

Before Independent Hearings Commissioners
appointed by the Northland Regional Council

under: the Resource Management Act 1991

in the matter of: an application by Meridian Energy Limited for resource consents for earthworks, associated stormwater diversion and discharges, vegetation clearance, and wetland removal for the construction of a solar farm at Ruakākā, Northland (APP.045356.01.01)

between: **Meridian Energy Limited**
Applicant

and: **Northland Regional Council**
Consent Authority

Summary statement – Lee Shapiro (Ecology - avifauna)

Dated: 5 August 2024

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SUMMARY STATEMENT OF DR LEE SHAPIRO

INTRODUCTION

- 1 My full name is Lee Mark Shapiro.
- 2 My qualifications, experience and confirmation I will comply with the Environment Court's Code of Conduct are set out at paragraphs 2-7 of my statement of evidence.

SUMMARY OF EVIDENCE

- 3 I have been asked by Meridian Energy Limited (*MEL*) to provide evidence focused on avifauna effects in relation to MEL's Ruakākā solar farm project (the *Proposal*).

The Proposal Site

- 4 Five species of Threatened and At-Risk wetland and open water birds have been recorded within the Proposal Site, namely matuku, dabchick/weweia, banded rail/moho pereru, little black shag/kawau tui and black shag/mapunga.
- 5 These species use freshwater bodies and/ or wetlands as their primary habitat and are all known to use wetland and open water habitats for feeding, roosting and breeding, with the exception of kawau tui which use open water habitat for foraging but roost and nest in trees overhanging open water.
- 6 Suitable habitat for matuku within Site 1 consists of foraging habitat within the exotic-dominated wetland and open water habitat in the south of Site 1, Bercich Drain (within Sites 1B and 1C), and areas of denser vegetation within Site 1A (including tall reed species within indigenous dominated wetlands) that may be suitable for matuku to roost. Overall, Site 1 lacks suitable habitat for matuku to nest and Sites 2 and 3 contain no suitable habitat for matuku to roost or nest.
- 7 Suitable habitat for dabchick/weweia, banded rail/moho pereru, and little black shag/kawau tui within Site 1 consists primarily of foraging habitat within the exotic-dominated wetland and open water habitat in the south of Site 1, however, this feature provides no suitable habitat for roosting for these species. Site 1A includes areas of denser vegetation within indigenous dominated wetlands that may be suitable for banded rail/moho pereru to roost.
- 8 At-Risk species of open country and coastal birds observed in exotic grassland habitats within the Proposal Site have included Pipit/Pihoihoi, Northern New Zealand dotterel/Tuturiwhatu and South Island pied oystercatcher/Torea.

- 9 Sites 1, 2 and 3 contain large areas of exotic grassland habitats (as does surrounding farmland within the wider area) suitable for pipit to forage, and areas of dense ungrazed exotic-dominated and indigenous wetland vegetation within Site 1A provide potential roosting and nesting habitat for pipit.
- 10 Sites 1, 2 and 3 do not contain any unique or significant habitat features for coastal bird species, instead grazed pasture/exotic grassland within these sites will be used by these species opportunistically at certain times, much the same as similar sites along the Ruakākā coastline and throughout coastal areas of New Zealand.

Stormwater ponds

- 11 A range of Threatened and At-Risk species of wetland and open water birds have been recorded within the two stormwater ponds adjacent to Sites 2 and 3, namely matuku, dabchick/weweia, banded rail/moho pereru, spotless crane/puweto, brown teal/pateke, pied shag/kāruhiruhi, marsh crane/koitareke and black shag/mapunga.
- 12 The two stormwater ponds adjacent to Sites 2 and 3 contain areas of open water and beds of tall rush, sedge and reed species (including rāupo) suitable for matuku and other wetland birds and open water birds to forage, roost and nest, with the exception of pied shag/kāruhiruhi and black shag/mapunga which predominantly use open water habitat for foraging but roost and nest in trees overhanging open water.

Assessment of Proposal and response to Council

- 13 The proposed ecological recreation, enhancement and restoration in Sites 1 and 3, as described by **Dr Flynn**, seeks to both mitigate and offset the potential effects on matuku and other wetland and open water birds resulting from the Proposal.
- 14 In my opinion, the proposed wetland recreation, enhancement and restoration, combined with a comprehensive mammalian pest control program, and measures to address other potential effects (i.e. vehicle collisions) on matuku and other Threatened and At-Risk birds present within the Proposal Site is sufficient to mitigate and offset the loss of wetland habitat and potential effects on these species.
- 15 The successful recreation, enhancement and restoration of wetland habitat will provide a mosaic of good quality habitats with areas of shallow water and deeper pools, and tall, dense, reed vegetation to provide foraging, roosting, breeding, and nesting habitat for matuku, dabchick/weweia, spotless crane/pūweto and other wetland birds and open water birds.

- 16 On Site 1 in particular, it is anticipated that the Proposal will have a positive effect on water quality which will benefit visual foragers including matuku and weweia. On Site 3 in particular, additional good quality wetland habitat will be provided adjacent to the two stormwater ponds where a range of Threatened and At-Risk wetland birds have been recorded.
- 17 In the case of wetland and open water birds (matuku in particular), their habitat requirements and preferences are relatively well understood and establishment of wetland environments for these birds can be achieved in a relatively short timeframe. My evidence provides examples of successful wetland restoration for these birds, in conjunction with the evidence and examples provided by **Mr Fuller**.
- 18 Overall, I consider the proposed approach will avoid, mitigate and offset the potential effects on matuku and other wetland and open water birds, such that the effects on these species will be minor, and once the improved/new habitat is established, positive in the short to medium term.
- 19 In my evidence I have addressed the avifauna concerns raised by Mr Warden. In relation to traffic disturbance and collision risk, in my assessment the Threatened and At-Risk wetland birds using the existing stormwater ponds have already habituated to human disturbance from the neighbouring subdivision and State Highway 15. The Proposal also incorporates an earth bund with vegetation to assist the birds in gaining sufficient elevation from the road. This is a known successful approach. I also consider the proposed comprehensive mammalian pest control programme to be a positive feature of the Proposal.

5 August 2024

Lee Mark Shapiro