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

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McCALLUM BROS LTD

Established 1904

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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	Depth of Closure
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 (Amendment 2025)
NZTCS	New Zealand Threat Classification System
NPS-I	National Policy Statement for Infrastructure 2025
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 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 know 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 application are included as Attachment One.

Naming Protocols

McCallum Brothers Ltd ("**MBL**") has consulted Te Parawhau ki Tai and Patuharakeke Te Iwi Trust Board. In the course of that consultation process, Patuharakeke 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 Parawhau ki Tai 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 ā Kiwa (the 'great ocean of Kiwa'). MBL and its consultants accept that both Māori names have meaning to the local iwi and hapū and are correct. All reports prepared for MBL 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.

1. Executive Summary

1.1. This is the substantive application made under s42(1) of the Fast-track Approvals Act 2024 **("the Act**") by McCallum Bros. Limited ("**MBL**") seeking the following approvals under s42(4)(a) and (h):

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) A wildlife approval for the disturbance, capture, collection, and incidental killing of Scleractinian cup corals (*Kionotrochus suteri* and *Sphenotrochus ralphae*) **("Cup Coral**").

1.2. The project for which this substantive application is being made is referred to as the Te Ākau Bream Bay Sand Extraction Project ("**the project"**). A 35-year consent period is being requested.

1.3. The substantive application 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.

1.4. Consent is being sought for extraction of sand from the coastal marine area from an area approximately 15.4 km^2 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:

a) Stage 1 will provide for an annual sand extraction volume of up to 150,000 m^3 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 m^3 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 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 (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 not identified an 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 which have historically been used for high-strength concrete production in Auckland. 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 ("**DoC**") and depth of transport ("**DoT**"). 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 DoC and DoT 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 to be employed so that extraction along the same extraction track is not repeated more than annually. The *William Fraser* is operated, and sand extraction will be undertaken, in accordance with a series of management plans to avoid or reduce potential effects on the environment.

1.11. Sand will be 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 an average of 5 times per week when the Stage 2 sand extraction volume comes into effect.

1.12. The sand extraction site is divided into cells for reporting and monitoring reasons. There are 77 cells (with each cell being 1000 m long x 200 m wide). In addition, there are three control areas 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:

a) The Pre-Sand Extraction Area Assessment and Reporting ("**PSEAR**");
b) Sand Extraction Monitoring and Reporting (at specified milestones) ("**SEMR**"); and
c) 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 and is included as Appendix C to the EMMP (Attachment Twenty-Nine). An output of this PSEAR 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. This ASEA is included as Appendix E to the EMMP.

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 ("**CIAs**") have been completed and form part of the AEE.

[1] Published January 2025 by the New Zealand Government

1.18. It is concluded for the substantive resource consent application:

- 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/or national benefit.
- The project 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 of Plenty regions.
- Based on the findings of the specialist reports prepared for the application, 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 three CIAs provided by Te Parawhau ki Tai, the Ngātiwai Trust Board and the Patuharakeke Te Iwi Trust Board (with this CIA being a draft). At the current time, Te Parawhau ki Tai is supportive of the project (on the basis of a number of commitments). There is differing opinion between the different iwi and hapū as to the nature and level of effects and whether resource consent should be granted. From a Te Ao Māori perspective, it is recognised that some iwi/hapū consider that the project presents unacceptable cultural, ecological, and economic effects and there will be an adverse effect on customary authority, and customary rights/interests/practices. On this basis, the Ngātiwai Trust Board and the Patuharakeke Te Iwi Trust Board oppose the application as it currently stands.
- The project 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. There is a functional need for marine sand and for the extraction of this sand from the coastal marine area. A precautionary approach in terms of the development of the project, the site selection, extraction volumes and monitoring has been taken consistent with Policy 3.
- The National Policy Statement for Infrastructure 2025 ("**NPS-I**") provides a clear direction that decision makers must recognise and provide for the role of infrastructure supporting activities such as this proposed sand extraction activity. In this case, granting consent would allow for the efficient extraction of a marine sand resource required for the production of concrete (and in particular high-strength concrete) which is vital for the development of infrastructure activities.
- 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 project and granting of consent 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 project 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 application. The project 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 project 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 project 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 project 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 project and granting consent would not be contrary to these.
- Te Parawhau ki Tai support the project subject to enforceable commitments. From a Te Ao Māori perspective, it may be considered by some iwi/hapū that the project is not consistent with or may be contrary to certain objectives and policies in the NZCPS, RPS, PRPN and the Operative Regional Coastal Plan.
- A 35-year consent period is considered appropriate, taking into account the adaptive management framework which has been adopted for the recommended consent conditions included as part of this application.

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 ralphae* 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 km^2 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 ralphae* 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. The CCMP also outlines the process to be followed for cup corals retained during monitoring. 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 this substantive 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.

1.21. Overall, the granting of the resource consent would fulfil 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 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 and/or national benefits.

2. Use Of The Fast-track Approvals Act 2024

2.1. This is the substantive application for approvals 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 disturbance, capture, collection, and incidental killing of Scleractinian cup corals (*Kionotrochus suteri* and *Sphenotrochus ralphae*) **("cup coral**").

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

McCallum Bros Limited	Bream Bay Sand Extraction Project	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	17 square kilometre area of seabed in the marine and coastal area of Bream Bay, Northland

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 km^2 sand extraction area sits within the 17 km^2 sand extraction area identified in Schedule 2 of the Act.

2.4. This substantive application 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.

Authorised person may lodge substantive application for approvals (s42)

2.6. An authorised person may lodge a substantive application for approvals (s42(1)). 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 project is not an ineligible activity as defined in s5 of the Act. The sand extraction area and control areas 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 as Attachment Three for this resource consent substantive application, to demonstrate where the information required under ss 43 and 44 of the Act is provided in this document.

2.9. A checklist is included as Attachment Four for the wildlife approval substantive application, to demonstrate where the information required under ss 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 (being 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 ("**MACA**"); 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 s42(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 Five.

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 (included in Attachment Five).

2.14. There are Mana Whakahono ā Rohe between Northland Regional Council ("**NRC**") and Te Parawhau ki Tai and Patuharakeke Te Iwi Trust Board. As outlined further in this report, consultation has been undertaken with Te Parawhau ki Tai and Patuharakeke Te Iwi Trust Board.

2.15. 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). Consultation was already occurring with Te Parawhau ki Tai and Patuharakeke 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 further later in this document.

2.16. There are a number of applicant groups with applications for customary marine title under MACA. These parties have been contacted, and this is addressed further later in this application.

2.17. The project is not located within or adjacent to, and will not directly affect, ngā rohe moana o ngā hapū o Ngāti Porou.

2.18. The project does not include a land exchange.

Identification of existing resource consent for same activity (s30)

2.19. In accordance with the requirements of s30 of the Act, the consent authority (NRC) provided written notice on the 13/10/2025 and again on the 16/01/2026 that there are no existing resource consents within the project area to which ss 124C(1)(c) or 165ZI of the RMA would apply. This correspondence is included in Attachment Five.

2.20. 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 (16/01/2026).

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

2.21. 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.

Government policy statements (s10A)

2.22. No policy statements relevant to this application/project have been released in terms of s10A.

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.

PART 1 – SUBSTANTIVE APPLICATION FOR RESOURCE CONSENT

4. Introduction

4.1. MBL is seeking a resource consent (coastal permit) under the Act for the extraction of sand from the coastal marine area from an area approximately 15.4 km^2 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 (including the location of the control areas) is included as Attachment Six.

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 m^3 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 m^3 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:

a) 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 (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

(b) Monitoring for the previous three years has not 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).

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) The site location

(vi) Proposed sand extraction commencement date.

(vii) MBL Relationship with iwi and hapū.

b) Description of the sand extraction operation, including:

(i) The sand resource.

(ii) The sand extraction operation.

(iii) Sand extraction operating hours.

(iv) Proposed mitigation measures.

(v) 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) Recommended consent conditions.

d) Reasons for consent, including:

(i) Resource consent 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 3 of the RMA.

(iv) Assessment against Part 6 of the RMA.

(v) Assessment against Part 8 of the RMA.

(vi) Assessment against Part 9 of the RMA.

(vii) Assessment against Part 10 of the RMA.

(viii) Other relevant legislation.

(ix) 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) Positive effects.

(ii) Effects on coastal processes.

(iii) Visual, landscape and amenity effects.

(iv) Acoustic effects.

(v) Lighting effects.

(vi) Ecological effects.

(vii) Effects on surf breaks and other recreational activities.

(viii) Effects on commercial activities.

(ix) Cultural effects.

(x) Biosecurity effects.

(xi) Climate change and natural hazards.

(xii) Navigation safety.

(xiii) Cumulative effects.

(xiv) Overall effects conclusion.

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

(i) National Policy Statement for Infrastructure 2025. .

(ii) New Zealand Coastal Policy Statement 2010.

(iii) National Policy Statement for Indigenous Biodiversity.

(iv) Regional Policy Statement for Northland.

(v) Proposed Regional Plan for Northland.

(vi) Regional Coastal Plan (Operative).

(vii) 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) 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 Seven).

b) Te Ākau Bream Bay Sand Extraction: Coastal Process Effects Assessment (T&T) (Attachment Eight).

c) Water Quality Assessment of Environment Effects (SLR) (Attachment Nine).

d) Assessment of Airborne Noise Effects (Styles Group) (Attachment Ten).

e) Assessment of Underwater Noise Levels (Styles Group) (Attachment Eleven).

f) Assessment of Ecological Effects (Bioresearches) (Attachment Twelve).

g) Potential Effects on Seabirds and Shorebirds (NIWA) (Attachment Thirteen).

h) Marine Mammals Environmental Impact Assessment (SLR) (Attachment Fourteen).

i) Cup Corals and Schedule 7 of the Fast-Track Approvals Act (NIWA) (Attachment Fifteen).

j) Assessment of Effects on Fish and Fisheries in Te Ākau Bream Bay (R. O. Boyd) (Attachment Sixteen).

k) Assessment of Effects on Surf Breaks at Te Ākau Bream Bay (Metocean Solutions) (Attachment Seventeen).

l) Assessment of Economic Effects (M.E. Consulting) (Attachment Eighteen).

m) Navigation Safety Assessment (Bruce Goodchild) (Attachment Nineteen).

n) Concrete Suitability Statement (Paul Donoghue) (Attachment Twenty).

o) Scleractinian Cup Corals at Te Ākau Bream Bay (NIWA) (Attachment Twenty-One).

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

4.9. A review of the Coastal Process Effects Assessment was completed by Jacobs Limited and their review letter is included in Appendix A to the Coastal Process Effects Assessment (Attachment Eight).

4.10. Cultural Impact Assessments ("**CIAs**") have been prepared by the following:

a) Te Parawhau ki Tai (Attachment Twenty-Three).

b) Patuharakeke Te Iwi Trust Board (Attachment Twenty-Four) (draft).

c) Ngātiwai Trust Board (Attachment Twenty-Five).

4.11. 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 Attachment Three.

4.12. 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.

5. Description of the Project

Overview

5.1. MBL is seeking a resource consent (coastal permit) under the Act for the extraction of sand from the coastal marine area from an area approximately 15.4 km^2 in size (7 km long x 2.2 km wide) in Te Ākau Bream Bay using the *William Fraser*, a trailer suction hopper dredge.

5.2. 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 m^3 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 m^3 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 SEMR, if:

a) 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 (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

b) Monitoring for the previous three years has not 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 m^3 (on the basis that the Stage 2 permitted extraction volume commenced in Year 4).

5.5. The objective of the project is to provide a long-term 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 Control Areas With Cells”, Dated 12/11/2025 included in Attachment Six and provided as Figure One.

5.7. The importance of sand[2] 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 undertook sand extraction operations for approximately 80 years. On the 22nd of August 2025, MBL ceased sand extraction from the Pākiri site in the Mangawhai-Pākiri embayment, an activity it had carried out since the 1940's. MBL current sand supply activities are therefore limited and utilising the sand stockpiled from the previous sand extraction operation.

5.11. MBL is the owner of the *William Fraser* and undertakes sand extraction itself. MBL has a berth and off-loading facility at the Port of Auckland where sand will be 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 world[3]. 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 approximately 410 kilograms of natural sand in each cubic metre of 30MPa concrete[4]. 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 International Airport and the Mangere Wastewater Treatment Plant. In recent times the City 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 non-infrastructure construction purposes. The Assessment of Economic Effects and Concrete Suitability Statement have focused on the use of sand in concrete production as this is the main use of fine 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 60% of concrete poured[5]. Quartz feldspar 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

[3] Para. 19, Supporting Statement of Paul Donoghue (Attachment Twenty)
[4] Para. 21, Supporting Statement of Paul Donoghue (Attachment Twenty)
[5] Para. 10, Assessment of Economic Effects (Attachment Eighteen)

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

5.16. The manufacture of concrete consumes approximately 80% of the total fine 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[6]. 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 sent to Auckland Council a notice of surrender of the consent. Auckland Council confirmed the surrender of the consent by email on the 2/9/2025. The reduction in sand extraction at Pākiri in recent years (under a temporary consent which allowed for an extraction of 76,000 m^3 per annum) and now the stopping of all sand extraction 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 Kaipara River due to its shallow and tidal nature. These constraints 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 most of Auckland concrete manufacturers (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 were lodged with Auckland Council just prior to Christmas 2025 but it is not known if the applications have been accepted for processing. There is currently no guarantee that the sand extraction in the Kaipara Harbour 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 Harbour[7]. Given the current predominant dependence on 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 Donoghue[8] 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.

[6] Para.8, Statement of Paul Donough (Attachment Twenty)
[7] Para 46, Statement of Paul Donough (Attachment Twenty)
[8] Para 46(c), Statement of Paul Donough (Attachment Twenty)

5.23. The Assessment of Economic Effects finds that the demand outlook for sand in the Auckland market is positive and states[9]:

"67. The demand outlook for sand in the Auckland market is positive and is projected to grow under all scenarios. The shift in demand is considerable, and by 2054, the annual increase in demand is estimated as follows:

a. Under scenario 1, the additional annual sand demand, is estimated at between 260,575 tonnes and 335,625 tonnes.

b. Using the high population growth suggests that Auckland will require an additional 373,000 tonnes to 460,200 tonnes of extra sand (per year).

68. In terms of the demand for concrete-related sand, the future demand (in year 2054) is estimated at:

a. Scenario 1: Medium population growth

i. Concrete sand (all) 774,050 tonnes to 849,100 tonnes,

ii. High strength concrete 464,425 tonnes to 509,450 tonnes.

b. Scenario 2: High population growth

i. Concrete sand (all) 899,500 tonnes to 986,700 tonnes,

ii. High-strength concrete 539,700 tonnes to 592,025 tonnes.

69. These changes are substantial, representing a percentage change from current levels of between +30% to 38% under the medium growth scenario, and between +40% to +49% under the high growth scenario. The change reflects the anticipated change in population and sand use patterns. The demand outlook for sand is positive and access to quality sand, from well-located sources will be key to ensure that the market can respond to demand growth."

5.24. The current annual demand for sand in the Auckland market is in the order of 872,775 to 944,025 tonnes[10]. 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 Pākiri, 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 (which include the Tomarata Sand Mine 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 (Attachment Eighteen) and the Concrete Suitability Statement of Paul Donoghue (Attachment Twenty). 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

[9] Paragraphs 67-69, Assessment of Economic Effects (Attachment Eighteen)
[10] Para. 63, Assessment of Economic Effects (Attachment Eighteen)

developed to ensure sufficient supply, reduce concentration risks, and to improve supply chain resilience and adaptation to market demands.

5.28. Mr Donoghue[11] 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. 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.

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) although it is recognised that some iwi/hapū consider that from a Te Ao Māori perspective a range of adverse effects may arise.

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[12]:

- 1950s -1980's – Concrete, landscaping, construction, beach replenishment, landscaping, industrial, recreational uses (i.e. horse arenas).

- 1990's – Concrete, landscaping, industrial, recreational (including golf courses), construction, beach replenishments, turf installation/maintenance.

5.32. 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 the 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: 2009-2029[13] was released by the New Zealand Government. In January 2025 the New Zealand Government released the Minerals Strategy for New Zealand to 2040[14]. 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 Zealand[15] (January 2025) and this is addressed further below.

5.35. The National Policy Statement for Infrastructure 2025 ("**NPS-I**") is addressed separately in Section 12.

[11] Para. 31, Statement of Paul Donoghue (Attachment Twenty)
[12] Personal Communications, Shayne Elstob (MBL)
[13] Responsibly Delivering Value – A Minerals and Petroleum Strategy for Aotearoa New Zealand: 2019-2029
[14] A Minerals Strategy for New Zealand to 2040
[15] A Critical Minerals List for New Zealand

Resource Strategy for Aotearoa New Zealand: 2009-2029

5.36. 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.

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

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

5.38. 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.

5.39. 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.

5.40. 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.

5.41. The Assessment of Economic Effects[16] identifies that by enabling this project, transport, environmental and social costs that would be avoided are estimated at $383.1m.

5.42. 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

5.43. 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.

5.44. 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".

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

A Critical Minerals List for New Zealand

5.46. 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 2024[17]).

[16] Para. 151, Assessment of Economic Effects (Attachment Eighteen)
[17] Final Wood Mackenzie Report on the Development of a Critical Minerals List for New Zealand

The Site Location

5.47. The sand extraction site is within Te Ākau Bream Bay as shown on the Bioresearches Drawing "Map Showing Sand Extraction Area and Control Areas with Cells" included in Attachment Six 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 km^2. 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.

5.48. 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.

5.49. 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 DoC and DoT. 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 DoC and DoT 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 in this Report and in Sections 2.1 and 2.2 of the Coastal Process Effects Assessment (Attachment Eight).

5.50. 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.

5.51. 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 DoC and DoT.
- 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.

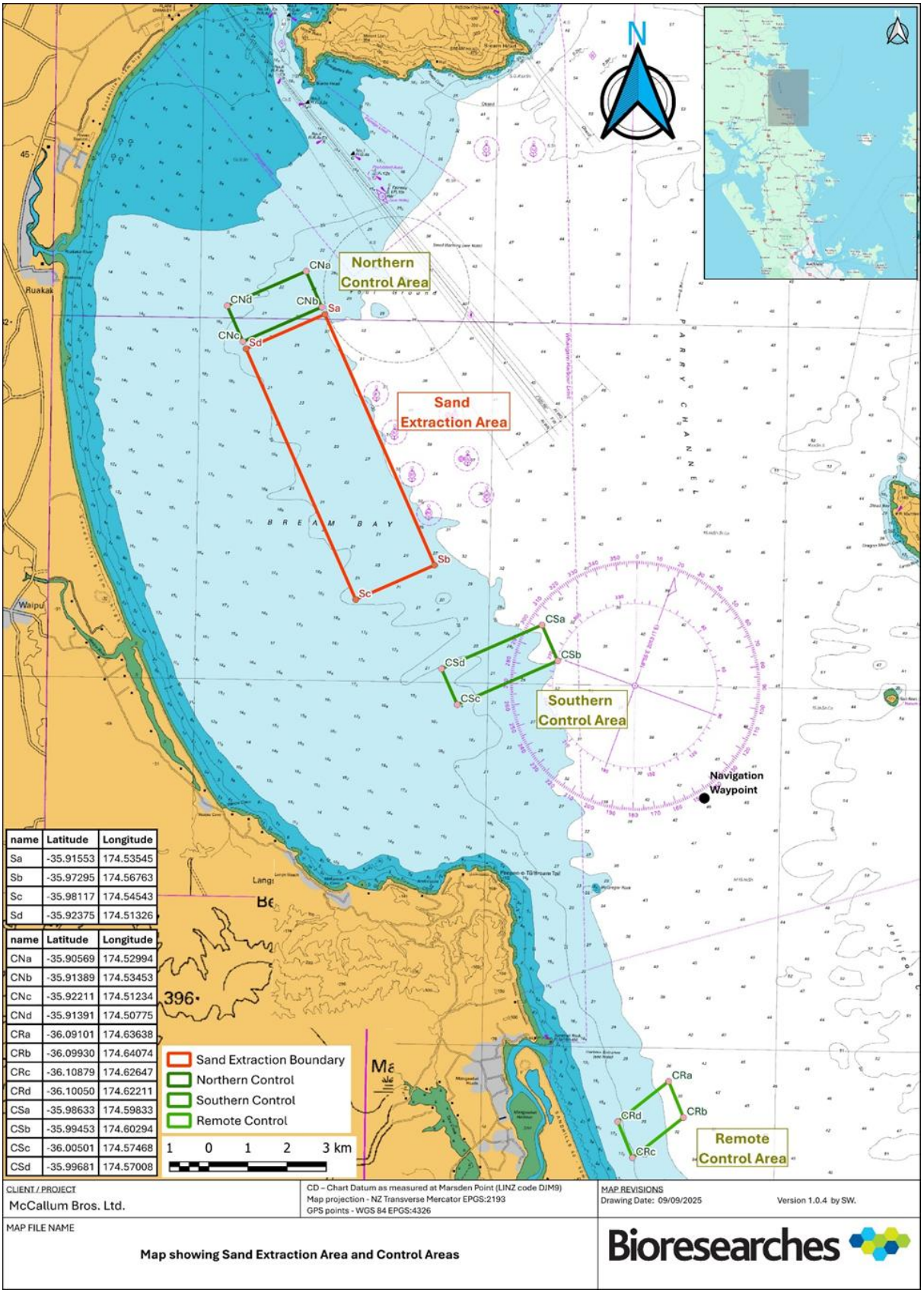

Figure One: ***Location of the Te Ākau Bream Bay Sand Extraction Area (from Attachment Seven).***

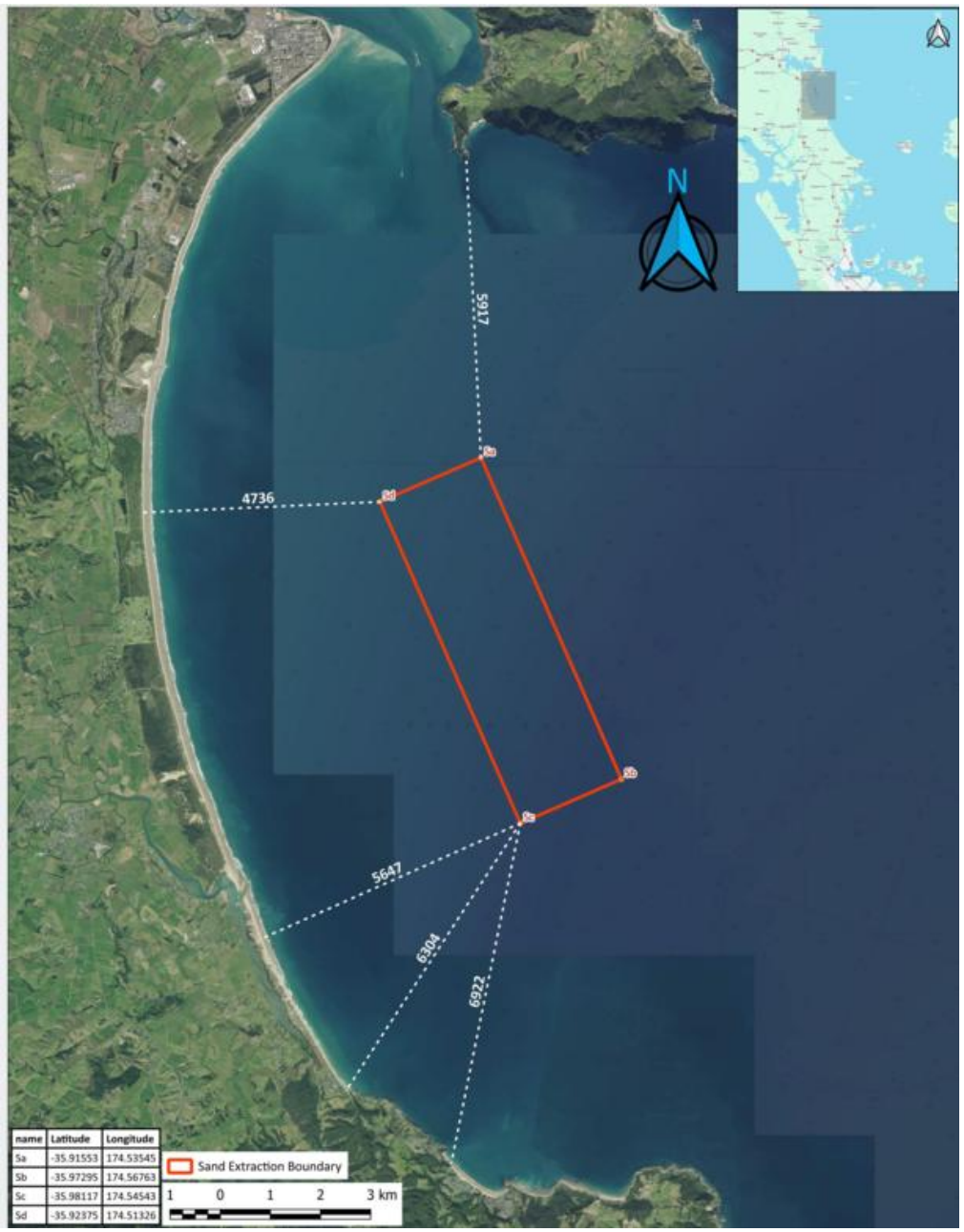

Figure Two: Aerial of the Location of the Te Ākau Bream Bay Sand Extraction Area).

Proposed Sand Extraction Commencement Date

5.52. 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 between one and two months may be required to give effect to any pre-sand extraction consent conditions such as the pre-start meetings and to submit the final management plans to NRC. It is confirmed that:

a) The equipment, training, and other operational processes required have, until recently, been used by MBL and will simply be applied at Te Ākau Bream Bay subject to any amendments required through conditions of consent.

b) No new significant procurement of resources or staff is required.

c) No new funding or capital investment is required.

d) 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 are final drafts and can be approved as part of the consent. They would then be submitted (with any updates required to reflect the granted consent) to NRC.

h) It is understood that the Mahere Tikanga Plan can be prepared and finalised within 20 working days by Te Parawhau ki Tai.

MBL Relationship with Iwi and Hapū

5.53. At a very early stage in the investigation of this project, MBL initiated consultation with Te Parawhau ki Tai, Patuharakeke Te Iwi Trust Board and the Ngātiwai Trust Board. Separate consultation was sought by these parties.

5.54. Te Parawhau ki Tai today is an amalgamation of Ngāti Manaia, Ngāi Tāhuhu, Ngāti Ruangaio and Ngāti Tu[18]. A history of Te Parawhau Hapū is provided in Section 4 of the CIA while Illustration Four in the CIA shows the Te Parawhau Rohe, with the sand extraction site being fully within this area. Te Parawhau Hapū have applications before the High Court for recognition of customary marine title under MACA.

5.55. Te Iwi o Ngātiwai descend from Manaia and maintain deep connections to the coastal waters and islands across Te Tai Tokerau and Tīkapa Moana[19].

5.56. Patuharakeke is derived from Ngāti Manaia, Ngāi Tāhuhu, Ngāti Wharepaia, Ngāti Ruangaio and Te Parawhau and Ngāti Tū[20] and are a hapū of Ngātiwai[21]. Information on the Patuharakeke Te Iwi Trust, its vision and mission, the WAI745 and WAI 1308 claims and a MACA claim are also provided in Section 2 of the CIA.

5.57. MBL recognised that the development of any relationship with these parties would take time and extensive work by all parties to get to understand the project and potential issues and to know each other. The end form of any relationship was not known at the commencement of the process, and it is recognised may further evolve through the consenting process. As outlined below, the relationship with Te Parawhau ki Tai has evolved to the stage where a substantive relationship agreement is being finalised.

5.58. MBL has a history of working relationships with iwi. For example, Pakihi Marine Farms Ltd, (a McCallum group company), entered into a joint venture company, Ngai Tai Pakihi Ltd, with Ngai Tai ki Tamaki, on 9th September 2022. The purpose of this company was to jointly apply for an oyster farm off the mouth of the Wairoa River, which was subsequently granted resource consent on the 16th of May 2023. The 45ha oyster farm is now being jointly developed. The decisions concerning development and future operations are being made by the Ngai Tai Pakihi Board which is comprised of iwi and MBL representatives. Ngai Tai Pakihi Limited are exploring other aquaculture opportunities such as fin fish farming in the Hauraki Gulf.

5.59. At the time of finalising this report it is confirmed:

a) Te Parawhau ki Tai have provided a final CIA including feedback on consent conditions (Attachment Twenty-Two). The CIA has been prepared by Te Pouwhenua o Tiakiriri Kūkupa Trust who is the Resource Management Unit for Te Parawhau ki Tai rohe and hold the appointment to manage the Mana Whakahono a Rohe with NRC. A Te Hononga Relationship Agreement (dated 14/09/2025) was entered into between Te Pouwhenua o Tiakiriri Kūkupa Trust

[18] Section 4.1, Te Parawhau ki Tai CIA (Attachment Twenty-Two)
[19] Section 1, Ngātiwai Trust Board CIA (Attachment Twenty-Four)
[20] Section 2, Patuharakeke Te Iwi Trust CIA (Attachment Twenty-Three)
[21] Section 2,5.1, Patuharakeke Te Iwi Trust CIA (Attachment Twenty-Three)

and MBL and is included in Attachment Twenty-Two. A substantive relationship agreement between the parties is currently being finalised. A joint memorandum confirming this will be provided to the Panel.

b) Patuharakeke Te Iwi Trust Board has provided a "Version for Approval by PTITB" CIA (Attachment Twenty-Three). This draft CIA has been prepared by Whetū Consultancy Group. Patuharakeke Te Iwi Trust Board also earlier provided feedback on the draft Assessment of Effects on Coastal Processes, Marine Mammals Impact Assessment, and Assessment of Effects on Fish and Fisheries. MBL in their email dated 18 November 2025 (included in Attachment Twenty-Three), responded to a number of matters raised in the feedback. To date, Patuharakeke Te Iwi Trust Board has not sought to progress any form of relationship agreement but have confirmed they are committed to continued engagement with MBL before and/or during the application process and may be in a position to finalise a CIA by mid-March 2026. MBL is currently awaiting any feedback on the draft recommended consent conditions.

c) The Ngātiwai Trust Board has provided a final CIA (Attachment Twenty-Four). To date, the Ngātiwai Trust Board has not sought to progress any form of relationship agreement but have identified in the CIA that if the application is not declined, they seek to establish a formal co-governance framework for marine resource management. The Ngātiwai Trust Board is seeking a minimum royalty of NZ$1.50 per cubic metre. It is unclear what the legal basis for seeking a royalty is and whether the financial outcome being sought is alternatively being met in part by the recommended cultural contribution condition.

5.60. Any substantive relationship agreement is outside the resource consenting process and is likely to be partly or fully confidential in nature between the parties. In broad terms, the draft substantive relationship agreement between MBL and Te Parawhau ki Tai provides for funding mechanisms for Te Parawhau ki Tai to focus on its key priorities for the wider hapū including health, housing, education pathways, employment, business and economic development and environmental enhancement and remediation.

6. Description of the Sand Extraction Operation

The Sand Resource

6.1. Within the wider sand resource area (and between the outer DoC and the -30 m contour), there is an estimated minimum sand resource volume of at least 124,110,000 m^3 which is likely to be a conservative assessment[22].

6.2. 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 Embayment. Sand samples taken from the 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).

6.3. 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.

6.4. Mr Donoghue[23] has found (with the Figure 2 referred to below being included in his statement):

"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.".

The Sand Extraction Operation

6.5. Attachment Twenty-Five 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 moon pools. This attachment also includes a number of diagrams and photographs of the *William Fraser* and key components of the sand extraction process. Figures Three, Four, Five and Seven below are of the *William Fraser*.

[22] Section 5.3, Coastal Process Effects Assessment (Attachment Eight)
[23] Paras. 31, 40 and 41, Statement of Paul Donoghue (Attachment Twenty)

6.6. The SEOP (Attachment Twenty-Seven) 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 former Pākiri sand extraction operation. 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 surveyed capacity of 923 m^3 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 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 had been an issue with sand extraction at the former 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 GPS technology.

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 Assessment (Attachment Nineteen) 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.

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

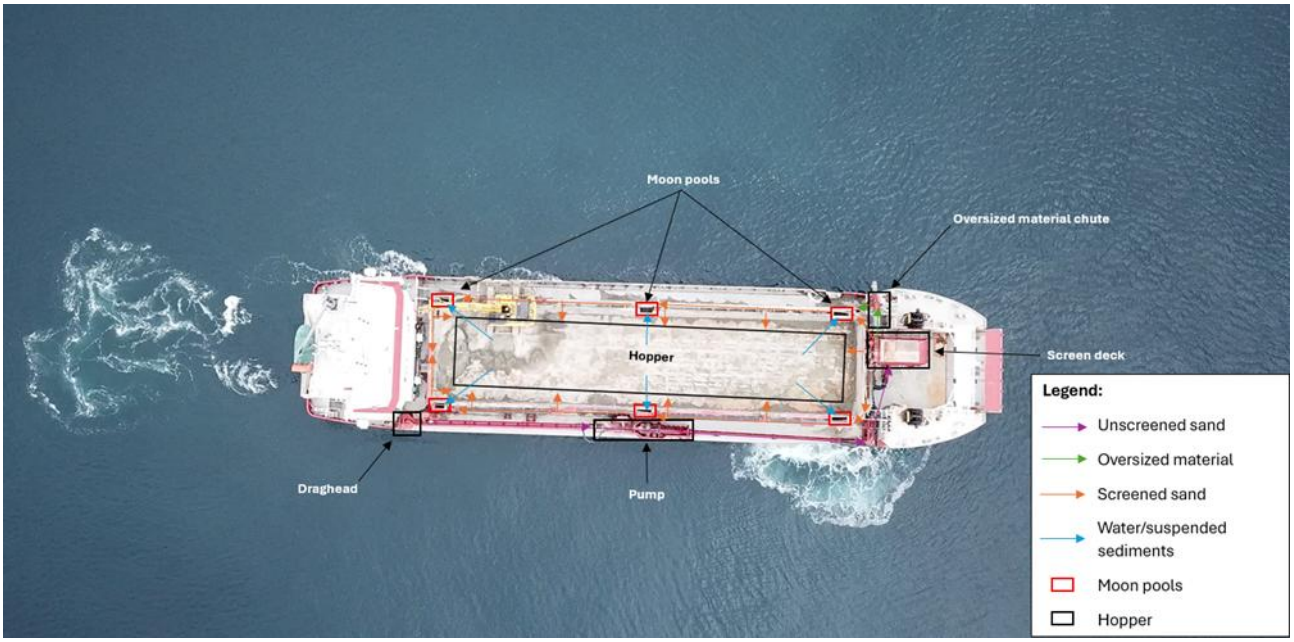

Figure Four: An Aerial View of the William Fraser (from Attachment Twenty-Five).

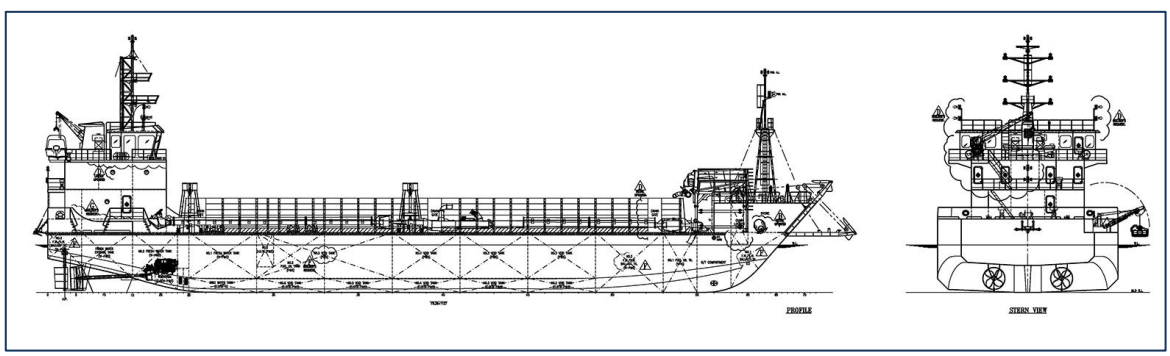

Figure Five: Elevations of the William Fraser.

6.11. The 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). The accepted transit route is included in the SEOP (Attachment Twenty-Seven) and copied as Figure Six below.

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 seafloor, 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 Master of the *William Fraser* 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 seafloor. 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 Ten) 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 m^3), the pump will be lifted to no greater than 3 m off the seafloor 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 approximately 923 m^3 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 Port 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-Seven) includes the plans of the routes used to these Ports.

6.28. The Navigation Safety Assessment (Attachment Nineteen) 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 to be 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-Seven).

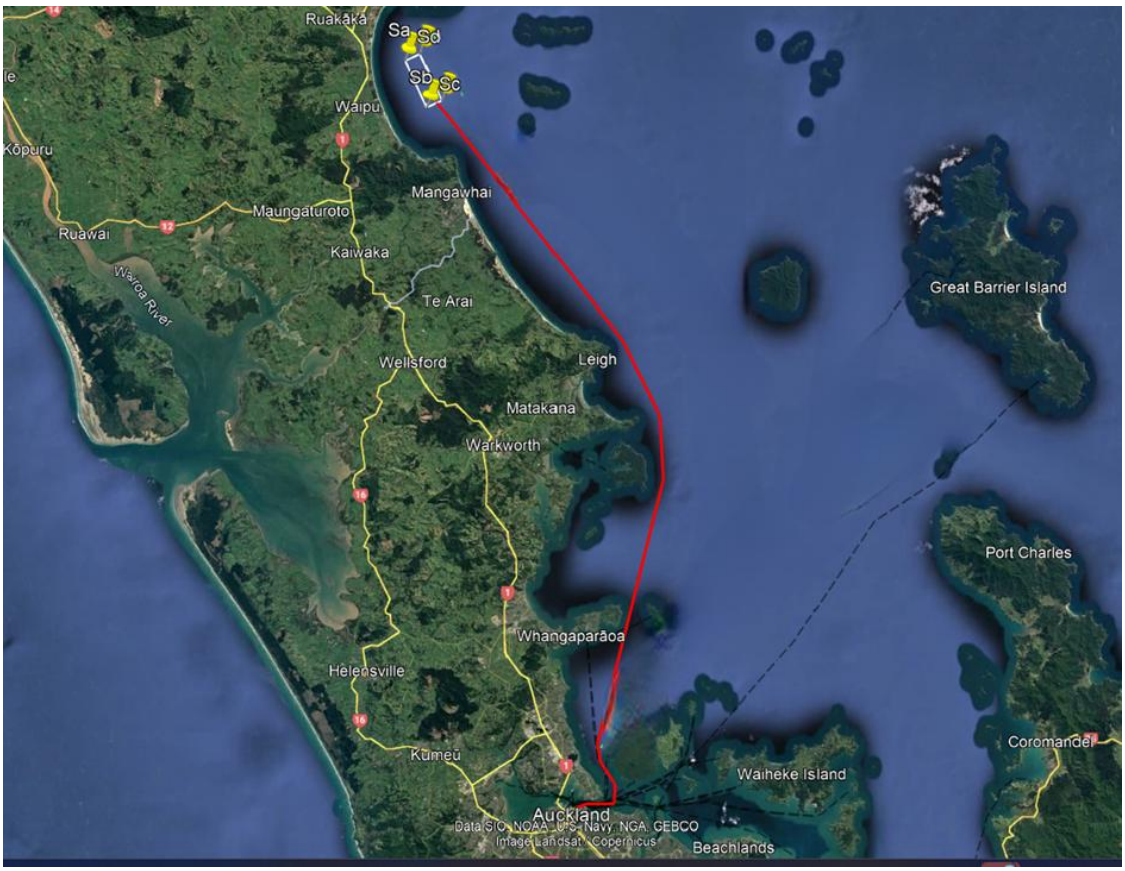

Figure Six: Map Showing the Proposed Route to Bream Bay from Port of Auckland.

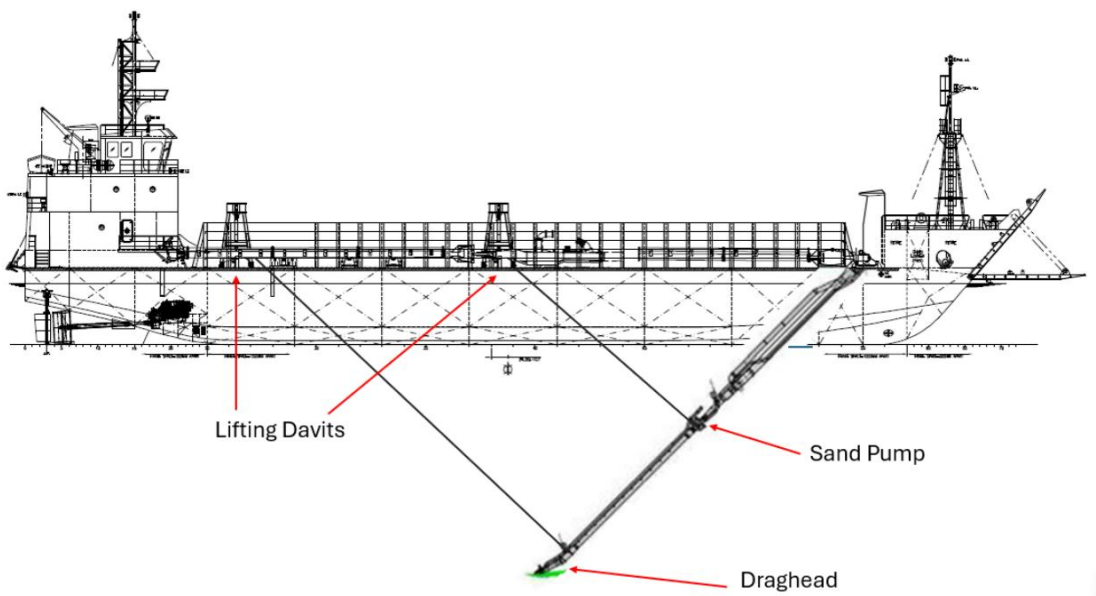

Figure Seven: Schematic Diagram of the William Fraser (from Attachment Twenty-Five).

Figure Eight: William Fraser Draghead Operating.

Figure Nine: 80-100mm deep Dredge Track 5 Minutes Post Dredge.

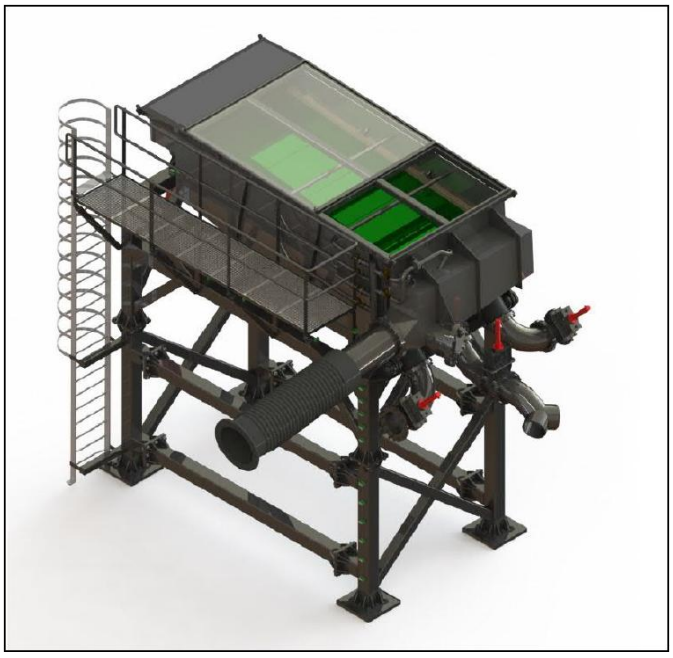

Figure Ten: 3 D Plan of sand 'screening deck' on the William Fraser.

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 an average of 5 times per week when the Stage 2 sand extraction volumes come into effect.

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 MNZ 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 draghead 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 seafloor to reduce the risk to any curious marine mammals that may investigate the pump apparatus.

d) Ensures oversized material passes through the moon pool 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 from any of their vessels in over 80 years of sand extraction operations.

6.38. During the underwater noise and marine mammal assessment 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). Daytime sand extraction has therefore been proposed. Section 4.2.4 of the Marine Mammal Environmental Impact Assessment (Attachment Fourteen) 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 ("ASEA")

6.39. The first PSEAR has been completed and covers the full sand extraction area. This PSEAR is included as Appendix C to the EMMP (Attachment Twenty-Nine). This PSEAR did not identify any cells which are required to be excluded based on recommended Condition 20. The first ASEA therefore covers the full sand extraction site. The first ASEA Plan is included in Appendix E in the PSEAR and is copied below (Figure Eleven). The consent application includes this first PSEAR and ASEA so that they can form part of the approved consent in order that a new PSEAR (including a new ASEA) is not required to be prepared upon granting of the consent and prior to sand extraction commencing.

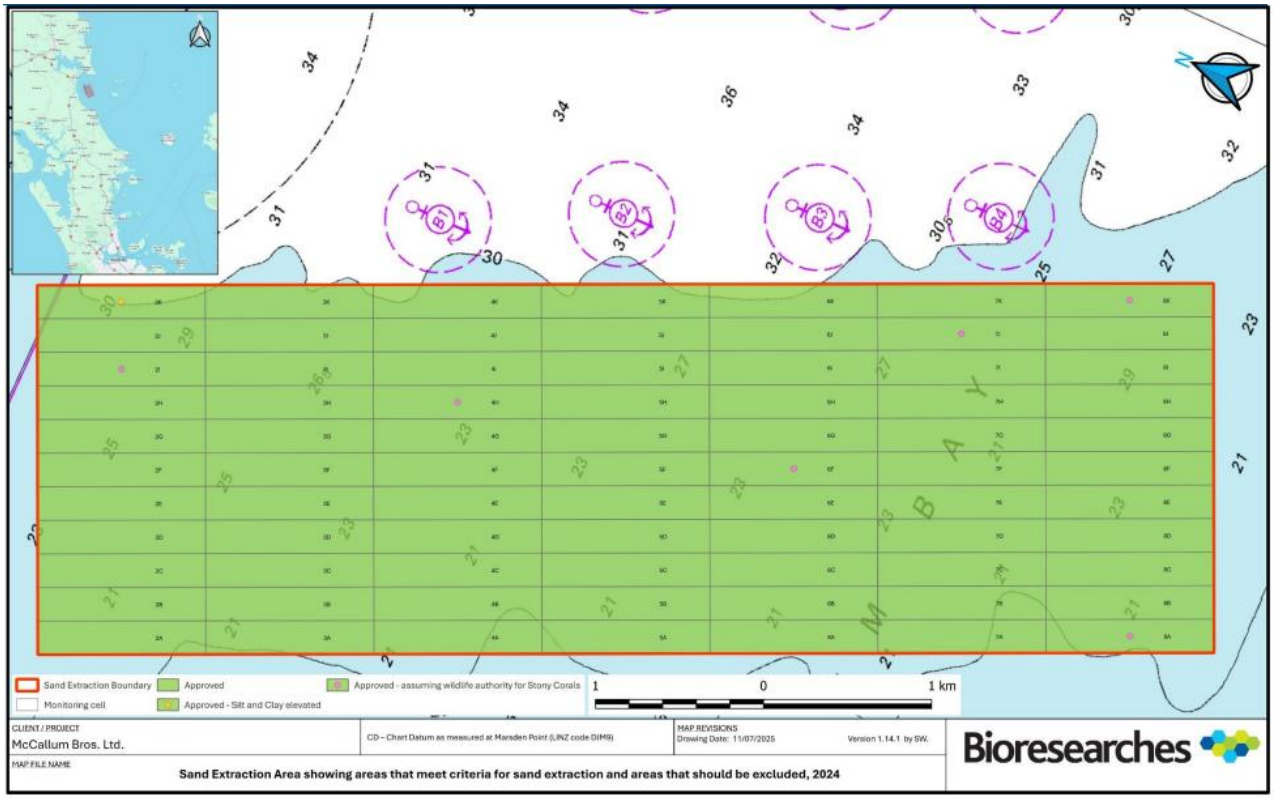

Figure Eleven: First ASEA (from Attachment Twenty-Nine).

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 any conditions to be no more onerous than necessary.

7.2. Attachment Twenty-Six 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 (including with Te Parawhau ki Tai). Given the nature of the project 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 Assessment[24] 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-Seven)):

    - 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"

[24] Page 12, Navigation Safety Assessment (Attachment Nineteen)

- "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 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 2.8.4 of the SEOP (Attachment Twenty-Seven) and in Section 4.3 of the MMMP (Attachment Twenty-Eight).

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:

  a) 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 (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

  b) Monitoring for the previous three years has not 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).

- 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 Twelve 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. It is considered that the recommended conditions, including those relating to the requirement for management plans, monitoring and reporting give effect to the adaptive management approach proposed. It is further 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.

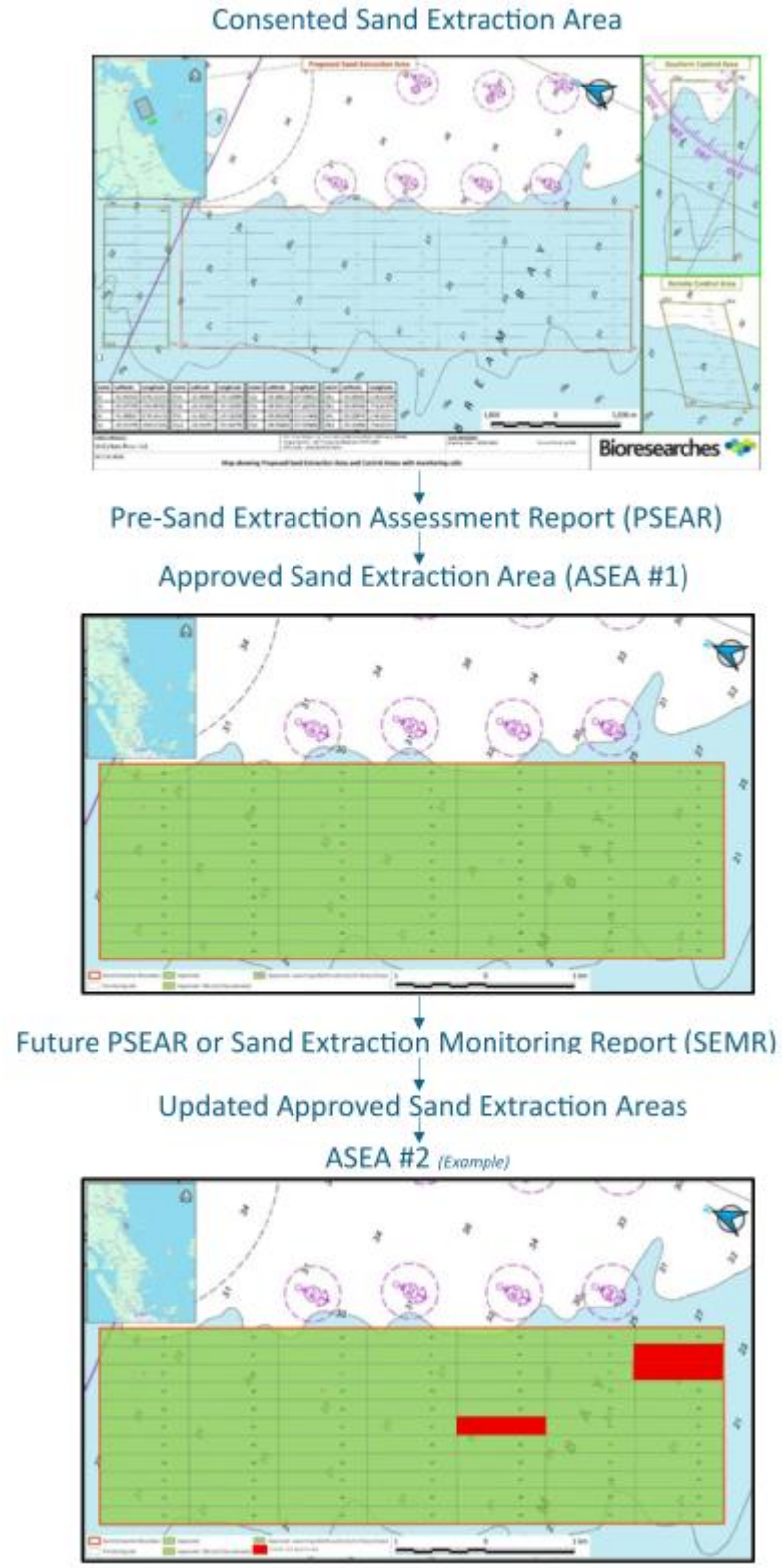

Figure Twelve: Flow-Diagram Showing ASEA Process.

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 (Table One) summarises those recommendations and identifies where they have been addressed. It is noted that the CIAs also made a number of recommendations, and these are addressed later in this report.

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 *William Fraser* 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 32.
An Oil Spill Prevention and Response Plan to be produced and implemented prior to sand extraction.	Water Quality Assessment of Environmental Effects	The *William Fraser* operates under an Oil Spill Contingency Plan which is required under Condition 33.
All project associated vessels to work to Maritime New Zealand standards and the International Maritime Organisation Standards.	Water Quality Assessment of Environmental Effects	The *William Fraser* 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.
Validate the predictions of the underwater acoustic modelling in terms of soundscape change.	Marine Mammal Environmental Impact Assessment	The requirement to validate underwater soundscape change measurement and assessment is set out in Condition 36 and the methodology for undertaking this is set out in Section 7 of the EMMP.

Support the continuation of boat-based research surveys in Te Ākau Bream Bay.	Marine Mammal Environmental Impact Assessment	The cultural contribution proposed to be made to the Patukarakeke Te Iwi Trust Board under Condition 44 (and if accepted) can in part be used for the boat-based research surveys if Trust choose to use the contribution in this manner.
The *William Fraser* will be operated in compliance with the Marine Mammal Protection Regulations 1992.	Marine Mammal Environmental Impact Assessment	This is addressed in Section 2.2 of the MMMP. The requirement for an MMMP is set out in Condition 17.
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 17. Condition 40 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	This is a requirement of Condition 41.
Appropriate waste management programmes must be adopted during all components of the proposed sand extraction activities.	Marine Mammal Environmental Impact Assessment	The *William Fraser* 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 32.
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.
To minimise and manage the potential impacts of entanglement: • 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 *William Fraser* 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	This is addressed in Section 6.0 of the MMMP and also through the SEOP (in terms of the operation of the *William Fraser*). Separation distance to Whales is addressed in Condition 26.
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 (Section 3), and a LMP is a requirement under Condition 19.

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.	Potential Effects on Seabirds and Shorebirds	Condition 27 requires a log to be kept of seabird interactions and Condition 38 sets out when and who this is to be submitted to.
Bathymetric survey monitoring is recommended to confirm and validate the findings of this assessment and to identify any unexpected effects. Key elements include: 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.	Coastal Process Effects Assessment	1 – A 100 m bathymetric monitoring area has been incorporated along the northern, southern and inner boundary of the extraction area. 2 – The SEMR requires bathymetric monitoring to address points 2 and 3. The methodology for this is outlined in the EMMP. Condition 16 sets out the requirements for the EMMP and Condition 37 for the SEMR. 3 – The methodology recommended in Sections 6.1.1 – 6.1.3, data collection requirements in 6.2 and the analysis and reporting in 6.2.1 of the Coastal Process Effects Assessment are reflected in the EMMP and SEMR requirements.
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. The following conditions are recommended: 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 surrounding seabed. If an anomaly is detected during	Coastal Process Effects Assessment	1 - An adaptive management approach has been adopted in the consent conditions. 2 - Condition 20(e) does not allow sand extraction to occur in cells where extraction track(s) longer than 100 m with a width less than 2 m and a depth exceeding 0.4 m below the typical adjacent seabed levels (defined as the seabed area within 10 m each track edge). If any such areas exist, then these are identified during

monitoring the cell will be closed. 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. 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 in operation, the cell should be closed to further extraction.		the PSEAR and SEMR process. 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 16 sets out the requirements for the EMMP and Condition 37 for the SEMR. 4 – Condition 20 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) 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.
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.	Coastal Process Effects Assessment	Although specific monitoring of the beach is not considered necessary by T&T, MBL will contribute $5,000.00 to NRC annually to assist with their current beach profile survey programme. This is set out in Condition 43.
MBL will be recording all marine reptile sightings and reporting them to DOC if and when they occur.	Assessment of Ecological Effects	Conditions 28 and 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 20 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 20 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 20 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.
Preparation of an SEMR Report at the end of each year that any benthic biota survey is undertaken.	Assessment of Ecological Effects	The first PSEAR has been completed and forms part of this application. This provides the baseline monitoring information. This monitoring programme for any future 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 16, 22 and 37.
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 16.

Table One: Recommendations and Actions.

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-Seven).
- Marine Mammal Management Plan (Attachment Twenty-Eight).

- Environmental Monitoring Management Plan (Attachment Twenty-Nine).
- Cup Coral Management Plan (Attachment Thirty).
- Biosecurity Management Plan (Attachment Thirty-One).

7.19. These plans are final draft plans which are being submitted as part of the application so they can be certified as part of the granting of consent (subject to any changes sought during the processing of the application). These plans will then be submitted to NRC with any final references to the consent number and conditions added along with any other changes required as a result of the final resource consent conditions.

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 may occur if NRC requires changes during a certification process to the CCMP under the resource consent, which will then result in a different version of the CCMP than the version referred to in the final 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-Two and Thirty-Three 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 Contingency Plan (approved by MNZ).

7.24. Te Parawhau ki Tai have offered to prepare a Mahere Tikanga Plan for the project upon the granting of consent. MBL are agreeable to this, and this is addressed in recommended Condition 47.

Sand Extraction Operation Plan ("SEOP")

7.25. 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 operation methodology (including operating limits, operating hours, method of extraction).
- Sand extraction management methodology (including the sand extraction rotation methodology).
- Legislation and Protocols to be complied with (including the Ports of Auckland Hauraki Gulf Transit protocol and minimisation of underwater noise generation).
- Sand extraction volume and location reporting requirements.
- Internal procedures for closing cells for extraction.
- Staff roles, responsibilities and training.
- Management plan review requirement.
- The Light Management Plan ("**LMP**").

Marine Mammal Management Plan ("MMMP")

7.26. 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:

- Outline of general protocols.
- Protocols to minimise underwater noise.
- Protocols to minimise the risk of marine mammal ship strike.
- Protocols to minimise marine debris.
- Protocols to avoid entanglement of marine mammals with the draghead and associated underwater equipment.
- Protocols to minimise artificial lighting.
- Stranding response.
- Record keeping and reporting requirements.
- Staff training requirements on the implementation of the MMMP requirements.
- Management plan review.
- Monitoring programme (including soundscape change validation).

7.27. 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 m^3;
- In the six months prior to the planned increase in extraction volume (from 150,000 m^3 to 250,000 m^3);
- After the first 12 months of operations during which the annual extraction volume is 250,000 m^3; and
- Every three years thereafter for the duration of the consent.

7.28. 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).

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

7.30. 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")

7.31. 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:

a) Provide the baseline ecological and bathymetric information for subsequent monitoring.

b) Identify areas where sand extraction is not to be undertaken.

c) Identify benthic ecological or bathymetric changes arising from the sand extraction.

d) To validate that the underwater noise monitoring does not identify a soundscape change arising from the project that exceeds 3db.

e) Confirm compliance with Condition 31 (Plume).

(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.

7.32. The EMMP includes:

- EMMP certification, review and key reporting date requirements.
- The environmental monitoring design rationale.
- Description of cells and control areas.
- The requirement and methodology for a PSEAR.
- The timing, monitoring methodology and reporting requirements for the SEMR (including the methodology to measure the turbidity level of the plume to confirm compliance with recommended Condition 31 (Plume)).
- 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 additional requirements for the Year Four SEMR to evaluate and confirm the level of effect on the environment is being managed to prevent bathymetric and ecologically significant adverse effects to benthic biota communities, before the rate of extraction increases to 250,000 m^3/yr.
- The methodology and reporting requirements for the soundscape change measurement and assessment.
- The requirements for sand extraction and vessel tracking reporting.

7.33. As outlined above, the EMMP sets out the specific requirements for the Year Four SEMR (that is, the third SEMR) in terms of determining if the maximum annual sand extraction volume can increase to 250,000 m^3. If it is determined that sand extraction cannot increase to 250,000 m^3/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 m^3.

7.34. Appendix C of the EMMP includes the first completed PSEAR for the entire sand extraction area. The first ASEA (which is an output of the PSEAR) is included in Appendix E of the EMMP.

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

- Seabird interactions log.
- Marine reptiles sightings log.
- Marine mammals sightings log.
- Marine mammals incidents log.

- Approved changes to extraction/discharge methodology and/or vessel.

- Approved ASEA plans.

7.36. The EMMP is to be reviewed at least at year three, at year five, then every five years thereafter from the date the consent is given effect to 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.

7.37. 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.

7.38. Te Parawhau ki Tai are to be provided any proposed changes to the EMMP for their review and comments.

Cup Coral Management Plan ("CCMP")

7.39. The objective of the CCMP is to avoid or minimise the risk of disturbance, possessing 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).

7.40. 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 sent to NIWA for their specimen collection.

Biosecurity Management Plan ("BMP")

7.41. 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.
- Sets out review requirements.

7.42. 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.

7.43. 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.

7.44. 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

7.45. The consented sand extraction area is to be divided into 77 cells (with each cell being 1000 m long x 200 m wide) for monitoring and reporting purposes. In addition, there are three control areas 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.

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

a) The Pre-Sand Extraction Area Assessment and Reporting ("**PSEAR**");

b) Sand Extraction Monitoring and Reporting (at specified milestones and including plume monitoring) ("**SEMR**"); and

c) Soundscape Change Measurement and Assessment.

7.47. The EMMP sets out the environmental monitoring design rationale and 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

7.48. 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:

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 in Attachment Four to the Recommended Conditions (Attachment Twenty-Six)); or

d) Any absolutely protected species under the Wildlife Act 1953, excluding any species for which a wildlife approval is held; or

e) Extraction track(s) longer than 100m with a width of less than 2m and a depth exceeding 0.4m below the typical adjacent seabed levels defined as the seabed area within 10m of each track edge.

7.49. The first PSEAR for the whole extraction area has been completed and is included as Appendix C in the EMMP (Attachment Twenty-Nine). The required ASEA Plan has been prepared as an output of the PSEAR and is included in the PSEAR. It is proposed that this ASEA is referenced in the relevant condition of consent (Condition 21) 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 (and assuming sand extraction commences prior to 1 April 2027).

7.50. 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.

7.51. 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 for that cell.

SEMR

7.52. 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. The SEMR is also to confirm that Condition 31 (Plume) is continuing to be complied with.

7.53. 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

7.54. 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.

7.55. 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.

7.56. 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.

7.57. 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).

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

7.59. The acoustic measurements for the "without project" soundscape are currently being undertaken.

Reporting to NRC

7.60. 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.

7.61. The sand extraction volumes, area and vessel tracking records are:

- To retain a record of sand extraction volumes and confirm that the consented sand extraction volumes are being complied with.
- To identify where 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 the approved ASEA.

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

7.63. 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 included requiring this pre-start meeting.

7.64. As outlined below any marine mammal incidents will also be reported to NRC. NRC has asked in feedback on the recommended consent conditions that they be advised when the seabird interactions log, marine reptiles sighting and the marine mammal incident and sighting logs are submitted to DOC and this has been incorporated into the recommended conditions.

7.65. NRC currently undertakes the Bream Bay Beach Profile Survey Programme. As an outcome of consultation with NRC, MBL has offered to provide an annual contribution to NRC for this programme. This has been recommended as a condition.

Reporting of Information to DOC

7.66. 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 Parawhau ki Tai and the Patuharakeke Te Iwi Trust Board at the same time.

7.67. 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 reptiles sightings and marine mammalsl incident and sighting logs are submitted to DOC for their information collection purposes (with the marine mammal reporting also being provided to Te Parawhau ki Tai and the Patuharakeke Te Iwi Trust Board).

Recommended Consent Conditions

7.68. The recommended consent conditions for the resource consent are provided in Attachment Twenty-Six.

7.69. 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, NRC and DOC. These conditions also draw on the experience of MBL in previous sand extraction operations and resource consenting processes.

7.70. The draft conditions have been provided to Te Parawhau ki Tai, the Patuharakeke Te Iwi Trust Board and the Ngātiwai Trust Board for comment. Te Parawhau ki Tai identified a preference for a separate pre-start meeting and for opportunities to review any future PSEAR and all SEMR's. Te Parawhau ki Tai also offered to prepare a Mahere Tikanga Plan for the project. These requests have been included in the recommended conditions along with a cultural contribution condition.

7.71. This section outlines the key points relating to these recommended conditions. MBL has confirmed that these conditions can be practically implemented. The recommended condition number is provided in brackets.

7.72. The recommended conditions are structured as follows:

- General Conditions
- Pre-Commencement Conditions
- Management Plans and Amendment Certification Conditions
- Operational Conditions
- Monitoring and Reporting Conditions
- Contributions and Mahere Tikanga Plan

7.73. 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) may need to be updated 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 24-month 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. NRC will need to confirm to the Panel the initial consent compliance monitoring charge.

Information Held on Site (5): This condition requires the management plans and resource consent conditions to be held on site (in this case on 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 either address any adverse effect on the environment that arises from the exercise of the resource consent and that is appropriate to deal with at a later stage or 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 outs any recommended changes to the monitoring, reporting, extraction method and maximum annual extraction volume and is to include an updated ASEA.

Procedure for Complaints (7): This condition set out the process to be followed if a complaint is received, the information to be recorded and the timing of providing this information to NRC.

Commencement of the Consent (8): This condition requires the consent holder to notify NRC 20 days prior to the sand extraction commencing and requires that all final certified management plans are provided to NRC as part of that notification. The consent commences on the date that sand extraction commences.

Pre-Start Meeting with Council (9): 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.

Pre-Start Hui with Iwi and Hapū Representatives (10): This condition sets out the requirement to invite iwi representatives to a pre-start hui with the purpose of this hui outlined. Te Parawhau ki Tai have offered to lead this hui.

Requirement for Certified Management Plans (11): 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 (12): 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 (13): 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 12.

Biosecurity Management Plan (BMP) (14): This condition sets out the objective and requirements of the BMP. The BMP is included in Attachment Thirty-One.

Cup Coral Management Plan (CCMP) (15): This condition sets out the objective and minimum information requirements of the CCMP. The CCMP is included in Attachment Thirty. The same CCMP is also proposed for the wildlife approval so there is a single CCMP.

Environmental Monitoring Management Plan (EMMP) (16): 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 (including confirmation of compliance with Condition 31 (Plume)), 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 at year 3, at year 5, then every 5 years thereafter 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 Twenty-Nine but with any updates resulting from the final consent conditions (for example, references to consent conditions).

Marine Mammal Management Plan (MMMP) (17): This condition sets out the objective and minimum information requirements of the MMMP as well as the dates which the MMMP must be reviewed and re-submitted to NRC for certification. The MMMP is included in Attachment Twenty-Eight.

Sand Extraction Operation Management Plan (SEOP) (18): This condition sets out the objective and minimum information requirements of the SEOP. The SEOP is included in Attachment Twenty-Seven.

Light Management Plan (LMP) (19): 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.

Extraction Area (20): 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 Four to the consent); 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 100m with a width of less than 2m and a depth exceeding 0.4m below the typical adjacent seabed levels defined as the seabed area within 10m of each track edge.

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 Network[25] 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 report[26].

A Wildlife Authority would be required for the incidental 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 approval is granted for the disturbance, possession 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.

PSEAR Reporting Exclusion (21): 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.

PSEAR Requirements (22): This condition sets out when a future PSEAR may be required. Te Parawhau ki Tai have requested that the draft PSEAR is provided to them for review and comments, and this has been included as part of the condition.

[25] http://www.marlin.ac.uk/sensitivityrationale.php

[26] https://environment.govt.nz/publications/sensitive-marine-benthic-habitats-defined/

Sand Extraction Volume (23): 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 and Equipment (24): 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.

Navigation (25): 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. This condition can only be applied to transiting within Northland Region as the consent is to be administered by NRC. An advice note is included to make it clear that the Hauraki Gulf Transit Protocol will be followed when the *William Fraser* is transiting to and from the extraction area within the Hauraki Gulf.

Presence of Marine Mammals (26): 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 within the Northland Region. This condition also requires the keeping of a Daily Marine Mammals Record Log and Condition 40 then stipulates who and when this log is to be provided to.

Sea-Bird Interactions (27): 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 (28): 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 (29): 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 (30): 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.

Plume (31): This condition sets the maximum permitted turbidity level for the plume at a distance of approximately 500 m from the *William Fraser*. Section 6.9 of the EMMP sets out the monitoring to be undertaken to confirm compliance with this Condition.

Disposal of Litter (32): This condition requires that there is to be an approved Garbage Management Plan and no overboard litter disposal is permitted. The approved Garbage Management Plan is included as Attachment Thirty-Two.

Oil Spill Contingency Plan Requirement (33): This condition requires that there is an approved Oil Spill Contingency Plan at all times. The approved Oil Spill Contingency Plan is included as Attachment Thirty-Three.

Sand Extraction Volume and Location (34): 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 (35): This condition requires that the reporting under Condition 34 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.

Soundscape Change Measurement and Assessment (36): 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 8 months of sand extraction commencing.

Sand Extraction Monitoring Report (SEMR) (37): 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. Te Parawhau ki Tai have requested that the draft SEMR is provided to them for review and comments, and this has been included as part of the condition.

Sea-Bird Interactions Log (38): This condition sets out that this log required under Condition 27 is to be submitted to DOC quarterly for information collection purposes and NRC advised of this.

Marine Reptile Sighting Log (39): This condition sets out that this log required under Condition 28 is to be submitted to DOC within 5 working days of a marine reptile sighting and NRC advised of this.

Marine Mammal Daily Records (40): This condition sets out that this log required under Condition 26 is to be submitted to DOC, Te Parawhau ki Tai and the Patuharakeke Te Iwi Trust Board annually for information collection purposes. Both Te Parawhau ki Tai and the Patuharakeke Te Iwi Trust Board have expressed interest in obtaining this information.

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.

Contribution to the Council Bream Bay Beach Profile Survey Programme (offered on an *Augier* basis) (43): NRC continues to undertake a Beach Profile Survey Programme to monitor beach profile changes along Bream Bay. During consultation, NRC has expressed a view that either the consent holder undertakes this survey or contributes to the NRC costs for undertaking this survey. MBL is agreeable to contributing to the survey programme and it is understood that the annual sum of $5000.00 (and adjusted annually) is agreeable to NRC.

Cultural Contribution (offered on an *Augier* basis) (44): During consultation with Te Parawhau ki Tai the issue of the payment of a cultural contribution to recognise the cultural relationship of iwi with the moana and sand resource and to ensure there was financial support for on-going kaitiakitanga (including any hapū led monitoring and review and cultural inputs into future PSEAR's and SEMR's) was traversed. A contribution per cubic metre of sand has been proposed and it is understood that this is considered appropriate by Te Parawhau ki Tai. This condition is currently drafted so that the same contribution would be made to the Patuharakeke Te Iwi Trust Board and the Ngātiwai Trust Board if they were agreeable to receiving such a contribution to support their on-going kaitiakitanga associated with this consent. This is separate to any additional substantial relationship agreement which may be entered into by MBL with hapū and/or iwi representatives.

Community Contribution (offered on an *Augier* basis) (45): This condition sets out the annual contribution to be paid to the Waipū Cove Surf Lifesaving Club, Ruakākā Surf Lifesaving Patrol and Whangārei Volunteer Coastguard Inc. (or their nominated entities) during the life of the consent. This condition is being offered by MBL to recognise the community contribution these organisations make and to support their ongoing contribution to the recreational use of Te Ākau Bream Bay. At the time of preparing this report, the Whangārei Volunteer Coastguard Inc. has indicated to MBL that at the current time they would not accept such a payment, and they have indicated that the Waipū Cove Surf Lifesaving Club and Ruakākā Surf Lifesaving Patrol likewise would not accept such a payment. If

this condition was imposed, then the parties named do not have to accept any contribution and feedback to the Panel from these parties (if invited) may confirm if this condition is appropriate or not.

Accidental Discovery Protocol (Condition 46): This is based on the standard NRC condition, although it is considered unlikely that an accidental discovery will occur in the extraction area.

Mahere Tikanga Plan (Condition 47): Te Parawhau ki Tai have offered to prepare a Mahere Tikanga Plan to assist with the tikanga responses around Whale and marine mammal strandings, drownings, discovery of taonga species or kòiwi and vessel incidents and accidents. MBL have accepted this offer, and this will be an input into the Pre-Start Hui with iwi and hapū representatives (Condition 10).

8. Reasons for Consent

8.1. This section 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 8 January 2026. There are no proposed plan changes of relevance to this application.

8.3. Attachment Thirty-Four includes the PRPN Plans with the site and control areas shown on them.

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 areas) 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 Places[27] 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).

8.6. The Significant Marine Mammals and Bird Area is defined and further described in the PRPN[28]. 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

[27] Page 343, Proposed Regional Plan for Northland
[28] Page 340-341, Proposed Regional Plan for Northland

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 application and is not considered further.

Resource Consent Required

8.8. A resource consent (coastal permit) for sand extraction is required under Rule C.1.5.13 of the PRPN[29] 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).

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.

[29] Page 93, PRPN proposed-regional-plan-february-2024.pdf

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:

"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) a hazard to navigation and safety, or a hazard to traffic safety, wharves, ramps and adjacent roads, or

b) 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. A LMP is included in the SEOP (Attachment Twenty-Seven).

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_{AFmax}
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 concludes[30]:

"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 12-13dBL_{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, possession and incidental killing of cup coral. The application for this approval is in Part 2 of this document.

Lapse Period

8.19. A 24-month period is being sought to give effect to the consent. It is expected that the consent will be given effect to immediately.

Duration of Consent

8.20. A consent period of 35 years is being applied for. Sand extraction is proposed to be undertaken during the full period of the granted consent.

Activities Permitted by the PRPN

8.21. The proposed monitoring is permitted under Rule C.1.5.3 as outlined above.

[30] Section 8, Assessment of Airborne Noise Effects (Attachment Ten)

8.22. There is no minimum volume of permitted sand extraction (apart from for the monitoring provided for under Rule C.1.5.3).

8.23. The movement of vessels within the Te Åkau Bream Bay Sand extraction area is permitted.

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 application is firstly assessed against the purpose of the Act. The application is then assessed against Parts 2, 3, 6 and 8 to 10 of the RMA. 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:

"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 world[31]. 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 though 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.

[31] Para. 19, Statement of Paul Donoghue (Attachment Twenty)

9.10. The Assessment of Economic Effects[32] outlines the demand outlook for sand in Auckland for concrete which is estimated to be in the order of 774,050 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 Effects[33] concludes:

> *"216. 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 $383.1m. This includes costs associated with the environmental and social externalities that are estimated at $124.9m. Clearly, these are significant costs and avoiding them will deliver significant regional benefits.*
>
> *217. 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 New Zealand's overall emissions is critical.*
>
> *218. Auckland's primary source of sand, located at the Taporapora banks in the Kaipara Harbour, has consents that will expire in 2027, and obtaining new consentsis not guaranteed and there is uncertainty around the future availability of high quality sand. This makes Auckland's sand supply vulnerable, so additional sources of high quality sand, such as that found in Te Ākau Bream Bay, are essential to increase Auckland's sand supply's resilience.*
>
> *219. Enabling sand extraction at Te Ākau Bream Bay will provide resilience to the sand supply network and provide additional flexibility to the concrete supply chain. A strong supply network is needed to ensure that the construction sector can respond to investment activity associated with growth as well as demand impulses associated with activity arising from extreme weather events. Further, enabling Te Ākau Bream Bay will add a second source of high quality sand to the Auckland sand market thereby lowering concentration risks associated with sourcing a substantial share of sand from one resource.*
>
> *220. In addition to the avoided costs, enabling sand extraction at Te Ākau Bream Bay will deliver significant benefits to regional Auckland by supporting the construction sector, thereby contributing to, and facilitating, the delivery of infrastructure and development costs."*

9.13. It is therefore confirmed that the granting of the resource consent and the wildlife approval will meet 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 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 RMA. 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

[32] Paragraphs 12-13, Assessment of Economic Effects (Attachment Eighteen)
[33] Paragraphs 216-220, Assessment of Economic Effects (Attachment Eighteen)

recognised and provided for, are set out in s6 of the RMA. 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.

(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 proposal 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. Sand is a critical component for infrastructure and development projects and has been listed on the Critical Mineral List for New Zealand. Quarrying, which includes sand mining, has been defined as an infrastructure supporting activity in the NPS-I.

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 on the environment range from negligible to minor (in terms of RMA classification). It is recognised that in terms of Te Ao Māori, there is not a singular view on potential effects or the scale of those effects and the CIAs identify a range of potential adverse effects based on the current understanding of the project. 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 concluded[34] 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 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.

- It is recognised that in terms of Te Ao Māori, there is not a singular view on potential effects and the CIAs identify a range of potential adverse effects based on the current understanding of the project. This includes potential effects on cultural and traditions with ancestral lands. The Te Parawhau ki Tai CIA is supportive of the project subject to various commitments (including conditions of consent).

- There will be no effects on historic heritage.

- There will not be effects on existing protected customary rights. It is recognised that concerns have been raised in the CIAs about potential effects on future 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. A number of recommended conditions have been included and refined as an outcome of consultation with Te Parawhau ki Tai and a substantial relationship agreement is being entered into with Te Parawhau ki Tai (in addition to the existing Te Hononga Relationship Agreement). At the time of preparing this report, feedback on the recommended conditions from the Ngātiwai Trust Board and the Patuharakeke Te Iwi Trust Board had not been received and neither party was currently in a position where they were wanting to discuss options for a relationship agreement. This may further evolve during the consenting process and the Panel may present other opportunities for iwi and hapū to identify options for how kaitiakitanga can be exercised.

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 it is recognised that there is not a singular Te Ao Māori view. The Te

[34] Section 12, Landscape and Natural Character Effects Assessment (Attachment Seven)

Parawhau ki Tai CIA is supportive of the project with certain commitments (including resource consent conditions) which addresses their concerns. However, other mana whenua may consider that there will be certain adverse effects and that such effects may not be temporary.

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 project 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 (Attachment Eighteen).

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 a 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 project 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 project 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 will not be 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.

- 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. The Te Parawhau ki Tai CIA is supportive of the project with certain commitments. There is not a singular Te Ao Māori view, and the CIAs prepared for this project identify a range of potential adverse effects based on the current understanding of the project by the authors of the CIAs.

- It is considered that the project and granting consent is either consistent with or gives effect to the relevant objectives and policies of the NPS-I and NZCPS (and as amended by the 2025 amendments).

- It has been determined that the project and the granting of consent 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 project and granting consent would either give effect to, is consistent with or is not contrary to the relevant objectives and policies.

- The project 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 project 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 project 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 project 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 project and granting consent would not be contrary to these.

- In terms of other matters, consideration has been given to the Te Iwi o Ngātiwai Iwi Environmental Policy Document (2007) and the Patuharakeke Hapū Environmental Management Plan (2014), and this is addressed further Section 13.

- 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 likely[35] that those consents will be implemented.[36] 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 Seven) include a series of photographs of the extraction area from key viewpoints along Te Ākau Bream Bay.

10.3. The history of and the Te Parawhau ki Tai association with Paepae Atua (Te Ākau Bream Bay) is outlined in Sections 4.1 and 4.2 of the Te Parawhau ki Tai CIA (Attachment Twenty-Two). Patuharakeke cultural values relating to Te Ākau Bream Bay are outlined in Section 2.6 of the Patuharakeke Te Iwi Trust Board draft CIA (Attachment Twenty-Three)

10.4. 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.

10.5. The Port hosts an average of 576 ships per annum (2014-2024 inclusive), 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 bay. The Navigation Safety Assessment[37] provides further details on shipping movements and recreational and commercial fishing vessels present in the Te Ākau Bream Bay area.

10.6. 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)[38]. The area has historically been trawled and Danish seined fished.

10.7. 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

[35] Likely means "more likely than not".

[36] *Queenstown Lakes District Council v Hawthorn Ltd* [2006] NZRMA 424 at [79].

[37] Pages 8-10, Navigation Safety Assessment (Attachment Nineteen)

[38] 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)

fishing activities in the Te Ākau Bream Bay area are outlined in Sections 3 and 4 of the Assessment of Effects on Fish and Fisheries in Te Ākau Bream Bay (Attachment Sixteen).

10.8. 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 bay[39]. 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 Seven).

10.9. 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.

10.10. The Coastal Process Effects Assessment (Attachment Eight) 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.

10.11. 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.

10.12. Te Ākau Bream Bay is characterised by a 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.

10.13. 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.

10.14. 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.

10.15. The Te Ākau Bream Bay ambient water quality has been described in the Water Quality Assessment of Environmental Effects. The water quality (for key water quality parameters turbidity, TSS, pH, nutrients, and metals contaminants) is considered to be of high value[40].

10.16. 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 samples[41].

[39] Section 4.1, Landscape and Natural Character Effects Assessment (Attachment Seven)
[40] Page ii, Water Quality Assessment of Environmental Effects (Attachment Nine)
[41] Section 3.3, PSEAR (Attachment Appendix C in Attachment Twenty-Nine)

10.17. 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.

10.18. 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 Twelve). 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-One). The benthic biota faunal community is ascribed a classification of moderate ecological value[42].

10.19. 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 a population of 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 Fourteen) 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.

10.20. 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 Sixteen) 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 value[43].

10.21. 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 Effects[44].

10.22. 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 Effects[45].

10.23. A conservative total of 34 seabird taxa, of which 5 are classified as 'Threatened' under the New Zealand Threat Classification System (NZTCS: Tara Iti Fairy Tern Sternula nereis davisae, takahikare-raro New Zealand storm petrel Fregetta maoriana, taranui Caspian tern Hydropogne 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 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

[42] Section 5.3, Assessment of Ecological Effects (Attachment Twelve)
[43] Section 5.4, Assessment of Ecological Effects (Attachment Twelve)
[44] Section 2.2.6, Assessment of Effects on Fish and Fisheries in Te Ākau Bream Bay (Attachment Sixteen)
[45] Section 5.6, Assessment of Ecological Effects (Attachment Twelve)

Risk'[46]. 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.

10.24. Additionally, 13 shorebird taxa, of which 3 are classified as 'Threatened' under the NZTCS (matuku-hūrepo Australasian bittern Botaurus poiciloptilus, ngutu pare wrybill Anarhynchus frontalis and tūturiwhatu 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 Bay[47].

10.25. 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 6 of the Assessment of Airborne Noise Effects (Attachment Ten) sets out the typical ambient noise levels.

10.26. 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 Appendix B of the Underwater Acoustics Report (Attachment Eleven).

10.27. 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 Seventeen) with Figure 1.1 of that Assessment identifying the general location of those surf breaks.

10.28. Attachment Thirty-Four includes the PRPN planning maps showing the various planning overlays in Te Ākau Bream Bay.

10.29. The sand extraction site is outside the Te Pēwhairangi (Bay of Islands) Marine Mammal Sanctuay, and the non-statutory Important Marine Mammal Area identified by the International Union for Conservation of Nature [48].

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 freighters[49]. It is considered that this should form part of the permitted baseline, particularly when assessing the visual and natural character effects.

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

[46] Page 6, Potential Effects on Seabirds and Shorebirds (Attachment Thirteen)
[47] Page 6, Potential Effects on Seabirds and Shorebirds (Attachment Thirteen)
[48] Section 3.3, Marine Mammal Environmental Impact Assessment (Attachment Fourteen)
[49] Section 3, Landscape and Natural Character Effects Assessment (Attachment Seven)

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 ("DoC") and Depth of Transport ("DoT")

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 transport[50].

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 DoC as a standard definition of the upper shoreface boundary.
- The empirically calculated outer DoC as a traditional definition of the lower shoreface boundary.
- The bed shear stress induced DoT 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.1.3 from the Assessment (Figure Thirteen below) shows the sand extraction site relative to the outer DoC and the DoT. The sand extraction site is on the seaward side and therefore at a deeper depth than the DoC and DoT which is of importance when assessing the potential effects on sediment transport, the foreshore, and surf breaks for example.

[50] Executive Summary, Coastal Process Effects Assessment (Attachment Eight)

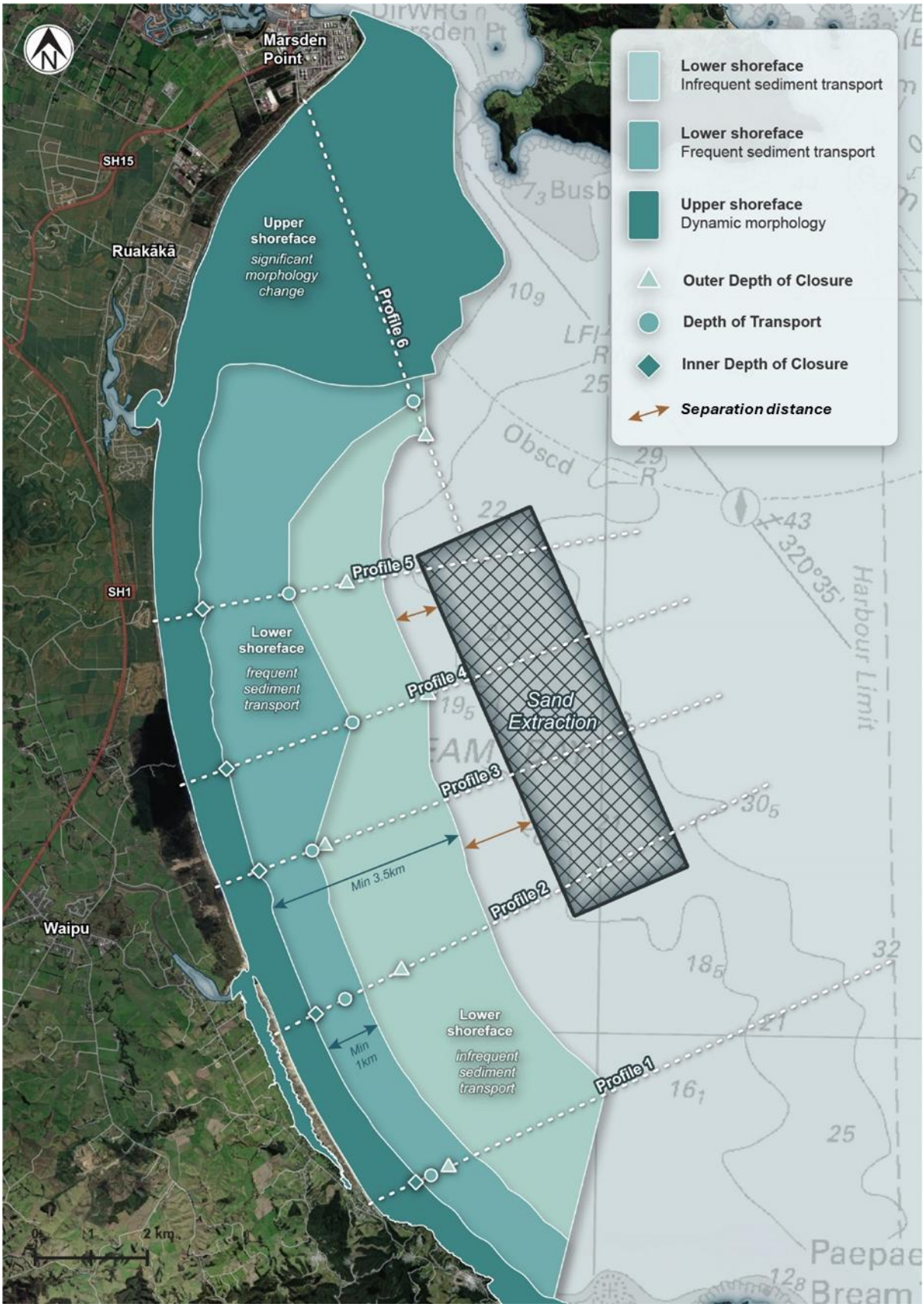

Figure Thirteen: Figure E.1.3 from the Coastal Process Effects Assessment.

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 CIAs) 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 (e) 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, Avifauna and Food Web)
- Effects on Surf Breaks and Other Recreational Activities
- Effects on Commercial Activities
- Cultural Effects
- Climate Change and Natural Hazards
- Navigation Safety
- Cumulative Effects

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. Furthermore, a number of major infrastructure projects within Auckland have a wider benefit for New Zealand and/or provide transportation connections to other parts of New Zealand, including Northland.

11.12. The project will have 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 project. This Assessment concludes[51]:

“216. 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 $383.1m. This includes costs associated with the environmental and social externalities that are estimated at $124.9m. Clearly, these are significant costs and avoiding them will deliver significant regional benefits.

217. 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

[51] Paragraphs 216 to 223, Assessment of Economic Effects (Attachment Eighteen)

carbon – it does not reflect the damage associated with weather and extreme natural events associated with climate change. Reducing New Zealand's overall emissions is critical.

218. Auckland's primary source of sand, located at the Taporapora banks in the Kaipara Harbour, has consents that will expire in 2027, and obtaining new consents is not guaranteed and there is uncertainty around the future availability of high quality sand. This makes Auckland's sand supply vulnerable, so additional sources of high quality sand, such as that found in Te Ākau Bream Bay, are essential to increase Auckland's sand supply's resilience.

219. Enabling sand extraction at Te Ākau Bream Bay will provide resilience to the sand supply network and provide additional flexibility to the concrete supply chain. A strong supply network is needed to ensure that the construction sector can respond to investment activity associated with growth as well as demand impulses associated with activity arising from extreme weather events. Further, enabling Te Ākau Bream Bay will add a second source of high quality sand to the Auckland sand market thereby lowering concentration risks associated with sourcing a substantial share of sand from one resource.

220. In addition to the avoided costs, enabling sand extraction at Te Ākau Bream Bay will deliver significant benefits to regional Auckland by supporting the construction sector, thereby contributing to, and facilitating, the delivery of infrastructure and development costs.

221. 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 will be rationed across concrete suppliers, and investments in environmental infrastructure will compete for concrete and other resources, meaning that delivery timeframes will be pushed out.

222. 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 future growth (i.e., the change in activity levels) as well as any demand impulse arising from projects associated with the Fast Track Approvals Act (2024).

223. Enabling sand extraction in 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 helps to address these risks. Te Ākau Bream Bay is a high quality sand that is essential for high strength applications associated with infrastructure investment. Infrastructure delivery is a key focus of the Fast-track Applications Act and enabling Te Ākau Bream Bay aligns directly with the purpose of the Act."

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 on 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 its more normal growth pattern 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. 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 option[52].

11.18. This project 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 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 Eight. 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.

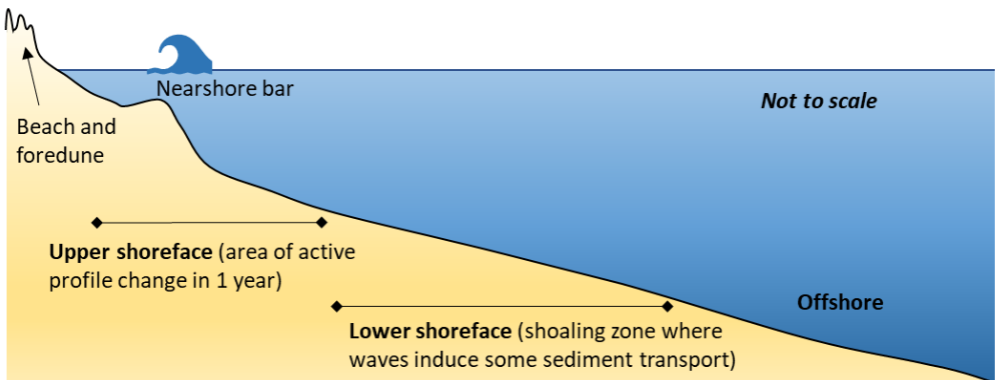

Figure Fourteen: Schematic Coastal Profile (from the Coastal Process Effects Assessment).

11.21. This Assessment concludes[53]:

"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*

[52] Paragraph 158, Assessment of Economic Effects (Attachment Eighteen)
[53] Section 5.13, Coastal Process Effects Assessment (Attachment Eight)

Zone	Element	Summary of effect	Effect level
	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 un-managed 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 area over 35 years if the maximum volume is removed.* *This is not expected to change the overall bedform characteristics within the extraction area, or waves and hydrodynamics.*	*Low within the extraction area due to the extraction 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*

Zone	Element	Summary of effect	Effect level
Beach	*All elements*	*No detectable change in physical parameters.*	*Negligible*

11.22. Specific consideration has been given to the effects on coastal morphology 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[54]:

"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 Beach[55]:

"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 Beach and Estuary[56]

"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

[54] Section 5.10, Coastal Process Effects Assessment (Attachment Eight)
[55] Section 5.12.2, Coastal Process Effects Assessment (Attachment Eight)
[56] Section 5.12.3, Coastal Process Effects Assessment (Attachment Eight)

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)."

Uretiti Beach[57]

"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 Beach and Estuary[58]

"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)."

[57] Section 5.12.4, Coastal Process Effects Assessment (Attachment Eight)
[58] Section 5.12.5, Coastal Process Effects Assessment (Attachment Eight)

Aquaculture Water Intake[59]

"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."

Mair Bank[60]

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 Methodology, the 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 Seven. 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 effects[61] 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

[59] Section 5.12.6, Coastal Process Effects Assessment (Attachment Eight)
[60] Section 5.12.7, Coastal Process Effects Assessment (Attachment Eight)
[61] Table 1, Page 37, Landscape and Natural Character Effects Assessment (Attachment Seven)

11.28. In terms of the perceived/experiential effects, the Assessment has been undertaken in the following four stages[62]:

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);

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 table[63]:

	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 Low-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) [64].

11.31. Turning to associative/cultural effects, the Assessment concludes[65]:

"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

[62] Section 9, Landscape and Natural Character Effects Assessment (Attachment Seven)
[63] Table 2, Page 54, Landscape and Natural Character Effects Assessment (Attachment Seven)
[64] Page 54, Landscape and Natural Character Effects Assessment (Attachment Seven)
[65] Page 66, Landscape and Natural Character Effects Assessment (Attachment Seven)

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 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. Furthermore, Te Parawhau's rohe extends across all of the proposed sand extraction site, and even though that iwi has yet to directly address or raise any concerns about MBL's sand extraction proposals, the 'five pou' and related principles set out above imply that the project could conceivably have effects that are of concern for both Patuharakeke and Te Parawhau."

11.32. The Assessment then identifies the effects 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 concludes[66]:

"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.

11.35. Mr Brown has considered those matters raised in the Patuharakeke Te Iwi Trust Draft CIA and provides a written response to those matters which is included in Attachment Seven. Having considered the matters raised in this Draft CIA, Mr Browns findings in his assessment do not alter.

Effects on Water Quality

11.36. 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.

11.37. The Water Quality Assessment of Environmental Effects (Attachment Seven) assesses the potential effects on water quality from the sand extraction operation. This assessment finds[67]:

"On the basis of the sampling undertaken, and comparison against available regional data from long term SoE monitoring locations, the water quality in the Te Ākau Bream Bay marine environment (for key

[66] Section 12, Landscape and Natural Character Effects Assessment (Attachment Seven)
[67] Pages ii-iii, Water Quality Assessment of Environmental Effects (Attachment Nine)

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).

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 is considered to be Negligible.

11.38. In terms of ecological effects from the plume, the Assessment of Ecological Effects[68] finds that the level of effects from turbidity and suspended sediment on coastal vegetation, benthic macroalgae, benthic fauna and benthic fish will be negligible.

11.39. It is therefore concluded that any adverse effects on and from water quality changes will be negligible (that is, less than minor).

11.40. 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 for the *William Fraser* and Condition 32 specifically addresses litter so that the risk from litter from the *William Fraser* entering the coastal marine area is avoided.

Acoustic Effects

11.41. Separate assessments of airborne and underwater acoustic effects have been completed.

11.42. In terms of airborne noise effects on Te Ākau Bream Bay beach users, Section 6.1 of the Assessment of Airborne Noise Effects (Attachment Ten), 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."

11.43. Turning to noise effects on the closest noise sensitive activities, Section 6.2 of the Assessment repeats the statement reproduced above and then states:

"*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 Åkau/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*

[68] Table 13, Assessment of Ecological Effects (Attachment Twelve)

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."

11.44. 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 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."

11.45. Based on the Assessment of Airborne Noise Effects, it is concluded that any adverse airborne noise effects (including on the amenity values of the wider area) will be negligible.

11.46. 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 Eleven). 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).

11.47. Based on this Underwater Noise Assessment:

- The Assessment of Ecological Effects[69] 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 Environmental Impact Assessment[70] finds that any adverse noise impacts on marine mammals will be negligible to low.

Lighting Effects

11.48. The time window which sand extraction must occur is proposed to be 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

[69] Table 13, Assessment of Ecological Effects (Attachment Twelve)
[70] Section 4.2.8, Marine Mammals Environmental Impact Assessment (Attachment Fourteen)

minimise potential acoustic effects on mammals, daytime sand extraction would be preferable (as compared to nighttime sand extraction which had been the general approach at the former Pākiri site).

11.49. A LMP has been prepared and is included as Section 3 of the SEOP (Attachment Twenty-Seven).

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 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 Twelve) 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 Environmental Impact Assessment (Attachment Fourteen). 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 Sixteen). The Potential Effects on Seabirds and Shorebirds Report (Attachment Thirteen) assesses potential effects on avian fauna while the Cup Corals and Schedule 7 of the FTAA and Scleractinian Cup Corals at Te Ākau Bream Bay Reports respectively in Attachments Fifteen and Twenty-One address cup corals.

11.52. The potential effects from sand extraction on ecology relate to 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 disturbance[71]:

"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 disturbance[72]"

"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

[71] Section 6.1.1.1, Assessment of Ecological Effects (Attachment Twelve)
[72] Section 6.1.1.1, Assessment of Ecological Effects (Attachment Twelve)

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."

In terms of benthic fauna survival[73]:

"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 quality[74]:

"The sediment quality has been assessed, (West, et al., 2025; Wilson, 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 turbidity[75]:

"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[76]

"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.

11.55. The overall live population of the two species of cup corals within the 15.4 km^2 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*, respectively[77].

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 Zealand[78].

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

[73] Section 6.1.2, Assessment of Ecological Effects (Attachment Twelve)
[74] Section 6.1.3.1, Assessment of Ecological Effects (Attachment Twelve)
[75] Section 6.1.3.2, Assessment of Ecological Effects (Attachment Twelve)
[76] Section 6.1.3.3, Assessment of Ecological Effects (Attachment Twelve)
[77] Page 5, Cup corals and Schedule 7 of the Fast-track Approvals Act 2024 (Attachment Fifteen)
[78] Page 5, Cup corals and Schedule 7 of the Fast-track Approvals Act 2024 (Attachment Fifteen)

been described and assessed in the Marine Mammal Environmental Impact Assessment (Attachment Fourteen). 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.

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 (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 widescale displacement of marine mammals is considered unlikely, underwater noise from sand extraction activities may affect the fine scale distribution of marine mammals in Te Ākau Bream Bay. For this reason an Acoustic Monitoring Programme (soundscape change validation) (as described in the MMMP) 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 negligible 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 Bay[79] 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 fish and shellfish species present in Te Ākau Bream Bay.*

[79] Section 7, Assessment of Effects on Fish and Fisheries in Te Ākau Bream Bay (Attachment Sixteen)

- *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.*

- *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 Effects[80] 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 negligible[81]. The magnitude and level of 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 area [82].

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.*" [83]

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."* [84]

And

"Accordingly, the magnitude of effect relating to vessel strike on marine reptiles is assessed as Negligible."[85]

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

[80] Section 6.2.2, and Table 13, Assessment of Ecological Effects (Attachment Twelve)
[81] Section 6.2.3 and Table 13, Assessment of Ecological Effects (Attachment Twelve)
[82] Section 6.2.4 and Table 13, Assessment of Ecological Effects (Attachment Twelve)
[83] Section 6.5.1.1, Assessment of Ecological Effects (Attachment Twelve)
[84] Section 6.5.1.2, Assessment of Ecological Effects (Attachment Twelve)
[85] Section 6.5.1.3, Assessment of Ecological Effects (Attachment Twelve)

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." [86]

And

"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."[87]

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." [88]

And

"The magnitude of cumulative effects on vagrant, migrant turtles and resident marine snakes is conservatively assigned as Negligible." [89]

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 summarises in respect to potential effects on sharks and rays[90]:

"The effects assessment indicates that the proposed sand extraction activities will potentially exposure sharks and rays to variety of disturbances such as noise, habitat modification, risk of vessel strike, contaminants, marine debris, artificial lighting, and cumulative effects. However, the magnitude of these potential effects is typically considered to be Negligible (having a Negligible effect on the known population or range of a species) (Table 11)."

11.68. Table 13 of the Assessment of Ecological Effects, 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 Thirteen). 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 provides further details on the potential effects considered, while Section 4.2 outlines the risk assessment process undertaken.

[86] Section 6.5.1.4, Assessment of Ecological Effects (Attachment Twelve)
[87] Section 6.5.1.5, Assessment of Ecological Effects (Attachment Twelve)
[88] Section 6.5.1.6, Assessment of Ecological Effects (Attachment Twelve)
[89] Section 6.5.1.7, Assessment of Ecological Effects (Attachment Twelve)
[90] Section 6.4.2, Assessment of Ecological Effects (Attachment Twelve)

11.70. Table 4-4[91] 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 process[92]:

> *"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. In over 70 years of extraction at Pākiri, MBL have never had an interaction event with tara iti fairy tern while extracting sand, 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), well within (shoreward of) the 5.6 km distance, but it is possible that birds venture offshore from time to time. Habitat use, the extent to which tara iti fairy terns utilise specific foraging zones and distributions of foraging trip distances remain to be fully quantified, but 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. MBL operates an Oil Spill Contingency Plan for the *Willliam Fraser* (Attachment Thirty-Three) and the likelihood of an oil spill, which could potentially affect seabirds and shorebirds, is very low.

11.73. Likewise, MBL operates a LMP for the *William Fraser* which is included as Section 3 of the SEOP (Attachment Twenty-Seven) 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 the Food-Web

11.75. The potential effects on the food-web pathways within Te Ākau Bream Bay has been assessed in the Assessment of Ecological Effects (Attachment Twelve). Sand extraction could interact with marine food-web processes through four pathways:

- Short-term increases in turbidity and suspended sediments;
- Localised seabed disturbance;

[91] Pages 28-31, Potential Effects on Seabirds and Shorebirds (Attachment Thirteen)
[92] Section 4.3, Potential Effects on Seabirds and Shorebirds (Attachment Thirteen)

- Alteration of benthic-pelagic coupling; and
- Behavioural disturbance from underwater noise.

11.76. The Assessment concludes[93]:

"On the basis of the above, sand extraction is not expected to result in any measurable changes to marine food-web structure, energy flow, or prey availability within Te Ākau Bream Bay. Any temporary and highly localised reductions in benthic infauna abundance within extraction tracks do not propagate through the food web at scales relevant to fish, seabirds (including tara iti), or marine mammals.

Accordingly, the magnitude of effects on marine food-web processes is assessed as Negligible, both within the sand extraction area and in the wider Te Ākau Bream Bay receiving environment."

Effects on Surf Breaks and Other Recreational Activities

11.77. The Assessment of Effects on Surf Breaks at Te Ākau Beam Bay (Attachment Seventeen) 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) 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."

11.78. As outlined in the Assessment of Effects on Fish and Fisheries in Te Ākau Bream Bay[94] 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**.**

11.79. The Navigation Safety Assessment[95] 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.

11.80. 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 Assessment[96] 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."

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

11.82. Overall, it is considered that effects on surf breaks and other recreational activities (and their contribution to the amenity values of the area) will be less than minor.

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[93] Section 6.3.3, Assessment of Ecological Effects (Attachment Twelve)
[94] Section 7, Assessment of Effects on Fish and Fisheries in Te Ākau Bream Bay (Attachment Sixteen)
[95] Pages 8- 9, Navigation Safety Assessment (Attachment Nineteen)
[96] Page 9, Navigation Safety Assessment (Attachment Nineteen)

Effects on Commercial Activities (including Fishing)

11.83. As outlined in the Assessment of Effects on Fish and Fisheries in Te Ākau Bream Bay[97] the mobility of fish 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.

11.84. The Navigation Safety Assessment[98] 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 fishermen 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."

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

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

11.87. Overall, it is considered that any effects on commercial activities will be negligible and temporal. There will be no impacts on a taiāpure-local fishery or a mātaitai reserve. The ability to undertake fishing with the area covered by 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) will not be impacted.

Cultural Effects

11.88. As outlined earlier, three CIAs have been received and are included as Attachments Twenty-Two to Twenty-Four. These CIAs have considered the application and project in terms of Te Ao Māori. Te Ao Māori can be summarised as the Māori worldview, a holistic, relational way of understanding people, the natural world, spirituality, knowledge, and community. It's not a fixed doctrine and is a living, evolving body of understandings shaped over centuries in Aotearoa. There may not be a singular Te Ao Māori viewpoint, and it can differ between iwi and hapū (and within iwi and hapū). This is reflected in the CIAs which have been prepared for this project.

11.89. The following sections summarise the outcomes of the three CIAs.

11.90. Te Parawhau ki Tai CIA concludes:

"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

[97] Section 7, Assessment of Effects on Fish and Fisheries in Te Ākau Bream Bay (Attachment Sixteen)
[98] Page 90, Navigation Safety Assessment (Attachment Nineteen)

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 Te Parawhau Hapū capacity, wellbeing, and environmental restoration."*

11.91. The CIA also notes early on that[99]:

"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)."

11.92. Section 10 of the CIA outlines the recommendations of Te Parawhau ki Tai.

11.93. Te Parawhau ki Tai CIA includes a brief summary of the main specialist reports reviewed by the author of the CIA.

11.94. MBL has consulted directly with Patuharakeke Te Iwi Trust Board who have prepared a detailed Cultural Impact Assessment (Attachment Twenty-Four). The Patuharakeke Te Iwi Trust draft CIA concludes[100]:

"7.1.1 The fundamental concerns for Patuharakeke is that the proposed fast-track project by McCallum Bros to extract sand from Te Ākau Bream Bay is located in a coastal marine environment that is of significance and importance to Patuharakeke.

7.1.2 The customary authority of Patuharakeke in Te Ākau Bream Bay are established, with the pursuit by Patuharakeke to further secure it customary rights, interests and practices in Te Ākau Bream Bay (and widely Whangārei Harbour and Hauraki Gulf) through available channels (e.g Waitangai claim and MACA processes).

7.1.3 These rights, interests and practices for Patuharakeke reinforces historical, traditional, cultural, and spiritual associations with the coastal marine environment, and provides a sense of food security and subsistence to Patuharakeke, whist complementary reducing living costs, and more importantly, ensures nutritional needs. There is a substantial cost/loss to Patuharakeke.

7.1.4 The recommendation to McCallum Bros to re-consider locating its project (in its current form) outside of, and away from, Te Ākau Bream Bay, is viewed by Patuharakeke as the best approach to safeguard the relationship, culture and traditions with Te Ākau Bream Bay."

11.95. The overarching recommendation in the Patuharakeke Te Iwi Trust Board CIA is to re-locate the sand proposed extraction outside of, and away from, Te Ākau Bream Bay. An alternative location has not been identified.

11.96. The Patuharakeke Te Iwi Trust Board commissioned a number of peer reviews of the MBL specialist reports[101] and these are provided and addressed in the draft CIA. With the exception of the review of the economics assessment, it is our reading that the other reviews did not identify any significant issues with the reports or their findings. The review of the economics assessment is further commented on in the Assessment of Economic Effects (Attachment Eighteen).

[99] Section 4.1, Te Parawhau ki Tai CIA (Attachment Twenty-Two

[100] Section 7, Patuharakeke Te Iwi Trust Cultural Impact Assessment (Attachment Twenty-Three)

[101] Section 5.1, Patuharakeke Te Iwi Trust Cultural Impact Assessment (Attachment Twenty-Three)

11.97. The Ngātiwai Trust Board CIA concludes[102]:

> *"In line with the Ngātiwai Environment Management Plan and Te Tiriti obligations, the proposed offshore sand mining at Ruakākā presents unacceptable cultural, ecological, and economic risks. The application should be declined. If decision-makers consider proceeding, minimum requirements include co-governance, independent assessments, comprehensive monitoring, adaptive management, and equitable economic returns — all developed in partnership with Ngātiwai."*

11.98. A range of issues have been identified in the CIAs, many of which overlap on environmental issues. These concerns are from a Te Ao Māori world view. It is recognised that there is no single Māori view, and it could also be expected that there will be a diversity of opinion within iwi and hapū.

11.99. In summary the issues (both positive and adverse) raised in the CIAs are:

- Cultural risks.
- Ecological risks.
- Economic risks and opportunities.
- Limitation of iwi participation and co-decision making under the Act.
- Smothering of shellfish beds.
- Alteration of benthic habitats.
- Disruption of fish spawning and migration pathways.
- Degradation of mahinga kai.
- Impact on Ngātiwai commercial fishing interests.
- Compromises the mauri of Tangaroa and the spiritual balance upheld through tikanga and kaitiakitanga.
- Cumulative effects on coastal processes, dunes and benthic ecosystems.
- Effects on customary rights, interests and practices in Te Ākau Bream Bay.
- Values and wellbeing of Te Ākau Bream Bay Community.
- Kaitiakitanga/Manaakitanga.
- Insufficient consideration of Patuharakeke relationship with Te Ākau Bream Bay and Marine Mammals.
- No protection, nor safeguarding, of areas of significance and importance to Patuharakeke.
- Effects on the mana and mauri of Tangaroa and Mana Atua.
- Limited, to no, consideration and response to Climate Change.
- Cultural revitalisation.
- Consultation.

11.100. Section 10 of Te Parawhau ki Tai CIA includes a list of recommendations (a number of which are also addressed through the report). Sections 8.1 (Mana Atua). 8.2 (Te Mana o Te Wai), 8.3 (Mana whenua), 8.4 (Mana Ao Turoa) and 8.5 (Tangata Whenua) outline in detail the recommended mitigation measures (mahi whakaora) and where they have been incorporated in management plans and/or recommended consent conditions or are proposed to be covered in the final substantive relationship agreement (with this agreement in particular covering a number of recommendations in 8.5).

11.101. As outlined earlier in this report a draft substantive relationship agreement has been prepared between MBL and Te Parawhau ki Tai (which in part addresses certain mahi whakaora along with matters such as the need to explore economic opportunities). A number of conditions reflect how Kaitakitanga is to be given effect to. It is expected that the Panel will seek feedback from Te Parawhau ki Tai and this process may result in Te Parawhau ki Tai providing recommendations for further refinement of the consent conditions.

11.102. In respect to the Patuharakeke Te Iwi Trust draft CIA, it is unclear if the author was provided a copy of the full draft application and the draft consent conditions before being asked by their client to finalise the CIA. The draft Application/AEE were provided to the Patuharakeke Te Iwi Trust for consideration as part of the preparation of the CIA on the 9th of September 2025. The potential effects from climate change have been addressed in various specialist reports and this document. In terms of exercising kaitiakitanga, no feedback on the draft conditions have been received to date and it therefore remains

[102] Section 10, Ngatiwai Trust Board – Cultural Impact Assessment (Attachment Twenty-Four)

unclear how the Patuharakeke Te Iwi Trust would like to be involved and whether they wish to have a similar involvement as Te Parawhau ki Tai in terms of the review and commenting on monitoring repots for example. This may be clarified during the on-going consultation or in any final CIA. The Panel may present other opportunities for Patuharakeke Te Iwi Trust to outline if and how they wish to exercise Kaitiakitanga. This application addresses the PRPN, the NRPS, the NZCPS and the NPS-IB which are correctly identified as having to be assessed[103].

11.103. It is unclear how the granting of consent would impact on the customary authority of the Patuharakeke Te Iwi Trust and customary rights/interests/practices. Although this is expanded upon to some degree in Section 6.2 it is unclear exactly how the project (or granting of consent) would undermine the customary authority of Patuharakeke. It is recognised that the customary authority is yet to be recognised under MACA and in terms of the Treaty of Waitangi Claim WAI 745 and WAI 1308, however these are separate legal processes. There is no legal requirement which prohibits resource consent applications being made or resource consents granted within a coastal marine area subject to a claim.

11.104. It is also unclear from the Patuharakeke Te Iwi Trust draft CIA how the recommended action (to locate the site outside the Rohe Moana of Patuharakeke and Rohe Moana Te Rerenga Paraoa) upholds the obligations of the Fisheries Settlement Act. The project will not impact on recreational or commercial fisheries and will not impact on the access to and passage across the waters of Te Ākau Bream Bay.

11.105. The Patuharakeke Te Iwi Trust draft CIA[104] states there has been minimal consideration of Patuharakeke values, interests and mātauranga, including Patuharakeke culture and traditions and relationship with Te Ākau Bream Bay (and Whangārei Harbour and Hauraki Gulf). The purpose of commissioning the various CIAs is to gain this understanding and so that these values can be outlined by Patuharakeke and the understood by MBL and other parties and taken into account when assessing the application.

11.106. In Section 6.3.10 of the Patuharakeke Te Iwi Trust Board draft CIA, there is a concern raised that the draft conditions do not propose any cultural mitigation measures. It is unclear which version of draft conditions is being referred to. It is noted that the CIA itself does not include any recommendations for modification or new conditions for consideration by MBL. Section 6.3.18 of the draft CIA identifies the importance of feedback loops and consideration of Patuharakeke concerns/comments. If it is considered appropriate by the Patuharakeke Te Iwi Trust Board then the conditions can be modified so they have the same review/comment input as Te Parawhai ki Tai in terms of the future PSEAR's and SEMR's and changes to the EMMP.

11.107. MBL is fully aware of the intimacy of the relationship that Patuharakeke (and other iwi/hapū) have with marine mammals, and this was traversed at the initial cultural induction for the MBL team hosted by Patuharakeke and at subsequent Hui. An outcome of this was the preparation of the Marine Mammal Management Plan which the Patuharakeke Te Iwi Trust Board has been invited to comment on.

11.108. Section 6.3.44 of the Patuharakeke Te Iwi Trust Board draft CIA identifies two distinct areas of significance and importance to Patuharakeke - Whangārei Terenga Parāoa, and reefs. It is recognised that the sand extraction site is within the Whangārei Terenga Parāoa. No reefs are located within the sand extraction area and potential physical or ecological effects on these reefs have not been identified.

11.109. The Ngātiwai Trust Board CIA states that if the consent is granted then the minimum requirements include co-governance, independent assessments, comprehensive monitoring, adaptive management, and equitable economic returns developed in partnership with Ngātiwai

11.110. The matter of co-governance is outside the scope of this consenting process. All assessments undertaken to date have been undertaken by independent specialists, as well all future environmental monitoring and reporting. A comprehensive suite of monitoring is proposed (as outlined in the EMMP) and an adaptive management approach has been taken in terms of the proposed consenting regime. MBL has proposed a cultural contribution condition which would allow the Ngātiwai Trust Board to undertake its own monitoring and assessments if it chooses to accept such a contribution.

[103] Section 6.4.13, Patuharakeke Te Iwi Trust Board CIA (Attachment Twenty-Three).
[104] Page 6 - Patuharakeke Te Iwi Trust Board CIA (Attachment Twenty-Three)

11.111. Although the Ngātiwai Trust Board CIA identifies effects on shellfish beds, alteration of benthic habitats, disruption of fish spawning and migration pathways and degradation of mahinga kai no further detail on the basis, extent or location of these concerns has been identified. No specific comments on the specialist reports addressing these matters or the proposed management plans have been provided so that further assessments of these concerns can be undertaken. In respect to CIA recommendations on a monitoring and compliance framework, it is noted that the recommended consent conditions already include requirements for a pre-sand extraction ecological assessment (which has been provided as part of the PSEAR included in the EMMP), an EMMP and for an adaptive management approach.

11.112. It is unclear how the granting of consent will affect the Ngātiwai commercial fishing interests.

11.113. It is unclear what the purpose of a further pre-dredging cultural assessment would be. Three CIAs have been obtained and the CIA commissioned from the Ngātiwai Trust Board CIA provided the opportunity for this cultural assessment.

11.114. The Ngātiwai Trust Board CIA proposes an iwi liaison group. MBL would be open to the Ngātiwai Trust Board being provided the same opportunities which Te Parawhau ki Tai have sought in terms of reviewing and commenting on any future draft PSEAR, SEMR's and changes to the EMMP. Any such comments would need to be addressed by MBL in the final documentation submitted so that they can be assessed by NRC as part of their certification process.

11.115. To address the economic equity issue, the Ngātiwai Trust Board CIA seeks a minimum royalty of NZ$1.50 per cubic metre of sand extracted. Feedback from the Ngātiwai Trust Board on the recommended cultural contribution condition has not been received and, to date, the Ngātiwai Trust Board has not sought to enter into discussions on any form of relationship agreement which may, in part, address the economic equity issue raised in the CIA.

11.116. MBL remains open to forming a substantive relationship agreement with the Patuharakeke Te Iwi Trust Board and the Ngātiwai Trust Board if such an agreement is sought. Likewise, if both Trust Boards seek a similar review and comment opportunity that Te Parawhau ki Tai has sought in terms of the future PSEAR and SEMR's and the EMMP then MBL would be agreeable to that, and the subsequential changes to recommended Conditions 22 and 37 and the EMMP.

11.117. The main market for the marine sand will be Auckland, however a holistic view of the economic benefits of that needs to be considered. The main market for marine sands is Auckland as that is where the majority of high-strength concrete is produced and is the main area for major infrastructure development. However, major infrastructure within Auckland has benefits for the wider New Zealand economy (including Northland) with the Auckland International Airport and the motorway network being prime examples. Furthermore, certain infrastructure is used for transportation connections into and through Northland while certain high-strength concrete products, although manufactured in Auckland, will likely be used in Northland. The efficient provision of infrastructure has substantial benefits for the New Zealand economy which includes the substantial Māori economy.

11.118. Although not addressed in the CIAs it is recognised that Patuharakeke currently enjoys access to Marsden Point's distal spit via a 'ceremonial path' past the current Northport and Channel Infrastructure 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.

11.119. 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.

11.120. The Te Parawhau ki Tai CIA is supportive of the project with certain commitments. This reflects that, in their opinion, the potential cultural effects can be addressed to a satisfactory level through a range of commitments including certain consent conditions. There is not a singular Te Ao Māori viewpoint on cultural effects, and this is reflected in the concerns raised in the other two CIAs received for this project. Due to this current range of views, a rating of cultural effects in terms of the RMA framework is not

considered appropriate. However, this does not diminish from the requirement for the effects raised in the CIAs to be considered by the Panel as part of the overall assessment of the application.

Biosecurity Effects

11.121. The *William Fraser* operates under a Biosecurity Management Plan (Attachment Thirty-One) which requires regular cleaning of the vessel. No discharge of bilge water is to be undertaken at the sand extraction site.

11.122. 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

11.123. Potential cumulative effects with climate change over the duration of a 35-year consent have been addressed in the Coastal Process Effects Assessment which concludes[105]:

"Sea level rise over the duration of the 35-year consent could be up to 0.35 m, with the actual rate depending on emission scenarios and climate-ocean feedback loops. The 0.35 m value was adopted as a suitable representative for this assessment, as higher rates of SLR associated with SSP5-RCP8.5 that are typically used in hazard assessments would be non-conservative here as higher sea levels push the lower shoreface boundary landward. Climate change could 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 DoC. 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 not reach the extraction area. Therefore, there is a 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 seaward by up to 0.9 m when considering the balance of higher sea level moving the point landward and larger waves moving the point seaward.

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 48 m horizontal and increasing the depth an average of 0.56 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."

11.124. The effect of climate change has also been considered in the Assessment of Effects on Surf Breaks[106] and this assessment finds:

[105] Section 5.11, Coastal Process Effects Assessment (Attachment Eight)
[106] Section 7.1, Assessment of Effects on Surf Breaks (Attachment Seventeen)

"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 Akau 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 (Vousdoukas 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."

11.125. No other natural hazards have been identified which require further consideration. Likewise, no potential natural hazards have been identified which the project may change the risk of that hazard occurring or the magnitude of potential effects of that hazard if it arises.

Navigation Safety

11.126. A Navigation Safety Assessment has been completed and concludes[107]:

"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."

11.127. The assessment includes a list of recommended Harbourmaster Guidelines, and MBL confirms they can be complied with.

Cumulative Effects

11.128. Cumulative coastal processes effects have been addressed above.

11.129. 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 land[108].

11.130. In terms of visual and character effects, it has been found[109]:

"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."

11.131. In terms of cumulative effects on marine mammals, the Marine Mammal Environmental Impact Assessment[110] 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 minor[111].

[107] Page 13, Navigation Safety Assessment (Attachment Nineteen)
[108] Section 7.2, Assessment of Airborne Noise Effects (Attachment Ten)
[109] Page 69, Landscape and Natural Character Effects Assessment (Attachment Seven)
[110] Section 4.9 and Table 20, Marine Mammal Environmental Impact Assessment (Attachment Fourteen)
[111] Table 13, Assessment of Ecological Effects (Attachment Twelve)

11.132. It is considered that there are no specific potential cumulative effects which may result in a greater degree of adverse effects.

Overall Effects Conclusion

11.133. 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 of Plenty regions (but at a lesser scale due to their marine sand demands which reflects their respective population size and infrastructure demands).

11.134. 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.

11.135. 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).

11.136. It is considered that the impacts (as summarised in Table Two below and ranging from negligible 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. In terms of potential cultural effects, the Te Parawhau ki Tai CIA is supportive of the project with certain commitments. This reflects that, in their opinion, the potential cultural effects can be addressed to a satisfactory level through a range of commitments including certain consent conditions. There is not a singular Te Ao Māori viewpoint on cultural effects, and this is reflected in the concerns raised in the other two CIAs received for this project. Due to this current range of views, a rating of cultural effects in terms of the RMA framework is not considered appropriate.

11.137. As assessments of effects in terms of Te Ao Māori naturally evolve, there may be further refinements of the current assessments provided in the CIAs in any feedback sought and obtained by the Panel during the processing of the application.

11.138. 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 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.

11.139. Adverse effects cannot be completely avoided and nor does the Act require the avoidance of all effects (including cultural effects). In this case, adverse effects (with the possible exception of certain cultural effects identified in the CIAs) arising will be negligible to minor. Those adverse effects (including any cultural 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.

11.140. The following table presents a summary of the level of effects assessed (except cultural effects). 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
Food-Web	Negligible	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	Negligible to low	Less than minor 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 Two: Summary of Level of Effects.

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 Policy Statements are:

a) National Policy Statement for Infrastructure 2025.

b) The New Zealand Coastal Policy Statement 2010.

c) National Policy Statement – Indigenous Biodiversity.

12.3. The relevant 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 8 January 2026, 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.

12.5. There are no relevant National Environmental Standards.

National Policy Statement for Infrastructure 2025 ("NPS-I")

12.6. The following assessment assesses the project against the relevant policies of the NPS-I, which came into force on the 15th of January 2026.

12.7. Under the NPS-I, the project (being a quarrying activity as defined in the National Planning Standards, November 2019) falls within the definition of "infrastructure supporting activities". Policies 5 and 6 are therefore of relevance.

Policy 5: Recognising and providing for infrastructure supporting activities

(1) Decision-makers must recognise and provide for the role of infrastructure supporting activities, including by:

(a) recognising the importance of infrastructure supporting activities to enable the benefits of infrastructure activities to be realised;

(b) recognising the operational need or functional need of some infrastructure supporting activities, including supporting quarrying activities to operate in, be located in, or traverse particular environments and locations; and

(c) enabling the timely delivery of infrastructure supporting activities.

Assessment

12.8. The NPS-I provides clear direction that decision makers must recognise and provide for the role of projects such as this. In this case, granting consent would allow for the efficient extraction of a marine

sand resource required for the production of concrete (and in particular, high-strength concrete) which is vital for the development of infrastructure activities.

12.9. As outlined earlier, there is a functional need both for marine sand and the need for this marine sand to be extracted from the coastal marine area. The proposed extraction area contains the type of marine sand required for the production of high-strength concrete and can be extracted and delivered to the market in an efficient manner. Furthermore, extraction can be undertaken in a manner where significant adverse effects can be avoided.

12.10. The current and on-going requirement for sand has been outlined in the Assessment of Economic Effects (Attachment Eighteen). Granting consent would enable the timely delivery of this infrastructure supporting activity, with sand extraction likely to be able to commence within 1 to 2 months of the resource consent and wildlife approval being granted (subject to final consent conditions).

Policy 6: Recognising and providing for Māori interests

(1) Decision-makers must recognise and provide for Māori interests in relation to infrastructure activities and infrastructure supporting activities, including by:

(a) taking into account the outcome of any engagement with tangata whenua on any relevant resource consent, notice of requirement, or request for a private plan change;

(b) recognising the opportunities tangata whenua may have in developing and operating their own infrastructure at any scale or in partnership; and

(c) local authorities:

(i) providing opportunities for tangata whenua involvement where infrastructure and infrastructure supporting activities may affect a site of significance or issue of cultural significance to Māori; and

(ii) operating in a way that is consistent with any relevant iwi participation legislation or Mana Whakahono ā Rohe.

Assessment

12.11. The consultation undertaken to date has been outlined earlier, and this application includes three CIAs which outline a range of issues considered by the respective iwi/hapū to be of relevance in respect to the application. As an outcome of this consultation specific consideration has been given to a number of issues and a range of conditions addressing these issues and opportunities for iwi to give effect in part to their role of kaitiaki have been proposed. In addition to a proposed cultural contribution condition, MBL and Te Parawhau ki Tai have developed a draft substantive relationship agreement which will have wider long-term benefits for the hapū if this infrastructure supporting activity is consented and progresses. MBL remains open to developing similar substantive relationship agreements with the Ngātiwai Trust Board and Patuharake Te Iwi Trust Board if those Boards seek to enter into such an agreement.

New Zealand Coastal Policy Statement 2010 ("NZCPS")

12.12. The following assessment assesses the proposal against the relevant objectives and policies of the NZCPS (as amended by the New Zealand Coastal Policy Statement Amendment 2025).

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

12.13. 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 negligible[112]. The plume created by the discharge will be temporary in nature and limited in size and will not result in any significant adverse effects.

12.14. 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 Effects[113] 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."

12.15. No physical processes in the coastal environment will be adversely affected by the project to a more than minor degree. This has been specifically addressed in the Coastal Process Effects Assessment[114] 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."

12.16. In terms of potential underwater noise effects, it is concluded that potential effects on natural biological processes will be negligible to low.

12.17. Sand extraction on the seaward side of the depth of closure/depth of transport will avoid 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).

12.18. The project will not impact on any significant natural ecosystems (identified as significant natural area in the PRPN or in the Operative Whangārei District Plan) or on the overall diversity of the indigenous coastal flora and fauna in Te Ākau Bream Bay.

12.19. 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.

[112] Section 8, Water Quality Assessment of Environmental Effects (Attachment Nine)
[113] Section 8.3, Assessment of Ecological Effects (Attachment Twelve)
[114] Section 5.13.1, Coastal Process Effects Assessment (Attachment Eight)

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

12.20. 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.

12.21. 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.

12.22. 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 project 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[115].

12.23. 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.

12.24. 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.

12.25. From a Te Ao Māori perspective, Te Parawhau ki Tai support the project with certain commitments. The Ngātiwai Trust Board and the Patuaharakeke Te Iwi Trust Board CIAs do not support sand extraction within this coastal location based on their current understanding of the project.

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*

[115] Page 68, Landscape and Natural Character Effects Assessment (Attachment Seven)

- *recognising and protecting characteristics of the coastal environment that are of special value to tangata whenua.*

Assessment

12.26. MBL recognises the ongoing and enduring relationship of the tangata whenua over their rohe. Consultation with Te Parawhau ki Tai, the Ngātiwai Trust Board and Patuharakeke Te Iwi Trust Board commenced at a very early stage of the project investigation. CIAs were commissioned from these parties and form part of this application. It is recognised that there is a divergence of views in respect to the proposal and potential effects and that at the current time. It is also recognised that the Patuharakeke Te Iwi Trust CIA is in draft form with further consultation being sought prior to it being finalised.

12.27. A number of conditions have been proposed to provide for iwi or hapū to exercise kaitiakitanga.

12.28. The Te Parawhau ki Tai draft CIA specifically addresses the NZCPS[116] and states:

"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."

12.29. In respect to the final bullet point of Objective 3, in terms of sites of cultural significance to Māori, it has been found[117]:

"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:

- *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*

[116] Section 5.7, Te Parawhau ki Tai CIA (Attachment Twenty-Two)
[117] Page 69, Landscape and Natural Character Effects Assessment (Attachment Seven)

- *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

12.30. The project will not require any restrictions to or within the coastal marine area and will not require exclusive occupation of any part of the coastal marine area.

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

12.32. The Navigation Safety Assessment[118] specifically addresses potential effects on recreational vessel use and considers that this is a manageable risk for the *William Fraser*.

12.33. 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 project. The Assessment of Effects on Fish and Fisheries in Te Ākau Bream Bay[119] 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.

12.34. Likewise, there will be no effect on surfability at the seven surf breaks in the wider area[120]:

"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."

12.35. 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

12.36. 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.

12.37. The sand extraction activity itself will not be adversely impacted upon by sea-level rise. Section 5.11 of the Coastal Process Effects Assessment 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

[118] Page 9, Navigation Safety Assessment (Attachment Nineteen)
[119] Section 7, Assessment of Effects on Fish and Fisheries in Te Ākau Bream Bay (Attachment Sixteen)
[120] Section 7, Assessment of Effects on Surf Breaks (Attachment Seventeen)

in an outer DoC that shifts the depth seaward by up to 0.9 m when considering the balance of higher sea level moving the point landward and larger waves moving the point seaward.

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 seaward by an average of 48 m horizontal and increasing the depth an average of 0.56 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

12.38. The project 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 therefore concluded that there remains a functional need for a marine sand source for Auckland with this source being within the coastal marine area.

12.39. 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.

12.40. By its very nature, the extraction of marine sands can only be undertaken within the coastal marine area.

12.41. 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.

12.42. The sand extraction area is not located within an area of the coastal marine area under any formal protection and there are no known listed historic heritage values which may be adversely impacted upon.

12.43. It is recognised that various cultural issues and effects have been identified within the CIAs.

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

12.44. The project will not be contrary to any known international obligations which New Zealand is party to.

NZCPS Policies

12.45. It is considered that Policies 2, 3, 6, 11, 13, 15, 16 and 23 are of relevance to this application and 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

12.46. MBL recognise that tangata whenua have traditional and continuing cultural relationships with areas of the coastal environment. Three CIAs have been prepared. Te Parawhau ki Tai support the project with certain commitments. At the current time, the Ngātiwai Trust Board and the Patuharakeke Te Iwi Trust are opposed to the project based on the nature and level of effects they consider will arise when considered in terms of Te Ao Māori.

12.47. The Te Parawhau ki Tai CIA specifically assesses the NZCPS and in particular Policies 2, 6(1)(a), 11, 13, 15 and 23(1)(a)[121] and notes:

"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."

12.48. It is considered that the potential adverse effects are either avoided or mitigated to an appropriate level including through the use of management plans and resource consent conditions. A number of recommended consent conditions have been added and refined as a result of feedback from Te Parawhau ki Tai and likewise there have been modifications to the management plans. MBL have accepted the offer by Te Parawhau ki Tai for a Mahere Tikanga Plan to be prepared.

12.49. The Panel may present further opportunities for iwi to outline how kaitiakitanga may be exercised through the consent conditions and/or management plans in the event that consent is granted.

12.50. In terms of clause (e), there are two iwi management plans of relevance to this area. An assessment of the proposal in terms of these iwi management plans is undertaken in Section 13.

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.

[121] Section 5.7, Te Parawhau ki Tai CIA (Attachment Twenty-Two)

Assessment

12.51. 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.

12.52. 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 DoC and DoT);
- 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).

12.53. 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.

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 which may be required for 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) recognise 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 current and 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 current and 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:

(i) requiring that structures be made available for public or multiple use wherever reasonable and practicable;

(ii) requiring the removal of any abandoned or redundant structure that has no heritage, amenity or reuse value; and

(iii) 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.

(3) Where an activity is infrastructure, including renewable electricity generation or electricity transmission, an aquaculture activity, or extraction of minerals for the purpose of supporting infrastructure, (6)(1)(e), (2)(c) and (2)(d) above must be read to apply if the activity has a functional need or operational need to locate in the coastal marine area.

(4) In this policy, 'operational need' and 'functional need' have the meanings set out in the National Planning Standards issued under section 58E of the Act.

Assessment

12.54. 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. The 2025 Amendment to the NZCPS, through the inclusion of the new clause (3), recognises that the extraction of minerals (for the purpose of supporting infrastructure) may have a functional need or operational need to locate in the coastal marine area, and where they do so they should be provided for in appropriate places.

12.55. 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 market[122] and therefore a functional need for this sand extraction to occur in the coastal marine area. It is considered that the 2025 Amendment to the NZCPS further strengthens the planning framework for granting consent with the amendments being introduced with the aim of making it easier for Councils to plan and deliver infrastructure and to support growth in the primary sector.

12.56. The specific properties of the Te Ākau Bream Bay sand and the advantages of using it have been traversed elsewhere in this application.

12.57. 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 concludes[123]:

> *"223. Enabling sand extraction in 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 helps to address these risks. Te Ākau Bream Bay is a high quality sand that is essential for high strength applications associated with infrastructure investment. Infrastructure delivery is a key focus of the Fast-track Applications Act and enabling Te Ākau Bream Bay aligns directly with the purpose of the Act."*

12.58. 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.

12.59. The economic benefits have been outlined in the Assessment of Economic Effects. These are assessed as the direct benefit (avoided cost) associated with enabling the sand is estimated at $383.1 million[124].

12.60. There will be no 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

[122] Para. 82, Statement of Paul Donoghue (Attachment Twenty).
[123] Para. 223, Assessment of Economic Effects (Attachment Eighteen)
[124] Para. 151, Assessment of Economic Effects (Attachment Eighteen)

(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

12.61. As addressed in Section 11, various ecological assessments have been completed focusing on benthic organisms, avifauna, fish, rays, sharks, reptiles and marine mammals.

12.62. The sand extraction area is not within or immediately adjoining an identified Significant Ecological Area.

12.63. The Marine Mammal Assessment of Environmental Effects (Attachment Fourteen) has identified a number of threatened marine mammal species (Bryde's whale, orca, leopard seals, southern right whale, humpback whale, blue whale, sei whale, minki 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."

12.64. In terms of Policy 11(b), the Assessment[125] 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:

[125] Section 4.2.6, Marine Mammal Assessment of Effects (Attachment Fourteen)

- *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)."

12.65. The Assessment[126] then specifically addresses underwater noise effects and summarises:

"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."

12.66. The MMMP (Attachment Twenty-Eight) includes protocols relating to minimising underwater noise and the risk of ship strike along with other matters.

12.67. With respect to avifauna, the Potential Effects on Seabirds and Shorebirds Report concludes[127]:

"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 NZCPS[16] and additionally the objectives and policies of the Regional Policy Statement[17] (for example, Objective 2.4 and Policy 4.4.1) and of the PRP[18] (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."

12.68. The Assessment of Ecological Effects[128] 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 protected species of stony coral were detected in the proposed sand extraction area in low numbers and are the subject of further investigation in Beaumont, et al., 2025. The proposed sand extraction area is not an area with ecosystems and habitats that are particularly vulnerable to modification."

12.69. There are 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).

[126] Section 4.2.6, Marine Mammal Assessment of Effects (Attachment Fourteen)
[127] Section 5, Potential Effects on Seabirds and Shorebirds (Attachment Thirteen)
[128] Section 8.4, Assessment of Ecological Effects (Attachment Twelve)

12.70. The effect on these corals have been assessed in the report Cup Corals and Schedule 7 of the Fast-Track Approvals Act 2024 (Attachment Fifteen). 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 with 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."

12.71. Of the fish species recorded for this area, Mangō taniwha (great white shark) are classified as Nationally Endangered under the NZTCS and may migrate through the sand extraction area[129]. However, no effect on this species would be expected from the sand extraction operation or the transiting of the *William Fraser*.

12.72. Overall, the project 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

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

[129] Section 2.2.6, Assessment of Effects on Fish and Fisheries in Te Ākau Bream Bay (Attachment Sixteen)

(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

12.73. The sand extraction site is at a greater depth than the DoC and DoT. This depth beyond the DoC and DoT has been specifically chosen to avoid potential effects on the beach/dune system above MHWS.

12.74. 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 project 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 Operative 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.

12.75. In addition, any visual effects on identified sites of cultural significance to Māori has been found to be typically of a low order[130]. From a Te Ao Māori perspective a range of potential cultural issues and

[130] Page 69, Landscape and Natural Character Effects Assessment (Attachment Seven)

effects have been identified in the CIAs and there is a not a singular view on nature or level of cultural effects of the project.

12.76. 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.

12.77. In respect to Policy13(1)(b) the conclusion drawn in the Landscape and Natural Character Effects Assessment[131] 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)."

12.78. 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).

12.79. 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.

12.80. 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 low[132].

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

12.81. The project will not adversely impact any of the surf breaks identified in Schedule 1 of Policy 16[133]:

"Based on the assessment presented in this report, the sand extraction proposal is consistent with Policy 16 of the 2010 New Zealand Coastal Policy Statement (NZCPS) 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."

12.82. The project 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:

[131] Section 12, Landscape and Natural Character Effects Assessment (Attachment Seven)
[132] Page 37, Landscape and Natural Character Effects Assessment (Attachment Seven)
[133] Section 7, Assessment of Effects on Surf Breaks (Attachment Seventeen)

(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

12.83. Only Policy 23(1) is of relevance for this proposal. The only discharge during the extraction process from the *Wiliam Fraser* is material that has been taken from the seabed (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.

12.84. The effects of this discharge on water quality have been assessed and any effects on water quality will be negligible[134].

12.85. The Assessment of Ecological Effects likewise concludes that both the magnitude and level of effects from the discharge on ecology (in terms of turbidity and suspended sediment) will be negligible[135].

12.86. There will be no discharges of sewage or bilge water from the *William Fraser* at the extraction site.

12.87. 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")

12.88. 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.

12.89. 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 Thirteen), a number of bird species are present within the environs of the proposed sand extraction area.

12.90. In respect to the NPSIB, the Assessment[136] 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 NZCPS and additionally the objectives and policies of the Regional Policy Statement (for example, Objective 2.4 and Policy 4.4.1) and of the PRP[18] (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."

[134] Section 8, Water Quality Assessment of Environmental Effects (Attachment Nine)
[135] Table 13, Assessment of Ecological Effects (Attachment Twelve)
[136] Section 5, Potential Effects on Seabirds and Shorebirds (Attachment Thirteen)

Regional Policy Statement for Northland ("RPS")

12.91. 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

12.92. 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 negligible[137].

12.93. The Assessment of Ecological Effects likewise concludes that both the magnitude and level of effects from the discharge on ecology will be negligible[138].

12.94. 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 this objective

12.95. The proposed sand extraction will not result in changing sedimentation rates in the region's estuaries or harbours.

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

12.96. 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.

12.97. In respect to this objective, the Assessment of Ecological Effects[139] concludes:

[137] Section Eight, Water Quality Assessment of Environmental Effects (Attachment Nine)
[138] Table 13, Assessment of Ecological Effects (Attachment Twelve)
[139] Section 8.4, Assessment of Ecological Effects (Attachment Twelve)

"The proposed sand extraction area is not within any area identified as having significant habitats of indigenous fauna (Figure 17). 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."

12.98. 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 a Significant Ecological Area.

12.99. The Marine Mammal Assessment of Environmental Effects[140] confirms that in respect to marine mammals, the overall level of impact from the proposed sand extraction ranges from negligible to low.

12.100. The MMMP (Attachment Twenty-Eight) outlines the protocols to be implemented to ensure that marine mammals are afforded adequate protection from any actual and potential effects of proposed sand extraction activities. In particular, the MMMP includes protocols relating to minimising underwater noise, minimising the risk of vessel strike on mammals by vessels and avoiding entanglement.

12.101. With respect to avifauna, the Potential Effects on Seabirds and Shorebirds Report (Attachment Thirteen) identifies 34 seabird taxa expected in the Te Ākau Bream Bay area of which 5 are classified as 'Threatened' under the NZCTS. The Report concludes[141]:

"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."

12.102. 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).

12.103. The effect on these corals have been assessed in the report Cup Corals and Schedule 7 of the Fast-Track Approvals Act 2024 (Attachment Fifteen). 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 with 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

[140] Section 6.0, Marine Mammal Assessment of Environmental Effects (Attachment Fourteen)
[141] Section 5, Potential Effects on Seabirds and Shorebirds (Attachment Thirteen)

adult immigration and/or larval settlement is expected over time once extraction activities cease, though connectivity between populations remains unknown."

12.104. 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*.

12.105. Overall, the project 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

12.106. An Assessment of Economic Effects has been prepared and is included as Attachment Eighteen.

12.107. The project 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.

12.108. 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. For example, precast bridge or tunnel components manufactured in Auckland and transported into Northland for specific projects. Likewise, major infrastructure development within Auckland can have benefits for the wider New Zealand community and examples include the Auckland International Airport, the Motorway network and the State Highway connections into Northland.

12.109. 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

12.110. Although not directly relevant, 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

12.111. 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 market. 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.

12.112. The rate of the extraction of sand will reflect the demand for the sand product by the market at any one time. Significant stockpiling of sand will not be undertaken, and the sand will not be exported outside New Zealand.

12.113. The occupation of the coastal marine area for sand extraction is temporal and will 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.

12.114. One of the key objectives of this application and project 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 (Attachment Eighteen).

12.115. 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

12.116. 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 Seven).

12.117. 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.

12.118. 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[142].

12.119. 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.

12.120. No historic heritage features have been identified in the immediate area which may be impacted upon.

12.121. It is therefore concluded that the project is an appropriate use in Te Ākau Bream Bay and granting consent would not be contrary to this objective. From a Te Ao Māori perspective, there is not a singular view in respect to the appropriateness of this project.

Supporting Policies

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;

[142] Page 68, Landscape and Natural Character Effects Assessment (Attachment Seven)

(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 may be 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

12.122. The assessment against Objective 3.4 also applies to this policy. Clauses (3) and (5) are not applicable to this proposal.

12.123. 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 DoC and DOT 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.

12.124. The Assessment of Ecological Effects[143] 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 Beaumont, et al, 2025. The proposed sand extraction area is not an area with ecosystems and habitats that are particularly vulnerable to modification."

12.125. In addition, it has been confirmed[144] that the effects on fish and fisheries will be low to negligible if they occur at all.

12.126. 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

[143] Section 8.4, Assessment of Ecological Effects (Attachment Twelve)
[144] Section 7, Assessment of Effects on Fish and Fisheries in Te Ākau Bream Bay (Attachment Sixteen)

(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

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

12.127. Clause (2) is not applicable as it relates to areas outside the coastal environment and therefore has not been included for assessment.

12.128. The assessment against Objective 3.14 also applies to this policy.

12.129. 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.

12.130. It has also been found[145] 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."*

12.131. It is considered that granting consent would not be contrary to this policy.

[145] Page 68, Landscape and Natural Character Effects Assessment (Attachment Seven)

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

12.132. 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, 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.

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

12.133. A 35-year consent period is being sought, and it is considered consent can be granted for this term for the following reasons:

- MBL 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*.

- MBL has invested in a modern extraction vessel (the *William Fraser*) which was specifically designed for sand extraction on the East Coast of New Zealand. MBL has also invested in the existing off-loading facilities at various Ports and has a trucking fleet for the distribution of sand to customers.

- 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. MBL 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.

- There are 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.

- 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.

- Extensive iwi consultation has been undertaken. Although there is not a singular viewpoint on the potential cultural effects, the recommended conditions have been refined to reflect feedback from Te Parawhau ki Tai to address specific issues and potential effects and to ensure they can have a long-term role in the project. It may evolve during the processing of the application that the Ngātiwai Trust Board and Patuharakeke Te Iwi Trust also seek to be involved in a similar manner.

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

12.134. 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

12.135. 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), (g) 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.

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

12.136. This project will be an efficient use of the Te Ākau Bream Bay sand resource. It is estimated that over 95% of the sand extracted will be less than 2 mm in size and retained as sand product and the sand not taken is immediately returned via moon pools to the seafloor. That limits the size of any plume and limits the area required for the sand extraction process.

12.137. 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.

12.138. 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.

12.139. 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 and all sand loaded onto the *William Fraser* and exported from the site will be able to be utilised.

12.140. 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

12.141. 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

Assessment[146] and the Assessment of Effects on Surf Breaks[147]. 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.

12.142. However, as detailed earlier, an overall precautionary approach has been taken in respect to the site selection, sand extraction volume and the recommended monitoring (and their supporting conditions). The proposal is therefore consistent with this policy.

Assessment in the Te Parawhau ki Tai CIA

12.143. The Te Parawhau ki Tai CIA assesses the project in terms of the NRPS[148]. This assessment concludes:

"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."

12.144. This CIA then makes a number of recommendations in respect to partnership, cultural integration, taiao monitoring and restoration, taonga species and biosecurity, capacity building and resourcing and reporting and transparency and where these recommendations have been adopted in the recommended conditions or management plans.

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.

[146] Section 5.11, Coastal Process Effects Assessment (Attachment Eight)
[147] Section 7.1, Assessment of Effects on Surf Breaks (Attachment Seventeen)
[148] Section 5.8, Te Parawhau ki Tai CIA (Attachment Twenty-Two)

Assessment

12.145. 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 moonpools into the sea (below the keel line).

12.146. 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.

12.147. 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.

12.148. The Water Quality Assessment of Environment Effects[149] 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, 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 is considered to be Negligible."

12.149. The sand to be extracted is not contaminated. Disturbance of the sand during extraction will therefore not release contaminants into the water column.

12.150. It is concluded that granting consent would not be contrary to this objective. However, it is recognised that the CIAs identify that there may be effects on cultural values based on their current understanding of the project.

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

12.151. 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.

[149] Section 8, Water Quality Assessment of Environmental Effects (Attachment Nine)

12.152. As assessed under the RPS Objective 3.4, the project 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 Effects[150] 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."

12.153. 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 DOC and the DOT 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.

12.154. The *William Fraser* operates under a BMP, which reduces the risk of new marine pests being introduced into the area.

12.155. It is considered that granting consent would not be contrary to this objective.

F.1.5 Enabling Economic Well-being

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

12.156. The project 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 sand. During the life of the consent, a small proportion of the sand resource is likely to be delivered to Port Nikau for direct use in the Northland market.

12.157. 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.

12.158. Furthermore, although Auckland is the main market, the development of infrastructure within Auckland (including State Highway connections to Northland) can have national benefits including for Northland. Likewise, future infrastructure and development projects are likely to use components such as precast pipes and bridge segments for example which have been manufactured in Auckland and contain marine sands.

12.159. The cultural contribution as proposed in recommended Condition 44 and the community contribution as proposed in recommended Condition 45 will have direct economic benefits to the Northland community if the contributions are accepted. Likewise, any substantive relationship agreements (such as that currently being finalised with Te Parawhau ki Tai) will also have direct economic (and potentially social and cultural well-being) benefits for the immediate community.

[150] Section 8.5, Assessment of Ecological Effects (Attachment Twelve)

12.160. 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.

Assessment

12.161. The project will not require the establishment of permanent structures within Te Ākau Bream Bay or exclusive occupation of the coastal marine area. The *William Fraser* 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.

12.162. The project will 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

12.163. It is understood that the Panel can seek comments directly from tangata whenua representatives as part of their decision-making process. Feedback received by the Panel may assist in further refining the recommended conditions.

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

12.164. 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 it is considered that the project will not be an inappropriate use of this part of Te Ākau Bream Bay.

12.165. In particular, the project 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.
- Adversely impact on any outstanding natural landscapes in the coastal marina area.
- Impact on any historic heritage in the CMA.

12.166. Te Parawhau ki Tai support the project subject to certain commitments. The Ngātiwai Trust Board and the Patuharakeke Te Iwi Trust Board CIAs identify that there may be effects on cultural values based on their current understanding of the project and they do not consider that this project is appropriate within Te Ākau Bream Bay.

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

12.167. Three CIAs have been prepared as part of this application and have been addressed elsewhere in this report. The Te Parawhau ki Tai CIA specifically assesses the project in terms of the PRPN[151] and makes specific recommendations and how they have been addressed.

[151] Section 5.10, Te Parawhau ki Tai CIA (Attachment Twenty-Two)

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

12.168. As outlined above, three CIAs have been prepared and form part of this application.

12.169. An assessment against the two iwi management plans relevant to this area has been undertaken in Section 13.

12.170. MBL has consulted directly with the Ngātiwai Trust Board, Te Parawhau Ki Tai and Patuharakeke Te Iwi Trust Board. The consultation register detailing the consultation undertaken is included in Attachment Five. The key outcomes of this consultation are addressed in Section 14. MBL is intending to continue this consultation through the consenting process.

12.171. As a result of feedback, and in particular from Te Parawhau ki Tai:

- The MMMP has been refined, including adding a stranding response section.
- The EMMP has been refined to include the opportunity for Te Parawhau ki Tai to review and comment on any proposed changes.
- Te Parawhau ki Tai is to prepare a Mahere Tikanga Management Plan
- A separate pre-start hui with iwi and hapū representative is proposed.

- Te Parawhau ki Tai will be given the opportunity to review and provides comments on the draft Future PSEAR's and SEMR's.

- Marine mammal Daily Records are to be provided to Patuharakeke Te Iwi Trust and Te Parawhau ki Tai.

- A cultural contribution is to be paid to Te Parawhau ki Tai, Ngātiwai Trust Board and Patuharakeke Te Iwi Trust Board (if they choose to accept such a contribution). If accepted, Patuharakeke Te Iwi Trust Board has the option to utilise this contribution for their on-going marine mammal monitoring.

- A substantive relationship agreement is being entered into with Te Parawhau ki Tai.

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.

Assessment

12.172. The Panel in making their decision will need to consider the three CIAs provided and any subsequent feedback sought and received by the Panel from the Ngātiwai Trust Board, Te Parawhau Ki Tai and Patuharakeke Te Iwi Trust Board. From a Te Ao Māori perspective, there is not a singular view as to the degree of adverse effects.

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

12.173. In considering D.1.5, consideration should be given to the three CIAs prepared. These outline the cultural values of Te Ākau Bream Bay. Te Ākau Bream Bay has significant spiritual and cultural significance to Iwi.

12.174. There is not a singular Te Ao Māori view on the nature and level of effects that will arise from the project. Furthermore, these may evolve through the consenting process as knowledge increases and potential conditions refined. At this stage, and based on the CIAs, it can be stated that Te Parawhau ki Tai can support the project with certain commitments and that the Ngātiwai Trust Board and Patuharakeke Te Iwi Trust Board are in opposition to the project.

12.175. In terms of visual and landscape effects on the listed sites of cultural significance to Māori, it has been found[152]:

"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."

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

12.176. 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 but also in terms of the s104 assessment under the RMA.

12.177. 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).

12.178. The acceptance of community and cultural contributions (as proposed under recommended Conditions 44 and 45) would have direct economic benefits to the immediate community. Likewise, any substantive relationship agreements would also have direct local economic benefits and could assist in enhancing Māori development (dependant on the final scope of such an agreement).

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

12.179. 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

[152] Page 69, Landscape and Natural Character Effects Assessment (Attachment Seven)

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).

12.180. 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.

12.181. The EMMP (Attachment Twenty-Nine) outlines the monitoring to be undertaken and the required outputs from this monitoring including updated ASEA's to avoid areas of sand extraction in cells where certain criteria are not achieved.

12.182. 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.2.13 Marine and freshwater pest management

Manage the adverse effects from marine pests, and pests within the beds of freshwater bodies, by:

1) recognising that the introduction or spreading of pests within the coastal marine area and freshwater bodies could have significant and irreversible adverse effects on Northland's environment, and

2) recognising that the main risk of introducing and spreading pests is from the movement of vessels, structures, equipment, materials, and aquaculture livestock, and

3) decision-makers applying the precautionary principle when there is scientific uncertainty as to the extent of effects from the introduction or spread of pests, and

4) imposing conditions on resource consents requiring that best practice measures are implemented so that risk of introducing or spreading pests is effectively managed as a result of the consented activity.

Assessment

12.183. The *William Fraser* has an approved BMP. 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 and addresses biofouling management.

12.184. Recommended condition 14 requires that there is a BMP at all times.

12.185. It is considered that the requirement for an implementation of the BMP gives effect to this policy.

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

12.186. 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.

12.187. This consent period is being sought for the following reasons:

- MBL has made a substantial investment in the scientific investigations required to identify the sand extraction area and, in the design and purchase of the *William Fraser*. Investments have also been made in onshore loading facilities and a trucking fleet for the distribution of sand to customers.

- 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 (including those of regional and national benefit). 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. MBL 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.

- Extensive iwi consultation has been undertaken. Although there is not a singular viewpoint on the potential cultural effects, the recommended conditions have been refined to reflect feedback from Te Parawhau ki Tai to address specific issues and potential effects and to ensure they can have a long-term role in the project. It may evolve during the processing of the application that the Ngātiwai Trust Board and Patuharakeke Te Iwi Trust Board also seek to be involved in a similar manner.

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

12.188. 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

12.189. As outlined earlier in this application, the Landscape and Natural Character Effects Assessment (Attachment Seven) 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. However, it is recognised that the CIAs identify potential effects when considered through the Te Ao Māori lens.

12.190. No specific significant adverse effects have been identified which need to be further addressed through avoidance or mitigation.

12.191. 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

e) maintaining the continuity of natural processes and systems contributing to the integrity of ecological areas, and

f) 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

12.192. As assessed under the RPS Objective 3.4, the project 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.

12.193. The Assessment of Ecological Effects[153] 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 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."

12.194. 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

[153] Section 8.5, Assessment of Ecological Effects (Attachment Twelve)

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

12.195. The effects on the beach environment (in that area above MHWS) in terms of coastal processes has been determined to be negligible[154]. 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.

12.196. No further consideration is 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

12.197. Although no potential significant effects on indigenous biodiversity have been identified, 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.

[154] Section 5.10, Coastal Processes Effects Assessment (Attachment Eight)

- Sand extraction methodology.

D.4.1 Maintaining overall water quality

When considering an application for a resource consent to discharge a contaminant into water or onto or into land where it may enter water or onto land where it may enter water:

1) ensure that the quality of fresh and coastal water is at least maintained, and

2) where a water quality standard in H.3 Water quality standards and guidelines is currently met:

a) ensure that the quality of water in a river, lake or the coastal marine area will continue to meet the standards in H.3 Water quality standards and guidelines; and

b) consider whether any improvements to water quality are required in order to achieve F.1.2 Water quality;

3) where a water quality standard in H.3 Water quality standards and guidelines is currently exceeded, ensure that any resource consent for a new discharge will not, or is not likely to, cause or contribute to a further exceedance of a water quality standard in H.3 Water quality standards and guidelines;

4) where a water quality standard in H.3 Water quality standards and guidelines is currently exceeded and the exceedance of the water quality standard is caused or contributed to by an existing activity for which a replacement resource consent is being considered, ensure any replacement resource consent granted for the existing discharge includes a condition(s) that:

a) requires the quality of the discharge to be improved over the term of the consent to reduce the contribution of the discharge to the exceedance of the water quality standard in H.3 Water quality standards and guidelines; and

b) sets out a series of time bound steps, demonstrating how the activity will be managed to achieve the water quality improvements required by (4)(a).

5) ensure that the discharge will not cause an acute toxic adverse effect within the zone of reasonable mixing

6) where a discharge will, or is likely to, cause or contribute to:

a) an exceedance of the coastal sediment quality guidelines in H.3.4 Coastal sediment quality guidelines, or

b) a transitory exceedance of the toxicants, metals and metalloids standard in Table 22: Water quality standards for ecosystem health in rivers, and the activity is associated with the establishment, operation, maintenance or upgrade of Regionally Significant Infrastructure, determine whether higher levels of contaminants in the particular location affected by the discharge can be provided for while still achieving F.1.2 Water quality, and set appropriate levels of contaminants in accordance with best practice methodology to safeguard the ecosystem values present at the location affected by the discharge; and

7) where existing water quality is unknown, or the effect of a discharge on water quality is unknown, the activity must be managed using a precautionary approach, which may include adaptive management.

Assessment

12.198. The Water Quality Assessment of Environmental Effects (Attachment Nine) identifies that the existing water quality is considered to be of high value. The Assessment has concluded that the overall level of effects on water quality parameters from the discharge (and associated plume) will be negligible and it is highly unlikely that the coastal water quality standards in Policy H.3.3 will be breached. The discharge will not cause an acute toxic adverse effect,

12.199. This is not a situation where the existing water quality, the current sand quality or the nature or effect of the discharge are unknown.

12.200. It is considered that the proposed discharge is consistent with this policy.

D.4.4 Zone of Reasonable Mixing

When determining what constitutes the zone of reasonable mixing for a discharge of a contaminant into water, or onto or into land in circumstances which may result in that contaminant (or any other contaminant emanating as a result of a natural process from that contaminant) entering water, have regard to:

1) using the smallest zone necessary to achieve the required water quality in the receiving waters as determined under D.4.1 Maintaining overall water quality, and

2) ensuring that within the mixing zone contaminant concentrations and levels of dissolved oxygen will not cause acute toxicity effects on aquatic ecosystems.

Assessment

12.201. Based on an analysis of the results of field trials of the extraction plume at the former Pākiri sand extraction site, turbidity levels were shown to be 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. It is expected that the plume generated by the *William Fraser* at Te Ākau Bream Bay will be very similar. The Water Quality Assessment of Environmental Effects finds[155]:

"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, 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 on water quality in Te Ākau Bream Bay is considered to be Negligible."

12.202. In terms of ecological effects from the plume, the Assessment of Ecological Effects[156] finds that the level of effects from turbidity and suspended sediment on coastal vegetation, benthic macroalge, benthic fauna and benthic fish will be negligible.

12.203. Recommended Condition 31 requires that the turbidity level within the upper 2-5 m of the water column at approximately 500 m from the William Fraser in the direction of the plume shall not be more than 2 NTU higher than the greater of either of the two background measurements required to be undertaken.

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

12.204. The Coastal Process Effects Assessment has found that the erosion risk on beaches from the sand extraction activity is negligible[157] 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 environment. This is confirmed by analysing the inner and outer DoC and the DoT, which indicate the

[155] Section 10, Water Quality Assessment of Environmental Effects (Appendix Nine)
[156] Table 13, Assessment of Ecological Effects (Attachment Twelve)
[157] Section 5.10, Coastal Process Effects Assessment (Attachment Eight).

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."

12.205. The Assessment then specifically considers Langs Beach, Waipū Cove Beach, Uretiti Beach, Ruakākā Beach and Mair Bank. Based on this Assessment, the project will not cause long-term erosion and there should be no risk, or damage, to any authorised structure.

12.206. The project 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

12.207. The sand extraction activities will comply with the relevant PRNP noise limits by a significant margin[158]. It is considered that proposal incorporates best practical options to manage noise and noise levels will not exceed a reasonable noise level.

12.208. Clause 2) is not relevant to this proposal.

12.209. 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.

12.210. It is concluded that the proposal is consistent with this Policy.

[158] Section 8, Assessment of Airborne Noise Effects (Attachment Ten).

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

12.211. An Assessment of Effects on Surf Breaks has been completed and forms part of this application. The effects of surf breaks will be less than minor to negligible[159]. The project will not affect access to surf breaks.

12.212. 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

12.213. The impact on the surfabilty 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 extraction[160].

12.214. 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

[159] Section 7, Assessment of Effects on Surf Breaks (Attachment Seventeen)
[160] Section 7, Assessment of Effects on Surf Breaks (Attachment Seventeen)

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.

12.215. It is therefore considered that the application has adequately considered the effects on the mapped surf breaks.

Operative Regional Coastal Plan

12.216. 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.

12.217. Under the Regional Coastal Plan, the sand extraction area is within the Marine 2 (Conservation) Management Area.

12.218. The Te Parawhau ki Tai CIA specifically addresses this Plan[161].

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

12.219. 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 elsewhere[162].

12.220. As outlined earlier, the effects on water quality have been assessed as being negligible[163].

12.221. As outlined earlier, any natural character effects generated would typically be of a low order[164].

12.222. There will be no effects on air quality.

[161] Section 5.9, Te Parawhau ki Tai CIA (Attachment Twenty-Two)
[162] Table 5.2, Coastal Process Effects Assessment (Attachment Eight)
[163] Section 8, Water Quality Assessment of Environmental Effects (Attachment Nine)
[164] Section 12, Landscape and Natural Character Effects Assessment (Attachment Seven)

12.223. In respect to cultural values, these have been addressed in the CIAs. No specific listed sites will be impacted upon.

12.224. 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.

12.225. In conclusion, granting consent would not be contrary to this objective or its supporting policy although it is recognised that at the current time while Te Parawhau ki Tai are supportive of the project, the Ngātiwai Trust Board and Patuharakeke Te Iwi Trust Board consider that the application should be declined based on their current understanding.

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*

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

12.226. There will be no effects from the project 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 RMA[165].

12.227. 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

12.228. The proposed sand extraction area is not within an area identified as being significant indigenous vegetation and the project will not impact on any such areas.

12.229. Clauses B to F are not relevant to this proposal.

12.230. 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.

[165] Section 12. Landscape and Natural Character Effects Assessment (Attachment Seven)

Assessment

12.231. 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. This category is applied to areas to be managed to conserve ecological, cultural, and amenity values[166].

12.232. The various assessments undertaken for this project have not identified any actual or potential effects on any significant habitats in the vicinity to such a magnitude or level of effects where the application should be declined.

12.233. 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

12.234. The project will 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

12.235. MBL recognises the long and strong spiritual and cultural relationship of Ngātiwai, Te Parawhau and Patuharakeke with Te Ākau Bream Bay and consultation was commenced at a very early stage of the project investigation.

12.236. Three CIAs have been prepared. There is not a singular view from a Te Ao Māori perspective on the nature and level of effects. Issues such as effects on kaimona and shellfish beds have been raised. Te Parawhau ki Tai are supportive of the project with certain commitments (including conditions of consent).

12.237. It is considered that through the site selection process (including the completed PSEAR), taking into account the extraction methodology and with the implementation of consent conditions including those relating to the plume, adverse effects on seafood resources (including those used by local iwi) will not be impacted upon.

12.238. It is considered that the proposal is not contrary to this objective or its supporting policy.

[166] Page 39, Regional Coastal Plan

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

12.239. The need for the discharge of seawater, oversized material and fine material cannot be avoided and it has been assessed[167] that any adverse effects on water quality from this discharge will be negligible. Water quality is therefore being maintained. No potential cumulative water quality effects have been identified.

12.240. The project 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

12.241. The *William Fraser* has a Garbage Management Plan (Attachment Thirty-Two), and recommended 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.

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.

[167] Section 8, Water Quality Assessment of Environmental Effects (Attachment Nine)

Assessment

12.242. This objective and supporting policies directly recognises that the extraction of sand should be provided for.

12.243. 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.

12.244. Although sand replenishment is not occurring, vibracore samples in the extraction site has confirmed the significant extent of the sand resource in this location. Within the wider sand resource area, there is an estimated minimum sand resource volume of at least 124,110,000 m^3 which is likely to be a conservative assessment[168].

12.245. The sediment sources are addressed in the Coastal Process Effects Assessment[169] 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 when compared to sand body generated by historic sources (Nichol, 2002). 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 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."*

12.246. 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 continues to be replenished by the same source supply they were formed under.

12.247. 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.

12.248. As concluded in this assessment of effects the level of effects will range from negligible to minor (in terms of RMA terminology). In respect to cultural values, a range of potential issues and effects have been identified. There is not a singular Te Ao Māori viewpoint on the significance of the effects. Te Parawhau ki Tai are supportive of the project with certain commitments. Based on their current understanding both the Ngātiwai Trust Board and the Patuharakeke Te Iwi Trust Board consider potential adverse effects are so significant that the application should be declined.

12.249. Although the project is not consistent with Policy 23.4.2 (as sediment replenishment is not occurring within the sand extraction area), it is considered that the project is consistent with Policy 23.4.3.

12.250. A precautionary approach has been taken in terms of the site selection, extraction volumes and the proposed monitoring (and supporting conditions).

[168] Section 5.3, Coastal Process Effects Assessment (Attachment Eight)
[169] Section 3.5.1, Coastal Process Effects Assessment (Attachment Eight)

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

12.251. The existing natural, cultural and amenity values in Te Ākau Bream Bay will be maintained.

12.252. A precautionary approach towards critical aspects of the project and application has been undertaken and an adaptive management approach taken towards the proposed consent conditions, management plans and monitoring.

12.253. 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

12.254. It is considered that the project is compatible in relation to the character, heritage and amenity values of the adjoining coastal environment due to the nature of the project and the level and extent of effects which are expected.

Whangārei Operative District Plan

12.255. 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 project 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).

12.256. The following assessment identifies the key objectives and policies and then assesses the potential effects of the project 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

12.257. The Coastal Process Effects Assessment (Attachment Eight) 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 above MHWS have been identified.

12.258. The Potential Effects on Seabirds and Shorebirds (Attachment Thirteen) has specifically addressed the loss of terrestrial breeding habitat and concludes in respect to this[170]:

"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. In over 70 years of extraction at Pākiri, MBL have never had an interaction event with tara iti fairy tern while extracting sand, 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), well within (shoreward of) the 5.6 km distance, but it is possible that birds venture offshore from time to time. Habitat use, the extent to which tara iti fairy terns utilise specific foraging zones and distributions of foraging trip distances remain to be fully quantified, but 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."

12.259. It is concluded that the project 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.

[170] Section 4.3, Potential Effects on Seabirds and Shorebirds (Attachment Thirteen)

Assessment

12.260. The Landscape and Natural Character Effects Assessment[171] 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

12.261. The project is an infrastructure supporting activity under the NPS-I. The NPS-I provides clear direction that decision makers must recognise and provide for the role of projects such as this. In this case, granting consent would allow for the efficient extraction of a marine sand resource required for the production of concrete (and in particular, high-strength concrete) which is vital for the development of infrastructure activities.

12.262. It is considered that the project 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.

12.263. The NPSIB is of limited relevance and only in respect to highly mobile fauna. It has been determined that the project is not contrary to the NPSIB in respect to those birds listed as highly mobile fauna in Appendix 2 of the NPSIB.

12.264. In terms of the RPS, it is considered that the project and granting consent would either give effect to, is consistent with or is not contrary to the relevant objectives and policies.

12.265. There are a significant number of objectives and policies in the PRPN of relevance to this project. 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 project 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.

12.266. Consideration is still required to be given to the Operative Regional Coastal Plan at the time of the preparation of this application. The project 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 project 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.

12.267. In respect to these statements and plans, in terms of cultural values and effects, it is recognised from the CIAs received that there are a range of issues and effects when the project is assessed in terms of Te Ao Māori. There is not a singular view and in Te Ao Māori, viewpoints evolve over time. Therefore, it may be considered by some parties that in terms of Te Ao Māori, the project is contrary to certain objectives and policies. If this viewpoint was formed, then this does not prohibit the granting of consent and needs to be considered within the context of the purpose of the Act.

[171] Page 68, Landscape and Natural Character Effects Assessment (Attachment Seven)

12.268. The sand extraction site is outside the territorial boundary of WDC. However, it is considered appropriate to consider whether the project 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 project and the granting of consent would not be contrary to them.

13. Assessment under Iwi Management Plans

13.1. This section provides the analysis of the application and project 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).

13.3. It is understood that the Te Uriroroi Hapū Environmental Management Plan/Whatitiri Hapū Environmental Plan does not extend into the coastal marine area along the East Coast and, furthermore, it is not referenced in any of the CIAs received. No consideration of this Plan has therefore been given.

13.4. The Ngātiwai Trust Board CIA refers to the Ngātiwai Environmental Management Plan. It is understood that the Ngātiwai Environmental Management Plan referred to is the Te Iwi o Ngātiwai Iwi Environmental Policy Document (2007).

13.5. The relevant objectives and policies listed in these documents are provided in italics followed by an assessment which has been informed in part by the CIAs.

Te Iwi O Ngātiwai Iwi Environmental Policy Document (2007)

13.6. The Ngātiwai Trust Board CIA does not provide a detailed assessment of the proposal against this Policy Document. Rather it provides the following assessment:

"Applying NEMP to the MBL proposal, Ngātiwai concludes that industrial seabed extraction is incompatible with kaitiakitanga, undermines taonga protection, accelerates coastal and ecological risks, and fails to uphold Te Tiriti commitments."

Minerals Objectives for Ngatiwai 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.*

Minerals Policies for Ngatiwai 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

13.7. The Ngātiwai Trust Board CIA has identified a number of matters they consider to be potential adverse effects arising from the proposal. The CIA does not identify the sand extraction area as being within a wāhi tapu area.

13.8. In the event that consent is granted, the CIA lists in Section 9 a recommended monitoring and compliance framework. As outlined earlier, a number of the matters listed are already addressed in the management plans and/or recommended conditions.

13.9. It is expected that the Panel will seek feedback from the Ngātiwai Trust Board, and this will provide an opportunity for the Trust Board to provide comments on the recommended conditions. This may further refine how the Trust Board will be involved in future review of reports for example or assist with refining monitoring requirements. A cultural contribution condition (Condition 44) has been proposed which would provide the funding for the ongoing involvement of the Trust Board in any iwi led monitoring it may wish to undertake and in the review of reports for example. MBL remains open to entering some form of substantive relationship agreement if the Trust Board seeks this.

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

13.10. The potential effects from the sediment plume has been identified in the Ngātiwai Trust Board CIA has having a high likelihood and high impact on Mauri/values.

13.11. The Assessment of Water Quality Effects (Attachment Nine) does not conclude that significant effects will arise. MBL is recommending that a condition setting the maximum turbidity level in the plume be set (Condition 31) and Section 6.9 of the EMMP sets out the plume monitoring requirements to confirm compliance with Condition 31.

13.12. The cultural contributions proposed in Condition 44, could be used by the Ngātiwai Trust Board if they consider that further iwi led monitoring of the plume is required.

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

13.13. The Ngātiwai Trust Board CIA has identified potential high impact on Mauri/values due to benthic habitat destruction.

13.14. A PSEAR for the sand extraction area has been undertaken (and forms part of this application) and an on-going monitoring programme is proposed and outlined in the EMMP. It is considered that this in part meets the mitigation/relief sought in the CIA. Furthermore, recommended Condition 20 ensures that sand extraction cannot occur in areas of sensitive benthic communities.

13.15. It is expected that the Panel will seek feedback from the Ngātiwai Trust Board, and this will provide an opportunity for the Trust Board to provide comments on the recommended conditions. This may further refine how the Trust Board will be involved in future review of reports for example or assist with refining monitoring requirements. A cultural contribution condition (Condition 44) has been proposed which would provide the funding for the ongoing involvement of the Trust Board in any iwi led monitoring it may wish to undertake and in the review of monitoring reports for example.

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

13.16. The Ngātiwai Trust Board is 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. Consultation has been undertaken with the Ngātiwai Trust Board, who have prepared a CIA. In addition, MBL has consulted extensively with Te Parawhau ki Tai and the Patuharakeke Te Iwi Trust Board. Attachment Five outlines the consultation undertaken to date

13.17. As outlined above, it is expected that the Panel will seek feedback from the Ngātiwai Trust Board and Condition 44 is proposed to provide a funding mechanism for the continual involvement of the iwi and hapū representatives in monitoring and review of monitoring reports for example.

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

13.18. The Ngātiwai Trust Board CIA does not identify any specific areas within the proposed sand extraction site which are of customary value and should be protected. The CIA makes a generic comment that Ngātiwai supports collective efforts to protect Bream Bay, but it is unclear as to the form of protection being sought.

Patuharakeke Hapū Environmental Management Plan 2014

13.19. The Patuharakeke Te Iwi Trust Board draft CIA lists in Appendix A the relevant issues, objectives and policies of the Patuharakeke Hapū Environmental Management Plan 2014. A detailed assessment against each of these is not provided in the draft CIA.

2.7 Objectives

a) Patuharakeke 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) Patuharakeke will have a partnership role in resource management planning and decision-making within our rohe.

Assessment

13.20. MBL initiated consultation with Patuharakeke at the very early stages of this project investigation. MBL recognises that it takes both time and effort to establish relationships, and the final form of any formal relationship may not be known until after a decision on the applications. In addition to proposing a cultural contribution condition to enable the Patuharakeke Te Iwi Trust Board to undertake its kaitiakitanga role, MBL remains open to developing a substantive relationship agreement with the Patuharakeke Te Iwi Trust Board.

13.21. Although the draft CIA does not have a positive recommendation, MBL recognises the time and effort undertaken by the Patuharakeke Te Iwi Trust Board in working with MBL to establish a meaningful relationship.

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

13.22. The long and strong spiritual and cultural relationship between Patuharakeke and Te Ākau Bream Bay is recognised. It is expected that the Panel will seek feedback from the Patuharakeke Te Iwi Trust Board, and this may further refine through conditions the role of Patuharakeke as Kaitiaki alongside Te Parawhau ki Tai and the Ngātiwai Trust Board.

13.23. 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 found[172]:

"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

13.24. The Patuharakeke Te Iwi Trust Board draft CIA identifies what Patuharakeke considers may be adverse effects. It is currently unclear whether the recommended conditions (with potential modifications) address in part or in full the concerns raised in the draft CIA.

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.

[172] Page 67, Landscape and Natural Character Effects Assessment (Attachment Seven)

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

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

13.25. The Patuharakeke Te Iwi Trust Board draft CIA identifies what Patuharakeke considers may be adverse effects. It is currently unclear whether the recommended conditions (with potential modifications) address in part or in full the concerns raised in the draft CIA.

13.26. Through the consultation process with various parties the potential effects of the plume were identified. As an outcome of that a specific plume condition has now been recommended and the requirement for plume monitoring outlined in Section 6.9 the EMMP.

13.27. It is confirmed that there will be no discharge of sewage, bilge water or disposal of rubbish from the *William Fraser* while within or transiting to and from Te Ākau Bream Bay.

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.

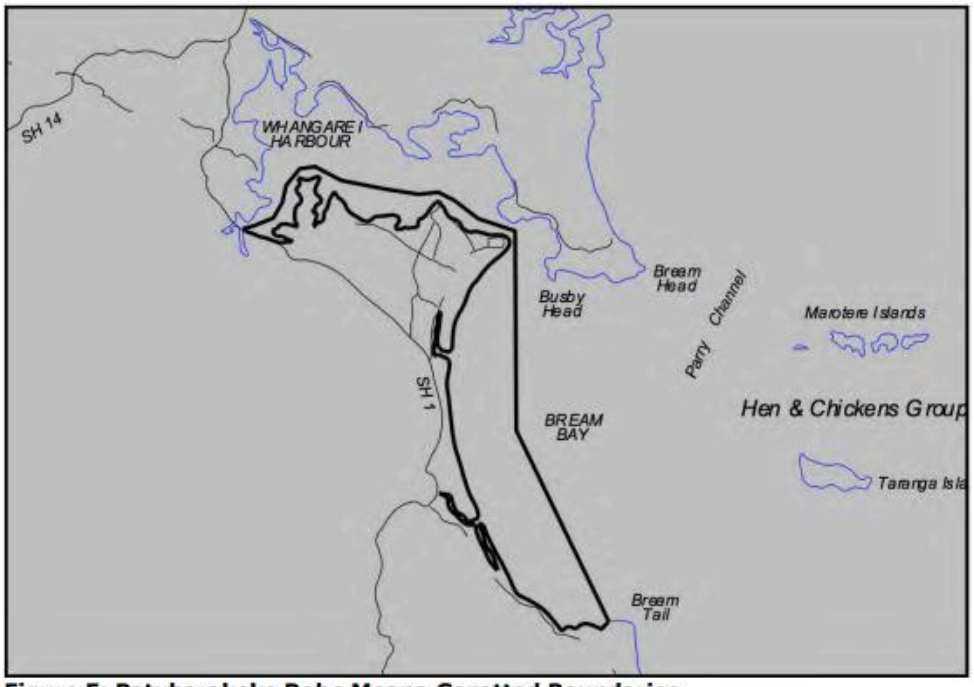

Figure 5: Patuharakeke Rohe Moana Gazetted Boundaries

Figure Fifteen: Figure Five from the Patuharakeke Hapū Environmental Management Plan 2014

Assessment

13.28. The sand extraction area is outside, and just east, of the Patuharakeke gazetted Rohe Moana shown in the Figure above. MBL engaged at a very early stage of the project investigation with the Patuharakeke Te Iwi Trust Board given the sand extraction area is eastwards of the identified Rohe Moana area and within New Zealand's Exclusive Economic Zone.

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

13.29. The cultural, spiritual, historic and traditional association of Patuharakeke with marine mammals is recognised. A Marine Mammal Management Plan has been prepared and shared with the Ngātiwai Trust Board, the Patuharakeke Te Iwi Trust Board and Te Parawhau ki Tai for review and feedback. Refinements to the MMMP have subsequently been made including a section on stranding response.

13.30. Te Parawhau ki Tai have offered to prepare a Mahere Tikanga Plan which may include additional detail on responses to marine mammal strandings.

Statutory Acknowledgement Areas

13.31. It is confirmed that the sand extraction site is not within any statutory acknowledgement areas (as at 8 January 2025).

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 mātaitai 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, paragraphs (d), (e) and (f) are not relevant to this proposal.

14.4. In relation to s29(1)(a) and s11(1)(a), (b) and (c), Attachment Five includes the Consultation Summary which sets out the engagement undertaken by MBL prior to and during the preparation of the application and key documentation. Given the extensive nature of the consultation undertaken, if any specific documentation (i.e. responses or replies) relating to this consultation is required then this can be provided.

14.5. Attachment Five is split into the following sections:

A(i) – Wildlife Approval Application – Pre-lodgement consultation.

A(ii) – Resource Consent Application - Pre-lodgement consultation with NRC and DOC.

B – Pre-lodgement consultation with other parties.

C - Overview of iwi engagement.

D – MACA applicants consulted.

Key Outcomes of Consultation

14.6. 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 Consultation Summary (Attachment Five).

Relevant Local Authority (NRC)

14.7. MBL commenced consultation with NRC in 2024. A summary of this consultation is included in Attachment Five A. Included in the Attachment is the tabulated response (dated 18 December 2025) to the various matters raised by NRC and in particular to the reviews prepared for NRC on the following reports:

- Bioresearches (2025). Te Ākau Bream Bay Sand Extraction Project, Assessment of Ecological Effects, Report for McCallum Bros Limited. June 2025. Version 6. pp 99.

- Bioresearches (2024). 2023 Initial Sand Extraction Assessment, Temporary Pakiri Offshore Sand Area. Report for McCallum Bros Limited. March 2025. Version 5. pp 105.

- Tonkin & Taylor (2025) Te Ākau Bream Bay Sand Extraction: Coastal Process Effects Assessm ent. Prepared for McCallum Bros Ltd. June 2025. Version 3.0. pp 103.

14.8. A number of minor refinements were made to the specialist reports as a result of the feedback from NRC (and the tabulated response identifies where a number of these changes have been made).

14.9. The NRC also provided feedback on an initial set of draft recommended conditions and then a further updated set of recommended conditions. NRC identified a number of conditions where it considered that the wording could be refined and/or improved or where a standard NRC condition was preferred. Given that the NRC will be the territorial authority responsible for monitoring and enforcing the consent conditions, it was considered important that there was general agreement in the recommended conditions being put forward in the application if possible. It is expected that NRC will provide feedback on the recommended conditions to the Panel which may further refine certain conditions.

14.10. It is understood that NRC has undertaken an initial review of the EMMP and consider it to be comprehensive. No specific feedback or requests for changes to the various management plans have been received.

14.11. Separate consultation has been undertaken with the NRC Harbourmaster, and this is outlined in Attachment Five B. The Harbourmasters Department provided the Navigation Safety Assessment (Appendix Nineteen).

Relevant Iwi Authorities, Hapū and Treaty Settlement Entities

Ngātiwai Trust Board

14.12. As detailed in the Consultation Summary (Attachment Five C), there have been a series of meetings between MBL and the Ngātiwai Trust Board since December 2023. Initially the Ngātiwai Trust Board deferred to hapū but in mid-2025 confirmed to MBL their interest in being consulted separately and preparing a CIA. This CIA was subsequently commissioned and received in December 2025.

14.13. Draft specialist reports, the draft application and assessment of effects on the environment and draft conditions and management plans were provided to the Ngātiwai Trust Board.

14.14. Consultation remains on-going with the Ngātiwai Trust Board.

Patuharakeke Te Iwi Trust Board

14.15. As detailed in the Consultation Summary (Attachment Five C), there has been a series of meetings between MBL and the Patuharakeke Te Iwi Board since about February 2024. These often occurred on a weekly or fortnightly basis.

14.16. The Patuharakeke Te Iwi Trust Board hosted a cultural induction hui for the MBL team (including most specialists) on the 15th of May 2024. MBL also attended a hapū hui at the Takahiwai Marae on the 8th of November 2025. The Patuharakeke Te Iwi Trust Board commissioned Whetū Consultancy to prepare their CIA.

14.17. The Patuharakeke Te Iwi Trust Board were provided by MBL all specialist reports, the draft Applications and AEE and draft conditions and management plans. In October 2025, the Patuharakeke Te Iwi Trust Board provided feedback on the draft Assessment of Effect on Coastal Processes, Marine Mammals Impact Assessment and Assessment of Fish and Fisheries, which MBL subsequently responded to in November 2025.

14.18. In December 2025 the current draft version of the CIA referred to in this application was provided to MBL.

14.19. Consultation remains on-going with the Patuharakeke Te Iwi Trust Board.

Te Pouwhenua o Tiakiriri Kukupa Trust and Te Parawhau ki Tai

14.20. As detailed in the Consultation Summary (Attachment Five C), there has been a series of meetings between MBL and the Te Pouwhenua o Tiakiriri Kukupa Trust/Te Parawhau ki Tai since March 2024.

14.21. The draft specialist reports, draft conditions and management plans were provided to the Te Pouwhenua o Tiakiriri Kukupa Trust. MBL were invited to hapū led huis on the 26th of July 2025, 16th of August 2025 and the 4th of October 2025 to present and to answer questions from Hapū members, which MBL representatives and various specialists attended.

14.22. In early December 2025, Te Parawhau ki Tai provided MBL a draft CIA. Following a subsequent Hui, the draft CIA was attached, and a final CIA has been provided and is referenced in this report.

14.23. A Te Hononga Relationship Agreement was entered into on the 14/09/2025. A draft substantive relationship agreement has been developed between MBL and Te Parawhau ki Tai and is currently being finalised.

14.24. Consultation remains on-going with Te Parawhau ki Tai.

Ngāti Tū ki Ngapūhi

14.25. The consultation undertaken with Ngāti Tū ki Ngapūhi is outlined in the Consultation Summary (Attachment Five C).

14.26. 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 re-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. In October 2025, Ngāti Tū confirmed they were working on a response which would be supplied to MBL by the 3rd of November 2025. This has not been received to date.

Ngāti Kahu

14.27. The consultation undertaken with Ngāti Kahu is outlined in the Consultation Summary (Attachment Five C).

14.28. 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 2025 where it was confirmed that the matter would be discussed with iwi and hapū before a collective response was sent. No response has been received to date.

Applicants for Customary Marine Title

14.29. This is addressed below under Consultation under the MACA.

Department Of Conservation

14.30. MBL commenced consultation with DOC in April 2024. A summary of this consultation is included in Attachment Five A. Included in the Attachment is the tabulated response (dated 18 December 2025) to the various matters raised by DOC and in particular to the reviews prepared for DOC on the following reports:

- Tonkin & Taylor (2025). Te Ākau Bream Bay Sand Extraction: Coastal Process Effects Assessm ent. Prepared for McCallum Bros Ltd. June 2025. Version 3.0. pp 103.
- SLR Consulting NZ (2025). Te Ākau Bream Bay Sand Extraction: Marine Mammal Environment al Impact Assessment. July 2025. Version 6. pp 235.
- NIWA (2025). Sand extraction in Te Ākau Bream Bay Potential effects on seabirds and shorebir ds. Prepared for McCallum Bros Limited. April 2025. Version 1.1. pp 39.

14.31. The potential effects on the food-web pathways from the project was raised during this consultation. As an outcome of this, the response “Marine Food Web Dynamics and Potential Effects of McCallum Bros Sand Extraction on the Food Web in Te Ākau Bream Bay” was prepared. This document is included as Appendix C of the Assessment of Ecological Effects (Attachment Twelve).

14.32. DOC also provided feedback on an initial draft set of recommended conditions. This feedback included identification of a number of conditions where it was considered the wording was ambiguous, confusing or unclear and various refinements to the conditions were made to address these. In respect to the CCMP, DOC was also seeking a certification role. DOC has a certification role in terms of CCMP required under the wildlife approval (if granted). It is assumed that if any future changes to the CCMP are required then DOC and NRC will work collaboratively in terms of the certification process under both the wildlife approval and the resource consent so there remains a single CCMP.

14.33. For a number of management plans, DOC was seeking the inclusion of standards but did not provide any specific recommendations. There was also a difference in opinions on the level of detail required in the Management Plan conditions. It is considered that the management plans submitted with this application are adequate and can be approved through this consenting process and no specific additional standards for these management plans are required to be included in the conditions.

Correspondence and Consultation with Other Parties

14.34. Separate to the statutory requirements for consultation, MBL has contacted and/or consulted with:

- Bream Bay Coastal Care Trust
- Channel Infrastructure
- Langs Beach Residents
- North Port
- Seafood NZ, Moana Fisheries, Leigh Fish, Local Fishermen

- Ruakākā Residents and Ratepayers Association
- Ruakākā Surf Life Saving Club
- NIWA (for Mahanga Bay facility)
- Whangārei Volunteer Coastguard
- Ministry for the Environment
- Ministry for Primary Industries

14.35. Attachment Five B provides a summary of the consultation undertaken.

14.36. The key outcomes of this consultation were:

Bream Bay Coastal Care Trust

- Raised concerns about possible effects on the integrity of dunes, safety of beaches and fisheries.
- No further response has been received.

Langs Beach Residents

- Initial meeting to discuss the project were held.
- No further response or action required, and no further contact has been made.

Channel Infrastructure

- 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 Residents and Ratepayers Association

- No response to the MBL response to the initial letter from the Association has been received.

Ruakākā 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 (and the Coastal Process Effects Assessment 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.

- Confirmed that at this stage they (and the two surf organisations) reject the proposed community contribution proposal.

Ministry for the Environment and Ministry for Primary Industries

- The Ministry of the Environment directed MBL to the need for assessments against national policy statements including the NZCPS.

- The Ministry for Primary Industries confirmed that there are are no established taiāpure-local fisheries or mātaitai reserves in the areas, that there is a temporary fisheries closure at Marsden Bank and Mair Bank and the areas are gazetted rohe moana, either to Ngāti Kahu, Parawhau, Ngāti Tu and Patuharakeke.

Harbour Safety Meeting

14.37. As outlined in the Navigation Safety Assessment, MBL attended the Harbour Safety Meeting on the 8th of October 2024 and provided a briefing on the project. No issues were raised by other stakeholders at the meeting. The project was further discussed at the 4th of February 2025 meeting.

Consultation Under Marine and Coastal Area (Takutai Moana) Act 2011

14.38. Under s62, those parties who have an application in for customary rights are to be notified by the applicant of any application for a coastal permit.

14.39. Attachment Five D 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. On the 19/05/2025 the Ngātiwai Trust Board responded and confirmed they would like to prepare a CIA. This CIA was subsequently commissioned and has been received (Attachment Twenty-Four).

14.40. A second email was sent to the same parties on the 12/09/2025. As at 6 January 2025 responses had been received from:

- Ngāti Tū ki Ngāpuhi. As outlined above, consultation was then initiated with Ngāti Tū ki Ngāpuhi.

- Te Parawhau ki Tai. As outlined above, consultation has been ongoing with Te Parawhau ki Tai.

15. Assessment under S104 of the RMA

15.1. The following sections assess the resource consent components of this 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 11.

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 of 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 CIAs. These CIAs identify a number of potential issues and effects from a Te Ao Māori perspective. It is recognised that at the current time the Ngātiwai Trust Board and Patuharakeke Te Iwi Trust Board consider that due to the level of cultural effects, the application should be declined. Te Parawhau ki Tai come to a differing opinion and consider that consent can be granted with certain commitments.

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 the 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 following planning documents are relevant to this application:

- The New Zealand Coastal Policy Statement
- National Policy Statement for Infrastructure
- 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 application and project is assessed against these planning documents in Section 12. 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.

In respect to these statements and plans, in terms of cultural values and effects, it is recognised from the CIAs received that there are a range of issues and effects when the proposal is assessed in terms of Te Ao Māori. There is not a singular view and in Te Ao Māori, viewpoints evolve over time. Therefore, it may be considered by some parties that in terms of Te Ao Māori, the proposal is contrary to certain objectives and policies. If this viewpoint was formed, then this does not prohibit the granting of consent and needs to be considered within the context of the purpose of the Act.

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 in Section 13 of this Report

- Te Iwi o Ngātiwai Iwi Environmental Policy Document (2007)
- Patuharakeke Hapū Environmental Management Plan (2014)

15.13. Consideration has been given to the Northland Conservation Management Strategy 2014-2024 (DOC, September 2014).

15.14. Section 17D of the Conservation Act states that the purpose of a conservation management strategy is to implement general policies (including the Conservation General Policy 2005), and to establish objectives for the integrated management of natural and historic resources, including species managed by the Department, and for recreation, tourism and other conservation purposes.

15.15. In respect to this Strategy, it is noted:

- The sand extraction site is not within an area identified as ecosystem and icon and gateway destinations, visitor management zones or aircraft access zones;
- Granting consent will not impact on the DOC National long-term vision of "New Zealand is the greatest living space on Earth Kāore he wāhi i tua atu i a Āotearoa, hei wahi noho i te ao".
- The Strategy states[173] "The region contains a wide variety of mineral commodities and currently produces high-quality ceramic clays, limestone for agriculture and cement, and rock and sand aggregates".
- The Strategy states[174] "Northland has the greatest marine biodiversity in New Zealand due to its exposure to two major ocean systems, an impressive array of islands and estuaries, and a complex, indented, semi-sheltered east coast".

15.16. The Strategy sets out a number of objectives (Treaty of Waitangi, Northland Region by 2024, History, Participation, Engagement and Business Partnerships). These objectives predominately relate to actions to be undertaken by the Department of Conservation. The granting of the resource consent will not impact on or detract from these objectives.

15.17. The granting of the resource consent would not be contrary to and will not impact on the policies of the Whangaruru–Mangawhai Coast Place[175] or the Specific Policy Requirements for Northland[176]. The policies relating to sand and shingle (16.11.1) only relate to extraction activities on public conservation land and waters and are therefore not relevant to this proposal.

Alternative methods for discharges - Sections 105 and 107 of the RMA

15.18. Sections 105 and 107 of the RMA are relevant to applications for discharges under section 15 of the RMA.

15.19. 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

[173] Page 17, Northland Conservation Management Strategy
[174] Page 20, Northland Conservation Management Strategy
[175] 14.2.2 Policies, Pages 93 and 94, Northland Conservation Management Strategy
[176] 16.1.1 Policies, Part 3 of the Northland Conservation Management Strategy

(b) the applicant's reasons for the proposed choice; and

(c) any possible alternative methods of discharge, including discharge into any other receiving environment.

15.20. The matters identified in s105(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.

15.21. 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.

15.22. 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.

15.23. 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.

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 to be staged, with an initial annual extraction volume of up to 150,000 m³ for at least 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. As 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. Major infrastructure developments in Auckland can have wider benefits for all of New Zealand.

16.5. In accordance with Schedule 5, Clause 5(1)(k), a suite of recommended 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/or national benefits, as it has done so historically.

- The project and granting consent would be consistent with Parts 2, 3 and 6 of the RMA.

- The project is an infrastructure supporting activity under the NPS-I. The NPS-I provides clear direction that decision makers must recognise and provide for the role of projects such as this. In this case, granting consent would allow for the efficient extraction of a marine sand resource required for the production of concrete (and in particular, high-strength concrete) which is vital for the development of infrastructure activities.

- The project 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 project, 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 granting of consent for the project 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 project 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 project. 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 project 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 project 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 project 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.

- In respect to these statements and plans, in terms of cultural values and effects it is recognised from the CIAs received that there are a range of issues and effects when the project is assessed in terms of Te Ao Māori. There is not a singular view and in Te Ao Māori, viewpoints evolve over time. The Te Parawhau ki Tai CIA is supportive of the project with certain commitments. However, other parties may consider that in terms of Te Ao Māori, the project is contrary to certain objectives and policies. If this viewpoint was formed, then this does not prohibit the granting of consent and needs to be considered within the context of the purpose of the Act.

- The sand extraction site is outside the territorial boundary of Whangārei District Council. However, it is considered appropriate to consider whether the project 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 project 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. From a Te Ao Māori perspective it is recognised that a number of issues and effects have been raised in the CIAs, and there is not a singular view on the extent or significance of these effects.

- 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 project's regional and national benefits.

PART 2 – SUBSTANTIVE APPLICATION FOR WILDLIFE APPROVAL

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 areas (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 dead and alive *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.

v. During monitoring and sand extraction – Disturbance and incidental killing of *Sphenotrochus ralphae* and *Kionotrochus suteri.*

17.2. 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”.

17.3. 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.

17.4. 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).

17.5. *Sphenotrochus ralphae* is endemic to New Zealand. This species has a small triangular corallum with flat faces and rounded edges. The corallum is white or sometimes porcellanous and measures up to 9 mm in height.

Figure Seventeen: Sphenotrochus ralphae (from the CCMP).

17.6. *Kionotrochus suteri* is also endemic to New Zealand. This species is up to 6.8 mm in corallite diameter 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.

Figures Eighteen and Nineteen: Kionotrochus suteri.

17.7. 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 ss 53, 53A and 54 of the Wildlife Act is required for the catching, release, possession 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, is it recognised that in some instances, cup coral could be inadvertently retained and incidentally killed through the monitoring and sand extraction processes.

17.8. The report, "Scleractinian Cup Corals at Te Ākau Bream Bay" (Attachment Twenty-One), 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.

17.9. The report, "Cup corals and Schedule 7 of the Fast-track Approvals Act 2024" (Attachment Fifteen), 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.

17.10. The CCMP is included as Attachment Thirty. The objective of this CCMP to avoid or minimise the risk of disturbance, possessing and incidental killing of cup coral during both monitoring and sand extraction.

17.11. 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. It also outlines the requirement to send retained cup coral to NIWA.

17.12. The wildlife approval is being sought to cover both the monitoring and sand extraction phases.

17.13. 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 areas during the life of the resource consent for the sand extraction.

17.14. During the sand extraction process, sand is fluidised into a slurry at the draghead via an electric pump 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.

17.15. It is expected that just about all cup corals will be retained on the sieve and returned to the sea via the moon pools.

17.16. 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 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.

17.17. 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 incidentally killed 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.

17.18. The Sand Extraction Operation Plan ("**SEOP**") (Attachment Twenty-Seven) outlines the operational requirements for the *William Fraser* and the sand extraction process. 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 approval.

17.19. The sand extraction rotation methodology, as outlined in Section 2.5.2 of 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.

17.20. For completeness, while marine mammals are also known to be present in Te Ākau Bream Bay 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.

17.21. 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 resource consent is commenced.

17.22. It is confirmed that approval is not being sought for an ineligible activity.

17.23. It is considered that granting the approval would not breach obligations relating to treaty settlements or recognised customary rights.

18. Decision Making Framework and Information Requirements

18.1. Schedule 7 of the Act sets out the information requirements for such an application. The tables 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 Fifteen) 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; and

(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).

Proposed Conditions

18.3. 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.

18.4. Notwithstanding the Panel's discretion to impose conditions on the wildlife approval under clause 6(1), this discretion is not unfettered, as prescribed in s83 of the Act.

18.5. The recommended conditions for the wildlife approval are included in Attachment Thirty-Five. An initial set of recommended conditions were provided to DOC as part of the pre-lodgement consultation. It is understood that the Standard Terms and Conditions for the wildlife approval (Schedule 2 of the recommended conditions) generally reflect the wording which DOC is seeking for wildlife approvals under the FTAA. The Special Conditions (Schedule 3 of the recommended conditions) focus on the requirement for a CCMP (which is proposed to be attached as Schedule 4 to the wildlife approval) and any amendments to the CCMP in the future.

18.6. It is recognised that any amendments to the CCMP will need to be approved separately through the processes outlined in the resource consent and the wildlife approval.

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 km^2 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:

a) Stage 1 will provide for an annual sand extraction volume of up to 150,000 m^3 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 m^3 for the remaining period of the consent after the change from Stage 1 to Stage 2 is certified (through the Year 4 or any subsequent SEMR when this change is sought).

19.5. The purpose of the wildlife approval is:

i. To authorise the disturbance, capture, incidental killing and possession of cup corals during monitoring associated with the sand extraction.

ii. To authorise 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 areas where monitoring will also be undertaken.

19.8. The process that are proposed to be implemented through the CCMP are:

a) Monitoring – The disturbance and capture of live and dead cup corals may occur during monitoring at the sand extraction site and the control areas. Sand samples are undertaken by a grab sample. Section 5 of the CCMP outlines the processes undertaken to minimise the disturbance and incidental killing of cup coral during monitoring. Those cup coral that are retained are to be sent to NIWA for their specimen collection.

b) Extraction – The disturbance and capture of live and dead cup corals (and potential incidental killing) may occur during the sand extraction process. Section 4 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 disturbance and 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 corals it is not practical to identify if any particular cup coral or cup corals will be killed during any particular sand extraction operation or operations. Any such killing would be inadvertent and incidental to the lawful activity. For this reason, the wildlife approval is being sought.

19.11. Owing to the size, distribution and mobility of cup coral, their location within the extraction and control areas 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 an electric pump 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. Both species of cup coral are 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 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 accidentally killed 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))[177].

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 ralphae* 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 km^2 proposed sand extraction area could be in the order of millions. It is expected that up to 5.6 km^2 of seabed will be extracted per

[177] Page 9, Cup corals and Schedule 7 of the Fast-track Approvals Act 2024 (Attachment Fifteen)

year. 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[178].

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 ralphae* and *Kionotrochus suteri*, respectively[179].

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 ralphae* 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)[180].

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 4 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 5 of the CCMP outlines the methodology used during monitoring to minimise the disturbance, capture, possession 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 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. Retained cup coral will be sent to NIWA.

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 areas (for monitoring) is included as Schedule 5 to the recommended conditions (Attachment Thirty-Five). 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. It has been agreed with DOC, that any cup coral accidentally retained during monitoring are to be sent to the NIWA specimen collection. NIWA has the appropriate authorisation to possess cup coral.

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

[178] Page 5, Cup corals and Schedule 7 of the Fast-track Approvals Act 2024 (Attachment Fifteen)
[179] Page 5, Cup corals and Schedule 7 of the Fast-track Approvals Act 2024 (Attachment Fifteen)
[180] Page 5, Cup corals and Schedule 7 of the Fast-track Approvals Act 2024 (Attachment Fifteen)

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.

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 Fifteen). This report finds[181]:

"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.

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 2 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 Methodology (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.

[181] Page 15, Cup corals and Schedule 7 of the Fast-track Approvals Act 2024 (Attachment Fifteen)

Current Criminal Charges under the Wildlife Act (clause 2(1)(m))

19.35. No current criminal charges under the Wildlife Act exist against MBL or any affiliated parties.

Consultation on the application specific to wildlife impacts, including with hapū or iwi (clause 1A(1)(n))

19.36. The Consultation Summary is included as Attachment Five. Separate consultation was initiated in respect to this application. The following summarises the outcomes of consultation.

Department of Conservation

19.37. The draft application was sent to the DOC for their comments and a subsequent meeting was held on the 15th of August 2025. An outcome of that meeting was that the DOC 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).

19.38. DOC has provided a comprehensive review of the following draft reports:

- Part 2 - Substantive application for wildlife approval
- NIWA (2025). Cup corals and Schedule 7 of the Fast-track Approvals Act 2024. June 2025. Prepared for McCallum Bros Limited. Version 2.1.
- NIWA (2025). Scleractinian cup corals at Te Ākau Bream Bay. Literature review and distribution of cup corals identified within the proposed sand extraction area. July 2025. Prepared for McCallum Bros Limited. Version 2.1.
- Recommended Wildlife Authority Conditions.
- Schedule 4: Cup Coral Management Plan (CCMP). July 2025. Version 1.
- Schedule 5: Sand Extraction Area and Control Sites.
- Schedule 6: Biosecurity Management Plan (BMP). July 2025. Version 1.
- Sand Extraction Operation Plan (SEOP). July 2025. Version 1

19.39. Attachment Five A includes the MBL response to DOC (dated 18/12/2025) on their review of these reports. Various refinements and updates were made to the specialist reports. The initial draft recommended conditions were substantially re-written to reflect the formatting and wording which it is understood DOC is recommending for wildlife approvals granted under the FFTA.

Te Hiku o Te Ika Conservation Board (Northland Conservation Board)

19.40. 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. MBL accepted this invitation and attended the presentation to answer questions from the Board (who had earlier been provided the presentation).

19.41. Subsequent to this MBL provided the draft Application and AEE, recommended conditions of consent, the Assessment of Fish and Fisheries Effects, and the Draft Wildlife Approval application. No response has subsequently been received from Te Hiku o Te Ika Conservation Board.

New Zealand Conservation Authority

19.42. The New Zealand Conservation Authority were contacted by email on the 31st of July 2025. The New Zealand Conservation Authority confirmed receiving this email, but no further response has been received.

New Zealand Fish and Game Council

19.43. On Tuesday the 19th of August 2025, the New Zealand Fish and Game Council responded by email that the project does not relate to the provisions of relevance to them and no further consultation was required.

Game Animal Council

19.44. 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

19.45. On the 4th of August 2025, NRC confirmed by email that they had no interest in discussing the wildlife approval application.

Te Parawhau ki Tai

19.46. The Te Parahwau ki Tai CIA is included as Attachment Twenty-Two. This CIA confirms that a wildlife approval is also being sought and addresses this application in Section 5.4. This includes the following statement:

"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."

19.47. Section 5.4 then lists recommended mahi whakaora (mitigation measures). No specific changes to the CCMP are included within the recommendations.

Patuharakeke Te Iwi Trust Board

19.48. The Patuharakeke Te Iwi Trust Board draft CIA is included as Attachment Twenty-Three. The draft CIA states[182] that: *"It is unknown to Whetū whether there are other approvals in addition to resource consents that are sought by McCallum Bros for its fast-track project. For this reason, only RMA Planning documents have been identified and reviewed by Whetū*.". However, in Section 8 (Bibliography and Refences), the Draft Substantive Application for Wildlife Approval "Draft for Consultation" is listed.

19.49. It is unclear why the Author of the CIA was unaware that an application for wildlife approval was being sought. Correspondence to the Patuharakeke Te Iwi Trust (dated 8/7/2025) made it clear that an application for wildlife approval was being sought alongside the substantive resource consent application.

19.50. The draft CIA does not specifically address cup corals.

Ngātiwai Trust Board

19.51. The Ngātiwai Trust Board CIA is included as Attachment Twenty-Four. This CIA does not specifically address Cup corals or the wildlife approval application.

Ngāti Tū ki Ngapūhi

19.52. The consultation undertaken with Ngāti Tū ki Ngapūhi is outlined in the Consultation Summary (Attachment Five C).

[182] Section 4.3.1, Patuharakeke Te Iwi Trust Board CIA (Attachment Twenty-Three)

19.53. 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. In October 2025, Ngāti Tū confirmed they were working on a response which would be supplied to MBL by the 3rd of November 2025. This has not been received to date.

Ngāti Kahu

19.54. 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 2025 where it was confirmed that the matter would be discussed with iwi and hapū before a collective response was sent. No further response has been received.

MACA Applicants

19.55. Attachment Five D 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. On the 19/05/2025 the Ngātiwai Trust Board responded and confirmed they would like to prepare a CIA. This CIA was subsequently commissioned and has been received (Attachment Twenty-Four).

19.56. A second email was sent to the same parties on the 12/09/2025. As at 6 January 2025 responses had been received from:

- Ngāti Tū ki Ngāpuhi. As outlined above, consultation was then initiated with Ngāti Tū kiNgāpuhi.
- Te Parawhau ki Tai. As outlined above, consultation has been ongoing with Te Parawhau ki Tai.

Additional written expert views, advice, or opinions obtained concerning the proposal (clause 1A(1)(o))

19.57. NIWA have prepared the following reports:

- “Scleractinian Cup Corals at Te Akau Bream Bay” (NIWA, December 2025) (Attachment Twenty-One); and
- “Cup corals and Schedule 7 of the Fast-track Approvals Act 2024” (NIWA, December 2025) (Attachment Fifteen).

19.58. 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:

The purpose of this Act is to facilitate the delivery of infrastructure and development projects with significant regional or national benefits.

20.3. The project achieves the purpose of the Act as it will secure a significant volume of marine sand for high-strength concrete manufacturing in Auckland. 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 project 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, possession or incidental killing of cup corals given their expected presence within the sand extraction area and control areas.

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. 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.

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 ralphae* or *Kionotrochus suteri* within the Aotearoa New Zealand region[183].

20.9. 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 monitoring and the sand extraction.

[183] Page 15, Cup corals and Schedule 7 of the Fast-track Approvals Act 2024 (Attachment Fifteen)

Information And Requirements Relating to the Protected Wildlife That Is To Be Covered By The Approval

20.10. The methods and processes outlined in the CCMP are considered to be consistent with best practice and will ensure impacts on cup coral and the cup coral population are minimised as far as practical.

Recommended Conditions

20.11. The recommended conditions are included as Attachment Thirty-Five. The 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 areas.

20.12. 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 approval gives the approval holder the right to hold absolutely protected wildlife for short periods in accordance with the terms and conditions of the approval, 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 approval; and if wildlife is killed by the approval 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.

Report Prepared By:
David Hay

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Updated: 22 January 2026

Osborne Hay (North) Limited
[redacted] Mobile: [redacted]
[redacted]