



# **ATTACHMENTS MINUTES**

**Strategy, Finance and Risk Committee  
meeting**

**Monday, 26 June 2023**



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# Cost escalation

→ For Tauranga City Council's  
Capital Works Programme

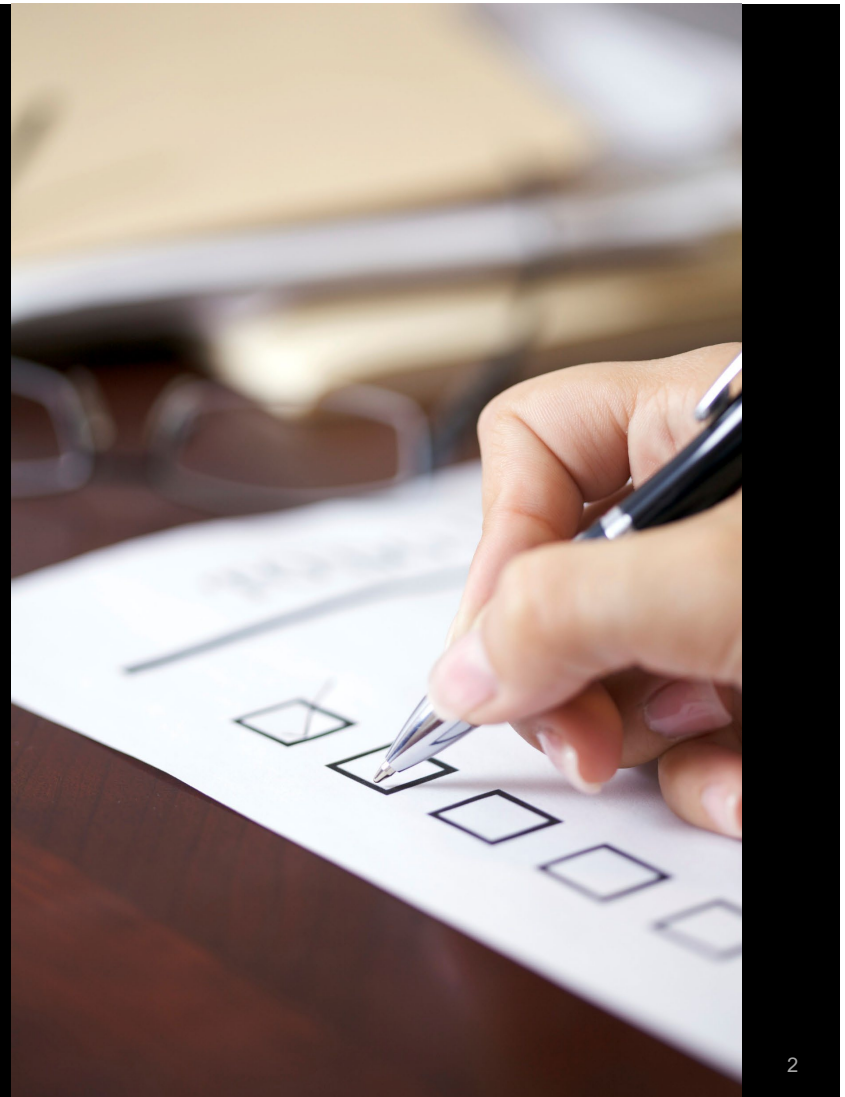
March 2023





# Agenda

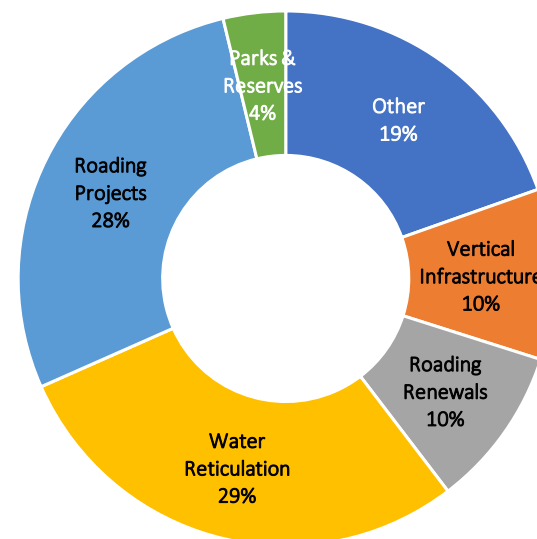
- Why we did this work
- What we did
- Headline results
- Supply chain and price risk management
- What happens next



# Why we did this work

- Existing generalised forecasts and projections have traditionally been available through LGNZ and SOLGM.
- Waka Kotahi produces indices for some categories, but they are backward looking.
- These indices do not take into account the specific mix of capital works programmes at different Councils.
- Indices were needed that account for at least 80% of the capital works programme so it is highly representative of total capital spending.
- TCC wanted forecasts / projections for a three-year and LTP time horizon for the anticipated capital works programme.

Major capex categories, TCC



# What we did - objectives

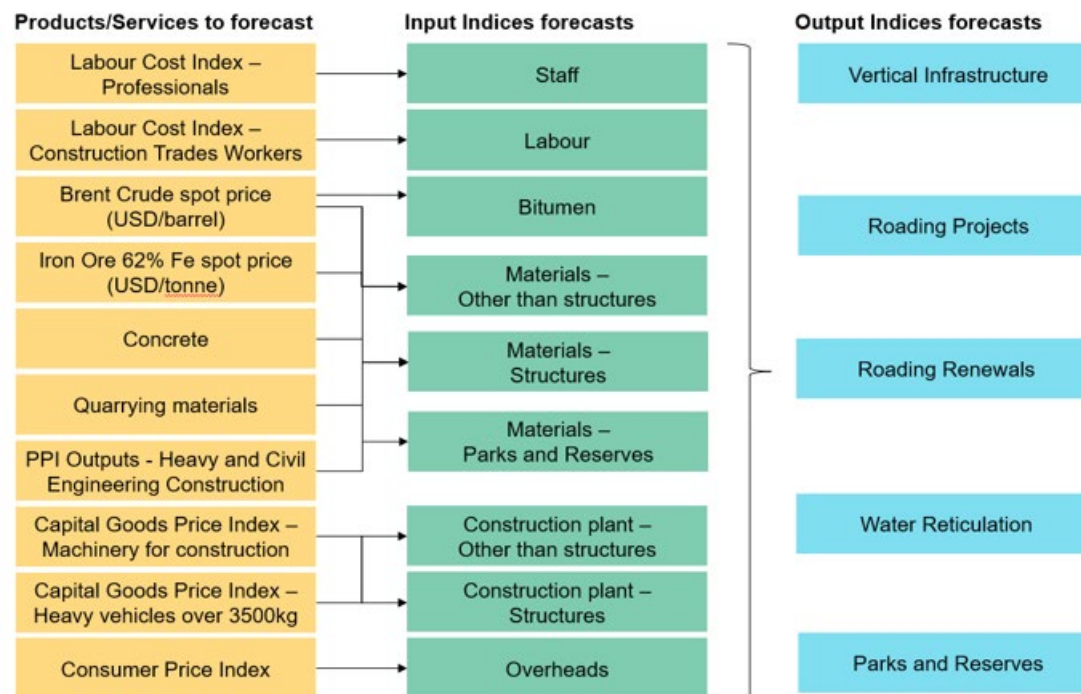
1. Develop a set of price **Output Indices** that present changes in cost escalation for major capex cost categories for TCC.
2. Develop a way to **forecast/project changes** in these Indices over the next three years, and projections for the longer LTP timeframe.
3. Comment on any mechanisms that might be used to **better manage price and supply chain risk** to avoid project delays and further price escalations.





# What we did - process

1. Identify the major categories of planned capital spend for TCC = Output Indices.
2. Evaluate existing indices work done by Waka Kotahi, which is valuable for backward-looking / historical indexation.
3. Identify appropriate proxies for major materials categories – bitumen and steel.
4. Identify the weightings for different inputs into each index. i.e.
  - a) how much plant, labour, overheads and materials go into each Output Index
  - b) How much of each type of material go into each materials index i.e. bitumen, steel, aggregates, concrete products etc.

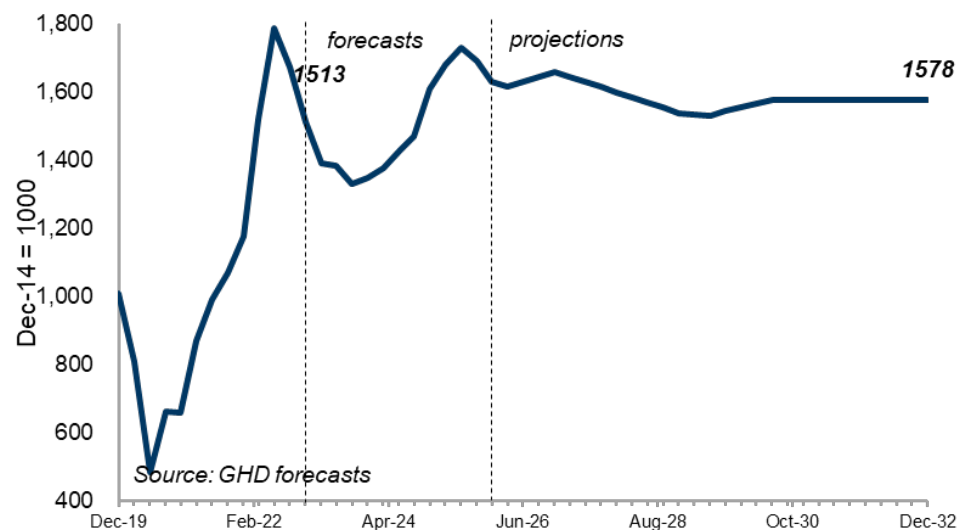




## What we did - process

5. Scour forecasts from Treasury, RBNZ, major trading banks and incorporate views into the outlook for commodity prices, CPI etc.
6. Speak to contractors to understand what they see in terms of cost pressure areas.
7. Develop forecasts over the next 3-4 years, then projections beyond that.
8. Smooth forecasts for budgeting purposes.

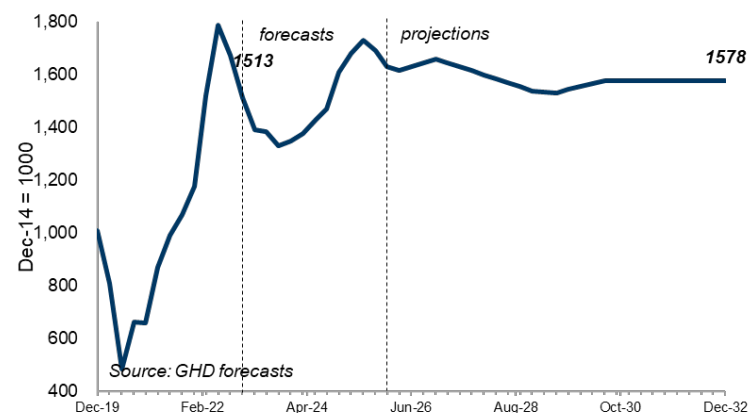
Bitumen / Oil / Plastics



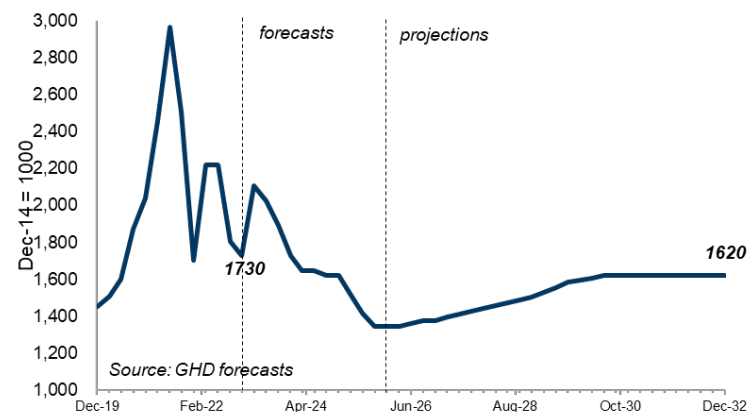
# Headlines / outlook

- **Cost escalation** continues to be a major challenge for capital works programmes but in some cases, index prices are beginning to move in opposite directions.
- **Materials prices:**
  - Bitumen prices have fallen and are expected to fall further as global economic weakness takes hold, before recovering.
  - Steel prices weaker but underpinned by infrastructure demand.
  - Other materials mostly produced in NZ.

Bitumen / Oil / Plastics



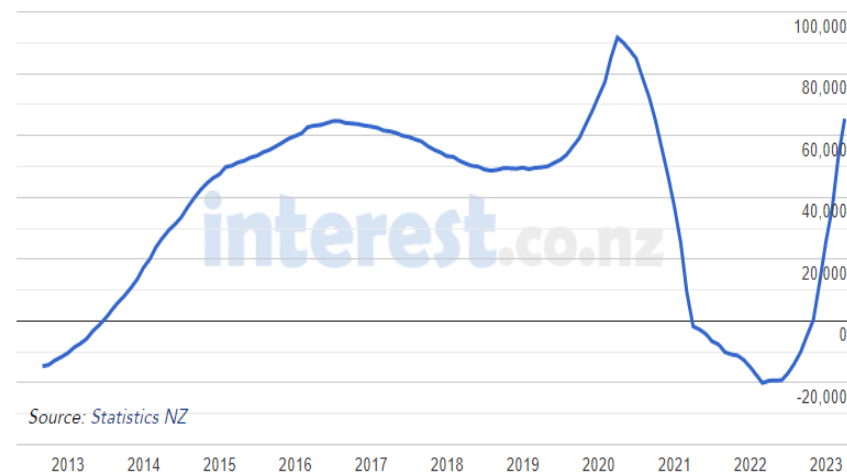
Steel



## Headlines / outlook

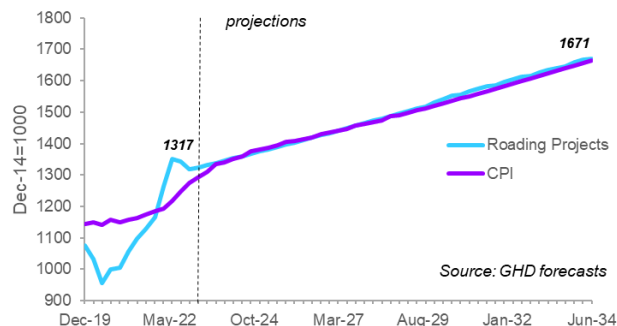
- The **New Zealand dollar** remains weaker. The forecasts assume a weak but slowly strengthening New Zealand dollar.
- **Immigration**. net annual migration turnaround of over 80,000 in less than one year. Still, **labour cost rises** are expected to remain above all-industry labour cost rises. Australia continues to be a major destination for New Zealand workers across many fields.
- The recent **cyclone's widespread damage** on the East Coast will affect pricing there and, at the margins, will affect pricing across New Zealand.

Net migration

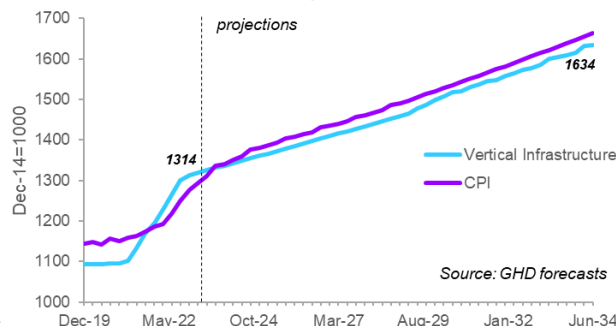


# Cost escalation of major capex categories\*

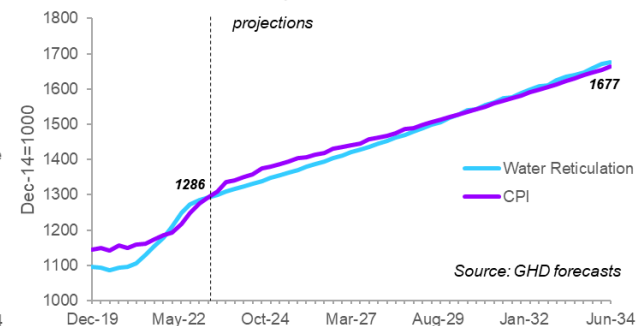
Roading Projects Output



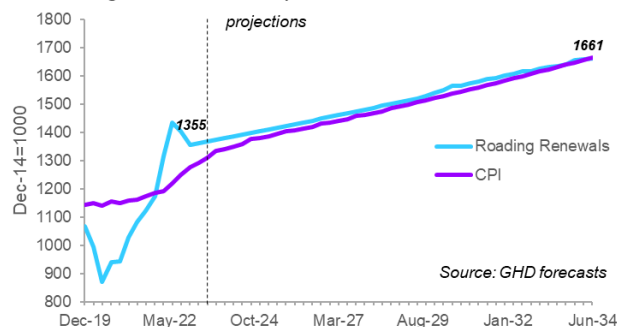
Vertical Infrastructure Output Index



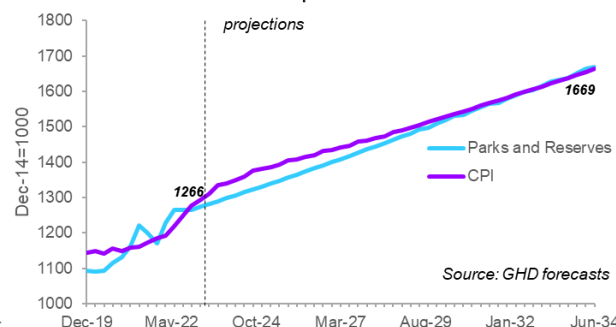
Water Reticulation Output Index



Roading Renewals Output

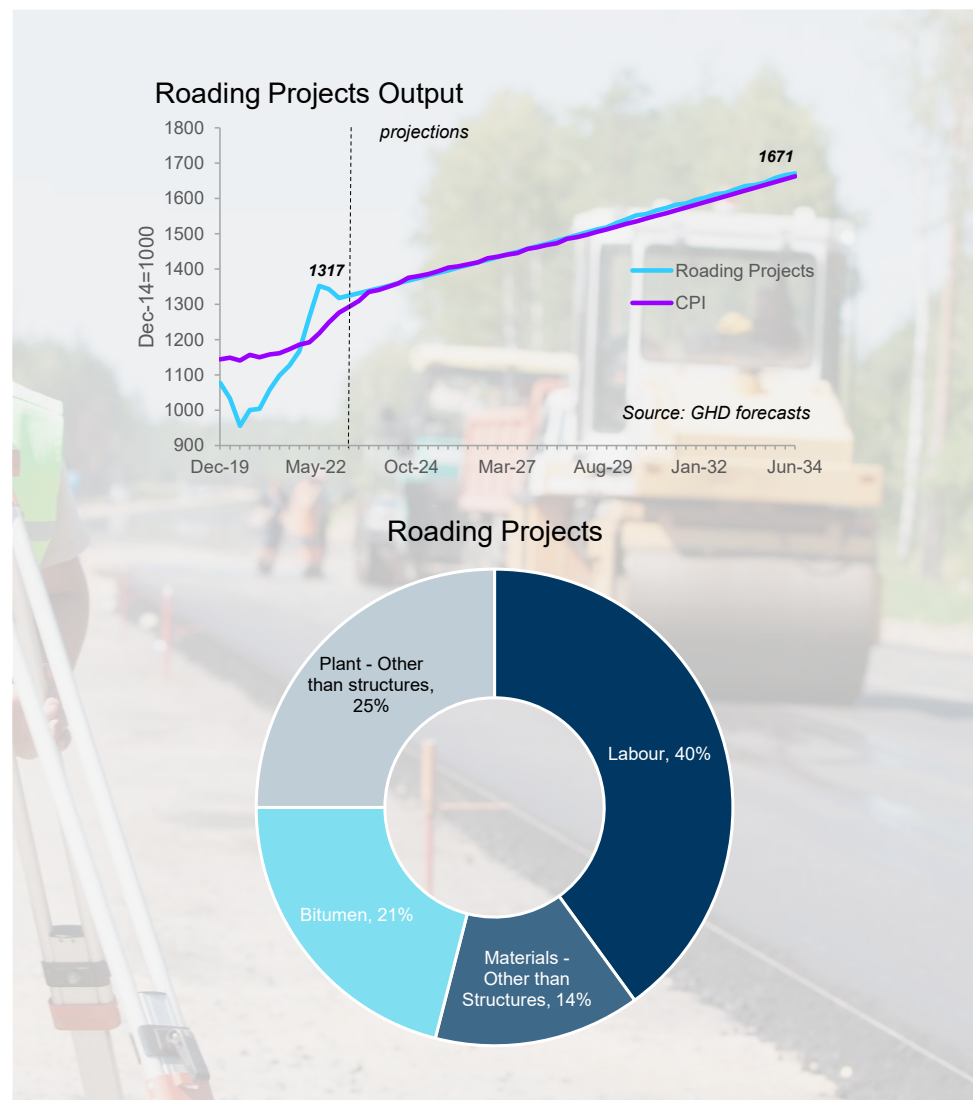


Parks and Reserves Output Index



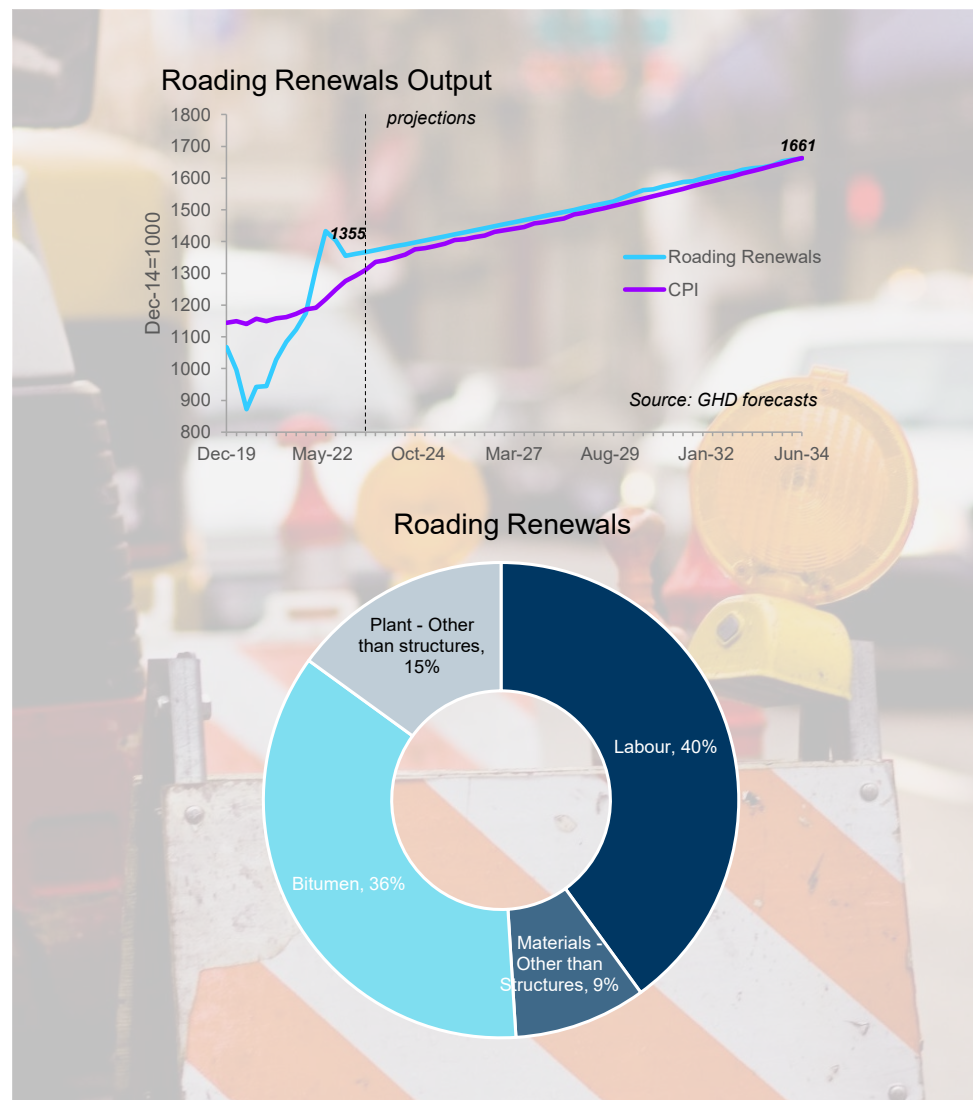
\* Note: TCC has requested a view of growth in costs for capital works projects that aligns with the LTP. The first three to four years covered in this report constitute forecasts, while the years thereafter constitute a projection based on long-term patterns.

\* Smoothed indices



## Roothing Projects

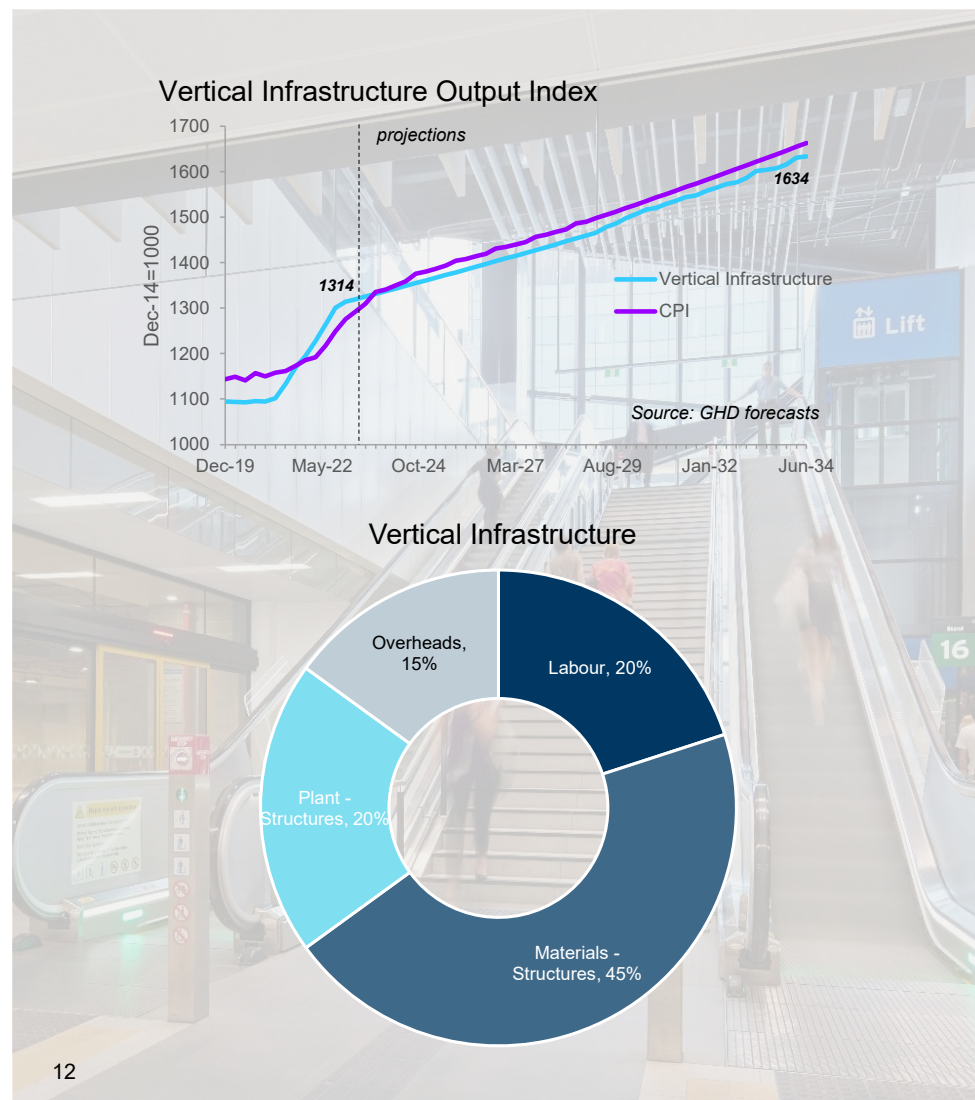
- Bitumen, a major component of road construction work, is subject to huge cost fluctuations at present.
- With the global outlook looking decidedly weak through 2023 and into the first half of 2024, the impact will be to moderate rises in road construction prices.
- From late 2024, as the world economy recovers, and with it bitumen prices, the cost of road construction is expected to rise again.
- Labour, a large share of road construction costs, is experiencing more consistent and enduring cost pressures. Labour cost increases for construction workers are expected to stay above economy-wide labour cost increases.



## Roothing Renewals

- Bitumen is an even more important part of road renewals. Consequently, the state of the world economy is expected to have a significant impact on this Index.
- Oil prices have fallen and are expected to fall further, **before recovering in late 2024** and bringing with it an increase in the cost of road renewals.
- Labour, a large share of road renewals costs, is experiencing more consistent and enduring cost pressures. Labour cost increases for construction workers are expected to stay above economy-wide labour cost increases.

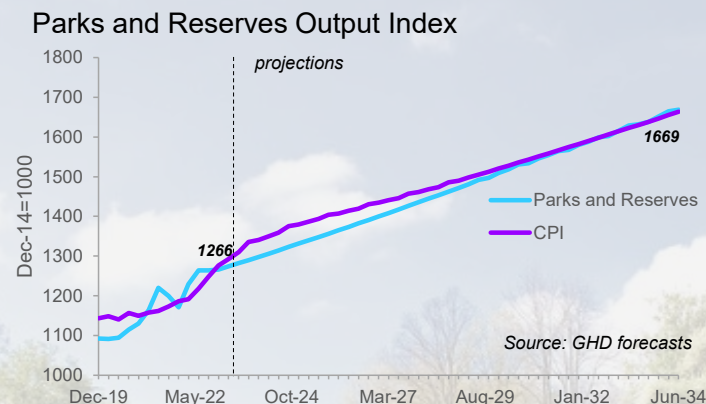




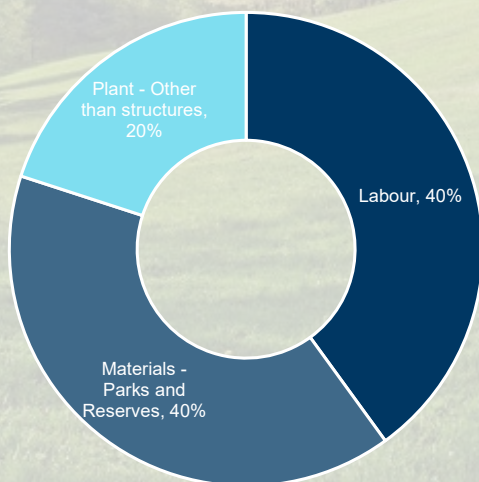
## Vertical Infrastructure

- Vertical construction is highly exposed to the vagaries of **steel prices**, which explains a fair portion of the sharp rise of the Output Index through 2021. As with oil prices, steel prices are highly volatile.
- Iron ore prices, which underlie steel prices, are down from their peaks in 2021, and fell even further to December 2022, but are up again quite strongly in the March 2023 quarter.
- Our forecasts have steel prices falling less sharply than many commentators over the next few quarters because we think **government purchasers will remain very active** in the market even as residential activity globally falls. Part of the higher steel price is also explained by a weak New Zealand dollar.
- We note that TCC is considering a shift toward more use of structural timber in new construction. Over time it may be necessary to review this Index to account for a change in materials composition.



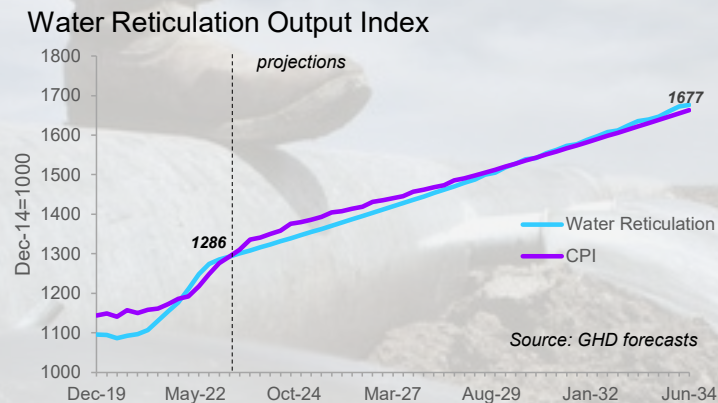


Parks and Reserves

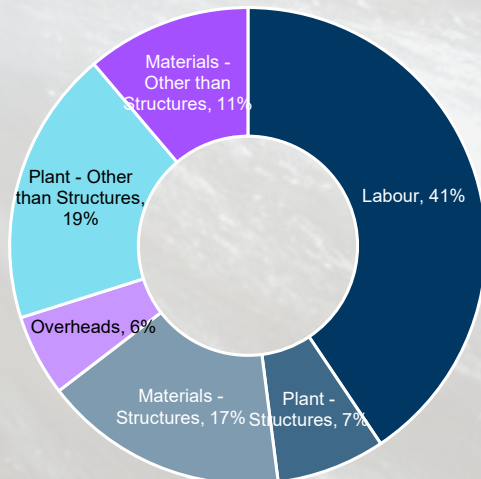


## Parks and Reserves

- The Parks and Reserves Output Index is characterised by a wider variety of input materials than roading, water reticulation, or vertical construction.
- Further, most of the inputs required are purchased locally. This provides somewhat greater certainty over pricing than for volatile imports like bitumen and steel, but also mean as commodity prices moderate, the same may not automatically occur for Parks and Reserves.
- Prices rose between 2021 and 2022 due to significant increases in oil, steel, concrete and quarry materials prices.
- Prices are expected to continue to grow relatively strongly over the three years to December 2025 and along through the projected horizon to December 2032.



**Water Reticulation**



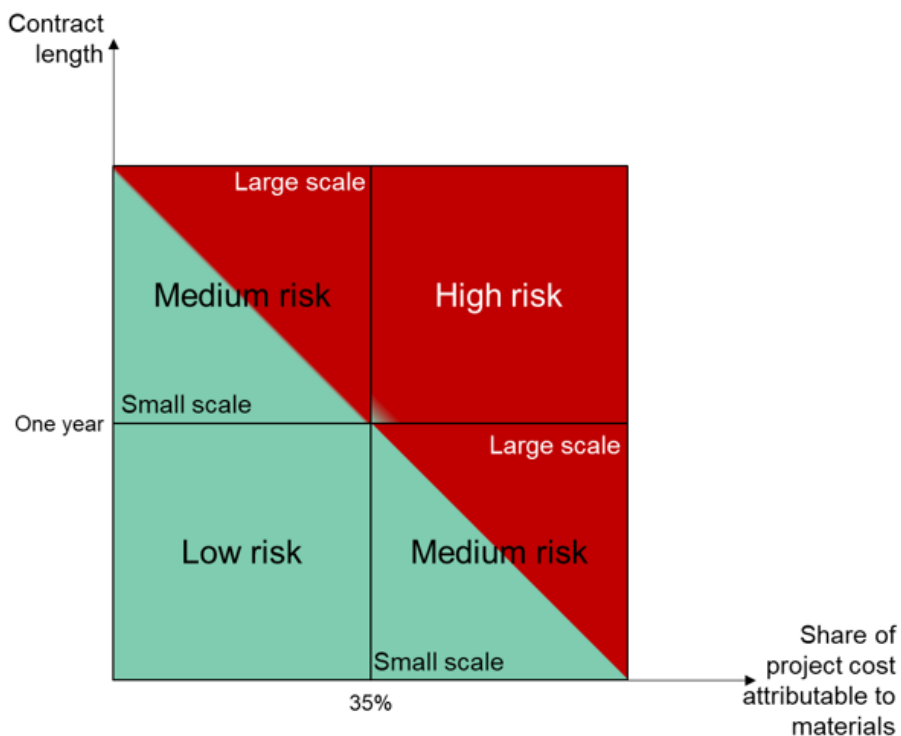
## Water Reticulation

- Water Reticulation is comprised of a mix of above-ground (“Structures”) and below-ground (“Other than Structures”) three waters infrastructure. The index is a composite of the two.
- Oil price effects are most evident in the Materials for below-ground work which is only 11% of this index. Despite low oil exposure, the slower rate of growth over the next three years is in large part due to moderating oil prices, combined with a more modest steel price.
- The magnitude of these fluctuations is hedged by the high dependence of this index on Labour and Plant which, when combined with overheads, total 72% of Water Reticulation.
- Increases out to 2032 are expected to be relatively modest for this Index compared to some others.

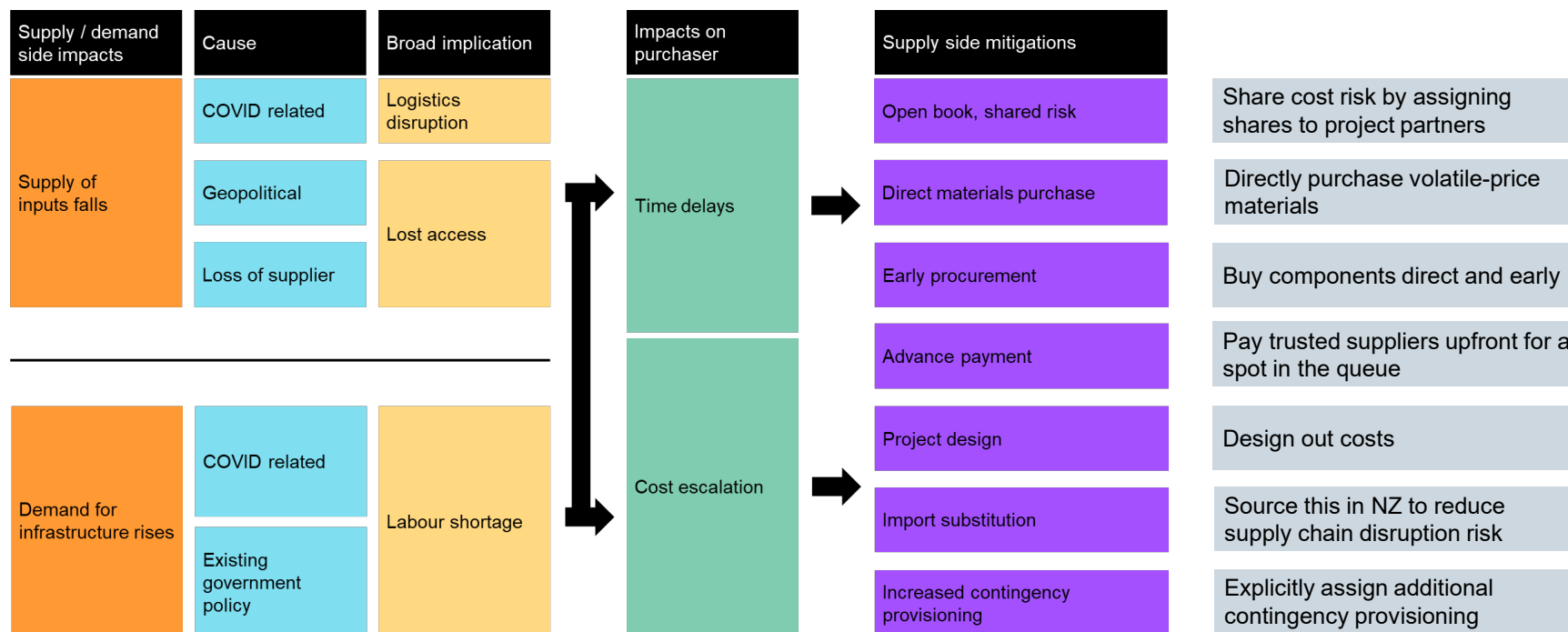
# Supply chain and pricing risk management

Risk is generally linked to:

1. Project length
2. Project scale
3. Exposure to highly price-volatile (usually materials) components



# Supply chain and pricing risk management



# What happens next

1. Forecasts are reviewed every six months.
2. Updated slide deck and commentary provided to TCC
3. Can adjust Indices if there are major switches to constituent parts e.g. from steel to timber structural elements





# \* Questions

→ [ghd.com/advisory](https://ghd.com/advisory)