

# Submission Form

## Marine Consents and Marine Discharge Consents Application

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SUBMISSION115653

Submitter Name:

McCurdy

Murray

Hard Copy Form

Incomplete Submission

## Marine Consents and Marine Discharge Consents Application

**Application Name:** Trans-Tasman Resources Limited iron sand extraction and processing application

**EPA Reference:** EEZ000011

**Applicant:** Trans-Tasman Resources Limited

**Notification Date:** 17 September 2016

**Submissions Close:** Extension of submission period to 5:00pm, Monday 14 November 2016  
Originally submission period was to close 5:00pm, Friday 14 October 2016

### 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 on having 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.

- Grant
- Grant with conditions
- Neutral
- Decline

**My reasons for seeking this decision are:**

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I wish to voice my support for the Trans-Tasman Resources Limited 2016 application to extract and process iron sand within the South Taranaki Bight. I have a PhD in chemical engineering and additional qualifications in biological sciences and business. I work primarily in research and development for the minerals and advanced materials sectors. This submission is my own opinion and does not necessarily represent the opinion of my employers. I will focus mostly on the economics as I think there is a room for improvement in how this is treated based on what I have seen in both the application and subsequent reports by experts. It seems that where there is any uncertainty on the economics the potential is expunged. In contrast where there is uncertainty in the environmental impacts the potential is amplified. I think that this leads to a bias in the treatment of the two aspects. In a case like this where the economic impacts define the 'why?' and the environmental impacts define the 'why not?' we end up mostly considering why the project should not go ahead. The focus of the economic assessment has been almost entirely on the money that will come from commodity sales and how this is divvied up as it percolates through the local, regional and national economy. The result is a fairly dull discussion by experts on the precision of the input-output multipliers and how the impact of this one company on NZ GDP is relatively small. I believe this fails to capture the potentially far-reaching economic benefits of the proposed operation. In this submission I hope to offer a broader perspective on the economic benefits and show how, with consideration for the environmental impacts, this leads me to support the proposed activity.

**Trailblazing:** The proposed operation represents the beginning of seabed mining in New Zealand. We have vast quantities and diversity of mineral resources within our EEZ. The approval of the TTRL marine consent will begin the process of opening up these resources to generate wealth and improve our economy. On the face of it sucking up iron sand and shipping it off to a commodity market seems like a fairly rudimentary business model. If however we take a sector view and this is seen in the context of being at the start of a new industry, then it makes perfect sense to begin with a product that is well understood and does not present market entry risks. This allows the focus to remain on the big unknowns, such as risks from the environment, and the challenges these present. This is analogous to a start-up business focussing on a minimum viable product. There are many more exciting and higher value seabed mineral resources in NZ. The amount of resource that TTRL intend to take is a drop in the ocean in terms of the total value in our seabed minerals. Among the grains of some of our mineral sands are rare earth elements and noble metals. Both of these are in demand for developing advanced technologies and have orders of magnitude greater value than iron sand. I believe experience of TTRL will see new businesses developed to extract them. The adaptive management approach that TTRL is taking shows that they are committed to learning more about the environmental impacts of seabed mining as they are doing it. As well as ensuring TTRL operations keep within environmental impact limits, this will provide incredibly valuable information. This will help to improve environmental impact modelling and reduce the uncertainty in future seabed mining applications. I think this shows that they are not only leading the way on seabed mining, they are also setting the bar high in how we manage the environmental effects of seabed mining in NZ.

**New Technology:** Meeting the challenge from environmental risks and keeping environmental impact to a minimum leads to development of new extraction technologies. TTRL has already developed new technologies and I'm sure will continue to do so as they learn more from scaling the seabed mining operation. This technology is valuable to our economy in its own right as it has to be manufactured and has the potential to be exported. Both of these benefit our manufacturing sector by providing exposure to new product lines and new markets. The technology will also benefit new seabed mineral extraction operations by reducing the risks in starting a new mining operation and improving their economic and environmental viability.

**Big Companies:** The economic evaluations by experts seem to imply that TTRL is small. I think this is unfair and that TTRL will in fact be a big company by NZ standards. When it reaches full production TTRL will be one of New Zealand's largest companies, falling into the top 0.5% on revenue and employment. Large companies tend to contribute disproportionately more to a countries economy due to higher productivity, wages and profits as well as being more innovative and more successful in international markets. This means that TTRL is likely to have a greater positive impact on our economy than a group of SMEs with the same total number of employees. As the seabed mining sector grows the new entrants will most likely be of a similar size leading to a big sector made up of large companies. Many of these companies will be located in regions with low performing economies and provide a much needed boost in regional growth. This will compound the large company benefit and ultimately result in an economic impact that is significant at the national economy level. The benefits of a focus on sustainability and social responsibility is more apparent in larger companies than SMEs, so as a large company TTRL can be expected to have a greater focus on a wider range of environmental issues.

**Research:** I expect TTRL will provide benefit

to the research sector in NZ. This is in part due to their size as larger operational budgets allow for larger research budgets. At the scale of TTRL these budgets are likely to be on a scale that can support dedicated researchers. They also face unknown challenges from their environment and these will pose many research questions. This will result in increased business expenditure on R&D (BERD) going through our research organisations, institutes and universities. This will lift overall funding levels for research which will in turn increase positive outcomes from research and development with flow on benefits to the economy. Many of the research questions posed are likely to have an environmental management component associated with them. This will contribute in a very practical way to our basic understanding of the environment in the STB and how to manage mining operations within this environment for the least environmental impact. This research is likely to be transferrable to other regions and may have a global impact. Diversified Economy: I believe that if we chose to take this next step towards developing our seabed mineral resources we will initiate a shift to a more diversified and modernised economy. We can build up a diverse mineral sector with barely noticeable impact. As this sector grows it will boost manufacturing directly through demand for products and indirectly by inspiring new businesses to exploit the raw materials made available. A resurgent minerals sector and growing manufacturing sector alongside the strong biological industries will reduce our dependence on a few commodity products and so increase our economic stability and potential for growth. Conclusion: The activities proposed by TTRL will have an impact on the environment. They have clearly acknowledged this and proposed strategies for managing environmental impacts. There are still some unknowns and I think now is the right time to get some hard data from a commercial seabed mining operation to answer these. The adaptive management approach that TTRL are proposing is exemplary for a first of its kind operation in NZ for tackling these unknowns. I believe that if TTRL set up a commercial seabed mining operation in NZ then it will trigger a long period of sustained growth in our economy. Based on this I recommend to the Decision-making Committee that they grant the consents that TTRL have applied for. I also think that the adaptive management strategies proposed by TTRL provide a solid base for determining conditions on the consents.

## 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?**

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If you would like to attach any supporting documents please do so below.

 File Attachment

**Only ONE PDF or Word document with a maximum size limit of 15MB can be attached to this submission form. Please forward larger files or file types other than PDF or Word, or multiple documents directly to the EPA on a CD or DVD or USB stick.**

**Email Address**

I wish to receive a copy of my completed submission via email.