

**Notice of application by McCallum Brothers Limited,
and invitation to comment under the Fast-track Approvals Act 2024**

TO



Application Lead – Bream Bay Sand Extraction project
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Tena koutou katoa,

The invitation from the Fast Track Panel asks for comments on points (a), (b), and (c); thus, Takahiwai Maori Committee's commentary commences to (a) **address the values that would or might be affected by the project** as follows:

TIAKITAI: SAFEGUARD THE COAST

The derricks stand brutal and erect
on the cargo ship sailing south
past Tuturu [Sail] rock
just like the
masts on the Royal Navy's
sloop HMS Resolution
1771 to 1782.

A prompt to the Chiefs and Tribes of New Zealand
that our Tupuna [Ancestors]
on the coast
didn't see coming
the education system
for manual labour
cultural assimilation
cultural integration
and the
segregation of Te Reo Maori
me Nga Tikanga.

On the coast the
metaphysical heartland
is where the spirits of
tragedy and hope confront
global citizenship performing
on motorbikes in the dune
horses and 4WDS in the 'no go' zone
and sand mining in the bay.

Is there a possibility of
a 'proof' that the political system
deserves
the allegiance of the Chiefs

and Tribes of New Zealand?
Is our decision simply a matter of
conforming and performing to
whichever version
of fatal impact
happens to be in vogue,
and in doing so play with
the global citizens
on the coast?
Is there something Tapu [Sacred]
capable of supporting
the Rangatiratanga of the Chiefs
and Tribes of New Zealand?
The leitmotif of
the coast mitigates
the relationship between
tragedy and hope
fatal impact and multiple agencies
echoing down the centuries
to deliberative debate in writing to
Tiakitai [safeguard] the coast!

Further, the statutory obligation of the Takahiwai Maori Committee is:

...to work for the wellbeing of Maori through health, education, employment,
housing as set out in section 18 of the Maori Development Act 1962.

Thus, the salient value is that of te Tiakitai, to safeguard the coast and one of the
committee has commented on that obligation in the following way:

I don't know how to put my feelings and thoughts about the sand mining issue.
Except loss, quantifying unknown repercussion of removal of sand. It will affect
everything. Only sand can be used to refill the hole.
(personal communication via email, 1 May 2026)

Indeed, safeguarding the coast and coping with the actual and potential effects - the loss of
place - is really the prominent part of this tragic problem with which TMC is grappling. The
TMC does not see any easy answers.

**(b) The actual and potential effects on the environment that might arise in the event of
grant of the approvals sought.**

The TMC has been there at Kopuawaiwaha, Mangawhati, Takahiwai, Te Poupouwhenua, Te
Koutu, Ara Kahika, Ruakaka, and Waipu, that moment when a landscape we thought was
permanent, quietly flips into something else. For coastal communities, the new lands are not
abstract policy. Take Northport, Channel Infrastructure, Ltd, Transpower and Meridian
Energy Ltd.'s heavy industrial businesses at Te Koutu, and the luxury housing estates at Ara

Kahika for example. The new lands mean the same 'boss', the same colonisation, and new patrols, new restrictions, new distances to travel. Marine species follow different paths when the seabed is ripped up and rearranged. Some move away. Some die in the plumes. Bird communities erode.

Academics who track this transformation use phrases that sound almost bland: "managed destruction", "land reclamation", "maritime feature enhancement", "infrastructure build-out". The scientists are talking about an industrial-scale rewrite of geography. The plain truth is: whoever controls fixed infrastructure in a disputed sea gains leverage, even if the legal status is grey. Every metre of sand pumped up carries a calculation – domestic pride, trade routes, military range, the subtle pressure of being the power that can literally move the sea floor when it wants to.

For wildlife protection, the value known as te Tiakitai enables the TMC to comment on a new nature study examining thousands of bird species across more than a thousand sites worldwide, revealing a troubling pattern: As human activity reshapes landscapes, the stability of bird communities erode. The research shows that even in places where birds still appear abundant, their ability to keep ecosystems functioning is quietly weakening.

It is time that more is done! In a natural habitat, like the coast, several species may share similar roles, so if one disappears, the system still functions, but in a human-altered landscape, like MBL's excavating the sea floor, that buffer erodes. The warning is that even small additional losses could cause major functional declines.

Seed-dispersing birds help forests recover after extreme weather, an increasingly important service for coastal communities facing stronger storms and rising temperatures. Insect-eating birds help keep pests in check, supporting farms and reducing reliance on chemical sprays. Critically, human-driven land-use change makes these benefits more precarious. With fewer species able to step in if one is lost, communities may face greater risks: slower forest recovery, more crop damage, and less natural protection from environmental stressors. All of this can delay progress toward a cleaner, safer future by weakening the natural systems people rely on for stability, food security, and climate resilience. Protecting bird communities and marine species isn't just good for nature, it's also an investment in safer, more resilient futures for people everywhere.

Concrete is the most used building material on the planet, but the production of it —from beginning to end — wrecks havoc on nature, largely due to the inclusion of cement. Fortunately, scientists around the world are finding new ways of making concrete more sustainable and less polluting — and creating the building materials of the future in the process.

Alternatives

Alternatives are not just a theoretical idea. Recent peer reviewed work has explored faster carbonation approaches, including:

- Desert sand is considered too fine to use in concrete, but the researchers are experimenting with various production methods to figure out a mix that's strong and durable.
- Scientists in India are developing a mix that has not only proved stronger than traditional repair mortars but also more resistant to cracks and has a stronger bond. The substance, containing quarry dust, polymer modifiers, curing agents, and hybrid fibres, has a lower environmental impact and cost than traditional mixes.
- Researchers in Egypt are experimenting with ingredients to replace cement in concrete while at the same time reducing multiple types of pollution. The mixtures are largely made up of quarry powders, which are left over when rocks are pulverized to make stone products; ground plastic, which can be made from plastic waste; and crumb rubber, which can be made from rubber waste such as old tires.
- Scientists in Iran aren't looking to replace cement but rather replace a portion of it in a concrete mixture with ceramic waste dust and pozzolans — materials with properties similar to cement when mixed with lime. They found that a ratio of 15% pozzolan and 10% ceramic dust resulted in improvements in concrete quality. The concrete used only 25% less cement, but it's a step in the right direction.
- Scientists in Australia are developing a geopolymers concrete mix that uses delithiated beta spodumene (DBS) as a binder material in place of traditional binder materials such as fly ash, which is a byproduct of burning coal. The environmental impacts go well beyond replacing fly ash. Using DBS in this way removes fly ash from the environment, where it can contaminate soil and groundwater.
- Glass recycling has become a solution against coast erosion in Louisiana. The *Glass Half full* project transforms discarded bottle into sand to restore the coastline.
- A University of Miami research team is trying to turn a coastal headache into a climate tool. Their idea is simple to describe but hard to pull off in practice, replace part of cement with algae derived biochar, then help the concrete absorb and store carbon dioxide as it hardens.
- Most of concrete's climate damage comes from clinker, the heat-baked ingredient that lets cement glue sand and stone together. High heat drives part of that burden, and limestone adds more when kilns strip away carbon dioxide to make Portland cement (8). The *EIC-funded C-SINC* project aims to transform the world's most-used building material into a carbon sink. It will use magnesium silicates to sequester CO₂ and turn cement into a substance that removes CO₂ from the atmosphere and stores it permanently. It will optimise the mineral carbonation process and validate the performance of these mineralised supplementary cementitious materials (SCMs) for industrial use. Using machine learning and advanced simulations, *C-SINC* will design sustainable concrete mixtures to reduce embodied carbon emissions while maintaining structural integrity. The ultimate goal is to create a commercially viable binder with lower emissions.
- A recent study by *Taangaro Tuia Te Ora/Endangered Species Foundation* found that sand mining projects in Aotearoa are currently underutilised, with capacity far exceeding local and export needs.

- At the same time, the New Zealand company Kayasand has developed technology to transform waste from construction and quarrying into usable aggregate. Their modelling suggests Auckland’s entire concrete sand demand could be met by just four processing plants, one already operational in Waikato, with further expansion planned to meet national and export demand.
- Oxford graduate, Dr Lynn Lewis-Bevan has emphasised that while sand mining can provide short-term economic benefits, particularly for local communities, its long-term social, cultural, and environmental impacts are significant. These include damage to fisheries, agriculture, and Maori cultural heritage, environmental degradation of coastal ecosystems, and limitations on future sustainable infrastructure such as wind turbines, coastal defences, aquaculture, and ecotourism. Once mining sites are depleted, companies withdraw, leaving behind damaged ecosystems and removing economic value from affected communities. Social and economic impacts are frequently understudied compared to environmental effects, creating an incomplete picture in decision-making processes.
- Dr Lewis-Bevan has pointed out that Northland provides a case study in alternatives. Tourism in the region has strong growth potential, with “swimmability” rates outperforming national averages: safe swimming 90% of the time compared to 80% elsewhere⁹. In 2024, tourism contributed 5.5% of Northland’s total economic output, compared to mining at just 0.1%, and agriculture/forestry/fishing at 10%. International tourists comprised 25% of the region’s tourism expenditure, primarily attracted by nature, scenery, Maori/Pacific culture and history and heritage.
- Te Araroa trail, starting at Cape Reinga, passes through Te Akau, Bream Bay. Through-walkers experience the sandy beach, laid-back seaside life, safe swimming, fishing, and industrial infrastructure transformation.

(c)The nature and scale of the project’s regional and / or national benefits.

What about the economics, TMC hears the panel ask. Excellent question. What is happening to the Chiefs and Tribes of New Zealand? Where the TMC sees suffering and climate chaos, Te Parawhau ki Tai Resource Management sees anonymous dollar signs.

The *Te Hononga Relationship Agreement*, dated 14 September 2025, entered into between MBL and Te Parawhau ki Tai, records that:

their intention and commitment to establish a positive and balanced relationship exercising good faith, co-operation, and flexibility and responsiveness in working together to undertake the Project. Te Parawhau ki Tai and MBL commit to an ongoing relationship, with a view to long term sustainability into the future that links to the aspirations of both parties. ...

The involvement includes:

Affording various contributions to Te Parawhau ki Tai relative to extraction values taken but providing up to amount (redacted) for the life of the consent if granted.”

The economic benefit to the Chiefs and Tribes of New Zealand, over the course of the project, is not receipted. Nonetheless, Maori people make up about 31 per cent of Whangarei District's 100,00 strong population, making MBL's economic benefit to Maori critical. Improving outcomes for Maori such as wider consultation, better health, housing, employment, and wellbeing will be positive for the whole District. The work involved in the TMC implementation plan is important and greater than the agreement between Te Parawhau ki Tai Resource Management Unit and the family corporate.

TMC recommends to the Panel that MBL commits \$61 million through an endowed Trust to accelerate the wellbeing of Maori through health, education, employment, and housing as set out in section 18 of the Maori Development Act 1962. The funding will be used by the TMC to establish an arts and science centre at the former Takahiwai school in the kaenga of Takahiwai, in collaboration with marae, Indigenous Maori, International Indigenous, and Pasifika researchers, councils, heavy industry, schools, and environmental organisations to:

- Establish a centre of life-long learning education.
- Support research into biodegradable and plastic-free fibres, aiming to reduce the environmental footprint of the cement industry.
- Accentuate the importance of protecting and enriching Te Reo Maori me nga tikanga.
- Protect and conserve the remaining natural habitats from the hills to the sea, and restoring those already degraded.
- Expand community-level conservation groups, such as the *Pest Strategy: Takahiwai Hills and Forest*.
- Highlight sustainable farming practices, and thoughtful land-use planning to rebuild the variety of ecological roles marine and land species provide.
- Expand green spaces, support habitat corridors, limit excessive land conversion, and endorse policies that strengthen all ecosystems and the human communities connected to them.
- Address health inequities faced by Kaumatua, including memory loss and loneliness.
- Address health inequities faced by children, including impoverishment in the broadest sense of the word.
- Develop a wraparound, art, science, conservation-hub model as a culturally resonant concept of promoting health, education, employment, housing, and wellbeing.

What will begin as a conservation-focused philanthropy will expand into material and social innovation, targeting one of the most resource-intensive sectors of the global economy. By supporting research and development, the TMC initiative aims to reduce the environmental footprint of the cement industry. The initiative also encourages collaboration between the TMC, and Takahiwai kaenga, startups, scientists, industrialists, environmentalists to scale solutions and bring sustainable materials into mainstream global production. If successful, this effort could help reshape the future of infrastructure development towards more environmentally responsible practices.

In other words, the investment signals a shift towards industrial transformation, particularly in concrete, where materials account for a significant share of emissions and environmental damage. Studies by the University of Miami estimate that the concrete industry is responsible for around 5 to 8 percent of global human caused carbon dioxide emissions. Put the estimate in a bigger frame and the buildings and construction sector, as a whole,

contributes roughly a third of global CO2 emission, depending on what is included in the accounting. The scale is exactly why small sounding improvements can matter. Even modest gains can add up because of how much concrete the world uses. If successful, TMC's education effort could help reshape the future of cement toward more environmentally responsible practices.

The TMC's final comment is, *How will MBL's seafloor mining operations respond to the discovery of something truly novel on the seafloor?* Within the first two to three years of the full-scale commercial mining operation, the amount of time humans would have spent observing the seafloor will nearly double. Within the 35-year operational life of the mine, the likelihood of discovery is guaranteed, and not just new species of nematodes or interesting snails, but whole ecosystems and ecological processes, with the potential to fundamentally change our understanding of Papatuanuku, Ranginui, Tangaroa, Tawhirimatea, and life on Earth.

A discovery on a large scale would mandate an operational full stop, a complete overhaul of any cultural and environmental management plan, and years, if not decades, of focused study. When MBL is the only mining company with the resources and capacity to monitor the site in Te Akau Bream Bay, how does the TMC through the panel safeguard this potential for discovery? Discovery is inevitable. The tragedy before us now lies in rushing to exploit the seafloor before the TMC, Maori conservation management, environmental organisations, and tourism understand deeply what we could lose.

Naku noa na Mere
(Dr) T. Mere. A. Kepa



Chair, Takahiwai Maori Committee. Est. 1977
Te Parawhau Hapu, Takahiwai

9 May 2026