Concrete New Zealand Incorporated

Submission to

Bream Bay Sand Extraction Project Expert Panel [FTAA-2511-1150]

May 2026

26 May 2026

Catherine Somerville-Frost
Chair
Bream Bay Sand Extraction Project Expert Panel
Environmental Protection Agency
Private Bag 63002
WELLINGTON 6140

By email: substantive@fasttrack.govt.nz

Dear Ms Somerville-Frost

Re: Bream Bay Sand Extraction Project Expert Panel [FTAA-2511-1150]

Concrete New Zealand (NZ) welcomes the opportunity to comment on the Bream Bay Sand Extraction Project Expert Panel [FTAA-2511-1150].[i]

INTRODUCTION

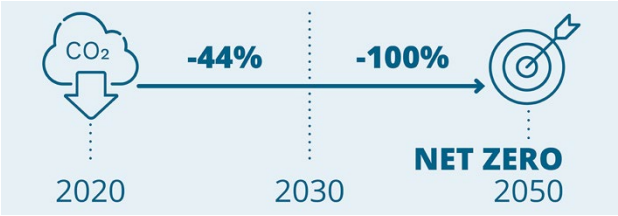
Concrete NZ is the voice of the cement and concrete industry, representing more than 500 corporates and individuals, including more than 200 concrete producing facilities. The industry spans cement manufacture, ready-mixed concrete, masonry, reinforcing steel processors, precast components including pipes and culverts, and experts in structural design and construction with concrete. More than 11,000 people are employed by the industry, which contributes more than $1.25 bn to GDP (March 2023, in March 2023 prices).

PART A: CEMENT AND CONCRETE INDUSTRY CONTEXT

As a critical construction material, concrete delivers resilient buildings and infrastructure, including bridges, tunnels, clean water, clean and renewable energy, and resilience to natural hazards, including mitigating the effects of climate change.

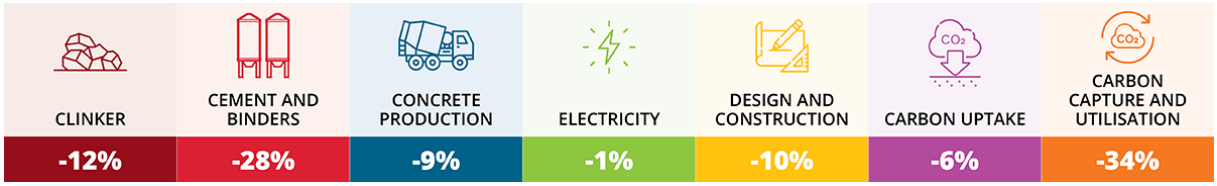
Concrete is strong, durable and versatile – it can be formed into almost any shape. Compared with other building materials, concrete offers enhanced fire safety and flood resilience, greater noise reduction, and more efficient heating and cooling. It can be reused, repurposed and recycled at the end of life of a building or other structure. For many applications there is no alternative to concrete.

The New Zealand cement and concrete industry has committed itself to a decarbonisation Roadmap, containing two main emissions reduction milestones as per the graphic to the right.



The industry's 2030 goal will contribute more than 400,000 tons of CO_2 emissions reductions annually to the government's overall goal.

Implementation of the Roadmap is already underway. Concrete NZ reports on progress via its sustainability reporting as well as regular stocktakes for the industry. The Roadmap lists seven key "levers" for cement and concrete industry decarbonisation (percentages refer to net emissions reductions by 2050 relative to a 2020 baseline):



Concrete already appears in resilient and affordable infrastructure throughout New Zealand, delivering long-term societal and environmental benefits to communities. With recent investments in low-carbon concrete supply chains, the material can be delivered with reduced embodied emissions today.

Roads are an area in which concrete can add significant value. Infometric's November 2024 report The Case for Concrete Roads, highlights the benefits of concrete roads, including cost-efficiency, de-risking oil price volatility, and lower whole-of-life embodied emissions versus asphalt.

EXECUTIVE SUMMARY

Marine sand to be produced via the Bream Bay Sand Extraction Project qualifies in New Zealand as a critical mineral. Accordingly, and if approved, the Bream Bay Sand Extraction Project should offer both regional and national benefits.

On the statistics and estimates presented in the substantive application to the Expert Panel, the McCallum Brothers project will be capable of supplying a significant share of Auckland demand for concrete inputs, and further afield – thereby demonstrating both regional and national benefits.

Marine sand has a long history of use in concrete manufacturing in the Auckland market, because of its:

- favourable mineral composition, grain size and grain size distribution, and the shape of the grains; and

- availability of supply near to where the concrete will be manufactured and used, and a relative lack of supply of suitable natural sand from other sources.

Concrete NZ believes it is important that all potential sources of rock, sand and gravel remain accessible for extraction, including carefully selected areas of the marine environment. Marine-dredged sand and gravel resources have considerable potential within the wider construction aggregate supply and are becoming increasingly important.

PART B: DETAILED SUBMISSION

A CRITICAL MINERAL

The Critical Minerals List for New Zealand, published by the government in early 2025, includes "aggregate & sand" among 37 minerals[ii]. Of critical minerals, the Ministry of Business, Innovation and Employment says, "The list developed identifies the minerals that are economically important, and are vulnerable to supply risk or essential to unlocking other critical minerals."

AUCKLAND CONTEXT

According to Statistics NZ[iii], more than half of the total concrete placed in New Zealand is in Auckland city and the wider region.

Auckland is experiencing 1 percent annual population growth, compared with an average of 0.7 percent for New Zealand[iv]. Auckland and the region are therefore a stable and growing market for concrete supply.

Cement and concrete underpin virtually all roads and buildings. This type of infrastructure is fundamental and is central to the Infrastructure Commission's *National Infrastructure Plan*[v], which outlines New Zealand's infrastructure pathway for the next 30 years. As population grows and efforts are made to address the national infrastructure deficit, demand for concrete (and therefore sand) to support infrastructure and housing construction will continue to increase.

As sand is a major ingredient in concrete, it should ideally be sourced close to where the concrete is produced and used. The same principle applies to other aggregates used in concrete production and construction more generally. As a general industry rule of thumb, the cost of aggregate doubles after it is transported 30 kilometres by truck, triples after 60 kilometres, and continues to rise accordingly.

Taking a New Zealand concrete industry perspective, Concrete NZ has drawn the following salient facts from Attachment 20 of the substantive application:

- Concrete uses around 80 percent of total fine natural sand demand in Auckland, i.e. 630,000 tonne (t) of the 780,000 t supplied annually into the Auckland market.

- Of the 630,000 t, more than 90 percent is marine sand because of its grain size distribution and other characteristics, and the benefits of that for producing workable, quality concrete.
- That equates to Auckland demand of around 567,000 t of marine sand per year for concrete manufacture.

SIGNIFICANCE OF THE BREAM BAY SAND EXTRACTION PROJECT

The Bream Bay Sand Extraction Project is to quarry up to 150,000 cubic metres (m^3) of sand per annum for an initial period of three years and up to 250,000 m^3/yr thereafter. At a specific gravity of 2.4, that equates to 360,000 t initially, going up to 600,000 t/yr. Taking together the above figures, the Bream Bay Sand Extraction Project will offer a significant if not predominant source of marine sand supply into the Auckland market, and further afield.

Accordingly, and if approved, the Bream Bay Sand Extraction Project should, potentially offer both regional and national benefits.

USE OF SAND IN CONCRETE-ATTACHMENT 20

As Attachment 20 indicates, sand is a substantial component of concrete, which amounts to a strong and durable synthetic rock made largely of natural materials. Concrete NZ wishes to correct statements made about “manufactured sand” in Attachment 20.

Whilst typically fine aggregate for concrete manufacture is generally a blend of natural and manufactured sand, it is possible to produce a good-quality and high-performing concrete using manufactured for the entire sand component. Indeed, this is occurring currently.

Concrete NZ notes that one concrete supplier member in Auckland (Allied Concrete Limited, Penrose) is using manufactured sand as its predominant sand source accounting for some 93 percent of all sand consumed at the facility in question in the past eight months, with the balance being marine dredged sand. This represents some 70,000 m^3 of production. The plant's production includes all market segments, from residential through to high strength and technically demanding specifications of concrete.

It is the view of Concrete NZ, therefore that statements made in a number of items (such as 12, 58, 61, 64 and 65) misrepresents current practice at least at this ready mixed concrete facility in Auckland pertaining to the use of manufactured sand. Manufactured sand is being used here often without a natural sand to produce a myriad of high performance concretes such as self compacting concrete and high strength concrete appllications.

Furthermore, figures cited in item 77 do not reflect New Zealand practice regarding carbon emissions of cement supplied to the New Zealand construction market. Cement utilised in New Zealand has a significantly lower carbon emissions than the figures

quoted in item 77. Indeed, the current Global Warm Potential (GWP) of cements used in New Zealand lies between 704 and 863 CO_2-eq. (c.f. 940 and 1000 CO_2-eq quoted in item 77). This is an important distinction as the concrete industry in New Zealand is committed to meeting its net-zero carbon emissions ambition by 2050.[vi]

PART C: CLOSING REMARKS

Aggregate extraction must take place only in suitable locations and be tightly controlled by environmental regulation and internationally recognised best-practice standards should guide operations to ensure precise extraction and minimise environmental impacts.

It is the view of Concrete NZ that all potential sources of rock, sand and gravel should remain available for responsible extraction, including carefully chosen areas of the marine environment. Marine-dredged sand and gravel have significant potential within the wider construction aggregate supply and are vital for the supply chain for concrete supplies, particularly for the Auckland market. In regions where local primary aggregates are limited - either due to geological absence or the exhaustion of existing deposits - alternative supply sources must be secured if New Zealand is to achieve its housing and infrastructure objectives.

The Bream Bay Sand Extraction Project qualifies in New Zealand as a critical mineral. On that basis alone, the product can be considered to provide regional and national benefits.

ACKNOWLEDGEMENT
Concrete NZ would like to thank the Expert Panel for the invitation to comment on the above application under sections 53 and 54 of the *Fast-track Approvals Act 2024*.

Yours sincerely,

Rob Gaimster
CHIEF EXECUTIVE

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[i] Bream Bay Sand Extraction Project Substantive Application
[ii] A Critical Minerals List for New Zealand | Ministry of Business, Innovation & Employment
[iii] Ready-Mixed Concrete: September 2025 Quarter | Stats NZ
[iv] Infometrics Regional Economic Profile | Auckland | Population Growth
[v] National Infrastructure Plan | Te Waihanga
[vi] A Net-Zero Carbon Concrete Industry for Aotearoa New Zealand: Roadmap to 2050