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Purpose

The purpose of this combined Financial and Infrastructural Strategy (F&IS) is to provide a decision-making framework that enables the Council to make informed, prudent and sustainable investment decisions that balance the funding of the City's:

- strategic needs (the things we have to do to protect and enhance our infrastructure assets, to mitigate our risks, and to manage future growth) with its
- strategic wants (the changes and improvements we have to make in services, assets and outcomes for us to deliver our future vision for Wellington).

Strategic Overview and Purpose

Introduction

He toka tū moana, ara he toa rongonui - strong like a rock in the rapids.

A City's physical infrastructure is the basic foundation upon which its residents can thrive. Good infrastructure is critical but usually taken for granted. Poor infrastructure can bring a City to its knees – it can undermine economic confidence and – at worst – can undermine public health.

Good infrastructure is also expensive, which means that funding for infrastructure renewals, replacements and growth has to be prioritised and protected. At the same time, this investment must be balanced with affordability, intergenerational benefits and the Council's other investment priorities.

Why this strategy is important

The scale of the capital investment we need to make in our infrastructure assets is substantial. This level of investment to be affordable, both now and in the future, requires a robust and informed strategic planning approach that considers the most effective prioritising, timing and financing of these investments. Getting these decisions wrong may have serious consequences not only for our City's basic infrastructure but also for the Council's future financial sustainability.

At the same time, the environment in which the Council operates is rapidly changing. A combination of external pressures and risks, and the evolving expectations of our communities, means that we need to take a comprehensive and long-term view of the financial challenges we face, and a strategic plan to allow us to respond to them. Some of these emerging financial challenges include:

- The impacts of a global pandemic
- The increasing unaffordability of housing in the City
- A Mayoral Taskforce that highlighted challenges with three waters infrastructure
- The emergence of a new blueprint for the future shape of the City (Planning For Growth)
- A requirement to review our District Plan for the Government's National Policy Statement on Urban Development (NPS-UD) by mid-2022
- The closing of the Central Library due to seismic concerns with public safety
- The declaration of a climate emergency, and adoption of Te Atakura (first to zero carbon emissions)
- The emergence of the plan for Let's Get Wellington Moving (LGWM)
- An ambitious waste minimisation plan that aims to reduce waste to landfill by one third by 2026.
- A productivity commission review of Local Government funding that has resulted in no new funding sources for Local Government

The response to these financial challenges requires improvements to our levels of services both in operational areas and increasing the amount of infrastructure. In areas not specifically referenced in this document, we need to maintain levels of service at current levels. To achieve this, we have to make sure that:

- The impact on rates of the planned investment is included in the rates increases forecast across the 30 years of our long-term plan.
- We are able to fully fund depreciation on current assets to generate cashflows needed to renew assets as forecast across the 30 year infrastructure strategy.

It is important that we continue to raise awareness of Te Ao Māori where everything in the world is believed to be related or interconnected. This approach, including the relationship between humans and the rest of nature promotes being responsible kaitiaki. We intend to increasingly bring this focus on wellbeing and reducing our impact on the environment into our financial and infrastructure planning this commitment being the platform for the development of further work on integrating Te Ao Māori into the implementation of the resulting actions.

Objectives of the strategy

The overarching objective of the F&IS is to ensure that financial and infrastructure investment decision-making directly supports the Council's strategic objectives and the Long-Term Plan (LTP). Underpinning this, the F&IS also aims to:

- Outline the current health of the Council's finances and infrastructure networks
- Identify significant issues and costs over the next 30 years
- Identify the main options for managing the issues
- Enable effective financial and infrastructure investment decision-making by providing a framework to assess, prioritise, consult on and finance proposals
- Commit the Council to a set of funding limits and other financial measures to ensure that our long-term plans are sustainable and affordable costs
- Outline how we manage our assets and ensure sufficient funding is generated to maintain infrastructure networks and the services they provide

Principles of financial and infrastructure investment decision-making

The following set of principles are designed to enable consistent and effective financial and investment decisions, and they form the basis of the F&IS:

- **Affordability** – focusing on areas that offer the greatest outcome.
- **Fairness & intergenerational equity** – applying debt funding and depreciation to ensure ratepayers pay for assets as they are using them.
- **Sustainability** – investment priorities include areas that grow the economy and the Council’s rating base.
- **Maintaining a balanced budget** – each year the Council will raise sufficient income to fund the operating costs (including depreciation) of providing its services.
- **Managing our investments and equity securities** – we optimise the return on our overall investment portfolio, and provide diversity in the Council revenue sources.
- **Operating a policy on securities** – using our rates revenue as security on our borrowings.
- **Managing insurable risk** – we achieve an adequate level of insurance at acceptable value for money.
- **Maintaining transparency** – our priorities are costed and the funding methods and tools are clear to ensure the community is aware of our proposals and their implications.
- **Funding capital expenditure** – generally funded initially by borrowing and then repaying borrowing by rating for depreciation. Other funding sources include development contributions for infrastructure to meet the demand for growth, government subsidies and donations.
- **Funding operating expenditure** – funded through general and targeted rates, fees and charges, investment income, government subsidies (eg NZTA) and other funding sources.

Community Outcomes

To help prioritise our Long-term Plan investment we developed a Community Outcomes Framework to put community wellbeing at the centre of our planning. These community outcomes drive our investment choices across our infrastructure

Environmental	Social
<p>A sustainable, climate friendly eco capital</p> <p>A city where the natural environment is being preserved, biodiversity improved, natural resources are used sustainably, and the city is mitigating and adapting to climate change – for now and future generations</p>	<p>A people friendly, compact, safe and accessible capital city</p> <p>An inclusive, liveable, and resilient city where people and communities can learn, are connected, well housed, safe and healthy</p>
Cultural	Economic
<p>An innovative, inclusive and creative city</p> <p>Wellington is a vibrant, creative city with the energy and opportunity to connect, collaborate, explore identities, and openly express, preserve and enjoy arts, culture and heritage.</p>	<p>A dynamic and sustainable economy</p> <p>The city is attracting and developing creative talent to enterprises across the city, creating jobs through innovation and growth while working towards an environmentally sustainable future.</p>

Wellington Water Limited

Wellington Water Limited (WWL) provides drinking water, wastewater and stormwater services on behalf of client councils – Hutt City, Porirua City, South Wairarapa District Council, Upper Hutt City, Wellington City and the Greater Wellington Regional Council. WWL is a council-owned, shared service organisation. A representative from each council sits on the regional Wellington Water Committee, which provides overall leadership and direction for the company. Wellington Water is governed by a board of independent directors.

WWL aims to deliver services focusing on three customer outcomes:

- Safe and healthy water: ensuring a safe drinking-water supply and work to protect communities from exposure to the harmful effects of wastewater overflows.

- Respectful of the environment: seeking to avoid harm to the natural and built environment and, over time, enhance it for the benefit of future generations.
- Resilient networks that support the economy: maintaining reliable water networks that can withstand shocks and stresses, and future-proof those networks to support a strong regional economy now and into the future.

Water is of great significant to Māori /iwi. Our local iwi are Taranaki Whānui (the legal entity representing its interests is 'Taranaki Whānui ki te Upoko o te Ika a Maui') and Ngāti Toa Rangatira (the legal entity representing its interests is 'Te Rūnanga O Toa Rangatira'). Representatives from each iwi are members of the Wellington Water Committee to provide a local te ao Māori perspective and enable the role of iwi as partners, as envisaged under the Treaty of Waitangi, to be brought alive at the governance level.

Current Finance & Infrastructure Settings & Health

Our current financial position

The Council's current financial position is strong and compares well to other local authorities. We have a robust balance sheet with manageable levels of debt relative to the assets and income generating investments we own; as at 30 June 2020:

- Our total assets were valued at have a \$7.6 billion replacement cost. Our debt to income ratio of 128% was within our agreed limit of 175% and was lower than most metropolitan councils in New Zealand.
- We held income generating investments of almost \$468 million which would help offset our total level of debt of \$662 million if they were sold.

In February 2021, the independent credit rating agency Standard & Poor's confirmed the Council's credit rating at AA+/A-1+. This means we continue to have a very strong capacity to meet our financial obligations and commitments.

Operationally, we consistently set a tax (rates) to cover our net costs (after other revenues) to break even each year (a balanced budget). Our sources of income are diversified, meaning that more than one third (36%) of our operating costs are funded from sources other than rates.

How we fund capital expenditure

Capital expenditure represents expenditure on property, plant and equipment. Property, plant and equipment are tangible assets that are held by the Council (for example: bridges, libraries, swimming pools). Capital expenditure is funded from rating for depreciation, development contributions, capital funding, and restricted funds or through new or extended borrowings as outlined below:

- If the capital expenditure relates to the replacement (renewal) of an existing asset, that expenditure will be temporarily funded by borrowings. These borrowings will be repaid by rating for depreciation over the life of the asset. Any surplus rate funded depreciation, after paying for the replacement of Council assets, will be used to repay borrowings.
- If the capital expenditure relates to the construction or purchase of a new asset or to the upgrade or increase in service potential of an existing asset, that expenditure will usually be funded from new or extended borrowings. Borrowing is the most cost-effective and equitable way to do this as it spreads the cost of the asset over all the generations who will benefit from it, making it affordable to ratepayers today.
- On projects where based on financial prudence, the Council may impose a targeted rate to repay borrowings on an asset at a faster rate than over the full life of the asset.
- The Council will use capital funding from third parties to fund investment in new or upgraded assets (such as funding received from the NZ Transport Agency).
- The funding of capital expenditure from the sale of surplus assets is decided on a case-by-case basis. Funds received from the sale of surplus assets that are not applied to the funding of capital expenditure shall be used to repay borrowings.
- The funding of capital expenditure from restricted or special funds is decided on a case-by-case basis and is subject to the specified purposes and conditions governing the use of those restricted funds.
- If an approved capital expenditure project is not completed by the end of the financial period, the unspent funds may be carried forward to the next financial period to enable the project to be completed.
- The Council has agreed that Development Contributions are to be used as the primary funding tool for capital expenditure related to population and

employment growth for: water, wastewater, stormwater, roads, and reserves. The Council will continue to collect residual RMA based Financial Contributions on developments consented prior to 2005/06. In some circumstances, funds collected under either the Development Contributions Policy or the Financial Contributions Policy in the District Plan will result in a corresponding decrease in the amount to be funded from new borrowings.

How we fund operating expenditure

Establishing the level of operating revenue required to fund operating expenditure

Operating expenditure pays for the Council's day-to-day operations and services, from collecting rubbish and providing street lighting to maintaining gardens and issuing building consents. The Council will set its projected operating revenue at a level sufficient to meet the current year's projected operating expenditure, except where the Council resolves that it is financially prudent not to do so. When setting projected operating revenue at a level that is different from the level of projected operating expenditure the Council will have regard to:

- the estimated expenses of achieving and maintaining the predicted levels of service provision set out in the 10-year plan, including the estimated expenses associated with maintaining the service capacity and integrity of assets throughout their useful life
- the projected revenue available to fund the estimated expenses associated with maintaining the service capacity and integrity of assets throughout their useful life
- the equitable allocation of responsibility for funding the provision and maintenance of assets and facilities throughout their useful life
- the funding and financial policies adopted under section 102 of the Local Government Act 2002.

In accordance with these principles, the Council has determined that the following items will not be funded:

- *Non-funding of depreciation on Council assets.* The Council may elect not to fund all or part of the depreciation expenditure on specific assets in those circumstances where it is not financially prudent to do so. In accordance with section 100 of the Local Government Act 2002, the Council considers that it is not financially prudent to fund depreciation in the following circumstances:
 - where the original asset purchase was not funded by borrowings, or the original borrowings have been repaid, and
 - where, on an ongoing basis, the replacement of the asset at the end of its useful life will be funded by a third party, or
 - where the Council has elected not to replace the asset at the end of its useful life.
 - where a third party has a contractual obligation to either maintain the service potential of the asset throughout all or part of its useful life (or to replace the asset at the end of its useful life) and the Council already effectively funds this through operating grants/tariffs payable to the third party.
- *Non-funding of depreciation on waterfront assets.* The Council has transitioned the waterfront project 'in-house' during 2014/2015. This acquisition has necessitated a transition toward funding the depreciation of all waterfront assets by 2024/25. This transition funding will link the cost of funding to the benefits received over time.

Options available for funding Council services

The Council uses the following mechanisms to fund operational expenditure requirements:

- **General rates.** General rates are used to fund public goods where it is not possible and/or practical to clearly identify customers or users. The general rate is also used to fund activities where, for reasons of fairness, equity and consideration of the wider community good it is considered that this is the most appropriate way in which to fund an activity.

- **Targeted rates.** This form of rate is used where an activity benefits an easily identifiable group of ratepayers (such as the commercial or residential sectors) and where it is appropriate that only this group be targeted to pay for some or all of a particular service. For example, sewage disposal, water supply and the downtown targeted rate.
- **Fees and charges.** User charges are direct charges to people and/or groups who use certain Council services such as swimming pools. In these instances, an identifiable benefit exists to clearly identifiable people and/or groups and they are required to pay for all or part of the cost of using that service. It is noted that, since 2006, councils have been required to inflation adjust all income and expenditure within their 10-year plans. Where appropriate and with consideration to ‘ability to pay’ principles, user charges will be increased by the rate of inflation to achieve continued alignment with the funding policy targets. Grants and subsidies apply to some activities when income from external agencies is received to support that particular activity.
- **Borrowings.** In general, the Council does not fund operating expenditure by borrowing. The exception is to fund the impacts on ratepayer’s intergenerational equity or to fund expenditure over the period which benefits are received, such as weathertightness payments. Any borrowings associated with these expenses will be repaid over time.
- **Other sources of funding.** The Council also funds operating expenditure from other sources, including income from interest and dividends from investments held by the Council, lease income and proceeds from asset sales.

Financial trends and implications

While the current health of the Council’s finances remains sound, there are underlying financial trends that highlight the increasing financial pressures the Council is facing. While current debt levels are manageable, they have also been steadily increasing. Similarly, our strong asset base is placing increasing

pressure on our operating costs due to higher costs of maintenance and debt financing.

Looking ahead, the trend over the forecast period of this LTP shows a further weakening financial position. With the proposed capital program over the next ten to thirty years, the level of borrowings is forecast to increase to the highest ever level. The proposed level of debt causes further operational costs (e.g. interest and depreciation funding) which need to be funded – from sources like rates, fees and charges.

Setting funding limits at a prudent level is essential to ensure the ongoing financial sustainability of the Council.

The below graph shows the projection of the Councils net debt level against a debt to income ratio of 225%.



Asset ownership

Of the \$7.9bn of assets we own, approximately two thirds of these are core infrastructure assets for the provision of the three waters services and transport.

The current state of our assets

According to the best information we have, our transport assets are generally well maintained and in reasonable condition, see table below. For water assets however, the picture is not so clear. There are gaps in our knowledge about critical assets, this is essential to help WWL to intervene with planned maintenance or replacement before assets fail, and to drive an ongoing programme of renewal and enhancement. Achieving the desired level of performance will require significant investment over the next 30 years.

This improved data is expected to show a requirement to increase the amount of renewals, and increased capacity to accommodate the forecast growth and ensure our assets are resilient to earthquakes, storms and the impacts of climate change.

The three waters networks in particular, have a significant number of assets that have exceeded their expected useful life (see section on Managing our Infrastructure). As the 2019/20 Mayoral Taskforce on Three Waters noted, “as assets age, their condition deteriorates and they become increasingly prone to failures such as leaks and overflows that require a reactive operational response”.

A breakdown of the assessment of asset **data** is detailed below:

	Replacement Cost	Condition (1-5)	Performance (1-5)	Data confidence (A-E)	AM Maturity
Transport	\$1.6bn	2- Minor defects only	2 - Good minor shortcomings	A-B Minor inaccuracies (1)	Intermediate (3)
Water	\$1.1bn	3- maintenance required	2 - Good	A-B Minor inaccuracies (1)	Under review
Stormwater	\$1.2bn	3- maintenance required	3 - Moderate	A-B Minor inaccuracies (1)	Under review

	Replacement Cost	Condition (1-5)	Performance (1-5)	Data confidence (A-E)	AM Maturity
Wastewater	\$1.6bn	3 -Maintenance required	3 - Moderate	A-B Minor inaccuracies (1)	Under review
Parks, Sport & Recreation	\$948m	2- Minor defects only	2 - Good	B Minor inaccuracies	Basic (3)
Waste Operations	\$39m	3 -Maintenance required	2 - Good minor shortcomings	B Minor inaccuracies	Basic (3)
City Housing*	\$370m	3 -Maintenance required	3 Moderate	B Minor inaccuracies (2)	Basic (3)
Corporate property **	\$489m	3 -Maintenance required	2 - Good	B Minor inaccuracies (2)	Basic (3)
Community centres, halls & childcare facilities	\$14m	3 -Maintenance required	3 - Moderate	B-Reliable / C - uncertain	Basic (3)
Libraries	\$56m	2 - Minor Defects Only	2 - Good minor shortcomings	B-Reliable	Basic (3)

(1) Independent valuer rating 2020

(2) Independent assessments in 2019 & 2020

(3) Independent assessment 2021

Condition, data confidence and criticality are all based on a 5 point rating scale included in Appendix A.

Asset risks and issues

We face a number of substantial risks and issues:

- Asset replacement timing is fundamentally determined by asset management planning.

- Good asset management planning is reliant on the quality and completeness of the data and information held on the assets. This enables more accurate predictions of when to replace assets.
- Despite the overall assessment of the information in the table above, there are risks in maintaining asset networks. This strategy has focused on getting a better understanding of the criticality and condition of assets to

- enable and perform better asset management planning and reduce the risk of asset failure and service interruptions
- The Mayoral Taskforce identified several weaknesses in the way that water assets are managed; these have been presented to Elected Members and are now shaping the future management of these assets in Wellington City.

Challenges

The challenges below are the factors that are expected to have a significant impact on the Council over the Long-term plan, including significant infrastructure issues. A summary of the main challenges and responses is included below:

Challenge 1 – Infrastructure - Looking after what we have

While there is a requirement to provide for our growing population regionally, we want Wellington to stay compact making the best use of what we have.

The key challenge in looking after what we have is:

Renewing assets at the end of their life, and addressing backlogs and bow waves

The timing of asset renewal is driven by a number of factors including condition, utilisation, capacity and criticality. It is also impacted by an organisation's risk appetite, sometimes the cost saving of deferring the renewal of an asset may outweigh the risk of failure.

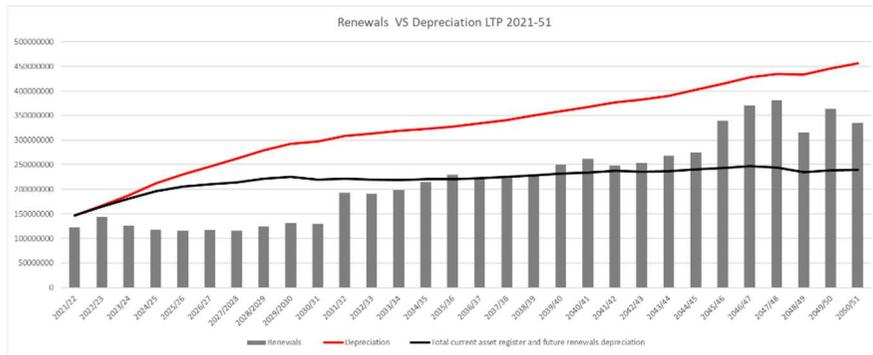
We have been improving the quality of our asset data to help us make better decisions on when to replace assets, so we can continue to deliver the target level of service at an efficient cost. This plan sees increased operating funding for condition assessment of our three waters assets to enable better informed decisions and management of this infrastructure.

A significant portion of our infrastructure assets were set-up after the Second World War and so are now becoming ready for replacement over the next 30 years (termed a bow wave). In some instances we also need to catch up on some of the replacements that have been needed (backlog) over the last few years.

The cost of replacing these assets is increasing due to higher costs driven by factors including:

- Increasing rates in the construction sector, indemnity from risk in consenting and legal challenges to consent decisions
- increasing central government regulation such as ensuring we are protecting biodiversity and improving water quality on behalf of our residents
- health and safety requirements during construction. We are continually looking at ways to be more efficient to be able to limit the impact on our borrowings and our ratepayers.

The timing of the renewal of assets is guided by our asset management plans. Over the 30 years covered by this infrastructure strategy we plan to spend a total of \$6.6 billion renewing this infrastructure. This is expected to increase the average condition score of the networks as a significant proportion of older and poorer quality pipes are replaced with better quality modern materials that, in the case of pipes, are more resilient to earthquakes.



*the above graph is inflated

The above graph shows that the budgeted renewals (grey bars) is lower than the depreciation funding for the first 14 years. This surplus depreciation funding will pay down debt. From year 15 where the amount of forecast renewals exceeds depreciation on the existing assets (black line) this will draw down on the debt balance. This indicates that there is a higher level of renewals as more assets are forecast to come to the end of their useful life. This indicates that sufficient renewal activity is taking place compared to the funding of existing (2021) assets.

The red line shows the full depreciation funding including depreciation on existing and new assets (from 2020 on). As these new assets often have a long life and do not require a replacement earlier in their life a depreciation surplus is created (the gap between the red line and the grey bars), which pays down debt which will be re-borrowed when these assets come to the end of their useful life. This gap / surplus is why we need to allow for headroom under the debt limit. See the Managing our Infrastructure section for the headroom requirements.

Challenge 2 – Housing and Urban Development - Growing & Changing

Population Growth

One-quarter of the regional growth or approximately 50,000 to 80,000 people over the next 30 years are expected to be accommodated in Wellington City, including the Let's Get Wellington Moving corridor and 'greenfields' development sites, which is the undeveloped land to the north of the city which will require new or upgraded infrastructure services to be provided to the new properties.

As a result of increased population growth, the region is facing several challenges, including:

- Maintaining compact urban form
- Housing demand and affordability
- Urban development feasibility
- Transport capacity driving the need to provide for mode shifts
- Infrastructure capacity
- Financial sustainability challenges for the future.

Many of these challenges are regional issues that are best dealt with together and not individually. They cross local council boundaries, and the maximum benefits can be had from tackling these together.

Response - Planning for growth

Wellington City Council has been working with other Wellington regional councils and Horowhenua District Council, central government and iwi on a Regional Growth Framework (RGF). The RGF team are currently working on a joint governance mechanism for adoption and implementation of the RGF. This will help to ensure that we manage growth across our region in an optimal way.

The RGF incorporates our 'Planning for Growth' work which includes the development and adoption of a draft spatial plan for the City leading to a full review of our District Plan. To ensure that we can accommodate the growth, significant investment will be required. Most notably in our three waters infrastructure, community facilities (including green space), and transport networks, including the development and improvement of walking and cycle networks and prioritising the development of public transport infrastructure.

The capital expenditure on assets for growth for the plan is \$0.56 bn over 10 years. In the latter years (11-30) covered by this infrastructure strategy current planning assumes growth will occur within existing urban areas. We propose to cater for growth as we renew our assets.

It is clear that this is not enough to cater for the forecasted growth in Wellington. Over the next two year the Spatial and District planning process will be completed in Wellington. Once that is set the level, type and place of infrastructure investment required for growth will be more clearly understood. This is another reason Council must maintain debt headroom to accommodate this additional investment in the future.

Further work is also being done over the next three years to assess what increased investment is needed in our community facilities and parks and reserves network to support the growth. This will be completed in time for the 2024/25-34 LTP. To enable investment in the increased capacity of infrastructure networks to enable growth, sufficient financial headroom is required to be maintained until the costs of the increased capacity is known. This is enabled with setting the debt:income ratio (debt) limit at 225% of the income level. This allows for the limit to be raised in the future to enable this expenditure.

Housing Affordability

Housing prices in Wellington have risen significantly recently and this has put considerable pressure on those on lower incomes and those buying their first home.

Influencing the availability of affordable housing – As the council is not able to sustainably deliver the level of social and affordable housing that residents in the city need, we plan to partner with central government and other housing providers. In March 2020 the Strategy and Policy Committee adopted a Housing Action Plan. This plan covers the 2020-22 Council triennium and focuses Council efforts on four key programmes:

- Planning for Growth – the development of a new Spatial Plan and District Plan changes that will support more development to accommodate population growth of 50,000 to 80,000 over the next 30 years.
- One-stop shop – a series of efficiency improvements to our consenting processes to support development of new housing
- Te Mahana (Homelessness strategy) – this is a collaboration with other agencies to ensure all Wellingtonians are well housed.
- Proactive development – we are actively supporting additional supply by working with commercial providers on converting office space into affordable apartments.

In addition to the above, over the coming year we will investigate how we can best increase affordable housing outcomes for the city.

We are also proposing to increase the access to residential rates postponement where there is a temporary affordability issue for ratepayers which may occur in the early years of the plan with double digit rates increases.

Response - Providing social housing

The Council is already one of the city's, and country's, largest providers of social rental housing, with more than 1900 homes across the city. WCC provides social housing to people on low-incomes and the city's most vulnerable people.

Currently, City Housing faces both a funding challenge, with an average \$9m annual operating deficit, and a financing challenge, as it is unable to meet the estimated cost to complete the Housing Upgrade Programme (HUP). The rents are also becoming increasingly unaffordable for tenants. Rents are currently set at 70% of market rent (a 30% discount on rental rates necessary to make tenancies more affordable), and market rental prices are increasing in Wellington (71% increase in market rents since the Deed was signed). There is not a single, simple solution to our financing and funding challenges – a number of changes are needed. WCC is seeking to achieve several objectives through the proposed changes:

- Commit to partnering with Central Government, mana whenua and other partners to increase social housing provision in Wellington
- Providing security of tenure and affordable rents for our tenants
- Improve our financial position for the remainder of the Deed period and manage housing cost pressures alongside other Council funding issues
- Complete the full upgrade programme, including meeting new regulatory requirements that were not in effect when the Deed was signed
- Creating new revenue sources to reduce reliance on rental income from tenants.

The Council has also set the Te Mahana strategy to end homelessness in Wellington. It weaves international best practice with culturally specific steps for ending homelessness, to establish short and medium-term priorities for action.

Challenge 3 - Environment

Respond to Climate Change - Te Atakura

Climate change is already here, and its effects are just beginning. When it rains heavily at a high tide, or when the waves from a severe storm crash against the coast, we are already experiencing early impacts of climate change. In Wellington City about \$7 billion in property alone is at risk from sea level rise according to the latest guidance from the Ministry for the Environment – and our cherished spaces like Civic Square, the waterfront, and Waitangi park are at risk if we don't move emissions to zero. Climate change includes the risk that rainfall will be more intense and variable, meaning we will need to increase our focus on interventions to manage increasing demands on our drinking water sources.

In response Wellington City Council has adopted Te Atakura -First to Zero carbon by 2050. This requires the reduction of city wide net emissions by 43% by 2030. Wellington City Council is committed to ensuring Wellington is a net zero greenhouse gas emission city by 2050 – with a commitment to make the most significant cuts in GHG emissions (43%) by 2030.



The Te Atakura Implementation Plan provides a measurement-based approach and identifies the potential for a 24% reduction in city-wide net emissions by 2030 – leaving a 19% shortfall to meet our 2030 target.

Adaptation to climate change is another area where sufficient debt headroom is required to enable future funding once the costs of these activities are more certain and the community can be consulted. Further information on our response across our Transport and Three Waters infrastructure is included in relevant sections of this Strategy.

Changing expectations of water quality

Community expectations around the quality of freshwater are increasing. This can be seen through the introduction of the National Policy Statement for Freshwater Management. It is also evident in the work of the Whaitua Committees setting expectation for water management.

The NPS and any Whaitua te Whanganui-a-Tara Committee implementation programme will come into effect during the life of this Long-Term Plan. This will affect the levels of service our community expects us to meet through our infrastructure, particularly for three waters. These increasing expectations will come into focus as a number of our key resource consents come to be renewed:

- Stage 1 of the global consent for stormwater discharge expires in 2023, for stage 2 and future consents there is a likelihood of more stringent conditions as the requirements of the National Policy Statement for Freshwater Management come into effect
- Consenting of any sludge minimisation plant in the coastal environment would be significantly more challenging than the current site given water quality concerns
- Landfill consents expire in 2026. Given the Southern Landfill consenting conditions are substantially about the management of water, there is a likelihood that conditions will be substantially more rigorous.

This Long-Term Plan includes significant investment in improving our three waters infrastructure that will significantly improve our ability to meet these changing expectations. Further investment however may be required depending on the speed and degree to which our community expect us to move.

Challenge 4- Resilience

Wellington has a strong awareness of risk from natural disasters. This has had a threefold impact on Wellington with the need to: fund the impacts of the earthquakes that have occurred, increase the resilience of our buildings and lifelines in line with new standards, and maintain financial headroom for potential future events and regulate and facilitate the safety of all other buildings in the city. Key challenges that we see related to resilience and risk are:

Making the city more earthquake resilient –

To respond to this challenge the Council is planning to increase the level of water storage and strengthen critical services such as the central library, town hall, St James theatre, TSB arena, Bond store and the Opera House.

- Regulate and facilitate strengthening work in the city – More than 500 earthquake prone buildings need work in the City, half of these need to be done by the end of 2027
- Congruent with the Wellington Resilience Strategy we plan to strengthen Council infrastructure through the renewal programme
- Focusing on critical lifeline areas – We are also planning to fund increased water storage in the city and secure water supply to the central city following a natural disaster event.
- Most of our buildings are not earthquake prone, but some are, and require strengthening. This includes key public use buildings like the library and investment in the arts – to maintain and strengthen the reputation of Wellington as a city of culture. Capital funding related to the cultural outcomes is to support the sector with high quality venues. The strengthening and refurbishment to allow for future use of the Town Hall and St James theatre, and remediation of the Central library
- Additional funding to respond to climate change impacts
- Review the risk of the investment portfolio in terms of asset concentration. The vast majority of income generating asset holdings are related to the

performance of the Wellington CBD either directly (Ground Lease, Commercial property, Parking revenues) or indirectly (Wellington International Airport shares). We are planning to review the investments we hold to determine whether it may be more appropriate to diversify the portfolio.

COVID-19

COVID-19 has had a sharp impact on the short-term financial position of the Council. Reduced revenue from fees and user charges along with loss of revenue from our airport dividend saw and operating deficit in the 2019/20 financial year.

Council's decision to debt fund the deficit in order to manage the immediate financial impact on rate payers has a short to medium term impact on this strategy. This is through the need to repay the borrowing over the first ten years of the Long-Term Plan.

To respond to future shocks like this, we are focusing on improving the technology to keep council running and updating Business Continuity Plans. We are also ensuring that there is sufficient capacity in the debt limit to allow for future unforeseen events.

Increasing risk and insurance pricing

In November 2016, we experienced a moderate earthquake that tested our city. It responded well, but there is more work to do to improve the city's resilience. With the climate also changing, we need to find ways of living with more severe and frequent extreme weather events. And we also need to factor in rising sea levels which will influence the capital investment required to protect our infrastructure assets.

We have insurance for natural hazard-related events on most of our infrastructure. Our assets are insured on a probable maximum loss basis for a

1-1000 year event. This means that we do not insure at a level to replace 100 percent of our assets, as there is a low level of risk that all assets would simultaneously be affected by a hazard event. We also have a self-insurance fund of \$10m for below-excess claims.

Due to the frequency of earthquake events in Wellington and insurance events worldwide, the cost of insurance cover has increased significantly, and the availability of cover has reduced. While we have increased our fees and rates to accommodate some of this increase, we have also developed a risk and

insurance strategy which justifies the Council accepting an increased level of risk by no longer insuring our assets at the same level.

When we are considering the level of acceptable debt relative to our limits, we are now careful to factor in a level of debt headroom needed for uninsured assets in the case of an event.

Future significant decisions

As a consequence of the challenges facing our long-term planning there are a number of key upcoming decisions that will have a material impact on our plans and this Strategy.

Joint Central/Local Government Three-Waters Reform

**Decision:
Year 1-2**

The Government and representatives of the local government sector are working through the Three-Waters service delivery reforms.

The government is expected to make a substantive policy decision April/May 2021, to enable legislation to be prepared. Each local authority would be asked to decide to participate in the new service delivery system in late 2021. In short, this would transfer the responsibility of 3-Waters from local government to a newly formed entity.

The reform process has a number of key milestones with the likely transfer of the entity assets to a new entity in 2023/24.

A package of supporting information will be provided to enable local government to engage with the community and consult on the proposal.

Given a substantive policy proposal is not currently available and the importance of continued planning for investment in three waters infrastructure, this Financial and Infrastructure Strategy assumes continued ownership of the waters assets by Wellington City Council, and management by Wellington Water Limited. The upcoming decision on reform is signalled however to make the community aware of the upcoming consultation of the proposed change. The implications of the proposal are still being assessed

across all entities that provided Three-Water services but would have significant direct and indirect impact on Council assets, borrowing and revenue. The full impacts of any reform proposal will be presented as part of consultation on the reforms and are likely to necessitate an amendment to the Long-Term Plan and substantive change to this Strategy.

The replacement value of the 3-Waters network is \$3.9 bn with an inflated capital investment of \$4.4 bn and \$7.1 bn of operating expenditure over 30 years

More information on the Three-Waters reform can be found on the following link: <https://www.dia.govt.nz/Three-Waters-Reform-Programme>

Let's Get Wellington Moving

**Decision:
Years 1-3**

Over the first years of the Long-Term Plan the LGWM programme will be presenting a range of significant decisions on their programme of work to the community for consultation and the Council for decision making. These will assess significant investment proposals in our transport infrastructure that will drive significant spend and change across the city.

The full financial impacts of these decisions are not yet included in our long-term budget with a need for alternative funding mechanisms to be identified by the programme. Depending on decision making of programme business cases and the success in identifying alternative sources of funding then significant additional spend and borrowing may need to be accommodated in this Strategy.

We have \$270m included in this Strategy for early LGWM projects, but Wellington City Council's total contribution to the programme could be more than \$1.4b.

Planning for Growth

**Decision:
Years 1-3**

Our current budget in this Long-Term Plan does not fully accommodate the level of growth investment required by a population growing by 50,000 to 80,000 over the next 30 years. This is because the outcomes and decisions around the current draft Spatial Plan are not yet confirmed.

Our draft Spatial Plan will be confirmed in the first year of the Long-Term Plan and the resulting review of our District Plan will take place over the early years of the Long-Term Plan. Decisions within both the Spatial Plan and District Plan will drive these further infrastructure investment requirements across our asset classes.

Where and when the city grows could drive varying level of infrastructure spend and these decisions will need to be accommodated in future Annual or Long-Term Plans. This is a city-wide plan and will require new and upgraded infrastructure of billions of dollars.

Community infrastructure investments

Also of note is the signal in our Long-Term Plan to review our network of community infrastructure assets. This review will examine our current network of libraries, pools, community halls and other facilities in light of decisions in our Spatial Plan. Decisions within that review will drive investment and funding requirements for community infrastructure over the coming decade.

Social Housing

**Decision:
Year 1**

As noted in the challenges earlier in this Strategy our City Housing portfolio faces both a funding and financing challenge. While the service has some cash reserves, given the financial challenge and the significant required upgrade programme facing the service, it will become insolvent from 30 June 2023 (The draft Long-term Plan provides Council debt funding for the operating deficit to enable operations to continue until a sustainable solution is agreed by Council).

The Council is actively working on options to ensure we can continue to provide this important service for our tenants, while also meeting our costs and commitments under the Deed of Grant. As part of this, Council is discussing options with Central Government, including immediate access to the Income Related Rent Subsidy for all eligible, existing tenants, funding capital costs through a special purpose vehicle in partnership with the Crown and/or establishing a Community Housing Provider (CHP).

Pursuing an option of establishment of a CHP would be a significant decision for the Council to take and would require comprehensive community consultation. Given options are still being pursued we don't know the nature of the decisions required but decisions are likely to be required in the first year of this Long-Term Plan.

The unbudgeted 10 year capital expenditure costs of the social housing upgrades and renewal programmes are \$402m.

Divestment programme

**Decision:
Ongoing**

To manage our finances, we will also be considering whether our assets are delivering the best value for Wellingtonians. Where we have assets that could realise more value we can look at divesting (selling) these assets and use the

proceeds to off-set our borrowings or reinvest in assets with a better financial return. This can help keep rates at an affordable level.

Assets that may represent an opportunity for Council include our shares in Wellington International Airport, our portfolio of ground leases, encroachments and road reserve, and some of our buildings.

These opportunities will be investigated and any decisions to sell strategic assets will need to be further consulted on with the community before any decision is made. The Investments in Wellington Airport and the ground lease portfolio alone is over \$469m.

Affordability

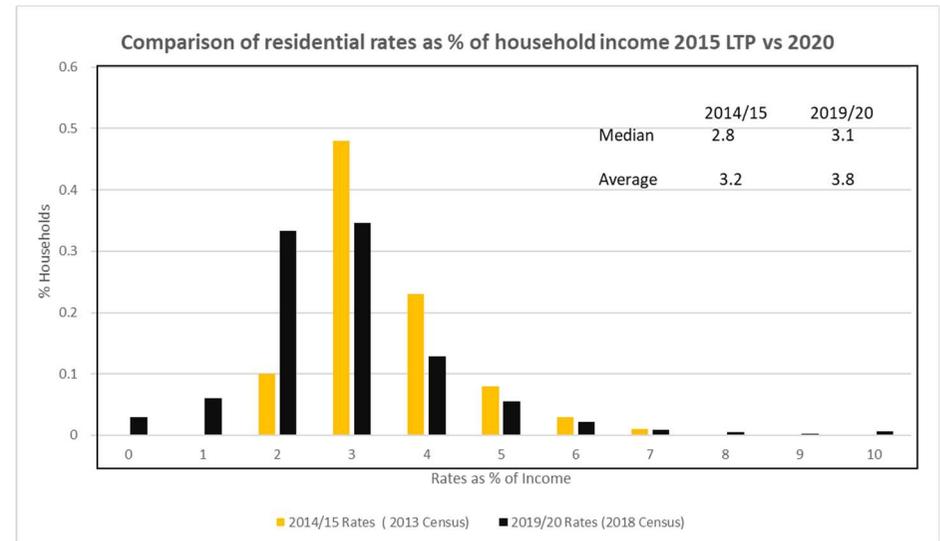
A majority of residents benefit from relatively high incomes with very high household incomes comparative to the New Zealand average. We also have a significant commercial sector that allows residents to afford higher levels of services than other smaller centres. There are still however sections of the community that struggle to afford living costs and are not easily able to access the services Wellington has to offer. The key challenges are:

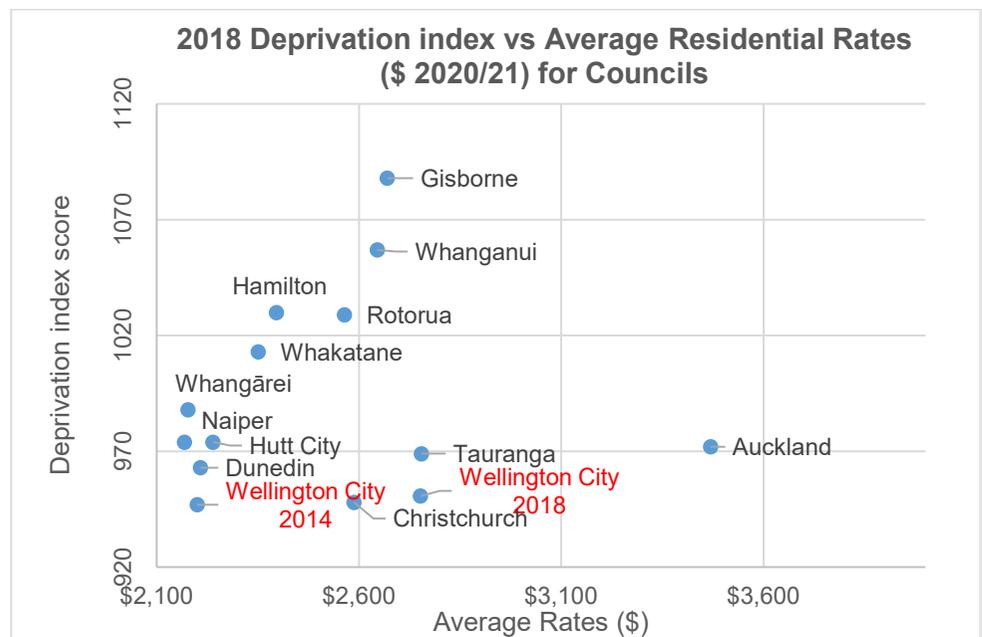
Affordability and accessibility (rates and services) –

i.e. making sure rates and services are affordable for residents and businesses. To try and ensure that there is a good level of affordability of rates we monitor rates as a portion of household incomes and have a policy on rates remissions. We also facilitate rates rebates and offer a ‘leisure card’ which offers services at discounted rate for community services card holders.

The analysis below shows that that the average rates (2020/21) is at a level close to 3.8% of household incomes (as at 2018 Census). This has slightly increased since this analysis was last done in 2017/18. The level of rates and distribution around the average is a subjective judgement around affordability. The 2007 Shand report reviewing Local Government rating suggested a benchmark of rates around 5% of household income being affordable.

Overall residential rates in Wellington are more affordable when compared to other Council’s rates across New Zealand, when this is compared to the relative deprivation index score, as can be seen in the table below.





The commercial sector rating affordability is also monitored and is critical in the review of the general rates differential whereby \$57.8m of rates are redistributed to the commercial rating sector based on affordability. Overall the rates expense for the commercial sector is relatively low as a proportion of Income and as a proportion of profit. The proportion in the wholesale/retail and hospitality sector is higher than other sectors and has risen by half a percent as can be seen in the table below.

The commercial sector rating as a proportion of profit and income can be seen in the table below:

Sector	2020	2017	2020	2017
	Rates % of income	Rates % of income	Rates % of profit	Rates % of profit
1 Agric/Mining/Utilities	0.59%	0.41%	3.56%	2.67%
2 Manufacturing/Construction/Transport/Storage	0.12%	0.13%	1.28%	1.48%
3 Wholes/Retail/Hospitality	0.18%	0.14%	4.96%	4.37%
4 Fin/Business	0.25%	0.20%	0.82%	0.71%

Council is working with central government and other Councils on a Ratepayer Financing Scheme (RFS) to support building owners. The RFS would allow a collection of Local Authorities to make use of the inherent high credit quality of local government rates charge security to access very efficient and flexible financing from the capital markets and then pass on these financing efficiencies to ratepayers.

The scheme could be used to provide rates payment flexibility to ratepayers facing affordability issues and is akin to a reverse equity mortgage. The RFS could also be used more widely to provide property improvement loans or deferred development contributions. Loans could be related, for example, to helping ratepayers to invest in required seismic strengthening work.

The Council is currently championing the next steps with the RFS, working with Auckland Council and Hamilton City Council in the first instance, following which will be gaining formal DIA support. It is hoped this stage will be completed by July 2021.

In addition the Council has reviewed its rates postponement and remission policies and is proposing more accessible policy criteria.

Future Finance Settings & Health

Introduction

The Council is committed to making some of the largest capital investments it has ever made over the next ten years. This level of investment is needed to ensure that the City's core infrastructure (three waters, transport) is maintained and optimised, to accommodate an expected population growth of between 50,000 to 80,000 people, and to respond to key challenges such as climate change and earthquake strengthening. We are projecting that these investments will increase the value of the Council's (non-land) assets by around 15% over the next ten years (from \$7.8 billion to \$9.0 billion). Looking further out, we are expecting the value of our assets to more than double over the following 20 years (to between \$20 billion and \$30 billion by 2050).

Understanding, modelling and managing the financial impacts of these necessary investments is critical. We need to be confident that the rate payers of both today and the future can afford this growth in assets, and that the Council can maintain its current position of financial sustainability.

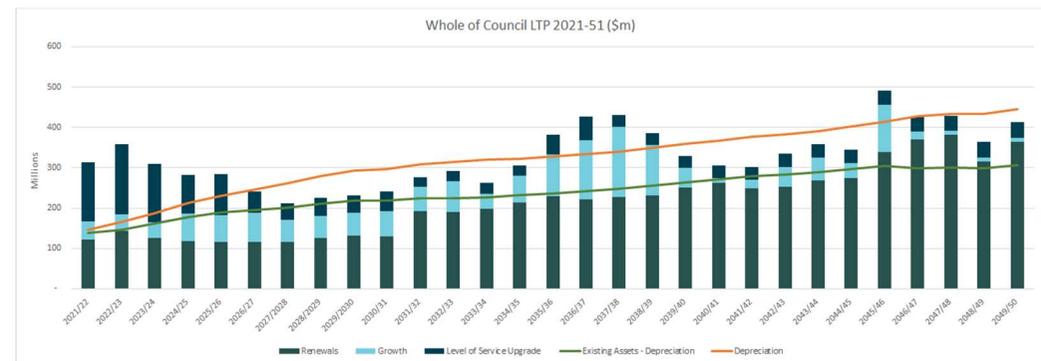
Investing in Infrastructure

Forecast growth in asset ownership

There are three main drivers of the growth in the Council's asset base which are the need to:

- Upgrade levels of service, replace or renew existing assets
- Respond to population growth and the changing expectations of our communities
- Respond to emerging risks such as climate change and earthquake strengthening.

The chart below summarises the main drivers of our planned capital expenditure will be invested over the next thirty years:



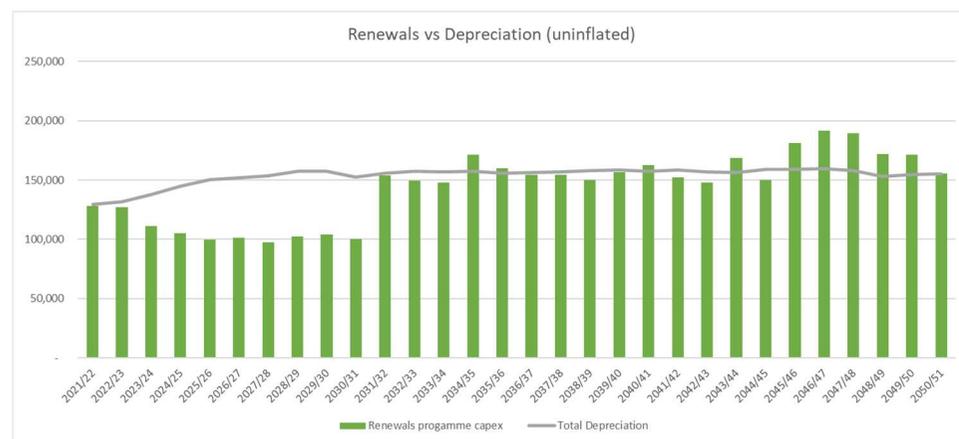
*The above graph is inflated.

Planned capital expenditure

This necessary growth in the value of the Council’s asset ownership will require substantial investments in capital expenditure. The figure below summarises planned and projected capital expenditure over the next 30 years, showing the split between renewals, upgrades and growth (excluding off balance sheet investments).

2021-31 LTP	10 Years		30 Years	
Renewals	1,222,466,853	46%	6,910,235,573	68%
Growth	555,842,247	21%	1,691,687,014	17%
Level of service	884,340,460	33%	1,573,166,196	15%
Grand Total	2,662,649,561	100%	10,175,088,783	100%

This level of capital investment cannot be funded solely from the cash generated by depreciation of the current asset base. The graph below highlights the increasing gap between the capital funding we raise through rates (via depreciation) and to total capital funding we need to deliver our planned expenditure. This gap will need to be funded through other means, and primarily through increases in our levels of debt.



*The above graph is uninflated.

Funding and financing our plans

To manage our finances, we need to consider several factors such as the rates we charge, the level of service we provide and the amount of debt we hold. We can also consider whether our assets are delivering the best value for Wellingtonians.

Meet increasing funding needs

The significant increase in operational and capital costs is a considerable affordability challenge for the Council. These cost increases come from the challenges outlined in this Strategy. Increasing our asset investment puts extra pressure on Council’s finances and results in increased debt and operating costs. This is because we fund investment in assets to improve our infrastructure by borrowing – we then spread the cost (debt repayment) via rates across the years the asset is utilised – ensuring that those who use the asset pay for the asset.

The increased investment in infrastructure to provide for growth is proposed to be recovered through development contributions over time as new lots are created and new houses and apartments are built across Wellington. This means there will also be more properties to share the rates across, reducing the impacts on existing ratepayers.

The way in which the planned significant cost increases are proposed to be addressed are as follows:

- Significantly increase debt funding, and increase the debt:Income debt funding limit from 175% to 225%. We will seek to maintain our strong credit rating of AA+ to ensure the cost of this increasing debt is minimised where possible. Bonds, including green bonds will be used where appropriate also.
- Significantly increase rates funding and the rates funding limit to \$465m for the first 3 years and \$630m for the next 10 years

Rate limit year 1-3	\$465,000,000
Rate Limit year 1-10	\$630,000,000

- Partnering with other entities (e.g. Government agencies, Property developers) to either deliver outcomes without the full cost being funded by Council, or enabling commercial incomes to offset costs
- Use of a Special Purpose vehicle to enable delivery of a capital project but not with Council debt, whereby beneficiaries still end up funding the project
- Divestment of risky or lower performing assets to reduce borrowings or enable higher performing investments
- Reducing cost by increasing risk – Council has options to reduce the amount of insurance cover taken to limit its exposure to insurance cost increases by accepting a greater proportion of uninsured risk
- Increasing other non-rates revenue streams such as fees and charges and returns on commercial investments.
- New Revenue streams will be advocated for those that require Crown support and/or legislative change such as congestion charging/travel demand management, parking levies, user charges etc.

We currently have moderate levels of borrowings and borrowings limits to be able to invest in the infrastructure required to ensure there is enough capacity for our growing population and have a buffer against risks. We are proposing to increase the limit on our levels of borrowings relative to income from 175% to 225%. This is still well within the limits of 285% for financial covenants with Local Government Funding Agency. This limit is expected to cater for the nominal level of net debt, the amount of ‘headroom’ cover to compensate for the lack of insurance cover for a 1 in 1000 year event, and the amount of headroom of depreciation funding in excess of renewals expenditure to facilitate future renewals expenditure when this is in excess of the depreciation funding.

To maintain a healthy balance sheet and reduce the general rates burden, alternative financing and funding arrangements are being considered for a number of significant projects including social housing upgrades and renewals from 2024/25 (\$402m), Sludge dewatering plant (\$147m-\$208m) and Lets Get Wellington Moving (LGWM) \$1.38bn. Although the intent is for these costs to sit ‘off balance sheet’ it is important to note that Wellingtonians will still be required to pay for these investments over time.

There is also risk that alternate solutions do not eventuate and if these significant projects are to continue, Council will need to raise the debt itself. It is therefore prudent to maintain headroom to mitigate against this risk.

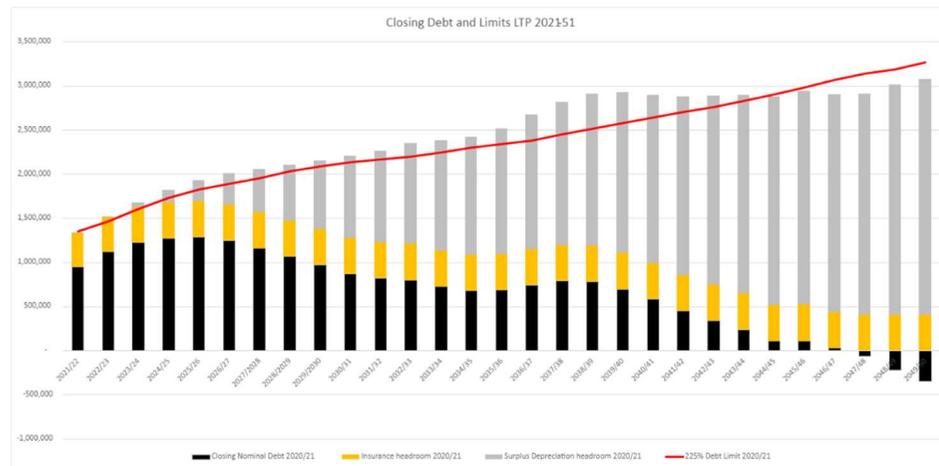
Responsible and prudent management of debt

The Council has headroom to increase its level of debt as a means of financing the significant increase in capital expenditure and the gap between depreciation funding and the capital cost of replacing our end of life assets. Increasing debt levels needs to be managed responsibly to avoid placing unsustainable pressures on future budgets and rates levels. As we plan to increase our levels of debt, we need to be confident that we have properly considered the following factors:

- That the timing, value and returns on planned investments are understood and modelled
- That necessary debt facilities, credit rating and security is in place and is achievable in the medium to long-term
- That the future cashflows needed to repay the debt will be available
- That future rate payers can afford to service debt interest and repayments
- That future rate payers can afford the operating cost implications of a bigger asset base
- That we maintain the financial headroom below the limit to deal with known future financial costs

- That we maintain the financial headroom above the limit to deal with known issues (without quantified costs) and risk and opportunities to invest.

We use strategic financial and asset planning, and the modelling of future scenarios and risks to provide reassurance that our capital expenditure planning is affordable. A powerful tool we use is to ensure the ratio of our debt to the revenues we generate are maintained within responsible limits. The debt limit of 225% debt:revenue ratio is proposed as an appropriate and prudent limit to ensure our debt levels remain sustainable. The graph below shows the forecast movement in our debt/revenue ratio over the next 10 years, based on our planned increases in rates and capital spending:



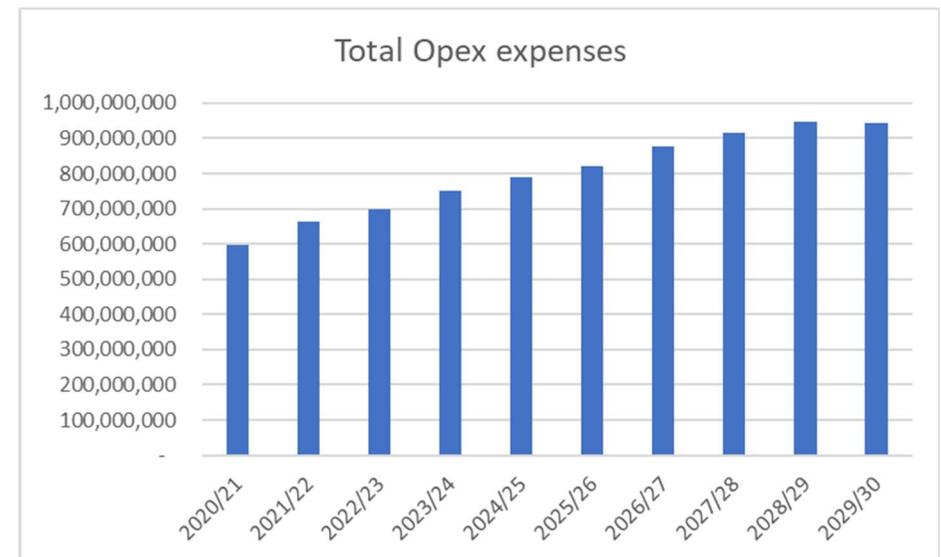
Understanding and managing the impacts on operating expenditure and rates

Another critical impact of funding capital expenditure through increasing debt as well as through depreciation funding is on future operating expenditure (and therefore on future rates). As both our asset base and our level of debt grow,

so do operating costs of debt financing and asset management and renewals. These increasing cost pressures include:

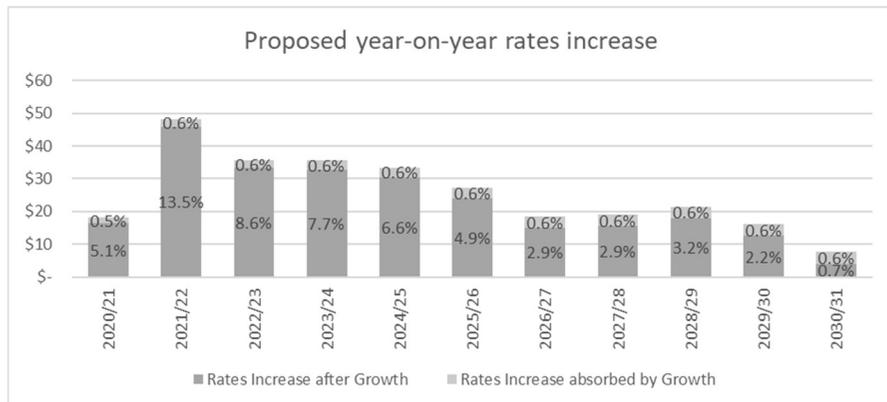
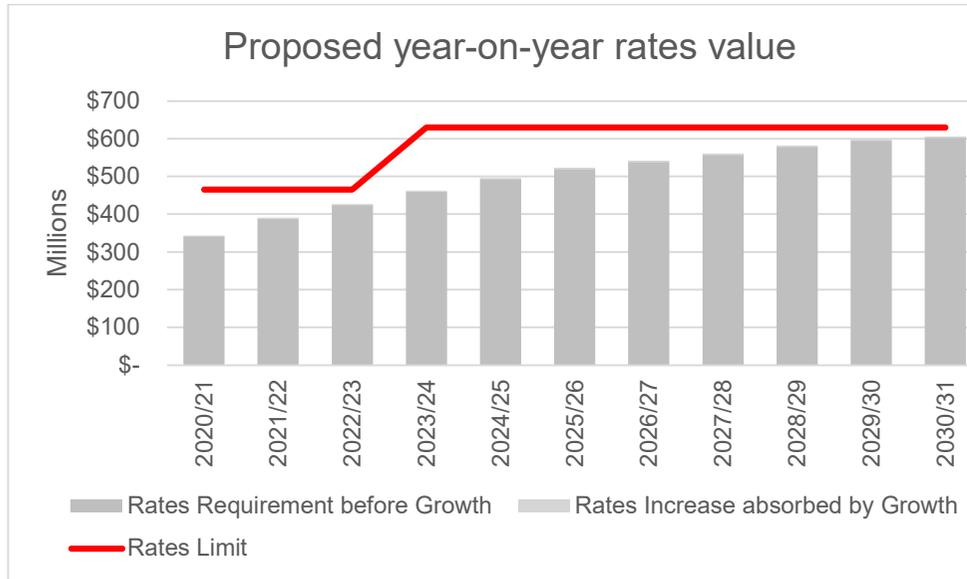
- Increasing interest payments as the debt principal increases
- Increasing depreciation as the value of total assets increases
- Increasing costs of repairing and maintaining a larger portfolio of assets.

The graph below shows how operating costs are projected to increase over the next 10 years as a result of our planned capital expenditure and capital funding:



*The above graph is inflated.

Over 60% of the Council's operating revenues are currently generated through rates. The graph below shows the projected increases in rates that will be needed to fund the ongoing maintenance and management of our increasing asset base, all services, and to finance our increasing level of debt:



Ability to deal with future issues and challenges

This F&IS provides a framework for enabling the Council to make the needed investments in infrastructure and other assets and services in a way that is affordable, fair and sustainable. It also provides transparency over the main risks and impacts of this level of investment, and specifically on future rate increases. By remaining true to the principles and targets set out in the strategy, and through careful monitoring against these measures, the Council can have confidence that it will achieve its strategic objectives.

Assessment that it is prudent and sustainable

Measure	Current Target (Limit)	Future Target (Limit) 10 Yrs
Financial Measures		
Debt to revenue ratio	175%	225%
Rates affordability (rates as a share of HH income) - % of HH with 5% or more	3.8% Average	<5% Average
Level of income from sources other than rates	36%	45%
Investment returns	Greater than or equal to the weighted average cost of borrowings	Greater than or equal to the weighted average cost of borrowings
Credit Rating	AA+	AA+

Measure	Current Target (Limit)	Future Target (Limit) 10 Yrs
Rates requirement	\$391m	\$606m
Net Debt level	\$948.8m	\$870.9m

Managing our investments and equity securities

The Council currently maintains equity interests valued at \$416m as at 30 June 2020.

The primary objective of holding and managing investments and equity securities is to optimise the return on the overall investment portfolio. Investments are also held for achieving Council’s strategic objectives and to provide diversity to the Council’s revenue sources. For non-strategic investments, the target return for investment is to achieve an average return over time greater than Council’s long-term cost of funds, currently forecast at 3.4% per year. The Council’s investment policy sets out the mix of investments, strategies and other policy considerations in detail.

The Council operates on a “net debt” basis, and does not separately maintain significant long-term cash investments. The general policy with respect to surplus short-term cash is to invest any short-term surplus cash or to temporarily reduce borrowings.

Equity and financial investments are divided into 4 categories:

- Cash and Cash Equivalents
Cash is held for liquidity purposes like the pre-funding of debt maturing within 12 months, or short-term cash surplus investments.

- Income generating commercial debt instruments
These are principally loans to other organisations (on commercial terms) to deliver a cash-flow return to the Council.
- Income generating commercial equity investments
The Council currently maintains a 34% shareholding in Wellington International Airport Limited (WIAL).
- Income generating commercial property investments
The Council’s ground leases and land and buildings are held primarily for investment purposes. The Council periodically reviews its continued ownership of investment properties by assessing the benefits of continued ownership in reference to strategic benefit, financial return, risk and opportunity cost.

The Council does not target a financial return from its strategic investments. These are divided into two categories:

- Non income generating investments
This includes loans to other organisations, and equity investments in Council Controlled Organisations. The Council’s non-income generating investments are held for strategic or ownership reasons.
- New Zealand Local Government Funding Agency Limited
The Council invests in shares and other financial instruments (including borrower notes) of the New Zealand Local Government Funding Agency Limited (LGFA) and may borrow to fund that investment. The Council’s objective is to ensure that the LGFA has sufficient capital to remain viable, enabling it to continue as a source of debt funding for the Council. The Council may also subscribe for uncalled capital in the LGFA and be a Guarantor.

The Council’s investment policy sets out the mix of investments, strategies and other policy considerations in greater detail.

Managing and improving infrastructure

Introduction

The core infrastructure assets are critical to the city's economy and quality of life. Our transport activity has a replacement value of \$1.6 billion and includes 700 km of city roads, as well as accessways, 900 km of footpaths, 38 km of cycleways, parking facilities, 119 of traffic signals, over 20,000 street lights, 135 km safety fences, handrails and guardrails as well as other transport network assets.

The Council owns the Three Waters networks with a replacement value of over \$3.9 billion which includes 67 reservoirs, 105 pumping stations, over 2,727 km of underground pipes, 165,000 fittings valves and hydrants, 18 km tunnels and storm network run-off infrastructure.

We have a significant portfolio of built property assets worth over \$1.1 billion which includes Venue buildings, Community buildings and libraries, social housing, Commercial buildings and operational buildings such as Municipal Office building and Civic Administration building.

Replacement value of council assets

Group	Amount (\$m)
Three waters	\$3,897
Transport	\$1,685
Property	\$489
City Housing	\$370
Parks Sport and Recreation	\$614
Waterfront	\$334
Other	\$275
Total (excluding land)	\$7,664

**some of the built portfolio is also within other groups*

This strategy focuses on core infrastructure (Three waters and Transport) however the principles and processes discussed generally apply across all our asset networks.

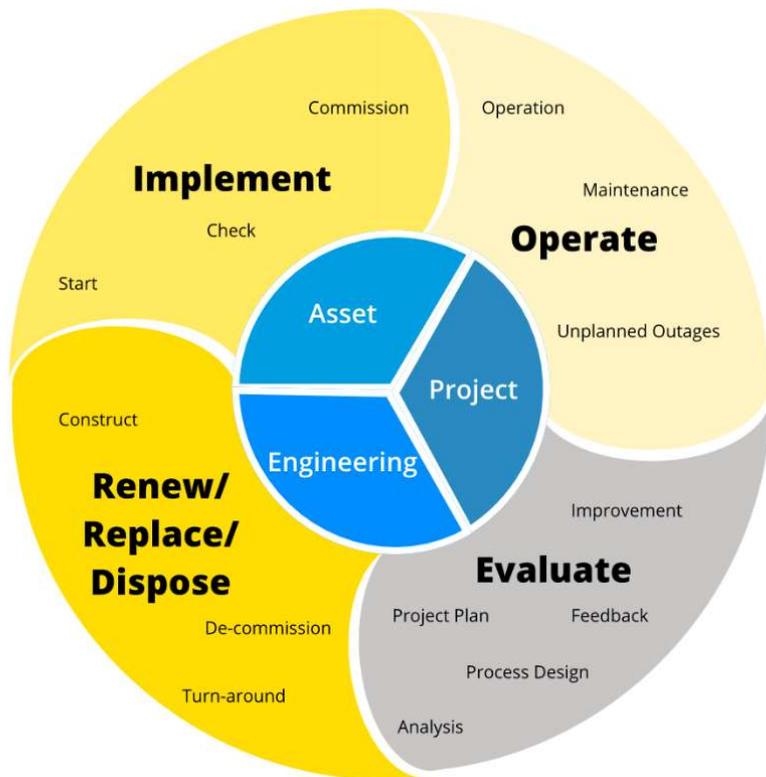
Asset Management is the key driver to the delivery of asset-based services to contribute to the Community Outcomes for the city. A good asset management plan is an enabler to inform our decision making for the Long-Term Plan.

Asset Management is intended to deliver required services to defined standards, cost effectively and sustainably over the long-term. Asset Management supports providing these services sustainably over the life cycle of the asset. It is intended to provide information required by elected members to understand the issues and risks associated with decisions they make on behalf of the community.

Our approach to how we manage our assets portfolio is guided by the following:

Lifecycle Management

The lifecycle management approach, guided by our asset management plans, alongside expert advice from external valuers covers the full life of our assets. It defines the monitoring, operations and maintenance of our assets, as well as renewal upgrade of assets at the end of their useful lives. The objective is to strike a balance between maintaining ageing assets and renewing and replacing those assets, to achieve the lowest long-term cost. As such, we consider lowest long-term/whole of life cost (rather than short term savings) when making decisions. The diagram overleaf depicts the key stages of an asset's during its lifecycle. Not all assets will trigger all of the stages in the lifecycle diagram and it is merely a high level representation of the key stages of an asset life span.



Asset data

We have continued our substantial data collection program across all core infrastructure (Transport and Three Waters). This information has been used to determine asset value, asset life and forecast renewal programmes. Our forecasting assumptions are based on the available information on age, criticality, asset quality, condition, remaining life and value to inform depreciation and renewal programmes.

As part of this Strategy a focus is on improving the knowledge of the condition and criticality of our underground assets and our property portfolio. This will inform our long-term renewal programme and provide a higher level of accuracy in our future forecasts. Information on the data quality and

completeness of our asset data for Transport and Three Waters is included in the relevant sections of this Strategy.

Critical Assets

Central to managing risks, hazards and resilience is the criticality of assets. Critical assets are those that are likely to result in a more significant financial, environment and social cost in terms of impact on organisational objectives and agreed level of service. This does not necessarily mean they have a high probability of failure. The more critical or significant an asset, the higher degree of pre-emptive maintenance it requires. We have a gap in the criticality ratings for some of our core assets with a good understanding in our Transport network along our lifeline routes and an improvement required in our Three Waters network. The investment in improving our asset knowledge is part of the data improvement collection and update programme in the asset data section above.

An asset inspection program (condition scoring) for waters infrastructure, asset management systems improvements and data collection technology has been boosted with \$7m of government stimulus funding for participation in the Three waters reform process. This will focus on critical assets to enhance our understanding of asset condition.

Renewals cycle

Prioritisation for renewals is established using a risk-based approach. In general terms, assets are maintained and rehabilitated until they reach the end of their useful life. Asset criticality is a fundamental driver of the renewal cycle of an asset. It determines whether an asset can continue being used until signs of failure are present or if it must be renewed before failure can occur. Assumptions about an asset's useful life are made upon construction and consequently updated periodically based on:

- Age and condition profile
- Performance and customer service issues
- Growth and changing demands

- Criticality and risk
- Failure rates
- Ongoing maintenance requirements
- The differing economic lives of individual assets

The rates of the current renewals are based on age as a proxy for condition and it is recognised a large proportion of Three Water assets have exceeded the theoretical useful life. The condition of the Three Waters assets is not fully understood and whether they will create additional unplanned renewals. As more is known about the condition of these assets, through an increase in the operational budget, the planned condition data assessments will provide greater certainty over our renewal programme and long-term budgets.

Asset Information Systems

We have been investing in improving our asset data systems for the last five years and integrating our data management systems. This enables source data (in the field) to be used in our modelling to more accurately forecast renewals cycles and costs etc. A significant investment has been made in the last year to enhance our property portfolio data to align to the same level as transport. WWL is undertaking a similar initiative for the Three Waters assets.

Growth

One-quarter of the regional growth or approximately 50,000 to 80,000 people over the next 30 years are expected to be accommodated in Wellington City, including the Let's Get Wellington Moving corridor and 'greenfields' development sites, which is the undeveloped land to the north of the city which will require new or upgraded infrastructure services. The planning for growth project is continuing and it is anticipated an increase in investment of new and replacement assets is required to increase capacity for growth. As this work is not complete we need extra headroom in our debt levels to facilitate this. For further details on our growth assumptions, please refer to our significant forecasting assumptions available on our website (<https://wgtc.cc/ltp>) alongside this Strategy.

Significant Issues

The Council's criteria for assessing the degree of significance of a decision relating to assets are:

- the level of importance to Wellington City
- the level of community interest
- the consistency of the proposed decision with existing policy and strategy; and
- the impact on the Council's capacity and capability – greater than 10% of rates revenue

High Level Infrastructure Challenges

The key infrastructure challenges underpinning the Strategy for our infrastructure assets include:

- Aging infrastructure – indicates there may be a backlog of deferred renewals and forecasts show a future wave of renewals
- Resilience – natural disasters, environmental and climate change
- Affordability – ability to maintain the current level of service from the available funding
- Phasing of investment to ensure that infrastructure is not a constraint on growth
- Increasing the capacity of existing infrastructure to accommodate growth
- Industry capacity to deliver

Deliverability

There is a risk that the full capital programme is not delivered in each given year. In the past up to 25% of the capital work programme has been carried forward to subsequent years. This is usually caught up and does not translate to 25% under delivery of the full capital programme.

We are also planning for a significant uplift in the level of investment in infrastructure (\$1.1bn 10 year increase from the last LTP) and this will create further pressure on delivery.

Internally, we are currently building capability with a Project Management Office to increase our capacity to deliver this significant capital programme. We are also building Strategic Asset Management capability to improve programme planning and definition.

There is also a risk that the market capacity (supply) to deliver the budget capex is not sufficient. Central government and other Councils are also increasing their level of planned spend and this will create further pressure on the national and regional supplier market. In the short to medium term the impacts of COVID-19 may also impact deliverability in the ability to bring in overseas labour or potential material supply issues caused by closed or restrained borders. We have lowered the forecast opening borrowings to adjust for any backlog.

For the three waters, WWL advises that industry ability to scale up to deliver an increased capital spend is a matter of concern. The Wellington region is emerging from a long period of modest funding on water assets. As funding is increased through Councils and Government stimulus packages, the capacity and capability of the local market will need to ramp up to be successful in delivery.

Further information on the deliverability of our planned capital programme are outlined in the sections below on Transport and Three Waters infrastructure.

Transport Assets

Overview of infrastructure

In Wellington we operate a complex, multi-modal transport network in a constrained urban environment. Our physical assets, people, and resources are the 'means' we use to deliver the key activities that most people and businesses rely on every day. These activities are provided continuously across the city, suburbs and rural areas by the various contributing parties and are for the benefit of residents, commuters, businesses, industry and visitors alike.

This specifically covers the activities of:

- Safe and efficient connections within and between the city's suburbs and the central business district for people who choose to walk, run and ride bikes.
- Safe and efficient connections within and between the city's suburbs and the central business district for people who use public transport and other vehicles.
- Safe and efficient connections within and between the city's suburbs and the central business district for the movement of goods and services.
- A resilient transport network that can function in the event of a natural disaster.

From an asset management perspective, we are responsible for the design, delivery, maintenance and renewals of:

- Sealed roads
- Footpaths and accessways
- Cycleways
- Bridges and large culverts
- Tunnels and subways
- Seawalls
- Retaining walls
- Road markings
- Road signage
- Traffic signals
- Street furniture
- Barriers
- Kerb and channel
- Stormwater drainage and culverts
- Bus shelters
- Street lighting

Levels of service

For our individual asset classes, we have a mixture of technical levels of service and customer levels of service that speak to the functionality and condition of our transport assets. A number of our service levels are statutory requirements and are also informed by central government requirements given the joint funding of transport spending through Waka Kotahi.

Broadly speaking there are a number of areas where targeted service performance not currently being met and these service gaps drive planned upgrade programmes. Areas where service levels require investment to achieve include street lighting and resilience of our structures. Road quality performance is also on a downward trend that requires change in order to manage.

The investments to manage service level challenges are outlined in the following sections.

Asset management maturity

The Council has been refining its asset management practices for many years to ensure appropriate service levels are delivered at least cost. We employ proactive lifecycle management practices where these avoid the significant extra costs of deferring maintenance of critical components. Technical audits by Waka Kotahi have confirmed that the Council's management practices, and intervention levels are appropriate.

Data quality

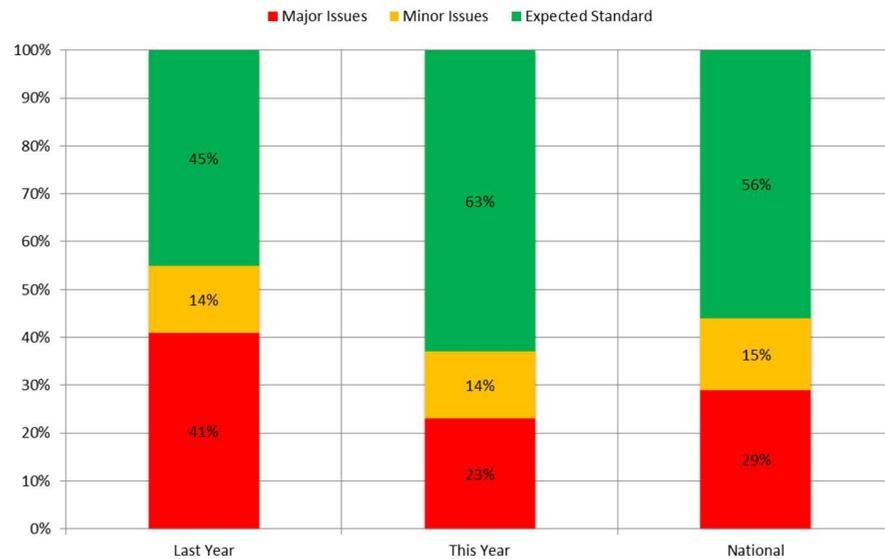
At the heart of good asset management is high quality asset data. There has been a marked improvement in our asset data quality over the last 3 years.

The Road Efficiency Group (REG)¹ collects and compares asset data from all councils. Data quality is measured using 63 metrics. The charts below show how our data quality has improved over time and how it compares nationally.

Asset lives are assumed based on the guidance on the Useful Life of Infrastructure from the National Asset Management Support (NAMS) Council and trend data that is available in our asset management system. As a result we have relatively high level of certainty around the strength of our asset lifecycle assumptions.

	Replacement Cost	Condition (1-5)	Performance (1-5)	Data confidence (A-E)	AM Maturity
Transport	\$1.6bn	2- Minor defects only	2 - Good minor shortcomings	A-B Minor inaccuracies (1)	Intermediate / Advanced (3)

Overall Results



¹ The Road Efficiency Group (REG) is a collaborative initiative between Waka Kotahi, Local Government NZ (LGNZ) and the Road Controlling Authorities (RCAs) of New Zealand. The REG partnership is focused on delivering change that will transform the transport sector as the New Zealand transport network transitions from private-

vehicle/freight centric to a modern integrated system that includes all modes and available technologies and aligns the objectives of local, regional and central government.

Key issues

Wellington expects to gain between 50,000 and 80,000 residents by 2043. Currently the biggest share of this growth is in our central city. Wellington is expected to see sustained growth over the next 30 years, both in terms of its population and as the primary employment centre for the wider region. This means that the city's transport network will need to accommodate thousands more people who need to get from place to place each day. Investment will need to be made to accommodate this growth, adapt to changing travel patterns, and ensure that the transport network is reliable, safe, and resilient.

The local transport network in Wellington is built on difficult terrain - it is steep, winding with lots of tight corners, narrow, old and is exposed to extreme natural events such as earthquakes, slips and storms which leaves the CBD, which is largely built on reclaimed land, at risk. This has an impact on how the network has been built as it has resulted in a greater need for structures to support the road surfaces leading to us having the highest number of walls per square kilometre in the country.

Although future overall traffic volume is uncertain, certain key corridors are becoming more heavily used. Increased volumes and vehicle loading create additional stress upon the road, accelerating defects and reducing the asset life of both the road surface and sub-structure. This is particularly a challenge given the large expected increases in heavy vehicles and public transport traffic volumes. A large portion of the network's roads are built on weak subgrades which results in road failures when exposed to moisture.

Key issue – Changing Network Usage	Level of service impacts
<p><i>Growing demand on roading network</i> - Options for increasing transport capacity are limited by constrained corridors that must accommodate a variety of transport modes. Increasing demand for walking and cycling presents a growing challenge to provide safety and amenity for all modes. As a result, limited road space must be shared between transport modes. Future investments need to consider the constrained nature of the network and strike a balance between several transport modes.</p> <p><i>Increased works on roading network</i> - We have seen an increase in activity on our roads by third parties such as utilities and private developers. This trend is likely to increase given the increase in activity and the large-scale renewal programmes planned for underground utilities. This increase in activity has started to, and will continue to, cause congestion on our network and make travelling around the city more difficult.</p>	<p>Increased traffic volumes are associated with a range of negative outcomes, including increased traffic congestion, increased travelling times, increased accidents, increased vehicle emissions, and increased costs for maintenance, renewal, and capital expenditure for the transport network. This would result in a declining level of service. Our preferred option below would see us increasing the levels of</p>

Growing demand for active transport modes - Trends since 2000 show an increase in levels of commuting by walking, cycling, and public transport. Although Wellington’s population and employment levels have been increasing, the total amount of car travel, average journey times, and average travel speeds have remained relatively constant over the past decade. To continue this trend investment in active modes is important.

service by creating a network that has less traffic congestion than current and reduces our carbon emissions.

Climate change - In 2019, the Council adopted Te Atakura – First to Zero, aiming to make Wellington City a zero-carbon city by 2050. Land transport is Wellington’s single largest source of emissions and accounted for 35% of the city’s greenhouse gas emissions in 2019. Te Atakura acknowledges that reducing emissions from transport will play a significant role in meeting our targets.

Principle options	Preferred option
<ol style="list-style-type: none"> 1. Allow the trends of vehicle and active mode usage to continue as per what has been previously witnessed 2. Make use of policies to manage where and how the city grows to encourage growth within the areas of the city that are more amenable to active modes and public transport usage 3. Create more opportunities to encourage mode shift. This could be done in two parts: <ol style="list-style-type: none"> a. Lean solely on the work to be undertaken by Let’s Get Wellington Moving (LGWM) b. Undertake further work to encourage mode shift outside of LGWM such as investing in cycleways and walking improvements 	<p><i>3 Create more opportunities to encourage mode shift</i></p> <p>As a compact city, by investing in the LGWM project we will enhance existing modes of transport across the city. This will reduce traffic congestion and therefore travel times, creating opportunities to move around the city through cycling and walking and improved public transport. These actions will improve our carbon footprint and reduce the impacts on the environment and climate.</p> <p>The LGWM programme will deliver multimodal improvements to the central city and on key corridors, including the cycling network and bike lanes on key corridors. Outside of LGWM there is currently estimated to be 63km of corridors requiring cycling infrastructure. It is currently estimated that the cost to develop these corridors is in the order of \$226m. The programme for the 2021-31 LTP is aligned to and coordinated with the LGWM programme and considers the remaining corridors not within the scope of LGWM.</p> <p>Our preferred option is a \$45m or 60 percent increase in funding for cycleways than what was planned in the previous Long-Term Plan. It will progress \$120m of the full \$226m programme.</p>

Key issue – Resilience	Level of service impacts
<p><i>Seismic resilience</i> - The Wellington Region contains numerous known fault lines with the potential to cause a severe shaking event. The Wellington fault line runs through Thorndon, along the edge of the harbour and roughly follows State</p>	<p>Our transport structures (walls, tunnels & bridges) play a vital role in</p>

Highway 2 up the Hutt Valley. The proximity to urban centres and major transport links along with this being the most active of the major fault lines in the region means the Wellington Fault presents the highest risk to the region. In 2013, Wellington Lifelines Group (WeLG) undertook a study as to what would happen in the event of a major earthquake in Wellington. The study looked at the impacts of a 7.5 magnitude earthquake caused by the Wellington fault line. WeLG identified a Priority 1 emergency route out of the city which extends from the airport to Johnsonville.

Climate resilience - Climate change is expected to cause a rise in sea levels as well as changing weather patterns which may result in more frequent and severe storms than have previously been experienced in Wellington. This will impact temperature, rainfall and wind as well as the frequency and intensity of storms.

Wellington has approximately 32 kilometres of road length which is adjacent to the sea and vulnerable to both increasing sea levels and increasing frequency and severity of storm surges. These roads are protected by over 200 sea walls and include arterial roads which serve as critical links to key destinations, including Wellington International Airport, the Southern Landfill, and Moa Point Wastewater Treatment Plant.

supporting and protecting the road corridor. Our tunnels and bridges provide access to suburbs and entry and exits to the wider Wellington region. Not being strengthened limits their resilience in the event of an earthquake. The retaining walls and seawalls help protect our road corridor, including key lifeline routes, from slope failure and sea erosion across the city. This would result in a declining level of service. Our preferred option below would see us increasing the levels of service by creating a network that is less susceptible to major events and climate change.

Principle options	Preferred option (\$363m over thirty years)
<ol style="list-style-type: none"> 1. Continue to deliver renewals and strengthening of retaining walls and seawalls as per the previous LTP 2. Prioritise strengthening work of retaining walls along emergency routes and then undertake further work based solely on condition (renewals) 3. Prioritise strengthening and renewals based on condition and criticality 4. Prioritise all seawalls for strengthening 5. Undertake strengthening of seawalls when doing seawall renewals 	<p><i>2 Prioritise strengthening work of retaining walls along emergency routes and then undertake further work based solely on condition</i></p> <p>To ensure the emergency routes can withstand a high impact earthquake, we need to strengthen the retaining walls, bridges and tunnels that support the effective function of the road corridor. Failure to strengthen our key routes into and out of the city will result in a transport network that is increasingly less safe, efficient, resilient, and reliable.</p> <p><i>3 Prioritise strengthening and renewals based on condition and criticality</i></p> <p>We have several un-strengthened structures with some assets built on liquefiable and reclaimed land. In a region with heightened risk of a major earthquake, the likelihood of losing access on key routes is high. As such we have prioritised our renewals programme for these assets based on both condition and criticality. Our focus is to strengthen and renew</p>

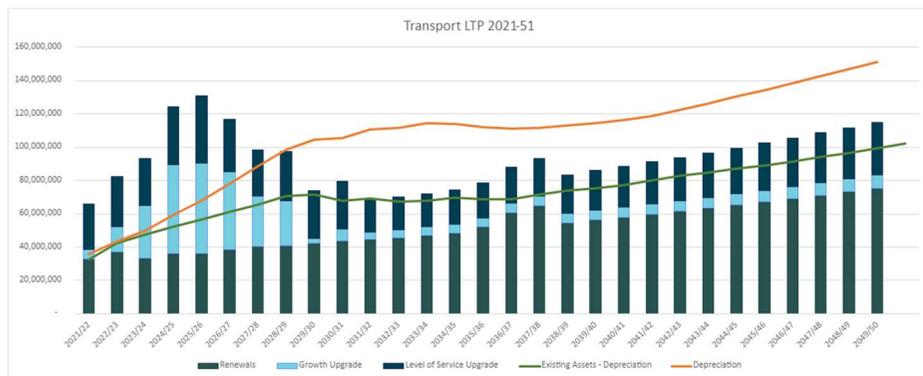
	<p>structures on the key emergency routes and existing seawalls along the road corridor in the short term to medium term.</p> <p><i>5 Undertake strengthening of seawalls when doing seawall renewals</i></p> <p>We undertake strengthening of seawalls whenever we undertake a renewal by accommodating for a 1m sea level rise. Over the long-term we plan to prioritise building of new retaining walls on unsupported slopes and new seawalls where required to protect the road corridor. All our vehicle tunnels have been renewed and strengthened with only one pedestrian tunnel left to be done.</p>
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Key issue – Deferred Road Renewals	Level of service impacts
<p>We have a high cost of transport road maintenance in Wellington City, relative to other Councils with similar transport networks. Road renewals are the largest driver of our costs making up close to 50% of our annual transport renewal expenditure. The sub-structure of Wellington’s roads generally consists of flexible, highly water susceptible clays. Our historical strategy for road surfaces is that we only replace the road surface. The aim is to protect the clay sub-structure which is very expensive to repair should it start deteriorating.</p> <p>We have been consistently underperforming our resurfacing targets due to the increasing costs of resurfacing treatments.</p>	<p>There has been a declining delivery in the road resurfacing programme over the last eight years given increasing costs within consequent decline in the condition of the road network as a result. We are currently witnessing a declining level of service. Our preferred option below would see us bringing our level of service back to the levels we aim to provide.</p>
Principle options	Preferred option (\$585m over thirty years)
<ol style="list-style-type: none"> 1. Continue to deliver road resurfacing as per previous expenditure 2. Undertake significant road rehabilitation to address the backlog of deferred resurfacing which is now causing failures 3. Invest more into resurfacing so that we can achieve targeted levels of resurfacing required for the network 	<p><i>4 Change treatment options using lower cost treatments to achieve the targeted levels of resurfacing</i></p> <p>We have undertaken an analysis of our expenditure vs. performance to understand how we can catch up on the deferred road renewals. Our strategy is to invest into rebuilding some of the roads that have deteriorated due to deferred renewals and to change the ratio of</p>

4. Change treatment options using lower cost treatments to achieve the targeted levels of resurfacing

treatments when undertaking future renewals. The current planned spend on the road renewals is in the order of \$131m over 10 years and \$585m over 30 years

Transport Investment programme (30 year graph)



*The above graph is inflated.

- The steady level of renewals increases over time with an increasing asset base and inflation.
- The depreciation of the current asset base (2021) is higher than the expenditure due to a number of long life assets not requiring to be replaced within the next 30 years e.g. bridges, tunnels and walls.
- The upgrades for growth in the next 10 years include facilitating transport modal shift such as \$192m for Bus prioritisation (as part of LGWM) and new roading to facilitate greenfields sites e.g. \$128m for Ohariu to Westchester Drive.
- Level of service improvements are planned across the 30 years mainly to install new retaining walls to protect roading assets, especially prioritising routes.
- The capital investment will facilitate improvements in accessibility as the programme works through its lifecycle



*The above graph is inflated.

Deliverability

Historically, because of the proximity of councils in the Wellington region, there has been a large pool of work available, making the market healthy as it attracted a number of suppliers to tender for works. However, this seems to have changed in recent times as the amount of physical works in the region outstrips the available suppliers to deliver. This includes work such as LGWM, building strengthening in the CBD, The Wellington Lifelines PBC, Transmission Gully and ongoing maintenance activities and capex programmes across councils.

The staged delivery model is the preferred delivery model for our medium to long-term maintenance contract works. We have decided to continue using this model for our Road Maintenance Renewal (RMR) Contract which was tendered out in 2020 and suppliers began to deliver on from 1 July 2020. We are well

resourced in this regard to deliver on road resurfacing, other maintenance and renewal activities and minor works.

Our capital works programmes have generally made use of a supplier panel. The supplier panel that we have been using has reached the end the contract period. We are evaluating our options for delivering on our capital works programme as well as future LGWM works programmes to confirm if a new supplier panel is the optimal delivery model going forward. In the LTP we are proposing an investment of \$120m over the next ten-year period. This is consistent with what we have delivered in the past (average of \$11.5m pa over the last three years). We planned for significant cycleway investment to occur from year 4 of the LTP onwards which provides us an opportunity to grow the local market or look at alternative contract options (alliance models etc.).

Potable Water

Overview of infrastructure

Wellington City shares its water supply with the three other cities in the Wellington metropolitan region, drawing water from Te Awa Kairangi/the Hutt River, the Waiwhetu Aquifer and the Wainuiomata and Orongorongo rivers using treatment, storage and transport assets owned by Greater Wellington Regional Council (GWRC). The catchments for this water are protected, well managed and of high quality.

The table below summarises outcomes delivered to and value of assets

Outcome	Drinking Water Contribution
Safe and healthy water	100 per cent compliance with the Drinking-water Standards
Respectful of the environment	Establishing roving crews to proactively identify public and private network leaks in order to reduce the pumping of water and defer the need for more large water source.
Resilient networks that support our economy	The 35ML Omāroro Reservoir will improve the resilience of the City's water supply when completed. WWL is establishing an above-ground emergency water network that can supply the City following a disaster. A cornerstone of WWL's approach to building resilience is developing the self-sufficiency of people and businesses for at least seven days following a major earthquake
Assets	Replacement value
<ul style="list-style-type: none"> 921km water pipes \$774m 67 reservoirs/tanks \$113m 34 pump stations \$4m 98,000 valves, hydrants \$233m 72,000 service laterals 	<ul style="list-style-type: none"> \$1.12bn

Levels of service

The status quo will need to change. Taumata Arowai has been established to provide regulatory oversight of drinking water quality. This, coupled with community expectations around better water conservation, avoidance of new and expensive dams, and reduced carbon generation, will culminate in a substantial change in the level of service for drinking water.

This will be particularly challenging as we will be building on a base that has some gaps around measuring water loss and fault response times.

Asset management maturity

Condition monitoring and assessment is an essential part of good asset management, particularly for the most critical assets. Some of the recent failures in Wellington can be attributed to this lack of condition monitoring and assessment.

WWL is undertaking inspection and maintenance of critical assets, and making other improvements to WWL asset management processes. Investments in this area are now underway using funding allocated through the Government's recent three waters stimulus package and an additional Council funding.

To facilitate the renewals and upgrades of the water network relies on good data to inform the most optimal investment programme. We already know a lot about our water assets in terms of location, material and age, but we do not know enough about asset condition.

	Replacement Cost	Condition (1-5)	Performance (1-5)	AM Maturity
Water	\$1.1bn	3- maintenance required	2 - Good	Under review

Key issues

Key issue – Premature failure of pipes	Level of service impacts
<p>Around 30% of the drinking water network has already passed or is approaching the end of its expected lifetime, and more than 50% is expected to require replacement within the next 30 years.</p> <p>In many cases the pipelines will require replacement ahead of their useful expected end-of-life due to the impacts of factors such as operating pressure and ground movement (including from seismic activity). These factors are considered to be a particular issue for the asbestos-cement pipes that make up around 25% of the existing water distribution network.</p> <p>The premature failure of asbestos cement pipes will necessitate bringing forward renewals on these assets. When these assets are replaced they are replaced with the most modern resilient materials.</p>	<p>Premature failure of pipes are disruptive and will constrain growth, as has happened on other parts of Aotearoa New Zealand.</p> <p>Potable water failures also have potential public health impacts.</p> <p>Without increased investment in network renewals we would anticipate a reduction in the level of service, evidenced by more frequent and significant drinking water outages across the city.</p>
Principle options	Preferred option (\$816m over thirty years)
<ol style="list-style-type: none"> 1. We could continue to deal with these pipes through accepting the risk of failure and repairing when they break. 2. Undertake a targeted replacement programme, based on WWL’s asset inspections and failure clusters 	<p>2- <i>Undertake a targeted replacement programme</i></p> <p>Wellingtonians have told us that accepting the increased risk of failures of not investing is not acceptable.</p>

Key issue – Water supply	Level of service impacts
<p>Water loss across the city’s water network is difficult to calculate due to the relatively limited extent of consumption metering. WWL is unable to report a reliable water loss percentage due to the limited number of water meters across the</p>	<p>Increasing levels of water consumption could result in</p>

<p>reticulation network. Instead, the water loss percentage has been reported at a regional level. However, the reliability of this regional water loss percentage was also affected by the limited number of water meters.</p> <p>Despite that, it is accepted that the average household water consumption for Wellington City is well in excess of national and international benchmarks. The high level of loss and consumption, together with population growth and potential changes to rain patterns from a changing climate are putting the bulk water network system under stress.</p> <p>At current levels, water consumption will exceed supply within the next decade, requiring expensive investment in a new storage facility, or the introduction of residential water meters.</p>	<p>increasing supply disruptions through the need for a reductions in levels of service through restrictions to manage demand</p>
<p>Principle options</p>	<p>Preferred option</p>
<ol style="list-style-type: none"> 1. Invest in expanded water storage. This would be carbon intensive and environmentally adverse. Ideally Wellingtonians could avoid the requirement for this by better water conservation. It is very difficult to manage consumption if it is not measured in detail. 2. Establish a suite of policy measures, including changes to the District Plan, relevant bylaws, and Codes of Practice that result in reduced drinking water use in new residential developments, such as through requiring rainwater harvesting and storage. 3. Consider a well informed public engagement around water meters to enable better measurement and management of water consumption. 	<p><i>2 Establish a suite of policy measures</i></p> <p>Council has resolved that the Long-Term Plan will not consult on water metering. In the short-term there are policy measures to encourage reductions in water usage that can be pursued in preference to significant capital expenditure in water storage. In the longer-term further work on management of water will need to be pursued and this can be done so as part of wider government water reforms.</p> <p>In addition, the planned increase in potable water renewals and maintenance will result in an increase in network efficiency and consequential decrease in leaks and water loss.</p>

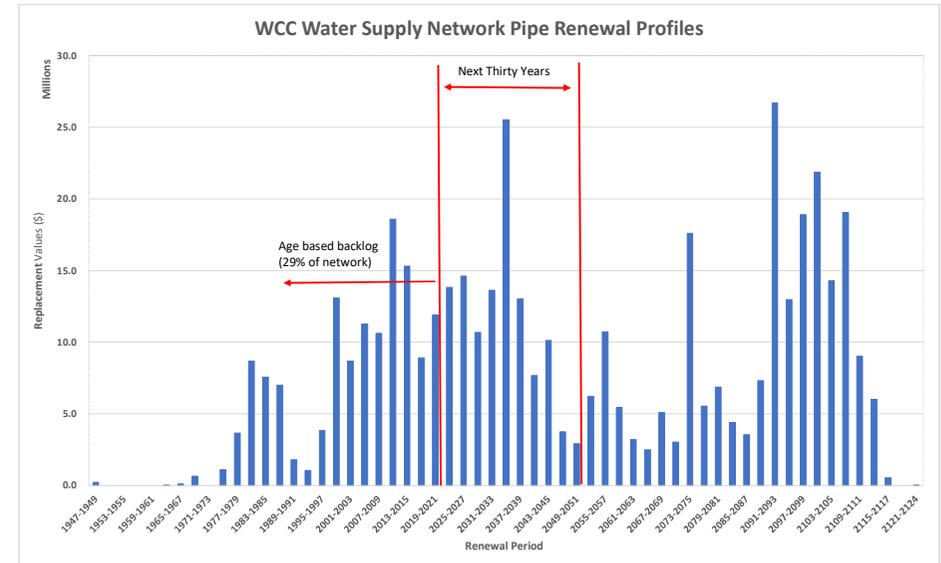
Capital investment

A planned renewals programme, rather than the reactive renewals approach, will minimise the impact on rates. By not addressing the ageing water infrastructure in a planned way will see an increase in pipe failures, longer outage times creating additional operating and capital cost.

We anticipate that the investment in renewals will reverse some of the trends and set us on a more favourable path towards fewer leaks and better water conservation.

Age of pipes

Assets have a long but variable life span mainly due to the material types. The modern materials have a greater resiliency and longer life span. The graph below depicts that we have assets that are past the expected useful life. If an asset is still in a condition that it can still provide a good level of service, then it is financially prudent to maintain it in operation. It would be wasteful to replace an asset too soon.

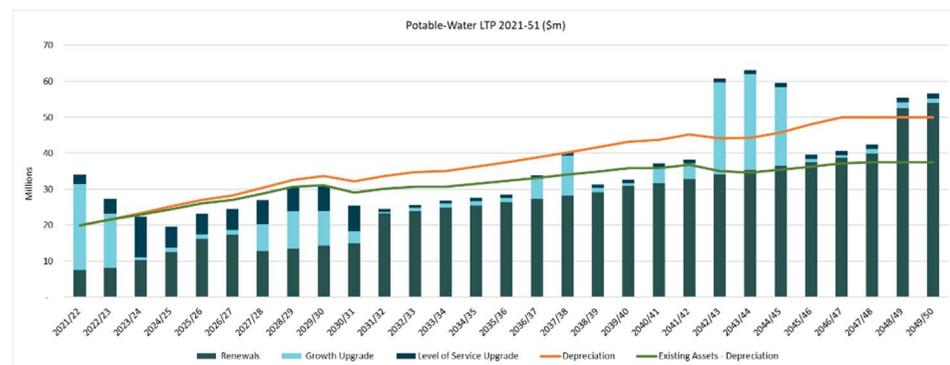


*A number of water pipe assets are still in commission and passed the expected useful life. Refer to graph above.

The key points to note are:

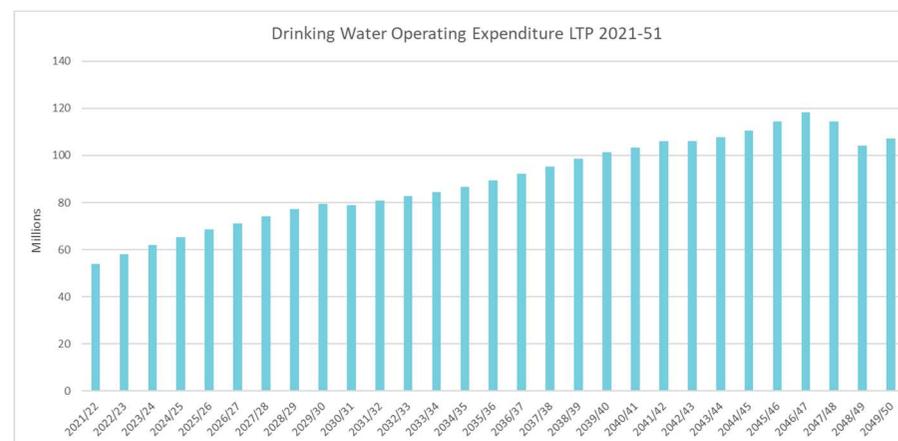
- Water pipes have been in service for longer than their theoretical useful life which increases the risk of asset failure
- Two waves of increased periods of a high level of replacements based on age
- Need to allow debt headroom to fund these waves
- Need more condition assessments to understand replacement timing.

The planned drinking water investment programme over 30 years is:



*The above graph is inflated.

- The potable water asset renewals are forecast to increase significantly over the term of the plan reflecting the volume of assets expected to come to the end of its life. It indicates a sustainable level of renewals to maintain the network performance over the period of the plan, when comparing it to the level of depreciation.
- The level of renewals for the first ten years has increased by over 80% compared to the first ten years of the 2018 LTP. The level exceeds the depreciation funding for the existing assets in 2043 where excess depreciation funding prior to this will be used to fund the higher level of renewals.
- 43% of the pipe network has already been replaced with more modern ductile materials.
- There is \$74m of upgrades for growth budgeted in the first 10 years however this is forecast to increase as the planning for growth project is completed over the next 2 years
- Compared to wastewater and stormwater, the Council is not anticipating a substantial investment in upgrading levels of service.



*The above graph is inflated.

Deliverability

WWL advises that industry ability to scale up to deliver an increased capital spend is a matter of concern. The capacity and capability of the local contracting market is currently sized for the historical level of investment. The Region will need to ramp up resources while also improving productivity to be successful in delivery. The long-term arrangements WWL has in place with consultant and contractor partners means they are well placed to respond collectively. While WWL is ramping up other large infrastructure projects within the region and nationally will also be competing for limited resources. This coupled with COVID uncertainty means if WWL is not well planned there is a risk of failure to deliver the capital programme in future years. To meet the challenge, WWL are taking a dual approach which involves increasing capacity and capability coupled with improved productivity using innovation and the increased scale to do things smarter.

With the planned delivery capability and capacity arrangements being progressed, the overall delivery risk will still remain at a moderate level.

Waste Water

Overview of infrastructure

The primary purpose of the wastewater service is to protect public health by ensuring the wastewater is safely removed from private property and other public spaces. There is now an increasing focus being placed on reducing the risk of illness and the environmental effects of discharges to waterways and the sea.

The table below summarises outcomes delivered to and value of assets

Outcome	Drinking Water Contribution
Safe and healthy water	Identification and mitigation of wastewater overflows into stormwater network and marine environment
Respectful of the environment	Prevention of wastewater overflows through pipe repairs and replacements, through better management of laterals and cross connections
Resilient networks that support our economy	Better management of critical assets such as the interceptor can grow the City's resilience to a seismic event, and help Wellingtonians to bounce back faster.
Assets	Replacement value
<ul style="list-style-type: none"> • Pipes 1,077km \$1,003M • Treatment Plants 2 \$217M • Tunnels 15 km \$156M • Pump Stations 69 \$19M • Fittings and valves 39,000 \$166M 	<ul style="list-style-type: none"> • \$1.56bn

Levels of service

The City will need to change in order to comply with the freshwater quality standards set out in the National Policy Statement-Freshwater Management (2020) (NPS-FM) by 2040. This regulation sets out to reduce the risks to public health from recreation/food gathering, prevent further degradation to receiving waters, and respect the aspirations of iwi and communities to restore Te Mana o Te Wai.

The state of our wastewater assets must improve if we are to meet the level of service demanded by the NPS. We need to fix leaks and remove systemic designed overflows that divert sewage into the stormwater system.

Failures in wastewater system are detrimental not only to environmental and human health, but also to the City's reputation. The Mayoral Taskforce made a clear statement around Wellingtonians' collective expectation around an improved level of service for wastewater.

Asset management maturity

Condition monitoring and assessment requires further development in Wellington City. Continued discovery of historic constructed overflows indicates that there is further work required, particularly for the most critical assets, for example the interceptor and pressurised rising mains. Some of the recent failures in Wellington can be attributed to this lack of condition monitoring and assessment.

WWL is undertaking inspection and maintenance of critical assets, and making other improvements to WWL asset management processes. Investments in this area are now underway using funding allocated through the Government's recent three waters stimulus package and through additional Council funding.

Managing the renewals and upgrades of the wastewater network relies on good data to inform the most optimal investment programme. We already

know a lot about our wastewater assets in terms of location, material, and age.
But we do not know enough about asset condition.

	Replacement Cost	Condition (1-5)	Performance (1 -5)	AM Maturity
Wastewater	\$1.6bn	3 -Maintenance required	3 - Moderate	Under review

Key issues

Key issue – Premature failure of pipes		Level of service impacts
<p>More than 1,000 km of public wastewater network has been developed over the past 125 years and many parts of it are now ageing and in poor condition. Recent high profile failures have highlighted the risks associated with this ageing infrastructure, and evidence shows that more than 7.5% of wastewater pipes are now in poor or very poor condition. The City is facing block obsolescence of a large part of its network reflecting a sustained period of growth in previous generations. Some of these pipes are more than 100 years old.</p>		<p>Premature failure of pipes is disruptive and will constrain growth, as has happened on other parts of Aotearoa New Zealand. Failures are occurring now and without further investment in the network, levels of service would reduce with negative impacts on the environment and increasing public health risk.</p>
Principle options	Preferred option (\$1.46 billion thirty years)	
<ol style="list-style-type: none"> 1. Continue to use assets beyond their economic life 2. Increase renewals investment, prioritising critical assets. 	<p><i>2 - Increase renewals investment</i></p> <p>Wellingtonians have told us that accepting the increased risk of failures of not investing is not acceptable.</p>	

Key issue – Wastewater system overflows		Level of service impacts
<p>Legacy design where wastewater is diverted to freshwater or stormwater when there are high flows or blockages, makes achieving the objective of keeping wastewater out of freshwater a very challenging proposition. The wastewater system experiences regular blockages and overflows which are offensive and harmful to people and the environment. The system can be overloaded in rainfall and also leaks, letting stormwater in during wet weather and letting wastewater out during dry weather. Private lateral pipes also leak and are sometimes mis-connected to the stormwater system, allowing pollution directly into our streams and coast.</p>		<p>Impacting freshwater quality standards and the consequential impacts on the environment and public health would continue to worsen without investment in decoupling the wastewater and stormwater and marine environs.</p>

We do not have an adequate understanding of the behaviours of our dry weather sewage overflows, this needs substantial and sustained investment in order to meet regulatory and community expectations.

Principle options	Preferred option
<ol style="list-style-type: none"> 1. Progress immediate reactive fixes to overflows 2. Increase monitoring and understanding of the scale and nature of the problem so that investment can be prioritised to drivers of overflows. 	<p><i>2 Increase monitoring and understanding</i></p> <p>We do not believe that we have sufficient information about constructed overflows to understand how we can eliminate them from our network. Monitoring and understanding is critical to direct investment toward the right solutions.</p> <p>This option will be addressed as part of the \$1.46b wastewater renewals programme.</p>

Key issue – Sewerage sludge	Level of service impacts
<p>The sewage system ultimately produces biosolids that need to be disposed in a way that meets expectations around waste and carbon reduction. The City’s biosolids are unstable and toxic; the appetite for risk here is low, and the system must be suitably resilient to seismic and other shocks.</p>	<p>Ongoing disposal of biosolids at the landfill maintains a high waste and carbon profile</p> <p>Ongoing resilience issues in the management of sludge through ongoing reliance on transport of biosolids from Moa Point to the Southern Landfill.</p>
Principle options	Preferred option \$147m-\$208m in the first 10 years
<ol style="list-style-type: none"> 1. Accept the status quo. 2. Invest in sludge minimisation to contribute to meeting its waste and its carbon aspirations. This is currently the subject of the 2021-31 LTP consultation. 	<p><i>2 - Invest in sludge minimisation</i></p> <p>Investment in sludge is a required pre-requisite to both making progress on waste and carbon, both of which are critical priority outcomes for Wellington City.</p>

Key issue – CBD wastewater network	Level of service impacts
-------------------------------------------	---------------------------------

The effect of a wastewater failure on the CBD is exponentially worse than in other areas – from an economic and a reputational viewpoint. We know from first hand experience that sea level rise is already upon us; in some parts of the City this presents real challenges when working with underground assets. The risk of this is further exacerbated by the ingress of seawater in low lying areas, resulting in advance degradation of ferrous assets and ongoing challenges working in and around assets where the sea level continues to rise.

Premature failure of pipes is disruptive and will constrain growth, as has happened on other parts of Aotearoa New Zealand.

Principle options

Preferred option \$42m over 10 years

1. Accept the increased frequency of risk of asset failure, and make reactive repairs.
2. Proactively address these issues to avoid costly and damaging failures, and to provide for growth.

2 - Proactively address these issues

Key issue – Private ownership of laterals

Level of service impacts

Currently residents are responsible for the maintenance of the pipes connecting their property to the wastewater (sewerage) main underneath the road corridor. These are called wastewater laterals. This is problematic as often residents are not aware of their responsibilities and are unable or unwilling to pay for repairs when their lateral fails. Often the failure of laterals under the road corridor are also outside of the control of property owners, for example being the result of damage caused by street tree roots. Most Councils in New Zealand are responsible for the maintenance of laterals in public land.

Public and private wastewater pipes should be maintained in a water-tight condition, so they do not leak or spill any wastewater before it reaches the treatment plants, where it is treated to a suitable standard to return to the ocean. The pipes should also be resilient, not only to natural hazards like earthquakes but also to other interruptions like blockages and maintenance.

The Council’s policy is being amended to be consistent in the region and New Zealand. This would result in the Council taking responsibility for the section of the wastewater lateral beneath the legal road to the property boundary. This will create efficiencies in maintenance by allowing us to plan their renewal alongside wastewater mains.

The lack of maintenance of those private pipes, which most owners are not even aware of, also needs to be made a priority. Blockages are also occurring as a result of people flushing materials that the system is not designed to accommodate. The solution lies in taking better care of these ageing pipes and pump stations and treating wastewater to a standard that meets our communities’ aspirations.

Principle options

Preferred option

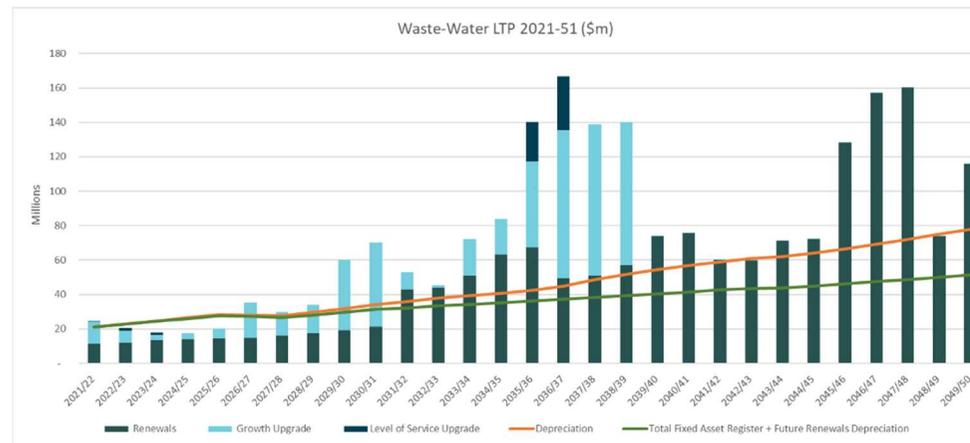
1. Maintain the status quo.

2. WCC take ownership and maintenance responsibility for wastewater laterals

2. WCC take ownership and maintenance responsibility for wastewater laterals	We have previously consulted on the issue in a prior Annual Plan, and laterals adoption options are currently the subject of the 2021-31 LTP consultation Opex Cost: \$4.6m (over 10 years) Capex cost: \$24m (over 10 years)
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Capital investment

The planned wastewater investment programme over 30 years is:

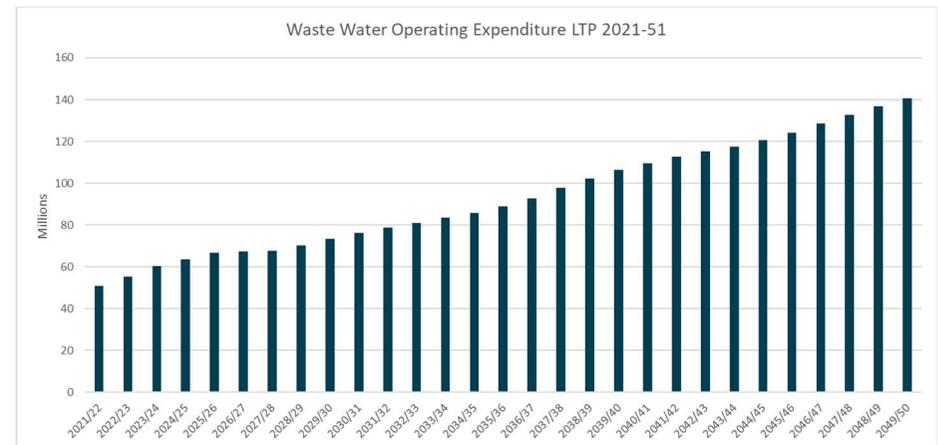


*The above graph is inflated.

A planned renewals programme, rather than a reactive renewals approach, will minimise asset failures and the impact on rates. By not addressing the ageing wastewater infrastructure in a planned way we will see an increase in pipe failures and longer outage times. This will create additional operating and capital cost. A failing and poor condition waste network has environmental impacts in polluting our waterways and the sea.

- The City has significant deferred renewals and it will take a concerted effort to close this gap.
- The planned level of renewals for the first ten years has increased by over 89% compared to the first ten years of the 2018 LTP. The level exceeds the depreciation funding for the existing assets in 2032, where excess depreciation funding prior to this will be used to fund the higher level of

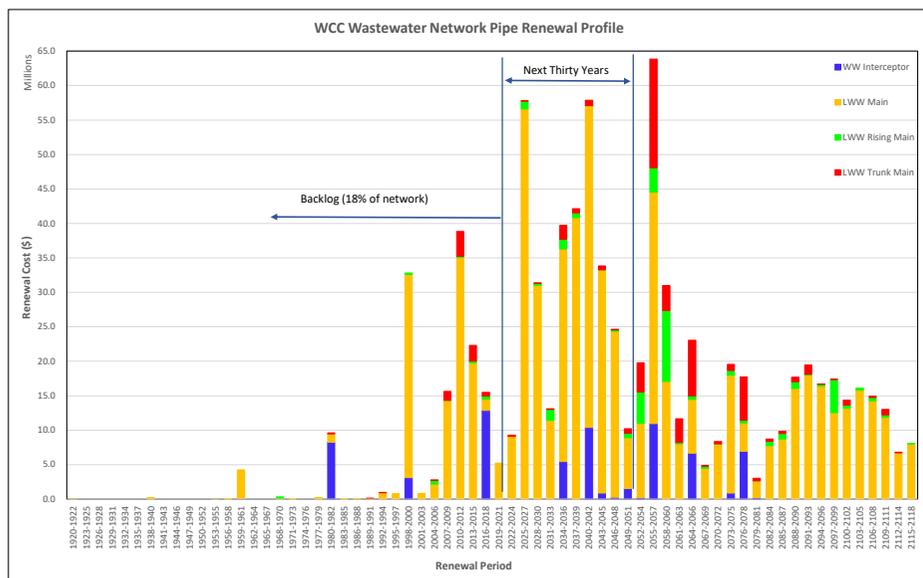
renewals. With a significant uplift in renewals from 2039/40, borrowings will fund any excess renewals and repaid over the life of the asset.



*The above graph is inflated.

- There is a significant increase in volume of assets that are coming to the end of their expected useful life from around 2031/32. The forecast budget more than doubles to match the planned uplift in the renewal programme
- There is \$172m of upgrades for growth budgeted in the first 10 years compared to \$4m in the prior LTP. This is forecast to increase further as the planning for growth project is completed over the next 2 years.
- There is a significant increase in volume of assets that are coming to the end of their expected useful life from around 2031/32. The forecast

budget more than doubles to match the planned uplift in the renewal programme.



Upgrade investments

The main area of upgrade where a level of service will be necessary is likely to be in eliminating or minimising sewage pollution in order to meet the requirements of the NPS-FM. This is targeted at Karori in the first ten years, and there is likely to be improvements in levels of service as a result of investments in growth.

The second area is around biosolids disposal. Investment in biosolids is necessary if the City is to meet its carbon and waste minimisation aspirations.

Growth investments

The City proposes unlocking capacity and growing redundancy in the CBD through investing in the Taranaki St pump station and rising main in Te Aro. We also intend to grow capacity by investing in intermediate storage in the central area, and managing peak flows from outer suburbs through to Moa Point.

We also intend investing in unlocking the constraints for the Stebbings Valley greenfield area.

Deliverability

WWL advises that industry ability to scale up to deliver an increased capital spend is a matter of concern. The deliverability limitations related to potable water discussed in the previous section also apply to delivery of wastewater investment.

Stormwater

Overview of infrastructure

Historically, the purpose of our stormwater system has been to drain rainwater from homes, premises and roads to prevent flooding that creates risks for public health and safety. The physical assets include pipes, culverts and sumps, but the performance of the system is also highly dependent on overland flow paths that carry the water around, rather than through, individual properties and enable the safe passage of stormwater when the pipe network is at capacity.

Streams have also been piped over time to enable the development of roads, buildings and other city infrastructure. The stormwater systems around the city have been designed to a range of standards for the amount of rainfall they can accommodate, meaning that some parts of the city are more prone to flooding than others.

The existing stormwater systems discharge directly into the environment, but it is now recognised that stormwater is a source of contaminants that can impact on water quality and ecosystem health. Heavy metals (such as zinc and copper), hydrocarbons, sediments and nutrients enter the water from areas of urban development causing acute and chronic toxicity to the indigenous fish and invertebrates that once thrived in our city’s waterways. Changes in flow during small to moderate rainfall can also cause erosion in streams, and the discharge of ‘hot’ stormwater in summer rainfall can be detrimental to downstream ecosystems.

Taken all together, the adverse environmental impacts of the stormwater system can extend through the entire stream system to the harbour, where sediments smother life on the seafloor. Wastewater that enters the stormwater system either through leaking wastewater pipes, constructed overflows from the wastewater network or illegal connections, creates a

significant public health risk and prevents safe swimming in our streams or coastal waters following even moderate rainfall. It also impacts on the aquatic life and biodiversity of these water bodies.

Having access to water bodies that are safe for human contact and that sustain their natural ecosystems is highly valued by iwi and our communities. Our stormwater systems have not been designed to remove these contaminants, but the National Policy Statement on Freshwater Management (NPS-FM) requires their performance to be improved. The existing water quality is poor and none of the city’s water bodies are likely to meet the targets that are expected to be set under the region’s Natural Resources Plan without significant investment.

The table below summarises outcomes delivered to and value of assets

Outcome	Drinking Water Contribution
Safe and healthy water	The stormwater system conveys rainfall away from habitable spaces, avoiding flooding.
Respectful of the environment	Increasingly the community is taking an active role in better water catchment management to improve the quality of our urban waterways.
Resilient networks that support our economy	The National Climate Change Adaptation Plan and associated legislative changes will cascade into the development of the City’s own adaptation action plan. This will incorporate policy and infrastructure measures involving green and hard infrastructure.
Assets	Replacement value
<ul style="list-style-type: none"> Storm water pipes 729 km \$993M Tunnels 3 km \$32M Pump Stations 2 \$3M Fittings 28,000 \$147M 	<ul style="list-style-type: none"> \$1.18M

Levels of service

New legislation will have an impact on the stormwater level of service. The Greater Wellington Region Council (GWRC) Natural Resources Plan gives effect to the National Policy Statement - Freshwater Management via Whaitua te Whanganui-a-Tara ('Whaitua'). This will in turn require improvements in wastewater overflows, wastewater dry weather leaks and stormwater contaminants. The status quo will not satisfy these increased requirements. This links to our investment in wastewater and is a significant strategic driver of change across this sector.

In anticipation of this shift in focus, as part of the Global Stormwater Consent stage 1, WWL is already piloting the deployment of roving crews looking at cross connections and sanitary surveys of key catchments. The intention is to roll out a more comprehensive regime across the City in the course of stage 2.

Asset management maturity

Traditionally, stormwater has been about gravity drainage of rainwater. Increasingly however, it is also about water quality and environmental concerns, such as fish passage and a desire to 'daylight' pipes streams. This is a challenge to the traditional asset management approach.

A further challenge is the changing climate and sea level rise. The existing assets were not designed with these changes in mind, and therefore the stormwater network is increasingly unfit for purpose. Seawater intrusion is now significant, and we need a greater level of granularity to understand how to meet this challenge now and into the future. For example, we will probably need to pump more stormwater in future. The current setup was not designed as a pressurised network.

Asset Type	Replacement Cost	Condition (1-5)	Performance (1 -5)	Data confidence (A-E)	AM Maturity
Stormwater	\$1.2bn	3- maintenance required	3 - Moderate	A-B Minor inaccuracies (1)	Under review

Key issues

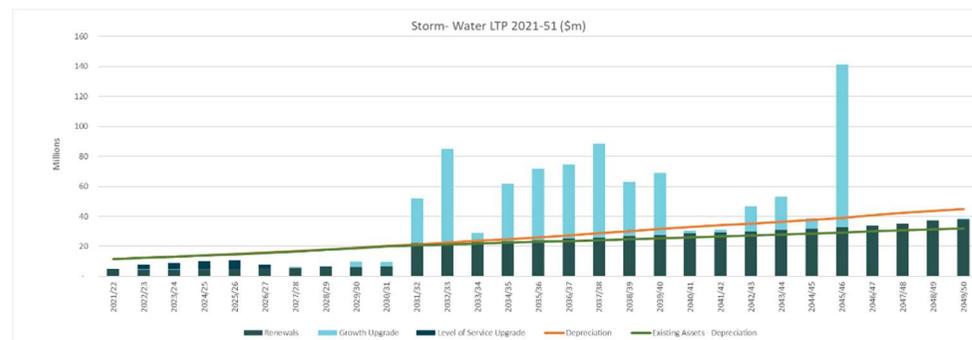
Key issue – Climate change		Level of service impacts
<p>Stormwater is closely linked with roading, flooding and land use. With climate change, stormwater management is likely to be a constraint on the future shape of Wellington. The challenges with managing stormwater are expected to increase over time as the frequency of heavy rain events increases, sea level rise makes it more difficult for stormwater to discharge, and as growth and intensification reduces ground permeability and impacts on overland flow paths. Historically our stormwater planning has not been cognisant of climate change challenges such as more intense rainfall and sea level rise.</p>		<p>Increased levels of flooding and constraining future growth will result in a downward trending level of service without a combination of investment and the inclusion of natural hazards planning rules in the District Plan.</p>
Principle options	Preferred option	
<ol style="list-style-type: none"> 1. Retain the status quo 2. Deal with climate change issues via the District Plan which will enable the City to grow with risks and to provide for critical overland flowpaths, augmented by targeted investment in priority areas where there is elevated risk. 	<p><i>2 - Deal with climate change</i></p> <p>We do not believe the status quo is an option – the risk to assets, property and safety of more intense rainfall and flooding is not defensible.</p> <p>There is a \$640m (over thirty years) capital renewals work programme that will be designed to accommodate changing standards.</p>	

Key issue – Green infrastructure	Level of service impacts
<p>In order to manage the environmental impacts of stormwater run off in line with increasing community expectations there will be an increased use of green infrastructure alongside traditional approaches to managing stormwater. As green infrastructure is adopted as part of stormwater management, this will challenge the traditional asset management and ownership models. For example, we do not currently depreciate green assets.</p>	<p>Management of impacts of storm water run off with green infrastructure to maintain and</p>

		improve the level of service as we increase housing across the city.
Principle options		Preferred option
1.	An option is to retain a focus on hard infrastructure only.	<p><i>2 - Confront the existing challenges around ownership, management and funding of green infrastructure</i></p> <p>While current policy settings do not require green infrastructure, this is a likely outcome of work currently underway. Assets will need to meet design and performance requirements, and have maintenance properly funded. Where possible, the renewals capital programme will be used to substitute hard infrastructure with green infrastructure solutions</p>
2.	Confront the existing challenges around ownership, management and funding of green infrastructure, and the challenges of integrating it with hard infrastructure.	

Renewal investment

The planned stormwater investment programme over 30 years is:



*The above graph is inflated.

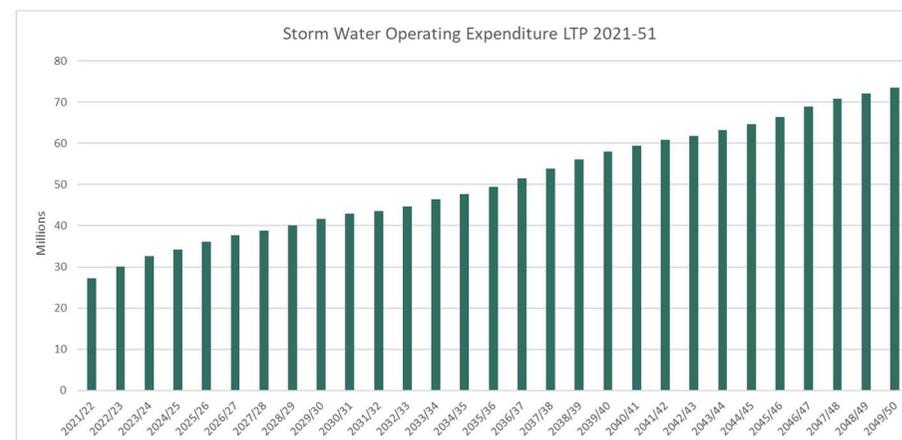
- The level of renewals for the first ten years has increased by over 25% compared to the first ten years of the 2018 LTP. The level exceeds the depreciation funding for the existing assets in 2031 /32. There is a significant uplift in renewals from 2031/32.
- There is a significant increase in volume of assets that are coming to the end of their expected useful life from around 2031/32. The forecast budget more than doubles to match the planned uplift in the renewal programme.

WWL has recommended limited investments targeted at key areas. This will necessitate accommodating, where practicable, natural green and open spaces that use vegetation, soils, and other elements and practices to help deal with environmental challenges such as stormwater runoff and climate adaptation.

This would supplement and, where possible, replace hard infrastructure, while providing increased biodiversity, flood protection, and more green and open spaces throughout the city.

Upgrade investments

The City needs to start focussing on sensitivity to our changing climate, more intensive rainfall and flooding. This means bigger pipes, pumping of stormwater and a sophisticated relationship with land use planning. In the short term, this is already underway in areas like Tawa. In the longer term, there is a desire to investigate daylighting of streams and other interventions that improve the amenity value of freshwater.



*The above graph is inflated.

Growth investments

For stormwater, the interdependence with land use, the District Plan and the Building Act (through floor levels) is paramount.

As the City grows, some areas (such as Johnsonville) will require direct investment in order to unlock growth. In some other areas, District Plan settings will set the bar for new developments and subdivisions that will be required to actively manage stormwater impacts. Hydraulic neutrality will be a condition of consents and developers will be required to present a water impact assessment. This is expected in turn to drive water sensitive urban design into developments.

This will further challenge our asset management processes and policies.

Deliverability

For stormwater, deliverability is not so much about contracting and hard infrastructure (although this is still a requirement), but more about innovation, design and catchment analysis. This means that a significant building block for future stormwater management is the analytical, science and engineering advice that will inform policy and investment decisions.

For stormwater, deliverability will hinge on the availability of this type of advice, and the willingness of decision makers to deploy stringent consent and planning conditions.

Stormwater is inextricably linked to wastewater and land use planning. In our view there is a risk that Government reforms not covering stormwater might create an 'orphan' that cannot be delivered, and is in competition with the other waters, rather than being complementary.

Community infrastructure

Introduction

In addition to our key infrastructure areas of transport and three-waters, Council owns a range of 'community infrastructure' including our venues, social housing, libraries, pools, community halls, parks and open space.

There are two significant issues relating to these assets that drive our infrastructure plans and the consultation items within our Long-Term Plan.

Key issues

Seismic resilience of buildings

The 2016 Kaikoura earthquake damaged a number of our buildings creating the need for significant investment in their remediation. It also heightened awareness of the seismic risk facing many of our other buildings, creating further requirements for strengthening.

In particular the buildings in Te Ngākau Civic Square, including the Central Library, the Municipal Office Building (MOB) and the Civic Administration Building (CAB) have needed to be vacated and require significant investment to bring back online. Our venues, including the St James theatre and Town Hall are also undergoing significant strengthening work and our other venues (Michael Fowler Centre, TSB Arena and Opera House) are in need of upgrade.

We plan on investing over \$200m in the remediation work required across Te Ngākau Civic Square including the high-level remediation of the Central Library. We also plan on investing \$45m in the upgrade of our venues following a strategic review to ensure that investment is prioritised in the right venues to deliver the best outcomes for Wellington .

In addition to the challenge this creates on our capital budgets, the scale of investment required also creates funding challenges. Fully funding the upgrade and remediation with traditional funding arrangements for all of these assets would challenge our debt limits and would require improvements to be phased out over a significant period of time.

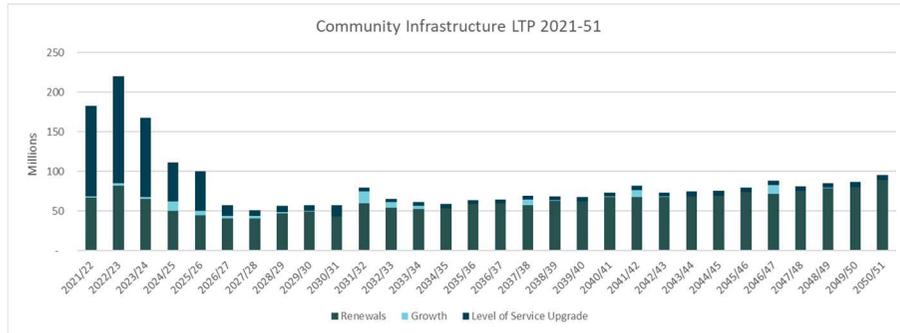
Our preference is, where appropriate, to look for partnering opportunities with long-term ground leases to progress works in Te Ngākau Civic Square, particularly for the MOB and CAB building sites. Partnering is not an option that we are examining for the Central Library.

Social Housing upgrades

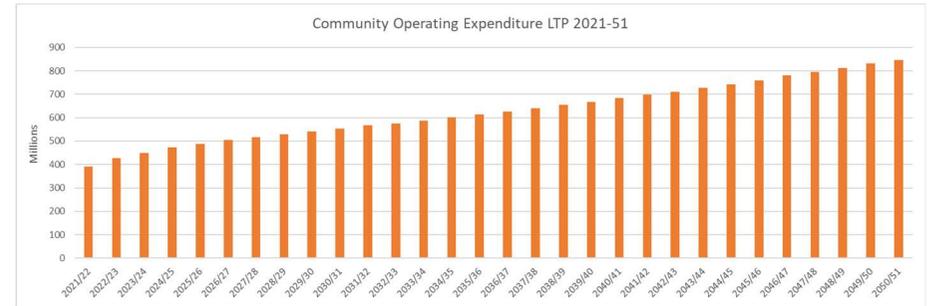
The Council has more than 1,900 social housing units across the city. In 2007, we signed a Deed of Grant with Central Government. It commits us to remaining a provider of social housing until at least 2037 and to upgrading our housing portfolio to modern standards.

We have completed phase 1 of the upgrades, for which we received a \$220m grant from Central Government. Phase 2 is due to begin in 2022 and be completed by 2028. By 2024, we also need to complete further upgrades to meet the new Healthy Homes standards set out in legislation.

We plan to undertake this full upgrade programme, however as outlined earlier in this Strategy, there are fundamental financial sustainability issues and City Housing operations are currently unable to sustainably fund this level of investment. We have provisioned three years of the capital programme to commence upgrades, deliver the required renewals for our tenants homes and meet the Healthy Homes legislative requirements. We are exploring alternative funding models for the balance of the City Housing programme.



*The above graph is inflated.



*The above graph is inflated.

Appendix A – Data definitions – condition, data confidence and criticality

	Condition	Data Confidence	Data Confidence	Criticality of an Asset	Asset Management Maturity
1	Excellent	Systematic and fully optimised data programme	(A) Reliable – data based on reliable documents +/- 5%	Major, region wide, long-term disruption and significant cost to restore service	
2	Some minor maintenance work is required	Reliable data in information system with analysis and reporting	(B) Minor inaccuracies – data based on some supporting documentation +/- 15%	Significant disruption over an extended period	Advanced
3	Maintenance is required to return to the expected level of service	Sufficient information to support basic analysis	(C) Uncertain Significant data estimated – data based on local knowledge +/- 30%	Serious localised impacts and cost	Intermediate
4	Requires a significant upgrade	Basic /incomplete information based on assumptions	(D) Data based on best guess of experienced person +/- 40%	Minor service disruption.	Core
5	The asset is unserviceable.	No asset register	(E) Unknown – no information held against data	Negligible social or economic impact	Basic