

# Te Waihanganga: Infrastructure Quarterly

A quarterly snapshot of issues and trends for New Zealand's infrastructure sector by the New Zealand Infrastructure Commission, Te Waihanganga.



Peter Nunns  
Director of Economics, Te Waihanganga

## Foreword – Peter Nunns

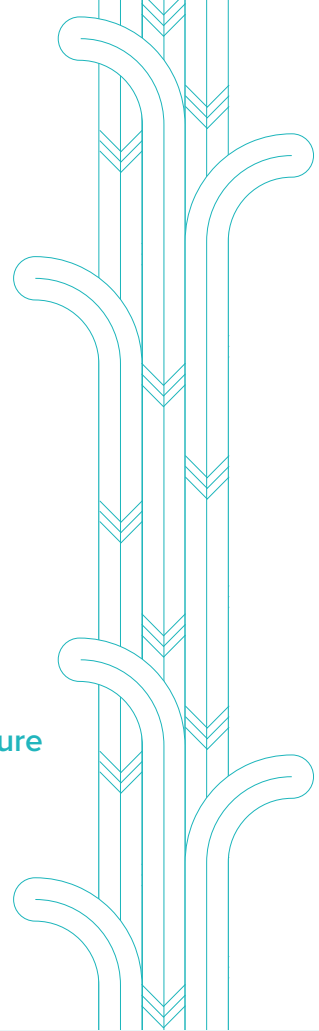
2022 has brought many challenges but infrastructure planning and delivery continues to move forward.

The total value of projects in Te Waihanganga's National Infrastructure Pipeline has risen to some \$72.9 billion. In June we welcomed the Lyttelton Port Company, Orion New Zealand, Tauranga City Council, and Upper Hutt City Council onto the Pipeline. We are now tracking 1011 projects that are worth more than \$10 million each, through the planning and delivery stages.

We spoke to Craig Barton, the Ministry of Education's Group Manager for Infrastructure Procurement, to understand how infrastructure agencies are progressing significant build programmes in a challenging economic environment. The Ministry manages a state school property portfolio of about 2100 schools across the country and is planning and delivering significant new school construction and school renewals.

Going forward, people who are planning infrastructure or contracting to build it should keep a close eye on the macroeconomic environment. So far, 2022 has been dominated by cost inflation, which is squeezing contractor margins and causing some projects to overrun budgets. But there are some signs of a slowdown on the horizon. In the economic insights section, Te Waihanganga economist Hannah Ouellet outlines several possible scenarios for the global economy and what current uncertainties mean for the infrastructure sector.

As always, if you have any feedback on our work or publications, don't hesitate to get in contact.



## What's in the National Infrastructure Pipeline

The National Infrastructure Pipeline (Pipeline) provides a forward view of planned infrastructure projects in New Zealand. The project information is provided directly from government agencies, councils, and private sector entities that are involved in providing infrastructure services to New Zealanders, to support the way we live, work, and play.

### Pipeline snapshot

The value of infrastructure projects in the Pipeline increased from \$69.2 billion to \$72.6 billion in June, an increase of 5% on the March quarter. A good response was received from contributors, with 86% of contributors providing project updates. Some organisations continue to experience challenges collating information from across their organisations. The Pipeline also continued to expand. In June we welcomed the Lyttelton Port Company, Orion New Zealand, Tauranga City Council, and Upper Hutt City Council.

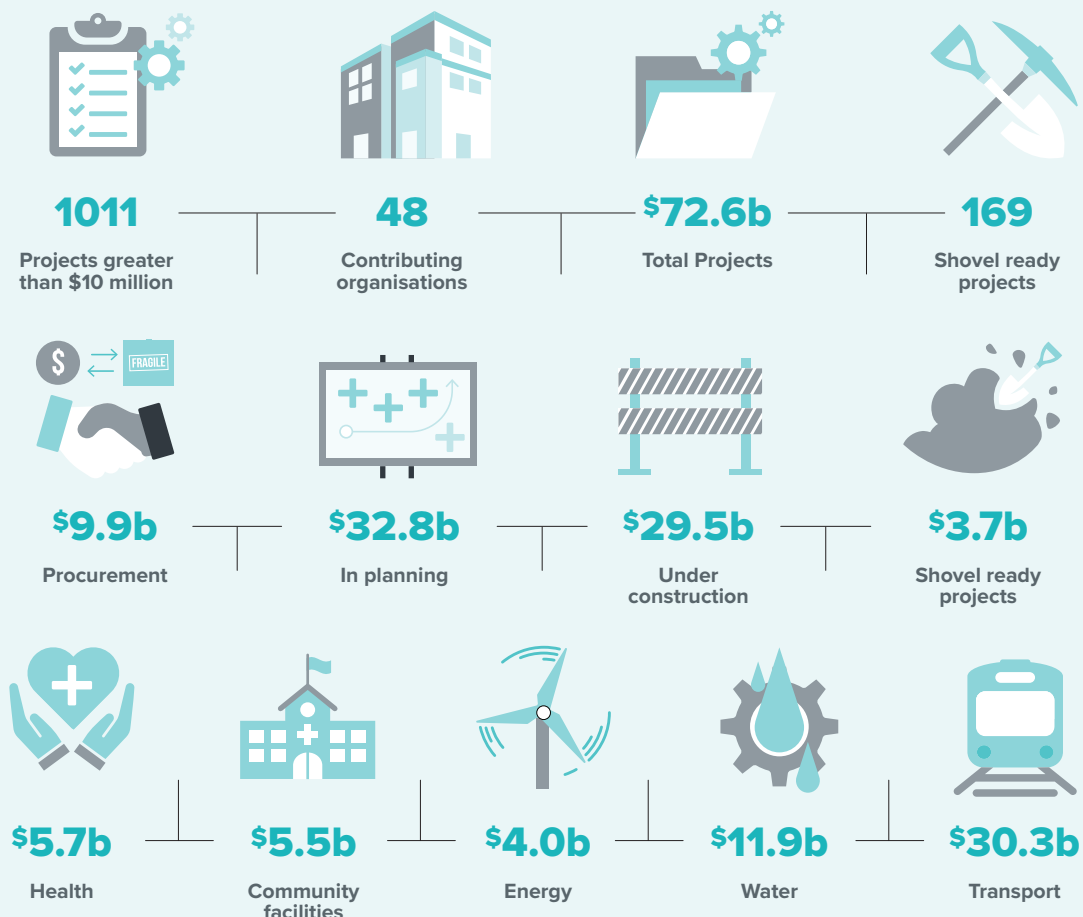
The increase in total value of projects in the Pipeline is from:

- \$2.9 billion from new organisations providing their project data
- \$1.1 billion from new projects from existing contributors
- \$1.4 billion due to an increase in the value of existing projects.

Less adjustments due to:

- \$900 million of projects completed during the quarter
- \$100 million of projects cancelled during the quarter.

An additional \$1.1 billion of projects were removed following consultation with contributors. These projects were removed as the data was refactored and the legacy data cleaned up. This work puts the Pipeline in a strong position to progress forward with a better foundation of quality project information.



## Forecast spend per sector

The forecast annual spend by sector for the projects in the Pipeline has been modelled and is illustrated in Figure 1. The forecast spend on infrastructure projects in 2022 is forecast to reach \$11.7 billion, this is up from \$11.2 billion in March. The forecast spend in 2023 has increased significantly, from \$9 billion in December 2021, to \$10 billion in March 2022 to \$10.9 billion at the end of June. This increase is due to the addition of new projects from new contributors, existing contributors, costs increasing for existing projects, and project completion dates shifting.

Figure 1 illustrates the significant spend across our social sector in the near term, accounting for 48% of total forecast spend in 2022. These social infrastructure projects include 33% on social housing, 22% on education, 22% on community facilities, and 18% on health infrastructure. Transport projects account for 34% of forecast spend in 2022. Annual spend on water projects is forecast to continue increasing, up approximately 90% from just over \$1.1 billion in 2022 to almost \$2.1 billion by 2024.

Figure 1:

### Social sector dominates projected infrastructure spend in the near term

Forecast project spend by year

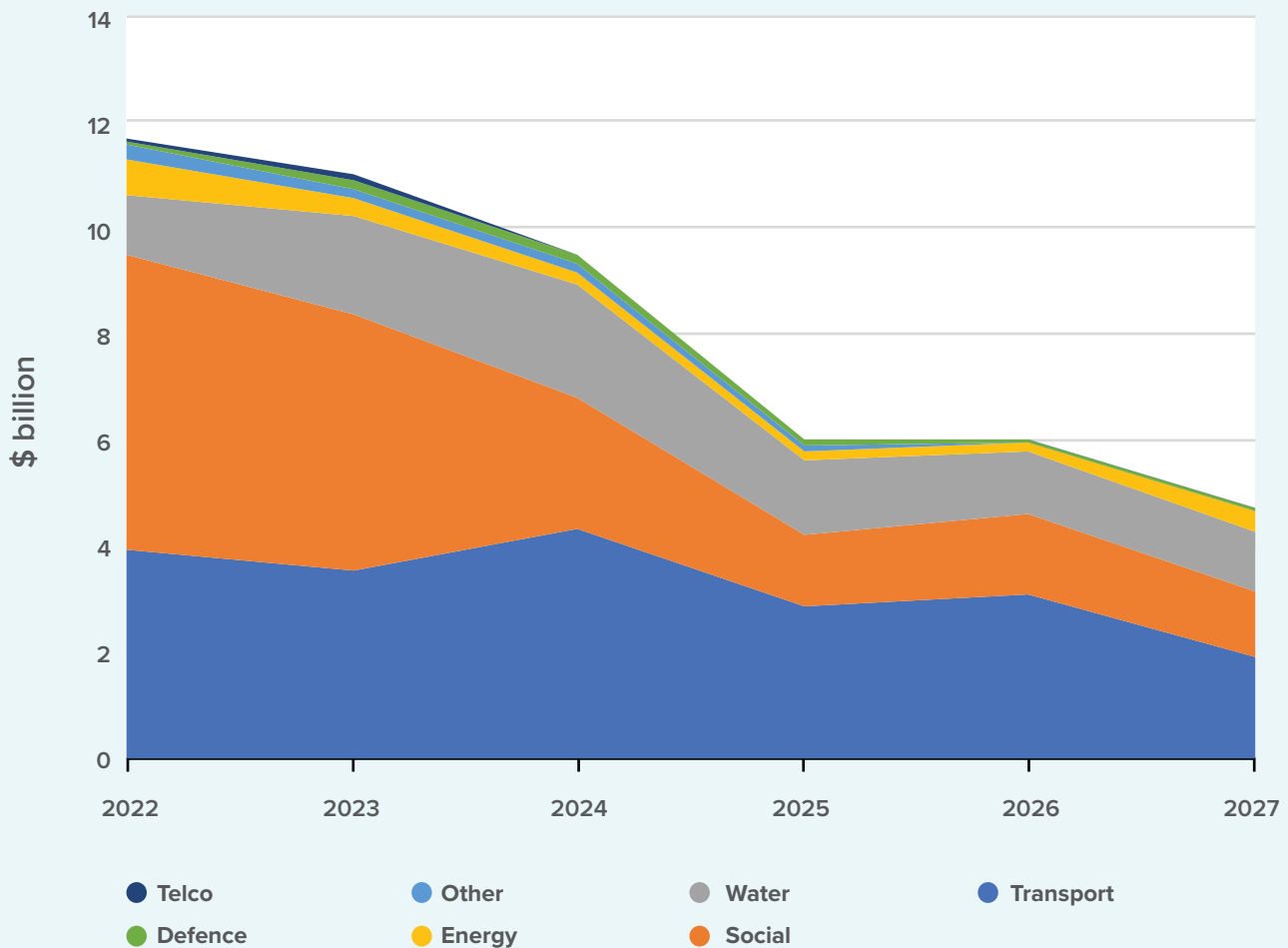


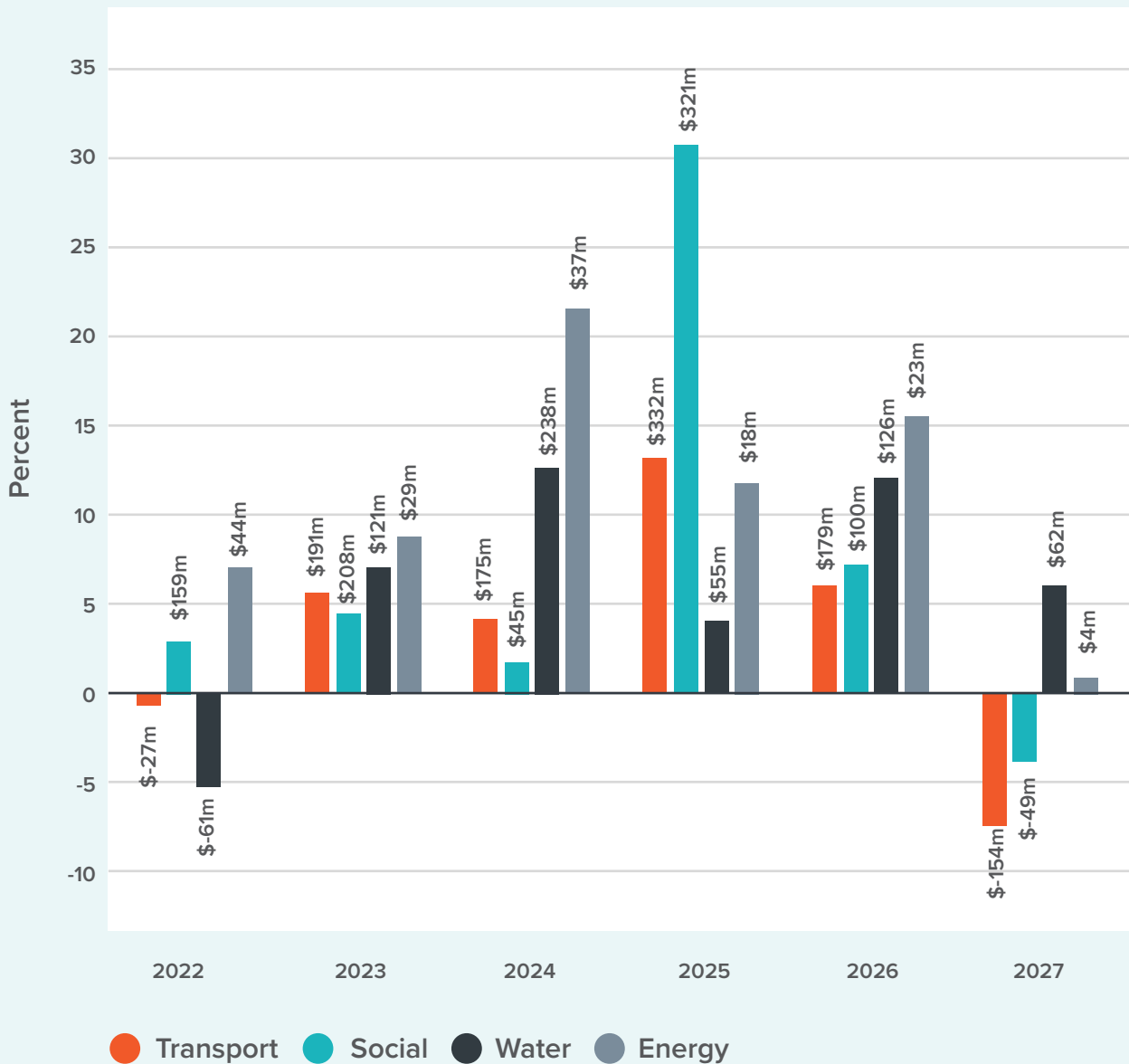
Figure 2 highlights the changes in spend across our main infrastructure sector compared to the March quarter. The main drivers behind the significant increases are the due to change to

the Te Kaha Canterbury Multi Use Arena project (social sector increase in 2025) and the addition of energy projects from Orion New Zealand (energy sector increase in 2024).

Figure 2:

## Forecast project spend has increased across majority of sectors and years

Change in forecast project spend from March 2022 to June 2022



## Towards a complete Pipeline of infrastructure projects

Te Waihanga has been producing the Pipeline since Q2 2020, with regular updates since Q4 2020. The Pipeline has been developed to support the statutory functions required under the New Zealand Infrastructure Commission/ Te Waihanga Act 2019. By December 2021, 41 organisations had contributed to the Pipeline providing project information on almost 2600 projects and covering infrastructure assets for 160 organisations. This foundational group of government agencies and local bodies have provided an excellent baseline to continue to build from.

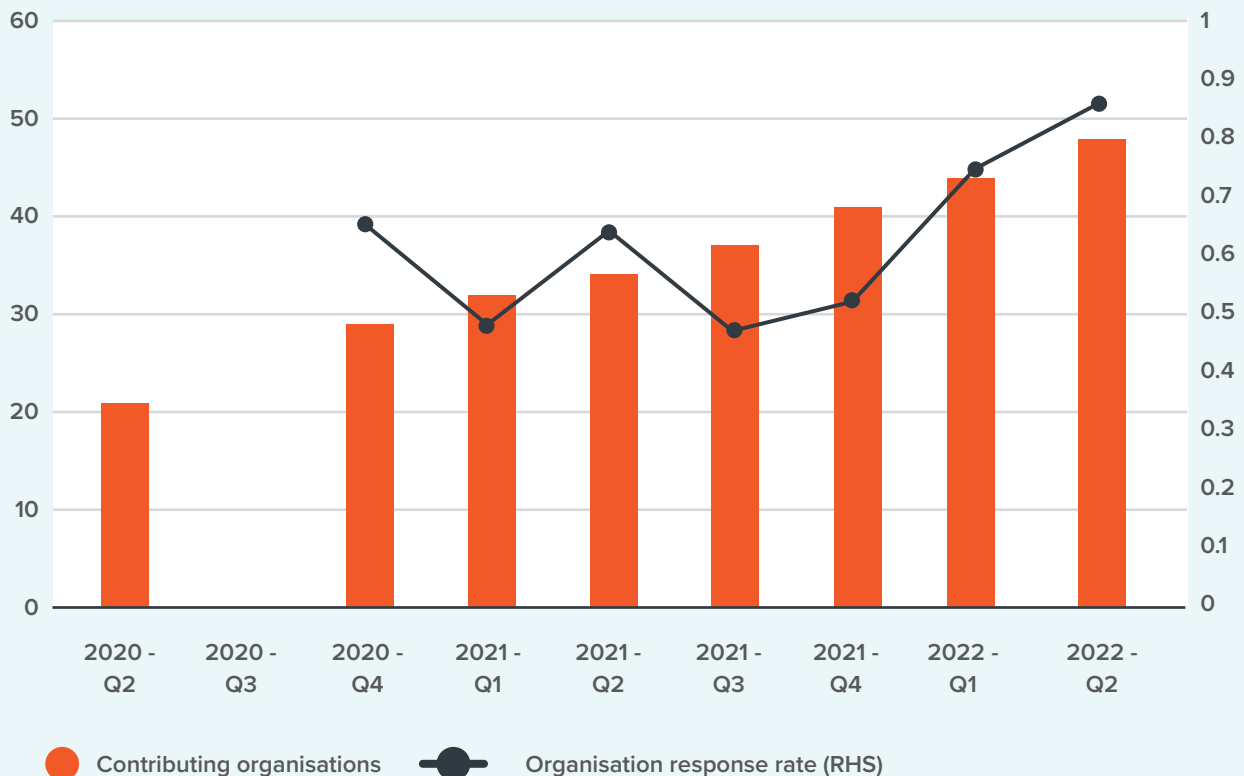
Over the past two quarters we have worked together with organisations to include their project data. This collaboration has helped to increase completeness and value the Pipeline provides the sector. There were 48 organisations contributing in the June update.

Each quarter new contributors will be invited to submit project data to continue to increase the breadth and depth of infrastructure projects in the Pipeline. The evolution and expansion of the Pipeline will provide a more complete and accurate picture of infrastructure activity in New Zealand. The insights that this more complete information will provide will help to improve the coordination of New Zealand's infrastructure landscape across our regions, and sectors, and within our construction markets.

Organisations do not need to be invited to submit their data; if your organisation has project information that is not included in the Pipeline, please contact the Pipeline team on [pipeline@tewaihanga.govt.nz](mailto:pipeline@tewaihanga.govt.nz).

Figure 3:

### Increase in Pipeline contributors and response rates, June 2020 – June 2022



## Project Spotlight: Ministry of Education

Interview with Craig Barton, Group Manager – Infrastructure Procurement, Ministry of Education

**Can you give a brief scope of the infrastructure portfolio your group is responsible for? How do you see this changing over the next coming years?**

The Ministry of Education is responsible for the management of the state school property portfolio of around 2100 schools across the country. With such a big property portfolio, even the slightest change to reduce our carbon footprint can make a significant impact in support of the global movement against climate change.

**We're facing an evolving environment which may have implications for infrastructure demand, planning, and delivery. Are you doing anything differently to build flexibility into your programmes?**

In view of the New Zealand Government-wide effort aimed at leveraging procurement activities to achieve wider public value, the Ministry of Education has been focusing on ensuring that its infrastructure procurement activities are exploring ways to support wider social, economic, cultural and environmental outcomes that go beyond the immediate purchase of goods and services.

**Schools and kura play such a significant role for the community they are in - how does infrastructure procurement planning work with this? Can you give us some insight and examples into this?**

The recently completed two-storey learning space at Manurewa East School in Auckland is a testament of the unique opportunities infrastructure procurement activities offer to the wider community.

About 20% of the total contract value benefitted local South Auckland businesses, helping them thrive following the impacts of the COVID-19 pandemic.

Through the support of Amotai – Aotearoa New Zealand's supplier diversity intermediary – Māori and Pasifika-owned businesses were also given a fair opportunity to work on this project.

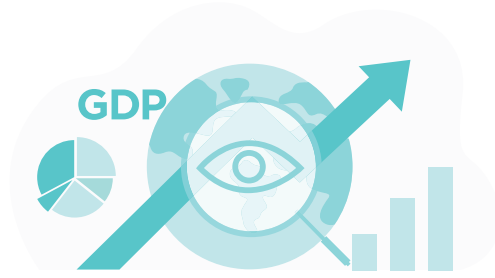
To minimise unnecessary construction waste, an on-site recycling manager was enlisted throughout the duration of the project. Their report shows an overall 75% waste diversion rate. Among the key contributors to the significant waste reduction is an effort to salvage and repurpose items that can still be reused or recycled.



Manurewa East School officially opening their new building with a dawn blessing ceremony. (Source: MoE)

## Economic insights

By Hannah Ouellet  
Economist,  
Te Waihanga



### Grappling with uncertainty: macroeconomic scenarios and infrastructure delivery

Cost inflation has been the story of the last year. Consumer price inflation is at its highest level in decades in New Zealand and many other countries (Figure 4). Rapidly rising construction costs are creating challenges for infrastructure delivery, as we have highlighted in recent editions of the Infrastructure Quarterly.

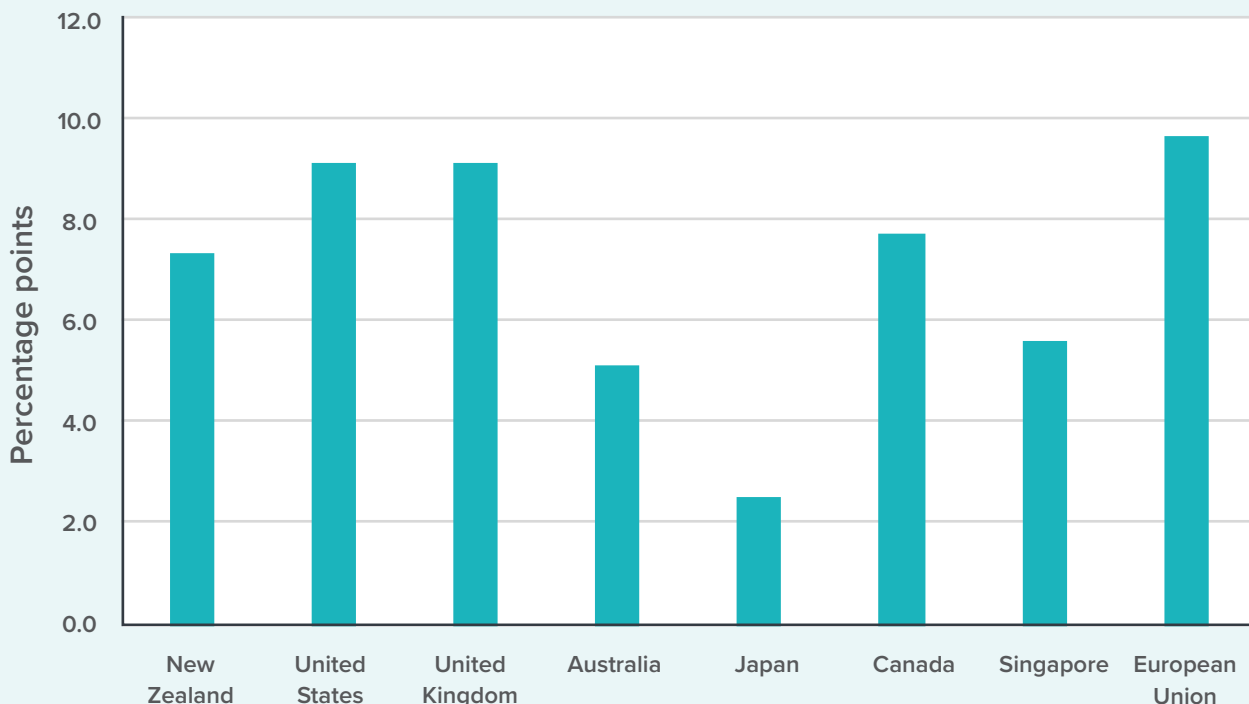
Higher inflation is currently expected to persist, at least in the near term. But there are other potential scenarios for New Zealand and the world economy. Central banks are now acting to

contain inflation by rapidly raising interest rates. This should cool things off – but if interest rates overshoot, it could tip the global economy over into a recession.

We live in uncertain times, macroeconomically speaking. People seeking to procure or build infrastructure projects need to plan for the different scenarios that could play out over the next year.

Figure 4:

#### Latest annual inflation in selected countries (year ended March/ May/ June 2022, depending on latest data)



Source: Trading economics (2022)

### Inflation is a supply and demand story

Inflation pressures are slightly different in different places. The United Kingdom and Europe are more exposed to energy price increases, while inflation is broader-based in the United States due to its large fiscal stimulus packages in 2020 and 2021. In New Zealand, housing costs and fuel prices are the main factors, accounting for half of recent consumer price inflation.

However, all countries are experiencing imbalances between supply and demand. Simply put, too much money is chasing too few things to buy, and this is pushing up prices.

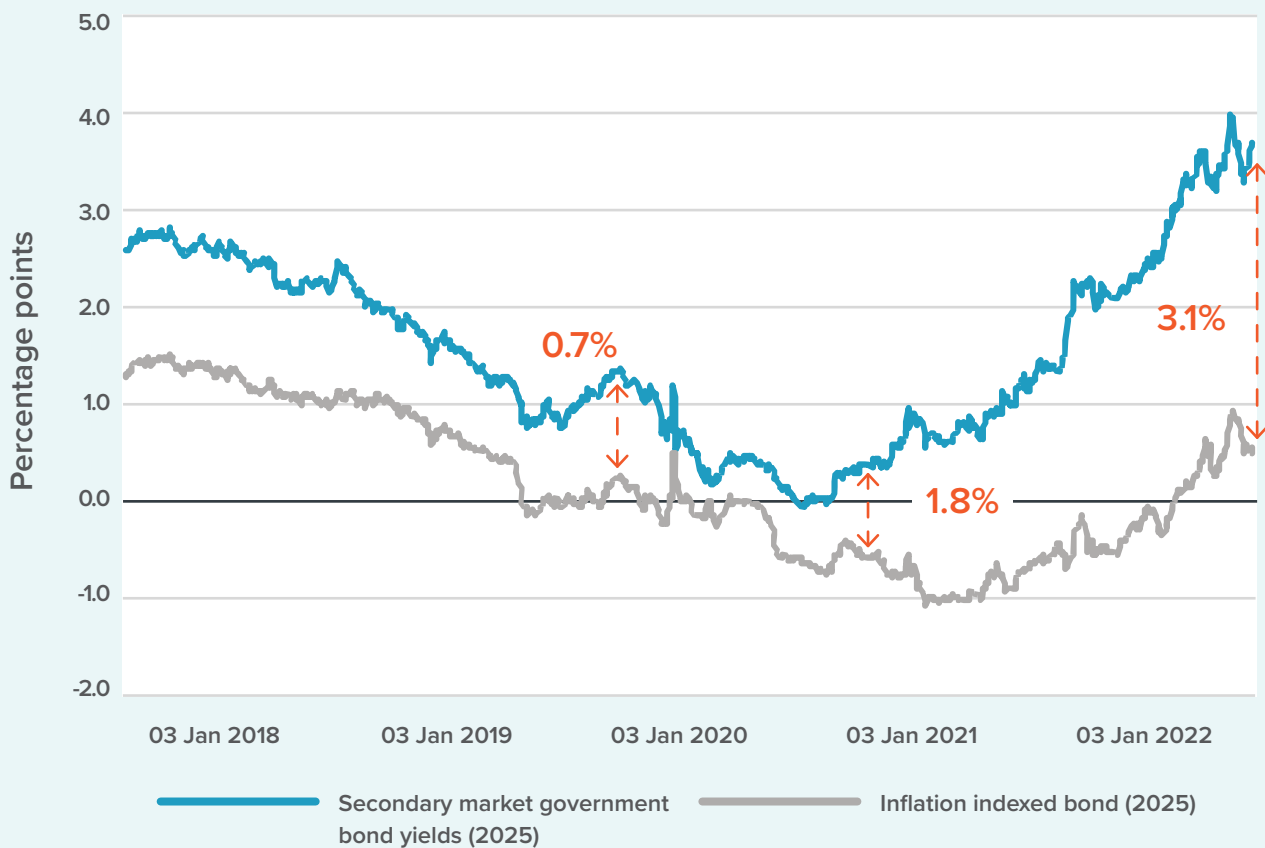
Disruptions to global supply chains don't help. The world is experiencing a perfect storm of supply disruptions in both production and distribution due

to Russia's invasion of Ukraine and the ongoing effects of Covid-19 on Chinese manufacturing and shipping centres. Prices for commodities like crude oil have been strongly affected – from June 2021 to June 2022 crude oil prices have risen 64%.

Financial markets expect inflation to persist, at least in the near term. The spread between inflation-indexed government bond yields and non-inflation indexed bond yields has widened (Figure 5). This gap shows the real-time market expectation of inflation. Average annual inflation from 2022 to 2025 is expected to be around 3.1%, slightly above the Reserve Bank's target band of 1% to 3%. But a year ago average annual inflation from 2021 to 2025 was expected to be 1.8%, and in 2020 it was 0.7%.

Figure 5:

### Inflation indexed and non-inflation indexed New Zealand Government bonds (2025 maturity)



Source: Reserve Bank of New Zealand (2022), Wholesale interest rates (B2)



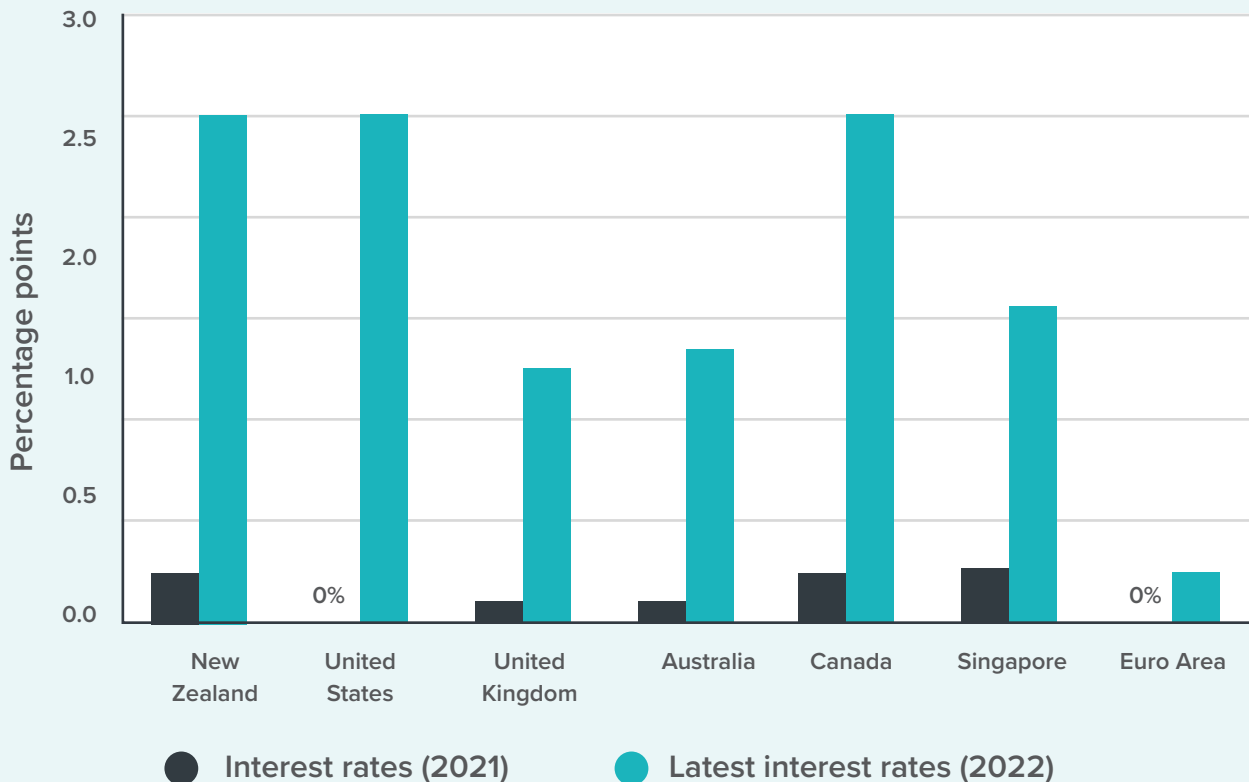
### Reining in inflation

Central banks around the world are moving to contain inflation by raising interest rates, which reduces demand pressures on the economy by raising the cost to borrow money. The Reserve Bank of New Zealand has lifted its benchmark interest rate from 0.25% to 2.5% over the last year, a similar increase as seen in other high-income countries.<sup>1</sup>

Central banks, including our Reserve Bank, have signalled further increases to interest rates to rein in inflation. While there is a strong need for action to contain the risk of ongoing inflation, there are other risks to consider. Globally, the risk of a recession – in which there is too little demand for goods and services, leading to excessive unemployment – is also coming into play.

Figure 6:

### Interest rates by central bank jurisdiction (July/ June 2022, depending on latest data)



Source: Trading Economics (2022)

<sup>1</sup> Reserve Bank of New Zealand (2022), 90-day Bank Bill Rate (Monthly Average) & Official Cash Rate (OCR) (End of Month).

### Downside risks for the global economy

Global economic indicators are now sending some mixed signals.

While inflation statistics suggest that demand is still outrunning supply, there are some emerging signs of a global economic slowdown. For instance, China has experienced a 11.1% drop in retail sales over the last year, United States GDP growth turned negative in the first two quarters of 2022, and the European Union recently cut its 2022 growth forecasts from 4% to 2.7%.<sup>2,3,4</sup>

If economic activity slows down too much, the world economy could flip into recession. In that scenario, inflation may not be such a big problem – but rising unemployment and insolvency risk for construction firms may bite instead.

New Zealand is especially exposed to recession risk in the residential construction sector. There are signs that demand for residential building is pulling back as rising interest rates are reducing borrowing capacity.<sup>5</sup> If this continues, it will place the broader construction sector under pressure, and shift the focus from managing cost increases and capacity pressures to managing workload and maintaining financial sustainability.

### Delivering infrastructure in uncertain times

Infrastructure planning and delivery is challenging in the current environment. We know that we have a lot of work ahead to address our infrastructure challenges. But how fast can we push ahead with that in the current environment?

If inflation continues to run hot and supply chains remain constrained, it will be challenging to deliver infrastructure rapidly without stretching our limited capacity to build. Careful planning and procurement will be needed to get things done on time and to budget.

However, if the global economy tips over into recession, falling demand for non-infrastructure construction may ease our capacity pressures. This will create an opportunity to deliver more infrastructure – and a risk that we will lose construction sector capacity if we can't respond.

We can't be certain how things will play out. In an uncertain environment, there's a lot of value in keeping your options open. If you're planning infrastructure or contracting to build it, you should be 'stress testing' your business plans against a few possible macroeconomic scenarios.

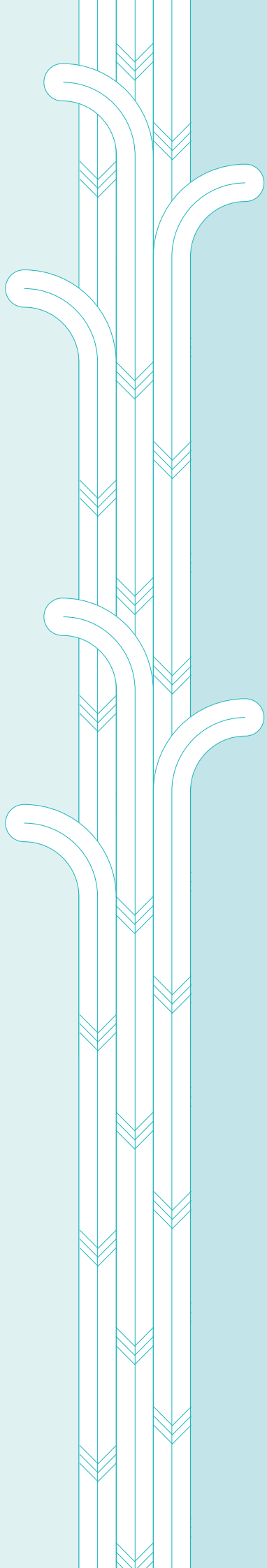
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<sup>2</sup> National Bureau of Statistics of China (2022), Retail Sales

<sup>3</sup> Bureau of Economic Analysis (2022), Gross Domestic Product (Third Estimate).

<sup>4</sup> European Commission (2022), Spring 2022 Economic Forecast: Russian invasion tests EU economic resilience.

<sup>5</sup> Interest.co.nz (2022), Builders report 80% to 90% slump in new home inquiries and fear another 2009/2010-style bust.



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