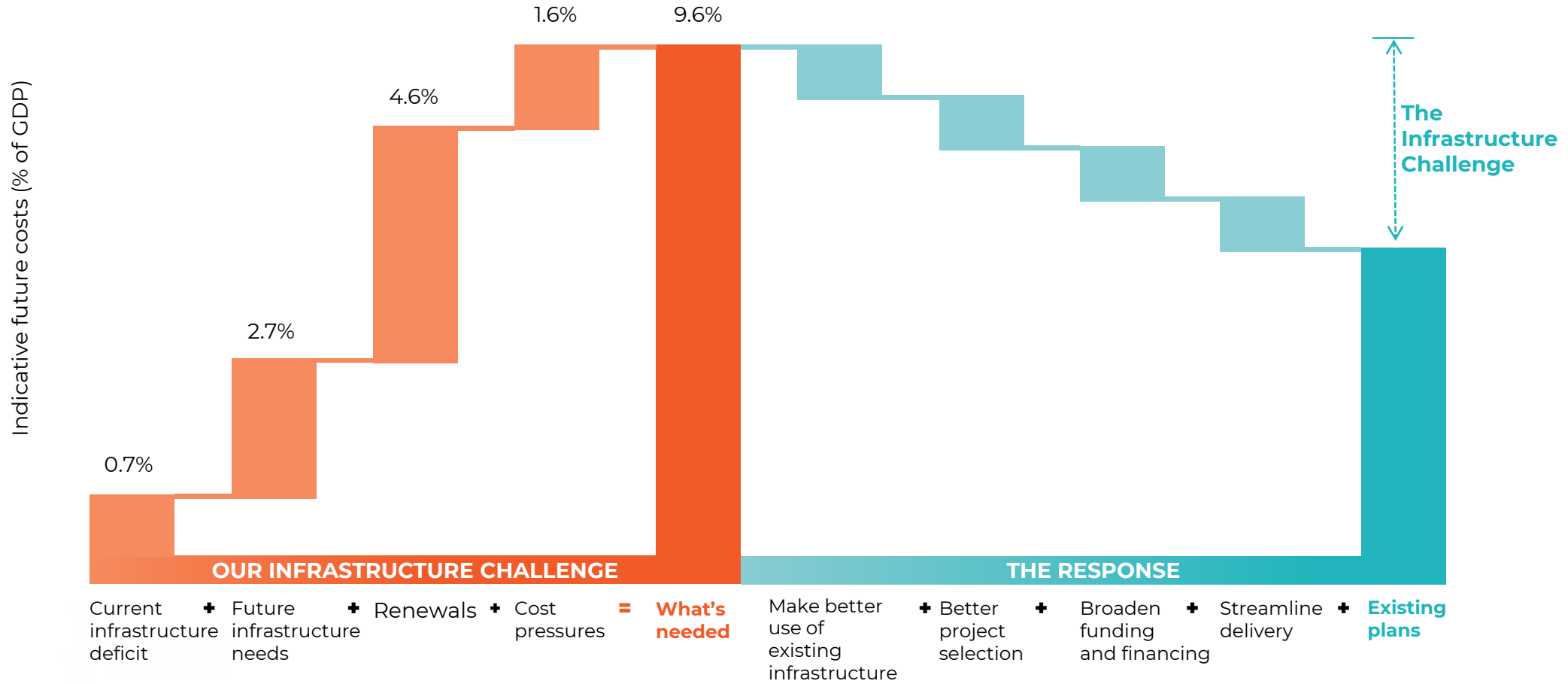




# Securing resources for future growth

# A trillion on infrastructure?

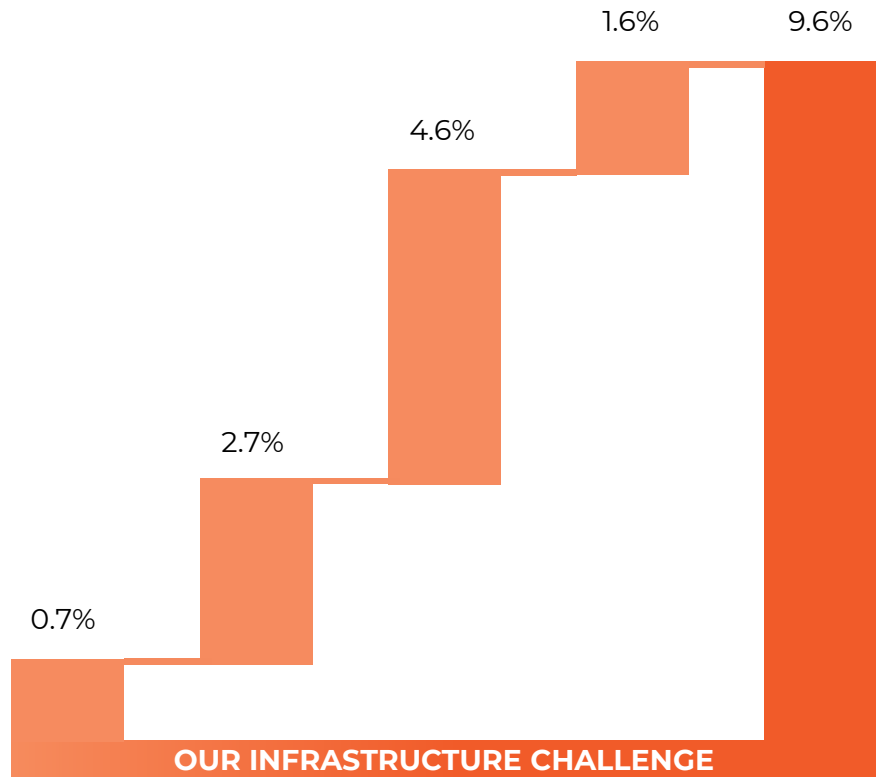
## The Challenge



# A trillion on infrastructure?

## The Challenge

Indicative future costs (% of GDP)



OUR INFRASTRUCTURE CHALLENGE

Current infrastructure deficit + Future infrastructure needs + Renewals + Cost pressures = **What's needed**

**RNZ** Home News Radio Podcasts & Series Topics Te Ao Māori

New Zealand World Politics Pacific Te Ao Māori Sport **Business** Country Local

**BUSINESS / ECONOMY**

## \$1 trillion to bring NZ infrastructure up to standard - ASB

THE RESPONSE

Make better use of existing infrastructure + Better project selection + Broaden funding and financing + Streamline delivery + **Existing plans**



# No chance

**What does a trillion dollars mean?**

**Charge users**

38% increase in household spending on infrastructure services

**Charge New Zealanders**

21% increase in the average tax paid per taxpayer

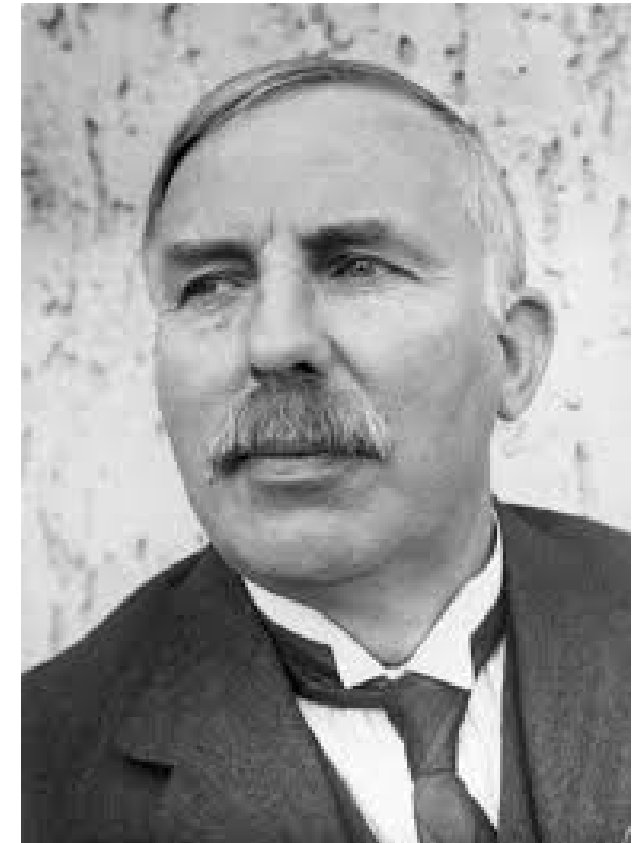
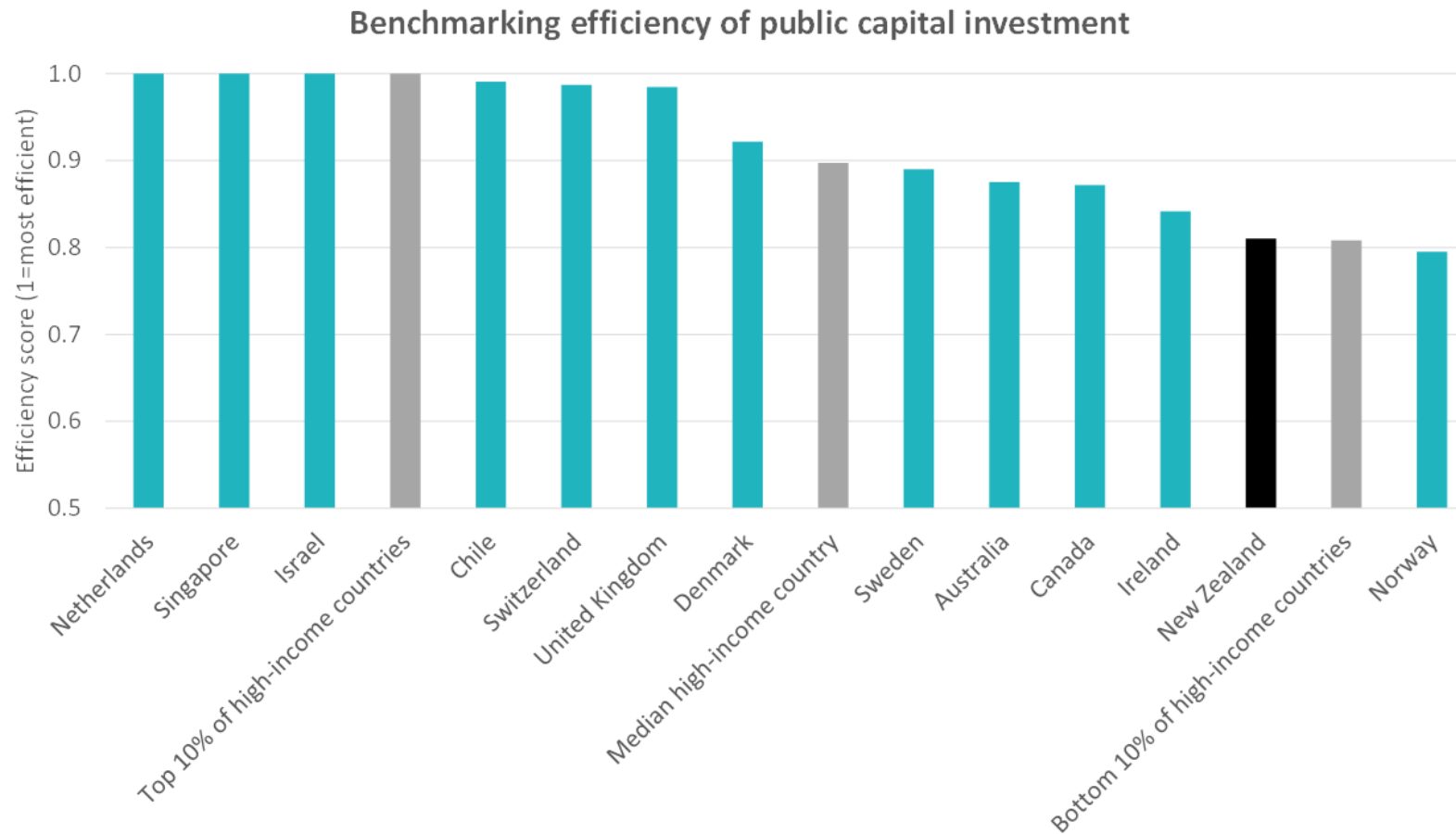
**Charge future New Zealanders**

98% increase in debt to GDP ratio by 2051



# “We haven’t got the money, so we’ll have to think”

Bang for buck





# Fluid aggregate supply is important for infrastructure services

- **We use an average of 8 tonnes of aggregate (over a truckload) per New Zealander per year**
- **Materials, including aggregate, make up about a third of the cost of heavy and civil construction**
- **Aggregate demand for Transmission Gully forced reopening of a local quarry to prevent supply delays and cost inflation**



# Location, location, location

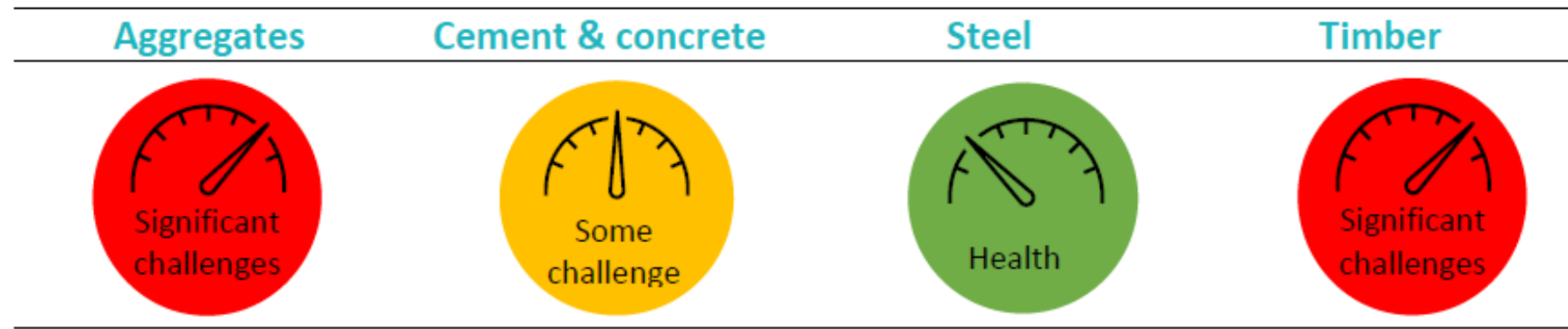
- **Carrying aggregate 30km doubles its price, another 30km and the price is tripled**
- **Added to this is roading wear and tear and further carbon emissions**
- **Having future aggregates supplies close to where they'll be needed will help lower future infrastructure prices.**
- **Creating supply options improves the local market and pricing**



# Streamlining delivery for aggregates

- The [construction materials supply study](#) found that we often limit the efficiency of aggregate production.

*Figure 2: Ability to adjust to short term changes in demand across focus materials*

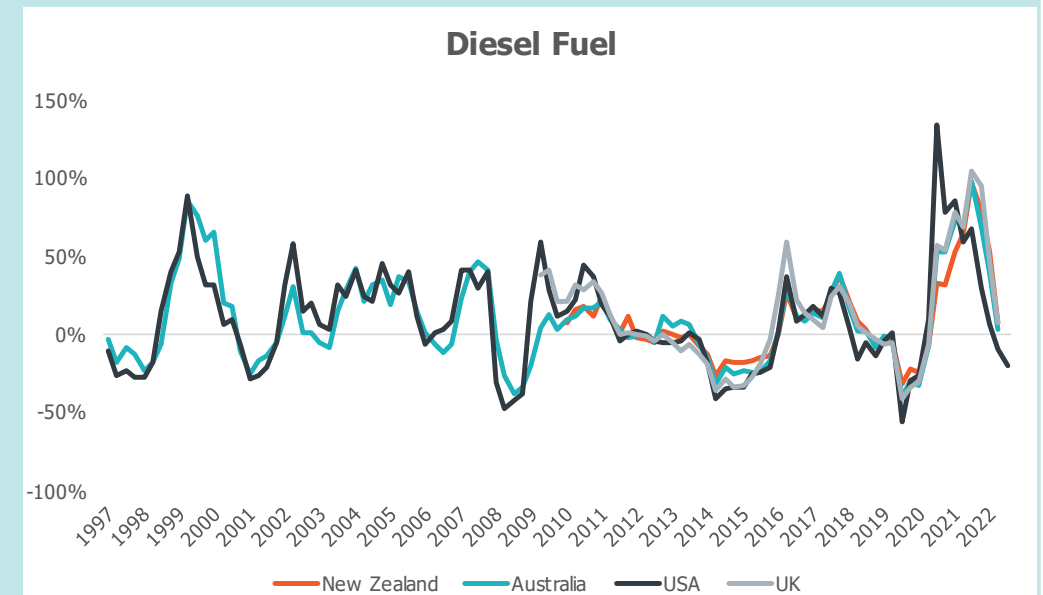
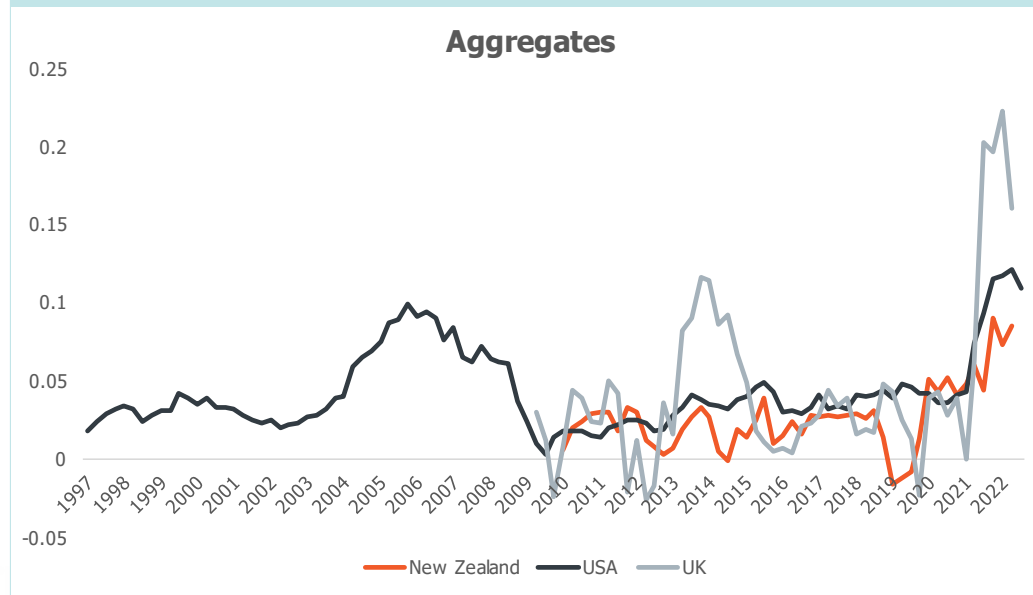






# Streamlining delivery for aggregates

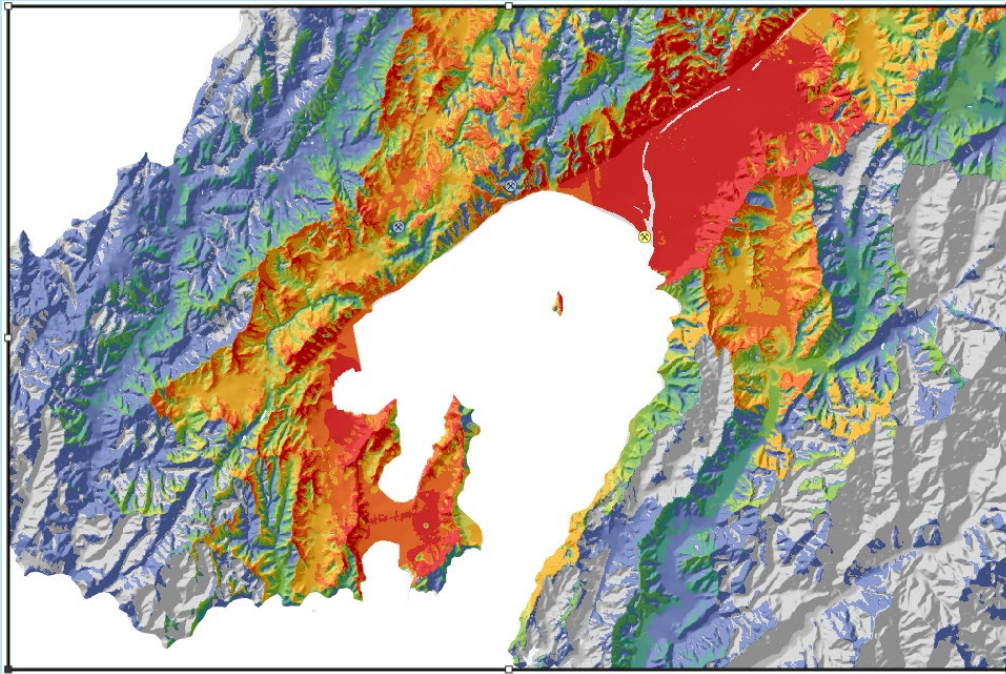
- Our work on construction cost inputs showed why aggregate differs to other resources





## Streamlining delivery for aggregates

- Te Waihanga commissioned GNS to undertake high-level mapping exercise to identify suitable aggregate resources throughout New Zealand ([Aggregate Study I](#)).





# Streamlining delivery for aggregates

- Resulting reports provide more granular detail for Auckland, Bay of Plenty, Queenstown/Otago and Wellington regions

Aggregate Opportunity Modelling for the northern Auckland area of New Zealand

MP Hill                      MO Chilton

GNS Science Report 2024/11  
May 2024

Aggregate Opportunity Modelling for the Bay of Plenty area of New Zealand

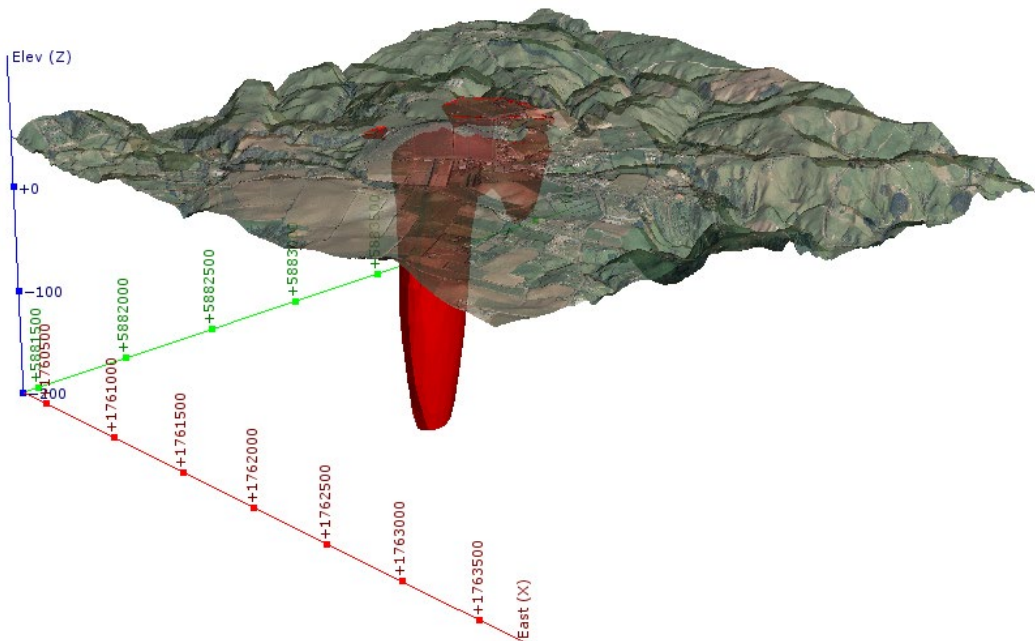
MP Hill                      MO Chilton

GNS Science Report 2024/10  
May 2024

Aggregate Opportunity Modelling for the Wellington Region of New Zealand

MP Hill                      MO Chilton

GNS Science Report 2024/09  
May 2024



## Planning and protecting existing resources:

- As cities grow, reverse sensitivity effects push quarry sites further and further out – increasing aggregate cost
- Basalt intrusion mapped in Auckland – 33 million tonnes of new aggregate ...
- Now trapped beneath a recent subdivision.



# Industrial Land and Aggregates Study

## Wellington Regional Leadership Committee





# Long-term planning reduces risk of bad assumptions

## The Commissioner's Map of the City of New York

- **100** Year Plan, at the time only 10% of Manhattan developed
- Provided for almost a century of urban growth, including significant ongoing intensification of the island
- The next iteration provided another century of growth – which filled up in 35 years
- Are we thinking far enough into the future?
- Longer term spatial planning and corridor protection



## What Next

- Maps provide a sense of opportunity, not a target for development – Matt will explain data and key findings
- Won't capture everything, won't have everything right
- A conversation starter for local community, mana whenua, councils, industry
- Hope this prompts more, and urgent, planning discussions so we actively plan as a country for the next 30 years of growth

An aerial photograph showing a wide river flowing through a lush green valley. A concrete dam with several piers spans across the river. To the right of the dam, a large-scale construction project is underway on a steep, rocky hillside. The site includes various structures, cranes, and access roads. The surrounding landscape is a mix of dense forest and open green fields.

Next up – the reports