

SECTION 3: Infrastructure strategy
summary | Rautaki hangarau
whakarāpopoto

Infrastructure strategy summary | Rautaki hangarau whakarāpopoto

Waikato Regional Council manages flood protection and land drainage assets across the region that are essential in **managing risks** to communities associated with natural hazards, enabling and protecting **economic productivity** and contributing to **community wellbeing**.

The assets and the schemes they make up have been developed over the last 80 years and primarily consist of stopbanks, pump stations and floodgates, across eight management zones and have a replacement value of \$580 million. The assets are supplemented by a range of land drainage assets.

The Waikato Regional Council Infrastructure Strategy, which is required by the Local Government Act 2002 Amendment Act 2014, follows recommended best practice by outlining the council's approach to managing and maintaining these assets over the next 50 years. This work is crucial to support the **council's mission** of *"working together to build a Waikato region that has a healthy environment, a strong economy and vibrant communities"*. The council's approach to infrastructure management is guided by the following overarching principles:

- Decisions are aligned with the council's strategic direction and priorities.
- Maintaining established infrastructure and levels of service.
- Collecting and maintaining best possible data and information.
- Appropriate replacement of existing infrastructure (renewals).
- Taking account of climate and morphological change.
- Responding to the demands for new capital.
- Service sustainability.

In regard to the management of the council's flood protection and land drainage assets, the following significant issues have been identified:

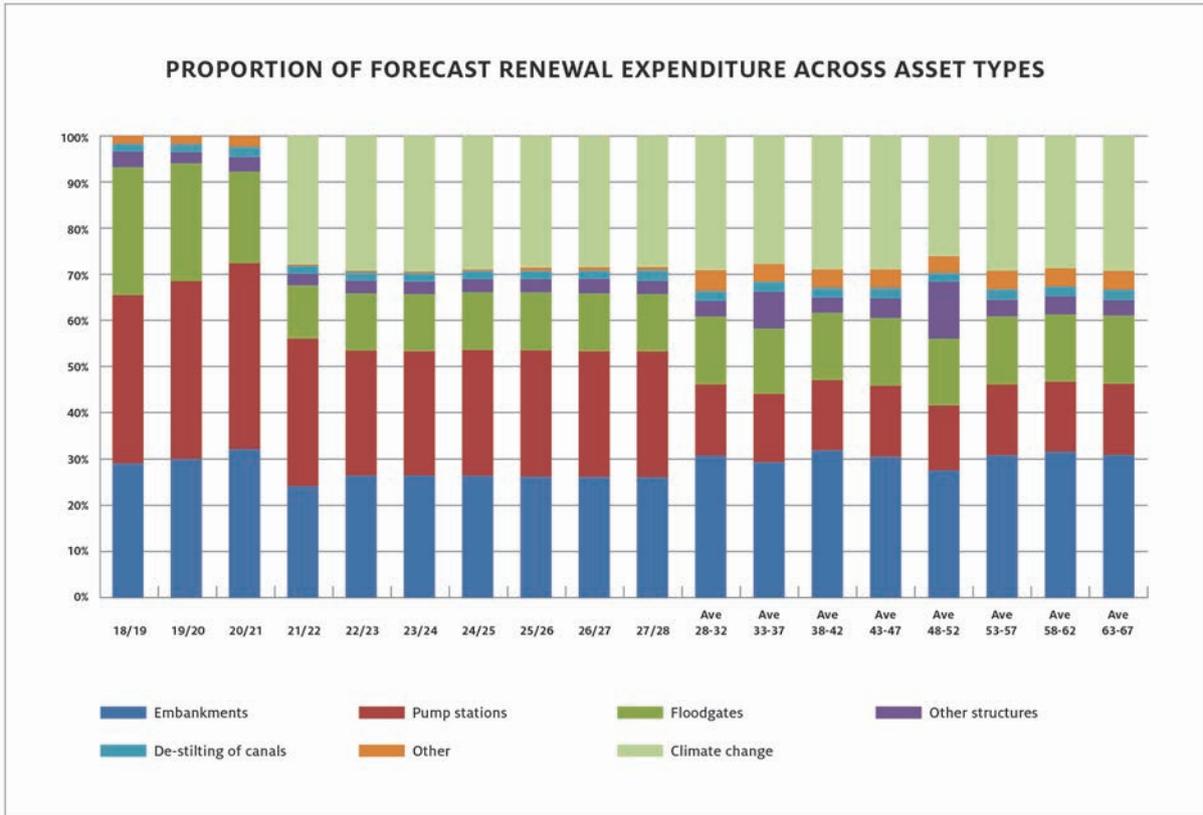
- **Ageing of assets and impact on levels of service** – Many of the council's assets were constructed over the 1960s to the 1990s and will reach the end of their predicted life in the next 50 years.
- **Increasing environmental and regulatory performance expectations** – Community and central government expectations in relation to environmental outcomes continue to increase over time. Flood protection infrastructure is often located in areas of high environmental, recreational or conservation value and these values may be impacted by that infrastructure.

- **Climate change** – Climate change is likely to increase flood hazard and risk due to sea level rise, more frequent and more intensive storm events, increased adverse river behaviour and higher water tables. This will place pressure on the council's assets and their services. The council also seeks to reduce carbon emissions, which has relevance to the council's pump stations.
- **Risk of natural disasters** – Extreme events such as tsunamis, coastal storm surge, land instability, earthquakes and volcanic eruptions pose significant threat to infrastructural assets and the services they provide.
- **Economic conditions and affordability** – The region's economic conditions have an impact on the ability of communities to pay for the services provided and there are increasing pressures on the current level of funding to deliver more. The construction sector within the Waikato region is currently at capacity. This is expected to continue for at least the short to medium term, and possibly beyond. This has an impact upon the availability of suitable contractors and consultants, costs and ability to deliver within expected timeframes.
- **Growth and development** – Population growth, land development and intensification all generate demand for additional levels of service. As growth continues, the demand for further new schemes and higher levels of protection can be expected.
- **Business continuity** – Experienced and skilled personnel are required if a high standard of service is to be provided to the regional community into the future. In recent times, recruitment of experienced engineering and construction related staff has become increasingly challenging due to a shortage of suitably qualified candidates.

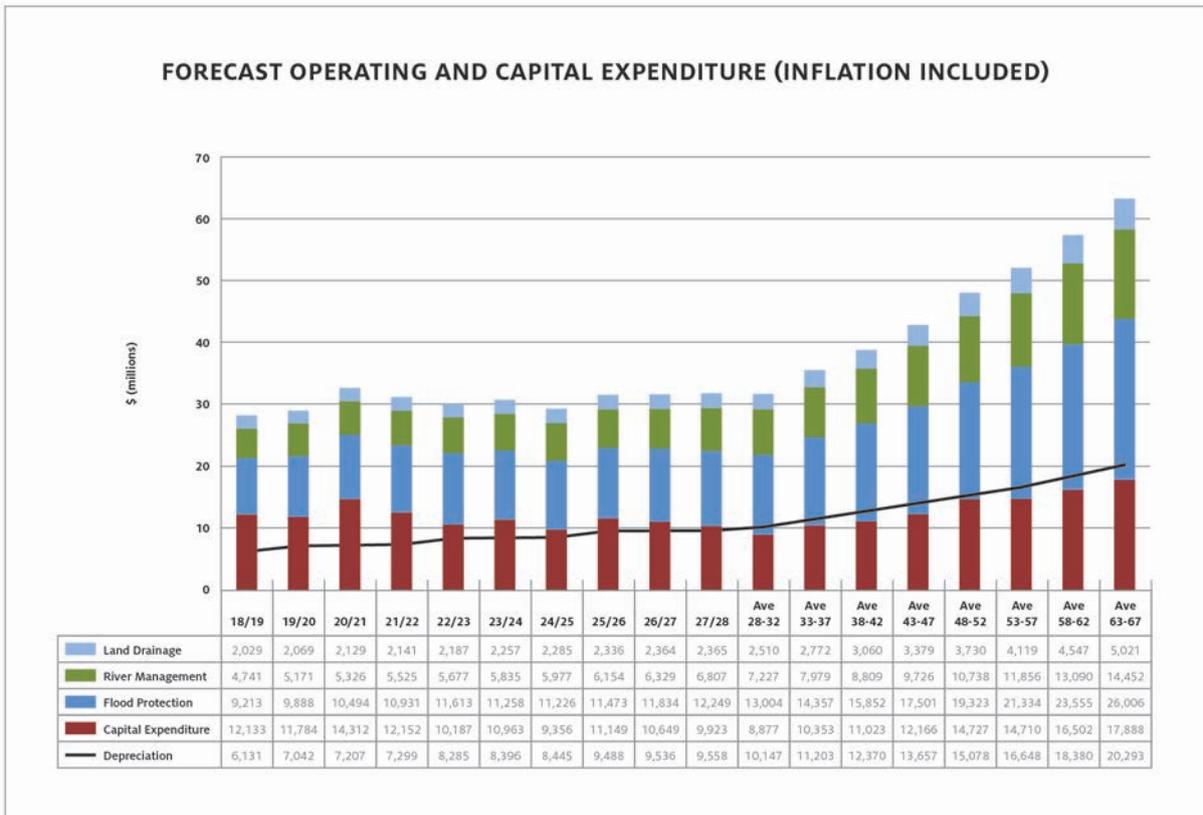
The council's preferred approach for addressing these issues is detailed in the full Infrastructure Strategy (section 8), as well as discussion relating to alternative approaches and actions that were considered. The preferred approach is generally based around continuance of present asset management practice and policy, while looking for opportunities for targeted improvements.

The council's forecast expenditure in relation to the management of flood protection and land drainage assets over the next 50 years is forecast to be \$2,817.9 million, consisting of a mixture of capital and operational expenditure.

With regard to capital investment, overall expenditure is expected to be \$649.7 million over the 50 year period (consisting of \$638.2 million for renewals and \$11.5 million for new assets). A further breakdown of this expenditure across asset types is provided in the following chart.



With regard to operational investment, overall expenditure is expected to be \$2,179.7 million over the same 50 year period and spread across river management, land drainage and flood protection activities. The breakdown of expenditure across these activities is provided in the following chart.



In addition to the spread of expenditure across asset types and activities that is shown above, the council's expected operational and capital expenditure will also be spread across eight geographic zones, with the most substantial expenditure occurring in the Lower Waikato, Waihou and Piako zones (all of which are locations for large flood protection schemes). A breakdown of expenditure across all zones is provided in the following table.

Catchment zone	Capital renewal expenditure	Operational expenditure	Total expenditure
Lake Taupō	\$7.0m	\$61.9m	\$68.9m
Upper Waikato	\$0.4m	\$8.6m	\$9.0m
Waipā	\$0.2m ⁽⁹⁾	\$109.8m	\$110.0m
Central Waikato	\$0.0m	\$111.3m	\$111.3m
Lower Waikato	\$196.4m	\$601.1m	\$797.5m
Waihou-Piako	\$429.0m	\$1,014.2m	\$1,443.2m
Coromandel	\$2.5m	\$76.4m	\$78.9m
West Coast	-	\$21.4m	\$21.4m
Land drainage ⁽¹⁰⁾	\$2.7m	\$175.0m	\$177.7m
TOTAL	\$638.2m	\$2,179.7m	\$2,817.9m

For the first 10 years, confirmed works programmes and project estimates are the dominant influence on the forecast expenditure associated with asset renewals. Beyond the 10 year horizon, the combination of current asset values (determined through asset revaluation⁽¹¹⁾) and remaining asset lives are used to estimate longer term renewal forecasts out to 50 years in the future. There will be an ongoing requirement to make decisions on renewals expenditure on a cyclical basis as part of the processes associated with the council's LTP.

The 50 Year Infrastructure Strategy needs also to be considered in the context of other council documents and processes, including the Financial Strategy, 2018-2028 Long Term Plan, the Asset Management Policy and zone/asset plans.

The full 50 Year Infrastructure Strategy has been adopted as part of the council's 2018-2028 Long Term Plan, and is available from the council on request.



⁹ Central Waikato renewals are \$25,000.

¹⁰ Slight differences are due to rounding.

¹¹ Current asset values updated in December 2016.