Response ID ANON-URZ4-5FYS-V

Submitted to Fast-track approval applications
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Submitter details

Is this application for section 2a or 2b?

2A

1 Submitter name

Individual or organisation name:
McCallum Brothers Limited

2 Contact person

Contact person name:
Christopher Garton

3 What is your job title

Job title:
Environmental Manager

4 What is your contact email address?

Email:
s 9(2)(a)

5 What is your phone number?

Phone number:
s 9(2)(a)

6 What is your postal address?

Postal address:

s 9(2)(a)

7 Is your address for service different from your postal address?

Yes

Organisation:
McCallum Brothers Limited

Contact person:
Christopher Garton

Phone number:
s 9(2)(a)

Email address:
s 9(2)(a)

Job title:
Environmental Manager

Please enter your service address:

s 9(2)(a)

Section 1: Project location

Site address or location

Add the address or describe the location:

Bream Bay, Northland as shown on the Bioresearches Drawing “Map Showing Proposed Extraction Area and Proposed Control Areas”, Dated 17/04/2024 (Attachment 1).

The exact boundary of the proposed sand extraction area and control areas is subject to final detailed investigations.

File upload:
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Upload file here:
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Do you have a current copy of the relevant Record(s) of Title?

No

upload file:
No file uploaded

Who are the registered legal land owner(s)?

Please write your answer here:

The site is an area of seabed within the coastal marine area and there are no records of title.

The application is within the coastal marine area, ownership of which is vested in the Crown.

Detail the nature of the applicant’s legal interest (if any) in the land on which the project will occur

Please write your answer here:

Sand extraction within this part of the coastal marine area is authorised through a Coastal Permit.

Section 2: Project details

What is the project name?

Please write your answer here:
Bream Bay Sand Extraction Project

What is the project summary?

Please write your answer here:

McCallum Bros Limited seeks to obtain a resource consent for 35 years to extract sand suitable for concrete production from an area approximately 17 km2 in size in Bream Bay.

What are the project details?

Please write your answer here:

Basic Details
The project proposes the extraction of
a. up to 150,000 m3 of sand per annum at a rate of up to 15,000 m3 per month for an initial period of three years.
b. up to 250,000 m3 of sand at a rate of up to 25,000 m3 per month for the remainder of the proposed 35 year term of consent.
Sand is to be extracted (predominantly at night) across the entire extraction site as shown in Attachment 1.

Objective
The objective of the proposal is to provide a long-term sustainable source of sand to Auckland (and Northland and Coromandel/Bay of Plenty in the future) which is suitable for concrete production. The efficient and secure production of concrete is essential for infrastructure and commercial/residential development.

McCallum Bros. Ltd.
McCallum Bros Limited (MBL) is a 4th generation, family-owned company, established in 1904. It is an independent sand supplier and does not manufacture concrete itself. MBL predominantly supplies the sand to concrete manufacturers and other customers in Auckland.

Sand Supply to Auckland
The annual requirement for sand in the Auckland region is estimated to currently be 900,000 tonnes. This is down from a high of 1.0 million tonnes in

2021. The volume of sand required per capita is currently 0.5 tonnes so as Auckland grows so too does the demand for sand. Looking forward to 2048 this is expected to increase to between 1.24 and 1.4 million tonnes, depending on the growth estimate used. Sand supplied to the Auckland region is predominantly used for the manufacture of concrete. MBL, through its sand extraction from the Mangawhai/Pākiri embayment, was supplying roughly 40 - 45% of Auckland's market share of sand used in concrete manufacture. This market share has fallen to about 19% due to the reduced capacity that can be extracted under the temporary consent that was granted by the Environment Court in 2023. This temporary consent permits the extraction of up to 76,000 m3 per annum until all appeals with respect to a new consent are determined or until August 2026, whichever is earlier. Given these reduced volumes, MBL prioritised the sale of this sand to customers producing high-strength concrete used in the construction of significant projects such as the Central Interceptor and City Rail Link.

The other main supplier of marine sand to the Auckland market extracts sand from the Kaipara Harbour. The resource consents providing for this are due to expire in 2027. The consented volumes from this resource are large, but there are significant operational constraints on delivering the product to Auckland. These centre around access to the unloading site on the Helensville River due to its shallow and tidal nature. These characteristics place limits on the timing to unload and the size of the vessels that can barge the sand to the depot. On top of this are the lengthy trucking distances required to bring the sand to the main markets (e.g. 55 km to Central Auckland).

Before July 2023, when sand extraction at Pākiri was reduced, marine sand from the Pākiri embayment and the Kaipara Harbour together accounted for about 95% of Aucklands sand used in concrete.

Very limited volumes of sand for the Auckland market are sourced from land-based sand mines (such as Tomarata and Fulton Hogan Tuakau quarries). Brookby Quarries Limited has also recently announced that it will soon manufacture sand using rock from its Brookby Quarry. However, this product is currently unproven in the Auckland concrete manufacturing market and supply capacity and market acceptance are unknown.

An Economic Assessment of the Auckland sand demand and supply market is included in Attachment 2. Obtaining a coastal permit for sand extraction from Bream Bay will significantly improve the resilience of Auckland's sand supply and will be critical if the coastal permit for sand extraction from the Mangawhai/Pākiri Embayment is not granted and the consents for sand extraction from the Kaipara Harbour are not renewed post their expiry in 2027. All of MBL's customers are concerned with the lack of certainty on sand supply in the Auckland market. Attachment 3 demonstrates this with a letter from Andrew Moss, CEO of the Hynds Group outlining the concerns of the Hynds Group in a letter to Hon. Ministers Shane Jones, Chris Bishop and David Seymour. Further to this Attachment 4 contains a statement from Patrick Bridgeman, Managing Director of Bridgeman Concrete regarding the sand supply issues and his experience with securing supply in Auckland and his concerns should no further sand consents be introduced to the Auckland market.

The Sand Resource

The mineralogical properties, particle size distribution and freedom from silt and other contaminants make the sand from the proposed Bream Bay site ideal for ready-mix concrete manufacture, particularly in the use of high-strength specialist concrete for use in infrastructure projects. Paul Donoghue, a concrete engineer with 35 years of experience in the global concrete industry has assessed the Bream Bay sand and Attachment 5 provides a statement that in his expert opinion, the sand is of a quality that can be used in high-strength concrete such as that used in significant projects.

Vibracore samples have established that there is between 2-4 m of suitable sand across the whole of the proposed extraction site. Therefore, the volume of sand within the site exceeds 34,000,000 m3 based on a minimum of 2 m sand depth. The application area is simply a section of Bream Bay, where there are vastly greater volumes of sand. Sand extraction will be undertaken at depths greater than the depth of closure to avoid any potential effects on the foreshore. The depth of closure is the landward side within the coastal marine area where wave-driven cross-shore and long-shore sediment transport processes are confined. This is the depth where, except under very significant storm events, there is relatively little movement of sand landward or seaward. Removing sand from beyond the depth of closure means that there will be no impact on the beaches, the dunes, and surf breaks of Bream Bay because the sand in these systems is not meaningfully connected to sand beyond the depth of closure.

Other Shipping

The proposed sand extraction location is adjacent to the designated anchorage area for large ships visiting Marsden Point in Whangārei so the movement and presence of ships is common in the embayment. The sand extraction proposal area will not affect the use of this area for vessel anchoring or the movements required to access the Port of Whangārei and is clear of all designated navigation routes.

Method of Extraction

The proposal is to extract sand from the sea floor using a trailing suction dredger the "William Fraser". This is the same method which is employed for the current sand extraction operation in the Mangawhai/Pākiri Embayment.

The "William Fraser", built in 2019, is a motorised trailing suction dredge that is 68 m long and has an approximate capacity of 900 m3 of sand. Sand is extracted using a drag head and pump system which fluidises the sand and delivers it into a holding hopper on the vessel. The operation can be likened to a vacuum cleaner operating on the seafloor. The width of the drag head is 1600 mm and it leaves a dredge track approximately 100 mm deep.

The "William Fraser" was designed specifically for sand extraction in the northeastern coastal waters of New Zealand. It can extract sand in depths up to 36 m. This depth allows for a greater area beyond the depth of closure to be dredged which has the benefit of spreading the extraction over a large area and therefore increasing the recovery time and minimising the impact on the marine environment.

The trailing suction sand extraction operation occurs as follows:

(1) Generally during the afternoon of an extracting day, the vessel will leave the Port of Auckland for the sand extraction area and follow a route along the east coast. It cruises at a maximum of 9.5 knots until it is approximately 1 km away from the extraction area.

(2) Once the vessel is within 1 km of the extraction area, it will slow as the dredging gear is prepared. Within 500 m of the extraction area, it will usually

have slowed to a speed of 1.5 to 2.5 knots. This is also the speed the vessel travels while extracting sand.

(3) While the vessel gets into position the drag head is lowered and the pump is started. Water will start to pump through the system in readiness to lower the drag head to the seafloor for extraction to commence.

(4) When the vessel reaches the extraction area, the drag head is lowered to the seafloor and pumping of a sand slurry begins. At this point, the Master of the vessel will start recording the extraction track on the MAXSea navigational software. Recording will continue until dredging is ceased and/or the pump is lifted off the sea floor.

(5) The sand slurry is fluidised at the drag head via the suction pulling sand and water through the drag head. The sand slurry moves up the drag head pipe, through the pump and then on board the vessel where it is discharged into a screen deck that utilises a 2.5 mm screen mesh to prevent larger material from entering the hopper.

(6) The sand passes through the screen deck and into two pipes that run along the sides of the holding hopper and pass into the hopper on board. As the slurry drops into the hopper the water velocity slows and the sand settles into the hopper. The water and any finer sediment in the load then passes out of the hopper into moon pools which discharge into the sea at the keel of the vessel (at least two metres underwater). There are six moon pools in total, three along each side of the hopper.

(7) The barge slowly fills with sand with excess water dropping into the moon pools. As the level of sand increases in the hopper, boards are used to raise the height of the side openings above the moon pools with the excess sea water returning to the sea. Oversized materials pass across the top of the screen and drop via a pipe into the forward port side moon pool. It then drops through the vessel and also exits at keel height under the vessel.

(8) Once the hopper in the William Fraser is full, the drag head is lifted off the bottom, the pump lines are flushed with seawater to clear them of any sand and the pump gear is brought on board and loaded and secured into its cradle on board the vessel. The time it takes to fill the hopper with sand is between 4 and 6 hours. A typical return trip to Bream Bay from the Port of Auckland is expected to take approximately 20 hours, depending on the weather.

(9) When the vessel returns to the Port of Auckland the sand is unloaded via excavator onto a stockpiling barge to drain, and after a day or so is loaded into trucks for distribution to our customers or to a land-based stockpile.

Extraction at Night
The sand extraction is planned to be predominantly undertaken at night and the vessel could expect to be undertaking sand extraction for a 4-6 hour period 3-5 times per week. The sand extraction is weather-dependent.

Lighting
Subdued and downward-facing lighting is used on the vessel. When the vessel is dredging it must display RAM (Restricted Ability to Manoeuver) lighting and have some lighting so the crew can safely work while extracting sand. Lighting is designed and operated to minimise the risk of bird strike.

Risk of Oil Spillage
The William Fraser is designed to reduce the risk of an oil spill. The risks are further mitigated by MBL using biodegradable synthetic oil instead of standard hydraulic oil. There is an approved Oil Spill Response Management Plan currently in place for the current sand extraction operation. In the 80-odd years that MBL has been extracting sand, MBL has not had an oil spill or other accident such as a vessel stranding during sand extraction that produced a release of contaminants to the Coastal Marine Area.

Describe the staging of the project, including the nature and timing of the staging

Please write your answer here:

MBL already operates a loading facility at the Ports of Auckland. No additional equipment or land-based facilities are required in order for MBL to commence sand extraction at Bream Bay.

MBL would commence sand extraction at Bream Bay as soon as possible after a Coastal Permit is granted. It is estimated that at least one month may be required to give effect to any pre-sand extraction consent conditions such as approval of marine mammal management plans etc.

The first stage of the project will be the extraction of 150,000 m3 per annum for the first three years spread across the entire proposed sand extraction area. To meet the current demand for sand, the William Fraser would be required to undertake approximately 14 trips per month.

The second stage of the project will increase this rate to 250,000 m3 per annum over the same extraction area. This second stage is proposed to be commenced after three years if no significant or unexpected adverse effects arising from the extraction have been identified through the monitoring programme and cannot be avoided, remedied or mitigated.

This second stage would allow for the distribution of sand to concrete manufacturers in Northland and the Coromandel/Bay of Plenty (into the MBL depot at Kopu). The Coromandel/Bay of Plenty in particular has had sand supply issues since supply from the Pākiri Off-Shore site to the area was stopped in 2023. Re-opening the sea-based supply to Kopu has potentially significant benefits in terms of reducing truck movements associated with the current sand supply into the Coromandel from the lower Bay of Plenty and the Waikato Region.

What are the details of the regime under which approval is being sought?

Please write your answer here:

The only authorisation required is a Coastal permit under the Resource Management Act 1991

If you seeking approval under the Resource Management Act, who are the relevant local authorities?

Please write your answer here:

Northland Regional Council

What applications have you already made for approvals on the same or a similar project?

Please write your answer here:

No previous applications of any kind have been made for the Bream Bay project.

Is approval required for the project by someone other than the applicant?

No

Please explain your answer here:

The application area is in the coastal marine area and therefore no landowner approval is required.

If the approval(s) are granted, when do you anticipate construction activities will begin, and be completed?

Please write your answer here:

Upon granting the coastal permit, sand extraction would commence as soon as any pre-extraction consent conditions can be fulfilled. It is expected that this process will take at least one month.
It is confirmed that:

• The equipment, training, and other operational processes required are already in operation by MBL at another location and will simply be duplicated at Bream Bay.
• No new significant procurement of resources or staff is required.
• No new funding or capital investment is required.
• No site works are required.
• A 35-year consent period is being sought.

Section 3: Consultation

Who are the persons affected by the project?

Please write your answer here:

Northland Regional Council (as the territorial authority).

The Ngātiwai Trust Board (as the mandated iwi authority of Ngātiwai iwi, whose rohe extends from Rakaumangamanga (Bay of Islands) in the north to Mahurangi (Warkworth) in the south, and across to Aotea (Great Barrier) including the off-shore islands.

Patuharaheke Te Iwi Trust Board (as the Trust Board who represents the Patuharaheke Hapu who are the mana whenua of the subject area)

Northport Limited

Channel Infrastructure Ltd (previously Refining NZ Ltd)

Northport Harbour master.

Applicant Groups under the Marine and Coastal (Takutai Moana) Act 2011:
Claimants MBL has been made aware of are listed below
· Ngapuhi nui tonu-Kota-toka-tutaha-moana o whaingaroa
· Ngapuhi nui tonuu (Te Kotahitanga Marae)
· Ngapuhi nui tonu (Awataha Marae)
· Te Hikutu whanau and hapu
· Iwi, whānau and hapū of Ngātiwai
· Nga Hapu o Ngati Wai Iwi
· Ngā Hapū o Tangaroa ki Te Ihu o Manaia tai atu ki Mangawhai
· Ngati Wai Whairepo Trust
· Patuharakeke Te Iwi (though listed above)
· Reti whanau
· Te Parawhau ki Tai

· Te Uri o Tautohe
· Te Hikutu Whanau and Hapu
· Nga Puhi Ngati Wai Haki Pereki Ngawhetu Sadler Whanau Trust

Detail all consultation undertaken with the persons referred to above. Include a statement explaining how engagement has informed the project.

Please write your answer here:

Refer to Attachment 6 for a copy of MBL's stakeholder consultation document.

Consultation has commenced with the purpose of informing the detail of the proposal (including ongoing monitoring and participation before and after commencement).

The cultural relationship advisor to MBL has had an initial meeting with the CEO of the Ngatiwai Trust Board to introduce the proposal. Contact is ongoing.

A working relationship with the Patuharaheke Te Iwi Trust Board has been established and fortnightly meetings are being held. The Trust Board is being kept updated on the investigations being undertaken and more detailed consultation is currently being planned in the coming months. Patuharakeke is involved in providing feedback on the results of our investigations and providing cultural feedback to help experts identify and take into account matters of significance to Patuharakeke.

We have met with Northport to discuss the project. They have expressed no concerns with the proposed application area. The next stage of consultation will be to provide the results of our investigations in support of the project and the final details of the application.

We have met with Channel Infrastructure and no concerns have been raised to date with the application location. The next stage of consultation will be to provide the results of our investigations in support of the project and the final details of the application.

The Northport Harbourmaster was satisfied there would be no effects on marine traffic or safety arising from sand extraction at the proposed site. We will keep the Harbourmaster informed as the project progresses.

Contact has been made with Northland Regional Council to notify them of the application. MBL awaits a response.

Contact has also been made with Te Parawhau and a meeting is scheduled on the 6th of May.

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Describe any processes already undertaken under the Public Works Act 1981 in relation to the land or any part of the land on which the project will occur:

Please write your answer here:

N/A

Section 4: Iwi authorities and Treaty settlements

What treaty settlements apply to the geographical location of the project?

Please write your answer here:

Despite enquiry, we are not aware of any Treaty Settlements or Statutory Acknowledgment areas over the proposed extraction area.

Are there any Ngā Rohe Moana o Ngā Hapū o Ngāti Porou Act 2019 principles or provisions that are relevant to the project?

No

If yes, what are they?:

Are there any identified parcels of Māori land within the project area, marae, and identified wāhi tapu?

No

If yes, what are they?:

Is the project proposed on any land returned under a Treaty settlement or any identified Māori land described in the ineligibility criteria?

No

Has the applicant has secured the relevant landowners' consent?

No

Is the project proposed in any customary marine title area, protected customary rights area, or aquaculture settlement area declared under s 12 of the Māori Commercial Aquaculture Claims Settlement Act 2004 or identified within an individual iwi settlement?

No

If yes, what are they?:

Has there been an assessment of any effects of the activity on the exercise of a protected customary right?

No

If yes, please explain:

Upload your assessment if necessary:
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Section 5: Adverse effects

What are the anticipated and known adverse effects of the project on the environment?

Please describe:

Description of the Existing Environment

The proposed sand extraction area is located within Bream Bay and at its closest point is approximately 4.2 km from the Bream Bay shoreline.

Bream Bay has a gently curving shoreline aligned northwest to southeast and bound to the north and south by major headlands formed in volcanic outcrops. It runs from Bream Head at the mouth of Whangārei Harbour, 22 kilometres south to the headland of Bream Tail, east of Langs Beach.
The shoreline is generally stable to slightly eroding, although there is evidence of increased erosion from the central to northern areas of the Bay. The Bay has reasonably uniform depth contours from the ebb tide delta off Whangārei Harbour to the north and Waipu Cove. The depth contours extend from the beach to around the -12 m depth contour at a slope of around 1% reaching a flatter slope from around 12 m to 20 m depth contour (around 0.2%), then deepening to around 40 m at around 0.4% steepness.
Bream Bay experiences a low- to moderate-energy wave climate due to its leeward position. Maximum wave heights can reach around 9 m with a mean annual significant wave height of around 0.7 m. Swell predominantly comes from the northeast to easterly sectors with the northern part of Bream Bay more sheltered to swell due to Whangārei Heads than the southern end of the Bay.
The long-term net flow is oriented from north to south (i.e. alongshore). However, there is a residual circulation within Bream Bay due to the sheltering effect of Whangārei Heads. It is expected that mean currents in the lower water column will be weak. Studies for Mangawhai-Pākiri indicate median speed in the range of 4-7 cm/s and a 90% speed less than 15 cm/s and that the tidal contribution to measured currents was less than 25% of the variability in mean current. The remainder of the current was generated by non-tidal effects such as winds, density stratification and oceanic intrusions. Near bed currents, particularly in shallower areas are dominated by wave processes, although mean currents contribute to the mass movement of sediment. This is likely to also be the case within Bream Bay.
There are limited quantities of new sediment entering the bay from the catchment and coastal erosion processes of the adjacent cliffs. The primary sediment source for Bream Bay and the nearshore coastal sediment system was delivered to the continental shelf by the Waikato River via the Firth of Thames when sea levels were lower than they are now during the last glacial maximum.
In terms of landscape, the approaches to Whangārei Harbour are framed by an expansive coastal plain and arcing shoreline that extends from Marsden Point in the north to Waipu Cove and Langs Beach in the south. This expansive ocean beach and bay is bookended by the volcanic peaks of Mt Lion and Bream Head flanking the northern side of the Whangārei Harbour entrance and the Brynderwyn Hills southeast of Langs Cove. Between these features, the coastal terrace around, and on either side of, Ruakaka encloses a broad area of sea that extends out to, then past, the Hen and Chicken Islands. The settlement's coastal terrace edge itself is lined by housing, industrial development, the Ruakaka Sewerage Plant and a racecourse – all of which face out across the open waters of Bream Bay, while the former Marsden Point Oil Refinery (now the Channel Infrastructure Storage Facility) is also prominent at the northern end of the bay. South of Ruakaka, the Uretiti Recreation Reserve, Waipu Golf Course, and farmland follow the ocean beach down to the coastal settlements of Waipu Cove and Langs Beach at its southern end.

Bream Bay itself has a gently shelving profile that is underpinned by its expansive, relatively shallow sand base, except near the entry channel to Whangārei Harbour and marginal reefs of both Bream Head and the seaward edge of the Brynderwyns – between Langs Beach and Mangawhai. Fuel tankers, log carriers, the occasional cruise ship, and fishing vessels are also a feature of this maritime environment, both waiting within Bream Bay to discharge their loads at Marsden Point and Northport or plying their way in and out of the harbour entrance.
Consequently, the majority of Bream Bay and its coastal margins are highly developed and modified. Although the outer Whangārei Heads embracing Mt Lion and Bream Head are identified as an Outstanding Natural Landscape, no such status is attributed to other parts of the Bay and its immediate margins. In a similar vein, while the Whangārei Heads coastline, its outer banks, and parts of the Waipu River mouth, are identified as comprising areas of High and Outstanding Natural Character, most of Bream Bay's coastline and the coastal marine area are devoid of such notation.

The seafloor within the extraction area is typical for a low-energy sandy embayment. A range of benthic species typical of the Mangawhai/Pākiri/Bream Bay embayment could be expected. This may include scallops, starfish and numerous polychaetes and mollusc species but generally not in significant numbers. Based on the known habitat, depth and distribution ranges, it is unlikely that there would be protected species present on the seafloor at the water depths of the proposed sand extraction.

The range of general water quality for parameters including turbidity and suspended solids are expected to be well within the ambient range or below

their respective median values as reported by Stats New Zealand for coastal waters around New Zealand. Previous measurements from consent applications in the Mangawhai – Pākiri embayment to the south of Bream Bay recorded levels that were within the ambient range. It is expected that the results at Bream Bay will be very similar.
No contamination in the seabed sand has been detected through the baseline sampling undertaken as part of this application and therefore no contaminants will be released to the water column when extraction occurs.

A range of marine mammals are expected to traverse through and near the proposed sand extraction area some of which frequent the wider region associated with Mangawhai / Bream Bay year-round or on a semi-regular basis. These species include common dolphins, bottlenose dolphins, orcas, Bryde's whales, leopard seals and fur seals. Seasonal visitors to Bream Bay may include southern right whales and humpback whales. While other species could have an infrequent presence, they would be expected substantially less frequently.

A wide range of common coastal fish and shellfish species are present, including but not limited to snapper, gurnard, John dory, school shark, trevally, rig, kahawai and scallops. Except for scallops which are sedentary, all of the fishes are mobile and likely to be transient in the extraction area.

A range of seabird species typical for the Bream Bay/Mangawhai embayment could be expected to forage in the proposed sand extraction area from time to time. Species would include, for example, flesh-footed and Buller's shearwaters, black petrel, little penguin and red-billed gull.

Several threatened and at-risk seabird species are known to be present in the wider area including those noted above. Landward of the extraction area a number of shorebird and coastal seabird species are known to breed, including, for example, fairy tern, variable oystercatcher and New Zealand dotterel.

Fairy Tern (Tara Iti), classified as 'threatened-nationally critical' under the New Zealand threat classification system, breeds in very low numbers at Waipu to the southwest of the proposed sand extraction area, but given the distance that the proposed sand extraction area is from the closest nesting sites (>5 km), the likelihood of fairy tern foraging in this area is extremely low.

The ambient noise environment at the shoreline, where receivers (members of the public) may be located, is expected to be dominated by coastal noises (ie wave movements etc.) for the majority of the year. There may be periods when wind and swell conditions are very low and ambient noise levels would drop. There may be some receivers that are elevated above the coastline where ambient noise levels may be lower.

The ambient underwater soundscape is expected to be typical of a sandy bottom habitat that is near an open coastline anchorage area with sounds from anchored vessels (ie generators, anchor chains), fish, marine mammals, snapping shrimp, transiting vessels (to and from Northport) and weather (wind and rain).

The application area is expected to be in the swell corridor for five regionally significant surf breaks within Bream Bay namely Marsden Point, Ruakaka River mouth, Waipu River, Waipu Cove and Langs-Ding Bay. The sand extraction area is at least the following distance from these surf breaks:
7.3km from Marsden Point,
4.5km from Ruakaka River mouth,
5.6km from Waipu River,
6.2km from Waipu Cove
and 6.4km from Langs-Ding Bay.

These surf break areas are shown in Attachment 7.

It can be expected that both recreational and commercial fishing occur from time to time in the proposed extraction area. However, about 2/3rds of the extraction area is not open to commercial bottom trawling and Danish seining fishing methods under current fisheries regulations. In addition, the commercial scallop fisheries are also closed in Bream Bay. There is also a small intermittent crab and whelk fishery but this would occur inshore of the extraction area.

Attachment 8 includes the Proposed Northland Regional Plan Overlay Plans with the proposed extraction area and control areas shown.

Effects on Coastal Processes

The potential effect on coastal processes is being assessed in accordance with the United Kingdom's "Marine aggregate dredging and the coastline: a guidance note". In addition, information from previous investigations and monitoring undertaken in the Mangawhai-Pākiri embayment are also being used to inform this assessment.
Indirect impacts on the physical environment can potentially result from:
1. changes in wave transportation of sediment due to the altered seabed bathymetry. It is proposed to undertake the sand extraction seaward of the depth of closure and therefore at a depth where any changes are minor. A minor change does not automatically result in an adverse effect.
2. erosion of sediment from beaches and dunes. The proposed sand extraction area is to be seaward of the depth of closure to avoid this effect. The sand extraction is undertaken in a manner where significant trenches or holes are not created and an even extraction rate across the sand extraction area is proposed.
3. changes in tidal currents. This potential effect is very unlikely due to the low tidal currents, the relatively flat bathymetry and the small changes to the bathymetry which will result from the sand extraction.
4. alteration of regional sediment transport pathways and the supply of sediment to adjacent sandbanks or beaches is unlikely to occur due to sand extraction occurring seaward of the depth of closure.

Ongoing bathymetric monitoring is being proposed to monitor the sand extraction activity and to ensure that it does not result in any adverse effects.

Effects on Marine Mammals

The marine mammals most likely affected by the proposal include the few species that frequent the wider region associated with Mangawhai / Bream Bay year-round or on a semi-regular basis. These species include common dolphins, bottlenose dolphins, orcas, Bryde's whales, leopard seals and fur seals.

It is expected that the overall risk of any significant adverse effects for marine mammals arising (from both the sand extraction activity and transiting of the extraction vessel to and from the site) will be no more than minor.

Proposed conditions of consent will include the requirement for a Marine Mammal Management Plan and adherence to the Ports of Auckland's Hauraki Gulf voluntary transit protocol for commercial shipping.

Effects on Benthic Organisms

Some benthic organisms on the seafloor immediately within the path of the dredge are entrained. Smaller species may pass through the screen into the hopper while larger ones are returned to the coastal marine area via the moon pool system.

Previous monitoring of trailing suction dredging at Pākiri has indicated a low degree of mortality of various benthic species and the majority of gastropods (ie shellfish) are shown to survive the filter process and discharge back into the coastal marine area.

Given the wide distribution of these species in the embayment and the limited area of extraction where entrainment may occur, the overall effect on benthic populations is expected to be negligible.

An ongoing monitoring programme to assess the effects on benthic organisms is proposed. This will utilise multiple control sites to provide feedback on the extraction process and possible changes to reduce any identified significant adverse effects. As part of this monitoring, a baseline assessment utilising sampling will be undertaken before sand extraction occurs. In the unlikely event any protected species or sensitive habitats are identified, then that specific area can be excluded from sand extraction.

Effects on Fish

Given the mobility of fish, they can avoid entrainment during the sand extraction process. If sand divers (which burrow into the top of the seabed) are extracted, they are too big to pass through the sand screen and are discharged back into the coastal marine area.

Disturbance of the seafloor can lead to a very localised loss of food resources. However, given the small area affected compared to the size of the wider embayment, this is expected to be a negligible effect.

Given the very temporary and localised nature of changes in turbidity in the water column resulting from the discharge, no effects on fish from the discharge are expected.

As assessed below, some temporary masking of communication from the noise of the extraction activity could be expected for some species. This is temporary, being limited to the period of extraction only, and overall effects on fish species are expected to be negligible.

Effects on Avifauna

Vessel Strike
The risk of a vessel strike is very low and has never occurred with any of the dredge vessels operated by MBL in the Hauraki Gulf over the last 50 years. Dredging will be at night and lighting will be appropriately controlled using standard and proven light mitigation measures on the vessel.

Extraction and Discharge
The extraction process does not directly impact avifauna. The presence of the vessel and the discharged material in the water column may prevent nocturnally-active seabirds from foraging in that area. However, the likely affected area will be small relative to the area that seabirds can exploit, and so even assuming complete exclusion from an area surrounding the vessel when extracting sand the effects on seabirds are likely to be negligible.

Noise
Based on the monitoring from the current operation of the William Fraser, noise from the vessel is not expected to impact avifauna.

Effect on coastal breeding habitat of shorebirds and seabirds
The proposed sand extraction site is seaward of the depth of closure and will not have any measurable effects on the stability of the beach and shoreline. It follows that there will be no effect on the stability and integrity of avifauna breeding habitat and nesting.

MBL operates an oil spill response plan for the Willliam Fraser and the likelihood of an oil spill, which could potentially affect seabirds and shorebirds, is very low.

Based on the above, it is considered that the risk of adverse effects on avifauna species in this area from the proposed sand extraction operation is very low.

Effects on Water Quality

The effects on water quality from the sand extraction activity have been monitored during sand extraction (including the discharge of excess material) at the Pākiri sand extraction sites. The discharge at the Bream Bay site is expected to be very similar because the sand grain size and mineral composition

are very similar. Based on this monitoring:

(1) The water quality assessments confirm the rapid reduction in both TSS and turbidity so that within a short time and distance, water quality values for turbidity and suspended solids return to the ambient levels expected in a coastal environment. This is due to the use of moonpools so that discharges are well below the surface of the sea, the slow speed of the vessel while dredging which reduces water turbidity and the majority of discharged material being oversized and rapidly descending through the water column to the seabed, with any residual material dispersing via water currents and wave action.

(2) The discharged material is from the same environment – this material has been demonstrated (via laboratory analyses) to be clean and free of all potentially toxic contaminants (i.e. metals, PAHs and PCBs. Thus, during seabed disturbance, there is a negligible risk of mobilisation of contaminants and negligible risk of contaminants impacting local water quality and potential ecological receptors.

Visual and Landscape Effects

The proposed extraction area is close to the anchorage sites used by fuel tankers and log carriers, and with viewing distances to the extraction area starting 4.2 km from the shoreline of Bream Bay, both the "William Fraser" and its sand extraction operations would be difficult to distinguish from other maritime movements and operations. The "William Fraser" would have a smaller profile than the other vessels at anchor and would appear quite remote. Sand extraction occurs underwater and would not be visible from the shoreline or close to it. The plume created by the discharge is both limited in size and temporal in nature and does not result in a long-term or significant adverse visual effect.

As sand extraction would not result in any erosion or instability, it would not result in any visual or other changes in the landscape. The Bream Bay beachfronts and dunes would remain unchanged.

As a result, it is considered that any landscape and visual effects would be of a very low to insignificant order.

Effects on Recreational Activities

Given the distance to the nearest surf breaks, the extraction methodology, extraction occurring predominantly at night, that extraction will occur seaward of the depth of closure and based on the investigations on the effect of surf breaks from sand extraction at Pākiri, any effects arising will be expected to be less than minor to negligible.

Any impact on the recreational fisheries in Bream Bay from the sand extraction activity is likely to be negligible. Recreational fishing is likely to be closer to the shoreline than the extraction area.

No other specific recreational activities have been identified in this location which may be adversely affected by the proposal.

Effects on Commercial Activities (including Fishing)

Any impact on the commercial fisheries in Bream Bay from the sand extraction activity is likely to be negligible.

The proposal will not impact the anchorage area or the shipping operations of Marsden Point or Northport.

No other existing commercial activities have been identified which may be impacted by the proposal.

Acoustic Effects

Based on previous monitoring of the "William Fraser" operation, it is expected that the noise levels arising from sand extraction will generally be very low on the coastline and further inland. In most meteorological conditions noise from sand extraction will be inaudible on land. The noise levels will be significantly lower than any permitted noise limit for the receiving zones.

In terms of underwater noise, previous monitoring has confirmed the noise level of the "William Fraser" in extraction mode is lower than larger TSHD vessels previously assessed in New Zealand waters for other projects (with an average source level of approximately 168 dB re 1 µPa @ 1m).

It is expected that:
(a) There will be no risk of Temporary Threshold Shift ("TTS") beyond 1m of the "William Fraser".
(b) There is no risk of Permanent Threshold Shift ("PTS") for all species.
(c) There is the potential for masking of other sound signals for some species when animals are within approximately 3 – 5 km of the "William Fraser" operating.
(d) Benign behavioural effects may occur if an animal is within a maximum of 1km of the "William Fraser" operating in the sand extraction area, for example, changing course to avoid the vessel.

This is an area with a degraded underwater soundscape due to existing vessel movements (commercial and recreational) and anchorages where large ships often run generators at anchor for long periods. The sand extraction activity will not change the underwater soundscape of the wider Bream Bay area and cumulative underwater noise effects are not expected to arise from ships beyond the extraction area.

Lighting Effects

The navigation and operational lights on the William Fraser are the minimum required to meet regulatory, navigation, and safety requirements. The "William Fraser" is significantly smaller than many of those vessels, including the occasional cruise ship approaching North Port, Marsden Point, or in the North Port anchorage area. As such, it would have little or no impact on Bream Bay's night-time environment and perception of its night sky.

Cultural Effects

Consultation is continuing with the Patuharaheke Te Iwi Trust Board and a detailed Cultural Impact Assessment is to be prepared. It is expected that the Trust Board will provide input into the various relevant assessments being prepared and the proposed consent conditions. The nature of any ongoing relationship and monitoring by the Trust Board if consent is granted is still to be developed and may evolve over time. A key component of this could be the role of a Mātauranga Māori Liaison Group and cultural liaison agreement.

It is recognised that the removal of sand from the sea is viewed adversely by some iwi but this viewpoint differs from iwi to iwi and hapu to hapu depending on the nature and effects of the activity and their relationship with the moana in their rohe.

To date, the sand extraction site has not been identified as covering an area that has a specific significance to iwi. The sand extraction area does not include large shellfish beds or other kai moana resources. It is recognised that a range of marine mammals and fish are transient in this area and we look forward to Patuharakeke's advice as to their view of the significance of these from their cultural perspective.

It is recognised that Patuharakeke currently enjoys access to Marsden Point's distal spit via a 'ceremonial path' past the current Northport and CINZ facilities. However, it is only the terminus of this pathway that is exposed to the extraction area – outside the confines of Whangārei Harbour. The area of extraction would be more than 4.3 km from this point and operations within it would be juxtaposed against vessels either within the harbour anchorage area in Bream Bay or moving in and out of the harbour.

As outlined above, no effects on the foreshore and sand dunes along Bream Bay are expected. No effects therefore are expected on cultural or archaeological features along Bream Bay.

Expert Evidence That Will Support the Application:

· Planning
· Marine Mammals
· Surf Break Assessment
· Water Quality Assessment
· Statistical Analysis of Ecological Sampling
· Avifauna Assessment
· Hydrography and Bathymetric Assessment
· Coastal Processes Assessment
· Terrestrial Acoustics Assessment
· Economic Assessment
· Underwater Acoustics Assessment
· Marine Ecology Assessment
· Landscape and Natural Character Assessment
· Cultural Assessment
· Concrete Suitability

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Section 6: National policy statements and national environmental standards

What is the general assessment of the project in relation to any relevant national policy statement (including the New Zealand Coastal Policy Statement) and national environmental standard?

Please write your answer here:

New Zealand Coastal Policy Statement 2010 ("NZCPS")

The following assessment assesses the proposal against the relevant objectives and policies of the NZCPS.

Objective 1 – safeguard and sustain the coastal environment

The biological and physical nature of the proposed extraction area and coastal processes of the embayment are known as a result of current and previous studies. The site does not host significant natural ecosystems or sites of biological importance that require protection.

No potential significant adverse effects on the ecology, water quality or natural coastal processes have been identified to date.

Sand extraction on the seaward side of the depth of closure avoids the risk of adverse effects on the foreshore and dunes and any significant natural ecosystems and sites of biological importance in those areas.

It is therefore considered that the integrity, form, functioning and resilience of the coastal environment (including the foredune and beach) and sustaining its ecosystems would not be adversely affected by the sand extraction beyond the depth of closure.

Objective 2 – preserve the natural character of the coastal environment

The coastal environment is dynamic. The proposed extraction site is adjoining an anchorage area and therefore large ships are a common visual element and the seabed in the vicinity has been disturbed by anchoring.

The natural character and natural features in the coastal environment would not be adversely impacted, although shallow and temporary disturbance of the areas dredged would occur from time to time.

The sand extraction area is outside any natural heritage overlays in the Proposed Northland Regional Plan (Outstanding Natural Features, Outstanding Natural Character and High Natural Character). Extraction will be seaward of the depth of closure and will not have any effect on the foreshore/dune system in Bream Bay.

Objective 3 – the Treaty of Waitangi and tangata whenua

The applicant recognises the ongoing and enduring relationship of the tangata whenua over their rohe. MBL has commenced consultation with both the Ngatiwai Trust Board and the Patuharaheke Te Iwi Trust Board. Regular meetings are now being held with the Patuharaheke Te Iwi Trust Board to update them on the scope and findings of investigations.

The objective of MBL is to form a beneficial and enduring relationship with the Trust Boards. As part of developing this relationship, the best ways to incorporate mātauranga Māori will be explored and may evolve over time. A key component of this could be the role of a Mātauranga Māori Liaison Group and cultural liaison agreement with Patuharakeke.

MBL is aware that there are characteristics of the Bream Bay coastal environment that are of particular value to tangata whenua and is working with Patuharakeke and Ngatiwai to identify these so that they can be taken into account as the project is developed further.

To date, no physical features of special value to iwi have been identified which may be adversely affected by the proposal. It is understood that effects on intrinsic or metaphysical values require further consultation and consideration.

Objective 4 – maintain public open space and recreation opportunities

The proposal will not impact on open space or access to it along and within the coastal marine area.

No recreational activities within the proposed extraction area or the immediate surrounds have been identified which may be adversely affected by the sand extraction over night time hours.

No surf breaks are expected to be impacted by the proposed sand extraction.

Objective 5 – coastal hazards risks

The sand extraction activity will not impinge on any natural coastal hazard risks.

Objective 6 – social economic and cultural wellbeing

An Economic Assessment is included as Attachment 2 and concludes:
“Sand is an essential input into a wide range of applications that are critically important to everyday life. Auckland’s sand market is showing signs of supply pressures. Notwithstanding the current economic slowdown, population growth is translating into ongoing demand for infrastructure investments, and therefore concrete and sand. The sand market relies heavily on a small number of consents, with Kaipara consents playing a key role. However, despite access to a large volume of sand in the Kaipara, technical and operational considerations act as a natural limit on the usable capacity that can be accessed.
Auckland needs access to multiple sand sources to ensure that the sand industry can respond to future growth pressures, especially during periods of high growth.”

The proposal is strongly aligned with Objective 6. In particular, an efficient and affordable sand supply continues to be critical for the economic well-being of the Auckland, Northland, Coromandel/Bay of Plenty communities. Auckland remains dependent on marine-sourced sand for concrete production, particularly high-grade concrete required for infrastructure projects of national significance. At the current time, there is not a feasible replacement for marine-sourced sand for the Auckland market. On this basis, there is a functional need for sand extraction to occur in the coastal marine area at a location where a suitable sand source is located and which can be efficiently extracted and delivered to the market.

The sand extraction at the proposed Bream Bay proposal site can be undertaken in a manner where significant adverse effects are avoided.

Sand extraction at this location is considered appropriate and both spatial and volume limits are proposed to avoid the risk of significant adverse effects.

Policy 2 – Treaty of Waitangi, tangata whenua and Māori heritage

As outlined elsewhere, the applicant has commenced consultation with the Ngatiwai Trust Board and the Patuharaheke Te Iwi Trust Board.

In terms of clause (e), there are two iwi management plans of relevance to this area. An assessment of the proposal in terms of these iwi management plans is included in Attachment 9.

In terms of clause (f), the scope and nature of how kaitiakitanga is to be provided for in the long term if consent is being granted is still being developed. A key component of this could be the role of a Mātauranga Māori Liaison Group and cultural liaison agreement.
These would provide an ongoing opportunity for mana whenua input as kaitiaki.

MBL recognises that the final scope of nature of these matters is up to how the Trust Boards wish to participate and exercise their role as kaitiaki and that this may evolve over time.

Policy 3 – precautionary approach

A precautionary approach is inherent in the key features of the project including:
The distance of the extraction area from the shoreline and areas subject to climate change
• Extraction in water depths beyond the depth of closure
• Site selection away from sensitive coastal features
• Volume and rate of take limits
• Benign extraction method
• Predominantly extracting at night to minimise visual effects and interaction with recreational users and marine birds
• Precautionary elements in proposed conditions of consent and management plans

Policy 6 – use and development of the coastal environment, including mineral extraction for infrastructure and social and economic wellbeing

The proposal is for sand extraction for concrete manufacture. Marine sand is an essential ingredient of high-strength concrete which is in turn a vital component of infrastructure and other construction and development. It follows that the provision of an efficient supply of sand is important for the continued economic and social well-being of the Auckland, Northland and Coromandel/Bay of Plenty communities.

The specific properties of the Bream Bay sand and the advantages of using it have been traversed elsewhere in this application. As also covered previously, there is a functional need for marine sand currently required for concrete production in Auckland that is sourced from the coastal marine area.

Policy 11 – indigenous biodiversity

A number of threatened marine mammal species (ie Brydes whale, orca, southern right whale, humpback whale and bottlenose dolphins) are likely to be transient in the area.

A Marine Mammal Management Plan will be implemented which outlines the mitigation actions required to ensure that marine mammals are afforded adequate protection from any actual and potential effects of proposed sand extraction activities.

In particular, the Marine Mammal Management Plan will address the potential effects of underwater noise and the risk of vessel strike on mammals by vessels transiting to and from the site and during sand extraction activities. On the basis of previous studies at Pākiri no damage or injury to marine mammals is expected and significant adverse effects on marine mammal habitat will be avoided.

MBL has been extracting sand from the CMA for over 80 years and has never had an occasion where marine mammals have been struck by their vessels. At all times the extraction vessel travels below the Ports of Auckland Shipping Protocol in relation to marine mammals which requires a speed less than 10 knots.

With respect to avifauna, the risk of threatened avifauna transiting through the sand extraction area and vessel strike is considered to be very low. To date, there have been no occasions of vessel strike by avifauna during MBL's 80+ years of shipping operations in the Hauraki Gulf.

The proposed sand extraction area and the sand extraction methodology have been identified and designed to avoid adverse effects on threatened and at risk species and avoid habitats of threatened indigenous ecosystems.

Overall, the proposal will not adversely impact the indigenous biological diversity of Bream Bay.

Policies 13 and 15 – preservation of natural character and protection of natural features and landscapes

The proposed sand extraction site does not include any Outstanding Natural Features and is not within any Outstanding Natural Character or High Natural Character overlays as identified in the Proposed Northland Regional Plan.

Given the significant distance between the sand extraction area and the closest overlays listed above and the nature of the activity, it is considered that the risk of any adverse effects on identified Outstanding Natural Features, Outstanding Natural Character and High Natural Character overlays is very low.

Any potential effects on the existing natural character of the coastal marine area in this location are considered to be very low.

In terms of effects on the sandy seafloor, if this was considered as part of the seascape, any changes are both minor and temporary in nature.

Policy 16 – surfbreaks of national significance

The proposal will not adversely impact any of the surf breaks identified in Schedule 1 of Policy 16.

Policy 23 – discharge of contaminants

Given the nature of the discharges, the receiving environment, the method of discharge and the temporary and localised nature of the plume granting consents would be consistent with this Policy.

National Policy Statement for Indigenous Biodiversity

In terms of specified highly mobile fauna listed in Appendix Two of the National Policy Statement, it has been confirmed that none of the listed species are expected to traverse the extraction area on a regular basis or if they do they will not be adversely affected by the sand extraction operation.

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Section 7: Eligibility

Will access to the fast-track process enable the project to be processed in a more timely and cost-efficient way than under normal processes?

Yes

Please explain your answer here:

The processing of the coastal permit application under the proposed Fast Track Act should result in a significantly shorter processing time than under the Resource Management Act 1991. Based on their experience to date, MBL considers that the time saving could be in the order of 3 years.

Given the importance of marine sand to the concrete component of most infrastructure and development projects and the increasingly serious shortages of sand particularly in Auckland, rapid approval of the project will clearly have regional and national benefits.

Cost efficiency will be achieved in the form of significant cost savings for MBL directly, but more importantly, there are cost savings for the Auckland sand market, concrete manufacturers and the community. In particular, the delays in achieving a sufficient supply of marine sand in Auckland will result in an increase in the price of sand for the concrete industry which has flow on effects for the cost of significant projects that use marine sand. Without a secure supply of sand, the price of sand will increase significantly causing the cost of concrete and construction projects to increase as well.

Supply shortages can be very disruptive to the delivery of major infrastructure projects and can add significant additional costs to their delivery. Since the restriction of the Pākiri sand supply in 2023, the concrete industry has faced at least four instances where sand supply for concrete production was severely constrained causing prices of sand and concrete to rise. This is during a period when concrete production was already down about 20% causing prices of sand and concrete to rise. As the construction industry grows again, the seriousness and costs of sand shortages for concrete production will increase.

Applying for the project through the fast track process will significantly reduce the time required to establish an alternative source of marine sand relatively close to the Ports of Auckland. This has become critical following the Environment Court's refusal to grant consent for the Pākiri Off-Shore Sand Extraction project for when and the temporary consent granted expires, pending any appeals.

What is the impact referring this project will have on the efficient operation of the fast-track process?

Please write your answer here:

MBL has many decades of experience in the operation of sand extraction. This resource consent application is therefore for an activity where both the operational and potential environmental effects are well known and documented. Below is a list of further reasons why the project can be efficiently handled in a way that will not impede or clog up the fast-track process:
• A detailed and complete application will be provided which will provide a sound basis for the fast-track decision-makers to make a decision in an efficient manner
• Baseline ecological and bathymetric monitoring has been completed and assessments are underway
• By August 2024 all remaining baseline monitoring (for example, noise levels) will be complete
• MBL have an agreement with Patuharakeke, the local hapu, for the delivery of their assessment of effects and consultation is underway with the relevant iwi (Ngatiwai).
• The application will include a detailed suite of proposed consent conditions.

In short, MBL expects to have assembled all the information necessary to enable the project to be fully evaluated by the time the fast-track legislation comes into force.

Has the project been identified as a priority project in a:

Other

Please explain your answer here:

For the reasons given below the Bream Bay project has not been separately identified as a priority project.

Will the project deliver regionally or nationally significant infrastructure?

National significant infrastructure

Please explain your answer here:

The Bream Bay sand extraction proposal does not itself directly deliver any particular infrastructure or development project but is critical for the efficient and resilient supply of marine sand which is crucial to the production of high-strength concrete. High-strength concrete is required for the vast majority of regionally and nationally significant infrastructure projects throughout New Zealand and in the projected market area for Bream Bay sand being Auckland, Northland and Coromandel/Bay of Plenty.

For example, MBL sand has been or is currently being used in regionally and nationally significant infrastructure such as:
- the Auckland Harbour Bridge
- the Waterview Tunnels
- the Newmarket Viaduct
- Auckland's Central Rail Link
- Auckland's Central Interceptor Link
- Port of Napier expansion project
- State Highway 2 extension and bridge between Tauranga and Mount Maunganui (NZTA)

Bream Bay has been identified as a suitable sand source as testing shows that it has the qualities required to be suitable for concrete production for infrastructure projects and can be supplied to the Auckland, Northland and Coromandel/Bay of Plenty markets efficiently. Generally speaking, land-based and river sand in the upper North Island is not as suitable for high-strength concrete applications as required in infrastructure, commercial and some residential projects.

Will the project:

increase the supply of housing, address housing needs, contribute to a well-functioning urban environment

Please explain your answer here:

Marine sands are an essential component in high-strength concrete used in multi-storey housing, hotel and commercial development and in roading (e.g. bridges and viaducts), rail, freshwater and wastewater projects which are essential to a well-functioning urban environment.

The efficient and secure supply of marine-sourced sand is critical to the development and maintenance of Auckland’s urban environment and economic output and through this the economic output of New Zealand.

Will the project deliver significant economic benefits?

Yes

Please explain your answer here:

Attachment 2 includes the Economic Assessment. This concludes:
“Sand is an essential input into a wide range of applications that are critically important to everyday life. Auckland’s sand market is showing signs of supply pressures. Notwithstanding the current economic slowdown, population growth is translating into ongoing demand for infrastructure investments, and therefore concrete and sand. The sand market relies heavily on a small number of consents, with Kaipara consents playing a key role. However, despite access to a large volume of sand in the Kaipara, technical and operational considerations act as a natural limit on the usable capacity that can be accessed.
Auckland needs access to multiple sand sources to ensure that the sand industry can respond to future growth pressures, especially during periods of high growth.”

The economic benefits of ensuring a secure and resilient supply of a vital ingredient of high-strength concrete are obvious.
At a more immediate level, the direct delivery of Bream Bay sand by the William Fraser into the Port of Auckland eliminates the truck movements that would otherwise be required to bring the equivalent amount of sand from as far afield as Northland and the Waikato.

In addition, there are reduced social costs because additional truck movements cause increased road maintenance, congestion, and human costs relating to road accidents.

Trucking also generates other costs including increased roading maintenance, more vehicles on already crowded roads, human costs relating to road accidents involving trucks and the costs related to increased congestion on the roads.

Will the project support primary industries, including aquaculture?

Yes

Please explain your answer here:

Yes, these industries are reliant on concrete for construction.

Will the project support development of natural resources, including minerals and petroleum?

Yes

Please explain your answer here:

Sand is a mineral and that term is defined in the Crown Minerals Act 1991. Sand extraction at Bream Bay would result in the use and development of the huge sand resource in the Bream Bay sand system.

Will the project support climate change mitigation, including the reduction or removal of greenhouse gas emissions?

Yes

Please explain your answer here:

This is addressed in the Economic Assessment section 3.2.2 Environmental Costs included as Attachment 2. This confirms:
"The Bream Bay operation would enable significant emission savings", and "based on the estimated distance, the associated emissions and the value of emissions, the potential annual environmental savings is estimated at $1.0m, increasing to $3.5m by 2028."

Due to the mineralogy cleanliness, shape, and composition of Bream Bay sand, less cement is required to make similar strength concrete compared to non-marine sand sources. This represents a significant reduction in the carbon emissions required to make the cement component of concrete. The production of one tonne of cement emits approximately one tonne of carbon dioxide. The use of marine sand reduces the amount of cement required to achieve the same strength concrete and therefore significantly reduces the carbon footprint of the concrete.

In addition, as stated above, delivering the Bream Bay sand via a ship into Auckland is vastly more fuel-efficient compared to trucking Kaipara Harbour sand from Helensville. The average trucking distances saved are in the vicinity of 262 km per trip and approximately (7,700) return truck and trailer trips would be required to transport 150,000 m3 of sand to Auckland by road. For 250,000 m3 the number of return trips would increase to approximately 12,800.

Will the project support adaptation, resilience, and recovery from natural hazards?

Yes

Please explain your answer here:

The sand extraction is neutral in relation to natural hazards as it will not exacerbate their effects or suffer adversely from them.

On the other hand, the sand extracted will be integral in the construction of infrastructure and development projects to enable adaptation and resilience to and recovery from natural hazards.

Will the project address significant environmental issues?

Yes

Please explain your answer here:

The extraction of sand from Bream Bay and its transportation to Auckland by ship will address the issue of CO_2 emissions for the reasons outlined above.

Is the project consistent with local or regional planning documents, including spatial strategies?

Yes

Please explain your answer here:

The relevant planning documents are the Northland Regional Policy Statement and the Proposed Northland Regional Plan (which incorporates the Regional Coastal Plan). The relevant provisions of the Proposed Northland Regional Plan are fully operative.

A coastal permit for sand extraction is required under Rule C.1.15.13 of the Proposed Northland Regional Plan and this is a discretionary activity.

Under the Proposed Northland Regional Plan, the site is zoned General Marine Zone. It is within the Significant Marine Mammals and Bird Area overlay. Within the wider Bream Bay area there are Significant Bird Areas, Significant Ecological Areas, Regionally Significant Surf Breaks, Areas and Places of Significance to Tangata Whenua, Outstanding Natural Areas, Outstanding Natural Features, Outstanding Natural Character and High Natural Character Overlays. The Zoning and Overlay Maps are included as Attachment 8.

An assessment of the proposal against the relevant objectives and policies of the Northland Regional Policy Statement and the Proposed Northland Regional Plan is included as Attachment 10.

Anything else?

Please write your answer here:

Auckland (and New Zealand) require a resilient supply of sand and aggregates for use in the construction of infrastructural, commercial, residential and recreational projects.

Currently in the Auckland region, there are two main sources of sand suitable for concrete production; Pākiri and the Kaipara Harbour. The Environment Court has very recently declined consent for the Pākiri Off-Shore Sand Extraction Site although an appeal to the High Court has been lodged.

The consenting of a new sand extraction site which can efficiently supply the Auckland market is therefore critical to the regional and therefore the national economy.

Granting consent for sand extraction at Bream Bay would achieve this and provide resilience to the Auckland sand supply from at least two sand extraction sites in the coastal marine area.

Does the project includes an activity which would make it ineligible?

No

If yes, please explain:

Section 8: Climate change and natural hazards

Will the project be affected by climate change and natural hazards?

No

If yes, please explain:

Section 9: Track record

Please add a summary of all compliance and/or enforcement actions taken against the applicant by any entity with enforcement powers under the Acts referred to in the Bill, and the outcome of those actions.

Please write your answer here:

MBL was founded in 1904 and over that time has been and is still involved in a range of business activities from sand extraction, quarrying, heavy vehicular transport, marine shipping, and barging all of which are subject to a barrage of regulatory and statutory controls. The company has a clean slate in all of these areas. MBL has no recorded history of any prosecution or other enforcement action against the company or its principals. As a fourth-generation family company, we rely heavily on our reputation as a responsible corporate entity and strive to bring that approach to all our business activities and dealings. MBL's goal is to supply Auckland long-term with high-quality sand in the most efficient and sustainable manner, with the least social, economic, and environmental costs and effects.

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Declaration

Do you acknowledge your submission will be published on environment.govt.nz if required

Yes

By typing your name in the field below you are electronically signing this application form and certifying the information given in this application is true and correct.

Please write your name here:
Christopher Garton

Important notes