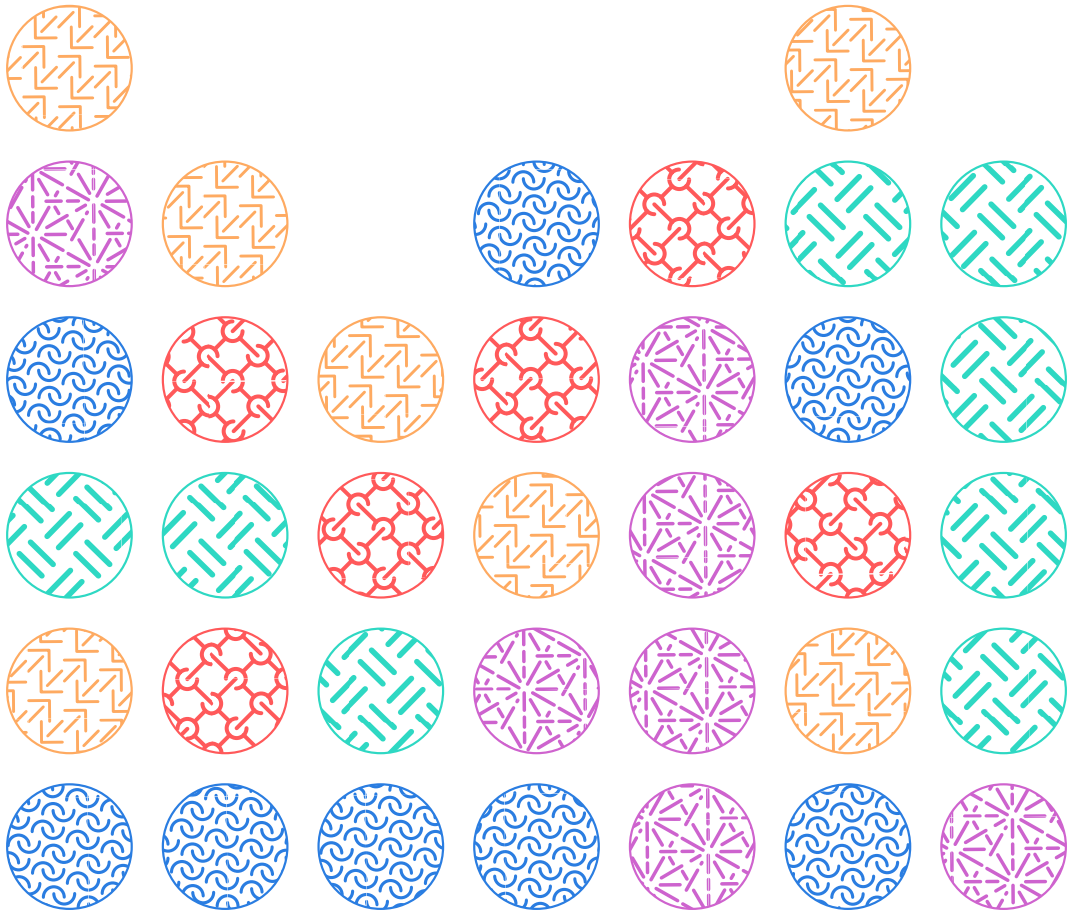
Whanganui District Council Long-Term Plan 2021-2031

Volume 3

30 Year Infrastructure Strategy

2021–2051

WHANGANUI
DISTRICT COUNCIL
Te Kaunihera a Rohe o Whanganui



Contents

1. Executive Summary

Infrastructure provides a foundation for building strong and resilient communities. This strategy describes Whanganui District Council's existing infrastructure, identifies significant issues that might impact on this and outlines the Council's approach to managing infrastructure assets over the next 30 years.

This document aligns with Council's Long-Term Plan and our Leading Edge Strategy commitments. It contributes to our vision to be a united, connected, creative, environmentally rich and economically prosperous community and provides mechanisms to respond to future challenges Whanganui will face.

The key issues to be addressed by this strategy can be classified into five themes:

- Demographic and land use changes
- Natural events and climate change
- Sustainable asset management approach
- Changing legislative requirements and environmental standards
- Affordability

The Council's infrastructure includes:

- 850 kilometres of roads, 73 bridges and 340 kilometres of footpaths
- Five water supply schemes
- Three wastewater schemes, reducing to two schemes in 2021
- Three stormwater schemes
- 155 green spaces[1]
- 16 community, cultural and events facilities

This comprises a significant infrastructure portfolio with assets estimated at over $1.8B. Although this infrastructure supports the safety, health, convenience, connectivity and enjoyment of residents and visitors, it also means that Council needs to be aware of, and respond to, issues such as growth demands, the impact of climate change, ongoing asset maintenance / renewal, increasing legislative requirements and changing level of service expectations from the community. These issues all have an impact on rates and service delivery – with affordability an ongoing concern for a district of Whanganui's size and socio-economic make-up.

In addition, this strategy, and its related Long-Term Plan, have been developed from a starting point of high debt. This is as a result of large infrastructure projects, particularly for wastewater and stormwater, combined with historic rates rises that, at times, have not kept pace with an ever growing list of services delivered by Council. Council is committed to a loan repayment programme to manage these debt requirements so that future generations are not unduly encumbered.

1 This includes six Premier Parks, 13 Active Parks, six Cemeteries, two Aquatic Centres, seven Pathway Parks, 53 Passive Parks,20 Riverbank Reserves and 48 Conservation Parks – note: while areas may be classified as recreation reserves they are not necessarily usable by the public.

This strategy is developed in response to these issues and is reflective of Whanganui's financial climate and community needs. It sets in place a clear strategy for the management and preservation of the district's key infrastructure now, and into the future. The strategy is an indicative estimate of the Council's future infrastructure needs. It is not a budget, and by itself it does not commit Council to any future project, cost or timing. It is a statement of current assumptions and thinking on what infrastructure issues Council is likely to face and how Council is planning to address these issues. The strategy is consistent with the overall assumptions contained in the Long-Term Plan 2021-2031 and should be read in conjunction with this document as well as the Asset Management Plans for each portfolio. These plans contain more specific detail to support the delivery of this strategy.

2. Introduction

This strategy is Whanganui District Council's 30 Year Infrastructure Strategy for the district and the key strategic plan for our assets. It is grounded in our present context and based on realistic growth forecasts. It explains current thinking and assumptions on infrastructure issues the Council is likely to face in the future and how the Council is planning to address these issues. This is supported by an overview of major infrastructure projects and a timeline for completion.

The Infrastructure Strategy outlines how the Council will responsibly manage its infrastructure assets. As a result, the strategy:

- Shows what infrastructure is needed to deliver Whanganui's longer term economic, environmental and social goals.
- Identifies significant infrastructure issues the Council may face over the next 30 years and the principal options for resolving those issues – including the preferred option.
- Identifies the costs and risks of each option to enable informed decisions to be made.

It has been developed to address the following key issues:

- Demographic and land use changes
- Natural events and climate change
- Sustainable asset management approach
- Changing legislative requirements and environmental standards
- Affordability

In responding to these issues it must be acknowledged that Whanganui is an old settlement with a modern vision. Our infrastructure marks our age and early boom – including social and cultural facilities unique to a district of our size – and our ongoing liveability is supported by a broad range of infrastructure networks including pipes, reservoirs, roads, cycleways and community amenities. These ensure we can deliver the outcomes our community desires – for example by protecting public health through the provision of clean drinking water and the treatment of waste; facilitating the movement of people and goods for economic growth; and maintaining the public spaces and facilities essential for a vibrant community. As a result, investing in and maintaining our infrastructure provides direct benefits for everyone in our district.

This strategy also responds to the current context of COVID-19 and is cognisant of growing housing demand, as well as the impact of developing projects such as the port revitalisation. Although COVID-19 has challenged us, and will continue to do so, our district, with its mix of industries and businesses, has fared better than many others. This has also not slowed our demand for housing and Council's resultant Housing Strategy is in the process of implementation. This includes a commitment to working in partnership with other housing stakeholders to rethink and adapt – enabling us to best meet Whanganui's shifting housing needs. The vision for this document is: "Everyone in Whanganui has the right housing opportunities and a great neighbourhood to live in". New economic development opportunities at the port are similarly important – future-proofing Whanganui's infrastructure as our population and heritage preservation expectations continues to grow.

Information about what these, and other, projects and key issues will mean for the district over the next 10 years can be found in the Long-Term Plan.

2.1 Strategy layout

Strategy Section		LGA 2002 (Section 101B)
1	Provides a summary of the key issues addressed within the document	(1)
3	Identifies the purpose of the strategy and the core infrastructure included within it	2(a), 6(a) and 6(b)
4	Provides context by describing the district, illustrating the linkage between strategic documents and referencing the strategic statements that guide decision-making	3(e) and 4(d)
5	Describes the core infrastructure provided by the Council, its current performance and the identified risks to performance	3(e)
6	Identifies the external factors influencing the Council's Infrastructure Strategy management approach including demographic changes, climate change and changing government priorities and legislation	3(b) to 3(e)
7 and 8	Identifies significant issues and options to respond to these, and documents benefits, assumptions, costs, timing and funding sources	2(a) and 2(b), 4(b) and 4(c)
9	Describes the Council's 30 year management strategy including its approach to managing growth, increasing service levels, ensuring infrastructure resilience, renewing existing infrastructure and providing cost effective delivery of services	3(a) to 3(e)
Appendices: Criticality maps for water, stormwater and wastewater Growth area maps		4(c) to 4(d)

3. Purpose and Scope

The purpose of this strategy is to identify the significant infrastructure issues relevant to our district and show how we will address and manage these over the next 30 years – including any implications of these options and decisions.

The strategy adheres to section 101B of the Local Government Act (LGA) and covers core infrastructure as well as other assets which require significant maintenance and operating expenditure across the following portfolios:

- Water supply
- Stormwater drainage
- Wastewater
- Roading and footpaths
- Parks and recreation
- Cultural and events facilities
- Property buildings
- Ports – sea and air
- Informati on services

Its scope delivers the following benefits:

- Articulating where our infrastructure demand lies and how we will manage it – within the particular context of our community's needs and fiscal constraints.
- Providing a long-term perspective – by taking a 30 year view we can assess whether there are potential investment gaps or affordability issues beyond the 10 year horizon of the Long-Term Plan. However, it is important to note that infrastructure assets have far-reaching impacts beyond the 30 year span of this strategy. Signalling our longer term view also lets other key players and residents know what we intend to do so they can plan accordingly.
- Coordinating effective and efficient infrastructure management – development of this strategy recognises that investment in infrastructure delivers a broad range of benefits across economic, environmental, social and cultural indicators. These include making us more attractive for investment; increasing our resilience to climate change and natural hazards; improving access to recreational facilities; and preserving our access to cultural resources. This strategy will help us share this benefit efficiently and effectively and provides a coherent perspective across all our asset groups.

The Infrastructure Strategy will be reviewed every three years.

4. Context, trends and strategic issues

4.1 Overview of infrastructure assets

Whanganui District Council has a significant infrastructure portfolio with assets estimated over $1.8B. This network ranges from the pipes under the ground to the roads we travel on and the community facilities we use. However, our infrastructure also includes other assets which offer sizeable benefit to the community and attract high levels of maintenance and operating expenditure. Although the Local Government Act only requires the strategy to cover five mandatory activities[2], we think it is important for our future planning to apply the same level of rigor to our other key assets. As a result, these have also been included in the strategy.

The strategy is primarily concerned with addressing five key themes.

Theme 1: Demographic and land use changes

A small reversal in Whanganui's pattern of population decline has been evident since 2014, in 2017 larger and earlier than predicted growth was experienced. In 2019, the Whanganui District had an estimated population[3] of 47,300, which reflects significant migration to Whanganui since the 2013 Census. Whanganui's tide turned in 2014 when the population began to grow after declining in all but two years since 1996. Average growth during the six-year period from 2014 to 2019 was 630 people per annum (~1.3% per annum). One of the factors that has facilitated this growth has been available housing stock, with Whanganui having only recently (2018) surpassed its 1996 population level of 46,000.

Midrange population modelling at the beginning of the planning period indicates a population of 48,200 in 2021, rising to 51,200 by 2031 and approximately 55,500 by 2050. This is an average increase of around 330 people per annum for the first 10 years of this strategy, and an average increase of 220 people from years 10 to 30 of the strategy.

This strategy can accommodate mid-range growth projections and increased development activity over the next 30 years but is ultimately predicated on a flattening out of our population. The District Plan has planned for growth capacity in Otamatea West and Springvale but there is also potential for further infill development in other parts of the city.

More information on this can be found in "Demographic and land use changes" on page 57.

2 Water supply; sewerage and the treatment and disposal of sewage; stormwater drainage; flood protection and control works; and the provision of roads and footpaths.

3 Stats NZ

Theme 2: Natural events and climate change

This strategy recognises that climate change is a significant issue that will have real impact across its 30 year planning window. In addition, Whanganui's position on the coast, alongside a river and with a catchment comprising steep hill country underlain by soft rock means that a large number of weather-related events have been, and will continue to be, experienced. As a result, this strategy has plans in place to prepare for, respond to and recover from these events – particularly given national climate change predictions. More information on this can be found on "Natural events and climate change" on page 59.

Theme 3: Sustainable asset management approach

A more strategic approach to the assessment of asset condition, criticality and performance is supported by this strategy through a risk based approach. This will ensure, amongst other things, that assets are adequately funded, risks are minimised, planned preventative maintenance occurs, there is a high degree of confidence in the asset data available and capital investment can be optimised. More information on this can be found in "Sustainable asset management approach" on page 62.

Theme 4: Changing legislative requirements and environmental standards

Shifting expectations as a result of legislation, environmental standards and community demands often have associated cost implications. Councils have to balance 'wants' against 'needs' and take into account broader responsibilities around community wellbeing, growth and ability to pay. This strategy acknowledges that these requirements and other competing demands are likely to continue to grow over the next 30 years and this will be reflected in our ability to provide services and infrastructure. More information on this can be found in "Changing legislative requirements and environmental standards" on page 64.

Theme 5: Affordability

Whanganui's Leading Edge Strategy commits to making Whanganui a place of choice for all. Central to this is our ability to provide the right facilities, public spaces and infrastructure for a range of needs. This strategy acknowledges and responds to these demands while being mindful of the district's affordability issues. As a result, provision of this infrastructure will be achieved through a balanced approach – managing the district's rating capacity, debt repayment commitments and asset management programmes alongside Whanganui's cultural, economic, environmental and social drivers. More information on this can be found in "Affordability" on page 65.

Some key information about each of the infrastructure portfolios included in the strategy is provided below. It should be noted that the Council does not manage any flood protection and control works assets within the district. These are managed by Horizons Regional Council (HRC). State highways are also not included as these are managed by the New Zealand Transport Agency.

Water supply

Whanganui District Council is responsible for the provision and management of five water supply systems:

- Whanganui Urban Water Supply Scheme.
- Fordell Water Supply Scheme.
- Maxwell Rural Water Supply Scheme.
- Mowhanau Rural Water Supply Scheme.
- Westmere Rural Water Supply Scheme

The systems comprise service lines, pipe networks, pump stations, treatment plants and outfalls.

Stormwater drainage

Most of our stormwater assets are located in the Whanganui urban area but there are some in Marybank and Mowhanau. The system includes

a network of pipes, watercourses, attenuation basins, outfalls and valves

Wastewater

The Council provides and manages three wastewater systems – the Whanganui Urban Wastewater System; the Mowhanau Rural Wastewater System; and is currently transitioning out of the Marybank Rural Wastewater System. These systems include service lines, pipe networks, pump stations, treatment plants and outfalls.

Roading and footpaths

We operate, maintain, replace and improve the district's roads, bridges, traffic management and control systems, streetlights, roadside drainage and public parking. We also manage road opening compliance. The Council provides a network of urban and rural footpaths and walkways to facilitate pedestrian movement as well as berms (which include street furniture) to separate private property from vehicle traffic.

Parks and recreation

We provide and manage a number of parks, reserves and sports grounds which make up a considerable percentage of the total assets owned and managed by the Council. We also have two aquatic centres. The Splash Centre offers covered facilities and is open year round and the Whanganui East Pool is an outdoor pool and is open during the summer months only.

Cultural and event facilities

We oversee the management of key cultural facilities, ensure appropriate stewardship of nationally-important collections and offer event facilities for the enjoyment of residents and visitors.

Property buildings

We manage and maintain buildings for a variety of uses including community benefit, operational use and investment purposes.

Ports

Our joint venture provincial airport provides sealed and grass runways and passenger terminal facilities for scheduled aircraft services and for commercial and private aircraft. It also provides property and infrastructure for aircraft storage and allied aviation service businesses.

In addition, Council owns and manages a commercial port for shallow draft coastal freight vessels, commercial vessels and pleasure boats.

Revitalisation plans are underway at the port and, in order to facilitate this, the Council will transfer its port related assets and operations to a Council Controlled Organisation (CCO) called Whanganui Port Limited Partnership. This CCO (which has been referred to as a Special Purpose Vehicle – SPV) will own and run the Port into the future.

Information services

Information services are vital to the effective and efficient operation of the organisation. This includes ensuring access to current and historical records as well as the management and maintenance of information technology hardware and automated systems.

Asset	Description	Replacement Value	% of total
Water supply	Backflows	$560,045	
	Connections	$13,376,169	
	Facilities	$39,166,968	
	Hydrants	$6,705,293	
	Meters	$880,044	
	Pipes	$99,503,097	
	Valves	$11,396,399	
SUB TOTAL		$171,588,015	10%
Wastewater	Connections	$49,587,840	
	Facilities	$82,823,319	
	Manholes	$25,475,084	
	Pipes	$180,882,058	
SUB TOTAL		$338,768,301	19%
Stormwater drainage	Connections	$27,454,752	
	Facilities	$281,673	
	Manholes	$20,881,985	
	Pipes	$137,948,911	
	Natural waterways	$3,321,161	
SUB TOTAL		$189,888,482	11%

Asset	Description	Replacement Value	% of total
Roading and footpaths	Pavements	$326,853,416	
	Structures	$179,268,516	
	Other features (berms, street furniture, safety barriers)	$14,690,042	
	Drainage	$118,115,504	
	Footpaths and cycleways	$34,029,400	
	Streetlights	$23,243,121	
	Traffic services	$7,808,724	
SUB TOTAL		$704,008,723	39%
Parks and recreation	Cemeteries	$4,693,470	
	Conservation parks	$4,600,667	
	Passive parks*	$7,199,592	
	Premier parks*	$30,430,030	
	Road reserves	$18,486,678	
	Active parks	$28,428,026	
	Pathway parks	$4,798,673	
	Swimming pools	$18,137,984	
SUB TOTAL		$116,775,120	7%

Asset	Description	Replacement Value	% of total
Cultural and event facilities	District libraries	$17,714,000	
	Sarjeant Gallery	$44,283,787	
	Royal Wanganui Opera House	$12,300,138	
	War Memorial Centre	$12,807,166	
	Whanganui Regional Museum Building	$19,421,011	
SUB TOTAL		$106,526,102	6%
Property buildings	Community buildings	$3,522,182	
	Pensioner housing	$32,211,193	
	Investment buildings	$40,560,275	
	Operational buildings	$18,296,510	
SUB TOTAL		$94,590,160	5%

Asset	Description	Replacement Value	% of total
Ports	Airport Runway, Taxiway	$7,938,667	
	Terminal	$1,148,256	
	Airport Buildings	$2,951,392	
	Fences and gates	$416,470	
	Pavements	$683,036	
	Other Infrastructure	$839,017	
	Sea Port Wharf 1	$2,109,880	
	Wharf 2	$3,757,541	
	Wharf 3	$3,194,854	
	Sheds	$3,047,884	
	Moles	$19,878,123	
	Other Infrastructure	$23,931,932	
SUB TOTAL		$69,897,052	4%

Asset	Description	Replacement Value	% of total
Information services	Desktop computers	$179,000	
	Laptops	$190,000	
	Monitors	$105,000	
	Televisions	$18,240	
	Servers	$660,000	
	Mobile phones	$126,400	
	Desktop phones	$65,600	
	Tablets (including iPads)	$95,100	
	Printers	$10,000	
	Wi-Fi	$120,000	
	Next unit of computing	$210,000	
	Network switch	$152,000	
	Other equipment	$170,000	
SUB TOTAL		$2,101,340	0.1%
GRAND TOTAL		**$1,794,143,295**	**100%**

* includes public toilets and playground equipment

4.2 Context

4.2.1 Historical context

The Whanganui Tribes are the descendants of Paerangi and Rua Tipua and are referred to as pre-waka ancestral lines. Today, the iwi actively refer to Paerangi, Rua Tipua and their affiliation to Aotea waka principally through whakapapa to Haunui-a-Paparangi and Tutawawhanaumoana (youngest child of Turi and Rongorongo from the Aotea waka).

Settlement first occurred in 1831 at the mouth of the river, before annexation under the Treaty of Waitangi in 1840. First named Petre, by the colonial government, the name was officially changed to 'Wanganui' on 20 January 1854. The name of the Whanganui River was changed by the Government in 1991 to include the 'h'. On 1 December 2015 the name of the District and the Council was officially changed to Whanganui.

Until the 1860s Māori gardens at Manganui a Te Ao, Pipiriki and Jerusalem supplied food to Wellington and Christchurch. Before the incursions of settlement from the 1880s onwards there were 246 rapids on the river – each of which were named by the tangata whenua and formed a pivotal function in mahinga kai related to tuna and piharau: a kai for which the hapu were famed among iwi across the central North Island.

Whanganui was linked by rail to both New Plymouth and Wellington by 1886. The town was incorporated as a Borough on 1 February 1872, and declared a city on 1 July 1924. By the early 1900s business in Whanganui was booming. Whanganui thrived as it serviced a huge fertile agricultural catchment area, rearing sheep and cattle, as well as growing barley, wheat, oats, maize, fruit and timber.

Pipiriki was cited under the Native Township Act 1896, to provide private legal access to the Māori hinterland for settlement and private enterprise. The Whanganui River tourist trade took off, with thousands of passengers being transported by Hatrick's steamboats. In the early 1900s visitors called the Whanganui River the 'Rhine of New Zealand'. It was during this time the town was developed and wharves established. Most coastal shipping berthed just downstream from the present town bridge. The Whanganui town wharf was the centre of activity until 1908 when Castlecliff Port was developed around the frozen meat trade. The town wharf closed in 1956 as it was uneconomic to operate both ports. Whanganui has since developed due to its farming hinterland, as well as its processing and manufacturing activity.

Whanganui District Council was established after the 1989 amalgamation of Wanganui County Council, most of Waitotara County Council, a small part of Stratford County Council and Wanganui City Council. The district has an area of 2,373 km^2. Much of the land in Whanganui District is hard hill, class 4 country, with a papa base in the riparian valley of the Whanganui River.

Apart from the main urban area, there are small rural settlements at Kai Iwi, Mowhanau, Fordell, Upokongaro, Maxwell and Mangamahu. Marae based settlements are at Kaiwhaiki, Pungarehu, Parikino, Atene, Koriniti, Matahiwi, Ranana and Jerusalem and Pipiriki.

Over the decades, Whanganui has seen significant investment in ownership of infrastructure as can be seen below.

1880	Moutoa Gardens	1960	War Memorial Hall
1896	Cooks Gardens	1968	Municipal Building
1900	Wanganui Opera House	1968	Town Bridge
1912	Dublin Street Bridge	1980	Davis Library
1914	Virginia Lake	1982	Bason Conservatories
1915	Aramoho Cemetery	1989	Splash Centre
1917	Sarjeant Gallery	1992-95	Main Street redevelopment
1922	Wanganui East Baths	1998	New Water Reservoir
1925	Memorial Tower	2003	Brunswick Water Bore
1927	Regional Museum	2007	Waterfront development
1927	Bastia Hill Water Tower	2007	Treatment Plant
1933	Alexander library	2008	Splash Centre extension
1936	Wanganui Airport	2011	Water Softening Plant
1940	Winter Gardens	2016	Aramoho Cemetery extension
1942	Durie Hill Elevator	2018	Shared pathways – Whanganui River and Te Tuaiwi
		2020	Upokongaro Cycling Bridge to finIsh Mountains to the Sea Cycleway

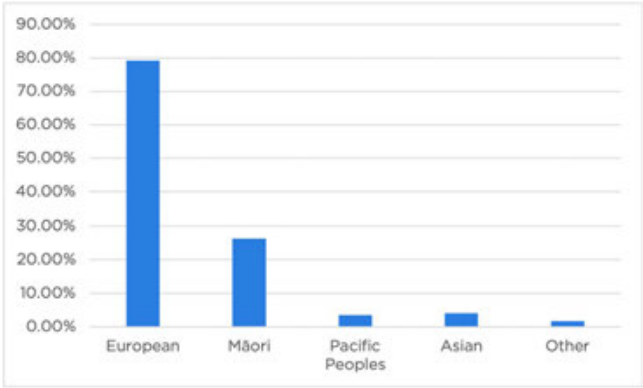
4.2.2 Demographic context – our people

At the 2013 Census, the district had a usually resident population of 42,153 on census night (a decrease of 486 people from 2006). However, the estimated population count of the Whanganui District as of 30 June 2020 is 48,100. This more recent figure is the estimated resident population released by Statistics New Zealand and takes into account births, deaths and internal and overseas migration. The table below shows how our estimated resident population has changed since 1991. The 'midrange' population forecasts by Infometrics at the beginning of the planning period had forecast a population of 48,200 in 2021, rising to 51,200 by 2031 and approximately 55,500 by 2050.

Population estimates (30 June)

1991	44,700
1996	46,000
2001	44,400
2006	43,800
2013	43,500
2014	43,400
2015	43,600
2016	43,800
2017	44,500
2018	45,309
2019	47,300
2020	48,100

Ethnic groups for people in Whanganui District



In 2018[4], 79.2% of the population identified[5] as European, 26.3% as Māori, 3.6% as Pacific Peoples, 4.1% as Asian and 1.7% as other. 7.1% of our population were Te Reo Māori speakers.

The median age of the population was 43 years but for the Māori population it was 26 years. The European population is an ageing population whereas the Māori population has a higher proportion of young people.

There were 19,746 dwellings in 2018 with 18,153 being privately occupied. This is an increase of 762 privately occupied dwellings since 2013 (152 new dwelling per year on average).

In 2018, 41.7% of the labour force were in full-time employment and 5.1% unemployed. This

4 Place Summaries | Whanganui District | Stats NZ

5 Where a person reported more than one ethnic group, they were counted in each applicable group.

compared to 50.1% and 4% respectively nationally. As a result of the 2020 COVID-19 Pandemic and the associated level 4 lockdown in March 2020, there was a spike in job seekers and benefit numbers. In May 2020 job seeker numbers in Whanganui were 30.5% above the 2019 level.

In 2018, the median income was $24,400, with 9.1% of people earning over $70,000 compared to 17.2% nationally. Whanganui residents are over-represented in the bands below $40,000 and under-represented in the bands over $40,000.

4.2.3 Geographic context

The Whanganui District is located on the south-west coast of the North Island of New Zealand facing the Tasman Sea, south of the Taranaki and Ruapehu regions and north of Manawatu. The District Council area includes the city of Whanganui and the surrounding area including the rural settlements of Mowhanau, Marybank, Fordell, Upokongaro, Kaiwhaiki and Jerusalem and Pipiriki.

The District has a land area of 2,373 km2, the majority of which is hill country, with deeply incised rivers and narrow valleys. The coastal lowland areas are marine terraces separated by old sea cliffs, resulting from a series of uplifts. Rivers and streams have cut deep valleys into these surfaces. A belt of sand dunes lies along the coast and in places, fossil dunes extend up to seven kilometres inland, overlying parts of the marine terraces and blocking streams to form a chain of small shallow lakes. Northwest of the city, a 45 metre high cliff extends along the coast fronted by a wide sandy beach.

Coastal, terrace and river valley landscapes are largely rural in character, dominated by mainly pastoral farming. Further inland, especially to the northwest, there is a much greater proportion of scrub and forest cover.

The Whanganui and Whangaehu Rivers and their main tributaries flow in a general southerly direction. A large portion of the District is within the Whanganui National Park. The park is administered by the Department of Conservation and comprises a main core area, with smaller outliers to the north and south, covering a total area of 74,231 hectares. The Whanganui River is the second largest river in the North Island and the longest navigable waterway in the country, covering 290 kilometres from the heights of Mount Tongariro to Whanganui's coast and the Tasman Sea.

Most of the population of the Whanganui District lives in the city meaning there are few prominent outlying settlements. Whanganui's geography supports an agricultural base, mainly sheep, beef and dairy, and has a strong primary processing sector.

4.2.4 Strategic context

Whanganui District Council's Leading Edge Strategy is the long-term strategic guide for Whanganui's future. It offers a shared vision for Whanganui as a united, connected, creative, environmentally rich and economically prosperous community. The Leading Edge Strategy describes a series of aspirational outcomes and is supported by an annually reviewed work programme determined through our annual planning process. The strategy is grounded by five strategic pillars:

- Community
- Connectivity
- Creativity
- Environment
- Economy

Four of these pillars – Connectivity, Creativity, Environment and Economy – relate closely to infrastructure provision. Investment and effective management across these areas has the potential to drive positive change. Examples of this include making our transport networks more accessible, safeguarding our heritage and culture, delivering best practice asset management and increasing economic activity at the Port.

The relationship of the Infrastructure Strategy to the Leading Edge Strategy and other key documents is demonstrated on **page 22**. The connection of this strategy to our Long Term Plan 2021-2031 (LTP), our Financial Strategy and our asset management plans is particularly important. This is because the direction set by this strategy must be informed by and reflect the ways we intend to manage our assets and fund and deliver our capital and operational works programmes.

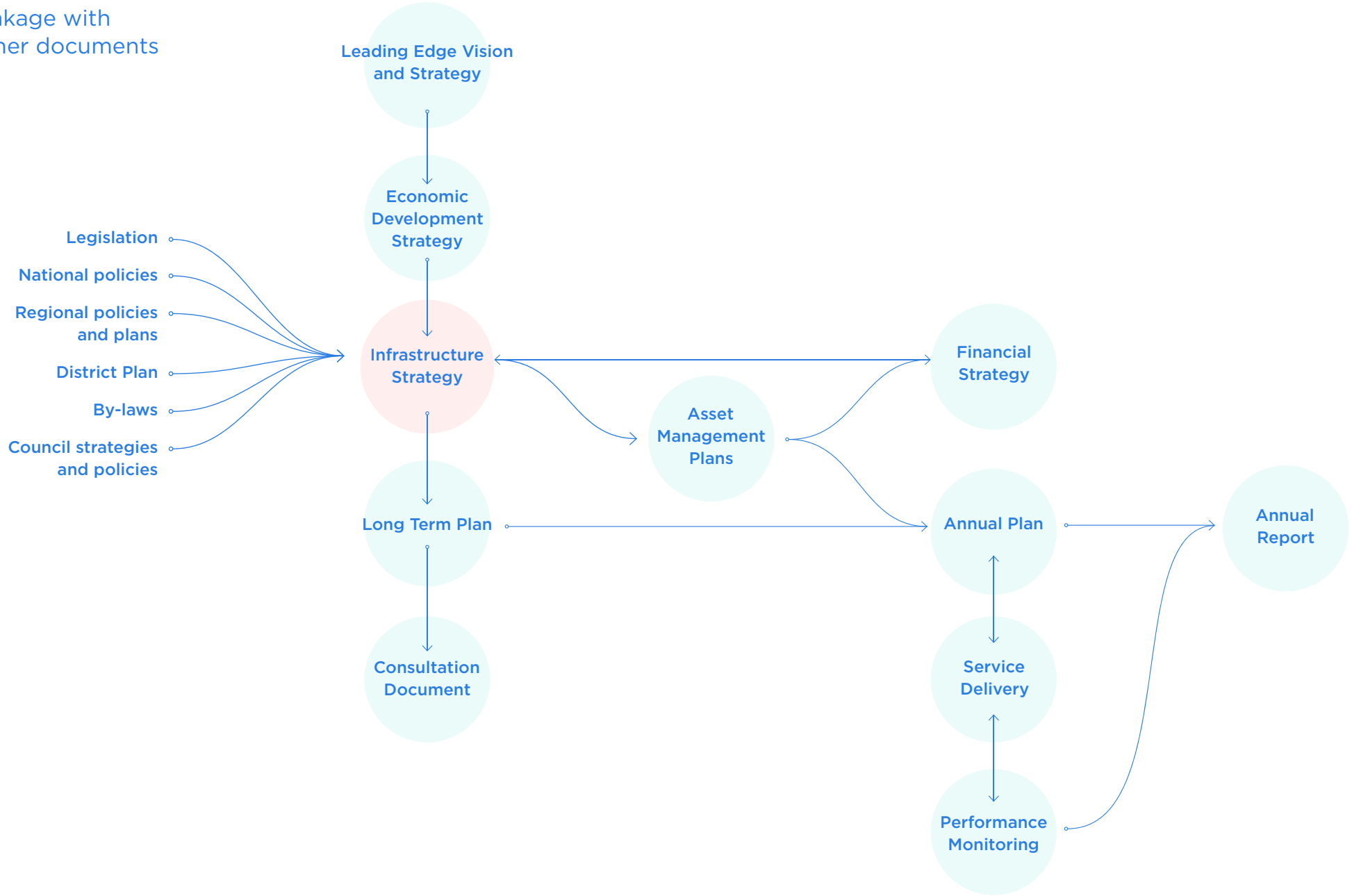
The diagram also shows how the Infrastructure Strategy is impacted by the direction and priorities set by national and regional policies and plans. The National Infrastructure Plan (NIP) is one example of this. The NIP has set the scene for a new and longer-term approach to infrastructure management and planning and offers a consolidated view of New Zealand's infrastructure. It is important to local authorities because of our major role in owning, managing and investing in the core infrastructure of our communities and, because of this, it has been a driving force behind the mandatory requirement for all local authorities to develop 30-year Infrastructure Strategies. This was due to concerns that local authorities were not adequately addressing potentially hidden investment gaps and affordability issues beyond the 10-year horizon. As a result, the NIP's vision is that by 2045 New Zealand's infrastructure is resilient and coordinated and contributes to a strong economy and high living standards. It's 'strategic responses' are also of relevance to this strategy – the three key actions being to increase understanding of levels of service and future drivers of demand; strengthen asset management; and ensure that we have the right settings to make decisions in the future. The NIP also makes a series of recommendations to support long-term integrated infrastructure planning from a regional perspective, incorporating central and local government objectives.

- Regional considerations are also covered in the Regional Land Transport Plan 2021-2031. This sets out the strategic direction for land transport in the Manawatu-Wanganui (Horizons) region over the next ten years. It is underpinned by five key objectives that the region will focus on:
- Connectivity and Access – Provide better transport connections and options to enable efficient and safe movement of people and freight, and improved access to health, social and economic opportunities
- Safety – Improve the transport network to create a safe transport system for all users
- Better Travel Options – Make active and public transport, and alternative freight modes safe, attractive, and viable options for more trips throughout the region
- Environment – Reduce environmental impacts and carbon emissions from the transport system

Resilience: Build resilien ce into the region's transport network by strengthening priority transport lifelines.

Accelerate25 (the Regional Growth Study) is also relevant to this strategy. It focuses on investment and economic development opportunities for all districts within the region over the next 30 years and recognises the importance of the right infrastructure (for example efficient transport networks) as a key enabler of growth. The Government Business Growth Agenda similarly highlights the significance of infrastructure in the creation of a more productive and competitive economy.

Linkage with other documents



4.2.5 Relationships with tangata whenua

The Council seeks to work with Māori to build community together in a mutually appropriate way. This approach is especially important in infrastructure planning, environmental management and development. Planning and the development of policy takes into account a requirement for effective engagement with hapu and iwi entities, as well as marae and whanau as required.

The Treaty of Waitangi

Due to differing interpretations of Te Tiriti o Waitangi, the Waitangi Tribunal applies a set of principles based on what Te Tiriti o Waitangi stood for, which have been adopted into law. Council has obligations under the Treaty of Waitangi principles. The main principles are:

Partnership
Both the Crown and Iwi agree to act towards each other with good faith. The obligations of partnership include the duty to consult Tāngata Whenua.

Reciprocity
The partnership is a reciprocal one. Tāngata whenua ceded to the Crown kāwanatanga of the country in return for a guarantee that Tino Rangatiratanga (full authority) over their land, people and taonga would be protected.

Autonomy
The Crown guaranteed to protect Tāngata Whenua autonomy.

Active protection
The Crown's duty to protect Tāngata Whenua rights and interests is not merely passive, but extends to active protection and full consultation.

Equal treatment
The Crown is required to treat all Iwi/Hapū fairly and not advantage one Iwi/Hapū over another if their circumstances, rights and interests are broadly the same.

The collective Hapū of Tamaupoko and Tupoho hold mana motuhake (tikanga autonomy) within the Whanganui District Council Catchment area.

The Treaty is incorporated in the statutory scheme administered by Council: this includes the Local Government Act 2002 and the Resource Management Act 1991, in particular.

Council recognises that mana sourced in whakapapa continues since time immemorial in Whanganui District: "since the fires of Paerangi were lit". Customary rights and responsibilities were not extinguished by the Treaty.

The entities with whom Council is bound to acknowledge and work with range from papatupu Marae and Hapū, to Rūnanga and statutory Iwi organisations. The constituents of all these entities have a shared whakapapa and will advise Council at all times about matters of shared and sometimes exclusive responsibilities under mana motuhake.

Engagement between the Crown and Iwi, within the settlement process, has provided a statutory platform for Crown legislated Iwi authorities.

Te Awa Tupua (Whanganui River Claims Settlement) Act 2017

The settlement of the River claim between the Crown and Whanganui Iwi provides legislative direction for Council to meet its responsibilities to the River, the land and the people.

Ngā Tangata Tiaki o Whanganui, was set up under a trust deed in 2014; and, established as a statutory Iwi authority under the Te Awa Tupua Act 2017, in which the Awa is deemed a legal personality.

The Te Awa Tupua (Whanganui River Claims Settlement) Act recognises at law a set of intrinsic values called Tupua te Kawa – the natural law and value system of Te Awa Tupua, which binds the people to the River and the River to the people. The four kawa (values) must be read together.

KO TE KAWA TUATAHI:
Ko te Awa te mātāpuna o te ora

(The River is the source of spiritual and physical sustenance)

Te Awa Tupua is a spiritual and physical entity that supports and sustains both the life and natural resources within the River and the health and well-being of Iwi, Hapū and other communities of the River.

KO TE KAWA TUARUA: E rere kau mai te awa nui mai i te kahui maunga ki Tangaroa
(The great River flows from the mountains to the sea)

Te Awa Tupua is an indivisible and living whole from the mountains to the sea, incorporating the River and all of its physical and metaphysical elements.

KO TE KAWA TUATORU:
Ko au te Awa, ko te Awa ko au
(I am the River and the River is me)

The Iwi and Hapū of the River have an inalienable interconnection with, and responsibility to, Te Awa Tupua and its health and well-being.

KO TE KAWA TUAWHĀ:
Ngā manga iti, ngā manga nui e honohono kau ana, ka tupu hei Awa Tupua
(The small and large streams that flow into one another and form one River)

Te Awa Tupua is a singular entity comprised of many elements and communities, working collaboratively for the common purpose of the health and well-being of Te Awa Tupua. Council is one of four local authorities charged with responsibilities within the Region to make appointments to Te Kōpuka. The Act provides for Te Kōpuka, to be a strategy group. It is a permanent joint committee for administrative purposes.

The Act provides for partnership to encompass customary rights and responsibilities as well as good practice within Council's jurisdiction.

Strategic relationships

The Local Government Act 2002 provides for Māori to participate in the decision making processes; and, for Council to contribute to capacity building for that to be effective.

Council has a responsive, issue focused, working relationship with the collective Hapū of Tamaupoko and Tupoho, claimants, and with post settlement governance entities. At the same time, to maintain consistency to work together, regular meetings are scheduled throughout the year with Iwi, Hapū and Statutory Iwi authorities.

It is a requirement of good faith that Hapū and Iwi are informed at the concept stage of any policy or major infrastructure development. This will be done in a way that is equivalent, transparent and robust.

In the final outcome there is likely to be seven post settlement governance entities emerging from the settlement processes under the Office of Treaty Settlements.

Partnership agreements are in place with:

- Te Rūnanga o Tamaupoko
- Te Rūnanga o Tupoho

Te Rūnanga o Tupoho is the Tikanga mandated Iwi authority within the Tupuna Rohe o Tupoho. This is recognised by Council distinct from other entities who engage with Council. Statutory Iwi relationship activity is with:

- Ngā Tāngata Tiaki
- Te Kaahui o Rauru
- Te Rūnanga o Ngā Wairiki Ngāti Apa
- Ngāti Rangi
- Whanganui Land Settlement Negotiation Trust

Other formal relationship documents
In June 2017 Council entered into the Te Matapihi ki Tangaroa Accord alongside Te Rūnanga o Ngā Wairiki Ngāti Apa, Te Kaahui o Rauru, Te Rūnanga o Tupoho and Ngā Tāngata Tiaki o Whanganui. "Te Matapihi ki Tangaroa" literally means "the window to the ocean" and refers to the area towards the Whanganui River

mouth. This partnership represents a shared commitment between Hapu, Iwi and the Council in protecting the marine environment and contains a number of objectives. In terms of infrastructure provision, the effective operation, management and monitoring of the new Wastewater Treatment Plant is a critical and shared concern.

Tupuna rohe in the District

Ngā Rūnanga o Tupoho and Tamaupoko are currently participating in regular meetings with Whanganui District Council. Relationship documents are in the process of being developed.

It is intended that the meetings' processes will be reviewed from time to time to ensure effectiveness and efficiency in a mutually appropriate way and ensure the expectations and aspirations of the rūnanga and the duties of the Council are both met. In that regard, Council is looking forward to engagement with Te Rūnanga o Ngā Wairiki Ngāti Apa and Te Kaahui o Rauru in a similar way when those entities consider it appropriate to occur.

Partnerships with iwi

The Pakaitore Historic Reserve Board administers Pakaitore (Moutoa Gardens). The members are appointed by iwi, the Council and the Crown.

Whanganui District Council has a partnership with Tupoho Whanau Trust and Sustainable Whanganui in the operation of the Whanganui Resource Recovery Centre.

The Mayor chairs Te Puwaha which is the governance group overseeing all funded partners and Iwi for the Port revitalisation.

Public sector agencies

Whanganui District Council will work with Te Puni Kokiri and the Māori Land Court as required in any projects set up to achieve outcomes for Māori under the Council's Long-Term Plan.

5. Overview of Core Infrastructure

5.1 Description

5.1.1 Water supply

The Council's Water Supply activity, which includes an urban water supply to Whanganui and rural schemes serving Fordell, Maxwell, Mowhanau and Westmere, has assets with a replacement cost of $171M. This includes nine bores, five treatment plants, 28 reservoirs, 17 pump stations, 2,943 valves, 2,122 hydrants and 520 kilometres of pipeline. The average condition grades for water supply assets ranges from fair to very good. This shows that the water supply network is being maintained in a sustainable manner. The lifecycle for water supply assets ranges from 20 years for water meters through to 110 years for PVC pipes.

The water supply activity supplies, on average, 27 million litres of water each day and is funded by a combination of rates and user charges.

Critical assets for water supply are currently listed as:

- Kai Iwi Supply Bores No 1,2 and 3 – High criticality – priority 1
- Reservoirs No 1,2,3 – High criticality – priority 1
- Kai Iwi Supply Main (15 kilometres) Medium criticality – 6%
- Castlecliff Main (five kilometres) – Medium criticality – 9%
- Trunk Mains – High criticality – 4%
- Mains servicing critical users – Medium criticality – 9%

There are mandatory performance measures for this activity set by the Local Government Act (2002). The key levels of service are to:

- provide a reliable water supply
- manage water consumption
- provide safe potable water

Additional information on criticality and levels of service, including performance measures and targets is available in the Asset Management Plan.

There are minimal changes to levels of service foreseen for this activity, which can be achieved within existing operational budgets. All capital upgrades in the Asset Management Plan have been allocated to renewals.

5.1.2 Stormwater drainage

The Council manages and operates this infrastructure to ensure that stormwater flows are managed cost-effectively and adverse impacts on public health and safety, the environment, public and private property and the economy are reduced. The stormwater network includes sections of open drains and natural waterways, as well as stormwater pipes. The water quality of our waterways, lakes and river is particularly related to stormwater and land management practices.

Flood protection and control in the district is the mandate of Horizons Regional Council and not a service provided by Whanganui District Council. The last of the Council's historic flood protection assets were transferred to Horizons Regional Council in 2014 for amalgamation into the Lower Whanganui River Flood Protection

Works. The Council provides some minor functional support to Horizons Regional Council.

Most of the Council's stormwater assets are located in the Whanganui urban area, with some minor schemes located in Marybank and Mowhanau. They have a replacement cost of $189M. These assets include 3,545 manholes, 11 valves, outfalls with a total length of 3,159 metres, 170 kilometres of pipeline and 17,061 meters of waterways. Current available data shows the average condition grades for stormwater assets range from 'good' to 'very good'. This reflects the relative recent age of the stormwater network, as most of it was constructed as part of the separation project in the 1990s to 2000s.

This activity has assets with lifecycles ranging from 50 years for valves through to 115 years for MDPE (Medium Density Polyethylene) pipes.

The stormwater activity is funded out of the Council's targeted rate.

- Critical assets for this discipline are:
- Stormwater pipes, manholes and valves – High criticality 5%
- Stormwater pipes, manholes and valves – Medium criticality 14%
- Stormwater pipes, manholes and valves – Low criticality 13%
- Stormwater pipes, manholes and valves – Very low criticality 67%

Detailed asset numbers and locations for these criticality groups are recorded in the Asset Register.

Mandatory performance measures for this activity are set by the Local Government Act 2002. The key levels of service are:

- To ensure a safe and operational stormwater drainage network
- To monitor flood warnings and respond promptly during emergency management of flooding events.

Additional information on criticality and levels of service, including performance measures and targets is available in the Asset Management Plan.

The true technical levels of service for this activity have historically been poorly defined. Whanganui District Council completed a set of new hydraulic and criticality models for the stormwater network in 2014. Indications are that levels of service through the primary network are relatively low, and would need improvement by investing in augmenting the pipe network over the long term. A combination of strategies will be used to achieve this, ranging from integrated catchment management planning activities, surface attenuation using low impact development and storage, and ensuring well-defined overland flow paths as a secondary system.

The condition of our natural waterways has also been identified as a potential issue, with the available data not being very reliable. This will need to be addressed from a level of service point of view, mainly through our Healthy Streams Whanganui initiative.

The remaining section of the public network in Gonville West also needs to be completely separated, as it is currently serviced by a combined sewer system.

5.1.3 Wastewater

The Council manages and operates wastewater infrastructure ensuring that wastewater flows are treated to a standard set by the relevant resource consent limits.

The wastewater activity treats, on average, 25 million litres of wastewater a day. The Council's wastewater services, which include an urban wastewater system servicing the city of Whanganui and two rural systems serving Marybank and Mowhanau, have assets with a replacement cost of $338M. This includes 4,655 manholes, 36 pump stations, three treatment plants and 276 kilometres of pipeline. The current available data shows the average condition grades for wastewater assets range from 'good' to 'very good'. This shows that the wastewater network is being maintained in a sustainable manner.

This activity has assets with lifecycles ranging from 15 years for communication equipment through to 100 years for manholes and pipes. It is funded from the wastewater targeted rate (pan tax) and trade waste fees.

- Critical assets for this area are:
- Wastewater pipes
- High Criticality 4%
- Medium Criticality 16%
- Low Criticality 14%
- Very Low Criticality 66%
- Wastewater pump stations
- High Criticality 14%
- Medium Criticality 31%
- Low Criticality 34%
- Very Low Criticality 21%

Detailed asset numbers and locations for these criticality groups are recorded in the Asset Register.

There are mandatory performance measures for this activity set by the Local Government Act 2002. The key level of service is to provide a convenient, safe and reliable wastewater system. Additional information on criticality and levels of service, including performance measures and targets is available in the Asset Management Plan.

The adverse effect of wastewater on the environment is negated by compliance with discharge consent conditions. The Council has set key performance measures to track and demonstrate successful delivery of these levels of service. A current significant issue is that due to large influxes of stormwater into the wastewater system, the system is not contained at all times.

Increased demand for higher levels of service are anticipated for this activity over the next 30 years. The Wastewater Treatment Plant has been upgraded by capital investment in order to protect the environment by compliance with discharge consents. The influx of stormwater sources into the wastewater network will be identified and isolated (or contained) to achieve the target wet weather level of service.

A key development for the treatment plant is the potential for 'biogas co-generation' in the future. Currently gases are being flared off from the plant and a feasibility study will be completed regarding the co-generation potential for this biogas resource. The feasibility will consider environmental impacts and gains, including from a climate emission perspective. We are actively monitoring and collecting biogas data to feed into the feasibility. This data needs to be representative over a period of time to give accurate recommendations for any future co-generation plant.

Biosolids are currently stored onsite in existing settlement ponds. A feasibility study is also planned to understand the options for future biosolid disposal. Biosolids' storage capacity is finite and this was a known critical constraint of the Wastewater Treatment Plant at the time of planning and construction.

Capping of the existing settlement pond is likely to be required when it reaches capacity and a budget for this work has also been set for capping this settlement pond. This will be subject to the outcomes of the feasibility study and available capacity. We are currently monitoring the volume and quality and composition of the biosolids to support the next process and potential disposal options.

Trade waste is a further key component of the wastewater operation. Trade waste is discharged into the reticulation and treated at the Wastewater Treatment Plant. This is a significant component of the wastewater make-up, with numerous industries contributing trade-waste.

The tradewaste is monitored to understand volume, quality and composition. This data will support the feasibility study for future biosolid disposal options. Tradewaste can impact on the environment and is a key consideration around managing biosolids into the future.

Wastewater resource consents expiring include Mowhanau plant, with this consent expiring in September 2021. Budget provision has been

made for an upgrade of this plant, if required, by the new consent.

Planning and communications are underway with Horizons Regional Council in relation to existing resource consent and we anticipate ongoing discussion with Horizons Regional Council throughout 2021 regarding any changes required in relation to the discharge conditions and consent at this plant.

A further resource consent for the Ocean outfall is due to expire in 2026. We anticipate working through this process with stakeholders and have made budget provisions for this process. At the completion of this process there is potential for the consent conditions to be more stringent. However, the current consent is relatively strong in its discharge requirements and it is too early to understand the implications of the next consent process.

5.1.4 Roading and footpaths

Whanganui's roading activity is one of the district's most valuable assets, with a replacement cost of $704M. It includes 73 bridges, 290 retaining walls, 6,400 street lights, 12 traffic signals, 340km of footpaths, 4,660,887m2 pavements and 16,000 assorted assets including street furniture, signs and culverts.

Data on road condition is collected through road roughness and condition rating surveys. Road condition is monitored throughout the year by the Council's maintenance contractors by way of an Alliance contract. The average condition grade for roading assets is 'fair'.

Funding for this activity is primarily received from rates with financial assistance from the New Zealand Transport Agency.

There are mandatory performance measures for this activity set by the Local Government Act 2002. The key levels of service are:

- the provision of a safe and secure local roading network.
- that local authority roads provide a smooth travel experience.
- that the local road corridor network meets the needs of its users.

Additional information on criticality and levels of service, including performance measures and targets is available in the Asset Management Plan.

5.1.5 Confidence and Reliability ratings for three waters and roading assets

Council collects and records data on the three waters and roading assets in various ways. This is critical so that council can have confidence that any issues are understood and that plans can be put in place to ensure that required services can be delivered efficiently.

Confidence ratings have been assigned to the source data, unit cost rates and to other items as appropriate. The confidence ratings used are summarised below.

Grade	Label	Description	Accuracy
A	Highly Reliable	Data based on sound records and recognised as the best method of assessment	±5-10%
B	Reliable	Large portion of data based on sound records but has minor shortcomings (e.g. old data, some missing documentation, reliance placed on unconfirmed reports and extrapolations)	±10-15%
C	Uncertain	Significant data incomplete, unsupported or extrapolated from a limited sample.	±15-25%
D	Very uncertain	Data based on unconfirmed verbal reports, cursory inspection and judgement of experienced person.	±25-40%

Note: Grading and Description are based on Table 3.5.3 of the "International Infrastructure Management Manual – 2011"

The valuations are based on accurate, componentised and substantially complete asset registers and on appropriate unit replacement costs and effective lives. Council have assigned confidence ratings to the source data, unit cost rates and to other items as appropriate, to come up with a weighted average accuracy level for each asset group. The assessed accuracies are:

- Wastewater, water supply and storm water assets rating of +/-15%
- Roading Assets rating of +/-15%

The council's asset management processes for updating asset information are very good. Inventories have had a high level of confirmation, including quantities, sizes, material types and life expectancies. The councils confidence ratings take into account the councils asset management and maintenance management practices. They also include consideration of council's accumulated knowledge and experience of these assets given the long association (30 years plus in some cases) by both council and contractors.

Asset Group	Asset Type	Purpose and Description	Quantity
Water supply	Connections	Connections run from Councils water main to the boundary of your property to supply water.	16,555
	Bores	Bores are wells drilled into the earth for retrieving water.	9
	Treatment plants	Treatment Plants treat water to improve the quality of water to make it more acceptable for the end user.	5
	Reservoirs	Reservoirs are storage tanks used for collecting and storing water.	28
	Pipelines	Pipelines are pipes used to transport water to consumers.	520km
	Pump stations	Pump Stations are facilities which supply water to the distribution system.	17
	Valves	Valves are devices that regulate, direct or control the flow of water within a system.	2,9243
	Hydrants	Hydrants are a connection point by which firefighters can tap into a water supply.	2,122
Critical Assets	Water Bores	Main water supply.	7
	Reservoirs	Supply Reservoirs.	7
	Key Trunk and Supply Mains	457 and 558 supply mains.	1
	Pressure Reducing Valves	Major Pressure Reducing Valves.	12
	Pipe Bridges	Trunk main crossings.	3

Asset Group	Asset Type	Purpose and Description	Quantity
Stormwater drainage	Connections	Connections run from the boundary of your property to either Council's stormwater main or to the road kerb.	11,468
	Pipelines	Pipelines are pipes used to transport stormwater from properties to disposal facilities.	170km
	Manholes	Manholes are access points to underground pipe networks.	3,545
	Valves	Valves are devices that regulate, direct or control the flow of water within a system.	11
	Structures	Structures can be stormwater inlets or outlets into streams or receiving environments	13
	Natural Waterways	Natural waterways are waterways (natural or manmade) through which flowing water will travel in a defined channel.	83
Critical Assets	Pipelines	High criticality pipes	5
	Pipelines	Medium criticality pipes	14

Asset Group	Asset Type	Purpose and Description	
Wastewater	Connections	Connections run from Council's wastewater main to the boundary of your property to collect wastewater	15,024
	Pipelines	Pipelines are pipes used to transport wastewater from properties to disposal facilities.	276km
	Manholes	Manholes are access points to underground pipe networks.	4,655
	Pump stations	Pump Stations in wastewater collection systems are normally designed to handle raw sewage that is fed from underground gravity pipelines and then pumped to disposal facilities.	36
	Treatment plants	Treatment Plants treat wastewater with the aim of producing an effluent that will do as little harm as possible when discharged to the surrounding environment.	3
Critical Assets	Pump stations	Pump stations pump raw sewage along pipelines	36
	Interceptor pipe	Channels raw sewerage from collector pipes to main pump station	14km
	River crossing and ocean outfall	Channels raw sewerage from main pump station to treatment facility and treated effluent to ocean disposal point.	3km
	Treatment facilities	Treats effluent prior to disposal	3
	Pipelines	High criticality pipes	5%

Asset Group	Asset Type	Purpose and Description	Quantity
Roading and footpaths	Pavements	Roads	850km
	Structures	Bridges	73
		Large Culverts	60
		Retaining Walls	290
	Drainage	Kerb & Channel	440km
		Road Culverts	3200
		Surface Water Channels	890km
		Berms	830,000m2
	Footpaths & Cycleways	Footpaths	340km
	Traffic Services	Traffic Signs	6,500
		Traffic Signals	12
		Traffic Control Devices	383
		Safety Barriers	12.5km
	Street Lights	Street Lights	6,400
	Other	Carparks, Off Street	10,490m2
		Riverbank Protection	2.5km
Critical Assets	Bridge 70	Whanganui City Bridge	184m
	Bridge 71	Dublin Street Bridge	309m

Asset Group	Asset Type	Purpose and Description	Quantity
Parks and Recreation	Cemeteries	Buildings	11
		Cremator	1
		Park Furniture	63
		Structures	11
		Ground Cover/Beams	143
		Roads/Paths	13
	Swimming Pools	Buildings	5
		Aquatic Equipment	68
		Park Furniture	17
	Parks & Reserves	Buildings	28
		Public Toilets	33
		Structures	229
		Park Furniture	1,643
		Ground Cover	67
		Roads/Car Parks	210
		Pathways	247
Critical Assets	Cemeteries	Cremator	1

5.2 Parks and recreation

The parks and recreation activity contributes to the community's social, cultural, environmental and economic interests and provides many opportunities for recreation. These are set within a landscape that includes a river, lakes and beaches all of which are within close proximity to each other whether accessed by walking, cycling or driving. Parks, aquatic facilities, trees, cemeteries, public toilets and cemeteries are core assets contributing to making Whanganui a great place to live and visit.

5.2.1 Parks and Reserves

Asset Type: Premier Parks

There are six open space areas identified as Premier Parks or Destination Parks. Each is unique and tells a different story for Whanganui while offering a varied experience for visitors and residents. They are iconic, tourist focused and of economic benefit. Generally the levels of service are higher at Destination Parks compared to other reserves.

Queens Park
Queens Park is located in the centre of Whanganui's CBD, and is a cultural hub and site of historical significance. The museum, art gallery, library, cenotaph and Memorial Hall are housed on the park.

Castlecliff Domain
The Domain contains a destination playground beside the beach which is well-used and a strategic asset for the community.

Kowhai Park
Kowhai Park is a unique playground that is a destination and stop-off point for visitors to Whanganui. With pathways that extend either side of the playground, this Destination Park caters to a wide user group and provides an immediate connection with the Whanganui River.

Virginia Lake
Virginia Lake is one of the older Destination Parks in Whanganui and at one stage was the water source for the city. It is an iconic marker for people coming into or leaving Whanganui via State Highway 3 with the Higgenbottom Fountain sitting on the lake well identified with Whanganui. The reserve is also known for its wild fowl, Winter Gardens and its aviary. Accessible from a number of streets, it also serves as the neighbourhood park for many residents on St Johns Hill.

Bason Botanic Gardens
The Bason Botanic Gardens carry the New Zealand Gardens Trust rating of a Significant Garden. As a botanic garden there is a strong focus on plant collections. The plantings have to take into account the proximity of the reserve to the coast, and this makes it fairly unique. Importantly, it offers open park-like settings that allow for large gatherings.

Majestic Square
Centrally placed and adjoining Queens Park, Majestic Square provides a gathering place for the community within the CBD. It forms part of the Town Centre Rejuvenation Strategy and future use of the space is being considered.

Asset Type: Passive Parks

These parks primarily exist in urban areas for the purposes of localised informal recreation and play for surrounding residents. They contribute to a sense of community, particularly those Passive Parks that have playgrounds. The smaller areas that do not have significant play spaces generally provide a seat, trees and/or views and provide intrinsic value to the built environment. Their key value is what they provide to the community as a whole, rather than the specific offerings of individual parks.

An assessment of the current stock of Passive Parks is to be undertaken to determine whether the needs of the community are being met, particularly with regard to accessibility.

Asset Type: Active Parks

The Council provides a range of opportunities for active recreation, with our key sports fields providing large areas that allow for multiple teams to play at one time.

Springvale Park
Springvale Park is a hub for sporting activity, and is accessible and well situated next to State Highway 3. It is the main sporting area for schools-based summer and winter outdoor sporting codes and senior club rugby. The grounds also provide extra facilities for cricket when required and offer a large open space for events such as the circus. It has also been the base for the Masters Games in previous years. Within the parks are two indoor stadiums that are run by a Trust, as well as the main aquatic facility, and a bike park developed by the community.

Wembley Park
Wembley Park is the main sporting facility for football in Whanganui. Sport Whanganui currently administers the ground's bookings and the Council manages the ground's maintenance contracts. Whanganui Football Charitable Trust (WFCT) represents the clubs and looks after their interests. WFCT are working with Council and local clubs to advance the redevelopment of Wembley Park.

Laird Park
Laird Park is the home of Netball Wanganui Inc. who have a license to occupy the land that the courts are on and lease the land that their building is on. There are minimal costs for maintenance of this facility for the Council but there are costs associated with maintaining the car parking area that surrounds the courts.

Cooks Gardens
Within the Cooks Gardens facility there is an athletics track (IAAF Level 2 certified)[6] and a premier turf that is mainly used for athletics field events and representative rugby games. The complex also houses the velodrome.

Asset Type: Aquatic Facilities

The Splash Centre is covered and is Whanganui's main aquatic facility. The Whanganui East pool is not covered and is only open during the summer months. Whanganui East pool is over 100 years old and is in need of refurbishment.

Asset Type: Public toilets

Public toilets are provided in areas of high public usage. There are currently 33 toilet blocks on 25 sites in the Whanganui district. There are toilet facilities in Premier Parks, most suburban shopping centres, and within the CBD.

The Freedom Camping Act 2011 has meant that there has been increasing demand for 24/7 facilities and the Mountains to the Sea route has also raised a need for more toilet facilities in rural areas.

Asset Type: Street Trees

Whanganui has approximately 6,500 street trees, with significantly more in our parks and reserves. They are managed according to the Street Tree Strategy which recognises the value that the treescape brings to the community, to real estate values and to good urban design. It could be anticipated that trees will have an increasing role in ameliorating the effects of climate change. Whanganui District Council has obtained 5,040 pre-1990 New Zealand EUs (Emissions Units) under the Emissions Trading Scheme (ETS) for a number of parks and reserves including Kowhai Park, Virginia Lake, Hyltons Pit, Matipo Park and AH Collins Reserve.

The tree stock is ageing, and a focused replacement programme has been implemented. Where possible, work is done alongside infrastructure upgrades. Replacement with younger trees will ultimately help to reduce maintenance costs.

6 IAAF is the International Association of Athletics Federations.

Asset Type: Cemeteries

The main cemetery for the Whanganui District is in Aramoho. Facilities at the Aramoho cemetery include a chapel and the cremator, which is considered a critical asset. There are also three rural cemeteries available. An extension to the Aramoho cemetery has been opened that will serve the community well beyond the term of this Strategy.

5.3 Cultural and events facilities

Whanganui District Council owns an eclectic portfolio of iconic venues for events of all types. These facilities encourage vibrancy and support the community to live an active lifestyle. These facilities are conveniently located in the heart of the CBD.

Events, big or small, can bring a community together and unite people through shared goals and experiences. Whanganui hosts a number of community and hallmark events that generate positive publicity and economic benefits for the district.

Queens Park, which is situated just off Whanganui's main street, is home to some of our significant assets, including the library where the community can access a wide range of services, as well as the museum and Sarjeant Gallery which is currently being earthquake strengthened and enlarged and will be a world class gallery.

5.3.1 Whanganui Venues and Events

In late 2016, the Council endorsed the creation of Whanganui Venues & Events (WVE) to consolidate the Council's event venues and, through a cohesive event strategy, deliver enhanced economic benefits to the District via increased visitor numbers and venue utilisation. The vision for Whanganui Venue and Events is to be the leading destination for events in the lower North Island.

Bringing together three unique venues under one portfolio provides an ideal setting for identifying potential synergy, eradicating duplication, and maximising resource efficiency. Less than positive venue reputations and perceived barriers to use are strong drivers for the team's aspirations to:

- attract, develop and support, new and existing sustainable events
- nurture and develop event capability
- maximise venue utilisation
- improve financial performance

The venues that make up the WVE portfolio include the Royal Wanganui Opera House, the War Memorial Centre, Cooks Gardens and Velodrome and the i-Site.

5.3.2 Libraries

Whanganui District Library Te Wharepukapuka o Whanganui is one of New Zealand's oldest public libraries.

Incorporated in 1875, it was established with donations from the libraries of Governor Grey and then Mayor of Wanganui, John Ballance. It holds significant collections (books, archives, photographs) relating to the history of Whanganui and the surrounding area. It also holds substantial collections that reflect our community's passion for arts, culture and heritage.

The Council provides library services because it recognises the importance to the community of lifelong literacy. By providing access to all, our libraries benefit the public by fostering literacy and connecting people. They are trusted public spaces and an essential component of our social and economic infrastructure, enabling individuals to better themselves and participate as citizens.

Current provision is significantly below national standards, both with regard to space/buildings and collection size (about 65% in both cases). Closing this gap is a key aim of the District Library Strategic Plan.

The Library service comprises the Davis Library, the Alexander Library, Gonville Café Library, Suzanne Aubert Library at Jerusalem, the Mobile Libraries, the Library Home Service, and suburban local libraries at Hakeke Street in Whanganui East, Rangiora Street in Castlecliff and in Mitchell Street, Aramoho.

5.3.3 Whanganui Regional Museum

The Whanganui Regional Museum plays an important role in our community and its collections represent a significant and irreplaceable public inheritance. The Council funds the Whanganui Regional Museum Trust to operate the museum activity.

The aspirations of the museum are to:

- serve everyone who has a potential, emotional or material interest in the Museum
- be a waharoa (gateway) for dialogue about the past and future
- ensure effective access to collections and kōrero (dialogue)
- generate a sense of community ownership

The Museum is uniquely positioned to give effect to these aspirations by exploring cultural and natural heritage through promotional and celebratory activities. It will focus on developing its unique voice and introduce Māori perspectives throughout the museum experience.

Achieving these goals will mean concentrating on sustainability and investing in growth and development by ensuring effective governance, advocating its worth to funders and the community at large, and by exploring diverse revenue streams.

5.3.4 Sarjeant Gallery

The Sarjeant Gallery Te Whare o Rehua Whanganui was established in 1912 through the generosity of local farmer and businessman Henry Sarjeant. He left the bulk of his estate to the Borough Council to establish and maintain an art gallery 'for the inspiration of ourselves and those who come after us'.

The Gallery was opened on 6 September 1919 by the Prime Minister William Massey.

It is one of New Zealand's most important heritage buildings and its collection, which has been built up over the last century through the original bequest and subsequent donations, is of national significance.

The Sarjeant Gallery Te Whare o Rehua Whanganui exists to inspire the people of the Whanganui District and the rest of New Zealand through stimulating, engaging, relevant, intellectually-challenging and educational uses of its collections and building.

In partnership with Whanganui iwi, we achieve this through:

- critical curatorship of the Gallery's existing and developing collections;
- building strong ties with other institutions and stakeholders
- a deep commitment to stewardship of the Gallery's collections and its historic building.

5.3.5 New Zealand Glassworks

The New Zealand Glassworks (NZG) opened in September 2016. Glass artists, and in particular those working in hot glass, are a distinctive part of Whanganui's arts community. Council considers the arts community to be a significant element in Whanganui's marketing mix. The large capital and operating costs of a hot glass operation mean that a shared-use facility available for hire by artists and educators remains affordable to users and enables artists to continue working in Whanganui. It also allows UCOL to continue to offer glass as part of its curriculum.

The building housing NZG is leased. The interior equipment and shop fit-out belong to the Council.

5.3.6 Overview of Assets

Asset Group	Asset Type	Purpose and Description	Quantity
Cultural and Events Facilities	Libraries	The Alexander Library, the Davis Library, Gonville Library, the Suzanne Aubert Library at Jerusalem, libraries at Hakeke Street, Rangiora Street and in Aramoho, and the Mobile Library vans.	9
	Cooks Gardens (WVE) & Velodrome	Sports Grounds, grandstands, corporate boxes and Function Centre – includes the Velodrome	1
	War Memorial Centre (WVE)	Function Centre inclusive of the Pioneer Room, Concert Chamber and Main Hall	1
	Royal Wanganui Opera House (WVE)	Theatrical venue for performing arts and entertainment	1
	i-Site	Information Centre for local, domestic and international visitors	1
	Whanganui Regional Museum	Museum building	1
	Sarjeant Gallery	Sarjeant Gallery at Pukenamu Queens Park as well as a temporary gallery (Sarjeant on the Quay) located at 38 Taupo Quay, also Tylee Cottage	1
	New Zealand Glassworks	Leased building located at 2 Rutland Street, furnace, kilns and other equipment. Shop and fittings.	1

Asset Group	Asset Type	Purpose and Description	Quantity
Operational Assets	Library Collection	Books, DVDs, CDs, recordings and heritage collections	119,000 items
	Library equipment	Furniture, IT equipment and library systems, shelving and equipment, Mobile Library and Home Service vehicles	1000
	Cooks Gardens equipment	Bar, furniture, broadcasting equipment, sports equipment	100
	Velodrome equipment	Building and furniture	100
	War Memorial Centre	Furniture, war memorabilia and technical equipment	1000
	Royal Wanganui Opera House	Technical lighting and sound systems, furniture and office equipment	100
	Whanganui Regional Museum	Collections of artwork, taonga and objects	100000
	Sarjeant Gallery	Collections of artwork	8300
Critical Assets	War Memorial Centre Lift		1
	Integrated Library Management System (ILMS)	Core library operating system controlling acquisition and disposal of collections, check in and out of items, customer personal data, fees, charges, debts, loan periods, etc.	1
	Collection and member data	Database of all collection and member information	1
	Data and power connections	A cloud-based system that can operate locally for a time; ILMS dependent on power supply to operate	various
	Air Conditioning	To ensure staff and public comfort is maintained; and collections are stored in optimum conditions for long-term preservation	various
	Building Safety Systems	Fire alarms, environmental control etc., to reduce the risk of fire and damage to collections etc.	various
	Security Systems	Alarms and CCTV	various

5.4 Property buildings

Whanganui District Council owns and manages investment properties within the City Endowment and Harbour Endowment portfolios. These endowments have specific purposes as outlined below. Both portfolios contain a mix of ground leases (which are land only) and improved leases (which are both land and buildings).

We undertake this activity in accordance with the Property Portfolio Investment Plan 2018 – 2028.

The plan applies to the property investment portfolio that is managed by the Council's Property Group, specifically to investment properties and properties determined surplus to Council's requirements that are within the Harbour Endowment, City Endowment and Community and Operational (Freehold) portfolios.

It outlines the Property Group's process and delegated authority in the divestment of property and reinvestment of capital.

5.4.1 City Endowment portfolio

The City Endowment property portfolio is the result of a Crown land grant in the 1880s. The fund is required to be used for the benefit of the people of the district. In practice this takes two forms:

- Property for parks
- Property that returns a rental to reduce the level of rates required by Council

5.4.2 Harbour Endowment portfolio

The Harbour Endowment property portfolio is the result of a Crown land grant in the 1880s.

Council is in the process of transferring the Harbour Endowment portfolio, which exists to fund port and river related works to a Council Controlled Organisation.

5.4.3 Overview of Assets

Asset Group	Asset Type	Purpose and Description	Quantity
City Endowment	Commercial and industrial buildings	Two separate properties 7 Taupo Quay. – 1 Building 178 Ridgway Street – 8 separate structures contained within 3 leases.	1 8
	Commercial, industrial and retail land	Six properties subject to ground leases	6
Harbour Endowment	Commercial and industrial buildings	Six separate properties • 179 St Hill Street – 4 storey and 2 storey building part occupied by Ministry of Health as well as Council functions • 53 Ridgway Street – Retail and Commercial building • 8/10 Cooks Street – Industrial/Commercial building • 301/303 Heads Road – Industrial/Commercial building • 305/307 Heads Road – Industrial/Commercial building • 309 Heads Road – Industrial/Commercial building	6
	Commercial, industrial and retail land	33 separate properties	33
	Farmed, residential and reserve properties	Six separate properties	6
	Port development area properties	10 separate properties	10
Critical Assets	178 Ridgway Street 179 St Hill Street 8/10 Cooks Street	These three properties provide 85% of the income for the improved leases within the portfolio. As such they need to be maintained to a standard that will retain tenants. To ensure this continues they need to operate under a planned preventative maintenance regime.	

5.5 Ports

The Council owns and manages three separate forms of transport. These are the airport, seaport and Durie Hill Elevator.

5.5.1 Airport

The Airport provides aerodrome services, namely landing, take off and ground handling facilities for scheduled airline services to Auckland. It also offers alternative landing facilities for scheduled services when airports in the lower North Island are closed by adverse weather, notably Wellington, Kapiti and Palmerston North. In addition, aerodrome services are provided for locally based commercial, aero medical, agricultural, training (including RNZAF aircraft) and recreation aviation as well as to the wider New Zealand commercial and general aviation sector. There are also commercial leases for a limited number of non-aeronautical commercial activities.

Whanganui Airport plays an important role within our district's economy and is an essential component of the regional and national aviation transport infrastructure. It is also a key element for the growth, development and expansion of business and industry in the greater region through the provision of:

- direct scheduled air links with Auckland
- indirect air links with all New Zealand regional and sub-regional airports.
- agricultural aviation
- non-scheduled commercial aviation
- flight training.
- regional emergency response and support facilities for routine and emergency aero medical evacuations (national medical policy) and Civil Defence support.

5.5.2 Seaport

We manage a commercial port for shallow draft coastal freight vessels, commercial vessels and pleasure boats. The facility also offers a safe, navigable river bar harbour and manages structures to confine the coastal portion of the Whanganui River to its existing alignment.

In 1988 the then Harbour Board (which was rating the district to cover operating losses) was disbanded, and by legislation, the port assets and the Harbour Endowment property portfolio were transferred to the Council.

The Port was leased out until October 2010 when Whanganui District Council purchased it back and regained management of the port business, including staff, from a private operator.

The port business is currently managed in-house but is in the process of being transferred to a Council Controlled Organisation. The port and harbour are partially funded from rates as the revenue generated from Harbour Endowment assets is insufficient to meet operating and compliance costs.

We are in the process of implementing the Port Revitalisation Project, which, along with our partners, has a capital investment in the vicinity of $50M.

5.5.3 Durie Hill Elevator

The Durie Hill elevator provides access for pedestrians and cyclists, both locals (particularly school children) and tourists linking the CBD to the suburb of Durie Hill and a city lookout area.

The Durie Hill elevator activity supports the preservation of an historic and rare facility that adds to the district tourist experience; however it is primarily used as a mode of public transport by the residents of, and visitors to, the suburb of Durie Hill.

As part of consultation on the Council's Leading Edge Strategy, our community talked about the importance of connectivity throughout our district. The Durie Hill elevator provides a transportation network in which people can move easily and safely.

5.5.4 Overview of Assets

Asset Group	Asset Type	Purpose and Description	Quantity
Airport	Terminal Building	Building that houses a passenger lounge, check in area and operator lease area, outsourced café, and various lease areas	1
	Standby Building – owned by Airways NZ Ltd	Building housing generator and electrical plant	1
	Control Tower	Building to be used to operate aerodrome information services and part leased to the Whanganui Airport Control Tower Restoration Group Inc.	1
	Sealed Runway 11/29	Used by scheduled services, air ambulance services, charter operators and general aviation aircraft	1
	Sealed Taxiway Alpha	Used by scheduled services, air ambulance services, charter operators and general aviation aircraft	1
	Grass runways	Used by light general aviation aircraft	3
	Grass taxiways	Used by light general aviation aircraft	-

Seaport	Wharf 1	The only operational wharf facility for cargo handling	1
	Wharf 2	To be redeveloped as part of the Port Revitalisation Project.	1
	Wharf 3	To be redeveloped as part of the Port Revitalisation Project.	1
	Store No 3 and extension (Cement Silo and associated building)	Ownership to transfer to a Port Revitalisation Project partner.	1
	Victory Shed	Ownership to transfer to a Port Revitalisation Project partner.	1
	Administration Building	Ownership to transfer to a Port Revitalisation Project partner.	1
	Cool Store – administration area	Being developed as Ports Group HQ and port equipment storage	1
	Boat Storage Shed	General storage – leases	1
Durie Hill Elevator	Plant Building and Tower	Building at top of shaft that houses plantroom and office as well as providing lookout point	1
	Elevator and associated plant	The travel mechanism and associated plant	1
	Elevator Shaft	Concrete lined shaft with associated guides that the elevator travels up and down	1
	Tunnel	Access to and from Anzac Parade	1

Critical Assets	Airport	Terminal building – required as part of passenger operation	1
		Standby building – required as backup power supply in event of power failure	1
		Sealed runway, taxiways and aprons – need to be well maintained – loose objects become projectiles that can cause significant damage to aircraft	-
		Grass runways – significant increase in landing fees expected. These need to be available.	-
	Seaport	Wharf 1 – Allows operation at the port	1
		Coolstore developed into Ports Group administration office and port equipment storage	1

Planned Maintenance and Capital Expenditure – Seaport

The estimated planned maintenance needs for the critical assets within the seaport have had an initial assessment. These will be reviewed and implemented by the new Council Controlled Organisation.

5.6 Information services

Information services infrastructure is essential for all Council functions and activities as well as many customer and shareholder-based services. Whether it be onsite administration and functions e.g. phones, emails, websites, our rating database, financial software, electronic records, and printing or remote activities, e.g. animal control, parking, police CCTV, inspections and monitoring, everything we do relies on our information services infrastructure functioning. Public Wi-Fi, online payments, Council website access, and many other customer-facing activities also depend on information services.

In today's digital world, information services infrastructure has moved from being an added optional improvement to now being a completely interwoven and critical part of any organisation. As we automate more and more things or allow for digital interactions and content to become more connected and smart, our information services infrastructure becomes crucial and effective management of these assets is vital to ensure the Council functions at a high level.

The events around COVID-19 have both changed the way we view work as well as demonstrated the importance of information services, especially in relation to the ability to work and interact remotely. This shift is most reflected in our expansion of remote networks, capabilities and devices.

Our new Digital Strategy guides our approach, most notably through Section 4 – "A Digital Council". This lays out our goal of a more future-focused and enabling Council. The intended outcome of which is to ensure working with Council is easy and our services and approaches are smart.

5.6.1 Overview of Assets

Asset Group	Asset Type	Purpose and Description	Quantity
Information Services	Server/SAN Infrastructure	Computing (by high density, clustered servers) and storage (in a Storage Area Network or SAN) of all of Council IT systems and data internally and externally	1
	Private Fibre Network	City-wide, Council-owned, fibre infrastructure connecting remote sites and systems such as Queens Park and CCTV cameras	1
	DR Server/SAN Infrastructure	Remote copy and replication of production environment Server/SAN – with an objective to build to a complete and full disaster recovery (DR) alternative site with a full “flip switch” type option to move between productions and the DR site	1

5.7 Infrastructure performance

The information in this section should be read in conjunction with the Asset Management Plans.

5.7.1 Water Supply

The water supply network and bulk supply infrastructure performs well and meets the needs of the community. It provides sufficient pressure and flow and it is compliant with the New Zealand Drinking Water Standards 2005 (Revised 2018).

5.7.2 Stormwater Drainage

The stormwater network has been designed to achieve lower levels of service than normal standards, in order to enable investment in additional infrastructure to complete the separation project spanning over the last few decades.

The network, therefore, performs below an acceptable standard for the long term effectiveness of the service.

5.7.3 Wastewater

The wastewater network performs according to design standards during dry weather events and this is sufficient for our needs as a community.

This network, however, performs at an unacceptable standard during wet weather events. This has a negative impact on the environment, therefore this Strategy provides direction on how best to mitigate this impact through targeted capital investment.

Biosolid and biogas co-generation options and opportunities are being investigated at the wastewater treatment plant.

5.7.4 Roading and footpaths

Council's roading and footpath networks perform to expectations, and provide levels of service that meet the mandatory measures set by the Local Government Act. Reporting against NZTA's One Network Road Classification (ONRC) has indicated that our low volume roads currently perform above the target measures in terms of customer comfort. This is measured by an annual roughness assessment.

5.7.5 Parks and recreation

Parks assets are performing well.

Buildings have been given an earthquake prone rating and there are some buildings on reserves that are earthquake prone. An upgrade programme has been put in place.

Areas of focus over the last five to ten years have included maintenance on parks roading, toilets and playgrounds.

Playground inspections are done monthly. Any assets that are not performing are demobilised immediately if there is a likely health and safety risk, or maintenance is programmed to ensure that a health and safety risk does not develop.

The Whanganui East pool has functioned for the purposes of providing an outdoor summertime swimming venue.

5.7.6 Cultural and events facilities

The Sarjeant Gallery located at Queens Park is considered an earthquake risk – meeting only 5% of the current New Zealand Building Standard. As well as the risk posed by earthquake collapse, the basement was not designed as a storage space for works of art so there is difficult access and no environmental or temperature control. Changes in temperature can lead to cracking, flaking and warping of works which is very expensive to repair. The absence of environmental or temperature controls in the Gallery spaces also means the

Sarjeant has been unable to attract national and international touring exhibitions because it failed to meet stringent requirements.

The Gallery Redevelopment Project will preserve the original building in Queens Park that opened in 1919, protect the Gallery's nationally-important collection and provide increased access to all parts of the collection. The project will be a partnership between Council, Whanganui iwi, central government and donors and sponsors both large and small.

To protect public, staff and the collection, the Gallery relocated in the first quarter of 2014 to a temporary home at Sarjeant on the Quay (38 Taupō Quay). The original Sarjeant Gallery will be strengthened against the risk of earthquakes by way of the post tensioned strand method. At the same time the environment throughout the public and storage spaces will be controlled to preserve collections on display and allow major touring exhibitions to come to Whanganui.

The Council has approximately 50 structures which are classified as earthquake-prone with an estimated cost to bring these to a level above 33% of the New Building Standard (NBS) in excess of $10M.

We are taking a proactive approach to our seismic upgrade programme which involves progressively upgrading our portfolio to at least 34% NBS on a priority basis. Below is a summary of progress on the seismic upgrade of the follow four buildings:

Royal Wanganui Opera House

- previously 10% NBS and now +34% NBS with ability to increase to 67% NBS
- project budget – $1M 3 construction phases
- phase 1 – 4 May to 31 August 2015 – Completed
- phase 2 – 19 October to 4 December 2015 – Completed
- phase 3 March – 20 October 2016 – Completed

The backstage and stage areas of the Royal Wanganui Opera House are ageing in terms of the set up and equipment and may soon become redundant. Promoters and shows are already looking at venues that have modern equipment and are more technologically advanced.

Routine repairs and maintenance are conducted on an as required basis to minimise the risk of asset failure.

There are no other known issues that might adversely impact this asset outside of the Risks to Asset Performance listed in Section 5.3.

Davis Library

- Library provision meets only two thirds of national standards overall.
- Extension of the Davis Library would go some way towards closing this gap.
- Estimated cost $2.84M to build, of which Council is expecting to fund up to $1.9M.
- Estimated delivery timeframe: opening early 2025.

The current building is too small to provide access to all the collections held, or provide space for related activities and events. The growing population means that by 2051, library provision at the current level in the district will be 60% of the national standard. The extension will bring this to 75% (and in the short to medium term between 80% and 85%); and will provide sufficient space for current and additional collections (meeting the national standard for library stock), as well as space for people/customers, events and activities, while re-affirming the unique cultural hub that is Pukenamu Queens Park.

Alexander Library

- The building was previously 20% – 25% NBS. The strengthening project in 2015-2016 brought it up to +67% NBS.

Routine repairs and maintenance are conducted on an as required basis to minimise the risk of asset failure.

There are no other known issues that might adversely impact this asset outside of the Risks to Asset Performance listed in Section 5.3.

Mobile Library

The Mobile Library vehicle was replaced in 2020 with two mobile library vans. The vans mitigate the licensing and access issues of the former vehicle and also provide back up when one vehicle is off the road (for example when it is being serviced). Regular servicing should ensure at least ten years life for the vehicles, with provision being made after five years of operation for a refit/refurbishment of the interior and exterior.

New Zealand Glassworks

The NZG occupies a leased building which was earthquake strengthened in 2015. The core equipment of the Glassworks is the hot glass furnace, which requires regular maintenance and will need to be replaced at some point during the lifespan of this strategy.

Whanganui Regional Museum

Routine repairs and maintenance are conducted on an as required basis to minimise the risk of asset failure.

There are no other known issues that might adversely impact this asset outside of the Risks to Asset Performance listed in Section 5.3.

War Memorial Centre

Routine repairs and maintenance are conducted on an as required basis to minimise the risk of asset failure.

There are no other known issues that might adversely impact this asset outside of the Risks to Asset Performance listed in Section 5.3.

5.7.7 Property buildings

Generally the property assets perform well, and in line with market returns. As tenancies change compliance issues can come to the fore, particularly with fire compliance between separate tenancies in the same building.

5.7.8 Ports

The Airport assets perform well. As the facility is close to the coast the main risk is a rising water table. For smaller aircraft, and with the introduction of the Flight School, there is a water level risk to the grass runways. Initial drainage concerns have been addressed but ongoing monitoring is necessary.

Although the Seaport has been running down through lack of maintenance over a number of years, progress of the Port Revitalisation Project is addressing these. Seismic strengthening has been undertaken on Wharf 1.

The Durie Hill Elevator performs well, although these days it is regarded more as an historic tourist attraction than a transport network link. For this reason it is preserved as original rather than upgraded to a more modern mechanism.

5.8 Information services

- The Server/SAN infrastructure is up to date and well maintained and funded in the current refresh cycle and processes. As long as we continue to plan for the long term and life-cycle replacement, this will continue to be the case.
- The Police CCTV, that had long been under-funded and underserved, has been upgraded, enhanced, and expanded thanks to an increase in the annual budget. This means we can now recover full usability of the system and maintain it properly into the future.

- DR[7]/Remote Replication is performing as expected and being refreshed regularly. Like the Server/SAN, this will continue to be at the current level of standard in the future due to our refresh cycle. Costs and projects will have to be considered if we would like to move up a level and improve the speed of recovery in the future. This will be addressed prior to the next hardware refresh in the next three years.

5.9 Risk to asset performance

The information in this section should be read in conjunction with the Asset Management Plans.

5.9.1 Water Supply

A Criticality Map is attached as Appendix A **page 127**. This categorises our water pipes according to a scale from 'very low criticality' to 'high criticality'. It highlights the assets which pose a higher risk to the performance of the service if they become compromised. As a result, these will need to be proactively managed over the lifetime of the projected planning period.

5.9.2 Stormwater drainage

A Criticality Map is attached as Appendix B **page 128**. This categorises our outlet structures from 'low criticality' to 'high criticality'. It highlights the assets which pose a higher risk to the performance of the service if they become compromised. As a result, these will need to be proactively managed over the lifetime of the projected planning period.

5.9.3 Wastewater

A Criticality Map is attached as Appendix C **page 129**. This categorises our pumpstations from 'low criticality' to 'high criticality'. It highlights the assets which pose a higher risk to the performance of the service if they become compromised. As a result, these will need to be proactively managed over the lifetime of the projected planning period.

5.9.4 Roading and footpaths

High Productivity Motor Vehicles (HPMV) and 50MAX trucks are now using parts of the roading network and they are likely to grow in number. There is concern that the impact of this on the road pavements will be significant, especially the additional demand generated by forestry related activities.

The biggest footpath condition concerns are tripping hazards (tree roots) and general damage. A targeted approach of routine maintenance and renewal is being developed to tackle these areas, and significant progress has been made to reduce the number and severity of faults identified over recent years.

The main risks to asset performance is under-investment.

5.9.5 Parks and recreation

The overriding risk is a failure to meet levels of service, causing reputational or Health and Safety risks. There are a number of reasons why levels of service may not be met including: poor asset management and a failure to recognise issues; deferred maintenance or replacement of

7 DR stands for Disaster Recovery and is a term used to describe sites, policies, processes and anything else that is related to systems in place to use in the event of a catastrophic outage. In this case, it refers to our gear in Palmerston North City Council's server room that is constantly copying our systems in case our server room at Whanganui District Council's Municipal Building is compromised.

assets; and lack of funding available to maintain current levels of service.

Specific risks include:

- the inability of the Council to fund maintenance of Parks assets to current and expected level of service
- flooding causing disruption to access to parks e.g. Kowhai Park.
- an earthquake causing damage to structures in parks, creating liquefaction and or Health and Safety risks from structures on parks e.g. the castle at Kowhai Park or toilet blocks on various reserves.
- severe wind events causing trees to fall and damage overhead services leading to outages.
- Earlier than expected asset failure, particularly to critical assets. The velodrome track is currently closed due to health and safety concerns.

5.9.6 Cultural and events facilities

Current library provision meets only two thirds of the national standard with regard to buildings and 75% of the standard with regard to collections. It is possible that any asset may fail to meet the expected levels of service. This could be as a result of:

- old assets and aging assets
- poor asset management planning
- assets failing prior to expected end of life
- failure to identify risks to assets
- insufficient knowledge of assets
- deferred maintenance not being assessed for risk
- insufficient funding for asset maintenance.
- a large scale natural hazard such as an earthquake.
- a building damaged e.g. as a result of fire or severe water damage caused by a building leak
- significant failure by a supplier

Consequences may include:

- unavailability of services
- loss of customer and operational data
- unavailability of essential infrastructure services causing health and safety issues for the district
- negative publicity
- injury to staff or members of the public

5.9.7 Property buildings

Buildings may present risks due to:

- seismic issues in the event of a moderate earthquake. While we have assumed that there will not be a major seismic event there is the possibility that some or all of our buildings will no longer be fit for purpose.
- Recent evidence has shown that compliance issues surface through tenancy changes or when alterations requiring a building consent is undertaken. The requirements of the Building Act are paramount.

Consequences may include:

- With regard to seismic events there could be an impact on rental income and a relatively long time frame to remedy the damage – resulting in the need for higher rates income.
- Tenancy changes can result in unforeseen expenditure required to obtain Code of Compliance.

5.9.8 Ports

Airport

The future viability of the Airport may be affected by:

- Climate change – with a resultant effect on the coastal environment. As the sea level and water table rises there is a threat to the runways as the facility is adjacent to the ocean.
- The future commitment of our Joint Venture partner. The current agreement is for a term of 3 years and would result in a significant funding shortage if the Joint Venture partner withdraws.

Consequences could include:

- Climate change could have an impact on service levels and result in needing to close runways more often.
- Should the Joint Venture agreement fail the Council needs to consider the rates affordability for the ongoing service provision.

Seaport

The future viability of the Seaport may be affected by:

- Climate change – with a resultant effect on the coastal environment
- Outcomes of the Port Revitalisation Strategy
- Lack of preventative maintenance.
- Deterioration of old buildings and structures

Consequences may include:

- An impact on levels of service able to be provided through the port
- A need for full condition ratings to be undertaken and plans developed for upgrades/demolitions etc. if the status quo remains. It is hoped the Port Revitalisation Project may address the future of the existing structures.

Durie Hill Elevator

The Durie Hill elevator operation may be affected by:

- Its ability to function after a seismic event
- The decision to maintain equipment as original.

As a consequence:

- Decisions would need to be made about the ongoing viability of the service.

5.9.9 Information services

Risk to the Server/SAN include:

- A sustained power issue at the Council building
- Communications outages to and from the Council or city
- Ageing equipment if it is not refreshed consistently

Consequences are likely to be:

- Outages of some or all of our IT services – everything from email to websites to phone systems to remote access.
- Impact on our copying abilities to our DR site as well as our communications and customer service functions (e.g. emails would stop, calls would not come in, public facing services such as websites would stop working)
- Slow, intermittent services, or short or long term outages as gear fails or becomes obsolete/incompatible – with a resultant impact on access and productivity
- Data corrupted or inaccessible and failing systems as disks fail

Risks to DR/Replication could include:

- A long sustained power issue at the Palmerston North City Council building
- Communications outages to and from Palmerston North City Council
- Ageing equipment if it is not refreshed consistently

Consequences are likely to include:

- Degradation or complete failure of the disaster recovery systems we currently have in place (i.e. we will not have a real time copy of our systems to fall back to in the event of a catastrophic event at our production site at Whanganui District Council)
- An impact on our ability to copy from our main systems to the backup systems – meaning work can potentially be lost as copying falls further and further behind
- Performance issues if, and when, we do have to switch to using our back-up site at Palmerston North City Council in the event of an outage at Whanganui District Council

Risks to our Police CCTV could include:

- Environmental disasters that damage the city wide network
- Ageing gear and fibre/infrastructure not being replaced in a timely manner

Potential consequences are that:

- The CCTV network would no longer work because of loss of connectivity of cameras to our server room – if the cameras lose connection they will not be able to record or display the video to be viewed
- The CCTV network would become less and less reliable and, eventually be completely unusable

6. Factors influencing the infrastructure strategy

These key strategic issues are likely to affect infrastructure management in the future. In this section the implications that these issues have on our assets, and why these issues are important, are explained.

6.1 Demographic and land use changes

In 2019, the Whanganui District had an estimated population8 of 47,300, which reflects the significant migration to Whanganui since the 2013 Census. Whanganui's tide turned in 2014 when the population began to grow after declining in all but two years since 1996. Average growth during the six-year period from 2014 to 2019 was 630 people per annum (~1.3% per annum). One of the factors that has facilitated this growth has been available housing stock, with Whanganui having only recently (2018) surpassed its 1996 population level of 46,000.

In 2020 subpopulation estimates by Statistics NZ estimated the population of Whanganui to be at 48,100 with a population change of 800 over previous 12 months.

However, continued housing availability has been identified as a potential constraint on growth within Whanganui. In order to sustain the current population growth rates, Whanganui would require approximately 250 available dwellings per annum, based on an average household size of 2.3. During the 30-year planning timeframe for the Infrastructure Strategy household sizes are predicted to drop from 2.3 to 2.1. House ownership for the Whanganui District is higher than the national average (67%) and is similar to 2006 levels.

At the 2018 Census, the number of empty dwellings was 3.7%, which is below the national average of 5.2%. This means that further population growth is reliant on the construction of new dwellings. Based on pre-COVID-19 Infometrics employment forecasting of sector size and historical residential construction capacity, new builds for dwellings are predicted to be between 130 and 140 new dwellings per year (up from between 60 and 117 dwellings in the last Long-Term Plan).

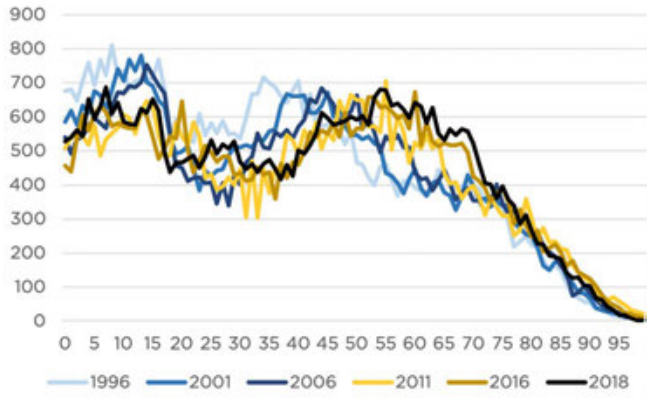
Greenfield and brownfield growth capacity is expected to last between 7-10 years at current construction levels for new dwellings.

Whanganui has an ageing population and it is predicted that from 2021 onward there will be a natural population decline, i.e. more deaths than births.

During the late 90s and early 2000s there was a hollowing out of the population between 20 and 45 years of age. In recent years this has reduced with recent net migration. It is also noted that

8 Statistics NZ

there has been higher levels of migration gains in the older working demographic (55+) to newly retired (65-70).

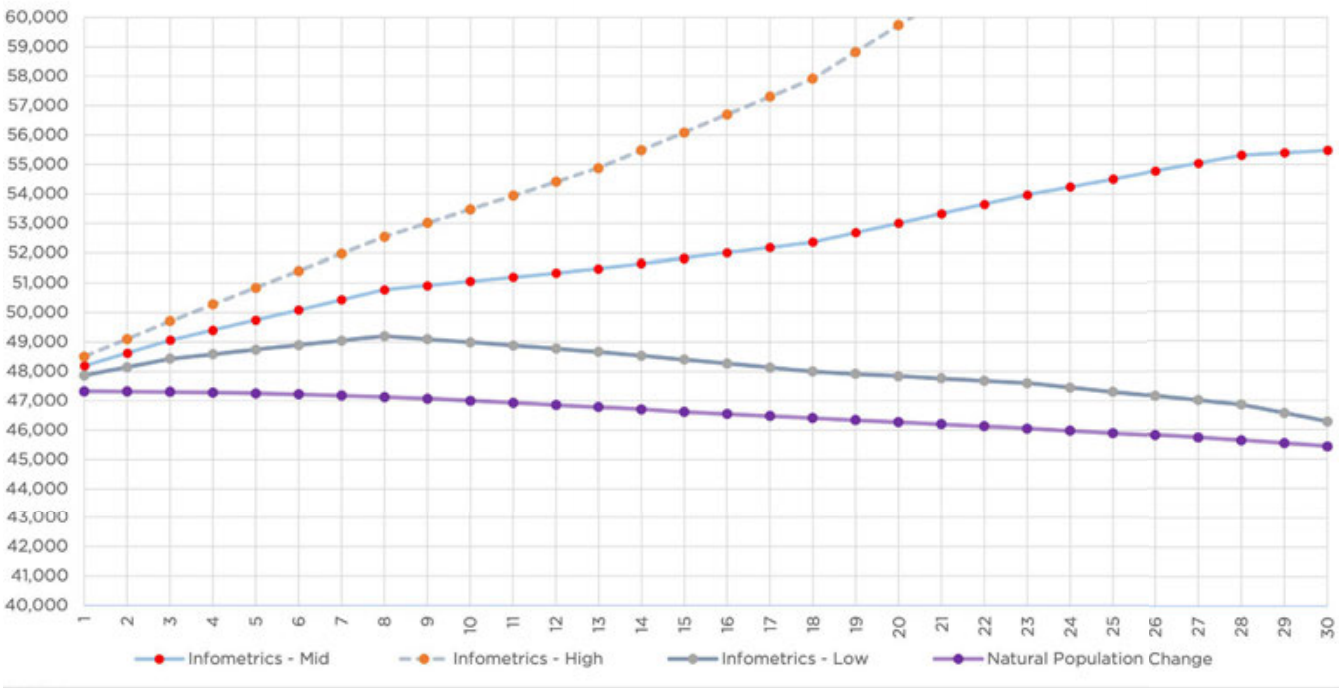


Whanganui Population Structure

In the first quarter of 2020, Infometrics was commissioned to produce regional and district population projections based on employment projections.

The Infometrics 'midrange' predicts population at the beginning of the planning period of 48,200 in 2021, rising to 51,200 by 2031 and approximately 55,500 by 2050. This is an average increase of around 330 people per annum for the first 10 years of the Long-Term Plan, and an average increase of 220 people from years 10 to 30 of the Long-Term Plan.

Figure 1: Whanganui District Population Projections - LTP 2021-203



Housing

Whanganui has an aspirational housing strategy that sets out the community's vision and objectives for the district in relation to housing. This includes working in partnership to achieve the best outcomes for all.

Having a home that is safe, warm, dry and affordable (within a great community) is a basic requirement. If our residents are housed appropriately this provides an important foundation for people to live well and contribute positively – within their families, communities and wider district. As a result, improving housing outcomes is a critical factor in supporting the needs of our growing, and increasingly vibrant, district.

As a result of people choosing to move to Whanganui, we have seen the largest population growth since 1996. With increased population, there is a growing need to rethink Whanganui's

housing stock and availability – for example, to address the current shortage of rental properties. However, we also need a longer-term plan for housing and growth that meets the needs of everyone in our district. This is about having good quality, affordable housing across the board as well as the right systems in place to achieve this.

The following are priority areas for Council:

- Partnerships are key; it was recognised that it is going to take a collaborative effort to address these issues, with lots of stakeholders contributing where they can. This might include things such as cheap housing options, provision of short-term accommodation, freeing up land, applying for funding, taking a fresh look at underused buildings or making things easier for people who just want to 'get on and do it' in safe and sustainable ways.
- Outside the box' approaches are needed; many creative opportunities exist – with some requiring a shift away from more traditional housing frameworks and adoption of some 'social good' principles.
- It has to be easier to get things done; there were many examples of individuals and agencies wanting to get involved but not being able to get their projects off the ground. Although it was acknowledged that safety is key, there are inconsistencies within the regulations and some processes are not as enabling as they could be. For the Council this will continue to mean reducing red tape where we can, while also meeting our statutory requirements, and maintaining the wellbeing of our people.

We are working on:
While working through our housing strategy it was agreed that the Council's role should be to lobby and facilitate – seeking partnership opportunities locally, as well as nationally, and calling on the government to tackle existing housing barriers. Other opportunities Council is also working on include:

- Development of a Strategic Housing Investment Plan
- Freeing up of Council controlled land
- Investing in more community housing

The National Policy Statement on Urban Development Capacity requires us to show we have the land development capacity to cater for projected growth over the next 30 years. Council has undertaken infrastructure modelling work to identify the future infrastructure requirements to accommodate this growth. The District Plan review has allowed for this growth to be accommodated in North Western Growth area with a total of 179 new sections and 500 infill developments, and in Springvale with a total of 417 new sections. There is also potential for further infill development in other parts of the city. A total of 1,578 new lots is estimated to be required to house the projected population growth. Please see Appendix D **page 130** for growth area maps. These show the growth areas that have been rezoned 'urban' (Springvale Structure Plan and North Western Growth Area).

6.2 Natural events and climate change

The Whanganui District experiences a high number of weather-related natural events due to having the river running through the town, our coastal location and a catchment comprising steep hill country underlain by soft rock (sandstone and mudstone and volcanically derived sediments).

There have been seven states of local emergency (1990, 1994, 1998, 2004, 2013, 2015, 2017 and 2018) over the past 27 years – meaning that we average one event every 4.5 years.

The Council relies on several funding sources to recover from major natural hazard events including NZTA funding support, as well as having prudent insurance arrangements in place. The Council also incurs a share of the cost and funds this through a natural disaster rate and borrowing.

Climate change has been recognised as a key issue, with an expectation that local government will lead community responses to its risks and opportunities. Councils have a legal obligation under the LGA and RMA to respond to climate change. Climate change has the potential to increase flooding, coastal hazards, erosion and landslides. The Ministry for the Environment projects:

- Average temperatures to rise by 0.8 C between 1986-2005 and 2031-2050 with some seasonal variations; and by 1.8 C between 1986-2005 and 2081-2100.
- Wetter conditions with annual precipitation up 1% between 1986-2005 and 2031-2050 and winter rainfall up 6%; and by 4% between 1986-2005 and 2081-2100 and winter rainfall up 11%.
- Sea Level Rise of 0.2m-0.4m by 2060 and 0.3m-1.0m rise by 2100.
- This will increase the frequency and magnitude of storm-related coastal flooding and erosion.

This could have large implications for areas like Whanganui which are already prone to river flooding and erosion. It could lead to increased sedimentation of the river and increase the impact of high tides and storm surges at the coast. This is likely to increase damage and disruption to infrastructure, transport, utility networks and other public services. It will put more pressure on stormwater systems and power supplies.

Horizons Regional Council commissioned NIWA to provide greater understanding around the climate change implications for the Manawatu – Whanganui Region: https://www.horizons.govt.nz/getattachment/Managing-Natural-Resources/Climate/Climate-change-implication-for-the-Manawatu-Whanganui-Region-2019.pdf?lang=en-NZ

During 2020 Horizons Regional Council developed a Regional Climate Change Strategy and the Council formally joined a Joint Climate Action Committee with the Region and Regional Territorial Authorities. Horizons Regional Council is also working in collaboration Massey University regarding Anzac Parade flood risk and mitigation.

Council has also been developing a climate change strategy for the District in collaboration with key stakeholders. This strategy will be completed in 2021. A ‘Whanganui Community Carbon Footprint’ report was completed as a baseline for the District in 2020 to support mitigation efforts into the future.

Possible climate change impacts on Council functions include:

Function	Possible effects
Water supply and infrastructure	Reduced security of supply.
Wastewater	Heavier rainfall events will cause more inflow and infiltration into wastewater network and overflow events will increase in frequency and volume.
Stormwater	Increased rainfall and sea levels will increase the frequency and/or volume of system flooding. There is greater potential for saltwater intrusion in coastal zones, changing flood plains and a greater likelihood of damage to properties and infrastructure – with a gradual deterioration to levels of service over the long term. There could possibly be a partial loss to levels of service in key industrial area (Heads Road / Gilberd Street) in the case of long-term sea level rise.
Roading	Disruption due to flooding, landslides, fallen trees and lines. Increased drainage costs to prevent damage to pavements.
Urban planning	Dealing with inappropriate location of development and retrofitting of infrastructure.
Land management	Erosion, changes in appropriate land use.
Water management	Variation in water volumes, sedimentation of rivers and river channel changes.
Coastal management	Sea level rise and associated ground water rise; increased frequency and intensity of storm surges; wave impacts and coastal erosion and accretion; sedimentation of the lower Whanganui River; harbour basin and inshore coastal environment; and changes to the coastal drift of sand. Loss of private and community assets.
Civil Defence emergency management	More events and resourcing required to manage and recover.
Open space and community facilities management	Impacts of temperature, rainfall changes and wind on the management and use of parks and playing fields.
Transport	Infrastructure disruption.
Airport	Inundation of aerodrome areas

6.3 Sustainable asset management approach

The Council has traditionally followed an age-based approach to its asset management planning for renewals and improvement. The key assumption with this approach is that an asset fails at the end of its design life (useful life). This has resulted in high risk assets not being adequately funded and in under-optimised capital investment as depicted in Figure 2.

In 2018, Council adopted a strategic approach to its assessment of asset condition, criticality and performance and, as a result, is now using a risk based approach instead. This method assumes that assets do not necessarily fail at the end of their design life, but instead will be considered to have failed if performance does not meet expected serviceability requirements. This approach makes use of an initial criticality assessment to form a hierarchy of criticality (i.e. the consequence of failure) for the various components within the asset base. It then uses the data available on age and other attributes to estimate the 'Likelihood of Failure'. The product of these two variables forms the 'Asset Priority Attribute' (a risk rating). The priority attribute provides direction to assessments of asset condition and performance. This model follows an iterative approach using the information gathered from the condition and performance assessments, to adjust the final priority for ultimate renewal/improvements.

- This approach to asset management, as shown in Figure 2, ensures:
- much flatter expenditure forecasts
- the ability to reduce risk without the need to increase budgets or create future "bubbles"
- Planned Preventative Maintenance (PPM) and renewal/improvement of critical assets
- Reactive Maintenance (RM) on non-critical assets
- renewal/improvement of assets strictly based on its true performance.
- proactive scheduling of renewal/improvement of assets which are under-performing
- improved understanding of the true levels of service provided by the assets
- a low risk profile to critical assets.
- high-confidence in data available on the condition and performance of critical assets.
- the ability to implement increases/decreases to levels of service through targeted capital investment.
- the ability to scale expenditure to suit the desired level of service and risk.
- optimised capital investment.

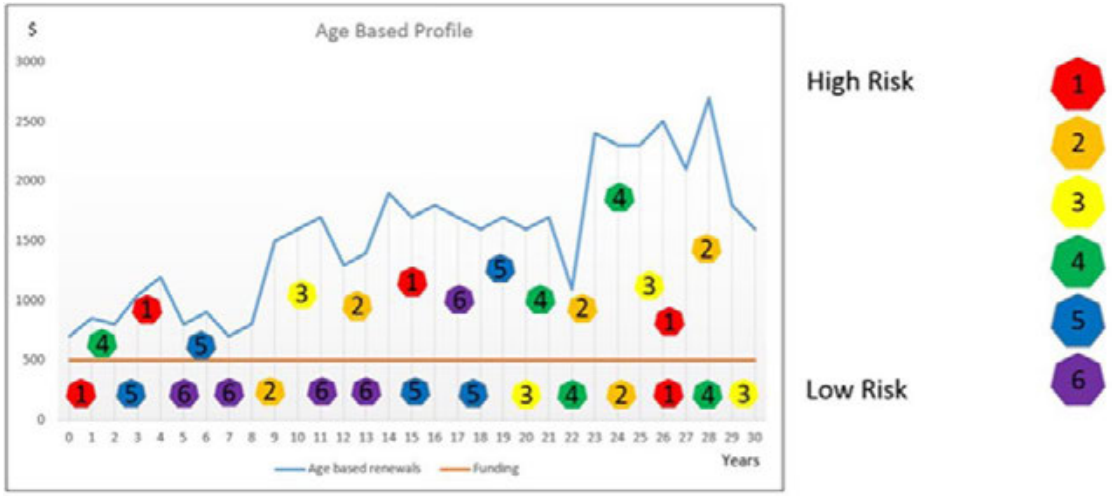


Figure 2: Age Based Profile

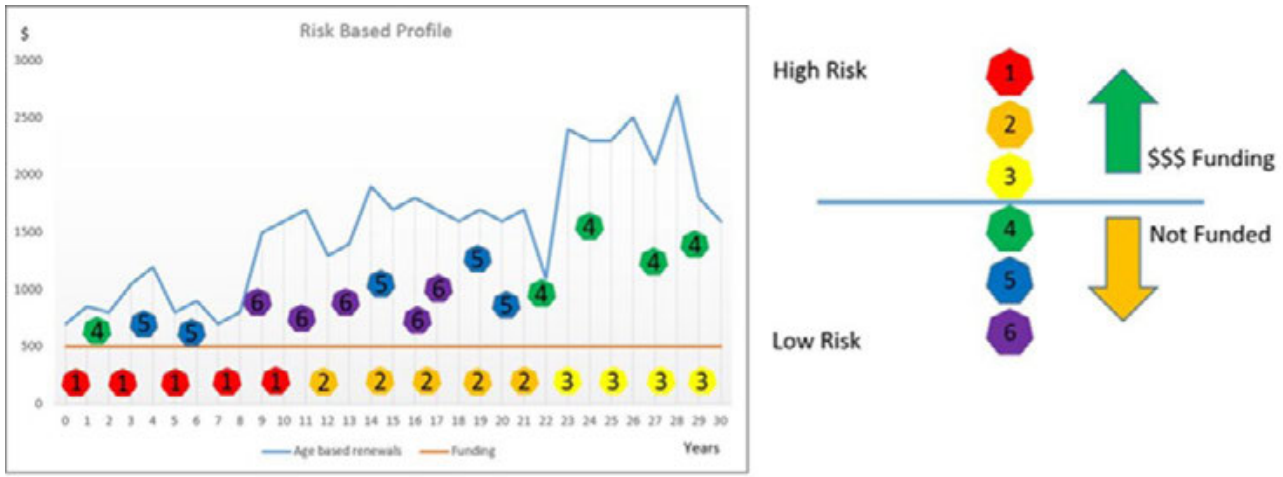


Figure 3: Risk Based Profile

6.4 Changing legislative requirements and environmental standards

An increase in expectations over the standard to which services are provided has accelerated in recent years, both in terms of legislative requirements and community expectations. These increasing expectations come at a cost, and affordability is a key consideration for the Council. Increasing environmental standards are also placing greater costs on councils. It is likely that environmental, safety and accountability requirements will increase during the 30 year period of this Strategy and will impact on the cost of providing services and infrastructure.

A substantive increase in environmental standards for water through National Environmental Standards or the regional plan will increase the cost of wastewater, stormwater and roading infrastructure by increasing the need for treatment of stormwater and wastewater prior to discharge. While it is noted that the most recent changes to national environmental standards did not have a substantive impact on Council's infrastructure, it has signalled a greater emphasis on the recreational use of water that would require higher water standards. The renewal of consents for discharges from infrastructure during the term of this plan has the potential to increase standards.

In addition, the government is looking into reforming three waters services (water, wastewater and stormwater) across the country into a small number of multi-regional entities. At this stage Council has agreed to work with the Government to share information. A fully developed reform proposal is not yet available to bring to the community for the Long-Term Plan 2021-2031 but community engagement on any proposed regional coordination / reform for the three waters will be undertaken via either a future Long-Term Plan and/or Annual Plan process. More information on what we know so far is contained in the Long-Term Plan.

We have an existing program of works related to the strengthening of earthquake prone buildings under the Building Act 2004 and Health and Safety at Work Act 2005 across all parts of the Council. These requirements will continue to impose a cost, particularly around Council social and recreational infrastructure.

The Council is required to maintain minimum standards for drinking water. The Ministry of Health has indicated that District Health Boards will be given the ability to make the decision on whether or not town water supplies will be fluoridated. While the Council will be able to apply for assistance with capital costs, we would still need to fund operational costs. The delegation of responsibilities for the provision of services which require additional Council infrastructure without additional funding streams is expected to be ongoing during the term of this Strategy. The Council will actively engage with central government to minimise these costs.

Whanganui Port is identified within a future pilotage area by Part 90 of the maritime rules. If the port were to become designated as an active pilotage area this would create further port infrastructure costs in addition to the advisory pilotage services currently offered by the port.

The Government Policy Statement on Land Transport sets the strategic policy direction on land transport with priorities around economic growth, safety and value for money. The policy statement dictates how funds from the land transport fund are allocated, which provides a significant portion of the funding for roading projects currently 61% for Whanganui District and this will drop to 60% in 2022/23. The policy statement in 2018 indicated an overall drop in funding for local roading over the entire country. The One Network Road Classification (ONRC) defines service level standards depending on the task of the road. As the classification system is implemented this has the potential to affect national funding for local roads where the

community's preferred level of service for a particular road is different from the national classification system.

Legislative changes to regulatory requirements including the Food Act 2014, the Building Act 2004, the RMA, the Sale and Supply of Alcohol Act 2012, the Dog Control Act 1996 etc., also place demands and cost pressures on Council which flow through to user charges e.g. consent application fees.

6.5 Affordability

- Accommodating the costs associated with the four issues outlined below will put pressure on rates:
- Growth pressures.
- Dealing with the increasing frequency of, and damage from, natural disasters and the projected increase as a result of climate change
- The reality that assets wear out and require constant maintenance and renewal.

The increasing legislative requirements and environmental standards placed on local government, as well as increasing level of service expectations from the community.

Affordability issues are compounded by our socio-economic profile which is marked by an aging population, low incomes and decreasing household sizes.This means we constantly have to balance the range of services and facilities we provide with the costs involved in running them.

Whanganui has spent much of the last 30 years focusing on significant improvements to its wastewater, stormwater and water networks. We have consistently kept rates increases low but our debt increased to fund these major infrastructure projects. Over this time our population didn't grow much at all, in fact for a long time it was declining.

Whanganui is fortunate to have a great range of public facilities and good quality infrastructure networks, but keeping these facilities and networks maintained to ever increasing standards does put pressure on our finances. We also have climate change to contend with, and less investment income due to COVID-19. Fortunately, lower interest rates are helping to keep our rates lower for now.

Our population is expected to grow modestly with a population of approximately 55,500 by 2050. We need to support this growth by providing the core infrastructure required. We will borrow to do this, and repay the debt over time largely through contributions from developers.

7. Assumptions and risks

This Strategy has been prepared using the following overall assumptions which are consistent with the significant forecasting assumptions used in the Long-Term Plan.

Assumption	Risk	Risk rating (likelihood vs consequence)	Impacts	Mitigation measures
Population growth The population of the district is expected to rise to 51,200 by 2031 and approximately 55,500 by 2050. Dwelling growth is predicted to be between 130 and 140 new dwellings per year. During the 30-year planning timeframe for the Infrastructure Strategy household sizes are predicted to drop from 2.3 to 2.1. Household numbers are expected to peak in 2033 at 19,305 and drop to 18,958 in 2043.	That population growth is lower than projected.	Moderate (Possible/Moderate)	Revenue from rates growth and development contributions may not be accurately forecast and costs of new infrastructure could fall onto existing ratepayers.	Making conservative growth assumptions that account for reasonably foreseeable development activity. Closely monitoring local trends and community demographics.
	That population growth is higher than projected.	Moderate (Possible/ Moderate)	Infrastructure works and associated costs may need to be brought forward.	

Assumption	Risk	Assumption	Risk rating (likelihood vs consequence)	Risk	Impacts	Assumption	Risk rating (likelihood vs consequence)	Mitigation measures	Risk	Impacts
Climate change Whanganui expects: • Average temperatures to rise by 0.8 C between 1986-2005 and 2031-2050 with some seasonal variations; and by 1.8 C between 1986-2005 and 2081-2100. • Wetter conditions with annual precipitation up 1% between 1986-2005 and 2031-2050 and winter rainfall up 6%; and by 4% between 1986-2005 and 2081-2100 and winter rainfall up 11%. • Sea Level Rise of 0.2m-0.4m by 2060 and 0.3m-1.0m rise by 2100. This will increase the frequency and magnitude of storm-related coastal flooding and erosion.	Planning has not adeq accounted for climate change impacts and tl associated cost.	**Earthquakes** The risk of a significant earthquake in the period of this Long Term Plan that causes damage to Council assets is considered low. However, the risk within the next 20 years is considered moderate to high. Emerging research is focussing on the increased risk of a very large regional earthquake off the coast of the lower North Island, as well as the overdue Alpine Fault event.	A significant earthqua strikes that cause's ma damage to Council an community assets.	**Three waters reform** This plan assumes Council continues to provide three water services to the community for the full period of the plan. The Government is looking into reforming three waters services (water, wastewater and stormwater) across the country into a small number of multi-regional entities who may take over the running of some or all of our water networks. At this stage we have agreed to work with the Government to share information. A fully developed reform proposal is not yet available to bring to the community for the Long-Term Plan 2021-2031. We expect the government to ask local authorities to participate in the new delivery system in late 2021 and the government has signalled that councils can opt out. If we opt in, we would no longer be responsible for the delivery of the three waters services and this would impact on our finances.	The shift to regionalised water service provision arrangements has the potential to be significant i scale, impact core role and functions of the Council an our finances. Uncertainty remains until multi-agency discussions have progressed.
Natural hazard events There will be natural hazard events e.g. flooding, landslides, severe winds that cause localised damage about every 3-5 years which will be funded from a combination of debt, rates and insurance.	There are natural haza events more often tha expected risk assessm	**Asset life** Assets do not necessarily fail at the end of their design life. An asset is considered to have failed if its performance does not meet expected serviceability requirements.	Earlier than planned a failure.							
		Central Government policy Central Government policy settings as they impact local government costs remain as is and environmental standards remain constant.	Changes in Central Government Policy oc place additional comp requirements on coun communities to compl							

Assumption	Risk	Risk rating (likelihood vs consequence)	Impacts	Mitigation measures
Water Services Regulator Council is yet to fully understand the impacts and outcomes for Whanganui following the introduction of new water services regulator Taumati Arowai. Expectation is that an increasing level of service will be required for water services. Scale and timing of service level change is yet to be determined. This plan assumes Council is operating under the current regime for three waters service provision to the community for the full period of the plan.	There is a greater level of service expected to be provided by Council from years 3-5 onwards.	Moderate	Any Government changes to legislation result in appropriate Council response during future annual and long term planning. Levels of uncertainty remains until implementation at central government has progressed further.	Council keeping up to date of any proposed changes and where appropriate submitting/contributing to the process regarding those changes. Significant changes are likely to require consultation with the community.

Assumption	Risk	Risk rating (likelihood vs consequence)	Impacts	Mitigation measures
Inflation / cost change The financial information is based on the following adjustments for inflation. Council has used the BERL forecasts of price level changes to calculate a weighted average inflation rate for each year of the plan. Where expenditure is subject to inflation, the following rates have been applied: 2021/22 0% 2022/23 2.9% 2023/24 2.5% 2024/25 2.5% 2025/26 2.6% 2026/27 2.5% 2027/28 2.6% 2028/29 2.7% 2029/30 2.7% 2030/31 2.6%	That actual inflation will be significantly different from the assumed inflation.	Years One to Three: Low (Unlikely/Minor) Years Four to 10: Moderate (Possible/Minor)	Inflation is affected by external economic factors. Council's costs and the income required to fund those costs will increase by Council's average rate of inflation. Where the actual inflation differs from the assumed inflation the cost of the activity will differ. Lower inflation may result in Council reducing the funding. Higher inflation may increase the funding.	While individual cost indices will at times vary from what has been included in this plan, the Council has relied on the Reserve Bank use of monetary controls to keep inflation within the 1 to 3% range.

Assumption	Risk	Risk rating (likelihood vs consequence)	Impacts	Mitigation measures
Asset data knowledge Council has an accurate record of assets to enable good decision making.	Incorrect asset data resulting in incorrect expenditure and loss of service potential.	Significant (Possible/Major)	Where data remains incomplete, or is inaccurate, there is potential for over-investment or under-investment in assets.	Accurate condition rating and performance measurement of assets. Over the past few years Council has been undertaking extensive modelling of its infrastructure networks to improve data information on the condition of its assets.
Timing of capital projects and accuracy of cost estimates That capital projects will be completed within the projected timeframes and budget cost estimates.	Capital projects are delayed or take longer to complete than estimated Actual capital project costs are significantly under or over budget	Moderate (Possible / Moderate) Moderate (Possible / Moderate)	Delay in completing projects could result in an escalation of costs in addition to Council not being able to deliver required levels of services. Significant variances of actual capital costs to budgeted capital costs may result in either: Over-collecting revenue from various sources, such as development contributions, fees and rates; or Funding shortfall, placing additional pressure on Council resources, such as borrowings and rates.	The timing and cost estimates of upcoming capital projects are reviewed prior to commencement, with reviews continuing throughout the life of the project. Adequate funding sources are confirmed prior to project commencement.

Assumption	Risk	Risk rating (likelihood vs consequence)	Impacts	Mitigation measures
Funding sources Funding sources (including external funding sources) do not change over the life of this Infrastructure Strategy. NOTE: Funding sources are specified in the Revenue and Financing Policy and Financial Strategy. This applies to user fees, charges and external funding towards projects and assets like subsidies and grants.	Projected revenue from user charges and external financial assistance is not achieved. Levels and sources of funding differ from those forecast.	Moderate (Possible/ Moderate)	Revenues could reduce without the ability to reduce expenditure proportionately. In this event, the account would run in deficit, with charges reviewed for the next financial year. Project and asset funding could result in projects being revised or alternative funding sources used.	Levels of revenue from user charges have been set at realistic levels in accordance with the ratios outlined in the Revenue and Financing Policy. Funding for projects and assets is considered before the commencement of each project or asset. A significant impact from changes in funding or funding sources may result in a revised capital work programme, or changes in the level of user fees and charges, borrowing or rating requirements.
Resource consents Conditions of resource consents held by Council will not be altered significantly.	Work is not performed in accordance with the conditions of the consent. Conditions of Council-held resource consents are reviewed and altered.	Moderate (Possible/ Moderate) (Unlikely/ Moderate)	Breaches of resource consent conditions may result in increased costs and // or legal action taken against Council; however, the specific extent of any breaches or legal actions cannot be accurately quantified prior to their occurrence.	Routine monitoring of consent conditions for compliance

Assumption	Risk	Risk rating (likelihood vs consequence)	Impacts	Mitigation measures
Credit availability Credit can be obtained from financial markets on competitive terms and conditions.	Required credit cannot be obtained from financial institutions.	Moderate (Unlikely/ Moderate)	Funding would need to be obtained from alternative sources or work programmes adjusted.	Prudent debt levels are maintained to mitigate risk for financial institutions, including maintaining adequate levels of undrawn committed bank facilities. Relationships are maintained with various financial institutions and Council regularly monitors credit markets.
Network capacity	Network capacity for the three waters networks are not as modelled and measured through calibrated third party monitoring services.	Moderate	Network performance may be either overestimated or underestimated, resulting in over-investment or under-investment.	Periodic re-measurement and recalibration to be done on targeted sub-catchments over the next 3 – 5 years, and results compared for reasonability.
Development contributions Growth will occur at the projected rate and in the projected order.	Development contributions are not recovered to match expenditure of network upgrades.	Moderate	Budgets may be insufficient or inappropriate for the level of growth. Sufficient development contributions revenue may not be gathered, leaving ratepayers to fund the deficit in the interim.	Careful planning of growth demand projects so that expenditure and recovery match market demand.

Assumption	Risk	Risk rating (likelihood vs consequence)	Impacts	Mitigation measures
Port The plan assumes that the Council will have transferred its port related assets and operations, including the Harbour Endowment land portfolio, to Whanganui Port Limited Partnership by 1 July 2021, in exchange for units in the partnership.	That the final port revitalisation project does not receive the required Government approval and therefore funding is declined.	Possible/Minor	If the final port revitalisation project is not approved by the Government, the port and Harbour Endowment assets and operations will remain with Council. The overall financial impact on rates would be nil, however the project would either not go ahead, or be considerably reduced in scope without the $12.2M of Government funding.	Council support and advocacy.

8. Significant infrastructure issues

8.1 How our infrastructure issues impact on our assets and options for managing these issues

Preferred option indicated in **blue**

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
Water supply	Managing increasing community expectations and higher regulatory standards – needs not wants: • Increasing difficulties in renewing resource consents for water extraction. • This will mean higher standards of treatment for potable water. • We also expect a higher degree of regulation on operations.	1. **Increase budgets for legal and professional costs, to meet higher levels of service.** 2. **Lobby stakeholders to maintain reasonability around new regulations.** 3. **Increase capital and operational investment to meet higher standards.** 4. **Combined approach using options 1,2 and 3**	1. Increased operational expenditure of around $100K per annum. 2. Increased operational expenditure of $100K per annum. 3. Increased capital expenditure of $200K, with ongoing operational expenditure of $20K. 4. Combined costings of 1,2 and 3	Increase levels of service

The most likely scenario

Option 4. Significant decision to be made within the next 20 years around the time of renewal of existing resource consents, or around the time of applying for new consents, depending on the outcomes of consultation.

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
Water supply	Renewing infrastructure in a sustainable manner: **Issue 1:** Risk of interrupted supply line across the Whanganui River when Dublin Street Bridge reaches the end of its useful life.	1. **If the bridge is refurbished in situ, minimal change will be required.** 2. **If the bridge is replaced, the water supply line will need to be replicated on the new bridge.**	1. Minimial additional investment required 2. Additional capital expenditure of $100k.	Maintain levels of service
	Issue 2: Poor understanding of true condition and performance of critical at risk assets.	1. **Adopt a risk-based approach for investigations, renewals and capital investments.** 2. Renew infrastructure on expiry of design life.	1. No additional capital investment, however, a lower more sustainable overall risk profile is achieved. 2. No additional capital investment, however, a higher less sustainable overall risk profile is achieved.	Increase levels of service, with no additional cost
	The most likely scenario Issue 1: Option 1 – Significant decision to be made within the next 10 years on replacement of the Dublin Street Bridge following preparatory investigations and stakeholder consultation in years 1 to 3 of the plan. This will clarify any potential impacts on the water supply line across the bridge. Issue 2: Option 1 – Significant decision to be made within the next year to adopt a risk-based approach to asset renewals and capital investment programme.			

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
Water supply	Ensuring infrastructure is resilient to major natural events: **Issue 1:** Low degree of redundancy of critical mains within the water network.	1. Increase the degree of redundancy by constructing new water mains to form a ring main within the network for critical sections.	1. Additional capital expenditure of $2.5M.	Increase levels of service
	Issue 2: Low degree of redundancy for water sources.	1. Consider alternative water sources, in order to increase the degree of redundancy of water supply assets.	1. Additional capital expenditure of $1M.	Increase level of service
	The most likely scenario Issue 1: Option 1 – Significant decision to be made within the next year about whether or not to increase the degree of redundancy within the water network by installing additional ring mains. Issue 2: Option 1 – Significant decision to be made within the next three years about whether or not to identify alternative water sources.			

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
Stormwater drainage	Significant Impacts of Climate Change on the Stormwater Activity: **Issue 1:** More frequent and higher intensity rain events reduce the available levels of service delivered by the existing stormwater infrastructure network.	1. **Retain the status quo, and accept a gradual deterioration to available levels of service.** 2. **Adopt higher levels of service for the gravity design of stormwater infrastructure.** 3. **Create purpose-designed attenuation basins in available public open spaces (e.g. wetlands, dry-basins to Springvale Park)** 4. **Combination of 1,2 and 3**	1. Normal expenditure programmes over projected timeframe of strategy, with no additional cost. 2. $20M over 30 years on selected configurations. 3. $5million capital expenditure, with $250K per annum operational cost. 4. Combination of options 1,2 and 3	Improve levels of service to allow for climate change projections, prioritise areas that are flood prone.
	Issue 2: Sea-level rise is projected to be an estimated 80cm by 2090, which may present significant risk to the Heads Road Industrial Area due to its proximity to the Whanganui estuary. This would compromise its ability to drain stormwater effectively using conventional methods.	1. **Consider pumping of stormwater in the Heads Road Industrial Area – and whether this will be cost-effective.** 2. Consider "organised retreat" from the Heads Road Industrial Area in the long term.	1. >$1Million capital investment, with additional operational expenditure of $100K per annum 2. Infrastructure divestment and reinvestment of >$50million 3. Allow for purpose built pump stations in later years, in the areas where long term sea level rise is likely to have an impact.	Improve levels of service to allow for climate change projections by constructing new pumpstations.
	The most likely scenario Issue 1: Option 4 – significant decision to be made over the planning period to make incremental increases to funding to change the levels of service for the Stormwater network. Issue 2: Option 1 – Significant decision to be made within the next 10 years to change the levels of service for Stormwater to the Heads Rd Industrial Area by providing pumpstations. NOTE: previous Infrastructure Strategies have included an issue of climate projections to 2050 being insufficient – this has now been addressed in this reviewed version.			

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
Stormwater drainage	Impacts of forecast population changes: Medium term demand for new infrastructure. This will cause long term decrease in demand for new infrastructure. Furthermore, there will be long term challenges in paying for ongoing maintenance and renewal of assets.	1. Retain the Status Quo and accept a medium term decrease in the levels of service available. 2. **Increase levels of service over the long term to cater for changes in population.**	1. Most cost-effective option, with no increase in projected investment program. 2. Increase in capital investment of >$20M, with increased maintenance and operational expenditure per capita. Costs to be recovered from development contributions.	Increase levels of service to facilitate growth

The most likely scenario

Option 2 – Significant decision to be made within the next year to adopt a capital investment programme to allow for population growth over the medium term. This will be done by incremental investment into new assets to improve the level of service over the long term.

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
Stormwater drainage	Impacts of rates affordability and the need for renewing infrastructure in a sustainable manner: Poor understanding of true condition and performance of critical at-risk assets.	1. **Adopt a risk-based approach for investigations, renewals and capital investments.** 2. Renew infrastructure on expiry of design life	1. No additional capital investment, however a lower, more sustainable over-all risk profile is achieved. 2. No additional capital investment, however a higher, less sustainable over-all risk profile is achieved.	Increase levels of service, for no additional expenditure

The most likely scenario

Option1 – . Significant decision to be made within the next year to adopt a risk-based approach to asset renewals and capital investment programme.

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
Stormwater drainage	Impacts of increasing community expectations and higher regulatory standards: Increased demand for higher levels of service. A possible future onus placed on Local Authorities to treat stormwater to a regulatory standard.	1. **Retain existing levels of service and, and inform community "on needs not wants"** 2. Invest in new infrastructure to provide higher levels of service. 3. Engage with regulators and stakeholders to lobby for reasonable apportionment of the cost of treatment, should this ever become compulsory.	1. No increase in projected investments 2. New Infrastructure investment 3. > $100M over the period of planning, depending on new standards set. 4. New service to be provided by local authority, and paid for by others – this should be cost neutral.	Maintain levels of service
	The most likely scenario Option 1. Significant decision to be made within the next 20 years (around the time of expiry of the stormwater resource consent in 2036), on whether or not the levels of service for stormwater will be increased to include treatment to a new regulatory standard. Develop studies and databases to inform this conversation early on.			

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
Wastewater	Poor performance of the wastewater network during wet weather events: Excess inflow and infiltration from unknown sources causes the wastewater network to spill during wet weather events.	1. **Invest in new assets to achieve a reasonably practicable level of service for wet weather performance.** 2. Status Quo option, however this option allows excessive frequency and duration of wet weather spills.	1. $13M over 10 years will achieve a reasonably practicable level of service for wet weather performance. 2. No additional cost, however there is undue risk on the environment.	Increase levels of service
	The most likely scenario Option 1. Significant decision to be made within the next year to increase the levels of service for wastewater wet weather spills, and include capital investment program to address the issue.			

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
Wastewater	Impacts of growth and population changes: Adverse impact on the existing wastewater network capacity and performance.	1. **Invest in new assets in targeted areas to service growth forecasts. Costs can be distributed to developers as part of their contributions.** 2. No proactive investment, continue with ad hoc approach.	1. Minimal additional cost to Council 2. High risk, with the cost of development having to be funded by the ratepayer in retrospect.	Increase levels of service to facilitate growth.
	The most likely scenario Option 1 – Significant decision to be made within the next year to adopt a capital investment programme to allow for growth within the wastewater system.			

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
Wastewater	Renewing infrastructure in a sustainable manner: **Issue 1:** Requirement for a continued supply-line across the Whanganui River given that Dublin Street Bridge is nearing the end of its useful life.	1. **If the bridge is refurbished in situ, minimal change will be required.** 2. **If the bridge is replaced, the wastewater pipeline will need to be replicated on the new bridge.**	1. Minimal capital investment required. 2. $300k capital expenditure.	Maintain levels of service
	The most likely scenario Issue 1: Option 1 – Significant decision to be made within the next 10 years on replacement of the Dublin Street Bridge following preparatory investigations and stakeholder consultation in years 1 to 3 of the plan. This will clarify any potential impacts on the wastewater pipeline across the bridge.			

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
Wastewater	Biosolids Disposal	1. **Explore all options for the disposal of biosolids from the wastewater treatment plant for implication once the on-site storage is full**	1. Dependent upon which option turns out to be the most feasible.	Consent compliance
	The most likely scenario Issue 1: Option 1 – A combination of land disposal and composting			

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
Roading and footpaths	Renewing infrastructure in a sustainable manner: **Issue 1:** The form and shape of the road network are not meeting changing demands and needs – resulting in decreasing levels of service and increasing reactive interventions.	1. **Renew assets based on condition and performance priorities.** 2. Renew assets on a reactionary basis only.	1. Best value for money approach, whilst meeting the agreed levels of service. 2. Increased costs, with no guarantee that levels of service will be met.	Maintain levels of service
	Issue 2: Ensuring connectivity across the Whanganui River, given that Dublin Street Bridge is nearing the end of its useful life.	1. Refurbish the current Dublin Street bridge 2. **Completely replace the Dublin Street bridge**	1. Cost unknown – to be estimated via preparatory work to occur in years 1 – 3 2. $50M over the projected planning period.	Maintain levels of service
	The most likely scenario Issue 1: Option 1 – Significant decision to allocate budgets to renew assets based on condition and performance only Issue 2: Option 2 – Significant decision to be made within the next 10 years on replacement of the Dublin Street Bridge following preparatory investigations and stakeholder consultation in years 1 to 3 of the plan.			

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
Roading and footpaths	Impact of major natural events and climate change: The network is impacted by changing geology, topography and weather resulting in increased resilience issues and high repair costs when unplanned events occur. The impact of major natural events is: • reduced availability of the transportation network • increased costs associated with emergency works • increased risk of premature failure of asset as a result of the repetitive rainfall • reduced network performance as a result of sodden pavements	1. **Accrue a contingency fund for clean-up and repairs following major unplanned events.** 2. Retain status quo, and reassess on a reactive basis when a new event occurs.	1. Increased operational investment (around $200K per annum), however delivers a more resilient and sustainable position. 2. No increase in operational investment, however delivers a less resilient and an unsustainable position.	Maintaining and increasing the levels of service through increasing our resilience to unexpected major natural events
	The most likely scenario Option 1. Significant decision to be made within the next year to include a contingency fund for future flood recovery events, as an improved level of service to manage risk.			

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
Roading and footpaths	Managing increasing community expectations and higher regulatory standards – needs not wants: The changing needs (mobility) and expectations (active modes) of the community require investment to meet level of service for all modes. This impacts on a range of factors such as urban intersection layout, age capability and the inexperience of drivers is contributing to death and serious injuries.	1. **Invest in new assets to meet the increased demand in levels of service.** 2. Accept a reduced level of service	1. >$10M over the length of the planning period. 2. No additional cost.	Maintain levels of service
	The most likely scenario Option 1. Specific projects for changing the levels of service may meet the threshold of significance.			

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
Parks and recreation	Growth related issues associated with new dwellings: Ensuring that usable open spaces and playgrounds are provided in existing and growth areas of the city to maintain reasonable access.	1. Maintain current level of green space availability – Status quo. 2. For growth areas, developers required to contribute land or funds to meet targets to provide reasonable access, and in other areas where a need is identified, land be purchased for recreational purposes by Council based on 'reasonable access' provision. Any and that is over and above what is required be considered for divestment. In some scenarios infrastructure projects may provide options for increasing recreational activities	1. Retain current levels of expenditure to meet current level of green space availability. 2. Level of service for reasonable access will be met. Higher cost to Council if contributions not made by developer. Increasing number of recreational areas will increase the maintenance costs. Divestment of land surplus to requirements may offset maintenance costs and potentially offset the purchase cost of any land required to meet reasonable access requirements.	Growth
	The most likely scenario Option 2 which will spread the cost of obtaining land to meet the Levels of Service for reasonable access to usable open spaces and playgrounds.			

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
Parks and recreation	Resilience to major natural events and climate change: Recurring frequency of flood events where water breaches the stop banks and floods Kowhai Park.	1. **Continue to fund clean-up activities at Kowhai Park from flood relief fund and insurance – Status quo.** 2. Give consideration to whether or not Kowhai Park playground should remain in current location or a premier playground be developed elsewhere.	1. Acceptance that the river will flood and that financial allowances are likely to be required within Council's long-term planning. 2. Significant capital outlay would be required to recreate Kowhai Park in a different location (this would cost millions of dollars).	Maintain levels of service
	The most likely scenario Within the term of this plan, Option 1. Option 2 will require a significant decision from Council and is likely to be influenced by the extent to which weather events continue to impact on Whanganui.			

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
Parks and recreation	Resilience to major natural events and climate change: Increased heavy rainfall events with an impact on our ability to maintain grass play surfaces to the current standard that are able to be used regularly for organised sporting activities across sporting codes.	1. Work in partnership with sporting bodies to invest in artificial surfaces where that would be the most appropriate surface. 2. Investigate drainage options to protect significant sports fields against water logging which disrupts organised sports activities. 3. **Retain status quo and accept that the level of service may deteriorate.**	1. Provides a more reliable surface and one which is potentially what is now required for top level sporting competition so this may potentially attract more events to Whanganui e.g. hockey turf. The financial impact would be variable. 2. Allows increase in usage of sporting facilities. Not appropriate for all sporting codes. Financial impact variable but costly. 3. Retain current levels of expenditure to meet current level of service.	Maintain levels of service
	The most likely scenario Option 3 considered in the short term. There may be opportunities that arise which make Options 1 and 2 more feasible for specific projects but this is an unknown.			

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
Parks and recreation	Resilience to major natural events and climate change: Coastal erosion of Castlecliff Reserve and other dunes	1. **Retain status quo and accept gradual change to the environment with minimal control measures.** 2. Discontinue current maintenance regime. 3. **Complete and adopt a coastal management plan to preserve the natural environment.**	1. Ongoing maintenance costs will increase overtime, and there will be a possible loss of community infrastructure. 2. There will be an operating cost saving but a likely increase in one-off clean-up costs (which are likely to be significant). 3. A Coastal Management Report is to be commissioned in the 2021/2022 year with implementation to commence in 2022/2023, with the cost envisaged to be significant	Maintain levels of service Higher levels of service
	The most likely scenario Option 3 considered and implementation to occur within the Long-Term Plan 2021-2031.			

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
Parks and recreation	Rates affordability: Cooks Gardens – continue to maintain the running track to an IAAF Class 2 certified athletics track standard.	1. **Continue to maintain and replace the track surface.** 2. Do not maintain the current standard but run the track down.	1. Retain current levels of service and continue to monitor track condition. 2. This would reduce the capital outlay and level of service to the community, but would increase operating costs.	Maintain levels of service
	The most likely scenario Option 1 – Continue to maintain and replace the track surface.			

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
Parks and recreation	Rates affordability: Continuing to maintain two aquatic facilities.	1. **Continue to fund aquatic facilities at the current level – Status quo.** 2. Closure of one facility. 3. Build a new facility that has both outdoor and indoor options.	1. Maintain existing levels of current expenditure. 2. Reduction on both future capital and operating costs. 3. Significant capital expenditure requirement.	Maintain levels of service
	The most likely scenario For the term of this plan, Option 1.			

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
Parks and recreation	Rates affordability: Current condition of the velodrome facility.	1. Decommission the facility 2. Replace the existing track 3. Redevelop the facility	1. Some capital require to undertake de-commissioning works 2. Cost of around $2.5M 3. Significant development capital required.	Reduced Level of Service Maintain levels of service Increase level of service
	The most likely scenario Council undertook community consultation on options 1 and 3 as part of the Long Term Plan 2021-2031. After hearing submissions, Council chose to replace the existing velodrome track at a cost of approximately $2.5M.			

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
Parks and recreation	Managing increasing community expectations – needs not wants: Ensuring playgrounds are safe, high quality, reasonably accessible and meet the needs of the community.	1. **Continue to fund maintenance and replacement of current playgrounds – status quo.** 2. Playgrounds to be situated to better meet changing population demographics and meet the voluntary Playground Standards.	1. Maintain current levels of service and expenditure. While each playground may be safe, they may not necessarily meet community expectations 2. New and basic community playgrounds cost within the region of $200K. Potentially, a new play area may be required in Otamatea and Aramoho within the period of this Long-Term Plan. .	Maintain levels of service
	The most likely scenario Option 1, with consideration required for new playgrounds when development occurs.			

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
Parks and recreation	Managing increasing community expectations – needs not wants: Public toilet provision is not meeting community and visitor needs.	1. Maintain current level of provision – Status quo. 2. **Assess and replace, or build, toilets where there is a proven demand. Retire facilities that are not required.**	1. No new public toilets. We would maintain current levels of service and expenditure. 2. Assess current levels of service and demand with appropriate action taken. The cost of a new facility will vary depending upon scope.	Increasing levels of service
	The most likely scenario Option 2. New toilets have been installed over the last three years. Additional facilities are being considered within this Long-Term Plan.			

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
Cultural and events Facilities	Rates affordability: Funding of Community, Cultural and Event infrastructure over the next 30 years to ensure that the facilities remain to a high standard and meet the needs of the community.	1. Continue with current model of funding from the rate payer and maintain the facilities to the current level, but also work towards attracting increased revenue streams through the strategic plans of each activity. 2. Reduce ongoing maintenance of the facilities to only repair when absolutely necessary. 3. Investigate alternative more cost-effective methods of service delivery to deliver equivalent levels of service at reduced cost. 4. Investigate alternative (external) funding opportunities to help reduce the burden on rate payers but maintain current levels of service 5. Sell or contract out ownership of facilities to external trusts or organisations to fully manage and maintain. **6. A mixture of 1-4 listed above where Council will maintain existing levels of service but will reduce maintenance spends where possible and continue to improve revenue streams, and source external funding opportunities.**	1. Rate payer reliance will continue to rise if additional revenue streams are not successful. 2. Reduction in overall appearance of facilities that will impact on people and groups wanting to use the venue or facility. 3. Capital and ongoing maintenance and replacement costs, while reduced, still need to be accounted for. 4. External funding will be difficult to source on an ongoing basis, this could help periodically but unlikely for long periods of time. 5. Less reliance on ratepayer but the operational and levels of service provided will be out of Council's control. Finding a suitable owner or trust to run the facilities may prove problematic, and there will still be an expectation for Council to provide funding and to meet any shortfalls 6. Overall costs reduce as other revenue streams are sourced as well as reduced non-critical maintenance.	Maintain the level of service

The most likely scenario

Option 6. The Council will continue with the existing funding model over the next 1-3 years but will look at ways to source additional funding through external opportunities. If successful, this should result in a reduction of rate payer contributions for years 3-10 of the Long-Term Plan. The overall maintenance cost will reduce as Council will implement a robust system to ensure that the facilities' critical assets are maintained to current levels – but those that are non-critical will have an extended lifecycle based on ongoing condition assessments.

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
Cultural and events facilities	Renewing infrastructure in a sustainable manner: The backstage and stage area of the Royal Wanganui Opera House is ageing in terms of the set up and equipment, and may soon become redundant. Promoters and shows are already looking at venues that have modern equipment and are more technologically advanced.	1. Do nothing but continue to maintain existing equipment, and focus on those shows that do not require modern technology (become a boutique theatre). 2. **Continue to monitor the requirements and impacts of the users and, from year 10, start a replacement program to upgrade the stage and backstage areas and work closely with the Friends of the Opera to source external funding.** 3. Lease or sell RWOH to a Trust or another organisation and it becomes their responsibility to upgrade or not.	1. Ageing equipment will result in fewer shows being available for customers. The RWOH will lose its current status of being a world class venue. However, the cost to run the venue will be less. 2. The impact over the next few years is minimal but will need to be monitored as different user requirements are requested. Planning should start early to ensure that any costs can be spread out across a number of years to reduce the impact on the ratepayer. 3. Less reliance on ratepayer but the operations and levels of service provided will be out of Council's control. Finding a suitable owner or trust to run the facilities may prove problematic, and there will still be an expectation for Council to provide funding and to meet any shortfalls.	Maintain the level of service

The most likely scenario

Option 2. The Opera House will continue to be funded similarly for the next 10 years and will upgrade equipment on an as required basis. Any significant changes in design and setups around the backstage and stage support will be planned from year 10. However, this may need earlier reviewing if there is a dramatic change in user requirements that have a significant impact on bringing shows to Whanganui.

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
Cultural and events facilities	Catering for a growing population, when the existing library provision is already significantly below the standards in terms of public space and collection size for the current population.	1. Grow collections to meet the needs of a growing population, with 50% of additional collection resources being in a digital format. 2. Extending the Davis Library to close the gap between current provision and national standards from 64% to 80% of standard. 3. Maintaining and developing local self-service libraries in Whanganui's suburbs and further afield, including pop-up libraries where appropriate. 4. Do nothing and continue to maintain the current libraries to existing levels and continue with the mobile bus and home service to reach the wider community and those with difficulties coming into the CBD. 5. A combination of 1, 2 and 3.	1. Increasing the collection budget by $30,000 to $350,000 per annum and maintaining this level will allow for gradual collection growth to the level set in the NZ standard. There would be a $30K replacement cost per hub on an 8-year replacement cycle. 2. Approximately $2.44 million (Including contingency) spread over three financial years, with the main bulk of the expenditure in 2024-25, with a view to opening in Q3 of 2024-25. External funding of up to $0.85 million will be sought from a variety of local and national sources. 3. Approximately $30,000 per local library on an eight year cycle. 4. Ongoing decrease in service levels; costs increasing in line with inflation; replacement of mobile library and home service vehicles on a 10-yearly (mobile) and 5-yearly (home service) cycle, at a cost of $300,000 (mobiles) and $30,000 (home service).	Getting closer to established standards of provision while keeping total operating costs within bounds. Maintain the level of service and, where appropriate, increasing accessibility
	The most likely scenario Option 5. The Davis Library will remain at its current location in Pukenamu Queens Park.			

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
Property buildings – pensioner housing	Functional obsolescence: All 1 bedroom units are ageing. Within our current stock of 275 flats spread across 16 complexes we have 25 buildings that are a block of three flats (75 flats in total).	1. **Retain status quo.** 2. Over time, and as demand for two bedroom units increases, convert some units into two bedroom flats.	1. The current projected financial performance has the portfolio running in a sustainable manner, however, does not allow for capital expenditure relating to growth/replacement. 2. As demand increases and market conditions change, consider converting some units to two bedroom flats.	Level of service increase
	The most likely scenario Option 1 is considered the most likely.			

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
Property buildings – pensioner housing	Effect on rates and maintenance if they fail: In 2019/20 City Endowment investment properties returned a net profit of $356K (5.5% of Asset Value) while the Harbour Endowment Investment properties returned a net profit of $1.0M (5.6% of Asset Value).	1. **Manage the portfolio in accordance with the Property Portfolio Investment Plan.** 2. Do not look to obtain a market return from investment properties within the Harbour and City Endowment portfolios.	1. A limited resource cost to administer the portfolio but a significant loss of income which would directly impact on rates. 2. Would result in a loss of income which is used to off-set rates.	Reduce rates
	The most likely scenario The Endowment portfolios are being managed in a way that ensures the value and revenue generated will remain intergenerational. Option 1 is the option that provides the greatest benefit to the ratepayer.			

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
Property buildings – 101 Guyton Street	Administration Building 101 Guyton Street: Business Continuity Plan (BCP) in the event of the building being unavailable including Emergency Operations Centre (EOC) function The administration building is currently at 57% of NBS for an "Importance Level 2" building. If required to meet "Importance Level 4" then significant expenditure will be required.	1. **Accept that the building may fail in a significant event and utilise back-up sites as identified.** 2. Increase resilience as an "Importance Level 2 Building" as scoped (main work on the 3rd floor). Building may still fail in a significant event and the utilisation of back-up sites as identified will be required. 3. Upgrade to a building that meets "Importance Level 4" in order to increase the resilience of the facility.	1. No cost. 2. Approximately $120K – this is allowed in Year One of the LTP. 3. Not priced as yet.	Maintain levels of service
	The most likely scenario Option 2 – increase resilience as an "Importance Level 2" building as scoped (main work on 3rd floor). Cost is relatively insignificant to improve resilience.			

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
Ports – airport	Significant impacts of Climate Change: Effect of climate change on the grass runways. Weather patterns have meant that grass runways are being closed more often. With the water table expected to rise as part of the climate change process, the frequency of closure will increase if no action is taken.	1. Do nothing and accept that the grass runways will be closed more often. 2. Investigate and implement drainage options to ensure that the grass runways are open as many days as possible. 3. **Implement development of a sealed taxiway.**	1. With the proposed introduction of the New Zealand International Commercial Pilot Academy (NZICPA), and the estimated increase in landing fee revenue, doing nothing could have a significant impact on the Airport Landing Fee Revenue. 2. When implemented the grass runways will be open for a greater number of days. Cost and timings to be investigated. 3. In budget for 2020/2021 year	This will maximise the benefits and improve safety for all airport users.
	The most likely scenario Option 3. This is contained within the Annual Plan 2020/21.			

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
Ports – airport	Usage as a passenger airport: The main purpose of the sealed runway is for passenger service. In order to maintain a passenger service we are currently working closely with third party service providers.	1. **Do nothing and allow service providers to determine what services are provided.** 2. **Work to encourage other passenger services.**	1. No additional cost but this may result in the loss of passenger services. 2. Time and incentives that may be necessary to attract operator(s).	Maintain levels of service
	The most likely scenario Options 1 is the most likely.			

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
Ports – airport	Continuation of the Crown as a Joint Venture partner at the Airport: Should Central Government withdraw as the Joint Venture partner Council would need to consider the rates affordability of what we provide.	1. **Continue with the current arrangement.** 2. Negotiate with our Joint Venture partner for a longer term agreement that will assist in the justification of investment in the airport by ratepayers.	1. Risk of affordability to the community for future capital replacements should the joint venture partner not renew. 2. Longer term security.	Maintain levels of service
	The most likely scenario Most likely that the agreement will be allowed to continue in the current form which it has done for half a century.			

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
Ports – seaport	Effect of climate change on the Port structures: Climate change can impact on the levels of service provided at the port.	1. Carry on as usual and let nature take its course. 2. **Giving consideration to the most likely effects of climate change and incorporate these as part of the Port Revitalisation Project to ensure that there is good resilience going forward.**	1. Loss of functionality at the Port if ignored. 2. Work required will not be known until it is scoped.	Maintain levels of service
	The most likely scenario Option 2 is being considered as part of the Port Revitalisation Project in order to maintain resilience for the Port.			

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
Ports – seaport	Rates affordability: Outcomes of Port revitalisation project.	1. Retain the status quo of very minimal maintenance or capital replacements. 2. **Continue with the implementation of the Port Revitalisation Project. Ensuring that infrastructure additions are affordable to Whanganui with our funding partners.**	1. Minimal exposure, however, there is a risk of obsolescence and lost economic development opportunities. 2. Continue to progress with the Port Revitalisation Project and pursue external funding opportunities. Long financial planning for capital improvements is currently difficult to forecast.	Level of service increase
	The most likely scenario Option 2 needs to remain a critical focus for the Port as this will both revitalise the Port activity and, if executed well, act as a strong economic driver for our community.			

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
Information services server / SAN infrastructure	Server/SAN infrastructure degradation and aging: Degradation of gear and outdating of technology to the point of impacting service and productivity.	1. **Continue with the replacement cycle and regular review of technology and architecture with adequate funding.** 2. Decrease services or outsource more and more IT capacity and systems.	1. This is best practice and the most prudent option. While this may be the most expensive option initially it will result in savings over time with better productivity and less expensive repairs and recovery costs. Average cost of $140K per year. 2. Reduces the need for periodic one-off capital expenditure but replaces it with continual (annual or monthly) and ever-growing service costs. This also, leaves much of the Council's autonomy of data and services in the hands of a third party.	To maintain the critical IT infrastructure at a productive and most cost effective level to maximise investment and workforce return for the Council and stakeholders
	The most likely scenario Council will continue to maintain the infrastructure of IT at a high level.			

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
Information services – police CCTV network	CCTV network degradation and aging: Technology and network connectivity advances require outdated equipment to be regularly serviced, upgraded and replaced. Without such funding more and more of the camera network will cease to function.	1. **Increase funding and the replacement cycle to ensure the network is functioning as needed.** 2. Outsource the service to another community group. 3. Stop the service all together.	1. The cost versus the community return makes this the ideal option. Annual cost of $30K. 2. Although this removes the cost initially for the Council, issues such as underfunding, a lack of technical expertise and system breakdowns could occur – providing an even bigger expense. 3. Will remove a vital safety and security service to the community and our stakeholder partners such as the Police and Main Street.	Council services provided for the care and safety of the community
	The most likely scenario Funding will be allocated to continue the service for the foreseeable future.			

	Significant Infrastructure issues	Principal options for managing the issue	Implications of options (cost and timing)	Purpose of expenditure
information services – DR replication and site	Disaster recovery location replication site time needed for activation: The production environment (through natural disaster, fire, cyber attack, or other reasons) could be completely incapacitated and inaccessible and we could require systems to run at a DR location for an unknown amount of time. This could result in a one or two, to several day outage, with our current DR replication infrastructure.	**1. Continue with the current replication DR plan.** 2. Move to a full DR site with the ability to switch from site to site instantly at any time. 3. Stop DR replication all together.	1. Minimal cost (e.g. there is free hosting of gear in Palmerston North City Council). However, it is not a full DR solution as it is not "switchable" on demand from one site to the other nor is it on equally advanced gear. Time of recovery will be a day or two at best and once running at full capacity, performance may be an issue. Geographically, for some disasters, it could be considered too close. 2. This is the most costly, and technically challenging option. A cloud based service will cost several hundred thousand per year to have the capacity replicated and "on" ready to switch at any time. Even cloud based IT infrastructure is not replicated without a significant premium (up to 75% of annual hosting costs). This would also take months to fully design, test, and deploy initially. This will cost anywhere from $30K to $1.5M per year. 3. Stop remote replication and rely on existing backups. This is the cheapest option, costing nothing. However, the obvious risk is that this is not a DR solution and recovery will be measured in weeks and months rather than seconds or days.	Functioning as a council in general in the event of an outage of core Information Services infrastructure

The most likely scenario

Stay with the current replication option and revisit the idea of a full DR capabilities solution in year five and again, if necessary, in year 10.

9. 30-year strategy

9.1 Priorities

The Council is committed to continuing to address the five key themes identified in this strategy:

- Demographic and land use changes
- Natural events and climate change
- Sustainable asset management approach
- Changing legislative requirements and environmental standards
- Affordability

As a result, our specific priorities will be to:

- Reduce costs, increase revenue and work in partnership with others.
- Monitor and be responsive to environmental, community and technological changes.
- Take a risk based approach to asset management.
- Develop resilience in funding and assets.
- Invest in new assets where levels of service are not being met and for growth.

9.2 Management strategy

In providing services to residents and visitors through the use of infrastructural assets, the Council's management strategy is to:

- Generally maintain the current agreed levels of service and ensure targets are met
- Maintain the assets in an acceptable condition
- Prudently increase levels of service for stormwater, roading, wastewater, seaport and within parks and recreation to facilitate and respond to growth and resilience demands
- Improve operational efficiencies

This will be achieved through developing and funding operations, maintenance, renewals and any new works programmes.

Operation and maintenance expenditure incorporates the day to day running of the infrastructure networks and allows these systems to carry on functioning to deliver the agreed levels of service – as well as operational efficiency to be improved.

Renewal expenditure is work that restores the systems to their original state rather than increasing the capacity or standard of the existing assets.

New works are identified through a capital works programme developed using some or all of the following sources:

- Capacity assessments – these provide details about any shortfalls and new works are prioritised to address these. This is primarily driven by growth.
- Levels of service – these highlight any deficiencies in the quality of service provided to customers.
- Risk assessments – these provide information about the highest risks to each scheme based on a range of different events and causes. Works are programmed to mitigate extreme or high risks.
- Criticality assessments – these provide a measure of the importance of an asset to the overall scheme. Highly critical assets

have a lower threshold for action, such as proactive inspection and rehabilitation, compared to low criticality assets.

The Council's asset management objectives are aligned with the achievement of Council's base assumptions and adherence to a risk based approach.

9.2.1 Lifecycle management

When making decisions we also have to consider lifecycle management. The concept of life cycle activities is easy to understand at the lowest levels of physical equipment components. However assets can only contribute value in a systems context – and more complex systems can have finite or infinite 'life', depending on how we choose to manage them. 'Patch and continue' maintenance strategies, asset replacements, modifications, obsolescence, changing functional demands, recycling and other options need to be considered, and the asset may have a number of 'owners' during its life, with different objectives, value criteria and planning horizons. Life cycle activity planning, life cycle costs and value realisation periods must be understood if short-termism and 'false economies' are to be avoided.

Lifecycle management involves documenting the performance and costs of our assets from the time of identifying the need for the asset, to its purchase and life until its disposal. The objective is to look for the lowest long-term cost (rather than short-term savings) when making asset management decisions.

The life of a system component can be viewed from different perspectives. Its economic life could be different than its physical life. In general the component deteriorates with age and there is a need to increase the frequency of maintenance activities during the last phase of its life time.

The overall philosophy is that asset lifecycle forms an integral part of normal operating practices. It is therefore the primary driver of the operational maintenance strategies.

All programmed maintenance is based on recommended industry standards that are progressively modified from experience based on observed failure rates and equipment performance. The Council understands that work that is planned and well managed is more economical than work that is unplanned and chaotic. Moreover, proper maintenance prevents costly damage to the asset, extending the asset life.

All critical pumping plants have standby backup in case of failure. Diesel generators provide standby power supplies to key pump stations. Flow meters, level and pressure sensors and on-line analytical equipment are calibrated regularly. Automatic call out of operational personnel is generated on failure of critical equipment that affects water reservoir levels or treatment plant outlet quality or flow.

Plant and equipment maintenance requirements are based on the recommendations outlined in Operations and Maintenance Manuals or (in their absence) manufacturer's information. Often experience gained from working with the equipment over many years, or detailed analysis, indicates that different (and in some cases lesser) maintenance requirements are appropriate.

These tactics are implemented to ensure levels of service are maintained and risks managed. Staff are notified promptly and respond effectively to issues and asset failures. The initial response is to achieve safety, and protect the environment as quickly as possible, making temporary repairs or closing facilities if major repairs or replacements are required. If a permanent repair cannot be achieved immediately, then a follow-up corrective work order is initiated to provide the necessary parts and/or contractor availability.

9.2.2 Risks, hazards and resilience

When considering risks, hazards and resilience the Council has taken the approach, through analysis of its network, of focusing more optimally on critical asset groups to manage risk. Capital budgets will be focused specifically on critical assets at risk within the network, and on new assets that will make a material difference to any proposed changes in levels of service.

The cost of natural disasters in New Zealand has highlighted the importance of good risk management and the part insurance plays for public assets. Whanganui has Material Damage Natural Catastrophe Insurance. This includes earthquake, natural landslip, flood, tsunami, tornado, windstorm and volcanic eruption cover.

The Council's insurers are AON Group Ltd (London) with a 40% proportion and central government covering the remaining 60%. This insurance is for above and below ground infrastructural assets.

More information on how Council will manage its identified risks relating to natural hazards can be found in sections 5.3 and 6.2 of this strategy.

9.3 Levels of service

9.3.1 Water supply

The water supply network will increase levels of service in the form of creating additional degrees of redundancy within the water supply network by investing in additional pipework to be installed at target locations. Additional degrees of redundancy in the bulk water sourcing are also to be investigated.

9.3.2 Wastewater

An increase in level of service has been effected by the Strategy, by introducing a new level of service for wet weather performance in 2018 and directing targeted capital investment to resolve the issue of wet weather spills from the wastewater network.

The balance of levels of service are to remain unchanged.

9.3.3 Stormwater

Increases in levels of service available to residential and commercial premises within the urban zone will be effected by targeted capital investment. This is to increase pipe sizes where bottle-necks have been identified and provide attenuation in wetlands and other low-lying areas where this is practically achievable.

We will also allow for stormwater pump stations as a response to long term sea-level rise in the Heads Road industrial area.

9.3.4 Roading and footpaths

The most notable increase in levels of service for connectivity will be achieved through investment in additional shared pathways. This is delivered with the aid of central government funding.

9.3.5 Community, Cultural and Events Facilities

The levels of service set out in the Asset Management Plan will mostly be maintained, although the method of delivery may change (for example with the replacement of the Mobile Library). The exceptions are:

- Redevelopment of the Sarjeant Gallery Te Whare o Rehua Whanganui in 2020 to 2023. This represents an increase in level of service, both in terms of long-term preservation of cultural heritage and in improved levels of access to cultural heritage collections.
- Extension of Davis Library will improve availability and accessibility of collections.

External funding from a variety of sources will mitigate the modest impact on ratepayers.

9.3.6 Parks and recreation

The levels of service identified in the Asset Management Plan largely aim to maintain levels of service at the current level, as one of the assumptions for this Strategy is that there will not be significant growth. As a result, funding of levels of service will be strained on a fairly static rates intake if rates are to remain affordable.

There are, however, some projects that will involve an increased level of service e.g. increasing provision of public toilets, sand management as part of the Castlecliff rejuvenation project, and new greenspaces as a result of growth.

The most likely options indicated above, for managing infrastructure issues are driven by growth, increasing levels of service or maintaining levels of service. Whether operational, replacement or acquisitions, the funding will largely come from rates and loans.

Even the management options chosen to maintain levels of service could have some significant funding requirements e.g. resurfacing the Cooks Gardens athletics track to maintain an IAAF Level 2 certification or cleaning up Kowhai Park after significant flooding events.

9.3.7 Specific projects:

Public toilet provision: The increase in levels of service is driven by growth, potentially from tourism. New toilets will be loan funded and will provide a better service, being distributed where there is demonstrated need and giving the visitor a better experience. Ongoing maintenance for the toilets will be funded from operational budgets funded through rates. Options such as retiring obsolete public toilets will also be considered, which will potentially remove extra maintenance costs incurred as part of providing new toilets.

Sand management: The project to protect the sand dune system and re-establish the fore dunes has still to be fully scoped, and will be considered as part of the Coastal Plan being developed. It is likely to be spread over a number of years and will be funded from rates. The establishment of the fore dunes will help to control accretion and protect buildings such as the Duncan Pavilion and Surf Lifesaving building.

9.4 Arrangements for service delivery

9.4.1 Water supply

- A section 17a review of this activity was completed in September 2017. The review found that the most cost-effective and practicable way of delivering the service was to contract service provision for maintenance and operations out to specialist service providers.
- The construction of new assets are also contracted out to specialist service providers, for similar reasons.
- These arrangements are unlikely to change in the near future.

9.4.2 Sewerage and the treatment and disposal of sewage

- A section 17a review of this activity was completed in September 2017. The review found that the most cost-effective and practicable way of delivering the service was to contract service provision for maintenance and operations out to specialist service providers.
- The construction of new assets are also contracted out to specialist service providers, for similar reasons.These

arrangements are unlikely to change in the near future.

9.4.3 Stormwater drainage

- A section 17a review of this activity was completed in September 2017. The review found that the most cost-effective and practicable way of delivering the service was to contract service provision for maintenance and operations out to specialist service providers.
- The construction of new assets are also contracted out to specialist service providers, for similar reasons.
- These arrangements are unlikely to change in the near future.

9.4.4 Provision of roads and footpaths

- The Council maintains ownership and responsibility for managing land transport activity and the associated infrastructure. In order to maximise efficiencies and long term value for money, the transportation network is managed with a holistic asset management focus. This means all procurement is linked operationally, tactically and strategically – with the maintenance management system, maintenance intervention strategy and 10-year programme all linked.
- The road maintenance and capital works contracts form the largest component of the Council procurement of transportation services. For maximum effectiveness and efficiency the Council's whole road corridor maintenance contract is carried out by a single entity, the Whanganui Alliance.
- At its LGA s17A review of service delivery, the Council overwhelmingly endorsed continuing with the Alliance model, but recommended exploring opportunities for collaboration by either sharing in-house resources or by working with neighbouring Road Controlling Authorities (RCAs) that wish to work under an Alliance model.

9.4.5 Parks and recreation

- Procurement of services is undertaken according to the Council Procurement Policy.
- Parks maintenance is outsourced to contractors. Contracts are awarded through a competitive tender process and generally have a seven year contract period. The contracts are managed by Parks Officers.
- Planned maintenance work is undertaken by approved contractors.
- Where required under section 17a of the LGA a review of service delivery will be undertaken. Changes to the service delivery method would occur if, after a review of s17a of the LGA, it was recommended that changes be made.

9.4.6 Community and cultural

- The Royal Wanganui Opera House (RWOH), War Memorial Centre (WMC), Sarjeant Gallery and Libraries are all delivered in-house.
- The Council funds the Whanganui Regional Museum Trust to operate the Museum activity. Funding is currently set at $1.125M per year.
- The RWOH, WMC and Cooks Gardens were previously operated within their own structures. Management identified this as an issue and all three facilities have now come under the Whanganui Venues and Events umbrella. Alternative operating models were explored but the chosen option has service delivery and financial benefits.
- Where required under section 17a of the LGA a review of service delivery will be undertaken. Changes to the service delivery method would occur if, after a review of s17a of the LGA, it was recommended that changes be made.

9.4.7 Property buildings

- These have accumulated as time has gone by. Currently management of these properties is “in house”. An analysis of the activity under s17a of the LGA has been undertaken and the decision confirmed to maintain in house management.
- Independent property advice is sought when setting and reviewing levels of rent.

9.4.8 Ports – sea and air

Airport

- This is managed in house as part of the ports group.
- One of the key criteria is the meeting of CAA certification requirements.
- Business growth in the aviation sector such as the NZICPA is constantly sought

Seaport

- This activity is managed in house as part of the ports group and is in the process of being transitioned into a Council Controlled Organisation.
- Meeting the Maritime NZ certification requirements is key to being an operational port.
- Future growth of the Port area has been considered and has been included in the Port Revitalisation masterplan.

Durie Hill Elevator

- This operation is outsourced to contractors.
- Management options are currently being considered and the oversight will be with Whanganui Venues and events.
- The entrance way upgrade is scheduled to be completed in 2021.

9.4.9 Information services

Server/SAN

- Delivery of any and all Council services and functions depend in some way on the Server/SAN infrastructure of the Council.
- In-house delivery is the most cost effective option currently, but in the next several years this may change to cloud hosting as costs lower and the value/cost ratio differences diminish.

Police CCTV

- This aligns with our Safer Whanganui commitments and is a tool for law enforcement to provide security and services to public places around the community.
- In-house solutions are the most effective given the existing fibre infrastructure the Council owns. This may change in the next several years and be passed on to an external organisation as Wi-Fi and other wireless technologies increase and if, or when, public interest grows to add more to the maintenance, management and monitoring of the cameras.

DR/Replication

- This currently has a massive return on investment advantage to any outsourced option. It also provides full replication of all data and systems of the Council.
- Out-sourced options could be considered if costs reduce, or if the Council decides that this is a high enough priority to substantially increase the budget to change to a more automated switching option.

9.5 Significant decisions required

‘Significance’ is defined by Council’s Significance and Engagement Policy. The following general criteria must be kept in mind when determining whether a decision is ‘significant’:

- The potential effect on delivering Council’s strategic aspirations
- How the decision aligns with historical Council decisions
- The likely impact of the decision on present and future interests of the community

- Recognising iwi cultural values past, present and future and their relationship to land and water
- Acknowledging mana whenua values and recognising their responsibilities of kaitiakitanga to land and water
- The level of community interest in the decision and whether community views on the issue are already known
- The possible financial and non-financial costs of the decision (or of reversing the decision) with regard to the Council's capacity to perform its role
- The transfer of ownership, control or affect a decision has on a strategic asset

When any issue, matter or proposal is determined as a significant decision:

- The issue will be considered by the Council
- The report to Council will include an officer assessment of significance of the issue, the degree of engagement proposed, the engagement and communication plan proposed and an officer recommendation.

The Council will not make a decision or proceed with a proposal which it considers to be significant, unless it is first satisfied that Sections 77 (Requirements in relation to decisions), 78 (Community views in relation to decisions), 81 (Contributions to decision-making by Māori) and 82 (Principles of Consultation) of the Local Government Act have been appropriately observed.

	Description	timing	estimated cost
Coastal Management Strategy Development and implementation of a coastal plan is identified as a specific action in the Leading Edge Strategy. This work also has some alignment with the 'draft' climate change strategy actions to implement opportunities to increase carbon sinks and build community resilience.	Option 1: Develop and implement Coastal Plan (Preferred option) Option 2: No additional coastal funding Following consultation, Council decided to proceed with the development and implementation of a coastal plan	Develop the plan in 2021/22 and then implement it between 2022/23 and 2024/25, and between 2028/29 and 2030/31.	$2.45M
Velodrome roof project The current wooden cycling track is now 25 years old and has deteriorated from exposure to the weather. Failing boards have been replaced over time using the stock of matching hardwood onsite. The level of deterioration of the track has increased year on year which led to the track's closure in February 2021 due to safety concerns for users.	Option 1. Decommission Option 2. Roofed velodrome (PREFERRED OPTION) Option 3. Multi-purpose veldrome and events centre Following consultation, Council decided not to roof the velodrome but to allocate $2.5M for works to the existing velodrome facility.	2021/22 and 2022/23	$2.5M
Provision of two aquatic facilities	Current work on the Whanganui East Pool will extend the life of the facility for 10 – 15 years after which the Council will need to consider if it will continue to fund the facility.	Year 10 of the Long-Term Plan.	To be scoped.
Outcomes of the Port Revitalisation project – including rates affordability The recommendations included in the Port Revitalisation Strategy will be partly or fully implemented.	The Port Revitalisation Strategy is likely to include a number of projects that require capital expenditure to achieve the desired results. Options around funding for these, including central government assistance need to be considered.	Within the next 10 years.	Project commenced.

	Description	timing	estimated cost
Stormwater Design Standards	Continue to review against projects issued by the Ministry for the Environment	Within the next 10 years	Excess of $20M over the first 10 years following the decision
Population Growth	Adopt a program of capital investment to fund projects that will enable growth over the next 5-10 years	Within the next year	$3.5mil recoverable from developers
Risk to Stormwater Network due to poor performance records	Adopt a risk-based approach to asset renewals and capital investment within the stormwater network.	Within the next year	No additional cost
Increased standard for quality of the urban stormwater system	Decide whether or not to increase levels of service to meet new requirements with expiry of stormwater resource consent in 2036.	Within the next 20 years	>$100M over new planning period depending on new standards at the time.
Dublin Street Bridge	Decide how to renew Dublin St Bridge when it reaches the end of its useful life. Highly dependent on NZTA funding subsidy being available following submission of Strategic Business Case planned in LTP to be undertaken in 2022/23.	Within the next 10 years	$50M
Impact of major natural events on the roading activity	Accrue a contingency fund for clean-up and repairs following major unplanned events.	Within the next year	$200K per annum
Changing needs and expectation of the community regarding mobility and active modes of transport	Invest in specific projects to improve levels of service.	Within the next year	>$10M over the length of the planning period.

	Description	timing	estimated cost
Wastewater Wet Weather Performance	Significant decision to be made within the next year to adopt a capital investment programme to allow for population growth over the medium term	Within the next year	$10M over the next 20 years
Approach to biosolids at Wastewater Treatment Plant	Undertake feasibility study regarding options for future disposal of biosolids	Within the next 10 years	$1.5M
Risk of interrupted connectivity along Dublin Street Bridge for water supply and wastewater when the bridge reaches the end of its useful life.	Await decision on future of Dublin Street bridge – refurbishment or replacement as this will dictate whether the services need to be transferred.	Within the next 10 years	$400k
Increasing water quality standards and regulation	Decide on new level of service to be adopted at the time of expiry of resource consents for water extraction	Within the next 20 years	
Bastia Hill Water Tower	Decide whether or not to renew Bastia Hill Water Tower, which is approaching the end of its useful life.	Within the next 20 years	>$5M
Degree of redundancy within the water network	Improve resilience of the water network by constructing new ring mains to create additional degrees of redundancy to key areas.	Within the next year	$2.5M
Degree of redundancy of water supply sources	Consider alternative water sources, to increase the degree of redundancy within the water bulk supply assets.	Within the next 3 years	>$1M
Davis Library extension	Addressing shortfall in library provision by adding a further 550 sqm to the existing library.	Planning, design and fundraising in years 2 and 3 of the LTP, construction in year 4.	$2.84M

10. Financial estimates

10.1 Total expenditure – projected capital expenditure for combined infrastructure assets

Infrastructure Activity	Capital Expenditure	Operational Expenditure
Wastewater	$54,284,405	$349,080,687
Stormwater	$102,096,175	$115,291,837
Water Supply	$66,641,897	$199,624,567
Roading & Footpaths	$462,821,225	$475,938,500
Parks & Recreation	$48,388,975	$401,092,246
Cultural & Event Facilities	$44,865,865	$393,176,299
Property/Buildings	$17,983,825	$180,236,691
Ports	$10,103,041	$65,545,805
Information Services	$19,163,900	$113,202,163
Total	$826,349,307	$2,293,188,794

Projected operational and maintenance expenditure for combined infrastructure assets

10.2 Operational Expenditure

Operational Expenditure	2021/2022	2022/2023	2023/2024	2024/2025	2025/2026	2026/2027	2027/2028	2028/2029	2029/2030	2030/2031	2031-2036	2036-2041	2041-2046	2046-2051
Wastewater	8,778	9,009	9,246	9,429	9,635	9,844	10,018	10,239	10,452	10,648	55,797	59,902	64,646	71,439
Stormwater	3,169	3,085	3,165	3,221	3,278	3,325	3,363	3,417	3,459	3,494	18,343	19,822	21,096	23,056
Water Supply	4,751	4,817	4,974	5,068	5,207	5,300	5,423	5,793	5,968	6,031	31,577	34,326	38,071	42,317
Roading & Footpaths	9,685	9,768	10,058	10,977	11,392	11,832	12,423	12,867	13,493	14,450	77,109	84,541	93,224	104,120
Parks & Recreation	9,061	9,390	9,843	9,991	10,189	10,484	10,808	11,493	11,225	11,909	63,286	70,468	77,826	85,120
Cultural & Event Facilities	8,368	9,700	10,154	9,827	10,180	10,408	10,527	10,922	11,167	11,684	61,815	68,302	75,840	84,281
Property/Buildings	4,243	4,410	4,396	4,677	5,069	4,526	5,109	4,784	4,747	4,994	25,232	31,815	36,746	39,487
Ports	1,866	1,841	1,867	1,898	1,884	1,900	1,833	1,912	1,993	2,046	10,531	11,339	12,031	12,605
Information Services	2,670	2,675	2,715	2,860	2,849	2,975	3,000	3,297	3,167	3,310	17,516	19,791	21,962	24,414

- Projected capital expenditure for each of the groups of assets

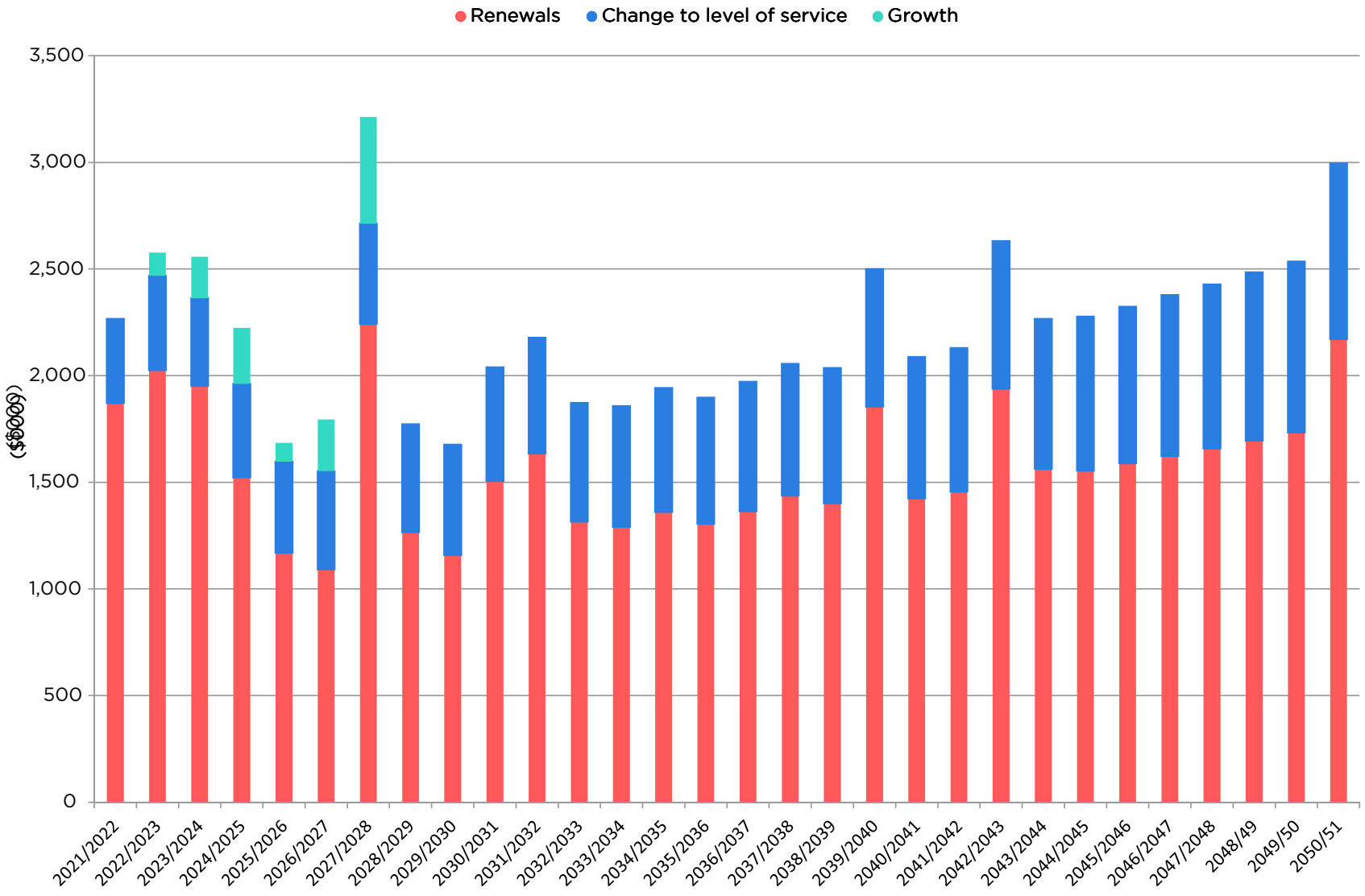
10.3 Capital Expenditure

Capital Expenditure	2021/2022	2022/2023	2023/2024	2024/2025	2025/2026	2026/2027	2027/2028	2028/2029	2029/2030	2030/2031	2031-2036	2036-2041	2041-2046	2046-2051
Wastewater														
Renewals	1,050	1,374	1,023	1,016	1,081	1,137	1,359	1,222	1,157	1,231	6,734	7,508	8,310	8,782
Change in LoS	110	833	380	1,362	954	125	128	132	135	139	741	827	922	1,028
Growth	1,000	1,029	333	242	263	360	218	40	-	-	-	-	-	-
Total	2,160	3,236	1,736	2,620	2,299	1,622	1,705	1,393	1,292	1,370	7,475	8,335	9,232	9,810
Stormwater														
Renewals	410	422	459	443	485	466	478	521	504	552	2,835	3,161	3,477	3,830
Change in LoS	1,412	1,453	1,489	1,527	1,566	1,605	2,230	2,291	2,352	2,414	18,280	14,369	11,832	13,192
Growth	1,450	2,109	1,064	1,659	610	625	521	-	-	-	-	-	-	-
Total	3,272	3,984	3,012	3,629	2,661	2,697	3,230	2,812	2,857	2,965	21,116	17,531	15,309	17,022
Water Supply														
Renewals	1,872	2,026	1,952	1,523	1,170	1,091	2,242	1,266	1,159	1,506	6,909	7,483	8,101	8,883
Change in LoS	394	443	411	438	427	461	471	506	517	533	2,836	3,165	3,526	3,935
Growth	-	108	195	262	89	242	501	-	-	-	-	-	-	-

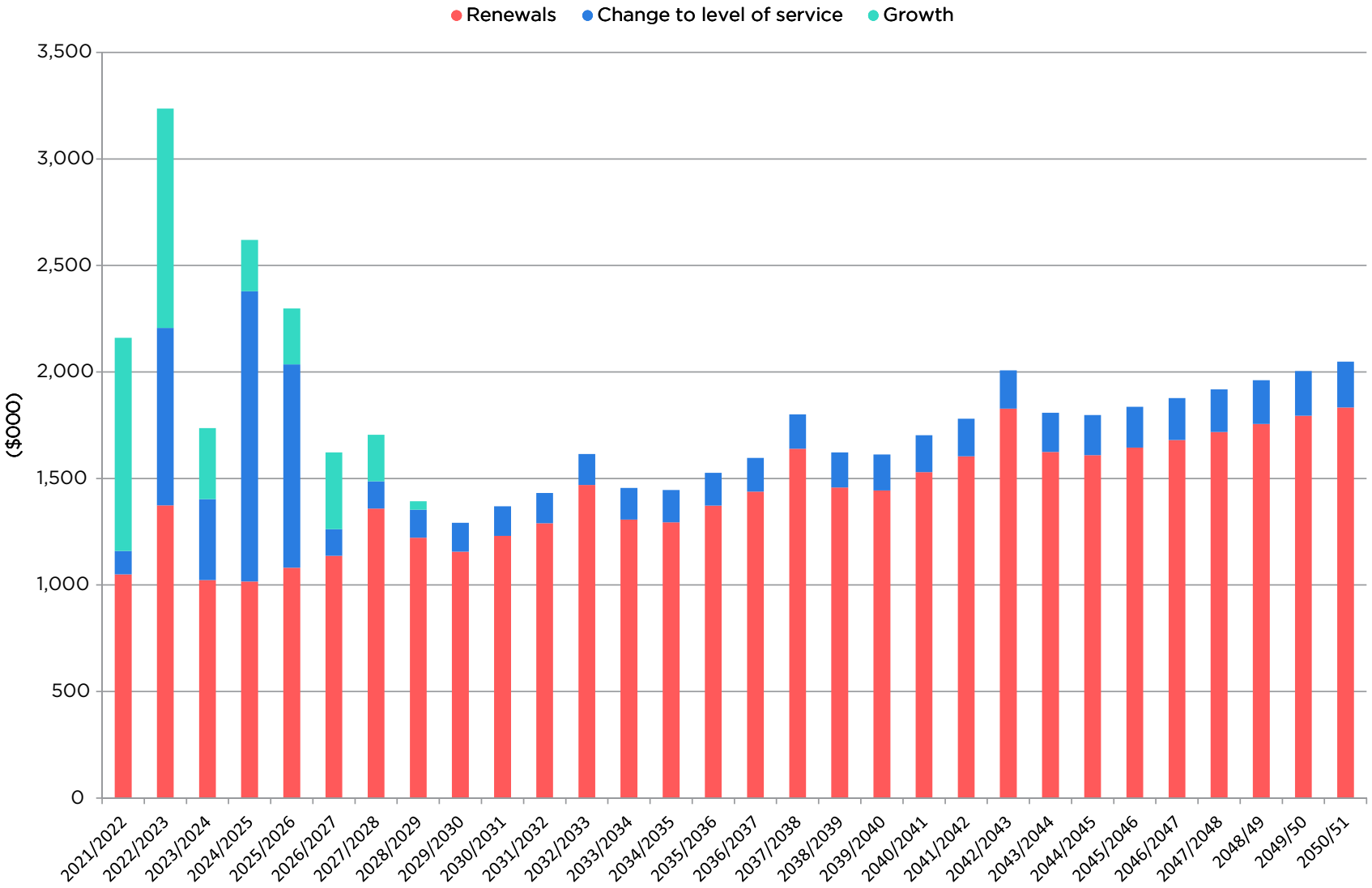
Capital Expenditure	2021/2022	2022/2023	2023/2024	2024/2025	2025/2026	2026/2027	2027/2028	2028/2029	2029/2030	2030/2031	2031-2036	2036-2041	2041-2046	2046-2051
Total	2,266	2,577	2,558	2,224	1,685	1,794	3,213	1,772	1,676	2,039	9,746	10,648	11,627	12,818
Roading & Footpaths														
Renewals	7,602	8,323	7,235	7,725	7,914	8,134	8,644	8,901	33,810	34,925	50,070	55,825	62,191	69,340
Change in LoS	1,936	406	3,451	2,162	2,218	2,274	2,333	2,396	2,461	2,525	13,481	15,031	16,759	18,685
Growth	500	-	3,560	714	695	562	-	-	34	-	-	-	-	-
Total	10,038	8,729	14,246	10,601	10,827	10,970	10,977	11,297	36,305	37,450	63,551	70,856	78,950	88,025
Parks & Recreation														
Renewals	852	1,656	1,700	1,411	2,221	819	585	849	973	2,373	4,565	6,579	6,913	7,302
Change in LoS	1,420	2,197	829	764	244	11	12	311	320	293	615	1,296	467	811
Growth	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	2,272	3,854	2,530	2,175	2,465	831	597	1,160	1,293	2,667	5,179	7,875	7,380	8,113
Cultural & Event Facilities														
Renewals	555	465	734	832	596	506	428	496	759	709	2,768	3,854	3,157	4,496
Change in LoS	15,257	2,998	852	2,787	602	54	50	57	132	60	300	442	373	549
Growth	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Capital Expenditure	2021/2022	2022/2023	2023/2024	2024/2025	2025/2026	2026/2027	2027/2028	2028/2029	2029/2030	2030/2031	2031-2036	2036-2041	2041-2046	2046-2051
Total	15,812	3,464	1,586	3,619	1,198	560	477	553	891	769	3,068	4,296	3,530	5,045
Property/Buildings														
Renewals	971	807	351	539	337	534	530	241	259	183	1,047	1,673	1,747	1,829
Change in LoS	80	1,029	1,055	1,081	-	-	-	1,198	1,230	1,262	-	-	-	-
Growth	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	1,051	1,836	1,406	1,620	337	534	530	1,439	1,489	1,445	1,047	1,673	1,747	1,829
Ports														
Renewals	13	2,058	174	222	183	171	1,418	1,198	1,230	-	352	2,940	-	-
Change in LoS	145	-	-	-	-	-	-	-	-	-	-	-	-	-
Growth	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	158	2,058	174	222	183	171	1,418	1,198	1,230	-	352	2,940	-	-
Information Services														
Renewals	212	836	245	262	463	275	982	290	298	507	2,668	2,952	3,315	3,698
Change in LoS	50	51	53	54	55	57	58	60	62	63	337	376	419	467
Growth	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	262	887	297	316	518	332	1,041	350	359	571	3,005	3,328	3,734	4,165

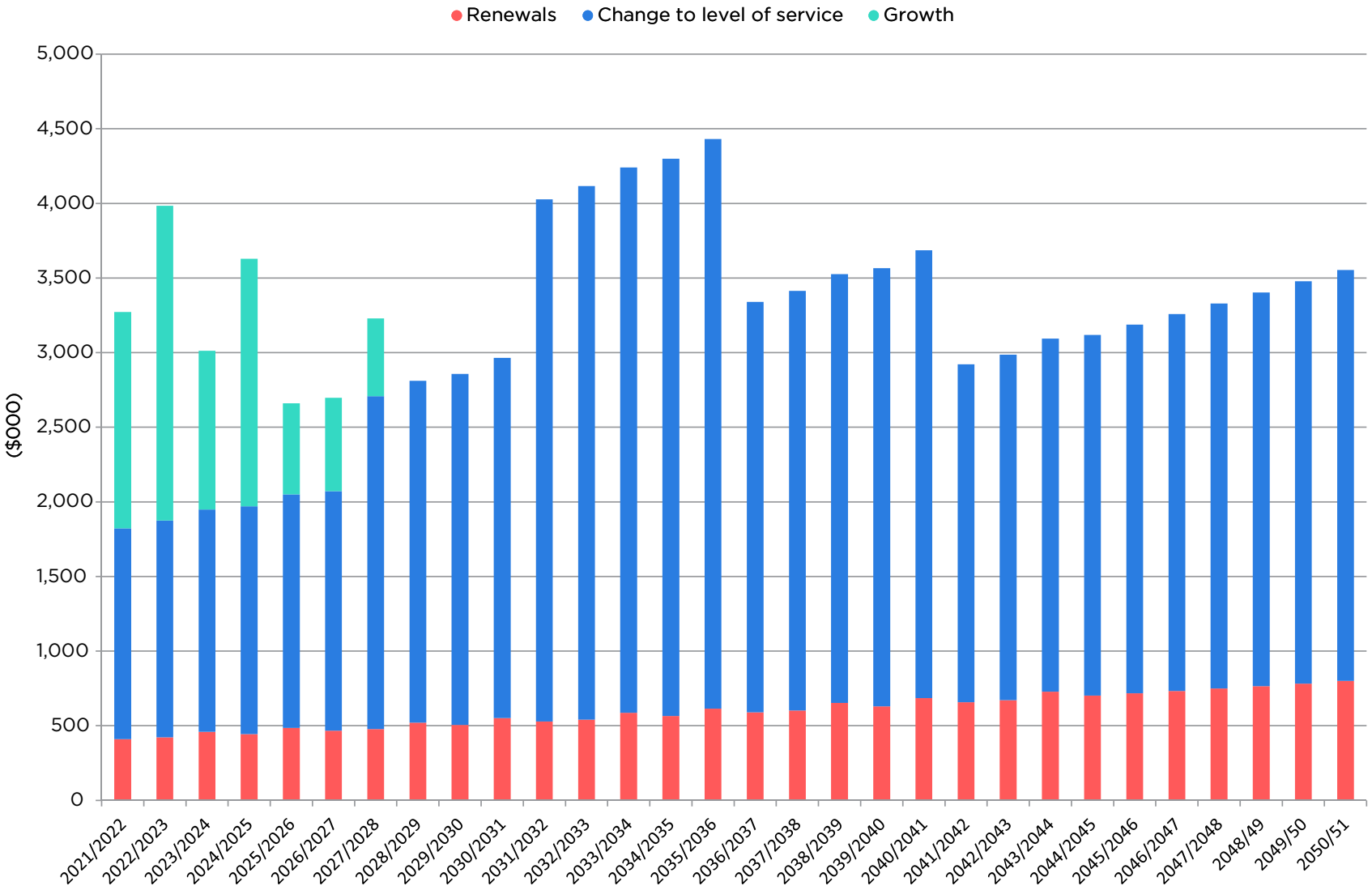
10.4 Indicative Estimates – Capital Expenditure



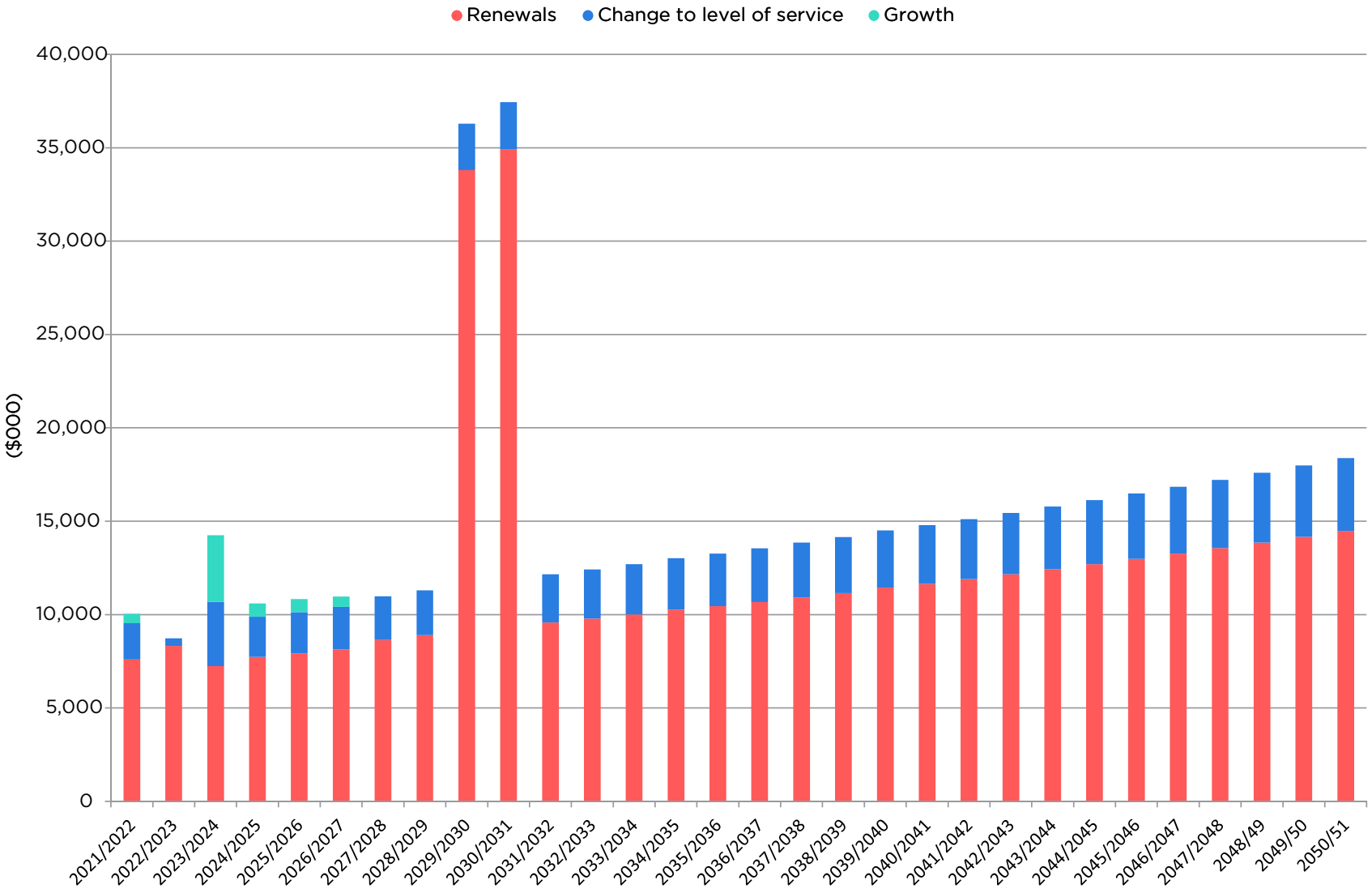
The estimated capital needs for the Water Supply activities have been prepared for the next 30 years. The forecasted capital expenditure for the period 2021-2031 has been included in the draft LTP



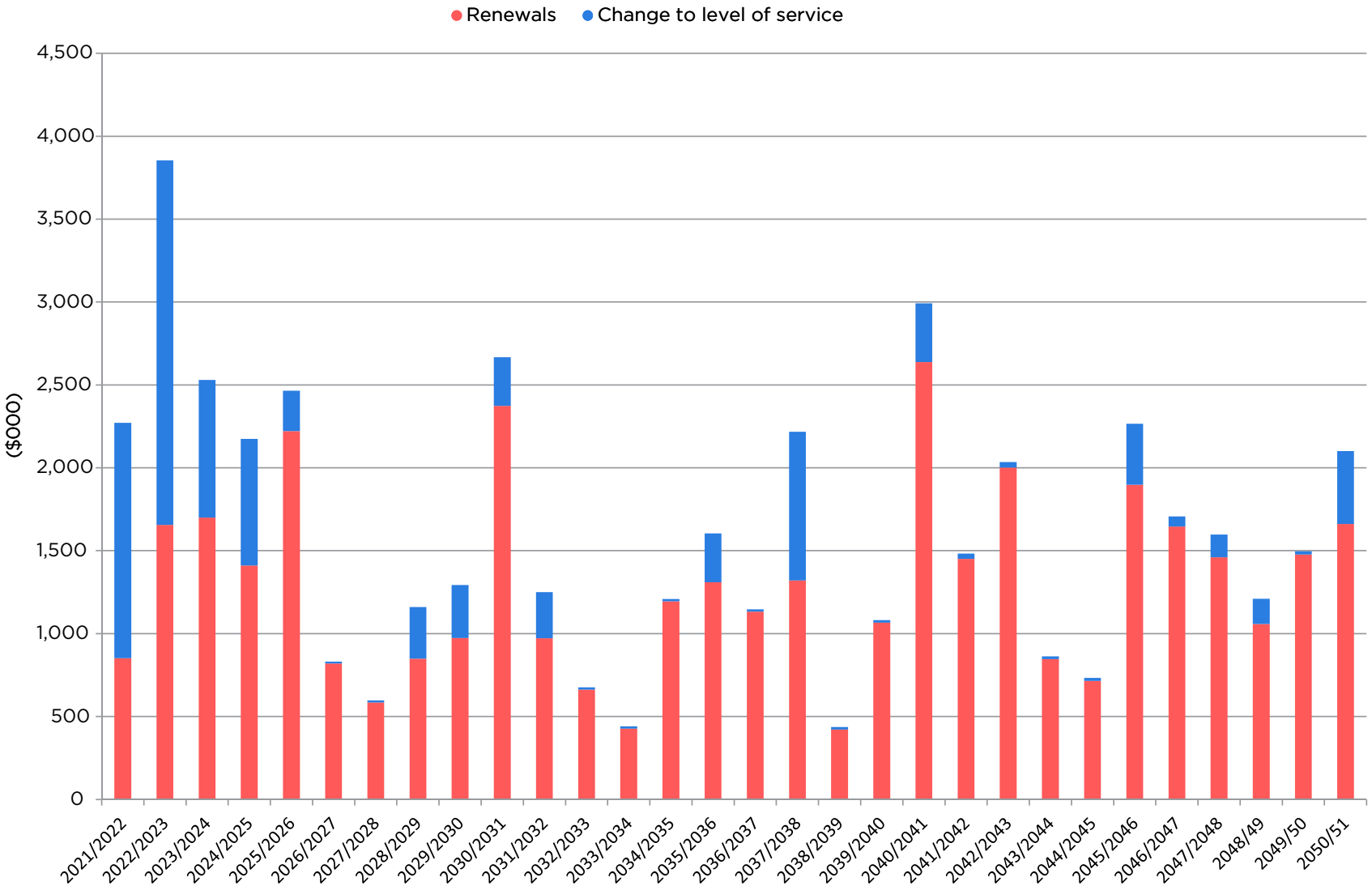
The estimated capital needs for the Wastewater activities have been prepared for the next 30 years. The forecasted capital expenditure for the period 2021-2031 has been included in the draft LTP



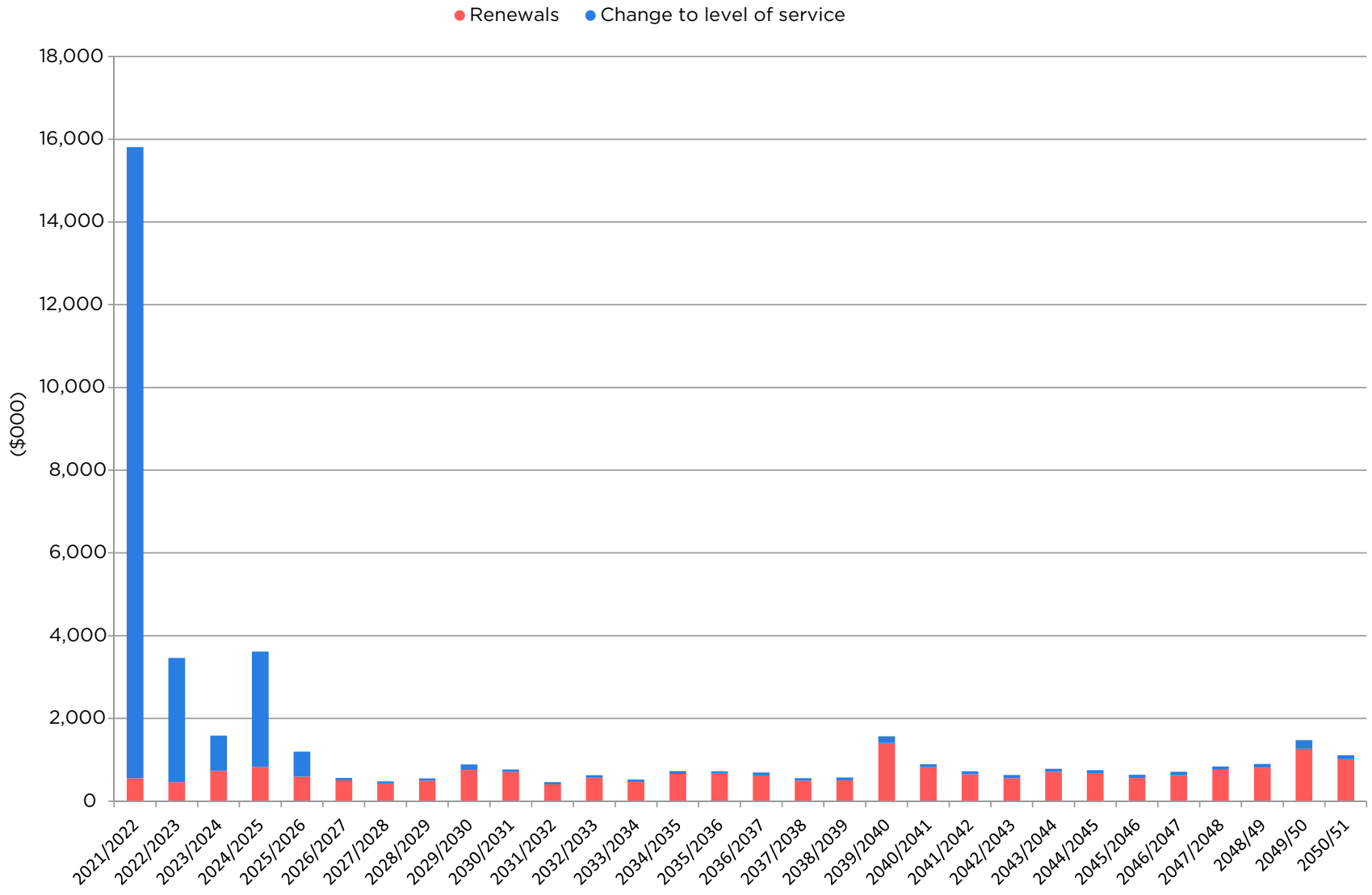
The estimated capital needs for the Stormwater activities have been prepared for the next 30 years. The forecasted capital expenditure for the period 2021-2031 has been included in the draft LTP.



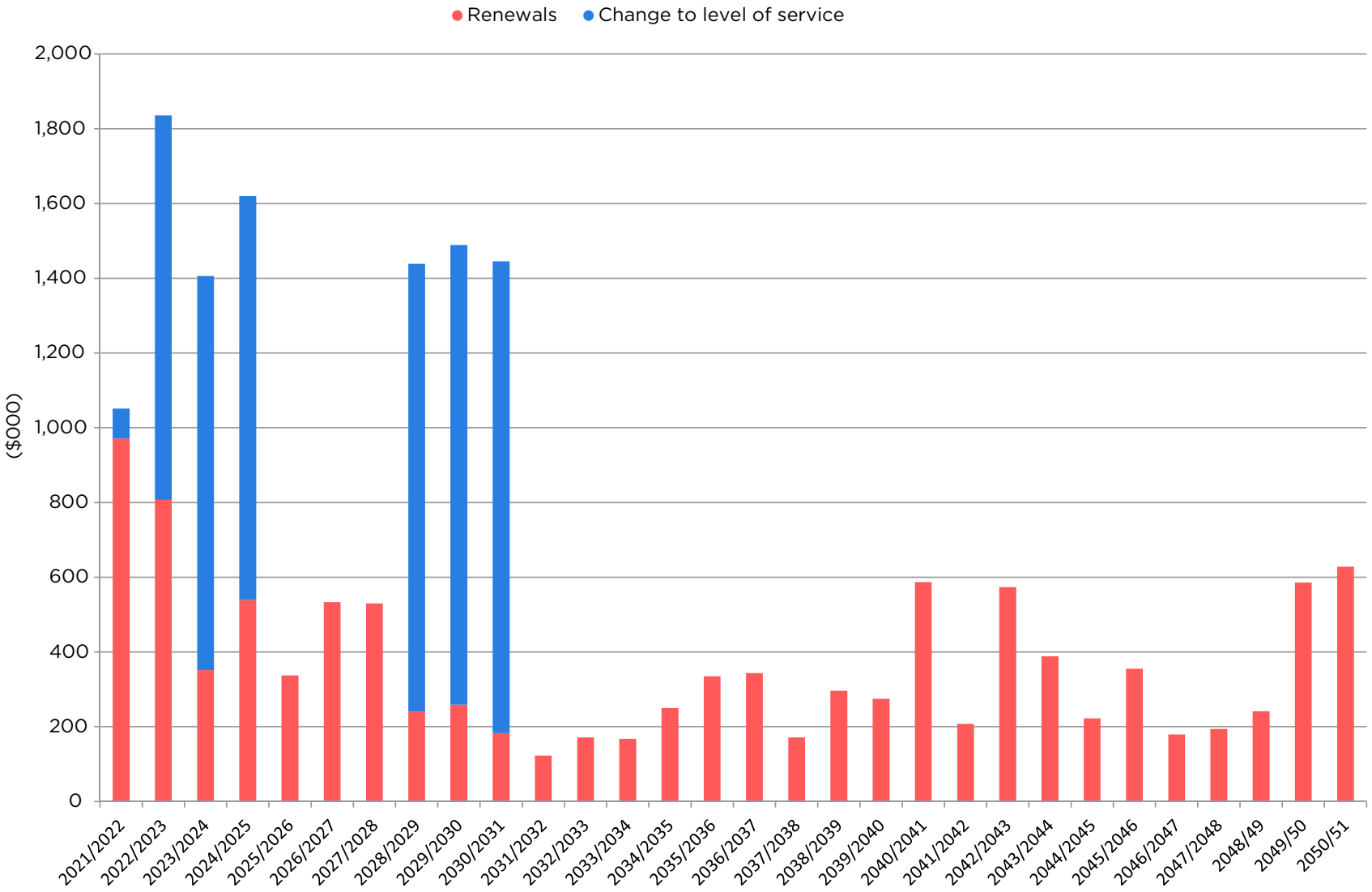
The estimated capital needs for the Roading and footpath activities have been prepared for the next 30 years. The forecasted capital expenditure for the period 2021-2031 has been included in the draft LTP.



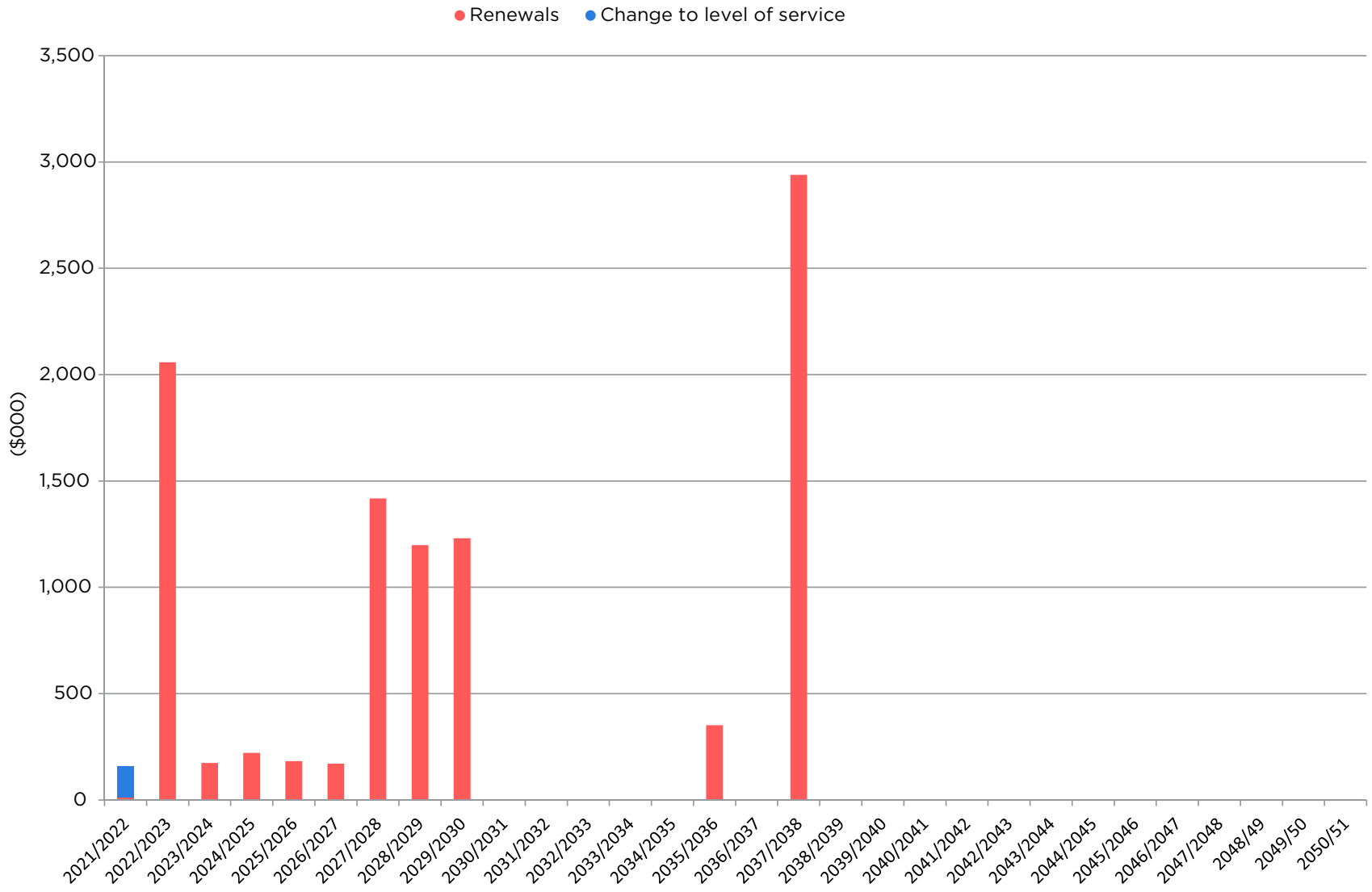
The estimated capital needs for the parks and recreation activities have been prepared for the next 30 years. The forecasted capital expenditure for the period 2021-2031 has been included in the draft LTP.



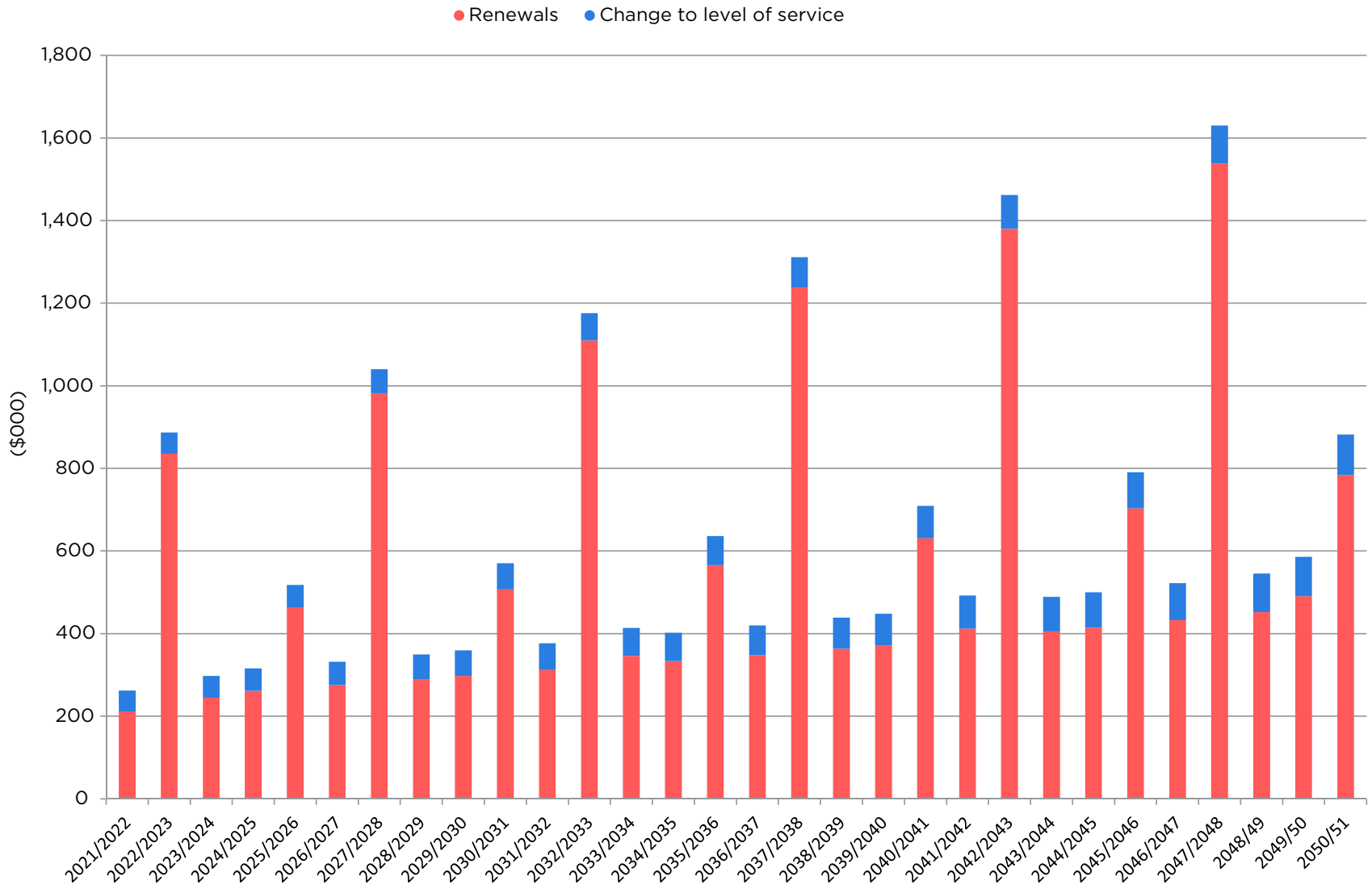
The estimated capital needs for the Community, Cultural and Events activities have been prepared for the next 30 years. The forecasted capital expenditure for the period 2021-2031 has been included in the draft LTP.



The estimated capital needs for the Property and buildings activities have been prepared for the next 30 years. The forecasted capital expenditure for the period 2021-2031 has been included in the draft LTP.



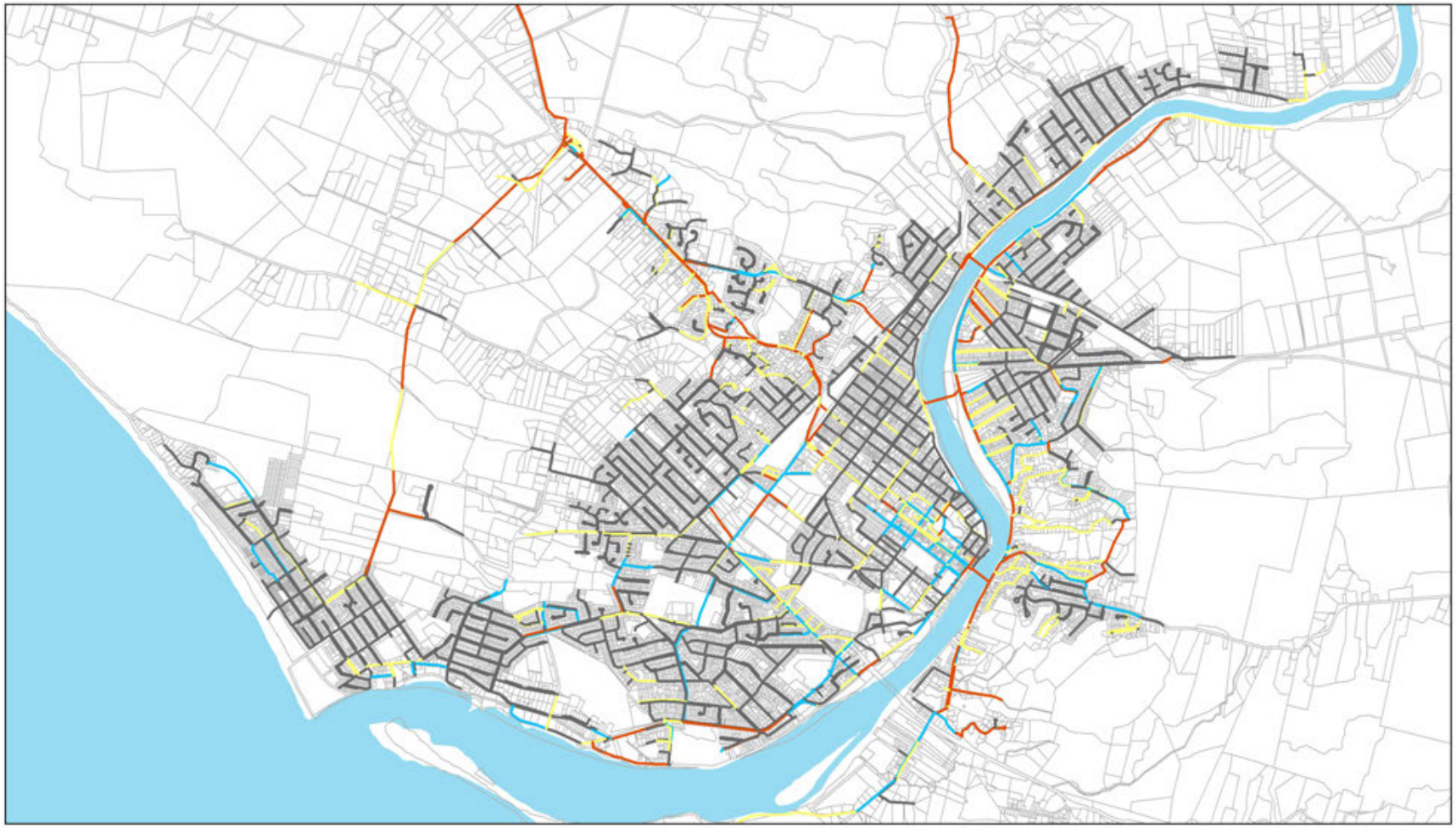
The estimated capital needs for the ports activities have been prepared for the next 30 years. The forecasted capital expenditure for the period 2021-2031 has been included in the draft LTP.



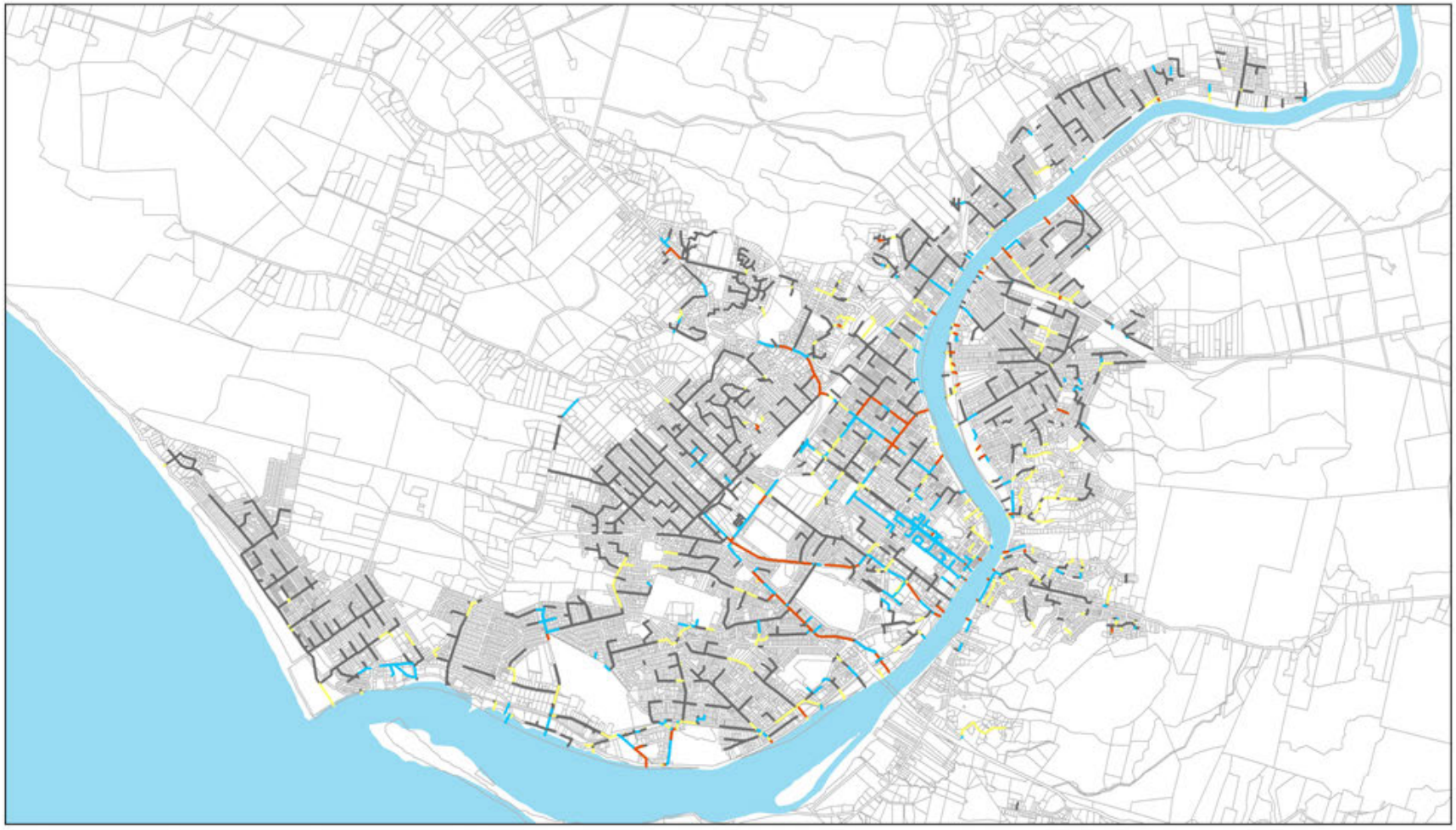
The estimated capital needs for the information services activities have been prepared for the next 30 years. The forecasted capital expenditure for the period 2021-2031 has been included in the draft LTP.

11. Appendices

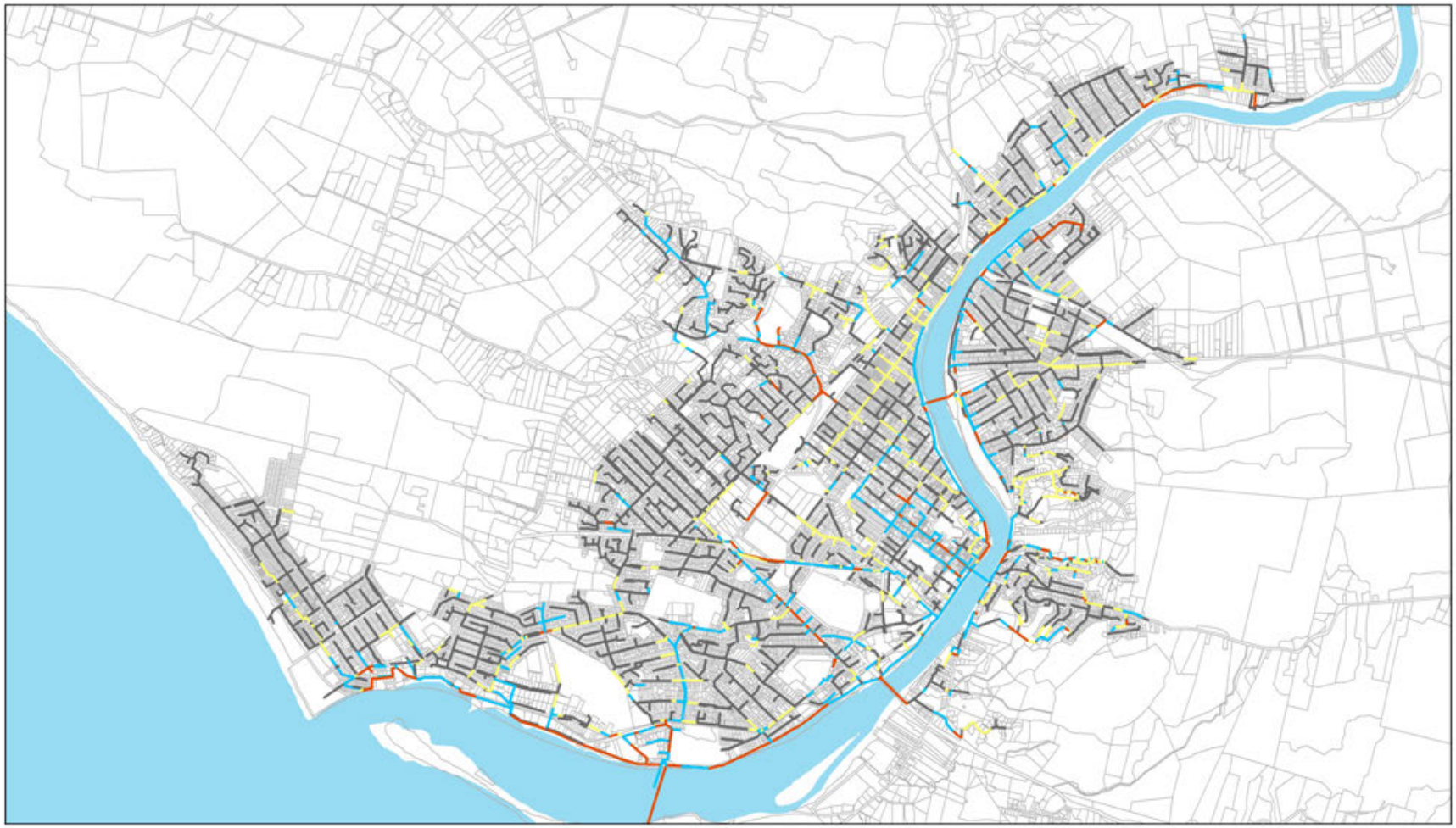
11.1 Appendix A – Criticality map for water supply



11.2 Appendix B – Criticality map for stormwater

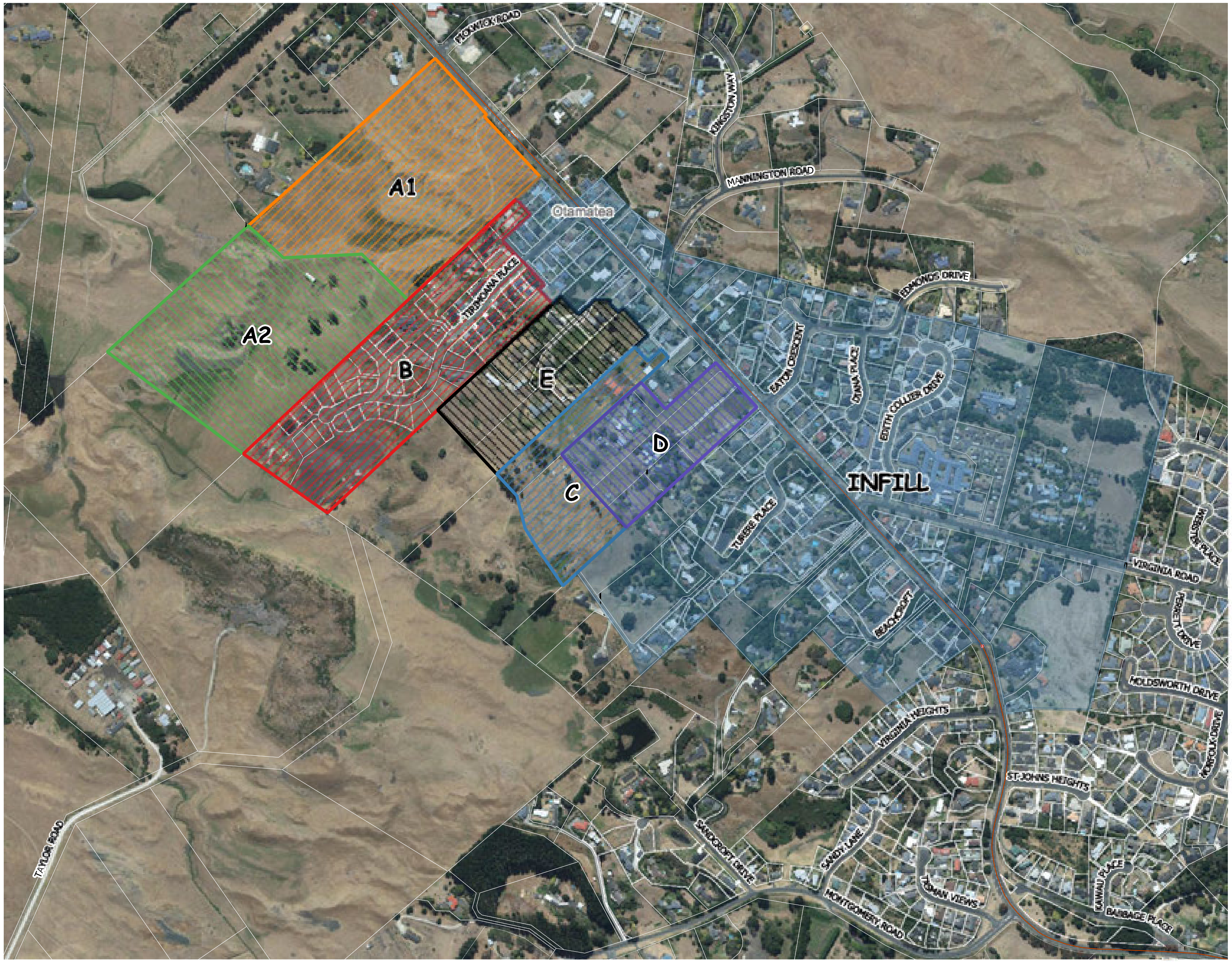


11.3 Appendix C – Criticality map for wastewater



11.4 Appendix D – Growth area maps

Springvale



Legend

Otamatea

- A1
- A2
- B
- C
- D
- E
- INFILL

Date Printed: 2020-11-09

WHANGANUI
DISTRICT COUNCIL
Te Kaunihera a Rohe o Whanganui