

13 October 2016

Shawn Thompson
Trans-Tasman Resources Limited
PO Box 10 571
Wellington 6143
New Zealand

Dear Shawn

Request for Further Information from Trans-Tasman Resources Limited (TTRL)

The Decision-making Committee (DMC) has asked me to request the following further information under section 42(1) of the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012 (the EEZ Act) in relation to your application for marine consents and marine discharge consents to extract and process iron sand within the South Taranaki Bight.

The further information requested and the reasons for requesting this information are attached in the following table in Appendix 1.

Timeframes

In accordance with section 43 of the EEZ Act, within 5 working days from the date of this request you must either:

- a. provide the requested information; or
- b. write to the EPA agreeing to provide the requested information; or
- c. write to the EPA informing it that you refuse to provide the requested information.

If the EPA receive written confirmation from you that you agree to provide the requested information, we are then required to set a reasonable time by which you must provide the information to us (section 43(2) of EEZ Act).

We anticipate that **31 October 2016** is a reasonable date for providing the further information. If you think you will be unable to provide the information to us by that time, please indicate a date by which you will be able to provide it to us.

Possible further requests

We note that further requests for information from TTRL and/or experts might need to be made once the DMC has received submissions on the application.

If you have any questions please do not hesitate to contact Amy Selvaraj on 04 474 5475 or email amy.selvaraj@epa.govt.nz

Yours sincerely

A handwritten signature in black ink, appearing to read "Richard Johnson". The signature is fluid and cursive, with the first name "Richard" and last name "Johnson" clearly distinguishable.

Richard Johnson
Manager, EEZ Applications
Climate, Land and Oceans Group
Environmental Protection Authority

Appendix 1 - Further information requested, October 2016

Area of consideration/question and further information needs		Reason
<u>Discharges of Sediment including its off-site dispersion</u>		
1	Have all the sediment sources likely to be generated by the activities (especially the crawler) been adequately accounted for as inputs in the NIWA sediment plume modelling? (relevant EPA expert - GHD)	In order to better understand the effects on water quality of the discharges of sediment back to the water column and its off-site dispersion and to help the DMC understand the sediment plume and optical model to ensure the DMC has the best available information on all relevant issues.
2	Does the sediment plume model assume that no lenses of fine grained seabed or subsoil material is encountered during mining?	
3	What are the relevance of the 'net differences' (predicted increases) in median and 99th percentile suspended sediment concentrations (SSC) at the three locations discussed in section 4.4.2.3 of the Impact Assessment? (relevant EPA expert - GHD)	
4	What pattern exists in terms of the predicted number of days where light is predicted to be reduced – are they all contiguous or spread out and does this affect the primary production effects assessment? (relevant EPA expert - GHD)	
5	In what way has TTRL demonstrated that the assumed sediment model domain (SMD) is a suitable area over which to average predicted results for optical and primary production effects given the strong likelihood of hydrodynamic gradients within the SMD? (relevant EPA expert - DHI)	
6	What is the final particle size range of the discharged post-processing material (de-ored sediment) compared to the material extracted? (relevant EPA expert - DHI)	

	Area of consideration/question and further information needs	Reason
7	Why are the de-ored sediments discharged 4 m above the seabed? Can they be released closer to the seabed and would this reduce the size and subsequent effects of the sediment plume?	
8	How will the results of grade control drilling influence the mining activity, both horizontally and vertically? If the grade control drilling shows lenses of fine grained material will mining avoid these, and if so how will they be avoided?	
9	Section 2.3.3.1 of the IA states that grade control drilling will occur an average spacing of 100 metres. What mitigation measures will be put in place if you strike an unexpected lens of fine grained material when mining occurs?	
10	Where were the three samples that HR Wallingford (HRW) tested collected from and do they reflect the nature (in particular the ranges of particle sizes) of the post-processing sediment proposed to be discharged? What was the chain of custody process associated with the collection and processing of these samples?	
11	Will there be any discharge of sediment (iron sand/ore) into the sea from the belt conveyors that are proposed to be used to transfer the iron ore from the floating storage and off-loading vessel (FSO) to the cape-sized export vessel (CEV)?	
<u>Effects on Plankton (primary production), fish and marine mammals</u>		
12	What is the abundance, diversity, or likely impacts on cephalopods from your proposed activities? Are cephalopods a distinct group of fauna within the STB? (relevant EPA expert - DHI)	In order to better understand the effects of the proposal on the environment and to ensure the DMC has the best available information on all relevant issues.
13	Will satellite based analyses be continued as a way of acquiring a full spatial understanding of sediment and other optical changes in the STB and allowing spatial validation of the operational sediment plume model (OSPM) as part of the Environmental Management and Monitoring Plan (EMMP)? (relevant EPA expert - DHI)	

Area of consideration/question and further information needs		Reason
<u>Proposed environmental triggers/limits and the adaptive management approach</u>		
14	Should the proposed response and compliance limits be based on 'exposure over time' (frequency and duration) in addition to intensity? (relevant EPA experts - AECOM and DHI)	In order to help the DMC better understand the proposed environmental triggers/limits and the adaptive management approach and to ensure the DMC has the best available information on all relevant issues.
15	Is measuring turbidity appropriate as a proxy for the proposed response and compliance SSC limits?	
<u>Physical seabed and subsoil disturbance effects</u>		
16	Section 4.6.5 of the IA discusses restoration and recolonization in terms of dredging. Are the effects on the environment from these two activities (dredging and your proposed mining approach that processes the material) comparable?	In order to help the DMC better understand the physical seabed and subsoil disturbance effects and to ensure the DMC has the best available information on all relevant issues.
17	Has TTRL considered stripping, saving, and replacing the top part of the seabed that contains surface soft body benthic organisms during the extraction of the material? If you have considered these options can you please explain why you have not decided to use these approaches in the extraction of the material?	
18	Has TTRL investigated alternatives to the proposed excavation of seabed material in continuous strips adjacent to one another? For example, working in one strip, leaving the next adjacent strip undisturbed and then mining the next strip? Would such an approach be feasible and would it aid in the recovery rates of the benthic communities?	
19	What period of time is required for the stripped/replaced material to become a suitable habitat for benthic organisms and communities if it is left to recover by itself?	

	Area of consideration/question and further information needs	Reason
20	<p>Are the benthic communities expected to recover to pre-mining levels and what factors will affect whether this will occur? For instance, alternatives such as leaving material in stockpiles or mining in alternative strips etc.</p>	
21	<p>What are the expected recovery scenarios (timeframes) in relation to benthic communities within the mining area? What does the expected recovery look like both spatially and temporally?</p> <p>Graphic illustrations of the temporal recovery of benthic communities are requested.</p>	
	<u>Bioaccumulation on benthic ecology</u>	
22	<p>The IA discusses the effects of bioaccumulation effects of mercury but it does not specifically describe the bioaccumulation effects of other metals despite stating (section 4.6.7 of the IA) that offshore biota can be affected through bioaccumulation into the food web. What are the risks of bioaccumulation of metals other than mercury within marine biota and what level of variation is there in concentrations across the sites?</p>	<p>In order to better understand the effects of the proposal on the bioaccumulation of metals into the food web and to ensure the DMC has the best available information on all relevant issues.</p>
	<u>Effects of the Maori existing interests</u>	
23	<p>What are the effects of the proposed activities on Māori who have had settlements under the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992?</p>	<p>In order to better understand the effects of the proposal on Māori existing interests and those who have had Treaty of Waitangi (Fisheries Claims) Settlements and to ensure the DMC has the best</p>

Area of consideration/question and further information needs		Reason
		available information on all relevant issues.
<u>Exclusionary effects in and around the project area and effects of the activity on existing interests</u>		
24	We note in the IA that surfing organisations and clubs (Surfing Taranaki, New Plymouth Board Riders, and Opunake Boardriders Club) are not listed in section 3.1.2.1, despite the fact that the Greenaway & Associates report (Report 29) identifies that potential effects on surfing may occur and summarises the consultation undertaken in 2013 with these clubs. If there are potential effects on surfing then an explanation should be provided as to why the IA doesn't identify surf groups as persons with existing interests.	In order to better understand the effects of the proposal on existing interests and to ensure the DMC has the best available information on all relevant issues.
25	Section 6.3.14 of the IA states that consultation was undertaken with representatives of the various recreation and tourism operators that were identified earlier in the IA as having existing interests that are likely to be affected by the activities. The nature of this consultation is described in general terms and it does not describe who TTRL consulted with. We also note that this consultation (and feedback) is not presented or discussed in the Greenaway & Associates report (on recreation and tourism effects) and it only covers consultation undertaken in 2013. Which recreational and tourism operators has TTRL consulted with?	
26	What are the overlaps between the project area and commercial fishing and what species are present that could be affected. A graphic illustration is requested.	
<u>Economic benefits to New Zealand</u>		
27	Has any price sensitivity analysis been undertaken?	In order to better understand when the economic analysis that has

	Area of consideration/question and further information needs	Reason
		<p>been undertaken and to ensure the DMC has the best available information on all relevant issues.</p>
	<p><u>Measures to avoid, remedy or mitigate the adverse effects (conditions)</u></p>	
28	<p>There is a discrepancy between the IA and the Environmental Monitoring and Management Plan (EMMP) in respect of when monitoring is to commence. In the draft EMMP (Appendix 5.2 of the Impact Assessment) it is stated that monitoring will commence “within one month of the iron sand extraction activities commencing”. However, in Section 5.5.4 of the IA it is stated that monitoring will be implemented “one month prior to the commencement of the iron sand extraction activities”. Which of these two statements is correct? (relevant EPA expert - AECOM)</p>	<p>In order to better understand when the monitoring will be commencing and to ensure the DMC has the best available information on all relevant issues.</p>
	<p><u>Other information</u></p>	
29	<p>A full assessment of why the hydraulic fluid is not regulated under the EEZ Act is requested.</p>	<p>In order to better understand the effects of the proposal and to ensure the DMC has the best available information on all relevant issues.</p>
30	<p>The EPA’s technical experts (AECOM) on benthic ecology have noted that section 2.3.6 of the IA (page 26) refers to the discharge from the hyperbaric pressure filter aboard the FSO vessel as ‘clean resalinated water’, however they note that discharges from this filter may be a further source of fine sediments, depending upon the maximum size of sediment particles that can pass through the filter. Will the discharge from the hyperbaric filter on the FSO contain sediment? (relevant EPA experts - AECOM and EPA)</p>	