



<b>Application Name:</b>	Trans-Tasman Resources Limited iron sand extraction and processing application
<b>EPA Reference:</b>	EEZ000011
<b>Applicant:</b>	Trans-Tasman Resources Limited
<b>Notification Date:</b>	17 September 2016
<b>Submission Close:</b>	5:00pm, Friday 14 October 2016

Your personal information will be held by the EPA and used in relation to the Trans-Tasman Resources Limited marine consents and marine discharge consents application process. You have the right to access and correct personal information held by the EPA. All information held by the EPA is subject to the Official Information Act 1982.

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### Send your submission to the EPA by:

- **Using the EPA online form** available at: <http://www.epa.govt.nz/EEZ/whats-going-on/current-applications/ttr-2016/Pages/default.aspx>. If you use the online form, Trans-Tasman Resources Limited will automatically be sent a copy of your submission.
- **Email:** [TTRLApplication@epa.govt.nz](mailto:TTRLApplication@epa.govt.nz) (if smaller than 10MB). *Please mark in the subject line:* 'Submission: (Your name), 'Trans-Tasman Resources Limited iron sand extraction and processing application'
- **Post to:** TTRL Application, Environmental Protection Authority, Private Bag 63002, Waterloo Quay, Wellington 6140, New Zealand.
- **Deliver in person to:** Environmental Protection Authority, Grant Thornton House, Level 10, 215 Lambton Quay, Wellington, New Zealand.

### Send your submission to Trans-Tasman Resources Limited by:

- **Email:** [EEZSubmissions@ttrf.co.nz](mailto:EEZSubmissions@ttrf.co.nz)
- **Post to:** the Project Director, Trans-Tasman Resources Limited, PO Box 10 571, Wellington 6143, New Zealand
- **Deliver in person to:** Reception, Mitchell Partnerships, Ground Floor, Oceanbridge House, 25 Anzac Street, Takapuna, Auckland, New Zealand.

For information on the submission process, see [www.epa.govt.nz/EEZ/having\\_your\\_say](http://www.epa.govt.nz/EEZ/having_your_say).

All sections of this form with an asterisk (\*) are mandatory.

### 1. Contact details\*

Organisation (if relevant):

First name of submitter:\* **GIRAHAM**

Last name of submitter:\* **ELLETT**

Submitter Email\* (please provide a valid email address): [Redacted]

Submitter Fax:

Submitter Home phone\*: [Redacted]

Submitter Work phone: /

Submitter Mobile phone\*: [Redacted]

Submitter Postal address\*: [Redacted]

- I/We confirm that I/we have authority to make this submission on behalf of the submitter(s) named on this form.\*
- I intend to have a spokesperson who will act on my behalf (e.g. a lawyer or professional adviser). I confirm this person will receive all correspondence on my behalf.

### 2. Spokesperson contact details

Organisation (if relevant): /

First name of spokesperson:\* **Glenys**

Last name of spokesperson:\* **Ellett**

Spokesperson Email\* (please provide a valid email address): [Redacted]

Spokesperson Fax:

Spokesperson Home phone\*: [Redacted]

Spokesperson Work phone:

Spokesperson Mobile phone\*: [Redacted]

Spokesperson Postal address\*: [Redacted]

### 3. Electronic correspondence

You will receive information by email. If you are unable to receive emails, please indicate below:

- I cannot receive electronic copies of information and updates.

### 4. Do you wish to speak to your submission at the hearing?\*

- I/We do not wish to speak about my / our submission at the hearing.

OR

- I/We wish to speak about my / our submission at the hearing.

If you wish to speak at the hearing, tick as many as apply to you:

- If others make a similar submission, I/we will consider presenting a joint case with them at the hearing.
- I/We wish to present in Te Reo Māori.
- I/We wish to present in New Zealand Sign Language.
- I/We intend to have legal representation (i.e. a lawyer speaking on your behalf).
- I/We intend to have expert witnesses to support my/our submission.

### 5. What decision do you want the EPA to make and why?\*

If you require more space, please attach additional pages. Please include your name, page numbers and *Trans-Tasman Resources Limited iron sand extraction and processing application* on the additional pages.

Decision*	Grant	Grant with conditions	Neutral	Decline
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

My reasons for seeking this decision are:

See attached 'My reasons for seeking the decision to decline the application', 7 pages

6. Do you have an existing interest that may be affected by what is proposed in this application?

- Lawfully established existing activity, whether or not authorised by or under any Act or Regulations, including rights of access, navigation and fishing
- Any activity that may be undertaken under the authority of an existing marine consent
- Any activity that may be undertaken under the authority of an existing resource consent granted under the Resource Management Act 1991
- Settlement of a historical claim under the Treaty of Waitangi Act 1975
- Settlement of a contemporary claim under the Treaty of Waitangi as provided for in an Act, including the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992
- Protected customary right or customary marine title as recognised under the Marine and Coastal Area (Takutai Moana) Act 2011

**What is your existing interest and how may it be affected by this application?**

**END OF THE SUBMISSION FORM**

*My reasons for seeking the decision to decline the application*

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 (km<sup>2</sup>) of seabed. TTR proposes to extract and export up to 5 million tonnes of iron ore per year.

I 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. The application does not satisfy the purpose of the 2012 Act. 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 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.

As kaitiakitanga or stewards of the ocean we must protect our marine environment from such destructive practices. This is the second application; the first was quite rightly declined in 2014. This is for the same activity and is just as damaging. It is unacceptable that the public and iwi must oppose such applications, especially where industry continue to fund repeat applications in the hope that the outcome will be different.

I oppose the application for the following reasons:

**1. THE PROPOSED SEABED MINING ACTIVITY WILL BE IN BREACH OF DOMESTIC AND INTERNATIONAL LAW**

- A. Statutory Regime:** The application does not satisfy the requirements of the EEZ and Continental Shelf (Environmental Effects) Act 2012 (EEZ/CS Act). The assessment of environmental effects is flawed, being based on inadequate scientific research. The applicant has failed to avoid, remedy or mitigate adverse effects to the marine environment.
- B. Repeated Application:** This application follows a previous application by TTR for the recovery of iron ore deposits in the same location in 2013. That application was declined by the Decision Making Committee (DMC) as being insufficient in terms of analysis of effects to the environment. TTR states that it has updated its assessment in order that it should now be able to set this issue aside. The new information provided by TTR fails once again to adequately address environmental and other concerns and should once again be declined. There is not even certainty that TTR itself intends to carry out the mining. There is a possibility that it may just sell the consent, leaving further uncertainty on who would do the mining and how.
- C. Treaty breach:** The application fails to provide active protection of Maori interests and taonga (particularly over fisheries), but also negates kaitiakitanga (or stewardship) by tangata whenua over the environment.
- D. International Law:** The application fails to apply key international treaties to which New Zealand is a party including the 1982 United Nations Convention on the Law of the Sea, the

1992 Convention on Biological Diversity and the 1986 Noumea Convention. By allowing this application to proceed New Zealand will be in breach of its obligation under these conventions and international law including to protect and preserve the marine environment.

- E. **Precautionary Approach:** The applicant has not provided a robust application proving that their proposal is safe for the marine environment and poses no threat to future sustainability. Taking a precautionary approach to major projects of this nature is internationally recognised and legally required.

The EPA must apply the precautionary approach to this application and apply the provisions of s10, s59(2) and 61 of the EEZ CS Act to ensure that the marine environment is protected.

## **2. THE APPLICANT, TTR, HAS FAILED TO CARRY OUT ADEQUATE CONSULTATION**

- A. **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.
- B. 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. Four weeks is simply an unrealistic timeframe for anyone who holds down a family and a full time job to read through and understand this volume of information in order to put forward a comprehensive submission.
- C. The Applicant has attempted to further reduce public scrutiny by applying to keep important environmental information secret.

## **3. THE PROPOSED MINING ACTIVITY WILL DEGRADE AND IRREVERSIBLE DESTROY OUR MARINE ENVIRONMENT**

- A. **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 km<sup>2</sup> 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.
- B. **Indirect Impact to Seabed Ecology:** Indirect impacts of the seabed mining are more varied and complex and cover a much larger area of the 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.

- C. 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 recolonisation 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 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.

- D. 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.
- E. 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.
- F. 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

*My reasons for seeking the decision to decline the application*

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.

- G. 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.
- H. 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.

- I. 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.”
- J. 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.

- K. 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.
- L. 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.

#### **4. THERE ARE OPERATIONAL RISKS WHICH WILL NOT BEEN ADEQUATELY PREVENTED OR MITIGATED**

- A. Risks from the vessels:** The use of deep-sea moorings for stabilising the large extraction and export vessels will create adverse effects and destroy a large area of seabed. Oil spills have the potential to create significant adverse effects, particularly from the crude thick toxic heavy fuel transfer operations from ship to ship. There is no contingency plan as part of the application and instead TTR proposes to supply such plans later. This does not enable any analysis of risk to be properly undertaken because TTR itself is yet to undertake such analysis.

Waves in excess of 4 metres are routinely measured and have been in excess of 7 metres. These are extreme conditions for vessel management and a safety plan needs to be provided.

Use of Admiralty Bay in storm conditions is not an adequate plan. Admiralty Bay is an important feeding ground for about 200-300 male dusky dolphins each winter. DOC has expressed concern about habitat fragmentation in the bay and it appears that existing developments are already causing a decline in dolphin numbers. Bottlenose and common dolphins, NZ fur seals, gannets, shearwaters and king shags also use the area, which has commercial importance for mussel farms as well. There is a risk that spillage will occur during the transfer. It is not satisfactory that the Admiralty Bay risks are to be considered in a separate Resource Consent application, rather than looking in total at the impact of this application.

- B. Insurance:** The applicant only intends to provide insurance cover of NZ\$100m for environmental restoration of any "an unplanned event" during the term of seabed mining operations. Two issues arise from this. One is the definition of unplanned event, and the other is the amount. Even the in comparison relatively minor Rena disaster cost about \$130m. Such an oil spill could be among the lesser effects arising from this application.

A substantial Bond would be needed to counter the minimal vague insurance cover utilising Section 65 of the EEZ/CS Act to bring effective risk management.

#### **5. OVERALL, NEW ZEALANDERS WILL NOT BENEFIT FROM THE PROPOSED MINING ACTIVITY**

- A. New Zealanders identify with the sea:** Many New Zealanders have a unique and special relationship with the marine environment. The sea forms part of our identity. This application

will undermine this relationship with the sea and all of its inhabitants.

- B. Economic concerns:** This is an overseas owned company. Profits will be directly exported overseas, while the risk of a potential ecological collapse in NZ remains. Low royalty rates of 2% will not deliver sufficient economic gains and will not provide economic benefits relative to economic losses resulting from the applicant's proposal. Private profit, public liability is not acceptable.

Despite wildly exaggerated claims by the company, there are minimal employment opportunities, yet New Zealand's clean green image and tourism will be undermined. As the first DMC found, any effects of the proposal on New Zealand's tourism brand would be difficult to measure. Most of the workforce will be taken up by overseas personnel and the "fly-In Fly out" majority of workforce will not reside in Taranaki but come from elsewhere.

TTR claim that the industry will contribute \$159 million to GDP. Even if this is true, in contrast to the claims accepted by the last DMC (\$50 million, mainly the royalties and taxes), the economic benefits from this mining proposal pales into insignificance when compared against the economic costs: these include possible damage to the growing tourist industry; damage to the marine environment, damage arising from erosion, loss of surfing, swimmers, beach users, fishers and damage to the 'clean-green' image. This will in turn have ongoing adverse cumulative effects on coastal communities, people's livelihoods and their quality of life.

Once again, inadequate evidence has been accepted by the EPA. Further progress of this application should be deferred until all evidence is at hand.

Tourism is one of New Zealand's largest export industries. The applicant only focuses on impacts on tourism in the immediate local area and fails to consider cumulative adverse effects to the larger region and New Zealand's overall clean green image.

The impact to recreational and commercial fisheries has not been adequately addressed. The applicant acknowledges that impacts to commercial fisheries in the local area will take place and has not provided any evidence that compensation will be paid to that sector. Nor is there an economic analysis of the loss to the recreational fishing sector. The potential loss to people's economic wellbeing and impacts to the local and regional area who rely on Kaimoana and the sea for their day to day lives will create adverse effects to those communities.

*My reasons for seeking the decision to decline the application*

see attached

## **CONCLUSION**

I 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.

I request that hearing venues are set in place in regional areas other than Wellington and Taranaki and that a hearing should take place on a Marae.

The application should be declined in full.

To whom it may concern,

T.T.R. Company is a group of foreigners and Kiwis out to make money with no regard for the environment or the beauty that this country is known for. Why would they give a false report of desert conditions beneath this part of the Tasman Sea.??

I know differently.

I have recently visited many of the residents of Waiinu Beach Settlement. The vast majority agree that we should just leave the sand where and how it is and signed a petition requesting that mining be prohibited. The effects of Waipipi are still on their minds.

I am a member of the local fishing club which holds competitions for surfcasting. Our 11 kms of sandy beach opens the way to mussel beds and fishing spots for the fisherfolk with quads and S.U.V.s The Waitotara River Mouth is also accessible from our road access and good catches of whitebait are netted. Catches of trevally snapper, red cod kahawai gurnard and lemon fish have been weighed in. Flounder have been caught in the river and at sea.

The beach access is used by many boaties who report good catches of blue cod, snapper and even king fish. The crab population attracts lemon fish which are sought after by the commercial trawlers.

We see the trawlers more often since the fishing in the Marlborough Sounds has been depleted. We have an extreme wild West Coast climate which helps protect the over fishing. The high wind for example is to be harnessed by windmills.

Much sand is shifted daily by the wind on this open exposed coast. Much more is shifted Southwards by tides and ocean currents. The proposed idea to process and remove 5 million tonnes of the heavy iron sand yearly concerns me greatly. Removing this amount is frightening and destructive!

Will this leave us with lighter sand (as at Levin) or will this wash further south east with ocean currents and bury more beaches at Waiterere beach?

Will it drift ashore at Waiinu and smother the mussel beds and impact on fish stock?

Will more sand be blown further inland burying profitable farmland?

Will we be left just with exposed rock?

What will the effects of the plume **actually** be as it spreads and drifts.?

What safety systems are in place to 'anchor' and transfer to and from the vessels?

Surely no company should make application to process on such a scale for such an extended period of time, 35 years!!!!

With what has happened North in the Hauraki Gulf, where the Auckland Regional Council has been unable to stop mining once ecological concerns were raised, we need to **stop** this seabed mining **before it starts** here in South Taranaki. Prevention is better than cure with the possibility of ecological disaster so high.

The potential for risk with sea conditions alone is considerable.

Admiralty Bay is not an appropriate shelter for a vessel of that size, where dolphins and other mammals are already at risk.

Wind conditions and currents bring buoys to Waiinu from fishing near Nelson. We do not want more air pollution drifting our way, harming bird life, or the noise from such an operation affecting sea life.

This part of the country has witnessed volcanic activity with the resulting poisons ending in the depths in our seabed. Do we want these poisons exposed? NO! The fish and sealife has survived, the seabeds have recovered over much time, but our ocean now has so many other threats with all the existing pollution, we should not be adding to it and making things worse. We have a moral and ethical responsibility to protect and care for it.

Many New Zealanders make a living and feed their families from this stretch of the Tasman Sea and thousands more enjoy the recreational sports and the beauty of the area. We ourselves have caught snapper, gurnard, kahawai and lemon fish surfcasting and from the long line. We eat from the

mussel beds. We live from the ocean and our garden as much as possible, from need and choice. Local and international tourists visit our beach and camping reserve throughout the year loving it as it is, as do our local residents.

We will not benefit from TTR or any company mining iron sand from our coast.

Save our Sea(life) and **SAVE OUR SAND.**

*G. Ellett 8-10-16*