

**Before the Decision-Making Committee of the Environmental Protection Authority  
At Wellington**

**Application for Marine Consent by Trans-Tasman Resources Ltd**

IN THE                    the Exclusive Economic  
MATTER OF            Zone and Continental Shelf  
                                 (Environmental Effects)  
                                 Act 2012

AND

IN THE                    An application by Trans-  
MATTER OF            Tasman Resources Ltd for a  
                                 marine consent application  
                                 made to excavate iron sand  
                                 from the seabed of the  
                                 exclusive economic zone in  
                                 the South Taranaki Bight,  
                                 process that sand to remove  
                                 iron particles and return the  
                                 remaining sand to the  
                                 seabed.

Kiwis Against Seabed  
Mining Incorporated  
(KASM)

Submitter

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**Supplementary Evidence of John Cockrem  
On Behalf of Kiwis Against Seabed Mining Incorporated**

**Dated 18 May 2017**

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## **INTRODUCTION**

1. My name is John Cockrem.
2. I prepared evidence dated 23 January 2017 (my “First Statement”) and evidence on 15 February (my “rebuttal evidence”) in these proceedings on behalf of Kiwis Against Seabed Mining Inc. (KASM).
3. I have read the Code of Conduct for Expert Witnesses Environment Court’s Consolidated Practice Note (2014). In so far as I express expert opinions, I agree to comply with that Code. In particular, except where I state that I am relying upon the specified evidence of another person as the basis for any expert opinion I have formed, my evidence is within my sphere of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions which I express.
4. The purpose of this evidence is to respond to the further information provided by the applicant in response to Minute 41 of the DMC. In particular, this evidence looks at the optical modelling and revised conditions.

## **OPTICAL MODELLING REPORT**

5. The Pinkerton report indicates that the revised modelling shows that the optical effects of the proposed sand mining are projected to be greater than had previously been estimated. For example, the report states that optical effects of mining at eight stations would be 41% greater than the previously estimated effects. Figure 2 – 12 in the report shows the estimated average reduction in light intensity at the seabed. This figure shows that the average area in which light intensity at the seabed would be reduced would be many hundreds of square kilometres in size and would extend from the mining site along the coast of the North Island south towards Kapiti Island. It is important to note that this figure shows an average, and on some days much larger areas of seabed would be affected stretching to the south and to the south-east or to the east of the sand mining site. The areas of sea that would be affected are important, if not crucial, feeding grounds for populations of little penguins, for fairy prions nesting on Stephens Island, and likely for other seabirds.

*Supplementary Evidence of John Cockrem*

6. The conclusions in the new report by Pinkerton thus support my previous evidence (section 6.1) in which I showed that the proposed sand mining would have adverse effects on the foraging opportunities for little penguins and other seabirds. These adverse effects would be caused by the reductions in light intensity in the water that would occur due to sand mining. These reductions would reduce the ability of little penguins and other seabirds to forage. The extent of the adverse effects cannot be accurately predicted.

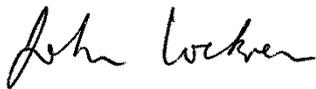
**REVISED CONDITIONS**

7. Section 10 of the revised conditions dated 2 May consider seabirds. Section 10a states that there shall be no adverse effects at a population level of seabirds of various classifications. In my previous evidence, I showed that the proposed Seabirds Effects Mitigation and Management Plan (SEMMP) could not achieve its stated goal of ensuring that there were no adverse effects at a population level. Section 10a could not be complied with. The current population of little penguins nesting along the south coast of Taranaki will be adversely affected if sand mining were to proceed and this population could become extinct due to the adverse effects of sand mining. This is just one of several populations of little penguins that would be adversely affected by the reductions in light intensity caused by sand mining. Similarly, sand mining would have adverse effects on the fairy prion population that breeds on Stephens Island.
8. Neither the proposed conditions nor the SEMMP contain any statement about how the status and breeding success of populations of little penguins, fairy prions, and other seabirds that use the South Taranaki Bight (STB) would be accurately determined every year. There would thus be no way of determining whether or not there were adverse effects of sand mining on seabird populations. There would therefore be no way in which the consent holder could comply with condition 10a.
9. Section 10b states that adverse effects on seabirds due to lighting, spills, the effect of sediment in the water column on birds, and other effects would be avoided to the greatest extent practicable. This condition would not provide

*Supplementary Evidence of John Cockrem*

protection for seabirds as it would allow adverse effects on seabirds to occur without any limitations.

10. Section 10c says that adverse effects on seabirds from vessel lighting shall be mitigated and where possible avoided. Like section 10b, this condition would not provide protection. There would be no limit on the number of seabirds that could be killed by collision with mining vessel. I noted in my previous evidence that there is a report of 100,000 fairy prions being seen less than 10 km from the mining proposed mining site, and noted that there was a possibility that large numbers of seabirds could be killed at the mining vessel.
11. The proposed conditions in section 10 in relation to seabirds are thus unsatisfactory as they would allow adverse effects on seabirds to occur without limit, would not allow for mining activities to be curtailed if they had a serious negative environmental impact, and as written could not be complied with.



**John Cockrem**

18 May 2017