

Submission from Straterra

To the Infrastructure Commission

Infrastructure Strategy

June 2021

Key points

- The extractive sector is a key component of the infrastructure supply chain and will play a major role in achieving the government's infrastructure and related objectives.
- Many of the minerals New Zealand needs are sourced, or able to be sourced, locally and access to them will be needed if the goals of the draft Infrastructure Strategy are to be met.
- There are a number of ongoing policy issues that the Commission should be aware of that could compromise the supply of minerals and aggregates.
- The government, in consultation with the sector, needs to identify and confirm the available sources of aggregate and sand throughout the country, including aggregate quality, accessibility, and proximity to markets.

Introduction

1. Straterra is the industry association representing the New Zealand minerals and mining sector (including coal). Our membership is comprised of mining companies, explorers, researchers, service providers, and support companies.
2. We welcome the opportunity to comment on the draft [Infrastructure Strategy](#), He Tūāpapa ki te Ora, Infrastructure for a Better Future.
3. Our submission focuses on the contribution the minerals sector makes to infrastructure development and on issues the Infrastructure Commission Te Waihanga should be aware of, which could constrain the sector's ability to provide an affordable and secure supply of resources.

Importance of Infrastructure

4. We support the government's focus on increased investment in infrastructure as embodied in the draft Infrastructure Strategy.
5. Infrastructure investment is needed to increase New Zealand's productivity and in turn for economic growth. It is needed to support and anticipate New Zealand's growing population; and also to meet the country's net zero carbon emissions by 2050 target.

6. The extractive sector is a key component of the infrastructure supply chain and will play a major role in rectifying the current infrastructure deficit and housing shortage in the medium term and building New Zealand's future infrastructure in the longer term.

Minerals and Infrastructure

7. Many of the minerals New Zealand needs are sourced, or able to be sourced locally and access to them will be needed if the goals of the draft Infrastructure Strategy are to be met.
8. Aggregate (crushed rock and sand) forms the foundation of buildings and other structures (including renewable electricity generation) and makes up 75–90% of the material in roading.
9. Steel, which is integral in the development of infrastructure projects, is produced using locally sourced coal, ironsands and limestone. Coal used in steel manufacturing is a mineral input as well as a source of heat. There is currently no commercially viable alternative to make new steel at scale without coal. (This is not made clear on page 14 of the Strategy where it implies the use of carbon is just for heating in “industrial processes such as drying milk powder and smelting steel”.) New Zealand Steel supplies around 65% of domestic demand for steel products.
10. Coal and limestone are also essential inputs for cement manufacture, not only through the high temperatures required, but also, in the case of limestone, as a mineral input.
11. In the past, natural pozzolans (high-silica volcanic ash, diatomite) were mined as a partial substitute for cement in concrete, also having a property of low CO₂ emissions. Investigations are currently underway into restarting this mineral stream.
12. Minerals will continue to play an important role as we develop the infrastructure into the future and as needed for a lower carbon economy. Low emissions technologies such as wind turbines, solar panels, electric vehicles and batteries etc will increase demand for minerals. According to a 2017 report by the World Bank, [The Growing Role of Minerals and Metals for a Low Carbon Future](#), demand for many of these minerals is forecast to increase.
13. New Zealand has prospectivity for some of these minerals. Vanadium, lithium, rare earth elements, tungsten, nickel-cobalt and copper are examples of low-carbon economy minerals which we have the potential to supply, providing we have access to land and sea for exploration and minerals development.
14. Minerals currently mined in New Zealand are also important for the low-carbon economy. Coal and ironsands, for example, are needed to make steel – which is needed to make wind turbines. Limestone is a key input in the manufacture of cement, which is needed for infrastructure.
15. As well as its role in building infrastructure, the extractives sector uses and supports existing and new infrastructure to a significant extent. It is doubtful that the West Coast rail link between Christchurch and the Greymouth would be economic without the vast quantities of coal that are transported across it. Towns such as Waihi and Westport would not be able to provide their residents with the social infrastructure they do if not for the mines that support the local economies of those towns.
16. The energy sector is also a key contributor to New Zealand infrastructure development and coal, as one mineral, plays an important role in maintaining energy security. That role is critical at present. As more renewable generation capacity is built the importance of the role will decrease but not be fully replaced.

Issues for Mining and Infrastructure

17. As argued so far, minerals are essential to any strategy for infrastructure. There is, therefore, no point in fast-tracking infrastructure development unless the mineral supply chain is also fast-tracked. This means

adequate access to locally sourced minerals is important. However, the minerals sector in New Zealand is beset with multiple obstacles to access and extraction impeding a ready supply. The Infrastructure Strategy must deal with this issue.

18. The starting point is policy and regulatory settings that enable environmentally and socially responsible mining and quarrying. The current settings are challenging at best but developing government policy in this area is creating greater barriers. For the extractive sector to be able to provide the necessary resource for infrastructure development, policies are needed that enable responsible extraction. Many policies currently being promulgated by the government will prevent rather than enable extraction.
19. Note also that minerals are locationally constrained resource, and economic deposits are rare. They are not universally available and can only be sourced from where they are located. Government policies and council planning need to allow for this specific characteristic.
20. Most importantly, New Zealand's robust environmental legislation ensures that mining in this country meets high standards in terms of mitigation and compensation. The RMA and the Environment Court have provided an independent, contestable, and robust forum to assess resource proposals on a case-by-case basis, and on their merits. Our view is that while this process could be improved, the RMA has served the resource sector, the conservation estate and broader societal objectives well, insofar as mining and quarrying are concerned.
21. A number of ongoing policy issues relating to minerals and infrastructure, could interrupt the supply of minerals and aggregates. The Infrastructure Commission needs to recognise and address this risk.

- **Mining on Conservation Land**

22. A significant proportion of mining in New Zealand by area is carried out on public conservation land. That is both because PCL exceeds 30% of New Zealand's land area, and there is a correlation between mineral resources and the unique physical and biological features which tend to be associated with conservation land. For example, GNS Science has provided maps and data which shows 79% of land prospective for rare earth elements in New Zealand lies in the conservation estate. Mining on this land has been allowed for many decades, consented under the RMA, via access agreements with the Department of Conservation (DOC), and additionally at times, under wildlife permits, and, potentially, concessions, all meeting different legal tests.
23. The government and some political parties have proposed to introduce a ban on new mines on conservation land. We strongly oppose this proposal because it would lead to costs, lost opportunities and a raft of unintended consequences without commensurate environmental benefits. More information on this issue is available [here on page 7](#)

- **NPS-IB**

24. New Zealand's indigenous biodiversity faces multiple threats, led by exotic animal pests and weeds. The minerals sector can help mitigate this threat as part of its activities, but not under the draft National Policy Statement for Indigenous Biodiversity. As currently written, the NPS-IB will prevent almost all land-use outside of urban boundaries, and landowners will be disincentivised from managing pests and weeds. We hope the revised NPS-IB draft due to be released soon will have remedied these issues and we will be monitoring it closely. More information on this issue is available [here on page 13](#).

- **Review of the Crown Minerals Act**

25. The Crown Minerals Act is currently being reviewed. This Act was passed in 1991 to enable the exchange of rights between the Crown as the owner of certain minerals, and the developer of the minerals, as a parallel statute to the RMA.

26. Precisely because minerals are essential to infrastructure development (and modern society generally), it is important that New Zealand continues with an enabling regime and that the review does not result in an even less conducive environment for minerals activities. More information on this issue is available [here on page 14](#).

- **Importation or Locally Sourced Minerals**

27. Certainly, users of minerals can access offshore minerals. This is happening currently with coal into the North Island for electricity generation, steel making and co-firing cement production. But a readily available supply of locally sourced minerals will improve our security of supply. Likewise, supplies of aggregate could theoretically be imported from places like Dubai, but the costs, let alone the optics of shipping rocks such large distances at elevated carbon footprint illustrate the political difficulties / challenges of such a proposition.

Planning for Aggregate to meet Infrastructure Demand

28. Of all minerals, New Zealand's infrastructure development will rely particularly on locally sourced aggregate resources. While generally more readily available than other minerals, a combination of regulatory and social issues is currently putting its supply at risk and it is essential this risk is mitigated by sound public policy and good council planning.
29. The expense involved in transporting large volumes of rock and sand means quarries need to be located close to their market and this often means not too far away from urban areas and land identified for future housing or commercial development. Like minerals generally, aggregate is location specific which is providing a cause of constraint. Growing populations and expanding residential areas encroaching on potential aggregate resources is providing another.
30. There are some simple remedies that the quarry sector is recommending to remedy this. First, the government, in consultation with the sector, needs to identify and confirm the available sources of aggregate and sand throughout the country, including aggregate quality, accessibility, and proximity to markets. We have been encouraging the government to undertake research into this for some time and are pleased GNS is now doing this work.
31. Once identified, those sources need to be protected from alternative land use where appropriate and appropriate provision made for development of the resource to meet demand now and into the future.
32. Local authorities need to ensure their planning does not sterilise available aggregate sources by making access to it unavailable either through regulation or alternative development. National direction should be used to direct councils to protect key resource areas and enable their development where appropriate. Existing and potential quarries should be protected from encroachment of non-compatible land uses such as housing to reduce potential for reverse sensitivity.¹
33. If aggregate has to be sourced more remotely as a result of this, it would lead to increased costs and lost opportunities. Currently, the cost of a tonne of aggregate doubles when it has to travel 30 kilometres from a quarry, with additional costs for each extra kilometre thereafter. By ensuring quarries are close to their markets, costs are reduced along with transport congestion and carbon emissions. These ideas should be reflected in the Infrastructure Strategy if they aren't already.

¹ Reverse sensitivity occurs when expanding residential activity locates in close proximity to quarrying and complaints from residents leads to restrictions of the existing quarrying activity.