Taranaki VTM Project: Written Comment

TRCID-1492626864-1173

Taranaki
Regional Council

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1. Executive summary

1. Taranaki Regional Council (Council) considers that the final determination of the Expert Panel to grant or decline the Taranaki VTM Project application (the Application) is likely to be finely balanced. On one hand, the project would likely have significant gross economic benefits to the nation and region, and this must be given greater weight under the Fast Track Approvals Act 2024 (FTAA). On the other, the eventuality that the activities' adverse effects are sufficiently significant to be out of proportion with the project's regional or national benefits cannot be ruled out. This is primarily due to the considerable uncertainty regarding adverse effects and the presence of both vulnerable and highly valued ecosystems and species in the South Taranaki Bight (STB).
2. Regarding uncertainty, the significant information deficiencies for adverse effects on marine mammals, seabirds, and the effects of the sediment plume identified by the Supreme Court in the 2016 application remain highly relevant. The limited work done by the Applicant since that Supreme Court decision has done little to address these gaps.
3. Resolving if the adverse effects are sufficiently out of proportion or not will likely hinge on how the Expert Panel takes into account the requirement to favour caution and environmental protection. The FTAA necessitates a judgement on extent of adverse effects, even in the face of considerable uncertainty. Council considers in such circumstances the Expert Panel should assume a plausible worst-case scenario for uncertain effects. If the Expert Panel agrees with this approach, caucusing amongst respective technical experts will likely be needed to determine what a plausible worst-case is in the context of seabirds, marine mammals and the sediment plume. This can then inform further analysis against relevant statutory criteria, including under the Resource Management Act 1991 and the Taranaki Coastal Plan (2023).
4. Council has also highlighted additional concerns with the application that we recommend the Expert Panel consider. These are the lack of assessment of environmental effects associated with the air discharges, misuse of the ISQG-High criteria, apparent gaps in the assessment and proffered consent conditions regarding incident response, and the Applicant's proposed approach to liability.
5. Council thanks the Expert Panel for the opportunity to provide its written comment. We look forward to further engagement throughout this process and can provide any further advice or information that may assist the Expert Panel in its deliberations[1].
6. Council's recommendations the Expert Panel:

Legislative application

a. Draw on case law regarding the Housing Accords and Special Housing Areas Act 2013 in determining its approach to the FTAA decision-making process.
b. Give close consideration to the underlying reasons for any potential breach of a bottom line, giving greater weighting to any adverse effect that causes such a breach compared to an adverse effect that does not.
c. In taking into account the requirement to favour caution and environmental protection, take a conservative approach to the extent of uncertain adverse effects focusing on the plausible worst case scenario, and if deciding to grant the application, applying stringent consent conditions.

Regional and national benefit

d. Note that the Application is strongly opposed by iwi and portions of the community.
e. Note that Council considers the project would likely provide significant gross economic benefits to the region, but cannot yet reach a judgement on if there would be significant net economic benefits.

[1] Council has provided advice on proposed consent conditions at points throughout this document. This is not a comprehensive treatment of consent conditions. If the Expert Panel decides to grant the application, detailed commentary on consent conditions from Council will be provided under section 70 of the FTAA.

f. Seek clarification from the Applicant on their estimates of jobs that will be taken by people who will live in Taranaki/Whanganui, including how they arrived at such figures, and estimated benefit to South Taranaki in particular.
g. Consider if the requirement for the project's head office be based in Taranaki could be a suitable consent condition.
h. Consider the potential economic impacts of the application on fisheries, tourism, recreation and human health.

Environmental setting and sediment plume

i. Address the following matters that undermine confidence in the conclusions reached by the Applicant regarding potential impacts on reef ecosystems:
    i. gaps in the assessment regarding known reef locations and associated biota (particularly in light of the Morrison et al. report);
    ii. uncertainty regarding other potential reef locations; and
    iii. uncertainty regarding the sediment plume modelling approach.
j. Address how uncertainty in the calibration of the sediment plume model across different years and timeframes affects confidence in whether the model accurately reflects oceanic conditions.
k. Address how the lack of clarity around the interaction of the two sediment discharge sources affects the weight given to conclusions about sediment dispersal.
l. Note the size and extent of the depositional area is not fully defined, limiting the ability to accurately assess the magnitude of sedimentation effects on the receiving environment.

Wider ecological effects

m. Give close consideration to the knowledge gaps with regards to seabirds and marine mammals, as well as the uncertainty associated with the models that have been employed to fill these knowledge gaps.
n. Note that the need to favour caution and environmental protection in the above matters will be particularly important for sensitive or endangered species such as pygmy blue whales, Hector's and Maui dolphins, the little penguin (*Eudyptula minor*), and the relict fairy prions (*Pachyptila turtur*).

Sulphur dioxide emissions

o. Request the Applicant to clarify whether the Floating Production, Storage and Offloading Vessel air quality emissions modelling by Tonkin & Taylor refers to emissions from the Integrated Mining Vessel (IMV) or alternatively from the Floating Storage and off-loading Vessel (FSO).
p. Request the Applicant to provide air quality emissions dispersion modelling that incorporates the cumulative effects of emissions simultaneously from the IMV, the FSO, and the Bulk Carrier Export Vessel (CEV).
q. Request resolution of possible discrepancies within the application documentation regarding the likely annual consumption of heavy fuel oil (HFO) by the IMV.
r. Request the Applicant provide modelling and environmental effects analysis regarding the potential impingement and deposition of acid gas condensation aerosols and plume on the sea surface in the vicinity of the IMV, FSO, and CEV.
s. Consider if requirements under MARPOL Annex VI apply to the Application regarding limitations on sulphur content in HFO.
t. Consider whether it is acceptable to allow the Applicant to use HFO of up to 3.5%, and if not, to consider:
    i. requiring the Applicant to use HFO of a maximum of 0.5% sulphur content;
    ii. requiring the use of only diesel fuel;
    iii. imposing a cap on annual emissions of sulphur dioxide and allowing the Applicant to manage fuel consumption within that cap;
    iv. requiring the installation of approved sulphur dioxide scrubbers on engine exhausts; or
    v. requiring continual ocean neutralisation dosing equivalent to their acid gas emissions.

Application of the ISQG-High

u. Amend draft Condition 6 by making reference to 'the Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2018 ("ANZECC 2018"), and not the 2000 guidelines.
v. Amend draft Condition 6 by deleting any reference to the 'ISQG-High' values in the ANZECC 2000 guidelines, and instead requiring the Applicant to demonstrate compliance with the DGV criteria in the ANZECC 2018 guidelines (or any future update).

Incident response

w. Require the Applicant to provide appropriate analysis and a verifiable protocol setting out:
    i. identified and secured capacity for assistance, towage, rescue, or salvage, as needs be, for the mining and ancillary vessels involved in the seabed mining operation;
    ii. confirming matters such as potential assistance vessels and staffing, constraints upon availability, mobilisation time, and suitability for large vessel assistance; and
    iii. that the protocol is to be submitted to EPA (and other statutory agency or agencies as appropriate) for certification.
x. Seek clarification from the Applicant on the rationale behind using 100 metric tonnes for oil spill modelling and consider the need for further modelling and effects assessment, including of a catastrophic failure scenario.
y. Review the level of public liability insurance cover offered by the Applicant, in order to establish a meaningful extent of cover.
z. Consider if a requirement for professional indemnity insurance from relevant technical experts referenced in the proposed consent conditions is appropriate.
aa. Amend proposed conditions 33 and 34 to:
    i. explicitly require MNZ approval of the oil spill contingency plan to be obtained by the Applicant prior to the commencement of any on-site extraction operations; and
    ii. require consultation by the Applicant with representatives of the Taranaki marine oil spill response team, and the Manawatu-Wanganui marine oil spill response team (subject to their availability), in the preparation and exercising of the oil spill contingency plan.
bb. Consideration be given to New Zealand's capacity to respond to a large-scale oil spill incident associated with the Project, and if potential gaps exist, these be addressed through consent conditions.

Liability

cc. Review the certainty, integrity, geographic coverage and term of the current assurances and consent conditions concerning the intention and capacity of the Applicant to ensure post-extraction recovery of the wider marine environment, and impose such additional measures, mechanisms, and criteria as it finds necessary to guarantee delivery of such capacity even in the case of default by the Applicant.
dd. In giving effect to the above recommendation, give consideration to the following potential requirements:
    i. progressive payments during mining operations into a trust fund, to be accessible as need is found once extraction ceases, and any residual to be returned to the Applicant at the end of the five-year period or the end of reinstatement works whichever comes later;
    ii. the public liability insurance to be arranged such that the EPA is recognised as a co-beneficiary for the purpose of environmental reinstatement cost recovery;
    iii. public liability cover for the full five-year period following cessation of extraction to be certified prior to the cessation of extraction; or
    iv. a bond, despite the Applicant's objections to such a provision.

Cultural protocols

ee. Set conditions following the template of those relating to the discovery of archaeological sites, and applying to the discovery of human remains or human artefacts.

ff. Set a condition requiring the development of a protocol for the operator to implement in case of declaration of a rahui in the general vicinity of extraction operations.

gg. Note that Council recognises and defers to the written comment and evidence of ngā iwi o Taranaki regarding mātauranga Māori and matters of tikanga, recognising their mana whenua and mana moana status in this rohe.

Planning analysis

hh. Note Council considers it currently has insufficient information to make a judgement on if the Application is consistent with the nature and effect of the RMA and Taranaki Coastal Plan (2023).

ii. Note that policies 9 and 15 and possibly 43 in the Taranaki Coastal Plan establish relevant bottom lines that should be given close consideration by the Expert Panel, while the requirement to take a precautionary approach in Policy 3 could also be contravened.

jj. Note that Council is able to provide further advice on consistency with key planning instruments as the decision-making process progresses.

Monitoring and enforcement

kk. Note the importance of the EPA and Council having a strong working relationship regarding monitoring and enforcement if the consent is granted.

ll. Note that Council is supportive of being represented on the proposed Technical Review Group if the consent is granted.

2. Introduction

7. This report contains Taranaki Regional Council's (Council) written comment on the Taranaki VTM Project application (the Application). It has been informed by the expertise of Council staff, the *Taranaki VTM Report – Economic Review* prepared by Market Economics (The Market Economics Report, Attachment 1), and the *Technical assessment of Fast Track Application* by Pattle Delamore Partners (the PDP Report, Attachment 2) regarding environmental effects. While key parts of these reports are summarised in this document, the full reports also form part of Council's written comment and should be read in their entirety.

3. Legislative application

3.1 Decision-making framework

8. This section outlines considerations for the Decision-Making Panel (the Expert Panel) regarding the decision-making framework under the Fast Track Approvals Act 2024 (FTAA). In presenting these comments, Council is cognisant of the Supreme Court judgement on the previous application for this project, and that this is the first application for fast-track approval for permits under the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012 (EEZ Act).
9. Decision-making under the FTAA includes both a general weighting exercise against different criteria, as well as an additional threshold that must be met to decline an application. In the weighting exercise, panels are to give greatest weight to the purpose of the FTAA and, in turn, the regional or national benefits of the project. The other mandatory considerations include the substantive application and any of the reports, advice and other information listed in section 81(2)(a) of the FTAA; and the specific matters set out in Clause 6 of Schedule 10 regarding the EEZ Act.
10. Under section 85(3) of the FTAA, a panel can only decline an application if it forms the view that the adverse impacts of an application "are sufficiently significant to be out of proportion to the project's regional or national benefits." This is after taking into account any conditions imposed or modifications proffered by the applicant.
11. In undertaking the required weighting exercise, Council suggests guidance can be taken from case law on the Housing Accords and Special Housing Areas Act 2013 (HASHAA), which contains weighting provisions in a similar structure to the FTAA. The Court of Appeal's interpretation of the HASHAA weighting provisions are that each of the matters listed needed to be considered independently first before the overall weighting exercise is carried out[2].
12. As the Expert Panel undertakes this independent assessment of the relevant matters, the findings of the Supreme Court regarding the previous application remain highly relevant. This decision canvased matters pertinent across a range of decision-making criteria in the EEZ Act.
13. Of particular relevance to Council is the Supreme Court's findings regarding the requirement to take into account "the nature and effect of other marine management regimes" (EEZ Act, section 59(2)(h)). The Supreme Court found the decision-making committee under the EEZ Act must consider[3]:
    a. the objectives of the Resource Management Act 1991 (RMA) and New Zealand Coastal Policy Statement (NZCPS), and the outcomes sought to be achieved by those instruments, in the area affected by the proposal;

[2] Enterprise Miramar Peninsula Inc v Wellington City Council [2018] NZCA 541

[3] Trans-Tasman Resources Limited v Taranaki-Whanganui Conservation Board [2021] NZSC 127 at [181] and [182], per William Young and Ellen France JJ; [280], per Glazebrook J; [298], per Williams J; [331] per Winkelmann CJ. Note that the members of the Supreme Court held differing views about aspects including the weight to be given to environmental bottom lines in the NZCPS in the context of the EEZ Act.

b. whether the proposal would produce effects within the coastal marine area that are inconsistent with the outcomes sought to be achieved by those regimes; and

c. whether the proposal "would be inconsistent with any environmental bottom lines established by the NZCPS. If a proposed activity within the EEZ would have effects within the CMA that are inconsistent with environmental bottom lines under the marine management regime governing the CMA, that would be a highly relevant factor for the DMC to take into account. The DMC would need to squarely address the inconsistency between the proposal before it and the objectives of the NZCPS. If the DMC [decision-making committee] was minded to grant a consent notwithstanding such an inconsistency, it would need to clearly articulate its reasons for doing so."

14. While the FTAA explicitly overrides any bottom lines, either in the EEZ Act or another marine management regime, Council encourages the Expert Panel to give close consideration to the underlying reasons for any potential breach when carrying out its proportionality assessment. In this assessment, it is reasonable to consider that any adverse effect that breaches a bottom line be given greater weight than an adverse effect that does not – even if such a breach cannot be the sole reason for meeting the threshold for declining an application as stated under section 85(4) of the FTAA. In other words, bottom lines indicate a threshold for particularly serious adverse effects that need to be given appropriate weighting in the Expert Panel's decision making.

3.2 The role of uncertainty and precaution

15. Council considers that the Expert Panel's way of approaching uncertainty under the FTAA will be of crucial importance. Where there is insufficient information to make a robust judgement on the extent of any positive or adverse effect, the FTAA provides pathways to commission reports, invite comments from specific parties, request further information, or hold a hearing. However, the strict timelines imposed under the FTAA may limit how many information deficiencies can be robustly addressed.
16. Council considers it unlikely the FTAA provides scope to directly decline an application on the basis of there being inadequate information. Under an orthodox EEZ Act process, section 62(2) of the EEZ Act enables a marine consent application to be refused if the authority has inadequate information. That provision is listed in clause 6 of Schedule 10 of the FTAA as part of the criteria to take into account when assessing the Application. However, under section 81(2)(f) of the FTAA, panels can decline approvals only in accordance with section 85. Section 85 does not include a provision about inadequate information.
17. Where there is uncertainty, clause 6(1)(d) of schedule 10 of the FTAA requires the Expert Panel to take into account section 61(2) of the EEZ Act, being the requirement to favour caution and environmental protection. As noted by the Applicant, "[g]iven the inherent uncertainties in the information to support the applications, the requirement to favour caution and environmental protection under section 62 of the EEZ Act is triggered."[4] This follows the conclusions in the Supreme Court decision regarding the lack of sufficient information in the 2016 application regarding effects on marine mammals and seabirds, and effects from the sediment plume. While the EEZ Act provides for an application to be declined due to the requirement to favour action and environmental protection, like with uncertainty, it is unlikely the FTAA directly provides for this. It is not a matter included under section 85 of the FTAA.
18. However, Council considers where there is uncertainty, the requirement to favour caution and environmental protection should still be given significant weight in the Expert Panel's decision making. This is through two pathways. First, where there is uncertainty around the adverse effects, that may require the Expert Panel to take a conservative view of a potential effect and adopt a plausible worst case scenario as its finding about the extent of the adverse effect. Second, where the Expert Panel

[4] Application report, section 8.3.15

decides to grant an application even where there is significant uncertainty, the requirement to favour caution and environmental protection should be expressed through stringent consent conditions.

3.3 Recommendations

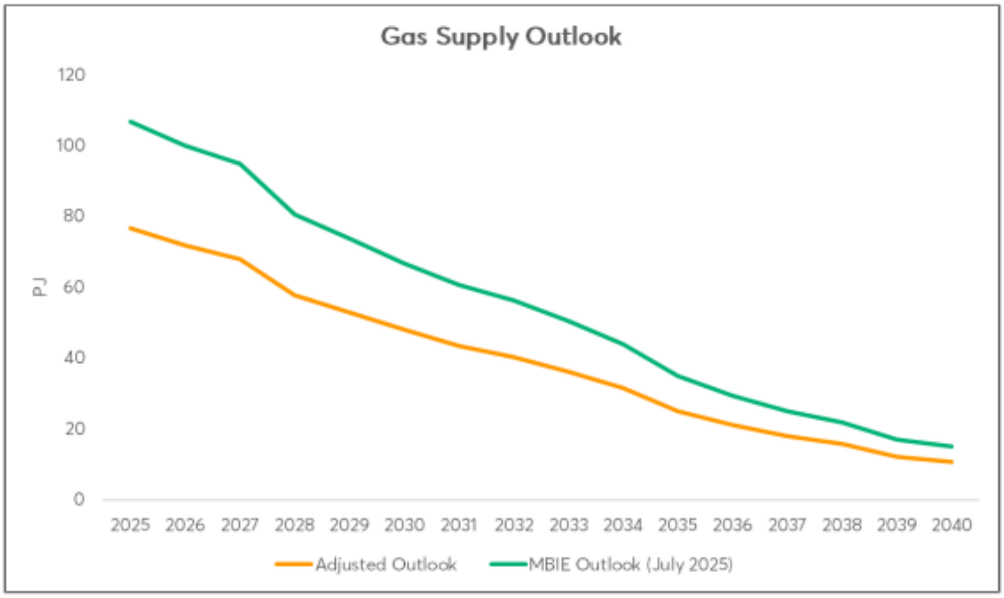
19. Council recommends the Expert Panel:
    a. Draw on case law regarding Housing Accords and Special Housing Areas Act 2013 in determining its approach to the FTAA decision-making process.
    b. Give close consideration to the underlying reasons for any potential breach of a bottom line, giving greater weighting to any adverse effect that causes such a breach compared to an adverse effect that does not.
    c. In taking into account the requirement to favour caution and environmental protection, take a conservative approach to the extent of uncertain adverse effects focusing on the plausible worst case scenario, and if deciding to grant the application, applying stringent consent conditions.

4. Regional and national benefit

4.1 Regional economic context

20. The expected economic benefits of the project need to be considered within the current and projected economic context of the region. The Taranaki economy remains in recession, with preliminary estimates from Infometrics predicting a decline in regional gross domestic product (GDP) by 3.1% the year to March 2025. This is contrasted with a 1.1% decline nationally. This economic contraction is most keenly felt for the mining sector, with particular impacts also on the construction, metal product manufacturing and utilities section. Employment has dropped by 1.8% over this period, compared with a 0.9% decline nationally. This has corresponded to an increase in the unemployment rate to 4.5%, compared with 4.9% nationally[5].
21. In the medium-term, the region is facing serious economic headwinds with the decline of the oil and gas industry. Using 2020 data, the oil and gas extraction and exploration and other mining support services provided 1,148 jobs and just over $1.6 billion in value added. This industry in turn supports a much wider network of jobs and economic performance, contributing in part to 1,381 jobs in primary metal and metal product manufacturing, and fabricated metal product manufacturing; and 383 jobs in electricity generation and on-selling, and electricity transmission and distribution[6]. Natural gas also directly supports over 300 direct employees at the Methanex Motunui facility and over 100 jobs at the Ballance urea plant Kapuni – with these two facilities generating their own flow-on economic benefits. Further jobs and gross domestic product are supported through the hospitality industry and other induced effects.
22. Without any significant new finds – where opinions differ on the probability of this occurring – the gas supply projections indicate a rapid decline in supply. The below graph shows MBIE's original 2024 projection for gas supply and an adjusted outlook based on actual 2025 data[7] .

[5] Infometrics Quarterly Economic Monitor, Taranaki Region, June 2025.
[6] Figures taken from Moran, E., McDonald, G., and Mckay, D. (2024). The Taranaki Economy and Freshwater Management. Taranaki Regional Council.
[7] Figure from the Gas Industry Co. Quarterly Report June 2025. The data is provided with a standard '2P' 50% probability that ultimate volumes will be greater or less than stated.



23. While the flow of specific economic impacts of the decline is uncertain, these impacts are highly likely to be significant for the regional economy. They are already being felt, as indicated by the ongoing natural gas supply crisis, reduction in Methanex's production, and slated temporary shutdown of Ballance's urea plant[8].

24. There are however bright spots in the Taranaki economy. The recent ANZ Taranaki Regional Spotlight Report[9] noted:

> *Manufacturing companies - including New Plymouth-based engineered timber producer Taranakipine (profiled in this report) - are investing heavily in innovation and new technology. This has boosted productivity, given these companies a competitive edge in the global market, and primed them for growth. Productivity gains and record-high prices have also enabled dairy farmers to make a substantial and growing contribution in recent years. By diversifying product offerings and markets, with a focus on developing high-value exports, these producers and manufacturers have played a key role in supporting our economy.*

It is also important to emphasise the range of innovative work that is being done in the region regarding renewable energy technologies, such as hydrogen and biogas. Organisations like Ara Ake and Venture Taranaki also play a crucial role in supporting the ongoing development of the region.

4.2 Economic significance

25. The project would likely bring significant gross economic benefit to Taranaki. As concluded in the review of the NZIER report in the Application by Market Economics (Attachment 1):

> *The economic assessment of the Taranaki VTM Project, conducted by NZIER using standard input-output methodology, demonstrates significant potential economic impacts. The analysis appropriately quantifies direct, indirect and induced effects, showing annual contributions of 0.34% to South Taranaki-Whanganui's GDP, 0.87% to the broader Taranaki-Whanganui region, and 0.07% nationally. These translate to substantial absolute benefits ($222 million regionally and $265 million annually) with cumulative impacts exceeding $4.4 billion (regional) and $5.3 billion (national) over 20 years.*

[8] Gas 'crisis' warning as MBIE warns again supply falling faster than expected, RNZ, 2025; Balance's Kapuni plan to shut down temporarily in January, the Post, 2025; Methanex sells gas for winter electricity supply again, the Post, 2025.

[9] ANZ Taranaki Regional Spotlight Report 6 August 2025.

Further, within the context of the decline of the oil and gas industry, the forecast 355.83 direct; 798.99 direct and indirect; and 1,123.10 direct, indirect and induced jobs at the regional (Taranaki-Whanganui) level take on additional significance.

26. However, Council emphasises the conclusion in the Market Economics review of:

    While NZIER's expenditure-focused assessment follows conventional practice and provides credible impact estimates, it does not fully evaluate broader economic benefits (as distinct from impacts) or account for potential adverse environmental/social effects identified in the Project Report.

    Hence, while the Council considers the project would likely have a significant gross economic impact, we cannot yet comment on the expected net economic benefit. It is the role of the Expert Panel to reach a judgement on the net benefit, after considering quantitative and qualitative evidence on the potential costs, including social and environmental, of the project. And as highlighted below, there remains information deficiencies in the Application that currently preclude Council from reaching its own judgment. Assessing the net benefit will also require close consideration of potential costs on fisheries, tourism, recreation and human health.

27. Further detail on how the estimated employment and economic benefit to South Taranaki will be secured would be particularly advantageous. Past experiences in South Taranaki have seen the proffered economic benefits of offshore activity not fully realised. If the Expert Panel determines to grant the application, further consideration will also be needed on the proposed South Taranaki training facility and $50,000 annual fund consent conditions to ensure sufficient community benefit.

28. Council also notes that the final number of jobs that will be based in the region is uncertain in two regards. First, the exact number is expressed differently throughout the Application and needs clarity[10]. Second, the regional job numbers include 35 based at a head office in New Plymouth, however there is no certainty that the head office will indeed be situated within Taranaki. Consideration should be given to this being a condition of consent if the application is granted, especially considering the elevated importance of regional economic benefits in the FTAA.

29. Finally, Council considers that the net economic benefits should also be tempered by the degree that a given community wants that development to occur. While no systematic survey of Taranaki residents has been undertaken, Council emphasises that the Application is strongly opposed by iwi and portions of the community.

4.3 Recommendations

30. Council recommends the Expert Panel:

    d. Note that the Application is strongly opposed by iwi and portions of the community.
    e. Note that Council considers the project would provide significant gross economic benefits to the region, but cannot yet reach a judgement on if there would be significant net economic benefits.
    f. Seek clarification from the Applicant on their estimates of jobs that will be taken by people who will live in Taranaki/Whanganui, including how they arrived at such figures, and estimated benefit to South Taranaki in particular.
    g. Consider if the requirement for the project's head office be based in Taranaki could be a suitable consent condition.
    h. Consider the potential economic impacts of the application on fisheries, tourism, recreation and human health.

[10] Section 8.3.4. refers to 799 jobs in the Taranaki/Whanganui regions, the NZIER report refers to the full 1,123.1 being in the Taranaki/Whanganui economy, section 5.2.3.4 refers to three quarters of the direct 359 employees being based outside the region, section 5.2.3.5 refers to the majority of employees being based in Taranaki, Manawatū-Whanganui and Wellington.

5. Environmental setting and sediment plume

5.1 Discussion

31. As set out in the PDP Report, considerable work has been undertaken by the Applicant to describe the baseline state of the activity area. However, the Application's treatment of the new information revealed in the *Offshore subtidal rocky reef habitats on Pātea Bank, South Taranaki (2022)*[11] by Morrison et al. is poor. This report demonstrated that subtidal reefs are relatively common along the Pātea Bank, and that there are likely many more that have not yet been identified. Further, it concluded these reefs are relatively unique in a New Zealand context due to their distance offshore. The Application's main consideration of these matters appears confined to passing reference in two paragraphs[12]. Further consideration of these matters is needed, especially the potential for rocky reefs to be within 3km of the mine site.
32. The PDP Report also sets out a range of other concerns and areas where further information is needed in order to be able to robustly assess the Application. Key matters are:
    a. The absence of an updated assessment of localised impacts on reef habitats and associated species (e.g. *Ecklonia radiata*) in light of the Morrison et al. report being a critical gap in the Application.
    b. This includes considering whether these impacts have been assessed under the latest worst-case scenario testing for optical and primary production effects, and using the most appropriate plume modelling approach (e.g. near-field verses far-field).
    c. The calibration of the sediment plume model across different years and timeframes introduces potential uncertainty.
    d. There remains a lack of clarity around the interaction of two sediment discharge sources, particularly the mechanism by which de-ored sand is expected to trap finer sediment.
    e. The size and extent of the depositional area is not fully defined, limiting the ability to accurately assess the magnitude of sedimentation effects on the receiving environment.

5.2 Recommendations

33. Council recommends the Expert Panel:
    i. Address the following matters that undermine confidence in the conclusions reached by the Applicant regarding potential impacts on reef ecosystems:
        i. gaps in the assessment regarding known reef locations and associated biota (particularly in light of the Morrison et al. report);
        ii. uncertainty regarding other potential reef locations; and
        iii. uncertainty regarding the sediment plume modelling approach.
    j. Address how uncertainty in the calibration of the sediment plume model across different years and timeframes affects confidence in whether the model accurately reflects oceanic conditions.
    k. Address how the lack of clarity around the interaction of the two sediment discharge sources affects the weight given to conclusions about sediment dispersal.
    l. Note the size and extent of the depositional area is not fully defined, limiting the ability to accurately assess the magnitude of sedimentation effects on the receiving environment.

[11] The report can be found on the Council website here.
[12] [17] and [18] of Dr. Alison Macdiarmid's evidence of 19 May 2023.

6. Wider ecological effects

6.1 Discussion

34. Council also commissioned PDP to undertake an assessment of the Application regarding effects on seabirds, marine mammals, and polychaete worms. Key points are:
    a. Based on the evidence, there does not appear to be sufficient information to fully and confidently assess the impacts of the mining activity on seabirds in the STB. Additionally, there is little indication that identified knowledge gaps have been substantially filled since the 2016 application.
    b. Site-specific data on seabird presence, distribution, foraging areas, and behavioural patterns remain limited, which makes it difficult to quantify potential population-level or long-term impacts.
    c. Potential effects on seabirds, including the little penguin (*Eudyptula minor*) who travel to feed in the STB and the relict fairy prions (*Pachyptila turtur*), was inconclusive regarding evidence presented in the 2023 reconsideration.
    d. There are potential mitigations available to reduce the attractiveness of the IMV to birds.
    e. Based on the information provided throughout the application, it is difficult to assess the potential for effects on marine mammals, including with regards to noise.
    f. The STB is an important hotspot for marine mammal diversity in New Zealand. Sightings and strandings include the following threatened or endangered species: bottlenose dolphin, Hector's dolphin, Maui dolphin, leopard seal, New Zealand sea lion, pygmy blue whale, killer whale (orca) and southern right whale.
    g. Within the mining site, it is likely that that recolonisation of seabed biota would occur, and flow on effects on food webs may be minimal. This is subject to the caveats that the presence of novel species in the area is unknown and recolonisation relies on nearby source populations.

6.2 Recommendations

35. Council recommends the Expert Panel:
    m. Give close consideration to the knowledge gaps with regards to seabirds and marine mammals, as well as the uncertainty associated with the models that have been employed to fill these knowledge gaps, and how the Expert Panel will take into account the need to favour caution and environmental protection regarding potential effects on these animals.
    n. Note that the need to favour caution and environmental protection in the above matters will be particularly important for sensitive or endangered species such as pygmy blue whales, Hector's and Maui dolphins, the little penguin (*Eudyptula minor*), and the relict fairy prions (*Pachyptila turtur*).

7. Sulphur dioxide emissions

7.1 Application content

36. The Application proposes that both the Integrated Mining Vessel (IMV) and the Floating Storage and off-loading Vessel (FSO) will primarily operate using heavy fuel oil (HFO) – with the IMV being able to also operate on diesel. The IMV and FSO vessels will have capacity for 35,000 tonnes and 20,000 tonnes of HFO respectively. Under normal operations they will consume up to 7,500 and 1,500 tonnes per

month[13]. The engines will operate to International Maritime Organisation Tier II emission levels, with no exhaust gas treatment systems.'[14] The fuel requirements of the Bulk Carrier Export Vessel (CEV) are not stated in the Application report.

37. The Applicant has offered to include a condition limiting the sulphur content of any fuel used in the project vessels to 3.5% wet weight. The Applicant states the condition is provided on an Augier bases, given the potential effect is not regulated[15].
38. The potential effects on human health from these emissions were modelled by Tonkin & Taylor (T&T) for two different possible power system configurations. The two air quality plume dispersion modelling reports by Tonkin & Taylor each refer to emissions from the Floating Production, Storage and Offloading (FPSO) vessel.
39. The two reports found that people on the coastline would not be exposed to sulphur dioxide, nitrogen dioxide and carbon monoxide at concentrations above New Zealand's National Air Quality Standards. However, the Application report does note the potential for staff on board the IMV to be exposed to elevated concentrations of sulphur dioxide and nitrogen dioxide[16].

7.2 Modelling omissions and consumption figures

40. The modelling completed by T&T appears to have omitted the emissions from the FSO and CEV. If this is the case, it is partial and incomplete. The T&T gas turbines report refers to the operation of four HFO fired gas turbines on the FPSO. The T&T reciprocating engines report refers to six 12V46 engines and one R1, seven-cylinder engine. It is this latter configuration that is referred to in the Application report, and as being located on the IMV.
41. The FSO is a second and substantial source of sulphur dioxides alongside the IMV. In addition, from time to time the CEV will moor in the vicinity in order to load raw iron ore. The downwind effects from the two and on occasion three significant sources will be cumulative. But there appears to be no report or other appendix to the Application that provides modelling of air emissions from either the FSO or the CEV. In the absence of consideration of these other sources of emissions, the findings regarding a lack of risk to human health on downwind shores are inadequately informed.
42. Further information is also needed to reconcile differences in the estimated HFO consumption. The Application report estimates the IMV using 7,500 tonnes of HFO per month, equating to 90,000 tonnes per year. However, the T&T reciprocating engines report states that "[w]ith all engines operating (ie the six 12V46 engines and the one R1 7 cylinder engine) the FPSO will use up to 156,000 tonnes per annum of HFO[17]". Noting the latter figure is a theoretical maximum and the former is an estimated actual, the discrepancy still requires explanation and rationale. A reliable figure for HFO consumption is essential for assessing the impacts of the emissions.

7.3 Lack of assessment of environmental effects

43. The Application contains no assessment of the environmental effects of sulphur dioxide emissions and resulting formation of sulphuric acid. Sulphur dioxide will be formed whenever sulphur-containing fuel is burned. Upon its release into the atmosphere, it reacts readily with any moisture in the air or on any surface (noting the naturally high levels of sea spray in the application area) to initially form sulphurous acid. Further oxidation then occurs naturally, at a somewhat slower rate, to form sulphuric acid mist or solution.

[13] Application report, section 2.3.10
[14] Application report, Section 2.3.21
[15] Application report, section 5.12.4
[16] Application report, section 5.12
[17] Page 3.

44. The estimated monthly consumption on the IMV is given as 7,500 tonnes per month, and on the FSO as 1,500 tonnes per month. These combined figures mean the combustion and release of up to 315 tonnes of sulphur per month for a HFO sulphur content of 3.5%. The combusted sulphur will be discharged in the form of 630 tonnes of sulphur dioxide, which in turn is equivalent to 965 tonnes of sulphuric acid (H_2SO_4) per month, deposited directly or indirectly into the sea. Over the course of 20 years, this indicates a gross potential discharge equivalent to up to 231,000 tonnes of concentrated sulphuric acid into the STB.
45. These figures do not take into account any additional contribution from the CEV to the annual sulphur dioxide deposition budget. Neither do they take into account the consequences of acid rain deposition of nitrogen oxides or carbon dioxide, likewise sourced from the combustion products.
46. Ocean acidification due to the dissolution of sulphur dioxide, nitrogen oxides, and carbon dioxide (each arising from combustion of HFO) is recognised as a global environmental crisis. The consequences include:
    a. changes in ocean chemistry (the acidity of the ocean has already increased about 25% since the start of the Industrial Revolution);
    b. the degradation and loss of coral reefs and beds and other life forms that rely on carbonate-based shells and skeletons;
    c. the weakening of shellfish shells with resultant greater vulnerability to predation and sediment abrasion, and loss of shellfish community health, diversity, and abundance; and
    d. adverse effects on any species sensitive to acidity.

    The contribution to ocean acidification through the VTM project will be a significant local cumulative contribution to a recognised global effect, and potentially a significant and unstudied effect at the local scale.
47. In response to the adverse effects of HFO sourced emissions, 3.5% HFO is no longer the standard grade fuel for ocean going vessels. Annex IX of the International Convention for the Prevention of Pollution from Ships (MARPOL) seeks to limit air pollution from ships. On 1 January 2020 the previous sulphur limit of 3.5% in MARPOL was dropped to 0.5%. New Zealand adopted MARPOL Annex VI on 26 May 2022, with it coming into force gradually as regulations are updated. Regulation 3.1 of Annex VI does include an exemption for "emissions associated solely and directly with the treatment, handling or storage of seabed minerals" and "emissions from marine diesel engines that are solely dedicated to the exploration, exploitation and associated offshore processing of seabed mineral resources". Considering that HFO will be used to power all aspects of the IMV, FSO and assumedly CEV, a key question is if the seabed minerals exemption in Annex VI applies to the IMV, FSO, and CEV.
48. Regardless of if Annex VI applies, consideration should be given to if use of HFO of 3.5% sulphur is appropriate. Especially in the context of the global move to low sulphur HFO and the already identified ability to use diesel in the IMV.

7.4 Recommendations

49. Council recommends the Expert Panel:
    o. Request the Applicant to clarify whether the FPSO air quality emissions modelling by Tonkin & Taylor refers to emissions from the IMV or alternatively from the FSO.
    p. Request the Applicant provide air quality emissions dispersion modelling that incorporates the cumulative effects of emissions simultaneously from the IMV, the FSO, and the CEV.
    q. Request resolution of possible discrepancies within the application documentation regarding the likely annual consumption of HFO by the IMV.

r. Request the Applicant provide modelling and environmental effects analysis regarding the potential impingement and deposition of acid gas condensation aerosols and plume on the sea surface in the vicinity of the IMV, FSO, and CEV.
s. Consider if requirements under MARPOL Annex VI apply to the Application regarding limitations on sulphur content in HFO.
t. Consider whether it is acceptable to allow the Applicant to use HFO of up to 3.5%, and if not, to consider:
    i. requiring the Applicant to use HFO of a maximum of 0.5% sulphur content;
    ii. requiring the use of only diesel fuel;
    iii. imposing a cap on annual emissions of sulphur dioxide and allowing the Applicant to manage fuel consumption within that cap;
    iv. requiring the installation of approved sulphur dioxide scrubbers on engine exhausts; or
    v. requiring continual ocean neutralisation dosing equivalent to their acid gas emissions.

8. Application of the ISQG-High

8.1 Discussion

50. There are two issues, one substantive and one administrative, regarding how the Applicant has applied the Interim Sediment Quality Guideline-High in its proposed consent conditions. Condition 6 states "[t]he activities authorised by these consents must not result in an exceedance of any Interim Sediment Quality Guideline-High ("ISQG-High") value in the Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000 ("ANZECC 2000"), or any subsequent versions thereof, at any of the ten monitoring sites identified in Schedule 2."
51. The administrative issue is that the ANZECC 2000 guidelines have been replaced by the Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2018. Likewise, the ISQG-High criteria are now referred to as 'GV-high' values.
52. The substantive issue is that ISQG-High/GV-high values are misapplied in the Application. The 2018 guidelines clearly state:
    a. The upper guideline values (GV-high) provide an indication of concentrations at which you might already expect to observe toxicity-related adverse effects.
    b. As such, the GV-high value should only be used as an indicator of potential high-level toxicity problems, not as a guideline value to ensure protection of ecosystems.
    c. The use of multiple lines of evidence as part of the weight-of-evidence process is recommended to better assess the risk to a sediment ecosystem if a default guideline value is exceeded.
53. To provide acceptable ecological protection against the possibility of metals within sediment proving to be at toxic levels, the criteria referenced in this condition should be the DGV criteria provided in Table 1 of the 2018 guidelines[18], and not the GV-high criteria. As quoted above from the guidelines, "the sediment DGVs indicate the concentrations below which there is a low risk of unacceptable effects occurring, and should be used, with other lines of evidence, to protect aquatic ecosystems".

8.2 Recommendations

54. Council recommends the Expert Panel:

[18] Table 1 Recommended toxicant default guideline values for sediment quality, at Toxicant default guideline values for sediment quality

u. Amend draft Condition 6 by making reference to 'the Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2018 ("ANZECC 2018"), and not the 2000 guidelines.
v. Amend draft Condition 6 by deleting any reference to the 'ISQG-High' values in the ANZECC 2000 guidelines, and instead requiring the applicant to demonstrate compliance with the DGV criteria in the ANZECC 2018 guidelines (or any future update).

9. Incident response

9.1 Rescue or salvage availability

55. There is an absence of consideration in the Application of the availability of, or means of assistance for, rescue or salvage procedures in the eventuality of any serious mishap to any of the vessel fleet. The Applicant has provided some detail around measures and corresponding consent conditions for the safe operation and movement of mining vessels and ancillary vessels (e.g. Attachment 1: Proposed Restricted Activities and Consent Conditions: conditions 25, 30, 33-34). However, given the mining activities involve up to three heavy vessels (any two of which will be at any time working in relatively close proximity), a lee shoreline and relatively shallow and frequently turbulent waters, this omission warrants further attention.
56. The 2022 *Emergency Towing and Emergency Salvage Study* (ETESS) prepared for Maritime New Zealand is an important reference point. It considered a number of plausible scenarios, such as dragging anchor, loss of propulsion in adverse conditions adjacent to a lee shore, loss of propulsion or steerage, and mooring breakout. A key finding was:

    With the risk of a maritime emergency not having decreased since the ETESS 15 report, statistically New Zealand is due another significant maritime incident. A finding of this report is that there are limited available vessels that could be used promptly to prevent the escalation of a maritime incident in all but the most benign conditions, principally because the main dedicated towing assets, harbour tugs, are not designed for emergency towage tasks. The report also finds that while there are numerous salvage-capable marine service providers located in New Zealand, none would be capable of conducting a significant salvage event' (ETESS 2022, Executive Summary).
57. Further, a history of shipping mishaps involving the Taharoa Express, a bulk iron ore carrier highlights the risks. The Taharoa Express exported ironsand ore from an offshore loading terminal off Kawhia. From 2003 to 2009 it was involved in at least 4 different incidents, two of which resulted in formal investigations[19]. This does not establish any likelihood regarding the Application but reinforces that operations are not certain to remain incident-free.
58. A mishap involving any of the primary mining vessels would be an adverse event of potentially highly significant scale. For example, the fuel storage capacity of the IMV and FSO are given as 35,000 tonnes and 20,000 tonnes of HFO respectively. The IMV is to have a length of 345 metres, the FSO a carrying capacity of 60,000 tonnes, and the CEV a cargo capacity of 180,000 tonnes. To provide context, the Rena disaster involve a much smaller vessel. It was 246 metres long, had a total deadweight (cargo plus fuel carrying capacity) of 47,000 tonnes. It was carrying 1,700 tonnes of HFO at the time of the grounding, with an estimated 350 tonnes being discharged into the sea. The Rena salvage operation cost $700 million[20].

[19] Report 07-207, Transport Accident Investigation Commission, 2007; Inquiry 09-210, Transport Accident Investigation Commission, 2009; Stricken ship will be towed to Japan, NZ Herald, 2003; Ship diced with danger last year, NZ Herald, 2004.
[20] Reflecting on ten years since the Rena grounding and oil spill response, Maritime NZ, 2021.

59. Council does not suggest the extraction and trans-shipment operations will be conducted with anything other than due care and competence. However, the possibility of a low or extremely low probability event, but with potentially high regional and national consequences, necessitates greater consideration of appropriate precautions.

9.2 Insurance

60. The Applicant proposes insurance cover of "public liability insurance of not less than NZ$500,000,000 (2025-dollar value) for any claim or series of claims arising from our operations to cover costs of environmental restoration and damage to the marine environment, assets of existing interests or infrastructure in the STB as a result of an unplanned event occurring during operations." (Application report, executive summary). Council notes that Section 5.13.1.3 of the Application report refers to proposed condition 83 and $100,000,000 of public liability cover. Condition 83 in the Application does not refer to public liability cover, but condition 107 refers to at least $500,000,000 worth of public liability insurance.
61. Regardless of the specific sum, comparison with the Rena disaster indicates the $500 million figure is inadequate by a significant margin. The Application involves much larger vessels with HFO carrying capacities that are an order of magnitude greater than the Rena. Accordingly, greater consideration is needed on what an appropriate public liability insurance requirement would be.
62. Consideration should also be given to if a requirement for professional indemnity insurance is appropriate. In particular, the Application makes extensive use of certification processes led by technical experts in the proposed consent conditions[21]. A requirement for professional indemnity insurance for relevant technical experts would provide reassurances that the tax or rate payer will not be left with the cost of addressing any issues.

9.3 Oil spill response

63. The Application report sets out the approach to providing oil spill response planning. This includes identification of the possibility of oil spillage in section 4.1.3, and a fuller discussion of oil spill planning and management in section 5.14.3. Modelling of the trajectory of an oil spill from the mining area has estimated that "some 92.4 to 97.8% of oil spill events are predicted to result in a beaching outcome of some sort[22]". That is, any spillage of oil is almost certain to result in a shoreline impact within the STB.
64. Council is concerned that the modelling done by the Applicant is only based on a 'worse case' oil spill of 100 metric tonnes over a two-hour period. This seems insufficient in the context of the IMV and FSO vessels with their respective 35,000 and 20,000 tonne HFO capacity. Further, the Application contains no information on why that scenario was chosen and what operational event it might equate to.
65. Effective oil spill scenario planning and assessment should be based on a range of scenarios, including catastrophic failure – even if that is a very low probability event. Further work is needed to determine what these scenarios would look like and the associated adverse effects.
66. Through conditions 33 and 34 the Applicant has committed to developing an oil spill response plan in consultation with Maritime New Zealand (MNZ) for their approval. However, these conditions do not

[21] These include matters related to the impacts of noise on marine mammals (condition 13), the pre-commencement environmental monitoring plan (condition 48), review of the numerical suspended sediment concentration limits (condition 51), operation sediment plume model (condition 52), environmental management and monitoring plan (condition 55), post-extraction benthic recovery monitoring (condition 57), seabird effects mitigation and management plan (condition 65), marine mammal management plan (condition 66), collision (loss of position) contingency management plan (condition 67), and biosecurity management plan (condition 70).

[22] Application report, section 5.14.3.2.

explicitly require the Company's oil spill contingency plan to be prepared and approved prior to the commencement of any on-site activity by the Applicant.

67. Further, the Application and draft conditions make no mention of any input from the Taranaki oil response team into the preparation of the contingency plan, including alignment with the Taranaki Regional Council Marine Oil Spill Contingency Plan. The Taranaki team is:
    a. comprised of staff from the Regional Council, Port Taranaki, and regional on-shore and off-shore oil hydrocarbon extraction and processing industries;
    b. exercises frequently (both desktop and field deployment);
    c. is trained by MNZ to current good oil spill response practice; and
    d. has considerable experience in the management of oil and oil spills to draw on.
68. Acknowledging that MNZ has the exclusive role of contingency plan approval, nevertheless seeking and incorporating input from the local team and the regional plan into the drafting of the operational plan for the mining operation would be prudent. It also ensures that the regional response team would have an immediate and intimate awareness of the part they would be called upon to play in conjunction with MNZ staff, in the eventuality of any spill in the STB. It is inevitable that the regional team, together with the oil spill containment and recovery equipment held at Port Taranaki, will be called upon in the event of a spill. Proactive, rehearsed, and co-operative engagement between all parties is sensible. Similar alignment with the oil spill team and plan within the Manawatu-Wanganui region should also be considered.
69. Finally, further consideration should be given to make sure New Zealand has the response capacity needed to respond to a large-scale incident associated with the Project. If not, consent conditions should provide for those capacity gaps to be addressed,

9.4 Recommendations

70. Council recommends the Expert Panel:
    w. Require the Applicant to provide appropriate analysis and a verifiable protocol setting out:
        i. identified and secured capacity for assistance, towage, rescue, or salvage, as needs be, for the mining and ancillary vessels involved in the seabed mining operation;
        ii. confirming matters such as potential assistance vessels and staffing, constraints upon availability, mobilisation time, and suitability for large vessel assistance; and
        iii. that the protocol is to be submitted to EPA (and other statutory agency or agencies as appropriate) for certification.
    x. Seek clarification from the Applicant on the rationale behind using 100 metric tonnes for oil spill modelling and consider the need for further modelling and effects assessment, including of a catastrophic failure scenario.
    y. Review the level of public liability insurance cover offered by the Applicant, in order to establish a meaningful extent of cover.
    z. Consider if a requirement for professional indemnity insurance from relevant technical experts referenced in the proposed consent conditions is appropriate.
    aa. Amend proposed conditions 33 and 34 to:
        i. explicitly require MNZ approval of the oil spill contingency plan to be obtained by the Applicant prior to the commencement of any on-site extraction operations; and
        ii. require consultation by the Applicant with representatives of the Taranaki marine oil spill response team and the Manawatu-Wanganui marine oil spill response team (subject to their availability), in the preparation and exercising of the oil spill contingency plan.
    bb. Consideration be given to New Zealand's capacity to respond to a large-scale oil spill incident associated with the Project, and if potential gaps exist, these be addressed through consent conditions.

10. Liability and post-extraction monitoring

10.1 Discussion

71. The Applicant commits to monitoring the state of the seabed and the wider marine environment for a period of 5 years following the cessation of ironsand extraction[23]. De-commissioning, and the environmental risks and their management during de-commissioning, are discussed in section 8.3.19. In context, this is in respect of benthic recovery or re-instatement following the cessation of extraction.
72. Condition 8 would require post-closure monitoring and reporting on any need for and means of intervention if this is found necessary to achieve recovery of the macroinfauna benthic community. Conditions 57 and 58 provide further details of the post-extraction recovery monitoring design and reporting requirements. Conditions 107 and 108 refer to the public liability insurance requirements discussed earlier.
73. Council notes there is no specific obligation placed upon the Applicant to accept responsibility for undertaking recovery. The closest provision is that the post-extraction monitoring plan is to identify how recovery of identified residual impacts might occur. It appears that the financial or operational obligation to take such steps as are necessary to deliver that recovery is omitted. This is particularly so if the recovery is still yet to satisfactorily occur after the 5-year post-extraction monitoring period has ended.
74. There is also no discussion of any mechanism for triggering the release of the public liability funding. Clear criteria are needed by which the insurance cover would be released to facilitate recovery. Assuming the insurance cover would be payable only to the Applicant as policy holder, there is no description of any mechanism by which the Applicant might agree to meet costs incurred by any other parties in respect of remedial and rehabilitation works. In their absence, it would seem that court action might be required for any third-party cost recoveries. This would be costly and time-consuming.
75. Finally, there is no guarantee of the continuing existence and financial viability of the Applicant, or of the continuation of the public liability insurance cover, at and following the cessation of the extraction operations. If the company were to be dissolved at that point, to surrender its marine mining consents, to be found to be insolvent, to have had its consents cancelled, or even simply to cancel the public liability cover, then the responsibility and costs for any intervention to bring about benthic (or shoreline) recovery and restoration are at risk of falling on the tax and rate payer.

10.2 Recommendations

76. Council recommends the Expert Panel:
    cc. Review the certainty, integrity, geographic coverage and term of the current assurances and consent conditions concerning the intention and capacity of the Applicant to ensure post-extraction recovery of the wider marine environment, and impose such additional measures, mechanisms, and criteria as it finds necessary to guarantee delivery of such capacity even in the case of default by the Applicant.
    dd. In giving effect to the above recommendation, give consideration to the following potential requirements:
        i. progressive payments during mining operations into a trust fund, to be accessible as need is found once extraction ceases, and any residual to be returned to the Applicant at the end of the five-year period or the end of reinstatement works whichever comes later;
        ii. the public liability insurance to be arranged such that EPA is recognised as a co-beneficiary for the purpose of environmental reinstatement cost recovery;

[23] Application report, section 6.7.

iii. public liability cover for the full five-year period following cessation of extraction to be certified prior to the cessation of extraction; or
iv. a bond, despite the Applicant's objections to such a provision.

11. Cultural protocols

11.1 Discussion

77. In Section 8.3.6.7 of the Application Report, the Applicant acknowledges the low but not non-existent likelihood of a discovery of archaeological sites such as a shipwreck. The Applicant has therefore addressed this possibility by including within proposed conditions, a protocol to be followed should such an eventuality arise (Conditions 19-23).
78. However, there is no recognition within the application of the possibility of discovery of human remains or human artefacts such as bones, clothing, or other human adornments and utensils during extraction or processing. In the Council's view, it is highly desirable that such a protocol be prepared through consultation with appropriate agencies and parties. This would require engagement with at least Police, Heritage New Zealand Pouhere Taonga, and iwi.
79. The Application also does not acknowledge that from time to time a rahui might be declared on the shoreline and near coastal waters. It is suggested that as a matter of respect and recognition of customary practice, a protocol could usefully be prepared in consultation with the relevant hapū and iwi authorities, prescribing appropriate levels of acknowledgement by the operator.
80. Finally, Council expects the written comment and evidence of ngā iwi o Taranaki will greatly assist the Expert Panel in considering mātauranga Māori and matters of tikanga. We also consider these matters were well canvased in the Supreme Court judgment and remain relevant to the Application.

11.2 Recommendations

81. Council recommends the Expert Panel:
    ee. Set conditions following the template of those relating to the discovery of archaeological sites, and applying to the discovery of human remains or human artefacts.
    ff. Set a condition requiring the development of a protocol for the operator to implement in case of declaration of a rahui in the general vicinity of extraction operations.
    gg. Note that Council recognises and defers to the written comment and evidence of ngā iwi o Taranaki regarding mātauranga Māori and matters of tikanga, recognising their mana whenua and mana moana status in this rohe.

12. Planning analysis

12.1 Discussion

82. As discussed under the legislative application section, the Expert Panel must take into account the nature and effect of the RMA regime, including the Taranaki Coastal Plan. This does not require a full analysis against relevant provisions, as you would for an application under the RMA. Rather, the focus is on the "nature and effect". Council has interpreted this to be a focus on key objectives and particularly policies that establish bottom lines.
83. In order to assess whether the proposed activity is consistent with these matters, a sufficient understanding of its potential adverse environmental effects is required. Based on the PDP Report and the other analysis contained in these written comments, Council considers there is currently insufficient information to enable an informed evaluation of the scale and significance of potential adverse effects.

It is then not possible to determine whether the proposed activity aligns with nature and effect of the RMA, including the NZCPS and the Taranaki Coastal Plan. Appendix 3 contains the full text of the relevant objectives and policies from the NZCPS, Taranaki Regional Policy Statement 2010, Taranaki Coastal Plan, and descriptions of relevant scheduled sites[24].

84. Despite these limitations, and in light of Council's consideration that bottom line related policies are still highly relevant to the Expert Panel's decision making, we have outlined below key policies of the Taranaki Coastal Plan and some commentary for the Expert Panel to consider:

    a. Policy 3[25] requires the adoption of precautionary approach. It is possible that if a decision on the Application was required without any further information, the Application would contravene this policy, which could be interpreted as a kind of bottom line, and therefore be inconsistent with the nature and effect of the Taranaki Coastal Plan.

    b. Policy 9 requires the avoidance of adverse effects on the values and characteristics of scheduled sites. This includes both Project Reef and the North and South Traps. The following values and characteristics for these sites are likely to be particularly important:

        i. important kelp (*Ecklonia radiata*) beds;
        ii. diverse ranges of fish and encrusting sponge species;
        iii. nursery ground functions for blue cod regarding Project Reef;
        iv. valuable cray fish habitat; and
        v. human activity is minimal and the experience of these sites maintains a high sense of wilderness and remoteness.

        Where an adverse effect cannot be avoided, the activity would likely be inconsistent with the nature and effect of the Taranaki Coastal Plan.

    c. Policy 15[26] requires the avoidance of adverse effects on indigenous taxa identified in Schedule 4A. Of particular relevance to the Application are the following scheduled species: Fairy prion, Northern blue penguin (i.e. Little penguin)[27], Common bottlenose dolphin, Hector's dolphin, Māui dolphin, New Zealand fur seal, and the Pygmy blue whale. Failure to avoid adverse effects on these species – or any other scheduled species – would breach a bottom line and therefore likely be inconsistent with the nature and effect of the Taranaki Coastal Plan.

    d. Policy 15 also requires the avoidance of adverse effects on scheduled indigenous ecosystems. This includes the area of the STB identified in the Taranaki Coastal Plan as a significant seabird area for pelagic seabirds feeding, breeding and passage – which includes the full area adjacent to the project site and within the expected plume. Adverse effects on this scheduled ecosystem would breach a bottom line and therefore would likely be inconsistent with the nature and effect of the Taranaki Coastal Plan.

    e. Policy 15 also requires the avoidance of adverse effects on areas set aside for full or partial protection of indigenous diversity under legislation, Council consider this likely includes the West Coast North Island Marine Mammal Sanctuary that covers the Taranaki CMA. This reinforces the importance of considerations of potential adverse effects on marine mammals and their habitats, especially Hector's and Māui dolphins.

    f. Policy 17 requires the avoidance of significant adverse effects on the habitat of taonga species, unless the avoidance of adverse effects is not practicable and adverse effects are remedied or

[24] The lists of scheduled significant indigenous biodiversity, scheduled significant indigenous biodiversity areas, and scheduled taonga species are not included due to their length. But can be found in schedules 4A, 4B, and 5.
[25] Policy 3 duplicates the NZCPS Policy 3(1).
[26] Policy 15 follows the form of NZCPS Policy 11.
[27] The specific sub-species of Little penguin scheduled in the Taranaki Coastal Plan is *Eudyptula minor iredale*. Even if the Panel considers this does not capture all sub-species of Little blue that might be relevant to the Application, Council notes others would be covered under Policy 11 of the NZCPS.

mitigated to the extent practicable. This includes all species of marine mammals, but also lists specific species, which of particular relevance to the Application, includes be the Hector's and Māui dolphins.

g. Policy 43 requires that deposition on to the seabed within areas managed or held under other acts for statutory protection must not occur. It is possible this captures the West Coast North Island Marine Mammal Sanctury and could then require deposition not to occur within the Taranaki CMA. This was not the intent of this policy originally, and Council is currently exploring a plan change to address the potential issue. This is yet to be notified.

12.2 Recommendations

85. Council recommends the Expert Panel:

hh. Note Council considers it currently has insufficient information to make a judgement on if the Application is consistent with the nature and effect of the RMA and Taranaki Coastal Plan.

ii. Note that policies 9 and 15 and possibly 43 in the Taranaki Coastal Plan establish relevant bottom lines that should be given close consideration by the Expert Panel, while the requirement to take a precautionary approach in Policy 3 could also be contravened.

jj. Note that Council is able to provide further advice on consistency with key planning instruments as the decision-making process progresses.

13. Monitoring and enforcement

13.1 Discussion

86. If consent is granted, Council considers a collaborative approach between the EPA and Council should be undertaken for monitoring and enforcement. Many of the effects of the Application will occur within the Taranaki CMA, and Council has significant compliance and scientific expertise that is able to be drawn on. Further, it is important Council have good access to the monitoring results so we can discriminate between environmental effects resulting from the Application, other consented activities, and natural environmental factors. This is to support the processing of other applications and carrying out of our regular environmental monitoring responsibilities. Finally, Council is likely to receive and have to respond to any public complaints in the area. We will need good responsive relationships with the EPA to be able to resolve these.

87. The Applicant has proposed Council have a representative on the proposed Technical Review Group. As proposed, this group would have responsibility for providing technical advice to the Consent Holder on a range of matters. Noting that the exact scope of this group may change over the decision-making process, if the Expert Panel decides to grant the Application, Council is supportive of being represented on the Group.

13.2 Recommendations

88. Council recommends the Expert Panel:

kk. Note the importance of the EPA and Council having a strong working relationship regarding monitoring and enforcement if the consent is granted.

ll. Note that Council is supportive of being represented on the proposed Technical Review Group if the consent is granted.

14. Conclusion

89. Taranaki Regional Council (Council) considers that the final determination of the Expert Panel to grant or decline the Taranaki VTM Project application (the Application) is likely to be finely balanced. On one hand, the project would likely have significant gross economic benefits to the nation and region, and this must be given greater weight under the Fast Track Approvals Act 2024 (FTAA). On the other, the eventuality that the activities' adverse effects are sufficiently significant to be out of proportion with the project's regional or national benefits cannot be ruled out. This is primarily due to the considerable uncertainty regarding adverse effects and the presence of both vulnerable and highly valued ecosystems and species in the South Taranaki Bight (STB).
90. Regarding uncertainty, the significant information deficiencies for adverse effects on marine mammals, seabirds, and the effects of the sediment plume identified by the Supreme Court in the 2016 application remain highly relevant. The limited work done by the Applicant since that Supreme Court decision has done little to address these gaps.
91. Resolving if the adverse effects are sufficiently out of proportion or not will likely hinge on how the Expert Panel takes into account the requirement to favour caution and environmental protection. The FTAA necessitates a judgement on extent of adverse effects, even in the face of considerable uncertainty. Council considers in such circumstances the Expert Panel should assume a plausible worst-case scenario for uncertain effects. If the Expert Panel agrees with this approach, caucusing amongst respective technical experts will likely be needed to determine what a plausible worst-case is in the context of seabirds, marine mammals and the sediment plume. This can then inform further analysis against relevant statutory criteria, including under the Resource Management Act 1991 and the Taranaki Coastal Plan (2023).
92. Council has also highlighted additional concerns with the application that we recommend the Expert Panel consider. These are the lack of assessment of environmental effects associated with the air discharges, misuse of the ISQG-High criteria, apparent gaps in the assessment and proffered consent conditions regarding incident response, and the Applicant's proposed approach to liability.
93. Council thanks the Expert Panel for the opportunity to provide its written comment. We look forward to further engagement throughout this process and can provide any further advice or information that may assist the Expert Panel in its deliberations[28].

[28] Council has provided advice on proposed consent conditions at points throughout this document. This is not a comprehensive treatment of consent conditions. If the Expert Panel decides to grant the application, detailed commentary on consent conditions from Council will be provided under section 70 of the FTAA.

15. Appendix 1: Market Economoics Taranaki VTM Report – Economic Review

Refer separate attachment.

16. Appendix 2: PDP Technical Assessment of Fast Track Application

Refer separate attachment.

17. Appendix 3: Relevant RMA objectives, policies and other material

NZCPS policies of particular relevance	
Policy	**Text**
3	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.
11	To protect indigenous biological diversity in the coastal environment: a) avoid adverse effects of activities on: i. indigenous taxa that are listed as threatened or at risk in the New Zealand Threat Classification System lists; ii. taxa that are listed by the International Union for Conservation of Nature and Natural Resources as threatened; iii. indigenous ecosystems and vegetation types that are threatened in the coastal environment, or are naturally rare; iv. habitats of indigenous species where the species are at the limit of their natural range, or are naturally rare; v. areas containing nationally significant examples of indigenous community types; and vi. areas set aside for full or partial protection of indigenous biological diversity under other legislation; and b) avoid significant adverse effects and avoid, remedy or mitigate other adverse effects of activities on: i. areas of predominantly indigenous vegetation in the coastal environment; ii. habitats in the coastal environment that are important during the vulnerable life stages of indigenous species; iii. indigenous ecosystems and habitats that are only found in the coastal environment and are particularly vulnerable to modification, including estuaries, lagoons, coastal wetlands, dunelands, intertidal zones, rocky reef systems, eelgrass and saltmarsh; iv. habitats of indigenous species in the coastal environment that are important for recreational, commercial, traditional or cultural purposes; v. habitats, including areas and routes, important to migratory species; and vi. ecological corridors, and areas important for linking or maintaining biological values identified under this policy.
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: i. 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 ii. ensuring that regional policy statements, and plans, identify areas where preserving natural character requires objectives, policies and rules, and include those provisions.

	2) Recognise that natural character is not the same as natural features and landscapes or amenity values and may include matters such as: a) natural elements, processes and patterns; b) biophysical, ecological, geological and geomorphological aspects; c) natural landforms such as headlands, peninsulas, cliffs, dunes, wetlands, reefs, freshwater springs and surf breaks; d) the natural movement of water and sediment; e) the natural darkness of the night sky; f) places or areas that are wild or scenic; g) a range of natural character from pristine to modified; and h) experiential attributes, including the sounds and smell of the sea; and their context or setting.
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); New Zealand Coastal Policy Statement 2010 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.
22	1) Assess and monitor sedimentation levels and impacts on the coastal environment. 2) Require that subdivision, use, or development will not result in a significant increase in sedimentation in the coastal marine area, or other coastal water. 3) Control the impacts of vegetation removal on sedimentation including the impacts of harvesting plantation forestry. 4) Reduce sediment loadings in runoff and in stormwater systems through controls on land use activities.
23	1) In managing discharges to water in the coastal environment, have particular regard to: a) the sensitivity of the receiving environment; b) the nature of the contaminants to be discharged, the particular concentration of contaminants needed to achieve the required water quality in the receiving environment, and the risks if that concentration of contaminants is exceeded; and c) the capacity of the receiving environment to assimilate the contaminants; and: d) avoid significant adverse effects on ecosystems and habitats after reasonable mixing; e) use the smallest mixing zone necessary to achieve the required water quality in the receiving environment; and

	f) minimise adverse effects on the life-supporting capacity of water within a mixing zone. 2) In managing discharge of human sewage, do not allow: a) discharge of human sewage directly to water in the coastal environment without treatment; and b) the discharge of treated human sewage to water in the coastal environment, unless: i. there has been adequate consideration of alternative methods, sites and routes for undertaking the discharge; and ii. informed by an understanding of tangata whenua values and the effects on them. 3) Objectives, policies and rules in plans which provide for the discharge of treated human sewage into waters of the coastal environment must have been subject to early and meaningful consultation with tangata whenua. 4) In managing discharges of stormwater take steps to avoid adverse effects of stormwater discharge to water in the coastal environment, on a catchment by catchment basis, by: a) avoiding where practicable and otherwise remedying cross contamination of sewage and stormwater systems; b) reducing contaminant and sediment loadings in stormwater at source, through contaminant treatment and by controls on land use activities; c) promoting integrated management of catchments and stormwater networks; and d) promoting design options that reduce flows to stormwater reticulation systems at source. New Zealand Coastal Policy Statement 2010 5) In managing discharges from ports and other marine facilities: a) require operators of ports and other marine facilities to take all practicable steps to avoid contamination of coastal waters, substrate, ecosystems and habitats that is more than minor; b) require that the disturbance or relocation of contaminated seabed material, other than by the movement of vessels, and the dumping or storage of dredged material does not result in significant adverse effects on water quality or the seabed, substrate, ecosystems or habitats; c) require operators of ports, marinas and other relevant marine facilities to provide for the collection of sewage and waste from vessels, and for residues from vessel maintenance to be safely contained and disposed of; and d) consider the need for facilities for the collection of sewage and other wastes for recreational and commercial boating.

Taranaki Regional Policy Statement policies of particular relevance	
Policy	**Text**
UDR 1	Recognition will be given in resource management processes to the role of resource use and development in the Taranaki region and its contribution to enabling people and communities to provide for their economic, social and cultural wellbeing.
CNC 2	The protection of the natural character of the coastal environment shall be achieved by having regard to the following criteria in determining appropriate subdivision, use, development or occupation of the coastal environment: a) the degree and significance of actual or potential adverse effects on the natural character of the coastal environment, including cumulative effects, and the efficacy of measures to avoid, remedy or mitigate such effects; b) the extent to which the subdivision, use, development or occupation recognise and provide for the relationship of tangata whenua and their culture and traditions with their ancestral lands, water, sites, wāhi tapu and other taonga; c) the degree to which adverse effects on those historic heritage values that can contribute to natural character can be avoided, remedied or mitigated; d) the need for development or occupation to occur in the coastal environment;

	e) where it is likely that an activity will result in significant adverse effects on the environment, any possible alternative locations or methods for undertaking the activity, and where the activity involves the discharge of any contaminant, any possible alternative methods of discharge; f) the degree to which the subdivision, use, development or occupation will avoid adverse effects at alternative non-coastal locations; g) the degree of existing modification of the coastal environment from its natural character; h) the degree to which the subdivision, use, development or occupation will disrupt natural processes or will be threatened by, or will contribute to, the occurrence of natural hazards, particularly coastal erosion; i) the degree to which the subdivision, use, development or occupation can be accommodated near existing developments and in spatially compact forms and the extent of further modification of the natural character of the coastal environment through sprawling and sporadic development; j) the provision of adequate services, particularly the disposal of wastes; k) the need to protect habitat (in the coastal marine area) of species including mobile species and those that are important for commercial, recreational, traditional or cultural purposes; l) the benefits to the community of the use, development or occupation of the coastal marine area; m) the degree to which financial contributions associated with any subdivision, use and development can be used to off set potential or actual unavoidable adverse effects arising from those activities; and n) the benefits to be derived from the use and development of renewable energy sources, including national, regional and local benefits.
CNC 4	Areas in the coastal environment of importance to the region will be identified and priority given to protection of the natural character, ecological and amenity values of such areas from any adverse effects arising from inappropriate subdivision, use and development. In the assessment of areas of importance, matters to be considered will include: a) wetlands, estuaries or coastal lagoons and coastal turf, forest and shrublands of regional, national or international importance; b) their importance for marine mammals or birds, invertebrates and lizards for breeding, roosting or feeding, or habitats of threatened indigenous bird species; c) the existence of regionally or nationally outstanding ecosystems or communities or nationally threatened plant or animal species; d) scenic sites and recreational sites of outstanding or regional or national significance; e) historic heritage values, including archaeological sites of national or outstanding significance; f) the existence of nationally significant or outstanding coastal and marine landforms, landscapes, scientific features and associated processes; g) the cultural and spiritual values of tangata whenua; h) wāhi tapu and sites of importance to tangata whenua; and i) the existence of marine protected areas.
CWQ 2	Avoid, remedy or mitigate, to the fullest practicable extent, adverse effects on coastal water quality arising from ship or offshore installation discharges and maintenance.
BIO 2	Adverse effects on indigenous biodiversity in the Taranaki region arising from the use and development of natural and physical resources will be avoided, remedied or mitigated as far as is practicable.
BIO 3	Priority will be given to the protection, enhancement or restoration of terrestrial, freshwater and marine ecosystems, habitats and areas that have significant indigenous biodiversity values.
MIN 1	Provision will be made to enable appropriate use and development of the region's mineral resources in a way that avoids, remedies or mitigates adverse effects on the environment.

Taranaki Coastal Plan objectives and policies of particular relevance	
Objective Number	**Text**
2	Natural and physical resources of the coastal environment are used efficiently, and activities that have a functional need or an operational need, that depend on the use and development of these resources, are provided for in appropriate locations.
4	The life-supporting capacity and mouri of coastal water, land and air are safeguarded from the adverse effects, including cumulative effects, of use and development of the coastal environment.
5	Water quality in the coastal environment is maintained where it is good and enhanced where it is degraded.
6	The natural character of the coastal environment is preserved and protected from inappropriate subdivision, use and development and is restored where appropriate.
7	The natural features and landscapes of the coastal environment are protected from inappropriate subdivision, use and development.
8	Indigenous biodiversity in the coastal environment is maintained and enhanced and significant indigenous biodiversity in the coastal environment is protected.
Policy Number	**Text**
General policies	
1	Manage the coastal environment in a way that recognises that some areas have values, characteristics or uses that are more vulnerable or sensitive to the effects of some activities, or that have different management needs than other areas. In managing the use, development and protection of resources in the coastal marine area under the Plan, recognition will be given to the following coastal management areas (identified in Schedule 1) and their distinguishing values, characteristics and uses: a) Outstanding Value: refers to those areas listed in Schedule 1(a) and are identified as having outstanding natural character and/or outstanding natural features or landscape values. These areas characteristically: i. contain values and attributes that are exceptional, including in relation to landforms, land cover, biodiversity, cultural and heritage associations, and visual qualities identified in Schedule 2 (refer corresponding Policy 9); ii. contain marine areas with legal protection, including Parininihi Marine Reserve, Ngā Motu/Sugar Loaf Islands Marine Protected Area and Tapuae Marine Reserve (identified in Schedule 1); and iii. are iconic to the region's identity and sense of place. b) Estuaries Unmodified: refers to those estuaries that are permanently open to tidal movements and listed in Schedule 1(b). These areas do not include estuaries identified in (a) or (c) of this policy and characteristically: i. have high natural character, provide a natural focal point for human activity, but are generally not significantly modified and are surrounded by minimal urban development and unmodified environments;

	ii. have significantly different and more complex natural processes than the open coast; iii. provide important habitats, migration paths, breeding areas and nursery areas for marine and bird life; and iv. are valued by Māori for taonga species, and cultural, spiritual, historical and traditional associations. c) Estuaries Modified: refers to the Pātea, Waiwhakaiho and Waitara estuaries that are permanently open to tidal movements and listed in Schedule 1(c). These areas characteristically: i. have been modified by flood protection works and placement of structures; ii. are surrounded by urban, extensively modified environments; iii. have significantly different and more complex natural processes than the open coast; iv. provide important habitats, migration paths, breeding areas and nursery areas for marine and bird life; and v. are valued by Māori for taonga species, and cultural, spiritual, historical and traditional associations. d) Open Coast: refers to remaining areas of the coastal marine area not identified in (a), (b), (c) and (e) of this Policy that characteristically: i. are subject to a high energy westerly wave environment and the coastal land behind the foreshore is generally naturally eroding; ii. include marine systems and habitat, including migration paths, breeding areas and nursery areas for marine mammals and seabirds; iii. include marine systems and marine life valued by Māori for mahinga kai; iv. include nationally and regionally important surf breaks identified in Schedule 8 (refer corresponding Policy 22); and v. contain fisheries that are recreationally, culturally and commercially valuable. e) Port: refers to the operational management area of Port Taranaki. The area is a highly modified environment that characteristically: i. enables people and communities to provide for their economic well-being; ii. contains regionally important infrastructure; iii. contains port related activities that are accepted as appropriate uses of this coastal management area; and iv. has a low level of natural character, although is located adjacent to an area of outstanding value.
3	Adopt a precautionary approach where the effects of any activity on the coastal environment are uncertain, unknown, or little understood, but potentially significantly adverse.
5	Consider whether subdivision and use and development of the coastal environment is in an appropriate location and form, and within appropriate limits, by having regard to (but not limited to) the following: a) the functional need or operational need for the activity to be located in the coastal marine area. Activities that do not have a functional need or operational need to be located in the coastal marine area generally should not be located there (unless the non-marine related activity complements the intended use and function of the area); b) whether the activity relates to the use, operation, maintenance and alteration of regionally important infrastructure; c) the benefits to be derived from other activities at a local, regional and national level, including the existing and potential contribution of agriculture, petroleum and mineral resources, and the potential contribution of aquaculture and renewable energy resources; d) the appropriateness of the proposed design, methodology, location or route of the activity in the context of the receiving environment and any possible alternatives, including best practicable options for preventing or minimising adverse effects on the environment; e) the degree to which the activity will recognise and provide for the relationships, uses and practices of Māori and their culture and traditions with their lands, water, sites, wāhi tapu, and other taonga in the coastal environment such as mahinga kai, tauranga waka (canoe landing sites), nga toka (rocks) and tauranga ika (fishing grounds); f) the degree to which the activity will be subject to unacceptable risks or exacerbate coastal hazards, or public health and safety with particular reference to Policy 23; g) the degree to which the activity contributes to the maintenance, enhancement or restoration of natural or historic heritage including by buffering areas and sites of historical heritage value;

	h) the degree to which the activity contributes to the maintenance, enhancement or restoration of appropriate public access or public use of the coast including for recreation; i) whether any landward component, development or use of land-based infrastructure or facilities associated with the activity can be appropriately provided for; j) whether the activity is for scientific investigation or educational study or research; and k) the degree and significance of actual or potential adverse effects of the activity on the environment, including consideration of: i. cumulative effects of otherwise minor activities; ii. the sensitivity of the environment; and iii. the efficacy of measures to avoid, remedy or mitigate such effects, or provide environmental compensation where effects cannot be avoided remedied or mitigated.
9	Protect the visual quality and the physical, ecological and cultural integrity of coastal areas of outstanding value identified in Schedules 1 and 2 from inappropriate subdivision, use and development by: a) avoiding adverse effects of activities on the values and characteristics including those identified in Schedules 1 and 2 that contribute to areas: i. having outstanding natural character; and/or ii. being outstanding natural features and landscape; and iii. within or adjoining coastal management area – Outstanding Value; and b) maintaining significant seascapes and visual corridors associated with outstanding natural features and landscapes, including views from within the landscapes or features, and views of the landscapes and features.
12	Maintain coastal water quality where it is good or enhance coastal water quality where it is degraded by avoiding, remedying and mitigating the adverse effects of activities on: a) the life-supporting capacity of coastal water; b) the mouri and wairua of coastal water; c) the integrity and functioning of natural coastal processes; and d) the ability of coastal water to provide for existing and anticipated future use by the community.
15	Protect significant indigenous biodiversity in the coastal environment by: a) avoiding adverse effects of activities on: i. indigenous taxa that are nationally threatened or at risk, or regionally distinctive, including those identified in Schedule 4A; ii. taxa that are internationally threatened including those identified in Schedule 4A; iii. indigenous ecosystems and vegetation types that are threatened in the coastal environment, or are naturally rare, including those identified in Schedule 4A; iv. habitats of indigenous species where the species are at the limit of their natural range, or are naturally rare; v. areas containing nationally significant examples of indigenous community types; and vi. areas set aside for full or partial protection of indigenous biological diversity under other legislation; b) avoiding significant adverse effects and avoiding, remedying and mitigating 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 stage of indigenous species including: i. estuaries; ii. spawning areas (e.g. snapper-trevally spawning area in the North Taranaki Bight between Mōhakatino River and Pariokariwa Point); iii. areas that provide passage for diadromous species; iv. marine mammal resting, feeding and breeding areas; and

	v. bird roosting and nesting areas; iii. indigenous ecosystems and habitats found only in the coastal environment and which are particularly vulnerable to modification including estuaries, lagoons, coastal wetlands, dunelands, intertidal zones, rocky reef systems, eelgrass, saltmarsh, and sensitive marine benthic habitats including those identified in Schedule 4B; 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, that are important to migratory species; and vi. ecological corridors and areas important for linking or maintaining biological values identified under this policy; and (c) avoiding, remedying or mitigating the adverse effects of activities in significant marine animal and seabird areas consistent with (a) and (b) above.
16	Maintain or enhance indigenous biodiversity generally in the coastal environment by: a) avoiding, remedying and mitigating the adverse effects of activities on indigenous biodiversity; and b) when assessing adverse effects on indigenous biodiversity, having regard to the extent of effects, including consideration of: i. the size and sensitivity of the ecological site and/or values; ii. the association of the ecological site and values with other interrelated, but not necessarily contiguous, ecological sites and values; iii. the nature, location, extent and design of the proposed development and the effects of these factors on indigenous biodiversity; and iv. the degree to which indigenous biodiversity values will be lost, damaged, destroyed, or enhanced, recognising that: i. transitory, discrete, localised or otherwise minor effects may be acceptable; ii. long-term and/or irreversible effects are less likely to be acceptable; and iii. there may be more than minor cumulative effects that arise from minor or transitory effects described in i.
17	Maintain or enhance taonga species as identified in Schedule 5 by: a) avoiding significant adverse effects of activities on the habitat of taonga species, mahinga kai, tāiapure or mataitai and customary uses and values unless: the activity is necessary for the provision of regionally important infrastructure, avoidance of adverse effects is not practicable and adverse effects are remedied or mitigated to the extent practicable; and b) avoiding, remedying or mitigating other adverse effects of activities on taonga species habitat, mahinga kai, tāiapure or mataitai
21	Maintain and enhance significant amenity values by avoiding, remedying or mitigating adverse effects on those qualities and characteristics that contribute to amenity values in: c) coastal areas of outstanding value identified in Schedules 1 and 2; d) coastal sites with significant amenity values identified in Schedule 7 including: i. beaches; ii. reefs; and iii. estuaries and river mouths; e) surf breaks identified in Schedule 8; f) coastal sites with significant indigenous biodiversity identified in Schedule 4, taonga species identified in Schedule 5, or historic heritage identified in Schedule 6A and B and Appendix 2; and g) other areas of the coastal environment with significant amenity values not identified in the Schedules referred to in (a), (b), (c) and (d).
Activity specific policies	
25	Discharges of water or contaminants to water in the coastal marine area must: a) be of an acceptable quality with regard to:

	i. the sensitivity of the receiving environment and associated uses and values; ii. the nature and concentration of the contaminants to be discharged and the efficacy of reduction, treatment and disposal measures; and iii. the capacity of the receiving environment to assimilate the contaminants and achieve the required water quality, taking into account the potential for cumulative or synergetic effects; b) avoid the accumulation of persistent toxic contaminants in the environment; c) adopt the best practicable option for the treatment and discharge to prevent or minimise adverse effects on the environment, having consideration to: i. discharging contaminants onto or into land above mean high water springs as an alternative to discharging contaminants into coastal waters; ii. the use of constructed wetlands or other land-based treatment systems as an alternative to discharging directly to water unless there is no other practicable option; iii. the nature of the discharge and sensitivity of the receiving environment; iv. the capital, operating and maintenance costs of alternative technical options to reduce the effects of the discharge, the effectiveness and reliability of each option, and the relative benefits to the receiving environment offered by each option; and v. the weighting of costs in proportion to any benefits to the receiving environment offered by each option; d) be required, where appropriate, to reduce adverse environmental effects through a defined programme of works, over an appropriate timeframe, set out as a condition of consent for either new resource consents or during a renewal or review process for existing resource consents; e) use the smallest mixing zone necessary to achieve the required water quality in the receiving environment and minimise as far as practicable the adverse effects on the life supporting capacity of water within the mixing zone; and f) avoid, remedy or mitigate adverse effects, after reasonable mixing.
43	Disturbance of, or deposition on, the foreshore or seabed or the extraction of natural material must not occur in areas managed or held under other Acts for statutory protection (including Parininihi Marine Reserve, Ngā Motu/Sugar Loaf Islands Marine Protected Area and Tapuae Marine Reserve identified in Schedule 1) apart from that associated with: a) recreational activities including boating and anchoring; b) scientific or educational study or research; and c) the placement and maintenance of boundary marker buoys
47	Extraction of sand, shingle, shell and other natural material from the foreshore or seabed, or deposition of material on the foreshore or seabed, not provided for by Policies 43, 44 and 46 must: a) be undertaken in an appropriate manner and location by having regard to the values and sensitivity of the environment potentially affected and the degree and significance of effects; b) generally not occur in coastal management areas – Outstanding Value, Estuaries Unmodified and Estuaries Modified; c) not occur close to moderate or high relief offshore reefs; d) have regard to the surface area and volumes of material to be extracted or deposited over the duration of the activity, composition of the material and method of extraction or deposition, and the resulting effects on water quality, sediment quality and ecology; e) where applicable, have regard to the volumes of material to be extracted over the duration of the activity and where appropriate: i. the natural rate of sediment being deposited over sediment lost from the area where extraction is proposed; and ii. the interaction of sediment within the extraction site with the nearshore littoral system; h) use methods and engineering controls to minimise adverse effects on the form of the foreshore or seabed, and benthic communities adjacent to the area of extraction or deposition; i) where applicable and appropriate, ensure that the deposited material is of a similar size, sorting and parent material as the receiving sediments; and

	j) not be for the purpose of disposing spoil from land-based activities unless significant environmental benefit can be demonstrated.	
Taranaki Coastal Plan Areas of Outstanding Natural Character		
Natural character attributes	**Values and characteristics**	**Degree of natural character**
Project Reef: The Project Reef is an unusually hard and shallow (23 m) structure for its distance offshore (11 km). The clear offshore waters and shallow depth enable the growth of important kelp beds. The reef provides complex habitat supporting a diverse range of marine invertebrates and fish. The unmodified seascape provides exceptional biophysical values with a high sense of wilderness. Map 42.		
Abiotic	• High relief reef comprised of unusually hard cemented concretionary shelly sandstone surrounded by shell hash • Shallow depth considering the distance offshore providing an excellent light climate less prone to influence from cliff erosion, river events and other land-based activities • Unmodified and diverse marine habitats including cracks, crevices, caves and overhangs	Very high
Biotic	• Unusually high diversity of encrusting sensitive benthic invertebrates including dense assemblages of sponges, hydroids and bryozoa, providing valuable biogenic habitat for other invertebrates and fish • Important kelp (*Ecklonia radiata*) beds • Abundant and diverse fish assemblages with evidence the reef provides an important nursery ground for blue cod • Complex habitat supporting crayfish (*Jasus edwardsii*), eels, rays, carpet shark (*Cephaloscyllium isabella*) and many species of reef fish	Very high
Perceptual and experiential	• Human activity is minimal associated with low impact recreation use • The experience maintains a high sense of wildness and remoteness	Very high
Overall rating		Outstanding
North and South Traps: The North and South Traps comprise a large reef system located approximately 6 km offshore from Pātea. Map 41.		
Abiotic	• Two large adjoining pinnacle reefs – unusual features on a shelf region dominated by sand	Very high

Biotic	• Important kelp (*Ecklonia radiata*) beds • Diverse range of fish and encrusting sponge species • Valuable habitat for crayfish	Very high
Perceptual and experiential	• Human activity is minimal associated with low impact recreational use • The experience maintains a high sense of wilderness and remoteness	Very high
Overall rating		Outstanding
Taranaki Coastal Plan Areas that are Outstanding Natural Features and Landscapes		
Natural character attributes	**Values and characteristics**	**Degree of natural character**
North and South Traps: The North and South Traps are two high-relief rocky reef systems that form a distinctive seascape and contribute significant ecological, cultural and recreational values. Map 41.		
Biophysical	• Two adjoining reef systems comprising tall underwater pinnacles – a rare feature for the sandy coast • Biotic values, particularly kelp (*Ecklonia radiata*) beds, diverse fish and sponge communities and valuable habitat for crayfish • Significant ecological values including kelp beds (*Ecklonia radiata*) and a diverse range of fish and sponge communities and species • Important habitat for crayfish	Very high
Sensory	• Unique marine feature for this part of the coast • Strikingly colourful reef walls due to a diverse range of different encrusting organisms including seaweeds, sponges and anemones • Seascape is largely unmodified by human intervention and comprises a naturally functioning and healthy ecosystem • Presence of wildlife throughout different times of the day and year • Climatic changes influence seawater clarity affecting the perception of aesthetic values	Very high

Associative	• Popular recreational fishing and diving area • Perceptual and experiential values including a high sense of wildness and remoteness; minimal human activity associated with low impact recreation use • This area was and still is known by the local iwi and hapū as a rich fishing ground • Source of kaimoana including crayfish	Very high
Overall rating		Outstanding