Response ID ANON-URZ4-5FBA-K

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:

P O Box 71 031
Rosebank
Auckland 1348

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:

747 Rosebank Road
Avondale
Auckland 1026

Section 1: Project location

Site address or location

Add the address or describe the location:

The Mangawhai/ Pākiri Embayment, Rodney.
See the attached Bioresearchers map titled “Proposed Offshore Sand Extraction Area and Control Areas” Dated 2/5/2024 (Attachment 1).

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:
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Who are the registered legal land owner(s)?

Please write your answer here:

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:
Mangawhai/Pākiri Embayment Sand Extraction Project

What is the project summary?

Please write your answer here:

McCallum Brothers Limited seeks to obtain a resource consent for 20 years to extract sand suitable for concrete production from an area of approximately 10 km2 in the Mangawhai/Pākiri Embayment.

What are the project details?

Please write your answer here:

The Proposal:
The proposed sand extraction area is within the Mangawhai/Pākiri Embayment, extending north of Poutawa Stream, to 1 km south of the NRC Boundary.

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 NZ company.
MBL is an independent sand supplier and does not manufacture concrete itself. MBL predominantly supplies the sand to concrete manufacturers and other customers in Auckland.

Basic Details
The project proposes the extraction of
Up to 100,000 m3 of sand per annum at a rate of up to 10,000 m3 per month for the full 20-year term.

The proposed extraction area is at least 2km offshore and outside the depth of closure. Extracting outside the depth of closure minimises any effects on the shoreline as this is the depth where, except under very significant storm events, there is minimal net movement of sand landward or seaward.

Sand is to be extracted (predominantly at night) across the entire extraction area as shown in Attachment 1.

History of Sand Extraction in the Mangawhai/Pākiri Embayment:
According to Auckland Council records, sand extraction in the Mangawhai/Pākiri Embayment has been occurring since the 1920's. Exact records are not available prior to 1966 but it is estimated that up to 2,000,000 m3 of sand was extracted from a mix of the nearshore area and the dune fields. The proportions of each are not known.
Since 1966 around 6,000,000 m3 have been extracted, with approximately 3,500,000 m3 from the inshore area in 5-10 m of water depth across the embayment and a further 500,000 m3 from the Mangawhai ebb tide delta. The remainder of the volume was extracted from the offshore application area (25-35m depth, but this extraction didn't start until 2003).
Historic Monitoring
The embayment has been monitored since approximately 1996, including:
• Foredune and shoreline monitoring, initially with profile measurements, and currently using aerial drone technology
• Since 2005, Bathymetric surveying including seabed imaging in map form using 0.2 m vertical resolution Multi Beam Echo Sounder colour banded bathymetry. In the last three years, this has become annual.
• Sediment texture monitoring, since the initiation of the Temporary consent this has become annual.
• Ecological monitoring of benthic macrofauna and communities. On commencing the temporary consent MBL operates under, this has become an annual requirement. This is in the form of benthic sampling and drop camera points.

Existing Sand Supply to Auckland
The annual requirement for sand in the Auckland region is estimated to currently be 900,000 tonnes per annum. This is down from a high of approximately 1.0 million tonnes in 2021. The volume of sand required is currently 0.5 tonnes per capita 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 per annum, 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 in its decision with the reference [2023] NZEnvC 138 (Temporary Consent). 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 infrastructure and development 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 one way 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 market is included in Attachment 2. Obtaining a coastal permit for sand extraction from the Mangawhai/Pākiri Embayment will significantly improve the resilience of Auckland's sand supply.

All of MBL 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 their concerns in a letter to Hon. Ministers Shane Jones.
Further to this is Attachment 4, which 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 Mangawhai/Pākiri embayment ideal for ready-mix concrete manufacture, particularly in the use of high-strength specialist concrete for use in infrastructure projects. This sand has been used for over 80 years to make concrete and has been used in many of the infrastructure builds undertaken in Auckland throughout that time. Many of these have been classed as projects of National or Regional significance.

Sand extraction will be undertaken at depths greater than the depth of closure (25 m) 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 Pākiri because the sand in these systems is not meaningfully connected to sand beyond the depth of closure.

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 Pākiri from the Port of Auckland is expected to take approximately 18 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 2-3 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 Manoeuvre) 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 an unloading facility at the Ports of Auckland and also Kopu, near Thames on the Coromandel Peninsula. No additional equipment or land-based facilities are required in order for MBL to commence sand extraction.

MBL would commence sand extraction at Mangawhai/ Pākiri Embayment immediately upon the grant of the consent and once any pre-extraction requirements were met.

The volume of sand extracted annually would have an upper limit of 100,000m3 per annum.

A 20-year consent period is being sought.

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

Please write your answer here:

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:

Auckland Council

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

Please write your answer here:

A Resource Consent Application for a similar activity was declined by the Environment Court at Auckland on 11 April 2024 under reference [2024] NZEnvC 75 and is currently being appealed to the High Court at Auckland.

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

No

Please explain your answer here:

The application is in the coastal marine area and therefore there is no landowner approval 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 of the coastal permit, sand extraction can commence as soon as any pre-extraction consent conditions are fulfilled because:

- The equipment, training, and other operational processes are already in operation by MBL at the same location.
- No new procurement of resources or staff is required.
- No new funding is required.
- No site works are required.
- A 20-year consent period is being sought.

Section 3: Consultation

Who are the persons affected by the project?

Please write your answer here:

Auckland Council (as the territorial authority).

Te Uri o Hau hapu
Ngati Manuhiri hapu
Mahinepua Reserve Ririwha Trust
Ngapuhi nui tonu-Kota-toka-tutaha-moana o whaingaroa
Ngapuhi nui tonuu (Te Kotahitanga Marae)
Ngapuhi nui tonu (Awataha Marae)
Ngapuhi nui tonu (Waitangi Marae)
Nga Puhi Ngati Wai Haki Pereki Ngawhetu Sadler Whanau Trust
Ngati Kawua Te Uri o Te Aho Ngati Kuri Nga Hapu
Ngati Wai Whairepo Trust
Ngati Whanaunga
Pakiri G Trust
Taumata B block Whanau Hauturu
Taumata B block Whanau Mahuki
Taumata B block Whanau Motairehe
Taumata B block Whanau Omaha 1
Taumata B block Whanau Pakiri T
Taumata B block Whanau Pakiri U
Taumata B block Whanau Rangiahau
Te Hikutu Whanau and Hapu
Iwi, whānau and hapū of Ngātiwai
Part 1 Te Kaunihera Maori o Te Tai Tokerau
Ngai Tai ki Tamaki
Te Parawhau Hapu

Te Kawerau a Maki

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:

A copy of MBL's stakeholder engagement register can be found as Attachment 5.

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

There have been many years of consultation with Te Uri o Hau and Ngāti Manuhiri/Omaha Marae which has improved further over the last year with the grant of the Temporary Consent.
Monitoring has been ongoing during the previous consents and the following liaison groups have been set up with the existing temporary consent:
• Community Liaison Group.
• Mātauranga Māori Expert Panel.

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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:

Te Uri o Hau has a Statutory acknowledgement area in the northern part of the application area which extends from Te Arai Point north to Bream Tail on the coastline.

Ngati Manuhiri has a statutory acknowledgement area which covers the whole embayment.

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

Pākiri Beach extends on either side of Te Ārai and Eyres Points and is the largest of the Auckland Region's eastern ocean beaches (Attachment 1). Its broad crescent defines the coastal edge of the Jellicoe Channel (which extends out to the Hen and Chicken Islands to the north, and Little Barrier Island to the south), providing an expansive 'gateway' to the Pacific Ocean, with its rolling seas and surf backed by a series of dune formations that culminate in the high dunes of Mangawhai Heads. This dune corridor, otherwise much lower down most of the rest of the beach, spreads out to enclose three dune lakes south of Te Ārai Point: Slipper Lake, Spectacle Lake and Tomarata Lake. Behind the northern end of this dune sequence, low lying, formations of sand, mud and peat underpin a coastal terrace that extends from near Mangawhai to Te Ārai Point Road. A mixture of mudstone and sandstone formations combine to then form a series of more elevated, ridges and foothills, that provide the backdrop to most of the beach and its dune/terrace hinterland.

The beaches are highly dynamic in response to wave conditions, with erosion and lowering occurring in storms and accretion occurring in calmer conditions.

Beach widths (e.g distance from the toe of the foredune to the 1 m beach contour) are therefore variable, generally ranging from 80 m to 20 m, with averages in the order of 40 – 50 m and beach slopes in the range 1:15 to 1:20.

The sand body of the beach and nearshore is primarily made up of Holocene quartz-feldspathic sands with a portion of calcareous material from local shell production, these overlie older consolidated Pleistocene sediments.

The volume of this Holocene sand within the Mangawhai/Pākiri dunes, beach and mantling on the seabed to the 40 m depth was estimated in the Mangawhai Pākiri Sand Study (MPSS) as being in the range of 174-694 million m3, of which 82-142 million m3 was estimated to be located offshore to the 40 m water depth.
The underlying Pleistocene sand volume within the embayment was estimated in the MPSS as being in the order of two billion m3.

In depth analysis of the wave climate since 1979 at the 30 m water depth (near the inner boundary of the application) has been carried out by Metoceans. The embayment experiences a low to moderate energy environment but can see significant swell from the north east to south east direction. Mean significant wave heights were measured at 0.93 m with a maximum significant wave height being measured at 7m.

Near bed currents, particularly in shallower areas are dominated by wave processes, although mean currents contribute to the mass movement of sediment. In terms of current flow, the long-term net flow is oriented from north to south (i.e. alongshore). Mean currents in the lower water column will be weak. Studies for the Mangawhai/Pākiri embayment 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.
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 the Mangawhai/ Pākiri Embayment and the nearshore coastal sediment system was from the rhyolitic provenance of central North Island and was delivered to the continental shelf by the Waikato River during low sea levels of the last glacial maximum.

The seafloor within the extraction area is typical for a low energy sandy embayment. A range of benthic species typical of the upper North Island east coast have been found in the application area through monitoring and assessment work towards this application. Species present include scallops, starfish and numerous polychaetes and mollusc species but generally not in significant numbers. Based on the known habitat, depth and distribution ranges of species, it is unlikely that there would be protected species present on the seafloor in the application area. Stony corals have been found in the embayment in deeper water and south of the application area but no live specimens have been recorded inside the proposal area. Horse mussel beds were recorded in the MPSS but these were found in depths shoreward and further north or south of the application area. None have been found within the application area.

The range of general water quality for parameters including turbidity and suspended solids are well within the ambient range or below their respective median values as reported by Statistics New Zealand for coastal waters around New Zealand. Previous measurements from earlier consent applications in the Mangawhai/Pākiri Embayment indicate levels are within the ambient range. No contamination in the seabed sand has been detected in the historical and 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 traverse through and near the proposed sand extraction area some of which frequent the wider region associated with the Mangawhai/Pākiri Embayment. These species may be found year-round or on a semi-regular basis in the area. These species include common dolphins, bottlenose dolphins, orcas, Bryde's whales, leopard seals and fur seals.
Seasonal visitors to the Mangawhai/Pākiri Embayment may include southern right whales and humpback whales. While other species could have an infrequent presence, they would be expected to be substantially less frequent. A marine mammal register has been maintained on the William Fraser for four years for the Mangawhai /Pākiri Embayment which records marine mammal presence both while in transit and while extracting. Only common and bottlenose dolphins have been sighted in the embayment while the vessel is operating.

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 Pākiri/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/tara iti, Caspian Tern, Variable Oystercatcher and New Zealand dotterel.

Fairy Tern, classified as 'threatened-nationally critical' under the New Zealand threat classification system, breeds in several areas of the embayment:
• Pākiri River, 6-7 km to the southwest of the proposed sand extraction area,
• Poutawa Stream over 2km to the west of the southern end of the extraction area, and,
• Te Arai Stream, over 2km to the west of the northern extraction area.

Given the distance that the proposed sand extraction area is from the closest nesting sites (>2km), the likelihood of effects on fairy tern foraging is extremely low/negligible. To reduce this even further, MBL will not extract during daylight hours during the breeding season from the months of September to April when fairy terns are known to return to the area from their wintering location in the Kaipara Harbour.

Due to extraction occurring outside of the depth of closure, the risk of extraction having any effect on the coastline where shorebirds feed is considered 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) and that is the expected noise for the majority of the year. There may be periods when wind and swell conditions are very low and ambient noise levels could drop. There may be some receivers that are elevated above the coastline where ambient noise levels may be lower.

The ambient underwater soundscape is typical of a sandy bottom habitat on an open coastline with recreational users including jet skis and power boats etc, marine mammals and fish, transiting and anchored vessels, commercial fishing and scallop dredging (when open), and weather (wind and rain).

The application area is offshore to several notable surf breaks.
These are Mangawhai Heads, Blackswamp, Te Ārai Point, Forestry and Pākiri River.
These surf break locations are shown in Attachment 6.

It can be expected that both recreational and commercial fishing occur from time to time in the proposed extraction area. Both long-line fishing and purse seining occur throughout the season but it is not a heavily fished embayment. Typically these occur either inshore of the extraction area or further offshore and outside of the proposed area. The commercial scallop fisheries are closed in the embayment at present with no timeframe on when they may open again. The embayment was not considered a significant scallop fishery with lower fishing intensity historically. Scallops have not been found in any significant densities in the application area during the ecological sampling to date.

Attachment 7 includes the Auckland Unitary Plan Operative in Part Overlay Plans with the proposed extraction area and control areas.

Effects on Coastal Processes

The potential effect on coastal processes is being assessed taking into account previous investigations and monitoring undertaken over many years for the Pākiri sand extraction area.
Indirect impacts on the physical environment can potentially result from:
1. changes in wave transformation processes 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 to infill the sand extraction area. 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 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 and beach profile monitoring is being proposed to confirm the findings of the assessments and that the sand extraction activity does not result in an adverse effect on seafloor heights or the shoreline.

Effects on Marine Mammals

The marine mammals most likely affected by the proposal include the few species that frequent the wider region associated with the Mangawhai/Pākiri Embayment 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 greater than minor.

To minimise the chance of an effect on marine mammals in the proposal area MBL currently uses a Marine Mammal Management Plan and adheres to

the Ports of Auckland's Hauraki Gulf voluntary transit protocol for commercial shipping. This is proposed to continue for any new consent that may be granted and will be a part of the conditions of consent.

Effects on Benthic Organisms

Those benthic organisms on the seafloor immediately within the path of the dredge are entrained. Those species smaller than 2 mm may pass through the screen into the hopper while those larger are returned to the coastal marine area via the moon pool system.

Previous studies of trailing suction dredging at Pākiri using the "William Fraser" indicated a low degree of mortality of various benthic species is expected 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 very 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, ongoing comparison to existing monitoring data available from previous consents will be used to look at longer term trends.

In the unlikely event any protected species or sensitive habitats are identified through benthic sampling, then that specific area can be excluded from sand extraction. This process exists within the Temporary consented area at Pākiri and has been utilised already when required.

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 filter and are discharged back into the coastal marine area.

The disturbance of the seafloor can lead to a very localised loss of food sources. However, given the very small area affected compared to the size of the wider embayment, this is likely 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 this discharge are expected.

As assessed below, some masking of communication from the noise of the extraction activity could be expected. 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. As explained earlier in the document, the discharge from the William Fraser is introduced via moon pools which enter the water column at keel height at least 2 metres under the water. This further reduces the interaction any seabirds can have with any discharge from the vessel.

Noise

Based on the monitoring from the current operation of the William Fraser, noise from the vessel is not expected to impact avifauna. No impacts to date from activities in the embayment have been found.

Effect on coastal breeding habitat of shorebirds and seabirds

The proposed sand extraction site is seaward of the depth of closure and is not expected to 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. As mentioned in this document, in the 80-odd years that MBL has been extracting sand, MBL has not had an oil spill.

The Fairy Tern is the most endangered bird in the Mangawhai/Pākiri Embayment. They are present in very low numbers during the breeding season (from October to March).
To mitigate any possible effects on the Fairy Tern, extraction will only take place during the hours of darkness during the breeding season, and at least 2 km from the shore. It is acknowledged that Fairy Terns only forage limited distances out to sea (usually less than 2km), and only during daylight hours. Therefore, there is not expected to be any interaction between fairy terns and the "William Fraser". Moreover, the effects on the foreshore/dunes where nesting of the Fairy Terns may occur is not expected due to extraction occurring beyond the depth of closure.

MBL also proposes to financially support Fairy Tern research and management, as well as assist in making their breeding sites more resilient to climate events.

Based on the above, it is considered that the risk of adverse effects on threatened and at-risk 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. 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 at least 2 km from the shoreline of the Mangawhai/Pākiri embayment, offshore, and extraction occurs at night for well over 95% of the time.
These facts in themselves minimise any visual effects for the majority of the time.
The lighting on the William Fraser is minimal and all downward facing apart from the navigational lights.
There are also other recreational and commercial craft transiting and anchoring in the embayment during the day and night.
The plume created by the discharge is both limited in size and temporary 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 to the beachfront and dunes in the Mangawhai/Pākiri area.
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, extraction will occur seaward of the depth of closure and based on the investigations on the effect of surf breaks from sand extraction in the embayment that have already been done, any effects from sand extraction will be expected to be less than minor to negligible.

Any impact on the recreational fisheries in Mangawhai/Pākiri embayment from the sand extraction activity is likely to be negligible. Recreation fishing is likely to be closer to the shoreline than the extraction area and during the day when the William Fraser will not be present in the embayment.

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 the Mangawhai/Pākiri Embayment from the sand extraction activity is likely to be negligible.

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 known 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 sound signals for some species when animals are within approximately 3 – 5 km of the “William Fraser” while operating.
(d) Benign behavioural effects may occur if an animal is within a maximum of 1 km of the “William Fraser” operating in the sand extraction area, for example, changing course to avoid the vessel.

This is an area where sand extraction has occurred for many years so this would not be a new activity. While the “William Fraser” has technology to

reduce its noise level, it will be a presence in the embayment. Similar to the many other commercial vessels that navigate this water regularly.

Lighting Effects

The navigation and operational lights on the "William Fraser" are the minimum required to meet regulatory, navigation, and safety requirements and would appear similar to other vessels in the Mangawhai/Pākiri Embayment or larger vessels moving past the embayment on a regular basis.

The navigation and operational lights on the "William Fraser" (or similar vessels used for sand extraction) would be significantly less than the regular commercial ships that transit the coast day and night throughout the year.
There are also substantial land-based developments on the Pakiri coastline, including golf courses and associated clubrooms, hotels, houses and buildings.
As such, it would have little or no impact on the Mangawhai/Pākiri Embayment night-time environment and perception of its night sky.

Cultural Effects

A key component of MBLs ongoing relationship with iwi and hapū in the area will be the role of a Mātauranga Māori Liaison Group and cultural liaison agreement(s).

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 hapū depending on their relationship with the moana in their rohe.

The sand extraction area does not include large shellfish beds or other kai moana sources, although it is recognised that a range of marine mammals and fish [answer truncated to 25000 characters]

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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 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 is outside any natural heritage or mana whenua overlays in the AUPOP. Extraction will be seaward of the depth of closure and will not have any effect on the foreshore/dune system in the Mangawhai/Pākiri Embayment.

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 engaged with local hapū and iwi for many years and has a working relationship with Te Uri o Hau that spans multiple generations.

The objective of MBL is to form a beneficial and enduring relationship with the Trust Boards of local hapū and iwi. 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 agreements.

Although some iwi did not support the previous declined consent application, these iwi had previously been signatories to a Deep Water Sand Agreement (regarding royalty payments) and Ngāti Wai Memorandum of Understanding relating to regular engagement communication. The agreements resulted in

a royalty being paid to Ngātiwai to benefit the local hapū to the order of $1 million for the duration of the previous offshore consent.
Further offers of support and benefits have been offered to local tangata whenua, and communications are on going.

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 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 Hazard 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 in section 2.4:
"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 Harbour consents playing a key role. However, despite access to a large volume of (consented) 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 Mangawhai/Pākiri Embayment proposal site can be undertaken in a manner where significant adverse effects are avoided and it is a proven source in high demand.

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 been consulting with local iwi and hapū as well as Ahi ka for many years.

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 8.

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 and local hapū and whānau 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.
• Precautionary elements in the proposed conditions of consent and management plans
• Precautionary approach by extracting over 2km offshore which is outside the expected Fairy Tern foraging range.

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 as an ingredient 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 projects. 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 Mangawhai/Pākiri Embayment 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 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 from time to time.

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 coastal marine area 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 of 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.

Due to the presence of fairy terns nesting in the embayment, additional measures are proposed to mitigate any risk to this species including:
• No day time extraction during their breeding season
• Extracting over 2 km offshore which is outside the expected Fairy Tern foraging range.
• Extraction seaward of the depth of closure to avoid any effect on the shoreline breeding habitat
• Financially supporting fairy tern research and management and being involved in making their breeding sites more resilient to weather events.

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 Pākiri/Mangawhai Embayment.

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

The proposed sand extraction area is outside any areas identified in the AUPOP as having an outstanding natural character, being an outstanding natural feature, or outstanding natural landscape in the coastal environment.

Given the significant distance between the sand extraction area and the closest overlays 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. In particular, the proposal does not introduce new built forms on the beach or dunes and does not impact the surf breaks, dune system or dune lakes. Furthermore, although the William Fraser would be seen in the distance (at least 2km from the beach) on occasions, the temporary and intermittent presence of a vessel off-shore does not detract from the "wild and scenic coastline" experienced by parties on the beach. As previously stated, most extraction occurs at night which further mitigates visual impacts.

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 the National Policy Statement.

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.

The current appeal to the High Court is not expected to be heard at least six months and up to one year from lodging any appeal and could be appealed further afterwards. The consenting process to date has been in the vicinity of 5 years from acceptance of the application.

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 in turn.

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 this project through the fast track process will significantly reduce the time required to establish a reliable source of marine sand relatively close to the Ports of Auckland. It will also permit the extraction of the existing high quality Pākiri sand and keep continuity to the concrete industry and the infrastructure projects that will inevitably come to Auckland.

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
• Long term monitoring has been undertaken and can be utilised in further assessments of effects.
• Baseline ecological and bathymetric monitoring has already been completed, and assessments will be updated with new findings.
• Gaps in the previous application assessments can be updated to provide more certainty of effects.
• Iwi consultation has been occurring for many years and is ongoing. Potential cultural effects are well documented along with potential avenues to provide for the kaitiaki role of iwi and hapu.
• 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 this 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 Mangawhai/Pākiri Embayment Sand Extraction Project
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 Mangawhai/Pākiri sand being Auckland, Northland and

Coromandel/Bay of Plenty.
However, MBL Pākiri 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)

It has a significant long term proven performance in projects of regional or national significance.

The Mangawhai/Pākiri Embayment has been proven as a suitable sand source because 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 suitable for high-strength concrete applications as required in infrastructure, commercial and some residential projects.
Historical supply has confirmed that the Mangawhai/Pākiri Embayment sand is suitable and preferred for these applications.

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 Two is the Economic Assessment. Section 4 concludes:
"Efficient and sustainable access to sand will be an important factor in both facilitating Auckland's economic growth aspirations and providing infrastructure such as roading, buildings, and other infrastructure to support Auckland's rapidly growing population and economy. Table 4 1 provides commentary illustrating how the Pakiri sand Fast-track application aligns with the eligibility criteria as outlined in Clause 17(3) of the Bill. The presence of the sand and the ability to utilise it sustainably contributes significantly to the economic well-being of Aucklanders."

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 Pākiri 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 Helensville, Northland or 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.

Section 3.2.2 of the economic report (Attachment 2) states:
"Based on the estimated distance [from Helensville], the associated emissions and the value of emissions, the potential annual environmental savings is estimated at $0.7m, increasing to $1.7m by 2044."

Section 3.2.3 of the economic report (Attachment 2) states:
"Annual avoided cost is estimated at $187,500 if the Pakiri resource can be used for the Auckland sand market. As with the environmental costs, these are likely to rise as the Value of Statistical Life, and other social cost metrics increase over time."

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 the Mangawhai/Pākiri Embayment would result in the use and development of the sand resource in the Mangawhai/Pākiri sand system.

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

Yes

Please explain your answer here:

The delivery of the sand into the central Auckland area to distribute in Auckland is significantly more fuel efficient than trucking. Barging the sand from Pākiri in the "William Fraser" will save 5,240g of CO_2 for every km travelled compared to trucking Kaipara Harbour sand from Helensville. Section 3.2.2 of the economics assessment (Attachment 2) states:
"When applied to the additional distance required to meet McCallum's current client need, there is an additional 2,975 tonnes of emissions generated to transport 180,000 tonnes [100,000 m3] annually. This estimate includes the emissions associated with barging the sand to Helensville or Auckland CBD as well as truck movements. It does not include any flow-on emission arising from congestion on the road network due to extra trucks"

Due to the mineralogy cleanliness, shape, and composition of Mangawhai/Pākiri 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.

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 the Mangawhai/Pākiri Embayment and its transportation to Auckland by ship will reduce of CO_2 emissions for bringing marine sand to the concrete manufacturers for the reasons outlined in previous sections of this application.

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

Yes

Please explain your answer here:

The relevant planning document is the Auckland Unitary Plan – Operative in Part ("AUPOP") which incorporates the Auckland Regional Policy Statement and the Regional Coastal Plan. The relevant provisions of the Plan are fully operative. There are no proposed plan changes of relevance.

The area of the proposed sand extraction site is zoned Coastal – General Coastal Marine Zone. The site is not within any of the AUPOP Natural Resources, Natural Heritage, Historic Heritage and Special Character, Mana Whenua, Built Environment or Infrastructure Overlays as shown in Attachment 7.

A coastal permit, for a discretionary activity under Rule F2.19.4(A28) of the AUPOP, is required for the extraction of sand. Consent is also required under Rule F2.19.2(A15) for the discharge into the coastal marine area from the sand extraction operation and this is a discretionary activity. Consent is also required under F2.19.4(A37) for coastal marine disturbance within the southern control monitoring area. This is a discretionary activity. Overall, the application is to be considered as a discretionary activity.

An assessment of the proposal against the relevant objectives and policies of the AUPOP is included in Attachment 9.

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 consents for sand extraction in the Kaipara Harbour expire in 2027. These may get longer extraction periods through the s 124 provisions while hearings occur but it must be noted that the volumes from this plant have not been keeping up with current demand (in a 20% downturn). The pathway for these consents is also difficult as the same key aspects that resulted in a decline of the offshore consent are in play in the same area where the extraction currently occurs.

The consenting of the existing Pākiri sand extraction site, which is a well-documented, monitored, and proven sand source which can efficiently supply the Auckland market is therefore critical to the regional and national economy.

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. We have 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