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 – Sarah Flynn (Ecology)

Dated: 5 August 2024

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SUMMARY STATEMENT OF SARAH FLYNN

INTRODUCTION

1 My full name is Sarah Megan Flynn.

2 My qualifications, experience and confirmation I will comply with the Code of Conduct are set out at paragraphs 1-8 of my statement of evidence.

SUMMARY OF EVIDENCE

3 My evidence provides an assessment of the ecological values of flora and fauna of the site and the effects of the Proposal. In my evidence I address the following matters:

3.1 ecological survey methodology;

3.2 values and significance of identified ecological features;

3.3 assessment of ecological effects;

3.4 ecological effects management; and

3.5 response to section 42A report.

4 The Project Area is divided into three Project Sites between Ruakākā township and Marsden Point.

5 A variety of field studies were undertaken to determine the ecological values of the project sites. These included surveys of vegetation communities, seasonal avifauna observations with a particular focus on wetland birds), bat surveys (using acoustic recorders, along with roost habitat assessments), and surveys for terrestrial and arboreal lizards. Habitat assessments of the main watercourses were undertaken, and the findings of a 2022 mudfish survey undertaken by Wildland Consultants for MEL was relied on as part of the assessment.

Ecological features and values

6 Most of the ecological values of interest are located within Site 1, on the eastern coast of Marsden Point and immediately south of the former Marsden Refinery. Sites 2 and 3 encompass well maintained pasture on peatland and podzol soils. No significant terrestrial or wetland features are present in Sites 2 or 3.

7 Site 1 is a 105 ha property on consolidated duneland (classified as recent and mesic organic soils) that has been modified by farming. Dune topography is still evident and patches of wetland are present in low lying 'dune swales'. Most wetlands present are degraded and dominated by exotic vegetation communities. Site 1 is divided into

three parts (1A, 1B and 1C) for the purposes of the ecological assessment.

8 Five small remnants of indigenous-dominated wetland are present in Site 1A. Two of these remnants are ecologically significant according to RPSN criteria, because they contain an At-Risk plant (*Carex fascicularis*), and in the case of the largest feature, because it exceeds the 4,000m^2 size threshold for indigenous wetlands to qualify as significant.

9 All other wetlands within Site 1 contain vegetation communities dominated by exotic species.

10 Open water bodies occur in the lowest-lying dune swales. The largest two of these features, in the south-eastern quarter of Sites 1B/1C, are ecologically significant according to RPSN criteria, because they provide habitat for threatened and At Risk birds.

11 Ecologically significant kanuka forest and shrubland covers 5 ha of stable duneland on the south-eastern margin of Site 1A.

12 Elegant gecko (an At Risk species) was detected in kānuka shrubland adjacent to Site 1. No other native lizards were found elsewhere in the Project Sites during field surveys. All sites contained abundant populations of exotic plague skinks.

13 No bats were detected on site in acoustic surveys Roost habitat assessments found that the shelterbelts within Sites 1 and 2 are suitable roosting and foraging habitat for long tailed bats.

14 All watercourses within the three sites are farm drainage channels, most of which were constructed by the 1950s. The two main drains meet the definition of rivers in the PRPN, and have moderate aquatic habitat quality. All other drains are periodically dry and have poor habitat quality for fish and aquatic invertebrates.

Ecological effects management

15 In accordance with the effects management hierarchy, project development included a review of prospective sites in the surrounding landscape, iterative design informed by ecological evaluation and constraints mapping. This process resulted in avoidance of the kanuka forest and shrubland and an area of open water on Site 1B/1C that is consistently used as habitat for threatened avifauna.

16 Significant residual adverse ecological effects of the Proposal include the permanent removal of 17.06 ha of wetlands, almost entirely from Site 1. Ground contouring to level and prepare the sites for construction of the solar farm will result in the loss of 2.07 ha of open water bodies, of which 1.11 ha is assessed as significant avifauna habitat; 0.75 ha of indigenous dune swale wetland, of

which 0.57 ha is assessed as significant indigenous wetland; and 13.7 ha of exotic-dominated dune swale wetland.

17 Residual adverse effects are to be offset by creation, enhancement and restoration of 18.78 ha of wetlands within Sites 1B/1C and 3. The objectives of the proposed reinstatement and enhancement are to replace the full extent of wetlands removed, and ensure the restored wetlands have better habitat and ecological function than those that are to be removed.

18 Principle 3 for aquatic offsetting specifies the use of a "quantitative loss-gain calculation". Accordingly, the adequacy of the proposed offset was evaluated using DOC's Biodiversity Offset Accounting Model (*BOAM*) based on the "ecological condition x area" of impacted and offset features.

19 I consider the proposed offset is appropriate in the circumstances of the Proposal where predominantly low value wetland areas will be replaced with features that supports higher biodiversity values.

20 I consider that the proposed offset meets all principles for aquatic offsetting of natural inland wetlands set out in Appendix 6 of the NPS-FM.

Response to S42A report

21 I disagree with the Council's peer review ecologist Mr Jack Warden, that the wetland features to be lost are nationally endangered and irreplaceable ecosystems.

22 Naturally uncommon ecosystems are prioritised for conservation because they contain distinctive biodiversity, and the risk of biodiversity loss is increased due to their natural scarcity. Hence, the emphasis is on protecting features that retain indigenous biodiversity.

23 Other than the small area of indigenous wetland within Site 1A, wetland features present within Site 1 are all extensively modified to the point that they are no longer representative of a naturally uncommon indigenous dune swale ecosystem.

24 **Mr Fuller's** evidence addresses Mr Warden's concern regarding the viability and long term restoration outcomes of the proposed offset. In contrast to Mr Warden, I consider that the long term prognosis for wetland features within Site 1 is poor.

25 Overall, I consider that the recreation of wetland habitats in Sites 1 and 3 will avoid, remedy and offset the ecological effects identified, such that the overall effects on ecological values will be minor, and will produce positive biodiversity benefits in the short to medium term.

5 August 2024

Sarah Flynn