Your Comment on the Taranaki VTM Project

Please include all the contact details listed below with your comments.

1. Contact Details	
Please ensure that you have authority to comment on the application on behalf of those named on this form.	
Organisation name (if relevant)	Ngā Motu Marine Reserve Society
First name	[redacted]
Last name	[redacted]
Postal address	[redacted]
Phone number	[redacted]
Email *(a valid email address enables us to communicate efficiently with you)*	[redacted]

2. We will email you draft conditions of consent for your comment			
☒	I can receive emails and my email address is correct	☐	I cannot receive emails and my postal address is correct

3. Please select the effects (positive or negative) that your comments address:			
☐	Economic Effects	☒	Sedimentation and Optical Water Quality Effects
☐	Effects on Coastal Processes	☒	Benthic Ecology and Primary Productivity Effects
☐	Fished Species	☒	Seabirds
☒	Marine Mammals	☐	Noise Effects
☐	Human Health Effects of the Marine Discharge Activities	☐	Visual, Seascape and Natural Character Effects
☐	Air Quality Effects	☐	Effects on Existing Interests
☒	Other Considerations (please specify): Other fish		

Please provide your comments below. You may include additional pages if needed. If you are emailing this form and attaching any supporting documents, please list the names of those files below to help us ensure all materials are received.

Please see the attached: NMMRS Comments for Taranaki VTM 4 October 2025.pdf

Thank you for your comments

Comments on the Taranaki VTM Project from the Ngā Motu Marine Reserve Society

1. The Ngā Motu Marine Reserve Society's vision is for Taranaki to have healthy marine and coastal ecosystems through science, education, community action and policy advocacy.

2. The Society formed in 1997 and successfully initiated the establishment of the Tapuae Marine Reserve in 2008. The Incorporated Society's objectives are:
    a. To establish a network of marine reserves in the Taranaki Region.
    b. To ensure the marine life and other natural resources in the region are protected.
    c. To encourage the scientific study of marine life on the Taranaki coast.
    d. To foster community awareness of the coastal environment by education.

3. We are concerned about the effects of:
    a. Direct extraction
    b. The sediment plume: reduced light penetration and smothering

4. Over the large area affected by the sediment plume it becomes problematic to:
    a. Identify sensitive habitats and threatened species
    b. Adequately assess cumulative effects and the wider ecological consequences within marine food webs

DIRECT EXTRACTION

5. The impacts of direct extraction on the marine food web have not been adequately assessed.

6. The benthic species that live in the sand (polychaete worms etc.) and which will be destroyed by the mining process are important food for many fish including sharks and rays. Recolonisation will not be immediate, e.g. overseas studies mentioned in the application have found that "communities in sand deposits are likely to be in a transitional stage and take up to two to three years to recover." And that "some longer lived species … such as heart urchins and large bivalves, which are found in the STB, could take several years to fully recover."[1]

7. The knock-on food web effects of direct extraction on any fish species other than 'fished species' appear to be given scant regard in the application. Under the heading "5.6 Fished Species" the application states "With regard to feeding effects and food sources, the project area has not been identified as providing extensive feeding grounds for fish species within the STB." It may not provide extensive feeding grounds, but this does not mean it is insignificant as a food source. The significance or otherwise for species other than "fished species" is not mentioned.

[1] https://www.fasttrack.govt.nz/__data/assets/pdf_file/0017/4337/Taranaki-VTM-FTA-Application.pdf p181

8. There is insufficient evidence presented to state that "recovery [of benthic communities] is likely to be rapid once the excavation and re-deposition moves away"[2] nor is there any assessment of the impact on the marine species that feed on the benthic communities in the project area.

REDUCTION IN LIGHT

9. **Reduction in light is one of the biggest issues with this project**. **Figure 1** shows the **reduction in mid water visibility** as a result of the sediment plume when mining at Site A. The area in green is around a 50% reduction in light. 20km away from mining site there is predicted to be a 40% reduction in light in mid water. The plume is over twice the size of Te Papa-Kura-o-Taranaki (previously Egmont National Park).[3]

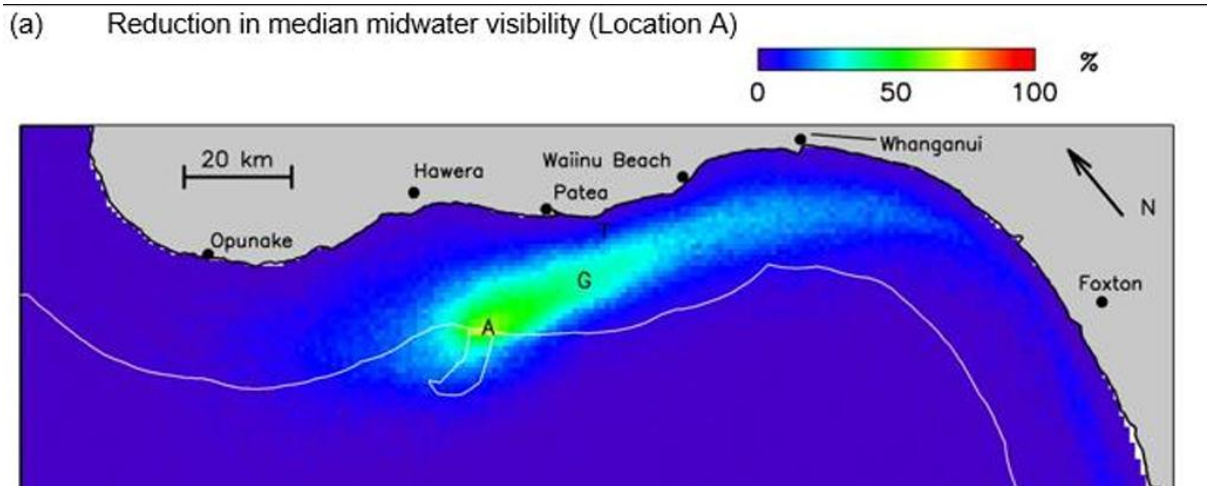

Figure 1

10. **This significant light reduction will have a serious impact on primary producers** - phytoplankton: the base of the marine food web; and seaweed: which provides valuable habitat for reef fish and invertebrates (see **Figure 2**).

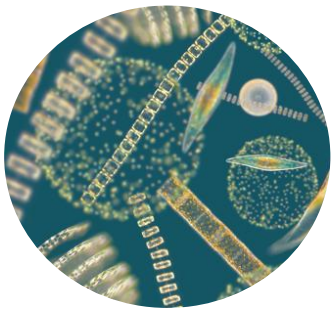

Figure 2: Phytoplankton; seaweed

[2] https://www.fasttrack.govt.nz/__data/assets/pdf_file/0017/4337/Taranaki-VTM-FTA-Application.pdf p182

[3] https://www.fasttrack.govt.nz/__data/assets/pdf_file/0017/4337/Taranaki-VTM-FTA-Application.pdf p148

11. The way the optical water quality effects are presented in the application is misleading. Figure 3 incorporates zoomed in portions of Figures 5.8 and 5.6 from the application[4]. The euphotic zone, where sufficient sunlight penetrates for photosynthesis (mislabelled eutrophic zone in the diagrams) decreases in the areas more offshore than the zone immediately adjacent to the coast. The modelling shows that if mining is occurring at Site A, the euphotic zone decreases to shallower than the seabed depth. This means light is not sufficient for seaweed (macroalgae) growth (in a significantly large area). NB consent conditions just refer to suspended sediment, but light levels are just as important, and that's a different measure.

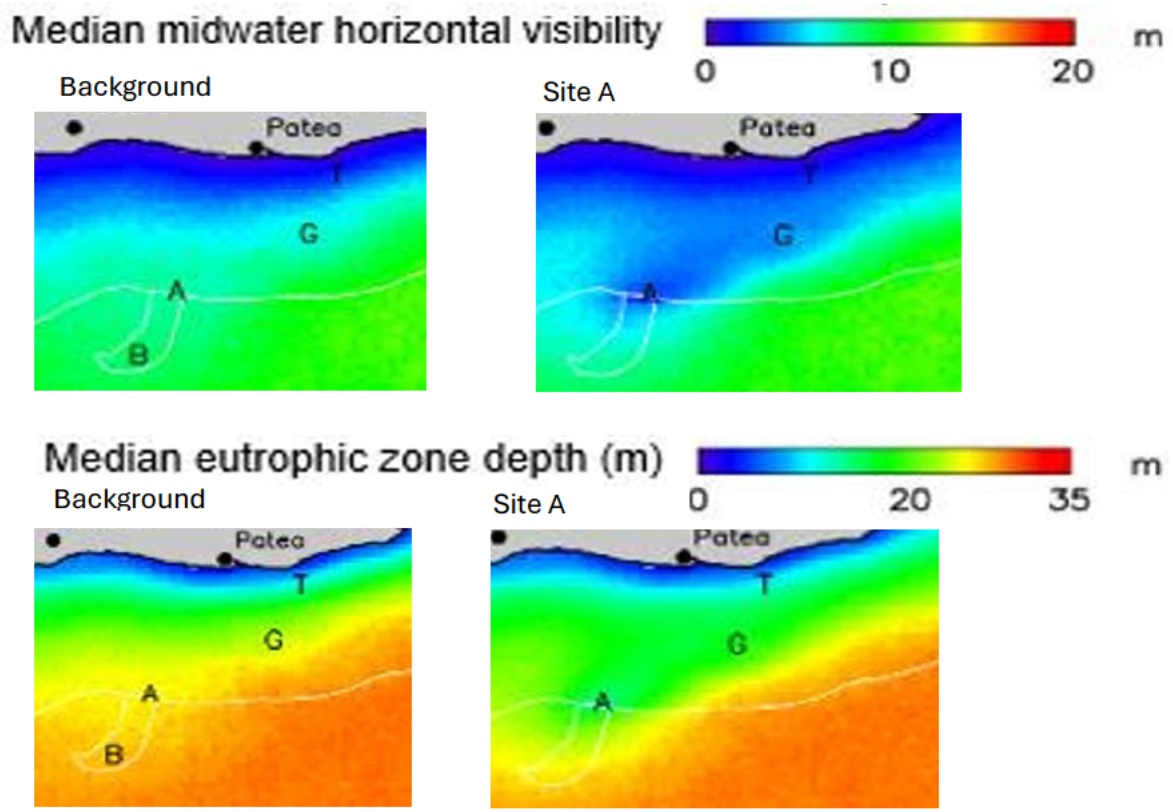

Figure 3: Light levels interpreted

SUBTIDAL ROCKY REEF HABITATS ON THE CONTINENTAL SHELF

12. Not only does this area contain the biologically rich Project Reef, but since TTRL's 2016 application, NIWA, commissioned by the Taranaki Regional Council, surveyed the shelf area using multibeam sonar to see what else might be there in addition to Project Reef. The findings were published in 2022[5]. In TTRL's previous applications the shelf area is referred to as a 'Sandy Desert'. The current application references the 2022 NIWA report but gives this new research little more than a passing mention[6] and effectively dismisses the findings

[4] https://www.fasttrack.govt.nz/__data/assets/pdf_file/0017/4337/Taranaki-VTM-FTA-Application.pdf pp 149 and 146

[5] https://www.trc.govt.nz/assets/2238-TRC002-FINAL-Offshore-subtidal-rocky-reef-habitats-on-Patea-Bank-South-Taranaki-2.pdf Offshore subtidal rocky reef habitats on Pātea Bank, South Taranaki. NIWA Client Report, September 2022

[6] https://www.fasttrack.govt.nz/__data/assets/pdf_file/0017/4337/Taranaki-VTM-FTA-Application.pdf p53

because they cover the area inshore of the proposed project area. Given the sediment plume modelling has shown significant impacts more than 20km away and inshore of the proposed project area, ignoring these findings seems self-serving.

13. Project Reef is a designated Area of Outstanding Natural Character (ONC) in the Coastal Plan for Taranaki 2023[7]. It is described in the Plan as: "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."[8] It therefore has the highest possible protection in the Coastal Plan for Taranaki. As an ONC the reef's physical, ecological and cultural integrity must be protected, and adverse effects of activities on its values and characteristics must be avoided. [9]

14. NIWA's mapping revealed numerous additional rocky reef habitats, many previously undocumented, including linear ridges several kilometres long, as shown in Figure 4, copied from the report[10].

[7] https://www.trc.govt.nz/council/plans-and-reports/strategy-policy-and-plans/regional-coastal-plan/coastal-plan-for-taranaki-2023
[8] https://www.trc.govt.nz/assets/hero-images/Coastal-Plan/Documents/Taranaki-Regional-Council-Operative-Coastal-Plan-for-Taranaki-4-September-2023.pdf ONC 6: Project Reef
[9] https://www.trc.govt.nz/assets/hero-images/Coastal-Plan/Documents/Taranaki-Regional-Council-Operative-Coastal-Plan-for-Taranaki-4-September-2023.pdf Section 5.1.3, Policy 9
[10] https://www.trc.govt.nz/assets/2238-TRC002-FINAL-Offshore-subtidal-rocky-reef-habitats-on-Patea-Bank-South-Taranaki-2.pdf Offshore subtidal rocky reef habitats on Pātea Bank, South Taranaki. NIWA Client Report, September 2022. p157

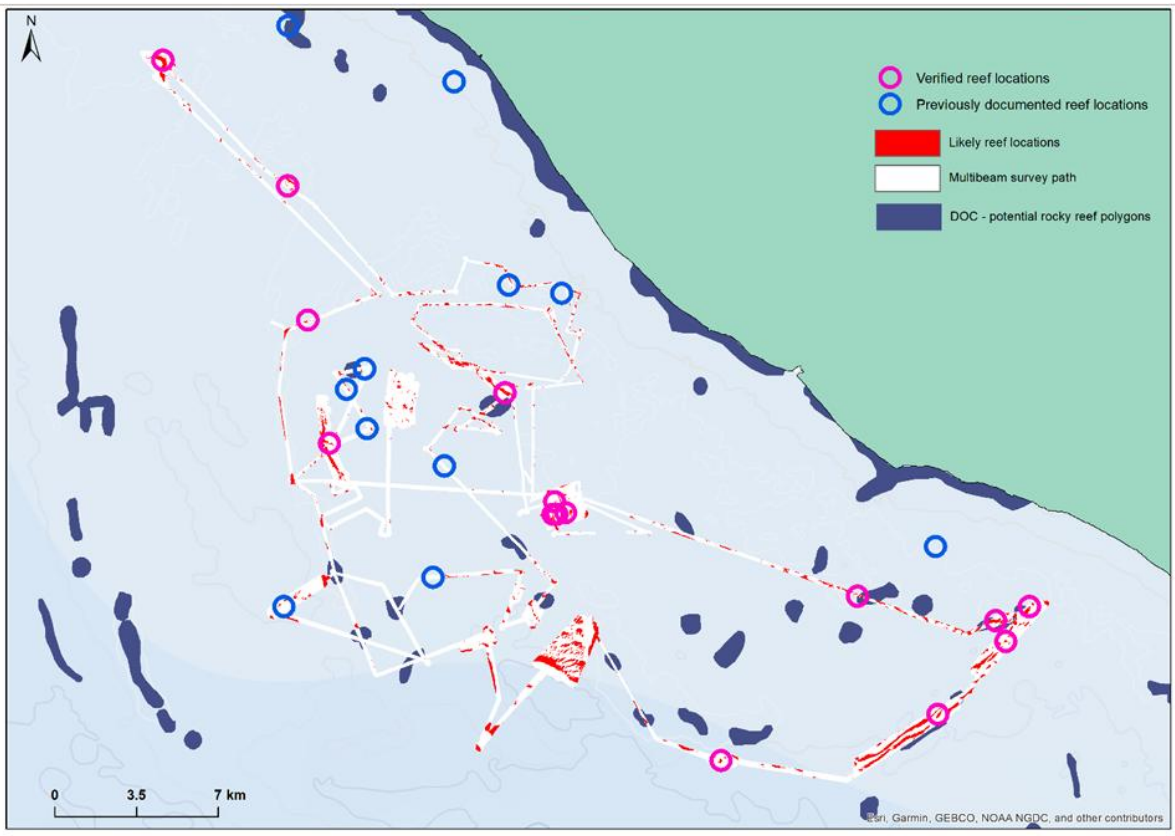

Figure 4-1: Known and likely reefs (by science survey) of Pātea Bank circles denote reefs verified with cameras, red polygons are other likely reefs encountered during multibeam sonar mapping, and the blue polygons putative reefs from DOC assessment of abrupt bathymetric changes on old fairing sheets.

Figure 4: NIWA mapping

15. The white lines in Figure 4 are the multibeam sonar tracks; the blue blobs are likely reefs predicted from bathymetry; the blue circles are previously documented reef locations; the pink circles are reefs identified by the sonar; and the red marks are likely reefs based on the sonar. As shown in the figure, only a small part of the area has been surveyed so far: there is so much more to be surveyed.

16. NIWA's report states: "This report demonstrates that subtidal reefs are in fact common on Pātea Bank, with many more awaiting discovery by multibeam sonar mapping."[11]

17. These subtidal rocky reef habitats are phenomenally biologically rich: "Associated with these reefs are extensive areas of biogenic habitat, dominated by macroalgae." [12]

18. The macroalgae include kelp forests (*Ecklonia radiata*), which:
    a. Are habitat forming seaweed
    b. Require sufficient light to grow
    c. Are only present due to sufficient light penetrating to these depths

[11] https://www.trc.govt.nz/assets/2238-TRC002-FINAL-Offshore-subtidal-rocky-reef-habitats-on-Patea-Bank-South-Taranaki-2.pdf Offshore subtidal rocky reef habitats on Pātea Bank, South Taranaki. NIWA Client Report, September 2022. P8

[12] Same source as above

19. A reduction in light in the water column could have serious consequences for the kelp forests and associated species. Kelp forests (see Figure 5) are present on reefs up to 30m in depth i.e. the water is clear enough so that sufficient light can penetrate to this depth. The water column in this offshore area has greater visibility than further inshore. Kelp forests further than 5km offshore are particularly susceptible to effects from the plume.

Figure 5: Project Reef - Ecklonia radiata habitat

20. Habitats in the area also include sponge gardens and soft bryozoan fields (see Figure 6 and Figure 7). Sponges are slow growing, long lived, and sensitive to smothering by sediment.

Figure 6: Project Reef - Sponge gardens

Figure 7: Project reef - Sponge gardens and bryozoan fields

21. Also present are hydroid trees (Figure 8). These are rare, old and sensitive. This example would be decades old.

22. The biological richness of the reefs is also reflected in the number and diversity of fish species present: "The associated fish assemblages are abundant, dominated by blue cod, scarlet wrasse, butterfly perch, leatherjackets and tarakihi, with other fisheries species likely to be common (e.g., snapper, trevally, kingfish, and kahawai)."[13] (see Figure 9)

[13] https://www.trc.govt.nz/assets/2238-TRC002-FINAL-Offshore-subtidal-rocky-reef-habitats-on-Patea-Bank-South-Taranaki-2.pdf Offshore subtidal rocky reef habitats on Pātea Bank, South Taranaki. NIWA Client Report, September 2022. P8

Figure 8: Project Reef - Hydroid tree

Figure 9: Diverse and abundant fish

23. The reefs have high densities of juvenile blue cod and are important nursery habitat (Figure 10).

Figure 10: Juvenile blue cod

24. **In summary, these reefs are biologically rich and deserve to be protected**:
"The unusual distance of these reef systems from shore, occurring on a wide shallow continental shelf, makes them relatively unique in the New Zealand context... They are worthy of careful management by the TRC, and other governance entities."[14]

Figure 11: Biologically rich reef system

[14] https://www.trc.govt.nz/assets/2238-TRC002-FINAL-Offshore-subtidal-rocky-reef-habitats-on-Patea-Bank-South-Taranaki-2.pdf Offshore subtidal rocky reef habitats on Pātea Bank, South Taranaki. NIWA Client Report, September 2022. P8

25. The area is not a sandy desert. In light of additional findings TTR's current summary, e.g. "The studies show the overall environmental effect of TTR's proposed operation will be negligible to minor and, therefore, situate the Taranaki VTM at the most benign end of extractive processes"[15], is now vague and unsubstantiated.

KORORĀ (Little blue penguins) Threat status: At Risk – Declining (NZ Threat Classification System)[16]

26. In their application, TTR state:
    "Less likely to extend offshore are little blue penguins, which feed inshore because most of their dives are only 2m in depth and further out to sea they could suffer predation from marine mammals and sharks."[17] The evidence we present below directly contradicts this assertion.

27. As is clear from Figure 12, a map of foraging trips of kororā from Motuara Island in the Marlborough Sounds in spring 2015, kororā not only travel well offshore, they are also foraging right over the proposed project area and sediment plume. Eleven of the 14 penguins tracked swam to South Taranaki. They are visual feeders and need clear water. One travelled more than 200km, not a day trip.

28. All patches of ocean are not equal when it comes to seabird feeding. Some areas attract birds like kororā due to the availability of food. This biological richness is acknowledged in the application: "The STB is also considered to be very productive. In this regard, biomass estimates are among the highest recorded when considered against other coastal regions around New Zealand." And, the "highest biomasses [of zooplankton] were found to occur over the Pātea Shoals and east towards Whanganui."[18]

[15] https://www.fasttrack.govt.nz/__data/assets/pdf_file/0017/4337/Taranaki-VTM-FTA-Application.pdf p viii
[16] https://www.doc.govt.nz/globalassets/documents/science-and-technical/nztcs36entire.pdf p24
[17] https://www.fasttrack.govt.nz/__data/assets/pdf_file/0017/4337/Taranaki-VTM-FTA-Application.pdf p xii
[18] https://www.fasttrack.govt.nz/__data/assets/pdf_file/0017/4337/Taranaki-VTM-FTA-Application.pdf pp58 and 59

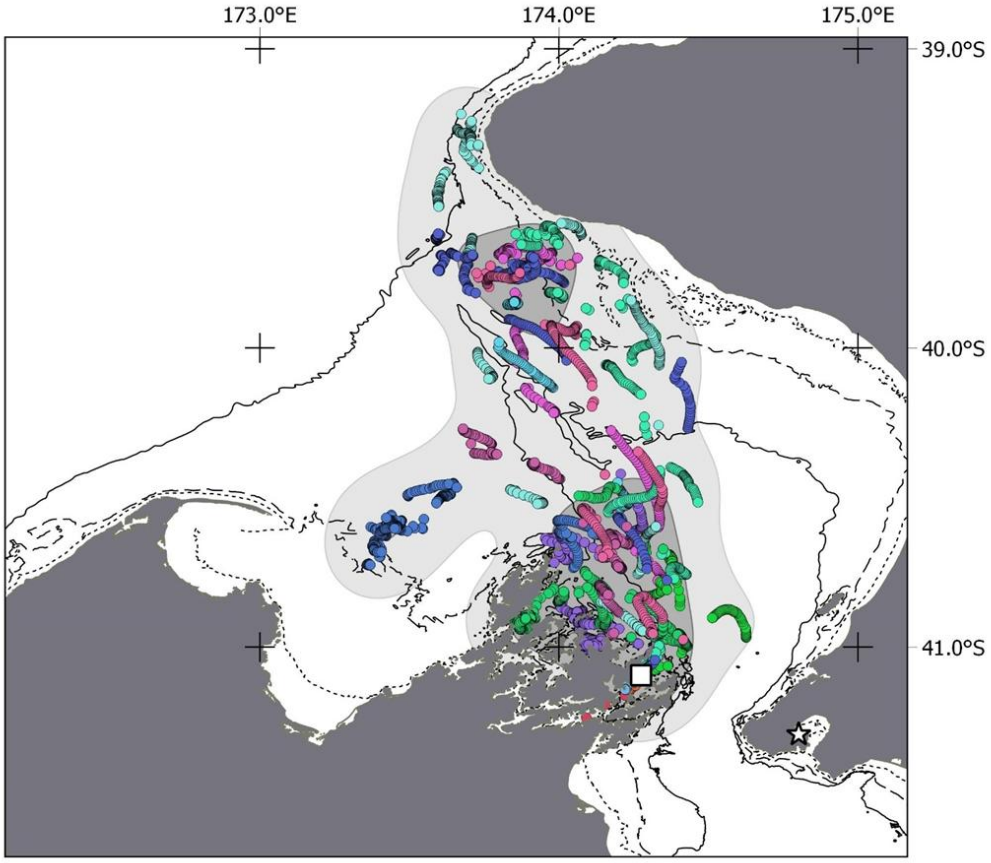

Figure 12: Foraging trips of Kororā from Motuara Island[19]

29. Since 2021, GPS tracking of 63 complete foraging trips of kororā from a colony at Port Taranaki by the Society in collaboration with Ngāti Te Whiti, and of kororā from Urenui Beach by Ngāti Mutunga (a related project) has shown:
    - Only 3 of these had average dive depths of 2m or less
    - Median max dive depth per trip: **18.2 m** (range: 10.4 – 58.2 m)
    - Median maximum distance from the coast per trip: **22.7 kilometres** (range: 4.1 – 78.7 km)[20]

30. Foraging well offshore is typical behaviour for kororā. Figure 13 shows the 2024 foraging tracks for birds from the two monitored North Taranaki colonies mentioned above[21]. The longest distance travelled in one foraging trip in 2024 was 217km. All tracks recorded to date are available on-line, at the same link referenced for Figure 12, with additional maps, classified by which stage of breeding the birds were in available on the Penguin Tracking site[22].

[19] https://www.tandfonline.com/doi/full/10.1080/03014223.2017.1302970 Variability in the foraging range of *Eudyptula minor* across breeding sites in central New Zealand. Timothée A. Poupart et al, 2017
[20] Pers. comm Dr Thomas Mattern (Global Penguin Society, Oceania Representative; and Department of Zoology, University of Otago), 21 June 2025
[21] https://maps.main.net.nz/mapstore/#/viewer/openlayers/403
[22] https://www.penguintracking.org/little-penguin/nga-motu

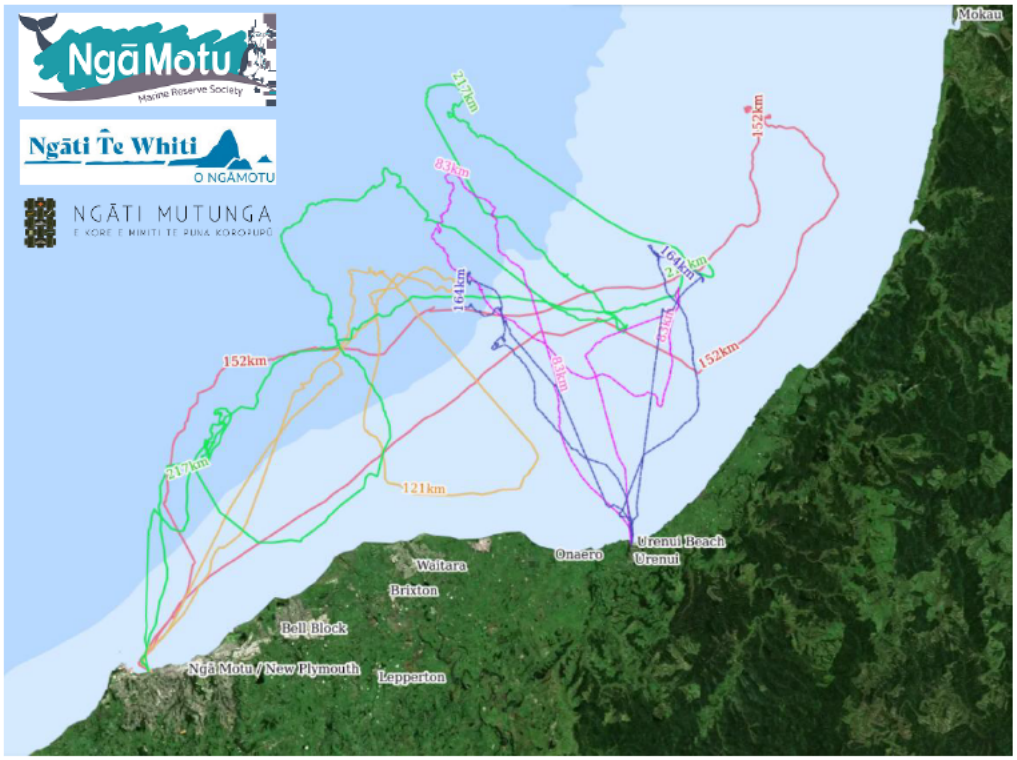

Figure 13: 2024 Kororā foraging tracks

31. Predation risk is actually highest close to shore, the opposite of the statement in TTR's application quoted above in paragraph 26.[23]

32. The application states: "Little blue penguins are found in coastal areas around New Zealand. The closest breeding sites are over 50km away from the extent of the sediment plume from the project and the area potentially affected is less than 0.1% of the area available. As such, any potential effects on little blue penguins will be negligible."[24]

33. This claim is unfounded. We have presented evidence that kororā from a colony in the Marlborough Sounds make use of the area. In addition, there has been no systematic survey effort along the coast in the South Taranaki / Whanganui region, largely due to limited coastal access.

34. A lack of mapped colonies does not mean absence of kororā.

35. Given that the waters off South Taranaki are highly productive and attract kororā from places as far away as the Marlborough Sounds, it would be surprising if there were not kororā nesting along the South Taranaki / Whanganui coast.

36. Kororā are known to range long distances outside of the breeding season (hundreds of kilometres from home), so there is high probability that even kororā from the monitored colony in Port Taranaki may make their way to the South Taranaki Bight (STB) when not breeding.[25] In fact, as shown in Figure 14, one of the tracked birds in 2021 clearly ventured

[23] Pers. comm. Dr Thomas Mattern (Global Penguin Society, Oceania Representative; and Department of Zoology, University of Otago), 21 June 2025

[24] https://www.fasttrack.govt.nz/__data/assets/pdf_file/0017/4337/Taranaki-VTM-FTA-Application.pdf p193

[25] Pers. comm. Dr Thomas Mattern (Global Penguin Society, Oceania Representative; and Department of Zoology, University of Otago), 21 June 2025

to the south during the breeding season (in the post-guard phase, when still feeding chicks).[26]

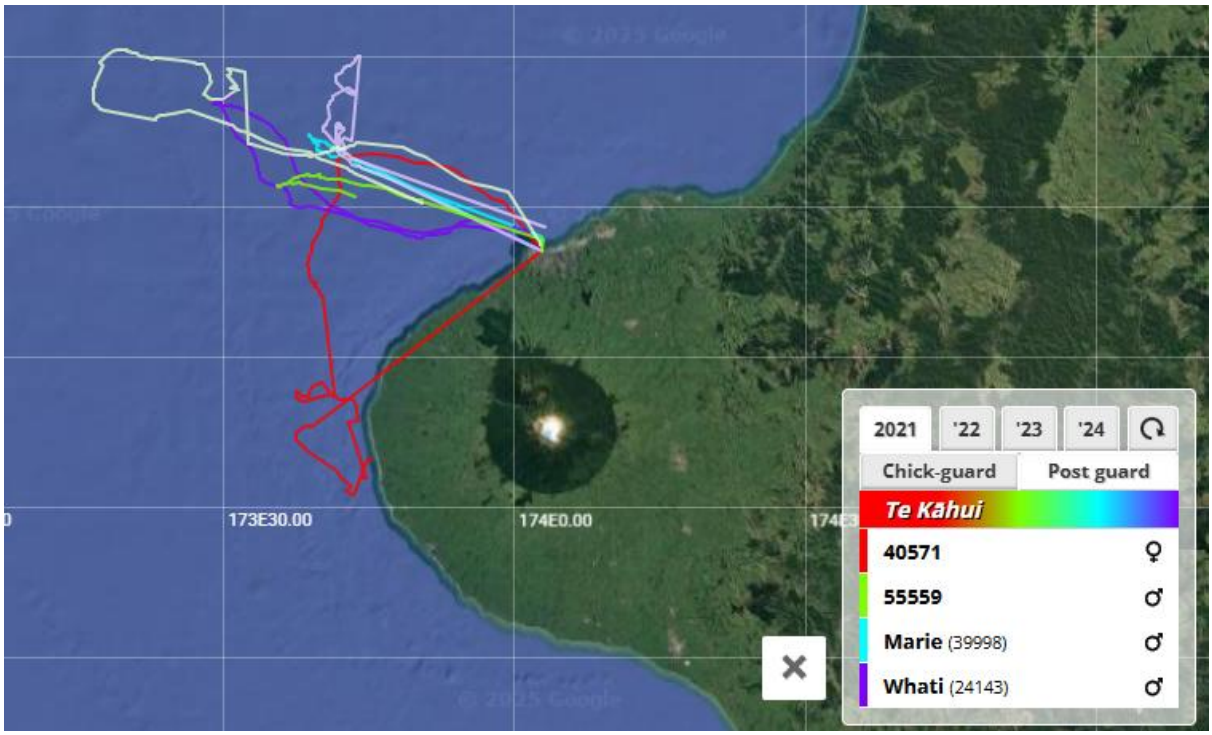

Figure 14: 2021 Kororā foraging tracks post-guard phase

37. TTR has undertaken no on-land or at sea penguin monitoring.

38. Dismissing effects of the proposed mining operations on penguins as "negligible" is it itself an act of severe negligence in the face of the evidence.

ORCA (Killer whales). Threat classification: nationally critical, the highest threat status in the NZ Threat Classification System[27]

39. The application states: **"**Killer whales are rare visitors to the STB. There are no data to suggest that the project area is of any biological or ecological significance to killer whales."[28]

40. In TTR's 2016 application, it was stated that waters off Taranaki had **6** orca sightings over **25 years.**

41. The Society's Project Hotspot Taranaki, a citizen science data collection portal, recorded **84** orca sightings in just **one year**, from the beginning of November 2015, on 29 different days, as shown in Figure 15[29] and Figure 16[30].

[26] https://www.penguintracking.org/little-penguin/nga-motu/gps2021/?stage=Post%20guard
[27] https://www.doc.govt.nz/globalassets/documents/science-and-technical/nztcs29entire.pdf p6
[28] https://www.fasttrack.govt.nz/__data/assets/pdf_file/0017/4337/Taranaki-VTM-FTA-Application.pdf p85
[29] https://shorturl.at/b34cV Ngā Motu Marine Reserve Society Submission: Trans-Tasman Resources Limited Sand Mining Application 2016, p10
[30] Https://maps.main.net.nz/static/NgaMotu/NMMRS-presentation-NPDC-20250624.pdf

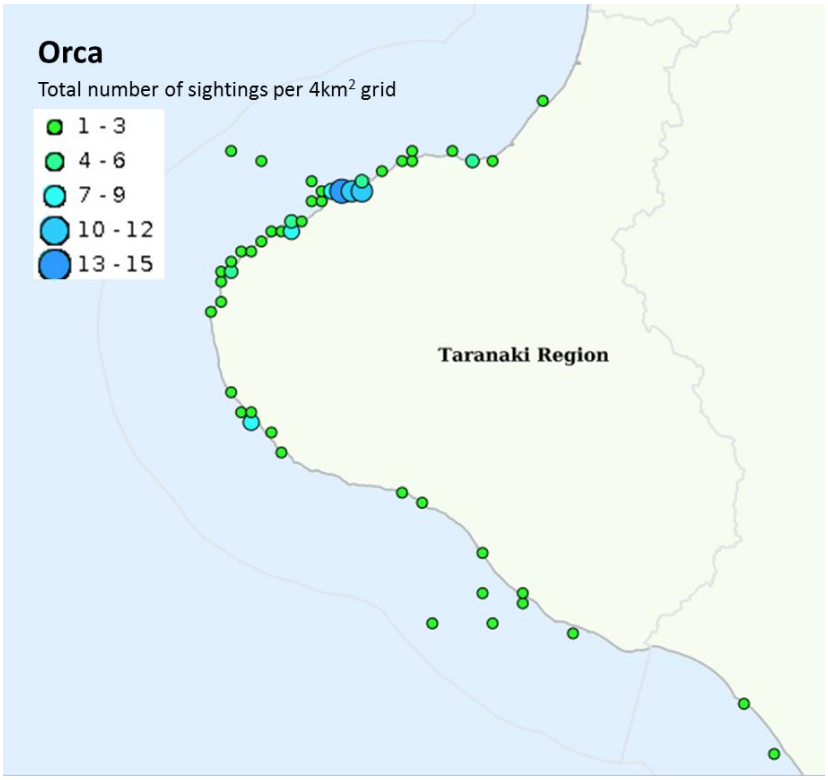

Figure 15: Orca sightings Taranaki

Figure 16: Images of orca from Taranaki waters

42. In this current, 2025 application, orca sightings have been updated to **241** records in the STB.[31] This updated marine mammal data is thanks to people reporting sightings which are then added to DOC records.

43. Despite this evidence, the application still states that orca "are rare visitors to the STB". This is based on no survey effort by the applicant (or any other party).

44. Figure 17, based on DOC's database, shows only one orca sighting within the 5km buffer zone around the proposed project area, none within the area, and none within the 10km buffer. There are two problems with this:
    a. There have been no systematic surveys for orca in the STB.
    b. The sediment plume may impact on orca whether they are within these artificial boundaries or not. As is clear from the application itself, the plume is far from limited to such boundaries. The brief comments in the application relevant to this point dismiss concerns about any potential impacts: e.g. "the short period of time during which they move through the STB means that any local effects on prey will be less than minor" and that because orca are "generally found... further inshore... there is unlikely to be any significant overlap with the proposed activity." [32]

Table 3.5: Number of marine mammal sightings in the area of the proposed consent area, and in the 5km and 10km buffer area around it from the DOC Marine Mammal Database to April 2023.[56]

Species	Within the project area	Within 5km buffer of the project area	Within 10km buffer of the project area
Blue whale	0	0	1
Minke whale	0	1	0
Common dolphin	1	4	4
Hector's or Maui dolphins	0	0	1
Orca	0	1	0
TOTAL	1	6	6

Figure 17: Table from TTR's application

45. Lack of sightings does not necessarily equate to lack of orca, the same point we made for kororā. Orca are notoriously difficult to spot, as noted in in our submission on TTRL's 2016 application, because, for example, they swim too far out to be seen by observers on shore or close to shore, and they are often not spotted in rough seas.[33]

[31] https://www.fasttrack.govt.nz/__data/assets/pdf_file/0017/4337/Taranaki-VTM-FTA-Application.pdf p71
[32] https://www.fasttrack.govt.nz/__data/assets/pdf_file/0017/4337/Taranaki-VTM-FTA-Application.pdf p198
[33] https://shorturl.at/b34cV Ngā Motu Marine Reserve Society Submission: Trans-Tasman Resources Limited Sand Mining Application 2016, p10

Conclusion

46. The Ngāmotu Marine Reserve Society believes that ongoing evidence continues to highlight that TTRL's Taranaki VTM application is not based on best available information. 'Best available information' is required under the Fast Track Act.

47. For seabirds and marine mammals:
    a. To date no targeted standardised surveys have been conducted
    b. The species present, along with their ecology and behaviour, are not fully known
    c. Until robust scientific research is carried out, it is not possible to assess the environmental effects of the proposed activities

48. The application does not:
    a. Use the best available information
    b. Safeguard the life-supporting capacity of the environment.

49. The application is not in line with:
    a. Information principles in the Exclusive Economic Zone Act (2012)
    b. The New Zealand Coastal Policy Statement (2010)
    c. The Coastal Plan for Taranaki (2023)

50. Due to the significant gaps in information provided by the applicant and the high level of uncertainty around the ecological impacts of the proposed activity, we believe that this application should not proceed any further.