

ATTACHMENT TWENTY-TWO
CIA (Te Pouwhenua o Tiakiriri Kūkupa Trust)



Cultural Impact Assessment

Te Pouwhenua o Tiakiriri Kūkupa Trust

Te Parawhau ki Tai

Sand Extraction Proposal

Paepae Atua

McCallum Brothers Limited



Photo: Paepae Atua
Creative Nature/NL Getty Images

Report Prepared For: Te Pouwhenua o Tiakiriri Kūkupa Trust t/a Te Parawhau ki Tai

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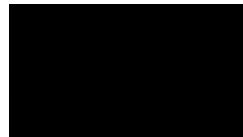
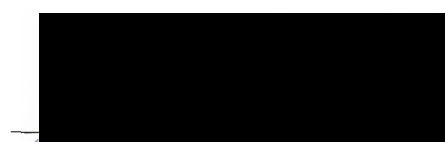
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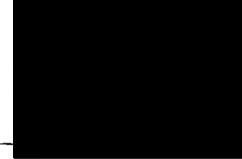


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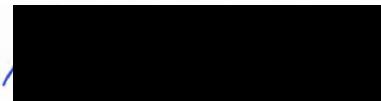
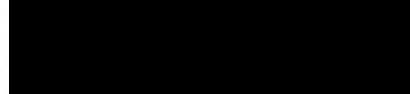
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Te Parawhau ki Tai





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This report is provided solely for the use of MBL and their authorised representatives, to facilitate an understanding of Te Parawhau ki Tai cultural values (ngā uara ahurea) and the potential impacts of the proposed sand extraction activities at Paepae Atua on these uara.

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Executive Summary

This Cultural Impact Assessment (CIA) has been prepared by Te Pouwhenua o Tiakiriri Kūkupa Trust who is the Resource Management Unit for Te Parawhau ki Tai rohe and holds the appointment to manage the Mana Whakahono ā Rohe with the Northland Regional Council (NRC) since 2024. In consultation with ngā kaumātua me ngā marae o Te Parawhau Hapū, Te Pouwhenua o Tiakiriri Kūkupa Trust are tasked to manage and prepare the resource consents sought under the relevant provisions of the Fast-track Approvals Act 2020 and the NRC by McCallum Brothers Limited (MBL) for marine sand extraction at Paepae Atua.

The CIA responds to the application process initiated through the Fast-track pathway. The proposal is assessed using Te Pouwhenua o Tiakiriri Kūkupa Trust's cultural and environmental design framework which outlines ngā uara ahurea o Te Parawhau ki Tai.

The relationship that Te Parawhau ki Tai has with Paepae Atua is embedded in whakapapa, atua, and kōrero tuku iho. This connection is carried each day by the rising of Te Hōkio, whose flight traces the whakapapa of the Hapū across the rohe, west to east from Tangihua to Taranga, from Mano Hiwa Ariki in the south to Parikiore in the north including all the whenua, moana, motu and awa in between affirming the mana of Te Parawhau ki Tai and its unbroken association with Paepae Atua and surrounding Outstanding Natural Landscapes including its rite of passage to Moana nui ā Kiwa.

The CIA assesses the potential effects of the proposed sand extraction activities against Te Pouwhenua o Tiakiriri Kūkupa Trust's Pou Tarawaho: Mana Atua, Mana o te Wai, Mana Whenua, Mana Ao Tūroa, and Mana Tāngata. The assessment identifies potential adverse effects on the taiao, uara ahurea, and the wellbeing of Te Parawhau ki Tai, who retain mana i te whenua across Paepae Atua and the surrounding ancestral taiao. A comprehensive suite



of restorative actions and mahi whakaora (mitigation measures) is therefore required to address these impacts. These include but are not exhaustive; environmental monitoring and restoration measures of the seabed; mutually beneficial economic arrangements, including employment, scholarships and training, Hapū enterprise establishment and support; investment in marae, housing and health initiatives; cultural induction; environmental funding; and partnership mechanisms.

These mahi whakaora are essential not only to mitigate adverse effects, but also to restore the mauri of Paepae Atua, uphold the mana of Te Parawhau ki Tai, and give effect to the articles and principles of partnership and active protection under Te Tiriti o Waitangi. The CIA affirms that MBL must uphold the principles of rangatiratanga, mauri ora, and whakawhanaungatanga, to ensure that Te Parawhau ki Tai can exercise its kaitiakitanga obligations and protect the interconnected wellbeing of ngā tāngata, whenua, wai, and taiao.

Te Pouwhenua o Tiakiriri Kūkupa Trust, and Te Parawhau marae kaumātua (i.e., the signatories to this CIA), conditionally support the proposed sand extraction activity at Paepae Atua, subject to enforceable commitments to adopt and formalise the full suite of mahi whakaora outlined in this CIA. These mahi whakaora are not discretionary; they are essential to uphold Te Tiriti o Waitangi, protect ngā uara ahurea o Te Parawhau ki Tai and the mauri of Paepae Atua, and ensure the wellbeing of Te Parawhau ki Tai.

The CIA outlines a multi-layered implementation approach, including enforceable consent conditions, a legally binding side agreement and relationship agreement. This ensures that cultural, environmental, and intergenerational outcomes are embedded and monitored throughout the life of the project. The recommendations outlined in the CIA transform requests into requirements, with clear mechanisms for implementation, oversight, and enforcement through consent conditions, contractual agreements, and partnership arrangements.



Recommendations Summary

Following the findings of this CIA, Te Pouwhenua o Tiakiriri Kūkupa Trust recommends that MBL, including NRC and the expert Fast Track Panel:

- **Adopt the full suite of mahi whakaora** outlined in this CIA to address cultural and environmental impacts and support Hapū tirohanga and wellbeing.
- **Incorporate key elements of mahi whakaora as enforceable conditions of consent**, ensuring they are embedded within the statutory framework and monitored throughout the project lifecycle.
- **Formalise additional commitments through a legally binding side agreement** between Te Pouwhenua o Tiakiriri Kūkupa Trust and MBL, including mutually beneficial economic arrangements, scholarships, training, environmental funding, and partnership arrangements.
- **Establish a permanent relationship agreement** to uphold the mahi whakaora and ensure long-term accountability and partnership.
- **Ensure cultural expertise is present** in any consenting or decision-making panels, including those under the Fast-track process, with demonstrated expertise in Te Ao Māori and mātauranga Māori.
- **Establish a partnership framework** to oversee implementation, monitor impacts, and uphold Te Tiriti o Waitangi throughout the project lifecycle.
- **Support Hapū capacity and wellbeing** by resourcing Te Parawhau ki Tai and supporting Te Parawhau marae to fulfil its kaitiakitanga obligations and enable intergenerational development.



These recommendations are made in the spirit of partnership and restoration, reflecting the commitment of Te Pouwhenua o Tiakiriri Kūkupa Trust and supporting Te Parawhau marae to work constructively with MBL to protect ngā uara ahurea o Te Parawhau ki Tai and mauri ora of Paepae Atua, and enhance the wellbeing of Te Parawhau ki Tai and supporting Te Parawhau marae, the hapori within its rohe, and the taiao, in accordance with Te Tiriti o Waitangi and relevant statutory and cultural obligations.



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Appendices

Appendix A:

Fast Track Application – For Consultation

Appendix B: Te Parawhau ki Tai Accidental Discovery Kaupapa

Appendix C: Mahi Whakaora

All correspondence in respect to this Cultural Impact Assessment should be addressed to:

Pari Walker

[REDACTED]

Attention: **Pari Walker**

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1 Whakatauaki

Ka tukua te tira mate ki tua o Paerau

Ka noho te tira ora ki te Ao Tūroa

Ka tu te tira o Te Parawhau

“As we stand here and farewell our departed across the divide, we all sit here in the wellbeing of ao tūroa, we stand here as Te Parawhau”.

Na, Matua Te Ihi Tito



2 Introduction

2.1 Scope and Limitations

This CIA evaluates the potential cultural and environmental impacts of the proposed sand extraction activities within the rohe of Te Parawhau ki Tai, including Paepae Atua, a culturally significant area encompassing Rauri, The Sea of Te Kōtu, Manaia, Te Whara, Taranga, Maui Taha, Maui Roto, Maui Waho, Maui Pae, Tuturu, Te Pae o Tū, Te Moana Nui a Kiwa, Poupouwhenua and the surrounding taiao.

The assessment focuses on the significance of the whenua, wai, and taiao to Te Parawhau ki Tai, and considers ngā uara ahurea o Te Parawhau ki Tai as well as the wellbeing of Te Iwi Māori, Hapū, taiao, and the wider hāpori.

This CIA draws on hapū engagement, mātauranga Māori, and expert technical reports, including observations based on the taiao, moana and the whenua. It does not assess engineering design, economic feasibility, or legal compliance directly, but considers the effects of engineering design (e.g., seabed disturbance from the suction dredge head on the sea floor and the taiao at Paepae Atua) and interprets statutory frameworks from a hapū perspective a suite of mahi whakaora as a solution focused approach.

The CIA has been prepared based on information provided to Te Pouwhenua o Tiakiriri Kūkupa Trust at the time of writing, including the Draft Fast-track Application 'for Consultation document' and associated expert reports from MBL. Should any material changes occur to these documents or information provided, Te Pouwhenua o Tiakiriri Kūkupa Trust, on behalf of the Hapū reserves the right to amend or withdraw this CIA, or to prepare a revised version in its entirety.

The cost of any such amendments shall be borne by MBL.

Note 1: Te Pouwhenua o Tiakiriri Kūkupa Trust recommends that the use of Te Parawhau ki Tai is used throughout this document to recognise Te Parawhau Hapū's interests.



Note 2: The terms Hapū, Te Parawhau ki Tai, and Te Parawhau are used interchangeably throughout this report and refer to the wider group who whakapapa to a common tūpuna.

Note 3: While the name 'Te Ākau' (meaning 'the reef') is used in MBL's application and expert reports to refer to the proposed sand extraction area, Te Parawhau ki Tai identify this area as 'Paepae Atua', a name of deep cultural and spiritual significance that connects us to our whakapapa, ngā uara ahurea Māori and ngā atua. 'Te Ākau' more accurately refers to 3 Mile Reef, a feature within the broader coastal environment to the north of the extraction area. For Te Parawhau ki Tai, the correct and enduring name for the area is Paepae Atua, and this CIA uses that name to reflect our whakapapa, tikanga, and unbroken relationship with the taiao.

2.2 Methodology

The methodology used in preparing this CIA integrates information obtained from hapū hui, hapū-led engagement, mātauranga Māori, and expert technical input. It includes:

- Review of the Draft Fast-track Application and associated expert reports provided by MBL, including assessments of:
 - coastal processes,
 - landscape and natural character,
 - surf breaks,
 - benthic ecology,
 - marine mammals,
 - navigation safety,
 - seabirds, shorebirds,
 - fish and fisheries,
 - airborne and underwater noise levels,
 - water quality.



- Facilitation of five Te Parawhau ki Tai and invited members of Te Parawhau hapū hui to gather whakaaro and kōrero on the proposal and its potential effects on the whenua and taiao.
- Several haerenga (overnight trips on the William Fraser) to observe sand extraction operations and associated logistics at Pākiri.
- Engagement with MBL landscape expert to ensure accurate representation of cultural landscapes of Te Parawhau ki Tai.
- Hapū-led review and interpretation of relevant environmental legislation, including the Fast-Track Act, the Resource Management Act (1991), New Zealand Coastal Policy Statement (2010), Northland Regional Policy Statement, Proposed Regional Plan for Northland, and the Operative Whangārei District Plan.
- Integration of mātauranga Māori and Hapū perspectives into the assessment of environmental effects.
- Internal review of the draft CIA by Te Parawhau ki Tai and Te Parawhau kaumātua.
- Presentations of the draft CIA to the appointed rōpū Te Parawhau kaumātua for review and incorporation of their feedback into the final version and approval for release to MBL.
- Hui with MBL to review and agree upon the mahi whakaora in the CIA is to be scheduled once MBL receive the draft CIA for consideration.

2.3 Engagement Between MBL with the Trust and Te Parawhau Hapū

The following engagements between MBL, their consultants, and Te Parawhau Hapū were undertaken to inform the development of this CIA:

- **March 2024** – Initial email received from Tame Te Rangi on behalf of MBL, requesting engagement.
- **May 2024** – Initial engagement commenced between Te Parawhau Hapū Resource Management Unit and MBL regarding the proposed sand extraction activities at Paepae Atua.



- **May 2024–September 2025** – Ongoing meetings with MBL representatives including Callum McCallum, Tame Te Rangi, Luke Davis, Shayne Elstob, and the William Fraser captain to support information sharing and engagement.
- **November 2024 & May 2025** – Haerenga to Pākiri aboard the William Fraser involving Selwyn Norris, Georgina Olsen, Pari Walker, Opania George, and Mark Manaia. The trip included visits to MBL's yard at Rosebank Road and port operations in Auckland.
- **May 2025** – Vessel inspection of the William Fraser while out of water by Selwyn Norris, Pari Walker, and Opania George to understand its design and operation was carried out.
- **26 July 2025** – First hui facilitated by MBL at Ruakākā with Hapū representatives and technical experts to present the proposal and discuss potential cultural impacts.
- **16 August 2025** – Second hui facilitated by MBL at Ruakākā to further explore technical aspects and allow Hapū members to express concerns, ask any questions.
- **12 August 2025** - Meeting with Stephen Brown (Landscape Architect) and MBL – Engagement to ensure Te Parawhau's pou, maunga, and cultural landscapes were accurately represented in the Landscape Character and Visual Impact Assessment.
- **30 August 2025** – First hapū-only hui in Whangārei to independently discuss the proposal and expert reports.
- **13 September 2025** – Second hapū-only hui to consolidate feedback and prepare cultural responses for inclusion in the CIA.
- **04 October 2025** – Third hui facilitated by MBL in Whangārei to allow further Hapū input and address questions arising from previous hui.
- **07 October 2025** – Whaea Mira Norris and MBL hui in Whangārei to discuss CIA progress and other kaupapa matters.

A copy of the CIA Hapū hui kōrero is attached at **Appendix D**.



2.4 Purpose

The primary objective of this CIA is to identify and assess the potential impacts of MBL's proposed sand extraction activities at Paepae Atua on ngā uara ahurea (cultural values) of Te Parawhau ki Tai, who retain mana i te whenua and exercise kaitiakitanga over the taiao within their rohe. This includes Paepae Atua, the coastal environment, associated waterways, (moana, awa) and surrounding whenua.

The purpose of this CIA is to:

1. **Acknowledge Te Parawhau ki Tai** – Recognise the enduring whakapapa connections and obligations that bind Te Parawhau ki Tai to the taiao and affirm their responsibilities within their rohe.
2. **Document Te Parawhau ki Tai Uara Ahurea** – Identify and record ngā uara ahurea o Te Parawhau ki Tai associated with our hapū whakapapa and ancestral relationships to the coastal and marine environment and whenua at Paepae Atua including the surrounding taiao.
3. **Assess Potential Effects** – Evaluate the potential positive and adverse effects of MBL's sand extraction activities at Paepae Atua on ngā uara ahurea o Te Parawhau ki Tai, both now and for future generations.
4. **Planning Legislation Assessment** – Provide an assessment of relevant matters under the Resource Management Act 1991 (RMA), the Fast-track Approvals Act 2020, and other applicable legislation, to determine how the proposal may affect ngā uara ahurea o Te Parawhau ki Tai and interests.
5. **Mahi Whakaora** – Identify appropriate mahi whakaora (restorative actions and mitigation measures) to avoid, remedy, or mitigate adverse effects on te taiao in accordance with our uara ahurea. These measures may be recommended as



conditions of consent to the relevant authorities (e.g., NRC) or be included in a private agreement with MBL as the applicant as appropriate.

This CIA provides a Te Parawhau ki Tai led cultural framework (pou tarāwaho) to guide decision-making and ensure that the Hapū whakaaro, ngā uara ahurea, and responsibilities including their kaitiakitanga obligations are upheld throughout the consenting process and the life of this project should it proceed.



3 The MBL Proposal & Application

3.1 Legislative Context

MBL seeks resource consent under the Fast-track Approvals Act 2024 and approval under the Wildlife Act 1953 to undertake marine sand extraction at Paepae Atua.

3.2 Resource Consents Required

MBL seeks the following approvals for the proposed sand extraction activity at Te Ākau, Paepae Atua:

Resource Consent

A Coastal Permit is required under Rule C.1.5.13 of the Proposed Regional Plan for Northland (PRPN) for the extraction of sand from the coastal marine area at Paepae Atua. This activity is classified as discretionary under the PRPN.

The consent sought covers:

- Extraction of up to 150,000 m³ per year for the first three years (Stage 1).
- Extraction of up to 250,000 m³ per year from Year 4 to Year 35 (Stage 2), subject to monitoring confirming no significant ecological or bathymetric effects.

No other resource consents are required for the marine extraction activity or for the continued operation of MBL's land-based sand extraction facilities such as loading and unloading sand at Tāmaki Makaurau or other location.

Wildlife Permit

An approval is required under the Wildlife Act 1953 for the incidental disturbance and potential harm to two species of Scleractinian cup corals (*Sphenotrochus ralpae* and *Kionotrochus suteri*), which are present within the proposed extraction area. This approval is



to be issued by the Department of Conservation and relates to both monitoring and extraction activities.

3.3 Intended Use of Sand

The extracted sand is primarily intended for the Auckland market, with additional supply to Northland (Port Nikau, Opau) and the Bay of Plenty (the Port of Tauranga).

3.4 Location, Scale and Staging of Activity

The proposal involves the staged extraction of up to 8.45 million m³ of sand over a 35-year consent period from a 15.4 km² offshore area, located approximately 4.7 km from the shoreline at Paepae Atua (refer to Bioresearches' map at **Illustration 1**).

Sand extraction will be carried out in two stages:

- **Stage 1 (Years 1-3):** Up to 150,000 m³ of sand extracted per year.
- **Stage 2 (Years 4-35):** Up to 250,000 m³ of sand extracted per year, subject to monitoring outcomes.

Transition to Stage 2 is contingent on findings from the Sand Extraction Monitoring Report (SEMR), which will assess ecological and bathymetric effects, including seabed changes and benthic biota.

3.5 Operating Hours and Frequency

Sand extraction is proposed during daylight hours, with sand extraction operations limited to 3.5 hours per day, up to four times per week during Stage 2.

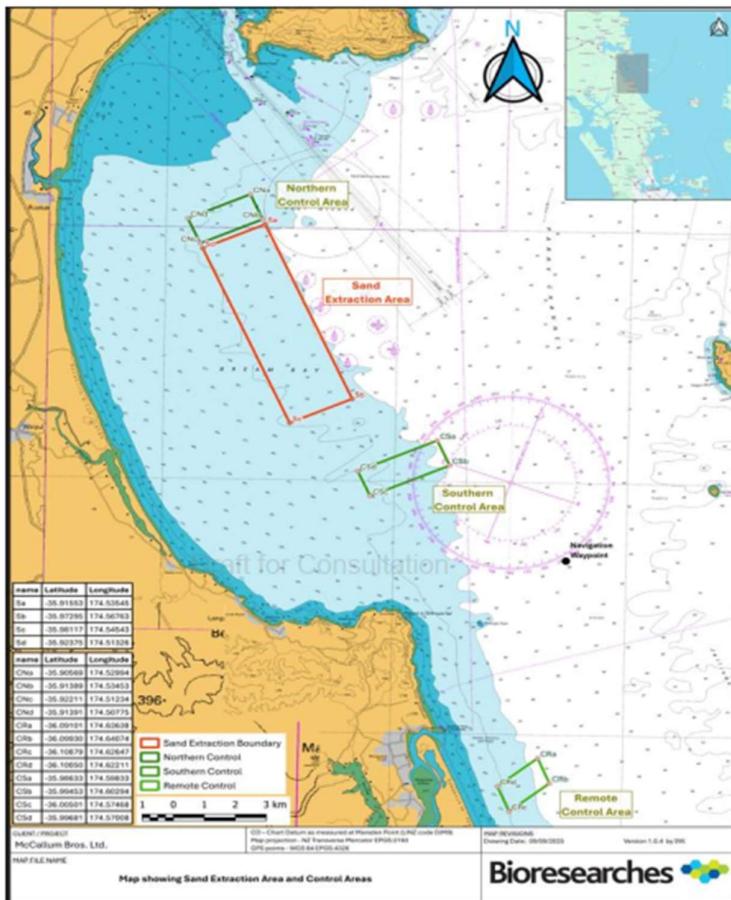


3.6 Extraction Area Layout and Control Sites

The extraction site is divided into 77 cells, each measuring 1000 metres long by 200 metres wide, for monitoring and reporting purposes. In addition to the extraction cells, MBL's proposal includes:

- Three control sites (one to north, one to the south and a remote site) located outside the extraction area provide reference data for environmental monitoring. Refer green rectangles at **Illustration 1** below.
- A 100-metre-wide bathymetric control area surrounding the northern, western, and eastern boundaries of the extraction site is used to detect any changes in seabed elevation resulting from extraction activities.

A map showing the extraction area marked by the red rectangle and three control sites, green rectangles is provided below at **Illustration 1**.

**Illustration 1: Sand Extraction Area (red rectangle) Control Sites (green rectangles)**

Source: Figure 1, MBL Fast Track Application accessed date 24 September 2025.

3.7 Extraction Method and Vessel

Sand extraction will be carried out using the William Fraser, a 68 m long motorised trailing suction hopper dredge (TSHD), utilising rotational extraction methods and associated technologies.

A 1.6-metre-wide drag head is lowered to the seafloor, fluidising the top layer of sediment and pumping the sand into an onboard hopper through a screening deck. A double-deck screening tower fitted with a 2 mm mesh prevents oversized material from entering the hopper.



Electric Pump System

An electric pump system transfers the extracted sediment to the onboard hopper on the vessel.

Moon Pools

The William Fraser contains six moon pools, three on each side of the hopper which discharge water, fine sediments, and oversized material approximately four metres below the vessel to the sea floor.

Vessel Speed

During transit, the William Fraser travels at a speed of up to 9.5 knots. Operation speed during sand extraction is approximately 1.5 to 2.5 knots.

Each extraction event typically covers approximately 13 kilometres and takes between 2.5 and 3.5 hours to fill the hopper with up to 923 m³ of sand.

GPS and Vessel Tracking

The vessel uses:

- Navigational software to geolocate and record the extraction track.
- A swell compensator system records extraction paths independently.

Both systems log data continuously during extraction and are turned off once the drag head is lifted off the seafloor.

Safety and Spill Prevention

The William Fraser incorporates the following safety and spill prevention measures:

- All engines, pumps, machinery, fuel, and oil tanks are housed within a double-bunded containment system.



- Hydraulic systems are fitted with leak detection alarms and automatic shutdown mechanisms.
- Biodegradable synthetic oil is used throughout the vessel.
- No refuelling will occur within the extraction area.

3.8 Monitoring and Management Framework

MBL has completed a Pre-Sand Extraction Assessment Report (PSEAR), which identified no exclusions within the proposed extraction area.

An Approved Sand Extraction Sub-Area (ASEA) has been defined, covering the full 15.4 km² site. Ongoing monitoring will be undertaken through Sand Extraction Monitoring Reports (SEMR), soundscape change assessments, and environmental reports.

Monitoring Framework

The proposed sand extraction activity includes a monitoring framework designed to monitor environmental effects which will inform the proposed adaptive management approach (refer **section 3.7.3**) over the duration of the 35-year consent.

Monitoring tools proposed by MBL include:

- **PSEAR:** Establishes baseline ecological and bathymetric conditions prior to extraction in each cell.
- **SEMR:** Assesses ecological and bathymetric changes following extraction activities.
- **Soundscape Change Measurement and Assessment:** Evaluates underwater acoustic impacts.
- **Environmental logs:** Records marine mammal sightings, seabird interactions, and other relevant observations.



Review Schedule

The proposed sand extraction application outlines a staged review process aligned with the monitoring programme. Reviews are scheduled at the following intervals:

- **12 months after commencement** of extraction.
- **Annually during Years 1–3.**
- **Prior to transition to Stage 2** extraction volumes.
- **At Years 5 and 8.**
- **Every five years thereafter**, unless triggered earlier by monitoring outcomes or changes in environmental conditions.

Adaptive Management Approach

As outlined above, MBL propose to utilise an adaptive management approach to respond to monitoring findings over time. This includes:

- Adjusting extraction volumes, locations, or methods based on SEMR outcomes.
- Updating management plans (e.g. EMMP, MMMP, SEOP) to reflect new data or technologies.
- Certifying changes through the consent authority as required.

3.9 Technical and Expert Reports

The following section summarises the findings of expert reports commissioned by MBL to assess the potential effects of the proposed sand extraction at Te Ākau, Bream Bay (Paepae Atua). The reports cover several disciplines including coastal processes, surf breaks, marine ecology, water quality, operational impacts, and landscape character and amenity.



3.10 Assessment of Operational Aspects – Te Ākau Bream Bay Sand

Extraction

Prepared by: McCallum Bros Ltd (MBL)

Date: 27 March 2025

MBL propose to extract sand from a designated offshore area in Te Ākau, Bream Bay, Paepae Atua using the purpose-built trailing suction hopper dredge vessel William Fraser. The operational summary in this report outlines the extraction methodology, vessel specifications, monitoring protocols, and environmental management measures associated with the proposed activity.

Methodology and Vessel Operation

- Sand extraction will occur in a 15.4 km² area located at least 4.7 km offshore, in water depths up to 38 m.
- The William Fraser will operate at slow speeds (1.5–2.5 knots) during extraction, using a drag head designed to minimise seabed disturbance and create shallow furrows (100 mm deep, 1.6 m wide).
- The vessel is equipped with GPS, AIS, radar, and automated tracking systems to record extraction paths and verify location data.
- Sand is screened onboard using a 2 mm mesh deck; oversized material and sediment are discharged below the hull via moon pools to reduce turbidity.
- Each extraction trip is expected to take 2.5–3.5 hours, with an average of 13 km of seabed traversed per load.



Operational Parameters

- Extraction will occur between 12:00 pm and 6:00 pm (April–September) and 12:00 pm and 8:00 pm (October–March), limited to 3.5 hours per day.
- Annual extraction volumes will be capped at 150,000 m³ for the first 3 years and 250,000 m³ for the remaining 32 years of the proposed 35-year consent.
- Sand will be transported primarily to the Port of Auckland, with additional deliveries to Whangārei and Bay of Plenty ports.

Monitoring and Management

The extraction area is divided into 77 cells (1000 m x 200 m) to manage spatial distribution and prevent over-extraction.

Monitoring includes bathymetric surveys, ecological sampling, and marine mammal observations, with data reported to Northland Regional Council.

An **Extraction Management Plan** will guide operations to ensure even distribution and allow for ecological recovery between extractions.

Environmental Safeguards

- The William Fraser incorporates multiple design features to reduce environmental impact, including:
 - electric pumps (eliminating hydraulic oil use), acoustically lined engine rooms, and subdued lighting.
 - Oil spill risk is mitigated through double bunded containment systems, alarm-triggered shutoffs, and the use of biodegradable hydraulic oil.
 - No refuelling will occur within the embayment.



Sand Characteristics and Use

- Sand from Te Ākau Bream Bay is mineralogically like Pākiri sand and has been tested for suitability in high-strength concrete.
- It is non-reactive in concrete mixes, making it suitable for infrastructure projects requiring long-term durability.
- MBL intends to supply sand to Auckland, Waikato, Bay of Plenty, and Northland markets, supporting regional growth and construction needs.

Conclusion

The operational proposal outlines a technically robust and environmentally managed approach to offshore sand extraction. The use of modern dredging technology, structured monitoring, and defined operational limits supports the sustainable use of Te Ākau Bream Bay as a long-term sand resource.

3.11 Coastal Processes and Geomorphology Effects Assessment

Report Title: *Te Ākau Bream Bay Sand Extraction: Coastal Process Effects Assessment*

Author: Tonkin + Taylor Ltd (2025)

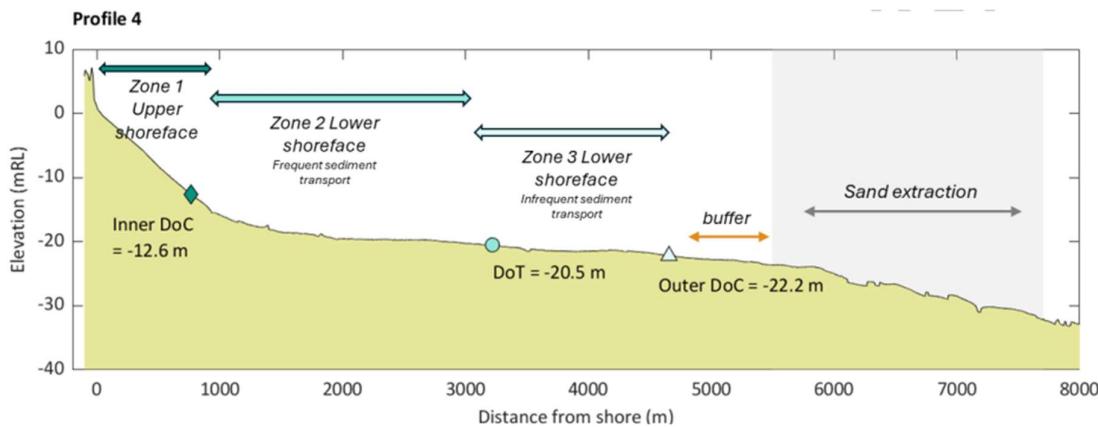
Tonkin + Taylor's coastal processes assessment evaluates the potential effects of sand extraction on sediment transport, wave dynamics, and seabed morphology in Te Ākau Bream Bay (Paepae Atua). This assessment uses three methods to define the offshore boundary of sediment transport: the inner and outer Depth of Closure (DoC), and the Depth of Transport (DoT)¹.

¹ **Depth of Transport (DoT):** A modern method for defining the seaward limit of sediment movement, based on how waves and currents stir the seabed. It helps identify where sediment transport becomes negligible and is considered more accurate than older methods like the outer Depth of Closure.



As shown in **Illustration 2**, the proposed extraction area is located beyond the depth of closure (DoC), which defines the offshore limit of sediment movement under typical wave conditions. Tonkin + Taylor's report states that this spatial separation disconnects the extraction area from the sediment transport processes of the active beach and upper shoreface systems.

Illustration 2: Shore Face Profile – Te Ākau, Paepae Atua



Source: Excerpt Figure E.1-2 Location of DoC and DoT and associated shoreface zones with respect to the application area for Profile 4. Tonkin + Taylor Coastal Effects Assessment:

Tonkin + Taylor's modelling shows:

- **Wave effects:** Predicted changes to wave height and direction are minimal, with a maximum seabed lowering of 0.55 m across the extraction area over the 35-year consent duration.
- **Hydrodynamics:** Depth changes within the proposed extraction area are negligible, with modelling indicating a 2% change over 35 years.



- **Sediment transport:** Effects are unlikely unless trenching² occurs. Tonkin + Taylor advise that trenching can be avoided through appropriate operational controls.
- **Lower shoreface stability:** The lower shoreface is expected to remain morphologically stable over annual to decadal timescales.
- **Upper shoreface and beach zones:** These zones are disconnected from the proposed extraction area by a minimum buffer of 4.7 km, and no detectable changes are expected in these areas from the proposed sand extraction activities.

Key Findings

Resource Characteristics

- The sand resource in the extraction area is at least 2.8 m deep, with no contact with rock or older geological sediments.
- The resource investigation area contains an estimated minimum of 124 million cubic metres of sand.

Spatial Separation and Sediment Transport

- The proposed extraction area is located seaward of the Depth of Closure (DoC), which defines the offshore limit of sediment transport.
- The area is sufficiently offshore to have negligible effects on the beach and dune environment.

² *Trenching:* A form of seabed disturbance where repeated sand extraction in the same location creates deeper depressions or trenches. This can alter sediment transport patterns and increase hydrodynamic effects.

Trenching is avoided in the proposed method by using shallow extraction passes (maximum 100 mm depth) and long return intervals (33–55 months) between re-extraction.



- The upper shoreface and beach zones are disconnected from the extraction area by a minimum buffer of 4.7 km.
- Sediment mobility within the extraction area may occur during extreme wave events, but net sediment transport is negligible under typical conditions.

Wave Dynamics and Hydrodynamics

- The depth and spatial extent of the proposed extraction area are sufficient to ensure negligible effects on wave height, direction, and coastal currents.
- Modelling predicts a maximum seabed lowering of 0.55 m and a 2% change in depth over the 35-year consent duration.

Operational Controls and Mitigation

- Trenching,³ which could increase effects, is avoided through the proposed extraction method using shallow tracks (maximum 100 mm depth per pass) and long return intervals (33–55 months).

Conclusion:

Tonkin + Taylor consider that the proposed sand extraction area is appropriately located beyond the DoC and buffered from the active beach system.

The combination of spatial separation, shallow extraction depth (100 mm max), and long return intervals supports the conclusion that the proposed sand extraction activity will not affect the active beach system or nearshore sediment dynamics. Tonkin + Taylor conclude,

³ *Trenching*: A form of seabed disturbance where repeated sand extraction in the same location creates deeper depressions or trenches. This can alter sediment transport patterns and increase hydrodynamic effects.

Trenching is avoided in the proposed method by using shallow extraction passes (maximum 100 mm depth) and long return intervals (33–55 months) between re-extraction.



with operational controls in place to avoid trenching, the effects on coastal processes and geomorphology are expected to be **negligible to low**, with **no onshore effects anticipated**.

3.12 Assessment of Ecological Effects

Report Title: *Te Ākau Bream Bay Sand Assessment of Ecological Effects*

Author: Bioresearches Group Ltd (2025)

Bioresearches report assesses the ecological effects of the proposed sand extraction on benthic habitats and species within the proposed extraction area at Paepae Atua.

Key findings of their report include:

- The seabed is composed of gently undulating sand with patches of gravel and shell and is relatively homogeneous with no large-scale geomorphic features.
- The William Fraser uses a drag head that disturbs sediment to a shallow depth of approximately 100 mm and 1.6 m wide which is significantly less than other dredging methods.
- Shallow disturbance (100 mm deep as proposed) allows for faster recovery of benthic communities. Comparative studies show:
 - 100 mm disturbance recovers in approximately 64 days.
 - 200 mm disturbance may take over 107 days to recover.
- Observations by divers recorded:
 - **Stomatopods** surviving the drag head passage and resuming feeding within 5 minutes.
 - **Predatory gastropods** were observed migrating into the disturbed area (extraction area) in search of prey.
 - A large percentage of hard-shell biota survive the passage through the drag head and are returned to the seabed via the vessel's screening system.



- The proposed sand extraction method creates a patchwork of disturbed strips rather than large continuous areas across the seabed, allowing mobile biota to recolonise laterally.
- Benthic communities will be in varying states of recovery depending on the time since last extraction. This reflects the rotational extraction method and long return intervals proposed.
- Full recovery is expected once extraction ceases although:
 - The timeframe for recovery may vary depending on species and habitat complexity.
 - Some species or structurally complex habitats may take longer to fully recover.
- If sensitive habitats have naturally disappeared prior to extraction, recolonisation may be limited by other seabed disturbance activities (e.g. anchoring, scallop dredging, bottom trawling).
- Sensitive biogenic habitats (i.e. seabed areas formed by living organisms that support complex biological communities) will be avoided through regular pre-extraction surveys and mapping. Sand extraction will not occur in areas where these habitats are identified.
- Previous extraction trials at Pākiri showed high survival rates for benthic macrofauna, with 86% of larger biota and 96% of crustaceans surviving passage through the dredge (Bioresearches 2020).
- The assessment also notes that sharks and rays present in the area are capable of avoiding the vessel, and no Wildlife Act-listed species have been sighted in Te Ākau Bream Bay. Only one marine reptile has been recorded in the extraction area since 1899.

**Conclusion:**

Bioresearches consider that the proposed sand extraction will result in **negligible to low** ecological effects on benthic habitats and fauna present within the extraction area at Paepae Atua.

The shallow extraction profile, recovery rates, and operational controls including habitat avoidance support the conclusion that benthic communities will recover naturally over time (Bioresearches, 2025).

3.13 Marine Mammals Assessment of Environmental Effects

Report Title: *Te Ākau Bream Bay Sand Extraction Marine Mammal Assessment of Environmental Effects*

Author: SLR Consulting NZ Ltd (2025)

SLR's report evaluates the potential effects of sand extraction on marine mammals, including pilot whales, dolphins, seals, and other species known to frequent Te Ākau Bream Bay.

Key findings of their report include:

Species frequently present in Te Ākau Bream Bay are noted as:

- Bottlenose dolphins – *Nationally Endangered*, semi-resident (~288 individuals), calves in 71% of sightings.
- Bryde's whales – *Nationally Critical*, regular foraging, calves observed, hotspot northeast of extraction site.
- Common dolphins – widespread, year-round.
- Orca – *Nationally Critical*, seasonal visitors.



- False killer whales, pilot whales, NZ fur seals – seasonal or offshore presence.

Species occasionally present include:

- Blue, humpback, southern right, sei, minke, sperm whales; leopard seals.

Underwater Noise and Audibility⁴

The William Fraser dredge produces low-frequency underwater noise (168 dB re 1 μ Pa @ 1m), which is considered relatively quiet compared to other dredging and shipping vessels.

SLR's report includes an assessment of audibility, which refers to the maximum distance that marine mammals can hear the William Fraser and extraction activities, even if no disturbance occurs. The predicted audibility ranges are:

- Dolphins and other toothed whales: up to 10.4 km
- Baleen whales (eg Bryde's whales): up to 18 km
- NZ fur seals: up to 18.7 km
- Leopard seals: up to 18.9 km

These distances indicate where sound is detectable above natural background noise, not where it causes harm. SLR state that the actual zones of impact, where behavioural responses or ecological effects may occur, are expected to be much smaller.

⁴ **Underwater Noise and Audibility** refers to sound generated by human activities in the marine environment and how detectable that sound is to marine mammals. It includes assessing how loud the noise is, how far it travels underwater, and whether it can be heard by different species, depending on their hearing range and the background noise levels.



Underwater Noise Effects on Marine Mammals⁵

SLR's assessment identifies zones of potential behavioural response and communication masking due to underwater noise from the extraction vessel:

- **Behavioural response zones⁶:**
 - Dolphins/toothed whales: up to 600 m
 - Baleen whales: up to 1.1 km
 - Seals: up to 700 m
- **Masking zones⁷:**
 - Dolphins/toothed whales: up to 8.3 km
 - Baleen whales and seals: up to 16 km
- **Soundscape change⁸:**
 - Negligible (<3 dB) outside the extraction area
 - Up to 37 dB increase within the extraction zone during active dredging

No sonar is used on the William Fraser. Sand extraction operations are limited to daylight hours (maximum 3.5 hours/day). It's slow linear movement during extraction reduces the risk of vessel strike.

⁵ **Underwater Noise Effects on Marine Mammals** – Refers to the potential for sound generated by vessels or machinery to affect marine mammal behaviour, communication, or navigation.

⁶ **Behavioural response zones:** Areas around a noise source where marine mammals may change their behaviour (e.g. avoid the area, alter vocalisations, or modify movement patterns) due to sound exposure.

⁷ **Masking zones:** Areas where underwater noise interferes with a marine mammal's ability to hear biologically important sounds, such as communication, navigation, or detecting predators and prey.

⁸ **Soundscape change:** Alterations to the natural underwater acoustic environment caused by human activities, which may affect how marine mammals experience and interact with their habitat.



Habitat Modification⁹

The sediment plume is expected to extend approximately 250 m from the extraction site, affecting sandy substrate. Impacts on prey species are considered minimal due to their mobility and dietary flexibility. The overall impact is assessed as low for bottlenose dolphins and negligible for other marine mammals.

Ship Strike Risk¹⁰

The William Fraser operates at \leq 9.5 knots during transit and 1.5–2.5 knots during extraction. Mitigation measures include lookout protocols, speed restrictions, and shutdown procedures. The risk of ship strike is assessed as negligible to very low, with Bryde's whales identified as the most vulnerable species.

Contaminants, Debris, and Entanglement¹¹

Sediment contaminant levels are below guideline thresholds. The vessel will actively retrieve and safely dispose of marine debris. No loose lines will be deployed, and a 100 m exclusion zone will be maintained around large whales. The overall impact is considered negligible, with a potential net ecological benefit from debris removal.

Artificial Lighting¹²

No nighttime extraction is proposed. Lighting will be minimised and directed downward. The impact of artificial lighting is assessed as negligible.

⁹ **Habitat Modification** – Describes physical changes to the seafloor or water column that may alter habitat conditions for marine species.

¹⁰ **Ship Strike Risk** – Assesses the likelihood of marine mammals being injured or killed by vessel collisions.

¹¹ **Contaminants, Debris, and Entanglement** – Covers risks from pollutants, marine litter, and the potential for animals to become entangled in equipment or debris.

¹² **Artificial Lighting** – Evaluates the effects of artificial light on marine fauna, particularly during nocturnal periods.



Cumulative Effects¹³

The assessment considers cumulative pressures from regional vessel traffic, fishing activity, and climate change (including sea surface temperature rise, ocean acidification, and sea level rise). Species-specific sensitivities are noted:

- Bottlenose dolphins: high residency and sensitivity to disturbance
- Bryde's whales: susceptible to ship strike, low site fidelity
- Killer whales: transient, low likelihood of exposure

Monitoring and Mitigation¹⁴

A Marine Mammal Monitoring Programme (MMMP) will be implemented, including:

- Acoustic monitoring and presence tracking
- Ongoing equipment maintenance and noise reduction
- Compliance with Marine Mammal Protection Regulations

Conclusion:

With mitigation measures in place, SLR's assessment concludes that the proposed sand extraction activity is expected to result in **negligible to low effects on marine mammals**. No population-level impacts are anticipated (Bioresearches, 2025).

¹³ **Cumulative Effects** – Considers the combined impact of the proposed activity alongside other existing or foreseeable environmental pressures.

¹⁴ **Monitoring and Mitigation** – Refers to measures designed to detect, manage, or reduce environmental impacts during the activity.



3.14 Fish and Fisheries Effects Assessment

Report Title: *Te Ākau Bream Bay Assessment of Effects on Fish and Fisheries*

Author: R.O. Boyd, Independent Fisheries Scientist (2025)

This assessment describes the fish and shellfish communities present in Te Ākau Bream Bay, Paepae Atua and evaluates the potential effects of the proposed sand extraction on fish populations and fishing activities. A summary of the key findings is below.

Key Findings

Fish Community and Habitat

- Te Ākau Bream Bay supports a diverse assemblage of demersal and pelagic¹⁵ fishes typical of the northeast coast and includes Tāmure, (the dominant species) kumukumu including kuparu and others.
- Most demersal species are generalist feeders, relying on benthic organisms such as crustaceans, molluscs, polychaetes, and echinoderms.
- Fish species in the area are highly mobile and adapted to naturally variable conditions, including elevated suspended sediment levels from storms and runoff.

Shellfish Resources

- Pipi and tūangi occur in intertidal zones, while tipa (Scallop) are found sub tidally, including within the Application Area in low numbers.
- The Northland scallop fishery (SCA1), including Te Ākau Bream Bay, was closed in 2022 due to low biomass and sustainability concerns.

¹⁵ **Demersal and pelagic** classifications refer to the ecological zones fish occupy. Demersal species are bottom-dwellers, often affected by seabed disturbances, while pelagic species live in the water column and are more influenced by changes in water quality and currents. (Source: Fisheries New Zealand, Ministry for Primary Industries)



- The assessment states that scallops are capable of short-distance escape responses and are expected to avoid entrainment during extraction.

Fishing Activity

- Commercial and recreational fishing occurs throughout Te Ākau Bream Bay, including within the Application Area, but fishing effort and catch levels in Te Ākau Bream Bay are considered moderate. These levels have been compared to similar research surveys conducted in Te Moananui-a-Toi (the Hauraki Gulf).
- Tāmure (snapper) is the primary target species for both commercial and non-commercial fishers.
- The timing of proposed extraction (afternoons and evenings) avoids peak recreational fishing periods.

Potential Effects of Sand Extraction on Fish and Fisheries

Underwater Noise

- Modelling by Styles Group (2025) indicates no risk of auditory injury to fishes and only minor behavioural responses within 205 m of the vessel William Fraser.
- Masking effects are expected to be low to medium within this range. Overall, noise-related effects are assessed as **low to negligible**.

Water Quality

- SLR Consulting (2025) found that changes to turbidity and suspended sediment levels will be localised and temporary, with effects returning to ambient within an hour.
- Coastal fish species are well adapted to such variability. Effects are assessed as **negligible**.



Entrainment and Mortality

- The dredge (drag head) moves slowly at 1.5 to 2.5 knots. Mobile fish species are expected to avoid entrainment.
- Eggs and larvae may be vulnerable, but the scale of extraction and wide distribution of spawning areas suggest minimal population-level effects.
- Direct mortality is assessed as **negligible**.

Prey Availability

- Benthic fauna, which form the primary food source for demersal fishes, will be disturbed but not entirely removed.
- Some organisms survive extraction and are released in the discharge, contributing to recovery and feeding opportunities.
- Recovery of benthic communities is expected within 2–3 years. Effects on food availability are assessed as **negligible**.

Scallop Recovery

- The proposed sand extraction is not expected to impact scallop recovery. Pākiri monitoring data (2023–2025) show increases in scallop numbers within extraction areas, suggesting recovery is influenced more by environmental factors than extraction alone.

Conflict with Existing Fisheries

- No conflict is anticipated with existing commercial or recreational fishing activities. The spatial and temporal separation of the proposed sand extraction supports coexistence.

**Conclusion:**

R.O Boyd's assessment concludes that the fish and shellfish communities in Te Ākau Bream Bay, Paepae Ātua are comprised of common, widespread fish and shellfish species. The proposed sand extraction is expected to have **low to negligible effects** on fish populations, fishing activities, and food availability, provided operational controls are implemented. The mobility of fish and the resilience of benthic communities support the conclusion that **no significant adverse effects** are anticipated.

3.15 Sand Extraction in Te Ākau, Bream Bay, Potential Effects on Seabirds and Shorebirds

Author: David Thompson, NIWA

Date: Final version 21 May 2025

This report assesses the potential effects of proposed sand extraction activities in Te Ākau Bream Bay on seabirds and shorebirds.

Bird Community Composition:

The following seabird and shorebird communities were identified in the area.

Seabirds: 34 taxa identified as likely to occur, including 5 classified as *Threatened* and 23 as *At Risk* under the New Zealand Threat Classification System (NZTCS).

Shorebirds: 13 taxa identified, including 3 *Threatened* and 6 *At Risk*.

The report identified, of particular concern is the tara iti (New Zealand fairy tern), which breeds at Waipū estuary, over 5 km southwest of the proposed sand extraction area (NIWA Taihoro Nukurangi, 2025).



Potential Effects Assessed

Seven potential effects were evaluated for all 47 seabird and shorebird taxa using a consequence-likelihood-risk framework:

1. Loss of terrestrial breeding habitat
2. Exclusion from at-sea habitat
3. Reduced prey abundance or availability
4. Interaction with the sand extraction vessel
5. Fuel or oil spill
6. Airborne noise
7. Underwater noise

Risk Assessment Outcomes

- The report identified all risk scores were classified as '**low**', with most effects deemed **negligible or less than minor**.
- For **tara iti**, three effects (loss of breeding habitat, vessel interaction, and fuel/oil spill) were assigned a '**major**' **consequence** due to the critically small population, but the **likelihood of occurrence was very low**, resulting in low overall risk scores.
- The low likelihood scores in the report are supported by:
 - The extraction site being beyond the Depth of Closure, meaning negligible impact on beach morphology and on the upper shore breeding habitats of birds¹⁶.
 - Historical absence of vessel interaction incidents over 70 years of similar operations.

¹⁶ NIWA Client Report: Bream Bay Extraction – Birds, Final, 21.05.2025, p.18. “It is worth noting that tara iti fairy tern nest in upper shore habitats, above the extreme high-water mark (Pulham & Wilson 2013) and would be susceptible to any loss of breeding habitat.”



- Proposed mitigation measures including a **light management plan** and **oil spill management plan**.

Recommendations

- Implement a **light management plan** for the sand extraction vessel to minimise nocturnal seabird interactions.
- Maintain an **oil spill management plan** and log all seabird interactions (fatal and non-fatal) for annual reporting to the Department of Conservation.

Conclusion:

The report concludes that, with appropriate mitigation, the proposed sand extraction **will not** result in adverse effects on seabirds and shorebirds and is consistent with the relevant provisions of New Zealand's environmental policy framework, including national and regional coastal and biodiversity policies.

3.16 Sand extraction in Te Ākau Bream Bay, Potential Effects on Marine Water Quality

Author: SLR Consulting New Zealand

Date: Final version 7 March 2025

This report assesses the potential effects of proposed sand extraction activities in Te Ākau Bream Bay on marine water quality.

Water Quality Assessment

An eight-week field sampling program (May–June 2024) was undertaken at two application sites and one reference site. Sampling results were compared with long-term regional data from Northland Regional Council's State of the Environment (SoE) programme and previous plume sampling from Pākiri.



Key Parameters Assessed

1. Suspended sediment and turbidity plume generation
2. Ambient water column pH
3. General water quality (temperature, dissolved oxygen, salinity, nutrients, chlorophyll-a)
4. Sediment contaminant mobilisation

Risk Assessment Outcomes

- All effects were assessed as **Negligible** and localised to the extraction area.
- Turbidity and TSS levels were low and well below NRC Policy H.3.3 thresholds. Any plume generated is expected to dissipate within ~30 minutes and return to ambient levels.
- pH levels were consistent across sites and within the NRC open coastal water range (8.0–8.4).
- Nutrient and biological parameters were low and consistent, with no indication of enrichment from extraction.
- Sediment contaminant levels (metals and hydrocarbons) were very low, and the sandy seabed reduces the risk of mobilisation.
- The vessel's design (e.g. moon pool discharge, improved screening efficiency) further mitigates potential effects.

Mitigation Measures

- Use of the William Fraser vessel with six moon pools to discharge sediment below the waterline, minimising plume spread and intensity.
- Daylight-only extraction to reduce acoustic disturbance to marine fauna.
- Implementation of a
 - **Waste Management Plan,**



- Preparation and implementation of an
 - **Oil Spill Prevention and Response Plan** prior to commencement of extraction.
- Compliance with
 - **Maritime New Zealand and International Maritime Organisation standards** for vessel operations.
- No additional water quality monitoring is required due to the low level of effects.

Conclusion:

SLR's report concludes that, with appropriate mitigation, the proposed sand extraction will not result in adverse effects on marine water quality and is consistent with the relevant provisions of New Zealand's environmental policy framework, including national and regional coastal and water quality policies.

3.17 Assessment of Effects on Surf Breaks at Te Ākau Bream Bay

Prepared by: Thiebaut S., Berthot A, MetOcean Solutions (Meteorological Service of New Zealand Ltd)

Date: March 2025

MetOcean Solutions' report evaluates the potential effects of proposed offshore sand extraction at Te Ākau Bream Bay, Paepae Atua, on seven regionally significant surf breaks located near the extraction area. These include Poupouwhenua, Ruakākā, Waipū, and Wairahi. The assessment applied hindcast wave modelling and surfability metrics to estimate potential changes in wave conditions. A worst-case scenario over a 35-year consent term, assuming full extraction without sand replenishment was adopted.



Methodology

MetOcean Solutions approach included:

- **Wave Modelling:** A computer model (SWAN) was used to simulate how waves behave in the area. This model worked at different scales, from detailed (30 m) to broad (4 km), and was guided by global wave and wind data.
- **Seafloor Mapping (Bathymetry):** The shape of the seafloor was mapped using recent sonar surveys (2024), older data, and global seabed information to inform their assessment.
- **Reference Year:** MetOcean Solutions selected 2009 for their modelling because it represents typical long-term wave conditions in the area.
- **Surfability Criteria:** To assess surf quality, MetOcean Solutions applied three sets of wave conditions:
 - **Conservative:** Waves at least 0.5 m high with a period of 6 seconds.
 - **Mead & Black (2004):** Waves at least 0.75 m high with a 6-second period.
 - **Average to Good Surf:** Waves at least 0.75 m high with an 8-second period.

Key Findings

MetOcean Solutions found that the proposed sand extraction is unlikely to noticeably affect surf conditions at nearby surf breaks. Their main findings include:

- **Surfable Conditions:** Surfable waves occur between 23% and 50% of the time, depending on how surf quality is defined.
- **Wave Changes at Surf Breaks:** MetOcean Solutions' modelling showed only minor changes in wave characteristics (such as wave behaviour that influence surf quality) were recorded and included:
 - Wave height: Changes of $\pm 0.01\text{--}0.02$ m, or 1.2–3.5%
 - Wave direction: Shifts of up to $\pm 2^\circ$



- Wave period (average): Changes of $\pm 1\text{--}2$ seconds, or 10–25%
- Peak wave period: Could change by up to ± 11 seconds, but this result is considered unreliable due to complex wave patterns.
- **Localised Effects:** Small changes may occur near the edges of the extraction area during northeast, east, and southeast swell events, but these are limited in scale.
- **Impact on Surf Quality:** Overall, the changes are considered too small to be noticed by surfers.
- **Climate Change Considerations:** Future changes in wave patterns due to climate change are not expected to worsen the potential effects of the proposed sand extraction on surf breaks. The combined impact of sand extraction and climate change is considered negligible.

Conclusion:

The proposed sand extraction is assessed as having less than minor to negligible effects on surf breaks at Te Ākau Bream Bay. The activity is considered consistent with Policy 16 of the New Zealand Coastal Policy Statement (NZCPS 2010), with no adverse effects anticipated on surf breaks or access to them. Future changes in wave patterns due to climate change are not expected to worsen the potential effects of the proposed sand extraction on surf breaks, and the combined impact is considered negligible.

3.18 Assessment of Underwater Noise Effects – Te Ākau Bream Bay Sand Extraction

Prepared by: Styles Group

Date: 10 April 2025

This report evaluates the underwater acoustic effects of the proposed sand extraction activity at Te Ākau Bream Bay over a 35-year consent term.



It models both instantaneous and cumulative noise emissions from the dredge vessel William Fraser and assesses potential impacts on marine mammals, fishes, invertebrates, kororā (little penguins), and sea turtles.

Methodology

Styles Group applied a combination of empirical measurements, international technical guidance, and computational modelling to assess underwater noise levels and evaluate the spatial extent and intensity of potential acoustic effects on marine species present or likely to occur in Te Ākau Bream Bay.

Noise Measurements and Modelling

The following modelling and data were collected to inform their assessment.

- **Empirical data** from the dredge vessel William Fraser was collected during active sand extraction off Pākiri in 2019.
- **Noise modelling** used the Energy Flux (EF) propagation model to simulate how sound travels underwater.
- **Environmental inputs** included:
 - Bathymetry (seafloor shape) from NIWA
 - Sound speed profiles from Zeldis (2013)
 - Sediment types from Tonkin & Taylor geotechnical data
- **Source levels** were based on measured underwater sound pressure levels from the William Fraser during active extraction off Pākiri.

Understanding the Existing Noise Environment

To assess how much additional noise the proposed sand extraction activity produced, Styles Group modelled existing vessel traffic and ambient sound levels using:



- AIS vessel data (April–June 2024) to model commercial ship movements and associated noise.
- Passive Acoustic Monitoring (PAM) conducted in May–June 2024 using calibrated hydrophones deployed within the proposed extraction area.
- Detection of marine mammal vocalisations helped establish a baseline of biological sound activity in Te Ākau Bay.

Effect Categories Assessed

- **Physiological Effects:** The assessment evaluated the risk of auditory injury or temporary hearing loss (TTS/PTS) in marine mammals, using thresholds from the U.S. National Marine Fisheries Service (NMFS, 2024). No risk of hearing damage was predicted beyond 0.5 metres from the William Fraser while actively extracting.
- **Behavioural Effects:** The likelihood of disturbance was modelled using dose-response¹⁷ functions for cetaceans (e.g., dolphins and whales). The modelling estimated the probability of behavioural changes at different noise levels. For pinnipeds (e.g., seals), threshold-based estimates were used to predict how they might respond to the dredge noise, such as changes in movement, vocalisation, or avoidance behaviour.
- **Auditory Masking:** Listening Space Reduction (LSR)¹⁸ was calculated to estimate how underwater noise from sand extraction may interfere with the ability of nearby marine species to detect biologically important sounds, such as communication calls or predator cues.

¹⁷ *Dose-response* refers to a modelling approach that estimates the likelihood of an effect (such as behavioural disturbance) occurring in an animal based on the level of exposure to a stressor — in this case, underwater noise. It helps predict how different species may respond at varying sound levels, using empirical data and probability curves.

¹⁸ *Listening Space Reduction (LSR)* refers to the decrease in the area around an animal within which it can detect biologically important sounds, such as communication calls or predator cues. LSR occurs when anthropogenic noise, like dredging, overlaps with the animal's hearing range and masks natural sounds, reducing its ability to perceive its environment.



- **Audibility:** Maximum distances at which species may detect dredge noise were estimated, regardless of whether an effect is expected.
- **Soundscape Change:** Monthly average sound levels and cumulative exposure were modelled to assess long-term changes to the underwater acoustic environment.

Conclusion:

The assessment concludes that the proposed sand extraction is **not** expected to result in auditory injury to marine fauna. Behavioural and masking effects are generally limited to within a few hundred metres of the vessel and are considered **Small to Minor** in magnitude. Soundscape changes are spatially constrained and unlikely to result in significant ecological impacts. The assessment supports the conclusion that underwater noise effects from the proposed sand extraction activity are consistent with New Zealand regulatory frameworks and international best practice.

3.19 Assessment of Airborne Noise Effects – Te Ākau Bream Bay Sand Extraction

Prepared by: Styles Group

Date: 3 April 2025

Styles Group assessed airborne noise effects from the proposed sand extraction activity using calibrated computer modelling based on measurements of the dredge vessel William Fraser. The assessment focused on:

- predicted noise levels received at the shoreline and nearby dwellings, comparing these against the limits set by the Proposed Northland Regional Plan (PNRP).



Methodology

- Noise modelling was conducted using Brüel & Kjær Predictor software, calibrated with real-world measurements of the *William Fraser* during active extraction.
- Modelling parameters included terrain, vessel speed, meteorological conditions (easterly winds at 1.5 m/s), and ISO 9613 propagation standards.
- Two operational scenarios were modelled:
 - Long track: vessel traverses the full length of the extraction area.
 - Short track: vessel operates in a concentrated area closer to shore.

Noise Standards

- PNRP Condition 22 requires:
 - Daytime: ≤ 55 dB LAeq
 - Nighttime: ≤ 45 dB LAeq and 75 dB LAFmax
- These limits apply at the notional boundary of any noise sensitive activity, including dwellings, marae, schools, and healthcare facilities.

Key Findings

- Predicted noise levels at the beach range from 10–15 dB LAeq, well below the threshold of human hearing.
- At the closest dwellings, predicted levels are <12 dB LAeq, considered inaudible¹⁹.
- Ambient noise measurements at Te Ārai and Pākiri Beach show that wave action dominates the coastal soundscape, with typical background levels between 40–60 dB, depending on wind and swell.

¹⁹ Inaudible: refers to sound levels below the threshold of human hearing, typically under 15 dB LAeq in open coastal environments, and not perceptible at noise-sensitive locations.



- Cumulative effects from other vessels are not expected to be significant; the TSHD will not contribute noticeably to the overall noise environment.

Effects on Receptors

- **Beach users:** Noise from the TSHD is expected to be inaudible under typical conditions.
- **Nearby dwellings:** Noise levels comply with both daytime and nighttime limits by a wide margin.
- **Avifauna:** While Styles Group are not avifauna experts, they conclude that the low noise levels are unlikely to interfere with bird communication or behaviour.

Conclusion:

The proposed sand extraction activity is predicted to generate **very low** airborne noise levels, well below regulatory thresholds. The sand extraction is **not** expected to cause adverse noise effects on beach users, nearby residents, or avifauna, and is consistent with the permitted noise environment under the PRNP.

3.20 Assessment of Navigational Safety – Te Ākau Bream Bay Sand Extraction

Prepared by: Northland Regional Council Harbourmaster's Department

Date: 21 February 2025

The Harbourmaster's Department of Northland Regional Council assessed the navigational safety implications of MBL's proposed sand extraction activity in Bream Bay using the vessel William Fraser. The assessment focused on:

- the location and operational characteristics of the extraction area relative to existing shipping and recreational use;
- the vessel's compliance with maritime safety rules and Harbourmaster guidelines;



- potential risks to other users of the Coastal Marine Area (CMA), including commercial and recreational vessels.

Methodology

- The assessment was based on site-specific mapping, vessel specifications, and operational protocols.
- The Harbourmaster reviewed historical shipping data, vessel traffic patterns, and Local Port Service (LPS) procedures.
- The William Fraser was inspected by the Deputy Harbourmaster, and the Master interviewed regarding operational readiness and pilotage exemption.
- Harbour Safety Meetings were held with stakeholders (which included NRC, Northport, Whangārei Harbour Radio, McCallum Bros Ltd, commercial fishing representatives, and other maritime users of Bream Bay) to discuss the proposed activity. Stakeholders involved in Harbour Safety Meetings and operational coordination.

Navigational Context

Operational details such as vessel speed, extraction duration, and location relative to shipping channels are consistent with those outlined in other expert reports and were considered in the Harbourmaster's assessment. The William Fraser is equipped with radar, AIS, GPS, and compliant day/night signals.



Key Findings

- **The vessel will operate within the LPS²⁰** area managed by Whangārei Harbour Radio, which provides traffic information and monitoring.
- **Communication protocols** require MBL to notify LPS 12 hours prior to each operation and maintain VHF contact before and after each trip.
- **Risks** from recreational vessels (e.g., small fishing boats, kayaks) are considered manageable due to vessel visibility, slow speed, and open water manoeuvrability.
- **Commercial fishing vessels** will be notified in advance to avoid operational overlap.
- **Environmental conditions** (wind, wave, tide) are monitored via Northport systems and Predict Wind services.

Effects on Receptors

- **Recreational vessels:** Risk of interaction is low and manageable with standard maritime protocols.
- **Commercial vessels:** Extraction area is clear of main shipping lanes; coordination via LPS will ensure safe separation.
- **Harbour stakeholders:** No objections were raised during Harbour Safety Meetings.

Conclusion:

The proposed sand extraction is considered navigationally safe and consistent with maritime operational standards.

²⁰ Local Port Service (LPS) area: refers to the designated maritime zone monitored and managed by Whangārei Harbour Radio, under the oversight of Northport Limited. The LPS provides vessel traffic information and monitoring to support safe navigation within Whangārei Harbour and its approaches, including Bream Bay.



The Harbourmaster concludes that the activity can be competently managed with adherence to established protocols and does not pose an unacceptable risk to other users of Te Ākau, Bream Bay.

3.21 Assessment of Landscape, Natural Character and Cultural Effects – Te Ākau Bream Bay Sand Extraction

Prepared by: Brown NZ Ltd

Date: 20 May 2025

Brown NZ Ltd assessed the landscape, natural character, and associative cultural effects of MBL's proposed sand extraction in Te Ākau Bream Bay. The assessment considered the visibility and perceptual impact of the William Fraser dredge vessel, the biophysical effects of sand removal, and the cultural significance of the surrounding coastal environment.

Methodology

- The assessment followed relevant professional landscape guidelines and legislation.
- **Site visits** were conducted to key viewpoints including Mair Road, Ruakākā Surf Club, Uretiti Beach, and Waipū Cove.
- **Visual simulations and photographic comparisons** were used to assess visibility and landscape integration.
- **Cultural values** were considered through review of the Patuharakeke Management Plan (2014), CVAs²¹, and engagement with hapū representatives.

²¹ Te Parawhau Hapū CVA, has not formed a part of this assessment. However, a meeting kanohi ki te kanohi was carried out with Mr Stephen Brown. The purpose of this meeting was to ensure our Hapū taonga, pou and wāhi were appropriately referenced in this report.



Landscape and Natural Character Effects

- The William Fraser would be visible for up to 3.5 hours per day, operating 4.7 km offshore within an existing maritime environment that includes anchoring points and shipping lanes.
- Visibility from the shore is limited due to distance, vessel scale, and similarity to other commercial ships.
- The extraction plume is confined to the undersea area and not visible from shore.
- Landscape effects are rated as **low to very low** across all viewpoints, with the highest visibility at Ruakākā Surf Club.
- Natural character effects are similarly rated low to negligible, with no significant impact on surf breaks, water quality, or coastal geomorphology.

Biophysical Effects

Expert assessments by Tonkin + Taylor, Metocean Solutions, SLR Consulting, and Bioresearches found:

- Coastal processes and sediment transport: negligible to low effect
- Surf breaks: less than minor to negligible impact
- Water quality: negligible to low, with plumes dissipating within 250 m
- Seabed habitats: low impact, with recovery expected between extraction cycles
- Marine mammals: low to negligible, with no population-level effects predicted

Associative and Cultural Effects

- The proposed extraction area is remote from Sites of Significance identified in the Patuharakeke Management Plan and Whangārei District Plan.



- Cultural effects ²²are considered low, with visibility of the vessel from cultural sites such as Te Tāhuna Tohorā (Whale Burial Ground) and Ruakākā Mahinga Mataitai limited by distance.
- No direct impact is expected on wāhi tapu, mahinga kai, or customary fisheries.
- Separate Cultural Impact Assessments are being prepared to address hapū concerns in more detail.

Conclusion:

The proposed sand extraction activity is assessed as having **low to negligible** effects on landscape, natural character, and cultural values.

The activity is consistent with the existing maritime context of Te Ākau Bream Bay and does not exceed thresholds for significant adverse effects under the NZ Coastal Policy Statement or RMA.

3.22 Te Ākau Bream Bay Sand Extraction – Assessment of Economic Effects

Author: Lawrence McIlrath, Market Economics Ltd

Date: 14 August 2025

This report assesses the potential economic effects of enabling sand extraction from Te Ākau Bream Bay, with a focus on Auckland's infrastructure needs and supply chain resilience. It evaluates the role of high-quality marine sand in supporting concrete production, particularly for high-strength applications, and outlines the risks associated with Auckland's current reliance on a limited number of sand sources.

²² Cultural effects noted in this report are based on the landscape expert's assessment and do not reference any Cultural Values Assessment or Cultural Impact Assessment from Te Parawhau Hapū.



The report is framed within the context of the Fast Track Approvals Act (2024), identifying regional and national benefits associated with improved supply certainty, reduced transport-related externalities, and enhanced infrastructure delivery capacity.

Key Findings

- Auckland's infrastructure pipeline is substantial and increasingly reliant on high-strength concrete, which requires consistent, clean marine sand.
- Existing sand supply is concentrated in Kaipara Harbour and Mangawhai–Pākiri, both of which face consent expiry and operational constraints.
- Te Ākau Bream Bay is identified as a technically suitable and strategically located source of marine sand that could alleviate supply pressures.
- Alternative sources, including manufactured sand and Waikato river sand, present limitations due to cost, technical suitability, and environmental impacts.
- Scenario modelling indicates a growing deficit in sand supply over the coming decades, particularly if Kaipara consents are not renewed.
- Enabling extraction at Te Ākau Bream Bay would improve supply chain resilience, reduce reliance on a single source, and support infrastructure delivery across Auckland and potentially other regions.

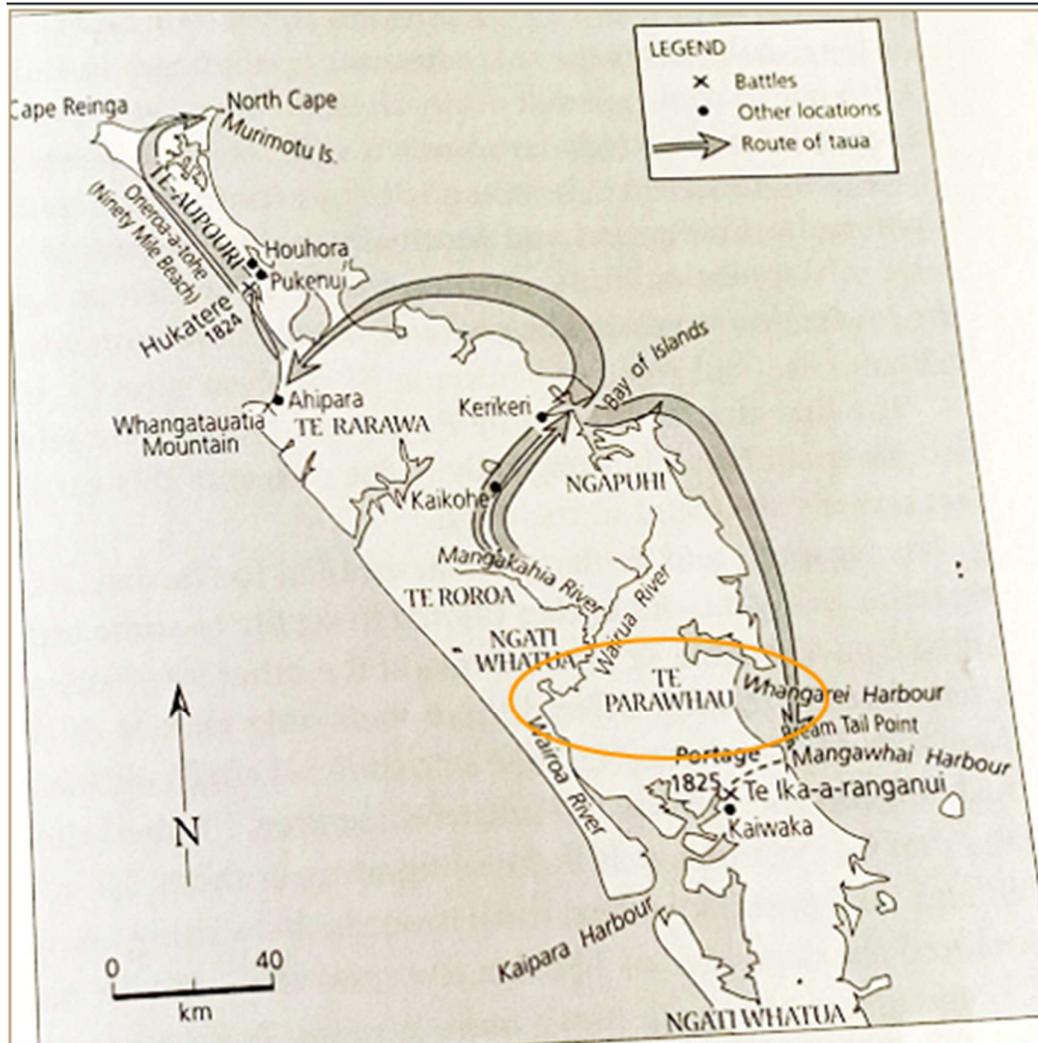
Conclusion:

The report concludes that enabling sand extraction at Te Ākau Bream Bay would deliver significant regional benefits by supporting Auckland's infrastructure investment, improving supply chain resilience, and reducing economic and environmental costs associated with alternative sand sources. The proposal aligns with the purpose of the Fast Track Approvals Act and is considered economically efficient in comparison to other supply options.



4 Te Parawhau Hapū

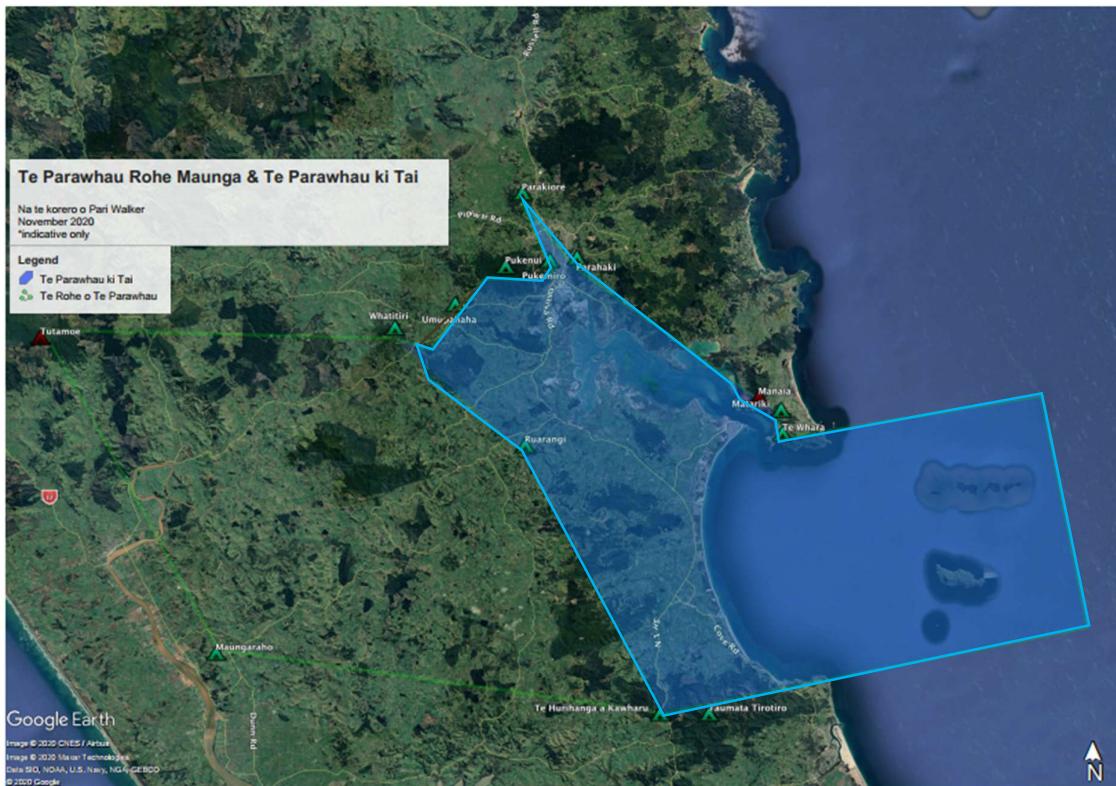
Illustration 3: 1824 – Route of Hongi Hika’s Tauā (1824–1825) and Te Parawhau Rohe (orange oval)



Source: Hongi Hika’s taua to Hukatere in 1824 and Te Ika-a-ranganui in 1825, with Te Parawhau highlighted. Adapted from Crosby, R. (2002). *The Musket Wars: A History of Inter-Iwi Conflict 1806–45* (Crosby, 2002).



Illustration 4: Te Parawhau ki Tai Rohe



Source: Mana Whakahono a Rohe Agreement signed 29 April 2024



4.1 History and Te Parawhau ki Tai Association with Paepae Atua

Ka tātaetia a Paepae Atua ki Te Parawhau ki Tai mā te whakapapa, ngā kōrero tuku iho, ngā Atua. Ko te ihi, te wehi, te mana, te rangatiratanga ngā whaiere hauora o te mauri o te Taiao, mai i te aranga mai o te Hōkio, me Te Ata Kurakura e kanapu ana i raro i ūna parirau i tōna haerenga ki ngā whaitua o Te Parawhau. Mai i a Tangihua, ka kake rā ki te taumata o Ranginui, ā, ko tōna aro ki te Rāwhiti, ka mataitia i ngā whenua o Te Parawhau i tōna tiu ki Mano Hiwa Ariki, Tuturu, Te Pae o Tū, Hauturu, Aotea, Taranga, Māui Taha, Māui Roto, Māui Waho, Māui Pae, ka hora atu ki te moana ki Koutu ki te Maioha o Te Whara. Ka hou mai te manu ki te tomokanga o Whangārei Terenga Parāoa. Ka whakamanahia i a Manaia i tana hoka i runga i a Te Ākau, e mau ana i ngā Herenga tangāta ki te moana, hangaia i te waharoa o Te Parawhau ki te Moana Nui a Kiwa. Ka tāwharautia te kaupapa, ka rere atu te Hōkio ki te taunga manu o ana Tupuna ki Pākau Hōkio, ka hoki ki Tangihua e whakakanohi ana i ngā punga wairua, punga tātai, hei tohutia i tō mātou whakapapa me te mana a te tāngata whenua (Tonga, 2025).

The connection between Te Parawhau ki Tai and Paepae Atua is embedded in whakapapa, atua, and kōrero tuku iho. Te ihi, te wehi, te mana, and te rangatiratanga are living expressions of the mauri of te taiao, carried each day by the rising of Te Hōkio, its underside of its wings glowing red with the dawn of Te Ata Kurakura as it begins its journey across the rohe of Te Parawhau, starting at Tangihua. From here, the Hōkio climbs toward the realm of Ranginui in an easterly direction, scanning the landscape of Te Parawhau as it passes over Mano Hiwa Ariki, Tūturu, Te Pae o Tū, Hauturu, Aotea, Taranga, Māui taha, Māui roto, Māui waho, and Māui Pae, sweeping toward the Sea of Koutu and Te Whara. As it reaches the entranceway to Whangārei Terenga Parāoa, it acknowledges Manaia, flying over Te Ākau and affirming the connection that Te Parawhau has to the moana, our gateway to Moana nui ā Kiwa. Upon delivering the kaupapa, the Hōkio returns to the resting place of its tūpuna manu at Pākau Hōkio, where it rests before returning to Tangihua. In doing so, it marks our



spiritual and genealogical anchors, affirming our whakapapa and mana as tāngata whenua (Tonga, 2025).

For Te Parawhau ki Tai, the sands of Paepae Atua are not merely a physical resource, they are a living expression of tātai, mauri, and mana. This area has long sustained the Hapū, providing kai moana, materials, and safe passage. The sand itself is imbued with mauri, understood as part of a living, interdependent system that supports all forms of life along the coast. Its movement and replenishment reflect the natural balance recognised by our tūpuna.

Disturbance or extraction of this sand is not a technical matter; it is a cultural and spiritual issue that affects the integrity of the environment and the obligations of Te Parawhau ki Tai as tiaki o te taiao. The role of the Hapū is not passive; it is an active, inherited responsibility to protect the mauri of the moana, whenua moana, and all living systems connected to them. This is the essence of kaitiakitanga, grounded in Te Parawhau ki Tai uara ahurea. In essence, the well-being of Paepae Atua is inseparable from the well-being of Te Parawhau ki Tai. Protecting the mauri of the sand and sea is an expression of mana, tātai, and transgenerational responsibility — a continuation of ancestral duty to uphold balance within the natural world (TeRangi, 2025).

In continuing this ancestral duty and whakapapa connections, Te Parawhau ki Tai today is an amalgamation of Ngāti Manaia, Ngāi Tāahu, Ngāti Ruangaio and Ngāti Tu.

It has been recorded in oral history by our tupuna Kūkupa, Te Parawhau paramount chief, further affirming our connection to Paepae Atua through a first contact event with Captain James Cook where Cook gifted Kūkupa a black cat. At the time, Cook renamed Paepae Atua an English name, “Bream Bay”. This renaming had profound and long-lasting effects upon our Hapū uara ahurea which continues to this day. European records affirm the timeframe as November 1769. This continuous occupation and unimpeded access to Paepae Atua and



its surrounding moana has been maintained to the present day by Te Parawhau ki Tai and Te Parawhau ki Uta (Walker, 2025).

4.2 Paepae Atua

The rising of Te Hōkio is not just a celestial event; it is a daily reaffirmation of our Hapū connection to the atua and the natural world. It marks the seat of ngā atua at Paepae Atua where Tāne, Tūmatauenga, Tangaroa, and other atua convene to deliberate the balance of their realms.

Paepae Atua extends from the Sea of Koutou at Rauiri and Te Whara and extends all the way to Te Pae o Tū, the seat of Tūmatauenga at the southern end near the boundary of Taranga, the home of Māui Tikitiki-a-Taranga and his siblings.

To the right of Taranga as outlined above, stands Te Whara, where she welcomes all with her karanga ‘Te Maioha o Te Whara’, into Te Wahapū o Whangārei Terenga Parāoa. From Te Whara, Taramainuku cast his net, out across the Hauraki Gulf and beyond connecting Te Parawhau to Ngāti Manuhiri, Te Uri o Hau and other whanaunga hapū. His net binding hapū through whakapapa. These narratives shape our identity, our responsibilities, and our enduring relationship with Paepae Atua. They affirm that our connection to this place is not only historical, but also spiritual, and intergenerational (Walker, 2025). While the implications of Cook renaming Paepae Atua to ‘Bream Bay’ is briefly noted in this CIA, it is also important to acknowledge that Cook similarly renamed ‘Te Pae o Tū’, the seat of Tūmatauenga at the southern end of Paepae Atua, as ‘Bream Tail’. The act of renaming our ancestral whenua was part of a broader colonial practice that displaced Māori place names and their associated whakapapa. In 2012, our whanaunga, Ngāti Manuhiri, through their Treaty settlement process, successfully restored the original name ‘Te Pae o Tū’ as the official name for Bream Tail, as gazetted by the New Zealand Geographic Board. This restoration affirms the enduring mana and cultural significance of these sites to Te



Parawhau ki Tai and all hapū as it reinforces the importance of recognising and reinstating tuturu ingoa (original place names) across our rohe.



5 Legislative Framework

There is a wide body of legislation and statutory documents that provide for the recognition of tikanga Māori and Hapū uara ahurea.

This legislative framework is not only important to the context of this CIA but also requires proper consideration as part of the decision-making process for the resource consent applications relevant to this kaupapa. The relevant legislative documents are discussed below:

5.1 Te Tiriti o Waitangi

The articles contained within Te Tiriti o Waitangi (Te Tiriti) and its principles are referenced in legislation, including the RMA.

Te Tiriti is the foundational document of Aotearoa and underpins the relationship between the Crown and Hapū. It is referenced in legislation including the RMA, the Fast-track Approvals Act 2024, and the Marine and Coastal Area (Takutai Moana) Act 2011. While these statutes refer to the principles of the Treaty of Waitangi, Te Parawhau ki Tai recognise and uphold the articles of Te Tiriti o Waitangi as signed in 1840. This distinction is important. The principles of the Treaty of Waitangi have been developed through New Zealand's legal and policy frameworks over time. However, the articles of Te Tiriti, particularly as expressed in the Māori text, reflect the original intent and understanding of the agreement by Hapū and Iwi. These articles remain central to Te Parawhau ki Tai to exercise its rangatiratanga and kaitiakitanga.

Protecting the uara and interests of tāngata whenua and enabling Māori to exercise their resource management are obligations under Te Tiriti.



The Articles of Te Tiriti o Waitangi

- **Article One – Kāwanatanga:** Te Parawhau ki Tai acknowledge the Crown's right to govern, provided it does not override or diminish the authority and tikanga of Hapū.
- **Article Two – Rangatiratanga:** Te Parawhau ki Tai retain rangatiratanga over their taonga, including Paepae Atua, the seabed and surrounding moana. This includes the right to make decisions, exercise kaitiakitanga, and protect Hapū uara ahurea.
- **Article Three – Ōritetanga (Equity):** Te Parawhau ki Tai are entitled to the same rights and protections as all citizens, including environmental protection, access to justice, and the ability to benefit from development in a way that aligns with Hapū uara.

The principles of Te Tiriti, as interpreted in legislation, include:

- **Rangatiratanga** – The duty to recognise Māori rights of independence, autonomy and self-determination. This principle empowers Māori to determine and manage matters of significance to them.
- **Partnership** – The duty to interact in good faith and in the nature of a partnership. This includes a sense of shared enterprise and mutual benefits, where each partner must take into account the needs and interests of the other.
- **Active Protection** – The principle of active protection under Te Tiriti o Waitangi emphasizes the responsibility of the Crown to proactively safeguard Māori interests and taonga.
- **Mutual Benefit** – The need to recognize that benefits should accrue to both Māori and non-Māori, and that both must participate in the prosperity of Aotearoa.
- **Right of Development** – Supporting Māori aspirations for development and restoration of taonga.



Comments

Rangatiratanga

Te Parawhau ki Tai exercise their right to determine and manage matters of significance to them, including the protection of Paepae Atua. The Hapū retain mana i te whenua across their rohe, acknowledging that ultimate mana resides with Papatūānuku and ngā atua including Tangaroa. The seabed and moana are not merely physical spaces but are imbued with whakapapa, wairua, and kaitiakitanga obligations.

MBL has engaged with Te Pouwhenua o Tiakiriri Kūkupa Trust and Te Parawhau hapū members. While this engagement is acknowledged, it must be strengthened and formalised to reflect the standard of partnership and to support the exercise of rangatiratanga.

The recommendations in **Section 10** of this CIA seek to empower Te Parawhau ki Tai to exercise their rights under Article Two of Te Tiriti, ensuring that the proposed sand extraction does not further degrade their uara ahurea or taonga.

Partnership

The preamble of Te Tiriti o Waitangi obligates all parties, including private applicants such as MBL, to uphold the articles of Te Tiriti and the principle of partnership. In the context of this application, the following actions are expected:

- MBL commits to engaging in meaningful, ongoing engagement with Te Parawhau ki Tai to understand and respond to Hapū concerns and aspirations.
- Both parties agree to act with honesty, integrity, and mutual respect.
- Te Parawhau ki Tai views are integrated into decision-making processes, with our Hapū uara ahurea and tirohanga upheld.
- MBL agrees to implement measures to protect significant sites, restore affected areas, and respect our Te Parawhau ki Tai uara.



- A collaborative arrangement is established to oversee the implementation of resource consents and the effectiveness of mahi whakaora, ensuring continuous improvement to the taiao and adherence to the principle of partnership.
- To give full effect to the principle of partnership under The Tiriti of Waitangi, Te Pouwhenua o Tiakiriri Kūkupa Trust recommends that the partnership between MBL and Te Parawhau ki Tai and Te Parawhau marae signatories be formalised through the establishment of a partnership group. This group shall be convened prior to the commencement of any sand extraction activities and will:
 - Hold joint decision-making authority over environmental monitoring, plan reviews, and adaptive management responses.
 - Ensure formal recognition of Te Parawhau ki Tai rangatiratanga in all project governance structures.
 - Include Te Parawhau ki Tai representatives in all consent-related panels, technical working groups, and review committees.
 - Require that all project documentation, including management plans and monitoring reports, be co-developed and co-signed by Te Pouwhenua o Tiakiriri Kūkupa Trust.
 - These provisions where appropriate, must be embedded in the consent conditions, the side agreement, and the relationship agreement to ensure that the partnership is enduring, enforceable, and reflective of Te Tiriti obligations.

Active Protection

The principle of active protection requires all parties, including MBL, to proactively safeguard taonga in alignment with Hapū rights and interests. This includes the mauri of the moana, the integrity of the seabed, and the spiritual and cultural values associated with Paepae Atua.



Te Parawhau ki Tai require MBL to commit to protecting Hapū uara ahurea and enabling the Hapū to exercise kaitiakitanga. These obligations are not discretionary, they are essential under Te Tiriti and must be embedded in all aspects of the project and includes recognising and protecting taonga, supporting Hapū capacity and capability, and embedding tikanga Māori in all aspects of the project.

Mutual Benefit

The principle of mutual benefit recognises that both Māori and non-Māori should share in the prosperity of Aotearoa. In this context, MBL has the opportunity to establish a relationship with Te Parawhau ki Tai that is based on reciprocity and shared outcomes.

Proposed actions include:

- **Economic Opportunities:** MBL will explore employment, training, and business opportunities for Te Parawhau ki Tai and Te Parawhau hapū members.
- **Kaitiakitanga/Manaakitanga:** Joint initiatives will be developed to ensure sustainable practices and restoration of the seabed and surrounding marine environment are implemented throughout the life of the project.
- **Cultural Revitalisation:** Support for Hapū-led initiatives that promote mātauranga Māori, kaitiakitanga, and intergenerational knowledge transfer.

Right of Development

This principle affirms the right of Māori to develop their taonga and resources in ways that reflect their own values and aspirations. For Te Parawhau ki Tai, this includes the restoration of Paepae Atua, the exercise of kaitiakitanga, and the development of Hapū-led taiao and economic initiatives.

It is requested that MBL:

- Respect and integrate Te Parawhau ki Tai uara ahurea in all aspects of the project.



- Support sustainable practices that protect Te Ao Tūroa and enhance the mauri of the moana and whenua and all those species that depend on these realms.
- Engage in meaningful engagement as partners to incorporate Hapū perspectives.
- Explore shared economic and environmental opportunities that align with Te Parawhau ki Tai tirohanga.

Mahi Whakaora

MBL is respectfully requested to uphold the articles of Te Tiriti o Waitangi by embedding Te Parawhau ki Tai uara ahurea, tikanga, and tirohanga throughout the life of the project. This includes supporting the exercise of rangatiratanga, mana motuhake and kaitiakitanga, ensuring meaningful and ongoing engagement, and enabling Hapū-led participation in environmental and cultural outcomes. These actions are essential to give effect to Te Tiriti obligations and to ensure that the proposed sand extraction activities contribute to the restoration and protection of the taiao in a way that reflects mutual respect and benefit. These requirements will be formalised an agreement between Te Pouwhenua o Tiakiriri Kukupa Trust and MBL.

5.2 Marine and Coastal Area (Takutai Moana) Act 2011

The Marine and Coastal Area (Takutai Moana) Act 2011 (MACA) provides for the recognition of customary marine title and protected customary rights in the common marine and coastal area. The Act affirms the mana of iwi and hapū in relation to the takutai moana and provides a legal pathway for recognising longstanding relationships and responsibilities to the moana.

Te Parawhau Hapū have active MACA applications before the High Court for recognition of customary marine title over Paepae Atua. These applications are a formal assertion of Te



Parawhau ancestral connection, tikanga, and obligations to the seabed and surrounding marine environment.

Considering the Marine and Coastal Area (Takutai Moana) Amendment Act 2025, which retrospectively alters the legal test for customary marine title and invalidates decisions made after 24 July 2024, Te Parawhau Hapū reaffirms the importance of protecting our active MACA claim. The retrospective nature of the recent amendment and the heightened evidentiary threshold materially affect the ability of Hapū to secure recognition of their customary rights. The following provisions are essential to uphold Te Tiriti o Waitangi and ensure that the rights of Te Parawhau are not diminished by retrospective legislative reform. While the Crown retains responsibility for MACA litigation and resourcing, the CIA affirms that MBL must respect the cultural and legal significance of the MACA claim and avoid any action that may compromise its integrity.

Relevant MACA Provisions

- **Section 11** – Customary marine title applications
- **Section 58** – Activities must not be inconsistent with protected customary rights
- **Section 62** – Effects of customary marine title
- **Section 95** – Duty to consult with MACA applicants which includes Te Parawhau Hapū.

Comment

MBL has actively engaged with Te Pouwhenua o Tiakiriri Kūkupa Trust over the past two years and other members of Te Parawhau Hapū through three Hapū hui. However, it is noted that specific discussions relating to Te Parawhau' MACA claims have not been held during these hui. It is further acknowledged that rather than a single combined Hapū claim, several groups of Te Parawhau whānau have lodged individual applications with the High Court.



The proposed sand extraction activity at Paepae Atua falls within the area under active MACA claim. As such, the Crown, NRC, and Fast Track Panel have a statutory obligation to ensure that no decisions or activities are inconsistent with the rights being claimed. Engagement with Te Parawhau as a MACA applicant is required pursuant to Section 95 of the Marine and Coastal Area (Takutai Moana) Act 2011. This consultation must be meaningful and ongoing, with Te Parawhau Hapū whakaaro, uara ahurea and tikanga embedded throughout the design, implementation, and monitoring of the sand extraction proposal.

Mahi Whakaora

The Trust respectfully requests that MBL and relevant decision-making authorities implement the following measures to uphold the uara ahurea, rights, and interests of Te Parawhau nui tonu in relation to the takutai moana and the proposed sand extraction activity at Paepae Atua:

- **Support Te Parawhau MACA Claims**

MBL is requested to formally support Te Parawhau' active MACA applications, ensuring that no activity associated with the sand extraction proposal causes substantial interruption to these claims throughout the life of the project.

- **Formal Commitment to Te Parawhau Hapū uara ahurea**

While MBL has informally expressed general support for Hapū aspirations, Te Parawhau ki Tai seeks a formalised and enduring commitment to uphold:

- Hapū uara ahurea
- Unimpeded access to customary marine areas and mātaitai
- Recognition and respect for tikanga Māori and kaitiakitanga responsibilities

- **Recognition of Active MACA Claims**



Te Pouwhenua o Tiakiriri Kūkupa Trust requests that the Fast-track Panel and (NRC) formally acknowledge the existence of Te Parawhau Hapū active MACA claims in all decision-making processes relating to the proposed sand extraction activities.

- **Consent Condition – Protection of MACA Interests**

A specific condition of consent should be included to ensure that MBL's sand extraction activities at Paepae Atua does not proceed in any manner that undermines, prejudices, or compromises the integrity of Te Parawhau' MACA claims.

- **Transparent and Ongoing Engagement**

All engagement with Te Parawhau under Section 95 of the MACA Act must be:

- Documented,
- Transparent,
- Ongoing throughout the duration of the consent.

5.3 Heritage NZ Pouhere Taonga Act 2014

The Heritage New Zealand Pouhere Taonga Act 2014 (HNZPT) promotes the identification, protection, preservation, and conservation of Aotearoa's historical and cultural heritage.

Ngā taonga tuku iho nō ngā tūpuna (Māori heritage) encompasses a wide range of places and items, including the physical and tangible, the natural environment, and the intangible.

The HNZPT Act recognises Māori values by:

- Requiring Heritage New Zealand to collaborate with Tāngata Whenua, and to seek the consent of Te Parawhau ki Tai and or Te Parawhau Hapū as tāngata whenua before any investigation of a site of interest to Māori.



- Ensuring that archaeologists approved to work on sites of interest to Māori possess the skills and cultural competencies to recognise and respect Māori values and have access to appropriate cultural support.

Mahi whakaora

Given the potential for ground disturbance in a culturally significant coastal area, Te Parawhau ki Tai requests that the following measure be adopted:

- In the event of an archaeological discovery, including koiwi or taonga tuku iho, the protocols outlined in **Appendix B: Te Parawhau ki Tai Accidental Discovery Protocol (ADK)** must be followed. ADK requirements are addressed in MBL's proposed conditions of consent under Condition 45 "Accidental Discovery Protocol".

These protocols reflect Te Parawhau ki Tai tikanga and responsibilities under kaitiakitanga and must be included as a condition of consent.

5.4 Wildlife Act (1953)

MBL seeks approval under the Wildlife Act for the incidental harm and killing of two protected cup coral species, *Kionotrochus suteri* and *Sphenotrochus ralpae* within the proposed extraction area. While these species are not classified as threatened, they are protected under law, and form part of ngā uri o Tangaroa and the taiao of Paepae Atua.

Comment

Te Pouwhenua Tiakiriri Kūkupa Trust acknowledge and support the management strategies outlined in the Cup Coral Management Plan to, where possible, reduce harm to these species. In accordance with Te Parawhau ki Tai uara ahurea, their presence must be recognised, and harm minimised. The implementation and monitoring of this approval must reflect Hapū expectations of kaitiakitanga, mana motuhake tikanga, and intergenerational



responsibility, ensuring that the mauri of the moana is upheld. The following mahi whakaora are therefore required.

Mahi Whakaora

- MBL and their specialists shall work collaboratively to undertake rangahau to understand the importance of these species and the role they play in the moana. Once known, this should be shared with the Hapū and others to provide a record and knowledge for future generations.
- Embedding Te Parawhau ki Tai tikanga, mātauranga Māori, and uara ahurea in project design, implementation, and monitoring where appropriate.
- Supporting Hapū-led initiatives that restore the taiao and enhance wellbeing.

5.5 Resource Management Act (RMA)

The RMA contains specific provisions that require the recognition and protection of uara Māori, relationships with ancestral lands and waters, and the exercise of kaitiakitanga.

A summary of the sections relevant to Hapū are below.

- **Section 5** Purpose of the Act: Sustainable management of natural and physical resources.
- **Section 6(e)** Recognition and provision for the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, wāhi tapu, and other taonga as a matter of national importance.
- **Section 6(f)** Protection of historic heritage from inappropriate subdivision, use, and development.
- **Section 6(g)** Protection of recognised customary activities.



- **Section 7(a)** Kaitiakitanga: Particular regard must be had to the exercise of kaitiakitanga.
- **Section 8** Treaty of Waitangi: All persons exercising functions and powers under the Act must take into account the principles of the Treaty of Waitangi.

Comment

The proposed sand extraction triggers multiple provisions under Part II of the RMA that require the recognition and protection of Te Parawhau ki Tai uara, whakapapa and whanaungatanga with the takutai moana. The seabed and the moana at Paepae Atua are taonga tuku iho, intrinsically linked to the whakapapa, tikanga, and Te Parawhau ki Tai kaitiakitanga obligations.

Section 6(e) of the RMA requires that the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, wāhi tapu, and other taonga be recognised and provided for as a matter of national importance.

Te Parawhau ki Tai maintains an enduring and active relationship with Paepae Atua. This relationship is expressed through continued access to the area for the harvesting of kai moana, the practice of tikanga, which historically included calling to Tohorā (whales) and receiving other gifts from ngā Atua and the fulfilment of kaitiakitanga obligations to the taiao.

The connection that Te Parawhau ki Tai has with the entire area, including the proposed sand extraction site, is embedded in whakapapa and sustained through the intergenerational transfer of knowledge (mātauranga). Paepae Atua is not only a place of resource gathering, but a place where the Hapū' identity, wellbeing, and responsibilities to ngā atua and the taiao are upheld.

Any proposal that may affect access, mahinga kai, tikanga, or the integrity of the realm of Tangaroa must be assessed in light of these enduring connections. The relationship of Te



Parawhau ki Tai with Paepae Atua is protected under Section 6(e) and must be recognised and provided for in all decision-making processes. This includes ensuring that the ability of the Hapū to uphold their kaitiakitanga obligations to the kaitiaki is not compromised.

Section 6(f) requires the protection of historic heritage from inappropriate subdivision, use, and development. In the event of a discovery associated with the sand extraction activities, Te Parawhau ki Tai Accidental Discovery Kaupapa must be followed, ensuring that tikanga-led processes guide the response, including appropriate tikanga, notification, and decision-making.

Section 6(g) requires the protection of customary activities. For Te Parawhau ki Tai, customary activities at Paepae Atua include mahinga kai, seasonal harvesting of kaimoana, tohorā, karakia, and other tikanga. These practices are essential to Hapū wellbeing and the exercise of kaitiakitanga including the transmission of mātauranga Māori across generations. The proposed sand extraction activity must not interfere with these customary activities, either directly through physical disruption or indirectly through ecological degradation or loss of access. Seasonal restrictions may be required to protect spawning periods, migratory pathways, or culturally significant times of the year. These activities could be supported through education and scholarship opportunities that form part of a separate agreement between Te Parawhau ki Tai and MBL.

Section 7(a) requires particular regard to be given to kaitiakitanga. Te Parawhau ki Tai kaitiakitanga is not symbolic it is an intergenerational responsibility grounded in mātauranga Māori and tikanga. The exercise of kaitiakitanga must be supported through genuine partnership, resourcing, and the inclusion of Hapū in environmental decision-making and monitoring with MBL.

Section 8 requires that the principles of the Treaty of Waitangi be taken into account. As outlined in Section 9.1 of this CIA, Te Parawhau ki Tai uphold the articles of Te Tiriti o Waitangi, and expect that the principles of rangatiratanga, partnership, active protection,



mutual benefit, and the right of development are reflected in the assessment and implementation of this Kaupapa.

Mahi Whakaora

As demonstrated in this CIA, Te Parawhau ki Tai and other Hapū have a long association with Paepae Atua and indeed the surrounding taiao. Working in partnership with Te Parawhau ki Tai offers multiple benefits, ensuring the proposed sand extraction activities and resultant conditions of consent are prepared and undertaken in a way that benefits everyone and aligns with Te Tiriti o Waitangi.

MBL is requested to uphold the relevant provisions of the RMA by ensuring that Te Powhenua o Tiakiriri Kūkupa Trust and Te Parawhau Hapū kaumātua are actively involved in all stages of the project, including any assessments, decision-making, monitoring, and restoration strategies. This includes:

- Recognising and providing for the continued relationship of Te Parawhau ki Tai with Paepae Atua under Section 6(e) including formal acknowledgment of Paepae Atua as a wāhi tūpuna and taonga tuku iho in all consent documentation and operational plans. Section 6(e) matters are acknowledged in Te Pouwhenua o Tiakiriri Kukupa Trust's and MBL's relationship agreement and substantive agreement, including MBL's various management plans.
- In the event of a discovery, pursuant to section 6(f), Te Parawhau ki Tai Accidental Discovery Kaupapa (ADK) must be followed, ensuring tikanga-led processes guide the response. This includes karakia, notification, and decision-making led by Te Parawhau. Refer **Appendix B**. The ADK requirement is incorporated into MBL's proposed conditions of consent under Condition 45, "Accidental Discovery Protocol".
- Protecting recognised customary activities under Section 6(g), including mahinga kai, karakia, seasonal harvesting, and observation of tohu. Extraction activities must not



interfere with these practices, and seasonal restrictions may be imposed where necessary to uphold tikanga and ecological integrity.

- Supporting the exercise of kaitiakitanga through resourcing, capacity building, and the integration of mātauranga Māori in environmental management (Section 7(a)). This includes Hapū-led monitoring, cultural indicators (e.g., tohu, maramataka), and joint review of environmental data.
- Ensuring that the principles of Te Tiriti o Waitangi are taken into account in accordance with Section 8, including commitments to partnership in implementing consent conditions, requiring cultural expertise in decision-making, and supporting Hapū wellbeing.
- Embedding cultural monitoring alongside technical assessments, with Te Parawhau ki Tai monitors present during key phases of the project lifecycle.
- Ensuring mātauranga Māori indicators of mauri (e.g., tohu, maramataka, species behaviour) are integrated into all monitoring frameworks and adaptive management responses.
- Establishing clear thresholds for ecological and cultural indicators that trigger adaptive management actions, including pausing or relocating extraction activities.
- Requiring all monitoring data and reports to be shared transparently with Te Parawhau ki Tai, NRC, and the Fast-track Panel, with Hapū commentary included.
- Providing Te Parawhau ki Tai with access to a shared data repository and the ability to initiate additional monitoring or review in response to tohu or environmental concerns.



The above activities and principles are supported and resourced under the substantive agreement and the relationship agreement between Te Pouwhenua o Tiakiriri Kukupa Trust and MBL.

5.6 Crown Minerals Act (1991)

The Crown Minerals Act governs the allocation and management of rights to Crown-owned minerals in New Zealand. Under Section 2, Interpretation of this Act, sand, shingle and shells are excluded from the definition of “minerals” (New Zealand Government, 1991) particularly where these are not located within the coastal marine area or are extracted solely for road construction or maintenance.

While sand is not defined as a mineral under this Act, other materials that may be encountered during the proposed sand extraction activities such as heavy mineral sands, rare earth elements, or other mineralised deposits are covered by this Act and remain the property of the Crown.

Te Parawhau ki Tai Hapū asserts its customary interests and expectations for engagement should any such materials be discovered within the sand extraction area Paepae Atua. Although the Act does not impose a statutory obligation on the Crown or permit holders (i.e., MBL) to consult with hapū in these circumstances, Te Pouwhenua o Tiakiriri Kūkupa Trust requests that MBL will notify the Trust in a timely manner and engage in a Hapū tikanga-led process to determine appropriate responses.

Comment

This expectation is grounded in the articles of Te Tiriti o Waitangi and reflects Te Parawhau ki Tai’s exercise of mana motuhake over our ancestral whenua and taonga across Paepae Atua. It also aligns with the broader intent of environmental legislation, including the RMA,



which recognises the relationship of Hapū, Māori with our ancestral lands, waters, and taonga pursuant to Section 6(e) of the RMA.

Mahi Whakaora

If mineralised materials other than sand are encountered during the proposed extraction activities, such as heavy mineral sands, rare earth elements, or other mineralised deposits, Te Pouwhenua o Tiakiriri Kūkupa Trust requests that:

- MBL notify Te Pouwhenua o Tiakiriri Kūkupa Trust which will include the signatories to this CIA and engage in a Hapū tikanga-led process to determine an appropriate response.

5.7 New Zealand Coastal Policy Statement (2010)

The New Zealand Coastal Policy Statement (NZCPS) 2010 is a national policy statement under the RMA. It provides direction to local authorities on managing activities in the coastal environment to safeguard natural character, protect biodiversity, and uphold the relationship of tāngata whenua with the coastal marine area.

A summary of the policies relevant to this proposal are listed below:

- **Policy 2**, recognise the Treaty of Waitangi and provide for tāngata whenua involvement in coastal management, including through consultation, participation in decision-making, and protection of Māori customary rights and interests.
- **Policy 6(1)(a)**, recognise that the coastal environment includes areas with cultural and historic significance to tāngata whenua.
- **Policy 11**, protect indigenous biological diversity in the coastal environment, including avoiding adverse effects on areas of significant indigenous vegetation and habitats of indigenous fauna.



- **Policy 13**, preserve the natural character of the coastal environment and protect it from inappropriate subdivision, use, and development.
- **Policy 15**, protect the natural features and natural landscapes of the coastal environment from inappropriate subdivision, use, and development.
- **Policy 23(1)(a)**, manage discharges to water in the coastal environment to avoid significant adverse effects on ecosystems and habitats.

Comment

The NZCPS provides clear direction to protect the ecological and integrity of the coastal environment. The proposed sand extraction activities at Paepae Atua are located offshore, within a dynamic sandy seabed environment beyond the Depth of Closure, approximately 4.5 km from shore. MBL's benthic ecological assessment concludes that the proposed extraction area does not contain significant indigenous vegetation or sensitive benthic habitats, and that no effects are anticipated on shoreline vegetation or beach habitats.

Notwithstanding these findings, the seabed and surrounding moana are of deep cultural and spiritual significance to Te Parawhau ki Tai. The area is within an active MACA claim and forms part of the Hapū's ancestral taiao. The proposal must uphold Te Parawhau ki Tai uara ahurea, as assessed in the CIA to ensure that any adverse effects on Hapū whakapapa and whanaungatanga, tikanga, and obligations are appropriately mitigated and where possible avoided.

Mahi Whakaora

Te Parawhau ki Tai seek assurance that the NZCPS is applied in a manner that upholds Te Tiriti o Waitangi and affirms the mana of Te Parawhau ki Tai as tāngata whenua.

- MBL must demonstrate a commitment to genuine partnership, cultural integrity, and environmental responsibility, with outcomes that uphold Te Parawhau ki Tai uara ahurea, and reflect Hapū aspirations and obligations outlined in this CIA.



5.8 Northland Regional Policy Statement (RPS)

The Northland Regional Policy Statement (RPS) sets out the strategic resource management framework for the region under the Resource Management Act 1991. It provides direction to regional and district plans and guides decision-making on activities that affect the environment, communities, and tāngata whenua.

A summary of those provisions relevant to this proposal is listed below:

- **Objective 3.4**, recognise and promote the role of tāngata whenua as kaitiaki and provide for their relationship with ancestral lands, water, sites, wāhi tapu, and other taonga.
- **Policy 4.4.1**, requires that resource management decisions give effect to the principles of the Treaty of Waitangi.
- **Policy 4.4.2**, encourages early and meaningful engagement with tāngata whenua in resource management processes.
- **Policy 4.4.3**, supports the integration of mātauranga Māori and tikanga in resource management.
- **Policy 4.6.1**, requires the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna.
- **Policy 4.6.2**, requires the preservation of the natural character of the coastal environment and protection from inappropriate subdivision, use, and development.
- **Policy 5.1.1**, promotes the sustainable management of natural and physical resources, including the coastal marine area.



Comment

The RPS provides clear direction to ensure that tāngata whenua uara, relationships, and responsibilities are recognised and provided for in regional decision-making. The proposed sand extraction site at its closest point is approximately 4.7 km offshore within a dynamic sandy seabed environment. Ecological assessments undertaken by MBL confirm the absence of significant indigenous vegetation or sensitive benthic habitats, and no anticipated effects on shoreline vegetation or beach habitats.

As previously stated, the extraction site lies within an area of ancestral significance to Te Parawhau ki Tai, including active Te Parawhau MACA claims. The seabed and surrounding moana are part of the Hapū' ancestral taiao.

The proposal must uphold Te Parawhau ki Tai uara ahurea, as assessed in the CIA, to ensure that effects on whakapapa, tikanga, and kaitiakitanga are appropriately addressed. The RPS requires that mātauranga Māori, tikanga, mahinga kai, and mātaitai areas are recognised and integrated into decision-making, and that tāngata whenua are engaged meaningfully in the management of coastal resources.

Mahi Whakaora

Te Parawhau ki Tai require the RPS to be applied in a manner that:

- Upholds the articles of Te Tiriti o Waitangi and affirms the mana of Te Parawhau ki Tai as tāngata whenua.
- MBL must demonstrate a commitment to genuine partnership, cultural integrity, and environmental responsibility, with outcomes that uphold ngā uara ahurea o Te Parawhau ki Tai and reflect the tirohanga and obligations outlined in this CIA.

To give effect to the relevant RPS provisions, the following mahi whakaora are also required:



Partnership

- Te Pouwhenua o Tiakiriri Kūkupa Trust, and signatories of this CIA shall be formally included in the review and certification of all MBL management plans, including but not limited to the EMMP, MMMP, SEOP, LMP and, BMP.
- A partnership approach shall be established to oversee the implementation of consent conditions and mahi whakaora, with regular hui between Te Pouwhenua o Tiakiriri Kūkupa Trust, and signatories of this CIA and MBL to review progress and address emerging issues.

Cultural Integration

- A māhere tikanga plan shall be developed by Te Pouwhenua o Tiakiriri Kūkupa Trust, Te Parawhau kaumātua, signatories of this CIA and incorporated into MBL's Environmental Management Plans. This plan shall include tikanga for karakia, rāhui, accidental discoveries, and other Hapū led responses to vessel incidents, marine mammal strandings or other incidents. Condition 47 of MBL's consent requires the preparation of this plan.
- Te Parawhau ki Tai cultural induction programme shall be delivered to all MBL staff and contractors involved in the sand extraction kaupapa. Condition 10 of MBL's consent requires these actions.

Taiao Monitoring and Restoration

- MBL's SEMR shall integrate technical assessments and mātauranga Māori indicators of mauri, such as tohu, maramataka, and species behaviour as provided by Te Pouwhenua o Tiakiriri Kūkupa Trust. Condition 37 of MBL's consent and Section 6.1 of the SEMR address this requirement.



- The sand extraction activities shall be carried out in accordance with MBL's Sand Extraction Operations Plan (SEOP) to ensure potential effects on the seabed are minimised and, where possible, avoided.
- MBL's SEOP shall be reviewed at the third year of extraction by both parties and include Hapū-led monitoring and reporting, with implementation overseen by Te Pouwhenua o Tiakiriri Kūkupa Trust. This requirement is addressed in Section 2.2 of MBL's Environmental Effects Management Plan (EEMP).

Taonga Species and Biosecurity

Taonga Species Protection Protocols shall be collaboratively developed by MBL and the signatories of this CIA and embedded in MBL's EMMP. This shall include vessel controls during migration periods, monitoring of tuna and other taonga species, and Hapū-led observation alongside MBL's experts. These protocols are addressed in MBL's MMMP, EMMP, and CCMP, and are also captured in the Substantive Agreement between Te Pouwhenua o Tiakiriri Kukupa Trust and MBL.

- A Biosecurity Management Plan shall be collaboratively developed by MBL and signatories of this CIA to prevent the introduction or spread of marine pests, including Exotic Caulerpa, with Hapū oversight and input. This requirement is addressed in MBL's Biosecurity Management Plan and Condition 14 of its consent (BMP).

Capacity Building and Resourcing

- To build Hapū capacity, Te Parawhau ki Tai monitors shall be resourced and trained through a collaborative programme developed by MBL and Te



Parawhau Ki Tai, to undertake environmental monitoring alongside MBL's experts. This includes water quality, sediment plume behaviour, and seabed and surrounding taiao health/mauri ora assessments.

- Te Parawhau Hapū kaimahi and kaumātua shall be remunerated for their time and expertise in accordance with agreed rates, and their involvement shall be embedded in all stages of the project lifecycle.

Reporting and Transparency

- MBL and NRC shall share all monitoring results including MBL's SEMR, water quality reports, and ecological assessments with Te Pouwhenua o Tiakiriri Kūkupa Trust and Te Parawhau kaumātua, at a response time agreed by both parties.
- The SEMR shall be jointly reviewed by MBL and Te Pouwhenua o Tiakiriri Kūkupa Trust, with Hapū commentary and mātauranga Māori perspectives integrated throughout. Reports shall be submitted to NRC as part of the agreed monitoring and reporting framework. This requirement is addressed in Section 6.1 of MBL's Environmental Effects Management Plan (EEMP).

These mahi whakaora are intended to be practical, measurable, and embedded within MBL's operational framework. They reflect Te Parawhau ki Tai's uara ahurea and ensure that the RPS is applied in a way that supports both environmental outcomes and cultural integrity.



5.9 Northland Regional Coastal Plan

The Northland Regional Coastal Plan gives effect to the NZCPS at the regional level. It sets out rules and policies for managing activities in the coastal marine area, including seabed disturbance, discharges, and protection of cultural and ecological values.

A summary of those provisions relevant to this proposal is listed below:

- **Objective 4.1.1**, to protect areas of significant conservation value, including habitats of indigenous flora and fauna.
- **Objective 4.1.2**, to recognise and provide for the relationship of tāngata whenua with the coastal marine area, including wāhi tapu, taonga, and customary activities.
- **Policy 4.2.1**, requires that activities in the CMA avoid, remedy, or mitigate adverse effects on areas of significant conservation value.
- **Policy 4.2.2**, requires recognition of tāngata whenua values and the incorporation of tikanga Māori in coastal management.
- **Policy 4.2.3**, encourages consultation with tāngata whenua and consideration of their views in decision-making.
- **Rule 16.6.1**, controls seabed disturbance and extraction activities, requiring consent where effects may be more than minor.

Comment

The proposed sand extraction at Paepae Atua is situated offshore in a dynamic sandy seabed environment. MBL's ecological assessments indicate that the site does not contain significant benthic habitats or indigenous vegetation, and no effects are anticipated on shoreline ecosystems.



Despite these findings, the location remains within an area of ancestral and cultural significance to Te Parawhau ki Tai, including active Te Parawhau MACA claims. The seabed and surrounding moana form part of the Hapū's taiao and whakapapa landscape. As outlined in this CIA, the proposal must uphold Te Parawhau ki Tai uara ahurea to ensure that effects on our uara, tikanga, kaitiakitanga, and intergenerational responsibilities are appropriately addressed. The NRCP requires that tāngata whenua uara, including mātauranga Māori and tikanga, are actively recognised in coastal management, and that engagement is genuine and ongoing. The following mahi whakaora are required to achieve these requirements.

Mahi Whakaora

Te Pouwhenua o Tiakiriri Kūkupa Trust require that the NRCP be applied in a way that upholds Te Tiriti o Waitangi and affirms the mana of Te Parawhau ki Tai as tāngata whenua. To meet the plan's requirements and protect the cultural and ecological integrity of the coastal marine area, the following actions are necessary:

- **Hapū uara, mana atua:** Te Parawhau ki Tai tikanga and mātauranga Māori shall be embedded in all coastal management plans, including protocols for karakia, rāhui, and cultural response procedures.
- **Ancestral Relationship, whakapapa:** The significance of Paepae Atua, the surrounding moana, and the seabed shall be acknowledged, including the active MACA claim. Any seabed disturbance shall be assessed and addressed in partnership with Te Parawhau ki Tai.
- **Monitoring and Reporting:** Marine monitoring, including seabed condition, sediment behaviour, and taonga species, shall be collaboratively managed and reviewed by MBL and Te Parawhau ki Tai. Monitoring results shall be shared at a response time agreed by both parties.
- **Taonga and Biosecurity:** To protect taonga species and manage biosecurity risks, the recommendations outlined in the suite of MBL's management plans and



conditions of consent shall be adhered to. Te Pouwhenua o Tiakiriri Kukupa Trust shall participate in reviewing these plans and the associated conditions of consent.

- **Participation and Resourcing:** Te Pouwhenua o Tiakiriri Kūkupa Trust, Te Parawhau monitors, and advisors shall be resourced to engage fully in coastal management. All data and findings shall be shared with Te Parawhau kaumātua and Te Pouwhenua o Tiakiriri Kūkupa Trust. This requirement is provided for in the Substantive Agreement between Te Pouwhenua o Tiakiriri Kukupa Trust and MBL.

5.10 Proposed Northland Regional Plan (Appeals Version February 2024)

The Proposed Northland Regional Plan (PNRP) consolidates and replaces several older regional plans, including the NRCP (assessed above). Although not yet formally operative, all appeals have been resolved, and the Appeals Version now carries significant legal weight under the RMA.

The PNRP introduces updated provisions that strengthen the recognition of tāngata whenua relationships with the coastal marine area, including:

- **Objective F.0.2**, recognise and provide for the relationship of tāngata whenua with land, water, and taonga, and support their role as kaitiaki.
- **Policy D.1.1**, requires decisions to give effect to Te Tiriti o Waitangi.
- **Policy D.1.2**, encourages early and meaningful engagement with tāngata whenua, and integration of mātauranga Māori and tikanga.
- **Policy D.2.1**, requires avoidance of significant adverse effects on areas of cultural significance.
- **Policy D.2.2**, supports protection of mahinga kai, wāhi tapu, and other sites of significance.



Rule C.1.8.1, regulates seabed disturbance and extraction activities, requiring consent where effects may be more than minor.

Comment

As previously outlined, Paepae Atua is of great significance to Te Parawhau ki Tai and the wider Te Parawhau Hapū. The proposed sand extraction site is an area where Hapū traditionally fished, gathered kai and have had a long uninterrupted connection with. It is an area where there is an active MACA application. While ecological assessments report no significant biophysical effects, the sand extraction area forms part of Te Parawhau ki Tai's taiao and whakapapa landscape, the place where the atua would sit and make decisions.

In upholding Te Parawhau ki Tai uara ahurea, the proposal must be assessed not only for environmental impacts but also for its alignment with Hapū mana motuhake, including tikanga, kaitiakitanga, and intergenerational obligations. The PNRP provides a strengthened framework for recognising these and must be considered alongside the operative NRCP.

Mahi Whakaora

To meet the intent of the PNRP and support the broader mahi whakaora outlined in this CIA, are required:

Cultural Integration

MBL are requested to collaborate with Te Pouwhenua o Tiakiriri Kūkupa Trust and Te Parawhau kaumātua signatories to this CIA, to develop and apply tikanga and mātauranga Māori across all relevant management plans. This includes recognising the Hapū whakapapa and taiao significance of Paepae Atua.

Assessment of Uara Ahurea Effects

All sand extraction activities must be assessed for their impact on Te Parawhau ki Tai uara, including tikanga, kaitiakitanga obligations, and intergenerational responsibilities. Avoidance



strategies and agreed mahi whakaora shall be developed in partnership and reflected in consent conditions or a side agreement, where appropriate.

Collaborative Monitoring

MBL and Te Parawhau ki Tai will jointly design and carry out marine monitoring, including assessments of seabed mauri, ecological condition, sediment movement, and taonga species. Both cultural and scientific indicators will be used, with results shared at response times agreed by both parties.

Protection of Cultural Sites and Taonga

Te Parawhau ki Tai will identify areas of cultural significance, including mahinga kai and wāhi tapu, which MBL will protect through agreed protocols. These requirements are provided for in the Substantive Agreement between Te Pouwhenua o Tiakiriri Kukupa Trust and MBL.

Resourcing and Participation

MBL shall provide Te Parawhau ki Tai monitors and other representatives as confirmed by Te Parawhau Hapū kaumātua (signatories to this CIA), with appropriate resourcing to participate in all stages of the project. This includes:

- timely access to environmental and project-related data,
- active involvement in decision-making processes, and
- recognition of their role in upholding kaitiakitanga and ngā uara ahurea o Te Parawhau ki Tai.

These requirements are provided for in the Substantive Agreement and the Relationship Agreement between Te Pouwhenua o Tiakiriri Kukupa Trust and MBL.



5.11 Mana Whakahono ā Rohe o Te Pouwhenua o Tiakiriri Kūkupa Trust

Te Parawhau have not prepared a specific Hapū Environmental Management Plan.

However, Te Pouwhenua o Tiakiriri Kūkupa Trust acting on behalf of Te Parawhau ki Tai rohe which is situated along the eastern coastline of the wider rohe of Te Parawhau (map pg 50), have signed a Mana Whakahono ā Rohe agreement with the NRC and have a draft Mana Whakahono ā Rohe agreement with the Whangarei District Council (WDC). The provisions outlined in the Mana Whakahono ā Rohe agreements are applicable to this CIA and shall inform any decision-making processes relating to this kaupapa.



6 Te Parawhau ki Tai Ngā Uara Ahurea

6.1 Kaitiaki, Kaitiakitanga and Manaakitanga

In keeping with kaitiakitanga Te Parawhau ki Tai have an obligation to the whānau and all other hapū in the area, which includes nurturing Mana Atua, Mana o Te Wai, Mana Whenua, Mana Ao Tūroa, and Mana Tāngata.

Kaitiakitanga and manaakitanga mean more than just guardianship or hospitality and support to others. They represent an intergenerational responsibility inherited at birth, passed down from generation to generation, to care for the environment and uphold spiritual (wairuatanga) obligations, safeguarding these from harm. Wairuatanga is essential to health and therefore vital to Mana Whenua's wellbeing and identity.

Through whakapapa, Te Parawhau ki Tai are responsible for both mātauranga and tikanga Māori in relation to the management of their resources. Kaitiakitanga involves not only protecting the life-supporting capacity of resources but also fulfilling spiritual (wairuatanga) and inherited responsibilities to taiao, maintaining mana over those resources, and ensuring the welfare of the people those resources support. This means that Te Parawhau ki Tai have a continuous and ongoing obligation to protect and use their natural resources and to interact and associate with their taonga and wāhi tapū. In this way, the legacy of kaitiakitanga and wairuatanga is passed from one generation to another.



7 Te Pou Tarāwaho o Te Taiao o Te Parawhau ki Tai

The deep and enduring relationship Te Parawhau ki Tai have with Paepae Atua and te taiao, as documented in this CIA, must be recognized as a crucial part of the Fast-Track Panel and NRC's decision-making processes.

For Hapū, all living and non-living things are intrinsically connected (physically and spiritually) to Ao Tūroa (the environment) through whakapapa, tātai, and whanaungatanga. Spiritual values are as important as the physical.

In accordance with kaitiakitanga, the responsibilities of Te Parawhau ki Tai extend beyond archaeological remnants to include Hapū ancestral whenua, awa, moana, tikanga, wāhi tapu, and the effects on their taonga, mana, tapū, and the mauri of resources.

All things, animate and inanimate, possess their own mauri. Paepae Atua including the wider surrounding taiao have a mauri that binds the current generation through mana, tapu, and whakapapa to the whenua and tātai ki te tāngata, including Te Ao Turoa.

The following key concepts are fundamental for environmental management based on Te Parawhau ki Tai mātauranga, and tikanga. They encompass both the tangible and intangible, mai i te whenua ki te Rangi mai i te Rangi ki te whenua (from the land to the sky and from the sky to the land), governing the rules and regulations for the appropriate use and exploitation of natural and physical resources.

These concepts form a cultural value framework (pou tarāwaho) adopted by Te Parawhau ki Tai Hapū, expressed as:



Te Pou Tarāwaho o Te Taiao o Te Parawhau ki Tai

- **Mana atua** (the atua,/the spirit realm's mana): Effects (positive/negative) on the spiritual realm, including tikanga (protocols/procedures).
- **Te mana o te wai** (Tangaroa/Maru's realm, the water's mana): Effects (positive/negative and benign) on the water (Paepae Atua, Te Moana-nui a kiwa), including those species that live in this realm (the uri of Tangaroa) and any physical change or discharge to the water.
- **Mana whenua** (the realm of Papatūānuku, the mana of the whenua): Effects (positive/negative and benign) on the whenua (the sea floor) arising from the proposed sand extraction activities, dredging.
- **Mana ao tūroa** The space in between Ranginui and Papatūānuku. (Mano ao tūroa is the realm of all those species that live between Papatūānuku and Ranginui, environment's mana): Effects (positive/negative) on the environment.
- **Mana tāngata** (the human realm, people's mana): Effects (positive/negative) on the people, including the reasons for the sand extraction, risks, and benefits associated with the kaupapa.



8 Ngā Uara Ahurea o Te Parawhau ki Tai Assessment of Effects

This section considers ngā uara ahurea o Te Parawhau ki Tai and the potential effects (both adverse and positive) upon these uara arising from the proposed sand extraction activities. The uara assessed include kaitiakitanga (guardianship), manaakitanga (hospitality), mana (authority), taonga (treasures), tikanga (customs), and mauri (life force) and our hapū pou tarāwaho (environmental framework) outlined above.

Mahi whakaora are provided against each uara ahurea below. For clarity, a full list of these mahi whakaora are collated and included as **Appendix C**.

8.1 Mana Atua

Effects arising from the proposed sand extraction can extend beyond tangible impacts to include spiritual and intangible effects. As outlined above, mana atua refers to the realm of the ancestors (tūpuna) and the atua, the deities and gods.

As told in the name, Paepae Atua is the seat or bench of the Atua. It is a place where the atua would sit, discuss, and make decisions. The identified sand extraction area lies within the realm of Tangaroa and Papatūānuku. Te Pae o Tū, also known as Bream Tail, is Tūmatauenga's seat, a vantage point overlooking the sand extraction activities at Paepae Atua.

The entire area holds deep significance for Te Parawhau ki Tai. The following mahi whakaora (mitigation measures) are required to ensure that mana atua effects are appropriately managed and that tikanga is upheld.

Mahi Whakaora

- A pre-start hui shall be held with Te Parawhau ki Tai and MBL representatives to confirm tikanga, cultural protocols, and expectations for the proposed sand extraction kaupapa.



- All activities associated with the sand extraction kaupapa shall be carried out in accordance with tikanga and mātauranga Māori, as developed and agreed between the signatories of this CIA and MBL.
- Te Parawhau ki Tai request that kaumātua be afforded the opportunity to undertake whakawātea, karakia and other tikanga on the moana and at relevant coastal whenua locations prior to commencement of the sand extraction activities. This includes karakia to acknowledge the mauri of Tangaroa and Tūmatauenga, to uplift the wairua of Paepae Atua and the surrounding taiao.
- A Te Parawhau ki Tai cultural induction programme shall be developed and delivered by agents of the Trust for all MBL staff and contractors involved in the sand extraction kaupapa.
- A māhere tikanga plan shall be developed by Te Parawhau ki Tai and incorporated into MBL's Environmental Effects Management Plan (EMMP), Sand Extraction Operation Management Plan, and Health and Safety Plan. This plan shall include tikanga responses for:
 - Whale and marine mammal strandings
 - Tāngata drowning events
 - Discovery of taonga species or kōiwi
 - Vessel incidents or accidents
- In the event of any incident or activity affecting the spiritual integrity or tikanga of Paepae Atua, a Hapū tikanga response team, including kaumātua and kaitiaki, shall be activated to carry out appropriate cultural protocols. These may include karakia, tapu lifting, whānau support, and the imposition of a rāhui.
- The extent and duration of any rāhui shall be determined in collaboration with Te Parawhau ki Tai, and where appropriate, in coordination with relevant authorities such as the Police.



- In the event of a rāhui imposed over the sand extraction area, MBL shall formally notify Te Parawhau ki Tai of their standard sand extraction operations, including timing and activity details.

MBL's consent conditions 10 and 47 relate to these requirements and are intended to appropriately address these mahi whakaora.

8.2 Te Mana o Te Wai

Te mana o te wai relates to the coastal waters at Paepae Atua the realm of Tangaroa encompassing the seabed and the benthic ecosystems that dwell within his domain, his uri. These taonga must be protected and actively enhanced to uphold their mauri and ensure the wellbeing of the wider taiao. The following mahi whakaora are required to achieve this.

Mahi Whakaora

- MBL shall avoid any areas within the sand extraction zone that are identified by Te Parawhau ki Tai as culturally significant or ecologically sensitive. Where Hapū kaumātua deem it appropriate, these locations shall be communicated to MBL and incorporated into the relevant management plans. If any such area is entered, the tikanga mahere plan shall be activated immediately.
- Te Parawhau ki Tai requests that mātauranga Māori indicators of mauri including but not limited to maramataka, tohu, and species health be integrated into the monitoring framework and adaptive management decisions.
- A marine monitoring framework shall be co-designed by Te Parawhau ki Tai and MBL to assess:
 - Sediment plume behaviour and dispersal
 - Impacts on benthic habitats and taonga species (e.g., tipa)
 - Changes to water clarity.

This requirement shall be addressed through Sections 6.8 and 6.9 of MBL's Environmental Monitoring and Management Plan (EMMP).



- Hapū-led monitoring and review shall be embedded at the following intervals:
 - Annually for the first seven years of extraction and included in MBL's SEMR schedule.
 - At least every three years thereafter, unless otherwise triggered by environmental change, Hapū observation, or SEMR findings.
 - Additional monitoring may be initiated at any time in response to tohu, taonga species behaviour, or unforeseen environmental effects.
 - All monitoring shall be carried out and reviewed collaboratively by Te Pouwhenua o Tiakiriri Kukupa Trust, the signatories to this CIA, and MBL, ensuring recognition of both mātauranga Māori and scientific expertise.
- Te Parawhau ki Tai monitors, in accordance with Hapū kaitiakitanga obligations, shall be resourced and trained to undertake regular water quality and seabed monitoring including pre-, during, and post-extraction phases. This monitoring shall be carried out collaboratively with MBL and their technical experts, recognising the value of both mātauranga Māori and scientific knowledge systems. These requirements shall be included in the Substantive Agreement between Te Pouwhenua o Tiakiriri Kukupa Trust and MBL.
- No contaminated discharges, vessel-related pollutants, debris, or rubbish shall enter the moana. The integrity of Tangaroa's domain must be always upheld. These requirements are addressed in MBL's Oil Spill Management Plan and Garbage Management Plan.
- Emergency response protocols for spills, vessel incidents, or marine accidents shall be prepared by MBL and formally reviewed and approved by Te Parawhau ki Tai. These protocols must reflect tikanga and mātauranga Māori and be embedded within MBL's EMMP. These requirements are addressed in MBL's Standard Operating Procedures (SOP) and Oil Spill Management Plan (OSMP).



Migrating Taonga Species

Tuna (long and shortfin eel) and other uri of Tangaroa are taonga species to Te Parawhau ki Tai. Tuna's annual migration from freshwater (the realm of Maru) to oceanic spawning grounds (the realm of Tangaroa) is a sacred journey that must be protected. Sand extraction activities must be managed within the extraction area to ensure that any migrating tuna are not harmed or disrupted on their journey to breed or on their return. This includes managing extraction during key migration periods (February to April) if rangahau (research) from education programmes indicates intervention is required. Measures may include implementing vessel controls to reduce risk of harm.

In addition to tuna, other taonga may also migrate through or inhabit the Paepae Atua area, including pelagic fish species, marine mammals (e.g., whales, dolphins), and benthic invertebrates. Where known, their seasonal movements and breeding cycles must be considered in the timing and operation of extraction activities.

Where required, Taonga Species Protection Protocols shall be collaboratively developed by MBL and the signatories of this CIA and embedded in MBL's applicable management plans. These protocols shall include:

- Identification of migratory corridors and seasonal movement patterns of tuna and other taonga species.
- Monitoring using mātauranga Māori indicators (e.g., tohu, maramataka) and scientific tools (e.g., environmental DNA, acoustic tracking).
- Vessel speed and lighting controls during migration periods.
- Resourcing of Te Parawhau ki Tai to lead cultural monitoring and ensure tikanga is upheld, in accordance with our kaitiakitanga obligations to safeguard the taiao and its kaitiaki including but not limited to fish species, marine mammals, and birds.



These protocols are addressed in MBL's management plans, including but not limited to the MMMP, EMMP, and CCMP, and are captured in the Substantive Agreement between Te Pouwhenua o Tiakiriri Kukupa Trust and MBL.

Water Quality Monitoring – Operational Phase

Although the Water Quality Assessment (SLR, 2025) concludes that the effects of sand extraction on water quality are negligible, annual monitoring is required in accordance with MBL's Consent Condition 31. Te Parawhau ki Tai supports this condition as it reflects our kaitiakitanga obligations and ensures transparency and responsiveness should any unforeseen effects arise.

Te Parawhau ki Tai acknowledges that the William Fraser's low-impact extraction system and the sandy nature of the seabed at Paepae Atua containing minimal fine sediment already contribute to reduced plume effects. These are positive features. However, the following measures are considered necessary to ensure mauri is actively protected and enhanced throughout the life of the activity.

Monitoring During Extraction

- Real-time technology shall be used on the William Fraser to accurately log the extraction location.
- Sediment plumes shall be monitored annually as required by MBL's Condition of Consent 31.
- Monitoring equipment shall be GPS-linked to allow spatial mapping as provided for in Section 6.9 of MBL's EMMP.
- Operational thresholds and trigger responses shall be established. These are covered in Section 6.9 of MBL's EMMP.



Post-Extraction Checks

- An annual summary report shall be prepared, comparing monitoring results with Northland Regional Council (NRC) environmental thresholds and pre-extraction baseline data. A copy of this report shall be provided to Te Parawhau ki Tai for review. These are addressed in MBL's SEMR as required under Condition 37.

Hapū Monitoring

- Te Parawhau ki Tai monitors shall be present during initial extraction activities and at agreed intervals to observe and record tohu and other indicators of mauri.
- Te Parawhau ki Tai mātauranga shall be used alongside scientific data to assess changes in water quality, including visual clarity, colour, and the presence or absence and responsiveness of taonga species.
- A marine monitoring programme shall be established to assess:
 - Sediment plume behaviour and dispersal
 - Impacts on benthic habitats and taonga species
 - Changes to water clarity.
- All monitoring frameworks shall be co-designed by Te Parawhau ki Tai, signatories of this CIA and MBL to ensure they are culturally appropriate, scientifically robust, and practically useful. Monitoring shall:
 - Include clear thresholds for ecological change that trigger adaptive management responses
 - Be scheduled at defined intervals (e.g., annually, five-yearly) as agreed with MBL
 - Allow for additional monitoring if tohu, taonga species behaviour, or environmental changes are observed
 - Be transparent, with results shared with Te Parawhau ki Tai, NRC, and the wider community (where appropriate).



- Embed cultural monitoring alongside technical assessments, with Te Parawhau ki Tai monitors present during key phases.

These mahi whakaora are addressed by MBL's management plans and applicable conditions of consent.

Adaptive Management

- Monitoring results shall inform any necessary changes to extraction timing, duration, or vessel operation.
- All findings shall be shared with Te Parawhau ki Tai and NRC to support collaborative oversight and ensure early response to any emerging issues is implemented.

Protected Marine Life

- MBL and their specialists undertake rangahau to understand the importance of protected species (e.g., cup corals) and share findings with Hapū.
- Embed Te Parawhau ki Tai tikanga, mātauranga Māori, and uara ahurea in project design, implementation, and monitoring.
- Support Hapū-led initiatives that restore the taiao and enhance wellbeing.

These requirements are addressed in the Substantive Agreement between Te Pouwhenua o Tiakiriri Kukupa Trust and MBL.

8.3 Mana Whenua

Although the sand extraction activity is marine based, the adjacent coastal whenua at Rauri, Poupouwhenua, Ruakākā, Waipū, Langs, Te Pae o Tū including Taranga, Maui Taha, Maui Roto, Maui Waho, Maui Pae, are part of Te Parawhau Hapū rohe. These areas must be respected and protected from further damage. Te Parawhau ki Tai maintains our whakapapa and whanaungatanga with the whenua and seabed which forms a part of the realm of Papatūānuku and as such, must be respected.

To uphold these obligations the following mahi whakaora area required:



Mahi Whakaora

Exotic Caulerpa is a significant marine plant pest to our Hapū taiao.

- **Exotic Caulerpa:** The William Fraser must remain free of this pest, and all sand extraction activities must be carried out in accordance with Biosecurity New Zealand's marine pest management protocols and any mātauranga Māori. Te Parawhau Hapū shall co-develop specific biosecurity protocols with and included in MBL's EMMP to prevent the introduction or spread of Exotic Caulerpa into our rohe.
- A comprehensive Biosecurity Management Plan shall be co-developed by Te Parawhau ki Tai and MBL, with protocols that reflect both mātauranga Māori and best-practice marine biosecurity standards. The plan shall include:
 - vessel inspection procedures, seasonal risk assessments, and response protocols for marine pests including Exotic Caulerpa and other invasive species.
- Te Parawhau ki Tai monitors shall be trained and resourced to participate in biosecurity inspections, surveillance, and reporting, ensuring Hapū oversight of all vessel movements and extraction activities.
- Biosecurity protocols shall be embedded in all operational plans and reviewed annually in partnership with Te Parawhau ki Tai to ensure they remain effective and responsive to emerging risks.
- Any breach of biosecurity protocols shall trigger a formal review and response process, with Te Parawhau ki Tai leading the tikanga response and NRC notified immediately.

Te Parawhau ki Tai supports the inclusion of the various management plans required by MBL's experts. Te Parawhau ki Tai shall be formally included in the review and certification of all management plans, including:

- Environmental Monitoring and Management Plan (EMMP)
- Marine Mammal Management Plan (MMMP)



- Sand Extraction Operations Plan (SEOP)
- Biosecurity Management Plan (BMP).

These requirements are addressed in:

- the Substantive Agreement between Te Pouwhenua o Tiakiriri Kukupa Trust and MBL
- MBL Condition of Consent 14 - BMP
- MBL Condition of Consent 16 – EMMP
- MBL Condition of Consent 17 – MMMP
- MBL Condition of Consent 18 – SEOP

Monitoring

- All monitoring frameworks shall be designed and agreed in collaboration with Te Parawhau ki Tai and MBL to ensure they are culturally appropriate, scientifically robust, and practically useful. Monitoring shall:
 - Include clear thresholds for ecological change that trigger adaptive management responses
 - Be scheduled at defined intervals (e.g., annually, five-yearly)
 - Allow for additional monitoring if tohu, taonga species behaviour, or environmental changes are observed
 - Be transparent, with results shared with Te Parawhau ki Tai, NRC, and the wider community (where appropriate)
 - Embed cultural monitoring alongside technical assessments, with Te Parawhau ki Tai monitors present during key phases.

These requirements are addressed in:

- the Substantive Agreement between Te Pouwhenua o Tiakiriri Kukupa Trust and MBL
- MBL Condition of Consent 14 - BMP
- MBL Condition of Consent 16 – EMMP



- MBL Condition of Consent 17 – MMMP
- MBL Condition of Consent 18 – SEOP
- MBL Condition of Consent 37 - SEMR

Adjacent Shoreline and Habitat Protection

The health of the adjacent shoreline shall be maintained throughout the duration of the activity. Sand extraction shall not:

- Result in any measurable shoreline erosion or disturbance to coastal bird nesting areas, including habitat used by taonga species such as Tara iti (New Zealand fairy tern).
- Monitoring shall be undertaken to confirm that no adverse effects on shoreline stability or ecological values can be attributed to the sand extraction activities. If any such effects are observed, appropriate mitigation or remediation measures shall be implemented in consultation with Te Parawhau ki Tai and relevant experts.
- The sand extraction activities shall be carried out in accordance with the Sand Extraction Operations Plan (SEOP) to ensure that the potential effects of sand extraction on the seabed are minimised and, where possible, avoided.

It is anticipated that the SEOP is reviewed on an annual basis as lessons are learned throughout the sand extraction process. The SEOP shall include:

- Clear objectives, monitoring strategies, incorporating adaptive management methodologies to ensure that the seafloor and immediate surrounding environment are not degraded. Where found, removal of marine debris and rubbish from the seafloor within the extraction area, with appropriate disposal shall occur. The extent of debris clearance area and ecological enhancement shall be agreed collaboratively between Te Pouhenua o Tiakiriri Kukupa Trust and MBL, with all monitoring and reporting to Te



Pouwhenua o Tiakiriri Kukupa Trust to ensure transparency and accountability.

- Te Parawhau ki Tai respectfully requests that MBL commit appropriate resources to support this mahi whakaora, including financial support, dedicated personnel, and access to relevant technical expertise to ensure any rehabilitation process is meaningful, effective, and aligned with Te Parawhau Hapū tirohanga and ngā uara ahurea. These requirements are addressed in the Substantive Agreement between Te Pouwhenua o Tiakiriri Kukupa Trust and MBL.

8.4 Mana Ao Turoa

Mana Ao Tūroa refers to the space between Papatūānuku and Ranginui, living environment. It is the realm of all species that dwell within this space, the many uri of Papatūānuku and Ranginui, including people. This environment is not static; it is dynamic, interconnected, and full of life. The sand extraction area at Paepae Atua sits within this realm and must be managed holistically.

The health and wellbeing of the environment, including Paepae Atua, is a shared responsibility held by all, including MBL and Hapū. The proposed sand extraction activities must be exercised in a way that upholds the mauri, (the life force of all things) and protects the integrity of the taiao. The following mahi whakaora are required to uphold this responsibility and ensure that Mana Ao Tūroa is maintained and actively enhanced.

Mahi Whakaora

- Te Parawhau ki Tai supports the use of low-impact vessel systems, such as the William Fraser's electric pump system, which reduces underwater noise and eliminates hydraulic oil risks. These design features contribute positively to the protection of mauri within the extraction area.



- Te Parawhau ki Tai supports the implementation of MBL's Oil Spill Management Plan, which includes double-bunded containment systems for fuel and oil onboard the William Fraser, use of biodegradable synthetic hydraulic oil, and automated shut-off alarms to prevent discharge in the event of a leak. No refuelling is to occur at Paepae Atua. These measures along with other vessel safeguards are essential to protecting Tangaroa's realm and upholding the mauri of te ao tūroa.
- Benthic seafloor monitoring program shall be undertaken prior to the commencement of extraction and repeated annually. This assessment shall be conducted by Te Parawhau ki Tai and MBL, using both scientific and mātauranga Māori methods. It shall include:
 - Tohu-based (visual) assessments of sediment texture and abundance (absence or presence of trenches and erosion).
 - Shellfish abundance, and ecological balance.
 - Monitoring of recolonisation and habitat recovery.

Seabed Depth Change – Cultural Impact of 2% Change Over Time

Coastal Processes and Geomorphology Effects Assessment (Attachment Nine of the Draft AEE, October 2025), predicts an average seabed lowering of up to 0.55 m over the 35-year consent period. This equates to approximately 2% of the average depth (28 m) of the extraction area. While the ecological effects are assessed as negligible, the cultural impact remains uncertain. The seabed is part of Papatūānuku and any change to its form may affect the mauri and balance of the taiao. Te Pouwhenua o Tiakiriri Kūkupa Trust, therefore, requests that:

- this change is monitored closely, with Hapū-led assessments of mauri and tohu supported by scientific evidence integrated into the Sand Extraction Monitoring Report (SEMR).
- An adaptive management approach must be embedded to ensure that any unforeseen adverse effects arising from the proposal are identified early and responded to appropriately. This includes the ability to pause or modify



extraction activities if monitoring indicates a decline in seabed health or mauri.

- A long-term ecological monitoring plan shall be developed with Hapū input and reviewed at least every five years. This plan shall include:
 - Monitoring of benthic species recolonisation, particularly those naturally occurring at depths of 20 metres or more (e.g., polychaete worms, burrowing crustaceans, deep-dwelling bivalves)
 - Where appropriate, reintroduction of species (e.g., spat or larvae) to support habitat recovery, guided by mātauranga Māori and ecological indicators of mauri
 - Adaptive management triggers for pausing or relocating extraction activities, including closure of extraction cells
 - Integration of rongoā moana and traditional knowledge into restoration design across the extraction area. This may include management strategies such as closing individual extraction cells, as addressed in MBL's SEMR.
- Sand extraction activities must avoid cumulative degradation of the seabed, including compaction, habitat and species loss, and disruption of natural sediment transport processes within Paepae Atua. Monitoring results shall inform operational adjustments to avoid long-term ecological decline.
- All monitoring frameworks shall be co-designed by Te Parawhau ki Tai and MBL to ensure they are culturally appropriate, scientifically robust, and practically useful.

Monitoring shall:

- Include clear thresholds for ecological change that trigger adaptive management responses
- Be scheduled at defined intervals (e.g., annually, five-yearly)
- Allow for additional monitoring if tohu, taonga species behaviour, or environmental changes are observed



- Be transparent, with results shared with Te Parawhau ki Tai, NRC, and the wider community (where appropriate)
- Embed cultural monitoring alongside technical assessments, with Te Parawhau ki Tai monitors present during key phases.
- Climate change considerations shall be addressed in MBL's management plans and monitoring reports. This includes assessing for cumulative effects of sand extraction and climate change on seabed morphology, surf breaks, and taonga species. Monitoring shall include indicators of climate-related change (e.g., changes in wave pattern and intensity and, species behavioural patterns), and adaptive management responses shall be developed to address any emerging risks.

8.5 Mana Tāngata

Mana Tāngata refers to the inherent dignity, authority, and wellbeing of the people. It is grounded in whakapapa, whanaungatanga, and the collective strength of the Hapū. For Te Parawhau ki Tai, Mana Tāngata is expressed through the ability to exercise rangatiratanga, uphold tikanga, and ensure the intergenerational wellbeing of whānau and hapū.

The proposed sand extraction activity at Paepae Atua presents both risks and opportunities for Te Parawhau ki Tai. While the Hapū has expressed deep concern regarding the cultural and environmental impacts of the sand extraction activity, there is also recognition of the potential for this kaupapa to support Hapū tirohanga through a respectful and equitable partnership. To uphold Mana Tāngata uara, the following commitments and mahi whakaora are required:

Te Parawhau ki Tai whakapapa is embedded in Paepae Atua and the wider surrounding area. The long history associated with this taiao is covered in this CIA.



To ensure our Te Parawhau ki Tai uara ahurea upheld, the following mahi whakaora are required to address the potential adverse effects on Mana Tāngata, rangatiratanga, whanaungatanga, wairuatanga, and mana tupuna arising from this kaupapa:

Mahi Whakaora

Mutually Beneficial Economic Arrangements: MBL and Te Pouwhenua o Tiakiriri Kūkupa Trust agree in principle to establish a mutually beneficial economic arrangement that appropriately reflects the mana of Te Parawhau ki Tai and signatories to this CIA as tāngata whenua, its enduring whakapapa and unbroken association with Paepae Atua, and the value of the sand resource. The arrangement should support Hapū tirohanga for wellbeing and economic development. Terms will be formalised through a legally binding side agreement and reviewed regularly to ensure equity, transparency, and alignment with Te Parawhau ki Tai uara, tirohanga and obligations, including those related to kaitiakitanga.

Scholarships and Training: MBL agrees to support a scholarship fund for Te Parawhau Ki Tai and Te Parawhau hapū members pursuing studies in environmental and marine sciences, resource management, and other related and supporting fields. Training and apprenticeship opportunities will be explored in partnership with the Hapū across relevant project areas, supporting not only rangatahi but all Hapū members seeking to grow their knowledge and understanding of marine-related kaupapa or to transition into new roles. This is vital to Te Parawhau ki Tai upholding its kaitiakitanga obligations.

Employment and Hapū Enterprise: MBL agrees to support Hapū-led opportunities across and beyond the life of the project. This includes but are not exhaustive, enabling Hapū enterprises to deliver services such as logistics, infrastructure, cultural induction, environmental monitoring, and other operational roles, all of which contribute to Hapū wellbeing, capability building, and long-term economic development. These opportunities



will include partnerships, joint ventures, collaborations with MBL in other commercial enterprises.

Cultural Induction and Capacity Building: MBL agrees to support a Te Parawhau ki Tai led cultural induction programme for all staff and contractors, covering Hapū history, tikanga, uara ahurea, and the significance of Paepae Atua. Resources will be made available to strengthen Hapū capacity in environmental governance and kaitiakitanga.

Hapū Wellbeing Fund: MBL agrees to contribute to whānau ora initiatives, including health, education, housing, marae and cultural revitalisation.

Partnership and Implementation Oversight: Te Pouwhenua o Tiakiriri Kūkupa Trust recommends MBL supports the establishment of a partnership framework with the signatories of this CIA to oversee the implementation of the mahi whakaora in this CIA, monitor sand extraction impacts, and uphold Te Tiriti o Waitangi articles and principles throughout the project lifecycle.

Relationship Agreement: Te Pouwhenua o Tiakiriri Kūkupa Trust recommends that a relationship agreement between MBL and Te Pouwhenua o Tiakiriri Kūkupa Trust including kaumātua signatories to this CIA be established to incorporate the commitments outlined in this CIA. This will ensure ongoing engagement, accountability, and a shared commitment to the implementation of the agreed mahi whakaora.

Cultural Expertise in Decision-Making: Given that the Fast-track Consenting process vests decision-making authority solely in the appointed Expert Consenting Panel, Te Pouwhenua o Tiakiriri Kūkupa Trust, strongly advocate that at least one Panel member is culturally competent and possesses demonstrated expertise and manawa in Te Ao Māori and a deep understanding of Paepae Atua and Te Parawhau ki Tai uara ahurea. This is essential to



ensure that the uara, tikanga, and mātauranga Māori articulated in this CIA are appropriately understood, respected, and integrated into the Panel’s assessment and decision-making process.

Environmental Funding: MBL agrees to provide funding to support environmental improvements in the Hapū rohe, including sediment and pollution reduction, rubbish removal, replanting and water quality enhancement of Paepae Atua and the surrounding area. The scope of this fund will be agreed and developed in consultation with Te Pouwhenua o Tiakiriri Kūkupa Trust and signatories to this CIA.

Minerals encountered: Te Pouwhenua o Tiakiriri Kūkupa Trust has set out clear expectations should mineralised materials be encountered during extraction in this CIA. While sand is excluded under the Crown Minerals Act, other materials remain the property of the Crown. If such materials are found, we expect MBL to notify the signatories to this CIA and engage in a tikanga-led process to determine an appropriate response.

Intergenerational Provisions:

- MBL shall support intergenerational wellbeing by resourcing Hapū-led initiatives that promote cultural revitalisation, mātauranga Māori transmission, and tiaki across Hapū generations.
- A long-term Hapū development plan shall be co-designed with Te Pouwhenua o Tiakiriri Kūkupa Trust and signatories to this CIA to ensure that benefits from the project extend beyond the consent term and contribute to enduring Te Parawhau ki Tai and Te Parawhau hapū capacity.
- MBL shall provide funding and support for Hapū-focused development programmes that go beyond entry-level or manual roles. These programmes shall include internships, mentoring, cultural education, and career development pathways for Te Parawhau ki Tai and Te Parawhau hapū rangatahi and any Hapū member who



chooses to pursue a career with MBL. The intent is to empower participants to grow into leadership, technical, governance, and environmental roles, and to contribute meaningfully to Hapū wellbeing, environmental restoration, and long-term Hapū development.

- All agreements shall include provisions for annual review and renewal to ensure that intergenerational goals remain relevant, measurable, and responsive to Hapū aspirations.

Transfer of Consent and Ongoing Commitments:

If MBL sells, transfers, or otherwise assigns its interest in the sand extraction consent at Paepae Atua, the following measures shall apply:

- All commitments outlined in this CIA including the agreed mahi whakaora, associated side agreements, and any conditions of consent, shall run with the consent and remain binding on any future consent holder or operator.
- MBL shall provide formal written notice to Te Pouwhenua o Tiakiriri Kūkupa Trust and signatories to this CIA of any proposed transfer of the consent or associated interests, with adequate notice to allow for meaningful engagement.
- MBL shall facilitate an introductory meeting between Te Pouwhenua o Tiakiriri Kūkupa Trust and signatories to this CIA and the incoming consent holder to ensure continuity of relationships, obligations, and understanding of Te Parawhau ki Tai and Te Parawhau Hapū uara ahurea, tikanga, and expectations.
- The incoming consent holder shall be required to formally acknowledge and adopt the commitments and obligations set out in this CIA and any related agreements, including the continuation of partnership, monitoring, and cultural protocols.

Te Tiriti o Waitangi

MBL, the Fast-track Expert Consenting Panel, and the Northland Regional Council (NRC) shall embed ngā uara ahurea o Te Parawhau ki Tai, including tikanga and tirohanga Māori, throughout the life of the project. This includes:



- Supporting the exercise of Te Parawhau ki Tai rangatiratanga and kaitiakitanga in relation to Paepae Atua and the takutai moana.
- Ensuring early, meaningful, and ongoing engagement with Te Parawhau ki Tai across all stages of the project, including design, implementation, monitoring, and review.
- Enabling Hapū-led participation in environmental and cultural decision-making, monitoring, and outcomes.

Te Parawhau Hapū MACA Claim

To uphold the rights and responsibilities of Te Parawhau ki Tai and Te Parawhau Hapū under Te Tiriti o Waitangi and the Takutai Moana Act 2011, the following mahi whakaora are sought:

Support for Te Parawhau Hapū MACA Claims

- MBL is requested to formally support Te Parawhau Hapū active MACA applications. All sand extraction activities must avoid any action that may cause substantial interruption to these claims throughout the life of the project.

Formal Commitment to Te Parawhau Hapū Uara Ahurea

Te Parawhau Hapū seeks a formal and enduring commitment from MBL to uphold:

- Hapū uara ahurea, as defined in ngā uara ahurea o Te Parawhau ki Tai pou tarawaho;
- Unimpeded access to customary marine areas and mātaitai;
- Recognition and respect for tikanga Māori and the exercise of kaitiakitanga.



Recognition of Active MACA Claims in Decision-Making

Te Pouwhenua o Tiakiriri Kūkupa Trust requests that the Fast-track Expert Consenting Panel and the NRC formally acknowledge Te Parawhau Hapū active MACA claims in all decisions relating to the proposed sand extraction activities.

- **Consent Condition – Protection of MACA Interests**

A specific condition of consent is sought to ensure that sand extraction activities at Paepae Atua do not proceed in any manner that undermines, prejudices, or compromises the integrity of Te Parawhau Hapū MACA claims.

- **Transparent and Ongoing Engagement under Section 95 MACA Act**

All engagement with Te Parawhau Hapū under Section 95 of the MACA Act must be:

- Transparent;
- Documented;
- Ongoing for the duration of the consent.

These measures are essential to ensure that the proposed sand extraction does not diminish the mana of Te Parawhau Hapū but instead contributes to the restoration of wellbeing, the exercise of rangatiratanga, and the realisation of Hapū tirohanga for current and future generations.



9 Conclusion

Te Pouwhenua o Tiakiriri Kūkupa Trust has prepared this CIA to evaluate the potential effects of MBL's proposed sand extraction at Paepae Atua. This assessment has been guided by Te Pou Tarāwaho o te Taiao o Te Parawhau ki Tai and informed by ngā uara ahurea o Te Parawhau ki Tai, Mana Atua, Mana o te Wai, Mana Whenua, Mana Ao Tūroa, and Mana Tāngata which collectively shape our obligations to the taiao, hapori, and atua, and provide the lens through which the potential impacts of MBL's kaupapa have been assessed.

The CIA identifies a range of cultural and environmental effects that must be addressed to uphold Te Parawhau ki Tai mana and ensure the mauri of Paepae Atua is protected and restored. The proposed suite of mahi whakaora is essential to mitigate these effects and to support Hapū tirohanga for wellbeing, rangatiratanga, and intergenerational development.

Te Pouwhenua o Tiakiriri Kūkupa Trust and signatories to this CIA do not oppose the application at this time, provided that the full suite of mahi whakaora are agreed to and formalised between MBL and Te Pouwhenua o Tiakiriri Kūkupa Trust and signatories to this CIA. This includes (but not limited to) commitments to:

- Establish a partnership framework;
- Embed cultural expertise in decision-making processes;
- Provide long-term support for Hapū capacity, wellbeing, and environmental restoration.

A meeting between MBL and Te Pouwhenua o Tiakiriri Kūkupa Trust and signatories to this CIA, is required to confirm shared understanding of the mahi whakaora, and to agree on mechanisms for implementation, monitoring, and oversight. This engagement is essential to ensure that commitments are meaningful, enduring, and aligned with Te Parawhau ki Tai uara ahurea, tikanga, and responsibilities.



This CIA affirms Te Parawhau Ki Tai whakapapa and enduring mana as tāngata whenua of Paepae Atua and the surrounding taiao. It reflects our kaitiakitanga obligations and the responsibilities we hold under Te Tiriti o Waitangi, and sets out a pathway grounded in partnership, restoration, and shared responsibility. The wellbeing of Paepae Atua is inseparable from the wellbeing of Te Parawhau ki Tai and must be upheld throughout the life of this kaupapa.

Te Parawhau ki Tai continued occupation and unbroken association with Paepae Atua meets the tikanga-based understanding of exclusive use and occupation. This relationship has been maintained prior to and from 1840 to the present day without substantial interruption, and is embedded in whakapapa, tikanga, and daily practice. The enduring nature of Te Parawhau ki Tai relationship with Paepae Atua must be recognised and protected through all decision-making processes, including those under the Fast-track Approvals Act 2020 and other relevant statutory frameworks.



10 Recommendations

Considering the findings of this CIA, Te Pouwhenua o Tiakiriri Kūkupa Trust and signatories to this CIA makes the following recommendations to ensure ngā uara ahurea o Te Parawhau ki Tai are upheld:

Adoption of Mahi Whakaora

MBL should formally adopt and implement the full suite of mahi whakaora outlined in this CIA, either conditions or consent or through a side agreement. These measures are essential to address the identified cultural and environmental impacts and to support the realisation of Hapū tirohanga for wellbeing, rangatiratanga, and intergenerational development.

Formalisation of Agreements

A side agreement should be developed between MBL and Te Pouwhenua o Tiakiriri Kūkupa Trust and signatories to this CIA and its commercial entity to confirm the commitments made, including mutually beneficial economic arrangements, scholarships, training, environmental funding, and partnership arrangements. This agreement should also include:

- Mutually beneficial economic arrangements;
- Scholarships and training pathways;
- Restoration of marae, house building and health initiatives;
- Environmental funding;
- Partnership mechanisms;
- Cultural monitoring and reporting protocols.

Relationship Agreement

A relationship agreement between MBL and Te Pouwhenua o Tiakiriri Kūkupa Trust and signatories to this CIA should be established to incorporate the agreed mahi whakaora, ensuring accountability and long-term partnership.



Cultural Expertise in Decision-Making

Any Expert Consenting Panel appointed under the Fast-track Consenting process must include individuals with demonstrated understanding of Te Ao Māori, mātauranga Māori and ngā uara ahurea Māori. This is essential to ensure culturally competent assessment and decision-making.

Ongoing Engagement and Implementation Oversight

A partnership framework should be established to oversee the implementation of mahi whakaora, monitor environmental and cultural impacts, and ensure that the principles and articles of Te Tiriti o Waitangi are upheld throughout the project lifecycle. This framework should include:

- Joint decision-making;
- Regular hui;
- Transparent reporting;
- Adaptive management protocols.

Support for Hapū Capacity and Wellbeing

MBL should provide appropriate resources to enable Te Parawhau ki Tai to fulfil its obligations and support Hapū-led initiatives, including those related to kaitiakitanga, and to support intergenerational wellbeing through education, training, employment, and enterprise development.

These recommendations are made in the spirit of partnership and restoration and reflect Te Pouwhenua o Tiakiriri Kūkupa Trust's commitment to working constructively with MBL to achieve outcomes that protect the uara and mauri ora of Paepae Atua, and enhance the wellbeing of Te Parawhau ki Tai, the hapori who live within Te Parawhau ki Tai rohe, and the taiao.



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Appendix A:
Fast Track Application – For Consultation

Applicant: **McCallum Bros Limited**

Site: **Te Ākau Bream Bay
(Coastal Marine
Area), Northland**

Report Title: **Te Ākau Bream Bay
Sand Extraction
Project - Resource
Consent and Wildlife
Approval Applications
and Assessment of
Effects under the
Fast-track Approvals
Act 2024**

Draft for Consultation

Report Date: **September 2025**

Report Version: **Draft for Consultation**

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ATTACHMENTS

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Attachment Two	Referral Application
Attachment Three	Check List for Resource Consent Substantive Application
Attachment Four	Check List for Wildlife Approval Substantive Application
Attachment Five	Stakeholder Engagement Register
Attachment Six	NRC S30 Response
Attachment Seven	Site Plan (Including Location of Control Sites)
Attachment Eight	Landscape and Natural Character Effects Assessment (Brown NZ Ltd)
Attachment Nine	Coastal Process Effects Assessment (Tonkin and Taylor)
Attachment Ten	Water Quality Assessment of Environment Effects (SLR)
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Attachment Fourteen	Potential Effects on Seabirds and Shorebirds (NIWA)
Attachment Fifteen	Marine Mammals Assessment of Environmental Effects (SLR)
Attachment Sixteen	Cup Corals and Schedule 7 of the Fast-Track Approvals Act 2024 (NIWA)
Attachment Seventeen	Assessment of Effects on Fish and Fisheries in Te Ākau Bream Bay (R.O. Boyd)
Attachment Eighteen	Assessment of Effects on Surf Breaks at Te Ākau Bream Bay (Metocean Solutions)
Attachment Nineteen	Assessment of Economic Effects (M.E. Consulting)
Attachment Twenty	Navigation Safety Assessment (B. Goodchild)
Attachment Twenty-One	Concrete Suitability Statement (Paul Donoghue)
Attachment Twenty-Two	Scleractinian Cup Corals at Te Ākau Bream Bay (NIWA)
Attachment Twenty-Three	CIA (Te Pouwhenua o Tiakiriri Kukupa Trust)
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Attachment Twenty-Six	First PSEAR and ASEA

Attachment Twenty-Seven	William Fraser Video Link
Attachment Twenty-Eight	Recommended Resource Consent Conditions
Attachment Twenty-Nine	Sand Extraction Operation Plan ("SEOP")
Attachment Thirty	Marine Mammal Management Plan ("MMMP")
Attachment Thirty-One	Environmental Monitoring Management Plan ("EMMP")
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Attachment Thirty-Three	Biosecurity Management Plan ("BMP")
Attachment Thirty-Four	Garbage Management Plan
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Attachment Thirty-Six	Proposed Regional Plan for Northland Planning Maps
Attachment Thirty-Seven	Correspondence with Claimants under MACA
Attachment Thirty-Eight	Legal Memorandum Re. Wildlife Act 1953
Attachment Thirty-Nine	Recommended Wildlife Approval Conditions
Attachment Forty	Consultation Correspondence for the Wildlife Approval

Draft for Consultation

Glossary of Terms

Term	Explanation
AEE	Assessment of Effects on the Environment
AMP	Acoustic Monitoring Programme
ASES	Approved Sand Extraction Sub-Area
BMP	Biosecurity Management Plan
CCMP	Cup Coral Management Plan
CIA	Cultural Impact Assessment
DoC	Department of Conservation
EMMP	Environmental Monitoring Management Plan
EPA	Environmental Protection Authority
HNC	High Natural Character Area (under the PRPN)
LMP	Lighting Management Plan
MACA	Marina and Coastal Area (Takutai Moana) Act 2011
MBL	McCallum Brothers Ltd®
MARPOL	International Convention for the Prevention of Pollution from Ships.
MEPC	Marine Environment Protection Committee
MHSW	Mean High Water Spring
MMMP	Marine Mammal Management Plan
MNZ	Maritime New Zealand
NPSIB	National Policy Statement for Indigenous Biodiversity
NRC	Northland Regional Council
NZCPS	New Zealand Coastal Policy Statement
NZTCS	New Zealand Threat Classification System
ONC	Outstanding Natural Character Area (under the PRPN)
ONF	Outstanding Natural Feature Area (under the PRPN)
ONL	Outstanding Natural Landscape (under the PRPN)
Project	Te Ākau Bream Bay Sand Extraction Project

PRPN	Proposed Regional Plan for Northland
PSEAR	Pre Sand Extraction Assessment Report
RPS	Regional Policy Statement for Northland
RMA	Resource Management Act 1991
SEA	Significant Ecological Area (under the PRPN)
SEMR	Sand Extraction Monitoring Report
SEOP	Sand Extraction Operation Plan
The Act	The Fast-Track Approvals Act 2024
TSHD	Trailer Suction Hopper Dredge
WDC	Whangārei District Council

Statement from Author

This Application Document and Assessment of Effects on the Environment has been prepared by David Hay (Planning Consultant of Osborne Hay (North) Limited) and draws upon a large number of specialist reports, cultural impact assessments and inputs (including consultation undertaken) from MBL.

Although this is not a hearing before the Environment Court, I record that I have read and agree to comply with the Environment Court's Code of Conduct for Expert Witnesses as specified in the Environment Court's Practice Note 2023 as relevant to preparation of a report for this Fast-track application. In particular, I confirm that this report is within my area of expertise, except where I state that I rely upon the evidence or reports of other expert witnesses lodged forming part of the project's application material. I have not omitted to consider any material facts known to me that might alter or detract from the opinions expressed.

Curriculum Vitae

The Curriculum Vitae for all key authors of reports and management plans that form part of the substantial applications are included as Attachment One.

Naming Protocols

McCallum Brothers Ltd® (“**MBL**”) has consulted Te Pouwhenua o Tiakiriri Kukupa Trust (for Te Parawhau) and Patuharaheke Te Iwi Trust Board. In the course of that consultation process, Patuharaheke Te Iwi Trust Board advised MBL that Bream Bay should also be called Te Ākau, or ‘The Reef’, and this convention was adopted for all project reports at that time. Subsequently, Te Pouwhenua o Tiakiriri Kukupa Trust advised MBL that Bream Bay should be named Paepae Atua, which refers to the ‘sacred seat’ or resting place of the iwi’s Atua (God or spiritual deity), with Paepae Atua Bream Bay being viewed as Te Parawhau’s gateway to Te Moana nui a Kiwa (the ‘great ocean of Kiwa’). MBL and its project consultants accept that both Māori names have meaning to the local iwi and hapū and are correct. All reports prepared for MBL will continue to use the term Te Ākau Bream Bay in order to simplify the description of the embayed sea and coastline of Bream Bay, but it is accepted that Paepae Atua is an appropriate name for that area, which has particular meaning for Te Parawhau.

Confidentiality of Draft Report

This report is the intellectual property and confidential information of McCallum Bros Limited® (Disclosing Party) and is provided strictly on a confidential basis to the recipient party. In consideration for the Disclosing Party allowing the recipient party access to this report, the recipient party warrants that it will keep and will ensure that

its employees, agents and contractors keep the report confidential and will not disclose any of the contents of the report whatsoever.

Draft for Consultation

1. Executive Summary

- 1.1. This is the substantive application under s42(4)(a) and (h) of the Fast-track Approvals Act 2024 (“**the Act**”) by McCallum Bros. Limited® (“**MBL**”) for:
 - a) A resource consent (coastal permit) for sand extraction (and associated discharges) required under Rule C.1.5.13 of the Proposed Regional Plan for Northland (“**PRPN**”). This is a discretionary activity.
 - b) Approval for the capture, collection, harm and incidental killing of Scleractinian cup corals (*Kionotrochus suteri* and *Sphenotrochus ralphae*) (“**Cup Coral**”) required under sections 53 and 54 of the Wildlife Act 1953.
- 1.2. This is referred to as the Te Ākau Bream Bay Sand Extraction Project (“**the project**”). A 35-year consent period is being requested.
- 1.3. These substantive applications and supporting Assessment of Environmental Effects (“**AEE**”) are provided in accordance with the requirements of the Act, including sections 42, 43 and 44 and Schedules 5 and 7 of the Act.
- 1.4. Consent is being sought for extraction of sand from the coastal marine area from an area approximately 15.4 km² in size in Te Ākau Bream Bay. The closest distance between the sand extraction site and the shoreline is 4.7 km. The average seabed depth in the extraction area is 28 m, with a range from 22 m to 34 m. No areas of unusable sand within the proposed extraction area have been identified.
- 1.5. The project is proposed to be staged as follows:

Stage 1 will provide for an annual sand extraction volume of up to 150,000 m³ for at least the first three years from the commencement of the consent.

Stage 2 will provide for an annual sand extraction volume of up to 250,000 m³ for the remaining period of the consent.

 - 1.6. Stage 2 may be commenced from no sooner than 3 months after the submission of the Year 4 Sand Extraction Monitoring Report (“**SEMR**”), if:
 - (i) Monitoring for the previous three years has identified lowering within the 100 m wide bathymetric control area (western side of the extraction area only) exceeding 0.15 m on average which cannot be explained by natural processes (having regard to any bathymetric changes at the northern and southern control sites, the six bathymetric profiles, and hydrodynamic conditions over the three-year period); and
 - (ii) Monitoring for the previous three years has identified ecologically significant statistical adverse change in the benthic biota assemblage, composition, and abundance relative to changes which cannot be explained by natural processes (having regard to the northern, southern and remote control sites).
 - 1.7. The objective of the project is to provide a long-term sustainable source of marine sand to Auckland, which is suitable for concrete and, in particular, high-strength concrete production. The project meets the functional need of providing a new marine sand source to meet in part the needs of the Auckland sand market and in a different location than the current main Auckland marine sands source (being the Kaipara Harbour) so reducing the risk of shortages arising during periods when sand extraction from the West Coast may be constrained or stopped. Te Ākau Bream Bay sand is a quartz feldspar sand and shares all the positive properties of the Kaipara Harbour and Pākiri marine sands. That is, this sand is suitable for the Auckland concrete production market including for high-strength concrete production. Marine sands continue to be extracted from the Kaipara Harbour, while sand extraction ceased at Pākiri on the 22nd of August 2025

- 1.8. The importance of sand to the New Zealand economy is acknowledged by its inclusion in the “A Critical Minerals List for New Zealand”¹. Minerals are included in the list if the mineral is:
 - Essential to New Zealand’s economy, national security, and technology needs, and/or equally important to New Zealand’s international partners, and
 - Susceptible to supply disruptions domestically and internationally.
- 1.9. In determining the landward edge of the sand extraction area, the objective was to ensure that the sand extraction area was located sufficiently seaward of the beach and at sufficient depth to have negligible direct or indirect effects on coastal processes and landforms. Sand extraction will be undertaken at depths greater than the depth of closure and depth of transport. Removing sand from beyond the depth of closure and depth of transport means that there will be negligible risk of impact on the beaches, the dunes, and surf breaks of Te Ākau Bream Bay. Beyond the depth of closure and depth of transport sediment transport processes are sufficiently decoupled from the beach that the activity has negligible direct or indirect impact on beach and dune landforms
- 1.10. Sand extraction will occur using the *William Fraser*, which is a motorised trailing suction hopper dredge (“**TSHD**”), purpose built for MBL in 2019. The draghead, which is used for extracting sand from the seafloor, is 1.6 m wide and leaves a temporary track approximately 100 mm (on average) deep. The life of the temporary track is dependent upon wave conditions at the time of, and following, extraction. An extraction rotation methodology is employed so that extraction along the same extraction track (which is also referred to as a dragline) is not repeated more than annually. The *William Fraser* is operated, and sand extraction is undertaken, in accordance with a series of management plans to avoid or reduce potential effects on the environment.
- 1.11. Sand is generally transported directly from the sand extraction area to MBL's depot at the Port of Auckland. Sand extraction will only occur between the hours 12:00pm to 8:00pm (October 1 to March 31) and between 12:00pm and 6:00pm (1 April to 30 September). The actual period of sand extraction will be limited to a maximum of 3.5 hours on any given day. Sand extraction will occur up to 4 times per week when the Stage 2 extraction volumes come into effect.
- 1.12. The sand extraction site is divided into cells for reporting and monitoring reasons. There are 77 cells (1000 m long x 200 m wide). In addition, there are three control sites and also a 100 m wide area around the north, western and southern sides of the consented extraction area which will be used as the bathymetric control area.
- 1.13. There are three components to the proposed monitoring programme. These are:
 - (i) The Pre-Sand Extraction Area Assessment and Reporting (“**PSEAR**”);
 - (ii) Sand Extraction Monitoring and Reporting (at specified milestones) (“**SEMR**”); and
 - (iii) Soundscape Change Measurement and Assessment.
- 1.14. The Environmental Monitoring Management Plan (“**EMMP**”) sets out the objectives, methodology and required outputs for this monitoring.
- 1.15. The first PSEAR for the whole sand extraction site has been completed and forms part of this application. An output of this Report is the Approved Sand Extraction Sub-Area (“**ASEA**”). No areas were identified as unsuitable for sand extraction in the sand extraction site in the PSEAR so the first ASEA, which forms part of this application, covers the full sand extraction site.
- 1.16. In accordance with Schedule 5, Clause 5(1)(k), a suite of draft conditions has been proposed, and these are supported by a range of management plans. An adaptive management approach has been taken in terms of the condition framework. It is considered that these conditions can be practically implemented and administered. It is further considered that these conditions are no more onerous than necessary. It is sought that the various management plans are approved as part of this consenting process.
- 1.17. A number of environmental assessments and cultural impact assessments have been completed and form part of the AEE.
- 1.18. It is concluded for the substantive resource consent application:

¹ Published January 2025 by the New Zealand Government

- The project is consistent with and supports the purpose of the Act, as it will provide for sand extraction at Te Ākau Bream Bay which will secure an efficient sand supply to the Auckland market. This is critical for the continued production of concrete products required for a range of development applications including regional and nationally important infrastructure. The efficient delivery of sand to the Auckland concrete market will facilitate the future delivery of infrastructure and development projects of regional and national benefit.
- The proposal and granting consent would be consistent with Parts 2, 3 and 6 of the Resource Management Act 1991 (“**RMA**”).
- The provision of an efficient and secure marine sand supply to the Auckland market and in particular for the manufacture of high-strength concrete for infrastructure and development projects is vital for the economic, social and cultural well-being of the Auckland community and beyond. The proposed sand extraction site meets the requirements for being able to provide the required type of sand for high-strength concrete manufacturing in Auckland efficiently. Furthermore, the location of this site means that sand can also be transported efficiently to a range of other ports to service in part the Northland, Waikato and Bay and Plenty Regions.
- Any adverse environmental effects arising will be no more than minor. In broad terms, the overall existing environment within Te Ākau Bream Bay will be maintained.
- The potential cultural effects have been addressed in the CIA’s which conclude (TBC).
- The proposal is either consistent with or gives effect to the relevant objectives and policies of the New Zealand Coastal Policy Statement (“**NZCPS**”). Policy 6 specifically identifies that the extraction of minerals is an activity important to the social, cultural and economic wellbeing of people and communities. A precautionary approach in terms of the development of the proposal, the site selection, extraction volumes and monitoring has been taken consistent with Policy 3.
- The National Policy Statement – Indigenous Biodiversity (“**NPSIB**”) is of limited relevance and only in respect to highly mobile fauna. It has been determined that the proposal is not contrary to the NPSIB in respect to those birds listed as highly mobile fauna in Appendix 2 of the NPSIB.
- In terms of the Regional Policy Statement for Northland (“**RPS**”), it is considered that the proposal and granting consent would either give effect to, is consistent with or is not contrary to the relevant objectives and policies.
- There are a significant number of objectives and policies in the Proposed Regional Plan for Northland (“**PRPN**”) of relevance to this proposal. The proposal and granting consent would either directly give effect to, is consistent with or is not contrary to the relevant objectives and policies of the PRPN.
- Consideration is still required to be given to the Operative Regional Coastal Plan at the time of the preparation of this application. The proposal and granting of the consent would either be consistent with or not contrary to the relevant objectives and policies. The exception to this is Policy 22.4.2 which the proposal is not consistent with as the area of sand extraction is not an area of known replenishment. However, the sand resource is so vast that this is not a situation where the Te Ākau Bream Bay sand resource will be exhausted (or even materially diminished) during the life of the consent.
- The sand extraction site is outside the territorial boundary of Whangārei District Council. However, it is considered appropriate to consider whether the proposal will affect those environmental matters managed under the Whangārei Operative District Plan and in particular flora and fauna, Outstanding Natural Features and Outstanding Natural Landscapes. In respect to the objectives and policies relating to these it is found that the proposal and granting consent would not be contrary to these.
- The CIA’s have concluded TBC.
- A 35-year consent period is considered appropriate, taking into account the adaptive management framework which has been adopted for the consent conditions.

1.19. It is concluded for the substantive Wildlife Approval application that:

- The two cup coral species known to be present within the proposed extraction area (*Sphenotrochus ralpae* and *Kionotrochus suteri*) have not been assessed by the New Zealand Threat Classification System (“**NZTCS**”) and, therefore, are not deemed to be ‘Threatened’, ‘Data Deficient’ or ‘At Risk’ wildlife (as defined in the NZTCS).
- The overall live population of the two species of cup corals within the 15.4 km² sand extraction area could be in the order of millions. While the proportion of corals that will be damaged or killed as they pass through the sand extraction process is unknown, some corals are expected to survive the disturbance. The sand extraction area is less than 0.2% and 0.1% of the identified potential

- suitable habitat in northern New Zealand for *Sphenotrochus ralpae* and *Kionotrochus suteri*, respectively.
- A Cup Coral Management Plan (“**CCMP**”) has been prepared to outline the operational measures to minimise the risk of cup corals being retained during both monitoring and sand extraction and the process to release them. These measures will be implemented to ensure that, as far as practical, cup corals are protected, consistent with the purpose of the Wildlife Act 1953.
- Any killing of cup corals is incidental to the monitoring and sand extraction process. It is not directly intended but is to a degree unavoidable and foreseeable as a consequence of carrying out monitoring and the sand extraction.
- Populations of wildlife are unlikely to be threatened or materially affected by the activities enabled by the authority. Any threat to individual wildlife is incidental, has been avoided, minimised and mitigated to the extent possible through the reasonable steps adopted by the applicant, and any individual incidental act of killing viewed in isolation does not need to be consistent with the protection of wildlife.
- Appropriate conditions for the Wildlife Approval have been proposed.

1.20. In terms of s85 of the Act, there are no matters listed under s85(1) which provide the basis for the applications to be declined. In terms of s85(3) it is concluded that no potential adverse impacts have been identified which are sufficiently significant to be out of proportion of the projects regional and national benefits.

1.21. Overall, the proposal fulfils the intent and purpose of the Act and Parts 2, 3 and 6 of the RMA in that it will allow for the establishment and operation of the Te Ākau Bream Bay Sand Extraction Project which will secure a future supply of marine sand predominantly for the Auckland market (and in particular for the production of high-strength concrete), which will facilitate infrastructure and development projects with significant regional or national benefits

Draft for Consultation

2. Use Of The Fast-track Approvals Act 2024

2.1. This is the substantive application under s42(4)(a) and (h) of the Act by MBL for:

- a) A resource consent (coastal permit) for sand extraction (including associated discharges) required under Rule C.1.5.13 of the Proposed Regional Plan for Northland (“**PRPN**”). This is a discretionary activity.
- b) Approval for the capture, collection, harm and incidental killing of Scleractinian cup corals (*Kionotrochus suteri* and *Sphenotrochus ralphae*) (“**Cup Coral**”) required under s53 and 54 of the Wildlife Act 1953.

2.2. This application relates solely to the following listed project under Schedule 2 of the Act:

<u>McCallum Bros Limited</u>	<u>Bream Bay Sand Extraction Project</u>	<u>Extract (using a motorised trailing suction dredge) up to approximately 150,000 cubic metres of sand per annum for an initial period of 3 years and up to approximately 250,000 cubic metres per annum thereafter</u>	<u>17 square kilometre area of seabed in the marine and coastal area of Bream Bay, Northland</u>
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2.3. It is confirmed that the project remains within the scope of the description of the listed project within Schedule 2 of the Act. The proposed 15.4 km² sand extraction area sits within the 17 km² sand extraction area identified in Schedule 2.

2.4. These substantive applications and supporting Assessment of Environmental Effects (“**AEE**”) are provided in accordance with the requirements of the Act, including ss 42, 43 and 44 and Schedules 5 and 7 of the Act. The investigations for this Project commenced in early 2024.

2.5. The original Fast Track Approval Application to have the project listed in Schedule 2 of the Act is included as Attachment Two.

Draft for Consultation

Authorised person may lodge substantive application for approvals (s42)

2.6. An authorised person may lodge a substantive application for approvals (s42). Pursuant to s 42(1), MBL is the ‘authorised person’ seeking all necessary approvals for the Project under s42(4) of the Act, including:

- a) A resource consent that would otherwise be applied for under the Resource Management Act 1991 (RMA); and
- b) A wildlife approval as defined in clause 1 of Schedule 7.

2.7. The proposal is not an ineligible activity as defined in s5 of the Act. The sand extraction area and control sites are not:

- On identified Māori land.
- Within a customary marine title area.
- On Māori customary land.
- On land set apart as a Māori reservation.
- An aquaculture activity.
- An activity that requires an access arrangement under the Crown Minerals Act 1991.

- An activity that would be prevented under section 165J, 165M, 165Q, 165ZC, or 165ZDB of the Resource Management Act 1991.
- On a national reserve held under the Reserves Act 1977.
- On a reserve held under the Reserves Act 1977.
- A prohibited activity under the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012 or the Resource Management Act 1991.
- A decommissioning related activity.
- An activity undertaken for the purposes of an offshore renewable energy project

Information requirements (ss 43 and 44)

- 2.8. A checklist is included at Attachment Three for this resource consent substantive application, to demonstrate where the information required under sections 43 and 44 of the Act is provided in this document.
- 2.9. A checklist is included at Attachment Four for the wildlife approval substantive application, to demonstrate where the information required under sections 43 and 44 of the Act is provided in this document.
- 2.10. In accordance with s44, the information provided in these applications is in sufficient detail to satisfy the purpose for which it is required.

Pre-lodgement requirement for listed project (s29)

- 2.11. With respect to the pre-lodgement requirements, s29 of the Act requires the authorised person for the Project (MBL) to consult with the following persons and groups:
 - a) The relevant local authorities; and
 - b) Any relevant iwi authorities, hapū, and Treaty settlement entities, including:
 - (i) Iwi authorities and groups that represent hapū that are parties to relevant Mana Whakahono ā Rohe or joint management agreements; and
 - (ii) The tangata whenua of any area within the project area that is a taiāpure-local fishery, a mātaitai reserve, or an area that is subject to bylaws under Part 9 of the Fisheries Act 1996; and
 - c) Any relevant applicant groups with applications for customary marine title under the Marine and Coastal Area (Takutai Moana Act) 2011 (MACAA); and
 - d) Ngā hapū o Ngāti Porou, if the project area is within or adjacent to, or the project would directly affect, ngā rohe moana o ngā hapū o Ngāti Porou; and
 - e) The relevant administering agencies; and
 - f) If the proposed approvals for the project are to include an approval described in s 42(4)(f) (land exchange), the holder of an interest in the land that is to be exchanged by the Crown.
- 2.12. A list of all persons and groups required to be consulted pursuant to s29 (and s11) of the Act and a summary of that consultation is included as Attachment TBC.
- 2.13. The Project is not within a taiāpure-local fishery or a mātaitai reserve. This was confirmed by the Ministry for Primary Industries on the 8th of August 2025 by email (include in Attachment TBC).

- 2.14. The Ministry for Primary Industries confirmed the site is within a rohe moana, for Ngāti Kahu, Parawhau, Ngāti Tū and Patuharakeke under the Fisheries Notification of Tāngata Kaitiaki/Tiaki) for Area/Rohe Moana of Ngāti Kahu, Parawhau, Ngāti Tū and Patuharakeke) Notice 2021 (Notice No. MPI 1353).
- 2.15. Consultation was already occurring with Te Pouwhenua o Tiakiriri Kukupa Trust (for Te Parawhau) and Patuharaheke Te Iwi Trust Board and it was confirmed with both these entities that the current consultation being undertaken was also being undertaken in respect to this matter. Contact was then made with Ngāti Tū and Ngāti Kahu and this is addressed under the two substantive applications.
- 2.16. The Project is not located within or adjacent to, and will not directly affect, ngā rohe moana o ngā hapū o Ngāti Porou.
- 2.17. The Project does not include a land exchange.

Identification of existing resource consent for same activity (s30)

- 2.18. In accordance with the requirements of s30 of the Act, the consent authority (Northland Regional Council) (“NRC”) provided written notice on TBC that there are no existing resource consents within the Project area to which ss 124C(1)(c) or 165ZI of the RMA would apply (refer to Attachment Six).
- 2.19. In accordance with the requirements of s30(6) of the Act, the substantive application has been lodged within 3 months of the date of this notice.

Payment of any fee, charge or levy (s43(1)(j))

- 2.20. MBL has paid the fee and levy for a substantive application prescribed under the Fast-track Approvals (Cost Recovery) Regulations 2025 prior to lodging this application.

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3. Structure Of This Substantive Application

3.1. This substantive application is structured in two parts:

- (a) Part 1 deals with the resource consent that would otherwise be applied for under the RMA.
- (b) Part 2 deals with the wildlife approval that would otherwise be applied for under the Wildlife Act.

Draft for Consultation

PART 1 – SUBSTANTIVE APPLICATION FOR RESOURCE CONSENT

Draft for Consultation

4. Introduction

- 4.1. MBL is seeking a Coastal Permit under the Act for the extraction of sand from the coastal marine area from an area approximately 15.4 km² in size (and a minimum 4.7 km from the shoreline) in Te Ākau Bream Bay. This is referred to as the Te Ākau Bream Bay Sand Extraction Project (“the project”). The site plan is included as Attachment Seven.
- 4.2. A 35-year consent period is being requested.
- 4.3. The project is proposed to be staged as follows:
 - a) Stage 1 will provide for an annual sand extraction volume of up to 150,000 m³ for at least the first three years from the commencement of the consent.
 - b) Stage 2 will provide for an annual sand extraction volume of up to 250,000 m³ for the remaining period of the consent.
- 4.4. Stage 2 may be commenced from no sooner than 3 months after the submission of the Year 4 Sand Extraction Monitoring Report (“SEMR”), if:
 - (i) Monitoring for the previous three years has identified lowering within the 100 m wide bathymetric control area (western side of the extraction area only) exceeding 0.15 m on average which cannot be explained by natural processes (having regard to any bathymetric changes at the northern and southern control sites, the six bathymetric profiles, and hydrodynamic conditions over the three-year period); and
 - (ii) Monitoring for the previous three years has identified ecologically significant statistical adverse change in the benthic biota assemblage, composition, and abundance relative to changes which cannot be explained by natural processes (having regard to the northern, southern and remote control sites).

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- 4.5. The Act sets out the framework under which a resource consent application is to be assessed by the Panel, together with the information that is required to be provided in a substantive application.
- 4.6. In accordance with the requirements of the Act, this substantive application for the resource consent is structured as follows:
 - a) A description of the Project, including:
 - (i) An overview of the project.
 - (ii) The applicant.
 - (iii) The reasons for the project.
 - (iv) Government strategies.
 - (v) Proposed sand extraction commencement date.
 - (vi) MBL Relationship with iwi.
 - b) Description of the sand extraction operation, including:
 - (i) The sand resource.
 - (ii) The sand extraction operation.

(iii) Sand extraction operating hours.

(iv) Existing and proposed mitigation measures.

(iv) First approved sand extraction area.

c) Proposed management plans, environmental monitoring and consent conditions, including:

- (i) Adaptive management approach.
- (ii) Recommendations from specialist reports.
- (iii) Management plans.
- (iv) Reporting to NRC.
- (v) Reporting of information to DoC.
- (vi) Proposed consent conditions.

d) Reasons for consent, including:

- (i) Resource consents required.
- (ii) Relevant standards.
- (iii) Other required approvals.
- (iv) Lapse period.
- (v) Duration of consent.
- (vi) Activities permitted by the PRPN.

e) Statutory framework for determining the resource consent application, including:

- (i) Assessment against the Purpose of the Act (s3).
- (ii) Assessment against Part 2 of the RMA.
- (iii) Assessment against Part 6 of the RMA.
- (iv) Assessment against Part 8 of the RMA.
- (v) Assessment against Part 9 of the RMA.
- (vi) Assessment against Part 10 of the RMA.
- (vii) Other relevant legislation.
- (viii) Conclusion.

f) Description of the sand extraction site and surrounding environment, including:

- (i) The receiving environment.
- (ii) Permitted baseline assessment.
- (iii) Depth of closure and depth of transport.

g) Assessment of Effects on the Environment, including:

- (i) Overall Effects and Impact Conclusion.

h) Assessment under the relevant statutory RMA documents, including:

- (i) New Zealand Coastal Policy Statement 2010.
- (ii) National Policy Statement for Indigenous Biodiversity.
- (iii) Regional Policy Statement for Northland.
- (iv) Proposed Regional Plan for Northland.
- (v) Regional Coastal Plan (Operative).
- (vi) Whangārei Operative District Plan.

i) Assessment under Iwi Management Plans, including:

- (i) Te Iwi o Ngātiwai Iwi Environmental Policy Document (2007).
- (ii) Patuharakeke Hapū Environmental Management Plan 2014.
- (iii) Te Urioroi Hapū Environmental Management Plan/Whatitiri Hapū Environmental Plan.
- (iv) Statutory acknowledgement areas.

j) Overview of the consultation and engagement undertaken, including:

- (i) Key outcomes of consultation.
- (ii) Consultation under the Marine and Coastal Area (Takutai Moana) Act 2011.

k) Assessment under s104 of the RMA.

l) Conclusion.

Specialist Reports and Cultural Impact Assessments

4.7. The following specialist reports have been prepared and form part of this application (and where relevant the application for the Wildlife approval):

- a) Landscape and Natural Character Effects Assessment (Brown NZ Ltd) (Attachment Eight)
- b) Te Ākau Bream Bay Sand Extraction: Coastal Process Effects Assessment (T&T) (Attachment Nine)
- c) Water Quality Assessment of Environment Effects (SLR) (Attachment Ten)
- d) Assessment of Airborne Noise Effects (Styles Group) (Attachment Eleven)
- e) Underwater Acoustics (Styles Group) (Attachment Twelve)
- f) Assessment of Ecological Effects (Bioresearches) (Attachment Thirteen)
- g) Potential Effects on Seabirds and Shorebirds (NIWA) (Attachment Fourteen)
- h) Marine Mammals Assessment of Environmental Effects (SLR) (Attachment Fifteen)

- i) Cup Corals and Schedule 6(1A) of the Fast-Track Approvals Act (NIWA) (Attachment Sixteen)
- j) Assessment of Effects on Fish and Fisheries in Te Ākau Bream Bay (R. O. Boyd) (Attachment Seventeen)
- k) Assessment of Effects on Surf Breaks at Te Ākau Bream Bay (Metocean Solutions) (Attachment Eighteen)
- l) Assessment of Economic Effects (M.E. Consulting) (Attachment Nineteen)
- m) Navigation Safety Assessment (Bruce Goodchild) (Attachment Twenty)
- n) Concrete Suitability Statement (Paul Donoghue) (Attachment Twenty-One)
- o) Scleractinian Cup Corals at Te Ākau Bream Bay (NIWA) (Attachment Twenty-Two)

4.8. These reports are based on a mix of both previous investigations/monitoring findings at the Pākiri sand extraction operation and site-specific investigations and modelling for the Te Ākau Bream Bay site.

4.9. Cultural Impact Assessments (“**CIA**”) have been prepared by the following (TBC):

- a) Te Pouwhenua o Tiakiriri Kukupa Trust (for Te Parawhau) (Attachment Twenty-Two)
- b) Patuharaheke Te Iwi Trust Board (Attachment Twenty-Three)
- c) Ngātiwai Trust Board (Attachment Twenty-Four)

4.10. Section 43 of the Act sets out the requirements for a substantive application and these are addressed in Table 1. Section 43 refers to the information requirements under s13(4) and Schedule 5 and these are addressed respectively in Tables 2 and 3. These tables are included in Attachments Three and Four.

4.11. Section 85 of the Act uses the term “adverse impacts”. This term is not defined in the Act. It is our understanding that “adverse impacts” are essentially any matter properly before the Panel which weighs against the granting of the approval.

Draft for Consultation

5. Description of the Proposal

Overview

- 5.1. MBL is seeking a coastal permit under the Act for the extraction of sand from the coastal marine area from an area approximately 15.4 km² in size (7 km long x 2 km wide) in Te Ākau Bream Bay using the *William Fraser*, a trailer suction hopper dredge.
- 5.2. The proposal is proposed to be staged as follows:
 - a) Stage 1 will provide for an annual sand extraction volume of up to 150,000 m³ for at least the first three years from the commencement of the consent.
 - b) Stage 2 will provide for an annual sand extraction volume of up to 250,000 m³ for the remaining period of the consent.
- 5.3. Stage 2 will be commenced from no sooner than 3 months after the submission of the Year 4 Sand Extraction Monitoring Report (“**SEMR**”), if:
 - (i) Monitoring for the previous three years has identified lowering within the 100 m wide bathymetric control area (western side of the extraction area only) exceeding 0.15 m on average which cannot be explained by natural processes (having regard to any bathymetric changes at the northern and southern control sites, the six bathymetric profiles, and hydrodynamic conditions over the three-year period); and
 - (ii) Monitoring for the previous three years has identified ecologically significant statistical adverse change in the benthic biota assemblage, composition, and abundance relative to changes which cannot be explained by natural processes (having regard to the northern, southern and remote control sites).
- 5.4. Over a 35-year life of consent, the total sand extraction volume would be up to 8.45 million m³.
- 5.5. The objective of the proposal is to provide a long-term sustainable source of marine sand to Auckland, which is suitable for concrete and, in particular, high-strength concrete production. The project meets the functional need of providing a new marine sand source to meet in part the needs of the Auckland market and in a different location than the current main Auckland marine sands source (being the Kaipara Harbour) so reducing the risk of shortages arising during periods when sand extraction from the West Coast may be constrained.
- 5.6. The location of the extraction area is shown on the drawing “Map Showing Proposed Extraction Area and Proposed Control Areas”, Dated TBC included in Attachment Seven and provided as Figure One below. An aerial of the site and surrounds is provided as Photograph One.
- 5.7. The importance of sand² to the New Zealand economy is acknowledged by its inclusion in the “A Critical Minerals List for New Zealand”. Minerals are included in the list if the mineral is:
 - Essential to New Zealand’s economy, national security, and technology needs, and/or equally important to New Zealand’s international partners, and
 - Susceptible to supply disruptions domestically and internationally.

² Wood Mackenzie. (2024, December). *Final Wood Mackenzie report on the development of a Critical Minerals List for New Zealand* (Prepared for the New Zealand Ministry of Business, Innovation & Employment). [link to MBIE](#)

The Applicant

- 5.8. MBL is a 4th generation, New Zealand family-owned company founded in 1904 and based in Auckland. In addition to its sand extraction operation, the company is involved in a range of activities that includes shipping and bulk cargo transport, trucking and quarrying.
- 5.9. MBL is an independent sand supplier and does not manufacture concrete itself. MBL predominantly supplies sand to concrete manufacturers and other customers in Auckland but also supplies on occasions to the Northland, Waikato and Bay of Plenty markets. There have been occasions where high-quality marine sand has been required for specific infrastructure projects elsewhere in New Zealand and MBL has provided sand for these projects from Auckland.
- 5.10. MBL has been undertaking sand extraction operations for approximately 80 years. On the 22nd of August 2025, MBL ceased sand extraction from the Mangawhai-Pākiri embayment, an activity it has carried out since the 1940's.
- 5.11. MBL is the owner of the *William Fraser* and undertakes the sand extraction itself. MBL has a berth and off-loading facility at the Port of Auckland where sand is off-loaded from the *William Fraser* then distributed to customers. MBL also has a berth at Port Nikau (Whangārei) for the off-loading of material and the *William Fraser* can berth and off-load at a number of ports around New Zealand (including the Port of Tauranga).

The Reason for the Project

- 5.12. Second only to water, concrete is the most consumed material, with three tonnes per year used for every person in the world³. Concrete is used extensively across a range of infrastructure and building projects in Auckland and all regions of New Zealand. Sand is a key component in the production of ready-mix concrete, with between 400 and 450 kilograms of sand in each cubic metre of concrete. In Auckland, sand is also used for a wide range of other uses including construction, sports fields and beach renourishment. Historically, marine sand has been used in vital infrastructure projects such as the Auckland Harbour Bridge, Auckland Airport, Mangere Wastewater Treatment Plant and in very recent times the Central Rail Link has been a major consumer of marine sand through its high strength concrete requirements. The economic and social benefits of this infrastructure to the Auckland and New Zealand economy is immense and on-going.
- 5.13. The marine sand to be extracted is primarily going to be used for the manufacturing of concrete including high-strength concrete (and therefore supplied directly to various concrete plants). A small percentage of the marine sand may be used for the manufacture of pre-bagged concrete supplies and concrete blocks or similar and for construction purposes. The Economic Assessment and Concrete Suitability Statement have focused on the use of sand in concrete production as this is the main use of sand in Auckland (approximately 80%) and will be the main market for the marine sand extracted under this consent.
- 5.14. Many infrastructure projects, especially roading, bridges, three waters as well as buildings require high strength concrete. Concrete mixes are engineered to achieve the required compressive strengths. Durability and costs are key factors that are considered during project design. High-strength concrete requires consistent, clean, and well-graded fine aggregate to ensure that the right specifications are achieved.
- 5.15. In Auckland, high strength concrete accounts for around 50% to 60% of concrete poured. Auckland's marine sands are particularly suitable for high-performance concrete applications, and their use is crucial for the Auckland concrete market. Marine sand is an essential input into the infrastructure investment landscape. Marine sands are therefore 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 production of concrete is essential for infrastructure and commercial/residential development. Many of the listed projects under Schedule 2 of the Act such as Mill Road, Northwest Rapid Transit, Bledisloe North Wharf and Fergusson North Berth Extension, the

³ Para. TBC Supporting Statement of Paul Donoghue (Attachment TBC)

Downtown Carpark Redevelopment, Eden Park 2.1 will have significant high strength concrete requirements.

- 5.16. The manufacture of concrete consumes approximately 80% of the total sand usage in Auckland (approximately 630,000 of the 780,000 total tonnes supplied annually to the Auckland market). Of the 630,000-tonne required for concrete manufacture over 90% is marine sand. Therefore, there is a functional need for marine sand.
- 5.17. The efficient and secure supply of marine-sourced sand is critical to the development and maintenance of urban environment and economic output (and in particular for Auckland in respect to this project) and through this the economic output of New Zealand. The efficient delivery of many of the listed projects under Schedule 2 of the Act may not be feasible without an efficient and secure supply of marine-sourced sand in the immediate and medium-term future.
- 5.18. The primary source of natural sand for concrete production in Auckland has been marine sand extracted under resource consents off Pākiri on the East Coast and in the Kaipara Harbour on the West Coast. All sand extraction at Pākiri ceased on the 22nd of August 2025 and MBL has sent to Auckland Council a notice of surrender of the consent. The reduction in sand extraction at Pākiri in recent years (under a temporary consent which allowed for an extraction of 76,000 m³ per annum) and now the stopping of all sand extraction only leaves the Kaipara Harbour as Auckland's remaining main source of marine sand. The consented volumes from the Kaipara resource are large, but there are 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).
- 5.19. The current resource consents held by Mt Rex Shipping Co. Ltd and Winstone Aggregates for the sand extraction from Kaipara Harbour expire in 2027. It is our understanding that applications for replacement resource consents have not yet been lodged (as at 26 August 2025). The applications will be for a discretionary or non-complying activity. It is possible that similar issues will arise that arose during the processing of the applications for the sand extraction consents at Pākiri. These include effects on Tara Iti Fairy Tern, marine mammals, cultural effects, lighting effects and ecological effects. This has been identified as there is currently no guarantee that sand extraction will be able to continue beyond the life of the current consents.
- 5.20. There are also additional issues with the security of sand supply from the Kaipara Harbour⁴. Given the current predominant dependence of marine sand from one location on the west coast, there is a functional need for a marine sand source on the East Coast which is not subject to the same extent of severe weather conditions or tidal variations which the Kaipara Harbour is subject to. Mr Donoghue⁵ comments in respect to this point:
“One of the advantages of MBL’s Te Ākau Bream Bay proposal is that it would provide marine sand from an entirely separate east coast location and so greatly reduce the risk of short supply and its potential consequences for major development and infrastructure projects in the Auckland region and beyond.”
- 5.21. Given the importance of concrete for Auckland’s economy, Auckland’s built future is effectively reliant upon maintaining access to cost effective sources of sand for concrete production. Because sand is a key component in a range of different building applications, much of New Zealand’s future productive growth is reliant on sand (along with aggregates) in one form or another.
- 5.22. A much smaller volume of marine sand is expected to be required for the Northland, Bay of Plenty and Waikato markets. Although this volume required by these markets will fluctuate, it is estimated that it will overtime be about 5-10% of the volume extracted at Te Ākau Bream Bay.
- 5.23. The Assessment of Economic Effects⁶ finds that:

⁴ Para 48, Statement of Paul Donough (Attachment Twenty-One) and Para. 69 Assessment of Economic Effects (Attachment Twenty)

⁵ Para 48, Statement of Paul Donough (Attachment Twenty-One)

⁶ Paragraphs 12-14, Assessment of Economic Effects (Attachment Nineteen)

“12. A scenario approach is used to estimate future demand for sand. The scenarios show different population growth rates out to 2054. The net change increase in sand demand (per year) for 2054 is shown:

	Baseline demand (2024; Tonnes)	Additional demand (tonnes) per year by 2054	
		Scenario 1	Scenario 2
Total Sand	872,775 – 944,025	260,575 – 335,625	373,000 – 460,200
Sand for all concrete	596,075 – 663,325	177,975 – 253,000	236,175 – 323,375
Sand for High Strength concrete	357,650 – 398,000	106,775 – 151,800	141,700 – 194,025

- Under scenario 1, the *additional sand that will be in demand (per year)*, is estimated at between 260,575 tonnes and 335,625 tonnes,
- Using the high population growth (scenario 2) suggests that Auckland will require additional sand of between 373,000 tonnes and 460,200 tonnes (per year).

13. The future demand (2054) for concrete sand is also substantial and is estimated at between 774,050 tonnes and 849,100 tonnes per year for scenario 1, and between 899,500 tonnes per year and 986,700 tonnes per year for scenario 2

14. These changes are substantial, and production levels will need to increase by, on average, more than a third (34%) under scenario 1, and 44% under scenario 2.”

5.24. The current annual demand for sand in the Auckland market is in the order of 872,000 to 931,900 tonnes⁷. The current supply position shows that the sand market is tight, with the usable sand volumes in-line with the demand levels. This is because the current economic slowdown is also felt in the construction sector, with below average activity. Significant pressures on sand supply can therefore be expected as the economy returns to ‘normal growth’ and as construction increases from the current low levels.

5.25. 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 had fallen to about 19% while extraction was occurring at Pākiri under the temporary consent. Before July 2023, when sand extraction at Pākiri was reduced, marine sand from the Pākiri/Mangawhai embayment and the Kaipara Harbour together accounted for about 95% of Auckland’s sand used in concrete.

5.26. 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 commenced manufacturing sand from rock and this is addressed further in the Assessment of Economic Effects and the Concrete Suitability Statement of Paul Donoghue. Although manufactured sand is now being provided into the Auckland market it remains a small part of the sand market.

5.27. Auckland’s sand market is therefore heavily reliant on the Kaipara Harbour sand resource, and there are significant concentration risks associated with such reliance. Other sources will need to be developed to ensure sufficient supply, reduce concentration risks, and to improve supply chain resilience and adaptation to market demands.

5.28. Mr Donoghue⁸ has confirmed that the Te Ākau Bream Bay sand is a quartz feldspar sand and shares all the positive properties of the Kaipara Harbour and Pākiri marine sands currently in use in Auckland. That is, this sand is suitable for the Auckland concrete production market. The properties of the sand are further addressed in Section 6 of this report.

⁷ Para. 62, Assessment of Economic Effects (Attachment Nineteen)

⁸ Paras TBC Statement of Paul Donoghue (Attachment Twenty-One)

5.29. The potential contribution of the Te Ākau Bream Bay resource to providing secure access to high quality sand is significant and enabling this sand extraction will add a sizable resource to the Auckland sand market.

5.30. Sand extraction from Te Ākau Bream Bay and delivery to market can be undertaken in an efficient manner and does not have the same operational constraints as the sand supply from Kaipara Harbour. Furthermore, based on the range of specialist studies undertaken, sand extraction at Te Ākau Bream Bay can be undertaken in a manner where adverse environmental effects will be minor or less (in terms of the RMA terminology).

5.31. The use of marine sands from the east coast has evolved over time since sand extraction commenced approximately 80 years ago but concrete production has always been the main use. The key uses over time for sand extracted by MBL since the 1950's has been:

- 1950s – Concrete, landscaping, construction.
- 1960's – Concrete, landscaping, construction.
- 1980's - Concrete, beach replenishment, landscaping, industrial, recreational uses (i.e. horse arenas), construction.
- 1990's – Concrete, landscaping, industrial, recreational, construction, beach replenishments, turf installation/maintenance.

5.32. As outlined earlier the sand extracted under this consent will predominantly be used for high-strength concrete production. Landscaping supplies are now predominately serviced from Waikato and Northland sand mines. Sand for golf courses in Auckland now comes predominately from Tomarata and Tuakau sand mines. The turf industry is predominately supplied by Waikato sand mines. The industrial uses for sand are very varied and much of the supply is now from the Kaipara Harbour and Waikato Sand mines. Further changes in these non-concrete production markets can be expected to occur as a result of manufactured sand entering the market.

5.33. This change in the sand market and sand market supply has been outlined to reflect that the market has adapted over the years, and particularly over the last decade, to utilise non marine sourced sand if it is both suitable and economically viable for that use. However, not all uses can utilise non-marine sourced sand and there remains a need for a high volume of marine sourced sand to be available to the Auckland market and particularly for the high-strength concrete market.

Government Strategies

5.34. In 2009 the Resource Strategy for Aotearoa New Zealand: 2009-2029⁹ was released by the New Zealand Government. In January 2025 the New Zealand Government released the Minerals Strategy for New Zealand to 2040¹⁰. These are both relevant in terms of the context of this application and the recognised need to provide for the efficient quarrying of aggregate and mineral resources in New Zealand. The New Zealand Government also released in January 2025, A Critical Minerals List for New Zealand¹¹ (January 2025) and this is addressed further below.

Resource Strategy for Aotearoa New Zealand: 2009-2029

5.35. The Minerals and Petroleum Resource Strategy for Aotearoa New Zealand: 2019-2029 ("Resource Strategy") sets out the Government's long-term strategy for the minerals and petroleum sector and the transition to a low-emission future and a productive, sustainable and inclusive economy.

5.36. The Resource Strategy is broadly centred around the following three themes:

⁹ [Responsibly Delivering Value – A Minerals and Petroleum Strategy for Aotearoa New Zealand: 2019-2029](#)

¹⁰ [A Minerals Strategy for New Zealand to 2040](#)

¹¹ [A Critical Minerals List for New Zealand](#)

- A low carbon economy;
- Growing a productive, sustainable and inclusive economy; and
- Social responsibility.

5.37. The Resource Strategy recognises the need to retain local sources of quarry material and the importance of retaining aggregate supply to support housing and transport programmes. To meet the growing population of New Zealand, the Resource Strategy acknowledges that the minerals and petroleum sector has a critical role to play in building the future. In order to deliver housing and infrastructure that is suitable and affordable for the growing number of New Zealanders, an affordable and secure supply of aggregate (which includes sand) resources is needed.

5.38. The Resource Strategy acknowledges the importance of aggregate being sourced close to demand in order to keep transportation costs down and to reduce carbon emissions.

5.39. Action Area Two of the Resource Strategy is securing affordable resources to meet New Zealand's minerals needs. A future action identified in Action Area 2 is the production of a list of critical minerals for New Zealand which has since been released.

5.40. The Assessment of Economic Effects¹² identifies that by enabling this project, transport, environmental and social costs that would be avoided are estimated at \$374.4m.

5.41. Granting consent would be consistent with the Resource Strategy and directly gives effect to Action Area 2.

A Minerals Strategy for New Zealand to 2024

5.42. A Minerals Strategy for New Zealand to 2024 ("Minerals Strategy") identifies that minerals are essential for the way of life in New Zealand and enable nearly every aspect of our modern world. They are at the heart of key sectors that drive New Zealand's economy, including infrastructure, construction, agriculture, manufacturing, medical equipment, and information technology.

5.43. Outcome 3 of the Minerals Strategy is to develop a critical minerals list which has since been released. The first objective of Outcome 2 is then to "Support strategically important critical mineral developments, facilities and capabilities".

5.44. Granting consent would be consistent with this Minerals Strategy and in particular Outcome 2.

A Critical Minerals List for New Zealand

5.45. Sand has been listed on the Critical Minerals List for New Zealand. Sand and aggregate were included due to their high level of economic importance to New Zealand. In addition, as a result of the regulatory constraints limiting new supply opportunities within New Zealand, particularly near to the major demand centre in Auckland and the lack of cost-effective alternate sourcing arrangements for New Zealand as a whole, Aggregate and Sand has been deemed a critical mineral. (ref. New Zealand Critical Minerals List, Wood Mackenzie, December 2024¹³).

The Site Location

5.46. The sand extraction site is within Te Ākau Bream Bay as shown on the Bioreserches Drawing "Map Showing Sand Extraction Area and Control Areas" included in Attachment Five and also provided as Figure One below. The sand extraction area is 7 km long by 2.2 km wide with a total area of 15.4 km². The closest distance between the sand extraction site and the shoreline is 4.7 km. The average

¹² Paragraph 35, Assessment of Economic Effects (Attachment X)

¹³ [Final Wood Mackenzie Report on the Development of a Critical Minerals List for New Zealand](#)

seabed depth in the extraction area is 28 m, with a range from 22 m to 34 m. No areas of unusable sand within the proposed extraction area have been identified.

- 5.47. The site is located centrally in Te Ākau Bream Bay and is west of the Northport anchorage area. It is southwest of the harbour shipping channel and the rocky reef north of the anchorage area.
- 5.48. In determining the landward edge of the sand extraction area, the objective was to ensure that the sand extraction area was located sufficiently seaward of the beach and at sufficient depth to have negligible direct or indirect effects on coastal processes and landforms. Sand extraction will be undertaken at depths greater than the depth of closure and depth of transport. To the landward side of these boundaries within the coastal marine area is where wave-driven cross-shore and long-shore sediment transport processes are confined. To the seaward side is the depth where, except under very significant storm events, there is relatively little net movement of sand landward or seaward. Removing sand from beyond the depth of closure and depth of transport means that there will be negligible risk of impact on the beaches, the dunes, and surf breaks of Te Ākau Bream Bay because the sand in these systems is not meaningfully connected to sand landward the depth of closure and depth of transport. This is further addressed later this Report and in Sections 2.1 and 2.2 of the Coastal Process Effects Assessment (Attachment Nine).
- 5.49. The majority of the sand will be delivered to the MBL depot at the Port of Auckland and is to service the Auckland market. The *William Fraser* will also discharge sand at Port Nikau (which is close to Whangārei) and Port of Tauranga to supply customers in the Northland, Bay of Plenty and Waikato regions.
- 5.50. In summary, the site location has been selected and is considered appropriate because:
 - The sand is a quartz feldspar sand and shares all the positive properties of the Kaipara Harbour and Pākiri marine sands that make it suitable for concrete and in particular high-strength concrete production.
 - There is a very significant volume and depth of sand resource.
 - The site can be efficiently accessed from the Port of Auckland and sand extraction and transportation to Auckland will be able to occur in most weather conditions and during all tide states.
 - The sand extraction can be undertaken at a depth deeper than the depth of closure and depth of transport.
 - The sand extraction area is close to a major anchorage and shipping channel which contribute to the existing character and amenity of this part of the coastal marine area.
 - There are no significant ecological features or shellfish beds on the seafloor. Much of the site has been previously subject to commercial scallop dredging and bottom trawling fishing.
 - The extraction area is not a key recreational area.
 - Sand extraction can be undertaken where adverse effects are expected to be no greater than minor.
 - An adaptive management approach can be employed over time in terms of monitoring and sand extraction take volumes.

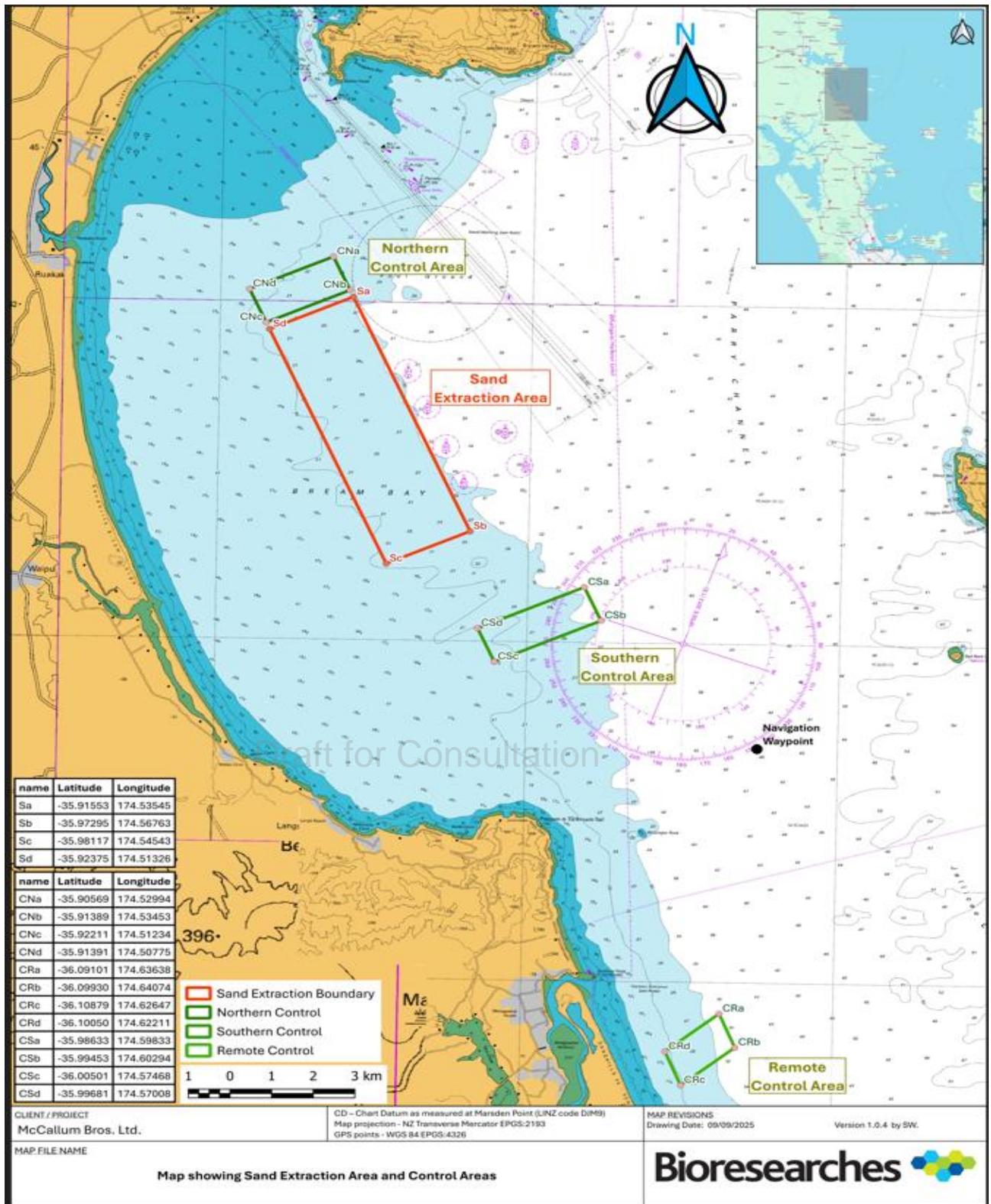


Figure One: Location of the Te Ākau Bream Bay Sand Extraction Area (from Attachment Seven)

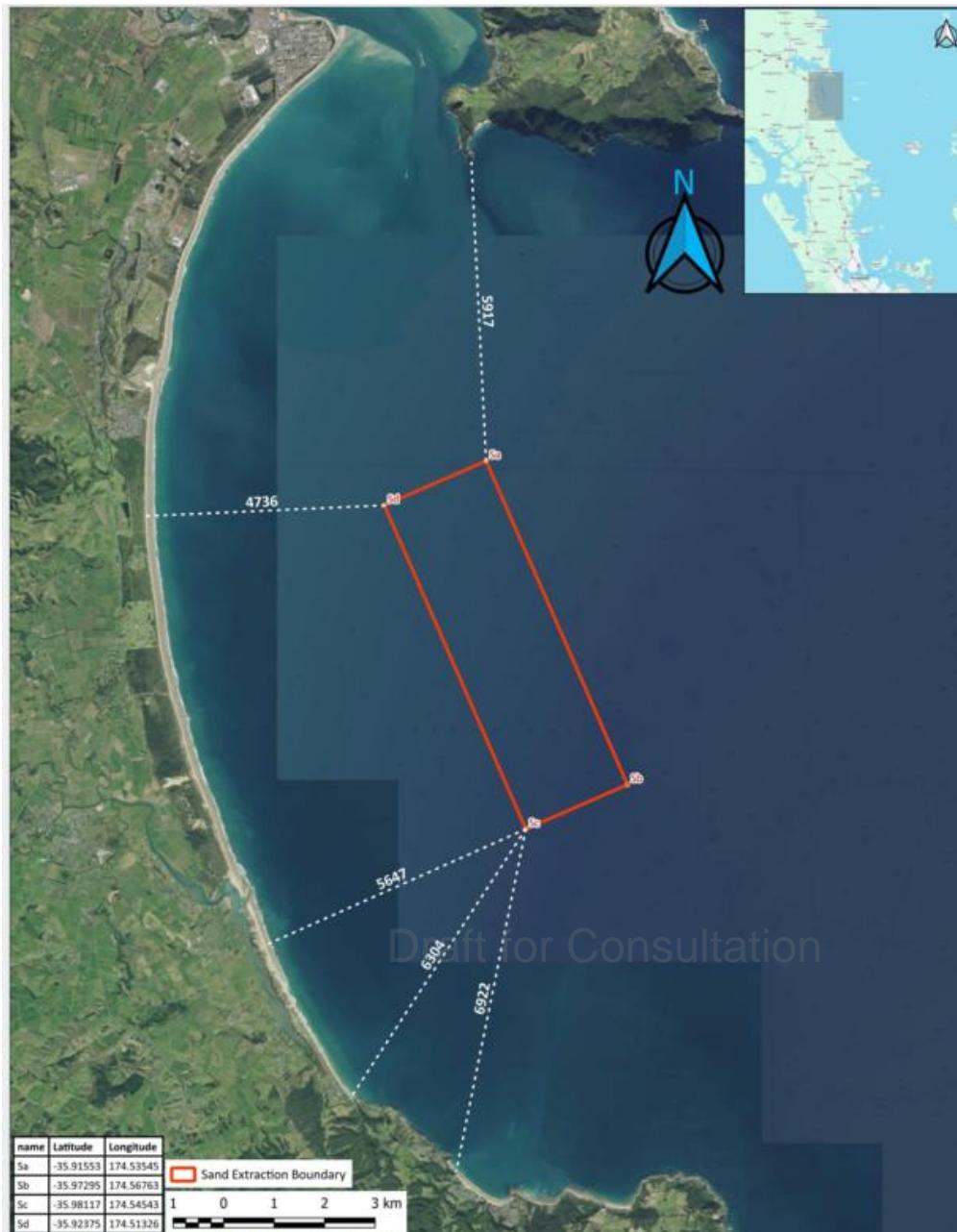


Figure Two: Aerial of the Location of the Te Ākau Bream Bay Sand Extraction Area (from Attachment Seven)

Proposed Sand Extraction Commencement Date

5.51. MBL would commence sand extraction at Te Ākau Bream Bay as soon as practical after granting of the resource consent and Wildlife approval. It is estimated that at least one month may be required to give effect to any pre-sand extraction consent conditions such as a pre-start meeting and to submit the final management plans to NRC. It is confirmed that:

- The equipment, training, and other operational processes required are already used by the applicant and will simply be duplicated at Te Ākau Bream Bay subject to any amendments required through conditions of consent.
- No new significant procurement of resources or staff is required.
- No new funding or capital investment is required.
- No site works are required.

- e) The first PSEAR has been completed and forms part of the application and can be approved.
- f) The first ASEA has been prepared and forms part of the application and can be approved.
- g) All management plans have been finalised and can be approved as part of the consent. They would then be submitted to NRC.

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6. Description of the Sand Extraction Operation

The Sand Resource

- 6.1. Vibracore samples have established that there is a depth of between 2 - > 4 m of suitable sand across the whole of the proposed extraction site. The volume of sand within the site exceeds 34,000,000 m³ based on a minimum of 2 m sand depth¹⁴.
- 6.2. Within the wider sand resource area, there is an estimated minimum sand resource volume of at least 124,110,000 m³ which is likely to be a conservative assessment¹⁵.
- 6.3. The sand has the same mineralogical properties, and a very similar particle size distribution compared to the sand that has been extracted from the Pākiri/Mangawhai Embayment¹⁶. Sand samples taken from the Te Ākau Bream Bay application area have been tested at Firth's Christchurch Concrete Laboratory (concrete suitability) and Stevensons Resources Laboratory for source properties and performance to the New Zealand Standard – Aggregates and Sand to confirm its suitability for use in concrete manufacturing. The results of that testing are included in the Concrete Suitability Statement of Paul Donoghue (Attachment Twenty-One).
- 6.4. Te Ākau Bream Bay sand is predominantly made up of quartz feldspathic particles which are classed as non-reactive in concrete. This becomes increasingly important as higher cement proportions are used in high strength concrete. Cement is highly alkaline and as more is added to the concrete mix the alkali level increases. Unlike many sands, Te Ākau Bream Bay sand does not contain minerals that contribute to the risk of alkali reactivity in concrete which can lead to the breakdown of the concrete's structural properties over time. This sand type is highly sought after for making high strength concrete mixes, especially where a high degree of consistency in the raw materials is required, and 100-year lifespans are required in the finished concrete.
- 6.5. Mr Donoghue¹⁷ has found:

“Te Ākau Bream Bay sand is a fine, well-shaped, quartz/feldspar sand and contains strong particles; see Figure 2 below. The sand contains some silt, but this will be removed by the washing process which is a necessary part of the extraction process of sand extraction by the William Fraser. This is the same process as is currently used at Pākiri. There are also some minor shell fragments and chlorides of insufficient quantity to be detrimental or of any material concern. It is of a similar provenance as Pākiri sand, as described in the petrographic report (Appendix 1). Chloride risk is easily managed by washing and over New Zealand's concrete history, there have never been any test results showing chloride levels in concrete near or above the limits specified in NZS 3101 (New Zealand Standard for Concrete Structures).”

And

“If Te Ākau Bream Bay sand is made available, I am confident that it will play an essential role in the Auckland ready mix concrete market and, to a lesser extent in Northland, the Waikato and Bay of Plenty and other North Island regions for use in projects where high performance concrete and long service life are required such as for tunnels, bridges and other heavy commercial projects of regional or national significance.

As mentioned above, Te Ākau Bream Bay sand is also a quartz feldspar sand and shares all the positive properties of the Kaipara Harbour and Pākiri marine sands currently in use in Auckland.”.

¹⁴ Section 5.3, Coastal Processes Effects Assessment (Attachment Nine)

¹⁵ Page 75, Coastal Process Effects Assessment (Attachment Nine)

¹⁶ Para xx, Statement of Paul Donoghue (Attachment Twenty-One)

¹⁷ Paras xxx , Statement of Paul Donoghue (Attachment Twenty-One)

The Sand Extraction Operation

- 6.6. Attachment Twenty-Seven has a link to a video of the *William Fraser* operating and includes footage of the draghead operating and the plume from the discharge of oversized material through the moonpools. The SEOP (Attachment Twenty-Nine) provides further details on the sand extraction operation.
- 6.7. Sand extraction occurs using the *William Fraser*, which is a motorised trailing suction vessel, purpose built for MBL in 2019. Sand is generally transported directly from the sand extraction area to MBL's depot at the Port of Auckland. This is the same method which was employed for the sand extraction operation in the Mangawhai/Pākiri Embayment. The *William Fraser* was designed specifically for sand extraction in the north-eastern coastal waters of New Zealand.
- 6.8. The *William Fraser* is 68 m long and has an approximate capacity of 923 m³ of sand. Sand is extracted using a draghead and pump system which fluidises the sand and delivers it into a holding hopper on the vessel (through a 2 mm screen). The extraction operation can be likened to a vacuum cleaner operating on the seafloor. The width of the draghead is 1600 mm and it leaves a temporary extraction track approximately 100 mm (on average) deep. It is recognised that in the past there has been an issue with sand extraction at the Pākiri site forming temporary "trenches" in specific locations. This was a historical issue, and the formation of trenches is no longer anticipated given the type of draghead used on the *William Fraser* and the accurate implementation of a sand extraction plan (utilising a rotational methodology) which can be undertaken utilising GIS.
- 6.9. The *William Fraser* has a crew of four, with crew on watch (including for marine mammals) during dredging operations to ensure that there are no navigational issues with other vessels despite the vessel displaying RAM ("Restricted in Ability to Manoeuvre") day shapes and lighting where required which gives navigational priority to the vessel.
- 6.10. The Navigation Safety Assessment¹⁸ provides further details on the *William Fraser*. This assessment also provides information on the Local Port Service Area of Whangārei Harbour Road and the Northport Limited harbour monitoring system which the *William Fraser* will utilise when operating at the sand extraction site.

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Figure Three: The William Fraser Riding High Without a Load of Sand

¹⁸ Pages 5-6, Navigation Safety Assessment (Attachment X)

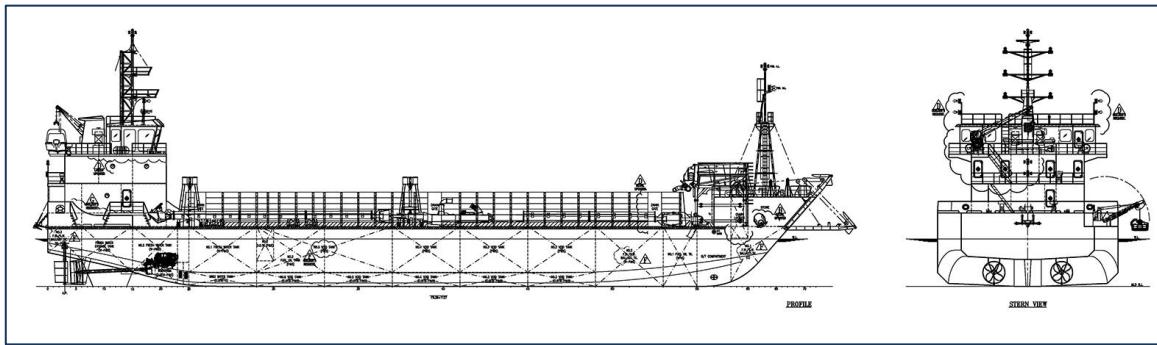


Figure Four: Elevations of the William Fraser

- 6.11. The trailing suction sand extraction operation will be undertaken as outlined in the following paragraphs.
- 6.12. During the morning of an extracting day, the *William Fraser* will leave the Port of Auckland for Te Ākau Bream Bay and will follow a route through Tiri Passage, outside Kawau Island, past the Pākiri/Mangawhai Embayment to arrive at Te Ākau Bream Bay in the early afternoon. The *William Fraser* cruises at a maximum of 9.5 knots, in compliance with the Hauraki Gulf Transit Protocol for Commercial Shipping. The *William Fraser* will enter and leave the extraction area seaward of the waypoint identified on the site plan (Figure One).
- 6.13. Once the *William Fraser* reaches the extraction area, it will slow to a speed of 1.5 to 2.5 knots as the dredging gear is prepared. This is the speed the vessel travels at while extracting sand. The Master of the *William Fraser* navigates the vessel to the starting coordinate of the predetermined extraction path for that trip, located on the boundary of the ASEA.
- 6.14. The draghead is unsecured from the vessel, the davits extend the pump and dredge pipework over the starboard side and they are slowly lowered to the seabed. When the draghead is less than 3 m above the sea floor, the pumps will be engaged, and sea water will start to pump through the system.
- 6.15. The pumps are initially primed with water, after which the draghead is fully lowered to the seafloor to commence extraction. At this point, the vessel's position is geolocated using the MAXSea navigational software to enable the extraction track to be recorded. Simultaneously, a switch on the swell compensator is automatically triggered, initiating an independent recording of the extraction track. Both recording systems continue logging data until extraction ceases and the draghead is lifted from the seafloor.
- 6.16. The tracking software will turn off once the draghead is lifted from the seafloor and the skipper will turn off the vessel tracking on the MAXsea navigational software.
- 6.17. As the draghead moves forward along the seafloor, the top 100 mm of seabed is fluidised and pumped onboard via the draghead and dredge system. This results in a 1.6 m wide x 100 mm deep (on average) temporary track being created on the sea floor. The life of the temporary track is dependent upon wave conditions at the time of, and following, extraction.
- 6.18. The sand slurry moves up the draghead pipe, through the pump and then on board the vessel where it is discharged onto a double deck screening tower that utilises a 2 mm screen mesh (Figure Nine) to prevent larger material going into the load of the hopper. Oversized material passes across the top of the screen and drops via a pipe into the forward port side moon pool and exits at keel height under the vessel.
- 6.19. The sand passes through the screen deck and into two pipes that run along the sides of the holding hopper and discharge into the hopper on board. As the slurry drops into the sand hopper the water velocity slows and the sand settles out. The water and any finer sediment in the load then pass out of the hopper into moon pools which discharge under the vessel's keel. There are six moon pools in total, three along each side of the hopper.

6.20. The barge slowly fills with sand with excess water flowing into the moon pools. As the level of sand increases in the hopper, boards are used to retain it in the hopper whilst still allowing the sediment laden water to pass out over these boards.

6.21. Once the vessel hopper is full or at sand volume capacity (approximately 923 m³), the pump will be lifted to no greater than 3 m off the sea floor and water will be pumped through the system to ensure that all the sand has been flushed from the pipes and screen deck. Once complete, the pump will be turned off and the draghead raised and stowed back on board the vessel.

6.22. The tracking software will turn off once the draghead is lifted from the seafloor and the Master of the *William Fraser* will turn off the vessel tracking on the MAXsea navigational software.

6.23. The vessel will travel an expected distance of 13 km to fill the hopper with an average of 923 m³ of sand. This will take between 2.5 and 3.5 hours.

6.24. A typical return trip (including the extraction period) from the Port of Auckland will range from 16-20 hours, depending on the weather.

6.25. 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 customers or to a land-based stockpile.

6.26. MBL operates a loading facility at the Ports of Auckland. No additional equipment or land-based facilities are required in order for MBL to commence the sand extraction. No resource consents are required for the continued operation of this land-based facility.

6.27. On occasions, the *William Fraser*, may deliver sand to the Port of Tauranga or Port Nikau and the SEOP (Attachment Twenty-Nine) includes the plans of the routes used to these Ports.

6.28. The Navigation Safety Assessment (Attachment Twenty) outlines the relevant maritime safety rules and navigational safety issues in respect of the operation of the *William Fraser*.

6.29. Extraction of sand will be managed across the sand extraction area via the use of cells and a sand extraction rotation methodology. Sand extraction is carried out along predefined lines known as tracks. During a typical extraction event, the vessel extracts sand over a distance of approximately 13 km, usually covering two rows of extraction cells. The actual length may vary slightly from trip to trip, depending on operational conditions.

6.30. A rotational methodology is used to ensure that extraction does not occur along the same track for at least 12 months. This approach promotes even spatial distribution of extraction across the ASEA. This methodology is further explained in Section 2.5.2 of the SEOP (Attachment Twenty-Nine).

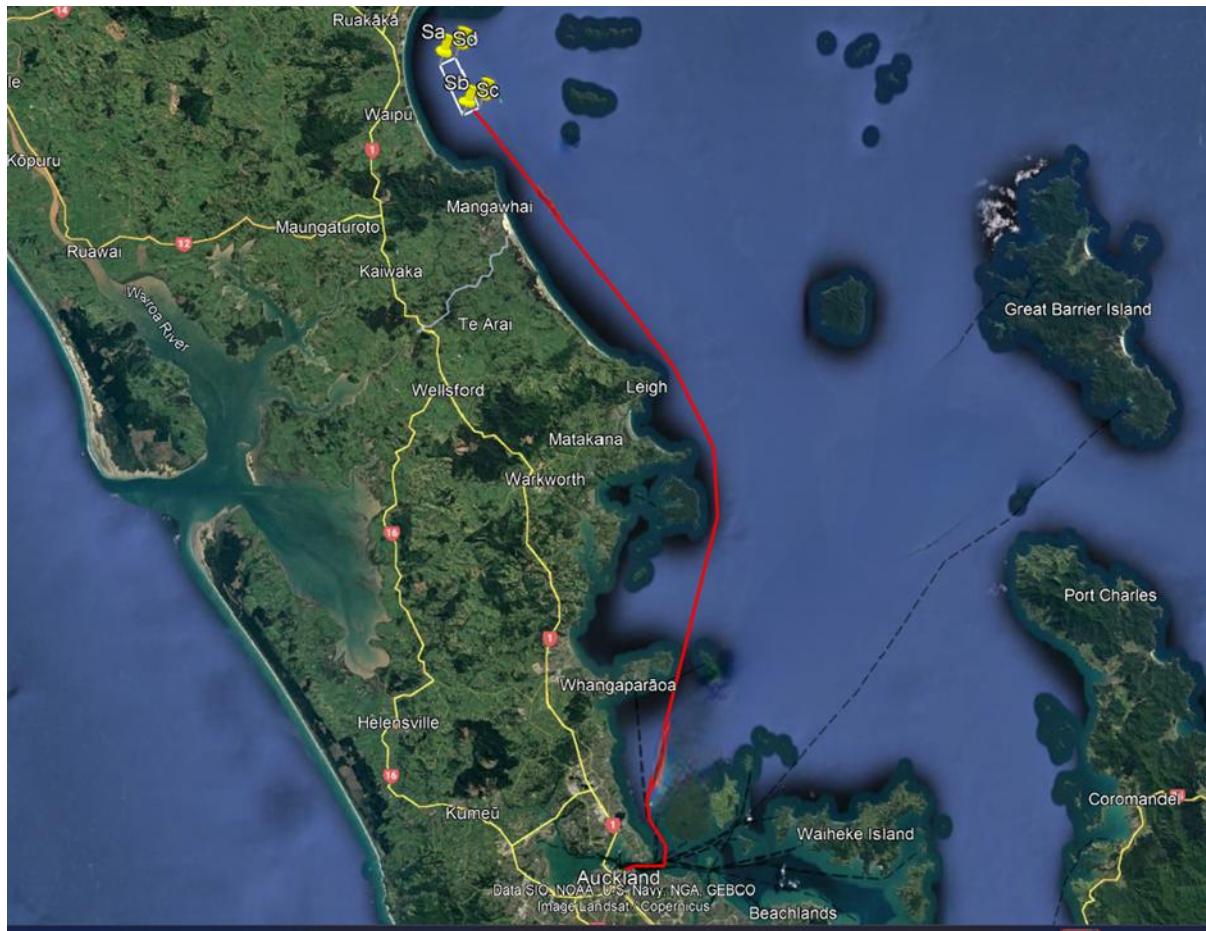


Figure Five: Map Showing the Proposed Route to Bream Bay from Port of Auckland.

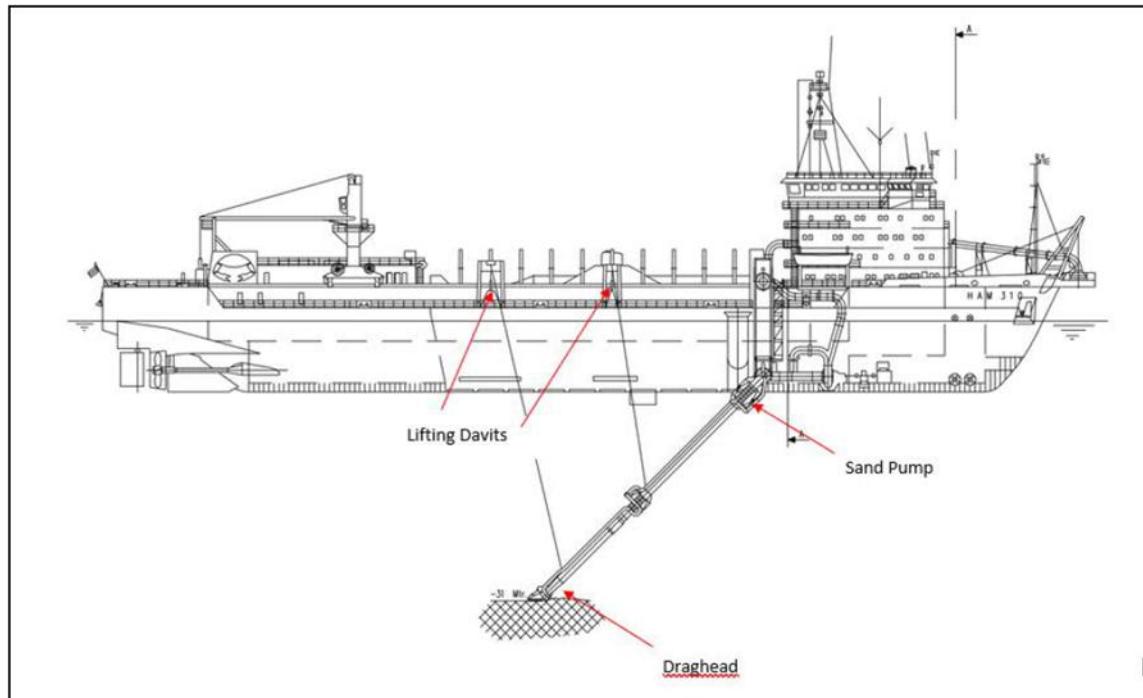


Figure Six: Schematic Diagram of a Trailing Suction Hopper Dredge (note not an actual MBL vessel)



Figure Seven: William Fraser Draghead Operating



Figure Eight: 80-100mm deep Dredge Track 5 minutes Post Dredge



Figure Nine: 3 D Plan of sand 'screening deck' on the William Fraser

Sand Extraction Operating Hours

- 6.31. Sand extraction will only occur between the hours 12:00pm to 8:00pm (October 1 to March 31) and between 12:00pm and 6:00pm (1 April to 30 September).
- 6.32. The actual period of sand extraction will be limited to no more than 3.5 hours on any given day. Sand extraction will occur up to 4 times per week when the Stage 2 extraction volumes come into effect.

Existing and Proposed Mitigation Measures

- 6.33. The sand extraction operation has been refined over many years to avoid and/or mitigate potential adverse environment effects. The *William Fraser* was designed specifically for sand extraction in the north-eastern coastal waters of New Zealand and operates under a number of management plans to avoid or mitigate the risk of potential adverse effects.
- 6.34. The *William Fraser* has a number of technologies that improve its performance and reduce environmental impacts and these include:
 - a) Euroclass, ACERT marine propulsion engines that meet both EPA Tier 4 and IMO II emission regulations to minimise fuel use and reduce emissions.
 - b) Acoustically lined engine and pump rooms to reduce engine noise from the vessel.
 - c) Reduced lighting. As far as practical the *William Fraser* uses subdued and downward facing lighting whilst still complying with Maritime NZ lighting and safety requirements.
 - d) A draghead designed to minimise seabed disturbance and take a wider and shallower extraction furrow (an average of 100 mm deep and 1600 mm wide).
 - e) An electric pump that reduces underwater noise and eliminates any possibility of hydraulic oil leaks or spills.
 - f) A Dutch designed screening deck, rather than flume pipes, which reduces damage to live animals passing through the drag-head and increases the screening efficiency.

g) Moon pools for sediment discharge below the water line to minimise turbidity.

6.35. The *William Fraser*:

- a) Can extract sand in depths up to 38 m (although the maximum depth of extraction will be approximately 34 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 available recovery time and minimising the impact on the marine environment. This also allows for extraction to be spread across the whole extraction area, regardless of the state of the tide or prevailing weather conditions.
- b) Cruises at a maximum of 9.5 knots, in compliance with the Hauraki Gulf Transit Protocol for Commercial Shipping, which reduces the risk of marine mammal strike while under way.
- c) Turns its pumps on and off less than 3 m from the sea floor to reduce the risk to any curious marine mammals that may investigate the pump apparatus.
- d) Ensures oversized material passes through the moonpool and enters the sea at keel height which reduces the aeration of the sediment (compared to pumping over the side of the vessel). This accelerates the descent of the suspended sediment in the water column and reduces the impact on the water quality. It also reduces the attractiveness and accessibility of this oversize material to opportunistic sea birds or other species that might try to feed on it.

6.36. The *William Fraser* is designed to reduce the risk of oil spills through the following:

- a) All of the engines, pumps, machinery, fuel and oil tanks are held within a double bunded system inside the vessel. This design is commonplace now and is designed to prevent contaminants being released from a vessel.
- b) The sand extraction pump is electric so uses no oil in its operation.
- c) The only external points above the deck which could potentially release oil are from the two davits that lift the sand pump and drag-head, and the sand screening deck. Both lines are run by hydraulic pumps with reservoirs inside the vessel. Should a leak occur alarms are immediately raised in the engine room, bridge and by the pump itself. The alarms will shut the pump off immediately so no further oil could escape. In the very slim chance that an oil spill occurs, the scuppers of the vessel retain the spilled oil so that it does not enter the marine environment.
- d) Uses biodegradable synthetic oil instead of standard hydraulic oil.
- e) No refuelling will be carried out in Te Ākau Bream Bay.

6.37. MBL have not had an oil spill in over 80 years of sand extraction operations.

6.38. During the underwater and marine mammal investigations, it was identified that to minimise potential acoustic effects on mammals, daytime sand extraction would be preferable (as compared to nighttime sand extraction which has been the general approach at the Pākiri Sand Extraction site). Section 4.2.4 of the Marine Mammal Assessment of Effects specifically addresses this:

"It is noteworthy that the operational window with the lowest potential for soundscape change has been selected for Te Ākau Bream Bay sand extraction to minimise the cumulative underwater noise impacts on marine mammals. In contrast to Pākiri, where extraction occurs at night, modelling has confirmed that daytime operations would be preferable to minimise the cumulative noise impacts in Te Ākau Bream Bay (Dr M. Pine, pers comm, January 2025). This finding is underpinned by the fact that the existing soundscape in the project area is significantly noisier during the day (on account of other vessel traffic); hence, the soundscape difference (with the addition of extraction noise) will be of a lower magnitude during daylight hours than it would be at night. While further analysis did not identify any particular time of the day when existing noise was highest, biological understanding has been

used to further refine the preferred operational window to afternoon and dusk (see Section 2.0 for proposed hours) on account of the following considerations:

- Scientific knowledge of activity budgets and resting behaviours of bottlenose dolphins (Mann and Smuts, 1999; Gnone et al, 2001; Sekiguchi and Kohshima, 2003; and Lyamin et al, 2007) were reviewed. While there is little information on wild dolphin populations, studies on dolphins in captivity revealed a distinct 'high activity time' between midday and 4 pm, and a distinct 'low activity time' between midnight and 3 am. The low activity time was characterised by resting and sleeping behaviours in the observed dolphins, and while evidence suggests that diurnal sleep patterns do change in response to changing situations (Sekiguchi and Kohshima, 2003), the 'low activity time' correlates with the quietest nighttime soundscape for Te Ākau Bream Bay and will presumably be important for resting in this species.
- Likewise, Izadi et al. (2018) reported that Bryde's whales exhibit strong diel activity patterns, exhibiting active behaviours (consistent with travelling and foraging) during the day, and long periods of less active states (indicative of rest) that occur exclusively at night. Observations made by Izadi et al. (2022) indicated that Bryde's whales can spend days in an area targeting zooplankton aggregations; feeding by day and resting by night.
- In keeping with the bullet points above, the introduction of underwater noise at night would presumably have higher ecological costs as critical resting periods for both bottlenose dolphins and Bryde's whales occur at night (Sekiguchi & Kohshima, 2003; Izadi et al., 2018). It follows that disturbance during nighttime resting periods would lead to disproportionately greater energetic consequences (compared with disturbance impacts during the day which occur in the context of animals that are already exhibiting high levels of activity). Hence, disturbance during the hours of darkness is more likely to have negative impacts on individual and/or population health.
- The 'dusk chorus' phenomenon has also been considered; whereby biophonic activity (the noises made by animals such as urchins, shrimp and fish) on subtidal reefs shows a consistent increase at dusk (e.g. Radford et al., 2010; Radford et al., 2011; McWilliam et al., 2017; Van Hoeck et al., 2020). While the extraction area itself does not contain any reefs, the nearest reef is "Three Mile Reef" located approximately 1 km to the north-east of the northeastern corner of the sand extraction area (Bioresearches, 2025). The dusk chorus emanating from this reef will increase sound pressure levels in their vicinity as night falls. Should active extraction occur at dusk, the noise from the William Fraser will be masked (to some extent) by the dusk chorus; and for marine mammals close to reefs at this time, the William Fraser will be less audible."

First Approved Sand Extraction Area

6.39. The first PSEAR has been completed (Attachment Twenty-Six) which covered the full sand extraction area. This PSEAR did not identify any cells which are required to be excluded based on recommended Condition 21. The first ASEA therefore covers the full sand extraction site. The first ASEA Plan is included in the PSEAR and provided below. The consent application includes this report and ASEA so that they form part of the approved consent and so that a new PSEAR (including a new ASEA) is not required to be prepared upon granting of the consent.

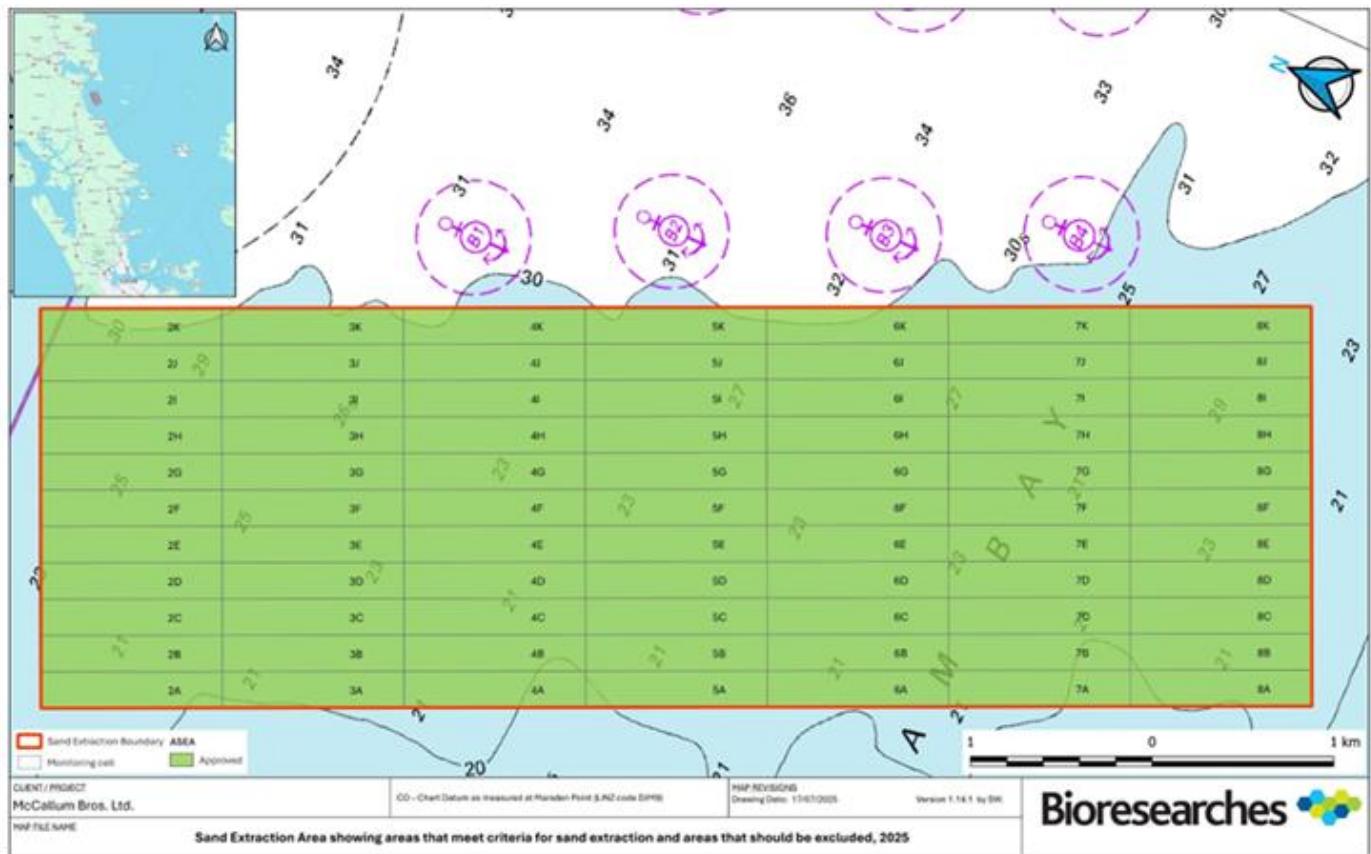


Figure Ten: First ASEA (from Attachment Twenty-Six)

Draft for Consultation

Bioresearches

7. Proposed Management Plans, Environmental Monitoring and Consent Conditions

7.1. Schedule 5, clause 5(1)(k) of the Act requires that an application provides conditions for the resource consent. Section 83 requires conditions to be no more onerous than necessary.

7.2. Attachment Twenty-Eight includes a set of recommended conditions and these are further addressed below. The recommended conditions have not been prepared in isolation and have developed during the preparation of various specialist reports and during the pre-lodgement consultation. Given the nature of the proposal and the duration of the consent being sought, it is considered that an adaptive management approach is appropriate, and this is outlined below and the conditions reflect this approach.

7.3. Various specialist reports have made a number of recommendations (including monitoring and reporting) and these have been addressed in the various management plans and/or recommended conditions.

7.4. Finally, the recommended management plans and conditions also reflect in part the lessons learned through the life of the sand extraction consents for Pākiri particularly in terms of the outputs of monitoring required to assess effects, the monitoring required in terms of achieving these outputs, reporting requirements and the ability to modify monitoring and management plans during the life of the consent.

7.5. The sand extraction operation has been refined over many years to avoid and/or mitigate potential adverse environment effects. As outlined earlier, the *William Fraser* was designed specifically for sand extraction in the north-eastern coastal waters of New Zealand and operates under a number of management plans to avoid the risk of potential adverse effects. The management plans and recommended conditions also reflect these refinements.

7.6. In addition to the resource consent conditions, the operation of the *William Fraser* and the sand extraction operation also have to be undertaken in accordance with the following:

- The Harbourmaster Guidelines for Whangārei Harbour (including Bream Bay) will be followed to ensure navigational safety. The Navigation Safety Assessment¹⁹ details the Harbourmaster Guidelines and the six weekly Harbour Safety Meetings.
- Relevant legislation (and this is further expanded on in Section 2.8 of the SEOP (Attachment Twenty-Nine)):
 - Maritime Transport Act 1994
 - Maritime Security Act 2004
 - Ship Registration Act 1992

7.7. The *William Fraser* is operated in accordance with the MNZ Safety Management framework and the relevant Harbourmaster Bylaws, regulations and COLREGS.

7.8. The Port of Auckland Hauraki Gulf Transit Protocol for Commercial Shipping is a voluntary protocol aimed to reduce the risk of whale strike. This Protocol has four components. The *William Fraser* is currently, and will continue to be, operated in accordance with the following components of this protocol:

- “Plan to Slow Down”
- “Watch for Brydes Whales”
- “Report on Whale Sightings”

7.9. Due to the location of the sand extraction area, part of the “Recommended Approach to Port of Auckland” (in the Port of Auckland Hauraki Gulf Transit Protocol for Commercial Shipping) is not followed as a

¹⁹ Page 12, Navigation Safety Assessment

route closer to the shoreline is undertaken. This was also the situation at Pākiri prior to the sand extraction ceasing. A copy of this protocol is included in the SEOP and further addressed in Section 2.84 of the SEOP (Attachment Twenty-Nine) and in Section 4.3 of the MMMP (Attachment Thirty).

Adaptive Management Approach

7.10. An adaptive management approach has been adopted for the sand extraction operation. In broad terms this involves:

- Monitoring the environment and environmental outcomes during the life of the project.
- Adjusting sand extraction locations (within the consented sand extraction area) and operation in response to what is learned.
- Providing for appropriate flexibility within the resource consent conditions.
- Avoiding significant adverse effects.
- Only going to the Stage 2 annual extraction volumes when the Year 4 (or later) SEMR confirms:
 - Monitoring for the previous three years has not identified lowering within the 100 m wide bathymetric control area (western side of the extraction area only) exceeding 0.15 m on average which cannot be explained by natural processes; and
 - Monitoring for the previous three years has not identified an ecologically statistically significant change in the benthic biota assemblage, composition, and abundance relative to changes in the control biota which cannot be explained by natural processes.
- Providing for maximum sand extraction volumes to be modified (within the Stage 1 and 2 limits) based on recommendations in the SEMR.

7.11. This will be undertaken through the following steps:

- 1 Preparation of a Pre-Sand Extraction Assessment Report (“**PSEAR**”) in those cells proposed for sand extraction within the consented sand extraction area. The first PSEAR for the whole site has been completed and forms part of this application.
- 2 Based on the PSEAR identify the Approved Sand Extraction Sub-Area (“**ASEA**”). That is, within the sand extraction area, those cells where sand extraction can occur are identified.
- 3 Preparation of a Sand Extraction Monitoring Report (“**SEMR**”) at set periods during the life of the consent.
- 4 The SEMR will then:
 - Recommend any changes to the monitoring, reporting, sand extraction operation and maximum sand extraction volumes (including confirming from the Year 4 SEMR onwards when the maximum sand extraction volume can increase to the Stage 2 volume).
 - Update the ASEA (that is, identify any cells where sand extraction is to cease).
- 5 During the life of the consent, additional PSEAR’s can be completed for those cells where sand extraction has either not commenced or where it has ceased for a period of time. This PSEAR will then update the ASEA to identify those additional cells where sand extraction can now occur.

7.12. Conditions have been proposed which allow for updating of management plans, the extraction operation methodology and the vessel used for sand extraction and review of conditions. The inclusion of these conditions reflect that the sand extraction areas (within the sand extraction site) and methodology may change over time to address specific effects or to allow for the adoption of new technology.

- 7.13. The section on Management Plans includes the EMMP which outlines the methodology and outputs for the PSEAR and SEMR.
- 7.14. The Environmental Monitoring section outlines the proposed monitoring and reporting to be undertaken (as outlined in the EMMP).
- 7.15. Figure Eleven provides a schematic flow-chart showing the relationship between the consented sand extraction area, the PSEAR and SEMR and the initial and future ASEA.
- 7.16. The Proposed Conditions section sets out the recommended conditions including those relating to the requirement for management plans, monitoring and reporting which give effect to the adaptive management approach proposed. It is considered that the proposed monitoring requirements are clear with defined output requirements and that the consent conditions which give effect to this adaptive management approach are enforceable.

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Consented Sand Extraction Area

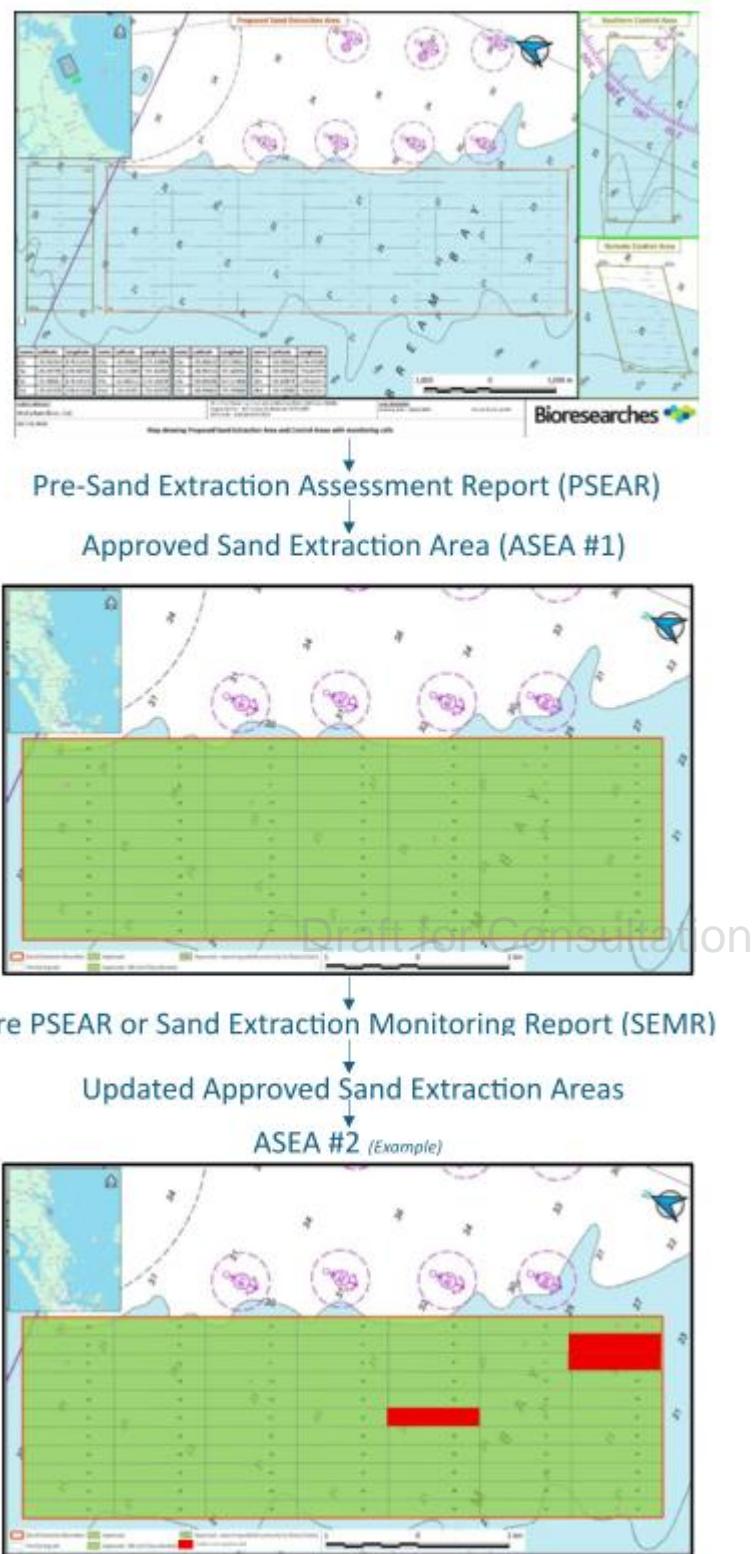


Figure Eleven: Flow-Diagram Showing ASEA Process

Recommendations from Specialist Reports

7.17. A number of specialist reports have recommended specific management plans, monitoring and/or conditions of consent. The following table summarises those recommendations and identifies where they have been addressed.

Recommendation	Reference	Action
All project-associated vessels to have and implement a waste management plan compliant with the International Convention for the Prevention of Pollution from Ships (1973/1978) (Marpol 73/78) and its Annexes.	Water Quality Assessment of Environmental Effects	The <i>William Fraser</i> operates under a Garbage Management Plan taking into account the Prevention of Pollution from Ships (1973/1978) (Marpol 73/78) and its Annexes. The disposal of litter is addressed in Condition 30.
An Oil Spill Prevention and Response Plan to be produced and implemented prior to sand extraction.	Water Quality Assessment of Environmental Effects	The <i>William Fraser</i> operates under an Oil Spill Management Plan which is required under Condition 31.
All project associated vessels to work to Maritime New Zealand standards and the International Maritime Organisation (IMO) standards.	Water Quality Assessment of Environmental Effects	The <i>William Fraser</i> operates in accordance with the relevant Maritime New Zealand and International Maritime Organisation Standards.
While recognising the efforts to date made by MBL to reduce noise outputs, and their ongoing commitment to undertake regular maintenance of extraction equipment, any further efforts to reduce the noise source level (e.g. the consideration of additional quietening technologies as they become available) and/or to further reduce the daily exposure duration would be beneficial to minimising the potential changes to the existing Te Ākau Bream Bay soundscape.	Marine Mammal Environmental Impact Assessment	This is addressed in Section 2.8.6 of the SEOP.
A Marine Mammal Monitoring Programme will be implemented to: <ul style="list-style-type: none"> Validate the predictions of the underwater acoustic modelling in terms of soundscape change; Support the continuation of boat-based research 	Marine Mammal Environmental Impact Assessment	The requirement for an underwater Soundscape Change Measurement and Assessment is set out in Condition 37 and the methodology for undertaking this is set out in Section 7 of the EMMP. MBL will offer to the Patuharakeke Te Iwi Trust

surveys in Te Ākau Bream Bay.		Board up to an annual contribution of \$2,000.00 per boat-based research survey undertaken in Te Ākau Bream Bay to assist with the costs associated with undertaking these surveys.
The <i>William Fraser</i> will be operated in compliance with the Marine Mammal Protection Regulations 1992.	Marine Mammal Environmental Impact Assessment	TBC. This is addressed in Section 2.2 of the MMMP. The requirement for an MMMP is set out in Condition 18.
The Hauraki Gulf Transit Protocol will be implemented. Noting that for this application, this protocol will be implemented not only in the Hauraki Gulf but in all waters subject to transit and extraction activities associated with this application.	Marine Mammal Environmental Impact Assessment	As outlined earlier, 3 of the 4 components of this voluntary protocol will be implemented. The full route of the recommended approach into the Port of Auckland cannot be implemented due to the location of the sand extraction area. This is addressed in 2.8.4 of the SEOP and 4.3 of the MMMP.
Vessel masters and crew will maintain vigilance for marine mammals and complete a marine mammal sighting form ¹ for each cetacean sighting that is made.	Marine Mammal Environmental Impact Assessment	This is outlined in the MMMP which is required under Condition 18. Condition 39 sets out the requirement for marine mammal daily records.
Any vessel strike incidents or near incidents, regardless of outcome, will be recorded and reported.	Marine Mammal Environmental Impact Assessment	Condition 41.
Appropriate waste management programmes must be adopted during all components of the proposed sand extraction activities.	Marine Mammal Environmental Impact Assessment	The <i>William Fraser</i> operates under a Garbage Management Plan taking into account the Prevention of Pollution from Ships (1973/1978) (Marpol 73/78) and its Annexes. The disposal of litter is addressed in Condition 30.
Compliance with Resource Management (Marine Pollution) Regulations 1998.	Marine Mammal Environmental Impact Assessment	Legal requirement.

MBL to collect and retrieve any obvious marine debris during extraction and safely dispose of these onshore.	Marine Mammal Environmental Impact Assessment	This is addressed in Section 5.0 of the MMMP.
<p>To minimise and manage the potential impacts of entanglement:</p> <ul style="list-style-type: none"> • The draghead and all other operational equipment in the water column must be free from loose lines, loops of tubing etc; • Free floating or slack lines must be avoided; • Suction of the draghead must be restricted to within 3 m of the seafloor; • While extracting, the <i>William Fraser</i> must be operated in a consistent manner in terms of direction and speed; • The extraction vessel master and crew must remain vigilant for marine mammals during active extraction, and be prepared to shutdown extraction if necessary; • A 100 m zone for large whales (killer whales and larger, including all baleen whales) must be implemented around the extraction vessel and draghead such that active extraction must cease if a large whale enters this zone; and • Extraction must not recommence until the large whale has been resighted and has moved away from the draghead/vessel, or until there has been no further sightings for 10 minutes. 	Marine Mammal Environmental Impact Assessment	<p>This is addressed in Section 6.0 of the MMMP and also through the SEOP (in terms of the operation of the <i>William Fraser</i>).</p> <p>Separation distance to Whales is addressed in Condition 25.</p>
The sand extraction vessel should operate under a light management plan when operating at night.	Potential Effects on Seabirds and Shorebirds	The SEOP includes a Light Management Plan, and a LMP is a requirement under Condition 20.

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<p>Vessel crew should maintain a log of any seabird interactions, including both fatal and non-fatal interactions, recording time and date of interactions, species involved (if possible, photographs should be taken of the bird) and outcome. Such a log should be submitted to the DoC annually.</p>	<p>Potential Effects on Seabirds and Shorebirds</p>	<p>Condition 26 requires a log to be kept of seabird interactions and Condition 38 sets out when and who this is to be submitted to.</p>
<p>Bathymetric survey monitoring is recommended to confirm and validate the findings of this assessment and to identify any unexpected effects. Key elements include:</p> <ol style="list-style-type: none"> 1. Monitoring the cumulative change in seabed level and seabed volume inside the extraction area, with reference to extraction volumes and locations. 2. Identification and management of dredge track anomalies, defined as a 2 m wide track that is >0.4 m deeper than surrounding seabed in that management cell. 3. Bathymetric profiles and a 100 m monitoring buffer along the northern, southern and inner boundary of the extraction area to identify and manage unexpected effects of lowering seabed level on the shoreface outside of the extraction boundary. 	<p>Coastal Processes Effects Assessment</p>	<p>1 – A 100 m bathymetric monitoring area has been incorporated along the northern, southern and inner boundary of the extraction area.</p> <p>2 – The SEMR requires the requirement for the bathymetric monitoring to address points 2 and 3. The methodology for this is outlined in the EMMP. Condition 17 sets out the requirements for the EMMP and Condition 36 for the SEMR.</p> <p>3 – The methodology recommended in Sections 6.1.1 – 6.1.3, data collection requirements in 6.2 and the analysis and report in 6.2.1 of the Coastal Process Effects Assessment are reflected in the EMMP and SEMR requirements.</p>
<p>Adaptive management is recommended if monitoring identifies that actual effects are occurring inside the extraction area or on the adjacent shoreface landward of the extraction area.</p> <p>The following conditions are recommended:</p> <ol style="list-style-type: none"> a. Identify the presence of track anomalies, defined as having a track width of approximately 2 m wide and a depth greater than 0.4 m below the 	<p>Coastal Processes Effects Assessment</p>	<p>1 – An adaptive management approach has been adopted in the consent conditions.</p> <p>2 – Condition 21 does not allow sand extraction to occur in cells where extraction track(s) with a width greater than 2 m and a depth exceeding 0.4 m below the surrounding seabed level and longer than 100 m in length are present.</p> <p>If any such areas exist, then these are identified during</p>

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<p>surrounding seabed. If an anomaly is detected, stop extraction in that cell until recovery is detected in a subsequent survey. Recovery would be a depth less than 0.25 m below the surrounding seabed. Once recovered, extraction can continue in that cell.</p> <p>b. Identify lowering of the shoreface landward of the extraction area as measured in the buffer zone or profiles. If lowering exceeds the survey error (± 0.15 m) and cannot be explained by natural events, then extraction is limited to the seaward half of the consented area until the next annual survey is undertaken. If the lowering trend landward of the extraction zone continues after 1 year, then a review of the landward boundary is recommended.</p> <p>c. Identification of any immobile layers (e.g. rock) or historic facies (e.g. partly consolidated orange Pleistocene sand deposit). These are not expected based on the geotechnical assessment, but if identified by monitoring or in operation, the cell should be closed to further extraction.</p>		<p>the PSEAR and SEMR process.</p> <p>3 - Monitoring of the shoreface is a requirement of the SEMR process and the methodology is outlined in the EMMP. The SEMR will recommend if a review of the landward boundary is recommended with the SEMR being Certified by NRC. Condition 17 sets out the requirements for the EMMP and Condition 36 for the SEMR.</p> <p>4 – Condition 21 does not allow sand extraction to occur in cells where there are areas of immobile layers (e.g. rock) or historic facies (e.g. partly consolidated orange Pleistocene sand deposit)</p> <p>If any such areas exist, then these are identified during the PSEAR and SEMR process. No such areas were identified during the first PSEAR for the whole sand extraction area.</p>
<p>Existing Beach Profile Surveys – It is recommended that existing beach profiles are surveyed regularly (at least annually, ideally twice annually). This could be in the form of MBL supporting Council to continue beach monitoring along Te Ākau Bream Bay.</p>	<p>Coastal Processes Effects Assessment</p>	<p>Although specific monitoring of the beach is not considered necessary by T&T, MBL will contribute \$2,000.00 to NRC per survey (assuming no more than annually) to assist with their current surveying programme.</p>

MBL will be recording all marine reptile sightings and reporting them to DOC if and when they occur.	Assessment of Ecological Effects	Condition 39
No sand extraction in areas of seabed with sediment with an average proportion of mud (grain size finer than 0.063 mm) exceeding 20% by weight.	Assessment of Ecological Effects	Condition 21 does not allow sand extraction to occur in cells where these occur. If any such areas exist, then these are identified during the PSEAR and SEMR process.
No sand extraction in areas of seabed with defined sensitive benthic communities.	Assessment of Ecological Effects	Condition 21 does not allow sand extraction to occur in cells where these occur. If any such areas exist, then these are identified during the PSEAR and SEMR process.
No sand extraction in areas of seabed with any absolutely protected species under the Wildlife Act 1953, excluding any species for which a Wildlife Authority is held.	Assessment of Ecological Effects	Condition 21 does not allow sand extraction to occur in cells where these occur. If any such areas exist, then these are identified during the PSEAR and SEMR process.
To outline a monitoring programme to: <ol style="list-style-type: none"> Provide the baseline ecological information for subsequent monitoring. Identify areas where sand extraction is not to be undertaken. Identify benthic ecological changes arising from the sand extraction. 	Assessment of Ecological Effects	This monitoring programme for the PSEAR (for the baseline ecological information) and the SEMR (for the ongoing monitoring) are outlined in the EMMP. The requirements for the EMMP (which includes the key elements of the monitoring required), PSEAR and SEMR are set out in Conditions 17, 34, 35 and 36.
To identify changes required to the sand extraction method to minimise any identified significant unanticipated adverse ecological, bathymetric and/or coastal processes effects on the environment.	Assessment of Ecological Effects	This is addressed in the EMMP. The requirements for the EMMP are set out in Condition 17.

Management Plans

7.18. The following management plans have been prepared specifically for this project:

- Sand Extraction Operation Plan (including the Light Management Plan) (Attachment Twenty-Nine)
- Marine Mammal Management Plan (Attachment Thirty)
- Environmental Monitoring Management Plan (Attachment Thirty-One)
- Cup Coral Management Plan (Attachment Thirty-Two)
- Biosecurity Management Plan (Attachment Thirty-Three)

7.19. These plans are final plans which are being submitted so they can be certified as part of the granting of consent. These plans will then be submitted to NRC with any final references to the consent number and conditions added.

7.20. It is considered that given these are comprehensive plans and the expertise that the Panel will have or can draw upon then these plans can be certified as part of the consenting process.

7.21. This will also avoid the risk that differences in the CCMP and BMP may occur if NRC requires changes during a certification process to these plans, which will then result in a different plan than that referred to in the Wildlife Approval.

7.22. The recommended conditions set out the requirements for these plans.

7.23. In addition to these management plans, the following management plans have also been provided in Attachments Thirty-Four and Thirty-Five respectively for information purposes:

- Garbage Management Plan (prepared under the regulations of Annex V, the Articles, and the Resolutions of MARPOL 73, as modified by the Protocol of 1978 (MARPOL 73/78) and the MEPC.295(71) “2017 Guidelines for the implementation of Annex V” (approved by MNZ)).
- Oil Spill Management Plan (approved by MNZ).

Sand Extraction Operation Plan (“SEOP”)

7.24. The SEOP is the management plan which sets out how the actual sand extraction activity is undertaken. The objective of the SEOP is to avoid or minimise the risk of adverse effects arising from the operation of the *William Fraser* at the sand extraction site. The SEOP includes:

- Outline of the sand extraction operations (including operating limits, operating hours, method of extraction).
- Sand extraction management methodology (including the sand extraction rotation methodology).
- Protocols to be complied with (including minimisation of underwater noise generation).
- Sand extraction volume and location reporting requirements.
- Staff roles, responsibilities and training.
- The Light Management Plan (“LMP”).

Marine Mammal Management Plan (“MMMP”)

7.25. The objective of the MMMP is to avoid or mitigate the potential effects of sand extraction operations (including active extraction and transit) on marine mammals. The MMMP includes:

- Procedures and methods to ensure that the *William Fraser* is maintained and operated to minimise underwater noise.
- Methods employed to minimise the risk of marine mammal ship strike.
- Methods employed to minimise entanglement of marine mammals with the draghead and associated underwater equipment.
- Record keeping and reporting requirements.
- Protocols to minimise marine debris (including an approved Garbage Management Plan).
- Staff training requirements on the implementation of the MMMP requirements.

7.26. A comprehensive review of the MMMP will be completed:

- After the first 12 months of operations during which the annual extraction volume is 150,000 m³;
- In the six months prior to the planned increase in extraction volume (from 150,000 m³ to 250,000 m³);
- After the first 12 months of operations during which the annual extraction volume is 250,000 m³; and
- Every three years thereafter for the duration of the consent.

7.27. A comprehensive review of the MMMP will also be completed within six months of any entanglement, vessel strike, injury or death of a marine mammal that is attributable to the sand extraction operations (including transit).

7.28. The methodology and reporting requirements for the underwater noise soundscape change assessment is outlined in the EMMP.

7.29. A copy of the Hauraki Gulf Transit Protocol, 2024, is included in the MMMP along with a marine mammal identification guide (which is currently used by MBL).

Environmental Monitoring Management Plan (“EMMP”)

7.30. The EMMP is the management plan which outlines the monitoring requirements for the project. The objectives of the EMMP are:

(1) To outline a monitoring programme to:

- Provide the baseline ecological and bathymetric information for subsequent monitoring.
- Identify areas where sand extraction is not to be undertaken.
- Identify benthic ecological or bathymetric changes arising from the sand extraction.
- To demonstrate that change in the soundscape level at the monitoring locations arising from the project does not exceed 3dB over any calendar month, or to set out the change and any mitigation response(s) if it is greater than 3dB.

(2) Identify changes required to the sand extraction method to minimise any identified significant unanticipated adverse ecological, bathymetric and/or coastal processes effects on the environment.

7.31. The EMMP includes:

- The requirement and methodology for a PSEAR.
- The timing, monitoring methodology and reporting requirements for the SEMR.
- The recommendation process within the SEMR for any changes to the ASEA's, sand extraction methodology, monitoring and/or reporting as an outcome of monitoring findings.
- The methodology and reporting requirements for the soundscape change measurement and assessment.
- The requirements for sand extraction and vessel tracking reporting.

7.32. The EMMP sets out the specific requirements for the Year Four SEMR (that this, the third SEMR) in terms of determining if the maximum annual sand extraction volume can increase to 250,000 m³. If it is determined that sand extraction cannot increase to 250,000 m³/year then this is to be re-assessed in the following SEMR until such time that it is confirmed that annual sand extraction volume can increase to 250,000 m³.

7.33. The EMMP will also be the depository for the:

- Seabirds interaction log.
- Marine reptile sighting log.
- Marine mammal sightings log.
- Marine mammal incident log.
- Approved changes to extraction/discharge methodology and/or vessel.
- Approved ASEA plans.

7.34. The EMMP is to be reviewed every five years from the commencement of the consent with the reviewed EMMP having to be submitted to NRC for certification. The objective of the review is:

- To identify any changes required to the monitoring methodology and timing to provide better understanding of observed effects, if any, arising from the sand extraction.
- To include new or revised sampling techniques if current sampling methods did not work as expected.
- To adopt new technology that makes data collection easier and/or more accurate.

7.35. The review shall also consider any recommendations arising in the SEMR reports. Given the adaptive management approach being undertaken, the challenges of monitoring in the coastal marine area and changing technology for monitoring (and bathymetric monitoring in particular) it is considered that the regular review of the EMMP is important to ensure that the monitoring remains sound, efficient and practical and is producing the data required to assess the effects (if any) which are being monitored.

Cup Coral Management Plan (“CCMP”)

7.36. The objective of the CCMP is to avoid or minimise the risk of disturbance and incidental killing of Cup Coral during both monitoring and sand extraction. The CCMP includes:

- An overview of the Scleractinian cup corals present within the extraction area.

- The methodology and processes to minimise the capture and incidental killing of cup corals during sand extraction, and
- The methodology and processes to minimise the capture and incidental killing of cup corals during monitoring.
- Key contacts, roles and responsibilities.
- Management plan review requirement (annually).

7.37. The benthic monitoring methodology outlined in the CCMP is reflected in the PSEAR and SEMR monitoring programmes (outlined in the EMMP) and is not a separate monitoring methodology. This section of the CCMP outlines in more detail how cup corals may be detected during the monitoring, how they are to be recorded and then returned to the coastal marine area. This section also outlines how the cup coral identified during the sand analysis at a laboratory will be counted and reported to DoC and disposed of.

Biosecurity Management Plan (“BMP”)

7.38. The objective of the BMP is to prevent the introduction and spread of marine pests through effective ballast water management and vessel maintenance practices. The BMP:

- Includes a ballast water management plan.
- Addresses biofouling management.
- Addresses staff training.

7.39. This plan ensures vessel operations, including ballast water use and hull maintenance, are carried out in compliance with New Zealand biosecurity regulations and best practice standards and is a continuation of the existing requirements.

7.40. The BMP is reviewed annually or following significant changes to biosecurity regulations, operational practices, or the identification of new marine pests in Auckland, Northland and/or Bay of Plenty waters. MBL is to engage with the NRC’s Marine Biosecurity Team and Auckland Council prior to major reviews to incorporate updated guidance.

7.41. Any updates to the BMP are documented, communicated to all crew, and incorporated into training sessions. Revised plans are submitted to relevant authorities for approval if required.

Environmental Monitoring

7.42. The consented sand extraction area is to be divided into 77 cells (1000 m long x 200 m wide) for monitoring and reporting purposes. In addition, there are three control sites and also a 100 m wide area around the north, western and eastern sides of the consented extraction area which will be used as the bathymetric control area.

7.43. There are three components to the proposed monitoring programme. These are:

- (i) The Pre-Sand Extraction Area Assessment and Reporting (“**PSEAR**”);
- (ii) Sand Extraction Monitoring and Reporting (at specified milestones) (“**SEMR**”); and
- (iii) Soundscape Change Measurement and Assessment

7.44. The EMMP sets out the objectives, methodology and required outputs for this monitoring. The proposed conditions set out the requirements for an EMMP and the monitoring reporting requirements and timing.

PSEAR

7.45. The PSEAR is the monitoring undertaken prior to sand extraction occurring in a cell (or where sand extraction has not occurred in a cell for the preceding 36 months). The PSEAR provides the baseline ecological and bathymetric information for the subsequent monitoring covered by the SEMR. The PSEAR also identifies those cells where sand extraction can occur, and an output is an ASEA Plan. An ASEA must not include areas of the seafloor which contain any of the following:

- Sediment with an average proportion of mud (grain size finer than 0.063 mm) exceeding 20% by weight; or
- Areas of immobile layers (e.g. rock) or historic facies (e.g. partly consolidated orange Pleistocene sand deposit); or
- Sensitive benthic communities (as defined by Appendix TBC); or
- Any absolutely protected species under the Wildlife Act 1953, excluding any species for which a Wildlife Authority is held.

7.46. The first PSEAR for the whole extraction area has been completed and is included in Attachment Twenty-Six. The required ASEA Plan has been prepared as an output of the PSEAR and is included in the PSEAR. It is proposed that this PSEAR and ASEA are referenced in the relevant conditions of consent so that it is clear that the first ASEA has been approved and a new PSEAR (and ASEA Plan) is not required once consent is granted and before sand extraction can commence.

7.47. Future PSEARs (and ASEA Plans) are to be submitted to NRC for certification prior to sand extraction occurring in any new cells not covered by the operative ASEA at that time.

7.48. The current ASEA Plan shows all cells within the whole extraction area as being available for sand extraction (that is, none of the exclusions identified above have been identified in any cells). Assuming extraction commences in a cell prior to 1 April 2027 and does not cease for a period longer than 36 months then no further PSEAR's may be required during the life of the consent.

SEMR

7.49. The SEMR is the on-going monitoring required where sand extraction has occurred in a cell. This monitoring is to identify ecological and/or bathymetric effects arising from the sand extraction and to recommend changes required to the sand extraction method to minimise any identified significant unanticipated adverse ecological, bathymetric and/or coastal processes effects on the environment. The SEMR is also to include an updated ASEA.

7.50. SEMR's are required in Years 2 to 7 then every three years afterwards for the duration of the consent. Given the importance of monitoring being undertaken at the approximate same time each year, all monitoring for the SEMR due that year is to be undertaken in March or April. March is the preferred month for undertaking the monitoring, but MBL seeks to be able to undertake this monitoring in April if weather conditions are not suitable to complete all monitoring during March.

Soundscape Change Measurement and Assessment

7.51. The objective of the assessment is to demonstrate that change in the soundscape level at the monitoring locations arising from the Project does not exceed 3dB over any calendar month, or to set out the change and any mitigation response(s) if it is greater than 3dB.

7.52. The assessment has three primary components:

- Continuous acoustic measurements for six months to quantify the soundscape without the Project (the 'without Project' measurements) and for the same six months with the Project (the 'with Project' measurements).

- Assessment of the 'without Project' and 'with Project' soundscapes, and
- Production of a report setting out the results of the measurement and assessment and the calculation of the overall soundscape change in decibels, adjusted for the maximum permitted extraction volumes.

7.53. If the final report demonstrates that the commencement of the Project changed the monthly soundscape at the monitoring locations by an average of 3dB or less in all calendar months, no further action is required.

7.54. If the final report shows that the commencement of the Project changed the monthly soundscape at the monitoring location by more than 3dB in any calendar month, the final report shall set out the mitigation options that will be available to the consent holder to reduce the soundscape change arising from the Project to no more than 3dB in any calendar month at the monitoring locations. The mitigation options could be physical (e.g. reducing the noise of the vessel and extraction operations at source) or by management (e.g. reducing the time spent in the area).

7.55. The final report must be submitted to the NRC within 32 weeks of the commencement of the consent.

Reporting to NRC

7.56. As the regulatory authority responsible for administering the consent, enforcing conditions and undertaking any review under s128 it is proposed through the conditions of consent that the following information is provided to NRC:

- All final management plans (including the Oil Spill Contingency Plan and Garbage Management Plan).
- All amendments to certified management plans.
- All PSEARs (including their ASEA).
- All SEMRS (including their ASEA and recommendations).
- The Soundscape Change Measurement and Assessment Report.
- Sand extraction volume and location records and vessel tracking records.

7.57. The Sand Extraction Volumes, Area and Vessel Tracking Records are:

- To retain a record of sand extraction volumes and confirm that the permitted sand extraction volumes are being complied with.
- To identify when the sand extraction monitoring (SEMR) is required to be undertaken.
- To retain a record of where sand extraction has been undertaken and confirm that sand extraction has only been undertaken within approved sand extraction sub-areas.

7.58. The recommended conditions set out the requirements for this reporting.

7.59. It is also recommended that a pre-start meeting is held with NRC. These are important in terms of reinforcing lines of communication between the consent holder and NRC and ensuring all parties have the same understanding of consent conditions and the approved management plans. A condition of consent is including requiring a pre-start meeting.

7.60. As outlined below any marine mammal incidents will also be reported to NRC.

Reporting of Information to the Department of Conservation

- 7.61. Under the Marine Mammals Protection Act 1978, all incidents involving marine mammals are required to be reported to DoC. Although this is a legal requirement, it has been included as a condition of consent (41) along with the requirement to provide this information to NRC, Te Pouwhenua o Tiakiriri Kukupa Trust (for Te Parawhau) and the Patuharaheke Te Iwi Trust Board at the same time.
- 7.62. Taking account of its role in keeping data and information on wildlife in New Zealand it is also considered appropriate that the sea-bird interactions, marine reptile sightings and marine mammal sightings logs (which will also be provided to Te Pouwhenua o Tiakiriri Kukupa Trust (for Te Parawhau) and the Patuharaheke Te Iwi Trust Board) are submitted to DoC for their information collection purposes.

Proposed Consent Conditions

- 7.63. Schedule 5, Clause 5(1)(k) of the Act requires that an application provides conditions for the resource consent. Section 83 of the Act requires conditions to be no more onerous than necessary.
- 7.64. The recommended consent conditions for the resource consent are provided in Attachment Twenty-Eight.
- 7.65. In broad terms these conditions have been developed and structured to ensure potential adverse effects on the environment are avoided or mitigated to an appropriate level and to provide for an adaptive management approach. The conditions incorporate recommendations of the technical specialists and the outcomes of engagement with iwi and NRC. These conditions also draw on the experience of MBL in previous sand extraction operations and resource consenting processes.
- 7.66. This section outlines the key points relating to these recommended conditions. The applicant has confirmed that these conditions can be practically implemented. The recommended condition number is provided in brackets.
- 7.67. The conditions are structured as follows:

- General Conditions
- Pre-Commencement Conditions
- Management Plans and Certification Conditions
- Operational Conditions
- Monitoring and Reporting Conditions

- 7.68. The following summarises the recommended conditions.

General Accordance (1): This condition is a standard consent condition requiring that the Project be undertaken in general accordance with the information submitted. The supporting Attachment One (information which forms part of the application) will need to be completed at the time the conditions are finalised.

Inconsistency Between Information (2): This condition sets out which information takes precedence in the event there are any inconsistencies in information.

Consent Lapse and Expiry (3): A 1-year period to give effect to the consent is proposed. This period is considered adequate to provide NRC the final management plans and to hold the pre-application meeting. The maximum 35-year consent period is sought.

Monitoring Charges and Payment of Council Costs (4): This is a standard condition used by Councils for the requirement of payment of an initial consent compliance monitoring charge and then recovery of on-going monitoring costs.

Information Held on Site (5): This condition requires the management plans and resource consent conditions to be held on site (in this case the *William Fraser*).

Review of Conditions (6): This condition outlines the timing when a review may be initiated under s128 of the RMA. The timing has been linked to the receipt by NRC of the SEMR. Condition 37 sets out the timing for when SEMR's are due. The SEMR outlines the findings of the monitoring and set out any recommended changes to the monitoring, reporting, extraction method and maximum annual extraction volume and is to include an updated ASEA.

Occupancy of the Common Marine and Coastal Area (7): This condition confirms that this consent does not provide for an exclusive right of occupancy.

Procedure for Complaints (8): This condition set out the process to be followed if a compliant is received, the information to be recorded and the timing of providing this information to NRC.

Commencement of the Consent (9): This condition requires the consent holder to notify NRC 10 days prior to the sand extraction commencing. The consent commences on the date that sand extraction commences.

Final Management Plans (10): This condition sets out that the final management plans must be provided to NRC prior to the pre-start meeting.

Pre-Start Meeting (11): This condition sets out the requirement for a pre-start meeting with NRC (and with the ability for invited iwi representatives to attend), timing, who is to attend and the purpose of that meeting.

Requirement for Certified Management Plans (12): This condition sets out what certified management plans are to be submitted to NRC. These are the Management Plans that are submitted with this application but may require minor modifications (i.e. Reference to consent number, reference to consent conditions) before being finalised and submitted to NRC. This condition also sets out the requirement that all certified management plans are to be implemented, and all works, monitoring and reporting must be in general accordance with these plans.

Minor Amendment to a Certified Management Plan (13): This condition sets out those changes which can be made to a management plan without the requirement for re-certification.

Certification of an Amendment to a Certified Management Plan (14): This condition sets out the requirement for a management plan to be re-certified if any amendments don't fall within the ambit of Condition 13.

Biosecurity Management Plan (BMP) (15): This condition sets out the objective and requirements of the BMP. The BMP is included in Attachment Thirty-Three.

Cup Coral Management Plan (CCMP) (16): This condition sets out the objective and minimum information requirements of the CCMP. The CCMP is included in Attachment Thirty-Two. The same CCMP is also proposed for the Wildlife Authority so there is a single CCMP.

Environmental Monitoring Management Plan (EMMP) (17): This condition sets out the objectives of the EMMP and the minimum information requirements of the EMMP including the methodology and outputs for the PSEAR, SEMR, Soundscape Change Measurement and Assessment and the requirements for sand extraction and vessel tracking reporting. This condition also requires that the EMMP is reviewed at least every 5 years by the Consent Holder and submitted to NRC for certification in accordance with Condition 13.

The final plan submitted to NRC under this Condition is to be based on the draft EMMP included in Attachment Thirty-One but with any updates resulting from the final consent conditions (for example, references to consent conditions).

Marine Mammal Management Plan (MMMP) (18): This condition sets out the objective and minimum information requirements of the MMMP. The MMMP is included in Attachment Thirty.

Sand Extraction Operation Management Plan (SEOP) (19): This condition sets out the objective and minimum information requirements of the SEOP. The SEOP is included in Attachment Six.

Light Management Plan (LMP) (20): This condition sets out the objective and minimum information requirements of the LMP. The LMP can form part of the SEOP as is currently proposed in the SEOP (Attachment Six).

Extraction Area (21): The area approved for sand extraction at any one time within the consented sand extraction area is to be identified as the ASEA. An ASEA must not include areas of the seafloor which contain any of the following:

- (a) Sediment with an average proportion of mud (grain size finer than 0.063 mm) exceeding 20% by weight; or
- (b) Areas of immobile layers (e.g. rock) or historic facies (e.g. partly consolidated orange Pleistocene sand deposit); or
- (c) Sensitive benthic communities (as defined by Attachment Two); or
- (d) Any absolutely protected species under the Wildlife Act 1953, excluding any species for which a Wildlife Authority is held; or
- (e) Extraction track(s) longer than 100 m in length with a width less than 2 m and a depth exceeding 0.4 m below the surrounding seabed level.

In terms of (a), sediments with a high percentage of fine silt and clay sized particles are likely to result in water quality effects with longer-lived, more extensive turbidity plumes. In addition, the sand product which MBL requires needs to have no fine sediments.

In terms of (b), these areas are avoided as they do not have a sand resource that can be extracted.

In terms of (c), not all benthic biota have the same sensitivity to disturbance effects caused by sand extraction. In this context “sensitivity” is defined by the United Kingdom’s Marine Life Information Network²⁰ as:

- The tolerance of a species or habitat to damage from an external factor, and
- The time taken for its subsequent recovery from damage sustained as a result of an external factor.

NIWA, in consultation with the Ministry for the Environment, defined a set of sensitive marine benthic environments in the Exclusive Economic Zone. The table of sensitive benthic communities referenced in this condition has been developed from the NIWA 2013 report²¹.

A Wildlife Authority would be required for the accidental capture/killing of any absolutely protected species under the Wildlife Act 1953. Apart from cup coral no other absolutely protected species have been identified to date in the extraction area. On the basis that the Wildlife Authority is granted for the disturbance and incidental killing of cup coral, these are excluded from those cells which are to be excluded from an ASEA. The first ASEA (ASEA No. 1, 2025) is included as part of this application and is approved under this condition. This first ASEA covers the whole sand extraction area.

Although long deep extraction tracks are not expected to be formed, (e) has been included to reinforce the need to avoid the creation of deep and/or long extraction tracks.

Sand Extraction Volume (22): This condition sets out the permitted monthly and annual volumes of sand extraction for

- (i) At least the first 3 years; then
- (ii) From no sooner than 3 months after the submission of the Year 4 SEMR when monitoring has confirmed that the defined bathymetric and ecological effects are not occurring.

Sand Extraction Vessel (23): This condition sets the *William Fraser* as the vessel to be used for the sand extraction. The second part of this condition requires that the volume of sand that can be carried by the *William Fraser* is to be surveyed. This cannot be undertaken until extraction has commenced as the volume of sand from the new sand extraction site will differ slightly from other sites due to very minor differences in sand size and properties.

²⁰ <http://www.marlin.ac.uk/sensitivityrationale.php>

²¹ <https://environment.govt.nz/publications/sensitive-marine-benthic-habitats-defined/>

Navigation (24): This condition requires the *William Fraser* to transit to the site at a speed of less than 10 knots, to require a crew member on watch to look for marine mammals during certain periods and to report all marine mammal sightings immediately.

Presence of Marine Mammals (25): This condition sets out the actions to be taken when the *William Fraser* is in the presence of Marine Mammals within the extraction site and while in transit. This condition also requires the keeping of a Marine Mammal Sighting Log and Condition 40 then stipulates who and when this log is to be provided to.

Sea-Bird Interactions (26): This condition sets out the requirements for a sea-bird interactions log. Condition 38 then stipulates who and when this log is to be provided to.

Marine Reptile Sightings (27): This condition sets out the requirements for a marine reptile sightings log. Condition 39 then stipulates who and when this log is to be provided to.

Hours of Sand Extraction (28): This condition sets out the hours which sand extraction must occur in with this being different for April to September and October to March to reflect the different daylight hours. Sand extraction during any one event is limited to 3.5 hours.

Operational Noise (29): This condition sets out the maximum noise level generated by the *William Fraser* during sand extraction when measured on land at the adjacent coastline and/or within any notional boundary of a site. This is based on the Whangārei District Plan noise standards.

Disposal of Litter (30): This condition requires that there is to be an approved Garbage Management Plan and no overboard litter disposal is permitted.

Oil Spill Contingency Plan (31): This condition requires that there is an approved Oil Spill Contingency Plan at all times.

Sand Extraction Volume and Location (32): This condition sets out the requirements to keep records for each extraction event (including date, time, sea conditions and water depth of extraction and where along with volume of sand extraction from each cell). This condition also sets out the requirement to keep an electronic record of the track of the *William Fraser* including when the draghead is on the seabed extracting sand and when the draghead is above the seabed and not extracting sand (including in those cells where sand extraction is not approved).

Reporting of Sand Extraction Volume and Location (33): This condition requires that the reporting under Condition 32 is provided to NRC quarterly along with a running record of total volume of sand extraction from each cell for that month, year and the consent period.

PSEAR Reporting Exclusion (34): As a PSEAR for the full site and the first ASEA have been completed and forms part of this application, this condition confirms that no PSEAR is required for the cells covered by the first ASEA if sand extraction in that cell has commenced by 1 April 2027. The date of 1 April 2027 has been set as it is considered that the current PSEAR ecological and bathymetric data should remain relevant until this date if no sand extraction has occurred in that cell.

Future PSEAR Reporting (35): This condition sets out when a future PSEAR may be required.

Sand Extraction Monitoring Report (SEMR) (36): This condition sets out the timing for the required SEMRs and that the SEMR is to be undertaken in accordance with the methodology outlined in the EMMP. The SEMR is to include an updated ASEA map and any recommended changes to the sand extraction method, monitoring, reporting and annual extraction volume based on the findings of that SEMR.

Soundscape Change Measurement and Assessment (37): This condition sets out the requirement to undertake an underwater soundscape change measurement and assessment in accordance with Section 7 of the EMMP. The final report is to be submitted to NRC within 32 weeks of the consent being given effect to.

Sea-Bird Interactions Log (38): This condition sets out that this log required under Condition 26 is to be submitted to DoC quarterly for information collection purposes.

Marine Reptile Sighting Log (39): This condition sets out that this log required under Condition 27 is to be submitted to DoC within 5 working days of a marine reptile sighting.

Marine Mammal Sighting Log (40): This condition sets out that this log required under Condition 25 is to be submitted to DoC, Te Pouhenua o Tiakiriri Kukupa Trust (for Te Parawhau) and the Patuharaheke Te Iwi Trust Board annually for information collection purposes.

Marine Mammal Incident Reporting (41): This condition sets out the process to be followed in the event of any incident which results in injury or mortality of a marine mammal.

Change of Extraction/Discharge Methodology and/or Vessel (42): This condition sets out the process for approval of changes to the approved sand extraction and/or discharge methodology and/or the use of an alternative vessel(s) (to the *William Fraser*) for extraction.

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8. Reasons for Consent

- 8.1. This section is provided in accordance with Schedule 5, Clause 5(1)(f) of the Act and provides a description of the resource consent required for the Project.
- 8.2. The subject site is within the territorial boundaries of NRC and is therefore subject to the Proposed Regional Plan for Northland (“PRPN”). The current status of the PRPN is that all appeals to the Environment Court have been resolved and as at 1 December 2024, NRC was in the process of making the PRPN fully operative. This remains the current situation as at 3 August 2025. There are no proposed plan changes of relevance to this proposal.
- 8.3. Attachment Thirty-Six includes the PRPN Plans with the site and control locations shown on it.
- 8.4. Under the PRPN when considering the activity, the sand extraction process would fall within the ambit of “dredging” while the proposed monitoring (including at the control sites) falls within the ambit of “monitoring”.

Summary of Zoning/Overlays under the PRPN:

Zoning:	General Marine
Water Quality Management Unit:	Open Coast
Overlays Over the Site:	Significant Marine Mammals and Bird Area
	Marine Pathways
	Aquaculture Exclusion Area
Overlays in the Wider Area:	Significant Bird Area (blue) (along the coastline).
	Significant Ecological Areas (blue hatching). Various in the wider area.
	Regionally Significant Surf Breaks (Various).
	Sites and Areas of Significance to Tangata Whenua. (At the Ruakākā River Mouth and Whangārei Harbour entrance.)
	Outstanding Natural Features. (On coastline on Whangārei Heads and south of Waipū.)
	Outstanding Natural Character. (Ruakākā River Mouth.)
	High Natural Character. (Various within Whangārei Harbour and Ruakākā and Waipū Estuaries.)

- 8.5. Marine Pathway Places²² is defined in the PRPN as places where restrictions apply to vessel movement between places when hull fouling exceeds light fouling. Only a very small corner of the sand extraction area is covered by this overlay. No consideration of this pathway is required as any biofouling of the *William Fraser* never exceeds light fouling (as a result of the regular out of water maintenance undertaken).

²² Page 343, Proposed Regional Plan for Northland

8.6. The Significant Marine Mammals and Bird Area is defined and further described in the PRPN²³. This overlay covers a very significant part of the Northland coastal marine area, and its intent is to identify that marine mammals and seabirds may be present in this area and further assessment to confirm this may be required for any relevant resource consent applications. This overlay is not identifying that the area is a significant ecological area (i.e., an area of significant indigenous vegetation and significant habitats of indigenous fauna to be protected in terms of s6 of the RMA). This overlay covers the sand extraction area in its entirety.

8.7. The Aquaculture Exclusion Area overlay is not relevant to this proposal and is not considered further.

Resource Consent Required

8.8. A Coastal Permit for sand extraction is required under Rule C.1.5.13 of the PRPN²⁴ and this is a discretionary activity. This Coastal Permit would cover:

- a) Destruction, damage or disturbance of any foreshore or seabed or the deposition of material in, on or under the foreshore or seabed (s12(1)).
- b) Discharge of water or sediment into water incidental to the activity (s15(1)).

8.9. Rule C.1.5.13 reads:

“C.1.5.13 Dredging, deposition and disturbance activities – discretionary activity

The damage, destruction or disturbance of the foreshore or seabed, or deposition of material onto the foreshore or seabed, that is not the subject of any other rule of this Plan are discretionary activities, provided they are not in a mapped (refer I Maps | Ngā mahere matawhenua):

- 1) Nationally Significant Surf Break, or
- 2) Outstanding Natural Feature, or
- 3) Area of Outstanding Natural Character, or
- 4) Historic Heritage Area or Site, or
- 5) Significant Ecological Area, or
- 6) Site or Area of Significance to Tāngata Whenua, or
- 7) Outstanding Natural Landscape, or
- 8) Significant Bird Area – Critical Bird Habitats.

For the avoidance of doubt this rule covers the following RMA activities:

- *Destruction, damage or disturbance of any foreshore or seabed or the deposition of material in, on or under the foreshore or seabed (s12(1)).*
- *Discharge of water or sediment into water incidental to the activity (s15(1)).*

8.10. The proposed monitoring over the life of the consent is a permitted activity under Rule C.1.5.3 as it will comply with the following standards:

- a) It will not be undertaken in a mapped Site or Area of Significance to Tāngata Whenua or a mapped Historic Heritage Area (refer I Maps | Ngā mahere matawhenua).

²³ Page 340-341, Proposed Regional Plan for Northland

²⁴ Page 93, PRPN [proposed-regional-plan-february-2024.pdf](https://www.nrc.govt.nz/assets/documents/proposed-regional-plan-february-2024.pdf)

- b) No more than one cubic metre of sand, shingle, shell or other natural material will be removed in any 24-hour period.
- c) The head size of any drilling equipment used will not exceed 250 millimetres in diameter.
- d) The monitoring complies with C.1.8 Coastal works general conditions. In particular:
 - It will not be undertaken on private or Council owned land.
 - No structures will be erected.
 - There will be no restriction on public access.
 - Monitoring will be undertaken between sunrise and sunset or 6.00am and 7.00pm, whichever occurs earlier, and on days other than public holidays.
 - No machinery, equipment and materials will be left at the monitoring sites.
 - Monitoring will not be undertaken within a significant ecological area, saltmarsh or seagrass meadow.
 - Monitoring will not result in damage to any rhodolith bed, bryozoan beds, sponge gardens or vermetid reefs.
 - Any visible disturbance of the seabed will be remedied within 48 hours of monitoring.
 - Given the location of the monitoring, there will be no disturbance of bird nesting areas or roosting coastal birds.

8.11. Rule C.1.5.3 reads:

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"C.1.5.3 Sampling and scientific investigation – permitted activity

The disturbance of the foreshore or seabed and any removal of sand, shingle, shell or other natural material for the purposes of sampling and scientific investigation in the coastal marine area are permitted activities provided:

- 1) *in a mapped Site or Area of Significance to Tāngata Whenua or a mapped Historic Heritage Area (refer I Maps | Ngā mahere matawhenua), no more than 0.2 cubic metres of sand, shingle, shell or other natural material is removed in any 24-hour period, and*
- 2) *in all other areas, no more than one cubic metre of sand, shingle, shell or other natural material is removed in any 24-hour period, and*
- 3) *the head size of any drilling equipment used does not exceed 250 millimetres in diameter, and*
- 4) *the activity complies with C.1.8 Coastal works general conditions.*

For the avoidance of doubt this rule covers the following RMA activities:

- *Disturbance of any foreshore or seabed by sampling and scientific investigation (s12(1)).*
- *Removal of sand, shingle, shell or other natural material from the coastal marine area for the purposes of sampling and scientific investigation (s12(2)).*

Relevant Standards

8.12. There are two relevant standards in the PRPN that require consideration – Lighting and Noise.

8.13. In respect to lighting, Rule C.1.8.21) states:

21) All lighting (excluding navigation lighting) associated with activities in the coastal marine area must not, by reason of its direction, colour or intensity, create:

- a hazard to navigation and safety, or a hazard to traffic safety, wharves, ramps and adjacent roads, or
- a nuisance to other users of the surrounding coastal marine area or adjacent land.

8.14. It is confirmed that this standard will be complied with.

8.15. In respect to noise, Rule C.1.8.22) sets out the noise standards which activities in the coastal marine area must comply with:

22) Noise from any activity within the coastal marine area (except for construction noise and noise from helicopters) must comply with *Table 4: Noise limits* at the notional boundary of any noise sensitive activity:

Table 4: Noise limits

Time (Monday to Sunday)	L _{Aeq} (15 min)	L _{Amax}
0700 to 2200 hours	55 db	Not applicable
2200 to 0700 hours	45 db	75db

a) noise must be measured in accordance with *New Zealand Standard. Acoustics – Measurement of Environmental Sound (NZS 6801:2008)* and assessed in accordance with *New Zealand Standard. Acoustics – Environmental Noise (NZS 6802:2008)*, and

8.16. The Assessment of Airborne Noise Effects confirms that this standard will be complied with by a significant margin and concludes²⁵:

“The noise level predictions show that in the most favourable conditions for the propagation of noise towards the foreshore, the noise generated from sand extraction will be approximately 12-13dB L_{Aeq} on the beach. The noise levels received at the closest noise sensitive activities (dwellings) will be less. This level of noise will be inaudible.

The noise from the proposed sand extraction activities will comply with the relevant PRNP noise limits by a significant margin, including at night when the noise limits applying at noise sensitivity activity is 45 DB L_{AEQ}”.

Other Required Approvals

8.17. No other resource consent requirements have been identified.

8.18. An approval is required under the Wildlife Act 1953 for the capture, collection, harm and incidental killing of Cup Coral. The application for this approval is in Part 2 of this document.

Lapse Period

8.19. A lapse period of 5 years is sought. It is expected that the consent will be given effect to immediately.

Duration of Consent

8.20. A coastal permit period of 35 years is being applied for. Sand extraction is proposed to be undertaken during the full period of the granted consent.

²⁵ Section 7, Assessment of Airborne Noise Effects (Attachment Eleven)

Activities Permitted by the PRPN

- 8.21. The proposed monitoring is permitted under Rule C.1.5.3 as outlined above.
- 8.22. There is no minimum volume of permitted sand extraction (apart from monitoring provided for under Rule C.1.5.3).
- 8.23. The movement of vessels within the Te Ākau Bream Bay Sand extraction area is permitted.

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9. Statutory Framework for Determining the Resource Consent Application

- 9.1. This section sets out the applicable statutory framework for determining the application for resource consent.
- 9.2. Schedule 5, clause 17 of the Act provides that, for the purposes of s81, when considering a consent application and setting conditions, the Panel must take into account, giving the greatest weight to paragraph (a):
 - (a) The purpose of the Act;
 - (b) The provisions of Parts 2, 6, and 8 to 10 of the RMA that direct decision making on an application for a resource consent (but excluding section 104D); and
 - (c) The relevant provisions of other legislation that directs decision making under the RMA.
- 9.3. That is, the purpose of the Act is to be given greater weighting than the listed provisions of the RMA, which includes Part 2 of the RMA
- 9.4. In this section, the proposal is firstly assessed against the purpose of the Act. The proposal is then assessed against Parts 2, 6 and 8 to 10 of the Act. Finally, consideration is given to other relevant provisions.
- 9.5. The assessment against s104, s105 and s107 of the RMA is undertaken in Section 15 of this Report.

Assessment Against the Purpose of The Act (s3)

- 9.6. The purpose of the Act is set out in s3 of the Act and is:

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“The purpose of this Act is to facilitate the delivery of infrastructure and development projects with significant regional or national benefits.”
- 9.7. Sand is an essential ingredient in concrete which, second to water, is the most consumed material in the world²⁶. Given its unique properties, marine sourced sand is required for high-strength concrete applications predominantly used for infrastructure projects. Like many parts of New Zealand, Auckland is facing a substantial required infrastructure project backlog.
- 9.8. Given the importance of concrete for Auckland’s economy, Auckland’s built future is effectively reliant upon maintaining access to cost effective sources of sand. Because sand is a key component in a range of different building applications, much of New Zealand’s future productive growth is reliant on sand in one form or another.
- 9.9. Access to suitable, and sufficient volumes of high-quality marine source sand from appropriate locations is critical for the continuing development of Auckland. As New Zealand’s largest city Auckland is a key economic driver of New Zealand’s economy. As outlined earlier, the efficient delivery of many of the listed projects in Schedule 2 of the Act along with other infrastructure consented through the existing RMA processes will require a secure and efficient supply of marine sand for their high-strength concrete requirements. The secure and efficient supply of sand, like aggregate, facilitates the development of just about all infrastructure and development projects in Auckland.

²⁶ Para. 19, Statement of Paul Donoghue

9.10. The Assessment of Economic Effects²⁷ outlines the demand outlook for sand in Auckland for concrete which is estimated to be in the order of 774,050 tonnes per year to 986,700 tonnes per year and production levels will need to increase by more than a third to meet future demand.

9.11. The potential contribution of the Te Ākau Bream Bay resource to providing secure access to high quality sand is significant, and enabling this sand extraction will add a sizable resource to the Auckland sand market.

9.12. The Assessment of Economic Effects²⁸ concludes:

“36. *Access to high quality and sufficient sand is essential to the infrastructure investment process. The location of the sand resource relative to end users is crucial because transport distance and mode combine to influence the cost of delivered sand. Input costs influence concrete prices that flow through the supply chain and impact infrastructure costs. Investment in roads, buildings, infrastructure and other assets become more expensive leading to difficult trade-offs.*

37. *Without enough high-quality sand, there will be delays in delivering the concrete used to complete such projects. Limited sand supply will mean that sand is rationed across concrete suppliers, and investments in environmental infrastructure will compete for concrete, and other resources, meaning that delivery timeframes will be pushed out.*

38. *Enabling sand extraction at Te Ākau Bream Bay will provide resilience to the sand supply network, providing additional flexibility to the concrete supply chain – a key element of any infrastructure and climate change resilience programme (before or after extreme weather events). In addition to the avoided costs, enabling sand extraction at Te Ākau Bream Bay will deliver wide benefits to Auckland. These benefits arise from a well-functioning construction sector that can deliver infrastructure in a time- and cost-efficient manner. Enabling Te Ākau Bream Bay will contribute towards, and facilitate, the delivery of infrastructure and development projects.”.*

9.13. It is therefore confirmed that the granting the resource consent and the Wildlife Approval will meet the purpose of the Act as it will provide for the sand extraction at Te Ākau Bream Bay which will secure an efficient sand supply to the Auckland market which is critical for the continued production of concrete products (and in particular high strength concrete) required for a range of development applications including regional and naturally important infrastructure. It will also provide an alternative source of marine sand to the Kaipara Harbour sourced sand, which will ensure future security of supply. The efficient delivery of sand to the Auckland concrete market will facilitate the future delivery of infrastructure and development projects of regional and national benefit.

Assessment Against Part 2 of the RMA

9.14. This section provides an assessment against the relevant Part 2 matters. Part 2 of the RMA sets out the purpose and principles of the Act. The purpose of the RMA (s5) is to promote the sustainable management of natural and physical resources. Matters of national importance, which are to be recognised and provided for, are set out in s6. Section 7 of the RMA sets out other matters to which particular regard must be had when exercising functions and powers under the RMA.

9.15. While assessment of s8 of the RMA is not required under the Act, the Project has taken the principles of the Treaty of Waitangi into account, particularly through extensive consultation with mana whenua over a period of time and this is addressed further in Section 14 of this report.

5 Purpose

(1) *The purpose of this Act is to promote the sustainable management of natural and physical resources.*

²⁷ Paragraphs 12-14, Assessment of Economic Effects (Attachment Nineteen)

²⁸ Paragraphs 36-38, Assessment of Economic Effects (Attachment Nineteen)

(2) *In this Act, sustainable management means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety while—*

- (a) *sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*
- (b) *safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and*
- (c) *avoiding, remedying, or mitigating any adverse effects of activities on the environment.*

6 *Matters of national importance*

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall recognise and provide for the following matters of national importance:

- (a) *the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development;*
- (b) *the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development;*
- (c) *the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna;*
- (d) *the maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers;*
- (e) *the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga;*
- (f) *the protection of historic heritage from inappropriate subdivision, use, and development;*
- (g) *the protection of protected customary rights;*
- (h) *the management of significant risks from natural hazards.*

7 *Other matters*

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall have particular regard to—

- (a) *kaitiakitanga:*
- (aa) *the ethic of stewardship:*
- (b) *the efficient use and development of natural and physical resources:*
- (ba) *the efficiency of the end use of energy:*
- (c) *the maintenance and enhancement of amenity values:*
- (d) *intrinsic values of ecosystems:*
- (e) *[Repealed]*
- (f) *maintenance and enhancement of the quality of the environment:*
- (g) *any finite characteristics of natural and physical resources:*
- (h) *the protection of the habitat of trout and salmon:*
- (i) *the effects of climate change:*

(j) the benefits

Assessment Against S5 - Purpose

9.16. The sand resource falls within the RMA definition of “mineral”. The project is to secure through a resource consent a new area for sand extraction which will provide an efficient source of marine sand for concrete manufacturing (and, in particular, for high-strength concrete).

9.17. The term “effect” includes any adverse effect regardless of scale and positive effects should be balanced against adverse effects. The matters that can constitute an effect on the environment are wide-ranging and include:

- Positive and adverse effects;
- Past, present and future effects;
- Cumulative effects; and
- Potential effects of low probability, but high potential impact.

9.18. As outlined earlier, sand is a critical component for infrastructure and development projects and has been listed on the Critical Mineral List for New Zealand.

9.19. Granting consent will secure an efficient marine sand supply to the Auckland market which is critical for the continued production of concrete products required for a range of building applications including regional and naturally important infrastructure. The efficient delivery of sand to the Auckland concrete market will facilitate the future delivery of infrastructure and development projects of regional and national benefits, as it has done so, for the last 80 years. The provision of new and replacement infrastructure and its on-going maintenance in Auckland is critical for the economic, social and cultural well-being of the Auckland and New Zealand communities.

9.20. The sand extraction site has been selected to ensure that the sand extraction process will not significantly impact on the coastal marine area including on indigenous biodiversity. The findings of the AEE based on the various technical reports indicate that the potential and actual effects of on the environment range from net positive to minor (in terms of RMA classification). Adverse effects need to be balanced against the positive effects.

9.21. The sand extraction methodology has been refined over time and the *William Fraser* has been specifically designed for sand extraction on the north-eastern coast of New Zealand and employs a range of technologies which avoids or minimises potential adverse effects. The implementation of various management plans and the recommended consent conditions further ensures potential adverse effects are avoided, managed and/or mitigated to an appropriate level.

9.22. It is concluded that granting the resource consent would give effect to the purpose of the RMA.

Assessment Against S6 - Matters of national importance

9.23. Section 6 sets out those matters of national importance that require consideration. In summary:

- Impacts on the natural character of the coastal environment has been assessed as being acceptable from a landscape and natural character standpoint. It has been concluded²⁹ in terms of Section 6 that:

“Based on this assessment, it is concluded that the landscape and natural character effects generated by the proposed sand extraction would typically be of a low order. Furthermore, they would remain below the ‘significant effects’ threshold in relation to the preservation of natural

²⁹ Section 12, Landscape and Natural Character Effects Assessment (Attachment Eight)

character values under Policy 13(1)(b) of the NZ Coastal Policy Statement and Section 6(a) of the Resource Management Act (1991)."

- There will be no effects on wetlands, lakes, rivers or their margins.
- There will be no effect on outstanding natural features and landscapes.
- There will be no effect on areas of significant indigenous vegetation and significant habitats of indigenous fauna.
- There will be no effect on public access within or along the coastal marine area.
- The proposal will not adversely impact on the relationship of Māori and their cultural and traditions with ancestral lands.
- There will be no effects on historic heritage.
- There will not be effects on existing protected customary rights.
- There are no significant risks from natural hazards that require further consideration.

Assessment Against S7 - Other matters

- 9.24. MBL is continuing to investigate through consultation if and how the project can provide for Tangata Whenua kaitiaki to exercise kaitiakitanga.
- 9.25. Sand extraction activities can generate adverse effects on the environment. The degree of effect is minimised through the proposed sand extraction location, sand extraction methodology and the implementation of an extensive set of conditions and various management plans.
- 9.26. Taking into account the potential effects on those natural or physical qualities that contribute to people's appreciation of the area's pleasantness, aesthetic coherence and cultural and recreational values, it is concluded that adverse effects on the amenity values for the area will be low and, in many cases, temporary (i.e. just during the period the *William Fraser* is in the locality). In respect to cultural effects on the amenity values of the area TBC.
- 9.27. The various ecological assessments undertaken (and as outlined in more detailed in Section 11) have concluded that potential adverse effects will range from negligible to low.
- 9.28. Overall, it has been concluded in the AEE (Section 11) that the quality of the environment within Te Ākau Bream Bay will be maintained.
- 9.29. The effects of climate change have been considered and any effects arising have been determined to be negligible (Section 11).
- 9.30. The sand resource along the northern east coast including Te Ākau Bream Bay is immense. This is not a situation where granting consent would result in a noticeable depletion of the sand resource.
- 9.31. The proposal will allow for the efficient extraction of a marine sand resource used in the development of the urban environment, and the delivery of it to the market at the rate and volume which may be required over the long-term. The benefits of a secure and efficient marine sand supply for the Auckland market have been addressed through this report and in the Assessment of Economic Effects.
- 9.32. Section 7(ba), (h) and (j) are not of relevance to this application.

Assessment Against Part 3 of the RMA

9.33. Part 3 of the RMA relates to the duties and restrictions under the RMA. It is considered that the proposal meets Part 3 of the RMA because:

- The resource consent being sought is the only consent required under s12 with Rule C.1.5.13 of the PRPN providing for the activity as discretionary activity.
- No consents are required in terms of s14 (restrictions relating to water).
- The PRPN rule C.1.5.13 that provides for the sand extraction also covers associated discharges. No additional consents are required under s15 (Discharge of contaminants into environment).
- The proposal does not involve dumping or incineration of waste or other matter in the coastal marine area and therefore complies with s15A of the RMA.
- The proposal does not involve the discharge of substances from ships or offshore installations and therefore complies with s15B of the RMA.
- Airborne and underwater acoustic assessments have been completed and the level of noise generated is not unreasonable. As a result, s16 of the RMA is complied with.
- As outlined in the AEE (Section 11), those adverse effects that will result will range from negligible to minor and effects will be managed through a comprehensive suite of consent conditions and management plans. It is considered that s17 of the RMA has been complied with.

Assessment Against Part 6 of the RMA

9.34. Part 6 of the RMA relates to resource consents. It sets out how decisions on applications for resource consents are considered if applied for under the RMA. The relevant sections in Part 6 are addressed below.

Draft for Consultation

- The primary decision-making section applying to the application is s104 of the RMA. A comprehensive assessment against s104 has been undertaken in Section 15 of this AEE. In summary:
 - It is concluded that, overall, the adverse environmental effects will be no more than minor.
 - It is considered that the proposal is either consistent with or gives effect to the relevant objectives and policies of the NZCPS.
 - It has been determined that the proposal is not contrary to the NPSIB in respect to those birds listed as highly mobile fauna in Appendix 2 of the NPSIB.
 - In terms of the RPS, it is considered that the proposal and granting consent would either give effect to, is consistent with or is not contrary to the relevant objectives and policies.
 - The proposal and the granting of consent would either directly give effect to, is consistent with or is not contrary to the relevant objectives and policies of the PRPN.
 - The proposal and granting consent would either be consistent with or not contrary to the relevant objectives and policies of the Operative Regional Coastal Plan. The exception to this is Policy 22.4.2 which the proposal is not consistent with as the area of sand extraction is not an area of known replenishment. However, the sand resource is so vast that this is not a situation where the sand resource will be exhausted (or even close to it) during the life-time of the consent.
 - The sand extraction site is outside the territorial boundary of WDC. However, it is considered appropriate to consider whether the proposal will affect those environmental

matters managed under the Whangarei Operative District Plan and in particular flora and fauna, Outstanding Natural Features and Outstanding Natural Landscapes. In respect to the objectives and policies relating to these it is found that the proposal and granting consent would not be contrary to these.

- In terms of other matters, consideration has been given to various Hapū management plans and TBC.
- Under s105 of the RMA when deciding an application for a discharge permit (with the consent being sought under Rule C.1.5.13 of the PRPN also covering associated discharges) the decision maker must have regard to the nature of the discharge and the sensitivity of the receiving environment to adverse effects; the applicant's reasons for the proposed choice; and any possible alternative methods of discharge, including discharge into any other receiving environment. This has been addressed in Section 15 and it has been concluded that the level of adverse effects arising from the discharge is negligible.
- Under s107 of the RMA it is considered that as the effects listed under s107(1) will not arise then there is no restriction on granting the consent.

Assessment Against Part 8 of the RMA

9.35. Part 8 of the RMA relates to designations and heritage orders. As no designations, notice of requirements, or heritage orders apply to the site or are proposed, Part 8 is not considered to be relevant to the proposal.

Assessment Against Part 9 of the RMA

9.36. Part 9 of the RMA relates to water conservation orders, freshwater farm plans and use of nitrogenous fertiliser. These matters are not relevant to any of the RMA approvals sought.

Assessment Against Part 10 of the RMA

9.37. Part 10 of the RMA relates to subdivision and reclamations. It is considered that Part 10 of the RMA is not relevant to this proposal.

Other Relevant Legislation

9.38. There is no other primary or secondary legislation relevant to the resource consent being sought in this application under the RMA.

Conclusion

9.39. Based on the analysis above, the project is considered to be consistent with the purpose and relevant principles of the RMA. In addition, it is considered that those sections of the RMA requiring consideration in terms of the Act have been addressed.

10. Description of The Sand Extraction Site and Surrounding Environment

The Receiving Environment

- 10.1. Environment is broadly defined in the RMA and is the place where the activity is to occur. The environment embraces not only the existing environment, but also the future state of the environment as it might be modified by permitted activities and by resource consents which have been granted where it appears likely³⁰ that those consents will be implemented.³¹ There are no known granted resource consents that may significantly modify the proposed sand extraction area or surrounds.
- 10.2. The proposed sand extraction area is located within Te Ākau Bream Bay and at its closest point is approximately 4.7 km from the Te Ākau Bream Bay shoreline. Te Ākau 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 attachments to the Landscape and Natural Character Effects Assessment (Attachment Eight) include a series of photographs of the extraction area from key viewpoints along Te Ākau Bream Bay.
- 10.3. Te Ākau Bream Bay is the entrance to Marsden Point and North Port. Marsden Point is one of New Zealand's busiest commercial ports and the main supply hub for New Zealand national oil and fuel imports. Fuel tankers, log carriers, the occasional cruise ship, and fishing vessels are a feature of this maritime environment, both waiting within Te Ākau Bream Bay to discharge their loads at Marsden Point and Northport or plying their way in and out of the harbour entrance. There is a commercial ships anchorage located to the north and south of the shipping channel which runs parallel to the proposed extraction area for a length of approximately 4 km with capacity for up to 7 vessels to be anchored at any one time. This anchorage area is used during most days of the year, with the commonly used inner northern anchorage site having a ship anchored for up to 9 months throughout the year.
- 10.4. The Port hosts an average of 576 ships per annum (2014-2024 inclusive) (Northland Regional Council, 2025), resulting in an average of 1152 vessel movements transiting in and out of Te Ākau Bream Bay per annum. This does not include the passage of recreational vessels whose numbers far exceed the number of commercial vessels transiting the bay³². The Navigation Safety Assessment³³ provides further details on shipping movements and recreational and commercial fishing vessels present in the Te Ākau Bream Bay area.
- 10.5. Te Ākau Bream Bay has a large commercial and recreational fishing presence, including the use of bottom trawling techniques. Historically, the embayment was widely dredged for scallops until the ban on scallop dredging came into effect in March 2023. Extensive scallop dredging occurred until 2021 with a total of 160,649 scallop dredge tows from 1990 to 2021 occurring (Ministry for Primary Industries, 2023)³⁴. The area has historically been trawled and Danish seined fished with about ½ of the sand extraction area still open to this fishing.
- 10.6. It can be expected that both recreational and commercial fishing occur from time to time in the proposed extraction area. However, about ½ 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 Te Ākau Bream Bay. There is a small intermittent crab and whelk fishery, but this would occur inshore of the extraction area. Further details on the commercial and recreational fishing activities in the Te Ākau Bream Bay area are outlined in Sections

³⁰ Likely means "more likely than not".

³¹ Queenstown Lakes District Council v Hawthorn Ltd [2006] NZRMA 424 at [79].

³² Para TBC Navigation Safety Assessment (Attachment Twenty)

³³ Pages 8-10, Navigation Safety Assessment (Attachment Twenty)

³⁴ Ministry for Primary Industries. 2023. Extent and intensity of bottom contact by commercial trawling and shellfish dredging in New Zealand waters, 1990–2021 New Zealand Aquatic Environment and Biodiversity Report No. 316 D.J. MacGibbon, R. Mules ISSN 1179-6480 (online) ISBN 978-1-991087-19-5 (online)

- 10.7. In terms of landscape, Te Ākau Bream Bay is a large, gently curving bay, centred on an expansive ocean beach that is bookended by Whangārei Harbour and Heads to the north and Paepae-o-Tu / Bream Tail, together with the outer Brynderwyn Range, to the south. The bay is also framed by the Hen and Chicken and Marotere Islands out to sea, while a rolling sequence of hill country and forest – anchored by the Ruakākā and Mareretu Forests – encloses the coastal plain that extends from Waipū Cove to Marsden Point. This plain is subdivided by two river corridors, focusing on the Waipū River in the south and the Ruakākā River at the centre of both the plain and bay³⁵. A further description of the site and its landscape context and values is provided in Sections 3 and 4 of the Landscape and Natural Character Effects Assessment (Attachment Eight).
- 10.8. Much of the coastal margins of Te Ākau Bream Bay are developed and modified. Although the outer Whangārei Heads embracing Mt Lion and Bream Head are identified as an Outstanding Natural Landscape under the PRPN, 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 Waipū River mouth, are identified as comprising areas of High and Outstanding Natural Character in the PRPN, most of Te Ākau Bream Bay's coastline and the coastal marine area are devoid of such notation.
- 10.9. The Coastal Process Effects Assessment (Attachment Nine) provides a detailed description of the coastal environment which the sand extraction area is located within including geology, topography, bathymetry, sediments, water levels, wind and wave climate and tidal circulation. The following paragraphs provide a brief summary from this assessment.
- 10.10. Within the coastal marine area, Te Ākau Bream Bay 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.
- 10.11. Te Ākau Bream Bay is characterised by white sand beach that transitions into a sand dune system that formed over the late-Pleistocene and Holocene. Coastal sediments at Te Ākau Bream Bay are a combination of late-Pleistocene and Holocene age coastal and river deposits. The historic sediment supply that formed the coastal system is no longer active and the current sediment budget is considered functionally closed, with no sediment inputs to the coast or nearshore.
- 10.12. The sand extraction site is located in the offshore zone, seaward of the lower shoreface, with a minimum buffer distance of 880 m from the conservative lower shoreface. The beach profile and shoreline position data both indicate that the shoreline changes dynamically in space and time at Te Ākau Bream Bay. While some locations show a net trend of accretion, others show a net trend of erosion. On balance, the net trend of the bay is considered to most likely be in a state of dynamic equilibrium, with variability in space and time.
- 10.13. Te Ākau 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 Te Ākau Bream Bay more sheltered to swell due to Whangārei Heads than the southern end of the Bay.
- 10.14. The Te Ākau Bream Bay ambient water quality has been described in the Water Quality Assessment of Environmental Effects. In summary the water quality (for key water quality parameters turbidity, TSS, pH, nutrients, and metals contaminants) is considered to be of high value³⁶.

³⁵ Section 4.1, Landscape and Natural Character Effects Assessment (Attachment Eight)

³⁶ Page iii, Water Quality Assessment of Environmental Effects (Attachment Ten)

10.15. The sediment testing undertaken has confirmed that all constituents were low and were below the relevant ANZECC DGV-Low guidelines for marine sediments. Mercury and total petroleum hydrocarbons were not detected in sediments in any of the twenty composite samples³⁷.

10.16. The sand extraction area has a habitat type (clean sandy seabed) that is also found in other areas of the outer Hauraki Gulf and northeastern New Zealand. The habitat is dynamic, with mobile sediments supporting common, opportunistic benthic fauna and a fish community containing common nearshore species. Less common fish and reptile species may pass through the area. However, they are considered to be vagrant and therefore not part of the water community³⁸.

10.17. A range of benthic species typical of the Mangawhai-Pākiri/Te Ākau Bream Bay are located in the area which includes scallops, starfish and numerous polychaetes and mollusc species but generally not in significant numbers. A further assessment of benthic habitat and fauna is included in Section 4.3 of the Assessment of Ecological Effects (Attachment Thirteen). Two species (*Kionotrochus sutrei*, *Sphenotrochus* sp.) of cup corals have been recorded within the sand extraction area and are addressed in the Scleractinian cup corals at Te Ākau Bream Bay Report (Attachment Twenty-Two). The benthic biota faunal community is ascribed a classification of moderate ecological value³⁹.

10.18. Thirty-four marine mammal species are known to have a presence in the wider region with data suggesting that only seven species – bottlenose dolphins, common dolphins, Bryde's whales, false killer whales, pilot whales, killer whales, and New Zealand fur seals – commonly visit Te Ākau Bream Bay and the immediate surrounds. Other species that are expected to be present less frequently include leopard seals, southern right whales, humpback whales, blue whales, sei whales, sperm whales, dwarf minke whales, and Gray's beaked whales. These species are considered to have a possible occurrence in the region, noting that the presence of southern right whales and humpback whales will be seasonal over the months of winter and spring, and that several others are primarily offshore deep-water species, e.g. blue whales, sei whales, minke whales, beaked whales, and sperm whales. Virtually all species that have been identified as having a likely or possible presence here have large home ranges, so the proposed sand extraction area would only represent a very small part of their overall distribution. The only potential exception to this is for bottlenose dolphins that have a high degree of residency to Te Ākau Bream Bay. Section 3.2 of the Marine Mammal Environmental Impact Assessment (Attachment Fifteen) provides a further description on the presence of Marine Mammals. Table 1 of the Assessment provides the NZCPS Policy 11(a) and (b) status of each species.

10.19. A wide range of common coastal fish and shellfish species are present within Te Ākau Bream Bay, 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. The shellfish resources of Te Ākau Bream Bay are typical of coastal areas. Populations of pipi and tuangi (cockle) occur in suitable intertidal habitats on the coastal fringe, tipa (scallop) occur sub-tidally near the harbour entrance and in the central part of Te Ākau Bream Bay. Section 2 of the Assessment of Effects on Fish and Fisheries in Te Ākau Bream Bay (Attachment Seventeen) provides further details on the fish and shellfish fauna of Te Ākau Bream Bay. The demersal fish community is ascribed a classification of low ecological value⁴⁰.

10.20. Mangō taniwha (great white shark) are classified as Nationally Endangered under the New Zealand Threat Classification System and may migrate through the sand extraction area and have been described in the Assessment of Ecological Effects⁴¹.

10.21. Marine turtles and snakes have been identified in the past in the wider area in the past and these have been described in the Assessment of Ecological Effects⁴².

10.22. A conservative total of 34 seabird taxa, of which five are classified as 'Threatened' under the New Zealand Threat Classification System (NZTCS: Tara Iti Fairy Tern *Sternula nereis*, takahikare-

³⁷ Section 3.3, PSEAR (Attachment Twenty-Six)

³⁸ Section 4.6, Assessment of Ecological Values (Attachment Thirteen)

³⁹ Section 4.3, Assessment of Ecological Effects (Attachment Thirteen)

⁴⁰ Section 4.4, Assessment of Ecological Effects (Attachment Thirteen)

⁴¹ Section 2.2.6, Assessment of Effects on Fish and Fisheries in Te Ākau Bream Bay (Attachment Seventeen)

⁴² Section 4.5, Assessment of Ecological Effects (Attachment Thirteen)

raro New Zealand storm petrel *Fregetta maoriana*, taranui Caspian tern *Hydropogon caspia*, tākoketa black petrel *Procellaria Parkinson* and toroa grey-headed albatross *Thalassarche chrysostoma*), with a further 23 taxa classified as ‘At Risk’, were identified as likely to occur in the within Te Ākau Bream Bay area. Overall, 82% of seabird taxa likely to occur in Te Ākau Bream Bay are classified as either ‘Threatened’ or ‘At Risk’⁴³. The Tara Iti Fairy Tern breeds at the Waipū estuary, 5.6 km to the southwest of the proposed sand extraction area, with 1-2 breeding pairs at this site.

- 10.23. Additionally, 13 shorebird taxa, of which three are classified as ‘Threatened’ under the NZTCS (matuku-hūrepo Australasian bittern *Botaurus poiciloptilus*, ngutu pare wrybill *Anarhynchus frontalis* and tūturiwhātū northern New Zealand dotterel *Charadrius obscurus aquilonius*), with a further six classified as ‘At Risk’, were identified as likely to occur in Te Ākau Bream Bay⁴⁴.
- 10.24. The ambient noise environment at the shoreline, where receivers (members of the public) may be located, fluctuates considerably depending on wind and swell conditions due to it being dominated by wave movements. Section 5 of the Assessment of Airborne Noise Effects (Attachment Eleven) sets out the typical ambient noise levels.
- 10.25. The ambient underwater soundscape within Te Ākau Bream Bay is complex with a range of sound sources occurring simultaneously at any given time. Wind, waves and tides (causing sediment entrainment) were the primary contributors to the bay’s geophony, while fish, marine mammals and snapping shrimp formed the area’s biophony. Vessels were the primary anthropogenic noise source. This is further described in Section 5 of the Underwater Acoustics Report (Attachment Twelve).
- 10.26. Seven regionally significant surf breaks (as defined by the New Zealand Surfing Guide Book and in the PRPN) are present on the east coast of Te Ākau Bream Bay. These surf breaks are located inshore of the proposed extraction area and are described in further detail in the Assessment of Effects on Surf Breaks in Te Ākau Bream Bay (Attachment Eighteen) with Figure 1.1 of that Assessment identifying the general location of those surf breaks.
- 10.27. The CIAs (Attachments Twenty-Three to Twenty-Five) outline the TBC.
- 10.28. The PRNP identifies in the wider Te Ākau Bream Bay area Significant Bird, Significant Ecological, Sites and Areas of Significant to Tangata Whenua, Outstanding Natural Features, Outstanding Natural Character and High Natural Character Areas along with Regionally Significant Surf Breaks. The locations of these are shown on the plans in Attachment Thirty-Six.
- 10.29. The sand extraction site is outside the Te Pēwhairangi (Bay of Islands) Marine Mammal Sanctuary, and the non-statutory Important Marine Mammal Area identified by International Union for Conservation of Nature⁴⁵.

Permitted Baseline Assessment

- 10.30. The “permitted baseline” is an analytical tool that can be used to assist an effects assessment (in the context of Schedule 5 of the Act). Its purpose is to identify effects that could be generated by activities that are permitted. It allows (but does not require) a consent authority to disregard an adverse effect of an activity on the environment if a national environmental standard or the plan permits an activity with that effect.
- 10.31. For the sand extraction site area and immediate surrounds, the permitted baseline includes the movement and anchorage of vessels (including both recreational and commercial vessels). The site is directly inshore of 7 anchoring points for oil and fuel tankers, log and cement carriers and freighters⁴⁶. It is considered that this should form part of the permitted baseline, particularly when assessing the visual and natural character effects.

⁴³ Page 6, Potential Effects on Seabirds and Shorebirds (Attachment Fourteen)

⁴⁴ Page 6, Potential Effects on Seabirds and Shorebirds (Attachment Fourteen)

⁴⁵ Pages 35 and 36, Marine Mammal Environmental Impact Assessment (Attachment Fifteen)

⁴⁶ Section 3.1, Landscape and Natural Character Effects Assessment (Attachment Eight)

- 10.32. Sampling and scientific investigations are permitted provided no more than one cubic metre of sand, shingle, shell or other natural material is removed in any 24-hour period, the head size of any drilling equipment used does not exceed 250 millimetres in diameter, and Rule C.1.8 (Coastal works general conditions) are complied with. Although the proposed monitoring complies with this, this extent of extraction is significantly below the proposed sand extraction rate and therefore does not assist with the permitted baseline assessment for this application.
- 10.33. Certain navigation structures and signs are permitted but there is no obvious reason why such structure would be constructed in the sand extraction area and it is therefore considered that such structures should not be included in the permitted baseline. Certain monitoring and sampling equipment is permitted but these are very limited in size and in occupation duration and again do not assist in the permitted baseline assessment in terms of this application.

Depth of Closure and Depth of Transport

- 10.34. The identification of the landward edge of the sand extraction area has been determined so that the sand extraction activity is located sufficiently seaward of the beach and at sufficient depth to have negligible direct or indirect effects on coastal processes and landforms.
- 10.35. Coastal process theory and international guidance on marine sand extraction indicate that removal of sand from the seabed is likely to have a negligible effect on coastal processes and landforms if the activity is undertaken in the offshore zone, at a suitable depth and distance seaward of the beach. This location can be defined by the point of negligible wave induced net sediment transport⁴⁷.
- 10.36. The analysis undertaken in the Coastal Process Effects Assessment applies a range of methods to calculate the seaward limit of the shoreface at Te Ākau Bream Bay to confirm the location is suitable for sand extraction from a coastal process perspective. Three methods were used to calculate the point of negligible connectivity between the active beach profile and the seabed:
 - The empirically calculated inner Depth of Closure as a standard definition of the upper shoreface boundary.
 - The empirically calculated outer Depth of Closure as a traditional definition of the lower shoreface boundary.
 - The bed shear stress induced Depth of Transport as a modern definition of the lower shoreface boundary.
- 10.37. The Coastal Process Effects Assessment outlines the different methods to calculate the depth of closure and also the depth of transport for various profiles across the sand extraction site. Figure E.13 from the Assessment (Figure Thirteen below) shows the sand extraction site relative to the outer depth of closure and the depth of transport. The sand extraction site is on the seaward side and therefore at a deeper depth than the depth of closure and depth of transport which is of importance when assessing the potential effects on the sediment transport, the foreshore, and surf breaks for example.

⁴⁷ Executive Summary, Coastal Process Effects Assessment (Attachment TBC)

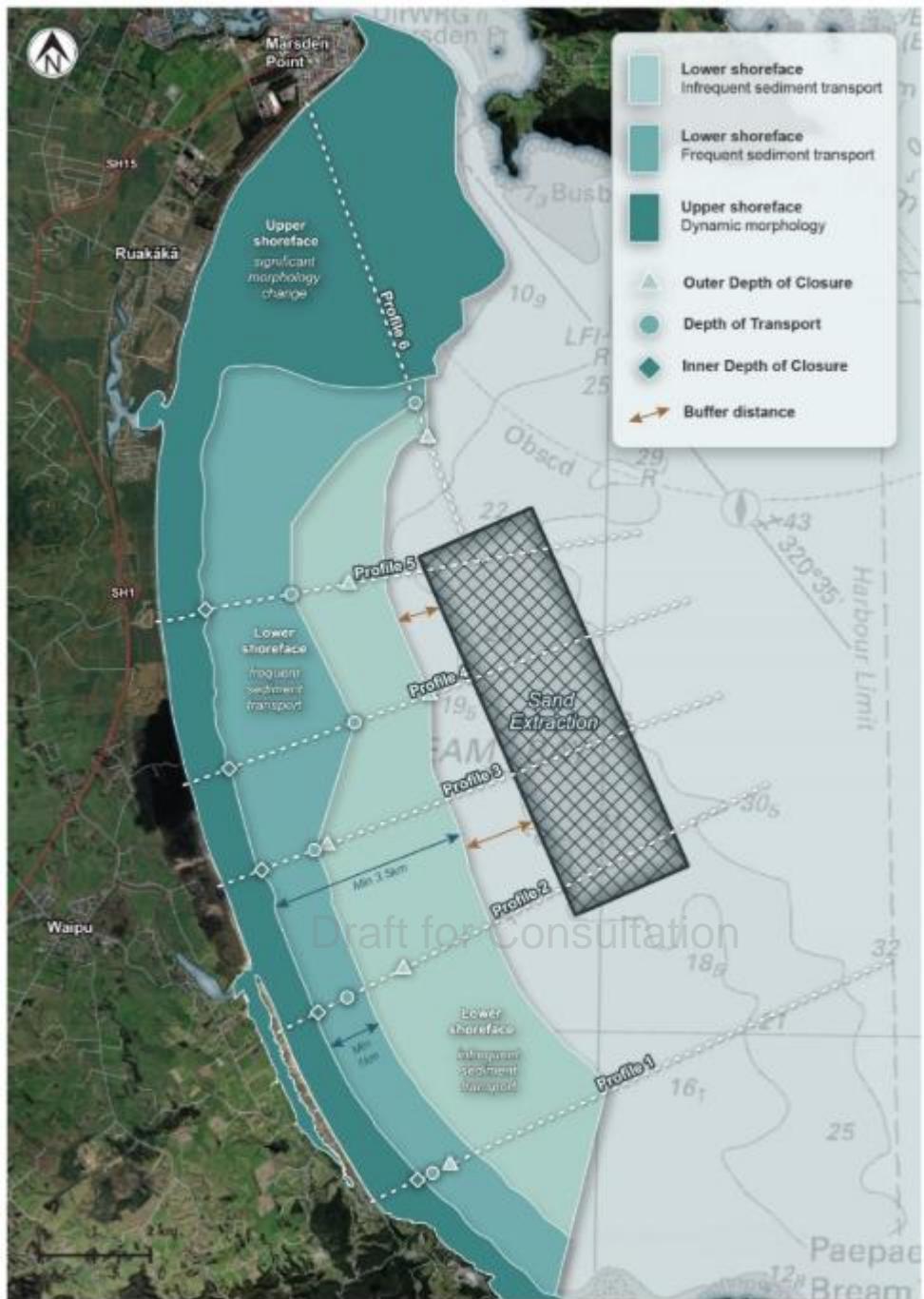


Figure Thirteen: Figure E.13 from the Coastal Process Effects Assessment

11. Assessment of Effects on the Environment

Introduction

11.1. This section provides the assessment of the actual and potential effects of the Project in accordance with Schedule 5, Clauses 5, 6 and 7 of the Act. This AEE draws on the various specialist assessments (including CIA's) prepared for and included as Attachments to this application.

11.2. Clause 6 sets out the information required to assess environmental effects and states:

(1) *The assessment of an activity's effects on the environment under clause 5(4) must include the following information:*

- (a) *an assessment of the actual or potential effects on the environment;*
- (b) *if the activity includes the use of hazardous installations, an assessment of any risks to the environment that are likely to arise from such use;*
- (c) *if the activity includes the discharge of any contaminant, a description of—*
 - (i) *the nature of the discharge and the sensitivity of the receiving environment to adverse effects; and*
 - (ii) *any possible alternative methods of discharge, including discharge into any other receiving environment;*
- (d) *a description of the mitigation measures (including safeguards and contingency plans where relevant) to be undertaken to help prevent or reduce the actual or potential effect of the activity;*
- (e) *identification of persons who may be affected by the activity and any response to the views of any persons consulted, including the views of iwi or hapū that have been consulted in relation to the proposal;*
- (f) *if iwi or hapū elect not to respond when consulted on the proposal, any reasons that they have specified for that decision;*
- (g) *if the scale and significance of the activity's effects are such that monitoring is required, a description of how the effects will be monitored and by whom, if the activity is approved;*
- (h) *an assessment of any effects of the activity on the exercise of a protected customary right.*

11.3. In respect to the matters above, the following assessment of effects covers (a) and (c). Clauses (b) and (h) are not applicable to this application. A description of mitigation measures (clause d) is included in Section 6 and 7 of this report with Section 7 outlining the proposed monitoring (clause g). A description of the consultation outcome and responses received (clauses (d) and (f)) is provided in Section 14.

11.4. Clause 7 then sets out the matters to be covered in the AEE and states:

The assessment of an activity's effects on the environment under clause 5(4) must cover the following matters:

- (a) *any effect on the people in the neighbourhood and, if relevant, the wider community, including any social, economic, or cultural effects;*
- (b) *any physical effect on the locality, including landscape and visual effects;*
- (c) *any effect on ecosystems, including effects on plants or animals and physical disturbance of habitats in the vicinity;*
- (d) *any effect on natural and physical resources that have aesthetic, recreational, scientific, historical, spiritual, or cultural value, or other special value, for present or future generations;*

- (e) any discharge of contaminants into the environment and options for the treatment and disposal of contaminants;
- (f) any unreasonable emission of noise;
- (g) any risk to the neighbourhood, the wider community, or the environment through natural hazards or hazardous installations.

11.5. This AEE addresses those matters outlined in Clause 7 of Schedule 5.

11.6. This assessment is divided into the following sub-sections:

- Positive Effects
- Effects on Coastal Processes
- Visual, Landscape and Amenity Effects
- Effects on Water Quality
- Acoustic Effects
- Lighting Effects
- Ecological Effects (including Effects on Benthic Organisms, Marine Reptiles Marine Mammals, Fish and Fisheries and Avifauna)
- Effects on Surf Breaks and Other Recreational Activities
- Effects on Commercial Activities
- Cultural Effects
- Climate Change and Natural Hazards
- Navigation Safety
- Cumulative Effects

Draft for Consultation

11.7. The assessments undertaken were on the basis that the proposed sand extraction is at the maximum volumes outlined in the proposed consent conditions and that the consent is for a 35-year period.

11.8. Various assessments have used different categorisations to define the level of effects. It is noted that:

- The Potential Effects on Seabirds and Shorebirds utilises the risk level rating from MacDiarmid *et al* (Expert risk assessment of activities in the New Zealand Exclusive Economic Zone and extended continental shelf, NIWA, 2011). The term “low” in this assessment equates to the term “minor effects” used in the RMA.
- The Assessment of Ecological Effects and Marine Mammal Environment Impact Assessment utilises the Environment Institute of Australia and New Zealand (“EIANZ”) criteria for describing the level of effects. “Low” equates to the term “minor effects” used in the RMA.
- In the Coastal Process Effects Assessment, Table 5.1 outlines the qualitative definition of level of effects. “Low” equates to the term “minor effects” used in the RMA and “negligible” equates to “less than minor”.

- The Landscape and Natural Character Effects Assessment utilises the effects rating in Te Tangi a Te Manu. “Low” equates to the term “less than minor” to “minor” and “low-moderate” equates to “minor” used in the RMA.
- A number of assessments have used the term “negligible” which falls within the scope of “less than minor” used in the RMA.

Positive Effects

11.9. As outlined earlier, marine sand is a critical component for the manufacture of concrete and in particular high-strength concrete applications predominantly used for infrastructure projects. This is reflected in the inclusion of sand in the New Zealand Minerals Strategy to 2040 and A Critical Minerals List for New Zealand.

11.10. Like many parts of New Zealand, Auckland is facing a substantial required infrastructure project backlog. Access to suitable, and sufficient volumes of high-quality marine sourced sand from appropriate locations is therefore critical for the continuing development of Auckland. The requirement for premium quality sand in Auckland remains very important and the efficient and timely delivery of many infrastructure and development projects, including those listed in Schedule 2 of the Act. Many of these projects may not be feasible without a secure and efficient supply of marine sand for high strength concrete manufacture.

11.11. The Auckland economy is multi-faceted and includes all areas and communities within Auckland, including the very significant Māori economy. As a key component of concrete, just about every development in Auckland has a requirement for sand and therefore sand resources, including marine sand resource, are of regional importance to Auckland.

11.12. The proposal has a range of potential positive effects:

- a) Access to a new secure sand resource for the Auckland market and to a lesser extent for the Northland, Bay of Plenty and Waikato markets.
- b) Increased resilience in the sand supply market (including greater competition).
- c) Access to a sand source that can be delivered to the market efficiently.
- d) Access to the sand source which can be delivered to market with lower rates of emissions than other sand sources.

11.13. The Assessment of Economic Effects provides a detailed assessment of the economic benefits of the proposal. This Assessment concludes:

“162. Access to sufficient sand is essential to facilitate Auckland’s economic growth aspirations by enabling cost effective infrastructure investment. The location of the sand resource relative to end users is important because transport distance and mode combine to influence the delivered cost of sand. In turn, concrete prices increase in line with input costs thereby influencing infrastructure delivery. Investment in things such as roads, buildings, three waters and other assets become more expensive leading to difficult trade-offs. The direct benefit (avoided cost) associated with enabling sand extraction at Te Ākau Bream Bay is estimated at \$374.4m (at 5% over 35 years). This includes costs associated with the environmental and social externalities that are estimated at \$116m. Clearly, these are significant costs and avoiding them will deliver significant regional benefits.”

163. A portion of the costs relate to avoiding emissions. While the assessment expresses the avoided emissions in dollar terms, it is important to note that the calculation uses the shadow price of carbon – it does not reflect the damage associated with weather and extreme natural events associated with climate change. Reducing our emissions is critical.

164. *Auckland's current main source of sand at the Taporapora banks in the Kaipara Harbour, has consents which expire in 2027, and successful reconsenting is by no means a certainty. This makes Auckland's sand supply very vulnerable, so additional sources such as Te Ākau Bream Bay are essential to increase Auckland's sand supply's resilience.*
165. *Without enough high-quality sand, there will be delays in delivering the concrete used to complete such projects. Limited sand supply will mean that sand is rationed across concrete suppliers, and investments in environmental infrastructure will compete for concrete, and other resources, meaning that delivery timeframes will be pushed out.*
166. *Enabling sand extraction at Te Ākau Bream Bay will provide resilience to the sand supply network provide additional flexibility to the concrete supply chain – a key element of any infrastructure and climate change resilience programme (before or after extreme weather events). In addition to the avoided costs, enabling sand extraction at Te Ākau Bream Bay will deliver wider benefits to Auckland by supporting the construction sector, thereby contributing to, and facilitating, the delivery of infrastructure and development costs. As the economy returns to a growth pathway, pressures on the sand supply market are expected to emerge. These pressures could constrain construction's ability to respond to the return to growth (i.e., the change in activity levels) as well as any demand impulse arising from projects associated with the Fast Track Applications Act (2024), i.e., above baseline activity. Enabling Te Ākau Bream Bay will provide supply chain resilience and avoid concentration risks associated with having a significant share of Auckland sand originate from one source. Diversifying supply options across multiple sources locations help to address these risks.”*

11.14. Auckland's sand supply is highly concentrated with most sand now sourced from the Kaipara Harbour. This is resulting in a significant concentration risk due to the reliance of this single source for a large portion of the supply. The sand market itself is currently very tight and significant pressures on sand supply can be expected as the economy returns to a more normal growth and as construction (including those projects granted consent under the Act) increases from the current low levels.

11.15. Without a new marine sand supply, a significant shift to alternatives, or a lift in production volumes a sand requirement deficit position will arise. Granting consents for this project will ensure that there is sufficient capacity in the sand supply market to provide supply chain resilience while supporting efficient market operation and avoiding concentration risk. In very blunt terms, any shortage of marine sands in the Auckland market results in a reduction in possible high strength concrete production which then results in delays of delivery of concrete (and in particular high strength concrete) to those infrastructure or development projects which have ordered it. This then results in both delays in the delivery of those projects and increased costs. Such delays and costs have a direct adverse impact on the Auckland community (and in terms of major infrastructure, often beyond Auckland).

11.16. Enabling sand to be extracted from Te Ākau Bream Bay to support the Auckland sand market will have direct benefits associated with the construction sector. The sand market, and its functioning in the context of construction and infrastructure delivery, is regionally significant. Without sufficient sand, the market cannot operate efficiently, and infrastructure delivery will be constrained with adverse flow on effects.

11.17. Enabling Te Ākau Bream Bay sand extraction is the most cost-effective option relative to the principal alternative (Kaipara Harbour sourced sand) as well as a manufactured sand option⁴⁸.

11.18. This proposal would also allow for the distribution of relatively small volumes of sand to concrete manufacturers in Northland and the Bay of Plenty. The Bay of Plenty in particular has had sand supply issues since supply from the Pākiri Off-Shore site to the area ceased in 2023.

11.19. Marine sands have historically and continue to provide major benefits to Aucklanders through their use in just about all major infrastructure projects. A secure and efficient supply of marine sand to the Auckland concrete market remains vital for the delivery of concrete for infrastructure and development

⁴⁸ Paragraph 35, Assessment of Economic Effects (Attachment Nineteen)

projects. These projects are critical for the on-going social, economic and cultural well-being of Aucklanders and in many cases, for all New Zealanders.

Effects on Coastal Processes

11.20. The Coastal Process Effects Assessment is included in Attachment Nine. This Assessment considers the effects on coastal processes (i.e., waves, hydrodynamics, sediment transport, shoreface morphology and coastal morphology) and also the effects on a number of specific locations along the coastline (Langs Beach, Waipū Cove Beach, Uretiti Beach, Ruakākā Beach, the NIWA Aquaculture Water Intake and Mair Bank). Figure Fourteen below illustrates the extent of the beach, upper shoreface, lower shoreface and offshore which are used in the Assessment.

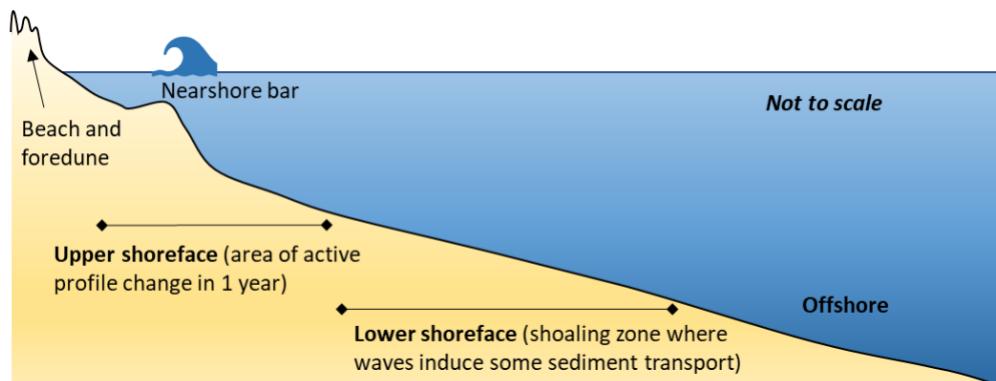


Figure Fourteen: Schematic Coastal Profile (from the Coastal Process Effects Assessment)

11.21. This Assessment concludes⁴⁹:

"The overall effect of the proposed offshore sand extraction activity at Te Ākau Bream Bay on coastal processes within the beach, upper and lower shoreface of Te Ākau Bream Bay is low to negligible. The level of effect is negligible to low within the proposed extraction area, as summarised for each zone and element below.

Table 5.2: Summary of effects on the physical coastal environment

Zone	Element	Summary of effect	Effect level
Proposed extraction area	Waves	Very limited change in wave height and direction associated with seabed being up to 0.55 m deeper.	Negligible
	Hydrodynamics	The 2% change in depth within the extraction area and uniform extraction are not expected to modify oceanographic current.	Negligible
	Sediment transport	Sediment mobility can occur in the extraction zone during extreme conditions, with negligible net sediment transport. The activity is not expected to influence sediment transport processes unless tracks create local anomalies through repetition.	Moderate if unmanaged to the point that relatively deep tracks form. Low if managed to avoid repeat tracks.
	Morphology	The activity could lower the seabed by an average depth of 0.55 m within the extraction	Low within the extraction area due to the extraction

⁴⁹ Pages 90-92, Coastal Process Effects Assessment (Attachment Nine)

Zone	Element	Summary of effect	Effect level
		<p>area over 35 years if the maximum volume is removed.</p> <p><i>This is not expected to change the overall bedform characteristics within the extraction area, or waves and hydrodynamics.</i></p>	method to take small track depths that are managed over the extent of the extraction area.
Lower shoreface	Waves	No notable change to wave processes on the lower shoreface.	Negligible
	Hydrodynamics	No change to hydrodynamics is expected on the lower shoreface which is outside of the extraction footprint.	Negligible
	Sediment transport	Some connectivity between the seaward lower shoreface and the extraction area could be influenced during extreme events, but this is infrequent and unlikely to be consequential.	Low
	Morphology	The lower shoreface is expected to be morphologically stable over annual to decadal timescales and is not expected to be altered by the offshore extraction.	Low
Upper shoreface	Waves	Wave processes on the upper shoreface were assessed by MetOcean to potentially be altered by a few cm if the full extraction is achieved.	Negligible
	Hydrodynamics	No change to hydrodynamics is expected on the upper shoreface which is outside of the extraction footprint.	Negligible
	Sediment transport	Sediment transport processes on the upper shoreface are dominated by local extreme conditions and are disconnected from the activity by a 4.7 km distance.	Negligible
	Morphology	The upper shoreface is a morphologically active zone that is disconnected from the extraction area. Offshore sand is not expected to have a detectable effect in this area.	Negligible
Beach	All elements	No detectable change in physical parameters.	Negligible

11.22. Specific consideration has been given to the effects on coastal morphology⁵⁰ which is of importance when considering potential effects on that area above Mean High Water Spring (“MHWS”) and effects on matters such as habitats above MHWS and natural character. The assessment finds:

⁵⁰ Section 5.10, Coastal Process Effects Assessment (Attachment Nine)

“A potential adverse effect from marine sand extraction is that this can cause a ‘drawdown’ of the beach. This occurs if the extraction is undertaken on the shoreface or surf-zone area that has a morphology in dynamic equilibrium with the wave climate and sediment supply. A drawdown would occur if the extraction activity forced the sediment system to be out of equilibrium, resulting in a sediment exchange from the beach to fill the holes left by the extraction. The effect of a ‘draw down’ is erosion of the beach and or dune, resulting in a beach that has less recreational space, reduced habitat area, and reduced resilience to climate change.

The sand extraction proposal for Te Ākau Bream Bay is located sufficiently offshore, in terms of distance and depth that the activity is not expected to directly or indirectly influence the beach and dune environment. This is confirmed by analysing the inner and outer DoC and the DoT, which indicate the activity is occurring at a suitable seaward depth and location for the extraction to avoid the risk of drawdown, indicating a negligible effect on coastal morphology of the beach at the present time.

The negligible effect of the extraction on wave transmission towards the shoreline is also not expected to influence coastal processes. Therefore, the overall effect of the activity on the beach and dune environment is assessed to be negligible, through the design of the location being offshore of the DoC.”

11.23. In terms of the specific areas considered, the Coastal Process Effects Assessment finds:

Langs Beach⁵¹:

“The proposed sand extraction area is located offshore, beyond the DoC and DoT and is therefore not expected to interfere with the natural sediment movement between the beach and shoreface at Langs Beach. Storm events at Langs Beach would be expected to transfer sediment from the dune and beach to the upper shoreface, to a depth of approximately 10 m. The proposed extraction area is located a further 6 km from the 10 m depth contour at the closest point. Following storm events, sand deposited on the upper shoreface is expected to gradually return to the beach through wave shoaling and bar migration processes. Due to the offshore location of the sand extraction, it is very unlikely that proposed activity could interrupt the natural sediment dynamics at Langs Beach through a draw-down effect. The proposed sand extraction is not expected to increase the vulnerability of Langs Beach to erosion from coastal storms and sea level rise.”

Waipū Cove Beach⁵²

“The proposed sand extraction area is located offshore, beyond the DoC and DoT and is therefore not expected to interfere with the natural sediment movement between the beach and shoreface at Waipū Cove. Storm events at Waipū Cove would be expected to transfer sediment from the dune and beach to the upper shoreface, to a depth of approximately 10 m. The proposed extraction area is located a further 5 km from the 10 m depth contour at the closest point. Following storm events, sand deposited on the upper shoreface is expected to gradually return to the beach through wave shoaling and bar migration processes. Due to the offshore location of the sand extraction, it is very unlikely that the proposed activity could interrupt the natural sediment dynamics at Waipū Cove through a draw-down effect. The proposed sand extraction is not expected to increase the vulnerability of Waipū Cove to erosion from coastal storms and sea level rise.”

The proposed extraction area is in the swell corridor for Waipū Cove which means waves pass over the proposed extraction area before arriving at local beach. If the extraction activity altered the bathymetry to a point that waves arriving at Waipū Cove were altered in height or direction, this could change the natural flow of sediment at the coast. The MetOcean Solutions Ltd (2024) has assessed potential changes to wave conditions at Waipū Cove based on the full proposed extraction area being lowered by 0.55 m. The results for Waipū Cove identified the maximum difference in wave height is 0.01 m and the modelled change in mean wave direction is <1 degree, which will have negligible influence the local coastal process regime (not discernible above natural variability).”

⁵¹ Section 5.12.2, Coastal Process Effects Assessment (Attachment Nine)

⁵² Section 5.12.3, Coastal Process Effects Assessment (Attachment Nine)

Uretiti Beach⁵³

“The proposed sand extraction area is located offshore, beyond the DoC and DoT and is therefore not expected to interfere with the natural sediment movement between beach and shoreface at Uretiti. Storm events at Uretiti would be expected to transfer sediment from the dune and beach to the upper shoreface, to a depth of approximately 10 m. The proposed extraction area is located a further 4 km from the 10 m depth contour at the closest point. Following storm events, sand deposited on the upper shoreface is expected to gradually return to the beach through wave shoaling and bar migration processes. Due to the offshore location of the sand extraction, it is very unlikely that the proposed activity could interrupt the natural sediment dynamics at Uretiti through a draw-down effect. The proposed sand extraction is not expected to increase the vulnerability of Uretiti to erosion from coastal storms and sea level rise.”

“The proposed extraction area is in the swell corridor for Uretiti which means waves pass over the proposed extraction area before arriving at the local beach. If the extraction activity altered the bathymetry to a point that waves arriving at Uretiti were altered in height or direction, this could change the natural flow of sediment at the coast. The MetOcean Solutions Ltd (2024) did not assess potential changes to wave conditions specifically at Uretiti, so sites at Ruakākā and Waipū River has been reviewed. The results for identified the maximum difference in wave height is 0.01 m and the modelled change in mean wave direction is <1 degree, which will have negligible influence the local coastal process regime (not discernible above natural variability).”

Ruakākā Beach⁵⁴

“The proposed sand extraction area is located offshore, beyond the DoC and DoT and is therefore not expected to interfere with the natural sediment movement between beach and shoreface at Ruakākā Beach. Storm events at Ruakākā Beach would be expected to transfer sediment from the dune and beach to the upper shoreface, to a depth of approximately 10 m. The proposed extraction area is located a further 4 km from the 10 m depth contour at the closest point. Following storm events, sand deposited on the upper shoreface is expected to gradually return to the beach through wave shoaling and bar migration processes. Due to the offshore location of the sand extraction, it is very unlikely that the proposed activity could interrupt the natural sediment dynamics at Ruakākā Beach through a draw-down effect. The proposed sand extraction is not expected to increase the vulnerability of Ruakākā Beach to erosion from coastal storms and sea level rise.”

“The proposed extraction area is in the swell corridor for Ruakākā Beach which means waves pass over the proposed extraction area before arriving at local beach. If the extraction activity altered the bathymetry to a point that waves arriving at Ruakākā Beach were altered in height or direction, this could change the natural flow of sediment at the coast. The MetOcean (2024) has assessed potential changes to wave conditions at Ruakākā based on the full proposed extraction area being lowered by 0.55 m. The results for identified the maximum difference in wave height is 0.01 m and the modelled change in mean wave direction is <1 degree, which will have negligible influence the local coastal process regime (not discernible above natural variability).”

Aquaculture Water Intake⁵⁵

“The potential for effects from the extraction will be limited to the surface plume as any sediment disturbance around the cutter head and seabed will be too deep and distant to affect the intake. Based on an analysis of the results of field trials of the extraction plume, turbidity levels were below 1 NTU at a distance of 2 km behind the William Fraser and around 250 m adjacent to the vessel path which is within ambient conditions. As the distance from the closest extraction operation is nearly 3 times further than the most conservative disturbance distance from the William Fraser, no effects are expected to the sediment transport and hydrodynamics at the intake.”

⁵³ Section 5.12.4, Coastal Process Effects Assessment (Attachment Nine)

⁵⁴ Section 5.12.5, Coastal Process Effects Assessment (Attachment Nine)

⁵⁵ Section 5.12.6, Coastal Process Effects Assessment (Attachment Nine)

Mair Bank⁵⁶

The physical processes and sediment dynamics that influence Mair Bank are localised at the harbour mouth location. These processes are not expected to be influenced by the proposed sand extraction which is located offshore and outside the zone of dynamic sediment exchange.

11.24. It is concluded that the effects on coastal processes and on specific locations along Te Ākau Bream Bay will range from negligible to low adverse effects (which equates to less than minor to minor in terms of the RMA). Given the draghead aboard the *William Fraser* to be used for the sand extraction and the implementation of the sand extraction rotation management plan, the moderate effects identified if deep tracks were to be formed (from repeated extraction along the same extraction track) will not occur and do not need to be considered further.

Visual, Landscape and Amenity Effects

11.25. The Landscape and Natural Character Assessment is included in Attachment Eight. The landscape and natural character effects of the proposed sand extraction activities have been assessed in relation to the three core dimensions of both landscape and natural character:

- Biophysical values;
- Perceptual – experiential values; and
- Associative or community- based values and connections.

11.26. In respect to biophysical effects, the Assessment considers the potential effects on coastal processes, geomorphology, hydrology, surf breaks, water quality, seabed habitats and marine mammals drawing on the findings of the various relevant specialist reports.

11.27. The Assessment presents the following table summarising the biophysical landscape effects⁵⁷ which draws upon the conclusions of the other relevant assessments in terms of determining what the biophysical landscape effects will be:

Viewpoints:	Biophysical Landscape Effects:
Coastal Processes / Geomorphological Effects	Negligible to Low
Hydrological Effects	Very Low
Water Quality Effects	Negligible to Low
Sea Floor Ecological Effects	Negligible to Low
Effects on Sea Mammals	Net gain to Low

11.28. In terms of the perceived/experiential effects, the assessment has been undertaken in the following four stages⁵⁸:

1. Identification of those catchments / receiving environments, key viewpoints and related audiences exposed to the proposed sand extraction site (listed in Section 9.2 of the Assessment);

⁵⁶ Section 5.12.7, Coastal Process Effects Assessment (Attachment Nine)

⁵⁷ Table 1, Page 34, Landscape and Natural Character Effects Assessment (Attachment Eight)

⁵⁸ Section 9, Landscape and Natural Character Effects Assessment (Attachment Eight)

2. Evaluation of the landscape values currently associated with the setting around the proposed extraction site, as experienced through views towards / of it;
3. Analysis of the relative visibility of the extraction process from a range of viewpoints (and various receiving environments) – as a precursor to addressing actual effects; and
4. Evaluation of the perceived landscape and natural character effects that would be generated in relation to the various receiving environments and audiences exposed to the sand extraction operations – taking into account Points 2) and 3) above.

11.29. The Assessment summarises the results of that evaluation in the following table⁵⁹:

		Contributing Factors:		Effects:	
Viewpoints:		Existing Values:	Visibility:	Landscape:	Natural Character:
The Mair Rd Beach Car Park		Moderate-High	Low	Low	Low
The Ruakākā Surf Club Lookout		High	Low-Moderate	Low to Lo w- Moderate	Low
The Uretiti Camping Ground Beachfront		High	Low-Moderate	Very Low to Low	Very Low
The Waipū Cove Beachfront Reserve		High	Low	Low	Very Low
Langs Beach		Moderate-High	Low	Very Low	Very Low
Tāwharau Busby Point & Smugglers Cove		Very High	Low	Very Low	Very Low

11.30. The Assessment confirms that in terms of section 6.39 of *Te Tangi a te Manu*, this means that the effects of the proposed extraction activity would typically be 'less than minor' rising to 'minor' for Viewpoint B (the Ruakākā Surf Club Lookout)⁶⁰.

11.31. Turning to associative/cultural effects, the Assessment concludes⁶¹:

"Most of the Patuharakeke Management Plan appears to focus on key cultural sites that are concentrated down the margins of Te Ākau Bream Bay, within Whangārei Harbour, near Te Ākau Bream Bay Scenic Reserve or further inland (such as around Takahiwai Marae), whereas other matters – such as those pertaining to coastal processes, water quality, and the ecological health of Te Ākau Bream Bay's waters – require specialist evaluation. As a result, there is limited room for a traditional 'landscape interpretation' of effects."

Furthermore, MBL's proposed sand extraction site appears to sit within a spatial void that is not directly associated with Patuharakeke's Sites of Significance, while the proposed activity is not directly subject to any of the objectives and policies found within the Patuharakeke Management Plan and the Ruakākā

⁵⁹ Table 2, Page 50, Landscape and Natural Character Effects Assessment (Attachment Eight)

⁶⁰ Page 50, Landscape and Natural Character Effects Assessment (Attachment Eight)

⁶¹ Page 65, Landscape and Natural Character Effects Assessment (Attachment Eight)

Estuary Mahinga Mataitai Assessment which instead appear to largely focus on managing effects associated with customary kai gathering grounds (for the most part, harbour and estuarine banks), and the ecological health of Te Ākau Bream Bay more generally.

Having said this, there remains a level of association between the Management Plan's Sites of Significance and the proposed extraction area, insofar as the activity of sand extraction would be visible from parts of the Te Poupouwhenua Cultural Area, the Ruakākā Mahinga Mataitai and Te Tahuna Tohora Cultural (Whale Burial) Area.

As a result, MBL's proposed extraction could conceivably have effects on several fronts and the following comprise summaries in relation to key audiences:

11.32. The Assessment then identifies these as:

- Te Ākau Bream Bay's Ecological Health (negligible to low order)
- The Bay's Landforms, Beaches & Surf Breaks (negligible)
- Landscapes and Sites of Significance to Iwi (low)

11.33. Overall, the Assessment concludes⁶²:

"Based on this assessment, it is concluded that the landscape and natural character effects generated by the proposed sand extraction would typically be of a low order. Furthermore, they would remain below the 'significant effects' threshold in relation to the preservation of natural character values under Policy 13(1)(b) of the NZ Coastal Policy Statement and Section 6(a) of the Resource Management Act (1991).

As a result, the effects identified are considered to be acceptable from a landscape and natural character standpoint."

11.34. Given this conclusion, it is considered that any effects on amenity values of the wider area arising from landscape and natural character effects will be low (which equates to minor) at the most.

Effects on Water Quality

11.35. Effects on water quality may arise from the disturbance of the seafloor during the sand extraction and the discharge of water, fine sediments and oversized material from the moon pools aboard the *William Fraser* into the sea (below the keel line). The risk of an oil spill has been addressed separately.

11.36. The Water Quality Assessment of Environmental Effects (Attachment Eight) assesses the potential effects on water quality from the sand extraction operation. This assessment finds⁶³:

"On the basis of the sampling undertaken, and comparison against available regional data from long term State of the Environment monitoring locations, the water quality in the Bream Bay marine environment (for key water quality parameters turbidity, TSS, pH, nutrients, and metals contaminants) is considered to be of High value.

The magnitude of effects of the proposed activity on water quality is assessed to be Negligible and localised to the area being extracted. The Te Ākau Bream Bay marine environment is considered to have a 'good capacity to absorb proposed changes'; any effects are highly likely to be very short-term/temporary increases in TSS only and will return to ambient levels within an hour of the activity ceasing. In addition, it is likely there will be 'No discernible change' relative to the wider open coastal waters after reasonable mixing, and as assessed over a 12-month period (as per the NRC Policy H.3.3 Coastal water quality standards).

⁶² Section 12, Landscape and Natural Character Effects Assessment (Attachment Eight)

⁶³ Pages iii-iv, Water Quality Assessment of Environmental Effects (Attachment Eight)

For ocean pH, there were no available regional data that have assessed pH. The data summarised from the 8-week sampling campaign show little difference between sites or with depth. On the basis of national analysis reported for the New Zealand Ocean Acidification Observation Network, it is likely that any trends in ocean pH for Auckland and Bay of Plenty regions will not become apparent for decades to come (>60 years). Given the proximity to Te Ākau Bream Bay, a similar time period is likely to apply for any discernible trends in pH to emerge for the coastal waters in the Northland Region.

As such, the overall level of effects on key water quality parameters (including TSS, turbidity, nutrients, pH and contaminants) is determined to be Negligible.

Any plume generated by proposed sand extraction in Te Ākau Bream Bay will be highly localised in terms of the temporal and spatial extent. Given the high assimilative capacity of the wider Te Ākau Bream Bay environment, natural fluctuations and prevalent metocean conditions experienced in the bay, it is highly unlikely coastal water quality standards set out in NRC's Policy H.3.3 will be breached. On this basis, the overall level of effects of the proposed sand extraction to water quality in Te Ākau Bream Bay are considered to be Negligible.

- 11.37. In terms of ecological effects from the plume, the Assessment of Ecological Effects⁶⁴ finds that the level of effects from turbidity and suspended sediment on coastal vegetation, benthic macroalgae, benthic fauna and benthic fish will be negligible.
- 11.38. It is therefore concluded that any adverse effects on and from water quality changes will be negligible (that is, less than minor).
- 11.39. The effects of marine debris has also been addressed in the Marine Mammal Assessment of Effects and the Assessment of Ecological Effects. A Garbage Management Plan is in effect from the *William Fraser* and Condition 30 specifically addresses litter so that the risk from litter from the *William Fraser* entering the coastal marine area is avoided.

Acoustic Effects

11.40. Separate assessments of airborne and underwater acoustic effects have been completed.

11.41. In terms of airborne noise effects on Te Ākau Bream Bay beach users, Section 6.1 of the Assessment of Airborne Noise Effects (Attachment Eleven), states:

"We expect that it would be remarkable if the TSHD could be heard on shore. If it was ever audible, the noise level would be very low, and the meteorological conditions and wave heights would have to be unusually calm."

11.42. Turning to noise effects on closest noise sensitive activities, Section 6.2 of the Assessment states:

"We expect that it would be remarkable if the TSHD could be heard on shore. If it was ever audible, the noise level would be very low, and the meteorological conditions and wave heights would have to be unusually calm."

We have no concerns relating to cumulative noise effects from the operation of the TSHD and the contribution from other commercial and recreational vessels in Te Ākau/Bream Bay. The noise level predictions demonstrate that the TSHD vessel will generate a very low level of noise (likely inaudible) when received onshore. The noise environment at the shoreline will be controlled by wave activity and the noise from vessels operating much close to the shore. The TSHD will not add to the noise level of other vessels in the area when observed on land."

11.43. In respect to noise effects on avifauna, Section 6.3 of the Assessment states:

"This Assessment concludes that the activity will generate a very low level of noise at the shoreline. We are not avifauna experts however based on the level of noise on the shoreline, and the level of sound generated by birds communicating on the shoreline and back-dune areas, we have not identified the

⁶⁴ Table 13, Assessment of Ecological Effects (Attachment TBC)

potential for the activity to disturb or impede communication amongst birds. Other noise sources in the general coastal environment will be considerably noise than the operation of the TSHD.”

11.44. Based on the Assessment of Airborne Noise Effects, it is concluded that any adverse airborne noise effects will be negligible.

11.45. The potential effects on animals from the underwater noise generated by the *William Fraser* and the sand extraction operation has been assessed in the Underwater Noise Report (Attachment Twelve). This report concludes in Chapter 6:

*“The proposed sand extraction activity will expose marine mammals, fish, invertebrates, kororā/little penguins, and sea turtles to acoustic-related disturbances. Notwithstanding, however, no risk of auditory injury was found in the modelling, and no temporary threshold shift beyond 0.5m from the *William Fraser* when it is actively extracting sand.*

*Generally, behavioural disturbances can generally be considered Small/Minor for all animal groups; occurring over the largest distances for baleen whales of 1115m. Small behavioural responses for delphinids could be possible within 596m, while pinnipeds may show small behavioural responses within 700m. Medium/Moderate behavioural responses occur far closer to the *William Fraser* for all species, for example within 203m and 227m, respectively, for delphinids and pinnipeds.*

Small/Minor behavioural responses in fishes, invertebrates, kororā/little penguins, and sea turtles could not be robustly calculated like for the marine mammals, due to lack of technical guidance for continuous noise sources, such as vessels. However, they are unlikely to occur beyond 205m, which is the range at which auditory masking effects are likely too low (i.e., below 75% reduction in active listening space) for the onset of small behavioural responses.

*Masking effects in marine mammals, fishes, invertebrates, kororā/little penguin, and sea turtles are also generally of Small/Minor magnitude when distant from the *William Fraser*. Medium/Moderate levels of masking begin occurring within 170m (delphinids) or 1431m (baleens) in marine mammals. In fishes, this was found to be between 165m and 205m, but 113m and 132m for invertebrate groups (for example, crustaceans). These ranges were also similar for kororā/little penguins (135m) and sea turtles (186m).*

11.46. Based on this Underwater Noise Assessment:

- The Assessment of Ecological Effects⁶⁵ addresses the potential effects on underwater noise of fish, sharks and rays and marine reptiles and concludes any effects will be negligible for fish and minor for sharks, rays and marine reptiles.
- The Marine Mammal Assessment of Effects⁶⁶ finds that any adverse noise impacts on marine mammals will be negligible to low.

11.47. Given the low level of noise arising, noise effects will not impact on the amenity values of the wider area.

Lighting Effects

11.48. Sand extraction is proposed to be undertaken during daylight hours and briefly (up to approximately 15 minutes) into dusk during the days with the shortest daylight hours in the year. As outlined earlier, during the underwater and marine mammal investigations, it was identified that to minimise potential acoustic effects on mammals, that daytime sand extraction would be preferable (as compared to nighttime sand extraction which had been the general approach at the Pākiri Sand Extraction site).

11.49. A LMP has been prepared and forms part of the SEOP (Attachment Twenty-Nine).

11.50. When transiting to or from the site during the hours of darkness 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

⁶⁵ Table 13, Assessment of Ecological Effects (Attachment Thirteen)

⁶⁶ Section 4.2.6, Marine Mammals Assessment of Effects (Attachment Fifteen)

ship approaching North Port, Marsden Point, or in the North Port anchorage area. As such, the *William Fraser* would have little or no impact on the night-time environment or perception of its night sky.

Ecological Effects

11.51. The Assessment of Ecological Effects (Attachment Thirteen) addresses the ecological effects in terms of benthic biota, benthic fish, marine reptiles, sharks and rays. Marine mammals are considered separately in the Marine Mammals Assessment of Environmental Effects (Attachment Fifteen). Further information on the effects on fish and fisheries is provided in the Assessment of Effects on Fish and Fisheries in Te Ākau Bream Bay (Attachment Seventeen). The Potential Effects on Seabirds and Shorebirds Report (Attachment Fourteen) assesses potential effects on avian fauna while the Scleractinian Cup Corals at Te Ākau Bream Bay Report in Attachment 22 addresses the cup corals.

11.52. The effects from sand extraction on ecology are expected to come from changes to water quality, underwater noise, seabed disturbance, loss of food source, vessel strike (in particular for marine mammals) and entanglement (again in particular for marine mammals).

Effects on Benthic Organisms

11.53. The Assessment of Ecological Effects finds:

In respect to seabed disturbance⁶⁷:

"The Te Ākau Bream Bay area is considered a dynamic environment with currents and sea swells influencing the movement of the seabed surface (e.g. large ripples of sand visible on seabed photographs) (Bioresearches, 2024). Considering the naturally dynamic environment in the embayment and the shallow (~ 100 mm) layer of sand extracted, it is not expected to alter the benthic community over and above what is experienced naturally in extreme events. Therefore, based on the definitions in Table 2 no complete loss of any key features is expected to occur in the sand extraction area as a whole. There may be some temporary partial changes in composition but generally the underlying character of the sand extraction area will be similar to the pre-extraction area, thus the magnitude of effects is described as Low on the overall benthic community within the sand extraction area. Assessing the magnitude of effect at the spatial scale of the effect is not a recommended practice (EIANZ, 2024). "Generally, it is recommended that an assessment at the scale of the feature (e.g. contiguous dunes, wetland system, forest community) should be done." (EIANZ, 2024), thus the potential changes in the benthic community of the wider Te Ākau Bream Bay beyond the sand extraction area need to be considered. The effects to benthic biota and composition are not expected to occur much beyond the sand extraction area as disturbance and biota loss will not occur, but there may be a very minor reduction in biota numbers as it potentially migrates into the edges of the sand extraction. Thus, the magnitude of effects is described as Negligible on the overall benthic community, and beyond the sand extraction area within the wider Te Ākau Bream Bay."

In respect to recovery after seabed disturbance⁶⁸

"Overall, the recovery of benthic communities after extraction is a complex process influenced by the extent of the disturbance and the specific changes in sediment characteristics. This can result in a community that is different in composition and abundance compared to the pre-extraction state. The proposed Te Ākau Bream Bay sand extraction is not expected to significantly alter the seabed conditions, as only narrow bands of seabed will be affected at any one time and then only to shallow profile depths, and the sediment quality is good, therefore the same benthic biota communities are expected to be maintained.

Considering the potential for possible temporal changes in composition and abundance in isolated areas within the sand extraction area, the extraction is assigned a low magnitude effect on benthic biota composition and abundance within the sand extraction area. Negligible effects are expected beyond the sand extraction area."

⁶⁷ Section 5.1.1.1, Assessment of Ecological Effects (Attachment Thirteen)

⁶⁸ Section 5.1.1.1, Assessment of Ecological Effects (Attachment Thirteen)

In terms of benthic fauna survival⁶⁹:

“Considering the low mortality, large volume and sub-surface discharge, the extraction is expected to have effects of a low magnitude on macrofauna survival in the sand extraction area, and negligible magnitude of effect in the wider Te Ākau Bream Bay.”

In terms of effects from water quality⁷⁰:

“The sediment quality has been assessed, (Bioresearches, 2024, SLR, 2025) and shown to be devoid of harmful concentrations of contaminants. There are no discharges of contaminants from land into or near the proposed sand extraction area with the closest shoreline 4.7 km away. The draghead does not inject anything into the seabed or leave any deposits. Therefore, there is no source of chemical contamination in or near the proposed sand extraction area. Thus, the composition of the seabed sediments will not result in the release of contaminants causing adverse effects if disturbed. As such, the overall effects on general water quality in Te Ākau Bream Bay is determined to be negligible.”

In terms of suspended sediment and Turbidity⁷¹:

“As such, the magnitude of effects on TSS and turbidity in the water quality is determined to be Low within the area of the plume for its duration. Beyond the plume within the sand extraction area and within the wider Te Ākau Bream Bay the effects of turbidity and TSS are Negligible.”

And

‘As such overall the overall risk of project effects on sediment deposition is determined to be of Negligible risk.’

11.54. The protected Scleractinian cup corals *Sphenotrochus ralphae* and *Kionotrochus suteri* have been identified within the proposed sand extraction area at Te Ākau Bream Bay.

11.55. The overall live population of the two species of cup corals within the 15.4 km² proposed sand extraction area could be in the order of millions. This area is less than 0.2% and 0.1% of the identified potential suitable habitat for *Sphenotrochus ralphae* and *Kionotrochus suteri*, respectively⁷².

11.56. While the proportion of corals that will be damaged or killed as they pass through the sand extraction process is unknown, some corals are expected to survive the disturbance. The proposed sand extraction activity will have a minor to negligible impact on the populations of either *Sphenotrochus ralphae* or *Kionotrochus suteri* within New Zealand⁷³.

Effects on Marine Mammals

11.57. Actual and potential impacts on marine mammals from the proposed sand extraction activities were identified as underwater noise, habitat modification, ship strike, exposure to contaminants, marine debris, entanglement, artificial lighting and cumulative impacts. Each of these potential impacts has been thoroughly described and assessed in the Marine Mammal Environmental Impact Assessment (Attachment Fifteen). Table 20 of that Assessment provides in tabulated form a summary of assessment findings on the potential impacts on marine mammals. Section 6 of the Assessment then concludes:

“While at least 30 marine mammal species are reported for the wider region, the available data suggests that only seven species – bottlenose dolphins, common dolphins, Bryde’s whales, false killer whales, pilot whales, killer whales, and New Zealand fur seals – commonly visit Te Ākau Bream Bay and the immediate surrounds. Bottlenose dolphins are of particular interest as Te Ākau Bream Bay has been identified as important habitat for this semi-resident species.

⁶⁹ Section 5.1.2 Assessment of Ecological Effects (Attachment Thirteen)

⁷⁰ Section 5.1.3.1, Assessment of Ecological Effects (Attachment Thirteen)

⁷¹ Section 5.1.3.2, Assessment of Ecological Effects (Attachment Thirteen)

⁷² Pages 4-5, Cup corals and Schedule 7 of the Fast-track Approvals Act 2024 (Attachment TBC)

⁷³ Pages 4-5, Cup corals and Schedule 7 of the Fast-track Approvals Act 2024 (Attachment TBC)

Several potential impacts of extraction have been identified and assessed in this report, including underwater noise, habitat modification, ship strike, exposure to contaminants, marine debris, entanglement, artificial lighting, and cumulative impacts.

In particular, underwater noise modelling was undertaken by Styles Group (Pine, 2025) to determine the potential impacts that the proposed sand extraction activities could have on marine mammals. While these modelling results conclude that no auditory injury or TTS is expected beyond 0.5 m, and the instantaneous impacts of sand extraction noise will be spatially restricted (to within c. 1 km for behavioural responses and c. 16 km for masking), the operational noise from the intermittent presence of the William Fraser is predicted to change the soundscape of parts of Te Ākau Bream Bay. While widespread displacement of marine mammals is considered unlikely, sand extraction activities may affect the fine scale distribution of marine mammals in Te Ākau Bream Bay. For this reason, a Marine Mammal Monitoring Programme will be implemented.

The results of this assessment found that with the adoption of the proposed mitigations, the overall level of impact from the proposed sand extraction ranges from net gain to low.

Overall, no population level effects on marine mammals are expected as a result of the proposed sand extraction. Further, there are no predicted adverse effects that exceed the thresholds set by the NZCPS."

11.58. The proposed mitigation methods recommended have been addressed in Section 7 of this report.

11.59. On this basis, it is considered that any adverse effects on marine mammals will be no greater than low.

Effects on Fish and Fisheries

11.60. The effects of changes in water turbidity and of underwater noise on fish have already been addressed above.

11.61. 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.

11.62. The Assessment of Effects on Fish and Fisheries in Te Ākau Bream Bay⁷⁴ concludes:

"Based on all available information, including the separate benthic, underwater noise and water quality effects assessments, any adverse effects arising from sand extraction on both fish populations and fishing activities will be low to negligible if they occur at all:

- *The area of benthic seabed where sand extraction is proposed and where there will be impacts on benthic fauna that fish feed on is a small proportion of the coastal habitat occupied by the species present in Te Ākau Bream Bay.*
- *Fishes are mobile and mostly able to avoid both disturbance and physical effects arising from the extraction activity, including small areas of temporarily elevated suspended sediments.*
- *No direct mortality of adult or juvenile fishes is likely although fish and shellfish eggs, larvae, and very small fishes immediately around the suction head may not be able to avoid being impacted by extraction or by temporarily elevated suspended sediments.*
- *Experience in other areas nearby and the scientific literature indicates a relatively rapid re-establishment of an altered benthic community on which fishes can feed.*

⁷⁴ Section 7, Assessment of Effects on Fish and Fisheries in Te Ākau Bream Bay (Attachment Seventeen)

- *The mobility of fishes means not only are they able to avoid any effects of extraction activities, but that they can be expected to remain available for commercial and non-commercial fishers to catch, probably nearby.*
- *The period when the extraction activity is proposed to occur each day will further minimise any potential effects, including any effects on non-commercial fishing.*
- *The former small Te Ākau Bream Bay commercial scallop fishery is closed indefinitely and any recovery of the scallop population to previous levels is very uncertain.”*

11.63. The Assessment of Ecological Effects⁷⁵ concludes that the magnitude and level of effects of entrainment on fish at a population level within the proposed sand extraction area are expected to be Negligible. Likewise, this Assessment also found that the magnitude and level of effects from suspended sediment are expected to be negligible⁷⁶. The magnitude and level effects from seafood reduction within the sand extraction area are expected to be low within the sand extraction area and negligible beyond the sand extraction area⁷⁷.

11.64. It is concluded that the effects on fish and fisheries will be negligible to low (that is, less than minor to minor).

Effects on Marine Reptiles

11.65. The Assessment of Ecological Effects has found that:

*“Considering the above, likelihood of underwater noise impacts from sand extraction on highly mobile, ‘vagrant’ and ‘migrant’ marine turtles and highly mobile and infrequently present ‘Not threatened’ yellow-bellied sea snakes is Negligible.”*⁷⁸

And

*“Overall, the extraction activity is not expected to have tangible ecological impacts on marine reptile habitats and the magnitude of effect is assessed as Negligible.”*⁷⁹

And

*“Accordingly, the magnitude of effect relating to vessel strike on marine reptiles is assessed as Negligible.”*⁸⁰

And

*“Marine reptiles considered in this assessment have large home ranges, and the plume would only represent a very small part of their habitat, which reduces prolonged exposure risk. Furthermore, the impact of exposure is expected to be greatest in areas where high contaminant burdens overlap with areas defined as important habitat or resources for marine reptiles. The marine reptiles considered in this assessment are either migrant, vagrant, or in the case of yellow-bellied sea snake, infrequent ‘Not Threatened’ visitors. Thus, no marine reptiles are confined to Te Ākau Bream Bay, and the area constitutes a very small part of large overall home ranges. Thus, the likelihood of contaminant impact from extraction is Negligible.”*⁸¹

And

⁷⁵ Section 5.2.2, and Table 12 Assessment of Ecological Effects (Attachment Thirteen)

⁷⁶ Section 5.2.3 and Table 12, Assessment of Ecological Effects (Attachment Thirteen)

⁷⁷ Section 5.2.4 and Table 12, Assessment of Ecological Effects (Attachment Thirteen)

⁷⁸ Section 5.3.1.1, Assessment of Ecological Effects (Attachment Thirteen)

⁷⁹ Section 5.3.1.2, Assessment of Ecological Effects (Attachment Thirteen)

⁸⁰ Section 5.3.1.3, Assessment of Ecological Effects (Attachment Thirteen)

⁸¹ Section 5.3.1.4, Assessment of Ecological Effects (Attachment Thirteen)

“With responsible waste management practices and a garbage disposal management plan recommended aboard the vessel and during all extraction operations, and compliance with New Zealand legislation (Resource Management [Marine Pollution] Regulations 1998), the impact on migrant and vagrant marine turtles and marine snakes is considered to be Negligible.”⁸²

And

“Considering the relatively slow operational speed of the vessel, the elevated noise of the extraction, lighting requirements for only some months of the year, and the intermittent nature of marine reptile occurrence in Te Ākau Bream Bay, the effects are considered to be Negligible.”⁸³

And

“The magnitude of cumulative effects on vagrant, migrant turtles and resident marine snakes is conservatively assigned as Negligible.”⁸⁴

11.66. Table 13 of the Assessment, then assesses the level of ecological effects incorporating the ecological values and the magnitude of effects and has determined that the level of potential effects in terms of the above matters is minor.

Effects on Sharks and Rays

11.67. The Assessment of Ecological Effects (Section 5.3) concludes

“Considering the above, likelihood of underwater noise impacts from sand extraction on highly mobile and infrequently present sharks and rays is Negligible.”

And in terms of habitat modification:

“Overall, the extraction activity is not expected to have ecological impacts on shark and ray habitats and the magnitude of effect is assessed as Negligible.”

And in terms of vessel strike:

“Accordingly, the magnitude of effect relating to vessel strike on sharks and rays is assessed as Negligible.”

And in terms of exposure to contaminants and debris:

“Thus, the likelihood of contaminant impact from extraction is Negligible.”

“With responsible waste management practices and a garbage disposal management plan recommended aboard the vessel and during all extraction operations, and compliance with New Zealand legislation (Resource Management [Marine Pollution] Regulations 1998), the impact from the sand extraction activity on the filter feeding sharks and rays is considered to be Negligible.”

11.68. Table 13 of the Assessment, then assesses the level of ecological effects incorporating the ecological values and the magnitude of effects and has determined that the level of potential effects is minor.

Effects on Avifauna

11.69. Seven potential effects from the proposed sand extraction activity have been assessed in the Potential Effects on Seabirds and Shorebirds (Attachment Fourteen). These were loss of terrestrial breeding habitat, exclusion from marine habitat, changes to prey abundance/availability, interaction with the sand extraction vessel, fuel/oil spill, airborne noise and underwater noise. Section 4.1 of the Assessment

⁸² Section 5.3.1.5, Assessment of Ecological Effects (Attachment Thirteen)

⁸³ Section 5.3.1.5, Assessment of Ecological Effects (Attachment Thirteen)

⁸⁴ Section 5.3.1.7, Assessment of Ecological Effects (Attachment Thirteen)

provides further details on the potential effects considered, while Section 4.2 outlines the risk assessment process undertaken.

11.70. Table 44⁸⁵ sets out the results of the risk assessment process for all 47 seabird and shorebird taxa and the seven potential effects from the sand extraction process.

11.71. It is concluded from this risk assessment process⁸⁶:

"For all potential effects and impacts, and for all taxa considered, risk scores fell within the 'low' risk level, with risk scores ranging from 0 (zero) to 3 (Table 44): for all potential effects, impacts on all taxa will be less than minor and often negligible. These low risk scores largely reflect low consequence scores: for example, consequence scores were 0 (zero), negligible consequence, for all taxa for the potential effects of habitat exclusion from, and of reduced prey abundance or availability in, the proposed sand extraction area, and likewise for the effects of airborne and underwater noise.

For tara iti fairy tern, and for the potential effects of loss of terrestrial breeding habitat, interaction with the sand extraction vessel and fuel/oil spill, risk scores were in the middle of the 'low' risk level (risk scores of 3 for each of these potential effects: Table 44). For all of these potential effects, the outcome effectively removed a bird from the population, either through being unable to breed (loss of terrestrial breeding habitat) or through mortality (interaction with the sand extraction vessel and fuel/oil spill). Because the overall population of tara iti fairy tern is critically small, the loss of a breeding bird would have 'major' consequences (consequence score of 3: Table 41 and Table 44). That the overall risk scores for these three potential effects were only 3 reflects the very low likelihood scores (scores of 1, negligible likelihood of occurrence, with a 0-5% chance of occurrence: Table 42) in each case. In the case of loss of terrestrial breeding habitat, the likelihood score is based on the proposed sand extraction area being sited beyond the depth of closure and that sand extraction will, therefore, have a negligible effect on beach morphology and on the upper shore breeding habitats of birds, including tara iti fairy tern.

Similarly, for the potential effects of interaction with the sand extraction vessel and fuel/oil spill, the likelihood score of 1 for tara iti fairy tern seems reasonable. To the best of my knowledge, there has not been an interaction event with a sand extraction vessel to date, which has predominantly operated at night when tara iti are likely to be roosting ashore, and substantial loss of fuel or oils from a vessel is a demonstrably rare occurrence. Further, the proposed extraction site is approximately 5.6 km offshore from the nearest tara iti fairy tern breeding site at Waipū. It is likely that tara iti fairy tern forages predominantly in estuarine and nearshore environments (Ismar et al. 2014), but it is possible that birds venture further offshore from time to time. Habitat use in this species remains to be fully quantified, but it would seem reasonable to conclude that for tara iti fairy tern the 'low' risk of interaction with the sand extraction vessel, operating for the most part during daylight hours, reflects in part the distance from shore to the proposed sand extraction area."

11.72. The applicant operates an Oil Spill Management Plan for the *William Fraser* (Attachment Thirty-Five) and the likelihood of an oil spill, which could potentially affect seabirds and shorebirds, is very low.

11.73. Likewise, the applicant operates a LMP for the *William Fraser* which is included in the SEOP (Attachment Six) and there are no recorded incidents of bird strike on the *William Fraser*.

11.74. Overall, the potential effects on seabirds and shorebirds will be less than minor.

Effects on Surf Breaks and Other Recreational Activities

11.75. The Assessment of Effects on Surf Breaks at Te Ākau Beam Bay (Attachment Eighteen) concludes in Chapter 7:

"Based on the worst-case bathymetry change scenarios, the impact on surfability at the seven surf breaks close to the extraction areas was found to be less than minor to negligible. Based on our results, it is unlikely that a surfer on site would be able to perceive a difference (increase or decrease)

⁸⁵ Pages 30-33, Potential Effects on Seabirds and Shorebirds (Attachment Fourteen)

⁸⁶ Section 4.3, Potential Effects on Seabirds and Shorebirds (Attachment Fourteen)

in wave height or period resulting from the proposed extraction. Our study was based on the results for the year 2009; however interannual variation of wave heights (including highest swell year) are not expected to have any significant impacts on the results.

Although this is beyond the purpose of the study, it is worth mentioning the potential for changes in wave-induced rip currents (caused by changes in wave patterns) are likely to be less than minor to negligible.”

11.76. As outlined in the Assessment of Effects on Fish and Fisheries in Te Ākau Bream Bay⁸⁷ the mobility of fishes means not only are they able to avoid any effects of extraction activities, but that they can be expected to remain available for non-commercial fishers to catch. Any adverse effects arising from sand extraction on both fish populations and fishing activities will be low to negligible.

11.77. The Navigation Safety Assessment⁸⁸ identifies that recreational vessels (mostly under 10 m in length) can be present in the sand extraction area especially during the day and normally drift fishing. Kayakers are sometimes seen off Ruakākā Beach but are limited to calm and light offshore winds and tend to remain within 2 nautical miles of the shore. These kayakers are predominately fishing.

11.78. The sand extraction operation does not result in any restrictions on the recreational boaters (including kayakers) utilising the sand extraction area for fishing or other recreational purposes. The Navigation Safety Assessment⁸⁹ identifies that:

“There is a risk that recreational craft will impede the passage of the William Fraser however the extraction area is open which allows plenty of manoeuvring space. William Fraser is equipped with a whistle to attract the attention of the small craft and is also travelling at a very slow speed. It is considered a manageable risk for the William Fraser.”

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

11.80. Overall, it is considered that effects on surf breaks and other recreational activities (and their contribution to the amenity values of the area) will less than minor.

Effects on Commercial Activities (including Fishing)

11.81. As outlined in the Assessment of Effects on Fish and Fisheries in Te Ākau Bream Bay⁹⁰ the mobility of fishes means not only are they able to avoid any effects of extraction activities, but that they can be expected to remain available for non-commercial fishers to catch. As outlined above, any adverse effects arising from sand extraction on both fish populations and fishing activities will be less than minor to minor.

11.82. The Navigation Safety Assessment⁹¹ identifies that commercial fishing vessels operate in Te Ākau Bream Bay, however in general the sand extraction area is clear of where most commercial fisherman operate. However, some fisherman will be affected by the sand extraction operation. In respect to this the Assessment notes:

“Under Part 22 Maritime Rules, (Collision Prevention) from Maritime New Zealand, vessels engaged in fishing underway must keep clear of vessels restricted in their ability to manoeuvre when carrying out underwater operations (sand extraction). Commercial fishing representatives will be informed of the extraction operations through Whangārei Harbour Radio. Early communication of the proposed extraction area will assist fishermen in planning their activities to remain clear of extraction activities.”

⁸⁷ Section 7, Assessment of Effects on Fish and Fisheries in Te Ākau Bream Bay (Attachment Seventeen)

⁸⁸ Page 9, Navigation Safety Assessment (Attachment Twenty)

⁸⁹ Page 9 Navigation Safety Assessment (Attachment Twenty)

⁹⁰ Section 7, Assessment of Effects on Fish and Fisheries in Te Ākau Bream Bay (Attachment Seventeen)

⁹¹ Page 10 Navigation Safety Assessment (Attachment Twenty)

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

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

11.85. Overall, it is considered that any effects on commercial activities will be negligible and temporal.

Cultural Effects

(To be completed once CIA's Received)

11.86. MBL has consulted directly with Patuharaheke Te Iwi Trust Board who have prepared a detailed Cultural Impact Assessment (Attachment Twenty-Four). The key findings of this CIA are:

11.87. MBL has consulted directly with Te Pouwhenua o Tiakiriri Kukupa Trust for Te Parawhau who have prepared a detailed CIA (Attachment Twenty-Three). The key findings of this CIA are:

11.88. MBL has consulted directly with the Ngātiwai Trust Board who have prepared a detailed CIA (Attachment Twenty-Five). The key findings of this CIA are:

11.89. 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 Te Ākau Bream Bay or moving in and out of the harbour.

11.90. As no effects on the foreshore and sand dunes along Te Ākau Bream Bay are expected no effects would therefore be expected on cultural or archaeological features above MHWS along Te Ākau Bream Bay.

Biosecurity Effects

Draft for Consultation

11.91. The *William Fraser* operates under a Biosecurity Management Plan (Attachment Thirty-Three) which requires regular cleaning of the vessel. No discharge of bilge water is to be undertaken at the sand extraction site.

11.92. The potential biosecurity risk and effects from the *William Fraser* at the sand extraction site and surrounds is therefore considered to be negligible.

Climate Change and Natural Hazards

11.93. Potential cumulative effects with climate change over the duration of a 35-year consent have been addressed in the Coastal Process Effects Assessment which concludes⁹²:

"Sea level rise over the duration of the 35-year consent could be up to 0.35 m. This will impact on the activity in the following ways:

- The DoC will move up and landward based on the magnitude of sea rise. This does not increase the risk of extraction occurring on the lower or upper surface, as the extraction area will be deeper with climate change and the DoT will move landward.*
- Beach erosion will occur in response to climate change. The response of sandy beaches to sea level rise is erosion of the beach and dune through landward translation. The erosion distance attributed to sea level rise is a function of the profile slope, measured between the foredune crest and the inner depth of closure. The sediment eroded from the dune is deposited on the upper-shoreface. Sediment deposition on the upper shoreface attributed to sea level rise response will*

⁹² Section 5.11, Coastal Process Effects Assessment (Attachment Nine)

not reach the extraction area. Therefore, there is negligible risk of the climate change induced sea level rise increasing the effect level from the activity.

There is uncertainty regarding the effect of climate change on the mean and extreme wave climate of Te Ākau Bream Bay. Uncertainty in future wave climates indicate that the extreme wave height may reduce or stay the same or potentially increase by up to 5% with some very low likelihood of extreme waves increasing by up to 15%. Therefore, an assessment considered the effect of climate change causing a 5% increase in the mean and annual extreme wave height. The outer DoC as calculated using the Hallermeier wave base equation was found to be sensitive to a 5% increase in wave height, resulting in an outer DoC that shifts the depth shoreward by up to 0.9 m (vertical from the current position).

The DoT method was also assessed to consider a 0.35 m increase in sea level and a 5% increase in the extreme 12 h/yr exceeded wave height, resulting in the DoT moving shoreward by an average of 36 m horizontal and increasing the depth by up to 0.8 m. This indicates that an increase in extreme or mean wave height is potentially more influential than sea level rise over the duration of the consent.

However, there is sufficient buffer distance between the proposed extraction area and the lower shoreface to allow for uncertainty in future wave climate changes and to keep the DoT and DoC boundaries landward of the proposed extraction area.”

11.94. The effect of climate change has also been considered in the Assessment of Effects on Surf Breaks⁹³ and this assessment finds:

“The projected impacts of climate change on wave dynamics in the NZ waters include potential changes in wave heights, periods, and directions due to shifting wind patterns and increased storm activity (Hemer et al., 2013; Morim et al., 2019). Rising sea levels may also interact with wave propagation, potentially leading to greater wave energy reaching the shoreline (IPCC, 2021). However, despite these potential changes, the level of change in surfability at Te Ākau Bream Bay is expected to remain very similar (i.e., less than minor to negligible) under both present-day conditions and future climate change scenarios, given that the dominant swell and wind patterns influencing surf conditions are not projected to shift dramatically (Vousovoukas et al., 2018; Morim et al., 2019).

This conclusion is consistent with the more detailed conclusions reached in Tonkin and Taylors’ Te Ākau Bream Bay Sand Extraction: Coastal Process Effects Assessment as to the generally negligible cumulative impact of climate change on the effects of sand extraction in Te Ākau Bream Bay. It follows that there is a negligible prospect that climate change would exacerbate the effects of sand extraction on surf breaks in the Bay.”

11.95. No other natural hazards have been identified which require further consideration. Likewise, no potential natural hazards have been identified which the proposal may change the risk of that hazard occurring or the magnitude of potential effects of that hazard if it arises.

Navigation Safety

11.96. A Navigation Safety Assessment has been completed and concludes⁹⁴:

“It is considered that the proposed sand extraction operation in Te Ākau Bream Bay can be competently managed with respect to navigational safety and does not impose an unacceptable risk for the NRC and other stakeholders (Northport/ CI, Golden Bay or commercial or recreational users) using the Bay. Harbourmaster guidelines and Navigation Safety Bylaws must be followed.”

11.97. The assessment includes a list of recommended Harbourmaster Guidelines, and MBL confirms they can be complied with.

Cumulative Effects

⁹³ Section 7.1, Assessment of Effects on Surf Breaks (Attachment Eighteen)

⁹⁴ Page 13, Navigation Safety Assessment (Attachment Twenty)

11.98. Cumulative coastal processes effects with climate change have been addressed above.

11.99. In respect to airborne noise, the sand extraction operation will not add to the noise level of other vessels in the area when observed on land⁹⁵.

11.100. In terms of visual and character effects, it has been found⁹⁶:

“Although the presence of the William Fraser within Te Ākau Bream Bay would inevitably increase the frequency and presence of ship activities in its water area, the limited scale of the vessel (relative to most existing ships transiting to and from Northport or the Channel Infrastructure jetties) and the frequency of current shipping movements would limit such additional / cumulative effects to a low level. Importantly, it is not considered that the presence of the William Fraser within Te Ākau Bream Bay marine environment and landscape on a regular basis would give rise to an appreciable change to their intrinsic character or values.”

11.101. In terms of cumulative effects on marine mammals, the Marine Mammal Assessment of Effects⁹⁷ concludes that any such effects will be negligible to low. In terms of sharks, rays and marine reptiles, the level of potential cumulative effects has been assessed as minor⁹⁸.

11.102. It is considered that there are no specific potential cumulative effects which may result in a greater degree of adverse effects.

Overall Effects Conclusion

11.103. The provision of an efficient and secure marine sand supply to the Auckland market and in particular for the manufacture of high-strength concrete required to facilitate infrastructure and development projects is vital for the economic, social and cultural well-being of the Auckland community and beyond. The proposed sand extraction site meets the requirements for being able to provide the required type of sand for high-strength concrete manufacturing in Auckland efficiently. Furthermore, the location of this site means that sand can also be transported efficiently to a range of other ports to service in part the Northland, Waikato and Bay and Plenty Regions (but at a lesser scale due to their marine sand demands which reflects their respective population size and infrastructure demands).

11.104. Taking into account the various assessments of effects and the recommended consent conditions (along with the various Management Plans), it is concluded that, overall, the adverse environmental effects will be minor. In broad terms, the overall existing environment within Te Ākau Bream Bay will be maintained.

11.105. The potential cultural effects have been addressed in the CIA's which conclude (TBC).

11.106. As outlined earlier in this application, s85 of the Act uses the term “adverse impacts”. It is our understanding that adverse impacts” are essentially any matter properly before the Panel which weighs against the granting of the approval. On this basis, it is our opinion this does not significantly change the outcome of the effects assessment, that is, the level of potential adverse effects identified will be minor or less (depending on the effect being considered).

11.107. It is considered that the impacts (as summarised in Table TBC below and ranging from positive to minor adverse) are not so sufficiently significant to be out of proportion to the projects regional and national benefits that consideration has to be given to declining the consent application.

11.108. The Project will adopt an adaptive management approach which provides for on-going monitoring of effects and the ability to adjust that area within the sand extraction area where sand extraction is occurring, maximum annual extraction volumes and extraction methodology if unexcepted or more

⁹⁵ Section 6.2 - Assessment of Airborne Noise Effects (Attachment Eleven)

⁹⁶ Page 64, Landscape and Natural Character Effects Assessment (Attachment Ten)

⁹⁷ Section 4.9 and Table 20, Marine Mammal Assessment of Effects (Attachment Fifteen)

⁹⁸ Table 13, Assessment of Ecological Effects (Attachment Thirteen)

significant adverse effects arise. Such an approach is considered appropriate in a dynamic coastal environment where an activity is occurring over a 35-year period.

11.109. Adverse effects cannot be completely avoided and nor does the Act require the avoidance of all effects. In this case, adverse effects arising will be negligible to minor. Those adverse effects need to be weighed against the higher priority factor of the significant positive effects arising from a secure and efficient sand supply and the critical importance of a marine sand supply to the Auckland concrete market.

11.110. The following table presents a summary of the level of effects assessed. As outlined earlier, different effects categorisations have been used in the different specialist assessments. The third column therefore defines the level of effects in terms of the three broad categories used in the RMA (less than minor, minor, more than minor).

Matter	Level of Adverse Effect	Level of Adverse Effects (RMA Equivalent)
Fish and Fisheries	Negligible to low (if they occur at all)	Less than minor to minor
Surf Breaks and Other Recreational Activities	Negligible to less than minor	Less than minor
Navigation Safety	Does not impose an unacceptable risk	Not applicable
Airborne Noise	Negligible as the activity will comply with the relevant PRNP noise limits.	Less than minor
Underwater Noise	Negligible to low	Less than minor to minor
Water Quality	Negligible	Less than minor
Landscape and Natural Character – Biophysical Landscape Effects	Net gain to low	Positive to less than minor/minor
Landscape and Natural Character – Perceived/Experiential Effects	Very low to low moderate	Less than minor to minor
Landscape – Associative/Cultural Effects	Low	Less than minor/minor
Avifauna (Seabirds and Shorebirds)	Negligible to less than minor	Less than minor
Coastal Processes	Negligible to low	Less than minor to minor
Coastal Vegetation	Negligible	Less than minor
Benthic Macroalgae	Negligible	Less than minor
Benthic Fauna	Negligible	Less than minor
Benthic Fish	Negligible	Less than minor
Marine Reptiles	Minor	Minor

Marine Mammals	Net gain to low	Positive to minor
Biosecurity	Negligible	Less than minor
Commercial Activities	Negligible	Less than minor
Climate Change and Natural Hazards	Negligible	Less than minor
Lighting	Negligible	Less than minor

Table One: Summary of Level of Effects

Draft for Consultation

12. Assessment under the Relevant Statutory RMA Documents

12.1. This section provides the analysis of the proposal in terms of relevant national and regional planning instruments as required by Schedule 5, Clause 5(1)(h) of the Act.

12.2. The relevant National Environmental Standards and National Policy Statements are:

- a) The New Zealand Coastal Policy Statement 2010
- b) National Policy Statement – Indigenous Biodiversity

12.3. The relevant Regional planning instruments are:

- a) The Regional Policy Statement for Northland
- b) The Proposed Regional Plan for Northland
- c) The Operative Regional Coastal Plan
- d) The Operative Whangārei District Plan

12.4. As at 1 August 2025, all appeals to the PRPN had been resolved. However, as the PRPN has not been made fully operative, consideration is still required to be given to the relevant objectives and policies of the Operative Regional Coastal Plan, although very little weighting should now be applied to these. It is considered that the RPS and the PRPN are consistent with the NZCPS.

New Zealand Coastal Policy Statement 2010 (“NZCPS”)

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

NZCPS Objectives

Objective 1

To safeguard the integrity, form, functioning and resilience of the coastal environment and sustain its ecosystems, including marine and intertidal areas, estuaries, dunes and land, by:

- *maintaining or enhancing natural biological and physical processes in the coastal environment and recognising their dynamic, complex and interdependent nature;*
- *protecting representative or significant natural ecosystems and sites of biological importance and maintaining the diversity of New Zealand’s indigenous coastal flora and fauna; and*
- *maintaining coastal water quality, and enhancing it where it has deteriorated from what would otherwise be its natural condition, with significant adverse effects on ecology and habitat, because of discharges associated with human activity.*

Assessment

12.6. Based on the various investigations undertaken no potential significant adverse effects on the ecology, water quality or natural coastal processes have been identified. The existing coastal water quality (which is considered to be high value in this location) will be maintained and any adverse effects on water quality have been determined to be negligible⁹⁹. The plume created by the discharge will be temporary in nature and limited in size and will not result in any significant adverse effects.

⁹⁹ Page 53 and 54, Water Quality Assessment of Environmental Effects (Attachment Ten)

12.7. The natural biological processes in the coastal environment will be maintained, although it is recognised that there will be temporary and localised disturbance in the immediate area where the draghead passes. The Assessment of Ecological Effects¹⁰⁰ finds in respect to this Objective:

“The sand extraction will maintain the natural biological processes. No Significant natural ecosystems occur in the sand extraction area, and biodiversity is not expected to be lost. Discharges from the sand extraction vessel are not expected to have significant adverse effects.”

12.8. No physical processes in the coastal environment will be adversely affected by the proposal to a more than minor degree. This has been specifically addressed in the Coastal Process Effects Assessment¹⁰¹ which states:

“Taking these findings into account we have considered the proposal in the context of Objective 1 of the New Zealand Coastal Policy Statement in terms of physical processes in the coastal environment. It is considered that the integrity, form, functioning and resilience of the coastal environment (including both the actual extraction site and the wider area) will not be adversely affected by changes to the coastal processes resulting from the sand extraction.”

12.9. In terms of potential underwater noise effects, it is concluded that potential effects on natural biological processes will be negligible to low.

12.10. Sand extraction on the seaward side of the depth of closure/depth of transport avoids the risk of adverse effects on the foreshore and dunes and any significant natural ecosystems and sites of biological importance in those areas (including the habitat of Tara Iti Fairy Tern).

12.11. The proposal will not impact on any significant natural ecosystems (identified as significant natural area in the PRPN or in the WDP). The proposal will not impact on the overall diversity of the indigenous coastal flora and fauna in Te Ākau Bream Bay.

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

Objective 2

To preserve the natural character of the coastal environment and protect natural features and landscape values through:

- *recognising the characteristics and qualities that contribute to natural character, natural features and landscape values and their location and distribution;*
- *identifying those areas where various forms of subdivision, use, and development would be inappropriate and protecting them from such activities; and*
- *encouraging restoration of the coastal environment.*

Assessment

12.13. The coastal environment is dynamic. The proposed extraction site is adjoining an anchorage area and is close to a shipping channel and therefore large ships are a common visual element and the seabed in the vicinity has been disturbed by anchoring and historical scallop dredging and trawling. Urban development is present along much of the coastline. The natural character of this area of the coastal environment is therefore modified to varying degrees.

¹⁰⁰ Section 7.3, Assessment of Ecological Effects (Attachment Thirteen)

¹⁰¹ Section 5.13.1, Coastal Process Effects Assessment (Attachment Twenty-Two)

12.14. The natural character and natural features in the coastal environment will not be adversely impacted, although shallow and temporary disturbance of the areas of seabed where excavation has occurred (tracks) would occur but these tracks will be temporary.

12.15. The sand extraction area is outside of any natural heritage overlays in the PRPN (Outstanding Natural Features, Outstanding Natural Character and High Natural Character). It has been concluded that the proposal will have no impact on any Outstanding Natural Character, High Natural Character, Outstanding Natural Features or Outstanding Natural Landscape Areas identified in the PRPN or the Whangārei District Plan. Furthermore, it has also been concluded that no significant adverse effects have been identified that might erode the natural character values of those parts of Te Ākau Bream Bay outside its ONC Areas¹⁰².

12.16. Extraction will be seaward of the depth of closure and will not have any effect on the beach/dune system in Te Ākau Bream Bay.

12.17. Airborne acoustic noise effects from the sand extraction operation will be minimal and it is expected that the level of noise at the closest beaches will generally be inaudible and will not impact on the character of the area.

Objective 3

To take account of the principles of the Treaty of Waitangi, recognise the role of tangata whenua as kaitiaki and provide for tangata whenua involvement in management of the coastal environment by:

- *recognising the ongoing and enduring relationship of tangata whenua over their lands, rohe and resources;*
- *promoting meaningful relationships and interactions between tangata whenua and persons exercising functions and powers under the Act;*
- *incorporating mātauranga Māori into sustainable management practices; and*
- *recognising and protecting characteristics of the coastal environment that are of special value to tangata whenua.*

Assessment

12.18. MBL recognises the ongoing and enduring relationship of the tangata whenua over their rohe.

12.19. TBC once CIA's received.

12.20. In respect to the final bullet point, in terms of sites of cultural significance to Māori, it has been found¹⁰³:

“Although the proposed sand extraction would be visible, to varying degrees from Patuharakeke’s Te Poupouwhenua area at Marsden Point, its Ruakākā River Mahunga Mataitai and Te Tahuna Tohora, this would be over viewing distances that start at more than 8km for the first of these sites and more than 4.7km from the latter two. For the reasons summarised in Section 9.5, above, it is considered that the proposed operations would do little to change the broad character and generally perceived values of Te Ākau Bream Bay and, as a result, the effects identified in relation to these Sites of Significance are typically of a low order.”

Objective 4

To maintain and enhance the public open space qualities and recreation opportunities of the coastal environment by:

¹⁰² Page 63, Landscape and Natural Character Effects Assessment (Attachment TBC)

¹⁰³ Page 64, Landscape and Natural Character Effects Assessment (Attachment TBC)

- *recognising that the coastal marine area is an extensive area of public space for the public to use and enjoy;*
- *maintaining and enhancing public walking access to and along the coastal marine area without charge, and where there are exceptional reasons that mean this is not practicable providing alternative linking access close to the coastal marine area; and*
- *recognising the potential for coastal processes, including those likely to be affected by climate change, to restrict access to the coastal environment and the need to ensure that public access is maintained even when the coastal marine area advances inland.*

Assessment

12.21. The proposal does not require any restrictions to or within the coastal marine area and does not require exclusive occupation of any part of the coastal marine area.

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

12.23. The Navigation Safety Assessment¹⁰⁴ specifically addresses potential effects on recreational vessel use and considers that this is a manageable risk for the *William Fraser*.

12.24. No recreational activities (including recreational fishing) within the proposed extraction area or the immediate surrounds have been identified which may be adversely affected by the sand extraction. The Assessment of Effects on Fish and Fisheries in Te Ākau Bream Bay¹⁰⁵ concludes that any adverse effects arising from sand extraction on both fish populations and fishing activities will be *low to negligible* if they occur at all.

12.25. Likewise, there will be no effect on surfability at the seven surf breaks in the wider area¹⁰⁶:

“Based on the worst-case bathymetry change scenarios, the impact on surfability at the seven surf breaks close to the extraction areas was found to be less than minor to negligible. Based on our results, it is unlikely that a surfer on site would be able to perceive a difference (increase or decrease) in wave height or period resulting from the proposed extraction.”

12.26. Public open space qualities and recreation opportunities will therefore be maintained which meets Objective 4.

Objective 5

To ensure that coastal hazard risks taking account of climate change, are managed by:

- *locating new development away from areas prone to such risks;*
- *considering responses, including managed retreat, for existing development in this situation; and*
- *protecting or restoring natural defences to coastal hazards.*

Assessment

12.27. The sand extraction activity is not within an area of a coastal hazard risk that may impact upon it or which the sand extraction may exacerbate.

¹⁰⁴ Page 9, Navigation Safety Assessment (Attachment Twenty)

¹⁰⁵ Section 7, Assessment of Effects on Fish and Fisheries in Te Ākau Bream Bay (Attachment Seventeen)

¹⁰⁶ Chapter 14, Assessment of Effects on Surf Breaks (Attachment Eighteen)

12.28. The sand extraction activity itself will not be adversely impacted upon by sea-level rise. Section 5.11 of the Coastal Process Effects Assessment¹⁰⁷ confirms:

"There is uncertainty regarding the effect of climate change on the mean and extreme wave climate of Te Ākau Bream Bay. Uncertainty in future wave climates indicate that the extreme wave height may reduce or stay the same or potentially increase by up to 5% with some very low likelihood of extreme waves increasing by up to 15%. Therefore, an assessment considered the effect of climate change causing a 5% increase in the mean and annual extreme wave height. The outer DoC as calculated using the Hallermeier wave base equation was found to be sensitive to a 5% increase in wave height, resulting in an outer DoC that shifts the depth shoreward by up to 0.9 m (vertical from the current position)."

The DoT method was also assessed to consider a 0.35 m increase in sea level and a 5% increase in the extreme 12 h/yr exceeded wave height, resulting in the DoT moving shoreward by an average of 36 m horizontal and increasing the depth by up to 0.8 m. This indicates that an increase in extreme or mean wave height is potentially more influential than sea level rise over the duration of the consent.

However, there is sufficient buffer distance between the proposed extraction area and the lower shoreface to allow for uncertainty in future wave climate changes and to keep the DoT and DoC boundaries landward of the proposed extraction area."

Objective 6

To enable people and communities to provide for their social, economic, and cultural wellbeing and their health and safety, through subdivision, use, and development, recognising that:

- *the protection of the values of the coastal environment does not preclude use and development in appropriate places and forms, and within appropriate limits;*
- *some uses and developments which depend upon the use of natural and physical resources in the coastal environment are important to the social, economic and cultural wellbeing of people and communities;*
- *functionally some uses and developments can only be located on the coast or in the coastal marine area;*
- *the coastal environment contains renewable energy resources of significant value;*
- *the protection of habitats of living marine resources contributes to the social, economic and cultural wellbeing of people and communities;*
- *the potential to protect, use, and develop natural and physical resources in the coastal marine area should not be compromised by activities on land;*
- *the proportion of the coastal marine area under any formal protection is small and therefore management under the Act is an important means by which the natural resources of the coastal marine area can be protected; and*
- *historic heritage in the coastal environment is extensive but not fully known, and vulnerable to loss or damage from inappropriate subdivision, use, and development.*

Assessment

12.29. 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 Auckland. Auckland remains dependent on marine-sourced sand for concrete production, particularly high-grade concrete required for infrastructure and development projects of regional and national significance. Without enough high-quality sand, there will be delays in delivering the concrete used to complete such projects. A limited sand supply will mean that sand is rationed across concrete suppliers, and investments in environmental infrastructure will compete for concrete, and other resources, meaning that delivery timeframes will be pushed out. It is

¹⁰⁷ Section 5.11, Coastal Process Effects Assessment (Attachment Twenty-Two)

therefore concluded that there remains a functional need for a marine sand source for Auckland with this source being within the coastal marine area.

12.30. The granting of the resource consent and the subsequent sand extraction will enable people and communities in part to provide for their economic and social well-being, given the critical importance of a secure and efficient sand supply for urban development. On this basis, the use of marine sands is considered to be important for the social, economic and cultural well-being of people and communities.

12.31. By its very nature, the extraction of marine sands can only be undertaken within the coastal marine area.

12.32. The sand extraction will not adversely impact on commercial fisheries or any other existing commercial activities in Te Ākau Bream Bay. MBL vessels are maintained in Whangārei which contributes directly to the Northland economy.

12.33. The sand extraction area is not located within an area of the coastal marine area under any formal protection and there are no known historic heritage values which may be adversely impacted upon.

Objective 7 -

To ensure that management of the coastal environment recognises and provides for New Zealand's international obligations regarding the coastal environment, including the coastal marine area.

Assessment

12.34. The proposal is not contrary to any known international obligations which New Zealand is party to.

NCZPS Policies

12.35. It is considered that Policies 2, 3, 6, 11, 13, 15, 16 and 23 are of relevance to this proposal.

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

In taking account of the principles of the Treaty of Waitangi (Te Tiriti o Waitangi), and kaitiakitanga, in relation to the coastal environment:

- (a) *recognise that tangata whenua have traditional and continuing cultural relationships with areas of the coastal environment, including places where they have lived and fished for generations;*
- (b) *involve iwi authorities or hapū on behalf of tangata whenua in the preparation of regional policy statements, and plans, by undertaking effective consultation with tangata whenua; with such consultation to be early, meaningful, and as far as practicable in accordance with tikanga Māori;*
- (c) *with the consent of tangata whenua and as far as practicable in accordance with tikanga Māori, incorporate mātauranga Māori in regional policy statements, in plans, and in the consideration of applications for resource consents, notices of requirement for designation and private plan changes;*
- (d) *provide opportunities in appropriate circumstances for Māori involvement in decision making, for example when a consent application or notice of requirement is dealing with cultural localities or issues of cultural significance, and Māori experts, including pūkenga, may have knowledge not otherwise available;*
- (e) *take into account any relevant iwi resource management plan and any other relevant planning document recognised by the appropriate iwi authority or hapū and lodged with the council, to the extent that its content has a bearing on resource management issues in the region or district; and*
 - (i) where appropriate incorporate references to, or material from, iwi resource management plans in regional policy statements and in plans; and*
 - (ii) consider providing practical assistance to iwi or hapū who have indicated a wish to develop iwi resource management plans;*

- (f) provide for opportunities for tangata whenua to exercise kaitiakitanga over waters, forests, lands, and fisheries in the coastal environment through such measures as:
 - (i) bringing cultural understanding to monitoring of natural resources;
 - (ii) providing appropriate methods for the management, maintenance and protection of the taonga of tangata whenua;
 - (iii) having regard to regulations, rules or bylaws relating to ensuring sustainability of fisheries resources such as taiāpure, mahinga mātaitai or other non commercial Māori customary fishing;
- (g) in consultation and collaboration with tangata whenua, working as far as practicable in accordance with tikanga Māori, and recognising that tangata whenua have the right to choose not to identify places or values of historic, cultural or spiritual significance or special value:
 - (i) recognise the importance of Māori cultural and heritage values through such methods as historic heritage, landscape and cultural impact assessments; and
 - (ii) provide for the identification, assessment, protection and management of areas or sites of significance or special value to Māori, including by historic analysis and archaeological survey and the development of methods such as alert layers and predictive methodologies for identifying areas of high potential for undiscovered Māori heritage, for example coastal pā or fishing villages.

Assessment

- 12.36. MBL recognise that tangata whenua have traditional and continuing cultural relationships with areas of the coastal environment.
- 12.37. The CIA's received have identified the following special values TBC.
- 12.38. In terms of clause (e), there are three iwi management plans of relevance to this area. An assessment of the proposal in terms of these iwi management plans is undertaken in Section 13.

Draft for Consultation

Policy 3 – precautionary approach

- 1. Adopt a precautionary approach towards proposed activities whose effects on the coastal environment are uncertain, unknown, or little understood, but potentially significantly adverse.
- 2. In particular, adopt a precautionary approach to use and management of coastal resources potentially vulnerable to effects from climate change, so that:
 - (a) avoidable social and economic loss and harm to communities does not occur;
 - (b) natural adjustments for coastal processes, natural defences, ecosystems, habitat and species are allowed to occur; and
 - (c) the natural character, public access, amenity and other values of the coastal environment meet the needs of future generations.

Assessment

- 12.39. Although various baseline studies have been completed and the effects on the coastal environment from sand extraction are known, it is recognised that the coastal environment is a dynamic environment. For this reason, a precautionary approach has been taken in terms of the sand extraction site selection, sand extraction volume and the proposed monitoring programme.

- 12.40. A precautionary approach is inherent in the proposal and includes:

- The distance of the extraction area from the shoreline and relative to the depth of extraction (based on ensuring that the extraction area is beyond the Depth of Closure and Depth of Transport);
- Site selection away from sensitive coastal features;
- Proposed monthly and annual extracted sand volume limits (with an increase in volume to the Stage 2 limit only allowed after the completion of the Year 4 SEMR and with certification from NRC);
- Extraction during daylight hours (and potentially briefly into dusk during the days with the shortest daylight hours each year) to minimise potential effects on marine mammals; and
- An adaptive sand extraction methodology and monitoring approach in terms of the monitoring undertaken in the PSEAR and SEMR (and its outputs).

12.41. The approach taken in recommended conditions and proposed monitoring mirrors those matters by:

- Defining the location of the sand extraction area and requiring that an ASEA plan is prepared (and updated through the life of the consent) to limit cells where extraction can occur so as to exclude those cells with certain characteristics and/or ecological species;
- Limiting the monthly and annual rate of extraction (and with specific requirements to move from the Stage 1 to Stage 2 extraction volumes);
- Limiting the sand extraction to a specific methodology;
- Limiting the hours of sand extraction; and
- Requiring pre- and post-extraction analysis and reporting (PSEAR and SEMR as outlined in the EMMP) with defined output requirements.

12.42. It is considered that no other approaches are needed to be considered in respect to the potential effects from climate change over time.

Policy 6 – Activities in the coastal environment

1. *In relation to the coastal environment:*

- (a) *recognise that the provision of infrastructure, the supply and transport of energy including the generation and transmission of electricity, and the extraction of minerals are activities important to the social, economic and cultural well-being of people and communities;*
- (b) *consider the rate at which built development and the associated public infrastructure should be enabled to provide for the reasonably foreseeable needs of population growth without compromising the other values of the coastal environment;*
- (c) *encourage the consolidation of existing coastal settlements and urban areas where this will contribute to the avoidance or mitigation of sprawling or sporadic patterns of settlement and urban growth;*
- (d) *recognise tangata whenua needs for papakāinga, marae and associated developments and make appropriate provision for them;*
- (e) *consider where and how built development on land should be controlled so that it does not compromise activities of national or regional importance that have a functional need to locate and operate in the coastal marine area;*
- (f) *consider where development that maintains the character of the existing built environment should be encouraged, and where development resulting in a change in character would be acceptable;*

- (g) take into account the potential of renewable resources in the coastal environment, such as energy from wind, waves, currents and tides, to meet the reasonably foreseeable needs of future generations;
- (h) consider how adverse visual impacts of development can be avoided in areas sensitive to such effects, such as headlands and prominent ridgelines, and as far as practicable and reasonable apply controls or conditions to avoid those effects;
- (i) set back development from the coastal marine area and other water bodies, where practicable and reasonable, to protect the natural character, open space, public access and amenity values of the coastal environment; and
- (j) where appropriate, buffer areas and sites of significant indigenous biological diversity, or historic heritage value.

2. Additionally, in relation to the coastal marine area:

- (a) recognise potential contributions to the social, economic and cultural wellbeing of people and communities from use and development of the coastal marine area, including the potential for renewable marine energy to contribute to meeting the energy needs of future generations;
- (b) recognise the need to maintain and enhance the public open space and recreation qualities and values of the coastal marine area;
- (c) recognise that there are activities that have a functional need to be located in the coastal marine area, and provide for those activities in appropriate places;
- (d) recognise that activities that do not have a functional need for location in the coastal marine area generally should not be located there; and
- (e) promote the efficient use of occupied space, including by:

1. requiring that structures be made available for public or multiple use wherever reasonable and practicable;
2. requiring the removal of any abandoned or redundant structure that has no heritage, amenity or reuse value; and
3. considering whether consent conditions should be applied to ensure that space occupied for an activity is used for that purpose effectively and without unreasonable delay.

Assessment

12.43. Policy 6.1(a) recognises that the extraction of minerals within the coastal marine area is an activity important to the social, economic and cultural well-being of people and communities.

12.44. The proposal is for sand extraction predominantly for concrete manufacturing. Marine sand is an essential ingredient of high-strength concrete which is in turn a vital component of infrastructure and other development projects. It follows that the provision of an efficient supply of sand is important for the continued economic, social, and cultural well-being of the Auckland community. There remains a functional need for a marine sand source for the Auckland concrete market¹⁰⁸.

12.45. The specific properties of the Te Ākau Bream Bay sand and the advantages of using it have been traversed elsewhere in this application.

12.46. The Assessment of Economic Effects has outlined the demand for sand in the Auckland market and the contribution which the marine sand from Te Ākau Bream Bay will make to this. This assessment concludes¹⁰⁹:

“Enabling sand extraction at Te Ākau Bream Bay will provide resilience to the sand supply network and will provide additional flexibility to the concrete supply chain – a key element of any infrastructure and climate change resilience programme (before or after extreme weather events). In addition to the avoided costs, enabling sand extraction at Te Ākau Bream Bay will deliver wide benefits to Auckland.

¹⁰⁸ Para. 24, Statement of Paul Donoghue (Attachment TBC).

¹⁰⁹ Para. 39, Assessment of Economic Effects (Attachment TBC)

These benefits arise from a well-functioning construction sector that can deliver infrastructure in a time- and cost-efficient manner. Enabling Te Ākau Bream Bay will contribute towards, and facilitate, the delivery of infrastructure and development projects.”

12.47. The sand extraction area is not within an area where a buffer should be applied to protect sites of significant indigenous biological diversity, or historic heritage value.

12.48. The economic benefits of the proposal have been outlined in the Assessment of Economic Effects¹¹⁰. These are assessed as the direct benefit (avoided cost) associated with enabling the sand is estimated at \$374.4 million.

12.49. The proposal will not impact on public access or the recreational qualities (including fishing, surfing and recreational boating) and values of Te Ākau Bream Bay. Exclusive occupation of the sand extraction area (or any part of it) is not required and likewise no permanent structures are required to be installed.

Policy 11 – Indigenous biological diversity (biodiversity)

To protect indigenous biological diversity in the coastal environment:

- (a) *avoid adverse effects of activities on:*
 - (i) *indigenous taxa that are listed as threatened or at risk in the New Zealand Threat Classification System lists;*
 - (ii) *taxa that are listed by the International Union for Conservation of Nature and Natural Resources as threatened;*
 - (iii) *indigenous ecosystems and vegetation types that are threatened in the coastal environment, or are naturally rare;*
 - (iv) *habitats of indigenous species where the species are at the limit of their natural range, or are naturally rare;*
 - (v) *areas containing nationally significant examples of indigenous community types; and*
 - (vi) *areas set aside for full or partial protection of indigenous biological diversity under other legislation; and*
- (b) *avoid significant adverse effects and avoid, remedy or mitigate other adverse effects of activities on:*
 - (i) *areas of predominantly indigenous vegetation in the coastal environment;*
 - (ii) *habitats in the coastal environment that are important during the vulnerable life stages of indigenous species;*
 - (iii) *indigenous ecosystems and habitats that are only found in the coastal environment and are particularly vulnerable to modification, including estuaries, lagoons, coastal wetlands, dunelands, intertidal zones, rocky reef systems, eelgrass and saltmarsh;*
 - (iv) *habitats of indigenous species in the coastal environment that are important for recreational, commercial, traditional or cultural purposes;*
 - (v) *habitats, including areas and routes, important to migratory species; and*
 - (vi) *ecological corridors, and areas important for linking or maintaining biological values identified under this policy.*

Assessment

12.50. As addressed in Section 11, various ecological assessments have been completed focusing on benthic organisms, avifauna, fish, rays, sharks, reptiles and marine mammals.

¹¹⁰ Paras. 32 and 33, Assessment of Economic Effects (Attachment, TBC)

12.51. The sand extraction area is not within or immediately adjoining an identified Significant Ecological Area.

12.52. The Marine Mammal Assessment of Environmental Effects (Attachment Fifteen) has identified a number of threatened marine mammal species (Bryde's whale, orca, leopard seals, southern right whale, humpback whale, blue whale, sei whale, minke whale, and bottlenose dolphins) are resident or likely to be transient in the wider Te Ākau Bream Bay area. Section 4.2.6 of this Assessment specifically addresses Policy 11(a) and concludes:

"In keeping with the requirement of NZCPS Policy 11(a) that effects on threatened marine mammal taxa (populations) are avoided, these model results confirm that no population level effects/ impacts are predicted from the instantaneous consequences of underwater noise (e.g. injury, behavioural response and masking), as no injury or mortality will occur as a result of extraction noise."

The ongoing (albeit intermittent) nature of the proposed sand extraction activities introduces a long-term change to the soundscape of Te Ākau Bream Bay. However, high level changes are confined to the immediate extraction area and the remainder of the embayment will only be subject to negligible or small soundscape changes. While sand extraction noise therefore has the potential to elevate sub-lethal risks to marine mammals above those already present from existing extraction and/or commercial shipping, large cumulative impacts will be spatially restricted to the extraction area. It is expected that marine mammals will either avoid the immediate extraction area or habituate to the increased noise levels. The noise level required to elicit long-term avoidance is unknown for marine mammals; however, because predicted soundscape changes are small or negligible for most of Te Ākau Bream Bay, widespread displacement and long-term habitat use changes are considered to be unlikely."

12.53. In terms of Policy 11(b), the Assessment¹¹¹ states:

"In terms of NZCPS policy 11(b), significant effects on habitats that are important during 'vulnerable life stages' must be avoided and DOC (2010) states that indigenous species can be vulnerable when breeding, as juveniles and during migration. It is important therefore to recognise that:

Brough (2023) and Brough et al. (2024) reports the presence of juveniles and calves of Bryde's whales and bottlenose dolphins in Te Ākau Bream Bay; and

The project area occurs in the inshore portion of a migratory corridor that is seasonally used by migrating humpback, minke and southern right whales.

While some baleen whale species use coastal waters of the region as a seasonal migratory corridor, most individual whales typically pass by any given point on the coast quite quickly (e.g., migrating humpback whales travel at average speeds of 3.2 – 5.8 km/hr; Riekkola et al., 2020; Modest et al., 2021). On this basis, masking and audibility associated with the proposed activities (which are predicted to extend to 16 km and 18 km respectively for baleen whales) would be low level and temporary for migrating whales (limited to several hours of exposure as they migrate past Te Ākau Bream Bay). The likelihood of exposure of migrating whales to project-related underwater noise reduces even further when considering that sand extraction will only occur for 3.5 hours at a time and only on extraction days.

Although southern right whales have the potential for a more sustained presence in coastal locations during their seasonal breeding migrations, it is probable that exposed individuals would avoid the zone of audibility and take advantage of plentiful nearby unaffected coastal habitat. For these reasons, the magnitude of underwater noise effects/impacts on migratory habitat will be negligible and significant effects can be avoided as required by NZCPS Policy 11(b)."

12.54. The Assessment¹¹² then specifically addresses underwater noise effects and summarises:

¹¹¹ Section 4.2.6, Marine Mammal Assessment of Effects (Attachment Fifteen)

¹¹² Section 4.2.6, Marine Mammal Assessment of Effects (Attachment Fifteen)

"To summarise, significant underwater noise effects on marine mammal migratory habitat and breeding habitat are not anticipated; therefore, and in terms of underwater noise, the requirements of NZCPS Policy 11(b) can be met."

12.55. The MMMP (Attachment Thirty) addresses 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.

12.56. With respect to avifauna, the Potential Effects on Seabirds and Shorebirds Report concludes¹¹³:

"It is my opinion that the proposal, including its various management plans, to extract sand from Te Ākau Bream Bay will not result in any adverse effects on seabirds and shorebirds, and will, therefore, satisfy Policy 11 of the NZCPS¹⁶ and additionally the objectives and policies of the Regional Policy Statement¹⁷ (for example, Objective 2.4 and Policy 4.4.1) and of the PRP¹⁸ (for example, D.2.18 and F.1.3). The proposal is also not contrary to the NPSIB in respect to those birds listed as highly mobile fauna in Appendix 2 of the NPSIB."

12.57. The Assessment of Ecological Effects¹¹⁴ notes:

"As part of the pre-sand extraction monitoring, a baseline assessment utilising sampling has been undertaken prior to sand extraction occurring. No sensitive habitats were identified, that suggested a specific area should be excluded from sand extraction. Two species of stony coral protected under the Wildlife Act (1953) were detected in the proposed sand extraction area in low numbers and are the subject of further investigation in NIWA (2024)."

12.58. There two species of Cup coral known to be present within the proposed sand extraction area are (*Kionotrochus suteri* and *Sphenotrochus ralphae*). Schedule 7A of the Wildlife Act 1953 identifies "Stony corals – all species in the order Scleractinia" as a marine species declared to be an animal and therefore protected under s3. Neither *Sphenotrochus ralphae* nor *Kionotrochus suteri* have been assessed by the NZTCS and, therefore, are not deemed to be 'Threatened', 'Data Deficient' or 'At Risk' wildlife (as defined in the NZTCS).

12.59. The effect on these corals have been assessed in the report Cup Corals and Schedule 7 of the Fast-Track Approvals Act 2024 (Attachment Sixteen). This assessment concludes that:

*"The proposed sand extraction area at Bream Bay is less than 0.2% and 0.1 % of the identified potential suitable habitat for *Sphenotrochus ralphae* and *Kionotrochus suteri*, respectively (Beaumont et al. 2024). This, together with the expected resilience of these corals to disturbance, means it is considered likely that the proposed sand extraction activity within Bream Bay will have a minor to negligible impact on the populations of either *Sphenotrochus ralphae* or *Kionotrochus suteri* within the Aotearoa New Zealand region. In addition, recovery of coral populations within the proposed sand extraction area by adult immigration and/or larval settlement is expected over time once extraction activities cease, though connectivity between populations remains unknown."*

12.60. Of the fish species recorded for this area, Mangō taniwha (great white shark) are classified as Nationally Endangered under the New Zealand Threat Classification System and may migrate through the sand extraction area¹¹⁵. However, no effect on this species would be expected from the sand extraction operation or the transiting of the *William Fraser*.

12.61. Overall, the proposal will not significantly adversely impact the indigenous biological diversity of Te Ākau Bream Bay.

Policies 13 and 15 – Preservation of natural character. Protection of natural features and landscapes

¹¹³ Section 5, Potential Effects on Seabirds and Shorebirds (Attachment Fourteen)

¹¹⁴ Section 7.3, Assessment of Ecological Effects (Attachment Thirteen)

¹¹⁵ Section 2.2.6, Assessment of Effects on Fish and Fisheries in Te Ākau Bream Bay (Attachment Seventeen)

Policy 13

1. *To preserve the natural character of the coastal environment and to protect it from inappropriate subdivision, use, and development:*
 - (a) *avoid adverse effects of activities on natural character in areas of the coastal environment with outstanding natural character; and*
 - (b) *avoid significant adverse effects and avoid, remedy or mitigate other adverse effects of activities on natural character in all other areas of the coastal environment; including by:*
 - (c) *assessing the natural character of the coastal environment of the region or district, by mapping or otherwise identifying at least areas of high natural character; and*
 - (d) *ensuring that regional policy statements, and plans, identify areas where preserving natural character requires objectives, policies and rules, and include those provisions.*
2. *Recognise that natural character is not the same as natural features and landscapes or amenity values and may include matters such as:*
 - (a) *natural elements, processes and patterns;*
 - (b) *biophysical, ecological, geological and geomorphological aspects;*
 - (c) *natural landforms such as headlands, peninsulas, cliffs, dunes, wetlands, reefs, freshwater springs and surf breaks;*
 - (d) *the natural movement of water and sediment;*
 - (e) *the natural darkness of the night sky;*
 - (f) *places or areas that are wild or scenic;*
 - (g) *a range of natural character from pristine to modified; and*
 - (h) *experiential attributes, including the sounds and smell of the sea; and their context or setting.*

Policy 15

To protect the natural features and natural landscapes (including seascapes) of the coastal environment from inappropriate subdivision, use, and development:

- (a) *avoid adverse effects of activities on outstanding natural features and outstanding natural landscapes in the coastal environment; and*
- (b) *avoid significant adverse effects and avoid, remedy, or mitigate other adverse effects of activities on other natural features and natural landscapes in the coastal environment; including by:*
- (c) *identifying and assessing the natural features and natural landscapes of the coastal environment of the region or district, at minimum by land typing, soil characterisation and landscape characterisation and having regard to:*
 - (i) *natural science factors, including geological, topographical, ecological and dynamic components;*
 - (ii) *the presence of water including in seas, lakes, rivers and streams;*
 - (iii) *legibility or expressiveness – how obviously the feature or landscape demonstrates its formative processes;*
 - (iv) *aesthetic values including memorability and naturalness;*
 - (v) *vegetation (native and exotic);*
 - (vi) *transient values, including presence of wildlife or other values at certain times of the day or year;*

- (vii) whether the values are shared and recognised;
- (viii) cultural and spiritual values for tangata whenua, identified by working, as far as practicable, in accordance with tikanga Māori; including their expression as cultural landscapes and features;
- (ix) historical and heritage associations; and
- (x) wild or scenic values;

(d) ensuring that regional policy statements, and plans, map or otherwise identify areas where the protection of natural features and natural landscapes requires objectives, policies and rules; and

(e) including the objectives, policies and rules required by (d) in plans.

Assessment

12.62. The sand extraction site is at a greater depth than the depth of closure and depth of transport. This depth beyond the depth of closure and depth of transport has been specifically chosen to avoid potential effects on the beach/dune system above MHWS.

12.63. As outlined above, the sand extraction area is outside any natural heritage overlays in the PRPN (Outstanding Natural Features, Outstanding Natural Character and High Natural Character). It has been concluded that the proposal will have no impact on any Outstanding Natural Character, High Natural Character, Outstanding Natural Features or Outstanding Natural Landscape Areas identified in the PRPN or the Whangārei District Plan. Furthermore, it has also been concluded that no significant adverse effects have been identified that might erode the natural character values of those parts of Te Ākau Bream Bay outside its ONC Areas.

12.64. In addition, any visual effects on sites of cultural significance to Māori has been found to be typically of a low order¹¹⁶. TBC

12.65. Firstly, turning to the landward component of the coastal environment, no impacts on the foreshore or dune system along Te Ākau Bream Bay, which may affect the natural character of this area, are expected as confirmed in the Coastal Process Effects Assessment.

12.66. In respect to Policy13(1)(b) the conclusion drawn in the Landscape and Natural Character Effects Assessment¹¹⁷ is:

“Based on this assessment, it is concluded that the landscape and natural character effects generated by the proposed sand extraction would typically be of a low order. Furthermore, they would remain below the ‘significant effects’ threshold in relation to the preservation of natural character values under Policy 13(1)(b) of the NZ Coastal Policy Statement and Section 6(a) of the Resource Management Act (1991).”

12.67. Based on the Assessment of Airborne Noise Effects, it is considered that no noise effects that may adversely impact on the natural character of the coastal environment will arise. No lighting effects that may impact on the natural character of the coastal environment will be result from the sand extraction operation (due to it being undertaken during daylight hours and potentially briefly into dusk during the days with the shortest daylight hours each year).

12.68. No other effects from the sand extraction operation have been identified which it is considered could adversely impact on the coastal environment above MHWS and in particular on any areas of outstanding natural character.

¹¹⁶ Page 64, Landscape and Natural Character Effects Assessment (Attachment TBC)

¹¹⁷ Section 12, Landscape and Natural Character Effects Assessment (Attachment TBC)

12.69. In terms of effects of the seafloor and biophysical effects, if this was considered as part of the seascape, any changes are both minor and temporary in nature. The biophysical landscape effects have been assessed as ranging from net gain to low¹¹⁸.

Policy 16 – Surfbreaks of national significance

Protect the surf breaks of national significance for surfing listed in Schedule 1, by:

- (a) *ensuring that activities in the coastal environment do not adversely affect the surf breaks; and*
- (b) *avoiding adverse effects of other activities on access to, and use and enjoyment of the surf breaks.*

Assessment

12.70. The proposal will not adversely impact any of the surf breaks identified in Schedule 1 of Policy 16¹¹⁹:

“Based on the assessment presented in this report, the sand extraction proposal is consistent with Policy 16⁷ of the 2010 New Zealand Coastal Policy Statement (NZCPS)⁸ as the proposal will not result in adverse effects on the surf breaks or access to and the use and enjoyment of those surf breaks.”

12.71. The proposal is therefore not contrary to Policy 16.

Policy 23 – Discharge of contaminants

1. *In managing discharges to water in the coastal environment, have particular regard to:*

- (a) *the sensitivity of the receiving environment;*
- (b) *the nature of the contaminants to be discharged, the particular concentration of contaminants needed to achieve the required water quality in the receiving environment, and the risks if that concentration of contaminants is exceeded; and*
- (c) *the capacity of the receiving environment to assimilate the contaminants; and;*
- (d) *avoid significant adverse effects on ecosystems and habitats after reasonable mixing;*
- (e) *use the smallest mixing zone necessary to achieve the required water quality in the receiving environment; and*
- (f) *minimise adverse effects on the life-supporting capacity of water within a mixing zone.*

Assessment

12.72. Only Policy 23(1) is of relevance for this proposal. The only discharge during the extraction process from the *William Fraser* is salt water, fine sediments and oversized material (>2 mm). This is discharged via moon pools below the keel height. The plume created by this will be temporary in nature.

12.73. The effects of this discharge on water quality have been assessed and any effects on water quality will be negligible¹²⁰.

¹¹⁸ Page 34, Landscape and Natural Character Effects Assessment (Attachment TBC)

¹¹⁹ Page 51, Assessment of Effects on Surf Breaks (Attachment Eighteen)

¹²⁰ Pages 55 and 56, Water Quality Assessment of Environmental Effects (Attachment TBC)

12.74. The Assessment of Ecological Effects likewise concludes that both the magnitude and level of effects from the discharge on ecology will be negligible¹²¹.

12.75. There will be no discharges of sewage from the *William Fraser* at the extraction site.

12.76. 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 not be contrary to Policy 23(1).

National Policy Statement for Indigenous Biodiversity (“NPSIB”)

12.77. The NPSIB seeks to maintain indigenous biodiversity across New Zealand such that there is at least no overall loss in indigenous biodiversity. The NPSIB applies to all indigenous biodiversity in the terrestrial environment but additionally makes provision for specified highly mobile fauna whether or not they use areas outside the terrestrial environment, including the coastal marine area. This part of the NPSIB is therefore relevant to this proposal.

12.78. Appendix 2 of the NPSIB identifies specified highly mobile fauna which the NPSIB applies to. As identified in Table 21 of the Potential Effects on Seabirds and Shorebirds (Attachment Fourteen), a number of bird species occur within the environs of the proposed sand extraction area.

12.79. In respect to the NPSIB, the Assessment¹²² concludes:

“It is my opinion that the proposal, including its various management plans, to extract sand from Te Ākau Bream Bay will not result in any adverse effects on seabirds and shorebirds, and will, therefore, satisfy Policy 11 of the NZCPS¹⁶ and additionally the objectives and policies of the Regional Policy Statement¹⁷ (for example, Objective 2.4 and Policy 4.4.1) and of the PRP¹⁸ (for example, D.2.18 and F.1.3). The proposal is also not contrary to the NPSIB in respect to those birds listed as highly mobile fauna in Appendix 2 of the NPSIB.”

Regional Policy Statement for Northland (“RPS”)

12.80. The RPS is fully operative. The following is an assessment of the proposal against the relevant objectives and policies of the RPS.

Objective 3.2 Region-wide Water Quality

Improve the overall quality of Northland’s fresh and coastal water with a particular focus on:

- (a) Reducing the overall Trophic Level Index status of the region’s lakes;
- (b) Increasing the overall Macroinvertebrate Community Index status of the region’s rivers and streams;
- (c) Reducing sedimentation rates in the region’s estuaries and harbours;
- (d) Improving microbiological water quality at popular contact recreation sites, recreational and cultural shellfish gathering sites, and commercial shellfish growing areas to minimise risk to human health; and
- (e) Protecting the quality of registered drinking water supplies and the potable quality of other drinking water sources

Assessment

12.81. The effects of this discharge on water quality have been assessed, and the Water Quality Assessment of Environment Effects concludes that any effects on water quality will be negligible¹²³.

¹²¹ Table 13, Assessment of Ecological Effects (Attachment Thirteen)

¹²² Page 35, Potential Effects on Seabirds and Shorebirds (Attachment Fourteen)

¹²³ Pages 55 and 56, Water Quality Assessment of Environmental Effects (Attachment TBC)

12.82. The Assessment of Ecological Effects likewise concludes that both the magnitude and level of effects from the discharge on ecology will be negligible¹²⁴.

12.83. Given the nature of the discharges, the receiving environment, the method of discharge and the temporary and localised nature of the plume granting consent would not be contrary to Policy 23(1).

12.84. The proposed sand extraction will not result in changing sedimentation rates in the region's estuaries or harbours.

12.85. Granting consent would not be contrary to this objective.

Objective 3.4 Indigenous Ecosystems and Biodiversity

Safeguard Northland's ecological integrity by:

- a) *Protecting areas of significant indigenous vegetation and significant habitats of indigenous fauna;*
- b) *Maintaining the extent and diversity of indigenous ecosystems and habitats in the region; and*
- c) *Where practicable, enhancing indigenous ecosystems and habitats, particularly where this contributes to the reduction in the overall threat status of regionally and nationally threatened species.*

Assessment

12.86. The proposed sand extraction area is not within an area identified as having significant habitats of indigenous fauna. Given the distance to the nearest significant ecological areas (as identified in the PRPN) and the nature of the effects arising from the sand extraction operation, no effects on these significant ecological areas are expected.

12.87. In respect to this objective, the Assessment of Ecological Effects¹²⁵ concludes:

"The proposed sand extraction area is not within any area identified as having significant habitats of indigenous fauna (Figure 13). Given the distance of greater than 4.5 km to the nearest significant ecological areas (as identified in the Proposed Northland Regional Plan) and the nature of the effects arising from the sand extraction operation, no effects on these significant ecological areas are expected. Given the very localised nature of the sand extraction and expected effects, there will not be an overall effect on the extent and diversity of indigenous ecosystems and habitats in the Northland Region."

12.88. The sand extraction site is within a very extensive area identified in the PRPN as a Significant Marine Mammals and Bird Area but is not within an SEA.

12.89. The Marine Mammal Assessment of Environmental Effects¹²⁶ confirms that in respect to marine mammals, the overall level of impact from the proposed sand extraction ranges from net gain to low.

12.90. The MMMP (Attachment Thirty) 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 MMMP addresses 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.

12.91. With respect to avifauna, the Potential Effects on Seabirds and Shorebirds Report (Attachment Fourteen) identifies 34 seabird taxa expected in the Te Ākau Bream Bay area of which are classified as 'Threatened' under the NZCTS. The Report concludes¹²⁷:

¹²⁴ Table 13, Assessment of Ecological Effects (Attachment Thirteen)

¹²⁵ Section 7.4, Assessment of Ecological Effects (Attachment Thirteen)

¹²⁶ Section 6.0, Marine Mammal Assessment of Environmental Effects (Attachment Fifteen)

¹²⁷ Section 5, Potential Effects on Seabirds and Shorebirds (Attachment Fourteen)

"For all seabirds and shorebirds, and for all potential effects assessed, the risk posed by the proposed sand extraction in Te Ākau Bay Bream Bay is low and impacts on seabirds and shorebirds will be less than minor, and for some potential effects negligible. However, for tara iti fairy tern, a taxon with a critically small population and very high conservation concern, the low risk of loss of terrestrial breeding habitat is based upon the proposed sand extraction area being outside the depth of closure and that extraction of sand will have a negligible effect on beach morphology and stability. Similarly, the low risk of tara iti interacting with the sand extraction vessel, or of being impacted by a fuel/oil spill from the sand extraction vessel, is based on the low likelihood of these two effects occurring. If this proposal is successful, the sand extraction vessel should operate under a light management plan when operating at night."

It is my opinion that the proposal, including its various management plans, to extract sand from Te Ākau Bream Bay will not result in any adverse effects on seabirds and shorebirds, and will, therefore, satisfy Policy 11 of the NZCPS16 and additionally the objectives and policies of the Regional Policy Statement17 (for example, Objective 2.4 and Policy 4.4.1) and of the PRP18 (for example, D.2.18 and F.1.3). The proposal is also not contrary to the NPSIB in respect to those birds listed as highly mobile fauna in Appendix 2 of the NPSIB."

12.92. There are two species of cup coral known to be present within the proposed sand extraction area (Kionotrochus suteri and Sphenotrochus ralphae). Schedule 7A of the Wildlife Act 1953 identifies "Stony corals – all species in the order Scleractinia" as a marine species declared to be an animal and therefore protected under s3. Neither Sphenotrochus ralphae nor Kionotrochus suteri have been assessed by the NZTCS and, therefore, are not deemed to be 'Threatened', 'Data Deficient' or 'At Risk' wildlife (as defined in the NZTCS).

12.93. The effect on these corals have been assessed in the report Cup Corals and Schedule 7 of the Fast-Track Approvals Act 2024 (Attachment Sixteen). This assessment concludes that:

"The proposed sand extraction area at Bream Bay is less than 0.2% and 0.1 % of the identified potential suitable habitat for Sphenotrochus ralphae and Kionotrochus suteri, respectively (Beaumont et al. 2024). This, together with the expected resilience of these corals to disturbance, means it is considered likely that the proposed sand extraction activity within Bream Bay will have a minor to negligible impact on the populations of either Sphenotrochus ralphae or Kionotrochus suteri within the Aotearoa New Zealand region. In addition, recovery of coral populations within the proposed sand extraction area by adult immigration and/or larval settlement is expected over time once extraction activities cease, though connectivity between populations remains unknown."

12.94. Of the fish species recorded for this area, Mangō taniwha (great white shark) are classified as Nationally Endangered under the New Zealand Threat Classification System and may migrate through the sand extraction area. However, no effect on this species would be expected from the sand extraction operation or the transiting of the *William Fraser*.

12.95. Overall, the proposal will not adversely impact on the ecological integrity of Te Ākau Bream Bay (or any protected areas of significant indigenous vegetation and significant habitats of indigenous fauna) and is therefore consistent with this objective.

Objective 3.5 Enabling Economic Wellbeing

Northland's natural and physical resources are sustainably managed in a way that is attractive for business and investment that will improve the economic wellbeing of Northland and its communities.

Assessment

12.96. An Assessment of Economic Effects has been prepared and is included as Attachment Nineteen.

12.97. The proposal is consistent with this objective as although the sand is to be extracted predominantly for the Auckland concrete production market, a small percentage is likely to be delivered to Port Nikau over the life of the consent for specific requirements (including concrete production) in the Northland market.

In addition, over the life of the consent it is more than likely that construction of key infrastructure projects in Northland will require high-strength concrete which will require a component of marine sands.

12.98. Concrete is an essential element for the built environment which is critical for the social and economic well-being of the community.

Objective 3.6 Economic activities – reverse sensitivity and sterilisation

The viability of land and activities important for Northland's economy is protected from the negative impacts of new subdivision, use and development, with particular emphasis on either:

(a) *Reverse sensitivity for existing:*

- (i) *Primary production activities;*
- (ii) *Industrial and commercial activities;*
- (iii) *Mining**; or
- (iv) *Existing and planned regionally significant infrastructure; or*

(b) *Sterilisation of:*

- (i) *Land with regionally significant mineral resources; or*
- (ii) *Land which is likely to be used for regionally significant infrastructure.*

*Includes aggregates and other minerals

Assessment

12.99. Although not directly relevant to this proposal, it is noted that there are no existing or likely future activities which may impede the proposed sand extraction. No additional rules are considered necessary in any future Regional Plans to ensure that the site is protected from other activities to ensure that reverse sensitivity effects do not arise.

Objective 3.10 Use and Allocation of Common Resources

Efficiently use and allocate common natural resources, with a particular focus on:

- (a) *Situations where demand is greater than supply;*
- (b) *The use of freshwater and coastal water space; and*
- (c) *Maximising the security and reliability of supply of common natural resources for users.*

Assessment

12.100. Section 3 of the Assessment of Economic Effects outlines the demand for marine sand (and in particular for the Auckland market). The sand resource in this location can be efficiently extracted and delivered to the Auckland market¹²⁸. There are no other sand extraction operations within the coastal marine area in Te Ākau Bream Bay which would result in the requirement for NRC to consider the management of the allocation of the resource to address potential effects.

¹²⁸ Para. 39, Assessment of Economic Effects (Attachment Nineteen)

12.101. The rate of the extraction of sand reflects the demand for the sand product by the market at any one time. Significant stockpiling of sand is not undertaken, and the sand is not exported outside New Zealand.

12.102. The occupation of the coastal marine area for sand extraction is temporal and does not impact on the use of the coastal marine area by other parties. Exclusive occupation of the sand extraction area is not required nor is being sought.

12.103. One of the key objectives of this proposal is to significantly improve the resilience of the sand supply to the Auckland market and this is addressed in detail in the Assessment of Economic Effects.

12.104. Granting consent would directly give effect to this objective.

Objective 3.14 Natural character, outstanding natural features, outstanding natural landscapes and historic heritage

Identify and protect from inappropriate subdivision, use and development;

- (a) *The qualities and characteristics that make up the natural character of the coastal environment, and the natural character of freshwater bodies and their margins;*
- (b) *The qualities and characteristics that make up outstanding natural features and outstanding natural landscapes;*
- (c) *The integrity of historic heritage*

Assessment

12.105. The qualities and characteristics of the natural character of the coastal environment in this part of Te Ākau Bream Bay have been addressed in the existing environment description and in detail in Section 4 of the Landscape and Natural Character Effects Assessment (Attachment Eight).

12.106. 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 4.7 km from the shoreline of Te Ākau 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.

12.107. Given the separation distance to the identified outstanding natural features and outstanding natural landscapes and the temporary nature of vessels associated with the sand extraction in the area, it has been concluded that the proposed sand extraction will have no impact on ONC, HNC, ONF's and ONL's identified within Te Ākau Bream Bay and the Whangārei Harbour¹²⁹.

12.108. Airborne effects arising will not impact on the wider coastal environment and should be inaudible at the closest beaches and therefore will not impact on the character of the wider coastal environment. No adverse lighting effects will be generated.

12.109. No historic heritage features have been identified in the immediate area which may be impacted upon.

12.110. It is therefore concluded that the proposal is not an inappropriate use in Te Ākau Bream Bay and granting consent would not be contrary to this objective.

Supporting Policies

¹²⁹ Page 63, Landscape and Natural Character Effects Assessment (Attachment Eight)

Policy 4.4.1 Policy – Maintaining and protecting significant ecological areas and habitats

- (1) *In the coastal environment, avoid adverse effects, and outside the coastal environment avoid, remedy or mitigate adverse effects of subdivision, use and development so they are no more than minor on:*
 - (a) *Indigenous taxa that are listed as threatened or at risk in the New Zealand Threat Classification System lists;*
 - (b) *Areas of indigenous vegetation and habitats of indigenous fauna, that are significant using the assessment criteria in Appendix 5;*
 - (c) *Areas set aside for full or partial protection of indigenous biodiversity under other legislation.*
- (2) *In the coastal environment, avoid significant adverse effects and avoid, remedy, or mitigate other adverse effects of subdivision, use and development on:*
 - (a) *Areas of predominantly indigenous vegetation;*
 - (b) *Habitats of indigenous species that are important for recreational, commercial, traditional or cultural purposes;*
 - (c) *Indigenous ecosystems and habitats that are particularly vulnerable to modification, including estuaries, lagoons, coastal wetlands, dunelands, intertidal zones, rocky reef systems, eelgrass, northern wet heathlands, coastal and headwater streams, floodplains, margins of the coastal marine area and freshwater bodies, spawning and nursery areas and saltmarsh.*
- (3) *Outside the coastal environment and where clause (1) does not apply, avoid, remedy or mitigate adverse effects of subdivision, use and development so they are not significant on any of the following:*
 - (a) *Areas of predominantly indigenous vegetation;*
 - (b) *Habitats of indigenous species that are important for recreational, commercial, traditional or cultural purposes;*
 - (c) *Indigenous ecosystems and habitats that are particularly vulnerable to modification, including wetlands, dunelands, northern wet heathlands, headwater streams, floodplains and margins of freshwater bodies, spawning and nursery areas.*
- (4) *For the purposes of clause (1), (2) and (3), when considering whether there are any adverse effects and/or any significant adverse effects:*
 - (a) *Recognise that a minor or transitory effect may not be an adverse effect;*
 - (b) *Recognise that where the effects are or maybe irreversible, then they are likely to be more than minor;*
 - (c) *Recognise that there may be more than minor cumulative effects from minor or transitory effects.*
- (5) *For the purpose of clause (3) if adverse effects cannot be reasonably avoided, remedied or mitigated then it maybe appropriate to consider the next steps in the mitigation hierarchy i.e. biodiversity offsetting followed by environmental biodiversity compensation, as methods to achieve Objective 3.4.*

Assessment

12.111. The assessment against Objective 3.4 also applies to this policy. Clauses (3) and (5) are not applicable to this proposal.

12.112. As outlined in the assessment against Objective 3.4, the risk posed to seabirds and shorebirds is low and impacts on seabirds and shorebirds will be less than minor, and for some potential effects negligible. For Tara Iti Fairy Tern, the low risk of loss of terrestrial breeding habitat is based upon the proposed sand extraction area being outside the depth of closure and that extraction of sand will have a negligible effect on beach morphology and stability. Similarly, the low risk of Tara Iti Fairy Tern interacting with the sand extraction vessel, or of being impacted by a fuel/oil spill from the sand extraction vessel, is based on the low likelihood of these two effects occurring.

12.113. The Assessment of Ecological Effects¹³⁰ concludes in respect to this Policy:

“As part of the pre-sand extraction monitoring, a baseline assessment utilising sampling has been undertaken prior to sand extraction occurring. No sensitive habitats were identified that suggested a specific area should be excluded from sand extraction. Two protected species of stony coral were detected in the proposed sand extraction area in low numbers and are the subject of further investigation in NIWA (2024). The proposed sand extraction area is not an area with ecosystems and habitats that are particularly vulnerable to modification.”

12.114. In addition, it has been confirmed¹³¹ that the effects on fish and fisheries will be low to negligible if they occur at all.

12.115. It is concluded that the proposal is not contrary to this policy.

Policy 4.6.1 Policy – Managing effects on the characteristics and qualities natural character, natural features and landscapes

(1) *In the coastal environment:*

- a) *Avoid adverse effects of subdivision use, and development on the characteristics and qualities which make up the outstanding values of areas of outstanding natural character, outstanding natural features and outstanding natural landscapes.*
- b) *Where*
- (a) *does not apply, avoid significant adverse effects and avoid, remedy or mitigate other adverse effects of subdivision, use and development on natural character, natural features and natural landscapes. Methods which may achieve this include:*
 - (i) *Ensuring the location, intensity, scale and form of subdivision and built development is appropriate having regard to natural elements, landforms and processes, including vegetation patterns, ridgelines, headlands, peninsulas, dune systems, reefs and freshwater bodies and their margins; and*
 - (ii) *In areas of high natural character, minimising to the extent practicable indigenous vegetation clearance and modification (including earthworks / disturbance, structures, discharges and extraction of water) to natural wetlands, the beds of lakes, rivers and the coastal marine area and their margins; and*
 - (iii) *Encouraging any new subdivision and built development to consolidate within and around existing settlements or where natural character and landscape has already been compromised.*

(3) *When considering whether there are any adverse effects on the characteristics and qualities of the natural character, natural features and landscape values in terms of (1)(a), whether there are any significant adverse effects and the scale of any adverse effects in terms of (1)(b) and (2), and in determining the character, intensity and scale of the adverse effects:*

- a) *Recognise that a minor or transitory effect may not be an adverse effect;*
- b) *Recognise that many areas contain ongoing use and development that:*
 - (i) *Were present when the area was identified as high or outstanding or have subsequently been lawfully established*
 - (ii) *May be dynamic, diverse or seasonal;*
- c) *Recognise that there may be more than minor cumulative adverse effects from minor or transitory adverse effects; and*

¹³⁰ Section 7.4, Assessment of Ecological Effects (Attachment Thirteen)

¹³¹ Section 7, Assessment of Effects on Fish and Fisheries in Te Ākau Bream Bay (Attachment Seventeen)

d) *Have regard to any restoration and enhancement on the characteristics and qualities of that area of natural character, natural features and/or natural landscape.*

Assessment

12.116. It is noted that Clause (2) is not applicable as it relates to areas outside the coastal environment and therefore has not been included for assessment.

12.117. The assessment against Objective 3.14 also applies to this policy.

12.118. Given the separation distance to the identified outstanding natural features and outstanding natural landscapes and the temporary nature of vessels associated with the sand extraction in the area, it has been concluded that the proposed sand extraction will have no impact on ONC, HNC, ONF's and ONL's identified within Te Ākau Bream Bay and the Whangārei Harbour.

12.119. It has also been found¹³² that: *"No significant adverse effects have been identified that might erode the natural character values of those parts of Te Ākau Bream Bay outside its ONC Areas."*

12.120. It is considered that granting consent would not be contrary to this policy.

Policy 4.8.1 Demonstrate the need to occupy space in the common marine and coastal area

(1) *Only consider allowing structures, the use of structures and other activities that occupy space in the common marine and coastal area where:*

- (a) *They have a functional need to be located in the common marine and coastal area, unless the structure, use or activity is consistent with Policy 4.8.1(2);*
- (b) *It is not feasible for the structure, the use or the occupation of space to be undertaken on dry land (land outside the common marine and coastal area), unless it is consistent with Policy 4.8.1(2);*
- (c) *It is not feasible to use an existing authorised structure; and*
- (d) *The area occupied is necessary to provide for or undertake the intended use.*

(2) *Occupation of space and structures (and their use) that are contrary to Policy 4.8.1(1) (a) and (b) may be appropriate where they will make a significant positive contribution to the local area or the region.*

(3) *If the public are excluded from using a structure or common marine and coastal area, the exclusion is:*

- (a) *Only for the time period(s) and the area necessary to provide for or undertake the intended use ;or*
- (b) *Necessary to ensure the integrity of the structure; or*
- (c) *Necessary to ensure the health and safety of the public.*

Assessment

12.121. Policy 4.8.1 is not relevant in the consideration of this proposal for the following reasons:

- No permanent occupation of the coastal marine area is required by the proposal, with the *William Fraser* continuously moving across the sand extraction area while sand extraction is occurring.
- No structures are required to be constructed within the CMA.
- There is no exclusion of the public from the sand extraction area.

¹³² Page 63, Landscape and Natural Character Effects Assessment (Attachment Eight)

Policy 4.8.3 Coastal Permit Duration

When determining the expiry date for coastal permits to occupy space in the common marine and coastal area, particular regard will be had to:

- (a) *The security of tenure for investment (the larger the investment, the longer the consent duration);*
- (b) *Aligning the expiry date with other coastal permits to occupy space in the surrounding common marine and coastal area;*
- (c) *The reasonably foreseeable demands for the occupied water space by another type of activity (the greater the demands, the shorter the consent duration); and*
- (d) *Certainty of effects (the less certain the effects the shorter the consent duration).*

Assessment

12.122. A 35-year consent period is being sought and it is considered consent can be granted for this term for the following reasons:

- The applicant has made a substantial investment in the scientific investigations required to identify an appropriate extraction site, to support this application and in the design and construction of the *William Fraser*.
- It is expected that the demand for coastal marine sand from Te Ākau Bream Bay will be maintained (if not increase) during this consent period. In very simple terms, the applicant only provides sand to the market at the rate required by the market so if the demand for coastal sand drops below the consented volumes then the volume extracted would also drop.
- No other commercial uses which may want to specifically use the sand extraction area and which may limit the use of the area for sand extraction have been identified.
- There are no other coastal permits in existence which may impact on the duration of the coastal permit being sought.
- Detailed and extensive site investigations have been completed, and it is considered that the potential effects are now well known and have been adequately documented in this application. A range of conditions are proposed to monitor potential effects during the life of the consent, and an adaptive management approach has been adopted. It is not considered that this is a situation where a shorter consent period is required due to the uncertainty of what effects may arise and the magnitude of such effects.

Policy 4.8.4 Private use of common marine and coastal area

Recognise activities which provide a net gain in environmental and / or public benefit from persons occupying space in the common marine and coastal area.

Assessment

12.123. Policy 4.8.4 is not of direct relevance to this proposal as consent is not being sought for the occupation of an area of the coastal marine area. If a wider interpretation of this Policy was to be undertaken, and all uses in the common marine and coastal area were to be considered in the context of this policy then granting consent will contribute towards, and facilitate, the delivery of infrastructure and development projects of regional and national benefits.

Policy 5.1.4 Regionally Significant Mineral Resources

Mineral resources will be considered regionally significant, based on one or more of the following:

- (a) *Relative scarcity;*
- (b) *Current or potential contribution to the regional economy from the extraction;*
- (c) *Current and potential demand, and location with respect to demand;*
- (d) *Constraints on extraction including existing or planned settlement and access to the site;*
- (e) *Constraints on other development and land use as a result of extraction;*
- (f) *Quality and size of deposit;*
- (g) *Average annual extraction rate of minerals (more than 50,000 tonnes per annum for aggregates); and*
- (h) *Importance to infrastructure development.*

Assessment

12.124. This policy is not directly relevant within the context of assessing the application as it outlines when a significant mineral resource is to be identified in a District Plan. However using this criteria, it is considered that the Te Ākau Bream Bay sand resource would be defined as regionally significant (in terms of (b), (c), (f) and (h)) given its potential contribution to the regional economy, the current and expected on-going demand for marine sands (of the type found in Te Ākau Bream Bay), the limitations on where sand resources can be efficiently extracted and delivered to the market, the size of the resource and the important of marine sands in the manufacture of concrete for regionally and nationally important infrastructure projects.

Draft for Consultation

Policy 5.2.1 Managing the Use of Resources

Encourage development and activities to efficiently use resources, particularly network resources, water and energy, and promote the reduction and reuse of waste.

Assessment

12.125. This proposal is an efficient use of the Te Ākau Bream Bay sand resource.

12.126. The sand is at a depth and the proposed sand extraction site is of a shape and dimension where sand extraction can be undertaken efficiently and under most weather and all tide conditions.

12.127. The proposed sand extraction site allows for the sand to be delivered to the market (and predominately via Port of Auckland) in an efficient manner.

12.128. Oversized material (greater than 2 mm) is returned to the coastal marine area during the excavation process as is any very fine sediment. There is no waste product with all sand loaded onto the *William Fraser* and exported from the site being utilised.

12.129. Granting consent would be consistent with this policy.

Policy 6.1.2 Precautionary Approach

Adopt a precautionary approach towards the effects of climate change and introducing genetically modified organisms to the environment where they are scientifically uncertain, unknown, or little understood, but potentially significantly adverse.

Assessment

12.130. The potential effects of climate change on the proposed effects resulting from the sand extraction have been considered in the various supporting assessments and in particular the Coastal Process Effects Assessment¹³³ and the Assessment of Effects on Surf Breaks¹³⁴. Neither assessment has identified the need to undertake a precautionary approach specifically in respect to climate change when assessing the effects on the environment as a result of potential effects from climate change.

12.131. However, as detailed earlier, an overall precautionary approach has been taken in respect to both the site selection, sand extraction volume and the recommended monitoring (and their supporting conditions). The proposal is therefore consistent with this policy.

Proposed Regional Plan for Northland (“PRPN”)

Relevant Objectives

Objective F.1.2 Water Quality

Manage the use of land and discharges of contaminants to land and water so that:

- 1) *existing water quality is at least maintained, and improved where it has been degraded below the river, lake or coastal water quality standards set out in H.3 Water quality standards and guidelines, and*
....
- 3) *the life-supporting capacity, ecosystem processes and indigenous species, including their associated ecosystems, of fresh and coastal water are safeguarded, and the health of freshwater ecosystems is maintained, and 302*
- 4) *the health of people and communities, as affected by contact with fresh and coastal water, is safeguarded, and*
...
- 8) *kai is safe to harvest and eat, and recreational, amenity and other social and cultural values are provided for.*

Assessment

12.132. As outlined earlier in this report, effects on water quality may arise from the disturbance of the seafloor during the sand extraction and the discharge of water, fine sediments, and oversized material from the moon pools into the sea (below the keel line).

12.133. The discharge back into the coastal marine area from the extraction vessel is comprised of seawater, shells, oversize sand, fines and fauna. No contamination of this material can occur through the process and before it is discharged back into the coastal marine area through the moon pool system.

12.134. The discharge therefore does not affect the life-supporting capacity, ecosystem processes and indigenous species of the receiving environment or kai moana or the ability to use the coastal water for recreational purposes such as fishing. The existing coastal water is considered to be of high value and this will not be impacted upon.

12.135. The Water Quality Assessment of Environment Effects¹³⁵ concludes that the magnitude of effects on water quality is negligible and states:

“Any plume generated by proposed sand extraction in Te Ākau Bream Bay will be highly localised in terms of the temporal and spatial extent and limited plume intensity. Given the relatively exposed coastal setting of the wider Te Ākau Bream Bay environment and natural fluctuations experienced in the bay, it is considered that water quality will be maintained and not degraded by the proposed activities. This is consistent with Objective 1 of the NZCPS, Objective 3.2 of the Regional Policy Statement for Northland,

¹³³ Section 5.11, Coastal Process Effects Assessment (Attachment Twenty-Two)

¹³⁴ Section 7.1, Assessment of Effects on Surf Breaks (Attachment Eighteen)

¹³⁵ Section 8, Water Quality Assessment of Environmental Effects (Attachment Ten)

and Objective F.1.2 of the Proposed Regional Policy Statement for Northland. On this basis, the overall level of effects of the proposed sand extraction to water quality in Te Ākau Bream Bay are considered to be Negligible.”

12.136. It is concluded that granting consent would not be contrary to this objective.

F.1.3 Indigenous Ecosystems and Biodiversity

In the coastal marine area and in fresh waterbodies, safeguard ecological integrity by:

- 1) *protecting areas of significant indigenous vegetation and significant habitats of indigenous fauna, and*
- 2) *maintaining regional indigenous biodiversity, and*
- 3) *where practicable, enhancing and restoring indigenous ecosystems and habitats to a healthy functioning state, and reducing the overall threat status of regionally and nationally Threatened or At Risk species, and*
- 4) *preventing the introduction of new marine or freshwater pests into Northland and slowing the spread of established marine or freshwater pests within the region.*

Assessment

12.137. The proposed sand extraction area is outside any identified significant ecological areas, and no significant habitats of indigenous fauna have been identified within the sand extraction area.

12.138. As assessed under the RPS Objective 3.4, the proposal will not impact on regional indigenous biodiversity and will not impact on protected areas of significant indigenous vegetation or significant habitats of indigenous fauna. The Assessment of Ecological Effects¹³⁶ finds in respect to this objective:

“The proposed sand extraction area is significantly outside any identified significant ecological areas and no significant habitats of indigenous flora or fauna have been identified within the sand extraction area. The proposal will not adversely impact on regional indigenous biodiversity.

MBL undertake regular cleaning of their vessels, and this is undertaken to maintain the vessel’s performance and stay within Maritime NZ regulatory requirements. The discharging of any bilge water is to be avoided while at the sand extraction sites. The potential biosecurity effects are therefore considered to be negligible.”

12.139. As outlined in the assessment against Objective 3.4, the risk posed to seabirds and shorebirds is low and impacts on seabirds and shorebirds will be less than minor, and for some potential effects negligible. For Tara Iti Fair Tern, the low risk of loss of terrestrial breeding habitat is based upon the proposed sand extraction area being outside the depth of closure and that extraction of sand will have a negligible effect on beach morphology and stability. Similarly, the low risk of Tara Iti Fairy Tern interacting with the sand extraction vessel, or of being impacted by a fuel/oil spill from the sand extraction vessel, is based on the low likelihood of these two effects occurring.

12.140. The William Fraser operates under a BMP, which reduces the risk of new marine pests being introduced into the area.

12.141. It is considered that granting consent would not be contrary to this objective.

F.1.5 Enabling Economic Well-being

¹³⁶ Section 7.5, Assessment of Ecological Effects (Attachment Thirteen)

The use and development of Northland's natural and physical resources is efficient and effective and managed in a way that will improve the economic, social and cultural well-being of Northland and its communities.

Assessment

12.142. The proposal allows for the efficient and effective use of the Te Ākau Bream Bay sand resource. Although the predominant market for the sand resource will be the Auckland concrete market, it is more than likely that during the life of the consent certain infrastructure projects in Northland will utilise high-strength concrete which utilises marine source sand. During the life of the consent, a small proportion of the sand resource is likely to be delivered to Port Nikau for use in the Northland market.

12.143. As outlined through this application, marine sand is a critical component of high-strength concrete. The efficient production and supply of concrete is critical for the development and maintenance of a well-functioning urban environment and therefore the economic and social well-being of the community.

12.144. Granting consent would directly give effect to this objective.

F.1.8 Use and Development in the Coastal Marine Area

Use and development in the coastal marine area:

- 1) *makes efficient use of space occupied in the common marine and coastal area, and*
- 2) *is of a scale, density and design compatible with its location, and*
- 3) *recognises the need to maintain and enhance public open space and recreational opportunities, and*
- 4) *is provided for in appropriate places and forms, and within appropriate limits, and*
- 5) *is undertaken in a way that recognises it can have effects outside the coastal marine area.*

Draft for Consultation

Assessment

12.145. The proposal does not require the establishment of permanent structures within Te Ākau Bream Bay or exclusive occupation of the coastal marine area. The vessel undertaking sand extraction is of a form and size which is not dissimilar to vessels currently using the anchorage area of which could be expected to traverse this general location to and from Northport.

12.146. The proposal does not impact on public access or recreational opportunities (including recreational fishing or surfing) within Te Ākau Bream Bay and therefore granting consent would not be contrary to this objective.

F1.9 Tāngata whenua role in decision-making

Tāngata whenua's kaitiaki role is recognised and provided for in decision making over natural and physical resources.

Assessment

12.147. It is understood that the Panel can seek comments directly from tangata whenua representatives as part of their decision-making process.

F.1.12 Natural character, outstanding natural features, historic heritage and places of significance to tāngata whenua

Protect from inappropriate use and development:

- 1) the characteristics, qualities and values that make up:
 - a) outstanding natural features in the coastal marine area and in fresh waterbodies, and
 - b) areas of outstanding and high natural character in the coastal marine area and in fresh waterbodies within the coastal environment, and
 - c) natural character in fresh waterbodies outside the coastal environment, and
 - d) outstanding natural landscapes in the coastal marine area, and
- 2) the integrity of historic heritage in the coastal marine area, and
- 3) the values of places of significance to tāngata whenua in the coastal marine area and freshwater bodies

Assessment

12.148. Given the proposed location of the sand extraction is some distance from identified outstanding natural features and areas of historic heritage and places of significance to tangata whenua (TBC) it is considered that the proposal is not an inappropriate use of this part of Te Ākau Bream Bay.

12.149. In particular, the proposal will not:

- Adversely Impact on any outstanding natural features in the CMA.
- Adversely impact on any areas of outstanding or high natural character in the CMA.
- Will not adversely impact on any outstanding natural landscapes in the coastal marina area.
- Will not impact on any historic heritage in the CMA.

12.150. It is considered that granting consent would not be contrary to this objective.

Relevant Policies

D.1.1 When an analysis of effects on tāngata whenua and their taonga is required

A resource consent application must include in its assessment of environmental effects an analysis of the effects of an activity on tāngata whenua and their taonga if one or more of the following is likely:

- 1) adverse effects on mahinga kai or access to mahinga kai, or
- 2) any damage, destruction or loss of access to wāhi tapu, sites of customary value and other ancestral sites and taonga with which Māori have a special relationship, or
- 3) adverse effects on indigenous biodiversity in the beds of waterbodies or the coastal marine area where it impacts on the ability of tāngata whenua to carry out cultural and traditional activities, or
- 4) the use of genetic engineering and the release of genetically modified organisms to the environment, or
- 5) adverse effects on taiāpure, mataitai or Māori non-commercial fisheries, or
- 6) adverse effects on protected customary rights, or
- 7) adverse effects on Sites and Areas of Significance to Tāngata Whenua mapped in the Regional Plan (refer I Maps | Ngā mahere matawhenua).

Assessment

12.151. Three CIA's have been prepared as part of this application. The key findings of these CIA's are:

- TBC

D.1.2 Requirements of an analysis of effects on tāngata whenua and their taonga

If an analysis of the effects of an activity on tāngata whenua and their taonga is required in a resource consent application, the analysis must:

- 1) *include such detail as corresponds with the scale and significance of the effects that the activity may have on tāngata whenua and their taonga, and*
- 2) *have regard to (but not be limited to):*
 - a) *any relevant planning document recognised by an iwi authority (lodged with the Council) to the extent that its content has a bearing on the resource management issues of the region, and*
 - b) *the outcomes of any consultation with tāngata whenua with respect to the consent application, and*
 - c) *statutory acknowledgements in treaty settlement legislation, and*
- 3) *follow best practice, including requesting, in the first instance, that the relevant tāngata whenua undertake the assessment, and*
- 4) *specify the tāngata whenua that the assessment relates to, and*
- 5) *be evidence-based, and*
- 6) *incorporate, where appropriate, Mātauranga Māori, and*
- 7) *identify and describe all the cultural resources and activities that may be affected by the activity, and*
- 8) *identify and describe the adverse effects of the activity on the cultural resources and cultural practices (including the effects on the mauri of the cultural resources, the cultural practices affected, how they are affected, and the extent of the effects), and*
- 9) *identify, where possible, how to avoid, remedy or mitigate the adverse effects on cultural values of the activity that are more than minor, and*
- 10) *include any other relevant information.*

Assessment

12.152. As outlined above, two CIA's have been prepared as part of this application.

12.153. An assessment against the three iwi management plans relevant to this area has been undertaken in Section 13.

12.154. MBL has consulted directly with the Ngātiwai Trust Board, Te Pouwhenua o Tiakiriri Kukupa Trust for Te Parawhau and Patuharakeke. The stakeholder engagement log detailing the consultation undertaken is included in Attachment TBC. The key outcomes of this consultation are addressed in Section 14.

12.155. The following mitigation and conditions are proposed to address identified potential cultural effects
TBC

D.1.4 Managing effects on places of significance to tāngata whenua

Resource consent for an activity may generally only be granted if the adverse effects from the activity on the values of places of significance to tāngata whenua in the coastal marine area and water bodies are avoided, remedied or mitigated so they are no more than minor.

D.1.5 Places of significance to tāngata whenua

For the purposes of this Plan, a place of significance to tāngata whenua:

- 1) is in the coastal marine area, or in a water body, where the values which may be impacted are related to any of the following:
 - a) soil conservation, or
 - b) quality and quantity of water, or
 - c) aquatic ecosystems and indigenous biodiversity, and
- 2) is:
 - a) a Historic Heritage resource, or
 - b) ancestral land, water, site, wāhi tapu, or other taonga, and
- 3) is either:
 - a) a Site or Area of Significance to Tāngata Whenua, which is a single resource or set of resources identified, described and contained in a mapped location, or
 - b) a landscape of significance to tāngata whenua, which is a collection of related resources identified and described within a mapped area, with the relationship between those component resources identified, and
- 4) has one or more of the following attributes:
 - a) historic associations, which include but are not limited to:
 - i. stories of initial migration, arrival and settlement, or
 - ii. patterns of occupation, including permanent, temporary or seasonal occupation, or
 - iii. the sites of conflicts and the subsequent peace-making and rebuilding of iwi or hapū, or
 - iv. kinship and alliances built between areas and iwi or hapū, often in terms of significant events, or
 - v. alliances to defend against external threats, or
 - vi. recognition of notable tupuna, and sites associated with them, or
 - b) traditional associations, which include but are not limited to:
 - i. resource use, including trading and trading routes between groups (for instance – with minerals such as matā/obsidian), or
 - ii. traditional travel and communication linkages, both on land and sea, or
 - iii. areas of mana moana for fisheries and other rights, or
 - iv. use of landmarks for navigation and location of fisheries grounds, or
 - v. implementation of traditional management measures, such as rāhui or tohatoha (distribution), or
 - c) cultural associations, which include but are not limited to:

- i. *the web of whanaungatanga connecting across locations and generations, or*
- ii. *the implementation of concepts such as kaitiakitanga and manākitanga, with specific details for each whanau, hapū and iwi, or*
- d) *spiritual associations which pervade all environmental and social realities, and include but are not limited to:*
 - i. *must: the role of the atua Ranginui and Papatūānuku, and their offspring such as Tangaroa and Tāne, or*
 - ii. *the recognition of places with connection to the wairua of those with us and those who have passed away, or*
 - iii. *the need to maintain the mauri of all living things and their environment, and*
must
 - a) *be based on traditions and tikanga, and*
 - b) *be endorsed for evidential purposes by the relevant tāngata whenua community, and*
 - c) *record the values of the place for which protection is required, and*
 - d) *record the relationship between the individual sites or resources (landscapes only), and*
 - e) *record the tāngata whenua groups determining and endorsing the assessment, and*
 - f) *geographically define the areas where values can be adversely affected.*

Assessment

12.156. TBC

12.157. The CIA's have identified the following potential impacts on these sites TBC

12.158. In terms of visual and landscape effects on sites of cultural significance to Māori, it has been found¹³⁷:

12.159. *“Although the proposed sand extraction would be visible, to varying degrees from Patuharakeke’s Te Poupouwhenua area at Marsden Point, its Ruakākā River Mahunga Mataitai and Te Tahuna Tohora, this would be over viewing distances that start at more than 8km for the first of these sites and more than 4.7km from the latter two. For the reasons summarised in Section 9.5, above, it is considered that the proposed operations would do little to change the broad character and generally perceived values of Te Ākau Bream Bay and, as a result, the effects identified in relation to these Sites of Significance are typically of a low order.”*

12.160. Overall, it is considered TBC

D.2.2 Social, cultural and economic benefits of activities

Regard must be had to the social, cultural and economic benefits of a proposed activity, recognising significant benefits to local communities, Māori and the region including local employment and enhancing Māori development, particularly in areas of Northland where alternative opportunities are limited.

Assessment

12.161. An Assessment of Economic Effects has been completed and forms part of this application and is therefore to be considered in terms of assessing the proposal both in terms of the purpose of the Act

¹³⁷ Page 64, Landscape and Natural Character Effects Assessment (Attachment Eight)

but also in terms of the s104 assessment under the RMA. Quite simply, granting consent and providing for the sand extraction will contribute towards, and facilitate, the delivery of infrastructure and development projects of regional and national significance. Such projects contribute towards employment and enhancing economic growth for New Zealand communities (including the Māori economy).

D.2.4 Adaptive management

Regard should be had to the appropriateness of an adaptive management approach where:

- 1) *there is an adequate baseline of information on the receiving environment, and*
- 2) *the occurrence of potential adverse effects can be effectively monitored, and*
- 3) *thresholds can be set to require mitigation action if more than minor adverse effects arise, and*
- 4) *potential adverse effects can be remedied before they become irreversible.*

Assessment

12.162. As outlined in Section 7, an adaptive management approach has been taken in terms of the proposed extraction area (i.e. the requirement for an ASEA), extraction volumes (including staging to increase the monthly and annual extraction volumes), monitoring, requirement for an ASEA and in the recommended consent conditions (including the requirements for monitoring and reporting, process for changes in operation/vessel and review of conditions).

12.163. Given the size of the proposed sand extraction area, the dynamic nature of the coastal marine area and the proposed duration of the consent it is considered that an adaptive management approach is appropriate in order to monitor effects during the life of the consent and to have the ability to change monitoring and reporting requirements, the specific areas and volume of sand extraction, and the sand extraction methodology.

12.164. The EMMP (Attachment Thirty-One) outlines the monitoring to be undertaken and the required outputs from this monitoring including updated ASEA's to avoid areas of sand extraction where certain criteria are not achieved.

12.165. It is considered that with the adoption of this approach significant adverse effects will be avoided and therefore potential adverse effects are avoided or remedied before they become irreversible.

D.2.14 Resource consent duration

When determining the expiry date for a resource consent, have particular regard to:

- 1) *security of tenure for investment (the larger the investment, then generally the longer the consent duration), and*
- 2) *the administrative benefits of aligning the expiry date with other resource consents for the same activity in the surrounding area or catchment, and*
- 3) *certainty of effects (the less certain the effects, the shorter the consent duration), and*
- 4) *whether the activity is associated with Regionally Significant Infrastructure (generally longer consent durations for Regionally Significant Infrastructure), and*
- 5) *where the resource consent application is to re-consent an activity, the applicant's past compliance with the conditions of any previous resource consent (significant previous non-compliance should generally result in a shorter duration).*

Assessment

12.166. A 35-year consent period is being sought. In respect to clause 5), it is confirmed that this application is not for a re-consenting of an existing activity at this site.

12.167. This consent period is being sought for the following reasons:

- The applicant has made a substantial investment in the scientific investigations required to identify the sand extraction area and to support this application and in the design and purchase of the *William Fraser*.
- It is expected that the demand for marine sand from Te Ākau Bream Bay will meet in a substantial way the sand requirements of the Auckland concrete market (and the high-strength concrete market in particular) required to facilitate the delivery of infrastructure and development projects. Section Three of the Assessment of Economic Effects outlines the demand outlook for sand in the Auckland market which is expected to grow under all growth scenarios considered. The applicant provides sand to the market at the rate required by the market so if the demand for marine sand drops below the consented volumes, then the volume extracted would also drop (rather than being stockpiled or exported).
- There are no other coastal permits in existence which may impact on the duration of the coastal permit being sought.
- Detailed and extensive site investigations have been completed, and it is considered that the environmental baseline and potential effects are now well known and have been adequately documented in this application. A range of conditions are proposed to monitor effects. It is not considered that this is a situation where a shorter consent period is required due to the uncertainty of what effects may arise and the magnitude of such effects.

D.2.15 Recognising other plans and strategies

When considering a resource consent application have regard to issues, uses, values, objectives and outcomes identified in an operative plan or strategy adopted by the Regional Council that has followed a consultation process carried out in accordance with the consultative principles and procedures of the Local Government Act 2002, to the extent that the content of this Plan or strategy has a bearing on the resource management issues of the region.

Assessment

12.168. The proposal has been considered in terms of the RPS and the PRPN. No strategies adopted by NRC have been identified which require consideration in terms of this policy.

D.2.17 Managing adverse effects on Natural Character, Outstanding Natural Landscapes and Outstanding Natural Features

Manage the adverse effects of activities on Natural Character, Outstanding Natural Landscapes and Outstanding Natural Features by:

- 1) avoiding adverse effects of activities as outlined in Table 17: Adverse effects to be avoided.

Table 17: Adverse effects to be avoided

Place / value	Location of the place	Effects to be avoided
Areas of Outstanding Natural Character Outstanding Natural Features Outstanding Natural Landscapes	Coastal marine area and freshwater bodies in the coastal environment.	Adverse effects on the characteristics, qualities and values that contribute to make the place outstanding.
Natural Character (incl. High Natural Character) Other Natural Features and Landscapes	The coastal marine area and freshwater bodies in the coastal environment.	Significant adverse effects on the characteristics, qualities and values that contribute to Natural Character or other natural features and landscapes.
Natural Character Outstanding Natural Features Outstanding Natural Landscapes	Freshwater bodies outside the coastal environment.	Significant adverse effects on the characteristics, qualities and values that contribute to Natural Character or which make the Natural Character or landscape outstanding.

2) *recognising that, in relation to Natural Character in water bodies and the coastal environment (where not identified as Outstanding Natural Character), appropriate methods of avoiding, remedying or mitigating adverse effects may include:*

- a) *ensuring the location, intensity, scale and form of activities is appropriate having regard to natural elements and processes, and*
- b) *in areas of High Natural Character in the coastal environment, minimising to the extent practicable indigenous vegetation clearance and modification (seabed and foreshore disturbance, structures, discharges of contaminants), and*
- c) *in freshwater, minimising to the extent practicable modification (disturbance, structures, extraction of water and discharge of contaminants), and*

3) *recognising that, in relation to Outstanding Natural Features in water bodies outside the coastal environment, appropriate methods of avoiding, remedying or mitigating adverse effects may include:*

- a) *requiring that the scale and intensity of bed disturbance and modification is appropriate, taking into account the feature's scale, form and vulnerability to modification of the feature, and*
- b) *requiring that proposals to extract water or discharge contaminants do not significantly adversely affect the characteristics, qualities and values of the Outstanding Natural Feature, and*

4) *recognising that uses and development form part of existing landscapes, features and water bodies and have existing effects.*

Assessment

12.169. As outlined earlier in this application, the Landscape and Natural Character Effects Assessment (Attachment Eight) has concluded that landscape and natural character effects would typically be of a low order. This includes any potential effects on areas identified as having Outstanding Natural Character or being an Outstanding Natural Feature or Natural Landscape.

12.170. No specific significant adverse effects have been identified which need to be further addressed through avoidance or mitigation.

12.171. It is considered that granting consent would not be contrary to this policy.

D.2.18 Managing adverse effects on indigenous biodiversity

Manage the adverse effects of activities on indigenous biodiversity by:

1) *in the coastal environment:*

- a) *avoiding adverse effects on:*
 - i. *indigenous taxa that are listed as threatened or at risk in the New Zealand Threat Classification System lists, and*
 - ii. *the values and characteristics of areas of indigenous vegetation and habitats of indigenous fauna that are assessed as significant using the assessment criteria in Appendix 5 of the Regional Policy Statement, and*
 - iii. *areas set aside for full or partial protection of indigenous biodiversity under other legislation, and*
- b) *avoiding significant adverse effects and avoiding, remedying or mitigating other adverse effects on:*
 - i. *areas of predominantly indigenous vegetation, and*
 - ii. *habitats of indigenous species that are important for recreational, commercial, traditional or cultural purposes, and*
 - iii. *indigenous ecosystems and habitats that are particularly vulnerable to modification, including estuaries, lagoons, coastal wetlands, intertidal zones, rocky reef systems, eelgrass, northern wet heathlands, coastal and headwater streams, spawning and nursery areas and saltmarsh, and*

2) *outside the coastal environment:*

- a) *avoiding, remedying or mitigating adverse effects so they are no more than minor on:*
 - i. *indigenous taxa that are listed as threatened or*
 - ii. *at risk in the New Zealand Threat Classification System lists, and areas of indigenous vegetation and habitats of indigenous fauna, that are significant using the assessment criteria in Appendix 5 of the Regional Policy Statement, and*
 - iii. *areas set aside for full or partial protection of indigenous biodiversity under other legislation, and*
- b) *avoiding, remedying or mitigating adverse effects so they are not significant on:*
 - i. *areas of predominantly indigenous vegetation, and*
 - ii. *habitats of indigenous species that are important for recreational, commercial, traditional or cultural purposes, and*
 - iii. *indigenous ecosystems and habitats that are particularly vulnerable to modification, including wetlands, wet heathlands, headwater streams, spawning and nursery areas, and*

3) *recognising areas of significant indigenous vegetation and significant habitats of indigenous fauna include:*

- a) *Significant Ecological Areas, and*
- b) *Significant Bird Areas, and*
- c) *Significant Marine Mammal and Seabird Areas, and*

4) *recognising damage, disturbance or loss to the following as being potential adverse effects:*

- a) *connections between areas of indigenous biodiversity, and*
- b) *the life supporting capacity of the area of indigenous biodiversity, and*
- c) *flora and fauna that are supported by the area of indigenous biodiversity, and*
- d) *natural processes or systems that contribute to the area of indigenous biodiversity, and*

5) assessing the potential adverse effects of the activity on identified values of indigenous biodiversity, including by:

- a) taking a system-wide approach to large areas of indigenous biodiversity such as whole estuaries or widespread bird and marine mammal habitats, recognising that the scale of the effect of an activity is proportional to the size and sensitivity of the area of indigenous biodiversity, and
- b) recognising that existing activities may be having existing acceptable effects, and
- c) recognising that minor or transitory effects may not be an adverse effect, and
- d) recognising that where effects may be irreversible, then they are likely to be more than minor, and
- e) recognising that there may be more than minor cumulative effects from minor or transitory effects, and

6) recognising that appropriate methods of avoiding, remedying or mitigating adverse effects may include:

- a) careful design, scale and location proposed in relation to areas of indigenous biodiversity, and
- b) maintaining and enhancing connections within and between areas of indigenous biodiversity, and
- c) considering the minimisation of effects during sensitive times such as indigenous freshwater fish spawning and migration periods, and

d) providing adequate setbacks, screening or buffers where there is the likelihood of damage and disturbance to areas of indigenous biodiversity from adjacent use and development, and

- a) maintaining the continuity of natural processes and systems contributing to the integrity of ecological areas, and
- b) the development of ecological management and restoration plans, and

7) recognising that significant residual adverse effects on biodiversity values can be offset or compensated:

- a) in accordance with the Regional Policy Statement for Northland Policy 4.4.1, and
- b) after consideration of the methods in (6) above, and

8) recognising the benefits of activities on biodiversity values that:

- a) restore, protect or enhance ecosystems, habitats and processes, ecological corridors and indigenous biodiversity, and
- b) improve the public use, value or understanding of ecosystems, habitats and indigenous biodiversity.

Assessment

12.172. As assessed under the RPS Objective 3.4, the proposal will not impact on regional indigenous biodiversity and will not impact on protected areas of significant indigenous vegetation or significant habitats of indigenous fauna. This assessment is not repeated again here.

12.173. The Assessment of Ecological Effects¹³⁸ specifically addresses this policy and states:

“Policy D.2.18 directs that when assessing the potential adverse effects of activities on identified values of indigenous biodiversity a system-wide approach should be employed. In essence, this approach avoids micro-level assessment of effects with no cognisance of relevant scale and magnitude. There is no single system or scale that is appropriate for all aspects of marine ecology, therefore assessments need to be made at varying appropriate scales.

Of the assessments made above in this report only the marine reptiles have Threatened or At Risk classification. The assessment concluded No population level effects are expected which would impact

¹³⁸ Section 7.5, Assessment of Ecological Effects (Attachment Thirteen)

marine reptile ecology in the wider Te Ākau Bream Bay, Whangārei Harbour, Ruakākā or Waipū estuaries.

While the assessments made above largely concentrate on the effects within the sand extraction area no adverse effects are expected significantly beyond the extraction area, the one exception to this is LSR for benthic fish. The assessment showed while a LSR could occur it was likely going to be small intermittent and only in the 0 -25 % reduction range result in negligible effects.

No population level effects are expected which would impact benthic biota or fish ecology in the wider Te Ākau Bream Bay, Whangārei Harbour, Ruakākā or Waipū estuaries.”

12.174. Overall, it is considered that granting consent would not be contrary to this policy.

D.2.19 Managing adverse effects on land-based values and infrastructure

When considering an application for a resource consent for an activity in the coastal marine area or in, on or under the bed of a freshwater body, recognise that adverse effects may extend beyond the coastal marine area or the freshwater body to:

- 1) *areas and values including:*
 - a) *Areas of Outstanding and High Natural Character, and*
 - b) *Outstanding Natural Landscapes, and*
 - c) *Outstanding Natural Features, and*
 - d) *Historic Heritage, and*
 - e) *Areas of significant indigenous biodiversity, and*
 - f) *Places of significance to tāngata whenua, and*
- 2) *land-based infrastructure including:*
 - a) *toilets, and*
 - b) *car parks, and*
 - c) *refuse facilities, and*
 - d) *boat ramps, and*
 - e) *boat and dinghy storage, and*
- when considering a proposal that has adverse effects that may extend beyond the coastal marine area or the freshwater body, decision-makers should have regard to:
- 3) *any demonstrated functional need for the activity, and*
- 4) *the nature and scale of effects, and*
- 5) *the proximity of mapped Outstanding Natural Landscapes outside the coastal marine area and the potential for activities in the coastal marine area to have adverse effects on the identified natural values, characteristics and qualities of such Outstanding Natural Landscapes, and*
- 6) *the need to impose conditions on resource consents for those activities in order to avoid, remedy or mitigate these adverse effects.*

Assessment

12.175. The effects on the beach (in that area above MHWS) in terms of coastal processes has been determined to be negligible (i.e. no detectable change in physical parameters)¹³⁹. On this basis there will be no effects on those areas listed in 1) which are located above MHWS. Furthermore, there will be no effects on land-based infrastructure.

12.176. No further consideration is therefore required to be given to 3) to 6) as adverse effects will not extend beyond the coastal marine area.

D.2.20 Precautionary approach to managing effects on significant indigenous biodiversity and the coastal environment

That decision makers adopt a precautionary approach where the adverse effects of proposed activities are uncertain, unknown or little understood, on:

- 1) *indigenous biodiversity, including Significant Ecological Areas, Significant Bird Areas and other areas that are assessed as significant under the criteria in Appendix 5 of the Regional Policy Statement; and*
- 2) *the coastal environment where the adverse effects are potentially significantly adverse, particularly in relation to coastal resources vulnerable to the effects of climate change.*

Assessment

12.177. Although no potential significant effects on indigenous biodiversity have been identified, as outlined earlier a precautionary approach has been taken in respect to the site selection, annual and monthly sand extraction volumes and the proposed monitoring and reporting. In particular, the PSEAR and SEMR monitoring and their outputs (including updated ASEA's) and recommendations for any changes to the monitoring, reporting and sand extraction methodology allow for modification over time to:

- The cells within the sand extraction area where extraction is to occur.
- Sand extraction volumes.
- Monitoring (including both benthic and bathymetric).
- Reporting requirements.
- Sand extraction methodology.

D.5.24 Dredging, disturbance and deposition activities

Dredging, disturbance and deposition activities should not:

- 1) *cause long-term erosion within the coastal marine area or on adjacent land, and*
- 2) *cause damage to any authorised structure.*

Assessment

12.178. The Coastal Process Effects Assessment has found that the erosion risk on beaches from the sand extraction activity is negligible¹⁴⁰ and states:

“The sand extraction proposal for Te Ākau Bream Bay is located sufficiently offshore, in terms of distance and depth that the activity is not expected to directly or indirectly influence the beach and dune

¹³⁹ Table 5.2, Coastal Processes Effects Assessment (Attachment Twenty-Two)

¹⁴⁰ Section 5.10, Coastal Process Effects Assessment (Attachment Twenty-Two).

environment. This is confirmed by analysing the inner and outer DoC and the DoT, which indicate the activity is occurring at a suitable seaward depth and location for the extraction to avoid the risk of drawdown, indicating a negligible effect on coastal morphology of the beach at the present time.

The negligible effect of the extraction on wave transmission towards the shoreline is also not expected to influence coastal processes. Therefore, the overall effect of the activity on the beach and dune environment is assessed to be negligible, through the design of the location being offshore of the DoC.”

12.179. The Assessment then specifically considers Langs Beach, Waipū Cove Beach, Uretiti Beach, Ruakākā Beach and Mair Bank.

12.180. Based on this Assessment, the proposal will not cause long-term erosion and there should be no risk, or damage, to any authorised structure.

12.181. The proposal is therefore consistent with Policy D.5.25.

D.5.27 Underwater noise

Activities causing underwater noise (such as blasting, vibratory piling and drilling, construction, demolition and marine seismic surveying) must:

- 1) *adopt the best practicable option to manage noise so that it does not exceed a reasonable level, and*
- 2) *in the case of marine seismic surveying, demonstrate compliance with Code of Conduct for Minimising Acoustic Disturbance to Marine Mammals from Seismic Surveying Operations (Department of Conservation, 2013), and*
- 3) *avoid adverse effects on marine mammals listed as threatened or at risk in the New Zealand Threat Classification System, and*
- 4) *avoid, remedy or mitigate other adverse effects on marine mammals, having regard to the location and duration of the proposed activity and the benefits of activities:*
 - a) *to be undertaken in association with scientific research and analysis, or*
 - b) *involving the maintenance or enhancement of navigational safety in permanently navigable harbour waters, or*
 - c) *to be undertaken in association with the operation, maintenance and protection of Regionally Significant Infrastructure, or*
 - d) *that mitigate natural hazards.*

Assessment

12.182. The sand extraction activities will comply with the relevant PRNP noise limits by a significant margin¹⁴¹. It is considered that proposal incorporates best practical options to manage noise and noise levels will not exceed a reasonable noise level.

12.183. Clause 2) is not relevant to this proposal.

12.184. Noise effects on fish and marine mammals have been covered in Section 11 of this report. It is confirmed that any noise effects on fish and marine mammals will be negligible to low.

12.185. It is concluded that the proposal is consistent with this proposal.

¹⁴¹ Section 7, Assessment of Airborne Noise Effects (Attachment Eleven).

D.5.30 Significant surf breaks

Provide for the use and enjoyment of Nationally and Regionally Significant Surf Breaks (refer I Maps | Ngā mahere matawhenua) by:

- 1) ensuring that resource consent applications for activities within the coastal marine area that are within a one kilometre radius of a Nationally Significant Surf Break or a Regionally Significant Surf Break are accompanied by an assessment of environmental effects of the activity on the identified values of the Surf Break, and
- 2) avoiding adverse effects on the characteristics, qualities and values that contribute to make Nationally Significant Surf Breaks significant, and
- 3) avoiding significant adverse effects on the characteristics, qualities and values that contribute to make Regionally Significant Surf Breaks significant, and
- 4) avoiding, remedying or mitigating other adverse effects on Nationally and Regionally Significant Surf Breaks, and
- 5) maintaining or enhancing access to Nationally and Regionally Significant Surf Breaks.

Assessment

12.186. An Assessment of Effects on Surf Breaks has been completed and forms part of this application. The effects of surf breaks will be negligible¹⁴². The proposal will not affect access to surf breaks.

12.187. The proposal is consistent with this Policy.

D.5.31 Managing effects on surf breaks

Have regard to the following effects on mapped Surf Breaks (refer I Maps | Ngā mahere matawhenua):

- 1) effects on the quality or consistency of the Surf Break by considering the extent to which the activity may:
 - a) change or interrupt coastal sediment dynamics, and
 - b) change or interrupt swell within the swell corridor including through reflection, refraction or diffraction of wave energy, and
 - c) change the morphology of the foreshore or seabed, and
- 2) effects on:
 - a) amenity values, and
 - b) the feeling of wilderness or isolation.

Assessment

12.188. The impact on the surfability at the seven surf breaks close to the extraction area will be less than minor to negligible. Furthermore, it was concluded that it is unlikely that a surfer on site would be able to perceive a difference in wave height or period resulting from the sand extraction¹⁴³.

12.189. Taking into account potential noise, lighting and visual effects and the distance between the surf breaks and the sand extraction area, it is considered that the proposed sand extraction operation will not impact on the amenity values of the surf breaks or the feeling of wilderness or isolation that surfers may feel while surfing at these locations.

¹⁴² Section 7, Assessment of Effects on Surf Breaks (Attachment Eighteen)

¹⁴³ Section 7, Assessment of Effects on Surf Breaks (Attachment Eighteen)

12.190. It is therefore considered that the application has adequately considered the effects on the mapped surf breaks.

Regional Coastal Plan (Operative)

12.191. At the time of preparing this application, the PRPN was not yet fully operative although all appeals had been resolved. Consideration therefore still needs to be given to the relevant objectives and policies of the Regional Coastal Plan. However, given the status of the PRPN, very little weighting needs to be applied to the Regional Coastal Plan.

12.192. Under the Regional Coastal Plan, the sand extraction area is within the Marine 2 (Conservation) Management Area

Objective 7.3

The preservation of the natural character of Northland's coastal marine area, and the protection of it from inappropriate subdivision, use and development.

Policy 7.4(2)

As far as reasonably practicable to avoid the adverse environmental effects including cumulative effects of subdivision, use and development on those qualities which collectively make up the natural character of the coastal marine area including:

- (a) *natural water and sediment movement patterns;*
- (b) *landscapes and associated natural features;*
- (c) *indigenous vegetation and the habitats of indigenous fauna;*
- (d) *water quality;*
- (e) *cultural heritage values, including historic places and sites of special significance to Maori;*
- (f) *air quality;*

and where avoidance is not practicable, to mitigate adverse effects and provide for remedying those effects to the extent practicable.

Assessment

12.193. The adverse effects level on waves and hydrodynamics has been assessed as being negligible while the level of effects on sediment transport within the sand extraction area has been assessed as low within the sand extraction area and lower shoreface and negligible elsewhere¹⁴⁴.

12.194. As earlier outlined, the effects on water quality have been assessed as being negligible¹⁴⁵.

12.195. As earlier outlined, any natural character effects generated would typically be of a low order¹⁴⁶.

12.196. There will be no effects on air quality.

12.197. In respect to cultural heritage values TBC

12.198. In respect to cumulative effects, it has been concluded in Section 11 of this report that any cumulative effects (including coastal processes and landscape and natural character) will be negligible.

¹⁴⁴ Table 5.2, Coastal Process Effects Assessment (Attachment Twenty-Two)

¹⁴⁵ Section 8, Water Quality Assessment of Environmental Effects (Attachment Ten)

¹⁴⁶ Section 12, Landscape and Natural Character Effects Assessment (Attachment Eight)

12.199. In conclusion, granting consent would not be contrary to this objective or its supporting policy.

Objective 8.3

The identification, and protection from inappropriate subdivision, use and development of outstanding natural features and landscapes which are wholly or partially within Northland's coastal marine area.

Policy 8.4(1)

1. *To recognise and provide for the protection from inappropriate subdivision, use and development of outstanding landscape values, such as those identified in the landscape assessment studies that have been commissioned by district councils of the Northland region of the following areas:*

- *Cape Maria van Diemen/Cape Reinga/North Cape*
- *Kokota sandspit, Parengarenga Harbour entrance*
- *Matai Bay, Cape Karikari*
- *Whangaroa Harbour entrance including Pekapeka Bay*
- *The Cavalli Islands*
- *The islands of the outer Bay of Islands*
- *The Cape Brett peninsula including Motukokako (Piercy) Island*
- *Bream Head and Mount Manaia*
- *The Poor Knights Islands*
- *Ngunguru Sandspit*
- *The Hen and Chickens Islands*
- *Mangawhai sandspit*
 - *Whangape Harbour entrance*
 - *Hokianga Heads*
 - *Maunganui Bluff*
 - *North Head, Kaipara Harbour entrance*

Draft for Consultation

Policy 8.4(3)

3. *To identify and protect from inappropriate subdivision, use and development any other regionally outstanding features and landscapes within Northland's coastal marine area in a co-ordinated and consistent manner.*

Assessment

12.200. There will be no effects from the proposal on the outstanding landscape values of the areas identified in (1) above. Any landscape and natural character effects generated would be of a low order and would remain below the 'significant effects' threshold in relation to the preservation of natural character values under Policy 13(1)(b) of the NZCPS and Section 6(a) of the RMA¹⁴⁷.

¹⁴⁷ Section 12. Landscape and Natural Character Effects Assessment (Attachment Eight)

12.201. Granting consent would therefore not be contrary to this objective and supporting policy.

Objective 9.1.3

- A *The protection of areas of significant indigenous vegetation within Northland's coastal marine area from the adverse effects of subdivision, use and development.*
- B *Appropriate mangrove removal and pruning is provided for.*
- C *Greater integration between land management planning, catchment management planning and marine (or coastal) environment planning leading to a reduction in the sediment and nutrient runoff.*
- D *Communities including the scientific community better understand the role of significant indigenous vegetation, including mangroves, in estuarine ecosystems.*
- E *Local community organisations such as "land care" or "harbour care" groups are able to provide local solutions for the sustainable management of estuaries in conjunction with local authorities and other relevant agencies.*
- F *Council and community groups work in conjunction with the scientific community to develop robust and practical monitoring techniques to assess the change in estuarine habitats over time.*

Objective 9.2.3

The protection of significant habitats of indigenous fauna within Northland's coastal marine area

Assessment

12.202. The proposed sand extraction area is not within an area identified as being significant indigenous vegetation and the proposal will not impact on any such areas.

12.203. Clauses B to F are not relevant to this proposal.

12.204. Granting consent would not be contrary to these objectives.

Policy 9.2.4.3

3. *In processing coastal permit applications for subdivision, use and development within all Marine Management Areas, require specific assessment of the actual and potential effects of the proposed subdivision, use or development on any significant habitat in the vicinity and, if significant, particular consideration be given to either:*
 - (a) *declining consent to the application; or*
 - (b) *requiring as a condition of the permit, mitigation and/or remedial measures to be instituted.*

Assessment

12.205. The sand extraction area is within the Marine 2 (Conservation) Management Area. The Marine 2 (Conservation) Management Area is applied to any part of the coastal marine area which is not otherwise covered by any of the other five classes of management area as indicated on the Coastal Plan Maps. Any new Coastal Marine Area that is not otherwise indicated on the Coastal Plan Maps will be classified as a Marine 2 Management Area. This category is applied to areas to be managed to conserve ecological, cultural, and amenity values¹⁴⁸.

¹⁴⁸ Page 39, Regional Coastal Plan

12.206. The various assessments undertaken for this proposal have not identified any actual or potential effects on any significant habitats in the vicinity to such a magnitude or level of effects where consent should be declined.

12.207. A range of consent conditions (and management plans) have been proposed to avoid or mitigate potential ecological effects.

Objective 10.3

1. *The maintenance and enhancement of public access to and along Northland's coastal marine area except where restriction on that access is necessary.*
2. *The integrated management of vehicular use of beaches, including access to and along the coastal marine area, between administrative agencies, non-governmental agencies and communities.*

Assessment

12.208. The proposal does not impact on public access to and along the coastal marine area. No vehicle use on beaches is required.

Objective 11.3

The management of the natural and physical resources within Northland's coastal marine area in a manner that recognises and respects the traditional and cultural relationships of tangata whenua with the coast.

Policy 11.4.1

To recognise and, as far as practicable, provide for the concerns and cultural perspective of tangata whenua with respect to the protection of natural and physical resources (especially seafood) in the coastal marine area.

Assessment

12.209. Three CIA's have been prepared and are included as part of this application. TBC

Objective 11.3

The maintenance, and where practicable, enhancement of water quality within Northland's coastal marine area.

Objective 19.3

The avoidance of the effects of discharges of contaminants to Northland's coastal water and the remediation or mitigation of any adverse effects of those discharges of contaminants to coastal waters, which are unavoidable.

Policy 19.4.4

To ensure that the individual and cumulative effects of authorised discharges to the coastal marine area do not compromise the maintenance and enhancement of coastal water quality.

Assessment

12.210. The need for the discharge of seawater, oversized material and fine material cannot be avoided and it has been assessed¹⁴⁹ that any adverse effects on water quality from this discharge will be negligible.

¹⁴⁹ Section 8, Water Quality Assessment of Environmental Effects (Attachment Ten)

Water quality is therefore being maintained. No potential cumulative water quality effects have been identified.

12.211. The proposal is therefore consistent with Objective 11.3 and 19.3 and Policy 19.4.4.

Policy 19.4.9

To promote the provision of facilities for the disposal of litter from ships and other vessels.

Assessment

12.212. A Garbage Management Plan has been prepared (Attachment Thirty-Four) and Condition 30 specifically addresses the disposal of litter.

Objective 23.3

Provision for the extraction of sand, shingle, shell, or other natural material while avoiding, remedying or mitigating any adverse effects of such activity on the coastal marine area.

Policy 23.4.1

In assessment of coastal permit applications to apply the precautionary approach for extraction of sand shingle, shell and other natural material, and require the consideration of alternative sources in areas where knowledge of replenishment rates or potential adverse effects is uncertain.

Policy 23.4.2

To promote the sustainable extraction of sand from areas of known sediment replenishment.

Draft for Consultation

Policy 23.4.3

To ensure that extraction activity within the coastal marine area is managed in ways which avoid, remedy or mitigate adverse effects on the natural character of the coast and its ecological, cultural and amenity values.

Assessment

12.213. This objective and supporting policy directly recognises that the provision of sand should be provided for.

12.214. The PRNP provides for sand extraction, such as that proposed in this application, as a discretionary activity. This provides for resource consent applications to be made for sand extraction and for such applications to be considered within, in this case, the framework of the Act.

12.215. Vibracore samples in the extraction site down to 4.9 m showed a mean sand depth of 2.1 m¹⁵⁰.

12.216. Within the wider sand resource area, there is an estimated minimum sand resource volume of at least 124,110,000 m³ which is likely to be a conservative assessment¹⁵¹. The sediment sources are addressed in the Coastal Process Effects Assessment¹⁵² which states:

"There are a limited number of non-biogenic sediment sources for the Te Ākau Bream Bay embayment. River input of sediment to the shoreline is thought to be negligible. The northern end of the Bay at the mouth of the Whangārei Harbour effectively traps sediment arriving from the catchments and inputs from erosion of headlands and cliffs are also relatively low (Nichol, 2002). The primary

¹⁵⁰ Section 3.5.3, Coastal Process Effects Assessment (Attachment Nine)

¹⁵¹ Section 5.3, Coastal Process Effects Assessment (Attachment Nine)

¹⁵² Section 3.5.1, Coastal Process Effects Assessment (Attachment Nine)

sediment source for the sandy barrier construction and the ebb tide delta at the entrance to Whangarei Harbour has been the nearshore and inner shelf deposits on the floor of Te Ākau Bream Bay (Schofield, 1970). These deposits belong to the Hauraki B Sand Facies which is interpreted as a reworked derivate of the Hauraki A Sand Facies. Both these Facies are derived from the rhyolitic provenance of central North Island and were delivered to the continental shelf by the paleo Waikato River during low sea levels of the last glacial maximum (Schofield, 1970). The historic sediment supply that formed the coastal system is no longer active and the current sediment budget is considered functionally closed for this assessment, with negligible sediment inputs to the coast or nearshore.”

- 12.217. There are now no major sand inputs into the northern east coast since the paleo Waikato River switched from discharging to the Firth of Thames to the west coast approximately 20,000 years ago. On this basis there are no major marine sand deposits on the northern east coast which continued to be replenished by the same source supply they were formed under.
- 12.218. Although this is not an area of known replenishment, the sand resource is so vast within Te Ākau Bream Bay, the proposed sand extraction can be undertaken in such a manner where the level of adverse effects on coastal processes will be negligible to low. This is not a situation where the Te Ākau Bream Bay sand resource will be exhausted (or even materially diminished) during the life of the consent.
- 12.219. As concluded in this assessment of effects the level of effects will range from positive to minor (in terms of RMA terminology). In respect to cultural values, TBC. Neither the Act nor the RMA require the complete avoidance of adverse effects for consent to be able to be granted.
- 12.220. Although the proposal is not consistent with Policy 23.4.2 (as sediment replenishment is not occurring within the sand extraction area), it is considered that the proposal is consistent with Policy 23.4.3.
- 12.221. A precautionary approach has been taken both in terms of the site selection, extraction volumes and the proposed monitoring (and supporting conditions).

Draft for Consultation

Objectives 26.3

1. *Subdivision, use and development occurring in such a way as to maintain, and where practicable, enhance, the existing natural, cultural and amenity values in the Marine 2 (Conservation) Management Area.*
2. *Involvement of local communities, and other agencies, in the awareness, maintenance and, where appropriate, enhancement of the values within the Marine 2 (Conservation) Management Area.*

Policy 26.4.1

Where there is a lack of knowledge about coastal processes and ecosystems in the Marine 2 (Conservation) Management Area, to adopt a cautious approach to decision-making.

Policy 26.4.2

To recognise that different areas within the Marine 2 (Conservation) Management Area have distinct natural, cultural and amenity values that should be maintained and where possible enhanced.

Assessment

- 12.222. The existing natural, cultural and amenity values in Te Ākau Bream Bay will be maintained.
- 12.223. A precautionary approach towards critical aspects of the proposal and application has been undertaken and an adaptive management approach taken towards the proposed consent conditions, management plans and monitoring.
- 12.224. No specific distinct natural, cultural or amenity values for that area of Te Ākau Bream Bay where the sand extraction site is located have been identified which require further consideration.

Policy 26.4.3

To provide for sustainable, use and development whilst ensuring that the intensity, character and scale of use and development is compatible in relation to the character (including natural character), heritage and amenity values of the adjoining coastal environment.

Assessment

12.225. It is considered that the proposal is compatible in relation to the character, heritage and amenity values of the adjoining coastal environment due to the nature of the proposal and the level and extent of effects which are expected.

Whangārei Operative District Plan

12.226. The Whangārei Operative District Plan is the primary document that manages land use and development within the Whangārei District Council's territorial boundaries which extends landward of MHWS. The sand extraction site is outside the territorial boundary of Whangārei District Council. However, it is considered appropriate to consider whether the proposal will affect those environmental matters managed under the Whangārei Operative District Plan and in particular flora and fauna, Outstanding Natural Features and Outstanding Natural Landscapes (and including those within the coastal environment).

12.227. The following assessment identifies the key objectives and policies and then assesses the potential effects of the proposal against them.

Objective DGD-O6 Indigenous Biodiversity

Identify and protect the values and attributes of indigenous biological diversity (Significant Natural Areas) and maintain the extent and diversity of other indigenous biodiversity.

Objective ECO-O1 Maintain and Enhance Ecosystems and Biodiversity

Maintenance and enhancement of the life-supporting capacity of ecosystems, and the biodiversity of the District.

Objective ECO-O2 Protection of Significant Indigenous Vegetation and Fauna

Protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna from inappropriate subdivision, use and development.

Assessment

12.228. The Coastal Process Effects Assessment has found that the erosion risk on beaches (which includes the dune system) from the sand extraction activity is negligible. No potential significant adverse effects on indigenous vegetation and fauna or ecosystems and biodiversity after MHWS have been identified.

12.229. The Potential Effects on Seabirds and Shorebirds (Attachment Fourteen) has specifically addressed the loss of terrestrial breeding habitat and concludes in respect to this¹⁵³:

"For tara iti fairy tern, and for the potential effects of loss of terrestrial breeding habitat, interaction with the sand extraction vessel and fuel/oil spill, risk scores were in the middle of the 'low' risk level (risk scores of 3 for each of these potential effects: Table 44). For all of these potential effects, the outcome effectively removed a bird from the population, either through being unable to breed (loss of terrestrial breeding habitat) or through mortality (interaction with the sand extraction vessel and fuel/oil spill). Because the overall population of tara iti fairy tern is critically small, the loss of a breeding bird would have 'major' consequences (consequence score of 3: Table 41 and Table 44). That the overall risk scores for these three potential effects were only 3 reflects the very low likelihood scores (scores of 1, negligible likelihood of occurrence, with a 0-5% chance of occurrence: Table 42) in each case. In

¹⁵³ Section 4.3, Potential Effects on Seabirds and Shorebirds (Attachment Fourteen)

the case of loss of terrestrial breeding habitat, the likelihood score is based on the proposed sand extraction area being sited beyond the depth of closure and that sand extraction will, therefore, have a negligible effect on beach morphology and on the upper shore breeding habitats of birds, including tara iti fairy tern.”

12.230. It is concluded that the proposal is not contrary to these objectives as the life-supporting capacity of terrestrial ecosystems and the biodiversity of Whangārei District will not be impacted upon by the sand extraction process.

Objective NFL-O2 Protection

Protect the characteristics and qualities of identified Outstanding Natural Features and Outstanding Natural Landscapes from inappropriate subdivision, use and development.

Objective NFL-O3 Coastal Environment

Provide greater protection for identified Outstanding Natural Features and Outstanding Natural Landscapes within the coastal environment over other features and landscapes.

Policy NFL-P3 Avoid Adverse Effects Within Coastal Environment

Within the Coastal Environment, to avoid adverse effects of subdivision, use and development on the characteristics and qualities of Outstanding Natural Features and Outstanding Natural Landscapes by controlling subdivision and restricting earthworks, mineral extraction, the extent of vegetation clearance, and rural production activities, and the location and design of buildings and structures including in relation to ridgelines, skylines and prominent headlands.

Assessment

12.231. The Landscape and Natural Character Effects Assessment¹⁵⁴ has concluded in respect to these matters:

“The proposed sand extraction would have no impact on the ONC, or even HNC Areas identified within Te Ākau Bream Bay and Whangārei Harbour.”

“The proposed sand extraction would not affect the values of the ONFs and ONLs identified in and around Te Ākau Bream Bay, more specifically at the northern and southern extremes of the Bay and well inland of it.”

And

“No significant adverse effects have been identified that might erode the natural character values of those parts of Te Ākau Bream Bay outside its ONC Areas.”

Conclusion

12.232. It is considered that the proposal is either consistent with or gives effect to the relevant objectives and policies of the NZCPS. Policy 6 specifically identifies that the extraction of minerals is an activity important to the social, cultural and economic wellbeing of people and communities. A precautionary approach in terms of the development of the proposal, the site selection, extraction volumes and monitoring has been taken into consideration and is consistent with Policy 3.

12.233. The NPSIB is of limited relevance and only in respect to highly mobile fauna. It has been determined that the proposal is not contrary to the NPSIB in respect to those birds listed as highly mobile fauna in Appendix 2 of the NPSIB.

¹⁵⁴ Page 63, Landscape and Natural Character Effects Assessment (Attachment TBC)

12.234. In terms of the RPS, it is considered that the proposal and granting consent would either give effect to, is consistent with or is not contrary to the relevant objectives and policies.

12.235. There are a significant number of objectives and policies in the PRPN of relevance to this proposal. In terms of Objective D.2.4, an adaptive management approach has been applied to the consent conditions, management plans and monitoring. In terms of Objective D.2.14, the 35-year consent period being sought is considered appropriate. The proposal and the granting of consent would either directly give effect to, is consistent with or is not contrary to the relevant objectives and policies of the PRPN.

12.236. Consideration is still required to be given to the Operative Regional Coastal Plan at the time of the preparation of this application. The proposal and granting consent would either be consistent with or not contrary to the relevant objectives and policies. The exception to this is Policy 22.4.2 which the proposal is not consistent with as the area of sand extraction is not an area of known replenishment. However, the sand resource is so vast that this is not a situation where the Te Ākau Bream Bay sand resource will be exhausted (or even materially diminished) during the life of the consent.

12.237. The sand extraction site is outside the territorial boundary of WDC. However, it is considered appropriate to consider whether the proposal will affect those environmental matters managed under the Whangārei Operative District Plan and in particular flora and fauna, Outstanding Natural Features and Outstanding Natural Landscapes. In respect to the objectives and policies relating to these it is found that the proposal and the granting of consent would not be contrary to them.

Draft for Consultation

13. Assessment under Iwi Management Plans

(This section is to be completed once the CIA's have been received and assessed)

- 13.1. This section provides the analysis of the proposal in terms of relevant iwi management plans as required by Schedule 5, Clause 5(1)(h) of the Act.
- 13.2. The relevant iwi management plans are:
 - a) Te Iwi o Ngātiwai Iwi Environmental Policy Document (2007)
 - b) Patuharakeke Hapū Environmental Management Plan (2014)
 - c) Te Urioroi Hapū Environmental Management Plan/Whatitiri Hapū Environmental Plan
- 13.3. The relevant objectives and policies listed in these documents are provided in italics followed by an assessment which has been informed by the CIA's prepared by:
 - a) Te Pouwhenua o Tiakiriri Kukupa Trust (for Te Parawhau) (Attachment Twenty-Three)
 - b) Patuharaheke Te Iwi Trust Board (Attachment Twenty-Four)
 - c) Ngātiwai Trust Board (Attachment Twenty-Five)

Te Iwi O Ngātiwai Iwi Environmental Policy Document (2007)

Minerals Objectives for Ngātiwai rohe

- *The sustainable extraction and management of mineral and geothermal resources without adverse impacts upon the earth.*
- *The mauri of mineral and geothermal resources is protected and enhanced in ways that enable Tāngata Whenua to provide for their social, economic and cultural wellbeing; and that of generations as yet unborn.*
- *Tāngata Whenua are acknowledged as the kaitiaki of mineral and geothermal resources within their rohe.*
- *The relationship of Tāngata Whenua and their culture and traditions with their ancestral taonga, mineral and geothermal resources, is recognised and provided for as a matter of national importance by councils.*
- *There is an increased Tāngata Whenua involvement in the management and monitoring of mineral and geothermal resources.*
- *Tāngata Whenua traditional environmental knowledge in relation to mineral and geothermal resources is appropriately acknowledged and utilised.*

Draft for Consultation

Minerals Policies for Ngātiwai rohe

1. *Prospecting, exploration and mining activities under the Crown Minerals Act are not permitted in areas significant to Tāngata Whenua. Areas significant to Tāngata Whenua include wāhi tapu, fresh waterways, mahinga kai and other places, as identified by Tāngata Whenua.*
2. *Tāngata Whenua promote innovative, sustainable management practices concerning mining, including restoration and rehabilitation programmes.*
3. *Tāngata Whenua are the kaitiaki of mineral and geothermal resources in their rohe.*
4. *Tāngata Whenua are an affected party to any resource consent application within their rohe concerning or potentially affecting mineral or geothermal resources, including applications for sand relocation for beach renourishment, because of their special relationship with these taonga.*

5. Use will be made of all relevant forms of knowledge and practises and information, including Tāngata Whenua traditional environmental knowledge, in assessments and decision-making around mineral and geothermal resources.
6. Whenever Tāngata Whenua are involved in setting conditions for consent, they will then be resourced appropriately by the applicants or council to monitor compliance with those conditions.

Assessment

13.4. TBC

Water Objectives for Ngatiwai rohe

- The mauri of water and soil is protected and enhanced in ways which enable Tāngata Whenua to provide for their social, economic and cultural wellbeing; and that of generations as yet unborn.
- The life-supporting capacity of creeks, streams, water bodies, wetlands, swamps, springs, aquifers, thermal waters, estuarine waters and coastal waters enables optimum health and wellness for all Tāngata Whenua; those they host within their rohe; their plants, animals and other whanaunga.
- The sustainable management of water, soil and air in a collaborative manner considering all flow on effects.
- The relationship of Tāngata Whenua and their culture and traditions with their ancestral waters is recognised and provided for as a matter of national importance by councils.
- Tāngata Whenua are acknowledged as the kaitiaki of creeks, streams, water bodies, wetlands, swamps, springs, aquifers, thermal waters, estuarine waters and coastal waters within their rohe.
- There is an increased Tāngata Whenua involvement in the management and monitoring of water.
- Tāngata Whenua traditional environmental knowledge in relation to water resources is appropriately acknowledged and utilised.
- Water use, allocation, and flow will be sustainably managed within Ngatiwai territory.
- Water use, allocation, and flow management will enable Tāngata Whenua to provide for their social, economic and cultural wellbeing; and that of generations as yet unborn.
- Tāngata Whenua, because of their special relationship with their waters, will be involved in water allocation planning for consumption from their streams, rivers and groundwater resources.

Water Policies for Ngatiwai rohe

1. Tāngata Whenua promote innovative, sustainable management practices concerning water. All natural water has value and sustains some form of natural life in the environment. Water is a sacred resource to Tāngata Whenua, to be given the highest level of protection.
2. No hierarchical values will be placed on water bodies within any councils planning documents to decide differing levels of protection.
9. Water must be seen and managed in an integrated, holistic way as per its cycle, and as an element of the life supporting the natural and physical environment. Water should not be viewed just as a running stream, a lake, or an aquifer, with no relationship to the other resources within its environment.
10. All activities concerning or potentially affecting creeks, streams, water bodies, wetlands, swamps, springs, aquifers, thermal waters, estuarine waters and coastal waters within a water catchment will be managed in an integrated way on a catchment basis.
13. Tāngata Whenua are the kaitiaki of water in their rohe.
14. Tāngata Whenua are an affected party to any resource consent application within their rohe concerning or potentially affecting water use, allocation, flow, quality, or quantity because of their special relationship with this taonga.

15. *Use will be made of all relevant forms of knowledge and practises, including Tāngata Whenua traditional environmental knowledge, in assessments and decision-making around water.*
16. *Whenever Tāngata Whenua are involved in setting conditions for a consent, they will then be resourced appropriately by the applicants or council to monitor compliance with those conditions.*

Assessment

- TBC

Indigenous Fauna Objectives for Ngatiwai rohe

- *The maintenance and restoration of natural species.*
- *The enhancement of endemic and endangered indigenous animals.*
- *Tāngata Whenua are acknowledged as the kaitiaki of all indigenous animals and their associated ecosystems within their rohe.*
- *There is an increased Tāngata Whenua involvement in the management of indigenous animals.*
- *Tāngata Whenua traditional environmental knowledge in relation to animals is appropriately acknowledged and utilised.*

Indigenous Fauna Policies for Ngatiwai rohe

5. *Indigenous fauna are taonga tuku iho to Tāngata Whenua.*
6. *Tāngata Whenua are the kaitiaki of their indigenous fauna.*
7. *Ngatiwai kaitiakitanga will be recognised as a viable management approach with respect to its indigenous fauna.*
8. *Tāngata Whenua are an affected party to any resource consent application within their rohe concerning or potentially impacting indigenous biodiversity, because of their special relationship with these taonga.*
9. *Use will be made of all relevant forms of knowledge and practises and information, including Tāngata Whenua traditional environmental knowledge, in assessments and decision-making around indigenous fauna.*
10. *Whenever Tāngata Whenua are involved in setting conditions for a consent, they will then be resourced appropriately by the applicants or council to monitor compliance with those conditions.*
11. *Only after appropriate effective engagement and adequate remediation or mitigation, or safety or security reasons, will Tāngata Whenua support any negative or destructive impacts on their indigenous fauna.*

Assessment

- TBC

Engagement Objectives for Ngatiwai rohe

- *Tāngata Whenua are acknowledged as the kaitiaki of their rohe.*
- *The relationship of Tāngata Whenua and their culture and traditions with their ancestral taonga, is recognised and provided for as a matter of national importance by councils.*
- *There is an increased Tāngata Whenua involvement in the management and monitoring of environmental resources.*

Engagement Policies for Ngatiwai rohe

1. *Tāngata Whenua are an affected party to any resource consent application within their rohe concerning or potentially affecting environmental resources, because of their special relationship with these taonga.*
2. *Whenever Tāngata Whenua are involved in setting conditions for consent, they will then be resourced appropriately by the applicants or council to monitor compliance of those conditions.*

Assessment

- 13.5. 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. An initial meeting has been held with the CEO of the Trust Board.
- 13.6. Patuharaheke Te Iwi Trust Board (as the Trust Board who represents the Patuharaheke Hapū who are the mana whenua of the subject area).
- 13.7. Te Parawhau are mana whenua of the subject area.
- 13.8. Attachment C outlines the consultation undertaken to date.

Ngatiwai Landscapes Objectives for Ngatiwai rohe

- *The relationship of Tāngata Whenua and their culture and traditions with their ancestral lands, water, sites, Wāhi tapu and other taonga is recognised and provided for as a matter of national importance by councils.*
- *The protection of areas or sites of customary value.*

Assessment

- TBC

Patuharakeke Hapū Environmental Management Plan 2014

Draft for Consultation

3.1.2 Objectives

- a) *Patuharakeke are acknowledged as the kaitiaki of all resources within our rohe and are actively involved in the decision-making, management, monitoring and enhancement of those resources including water, soils, mineral, air, flora and fauna and heritage.*
- b) *The relationship of Patuharakeke and our culture and traditions with our ancestral taonga is recognised and provided for as a matter of national importance by Councils and other statutory agencies.*
- c) *Matauranga Patuharakeke or traditional Patuharakeke environmental knowledge is acknowledged, protected and utilised.*

3.1.3 Policies

- a) *Patuharakeke are recognised as the kaitiaki of all resources, including water bodies, energy, soils, minerals, air, flora, fauna and heritage, in our rohe.*
- b) *Use will be made of relevant Matauranga Patuharakeke/traditional Patuharakeke environmental knowledge and practice in management and decision-making associated with all resources, including water bodies, soils, minerals, air, flora, fauna, energy and heritage. The intellectual property rights associated with that knowledge will be respected and protected.*
- c) *PTB are an interested and potentially affected party to any notified and non-notified resource consent application within our rohe concerning or potentially affecting any resource because of our special relationship with these taonga. When PTB is involved in setting conditions for a consent, the applicant or council will resource PTB to regularly monitor and review those conditions.*

Assessment

13.9. TBC

13.10. The Sites of Significance Plan for Patuharakeke is provided below and the proposed sand extraction site is outside any of the identified sites of significance. In respect to landscapes and sites of significance to iwi, it has been found¹⁵⁵:

"In relation to Patuharakeke, the degree of interaction and 'engagement' between the Patuharakeke Management Plan's Sites of Significance and the proposed extraction operation would also be tenuous, for the reasons discussed in Section 9.4-9.7 of this report. Furthermore, none of the significant landscapes or waahi tapu sites described in the Northport CVA would be directly affected by the proposed sand extraction. Instead, it would remain relatively isolated, or at the very least remote – some 4.7km or more offshore of those sites that remain particularly meaningful to Patuharakeke. Although there would still be awareness of the William Fraser and its operations, it would essentially be peripheral to most of those sites. As a result, it is considered that the proposed sand extraction would typically have a low level of effect in relation to most of the 'cultural landscape' found on and near the margins of Te Ākau Bream Bay, Te Poupouwhenua Marsden Point and Te Whara Bream Head."

5.4 Soils and Minerals

5.4.2 Objectives

- a) *The mauri of mineral and soil resources is protected and enhanced in ways that enable Patuharakeke to provide for our social, economic and cultural wellbeing; and that of generations to come.*
- b) *The sustainable use and management of mineral and soil resources without adverse impacts.*

5.4.3 Policies

- a) *Prospecting, exploration and mining activities are not permitted in areas significant to Patuharakeke.*
- b) *Patuharakeke promote innovative, sustainable management practices for mining and quarrying operations, including rehabilitation.*

Assessment

13.11. TBC

9.1 Coastal Water Quality

9.1.2 Objectives

- a) *Whangarei Terenga Paraoa, Te Ākau Bream Bay and our estuaries are precious taonga and the home of myriad species and are respected for their taonga value above all else.*
- b) *The mauri and cultural health of the harbour, Te Ākau Bream Bay and our estuaries is protected and enhanced in ways that enable Patuharakeke to provide for our physical, social, economic and cultural wellbeing.*
- c) *Patuharakeke have a leading role in managing, monitoring and enhancing coastal water quality in our rohe.*
- d) *The management of coastal water quality in Te Tai Tokerau occurs on an integrated catchment basis and is led by tangata whenua.*
- e) *Coastal water quality standards relevant to Patuharakeke are developed and implemented by agencies and monitored by kaitiaki.*

9.1.3 Policies

¹⁵⁵ Page 62, Landscape and Natural Character Effects Assessment (Attachment Eight)

- a) Coastal water quality is required to be consistent with protecting and enhancing customary fisheries, and with enabling Patuharakeke to exercise their customary rights and safely harvest kaimoana.
- b) Patuharakeke will participate fully in any decision-making over the management of coastal waters in our rohe.
- c) Decision-makers will ensure that economic costs do not take precedence over the cultural, environmental and intergenerational costs of degrading coastal water quality.
- e) PTB will oppose any new consent applications seeking the direct discharge of contaminants to coastal water, or where contaminants may enter coastal waters.
- g) NRC will implement rigorous controls restricting the ability of boats to discharge sewage, bilge water and rubbish in our harbour, estuaries and coastal waters.

Assessment

13.12. TBC

9.4 Offshore Oil Exploration and Mining

9.4.2 Objective

- a) Offshore petroleum exploration and mining is not permitted within the boundaries of our gazetted rohe moana (see 5 below), and extending in an easterly direction from Patuharakeke landward coastal boundaries to the limit of New Zealand's Exclusive Economic Zone ('EEZ').

9.4.3 Policies

- a) Patuharakeke will oppose any offshore petroleum exploration and mining proposals within the boundaries of our gazetted rohe moana, and extending in an easterly direction from Patuharakeke landward coastal boundaries to the limit of New Zealand's EEZ.
- b) The Crown and petroleum and mining companies are required to engage in early, and good faith consultation with Patuharakeke should any proposed prospecting, exploration or drilling licences be sought within the boundaries of our gazetted rohe moana, and extending in an easterly direction from Patuharakeke landward coastal boundaries to the limit of New Zealand's Exclusive Economic Zone.

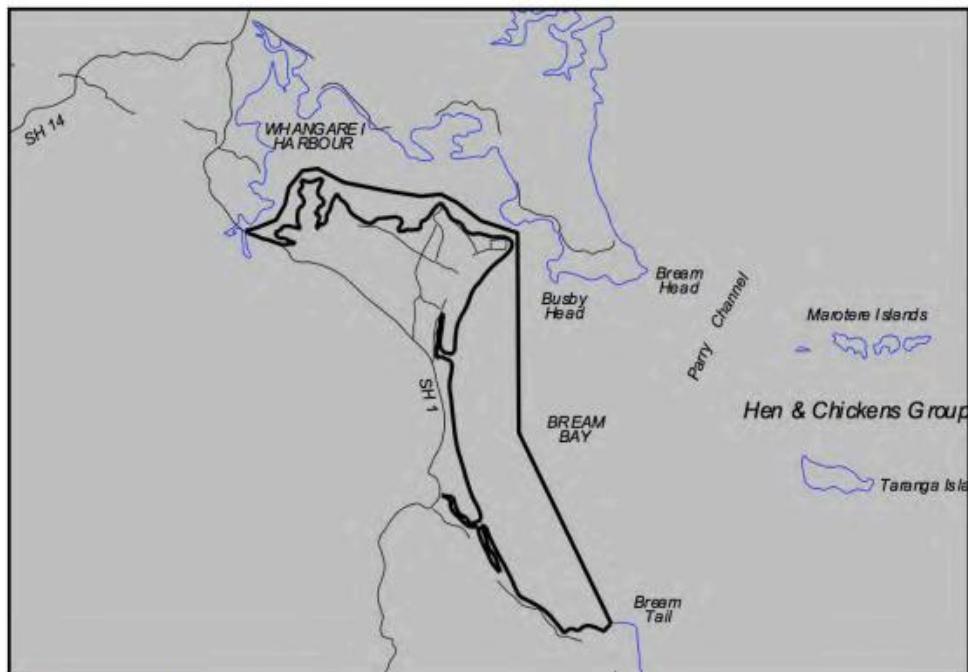


Figure 5: Patuharakeke Rohe Moana Gazetted Boundaries

Figure Fifteen: Figure Five from the Patuharakeke Hapū Environmental Management Plan 2014

Assessment

TBC

9.7 Marine Mammals

9.7.2 Objectives

- a) *Increased numbers of healthy whales and dolphins inhabiting and migrating through our coastal waters and harbour.*
- b) *A strong partnership between DOC and Patuharakeke with regard to the management of marine mammal strandings and cultural harvest in our rohe.*
- c) *Revival of matauranga and tikanga associated with marine mammal strandings and cultural use.*

9.7.3 Policies

- a) *The cultural, spiritual, historic and traditional association of Patuharakeke with marine mammals, and the rights to exercise rangatiratanga and kaitiakitanga over marine mammals is guaranteed by Te Tiriti o Waitangi.*
- b) *The relationship between Patuharakeke and DOC for the recovery, disposal, storage and distribution of beached marine mammals shall be guided by the principles of partnership.*
- c) *To require that a standard procedure be introduced that Patuharakeke are involved in the determination of burial sites for beached whales that do not survive, and that burial locations are retained as waahi taonga and therefore protected from inappropriate use and development.*

Assessment

13.13. TBC

Draft for Consultation

Te Uriroroi Hapū Environmental Management Plan/Whatitiri Hapū Environmental Plan

Relationships

2.2 Objectives

- a) *Mana Whenua ki Whatitiri will strengthen and establish ongoing meaningful relationships with our neighbours, community, developers and agencies to ensure we are appropriately acknowledged as kaitiaki of our rohe.*
- b) *Mana Whenua ki Whatitiri will have a partnership role in resource management planning and decision-making within our rohe.*

2.3 Policies

- i) *Whatitiri RMU will direct developers to the appropriate point of contact for their proposal. Whatitiri RMU will enter into consultation with all developers to assist in ascertaining the actual or potential effects of the development proposals on Mana Whenua ki Whatitiri, our values and our environment. Where any development initiative has the potential to impact on our values or resources, Whatitiri RMU will request that the developers bring their initiatives to the marae for the consideration of the hau kainga.*
- j) *Whatitiri RMU will ensure that adequate measures to avoid, remedy or mitigate any adverse effects on Mana Whenua ki Whatitiri, our values and our environment are identified for developers and council prior to development proceeding.*
- k) *Whatitiri RMU will, to the best of our capacity, monitor all developments once commenced to ensure that they do not result in adverse effects and that they are completed in accordance with the conditions of their consent.*

Assessment

13.14. TBC

Kaitiakitanga

3.2 Objectives

- a) *Mana Whenua ki Whatitiri are acknowledged as the kaitiaki of all resources within our rohe and are actively involved in the decision-making, management, monitoring and enhancement of those resources including water, tuna, soils, mineral, air, flora and fauna and heritage.*
- b) *The relationship of Mana Whenua ki Whatitiri and our culture and traditions with our ancestral taonga is recognised and provided for as a matter of national importance by Councils and other statutory agencies.*
- c) *Mana Whenua ki Whatitiri mātauranga/traditional environmental knowledge is acknowledged, protected and utilised.*

3.3 Policies

- a) *Mana Whenua ki Whatitiri are recognised as the kaitiaki of all resources, including water bodies, energy, soils, minerals, air, flora, fauna and heritage, in our rohe.*
- b) *Use will be made of relevant Mana Whenua ki Whatitiri matauranga/traditional environmental knowledge and practice in decision-making associated with all resources, including water bodies, soils, minerals, air, flora, fauna, energy and heritage. The intellectual property rights associated with that knowledge will be respected and protected.*
- c) *Whatitiri RMU are an interested and potentially affected party to any notified and non-notified resource consent application within our rohe concerning or potentially affecting any resource because of our special relationship with these taonga. When Whatitiri RMU is involved in setting conditions for a consent, either the applicant or council will resource Whatitiri RMU to regularly monitor and review those conditions.*

Assessment

Draft for Consultation

13.15. TBC

Soils and Minerals

5.12 Objectives

- a) *The mauri of mineral and soil resources is protected and enhanced in ways that enable Mana Whenua ki Whatitiri to provide for our social, economic and cultural wellbeing; and that of generations as yet unborn.*
- b) *The sustainable use and management of mineral and soil resources without adverse impacts.*

5.13 Policies

- a) *Prospecting, exploration and mining activities are not permitted in areas significant to Mana Whenua ki Whatitiri.*
- b) *Mana Whenua ki Whatitiri promote innovative, sustainable management practices for mining and quarrying operations, including rehabilitation.*

Assessment

13.16. TBC

Biodiversity

6.2 Objectives

- a) *The mauri of indigenous ecosystems is enhanced enabling Mana Whenua ki Whatitiri to provide for our physical, social, economic and cultural wellbeing.*
- b) *A pest free rohe.*
- e) *Healthy mahinga kai enabling Mana Whenua ki Whatitiri to harvest key species for sustenance, commercial and customary needs confident that our fisheries are being sustainably managed with Mana Whenua ki Whatitiri as decision makers and managers within our rohe.*
- f) *Mana Whenua ki whatitiri utilize Mātauranga Māori as often as practicable in the sustainable management of our biodiversity.*

6.3 Policies

- a) *Mana Whenua ki Whatitiri will honour their responsibility as kaitiaki of the atua Tāne Mahuta through practical and positive expression of kaitiakitanga.*
- e) *Mana Whenua ki Whatitiri will not compromise the retention of our customary harvest rights to meet Crown policies or objectives.*
- f) *Provision for the potential economic opportunities that exist within our rohe where these do not compromise biodiversity values.*

Assessment

13.17. TBC

Heritage, Landscapes and Wāhi Tapu

7.2 Objectives

- a) *The protection of areas or sites of customary value.*

7.3 Policies

Draft for Consultation

- e) *Our cultural landscape should be afforded at least as high a priority as other landscape values when being considered as part of any process under the RMA, the Conservation Act or the LGA.*
- f) *Preparation of landscape assessments for resource consent applications and similar process should be done in conjunction with Whatitiri RMU to ensure that the cultural aspects of the landscape are given full recognition alongside other values such as natural character and amenity values.*
- g) *Monitoring of effects on cultural landscapes within our rohe is the responsibility of the ahi kaa and kaitiaki. This should be reflected in all relevant consent conditions. This function should be formally transferred to Whatitiri RMU as Mana Whenua.*

Assessment

13.18. TBC

Statutory Acknowledgement Areas

13.19. It is confirmed that the sand extraction site is not within any statutory acknowledgement areas (as at 1 August 2025).

Patuharakeke Cultural Landscape



Figure 4: Patuharakeke Sites of Significance Overlay

Figure Sixteen:

Figure Four from the Patuharakeke Hapū Environmental Management Plan 2014

14. Overview of Consultation and Engagement Undertaken

14.1. This section outlines the consultation and engagement undertaken by MBL as part of the preparation of the applications. Section 29 of the Act (which then refers to Section 11) outline the consultation requirements.

s29 Pre-lodgement requirements for listed project

(1) *Before lodging a substantive application for a listed project, the authorised person for the project must—*

- (a) *consult the persons and groups referred to in section 11; and*
- (b) *if the substantive application seeks an approval described in section 42(4)(l) or (m) (access arrangement), comply with section 59(1) and (2) of the Crown Minerals Act 1991 (which applies as if a reference to an access arrangement under that Act were a reference to an access arrangement under this Act).*

S11 Consultation requirements for referral application

(1) *Before lodging a referral application, the applicant must consult—*

- (a) *the relevant local authorities; and*
- (b) *any relevant iwi authorities, hapū, and Treaty settlement entities, including—*
 - (i) *iwi authorities and groups that represent hapū that are parties to relevant Mana Whakahono ā Rohe or joint management agreements; and*
 - (ii) *the tangata whenua of any area within the project area that is a taiāpure-local fishery, a mātaītai reserve, or an area that is subject to bylaws or regulations made under Part 9 of the Fisheries Act 1996; and*
- (c) *any relevant applicant groups with applications for customary marine title under the Marine and Coastal Area (Takutai Moana) Act 2011; and*
- (d) *ngā hapū o Ngāti Porou, if the project area is within or adjacent to, or the project would directly affect, ngā rohe moana o ngā hapū o Ngāti Porou; and*
- (e) *the relevant administering agencies; and*
- (f) *if the proposed approvals for the project are to include an approval described in section 42(4)(f) (land exchange), the holder of an interest in the land that is to be exchanged by the Crown.*

Comment

14.2. S29(1)(b) is not relevant to this application.

14.3. Turning to s11, clauses (d), (e) and (f) are not relevant to this proposal.

14.4. Attachment Five includes the Stakeholder Engagement Register which sets out the engagement undertaken by MBL prior to and during the preparation of the application.

Key Outcomes of Consultation

14.5. The following sections outline the key outcomes of consultation undertaken for the substantive resource consent application. The dates and form of consultation is listed in Stakeholder Engagement Register.

Relevant Local Authority (NRC)

(To complete)

Relevant Iwi Authorities, Hapū and Treaty Settlement Entities

Ngātiwai Trust Board

- 14.6. As detailed in the Stakeholder Engagement Register, there have been a series of meetings between MBL and the Ngātiwai Trust Board since December 2023.
- 14.7. The draft specialist reports, draft conditions and management plans were provided to the Ngātiwai Trust Board.

(To be completed)

Patuharaheke Te Iwi Trust Board

- 14.8. As detailed in the Stakeholder Engagement Register, there has been a series of weekly or fortnightly meetings between MBL and the Patuharaheke Te Iwi Board since about March 2024.
- 14.9. The Patuharaheke Te Iwi Trust Board hosted a cultural induction hui for the MBL team (including most specialists) on the 15th of May 2025.

(To be completed)

Te Pouwhenua o Tiakiriri Kukupa Trust

- 14.10. As detailed in the Stakeholder Engagement Register, there has been a series of meetings between MBL and the Te Pouwhenua o Tiakiriri Kukupa Trust since March 2024.
- 14.11. The draft specialist reports, draft conditions and management plans were provided to the Te Pouwhenua o Tiakiriri Kukupa Trust. The Trust then invited MBL to a hapū led hui on the 26th of July 2025 and the 16th of August 2025 to present and to answer questions from Hapū members, which MBL representatives and various specialists attended.

(to be completed)

Ngāti Tū

- 14.12. Ngāti Tū (as a party to the Fisheries Notification of Tāngata Kaitiaki/Tiaki) for Area/Rohe Moana of Ngāti Kahu, Parawhau, Ngāti Tū and Patuharakeke) Notice 2021) were contacted by email on the 15th of August 2025. A response was received on the 18th of August 2025 and confirmed they were to be consulted. To date a suitable meeting time has not been able to be confirmed.

Ngāti Kahu

- 14.13. Ngāti Kahu (as a party to the Fisheries Notification of Tāngata Kaitiaki/Tiaki) for Area/Rohe Moana of Ngāti Kahu, Parawhau, Ngāti Tū and Patuharakeke) Notice 2021) were contacted by email on the 19th of August 2025. A response was received on the 4th of September where it was confirmed that the matter would be discussed with iwi and hapu before a collective response was sent.

Applicants for Customary Marine Title

- 14.14. This is addressed below under Consultation under the Marine and Coastal Area (Takutai Moana) Act 2011.

Other Parties

Harbour Safety Meeting

14.15. As outlined in the Navigation Safety Assessment¹⁵⁶, MBL attended the Harbour Safety Meeting on the 8th of October 2024 and provided a briefing on the proposal. No issues were raised by other stakeholders at the meeting. The proposal was further discussed at the 4th of February 2025 meeting.

Department Of Conservation

(To be completed)

Consultation with Other Parties

14.16. Separate to the statutory requirements for consultation, MBL has consulted with:

- Channel Infrastructure
- North Port
- Seafood NZ, Moana Fisheries, Leigh Fish, Local Fishermen
- Ruakākā Surf Life Saving Club
- Waipū Surf Life Saving Club
- NIWA (for Mahanga Bay facility)
- Whangārei Volunteer Coastguard

14.17. The key outcomes of this consultation were:

Channel Infrastructure

Draft for Consultation

- Requested that they be kept informed.
- No potential effects were identified as outside their direct area of activity.

North Port

- Requested that they be kept informed.
- No potential effects were identified as outside their direct area of activity (i.e. port and shipping channel).

Seafood NZ, Moana Fisheries, Leigh Fish. Various Local Commercial Fishermen

- Raised potential concerns about effects on fisheries and scallop fisheries. Some potential advantages to long-line fisheries based on experience at the Pākiri site.
- Fisheries report was shared with them along with other specific information.
- No further comments or requests for additional information has since been received.

Ruakākā Surf Life Saving Club

- Initial concern about potential effects on surf breaks and shoreline.

¹⁵⁶ Page 12, Navigation Safety Assessment (Attachment Twenty)

- Summary information provided.
- No further information sought. Requested that they be kept informed. Have advised they are taking a neutral approach.

Waipū Surf Life Saving Club

- Initial concern about potential effects on surf breaks and shoreline.
- Summary information provided.
- No further information sought. Requested that they be kept informed. Have advised they are taking a neutral approach

NIWA (for Bream Bay facility, located within the former Marsden Point Power Station)

- Initial concerns related to water quality and coastal processes in the location of their water intake.
- Summary information provided along with Assessment of Effects on Water Quality. The Water Quality Assessment of Environmental Effects (Section 6.3.1.1) and the Coastal Process Effects Assessment (Section 5.12.6) have specifically addressed the Bream Bay Facility, and these reports have been provided to NIWA.
- No further information has been sought or concerns raised.

Whangārei Coastguard

- No specific concerns raised except they expressed an interest in navigational and safety aspects.
- A link to all summaries were provided to them.
- No further information has been sought or concerns raised.

Consultation Under Marine and Coastal Area (Takutai Moana) Act 2011

- 14.18. Under s62 of the Marine and Coastal Area Act, those parties who have an application in for customary rights are to be notified by the applicant of any applications for coastal permits.
- 14.19. Attachment Thirty-Sven includes the list of those applicant groups who were contacted by email. Two of the initial emails bounced back and were resent on the 28/02/2025.
- 14.20. As at 4 August 2025 no responses have been received.
- 14.21. A second email was sent to the same parties on the TBC. As at TBC, TBC responses have been received.
- 14.22. The two emails sent are included as Attachment Thirty-Seven.

15. Assessment under S104 of the RMA

15.1. The following sections assess the resource consent components of the Substantive Application against the relevant statutory framework.

Section 104 – Consideration of applications for resource consent

15.2. Section 104 of the RMA sets out the matters which a consent authority must have regard to, subject to Part 2 of the RMA, when considering an application for resource consent.

15.3. With respect to this project, the relevant parts of section 104 include:

- Any actual or potential effects on the environment of allowing the activity;
- Any relevant provisions of a national policy statement, a coastal policy statement, regional policy statements and plans; and
- Any other matter the consent authority considers relevant and reasonably necessary to determine the application.

15.4. These are set out below.

Section 104(1)(a) - Actual and potential effects on the environment

15.5. For the purpose of this s104 assessment, the identification of effects are comprehensively assessed in Section 10 of this Report.

15.6. The provision of an efficient and secure marine sand supply to the Auckland market and in particular for the manufacture of high-strength concrete for infrastructure and development projects is vital for the economic, social and cultural well-being of the Auckland community and beyond. The proposed sand extraction site meets the requirements for being able to provide the required type of sand for high-strength concrete manufacturing in Auckland efficiently. Furthermore, the location of this site means that sand can also be transported efficiently to a range of other ports to service in part the Northland, Waikato and Bay and Plenty Regions (but at a lesser scale due to their marine sand demands which reflects their respective population size and infrastructure demands).

15.7. Taking into account the various assessments of effects and the recommended consent conditions (along with the various Management Plans), it is concluded that, overall, the adverse environmental effects will be no more than minor. In broad terms, the overall existing environment within Te Ākau Bream Bay will be maintained.

15.8. The potential cultural effects have been addressed in the CIA's which conclude (TBC).

Section 104(1)(ab) of the RMA – Measures proposed for ensuring positive effects on the environment to offset and compensate for any adverse effects on the environment

15.9. Under section 104(1)(ab) of RMA, a decision maker must consider the positive effects on the environment to offset or compensate for any adverse effects on the environment that will result from the proposed activity. No residual adverse effects have been identified which require the consideration of off-setting or compensation under s104(1)(ab).

Relevant provisions of planning documents

15.10. Section 104(1)(b) of the RMA requires an application for a resource consent to have regard to any relevant provisions of documents listed in s104(1)(b)(i-vi). The proposal is subject to a range of planning documents:

- The New Zealand Coastal Policy Statement
- The National Policy Statement - Indigenous Biodiversity
- Regional Policy Statement for Northland
- Proposed Regional Plan for Northland
- Operative Regional Coastal Plan for Northland
- Operative Whangārei District Plan

15.11. The Project is assessed against these planning documents in Section 10. This assessment concludes:

"It is considered that the proposal is either consistent with or gives effect to the relevant objectives and policies of the NZCPS. Policy 6 specifically identifies that the extraction of minerals is an activity important to the social, cultural and economic wellbeing of people and communities. A precautionary approach in terms of the development of the proposal, the site selection, extraction volumes and monitoring has been taken consistent with Policy 3.

The NPSIB is of limited relevance and only in respect to highly mobile fauna. It has been determined that the proposal is not contrary to the NPSIB in respect to those birds listed as highly mobile fauna in Appendix 2 of the NPSIB.

In terms of the RPS, it is considered that the proposal and granting consent would either give effect to, is consistent with or is not contrary to the relevant objectives and policies.

There are a significant number of objectives and policies in the PRPN of relevance to this proposal. In terms of Objective D.2.4, an adaptive management approach has been taken to the consent conditions, management plans and monitoring. In terms of Objective D.2.14, the 35-year consent period being sought is considered appropriate. The proposal and grant consent would either directly give effect to, is consistent with or is not contrary to the relevant objectives and policies of the PRPN.

Consideration is still required to be given to the Operative Regional Coastal Plan at the time of the preparation of this application. The proposal and granting consent would either be consistent with or not contrary to the relevant objectives and policies. The exception to this is Policy 22.4.2 which the proposal is not consistent with as the area of sand extraction is not an area of known replenishment. However, the sand resource is so vast that this is not a situation where the sand resource will be exhausted (or even close to it) during the life-time of the consent.

The sand extraction site is outside the territorial boundary of WDC. However, it is considered appropriate to consider whether the proposal will affect those environmental matters managed under the Whangarei Operative District Plan and in particular flora and fauna, Outstanding Natural Features and Outstanding Natural Landscapes. In respect to the objectives and policies relating to these it is found that the proposal and granting consent would not be contrary to these."

Section 104(1)(c) – any other relevant matter

15.12. Consideration has been given to the following iwi management plans.

- Te Iwi o Ngātiwai Iwi Environmental Policy Document (2007)
- Patuharakeke Hapū Environmental Management Plan (2014)
- Te Uriroroi Hapū Environmental Management Plan/Whatitiri Hapū Environmental Plan

Alternative methods for discharges - Sections 105 and 107 of the RMA

15.13. Sections 105 and 107 of the RMA are relevant to applications for discharges under section 15 of the RMA.

15.14. Section 105 sets out additional matters which must be considered by a consent authority when considering an application for a discharge permit. Section 105(1) states:

(1) *If an application is for a discharge permit or coastal permit to do something that would contravene section 15 or section 15B, the consent authority must, in addition to the matters in section 104(1), have regard to—*

(a) *the nature of the discharge and the sensitivity of the receiving environment to adverse effects; and*

(b) *the applicant's reasons for the proposed choice; and*

(c) *any possible alternative methods of discharge, including discharge into any other receiving environment.*

15.15. The matters identified in sections 105(1) have been addressed throughout this report. In particular, Section 10 which describes the receiving environment and Section 11 which assesses the effects on the environment.

15.16. The discharge into the coastal marine area of oversized material and fines during the sand extraction process through the moon pools is an unavoidable component of the sand extraction process. There are no alternative options. The moon pool system employed on the *William Fraser* (which results in discharges below the keel line) replaces the earlier method of discharges via pipes over the side of the vessel and is considered to be the current international best practice.

15.17. Section 107(1) restricts the granting of discharge permits in certain circumstances, namely if, after reasonable mixing the contaminant or water discharged (either by itself or in combination with other contaminants or water) is likely to give rise to any of the following effects in the receiving waters:

- The production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
- Any conspicuous change in the colour or visual clarity;
- Any emission of objectionable odour;
- The rendering of fresh water unsuitable for consumption by farm animals; and
- Any significant adverse effects on aquatic life.

15.18. The plume will be very limited in both size and duration. The effects above will not occur and s107 does not create an impediment to the granting of the resource consent.

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16. Conclusion

16.1. MBL is applying for a resource consent (coastal permit) (a discretionary activity) for sand extraction from a 15.4 km² area in Te Ākau Bream Bay, with a 35-year consent period. The project is staged, with an initial annual extraction volume of up to 150,000 m³ for the first three years, increasing to 250,000 m³ thereafter, subject to monitoring results. No other resource consents are required. A Wildlife Approval is being sought in respect to the cup corals *Sphenotrochus ralphae* and *Kionotrochus suteri*.

16.2. The objective of the project is to secure an efficient source of marine sand predominantly for the Auckland market, particularly for high-strength concrete production.

16.3. Sand is an essential ingredient in concrete, which second to water, is the most consumed material in the world. Given its unique properties, marine sourced sand is required for high-strength concrete applications predominantly used for infrastructure projects. Like many parts of New Zealand, Auckland is facing a substantial required infrastructure project backlog. Given the importance of concrete for Auckland's economy, Auckland's built future is effectively reliant upon maintaining access to cost effective sources of sand. Because sand is a key component in a range of different building applications, much of New Zealand's future productive growth is reliant on sand in one form or another.

16.4. Access to suitable, and sufficient volumes of high-quality marine source sand from appropriate locations is therefore critical for the continuing development of Auckland. As New Zealand's largest city, Auckland is a key economic driver of New Zealand's economy. The secure and efficient supply of sand, like aggregate, facilitates the development of just about all infrastructure and development projects in Auckland.

16.5. In accordance with Schedule 5, Clause 5(1)(k), a suite of draft conditions have been proposed, and these are supported by a range of management plans. An adaptive management approach has been taken in terms of the condition framework. It is considered that these conditions can be practically implemented and administered. It is further considered that these conditions are no more onerous than necessary.

16.6. It is concluded that:

- The project is consistent with and supports the purpose of the Act, as it will provide for the sand extraction at Te Ākau Bream Bay which will secure an efficient sand supply to the Auckland market. This is critical for the continued production of concrete products required for a range of development applications including regional and naturally important infrastructure. The efficient delivery of sand to the Auckland concrete market will facilitate the future delivery of infrastructure and development projects of regional and national benefits, as it has done so historically.
- The proposal and granting consent would be consistent with Parts 2, 3 and 6 of the RMA.
- The proposal is either consistent with or gives effect to the relevant objectives and policies of the NZCPS. Policy 6 specifically identifies that the extraction of minerals is an activity important to the social, cultural and economic wellbeing of people and communities. A precautionary approach in terms of the development of the proposal, the site selection, extraction volumes and monitoring has been taken consistent with Policy 3.
- The NPSIB is of limited relevance and only in respect to highly mobile fauna. It has been determined that the proposal is not contrary to the NPSIB in respect to those birds listed as highly mobile fauna in Appendix 2 of the NPSIB.
- In terms of the RPS, it is considered that the proposal and granting consent would either give effect to, is consistent with or is not contrary to the relevant objectives and policies.

- There are a significant number of objectives and policies in the PRPN of relevance to this proposal. In terms of Objective D.2.4, an adaptive management approach has been taken to the consent conditions, management plans and monitoring. In terms of Objective D.2.14, the 35-year consent period being sought is considered appropriate. The proposal and the granting of the consent would either directly give effect to, is consistent with or is not contrary to the relevant objectives and policies of the PRPN.
- Consideration is still required to be given to the Operative Regional Coastal Plan at the time of the preparation of this application. The proposal and the granting of consent would either be consistent with or not contrary to the relevant objectives and policies. The exception to this is Policy 22.4.2 which the proposal is not consistent with as the area of sand extraction is not an area of known replenishment. However, the sand resource is so vast that this is not a situation where the Te Ākau Bream Bay sand resource will be exhausted (or even materially diminished) during the life of the consent.
- The sand extraction site is outside the territorial boundary of Whangārei District Council. However, it is considered appropriate to consider whether the proposal will affect those environmental matters managed under the Whangārei Operative District Plan and in particular flora and fauna, Outstanding Natural Features and Outstanding Natural Landscapes. In respect to the objectives and policies relating to these it is found that the proposal and the granting of consent would not be contrary to these.
- In terms of the potential adverse effects identified and assessed, adverse effects will range from less than minor to minor.
- The CIA's have concluded TBC.
- A 35-year consent period is considered appropriate, taking into account the adaptive management framework which has been adopted for the consent conditions.

16.7. In terms of s85 of the Act, there are no matters listed under s85(1) which provide the basis for the application to be declined. In terms of s85(3) it is concluded that no potential adverse impacts have been identified which are sufficiently significant to be out of proportion of the projects regional and national benefits.

PART 2 – SUBSTANTIVE APPLICATION FOR WILDLIFE APPROVAL

Draft for Consultation

17. Introduction

17.1. Under s42(4)(h) of the Act, MBL is seeking a wildlife approval under the Wildlife Act 1953 (as amended by the Wildlife (Authorisations) Amendment Act 2025) for the following activities at the Te Ākau Bream Bay Sand Extraction Site (during both monitoring and sand extraction) and associated control sites (during monitoring only):

- i. During monitoring – Collect both dead and alive *Sphenotrochus ralphae* and *Kionotrochus suteri*.
- ii. During Monitoring – When identified on site during monitoring, return to the coastal marine area the dead and alive *Sphenotrochus ralphae* and *Kionotrochus suteri*.
- iii. During Monitoring -- For those live *Sphenotrochus ralphae* and *Kionotrochus suteri* not identified and returned to the coastal marine area while on site, incidental killing by being preserved in a solution of 5% glyoxal, 70% ethanol sea water solution as part of the storage and transportation of sand samples to a laboratory.
- iv. During Sand Extraction – Incidental collection of both dead and alive *Sphenotrochus ralphae* and *Kionotrochus suteri*. and return to the coastal marine area.

17.2. Attachment Thirty-Eight includes a legal memorandum outlining the recent changes to the Wildlife Act 1953 and how wildlife approval applications are now to be considered. In particular, it addresses how the new clause 53A allows for an authority to be granted under S53 to kill wildlife incidentally.

17.3. There are two species of cup coral known to be present within the proposed sand extraction area (*Kionotrochus suteri* and *Sphenotrochus ralphae*). In this application these are referred to collectively as “cup corals”.

17.4. Cup corals are a form of non-reef building (solitary) stony corals (Order Scleractinia). They can occur as solitary individuals or they can clump. Some cup coral species live attached to hard substrates, other species live in or on mobile or soft sediments.

17.5. Stony corals are marine animals in the phylum Cnidaria that have a hard skeleton made from calcium carbonate. Stony corals can be either solitary (e.g., cup corals) or colonial (e.g., branching habitat-forming corals).

17.6. *Sphenotrochus ralphae* is endemic to Aotearoa New Zealand. This species has a small triangular corallum with flat faces and rounded edges. The corallum is white or sometimes porcellaneous and measures up to 9 mm in height.



Figure Sixteen: *Sphenotrochus ralpae* (from the CCMP)

17.7. *Kionotrochus suteri* is also endemic to Aotearoa New Zealand. This species is up to 6.8 mm in CD and 6.5 mm in height. The corallum is white and often attached to a bivalve shell. Mature specimens have a conical corallum with a rounded base.

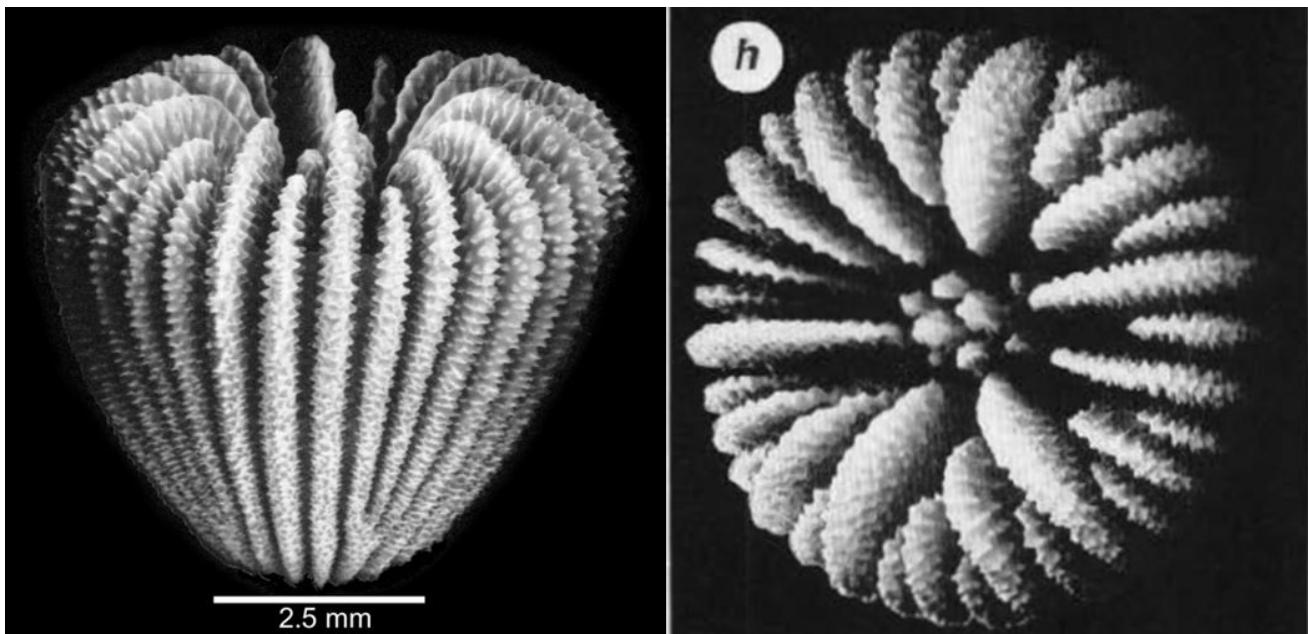


Figure Seventeen:

***Kionotrochus suteri* (from the CCMP)**

17.8. Schedule 7A of the Wildlife Act 1953 identifies “Stony corals – all species in the order Scleractinia” as a marine species declared to be an animal and therefore protected under s3. Approval under sections 53, 53A and 54 of the Wildlife Act is required for the catching, release and incidental killing of cup corals as part of the monitoring and sand extraction process. Although the intent is to immediately release captured cup corals, it is recognised that in some instances, cup coral could be incidentally killed through the monitoring and sand extraction processes.

17.9. The report, “Scleractinian Cup Corals at Te Ākau Bream Bay” (NIWA, July 2025) (Attachment Twenty-Two), summarises existing knowledge of the cup corals found within the proposed Te Ākau Bream Bay extraction area and elsewhere around New Zealand. The report further describes the cup corals and makes an assessment, based on the available information, of the potential impact the proposed sand extraction may have on the populations of these corals.

17.10. The report, Cup corals and Schedule 7 of the Fast-track Approvals Act 2024 (Attachment Sixteen), summarises the Scleractinian Cup Corals at Te Ākau Bream Bay report and addresses clauses c, d, e, j and k of Schedule 7(2)(1) FTAA in relation to cup corals.

17.11. The Cup Coral Management Plan (“CCMP”) is included as Attachment Thirty-Two. The objectives of this CCMP are to:

- To minimise disturbance and incidental killing of Scleractinia (cup corals) through the sand extraction process.
- To minimise the disturbance and incidental killing of cup corals through the monitoring/sampling process.

17.12. The CCMP outlines the standard operating procedures to minimise the capture and incidental killing of Cup Corals during monitoring and sand extraction and the process to be followed to handle and release any captured and identified Cup Corals during monitoring.

17.13. The Biosecurity Management Plan (“**BMP**”) for the *William Fraser* for the sand extraction operation is included as Attachment Thirty-Three. The purpose of this BMP is to outline the measures MBL will implement to prevent the spread of harmful aquatic organisms during sand extraction activities at the Te Ākau Bream Bay Sand Extraction Site. This plan ensures vessel operations, including ballast water use and hull maintenance, are carried out in compliance with New Zealand biosecurity regulations and best practice standards.

17.14. The Authority is being sought to cover both the monitoring and sand extraction phases.

17.15. Cup corals may be disturbed, collected and incidentally killed as part of sediment and benthic sampling during both the pre sand extraction monitoring and sand extraction monitoring undertaken at the extraction site and the three control sites during the life of the resource consent for the sand extraction.

17.16. During the sand extraction process, sand is fluidised into a slurry at the draghead via suction pulling sand and water through the draghead at the seabed. Any cup coral within the immediate area of the draghead is likely to be sucked up in the sand slurry. The sand slurry then moves up the draghead pipe, through a pump and onto the vessel where it is discharged onto a screen deck that utilises a 2 mm screen mesh to prevent larger material going into the load of the hopper. Oversized material (> 2 mm) (which would include cup corals) passes across the top of the screen and drops, via a pipe, into the forward port side moon pool where it drops through the vessel and exits, at keel height, under the vessel to return to the seabed.

17.17. It is expected all just about all cup corals will be retained on the sieve and returned to the sea via the moonpool.

17.18. Screened sand passes through the screen deck and into two pipes that run along the sides of the hopper. As the sand slurry drops into the hopper, the water velocity slows, and the sand settles out. The water and any finer suspended micro-sediments (<2.00 mm, including any remaining cup corals) will pass out of the hopper and into one of the six moon pools (three on each side of the hopper) which discharges any oversized or suspended sediments under the vessel’s keel.

17.19. Passage through the draghead and across the screens is not without some risk and there is the potential that organisms, including the protected corals, could be damaged or destroyed during this process (and therefore the requirement for approval under the Wildlife Act). Given the nature of cup corals, it is not possible to identify if a specific cup coral has been killed during the sand extraction process or was already dead.

17.20. The Sand Extraction Operation Plan (“**SEOP**”) (Attachment Twenty-Nine) outlines the operational requirements for the *William Fraser* and the sand extraction. This is being recommended as a required management plan for the resource consent, but it is not considered that it is required to be a management plan required under the Wildlife Authority.

17.21. The sand extraction rotation methodology, as outlined in the SEOP, will result in the same extraction tracks not being reused for up to 1 year. This would maximise the time available for damaged/fragmented corals to regenerate between disturbance events, giving them the ability to move through sediments to escape burial.

17.22. For completeness, while marine mammals are also known to be present in Bream Bay¹⁵⁷ the application for the resource consent includes a suite of measures to avoid or mitigate the potential effects on marine mammals such that a Wildlife Approval is not required to cover marine mammals.

17.23. A 35-year period is being sought for the Wildlife Approval. This aligns with the 35-year consent period being sought for the sand extraction. The Wildlife Approval will be given effect to at the same time as the consent is commenced.

17.24. It is confirmed that approval is not being sought for an ineligible activity.

17.25. It is considered that granting the approval would not breach obligations relating to treaty settlements or recognised customary rights.

¹⁵⁷ Page TBC, Marine Mammals Assessment of Environmental Effects (Attachment Fifteen)

18. Decision Making Framework and Information Requirements

18.1. Schedule 7 of the Act sets out the information requirements for such an application. Table TBC in Attachment Four outlines the information requirements under Schedule 7. The report “Cup corals and Schedule 7 of the Fast-track Approvals Act 2024” (Attachment Sixteen) provides the supporting technical information.

Criteria for Assessment of Application

18.2. Clause 5 of Schedule 7 provides that when considering an application for a wildlife approval, including conditions under clause 6, the Panel must take into account, giving the greatest weight to paragraph (a):

- (a) The purpose of the Act;
- (b) The purpose of the Wildlife Act and the effects of the project on the protected wildlife that is to be covered by the approval;
- (c) Information and requirements relating to the protected wildlife that is to be covered by the approval (including, as the case may be, in the New Zealand Threat Classification System or any relevant international conservation agreement).

18.3. Parliament’s clear intention is that the purpose of the Act takes precedent over (b) and (c) of clause 5 when deciding whether to grant or decline the Approval.

Proposed Conditions

18.4. Clause 6 of Schedule 7 provides that a Panel may set any conditions on a Wildlife Approval that the panel considers necessary to manage the effects of the activity on protected wildlife. In setting any condition under subclause (1), the Panel must:

- (a) Consider whether the condition would avoid, minimise, or remedy any impacts on protected wildlife that is to be covered by the approval; and
- (b) Where more than minor residual impacts on protected wildlife cannot be avoided, or remedied, ensure that they are offset or compensated for where possible and appropriate; and
- (c) Take into account, as the case may be, the New Zealand Threat Classification System or any relevant international conservation agreement that may apply in respect of the protected wildlife that is to be covered by the approval.

18.5. Notwithstanding the Panel’s discretion to impose conditions on the Approval under clause 6(1), this discretion is not unfettered, as prescribed in section 83 of the Act.

18.6. The proposed conditions for the Wildlife Approval are included in Attachment Thirty-Nine.

19. Information Required Under Clause 2 Of Schedule 7

19.1. The following sections provide the information that is required under Clause 2 of Schedule 7.

Purpose of the Proposed Activity (Clause 2(1)(a))

19.2. MBL is seeking a Coastal Permit under the Act for the extraction of sand from the coastal marine area from an area approximately 15.4 km² in size in Te Ākau Bream Bay. This is further described in Section Five of this report.

19.3. A 35-year consent period is being requested.

19.4. The project is proposed to be staged as follows:

- i. Stage 1 will provide for an annual sand extraction volume of up to 150,000 m³ for the first three years of the consent.
- ii. Stage 2 will provide for an annual sand extraction volume of up to 250,000 m³ for the remaining 32 years of the consent.

19.5. The purpose of the Wildlife Approval is:

- i. To minimise the risk of incidental killing of cup corals during monitoring associated with the sand extraction.
- ii. To minimise the disturbance, capture and incidental killing of live cup corals during sand extraction, and to return to the coastal marine area both live and dead cup coral during the sand extraction process.

19.6. All Scleractinia are protected under the Wildlife Act 1953.

Actions the Applicant Wishes to Carry Out Involving Protected Wildlife and Where They Will Be Carried Out (Clause 2(1)(b))

19.7. Schedule 5 attached to the proposed Wildlife Approval conditions includes a map showing the extraction area and the 3 control sites where monitoring will also be undertaken.

19.8. The process that are proposed to be implemented through the CCMP are:

Monitoring – The disturbance and capture of live and dead cup corals may occur during monitoring at the sand extraction site and the control sites. Sand samples are undertaken by a grab sample. Section TBC of the CCMP outlines the processes undertaken to minimise the disturbance and incidental killing of cup coral during monitoring.

Extraction – The disturbance and capture of live and dead cup corals (and potential incidental killing) may occur during the sand extraction process. Section TBC of the CCMP outlines the processes undertaken to minimise the disturbance and incidental killing of cup coral during sand extraction.

Assessment of the Activity and its Impacts Against the Purpose of the Wildlife Act (Clause 2(1)(c))

19.9. The overarching purpose of the Wildlife Act is to protect animals classed as wildlife and manage game bird hunting in New Zealand. Cup Corals are therefore to be protected under the Wildlife Act. The interpretation of the purpose of the Wildlife Act is considered to have widened as a result of the Wildlife (Authorisations) Amendment Act 2025 which provides further legal certainty around s53 of the Wildlife Act. The Act clarifies (under s53A) that the Director-General of Conservation can authorise under this Act the killing of wildlife incidentally to an otherwise lawful activity.

19.10. Although it is recognised that cup coral are present in the sand extraction area and can be sucked up during the sand extraction process it is not possible to identify if any dead cup corals found in the past or in current investigations have died as a result of the actual sand extraction or were already dead. Given the size and nature of cup coral it is not practical to identify if any cup coral will be killed during the sand extraction operation and any such killing will be incidental to the lawful activity. For this reason, the Wildlife Approval is being sought and granting consent would be consistent with the purpose of the Wildlife Act.

19.11. Owing to the size and distribution of cup coral, their location within the extraction site and control sites cannot be identified prior to the commencement of monitoring and sand extraction.

19.12. During the sand extraction process, sand is fluidised into a slurry at the draghead via suction pulling sand and water through the draghead at the seabed. Any cup coral within the immediate area of the drag-head is likely to be sucked up in the sand slurry. The sand slurry then moves up the draghead pipe, through a pump and onto the vessel where it is discharged onto a screen deck that utilises a 2 mm screen mesh to prevent larger material going into the load of the hopper. Oversized material (> 2 mm and which would include just about all cup coral) passes across the top of the screen and drops, via a pipe, into the forward port side moon pool where it drops through the vessel and exits, at keel height, under the vessel to return to the seabed.

19.13. The two species of cup coral both expected to be returned to the seafloor as oversized material.

19.14. Screened sand passes through the screen deck and into two pipes that run along the sides of the hopper. As the sand slurry drops into the hopper, the water velocity slows, and the sand settles out. The water and any finer suspended micro-sediments (<2.00 mm, including any remaining cup corals) will pass out of the hopper and into one of the six moon pools (three on each side of the hopper) which discharges any oversized or suspended sediments under the vessel's keel.

19.15. Passage through the draghead and across the screens is not without some risk and there is the potential that organisms, including the protected corals, could be damaged or destroyed during this process.

19.16. The CCMP has been prepared to outline the operational measures to minimise the risk of cup coral being captured during both monitoring and sand extraction and the process to release them. These measures will be implemented to ensure that, as far as practical, cup coral are protected, consistent with the purpose of the Wildlife Act.

19.17. In summary, any incidental killing of cup corals is incidental to the monitoring and sand extraction process. It is not directly intended but is unavoidable and foreseeable as a consequence of carrying out monitoring and the sand extraction.

19.18. Populations of wildlife are unlikely to be threatened or materially affected by the activities enabled by the authority. Any threat to individual wildlife is incidental, has been avoided, minimised and mitigated to the extent possible through the reasonable steps adopted by the applicant (s53B (4)), and any individual incidental act of killing viewed in isolation does not need to be consistent with the protection of wildlife (s53B (5)).¹⁵⁸

Protected Wildlife Species Known or Predicted to be in the Area, Where Possible, the Number of Wildlife Present and Numbers Likely to be Impacted (Clause 2(1)(d))

19.19. The protected Scleractinian cup corals *Sphenotrochus ralpae* and *Kionotrochus suteri* have been identified within the proposed sand extraction area at Te Ākau Bream Bay.

19.20. The overall live population of the two species of cup corals within the 15.4 km² proposed sand extraction area could be in the order of millions. It is expected that up to 5.6 km² of seabed will be extracted per year. While the proportion of corals that will be damaged or killed as they pass through the TSHD is unknown, some corals are expected to survive the disturbance.¹⁵⁹

¹⁵⁸ Page 11, Cup corals and Schedule 7 of the Fast-track Approvals Act 2024 (Attachment Sixteen)

¹⁵⁹ Page 17, Cup corals and Schedule 7 of the Fast-track Approvals Act 2024 (Attachment Sixteen)

19.21. The proposed sand extraction area at Te Ākau Bream Bay is less than 0.2% and 0.1% of the identified potential suitable habitat for *Sphenotrochus ralpae* and *Kionotrochus suteri*, respectively¹⁶⁰.

Impact on Threatened, Data Deficient, and At-Risk Wildlife Species (clause 2(1)(e))

19.22. The two cup coral species known to be present within the proposed extraction area (*Sphenotrochus ralpae* and *Kionotrochus suteri*) have not been assessed by the New Zealand Threat Classification System (“NZTCS”) and, therefore, are not deemed to be ‘Threatened’, ‘Data Deficient’ or ‘At Risk’ wildlife (as defined in the NZTCS).¹⁶¹

Methods Proposed to be Used to Conduct the Actions to Ensure Best Practice Standards are Met (Clause 2(1)(f))

19.23. The methods outline in the CCMP are considered to meet best practice standards and have been prepared in consultation with staff from NIWA and Bioresearches (who undertake the benthic monitoring for MBL). No previous CCMP are known to exist, and this may be the first CCMP implemented in New Zealand.

19.24. Section 8 of the CCMP outlines the methodology used during the sand extraction process to minimise the disturbance, capture and incidental killing of cup corals.

19.25. Section 7 of the CCMP outlines the methodology used during monitoring to minimise the disturbance, capture and incidental killing of cup corals.

Methods to be Used to Safely, Efficiently, and Humanely Catch, Hold or Kill the Animals and Relevant Animal Ethics Processes (Clause 2(1)(g))

19.26. As outlined in Sections 7 and 8 of the CCMP, it is intended that captured cup corals are returned to the coastal marine area. For those live cup corals captured during monitoring and not identified on board the *William Fraser* (and then returned to the coastal marine area), they will be killed when the sand sample they are in is preserved and sent to a laboratory.

19.27. There are no known animal ethics processes for cup corals.

Location or Locations in Which the Activity will be Carried Out (Clause 2(1)(h))

19.28. The map of the sand extraction site and control sites (for monitoring) is included as Schedule 5 to the recommended conditions (Attachment Thirty-Nine). For the purpose of this wildlife approval application, it is considered that the cup corals could be present anywhere within the extraction area and control areas.

Authorisation to Temporarily Hold or Relocate Wildlife (Clause 2(1)(i))

19.29. The majority of cup coral captured during monitoring will be held temporarily on board the sampling vessel while they are identified before being returned to the coastal marine area. Although they will be returned to the coastal marine area generally within the sand extraction or control site, they are likely to be returned in a slightly different location due to the movement of the sampling vessel during that period between when they are captured, and when they are disposed of and returned to the coastal marine area.

19.30. For those cup corals captured during sand extraction, they will be temporarily held as they pass through the sand extraction process before being discharged via the moon pools back into the coastal marine area. Again, due to the passage of the *William Fraser* during this period they will be deposited back into the coastal marine area in a different location than where they were captured.

¹⁶⁰ Page 17, Cup corals and Schedule 7 of the Fast-track Approvals Act 2024 (Attachment Sixteen)

¹⁶¹ Page 17, Cup corals and Schedule 7 of the Fast-track Approvals Act 2024 (Attachment Sixteen)

Actual and Potential Wildlife Effects (Adverse or Positive) of the Proposed Activity, including Effects on the Target Species, Other Indigenous Species, and the Ecosystems at the Site (Clause 2(1)(j))

19.31. This has been addressed in detail in the Cup corals and Schedule 7 of the Fast-track Approvals Act 2024 Report (Attachment Sixteen). This report finds¹⁶²:

“The proposed sand extraction area at Te Ākau Bream Bay is less than 0.2% and 0.1 % of the identified potential suitable habitat for Sphenotrochus ralphae and Kionotrochus suteri, respectively (Beaumont et al. 2024). This, together with the expected resilience of these corals to disturbance, means it is considered likely that the proposed sand extraction activity within Te Ākau Bream Bay will have a minor to negligible impact on the populations of either Sphenotrochus ralphae or Kionotrochus suteri within the Aotearoa New Zealand region. In addition, recovery of coral populations within the proposed sand extraction area by adult immigration and/or larval settlement is expected over time once extraction activities cease, though connectivity between populations remains unknown.”

19.32. A comprehensive assessment of ecological effects has been undertaken within the substantive application for the resource consent (Section TBC).

Methods to avoid and minimise adverse effects, including any offsetting or compensation to address unmitigated adverse effects (clause 2(1)(k))

19.33. The methods outlined in the CCMP are considered sufficient to avoid or minimise the adverse effects of the Project on cup coral. In summary these are:

During Monitoring:

- Limitation on sand samples taking during monitoring.
- Using sieves with seawater, separation of biota from sediment immediately after collection. Biota retained on the 3 mm sieve will be visually inspected. Identified cup corals will be recorded then returned immediately to the coastal marine area.

During Sand Extraction:

- Implementation of a sand extraction rotation plan (to ensure that there is more than a 12-month period between sand extraction in a specific area).
- A draghead designed to minimise seabed disturbance and take a wider and shallower extraction furrow. The extraction track is an average of 100 mm deep and 1600 mm wide.
- A Dutch-designed screening deck, rather than flume pipes, which reduces damage to live animals passing through the draghead and increases the screening efficiency.
- Moon pools to deliver the over-size material (including cup corals) and sediment discharges below the water line to minimise turbidity.
- The moon pool system also reduces the aeration of the sediment and/or biota, which decreases their settling time, and therefore the time they may be vulnerable to predation, compared to the flume pipe and discharge over the side of the boat method.

Convictions for any offence under the Wildlife Act (clause 2(1)(l))

19.34. MBL and all associated entities have no history of convictions under the Wildlife Act.

¹⁶² Page 18, Cup corals and Schedule 7 of the Fast-track Approvals Act 2024 (Attachment Sixteen)

Current Criminal Charges under the Wildlife Act (clause 2(1)(m))

20.22. No current criminal charges under the Wildlife Act exist against the applicant or any affiliated parties.

Consultation on the application specific to wildlife impacts, including with hapū or iwi (clause 1A(1)(n))

19.35. The consultation log is included as Attachment Forty. Separate consultation was initiated in respect to this application. The following summarises the outcomes of consultation. Attachment TBC is the compilation of the emails sent out to the following parties to ask if they wished to be consulted, and their responses.

Department of Conservation

19.36. The draft application was sent to the Department of Conservation for their comments and a subsequent meeting was held on the 15th of August 2025. An outcome of that meeting was that the Department of Conservation sought some further details on the extent of monitoring being undertaken and this information was subsequently provided (along with some minor clarification on other points raised).

19.37. The Department of Conservation responded in writing on TBC and this response is included in Attachment TBC.

Te Hiku o Te Ika Conservation Board (Northland Conservation Board)

19.38. Te Hiku o Te Ika Conservation Board were contacted by email on the 31st of July 2025. A response was received on the 5th of September 2025, asking if MBL wanted to make a 10-minute presentation to the Board at their public meeting on the 26th of September 2025.

New Zealand Conservation Authority

19.39. The New Zealand Conservation Authority were contacted by email on the 31st of July 2025.

New Zealand Fish and Game Council

19.40. On Tuesday the 19th of August 2025, the New Zealand Fish and Game Council responded by email that the proposal does not relate to the provisions of relevance to them and no further consultation was required.

Game Animal Council

19.41. On Monday the 28th of July 2025, the Game Animal Council responded by email that no consultation was required (and they would not be making a comment) as the project is outside the legislated mandate of the Game Animal Council

Northland Regional Council

19.42. On the 4th of August 2025, Council confirmed by email that Council has no interest in discussing the Wildlife Act approvals.

Te Pouwhenua o Tiakiriri Kukupa Trust

19.43. Please refer to the CIA included as Attachment TBC.

Patuharaheke Te Iwi Trust Board

19.44. Please refer to the CIA included as Attachment TBC.

Ngati Wai Trust Board

19.45. Please refer to the CIA included as Attachment TBC.

Ngāti Tū

19.46. Ngāti Tū (as a party to the Fisheries Notification of Tāngata Kaitiaki/Tiaki) for Area/Rohe Moana of Ngāti Kahu, Parawhau, Ngāti Tū and Patuharakeke) Notice 2021) were contacted by email on the 15th of August 2025. A response was received on the 18th of August 2025 and confirmed they were to be consulted. To date a suitable meeting time has not been able to be confirmed.

Ngāti Kahu

19.47. Ngāti Kahu (as a party to the Fisheries Notification of Tāngata Kaitiaki/Tiaki) for Area/Rohe Moana of Ngāti Kahu, Parawhau, Ngāti Tū and Patuharakeke) Notice 2021) were contacted by email on the 19th of August 2025. A response was received on the 4th of September where it was confirmed that the matter would be discussed with iwi and hapu before a collective response was sent.

MACA applicants

19.48. (To be completed)

Additional written expert views, advice, or opinions obtained concerning the proposal (clause 1A(1)(o))

19.49. NIWA have prepared the following reports:

- “Scleractinian Cup Corals at Te Akau Bream Bay” (NIWA, July 2025) (Attachment Twenty-Two); and
- “Cup corals and Schedule 7 of the Fast-track Approvals Act 2024” (NIWA, June 2025) (Attachment Sixteen).

19.50. The CCMP has been prepared by MBL in consultation with Dr Jennifer Beaumont (NIWA) and Mr Simon West (Bioresearches).

20. Decisions On Wildlife Approval – Section 81 Of The FTAA

Schedule 7, Clause 5

20.1. This provides an assessment of the Wildlife Approval application against the statutory framework summarised in Section 17.

Purpose of the Act

20.2. The purpose of the Act is set out in s 3 as follows:

3 Purpose

The purpose of this Act is to facilitate the delivery of infrastructure and development projects with significant regional or national benefits.

20.3. The Te Ākau Bream Bay Sand Extraction Project achieves the purpose of the Act as it will secure a significant volume of marine sand for high-strength concrete manufacturing in the Auckland Region. High-strength concrete is the key material used in just about all major infrastructure and development projects. Marine sand is therefore a fundamental resource required to facilitate the delivery of infrastructure and development projects in New Zealand (and in Auckland in particular) that provide significant regional and national benefits.

20.4. Overall, the proposal fulfils the intent and purpose of the Act in that it will allow for the establishment of an environmentally sound sand extraction operation, which will secure a future supply of marine sand suitable for high-strength concrete production in Auckland, to enable and support infrastructure and development projects with significant regional and/or national benefits.

20.5. It is not possible to undertake the sand extraction or the required monitoring without the disturbance, capture or incidental killing of cup corals given their expected presence within the sand extraction area and control sites.

Draft for Consultation

The Purpose of The Wildlife Act 1953 And The Effects Of The Project On The Protected Wildlife That Is To Be Covered By The Approval

20.6. The purpose of the Wildlife Act is to protect animals classed as wildlife and manage game bird hunting in New Zealand. The cup coral are therefore to be protected under the Act. The interpretation of the purpose of the Wildlife Act is considered to have widened as a result of the Wildlife (Authorisations) Amendment Act 2025 which provides further legal certainty around s53 of the Wildlife Act. The Act clarifies (under s53A) that the Director-General of Conservation can authorise under this Act the killing of wildlife incidentally to an otherwise lawful activity.

20.7. Although it is recognised that live and dead cup coral are present in the sand extraction and control areas and can be disturbed and captured during the monitoring and sand extraction process it is not possible to identify if any dead cup corals found in the past or in current investigations have died as a result of the actual monitoring or sand extraction or were already dead. Given the size and nature of cup coral it is not practical to identify if any cup coral will be killed during monitoring or the sand extraction operation and any such killing will be incidental to the lawful activity. For this reason, the Wildlife Approval is being sought and granting consent would be consistent with the purpose of the Act.

20.8. An assessment of the potential wildlife effects of the Project on the cup coral has been undertaken by NIWA. In summary, they have determined that it is likely that any adverse effects of the proposed sand extraction activity within Te Ākau Bream Bay will have a minor to negligible impact on the populations of either *Sphenotrochus ralpae* or *Kionotrochus suteri* within the Aotearoa New Zealand region¹⁶³.

¹⁶³ Page 19, Cup corals and Schedule 7 of the Fast-track Approvals Act 2024 (Attachment Sixteen)

20.9. With respect to the activities sought to be authorised under the Wildlife Approval, these are proposed with the sole purpose of avoiding and minimising effects on cup coral during the sand extraction process. The purpose of the Wildlife Act is therefore considered to be achieved.

20.10. In summary, the disturbance and any killing of cup corals is incidental to the sand extraction process. It is not directly intended but is unavoidable and foreseeable as a consequence of carrying out the sand extraction.

Information And Requirements Relating to the Protected Wildlife That Is To Be Covered By The Approval

20.11. The methods and processes outlined in the CCMP are considered to be consistent with best practice and will ensure impacts on cup coral are minimised as far as practical.

Proposed Conditions

20.12. The recommended conditions are included as Attachment Thirty-Nine. This recommended Schedules 1 and 2 follow the current standard template for Wildlife Approvals. Schedule 3 includes the special conditions; Schedule 4 includes the CCMP and Schedule 5 includes the site plan showing the sand extraction area and control sites.

20.13. In respect to the special conditions, it is noted they cover the following matters:

- There is a requirement to undertake the activity in accordance with the CCMP.
- Cup corals must only be handled by the authorised personnel listed in Schedule 1 or by parties under direct supervision of those personnel.
- DoC has the ability to instruct the authority holder to make such reasonable improvements to techniques (including catching, handling, releasing, preserving and storing).
- The Authorisation gives the authority holder the right to hold absolutely protected wildlife for short periods in accordance with the terms and conditions of the Authorisation, but the wildlife remains the property of the Crown.
- If, in the course of undertaking the activities, all reasonable effort has been made to meet all of the conditions expressed and implied in this authority; and wildlife is killed by the authority holder, then that will be permitted under this authority.
- All monitoring records must be made available for inspection at reasonable times by officers of the Grantor.
- The authority holder must comply with the biosecurity provisions set out in the Biosecurity Management Plan attached as Schedule Four to this authority, or any subsequently amended versions thereof.

Appendix B:
Te Parawhau ki Tai Accidental Discovery Kaupapa

Te Parawhau Ki Tai Accidental Discovery Kaupapa

In the event of a discovery, of archaeological material and taonga, Accidental Discovery Kaupapa shall be immediately implemented as follows:

- All work on the site will cease immediately. The contractor/works supervisor will shut down all equipment and activity.
- The contractor/works supervisor/owner will take immediate steps to secure the site (tape it off) to ensure the archaeological remains are undisturbed and the site is safe in terms of health and safety requirements and tikanga Māori.
- The contractor/works supervisor/owner will immediately notify the Cultural Monitor on site and the Area Archaeologist of the Heritage New Zealand Pouhere Taonga (Northland Office). The Cultural Monitor will have a direct line of communication with the Heritage New Zealand appointed archaeologist.
- The Cultural Monitor will undertake karakia and any other protocol in accordance with tikanga Māori. If required, the Cultural Monitor will escalate the matter and contact Te Parawhau Hapū Kaumātua for further guidance and support.
- If the material is confirmed as being archaeological, as defined by the Heritage New Zealand Pouhere Taonga Act 2014, an assessment will be carried out before work resumes. If koiwi tāngata are uncovered, the above step is must be taken and the area dealt with according to tikanga Māori and the law.

Works at the site area shall not recommence until an archaeological assessment is made and, the Cultural Monitor together with the on-site archaeologist confirm that all archaeological material has been dealt with appropriately, and statutory requirements met which includes the active Crown protection of Māori interests which includes their culture, taonga and their future generations in accordance with Te Tiriti.

Appendix C: Mahi Whakaora

Mahi Whakaora

Uara Ahurea	Mahi Whakaora
Mana Atua	<ul style="list-style-type: none">• A pre-start hui shall be held with Te Parawhau ki Tai and MBL representatives to confirm tikanga, cultural protocols, and expectations for the proposed sand extraction kaupapa.• All activities associated with the sand extraction kaupapa shall be carried out in accordance with tikanga and mātauranga Māori, as developed and agreed between the signatories of this CIA and MBL.• Te Parawhau ki Tai request that kaumātua be afforded the opportunity to undertake whakawātea, karakia and other tikanga on the moana and at relevant coastal whenua locations prior to commencement of the sand extraction activities. This includes karakia to acknowledge the mauri of Tangaroa and Tūmatauenga, to uplift the wairua of Paepae Atua and the surrounding taiao.• A Te Parawhau ki Tai cultural induction programme shall be developed and delivered by agents of the Trust for all MBL staff and contractors involved in the sand extraction kaupapa.• A māhere tikanga plan shall be developed by Te Parawhau ki Tai and incorporated into MBL's Environmental Effects Management Plan (EMMP), Sand Extraction Operation Management Plan, and Health and Safety Plan. This plan shall include tikanga responses for:<ul style="list-style-type: none">○ Whale and marine mammal strandings○ Tāngata drowning events○ Discovery of taonga species or kōiwi○ Vessel incidents or accidents• In the event of any incident or activity affecting the spiritual integrity or tikanga of Paepae Atua, a Hapū tikanga response

team, including kaumātua and kaitiaki, shall be activated to carry out appropriate cultural protocols. These may include karakia, tapu lifting, whānau support, and the imposition of a rāhui.

- The extent and duration of any rāhui shall be determined in collaboration with Te Parawhau ki Tai, and where appropriate, in coordination with relevant authorities such as the Police.
- In the event of a rāhui imposed over the sand extraction area, MBL shall formally notify Te Parawhau ki Tai of their standard sand extraction operations, including timing and activity details.

Te Mana o te Wai

- MBL shall avoid areas within the sand extraction area (where they exist) identified by Te Parawhau ki Tai as culturally significant or ecologically sensitive. Where deemed appropriate by Hapū kaumātua, MBL shall be informed of these locations, and they shall be included in MBL's relevant management plans. Should any such area be entered, a tikanga response plan shall be activated immediately, and embedded within MBL's EMMP.
- Te Parawhau ki Tai requests that mātauranga Māori indicators of mauri including but not limited to maramataka, tohu, and species health be integrated into the monitoring framework and adaptive management decisions.
- A marine monitoring framework shall be co-designed by Te Parawhau ki Tai and MBL to assess:
 - Sediment plume behaviour and dispersal
 - Impacts on benthic habitats and taonga species (e.g., tipa)
 - Changes to water clarity, temperature, and salinity
- Hapū-led monitoring and review shall be embedded at the following intervals:

- Bi-annually for the first six years of extraction and included in MBL's SEMR schedule.
- Every three years thereafter, unless otherwise triggered by environmental change, Hapū observation, or SEMR findings.
- Additional monitoring may be initiated at any time in response to tohu, taonga species behaviour, or unforeseen environmental effects.
- All monitoring shall be co-designed and carried out collaboratively between Te Parawhau Hapū and MBL, recognising the value of both mātauranga Māori and scientific expertise.
- Te Parawhau ki Tai monitors, in accordance with our Hapū kaitiakitanga obligations, shall be resourced and trained to undertake regular water quality and seabed monitoring including pre-, during, and post-extraction phases. This work shall be carried out alongside MBL and their technical experts, recognising the value of both mātauranga Māori and scientific knowledge systems.
- No contaminated discharges, vessel-related pollutants, debris, or rubbish shall enter the moana. The integrity of Tangaroa's domain must be always upheld.
- Emergency response protocols for spills, vessel incidents, or marine accidents shall be prepared by MBL and formally reviewed and approved by Te Parawhau ki Tai. These protocols must reflect tikanga and mātauranga Māori and be embedded within MBL's EMMP.

Migrating Taonga Species

Tuna (long and shortfin eel) and other uri of Tangaroa are taonga species to Te Parawhau ki Tai. Tuna's annual migration from freshwater

(the realm of Maru) to oceanic spawning grounds (the realm of Tangaroa) is a sacred journey that must be protected.

Sand extraction activities must be managed to ensure that migrating tuna are not harmed or disrupted on their way out to breed or on their return home. This includes managing extraction during key migration periods (February to April) and implementing vessel controls to reduce risk of harm.

In addition to tuna, other taonga may also migrate through or inhabit the Paepae Atua area, including pelagic fish species, marine mammals (e.g., whales, dolphins), and benthic invertebrates. Where known, their seasonal movements and breeding cycles must be considered in the timing and operation of extraction activities.

A Taonga Species Protection Protocol shall be developed in collaboration with Te Parawhau ki Tai and included in MBL's EMMP. This protocol shall include:

- Identification of migratory corridors and seasonal movement patterns of tuna and other taonga species.
- Monitoring using mātauranga Māori indicators (e.g., tohu, maramataka) and scientific tools (e.g., environmental DNA, acoustic tracking).
- Vessel speed and lighting controls during migration periods.
- Resourcing of Te Parawhau ki Tai to lead cultural monitoring and ensure tikanga is upheld, in accordance with our kaitiakitanga obligations to safeguard the taiao and its kaitiaki including but not limited to fish species, marine mammals, and birds.

Water Quality Monitoring – Operational Phase

Although the Water Quality Assessment (SLR, 2025) concludes that the effects of sand extraction on water quality are negligible and that no further monitoring is required, Te Parawhau ki Tai considers a precautionary approach appropriate. This reflects our kaitiakitanga obligations and ensures transparency and responsiveness should any unforeseen effects arise.

Te Parawhau ki Tai acknowledges that the William Fraser's low-impact extraction system and the sandy nature of the seabed at Paepae Atua containing minimal fine sediment already contribute to reduced plume effects. These are positive features. However, the following measures are considered necessary to ensure mauri is actively protected and enhanced throughout the life of the activity.

Monitoring During Extraction

- Real-time technology shall be used on the William Fraser to monitor turbidity levels and track the extent and behaviour of any sediment plumes.
- Monitoring equipment shall be GPS-linked to allow spatial mapping of plume extent and movement.
- Operational thresholds shall be established (e.g., sustained elevated turbidity) to trigger a review of the sand extraction activity and, if necessary, strategies implemented to ensure turbidity levels arising from the sediment plume are maintained at acceptable levels.

Post-Extraction Checks

- Spot checks shall be carried out at the extraction site and a nearby reference location within 24 hours of each extraction

event to confirm that water quality is maintained at baseline conditions.

- An annual summary report shall be prepared, comparing monitoring results with Northland Regional Council (NRC) environmental thresholds and pre-extraction baseline data. A copy of this report shall be provided to Te Parawhau ki Tai for review.

Hapū Monitoring

- Te Parawhau ki Tai monitors shall be present during initial extraction activities and at agreed intervals to observe and record tohu and other indicators of mauri.
- Te Parawhau ki Tai mātauranga shall be used alongside scientific data to assess changes in water quality, including visual clarity, colour, and the presence or absence and responsiveness of taonga species.
- A Hapū-led marine monitoring programme shall be established to assess:
 - Sediment plume behaviour and dispersal
 - Impacts on benthic habitats and taonga species
 - Changes to water clarity, temperature, and salinity.
- All monitoring frameworks shall be co-designed by Te Parawhau ki Tai, signatories of this CIA and MBL to ensure they are culturally appropriate, scientifically robust, and practically useful. Monitoring shall:
 - Include clear thresholds for ecological change that trigger adaptive management responses
 - Be scheduled at defined intervals (e.g., biannual, annual, five-yearly) as agreed with MBL

- Allow for additional monitoring if tohu, taonga species behaviour, or environmental changes are observed
- Be transparent, with results shared with Te Parawhau ki Tai, NRC, and the wider community
- Embed cultural monitoring alongside technical assessments, with Te Parawhau ki Tai monitors present during key phases.

Adaptive Management

- Monitoring results shall inform any necessary changes to extraction timing, duration, or vessel operation.
- All findings shall be shared with Te Parawhau ki Tai and NRC to support collaborative oversight and ensure early response to any emerging issues is implemented.

Protected Marine Life

- MBL and their specialists undertake rangahau to understand the importance of protected species (e.g., cup corals) and share findings with Hapū.
- Embed Te Parawhau ki Tai tikanga, mātauranga Māori, and uara ahurea in project design, implementation, and monitoring.
- Support Hapū-led initiatives that restore the taiao and enhance wellbeing.

Mana Whenua

Exotic Caulerpa is a significant marine plant pest to our Hapū taiao.

- **Exotic Caulerpa:** The William Fraser must remain free of this pest, and all sand extraction activities must be carried out in accordance with Biosecurity New Zealand's marine pest management protocols and any mātauranga Māori. Te Parawhau Hapū shall co-develop specific biosecurity protocols

with and included in MBL's EMMP to prevent the introduction or spread of Exotic Caulerpa into our rohe.

- A comprehensive Biosecurity Management Plan shall be co-developed by Te Parawhau ki Tai and MBL, with protocols that reflect both mātauranga Māori and best-practice marine biosecurity standards. The plan shall include:
 - vessel inspection procedures, seasonal risk assessments, and response protocols for marine pests including Exotic Caulerpa and other invasive species.
- Te Parawhau ki Tai monitors shall be trained and resourced to participate in biosecurity inspections, surveillance, and reporting, ensuring Hapū oversight of all vessel movements and extraction activities.
- Biosecurity protocols shall be embedded in all operational plans and reviewed annually in partnership with Te Parawhau ki Tai to ensure they remain effective and responsive to emerging risks.
- Any breach of biosecurity protocols shall trigger a formal review and response process, with Te Parawhau ki Tai leading the tikanga response and NRC notified immediately.

Te Parawhau ki Tai supports the inclusion of the various management plans required by MBL's experts. Te Parawhau ki Tai shall be formally included in the review and certification of all management plans, including:

- Coastal Processes Monitoring Management Plan (CPMMP)
- Environmental Monitoring and Management Plan (EMMP)
- Marine Mammal Management Plan (MMMP)
- Sediment Effects and Operational Plan (SEOP)
- Biosecurity Management Plan (BMP)

Monitoring

- All monitoring frameworks shall be co-designed and agreed in collaboration by Te Parawhau ki Tai and MBL to ensure they are culturally appropriate, scientifically robust, and practically useful. Monitoring shall:
 - Include clear thresholds for ecological change that trigger adaptive management responses
 - Be scheduled at defined intervals (e.g., biannual, annual, five-yearly)
 - Allow for additional monitoring if tohu, taonga species behaviour, or environmental changes are observed
 - Be transparent, with results shared with Te Parawhau ki Tai, NRC, and the wider community (where appropriate)
 - Embed cultural monitoring alongside technical assessments, with Te Parawhau ki Tai monitors present during key phases.

Adjacent Shoreline and Habitat Protection

The health of the adjacent shoreline shall be maintained throughout the duration of the activity. Sand extraction shall not:

- Result in any measurable shoreline erosion or disturbance to coastal bird nesting areas, including habitat used by taonga species such as Tara iti (New Zealand fairy tern).
- Monitoring shall be undertaken to confirm that no adverse effects on shoreline stability or ecological values can be attributed to the sand extraction activities. If any such effects are observed, appropriate mitigation or remediation measures shall be implemented in consultation with Te Parawhau ki Tai and relevant experts.

- Te Parawhau ki Tai requires that the sand extraction area at Paepae Atua be rehabilitated at the conclusion of extraction activities.
- A Rehabilitation Management Plan shall be prepared by Te Parawhau ki Tai and MBL and must be treated as a living document. It is anticipated that this plan is updated on an annual basis as lessons are learned throughout the sand extraction process. The plan must set out:
 - Clear objectives, monitoring strategies, incorporating adaptive management methodologies to ensure that the seafloor and surrounding environment are left in a measurably improved ecological state compared to pre-extraction conditions. Expected outcomes of rehabilitation include:
 - Enhanced ecological health of the seafloor, including increased species abundance and diversity.
 - Improved water quality in the extraction area and adjacent marine environments.
 - Removal of marine debris and rubbish from the seafloor beyond the sand extraction area, with appropriate disposal of all waste. The extent of debris clearance area and ecological enhancement shall be agreed in collaboration between Te Parawhau Hapū and MBL, with Hapū-led monitoring and reporting to ensure transparency and accountability.
- Te Parawhau ki Tai respectfully requests that MBL commit appropriate resources to support this mahi whakaora, including financial support, dedicated personnel, and access to relevant technical expertise to

ensure that the rehabilitation process is meaningful, effective, and aligned with Te Parawhau Hapū tirohangā and uara ahurea.

Mana Ao Tūroa

- Te Parawhau ki Tai supports the use of low-impact vessel systems, such as the William Fraser's electric pump system, which reduces underwater noise and eliminates hydraulic oil risks. These design features contribute positively to the protection of mauri within the extraction area.
- Te Parawhau ki Tai supports the implementation of MBL's Oil Spill Management Plan, which includes double-bunded containment systems for fuel and oil onboard the William Fraser, use of biodegradable synthetic hydraulic oil, and automated shut-off alarms to prevent discharge in the event of a leak. No refuelling is to occur at Paepae Atua. These measures along with other vessel safeguards are essential to protecting Tangaroa's realm and upholding the mauri of te ao tūroa.
- A seabed health assessment shall be undertaken prior to the commencement of extraction and repeated annually. This assessment shall be co-led by Te Parawhau ki Tai and MBL, using both scientific and mātauranga Māori methods. It shall include:
 - Tohu-based (visual) assessments of sediment texture and abundance (absence or presence of trenches and erosion).
 - Shellfish condition, and ecological balance.
 - Monitoring of recolonisation and habitat recovery.
- A seabed health and mauri assessment shall be undertaken biannually, in collaboration between Te Parawhau ki Tai, MBL, and their marine scientists. This shall incorporate mātauranga Māori indicators as appropriate and include:

- Shellfish and fish health and abundance
- Sediment texture and ecological balance
- **Seabed Depth Change – Cultural Impact of 2% Change Over Time**

Coastal Processes and Geomorphology Effects Assessment (Attachment Nine of the Draft AEE, October 2025), predicts an average seabed lowering of 0.55 m over the 35-year consent period. This equates to approximately 2% of the average depth (28 m) of the extraction area. While the ecological effects are assessed as negligible, the cultural impact remains uncertain. The seabed is part of Papatūānuku and any change to its form may affect the mauri and balance of the taiao. Te Pouwhenua o Tiakiriri Kūkupa Trust, therefore requests that:

- this change is monitored closely, with Hapū-led assessments of mauri and tohu supported by scientific evidence integrated into the Sand Extraction Monitoring Reports (SEMR).
- An adaptive management approach must be embedded to ensure that any unforeseen adverse effects arising from the proposal are identified early and responded to appropriately. This includes the ability to pause or modify extraction activities if monitoring indicates a decline in seabed health or mauri.
- A long-term ecological restoration plan shall be developed with Hapū input and reviewed every five years. This plan shall include:
 - Monitoring of benthic species recolonisation, particularly those naturally occurring at depths of 20 metres or more (e.g., polychaete worms, burrowing crustaceans, deep-dwelling bivalves).

- Where appropriate, reintroduction of species (e.g., spat or larvae) to support habitat recovery, guided by mātauranga Māori and ecological indicators of mauri
- Adaptive management triggers for pausing or relocating extraction activities, including closure of extraction cells
- Integration of rongoā moana and traditional knowledge in restoration design across the extraction area
- Sand extraction activities must avoid cumulative degradation of the seabed, including compaction, habitat and species loss, and disruption of natural sediment transport processes within Paepae Atua. Monitoring results shall inform operational adjustments to avoid long-term ecological decline.
- Te Parawhau ki Tai and MBL shall work together to establish a plan to clear the seafloor of debris, including disposed sea anchors, chains, and other marine waste. This work shall be completed prior to Stage 2 extraction and reviewed annually thereafter.
- All monitoring frameworks shall be co-designed by Te Parawhau ki Tai and MBL to ensure they are culturally appropriate, scientifically robust, and practically useful. Monitoring shall:
 - Include clear thresholds for ecological change that trigger adaptive management responses
 - Be scheduled at defined intervals (e.g., biannual, annual, five-yearly)
 - Allow for additional monitoring if tohu, taonga species behaviour, or environmental changes are observed
 - Be transparent, with results shared with Te Parawhau ki Tai, NRC, and the wider community
 - Embed cultural monitoring alongside technical assessments, with Te Parawhau ki Tai monitors present during key phases.

- Climate change considerations shall be embedded in all monitoring and restoration frameworks. This includes assessing cumulative effects of sand extraction and climate change on seabed morphology, surf breaks, and taonga species. Monitoring shall include indicators of climate-related change (e.g., sea temperature, sediment movement, species migration patterns), and adaptive management responses shall be developed to address any emerging risks.

Mana Tāngata	<p>Mutually Beneficial Economic Arrangements: MBL and Te Pouwhenua o Tiakiriri Kūkupa Trust agree in principle to establish a mutually beneficial economic arrangement that appropriately reflects the mana of Te Parawhau ki Tai and signatories to this CIA as tāngata whenua, its enduring whakapapa and unbroken association with Paepae Atua, and the value of the sand resource. The arrangement should support Hapū tirohanga for wellbeing and economic development. Terms will be formalised through a legally binding side agreement and reviewed regularly to ensure equity, transparency, and alignment with Te Parawhau ki Tai uara, tirohanga and obligations, including those related to kaitiakitanga.</p> <p>Scholarships and Training: MBL agrees to support a scholarship fund for Te Parawhau Ki Tai and Te Parawhau hapū members pursuing studies in environmental and marine sciences, resource management, and other related and supporting fields. Training and apprenticeship opportunities will be explored in partnership with the Hapū across relevant project areas, supporting not only rangatahi but all Hapū members seeking to grow their knowledge and understanding of marine-related kaupapa or to transition into new roles. This is vital to Te Parawhau ki Tai upholding its kaitiakitanga obligations.</p>
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Employment and Hapū Enterprise: MBL agrees to support Hapū-led opportunities across and beyond the life of the project. This includes but are not exhaustive, enabling Hapū enterprises to deliver services such as logistics, infrastructure, cultural induction, environmental monitoring, and other operational roles, all of which contribute to Hapū wellbeing, capability building, and long-term economic development. These opportunities will include partnerships, joint ventures, collaborations with MBL in other commercial enterprises.

Cultural Induction and Capacity Building: MBL agrees to support a Te Parawhau ki Tai led cultural induction programme for all staff and contractors, covering Hapū history, tikanga, uara ahurea, and the significance of Paepae Atua. Resources will be made available to strengthen Hapū capacity in environmental governance and kaitiakitanga.

Hapū Wellbeing Fund: MBL agrees to contribute to whānau ora initiatives, including health, education, housing, marae and cultural revitalisation.

Partnership and Implementation Oversight: Te Pouwhenua o Tiakiriri Kūkupa Trust recommends MBL supports the establishment of a partnership framework with the signatories of this CIA to oversee the implementation of the mahi whakaora in this CIA, monitor sand extraction impacts, and uphold Te Tiriti o Waitangi articles and principles throughout the project lifecycle.

Relationship Agreement: Te Pouwhenua o Tiakiriri Kūkupa Trust recommends that a relationship agreement between MBL and Te Pouwhenua o Tiakiriri Kūkupa Trust including kaumātua signatories to this CIA be established to incorporate the commitments outlined in this

CIA. This will ensure ongoing engagement, accountability, and a shared commitment to the implementation of the agreed mahi whakaora.

Cultural Expertise in Decision-Making: Given that the Fast-track Consenting process vests decision-making authority solely in the appointed Expert Consenting Panel, Te Pouwhenua o Tiakiriri Kūkupa Trust, strongly advocate that at least one Panel member is culturally competent and possesses demonstrated expertise and manawa in Te Ao Māori and a deep understanding of Paepae Atua and Te Parawhau ki Tai uara ahurea. This is essential to ensure that the uara, tikanga, and mātauranga Māori articulated in this CIA are appropriately understood, respected, and integrated into the Panel's assessment and decision-making process.

Environmental Funding: MBL agrees to provide funding to support environmental improvements in the Hapū rohe, including sediment and pollution reduction, rubbish removal, replanting and water quality enhancement of Paepae Atua and the surrounding area. The scope of this fund will be agreed and developed in consultation with Te Pouwhenua o Tiakiriri Kūkupa Trust and signatories to this CIA.

Minerals encountered: Te Pouwhenua o Tiakiriri Kūkupa Trust has set out clear expectations should mineralised materials be encountered during extraction in this CIA. While sand is excluded under the Crown Minerals Act, other materials remain the property of the Crown. If such materials are found, we expect MBL to notify the signatories to this CIA and engage in a tikanga-led process to determine an appropriate response.

Intergenerational Provisions:

- MBL shall support intergenerational wellbeing by resourcing Hapū-led initiatives that promote cultural revitalisation, mātauranga Māori transmission, and tiaki across Hapū generations.
- A long-term Hapū development plan shall be co-designed with Te Pouwhenua o Tiakiriri Kūkupa Trust and signatories to this CIA to ensure that benefits from the project extend beyond the consent term and contribute to enduring Te Parawhau ki Tai and Te Parawhau hapū capacity.
- MBL shall provide funding and support for Hapū-focused development programmes that go beyond entry-level or manual roles. These programmes shall include internships, mentoring, cultural education, and career development pathways for Te Parawhau ki Tai and Te Parawhau hapū rangatahi and any Hapū member who chooses to pursue a career with MBL. The intent is to empower participants to grow into leadership, technical, governance, and environmental roles, and to contribute meaningfully to Hapū wellbeing, environmental restoration, and long-term Hapū development.
- All agreements shall include provisions for annual review and renewal to ensure that intergenerational goals remain relevant, measurable, and responsive to Hapū aspirations.

Transfer of Consent and Ongoing Commitments:

In the event that MBL sells, transfers, or otherwise assigns its interest in the sand extraction consent at Paepae Atua, the following measures shall apply:

- All commitments outlined in this CIA including the agreed mahi whakaora, associated side agreements, and any conditions of

consent, shall run with the consent and remain binding on any future consent holder or operator.

- MBL shall provide formal written notice to Te Pouwhenua o Tiakiriri Kūkupa Trust and signatories to this CIA of any proposed transfer of the consent or associated interests, with adequate notice to allow for meaningful engagement.
- MBL shall facilitate an introductory meeting between Te Pouwhenua o Tiakiriri Kūkupa Trust and signatories to this CIA and the incoming consent holder to ensure continuity of relationships, obligations, and understanding of Te Parawhau ki Tai and Te Parawhau Hapū uara ahurea, tikanga, and expectations.
- The incoming consent holder shall be required to formally acknowledge and adopt the commitments and obligations set out in this CIA and any related agreements, including the continuation of partnership, monitoring, and cultural protocols.

Te Tiriti o Waitangi

MBL, the Fast-track Expert Consenting Panel, and the Northland Regional Council (NRC) shall embed ngā uara ahurea o Te Parawhau ki Tai, including tikanga and tirohanga Māori, throughout the life of the project. This includes:

- Supporting the exercise of Te Parawhau ki Tai rangatiratanga and kaitiakitanga in relation to Paepae Atua and the takutai moana.
- Ensuring early, meaningful, and ongoing engagement with Te Parawhau ki Tai across all stages of the project, including design, implementation, monitoring, and review.
- Enabling Hapū-led participation in environmental and cultural decision-making, monitoring, and outcomes.

Te Parawhau Hapū MACA Claim

To uphold the rights and responsibilities of Te Parawhau ki Tai and Te Parawhau Hapū under Te Tiriti o Waitangi and the Takutai Moana Act 2011, the following mahi whakaora are sought:

Support for Te Parawhau Hapū MACA Claims

- MBL is requested to formally support Te Parawhau Hapū active MACA applications. All sand extraction activities must avoid any action that may cause substantial interruption to these claims throughout the life of the project.

Formal Commitment to Te Parawhau Hapū Uara Ahurea

Te Parawhau Hapū seeks a formal and enduring commitment from MBL to uphold:

- Hapū uara ahurea, as defined in ngā uara ahurea o Te Parawhau ki Tai pou tarawaho;
- Unimpeded access to customary marine areas and mātaitai;
- Recognition and respect for tikanga Māori and the exercise of kaitiakitanga.

Recognition of Active MACA Claims in Decision-Making

Te Pouwhenua o Tiakiriri Kūkupa Trust requests that the Fast-track Expert Consenting Panel and the NRC formally acknowledge Te Parawhau Hapū active MACA claims in all decisions relating to the proposed sand extraction activities.

- **Consent Condition – Protection of MACA Interests**

A specific condition of consent is sought to ensure that sand extraction activities at Paepae Atua do not proceed in any manner that undermines, prejudices, or compromises the integrity of Te Parawhau Hapū MACA claims.

- **Transparent and Ongoing Engagement under Section 95 MACA Act**

All engagement with Te Parawhau Hapū under Section 95 of the MACA Act must be:

- Transparent;
- Documented;
- Ongoing for the duration of the consent.

These measures are essential to ensure that the proposed sand extraction does not diminish the mana of Te Parawhau Hapū but instead contributes to the restoration of wellbeing, the exercise of rangatiratanga, and the realisation of Hapū tirohanga for current and future generations.

ATTACHMENT TWENTY-TWO
Te Hononga Relationship Agreement



TE HONONGA RELATIONSHIP AGREEMENT

This agreement is made between Te Pouwhenua o Tiakiriri Kūkupa Trust representing the beneficiaries of the Trust and Te Parawhau hapū, and McCallum Bros Limited.

PARTIES

Te Pouwhenua o Tikairiri Kūkupa Trust, (the Trust)

McCallum Bros Limited (MBL)

1. Introduction

1.1 An introduction to Te Pouwhenua o Tiakiriri Kūkupa Trust is set out below:

Manawa mai te putanga o te Ariki.

Manawa mai te putanga o te Tauira.

Manawa mai te putanga o te Pia.

Ka eke ki Manaia, ki Parihaka, ki Parikiore.

Ka eke ki te wānanga o te Mātauranga.

Ka eke ki Whatatiri, Tangihua, Mano Hiwa Ariki te rerenga o te rā.

Ka whaka te rāwhiti ko Taranga, ko Maui taha, ko Maui roto, ko Maui waho, ko Maui pae, ko Te Pae o Tu, ko Te Paepae Atua, ko Te Poupouwhenua, ko Te Koutu, ko Motukiore, Ko Matakohe, ko Motu a Taua koia te karaka whati a Tū ki te hiore weku o te Paraoa.

Ko te kawe i ngā Tapu.

Ko te kawe i te Mauri.

Ko te mauri hihiri.

Ko te mauri i tēnei Ariki.

Ko te mauri i tēnei Tauira.

Ko te mauri i tēnei Pia.

Ko te mauri o Ranginui e tu iho nei.

Ko te mauri a Papatūānuku e takoto nei.

Ko te mauri a Te Parawhau ki te arero me te ringaringa i te kauae raro.

Tēnei au tēnei au ko te uri whakatupu ko te uri whakahake o Te Parawhau.

The heart welcomes the emergence of the high one.
The heart welcomes the emergence of the student.
The heart welcomes the emergence of the novice one.
We ascend upon each of these sacred maunga in turn.
We attain the knowledge from a space of learning.
We ascend upon these maunga as the sun rises.
As we look into the sun we see the many islands, the sea and sacred beaches that divide our atua realms, the lands of our ancestors named, finishing at that place Motu a Taua where our chiefs gathered to conduct rituals of weaponry, where the cracking sound is similar to the slapping of the Sperm whale's tail as it crashes on to the surface of the sea.
To carry the Sacredness.
To carry the life force.
The life force that rises.
The life force of the High one.
The life force of the Student.
The life force of the Novice.
The life force of the Sky father above.
The life force of mother earth below our feet.
The life force of our tribe as we reach out with our voices and hands to gain the earthly knowledge.
Here we are the growing generations, the growing descendants of our hapū Te Parawhau.

1.2 Whakapapa

Ko te ara tangata o Tiakiriri Kūkupa, ko Manaia ko tana ko Tāhuhu-nui-o-te-rangi, ko tana ko Tāhuhu Peka, ko tana ko Tāhuhu Pōtiki, ko tana ko Kuao, ko tana ko Rongomate, ko tana ko Te Ngaio, ko tana ko Taura-Iti, ko tana ko Kono-me, ko tana ko Pae, ko tana ko Ruarangi, ko tana ko Waihūrangi, ko tana ko Tokaitāwhio, ko tana ko Kūkupa, ko tana ko Tiakiriri.

1.3 Rohe

The rohe of Te Parawhau includes their ancestral lands, waters, wāhi tapu, wāhi tupuna, and taonga under Te Parawhau tikanga.

2. Shared Objectives

2.1 This relationship Agreement between MBL and the Trust records the intention and commitment to establishing a collaborative, interactive, positive and balanced relationship exercising good faith, co-operation, and flexibility and responsiveness in working together to undertake the extraction of sand in the rohe moana of Te Parawhau (the “**Activity**”) under the Resource Management Act 1991 (“**RMA**”) or the Fast- track Approvals Act 2024 (the “**Act**.”).

2.2 MBL and the Trust agree to direct this positive working relationship to:

- a. addressing matters of mutual interest, while recognising the individual mana of Te Parawhau;
- b. working together in the promotion of the sustainable management of MBL activities within the interests of the Trust and Te Parawhau hapū (Appendix 1).
- c. resolving concerns of Te Parawhau in regards to the activity under the RMA or the Act by MBL; and
- d. finalise a substantive agreement mutually beneficial to the Parties.

3. Background of the Parties

3.1 MBL

- a. MBL is a multi-generational, New Zealand company which has been operated by the McCallum family since 1904. It is owned by the McCallum Family Trust and run in conjunction with Clevedon Coast Oysters® and the McCallum Residence®.
- b. MBL has no other shareholders or interests that would conflict with the relationship agreement between the parties at the time of the Agreement.
- c. MBL business activities include sand extraction, shipping, quarrying and bulk transport.
- d. MBL is in the process of preparing an application to extract sand in Te Paepae Atua embayment that is in the rohe moana of Te Parawhau.

3.2 Te Pouwhenua o Tiakiriri Kūkupa Trust

The Trust is a charitable trust established to promote, advance, and support the kaitiakitanga obligations of the Board of Trustees toward Te Rohe o Tiakiriri Kūkupa, his uri (descendants), and the Te Parawhau hapū.

4. Purpose

4.1 MBL and the Trust agree that the purpose of this Relationship Agreement is to establish high-level principles in order to guide the relationship between the Parties and to document their shared values and:

- a. formally record the relationship, acknowledge the engagement between the Parties prior to finalising a substantive agreement;
- b. agree a process for establishing regular engagement should that be necessary and appropriate; and
- c. this agreement does not impinge on the rangatiratanga or mana of both Parties;

4.2 The Parties intend to enter into a Substantive Agreement to recognise a formal, binding relationship to undertake the Activity.

4.3 This Hononga Relationship Agreement will give effect to the aspirations and objectives of the Trust, its ability to represent the Te Parawhau hapū and enables MBL to meet its Treaty of Waitangi obligations pursuant to the RMA and the Act in relation to the sand extraction application in Te Paepae Atua or any other project being undertaken within Te Rohe o Te Parawhau.

5. Principles

5.1 Both Parties are acting under the RMA and recognise they have both statutory and moral obligations to take into account with the principles of the Treaty of Waitangi pursuant to (s8 RMA).

5.2 The Treaty of Waitangi provides for the exercise of kāwanatanga (the right of the Crown to provide peace and good government), while actively protecting tino rangatiratanga (self-determination) of tangata whenua with respect to their natural, physical and spiritual resources.

5.3 Tangata whenua refers to the Te Parawhau hapū who hold mana i te whenua, the traditional status, rights and responsibilities over a particular area in respect of their natural, physical and spiritual resources.

5.4 As a treaty partner there is an obligation that MBL support Te Parawhau in the exercise of its kaitiaki responsibilities, and in doing so provide opportunities to be an active and informed participant in decision making processes pertaining to activities associated with the operation of sand extraction, quarrying and manufacturing activities in Te Parawhau takiwa. This is in accordance with the RMA; specifically section 6e, 6f, 7a and 8 which have particular regard to the principles of the Treaty of Waitangi.

5.5 MBL recognises and provides for the articles of the Treaty of Waitangi, which is acknowledged by the Trust, for the beneficiaries of the Trust and on behalf of the Te Parawhau hapū.

5.6 The Parties are committed to working collaboratively following mutually agreed principles of;

- a. **Kaitiakitanga** - Taking care of our whānau, hapū, iwi, and te taiao is a responsibility we carry with pride. It reflects our commitment to protect and nurture both people and the environment, ensuring their wellbeing for generations to come.
- b. **Manaakitanga** - Uplifting the mana of people and organisations through acts of aroha, generosity, hospitality, and mutual respect. It's about fostering environments where people feel honoured, supported, and safe.
- c. **Rangatiratanga** - Exercising our mana motuhake and upholding Te Tino Rangatiratanga o Te Parawhau. Asserting our self-determination as a hapū. To strengthen our Mana Atua, Mana Tūpuna, and Mana Whenua through the practice and protection of our kawa me ūnā tikanga. That our partnerships and relationships with the Crown are thriving.
- d. **Whanaungatanga** - Honouring the relationships between tāngata whenua and others through shared whakapapa and reciprocal responsibilities. Our whanaungatanga is rooted in our whakapapa to Tiakiriri Kūkupa which connects us to the land he walked as Te Ahi Kā: Parikiore ki Wharowharo ki Kauika ki Horahora ki Waihoanga ki Maunu ki Ōtaika ki Toetoe ki Takahiwai ki Pouwhenua ki Ruakākā ki Waipū ki Mano Hiwa Ariki - stretching the harbour to the coast - Whangārei Terenga Paraoa ki Te Paepae Atua ki Te Paepae Tū.
- e. **Kotahitanga** - Demonstrating unity and shared commitment to our collective goals, focused on enhancing and sustaining the wellbeing of Te Parawhau now and for future generations.
- f. **Wairuatanga** - Strengthening our spiritual and cultural connections to our tūpuna and atua through the sacred landscapes of Te Parawhau - our maunga, awa, moana, whenua, marae, and other places of ancestral significance.

6. Co-operation

- 6.1 MBL and the Trust will commit to meet regularly to review and provide updates on activities associated with sand extraction, quarrying and manufacturing activities within Te Parawhau takiwa.
- 6.2 The Parties agree to co-operate on the implementation of the purpose and principles that will give effect to this Agreement.
- 6.3 The Parties agree to review this Agreement annually to ensure it remains fit for purpose.

7. Relationships and Decision Making (Mitigation)

- 7.1 Recognition of Te Parawhau Mana.
 - a. It is important to the Trust that MBL demonstrates an approach that recognises the values and aspirations of the Trust and Te Parawhau hapū in the management of this resource consent application and proposal. This includes an appreciation of Te Parawhau kaitiaki responsibilities and philosophies, each of which is central to the way in which Te Parawhau views its relationship with the natural environment.
 - b. In addition to this, the Trust and the Te Parawhau hapū consider it important that a Substantive Agreement or similar be established to inform future progress on the project. Any relationship is to be ongoing, a view to long term sustainability into the future that links to the aspirations of both parties.
- 7.2 Recognition of Te Parawhau Traditions and Relationships with Ancestral Lands, Water and Wāhi Tapu
 - a. The Trust and Te Parawhau consider it of paramount importance that their values and aspirations regarding their relationships with the natural environment (including ancestral lands, water and wāhi tapu) are given high regard and this is demonstrated in decision-making processes that might affect the Te Parawhau hapū.

7.3 Participating in Decision Making Processes

- a. The Trust and Te Parawhau acknowledges the level and regularity of engagement to date and reiterates the importance of maintaining and enhancing its relationship with MBL. The Trust and Te Parawhau hapū supports the drafting of an agreement or document that reflects and supports the Parties' continuing partnership, participation in decision making and protection of Te Parawhau taonga.

7.4 Unacceptable Activities

Certain activities are considered unacceptable to the Trust and Te Parawhau due to their impact on the uara (values) of the hapū. These activities may require mitigation and include, but are not limited to:

- a. direct and immediate impacts on sites of significance;
- b. activities that contaminate or significantly degrade land, water and air quality;
- c. irreversible impacts on the environment, biodiversity and ecological systems;
- d. activities that adversely affect customary practices, which include the gathering of kai.

8. Term

8.1 This Agreement is effective from the date of signing.

8.2 The Parties may withdraw from this agreement by meeting face to face and by mutual agreement.

9. Confidentiality

This agreement is confidential to both Parties and the decision making panel of the Te Paepae Atua Bream Bay application.

9.1 Confidential information means:

- a. all information and material relating to or arising from this agreement in any form whatsoever; and
- b. information which is by its nature confidential or which the discloser advises the recipient is confidential and includes the terms of this agreement; and includes anything disclosed before and after the date of this agreement.

9.2 Confidential Information does not include:

- a. information which at the date of this agreement is in the public domain or subsequently enters the public domain without fault on the part of the recipient
- b. any Confidential Information belonging to the other party for any purpose other than as required in terms of this agreement
- c. disclosure of Confidential Information in order to meet a legal requirement, or as otherwise agreed.

9.3 The parties shall obtain prior written approval from the other party before disclosing any Confidential information.

Signed _____

Name _____ p.p. Mark Manaia for Pari Walker

Te Pouhenua o Tiakiriri Kūkupa Trust Chair

Date _____ 14 September 2025

Signed _____

Name _____ Callum McCallum

McCallum Bros Limited Director

Date _____ 15 September 2025