**BEFORE THE FAST-TRACK EXPERT PANEL**

**IN THE MATTER** of an application for approvals under section 42 of the Fast-track Approvals Act 2024 ("FTAA")

**AND**

**IN THE MATTER** of the application for approvals by Trans-Tasman Resources Limited for the Taranaki VTM Project, a project listed in Schedule 2 of the FTAA

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# JOINT STATEMENT OF EXPERT WITNESSES:

# EFFECTS ON BIRDS

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**20 November 2025**

## INTRODUCTION

1. Expert conferencing on the topic of effects on birds took place online via Microsoft Teams on 20 November 2025.

2. The conference was attended by the following experts:

   (a) Dr David Thompson (”DT”) (Applicant); and
   (b) Dr John Cockrem (“JC”) (Kiwis Against Seabed Mining and Greenpeace Aotearoa Limited).

3. Jason Welsh (ChanceryGreen) acted as facilitator.

4. Islay Fowler (ChanceryGreen) assisted the experts to draft the Joint Witness Statement (“JWS”).

## CODE OF CONDUCT

5. The experts confirm that they have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2023 and agree to comply with it. The experts confirm that the issues addressed in this JWS are within their area of expertise, unless stated otherwise.

## SCOPE OF STATEMENT

6. In Expert Panel Minute 19 (5 November 2025), the Panel directed experts in effects on birds to conference regarding identified questions, recording matters that are agreed or disagreed and any unresolved matters or uncertainties.

7. The scope of this statement is limited to effects on birds.

8. Appendix F of Panel Minute 19 formed the basis of an agenda for conferencing.

9. In this JWS, we report the outcome of our discussions in relation to each item (below), including by reference to points of agreement, disagreement, and unresolved matters or uncertainties. Where we are not agreed in relation to any issue, we have set out the nature and basis of that disagreement.

## QUESTIONS FROM THE PANEL

### 1. Baseline Data and Bird Use of the Area

*a. Is the data used to inform the effects assessment on birds adequate in spatial and temporal coverage to assess species of concern, including rare, threatened, or migratory seabirds? If not, is additional information available?*

10. DT considers that to the best of his knowledge, there have been no systematic and structured at-sea surveys of seabird occurrence and abundance, and how these vary temporally, in South Taranaki Bight (STB). There are data sources, for example ad hoc sightings data and seabird tracking data, that allow a species occurrence list to be compiled for the region. DT considers it would be fair to say that 'bird use of the area' is not well or fully understood.

11. JC considers that the data used to inform the effects assessment on birds are not adequate in spatial and temporal coverage to assess species of concern, including rare, threatened, or migratory seabirds.

12. JC considers no systematic observations have been made from boats to determine the abundance and distribution of seabirds in the South Taranaki Bight throughout the year and across different years. The available data are inadequate. JC further considers no additional information is available.

### 2. Magnitude and Extent of Predicted Effects

*a. Which species or groups of birds are most susceptible to impact from the proposed mining activities and these pathways, and under what operational or environmental circumstances?*

13. DT considers that taking into account all potential effects and considering all bird groups, he thinks kororā little penguin, kuaka diving petrel, shearwater species and shag species (i.e., those species that (can) forage underwater using primarily visual cues) would be most susceptible to proposed activities. Specifically, these species would be potentially affected by the sediment plume, which would reduce foraging efficiency where suspended sediment concentrations were relatively high.

14. JC considers that seabirds that depend on the South Taranaki Bight (STB) in the breeding season would be most susceptible to impact from the proposed mining activities. These species include fairy prions that breed on Takapourewa

Stephens Island and the kororā (little penguins). As set out in JC's statements of evidence dated 23 January 2017 and 6 October 2023, adverse effects of mining activities on seabirds would occur at all times during the multidecade duration of the proposed project, with adverse effects of lights associated with mining activities occurring at night throughout the proposed project.

15. DT's views on artificial lighting on seabirds are set out in his statements of evidence dated 13 October 2025 and 19 May 2023.

*b. What is the predicted spatial extent, duration, and intensity of effects on birds?*

16. DT considers that the spatial extent and intensity will vary by potential effect, but all will operate over the lifetime of mining operations. Effects of the mining-derived sediment plume, for example, will be greatest at and close to the mining site, decreasing with distance away from the mining site, whereas the potential effects of artificial nocturnal lighting (on mining vessels) will be limited (spatially) to the vessels themselves.

17. JC considers that the proposed mining activities will have adverse effects on seabirds, and adverse effects may be significant for some species or for local populations of some species of seabirds. The duration of the adverse effects would be the duration of the proposed mining activities.

18. JC further considers that there are no systematically collected data on the use of the STB by seabirds. There are no data on the current population size, breeding success, and population dynamics of fairy prions that breed on Takapourewa, or for kororā that forage in the STB, and no such data for other species of seabirds that use the STB during their breeding season. The current modelling of plume dynamics has limitations (see evidence of Dr Dougal Greer) and cannot be relied upon for any assessment of the likely adverse effects of mining plumes on foraging of seabirds.

19. JC considers that together, the absence of information about seabirds, and the high uncertainty about the extent of the plume, mean that detailed predictions of the spatial extent and intensity of adverse effects on seabirds cannot be made.

c. *What is the evidence regarding the potential for population-level or conservation significant impacts on threatened or regionally important bird species and colonies?*

20. DT considers that if this question is asking what empirical evidence exists to address potential (population level) effects from mining in STB on seabirds then the answer would be none, and to collect such evidence would be challenging.

21. JC considers that fairy prions that breed at the colony on Takapourewa Stephens Island rely on the STB for feeding and would be adversely affected. The absence of data on the current status of this colony means that there is no evidence available to determine the vulnerability of this population to the reduction in food supply that would occur if seabed mining went ahead.

22. JC considers that similarly, kororā that breed along the Taranaki coast, in the Marlborough Sounds, and on the northern approaches to Cook Strait and that forage in the STB, especially the Patea Shoals area, would be adversely affected by mining.

23. JC considers that there may be population-level and conservation-significant impacts of mining on fairy prions and kororā, and possibly on other species of seabirds. The extent of these impacts cannot be reliably predicted.

d. *Are any populations, colonies, or habitats likely to experience significant impacts? If so, describe why impacts are assessed as significant.*

24. DT considers that in his opinion, seabirds are unlikely to experience significant impacts for the reasons set out in his statements of evidence dated 13 October 2025 and 19 May 2023.

25. JC considers that there are populations, colonies, or habitats likely to experience significant impacts.

26. JC considers that kororā that breed along the south Taranaki coast would experience significant impacts. Their foraging range when feeding chicks is limited to approximately 30 km. The adverse effects of increased turbidity of the water due to mining would reduce foraging efficiency for the local kororā population. In addition, mining would reduce primary productivity (due to reductions in the amount of light that would reach below the surface of the sea) and hence food availability in the kororā foraging range. Furthermore, sediment would partially or fully smother reefs that have abundant plant, invertebrate and

vertebrate marine life that contribute to the Patea Shoals being especially important as a feeding area for fairy prions and kororā.

27. JC considers that fairy prions that breed at the colony on Takapourewa Stephens Island, and kororā that breed along the central Taranaki coast, in the Marlborough Sounds, and on the northern approaches to Cook Strait, might experience significant impacts.

**3. Recovery and Population Resilience**

*a. What is the expected ability of affected bird populations or species to recover from direct or indirect impacts, either following mitigation or once activities cease?*

28. DT has interpreted this question as relating to *significant* direct or indirect impacts. On that basis, DT considers that it follows from his response to question 2d above that 'recovery' should not be an issue.

29. JC notes that the proposed activity would continue for decades. JC considers that local populations of kororā that had become extinct due to mining activities could not recover.

30. JC considers that mortality of fairy prions in the STB during a marine heatwave in January 2018 is an example of adverse effects of climate change on seabirds in the STB. These effects are rapidly becoming more pronounced, making populations of seabirds that use the STB more vulnerable to adverse effects of mining than was appreciated in the past. The ability of the fairy prion Takapourewa Stephens Island colony to recover from adverse effects due to mining cannot be reliably predicted.

**4. Key uncertainties and information gaps**

*a. What are the major uncertainties or data gaps influencing confidence in predictions about effects on birds?*

31. DT considers that there is a lack of temporally-resolved data on species-specific seabird occurrence, abundance and behaviour in the proposed mining area and the STB more generally – information that would allow 'importance' (of space) to be determined.

32. JC considers that major uncertainties and data gaps have been identified in his answers to questions 2 and 3. There are no data on current use of the STB by

seabirds, no data on population size for fairy prions and kororā that use STB, and no data on population trends for these species. There is no information on the vulnerability of these populations to reduction in food supply that would occur if seabed mining went ahead.

33. JC considers the extent of the sediment plume is uncertain, adverse effects of the plume on marine life are uncertain, and the direct and indirect adverse effects of the plume on seabirds are uncertain.

    b. *How do these uncertainties affect the strength and reliability of the effects assessment?*

34. DT considers that his view would be that the above would be important for species/populations for which the proposed mining area is critical habitat (i.e., the proposed mining area is vital in some way for the well-being of a species/population, in a way that does not apply to other nearby or similar areas). While this is possible, DT considers it is unlikely that the proposed mining area represents such habitat, although clearly there is some uncertainty associated with this statement.

35. JC considers that the uncertainties mean that the effects assessment is weak and unreliable.

**5. Consequences for Decision-Making and Conditions**

    a. *Where information gaps, disagreement or uncertainty exist, what are the consequences for the application, effects assessment, and decision-making?*

36. DT considers that as noted above, there are information gaps. However, he is of the view that it is possible to draw conclusions around whether a potential effect is relatively likely or unlikely to have a significant impact on seabird species and/or populations. For example, a mining vessel has not been anchored in the STB and illuminated at night to confirm whether the nocturnal lighting caused seabirds to be attracted to the vessel. However, if it were to be, and if the vessel adopted standard mitigation measures to reduce light spill, and because the vessel will be relatively far from a seabird breeding colony, DT considers it would be fairly safe to conclude that the potential effect of artificial nocturnal lighting causing deck

strike leading to injury or death of seabirds would be minimal (as far as practicable), and that the impact on seabirds would be minor.

37. JC considers that the complete absence of seabird surveys, the lack of relevant data about populations of seabirds that use the STB for foraging, and the uncertainty about the plume, mean that the application and effects assessment are not adequate for decision-making in relation to adverse effects of the proposed project on seabirds.

38. JC considers that for decision making, it can be noted that the project would have adverse effects on seabirds over several decades and across large areas of the STB, adverse effects may be significant for some populations of seabirds, and the available information is insufficient to determine the extent and magnitude of these adverse effects.

39. JC considers that there is a high risk of seabird mortality due to lights on mining vessels. JC considers that there is the possibility of large mortality to fairy prions attracted to lights on mining vessels in the STB.

**6. Adequacy of Mitigation and Monitoring**

*a. Are the proposed conditions on proposed mitigation and monitoring measures suitable and sufficient to avoid, remedy, or mitigate adverse effects on birds?*

40. DT thinks so. The two-year, pre-commencement monitoring, for example, represents an opportunity, provided the monitoring was structured and applied appropriately, to answer questions around space use by seabirds in the STB and the relative importance to seabirds of the proposed mining area

41. JC disagrees as he considers that the proposed conditions on proposed mitigation and monitoring measures are not suitable and sufficient to avoid, remedy, or mitigate adverse effects on birds.

42. JC explains that proposed condition 9a states:

> 9. The Consent Holder must ensure that:
>
> a. There are no adverse effects on seabird species that utilise the South Taranaki Bight that are classified under the New Zealand Threat Classification System as “Threatened” or “At risk” or “Threatened” in the International Union for the Conservation of Nature “Red List”;

43. JC considers that if the proposed activity was undertaken, then it would be in his view impossible to meet condition 9a, as the proposed activity would have adverse effects on individuals of "Threatened" and “At-risk" species. JC says that in his 2023 evidence, a total of 46 seabird species classified as threatened or at risk are identified as likely to occur in the STB.

44. JC further noted that proposed condition 9b refers to species other than those identified in Condition 9a, and that adverse effects are to be mitigated and where practicable avoided. JC considers that there are no measures that could be taken to mitigate adverse effects of sediment on diving birds that could meaningfully reduce adverse effects on diving birds, as the mining will by its nature generate sediment.

45. JC considers that adverse effects of mining on species of birds referred to in condition 9b could not be avoided.

46. JC considers that the proposed pre-commencement monitoring for two years would be inadequate to determine the use of the STB by seabirds. The minimum period of monitoring needed for a seabird population is 10 years (Montevecchi, 2023[1]; Young and VanderWerf, 2023[2]).

47. JC considers that monitoring of numbers of birds at sea would not provide any information about population trends or about the vulnerability of populations to adverse effects from mining. Populations of seabirds that use the STB are being challenged by changes in weather and food availability due to climate change, with these challenges becoming increasingly severe.

    b. *If experts disagree, what alternative or supplementary measures would improve effects management, and to what extent would these reduce uncertainty or risk of significant adverse effects?*

48. DT and JC disagree as to whether the proposed conditions on proposed mitigation and monitoring measures are suitable and sufficient to avoid, remedy, or mitigate adverse effects on birds.

49. JC considers that the available evidence indicates that the proposed sand mining in the STB would have adverse and cumulative adverse effects on populations of

[1] Montevecchi, W. (2023). Interactions between fisheries and seabirds: prey modification, discards, and bycatch. pp. 57-95. In: Young, L. and VanderWerf, E. (Eds.). Conservation of marine birds. Academic Press, London, United Kingdom.

[2] Young, L. and VanderWerf, E. (2023). Conclusions and the future of seabird conservation. pp. 579-586. In: Young, L. and VanderWerf, E. (Eds.). Conservation of marine birds. Academic Press, London, United Kingdom.

seabirds and would result in material harm. The only course of action that would avoid these adverse effects would be to avoid undertaking the proposed activity.

**7. Advice for interdisciplinary assessment and decision-making**

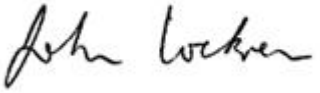
*a. What advice or caveats should be communicated to other experts or decision-makers to ensure that bird effects and uncertainties are accounted for appropriately in interdisciplinary effects assessments or decision-making?*

50. DT has based some of his conclusions on the sediment plume modelling, and it should perhaps be noted that should the characteristics of a 'real' plume differ substantially from those of the modelled plume then his conclusions would need to be revisited.

51. JC considers that, as noted for question 5, for other experts or decision-makers, it should be taken into account that in his view, the project would have adverse effects on seabirds over several decades and across large areas of the STB, adverse effects may be significant for some populations of seabirds, and the available information is insufficient to determine the extent and magnitude of these adverse effects.

**SIGNATURES OF EXPERTS**

Dr David Thompson



Dr John Cockrem