



NEW PLYMOUTH SPORTFISHING & UNDERWATER CLUB (INC.)

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New Plymouth Sportfishing and Underwater Club submission 2016

Trans-Tasman Resources Limited iron sand extraction and processing application

Background

This letter provides details on our submission regarding the TTR proposal to extract iron sand for export off the South Taranaki Bight.

New Plymouth Sport Fishing and underwater Club Inc (NPSUC) oppose this application based on the grounds that the applicant has not provided all available data on the environmental impacts of such a huge extraction project. The information that has been presented fails to address our concerns, there is no evidence that this can be carried out in a way in which will not negatively affect our marine environment.

The New Plymouth Sportfishing and underwater club was established in the Late 1960s and built a base at the Lee breakwater, Port Taranaki in the Mid 1970s and was then called the Taranaki Cruising Club.

Its membership was around 60 persons. In the 1970s and early 1980s Game Fishing became established with several Striped Marlin setting the club up for a new and exciting future. The club quickly took up the challenge and was admitted to the N.Z Big Game Fish Council in 1984 (now known as the NZ Sportfishing Council). Since that time the club has grown its size - membership currently stands at over 1500 persons.

Technology has also changed, especially boat design, size and capability. Many of our members have boats capable of travelling to the outer shelf and beyond (100 km plus each way in a day). No longer are our boats confined to the close proximity of Port Taranaki which makes this TTR application to disrupt the normal habitat of the seabed so concerning.

The recreational Marine area off Taranaki has many manmade restrictions placed on it by the existing marine reserves and the Oil & Gas industry. In recent years huge seismic surveys have cut across lucrative Sportfishing grounds reducing the available area. Recently created marine reserves including White cliffs, Pukearuhe and Tapuae Hem restrict area for marine recreation.

The area left for recreational anglers to fish is also an area of high interest to the applicant as the North Taranaki Bight also holds significant areas of iron sand in the form of natural seabed. Any industrial disturbance upon this natural environment can only be severely disturbing.

Summary

The New Plymouth Sportfishing and Underwater Club (NPSUC) seeks the application to be declined in full. This request is made on the following grounds:

- **Consultation** – there has been insufficient consultation – our club has not had an approach to consult.
- **Seabed ecology** – the detrimental effects on the organisms at the site are not in question – they will be destroyed.
- **Recreational fishing, marine mammals and animals** - The effects of which on mammals, animals and fish populations losing this important feeding and breeding ground is not addressed sufficiently by TTR. This is at the core of our submission.

As a repeat application – the uncertainty from the first declined application has not been addressed.

Further details are provided below:

Further information.

Trans Tasman Resources Limited (TTR) wants to mine iron sand in the South Taranaki Bight for the next 35 years. It has applied for marine discharge consents to extract and process iron sand within 65.76 square kilometres (km²) of seabed. TTR proposes to extract and export up to 5 million tonnes of iron ore per year.

Repeat application

We oppose the application in full as the proposed mining will devastate the marine environment within the mining area and have significant and unacceptable negative impacts on the surrounding marine area.

As with the first application, the uncertainties in the scope and significance of the potential adverse environmental effects mean it should be denied. Uncertainties and effects related to primary productivity and benthic effects and consequent ecosystem effects as well as the impacts on existing interests, notably iwi and fishing interests also mean the application should again be denied. Taking into account effects on marine mammals, the importance of protecting rare and vulnerable ecosystems and the habitats of threatened species, the lack of clarity about economic effects, it is clear that that the life-supporting capacity of the environment would not be safeguarded and that the adverse effects of the proposal could not be adequately avoided, remedied or mitigated.

Consultation - the applicant, TTR, has failed to carry out adequate consultation

Consultation: The applicant's consultation has been incomplete, insufficient and lacking integrity in the sharing of information. The information shared at meetings held by the applicant has been selective and inadequate. Despite, opposition from local iwi and tangata whenua, TTR has failed a second time to adequately engage. This has led to great difficulty for interested and affected parties to form an understanding of the total proposal and effects of the application.

The time frame for the submission process is too short. The Assessment of Effects alone is 320 pages long and its appendices 514 pages. There are over forty other reports attached to the application.

For a not for profit organisation such as ours, which is run by volunteers, four weeks is simply an unrealistic timeframe for our members who support a family and a full time job to read through and understand this volume of information in order to put forward a comprehensive submission. This is where the consultation has been insufficient.

The Applicant has attempted to further reduce public scrutiny by applying to keep important environmental information secret.

Seabed ecology - the proposed mining activity will degrade and irreversible destroy our marine environment

Direct Effects to Seabed Ecology: The seafloor supports a wide variety of organisms, including plants, mussels and other shellfish, worms and crustaceans, which in turn support an extremely healthy fishery through a complex food web. The suction dredging crawler will suck up to 8000 tonnes per hour and remove the entire top surface of the seabed to a depth of up to 11 metres. It is certain that any plants or animals living in the sediment from the 65 km² excavation hole will be destroyed during the mining and sorting process, turning the mined area plus a significant area around the mining sites, into a dead zone. Any plants or animals living on the seafloor at the tailing site will be smothered and killed. Regeneration times are unknown, if even regeneration is possible.

Indirect Impact to Seabed Ecology: Indirect impacts of the seabed mining are more varied and complex and cover a much larger area of the South Taranaki Bight (STB) - perhaps as much as an order of magnitude larger than the mining zone. Many of these impacts are associated with the sediment plume generated by the mining and include changes to the physical, chemical and biological character of the water column and seafloor, which in turn alters ecosystem function and resilience of plants and animals all the way up through the food web, living in both the water column and on the seafloor. Many of the changes caused by the plume may not be immediately lethal, but instead are certain to stress the plants and animals in the water column and on the sea floor causing a reduction in plant and animal species diversity and abundance as well as ecosystem health and resilience over time.

Plume impacts: Sediment plumes consist of fine sediment that can remain in suspension for days at a time (as opposed to sand, which is heavier and will fall back to the seabed quickly). Sediment plumes are created at the time of mining and when the unwanted sand is dumped back down on the seafloor. The sediment plume will reduce the ability for life to exist in the surrounding area of the mining site. The plumes will impact phytoplankton and zooplankton and light penetration, affecting the food web. The discharged material is also chemically altered and will create adverse effects to the marine life, notably fish and larger marine mammals in the area. In total, the biology will be tremendously altered and re-colonisation will be a very slow process. The re-establishment of balanced seafloor biology may take decades.

TTR have proposed use of flocculation, whereby fine sediments combine with other materials to sink faster, to reduce the projected effects of the plume from what was modelled in the previous application. There is great uncertainty around the ability of TTR to maintain sediment particle size, and around whether or to what extent the mitigation effect will be achieved. TTR in its first application ignored flocculation; now it relies on it as a primary mitigation technique. As the first EPA Decision-making Committee (DMC) found, the proposed mining would have effects on the primary productivity of the STB, there would be decreases in both water column (phytoplankton) and benthic primary productivity that could result in a reduction of total primary production in the STB in the order of 10% and a reduction in energy input into the seabed ecosystem of up to 36%, there are likely to be significant effects on benthic productivity in areas under the sediment plume, and there is considerable uncertainty in predicting effects on the wider ecosystem and food web of the STB.

Impacts to Benthic Ecology and sedimentation effects: The covering of a few millimetres of sediment on the seafloor can cause the plants and animals living on and in the seafloor to be smothered, causing stress and resulting in a lowered ecosystem health and resilience. Although these effects are not always immediately lethal, they are still important. Over time sediment induced stress will result in lowered species diversity and

abundance of these small (but very important) species at the base of the food web. The EPA Review of sediment mobilisation and transport states that some of the predicted effects are dependent on information provided by TTR and notes that commonly required information on the extent and duration of this smothering effect is missing. The application shouldn't have been allowed to proceed with such vital information missing.

Impacts to Primary Productivity: The South Taranaki Bight is a dynamic region with large plankton and zooplankton communities which are vulnerable to effects from the plume.

Heavy Metal Content of the Seabed: The higher the heavy metal content of the substrate the greater the effects from the plume as the higher volume of heavy metals released in the mining process would lead to a more toxic plume. Individual organisms need to be tested for tolerance to toxic metals, and independent review of heavy metal core samples and analysis should be undertaken and shared with the public so that the public is aware of what heavy metals could potentially be exposed and harm marine and human health, including through bioaccumulation and concentration through the food chain, following the proposed mining.

Coastal Erosion: Large scale mining of the Tasman seabed will remove non-renewable sand resources that supply west coast beaches up to Cape Reinga. It will cause increased coastal erosion both up and downstream from where any mining takes place. The South Taranaki area already has severe coastal erosion issues and this mining activity has potential to exacerbate the erosion.

Recreational fishing, marine mammals and animals

Marine Mammals: There have been no required surveys of marine mammals in the area. This is despite the first DMC finding that more baseline work should have been undertaken prior to the application being lodged. They also said that “We consider comprehensive and longer-term baseline studies of the presence of marine mammals in the STB would have assisted us to understand the importance of the STB to various species and what they use this area for (e.g foraging, breeding, calving, migrating etc.). The absence of this information leaves us uncertain as to the significance of the proposed mining area and the wider area of the STB affected by the mining operation to cetaceans.”

TTR only propose to conduct marine mammal species surveys as part of the later monitoring programme. This is unacceptable as the public and contrary to the findings of the first DMC, and the Committee will not have information about marine mammals that are or may be in the area. Marine mammal species such as blue whales and southern -right whales have a high potential to be impacted along with orca whales plus the highly at risk Maui and Hector's dolphins. Southern right whales are nationally endangered and are known to pass through the area. We also already know that the area is an important blue whale foraging area. Any adverse impacts to the migratory and resident mammal species could be devastating and must be avoided. Marine mammals will be particularly sensitive to effects from the large underwater and heavy metal content of the plume. Marine mammals are also particularly sensitive to noise from the activity. Noise and the plume will drive marine mammals away from the area.

Effects to seabirds: Surface noise and light from operations that run day and night will negatively affect seabirds and other wildlife. No attempt has been made to quantify these effects, and the only research has been done in an estuary, rather than open sea. As the first DMC found, there is a “lack of any field surveys undertaken and an understanding of the potential significance or not of birds in the STB. Given this, we find that we are still lacking an understanding of how important the STB is for seabirds and therefore the significance of the potential effects.”

Impacts to Fisheries: There are a wide range of fish species in the area. The project will impact those fish directly in the mining area, areas directly surrounding the site and those areas impacted by the plume. This could include spawning areas. As the first DMC found, there is significant uncertainty around the food web effects due to the primary production changes.

There are important recreational and commercial fisheries that will be indirectly affected by the proposal. The direct and indirect damage to the benthos and marine environment including sedimentation and downstream effects will affect fisheries and the food web. The noise, light and seafloor disturbance has a high potential to place the commercial, recreational and customary fisheries at risk. Disturbance of the seafloor may also mobilise previously settled pollutants, such as heavy metals, that can bio-accumulate in fish species. As the first DMC found, there is particular concern for human health around copper and nickel.

Impacts to Rocky Reefs in the area: The extent of rocky reef habitat in the area is not fully documented. The applicant has failed to adequately map all the rocky reefs in the area that may be affected by the activity. Again, the data in the application is unreliable. The reefs are biologically significant for the South Taranaki coast, providing habitat for encrusting and sessile fauna.

Impacts to Coral: It is likely that coral in the area will be smothered, but surveys have not been undertaken to identify them. This is an important effect which has been all but ignored.

CONCLUSION

We request the DMC to grant permission for submitters or their experts to allow cross examination of the applicant's expert witnesses to provide for rigorous testing of the applicant's evidence.

The application should be declined in full.

Regards,

NPSUC Committee