

Submission from the AQA on the discussion paper - Transport Emissions: Pathways to Net Zero by 2050 June 2021

Introduction

The Aggregate and Quarry Association (AQA) acknowledges that our transport system needs to shift to a low/zero carbon pathway as soon as possible to meet our emissions reductions commitments and targets.

We agree that decarbonising our transport system will be challenging and that difficult choices and trade-offs within transport and across sectors must be made by central and local government to prioritise investment, and other action, to move different sectors to low-carbon pathways.

New Zealand needs to play its part in global commitments to meet the objectives of the 2015 Paris Agreement and to reduce carbon dioxide emissions. In reducing our emissions, it is essential that policies do not lead directly to constraints on the supply of vital materials essential for the social, economic, and cultural wellbeing of communities.

New Zealand's aggregates profile

Currently an average of around nine tonnes (one rigid truckload) of stone, gravel and sand per New Zealander is required each year to meet New Zealand's ongoing infrastructure demand. The Government's 10-year Minerals and Petroleum Strategy released in November 2019 included a clear statement that:

***“Projections indicate that the population of New Zealand could grow as high as between 5.3 and 7.9 million by 2068. To meet the needs of this growing population we will require more housing, more energy, and expanded infrastructure. The minerals and petroleum sector has a critical role to play in building this future.*”**

We need to make sure we have the aggregate (crushed rock and stone) required, or alternative replacement material, to build the foundations of our houses and roads.”

Central and local government will need to invest an unprecedented amount of money into infrastructure, such as schools, hospitals, roads and transport, to meet this population growth. New Zealand relies heavily on locally sourced aggregate resources for infrastructure repair following disasters for road, cycleway and rail transport corridors, major projects and for housing development.

In Auckland alone, population is projected to reach 2.4 million by 2050. This represents a population growth rate that is higher than the national average. To accommodate this growth, Auckland's built environment will change significantly. This could mean 313,000 new homes along with new infrastructure, commercial buildings and community facilities. This number of homes alone will require an additional 78 million tonnes of aggregate, or 2.6 million tonnes per year from now until 2050.

Climate change and rising sea levels are going to put added pressure on rock supply for sea walls, riverbank protection and restoration. Based on the advice of the Climate Change Commission, 13 wind farms, each the size of the country's largest, will need to be built in the next 15 years to power the country's new electric cars and boilers. The construction of these wind farms alone will require an additional 1 million tonnes of aggregate and sand.

New Zealand needs a secure supply of quarry materials to provide affordable housing and infrastructure now and for future generations.

To do this, it is critical that planning is streamlined, quarry resources are protected so they can supply vital construction materials and quarry land is returned as an asset to the community once extraction is complete.

Quarry products are almost exclusively carted on heavy trucks which are typically fuelled by diesel. Haul distances are short and the location of quarries on urban fringes limits the transport options for aggregates and sand.

We make the following submission in relation to the [discussion paper; Transport Emissions: Pathway to net Zero by 2050](#).

Consultation Question 1: the principles in Hīkina te Kohupara

We generally support the principles used in Hīkina te Kohupara to shape the advice, particularly Principle 4 in relation to a co-ordinated approach to transport and land use planning that have a strong influence on transport emissions.

Quarry materials are not universally available and can only be sourced from where they are located; without planning to provide for adequate access to resources at workable locations, there is the real risk of losing access to such proximate resources, greatly increasing the costs of building and infrastructure development and maintenance.

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, opportunities exist for emissions to be reduced by improving the efficiency of supply chains and improving the fuel efficiency, and carbon intensity of freight modes and fuel.

Consultation Question 2: the government's role in reducing transport emissions

Government procurement policies, including leveraging their purchase power, to support low emissions products and practices could help reduce emissions. It is important here to decrease the need for carbon-intensive transportation and improve energy efficiency in the long-term by ensuring quarries are close to their markets, thus significantly reducing transport costs, transport congestion and carbon emissions.

Too often specifications for major projects target high quality aggregates regardless of the need for such "high quality" products given the use and life expectancy of the road

or building. Such specifications do not take account of sources close to the project which could be suitable while significantly reducing transport related carbon emissions.

The Government, in consultation with the aggregates sector, needs to confirm the available sources of aggregate and sand throughout the country, including aggregate quality, accessibility, and proximity to markets so that those sources identified as critical for the country's future growth, are protected and appropriate provision is made for their development to meet future demand for aggregates.

We consider it imperative that local authorities are directed to protect key resource areas and enable their development, to both protect existing quarries from encroachment of non-compatible land uses such as housing, reduce reverse sensitivity potential and to enable the expansion of these resources and development of new greenfield resources.

Consultation Question 4: priority of government actions

Transitioning New Zealand to a low emissions economy requires a coherent and coordinated approach to climate change across government agencies, and across levels of government. It is essential that working together addresses the allocation of risk and funding to ensure incentives for behavioural change are appropriate at the national and regional levels.

The Government needs to create a more discretionary regulatory approach for certain activities, including quarries, that are necessary to facilitate a response to the effects of climate change.

Coherent policy is also important to ensure that households, business, and communities receive clear and consistent signals about the transition to low emissions, and the nature and speed of change required.

The proposed National Policy Statement for Indigenous Biodiversity requiring territorial authorities to "avoid" any subdivision, use and development within an SNA containing the four main effects is inconsistent with the Government's Resource Strategy, and other current initiatives around urban development, use of highly productive land, infrastructure spending, and climate change.

Rather than taking an integrated approach to resource management, it appears that officials across government departments are acting in their separate silos creating unnecessary duplication and imposition of additional costs and restrictions, all with similar stated goals but with inevitable unintended consequences. We have seen this recently with introduction of the NES Freshwater Regulations, particularly concerning earthworks around wetlands.

Consultation Question 10: the freight supply chain

Existing freight networks and services could be used more efficiently, however if we continue to embrace technology including heavier electric vehicles and modern heavy vehicle configurations, we need to continually upgrade the road network to compliment this technology.

More efficient use of networks in relation to supply of aggregates and sand could mean more flexible operating hours in areas to reduce traffic congestion at peak times and spread the load on roads. An example here is the restocking of resale yards, concrete and asphalt plants in urban areas at night so that trucks are off major arterial roads during the morning peak times. While this may involve 24-hour operations for loading, this can be done while mitigating the operation's impacts on the environment, reducing emissions, and ensuring community wellbeing is maintained.

Consultation Question 11: freight modes and fuels

The Climate Change Commission identified that heavy trucks are the most challenging vehicles to electrify as they operate close to legal size and weight limits, so heavy batteries could reduce the payload the truck can carry. Modelling also suggests that commercially available quantities of biofuels for heavy and off-road vehicles is unlikely to be available before 2035 and therefore low carbon liquid fuels are unlikely to be an option for our sector in the short to medium term.

Like food and perishable goods, aggregate moves over short distances, and very few quarries or delivery sites have access to rail or coastal shipping. Aggregates need to be delivered quickly and reliably as customers do not have areas to stockpile material. Therefore, aggregate delivery cannot easily shift travel type.

While the discussion document identifies that these deliveries are most likely to be carried out by electric trucks in the future, at this point too much is unknown about the kinds of future energy that will power heavy vehicles.

General comments

We agree that in the short-term, the best opportunity for the Government to reduce emission from heavy trucks is to introduce a fuel efficiency standard for trucks and a biofuel mandate. As with light vehicles, these standards will need to ramp up over time. There is currently a limited amount of biofuel available in New Zealand, so we believe there is merit in the Government supporting a domestic biofuel industry.

We do not hold a view on the relative merits of the four potential pathways identified in Hīkina te Kohupara, as all will require many levers and policies to be achieved.

We agree that the government should pursue urban development and land use changes that support emissions reductions from transport as soon as possible. Our cities and towns will only realise the full benefits of changes to urban development and land-use planning over the long-term. An additional reason our cities are under pressure is that adequate provision has not been made in planning documents to recognise existing and potential aggregate and sand deposits or provide for their extraction.

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