

2024 – 2034

- Between **2024 and 2034** the population of the city is projected to grow by around 32,560 people (+8%) and 11,351 households (+6%), reaching a total population of around 432,920 in 2034.
- Throughout this period the average household size is expected to remain at 2.6 people per household in the metropolitan area of the city and 2.2 per household in Banks Peninsula.

2034 – 2054

- Between **2034 and 2054** the population of the city is expected to grow by around a further 41,960 people (+10%) and 16,305 (+10%) households.
- Throughout this period the average household size is expected to remain at 2.6 people per household in the metropolitan area of the city until around 2048 when it will decrease to 2.5 people per household. It is expected to remain at 2.2 people per household in Banks Peninsula.

2024 – 2054

- Between **2024 and 2054** the population of the city is projected to grow by around 74,500 people (+19%) and 27,600 households (+18%), reaching a total population of around 474,800 in 2054.
- Throughout this period the average household size is expected to remain at 2.6 people per household in the metropolitan area of the city until around 2048 when it will decrease to 2.5 people per household. It is expected to remain at 2.2 people per household in Banks Peninsula.

Future Growth Scenario Two (Used by Transport and Three Waters only)

The NPD-UD is part of the urban planning focus of the Urban Growth Agenda. It directs councils to remove overly restrictive planning rules and plan for growth, both up and out.

We also have to respond to changes in demand by allowing denser housing in areas where people want to live, that are well-connected to jobs, transport and community facilities.

The NPS-UD directs us to factor in feasible development capacity over and above projected demand, which may not be developed, and is required in order to support choice and competitiveness in housing and business land markets.

This additional 'buffer' is set at 20% above projected growth in the short term (up to ten years ahead) and 15% in the long term (11 - 30 years).

The development capacity must be:

- a) plan-enabled;
- b) and infrastructure-ready;
- c) and feasible and reasonably expected to be realised

This directive requires Transport and Three Waters to plan and provide infrastructure for over and above what StatsNZ is projecting.

The NPS-UD **competitiveness margin has been applied to the household projections only**, as these are the best indicator of future household demand. All **population projections** used throughout this document are the original projections received from StatsNZ in December 2022, no adjustments have been applied.

Table 2: Future Growth Scenario Two (To be used by Transport and Three Waters only)

Year	Population	Adjusted Household Projections	Projected Household Growth
2024	400,360	156,120	
2034	432,920	169,741	+ 13,621 (2024 – 2033)
2054	474,880	188,492	+ 32,372 (2024 – 2054)

2024 – 2034

- Between 2024 and 2034 the population of the city is projected to grow by around 32,560 people (+8%) and 11,621 households (+6%), reaching a total population of around 432,920 in 2034.
- To account for the NPS-UD competitiveness margins, we need to be planning for more growth than this across in our Three Waters and Transport activities (an additional 20% in the short term and 15% in the long term).
- Transport and Three Waters should be planning for household growth of around 13,600 (+9%) households between 2024 and 2034.
- Throughout this period the average household size is expected to remain at 2.6 people per household in the metropolitan area of the city and 2.2 per household in Banks Peninsula.

2034 – 2054

- Between 2034 and 2054 the population of the city is expected to grow by around a further 41,960 people (+10%) and 16,305 (+10%) households.

- Accounting for the competitiveness margins, Transport and Three Waters should be planning for household growth of around 18,700 households across this period.
- Throughout this period the average household size is expected to remain at 2.6 people per household in the metropolitan area of the city until around 2048 when it will decrease to 2.5 people per household. It is expected to remain at 2.2 people per household in Banks Peninsula.

2024 – 2054

- Between 2024 and 2054 the population of the city is projected to grow by around 74,500 people (+19%) and 27,600 households (+18%), reaching a total population of around 474,800 in 2054.
- To meet our obligations under the NPS-UD, Transport and Three Waters should be planning for household growth of around 32,400 households across the period between 2024 – 2054.
- Throughout this period the average household size is expected to remain at 2.6 people per household in the metropolitan area of the city until around 2048 when it will decrease to 2.5 people per household. It is expected to remain at 2.2 people per household in Banks Peninsula.

The demographic composition of our population is changing...

Over the thirty-year period between 2023 and 2053, the age composition of our population is expected to change significantly.

- Between 2023 and 2053, the number of people living in Christchurch City who will be over the age of 80 is expected to increase by around 109%, increasing from 4% of the total population to around 7% of the total population.

- The proportion of those over the age of 65 years is expected to increase by around 50%, from 16% of the total population to around 20%.
- The proportion of the population in the 0 - 14, and 40 - 64 year age groups is expected to remain relatively stable over the period between 2023 and 2053.
- The largest decrease is expected to be seen within the proportion of the population aged between 15 – 39 years. Falling from 37% of the population in 2023 to 32% by 2053.

Over the twenty-year period between 2023 and 2043, the ethnic composition of our population is also expected to change. Note: individuals may identify with more than one ethnicity, causing the ethnicity breakdown to exceed 100%.

- Between 2023 and 2043, the proportion of the population that identify as Māori, Asian and/or Pacific is expected to increase from 33% to 46%.
- The proportion of the population who identify as European or 'Other' is expected to decrease from 77% to 72%, over the same time period.
- The largest increase is expected to be seen within the proportion of the population who identify as Asian. Increasing by 62% over the 20-year period.
- Māori and/or Pacific populations are expected to increase 46% and 51%, respectively.

Appendix Two: General Assumptions

Assumption	Level of uncertainty and reason/s for this and implications/risks
<p>Growth/population</p> <p>The growth/population statistics are based on the 2018 Census and the Environmental Scan 2023. These statistics are a placeholder until the 2023</p>	
<p>The population of Christchurch City will continue to grow:</p> <ul style="list-style-type: none"> • 2024: 400,360 • 2034: 432,920 • 2054: 474,880 	<p>There is a low level of uncertainty regarding this assumption for years 1-10, and a medium level of uncertainty regarding this assumption for years 11-30. Achieving these levels of population and household growth is reliant on cooperation between Christchurch City and neighbouring district councils (Waimakariri and Selwyn), to achieve the agreed policy direction for settlement. It is also reliant on other external factors, such as immigration policies and trends, and economic opportunities. The Council must plan for growth and provide the right infrastructure at the right time to service growth demand. Planning and delivery of infrastructure to service growth development is under constant review and adjusted through the LTP and Annual Plans where required.</p>
<p>The number of households in Christchurch City will continue to grow:</p> <ul style="list-style-type: none"> • 2024: 156,120 • 2034: 167,471 • 2054: 183,776 	<p>There is a low level of uncertainty regarding this assumption for years 1-10, and a medium level of uncertainty regarding this assumption for years 11-30. The Council must plan for growth and provide the right infrastructure at the right time to service growth demand. Planning and delivery of infrastructure to service growth development is under constant review and adjusted through the LTP and Annual Plans where required.</p>
<p>The average household size will slightly decrease over time. Throughout this period the average household size is expected to remain at 2.6 people per household in the metropolitan area of the city until around 2048 when it will decrease to 2.5 people per household. It is expected to remain at 2.2 people per household in Banks Peninsula.</p>	<p>There is a low level of uncertainty regarding this assumption; it is based on 2022 household projections (StatsNZ) and reflects trends that occur with an ageing population. This will result in changes in average household demand on infrastructure and for services. Planning and delivery of infrastructure to service growth development is under constant review and adjusted through the LTP and Annual Plans where required.</p>

Assumption	Level of uncertainty and reason/s for this and implications/risks
<p>Over the thirty-year period between 2023 and 2053, the age composition of our population is expected to change significantly.</p> <ul style="list-style-type: none"> • Between 2023 and 2053, the number of people living in Christchurch City who will be over the age of 80 is expected to increase by around 109%, increasing from 4% of the total population to around 7% of the total population. • The proportion of those over the age of 65 years is expected to increase by around 50%, from 16% of the total population to around 20%. • The proportion of the population in the 0 - 14, and 40 - 64 year age groups is expected to remain relatively stable over the period between 2023 and 2053. • The largest decrease is expected to be seen within the proportion of the population aged between 15 – 39 years. Falling from 37% of the population in 2023 to 32% by 2053. 	<p>There is a low level of uncertainty regarding this assumption; it is based on StatsNZ December 2022 projections.</p> <p>An ageing population is likely to mean some levels of service will need to evolve to meet specific requirements of older residents. Levels of service are under constant review and can be adjusted through the LTP or Annual Plan as required. Older residents are more likely to be on fixed incomes and be more sensitive than other residents/ households to increased Council costs including rates.</p>

Appendix Three: Assumptions about asset life cycle

Water supply			
Asset type	Theoretical useful life	Where does the asset sit in its life cycle	Level of uncertainty (if applicable)
Reticulation	Cast iron – 120 years Steel – 100-120 years Asbestos cement – 60-80 years Blue PVC pipe – 30-60 years	13% < 5% TUL remaining (condition grade 5) All materials are heading towards a renewals peak at the same time.	Low level of uncertainty
Stations	Civil and structural – long asset life Mechanical, electrical and IAC – shorter asset life	Nearly 30% < 5% TUL 44% > 50% remaining TUL (condition grade 1)	There is a medium level of uncertainty associated with this assumption – a large number of start-up dates are missing
Treatment assets	Water supply treatment plants		There is a medium level of uncertainty associated with this assumption – the majority don't have start-up dates.

Wastewater			
Asset type	Theoretical useful life	Where does the asset sit in its life cycle	Level of uncertainty (if applicable)
Reticulation	Concrete – RCRR – PVC – 30-60 years Asbestos cement – 60-80 years EW/VC -	14% < 5% TUL A significant proportion of the network was renewed after the Earthquakes, so the renewal peak is less pronounced. RCRR (reinforced concrete with rubber ring joints) pipes make up a large proportion of the remaining poor condition pipes	
Stations	Civil and structural – long asset life Electrical and IAC assets – shorter asset life	13% < 5% TUL. High proportion, leading to renewals forecast spike in 2021	There is a medium level of uncertainty associated with this assumption, as the condition data is sparse
Treatment assets	Bromley WWTP Banks Peninsula WWTPs		There is a medium level of uncertainty associated with this assumption – many treatment assets don't have start-up dates.

Stormwater, flood protection, and control works			
Asset type	Theoretical useful life	Where does the asset sit in its life cycle	Level of uncertainty (if applicable)
Reticulation	Concrete – RCRR -	6.8% < 5% TUL. High proportion of these are RCRR pipes with EQ damage still, as well as brick and rock and earthenware	Low level of uncertainty
Waterway lining	Timber – 40 years Concrete – 100 years Rock -	Timber lining reaching the end of its useful life in peaks in 6-10 years, and 16-20 years 10% of network between < 5% and < 15% TUL	Low level of uncertainty (due to LDRP inspections)
Pump station assets	Pumps - 40 years Civil and structural – long asset life	Range from 1-51 years. Nearly 60% at condition grade 5. Remaining useful life of actual pump stations cannot be provided due to number of asset groups and components within a pump station	
Flood protection structures	Stopbanks - Valves – 100 years		Low level of uncertainty
Treatment and storage facilities	Lining Soakpit Basins	Approx 45% lining and 62% soakpits are condition grade 3-5	

Transport			
Asset type	Theoretical useful life	Where does the asset sit in its life cycle	Level of uncertainty (if applicable)

Carriageways	At least 80 years 'economic life'	23% of pavement layers (by number) beyond expected life	
Drainage (kerb and channel)	Concrete – 80 years	Approx 174 km (of total 3,512 km) beyond expected life – or 5%	
Footpaths	Asphaltic concrete – 25 years Concrete – 80 years	Approx 8 km (of total 2,682 km) of asphaltic concrete beyond expected life – or 0.3% Approx 0.8 km (of total 55 km) of concrete beyond expected life – or 1.5%	
Bridges Culverts	Concrete - 100 years Steel - 80-95 years Timber - 70-75 years Concrete – 90 years Steel – 50 years	Bridges and culverts due for full replacement now or overdue for replacement – 1% Bridges and culverts due for full replacement in 1-25 years – 23%	Medium level of uncertainty around year of construction – especially for older, masonry culverts
Retaining walls	Timber/earth - 50 years Concrete/steel/stone – 100 years	Walls due for full replacement now or overdue for replacement – 3% Walls due for full replacement in 1-25 years – 42%	Medium level of uncertainty around year of construction – especially for older, non-structural walls
Cycleways	80 years approx	Majority of off-road cycleways are less than 30 years old and in good condition	

Solid waste and recycling			
Asset type	Theoretical useful life	Where does the asset sit in its life cycle	Level of uncertainty (if applicable)
Transfer station – plants	Depends on future requirements and cost of refurbishment vs new options		
Transfer station – buildings	50-100 years, depending on future requirements and cost of refurbishment vs new	30-40 years old (Parkhouse, Styx Mill, Metro)	
Material Recovery Facility		Developed since 2000 (currently owned and operated by EcoCentral)	
Organics Processing Plant	Building - 50-100 years Aeration and biofiltration system – 25-30 years	Building commissioned in 2009	
Burwood Landfill; other closed landfills			

Parks			
Asset type	Theoretical useful life	Where does the asset sit in its life cycle	Level of uncertainty (if applicable)
Parks furniture	15-40 years	Varied Approximately 10,000 of 22,000 are unassessed or are due for assessment (less critical)	Low level of uncertainty as based on industry literature, performance observations and staff knowledge.
Sports equipment, Dog Exercise Equipment, Play Modular Unit, drinking fountains, play surfaces, exercise area, backflow	15-25 years	Majority in good condition	However, there is a high level of uncertainty regarding the age of many of the assets due to start up dates being largely unknown.
Hedge, tree planter, garden, turf	20-35 years	Varied	
Boat ramp, car park, stairs, track, shelter	35 years	20% average 70% good	
Boardwalk, gate, flagpole, bollard, viewing platform, cattle stop Fence, bridge, jetty, retaining wall, water tower, terraces, culvert	40-80 years	Approximately 13,000 fences (less critical) are unassessed Varied	
Buildings - toilets, information centres, depots, houses, sheds, pavilions	20-90 years	Varied	High level of uncertainty as age of many assets is unknown
Heritage assets	Scheduled heritage - perpetuity Artworks 10 years for murals, 20 - 50 years for sculptures Monuments - perpetuity	Varied	The standard renewals lifecycle approach is not applicable to scheduled heritage. Low level of uncertainty as creation dates are recorded

Facilities			
Asset type	Theoretical useful life	Where does the asset sit in its life cycle	Level of uncertainty (if applicable)
Libraries	60-70 years	A number were built in the mid-90s – will be nearing end of life by 2050	Low level of uncertainty
Community housing	90 years	Almost half of stock was developed during the 1970s; a quarter during	Low level of uncertainty

		1960s; these are due for mid-life refurbishments in the next few years	
Art Gallery		Opened 2003	Low level of uncertainty
Community facilities	70 years	60% > 50 years of age	Low level of uncertainty
Early learning centres	70 years	Acquired or developed in 1990s	Low level of uncertainty
Volunteer libraries	70 years		