

**IN THE ENVIRONMENT COURT  
WELLINGTON REGISTRY**

**I TE KŌTI TAIAO O AOTEAROA  
TE WHANGANUI-A-TARA ROHE**

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**ENV-2024-WLG-001**

**UNDER** the Resource Management Act 1991

**IN THE MATTER** the direct referral of applications for resource consents by  
under section 87G of the Act for the Mt Munro Wind Farm

**BY** **MERIDIAN ENERGY LIMITED**  
Applicant

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**STATEMENT OF EVIDENCE OF DAMIEN MCGAHAN**

**ON BEHALF OF TARARUA DISTRICT COUNCIL AND MASTERTON DISTRICT COUNCIL**

**PLANNING**

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Dated: 23 August 2024

  
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## STATEMENT OF EVIDENCE OF DAMIEN MCGAHAN

### A. INTRODUCTION

- [1] My name is Damien McGahan. I am a Principal at Aurecon New Zealand Limited (Aurecon), a multi-disciplinary consultancy firm which provides engineering, management and specialist technical services for public and private sector clients. I am a full member of the New Zealand Planning Institute.
- [2] I co-authored a report on the application required by section 87F of the Resource Management Act 1991 (**RMA**) on behalf of Tararua District Council (**TDC**) and Masterton District Council (**MDC**) (the **District Councils**), dated 15 March 2024 (**s 87F Report**).
- [3] In the s 87F Report, I reviewed the application from Meridian Energy Limited (the **Applicant** or **Meridian**) for resource consent applications lodged with the District Councils for the Mt Munro Wind Farm (**Mt Munro Project** or **Project**). My s 87F Report provided recommendations to improve or further clarify aspects of the resource consent applications, including with regard to conditions, should the Court be minded to grant resource consents.
- [4] I confirm I have the qualifications and experience set out at paragraphs 492-497 of the s 87F Report.
- [5] On 8 and 9 August 2024, I participated in expert conferencing on planning, which resulted in a joint witness statement dated 9 August 2024 (the **Planning JWS**). I confirm the contents of the Planning JWS.
- [6] I participated in further expert conferencing on 14 August 2024 with the District Council's traffic expert, Ms Harriet Fraser along with Meridian's traffic expert Mr Colin Shields, and planning expert Mr Tom Anderson. This conference addressed some matters arising from the Transport JWS dated 7 August 2024 and resulted in a joint witness statement dated 14 August 2024 (the **Traffic and Planning JWS**). I confirm the contents of this JWS.

- [7] I attended mediation on 18 and 19 June 2024 in Palmerston North. Following mediation, I have had discussions and workshops on 11-12 July 2024 with Mr Tom Anderson from Meridian (and the Regional Council planning experts) as to some of the matters arising from mediation, and in particular the condition set. Following on from expert conferencing, I, along with the planners for the Regional Councils, have continued to discuss the condition set with Mr Anderson for the purpose of evidence preparation. I discuss the conditions in further detail in Section F below.

**B. CODE OF CONDUCT**

- [8] I repeat the confirmation provided in the s 87F Report that I have read and agree to comply with the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2023. This evidence has been prepared in accordance with that Code. Statements expressed in this evidence are within my areas of expertise, except where I state I am relying on the opinion or evidence of other witnesses.

**C. SCOPE OF EVIDENCE**

- [9] This statement will cover the following:
- (a) The extent to which issues identified in the s 87F Report have been resolved through mediation, Meridian evidence, and expert conferencing;
  - (b) A response to section 274 party evidence; and
  - (c) Conditions.
- [10] In addition to the material that was reviewed for the s 87F Report, the following has also been reviewed:
- (a) All of the Joint Witness Statements (**JWS**) filed with the Court;
  - (b) Statements of Evidence of Mr Grant Telfar (Meridian and the Electricity Sector), Mr Nicholas Bowmar (Project Description and Consultation), Mr James Kendrick (Ngāti Kahungunu ki Tāmaki nui a rua), Mr Simon Faulkner (Wind Technical), Dr Jennifer Purdie

(Climate Change Impacts and Mt Munro), Mr Rhys Girvan (Landscape and Visual), Mr Miklin Halstead (Acoustics), Mr Colin Shields (Traffic and Transportation), Mr Christopher Jones (Mill Creek Ohariu Valley Road Upgrade), Mr Maurice Mills (Civil Engineering Design), Mr Robert Van de Munckhof (Air Quality), Mr Glen Wright (Lighting), Ms Emily Howitt (Archaeology), and Mr Tom Anderson (Planning) dated 24 May 2024, on behalf of Meridian;

- (c) The proposed changes to conditions filed with Mr Anderson's evidence (the **Meridian conditions**);
- (d) Further information provided by Meridian, dated 27 June 2024, 3 July 2024, 11 July 2024, and 26 July 2024;
- (e) Evidence of Janet McIlraith (s 274 party) dated 10 July 2024;
- (f) Evidence of Robin Olliver (s 274 party) dated 10 July 2024;
- (g) Evidence of Hastwell/Mt Munro Protection Society Inc. (s 274 party) dated 10 July 2024;
- (h) Evidence (Social Impact Report) of John Maxwell (s 274 party) dated 10 July 2024; and
- (i) Draft evidence of Ms Harriet Fraser (Traffic and Transportation), Mr Joshua Hunt (Landscape and Visual), Mr John Mckensey (Lighting), Mr Nigel Lloyd (Acoustics), Ms Sarah Newall (Contaminated Land), Ms Claire West (Shadow Flicker), Mr Neil Crampton (Geotechnical), Mr Andrew Curtis (Air Quality), Mr James Lambie (Terrestrial Ecology), Ms Lauren Edwards and Ms Alisha Vivian (Planning).

[11] Along with Ms Edwards and Ms Vivian for the Regional Councils, I have proposed amendments to the condition set which has been the subject of discussion (and in many cases agreement) with Mr Anderson. Where there are changes to the conditions that have not been agreed with Mr Anderson

or Meridian, they are shown. I discuss these conditions, referred to as the **August Proposed Conditions**, in further detail in Section F.<sup>1</sup>

- [12] My evidence responds to any outstanding issues raised in submissions and evidence that have not been addressed in the s 87F Report, or where, in that report, I reserved my position until all relevant evidence had been heard. I also address new information that has been provided following mediation, and the matters addressed through conferencing. I have indicated where I have updated or changed my recommendations. Where I have not responded to an issue, I consider this issue to be addressed in full in the s 87F Report or through expert conferencing and my opinion remains unchanged.

#### **D. OUTSTANDING ISSUES**

- [13] Many of the issues identified in the s 87F Report, which have been discussed in the evidence of Meridian, have been resolved and/or narrowed in the Planning JWS and other technical JWSs and in the draft evidence of Council's experts.
- [14] Following mediation, expert conferencing and review of the Meridian and section 274 evidence, I have identified the following planning matters that remain at issue:
- (a) Application of existing environment;
  - (b) Actual and potential environmental effects:
    - (i) Landscape and visual effects – in particular the 'high' (significant) effects on 4 properties, and the mitigation of these effects.
    - (ii) Effects on tangata whenua and cultural effects – specifically in relation to effects on Rangitāne o Tamaki nui-ā-Rua and Rangitāne o Wairarapa.

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<sup>1</sup> See Attachment B for the August Proposed Conditions.

- (iii) Traffic and transportation – in particular, potential effects in relation to safety associated with the design of and ongoing maintenance of Old Coach Road, treatment and management of the SH2/Kaiparoro Road intersection and the scope of potential haulage routes (including Opaki-Kaiparoro Road) and their treatment during construction.
  - (iv) Construction noise – in particular relating to the appropriate standard to apply to the operation of the Concrete Batching Plant and Mobile Aggregate Crushing operations and to confirm timings around proposed blasting activities.
  - (v) Social Impact (Health and Social Wellbeing) – based on feedback from section 274 parties during mediation and through their evidence and the need to address this matter with an appropriate level of assessment.
  - (vi) While I do not consider the following to be at issue, I also provide a summary of other important potential district-level effects including: geotechnical / natural hazards; contaminated land; air discharges (dust); lighting; and shadow flicker and other effects raised by section 274 parties such as aviation, reserve sensitivity for farming operations and fire risk).
- (c) Statutory Planning Framework;
  - (d) The appropriate lapse period for the consents; and
  - (e) Conditions.

### **Existing Environment**

- [15] I consider that the Project site and its surrounds can be best described as a substantially modified, working rural landscape that is predominantly used for pastoral farming activities. I note that the surrounds also contain some rural-residential lifestyle blocks, particularly to the south-east of the Project site within the Hastwell area. The immediately surrounding area is zoned for

rural related activities under both the TDC and MDC district planning documents.

[16] I have reviewed the relevant district plans and note that they anticipate activities, such as wind farms, as either a “viable and legitimate land use” within the rural environment subject to the appropriate management of effects (Taranua District Plan (**TDP**))<sup>2</sup> or “are an appropriate part of the rural environment, provided effects can be appropriately managed” (WCDP).<sup>3</sup> I discuss these matters further below.

[17] Mr John Maxwell and the Hastwell/Mt Munro Protection Society have raised a concern relating to the Project preventing residents or individual landowners realising their ‘vision for the future’ (which I understand to include the subdivision and/or selling off land).<sup>4</sup> I have therefore closely reviewed the extent of assessment that has taken place, particularly in relation to the presence of an operational wind farm. Further detail has been included within the Planning JWS on this matter, specifically in relation to properties within the Masterton district.<sup>5</sup> This includes identifying the limitations around subdivision/boundary adjustments (particularly under the proposed WCDP) and other governing rules, standards and overlays.

[18] I have reviewed the general land pattern in the general vicinity and within 2km and note that there are a variety of land parcel sizes in existence including:

- (a) 8-10 ha blocks on the northern side of Hall Road;
- (b) 2-4 ha blocks on the southern side of Hall Road;
- (c) 1-2 ha blocks on Opaki-Kaiparoro Road west of Smiths Line;
- (d) Historic titles of approx. 4000m<sup>2</sup> on Opaki-Kaiparoro Road east of Smiths Line; and

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<sup>2</sup> Taranua District Plan, at page 2-14.

<sup>3</sup> Wairarapa Combined District Plan, at page 4-2.

<sup>4</sup> Statement of Evidence – John Maxwell, 10 July 2024 at page 23. Statement of Evidence – Hastwell/Mt Munro Protection Society Inc, 10 July 2024 at page 13.

<sup>5</sup> Planning JWS, at page 5, item 4.



(e) Larger lots in excess of 35 ha to the south of Opaki-Kaiparoro Road.

[19] I note that some individual land parcels are also amalgamated (e.g. WN58A/74), resulting in a number of titles being tied together.

[20] I consider there are a range of activities from a residential perspective that are feasible, subject to meeting relevant permitted activity standards for the zone. I specifically note the restrictions imposed on subdivision under the proposed WCDP which have legal effect.

[21] Taking account of the above however, I consider that it difficult to predict with certainty where future development is likely or will take place and on what basis. Undertaking an assessment of a proposal, such as a landscape and visual assessment, for example, is typically undertaken using an accepted methodology and will, as I understand it, consider representative viewpoints or receivers that exist at the time of assessment (including those that might have an unimplemented consent). I consider that this type of approach has been undertaken here and is agreed between the relevant landscape and visual experts, including consideration of any recent consented activities.<sup>6</sup> In my view, the assessment has been appropriate on the basis of the environment as it exists today, recently lodged consents and consented activities and what may be readily expected. I note the similar approach to the assessment of noise, and shadow flicker, in accounting for the existing environment.

#### **Actual and potential environmental effects**

[22] The following subsections cover those actual and potential effects that have been the subject of ongoing discussion and detailed analysis post Councils' planning s 87F Report, and receipt of evidence (from both Meridian and the section 274 parties). I also provide a brief update regarding other important district-level effects.

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<sup>6</sup> Landscape and Visual JWS.

*Landscape, Rural Character and Visual (Amenity) Effects*

- [23] I have reviewed the evidence of Mr Girven and Mr Hunt and considered the Landscape and Visual JWS. I am satisfied that the landscape and rural character effects associated with the Project will not be more than minor.
- [24] The visual effects arising from the Project have been the subject of detailed assessment, with many submitters and section 274 parties raising concerns with regard to these effects. Having reviewed the Landscape Effects Assessment and the reporting by Mr Hunt, I noted in my s 87 Report that further evidence was required to confirm how significant adverse visual (amenity) effects for four properties would be managed or mitigated to an appropriate level.<sup>7</sup>
- [25] These gaps largely have been resolved through further evidence provided by Meridian (**Alternatives Memorandum**)<sup>8</sup> and Mr Hunt, agreements noted within the Landscape and Visual JWS, and an offered condition by Meridian that confirms additional mitigation will be offered to all receivers who may experience 'moderate-high' or 'high' adverse visual effects which was attached to the Planning JWS.<sup>9</sup>
- [26] The Landscape and Visual JWS confirms the level of effects anticipated for identified representative properties within 2km of the Project site, which is based on an appropriate and accepted methodology.<sup>10</sup> I specifically note the distinction made between 'high' (significant) and 'very high' (significant, and unacceptable) effects and how that has been applied. I note that Mr Hunt has confirmed his agreement with this distinction and the continuum of 'adverse effects' that exist between 'high' and 'very high'.<sup>11</sup>
- [27] The Alternatives Memorandum relates to the range of alternative turbine layouts considered by Meridian. It confirms that there will be no material

<sup>7</sup> Section 87F Report – Planning, 15 March 2024 at [526].

<sup>8</sup> Alternatives Memorandum (Rhys Girvan) – BM210418 Mount Munro Windfarm: Consideration of Alternative Turbine Layouts. Annexure D to Landscape and Visual JWS.

<sup>9</sup> See also August Proposed Conditions, at Condition VM1.

<sup>10</sup> Landscape and Visual JWS, at Annexure B.

<sup>11</sup> At page 6, item 9.

differences in likely levels of landscape and visual effects attributed to those alternative layouts that remain within the consent envelope.<sup>12</sup> The Alternatives Memorandum also confirms the Project would require the removal of some 12 of the 20 proposed turbines (60%), to reduce the adverse visual effects to ‘moderate-high’ (thereby removing the ‘high’ effect for the identified four properties).<sup>13</sup> While Meridian has not explicitly indicated it, in my experience, and opinion, questions of feasibility would arise with a Project of this smaller scale. As such, there does not appear to be any other feasible mitigation available to reduce effects through reducing the scale of the Project. In my opinion, removing 60% of the Project is not a practicable option for reducing the visual effects of the Project.

[28] Meridian’s offered condition (Condition VM1) will provide a mechanism to mitigate properties that will experience ‘moderate-high’ or ‘high’ effects, provided the property owners agree to this mitigation. Mitigation will consist of planting additional advanced grade specimen tree(s) to foreshorten identified views in the direction of turbines. Properties that will experience ‘high’ effects will also be offered the construction or extension of a patio or deck accessed from the dwelling which will refocus available rural views away from the direction of the proposed wind farm.

[29] It is acknowledged that the level of effect remains at “moderate-high” or “high” where mitigation options are not taken up by landowners.

[30] I address the policy implications of this assessment and associated recommendations in paragraphs [76] to [82] below.

#### *Effects on Tangata Whenua and Cultural Effects*

[31] As identified in my s 87F Report, I was unable to assess the Project’s actual or potential effects on cultural values or matters of importance of iwi based on the evidence in front of me at that time.<sup>14</sup> I also noted that there was a lack of direction in relation to how ongoing engagement might work with those iwi who have identified an interest in the Project area and the Project

<sup>12</sup> Alternatives Memorandum at page 1.

<sup>13</sup> At page 2.

<sup>14</sup> Section 87F Report – Planning, 15 March 2024 at [529].

itself, including through any potential condition framework.<sup>15</sup> It was on this basis I proposed draft conditions that included opportunities for iwi involvement (e.g., as part of the proposed Stakeholder liaison Group and for pre-start and annual site meetings). I acknowledge however, that these have been proposed without any input from iwi.

- [32] While Meridian have provided further information through the evidence of Mr Bowmar<sup>16</sup> and Mr Anderson,<sup>17</sup> including confirmation that Ngāti Kahungunu ki Tāmaki nui-ā-Rua and Ngāti Kahungunu ki Wairarapa have confirmed their support for the Project, some gaps remain.
- [33] In particular, I note that Rangitāne o Tāmaki nui-ā-Rua's support is contingent on the completion of a Cultural History Assessment (as an update to its 2014 Cultural Values Assessment), which I understand has not yet been completed. The implications of this are unknown. In addition, I understand that Meridian is still in discussions with both Rangitāne o Tāmaki nui-ā-Rua and Rangitāne o Wairarapa regarding a Memorandum of Partnership. I also understand that Mr Anderson is in the process of engaging with iwi representatives around the shape of draft conditions.
- [34] Given the information gaps that still remain, I am unable to conclude if the proposal and/or conditions have adequately and appropriately addressed matters of cultural importance for Rangitāne o Tāmaki nui-ā-Rua and Rangitāne o Wairarapa. I cannot therefore offer a view as to mitigation of effects or alignment with the relevant objectives and policy framework for TDC and MDC (this matter has also been recorded in the Planning JWS).<sup>18</sup> Should additional information be filed or provided by Meridian, I can re-assess my opinion at that time.

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<sup>15</sup> At [529].

<sup>16</sup> Statement of Evidence of Nicholas Erskine Bowmar (Project Description and Consultation), 24 May 2024, at [49-62].

<sup>17</sup> Statement of Evidence – Tom Anderson (Planning), 24 May 2024, paragraphs [140], [208].

<sup>18</sup> Planning JWS, at page 16, item 10.

*Traffic and Transportation*

[35] The Traffic JWS and the Traffic & Planning JWS records agreement between the experts for:

- (a) The parameters of the upgrade to Old Coach Road (including the need for to and timing for the right-hand turn from SH2 onto Old Coach Road).<sup>19</sup>
- (b) The retention of the Old Coach Road seal post-construction (subject to the appropriate maintenance agreement being entered into between Meridian and TDC).<sup>20</sup> I note it would be useful to receive an update from Meridian on the status of this agreement.
- (c) The locations and associated geographic extents of the required intersection, roads and access point upgrades and maintenance during construction.<sup>21</sup>
- (d) That some form of identification of geographic extent and associated pavement surveys for haulage routes is appropriate.<sup>22</sup> I note that while this agreement has been reached, the final form of the condition is still to be agreed. On this basis, I have taken proposed Condition CTM3 (as appended to my s 87F Report)<sup>23</sup> and included amendments as recommended by Ms Fraser in her evidence. I have also made some minor changes to proposed to CTM5(d)(i-iii) to 'lock-in' the requirement to identify haulage routes and tie these identified routes to propose Condition CTM3. I consider this is an appropriate approach and, in my opinion, confirms recent engagement between the Councils and the Applicant on the matter.

[36] Based on the above, the evidence of Ms Fraser, and subject to confirmation of the maintenance agreement and final form of conditions, I consider that

<sup>19</sup> Traffic and Planning JWS, at page 1, item 1. Traffic JWS at page 5, item 5.

<sup>20</sup> Traffic JWS, at page 9, item 18.

<sup>21</sup> Traffic and Planning JWS, at page 4. Traffic JWS, at pages 1-2, 6, 9.

<sup>22</sup> Traffic and Planning JWS, at page 4, item 4.

<sup>23</sup> See Appendix 23 to Section 87F Report – Planning, 15 March 2024.

the actual and potential transportation related effects of the Project can be appropriately managed. I have made several amendments to the August Proposed Conditions to reflect the above outcomes.

*Construction and Operational Noise*

- [37] The Acoustics JWS shows a good degree of alignment between the experts, and it indicates that the actual and potential effects of the Project can be appropriately managed. I agree that the effects can be appropriately and effectively managed as is the norm for projects of this nature, including those involving roading upgrades. I have proposed some changes to the August Proposed Conditions which reflect agreements within the Planning JWS and the evidence of Mr Lloyd.
- [38] The key areas of disagreement that remains relates to the construction noise standards that should apply to specific construction activities, in particular the Concrete Batching Plant and the Mobile Aggregate crushing activity.<sup>24</sup>
- [39] Regarding this, I note that Mr Lloyd agrees that the 250-metre setback from any dwellings is appropriate because it will protect daytime residential amenity at dwellings. However, Mr Lloyd remains concerned that there will still be some noise impacts on a small number of dwellings resulting from the night-time operation of the concrete batching plant (which may occur on approximately 20 occasions given the number of wind turbines involved). He is of the view that, given the envelope approach taken (where the actual location of the concrete batching plant is yet to be determined by the Applicant) that the noise limits in condition WF01 are appropriate in the circumstances. Mr Lloyd recommends that the concrete batching plant only operate at night, where it is for essential reasons, and on a strictly limited basis, as directed by a management plan.<sup>25</sup> Mr Lloyd has referred to the need to continue into the evening when pouring foundations as an example of essentiality.<sup>26</sup> Mr Lloyd has recommended that nighttime operation of the concrete batching plant be provided for in the conditions, on a strictly

<sup>24</sup> Acoustics JWS, at page 4, item 5.

<sup>25</sup> The Concrete Batching Plant Management Plan.

<sup>26</sup> Statement of Evidence – Nigel Lloyd (Acoustics), 23 August 2024, at [18].

limited basis. He has suggested a condition to be added to Condition CN1. I consider this appropriate in order to manage potential adverse nighttime operation of the concrete batching plant, including giving local residents advance notice. I have adopted Mr Lloyd's recommendation and inserted this at subpart (c) of Condition CN1.

[40] Based on Mr Lloyd's assessment and associated recommendations, I am confident activities associated with the Concrete Batching Plant can be suitably managed through conditions.

[41] I note Mr Lloyd's comfort regarding the Mobile Aggregate crushing activity based on it being a daytime activity only and with the setbacks built in. I also note Mr Lloyd's view that the setbacks need to be provided for more explicitly in the conditions, and amendments have been proposed (also for the concrete batching plant) in the August Proposed Conditions.<sup>27</sup>

[42] I understand Mr Lloyd remains concerned about providing for production blasting on an unrestricted time basis. The experts have identified a need to clarify the hours of operation and management of the proposed production blasting.<sup>28</sup> This information is yet to be provided. For now, on the information before him, Mr Lloyd considers that production blasting should be restricted to day-time hours.

[43] Aside from the matters identified above, I have made several amendments to the proposed condition set to reflect the recommendations of Mr Lloyd in the August Proposed Conditions. I consider that these measures represent the Best Practicable Option when considered against section 16 of the RMA.

#### *Health and Social Wellbeing*

[44] I concluded in my s 87F Report that, based on the information in front of me at that time, the Application as lodged would result in both positive and adverse social effects. I noted that a number of those environmental effects (which I understand can be classified as 'environmental stressors' to communities and/or individuals) and the ongoing interface with the

<sup>27</sup> Statement of Evidence – Nigel Lloyd (Acoustics), 23 August 2024, from [22].

<sup>28</sup> Acoustics JWS, at page 6, item 3.

community (both pre, during and post construction) could be appropriately managed through conditions of consent.<sup>29</sup>

[45] Following mediation and a review of the evidence of the section 274 parties (Mr Olliver, Ms McIlraith, Mr Maxwell, and the Hastwell/Mt Munro Protection Society Inc.),<sup>30</sup> I requested a preliminary review of the Application material in relation to this matter and whether there were any specific gaps. Ms Louise Strogon of Aurecon, who is experienced in social impact assessment (SIA) has provided me with a preliminary memorandum outlining her review. This memorandum is attached at **Attachment A** to my evidence. In summary, this technical memorandum identifies the following:

- (a) The requirement to consider social aspects of development proposals under the RMA.
- (b) SIA is the most common framework in New Zealand and internationally to identify, analyse, monitor and manage the potential social consequences of development and is typically guided by matters provided for in the International Association of Impact Assessment (IAIA) Social Impact Guidelines.
- (c) That an SIA would, in the context of this Application, be an appropriate assessment to undertake when viewed against the submissions and the section 274 party evidence in relation to the types of social matters that have been raised.

[46] It is my understanding that Meridian, as a result of mediation and a review of the evidence of the section 274 parties, is in the process of undertaking an SIA for the Project. I consider that this is an appropriate and positive step.

[47] I note that the Planning JWS captures this aspect, and the Councils look forward to reviewing this assessment once it becomes available.<sup>31</sup> On receipt

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<sup>29</sup> Section 87F Report – Planning, 15 March 2024 at [674].

<sup>30</sup> Including the analysis provided by Ms Steadman for the Hastwell/Mt Munro Protection Society – see Appendix 1 to Society’s evidence.

<sup>31</sup> See Planning JWS, at page 8, item 7.



and review of the SIA, I may update my opinion regarding the nature, extent and management of social effects.

### **Other Effects**

#### *Geotechnical and natural hazard matters*

- [48] I note the agreement between the relevant experts as to geotechnical and natural hazard matters and general alignment with the conditions as proposed.<sup>32</sup> The experts have confirmed that it would be appropriate to include an additional condition requiring detailed site-specific assessment of the Terminal Substation siting and design in response to the presence of inferred faults in the vicinity.<sup>33</sup> I agree with this inclusion and have proposed an additional condition (condition EW3) in the August Proposed Conditions.

#### *Contaminated land*

- [49] I remain of the view that the potential adverse effects associated with contaminated land can be managed via an accidental discovery condition. I have proposed additional requirements (steps) that should be included within the condition set to ensure works stop immediately in the event of a find, the area is isolated and the appropriate people, including the Councils, are advised. These changes are reflected at proposed condition PCS1 in the August Proposed Conditions. PCS2 sets out the process by which works may restart in the identified area again. I note that this may include a need to seek additional consents.

#### *Air Discharges (Dust)*

- [50] Based on the Air Quality JWS, there is a high degree of alignment between the experts for Meridian and the Councils. This includes agreement that through the implementation of a Dust Management Plan, the sealing of Old Coach Road and careful management, the potential for effects associated with the construction phase will no more than minor and in many instances negligible.<sup>34</sup> A number of recommendations are made with respect to

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<sup>32</sup> Geotechnical JWS, at pages 3-4.

<sup>33</sup> At pages 3-4, item 3.

<sup>34</sup> Air Quality JWS, at pages 3-6.

conditions of consent, which generally reflect the outcomes reached as part of the Planning JWS.

#### *Lighting*

- [51] Based on the Lighting JWS, there is a high degree of alignment between the experts for Meridian and the Councils. I am of the opinion, that subject to confirmation of appropriate conditions, the potential effects associated with construction and operational lighting (including aviation lighting) will be no more than minor. Several recommendations are made within the Lighting JWS regarding proposed conditions of consent. I address this further below.

#### *Shadow Flicker*

- [52] Based on the Shadow Flicker JWS, there is a high degree of alignment between the experts for Meridian and the Councils.
- [53] While the conditions as proposed through Meridian's evidence are considered appropriate, I note that Ms West, in her evidence recommends that that the curtailment strategy implementation proposed by the Applicant should be explained in detail in the Pre-Instalment Shadow Flicker Assessment and outlines some specific information requirements. I agree with Ms West's recommendation including the need to identify threshold values where appropriate within the conditions to aid in implementation, monitoring and enforceability. I have reflected Ms West's recommendations in the updated conditions at **Attachment B**.
- [54] Another matter that arises in relation to Pre-Instalment Shadow Flicker Assessment is the definition of what constitutes a 'dwelling' for the purpose of conditions SF2 and SF3. I consider it is feasible that additional dwellings could have lawfully established (as a permitted activity) between the decision on the resource consent applications and the pre-instalment survey. In that case, the current definition of 'dwelling' would preclude them from being considered as part of any pre-instalment assessment under SF3, and SF4. Whether this is an issue or not, will be different in every case, and it may be that the Consent Holder needs to satisfy itself as to whether there is any permitted development that is being advanced, such that it is likely,

and the conditions needing to accommodate the future dwellings in some way.

- [55] Alongside the above recommended changes, I agree with the addition of a certification requirement at proposed condition SF3 (with minor amendments relating to the certification process) and an additional condition at SL4 that requires Meridian to update its Shadow Flicker assessment in the event it becomes aware of any changes at a particular receiver (either informed or generated via a complaint). I consider this appropriate and provides an extra safeguard for both the Consent Holder and receivers. I consider that the potential effects associated with Shadow Flicker can be appropriately managed.

*Other effects*

- [56] Following further consideration, I consider that potential effects previously identified or that have been raised through submissions and the evidence of section 274 parties including effects on aviation, farming operations and in relation to fire risk are able to be appropriately managed. I note the following:
- (a) I consider that effects on aviation activities will be no more than minor, and I note that there is process governed by the Civil Aviation Act 1990 which Meridian will need adhere to. I consider that the revised Condition CAR1, which signals this requirement, is appropriate for addressing these effects.
  - (b) I remain of the view that effects on neighbouring farming activities can be appropriately managed through farming practices generally and via conditions of consent. Proposed conditions include requirements to communicate with neighbours during the construction phase<sup>35</sup> and the engagement and associated feedback loops provided for through Conditions SLG2 and CM4(c)(xvi)).

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<sup>35</sup> See Condition CTM5(d) (viii, xiii, xiv).

- (c) I have reviewed my position on the management of potential fire risk and no longer consider it necessary for Fire Emergency New Zealand to be part of a regularly occurring Stakeholder Liaison Group. I consider that through good design and management of the wind farm, any potential effects associated with fire risk will be negligible.

#### *Summary*

- [57] Based on the above analysis, I consider that the actual and potential adverse effects that have been identified through the s 87F reporting, and evidence, can be addressed through the recommended conditions (see Section F).

#### **Consistency with the Statutory Planning Framework**

- [58] Following a review of evidence and further information supplied by Meridian to date, and a review of the section 274 parties' evidence I consider I am in a position to provide an update in the following areas:

- (a) Positive effects and benefits;
- (b) National Policy Statement on Highly Productive Land 2022; and
- (c) District Plan Objective and Policy Framework.

#### *Positive effects and benefits*

- [59] Consideration of the Project's positive effects and benefits is relevant to the National Policy Statement for Renewable Energy Generation 2011 (**NPS-REG**) and various District Plan objectives and policies.<sup>36</sup>
- [60] In my s 87F Report, I concurred with the Applicant's assessment of the Project's positive effects but noted that some submitters have challenged the stated regional/local benefits.<sup>37</sup> One section 274 party also questioned

<sup>36</sup> For example, TDC policy 2.8.4.2(a); operative CWDP NUE2(b) policy; proposed CWDP objective ENG-O1.

<sup>37</sup> Section 87F Report– Planning, 15 March 2024, at [675-677].

the local benefits of the Project, in particular the potential for local employment during construction.<sup>38</sup>

- [61] I have previously noted that Meridian will be providing a SIA for the Project, which may provide some further detail on the potential regional and/or local benefits of the Project. I may update my opinion upon receipt of that information.

*National Policy Statement for Highly Productive Land 2022 (NPS HPL)*

- [62] Meridian have agreed to provide information on the functional or operational need for the terminal substation infrastructure and a section of the transmission line to be located on LUC 3 land. In addition, I have sought clarification on the reasons why the terminal substation was excluded from the draft decommissioning conditions included in my s87F report.<sup>39</sup> This outstanding information has the potential to affect the assessment of the Project when considered against the NPS HPL as discussed below.
- [63] While I accepted that the overall Project had a functional need to be located on Mt Munro in my s 87F Report,<sup>40</sup> I require clarification on the functional/operational<sup>41</sup> need for the terminal substation infrastructure and a section of the transmission line to be located on the identified LUC 3 land specifically.
- [64] The Applicant has recently provided further information setting out the *operational* need to locate on the LUC 3 land taking into consideration terrain, geological, constructability, planning and environmental factors, and ensuring the route and site would be accessible for construction and maintenance.<sup>42</sup> These factors, are in my opinion, valid considerations in selection sites for the type of infrastructure under consideration for the

<sup>38</sup> Statement of Evidence - Hastwell/Mount Munro Protection Society Inc, 10 July 2024, at Section D, page 8.

<sup>39</sup> Planning JWS, at page 4, item 2.

<sup>40</sup> Section 87F Report– Planning, 15 March 2024 at [697(b)].

<sup>41</sup> Noting that ‘functional’ and ‘operational’ need have different meanings; although in the application material and reporting the term was used interchangeably at times.

<sup>42</sup> Memorandum from Meridian – Response to queries in Planning JWS, 16 August 2024.

Project. In my view, this information establishes an operational need for the Project for the purposes of the NPS-HPL.

- [65] In addition, the Applicant has identified an alternative route which avoids the terminal substation and infrastructure needing to occur on HPL. Several constraints that would make the alternative route/site unfeasible, are identified.<sup>43</sup> These factors broadly include a greater number of impacted properties/property owner interfaces; an alignment corridor which is less optimal when linking from the principal wind farm site and which would lead to greater disruption by cutting through property (as opposed to following fence lines for example), and accessibility challenges. I also consider the nature of the site (flat / large), immediate adjacency to the National Grid and the ability to be readily accessed from SH2 are important when considering the potential alternative.
- [66] Overall, in my opinion, the additional information confirms that the terminal substation infrastructure is an appropriate use of HPL in this location.
- [67] The policy tests for appropriate use of HPL set out in cl 3.9(3)(a-b) of the NPS-HPL were also discussed during expert conferencing, and it was agreed the Project is consistent with these tests.<sup>44</sup> However, I note Meridian intend to provide more information on why the terminal substation was excluded from decommissioning conditions, which may further inform my view on how these policy tests are met.
- [68] Finally, the NPS-HPL has been amended and these changes come into effect on 13 September 2024. The changes, clarify at cl. 3.9(2)(j)(i), the consent pathway for construction of new specified infrastructure on HPL.

#### *District Plan Objective and Policy Framework*

- [69] In my s 87F Report, I concluded that I was unable to determine consistency with some district plan objectives and policies as there were aspects of the Project that required clarification and / or further assessment. I note that further evidence from the Applicant and the alignment of experts in several

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<sup>43</sup> At paragraph 4.3.

<sup>44</sup> Planning JWS, at page 4, item 2.

areas has enabled many of the issues and associated effects which were at large to be narrowed.

[70] As set out in the Planning JWS, I am of the view that the Project is consistent with the objectives and policies of the relevant district plans, with the exception of those associated with cultural matters, general amenity associated with the construction and operation of renewable energy infrastructure and transportation.<sup>45</sup> I address these objectives and policies below.

[71] I note that Masterton District Council notified its Proposed CWDP in October 2023 and hearings are yet to be held. While the objectives and policies are relevant to the proposal, given the current stage of plan development, I afford limited weight to these.

#### *Cultural matters*

[72] As recorded at paragraphs [31] to [34], further information is still required in order for me to draw a conclusion on the alignment or consistency with the relevant objectives and policies of the TDP and Operative/Proposed CWDP.<sup>46</sup>

#### *Providing for Renewable Energy*

[73] I record that there is strong common direction provided through national policy (i.e., NPS-REG) and regional policy (i.e., Objective 3-1 and 3-2 and Policies 3-1, 3-3 and 3.6 of the One Plan – Part 1: RPS; and Objective 9 and Policy 39 of the RPS for the Wellington Region) to recognise the national significance of renewable energy and to provide for its development, operation, maintenance and upgrading. This direction also indicates that where any residual environmental effects of renewable energy generation activities cannot be avoided, remedied or mitigated, decision makers shall

<sup>45</sup> See Planning JWS, at pages 16-18, items 10-11.

<sup>46</sup> Tararua District Plan: Objectives 2.10.2.1; 2.10.3.1; Policies 2.10.2.2(a) and (b) and 2.10.3.2(a). Operative Combined Wairarapa District Plan: Objective TW1 and Policies TW1(a)-(c). Proposed Combined Wairarapa District Plan: Objectives TW-01; TW-02; TW-04.

have regard to offsetting measures or environmental and/or financial compensation.

[74] I consider that the district-level planning framework for both the Tararua and Masterton districts reflects national and regional direction as broadly set out above, and provides important direction in terms of recognising and providing for renewable electricity generation (including wind farms), within appropriate rural environments.

[75] In undertaking my analysis, I have had particular regard to:

- (a) Objective 2.8.4.1 and Policies 2.8.4.2 (a) and (b) of the TDP which require that adverse effects associated with renewable energy generation will be avoided, remedied or mitigated *where possible*.
- (b) Objective NUE2 and associated Policies NUE2 (b) – (f) of the Operative CWDP which require that adverse effects associated with renewable energy generation will be avoided, remedied or mitigated *as far as is practicable*.
- (c) Objective ENG-01 and Policy ENG-P4 of the Proposed CWDP which seek to provide for renewable generation activities where the effects *are appropriately managed*.

*General amenity associated with the construction and operation of the Project*

[76] General amenity effects of particular relevance include those associated with increased traffic generation (e.g. noise; dust) and more generally noise associated with the construction phase and the visual presence of turbine infrastructure to nearby residences.

[77] I consider the Project is generally aligned to the landscape and rural character related objectives and policies of the TDP (contained within Sections 2.3 and 2.6) and the Operative CWDP (contained within Chapters 4, 9 and 19) for reasons set out in my s 87F Report<sup>47</sup> and based on the evidence

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<sup>47</sup> Section 87F Report – Planning, 15 March 2024 from [707], [741].



of Ms Fraser, Mr Lloyd, Mr Curtis and Mr Hunt and the various JWSs. There is a strong degree of alignment in terms of the methodologies used to assess effects, the identification of effects and the identification of measures to avoid, remedy or mitigate those effects.

[78] In particular, I note that the Landscape and Visual JWS confirms that landscape and visual effects must consider the statutory context within which change is proposed.<sup>48</sup> Based on my own analysis, I agree that wind farms are both an anticipated and appropriate land use within the rural environment. Both district plans reflect this approach, subject to effects being appropriately avoided, remedied or mitigated, or otherwise offset or compensated where possible or where practicable with particular regard to the locality / receiving environment.

[79] I accept the evidence of Mr Bowmar, which demonstrates the suitability of the site and therefore the need to locate the wind farm at Mt Munro when examined against the alternatives considered. I am of the opinion that the Applicant has demonstrated, through all reasonable means, that it has attempted to minimise any significant adverse effects through measures including:

- (a) The testing of a range of turbine layouts within an identified turbine envelope zone, having regard to the constraints of the site (refer to the Landscape and Visual JWS).<sup>49</sup> I consider that this exercise has demonstrated that there is little room for variation given the constraints, and would not influence the effects on the receiving environment to any material degree.
- (b) I consider the testing of a potential reduction in the number of turbines to reduce the level of effect is useful, in that it raises questions as to feasibility of the Project (as discussed earlier in my evidence at paragraph [27]). I consider this an important point as I consider this Project, at a reduced scale, would likely be inconsistent

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<sup>48</sup> Landscape and Visual JWS, at page 4, item 5.

<sup>49</sup> See Annexure D to Landscape and Visual JWS for Alternatives Memorandum.

with district-level and higher order policy direction. I would welcome a view from the Applicant on this matter.

- (c) The proposed mitigation condition (VM1) that has been appended to the Planning JWS demonstrates a strong willingness by the Applicant to mitigate not only those receivers that have a 'high' visual amenity rating, but those with 'moderate-high' ratings. I am generally comfortable with the intent of the proposed condition however I would signal that the proposed requirement to engage within a 12-month period following the start of construction is not appropriate. I consider this engagement needs to begin at least 6 months prior to the start of construction. In addition, I consider that the Applicant needs to enable the Councils the opportunity to review and feedback on any draft landscape plans that are completed and to regularly report on progress made. This is considered important so that the Councils can have confidence that the Applicant is seeking to mitigate the identified adverse effects and have confirmation of final mitigation agreements reached. I have made these recommendations in updated condition VM1 at **Attachment B**. This outcome would in my opinion, provide far more certainty to affected parties that a reasonable mitigation option for 'high' adverse effects can be offered and potentially implemented well before the wind farm is completed, and prior to operation.

[80] In my view, the offer, through the above-mentioned condition is an appropriate step. I note also that the Applicant has recorded that it can utilise its Power Up community fund to the benefit of the local community and the local environment. I consider that this would be appropriate in this instance, but also understand from the evidence of Mr Telfar that there is no guarantee the Power Up fund will be used in this location.<sup>50</sup>

[81] Based on the evidence of Mr Hunt and the position recorded in the Landscape and Visual JWS, I accept that there will be residual 'high' and 'moderate-high' adverse effects associated with visual amenity on some

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<sup>50</sup> Statement of Evidence – Grant Telfar (Meridian and the Electricity Sector), 24 May 2024, at [87].

receivers. Given the lack of practicable alternatives (which I have concluded on the basis of the evidence of Mr Bowmar, Mr Girvin, the review by Mr Hunt and the position recorded in the Landscape and Visual JWS) and the offered mitigation to properties that may experience 'high' and 'moderate-high' effects, it is my view that the landscape and visual effects of the Project have been mitigated as far as is practicable.

- [82] On the basis of the preceding analysis, I consider that the measures (discussed at paragraph 79 (a) – (c)), demonstrate that the proposal is not contrary to the outcomes sought under the district plan frameworks and is strongly supported by national and regional level policy direction (as set out at paragraph 67). Further, I consider the actual and potential adverse effects are avoided, remedied or mitigated to an appropriate and acceptable level when considered against the district-level planning framework, in particular the overarching objectives and policies set out at paragraph 69.

#### *Transportation Infrastructure*

- [83] Based on my assessment of traffic matters and construction phase noise above at paragraphs [35] – [36] and [37] – [43] respectively, subject to the necessary clarifications outlined relating to an agreement between the Applicant regarding the maintenance of Old Coach Road and the implementation of all other traffic related recommendations associated with the Project to manage effects, I consider that the Project will find consistency with the relevant objectives and policies of the TDP and Operative/Proposed CWDP.<sup>51</sup>

#### *Summary*

- [84] I am of the view, given the strong alignment between experts on the nature of effects and mitigation, including proposed conditions of resource consent, that the Project is consistent with, and not contrary to the District Plan objectives and policy framework. I consider the Project finds strong support from higher order policy direction, and this has been an important

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<sup>51</sup> Tararua District Plan: Objectives 2.8.3.1; Polic 2.8.3.2(h). Operative Combined Wairarapa District Plan: Objective TT1 and Policies TT1(a)-(c). Proposed Combined Wairarapa District Plan: Objectives TR-01; TR-03; TR-P7.

consideration when reaching my conclusion. I note that an update on the potential social effects of the Project is expected (and will need to be reviewed), while some clarifications around cultural, transportation and acoustic matters are required. I will update my opinion upon receiving this further information.

### **Consent Lapse and Expiry Dates**

- [85] The consent lapse dates applied for by Meridian have been confirmed in the Planning JWS as ten (10) years for all consents.<sup>52</sup>
- [86] As outlined in my s 87F Report, I consider that five (5) years for all resource consents is appropriate based on the information presented to date by Meridian.<sup>53</sup> Meridian have not, in my view, provided sufficient reasons to justify why a longer period is necessary for this Project, particularly given it has been identified in evidence by Mr Bowmar as a priority project and the best development option available to Meridian (at the time of lodgement).<sup>54</sup>
- [87] Consistent with the Planning JWS, Meridian has recently provided further evidence concerning the variables as set out in Mr Bowmar's evidence and additional matters that may influence the implementation of consents.<sup>55</sup>
- [88] The recent information highlights several factors<sup>56</sup> that influence the Applicant's request for a 10-year lapse. I agree that these can all be relevant matters, however there is no evidence around the timing implications, other than for the detailed design and tendering related processes (identified as 2.5 years). In my view, greater clarity is required around the interplay (or overlap) between the various factors from a timing perspective and any sensitivity analysis to better understand the likely start / delivery of the Project. It would also be useful to understand where this Project sits on

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<sup>52</sup> Planning JWS, at page 6, item 6.

<sup>53</sup> Section 87F Report – Planning, 15 March 2024, at [836].

<sup>54</sup> Statement of Evidence – Nicholas Bowmar (Project Description and Consultation), 24 May 2024 at [11].

<sup>55</sup> Planning JWS, at page 6, item 6.

<sup>56</sup> Memorandum from Meridian: Response to queries in Planning JWS, at points 5-10.

Transpower's Connections Management Framework, given grid connection has been highlighted as a key matter.

[89] While the updated information is helpful, I am not persuaded at this stage that a lapse of ten (10) years is appropriate. If further clarity can be provided on the timing aspects outlined above, I will be in a position to consider the question of an appropriate 'lapse' period further.

[90] I note that the district-level resource consents all have an unlimited expiry date.

#### **E. RESPONSE TO SECTION 274 PARTY EVIDENCE**

[91] I have reviewed the section 274 party evidence and have responded to the matters raised relevant to my field of expertise (and as appropriate) in earlier sections of my evidence. I have also reviewed the evidence of other experts of relevance and consider all matters raised through the section 274 party evidence have been addressed.

#### **F. CONDITIONS**

[92] As a result of the condition workshops and the Planning JWS, amendments to the Meridian conditions were agreed upon. These have been included as a version titled 'August Proposed Conditions' in **Attachment B** to my evidence. The August Proposed Conditions also include amendments proposed by the Councils (shown as underlined text and ~~strike-out~~). Some of the amendments proposed by the Councils are of an administrative and implementation nature. Other changes are a result of expert advice and have not yet been agreed upon or remain at issue between Councils and Meridian.

[93] I summarise the district related conditions that remain at issue and/or require further comment or refinement:

- (a) The proposed recommendation regarding proposed Condition VM1.
- (b) The inclusion of proposed Condition EW3.
- (c) The retention of CTM3 and some associated edits at CTM5 to provide a more direct connection between these conditions.

- (d) I have developed further, the proposed operational lighting conditions at proposed Conditions WFO13 and WFO14, to better reflect the evidence of Mr McKensey.
- (e) The management of noise associated with the mobile aggregate crusher and the concrete batching plant through MACF4 and CB4, as recommended by Mr Lloyd.
- (f) Proposed amendments to provide greater certainty around the measurement of shadow flicker under SF1-SF4.
- (g) Provision for the management of contaminated land within the condition set including PCS1.
- (h) Some general drafting improvements to reflect evidence and to address administrative and implementation matters.

## **G. CONCLUSION**

[94] A number of issues identified within my s 87F Report have been addressed through evidence, mediation, the provision of additional information and through expert conferencing. However there remain some matters that still require further attention to ensure the effects of the Project are appropriately avoided, remedied, mitigated or offset having regard to the relevant planning framework. I have described these matters above having had regard to technical evidence of various experts, the JWS's and I have recommended changes to proposed conditions at **Attachment B**.

**23 August 2024**

**Damien McGahan**

To	<b>Damien McGahan</b>	From	<b>Louise Strogon</b>
Copy		Reference	<b>P524167</b>
Date	<b>2024-08-21</b>	Pages (including this page)	<b>4</b>
Subject	<b>Mt Munro – Social Impact Assessment</b>		

### 1. Purpose

I understand that Meridian Energy Limited (Meridian) is seeking resource consents to construct, operate and maintain a wind farm, including all ancillary activities such as earthworks, transmission lines and substations, on a site known as Mt Munro, located approximately 5km south of Eketāhuna in the northern Wairarapa (the Project). The site, and its surrounds, are rural in nature and primarily used for pastoral farming.

While the application documentation includes a suite of technical specialist assessments considering the actual and potential adverse effects of the proposed wind farm, a Social Impact Assessment (SIA) has not been prepared. I have been asked to provide advice to Councils' reporting planner as to the benefits of a SIA to inform the resource consenting process for the Project.

### 2. Background

I am a planner and environmental impact assessor. My current role is Director within the Environment and Planning team at Aurecon New Zealand Ltd. My qualifications and experience are otherwise set out in **Appendix A**.

I confirm that I have read the Code of Conduct for expert witnesses contained in the Environment Court Practice Notice 2023 and I agree to comply with it in the preparation of this short report. The contents of this report are within my area of expertise, except where I state that I am relying on another person, and I have not omitted to consider any material facts known to me that might alter or detract from the opinions I express.

### 3. Context for SIA

The Resource Management Act 1991 (RMA) requires the decision-making process to include consideration of the actual and potential effects of activities on the environment. The RMA interpretation of the environment in Part 1, Section 2 includes *"The social, economic, aesthetic, and cultural conditions which affect the matters stated in paragraphs (a) to (c) or which are affected by those matters."* This interpretation is central to considering social impacts with respect to the environment.

SIA is the most common framework in New Zealand and internationally to identify, analyse, monitor and manage the potential social consequences of development. It, therefore, forms part of the suite of technical assessments used in the RMA resource consent process.

SIA are predominantly desk-based assessments but an important component is community engagement – this can be part of a Project's community engagement or by way of targeted SIA stakeholder engagement. The latter is advised where a community is demonstrating a level of social concern about a development from the community profiling undertaken as part of the SIA development.

Methodology steps which are typically applied in a SIA are summarised below:

Step	Task Overview
<b>Scoping</b>	Scoping the likely range of potential social issues relevant to the Project and identifying the communities likely to be affected by the Project. Inputs would be any community consultation records, information from comparative studies, literature reviews, etc.
<b>Study Area</b>	Based on scoping exercise, a Study Area is identified

Step	Task Overview
<b>Social Baseline</b>	Prepare a social baseline describing existing social environment and characteristics, values and conditions within the study area. This provides a snapshot of existing social conditions within the study area, establishing a base case against which potential impacts can be assessed.
<b>Impact identification</b>	Identify the social domains of concern / nature of likely social impacts for assessment.
<b>Assessment</b>	Through analysis, determine the social changes (positive and negative) and impacts that will likely result from the planning, construction and operation phases of a project, including any cumulative impacts.
<b>Mitigation / Management recommendations</b>	Consider requirements necessary to avoid, remedy or mitigate/manage any identified social impacts and make recommendations. These recommendations would form the basis for social impact resource consent conditions.

It is important to note that a SIA is not an economic assessment and is normally limited to regional or local economic impacts and business disruption where a Project may potentially impact employment. Similarly, a SIA is not a Health Impact Assessment and is normally limited to health and wellbeing impacts of environmental stressors (eg. noise, traffic and dust); and stress and anxiety relating to changes to environment/ process of planning phase.

The International Association of Impact Assessment (IAIA) is an organisation which promotes best practice impact assessment. IAIA describes a range of social impact categories. The IAIA categories are normally used as a scoping guide and following the scoping stage of a methodology the most relevant are identified for assessment with respect to a project:

Area	Consideration
Way of life	How people live, work, play and interact with one another on a day-to-day basis.
Culture	People's shared beliefs, customs, values and language or dialect.
Community	The cohesion, stability, character, services and facilities of an area.
Political systems	The extent to which people are able to participate in decisions that affect their lives, the level of democratisation that is taking place, and the resources provided for this purpose.
Environment	The quality of the environment in which people live, work and socialise (e.g. the air and water people use; the availability and quality of the food they eat; the level of hazard or risk, dust and noise they are exposed to; the adequacy of sanitation, their physical safety, and their access to and control over resources).
Health and wellbeing	People's state of physical, mental, social and spiritual wellbeing
Personal and property rights	The extent to which people are economically affected or experience personal disadvantage which may include a violation of their civil liberties.
Fears and aspirations	People's perceptions about their safety, their fears about the future of their community, and their aspirations for their future and the future of their children.

#### 4. SIA and Mt Munro Windfarm proposal

I have reviewed the following information in respect of the project:

- Assessment of Environmental Effects dated May 2023



- Additional Information Request for Application APP-2022203902.00 dated 20 December 2023
- Applicant's response to Councils' Additional Information Request for Application APP-2022203902.00 dated 23 February 2024
- s87F Report of Councils dated 15 March 2024
- Submissions received on the Project
- Evidence of s274 Parties

The proposed windfarm is a large-scale infrastructure development which has the potential to create both positive and negative social impacts arising from the planning, construction and operation phases.

Based on my experience in the preparation of SIA, the submissions have raised matters which I consider to be social impacts. and would fall within the following IAIA categories: way of life, community, environment, health and as well as fears and aspirations. There are both positive and negative impacts noted.

The evidence of the s274 parties, namely that of Mr Olliver, Mrs McIlraith, Mr Maxwell, Mrs Steadman and the Hastwell / Mt Munro Protection Society Inc include discussion on matters which I consider in my experience to be social impacts and would fall within the following IAIA categories: way of life, community, environment, health and wellbeing as well as fears and aspirations (relating for some to property rights).

I draw out some matters raised in the submissions and s274 evidence by way of example:

Area	Consideration
Way of life	<p>Many submitters have raised concerns regarding their ability during the construction phase to travel when they want and how they want to. The school run and ability to safely access facilities in Eketāhuna are examples.</p> <p>There is heightened concern that people's enjoyment of their homes, in particular outdoor spaces will be reduced / compromised by effects from construction activities and then the wind farm operation. Reference is made to constant intrusion of the windfarm on lives (nuisance of noise, flicker) with no relief for the resident population.</p> <p>Loss of relaxation time and the ability to continue to undertake recreation activities such as cycling and hunting are also noted.</p> <p>Some submissions raise concerns relating to business disruption ranging from constraints for stock movement to customer access.</p>
Community	<p>The cohesion and character of the local area is emphasised, noting that this has contributed to growth and vibrancy within the community.</p> <p>Road safety concerns are linked in many submissions to an impact (reduction) on family connections and social interactions. The loss of the quiet life rural surroundings for many means a loss in community character which in turn will have a negative change to the community dynamics. Refer is made to the project planning stage having created a divide within the community.</p> <p>Reduced / constrained access to services and facilities within the area are presented. Some have raised concern about services being able to continue to reach them.</p>
Environment	<p>The quality of the environment both during construction and operation are presented – concerns over water quality are particularly noted as many properties rely on rainwater re: potable supply / stock. Reduce quality of food from garden plots, the level of travel risk, exposure to dust and noise levels are concerns repeatedly raised.</p>

Area	Consideration
Health and wellbeing	<p>People's state of physical, mental and social wellbeing is reflected across the majority of submissions and within the s274 evidence. It is evident that the planning phase is creating great anxiety and stress for individuals which is linked to information, the process and the worries/concerns about future way of life/community/ environment.</p> <p>Once operational, concerns are being raised about potential health effects from dust and noise even if environmental management best practice measures are in place – these concerns are linked in the main to nuisance and potential way of life changes.</p>
Personal and property rights	Rental and/or resale difficulties, disruption to way of life and businesses are all noted.
Fears and aspirations	People's perceptions about their safety, their fears about their future, that of their children and wider community, and their aspirations for their future (retirement, family life, community plans).

Based on my experience and the range of social matters raised in the submissions and the s274 parties' evidence, a SIA in the context of proposed Mt Munro Wind Farm would be an appropriate assessment to undertake and to inform the decision-making process.

Social impacts are the likely changes to or impacts on communities and businesses that are likely to occur because of the Project. They may be tangible or intangible, direct or indirect, and different people or groups may experience a social impact in different ways. As such, the value of a SIA is to consider effects in a holistic manner in comparison to other technical effect assessments.

The SIA will assist in defining or shaping appropriate mitigation and/or management measures for effects. These may include recommendations on the membership, duration and remit of a Community Liaison Group; the requirement for a full time Community Liaison; management measures over and above those necessary to address an environmental effect, e.g, prescribe traffic routes and timings.

## Appendix A - Qualifications and experience

My full name is Louise Strogon. I hold the position of Director within the Environment and Planning Team, Advisory Service Group at Aurecon New Zealand Ltd (Aurecon). I have over 27-years' experience as a planner and environmental assessor. I have worked at Aurecon since May 2008.

I hold the qualification of BA Geography (Hons) from University College Cork, Ireland and MSc City & Regional Planning from Cardiff University, UK. I am an Associate Member of the New Zealand Planning Institute, a Full Member of the Royal Town Planning Institute, UK and a member of the NZ Association of Impact Assessment.

My role involves advising clients on project feasibility from a planning and environmental management perspective, project leadership and management of the preparation of resource consents and notice or requirement/designation approvals including management plans. I also lead engagement activities that support planning and environmental management activities.

I have been an author and reviewer of SIA in the UK, New Zealand and Australia (Queensland & New South Wales) since 2002. I have experience advising and assessing on social impact matters arising from large infrastructure projects.

Examples of SIA project work includes the following:

- Mt Piper Battery Energy Storage System, NSW | EnergyAustralia NSW Pty Ltd | 2023-2024 | Socio-Economic Effects Assessor
- Bristol Street Rehabilitative and Reintegrative Residential Accommodation, Christchurch | Christchurch City Council | 2021 | Social Impact Assessor for Council
- Let's Get Wellington Moving – Programme Business Case | LGWM | 2020-21 | Social Impact Assessor
- City Rail Link | Auckland Transport & CRLL | 2014 – 2020 | Planner and Social Impact Advisor:
- Port of Gladstone Gatcombe and Golding Cutting Channel Duplication Project, Queensland | Gladstone Ports Authority | 2018 | Social Effects Assessor
- Northern Corridor Improvements | NZ Transport Agency | 2015 - 2017 | Environmental Team Manager and Social Effects Assessor

## Attachment B: August Proposed Conditions

### CONDITIONS INDEX

Condition Number	Condition	Administering Authority	Page
<b>GA1 – GA9</b>	General	All (means Manawatū-Whanganui Regional Council, Greater Wellington Regional Council, Masterton District Council and Tararua District Council)	5
<b>SLG 1 – SLG7</b>	Stakeholder Liaison Group	All	6
<b>MP1 – MP2</b>	Management Plan Certification Process	All	7
<b>WFL1 – WFL7</b>	Windfarm Layout and Infrastructure		7
<b>CAR1</b>	Civil Aviation Requirements	Masterton District Council and Tararua District Council	8
<b>VM1</b>	Visual Effects Mitigation	Masterton District Council and Tararua District Council	9
<b>TP1</b>	Telecommunications	Masterton District Council and Tararua District Council	9
<b>CM1 – CM8</b>	Construction Management	All	9
<b>AH1</b>	Archaeological and Historic Heritage	All	13
<b>CC1</b>	Climate Change	All	13
<b>EW1 – EW3</b>	Earthworks Stability Standards	All	13
<b>ES1 – ES19</b>	Erosion and Sediment Control	Manawatū-Whanganui Regional Council and Greater Wellington Regional Council	14
<b>SM1</b>	Spill Management Plan	Manawatū-Whanganui Regional Council and Greater Wellington Regional Council	18
<b>PCS1-PCS2</b>	Potentially Contaminated Sites	All	18
<b>DM1 – DM2</b>	Dust Management	All	19
<b>CB1 – CB4</b>	Concrete Batching	All	19
<b>MACF1 – MACF4</b>	Mobile Aggregate Crushing	All	20
<b>CBL1 – CBL3</b>	Controlled Blasting	Masterton District Council and Tararua District Council	20
<b>CTM1 CTM5</b>	Construction Traffic Management	Masterton District Council and Tararua District Council	20
<b>CN1 – CN4</b>	Construction Noise	Masterton District Council and Tararua District Council	22
<b>SF1-SF4</b>	Shadow Flicker	Masterton District Council and Tararua District Council	23
<b>EC1 – EC26</b>	Ecology	Manawatū-Whanganui Regional Council and Greater Wellington Regional Council	24
<b>CU1 – CU15</b>	Culvert Design and Monitoring	Manawatū-Whanganui Regional Council and Greater Wellington Regional Council	31
<b>WC1 – WC2</b>	Works Completion	All	31
<b>WFO1-WFO13</b>	Wind Farm Operation	All	32
<b>DT1</b>	Decommissioning of Wind Farm	All	34

## Definitions and Abbreviations within the Conditions Schedule

**Note: We expect that additional definitions and abbreviations will be added to the below table as the conditions suite is refined through the process.**

Abbreviation/Acronym	Term/Definition
Act	Resource Management 1991
CAA	Civil Aviation Authority
CEMP	Construction Environmental Management Plan
Cleanfill material	Material that when buried will have no adverse effect on people or the environment and includes virgin natural materials such as clay, soil and rock, and other inert materials such as concrete or brick that are free of: <ul style="list-style-type: none"> <li>a) combustible, putrescible, degradable or leachable components;</li> <li>b) hazardous substances;</li> <li>c) products or materials derived from hazardous waste treatment, stabilisation or hazardous waste disposal practices;</li> <li>d) materials that may present a risk to human health;</li> <li>e) liquid waste; and</li> <li>f) for the purpose of this consent, any archaeological material or from a wāhi tapu or site of cultural significance</li> </ul>
CNVMP	Construction and Vibration Noise Management Plan
Commencement of construction / Commencement of works	means activities undertaken to construct the Project including bulk earthworks (cut and fill activities), installation of wind turbine foundations, wind turbines, underground and above-ground infrastructure for electrical conveyance and meteorological masts, but excludes the following activities: <ul style="list-style-type: none"> <li>- Pre-construction site investigations including access for such activities;</li> <li>- The establishment of erosion and sediment control measures;</li> <li>- Site establishment activities for the purposes of providing any temporary site construction office compound;</li> <li>- Ecological survey(s); and</li> <li>- Any vegetation removal associated with the activities listed above</li> </ul>
Commissioning of turbines	means the generation of electricity from any constructed wind turbine and export of that electricity via a connection to the national electrical grid
Complaint	For the purposes of Condition GA7, a complaint may include more than one complaint made in relation to the same or similar event or activity
CBPMP	Concrete Batching Plant Management Plan
Consent Holder	Means Meridian Energy Limited, its successor, or any person(s) acting under the prior written approval of Meridian Energy Limited or its successor
Construction Laydown and Site Administration Area	means area consisting of items such as a laydown yard and portacom structures which may be established on land legally described as Sec: 147 Blk: IX SD: MANGAONE on the western side of Old Coach Road opposite the Project entrance.
CBMP	Controlled Blasting Management Plan
CTMP	Construction Traffic Management Plan
<u>District Council</u>	<u>Tararua District Council and/or Masterton District Council</u>
DMP	Dust Management Plan
FEMP	Freshwater Ecology Management Plan
FMP	Flocculation Management Plan
Earthworks/Land disturbance	means the alteration or disturbance of land, including by moving, removing, placing, blading, cutting, contouring, filling or excavation of earth (or any matter constituting the land including soil, clay, sand and rock) but excludes gardening, cultivation and disturbance of land for the installation of fence posts.

<u>Erosion and Sediment Control Structures</u>	<u>Means any device or measure which results in a point source discharge, including Sediment Retention Ponds and Decanting Earth Bunds</u>
GW Guidelines	Means the document titled “ <i>Erosion and Sediment Control Guide for Land Disturbing Activities in the Wellington Region</i> ” dated February 2021.
Haulage activities	Means the act of transporting goods or material by road between the source and Project site.
Haulage route	means any public road within the Tararua District or Masterton District which is to be used to deliver products and / or materials to the Project site over the course of its construction.
Incident	means an unforeseen event that cannot be, or has not been, prevented
Mt Munro Wind Farm	The construction, operation and maintenance of a new windfarm known as <i>Mt Munro Wind Farm</i> (also referred to as the Wind Farm or Project within these conditions).
Management Plan(s)	means any one or more of the management plans required under any one or more of the conditions of these resource consents
ONMP	Operational Noise Management Plan
PIA	Pavement Impact Assessment
ESCP	The overarching Erosion and Sediment Control Plan
Regional Council	Manawatū-Whanganui Regional Council and/or Greater Wellington Regional Council
Reasonable mixing	A distance equal to seven times the width of the wetted channel of the surface water body but which shall not be less than 50m.
Regional Plans	Means Manawatu-Whanganui Regional Councils One Plan or Greater Wellington Regional Council Natural Resource Plan
Project	The construction, operation, maintenance of a new windfarm known as <i>Mt Munro Wind Farm</i> (also referred to as the Wind Farm or Project within these conditions)
Site / Project Site / Project Envelope	means all properties subject to the Wind Farm being: <ul style="list-style-type: none"> <li>- Section 147 Block IX Mangaone Survey District</li> <li>- Lot 2-3 Deposited Plan 665</li> <li>- Lot 1 Deposited Plan 665</li> <li>- Section 129 Block XIII Mangaone SD</li> <li>- Part Lot 1 Deposited Plan 1263</li> <li>- Section 133 Block IX Mangaone SD</li> <li>- Section 131 Block XIII Mangaone SD</li> <li>- Section 186 Block XIII Mangaone Survey District and Lot 1 Deposited Plan 90879</li> <li>- Section 1 and Section 62 Block XIV Tararua Survey District</li> <li>- The length of Old Coach Road</li> </ul>
Suitably Qualified and Experienced Person (SQEP)	A person who is not an employee of the consent holder and is competent and experienced in the field of expertise that is relevant to a particular task or action directed by a Condition
The Councils	Includes Manawatū-Whanganui Regional Council, Greater Wellington Regional Council, Tararua District Council and Masterton District Council

Transmission Corridor	Corridor where transmission lines can be located. Transmission Corridor identified by red dashed line in Figure 1 below, and plan [XXXXX]. For the avoidance of doubt, transmission lines cannot be located outside the Transmission Corridor.
Turbine Envelope Zone	Zone where wind turbines and ancillary infrastructure (roading, cabling, transformers) can be located. Zone identified by blue in Figure 1 below, and plan [XXXXX]. For the avoidance of doubt wind turbine foundations and towers cannot be located outside of this zone.
Turbine Exclusion Zone	Zone where access roading and cabling can be located. Zone identified by white area in Figure 1 below), and plan [XXXXX].
Wind Farm	means an array or system of multiple wind turbines at a given site, used to capture wind energy for the production of electricity.

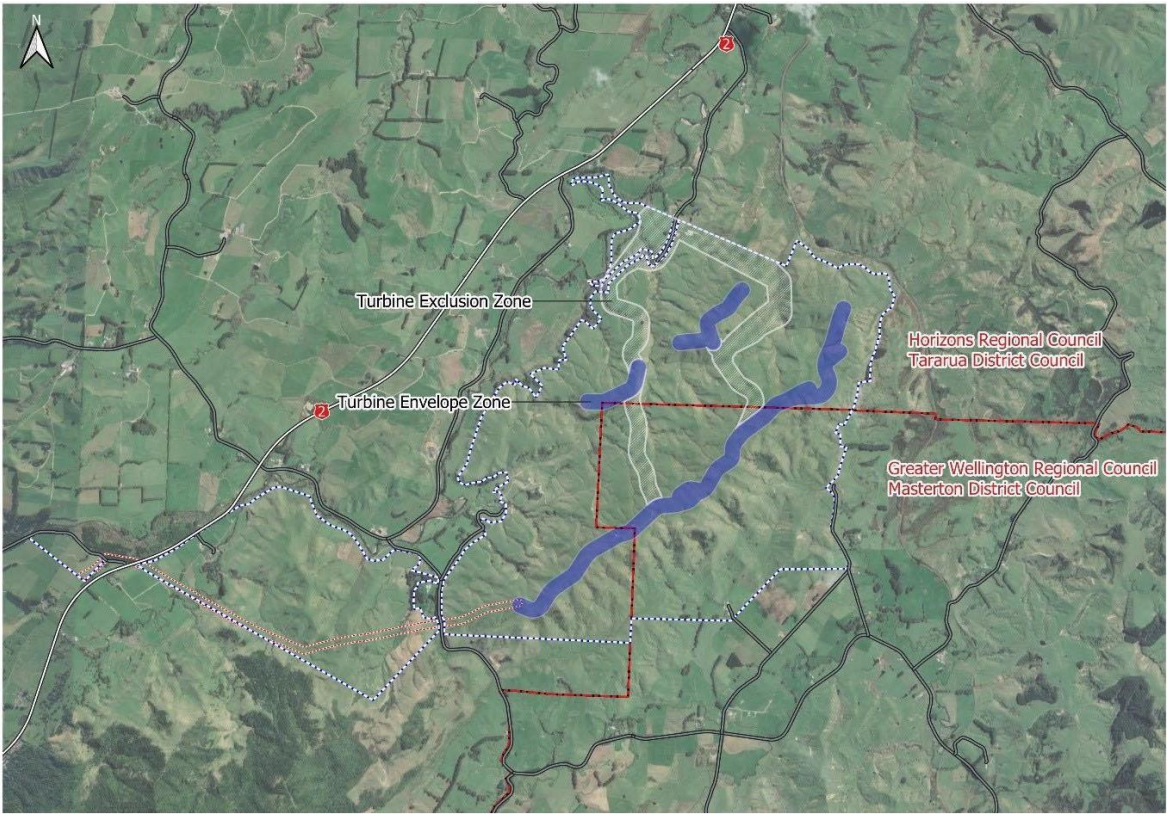


Figure 1: Proposed Project Zones



**GENERAL**

**GA1 General Accordance**

Unless otherwise specified by the conditions of these resource consents, the Project must be undertaken in general accordance with the information supplied within the report prepared by Incite entitled ‘*Assessment of Environmental Effects on behalf of Meridian Energy Limited Mt Munro Wind Farm Project*’, dated May 2023, and the subsequent responses to further information requests made by the Councils, and in particular the following supporting documents:

a) [To be confirmed...]

**Note: To be confirmed.**

Where there is any inconsistency between the documents listed in this condition and the other conditions of these resource consents, the requirements of the conditions of these resource consents shall prevail.

**GA2** Pursuant to Section 125(1) of the Resource Management Act 1991, these resource consents shall lapse if not given effect to within five (5) years of the commencement of these resource consents.

**GA3** [Expiry condition here for different consents]

**Note: To be confirmed.**

**GA4** These resource consents may be exercised by the Consent Holder, its successor, or any person acting under the prior written approval of the Consent Holder.

**GA5** The Consent Holder must ensure that all persons engaged to undertake any and/or all activities authorised by these resource consents are made aware of the conditions of these resource consents and any measures required to comply with these conditions.

**GA6** The Consent Holder must at all times undertake the Project in accordance with all Management Plans (and any amended or updated Management Plans) required by these ~~certified by the Councils (as stated in subsequent conditions).~~

**GA7 Complaints Management (Construction)**

- a) A register must be maintained of any complaint received regarding the construction activities associated with this Project.
- b) The register must include:
  - i. the name and contact details (if supplied) of the complainant;
  - ii. the nature and details of the complaint;
  - iii. the location, date and time of the complaint and the alleged event giving rise to the complaint;
  - iv. the weather conditions and wind direction at the time of the complaint, where relevant to the complaint;
  - v. other activities in the area, unrelated to the Project, that may have contributed to the complaint;
  - vi. the outcome of the consent holder’s investigation into the complaint; and
  - vii. a description of any measures taken to respond to the complaint.
- c) The Councils must be notified of any complaint received that relates to the activities authorised by these resource consents as soon as reasonably practicable and no longer than **two (2) working days** after receiving the complaint.
- d) The Consent Holder must respond to any complaint as soon as reasonably practicable and within **five (5) working days** by advising the Councils and complainant of the outcome of the Consent Holder’s investigation and all measures taken, or proposed to be taken, to respond to the complaint.

**GA8 Incident Management and Reporting**

- a) In the event of an incident occurring that causes, or is likely to cause, a non-compliance with any condition(s) of these resource consents or any unanticipated adverse environmental effects, the following must occur:
  - i. The Councils must be notified by email to **[to be confirmed]** within **twenty-four (24) hours** of the Consent Holder becoming aware of the incident;
  - ii. An incident report must be provided to the Councils within **ten (10) working days** of the incident occurring, providing the following details:
    - i. A description of the nature, timing and cause of the incident;
    - ii. An assessment of any adverse effects of the incident on the environment; and
    - iii. A description of any remedial and/or mitigation measures that have been, or will be, implemented as a result of the incident to prevent the incident reoccurring in the future.
  - iii. Remedial action and/or mitigation measures described in the incident report required by **clause (ii)** must be implemented as soon as practicable and within **ten (10) working days** of the incident report being provided to the Councils.
  - iv. The Councils may, in response to an incident report, require the Consent Holder to review and where necessary amend the Construction and Environmental Management Plan (**CEMP**), including any one or more of the Management Plans that make up the CEMP, in accordance with **Condition CM3**.
  - v. Where a review of a Management Plan is required by **clause (iv)**, the review must:



- i. Address the reasons for requiring the review; and
- ii. Describe any appropriate actions required, and a programme for implementing those actions.

**ADVICE NOTE:** Where the review of a Management Plan under **clauses (iv) and (v)** of this condition identifies one or more amendments to the Management Plan(s) are required, the process for amendment and recertification of amended Management Plan(s) is set out in **Condition MP2**.

#### GA9 Review of Conditions

- a) Pursuant to sections 128 to 131 of the Resource Management Act 1991, the Councils may, **one (1) year** after commencement of works in accordance with these resource consents, and **at five (5) yearly intervals** thereafter, serve written notice on the Consent Holder of its intention to review any or all of the conditions of these consents for any of the following purposes:
  - i. To review the effectiveness of the conditions of these resource consents in avoiding, remedying, or mitigating any adverse effects on the environment that may arise from the exercise of these resource consents, including any identified matters following annual reporting in accordance with **Condition CM8**;
  - ii. To address any adverse effects on the environment which have arisen as a result of the exercise of these resource consents that were not anticipated at the time of commencement of these resource consents, including addressing any issues arising out of complaints; and/or
  - iii. To review the adequacy of, and necessity for, any of the monitoring programmes, measures to offset residual effects on terrestrial, freshwater, or wetland ecology and/or Management Plans that are part of the conditions of these consents.

#### STAKEHOLDER LIAISON GROUP

- SLG1 No less than **forty (40) working days** prior to the lodgment of the ~~Construction Environmental Management Plan~~ CEMP ~~for certification with the Councils~~ in accordance with **Condition CM4(a)**, the Consent Holder must establish, and thereafter maintain for a period of **no less than three (3) years** after the completion of construction activities under **Condition WC1**, a Stakeholder Liaison Group. This period may be reduced, and the Stakeholder Liaison Group dissolved before this period, if unanimously agreed by members of the Stakeholder Liaison Group.
- SLG2 The purpose of the Stakeholder Liaison Group established by **Condition SLG1** is to facilitate the provision of information between the Consent Holder and the community up to the expiry of the period specified in **Condition SLG1**. The functions of the Stakeholder Liaison Group is to:
  - a) enable the Consent Holder to share information and, provide the opportunity for it to comment on draft versions of the following management plans, prior to their submission to Councils for certification:
    - i. the Construction Environmental Management Plan (CEMP only and not all of its constituent management plans, with the exception of those listed below);
    - ii. Construction Traffic Management Plan;
    - iii. Construction Noise and Vibration Management Plan;
    - iv. ~~Air Quality~~ Dust Management Plan;
    - v. Concrete Batching Management Plan; and
    - vi. Operational Noise Management Plan
  - b) act as a forum for the relaying of community concerns about the construction and initial operation of the Project to the Consent Holder and/or representative(s), discussing means of addressing concerns raised, and reviewing the implementation of measures to resolve and manage those concerns.
- SLG3 The Consent Holder must invite the Stakeholder Liaison Group to meet, as a minimum, on a three-monthly basis over the period specified by **Condition SLG1**. On the close of that period, the Consent Holder must notify all parties included within the Stakeholder Liaison Group as detailed in **Condition SLG6** of the dissolution of the Stakeholder Liaison Group, and of the contact details of the Consent Holder's nominated representative(s) responsible for the ongoing operation of the wind farm.
- SLG4 The Consent Holder shall be responsible for appointing an independent facilitator, arranging the dates and location(s) of the meetings of the Stakeholder Liaison Group, and must cover the costs associated with the meetings.
 

**ADVICE NOTE:** These costs include any administrative costs associated with arranging meetings, taking minutes, venue hire, the provision of refreshments, but exclude any costs incurred by any invitee in reviewing documents, preparing for or attending meetings.
- SLG5 The Consent Holder shall be responsible for the keeping and distribution of minutes at each meeting to all members of the Stakeholder Liaison Group.
- SLG6 The Consent Holder must invite, as a minimum, the following parties to participate in the Stakeholder Liaison Group established under **Condition SLG1**:
  - i) The owners and occupiers of each property accessed from Old Coach Road, as listed in Schedule 1 to these consents;
  - ii) A representative for each of the of the adjacent properties to those allotments on which the turbine envelope zone and turbine exclusion zones are located, as listed in Schedule 1 to these consents;
  - iii) A representative of each of the Councils;
  - iv) A representative of each of the Iwi/Hapū Authorities:
    - Rangitāne o Wairarapa
    - Rangitāne o Tāmaki nui-ā-Rua
    - Ngāti Kahungunu ki Wairarapa
    - Ngāti Kahungunu ki Tāmaki nui-ā-Rua; and

- v) Two representatives of the Hastwell / Mt Munro Protection Society.

SLG7 The Consent Holder shall not be in breach of this condition if any one or more of the parties specified above does not wish to be a member of the Group or to attend any particular meetings of the Group.

#### MANAGEMENT PLAN CERTIFICATION PROCESS

##### MP1 Management Plan Certification

- a) Certification (or withholding certification) of any Management Plan required by these resource consents is based on whether the specified Management Plan(s) meets the requirements of the relevant conditions of these resource consents.
- b) Subject to meeting all pre-construction requirements contained within the conditions of these resource consents, the Consent Holder must only commence construction activities where the specified management plans have been certified in writing by the relevant Council(s) acting in a technical certification capacity.

##### MP2 Amending the Certified Management Plan(s)

- a) Any Management Plan required under these conditions of consent may be amended or updated without the need for re-certification where:
  - i. The Consent Holder considers that the amendment/s have no, or a de minimis adverse effect on the environment, or the amendment is an administrative change, such as a change in contact details; and
  - ii. The Consent Holder provides the revised Management Plan(s) to the relevant certifying authority, and the relevant certifying authority ~~either~~ advises in writing within five working days that the amendment need not be certified under **clause (b)** on the basis that the amendment/s meet the requirements of **clause (a)(i)** above.
- b) Except as provided for in **clause (a)**, amendments to any Management Plan(s) must be certified in writing by the relevant Council(s) acting in a technical certification capacity prior to the commencement of any works to which the amended Management Plan(s) relates.
- c) Certification (or withholding certification) is based on whether the amended Management Plan(s) meets the requirements of the relevant conditions of these resource consents.
- d) Where a Management Plan is required under these conditions to be prepared in consultation with any party, any amendments to a certified Management Plan (other than minor amendments under **clause (a)**) must also be prepared in consultation with those same parties.
- e) Where the relevant Council(s) has stated in writing that it is unable to certify any Management Plan listed in clause (a) of this condition along with the reason(s) the Management Plan does not meet the requirements of **Conditions MP1(a) or MP2(c)**, the Consent Holder must prepare and submit a revised Management Plan for certification. The procedures specified by **clauses (b) through (d)** of this condition shall apply.

#### WIND FARM LAYOUT AND INFRASTRUCTURE

##### WFL1 Wind Turbine Characteristics

- a) The maximum number wind turbines in the Wind Farm must not exceed **twenty (20) turbines**, with all wind turbine towers and foundations to be located within the Turbine Envelope Zone.
- b) The maximum wind turbine height (measured at finished ground level to the top of the vertically extended blade tip) must not exceed **160 metres**.
- c) The maximum hub height must not exceed **92 metres** above finished ground level.
- d) The maximum rotor diameter must not exceed **136 metres**.
- e) All wind turbines must-have **three (3) blades**.

**ADVICE NOTE:** The parameters set by **Condition WFL1 (b) – WFL1(d)**, apply to all wind turbines that are installed during the life of the Wind Farm, including any replacement wind turbines.

- f) All wind turbines and turbine blades used within the Wind Farm must be finished with the same light grey or off-white colour, which is uniform over the blades, hubs, nacelles and towers. The turbines must not include any branding or logos. The finish of the turbine blades must have a light reflectance value of no greater than 30%.
- g) Each wind turbine may include one externally housed transformer unit located adjacent to the base of the turbine. The externally transformer housing must be finished in a neutral and visually recessive colour (e.g., green/brown) so that they blend in with the landscape.
- h) Wind turbine blades may overhang the Turbine Envelope Zone boundaries.

##### WFL2 Metrological Mast

- a) **One (1) permanent** meteorological mast, not exceeding 92 metres above finished ground level, may be erected within the Turbine Envelope Zone. The final location of the permanent meteorological mast must be provided to the District Councils in accordance with the reporting requirements under **Condition WC1**.

**ADVICE NOTE:** Instrumental additions and fixtures including but not limited to lightning finials and anemometers may be affixed to a meteorological mast in addition to the specified height of the main structure.

##### WFL3 Wind Farm Substations

- a) **One (1) Site Substation** and associated ancillary buildings and parking may be established within the Turbine Envelope Zone. The maximum footprint of the Site Substation must not exceed 6,300m<sup>2</sup> and must be fenced. The maximum height of any Site Substation building must not exceed 7 metres above finished ground level.

- b) **One (1) Terminal Substation** and associated ancillary buildings and parking may be established on land legally described as Section 1 and Section 62 Block XIV Tararua Survey District. The maximum footprint of the Terminal Substation must not exceed 14,000m<sup>2</sup> and must be fenced. The maximum height of any Terminal Substation building must not exceed 7 metres above finished ground level.
- c) A Terminal Substation landscape plan detailing vegetation to be planted along the southeastern and southwestern boundaries of Section 1 and Section 62 Block XIV Tararua Survey District to provide screening of the Terminal Substation from State Highway 2 must be submitted for certification to the Tararua District Council at **least forty (40) working days** prior to construction of the Terminal Substation commencing. The Landscape Plan must show:
  - a. a scale;
  - b. the individual location and species (with both scientific and common names);
  - c. PB size of proposed plants; and
  - d. details of plants to be removed or pruned.
- d) The planting must be completed by the next planting season following the certification under **Condition WFL3(c)**. The screen planting must be capable of attaining a height of 3 metres at maturity ~~and must be undertaken in the immediate planting season following the certification under Condition WFL3(c).~~
- e) The planting must be maintained and monitored for at least **eighteen (18) months** from time of planting in order to allow for plant establishment. Within this period, monitoring includes the removal of weeds within the vicinity of the plantings and the replacement of plants that die, or are removed unlawfully, with plants of the same species and original size. All plantings must continue to be monitored and maintained by the Consent Holder for the life of the Wind Farm. Any plants that fail must be replaced at the expense of the Consent Holder.

#### WFL4 Internal Transmission Line and Internal Electrical Cabling

- a) A 110kV or dual 33kV transmission line must be constructed in the Transmission Corridor.
- b) Transmission towers / poles must not exceed 20 metres in height above finished ground level.
- c) The 33kV electric and fibre optic cable network supporting the connection of wind turbines to the Site Sub Station must be located underground and within the Turbine Envelope Zone and Turbine Exclusion Zone.

#### WFL5 Internal Road Layout

- a) The internal roading network must be constructed within the Turbine Envelope Zone and Turbine Exclusion Zone.

#### WFL6 Operations and Maintenance Building

- a) **One (1) Permanent** Operations and Maintenance building and parking may be established within land legally described as Sec: 147 Blk: IX SD: MANGAONE. The maximum footprint of the Operations and Maintenance building must not exceed 700m<sup>2</sup>. The maximum height of Operations and Maintenance building must not exceed 6.5 metres above finished ground level.

#### WFL7 Construction Laydown and Site Administration

- a) **One (1) Temporary** Construction Laydown and Site Administration Area may be established on land legally described as Sec: 147 Blk: IX SD: MANGAONE on the western side of Old Coach Road opposite the Project entrance. The Temporary Construction Laydown and Site Administration Area must be fenced. The Temporary Construction Laydown Area must be removed within three (3) months following the completion of construction.
- b) A landscape plan detailing vegetation to be planted on the common boundary between Sec: 147 Blk: IX SD: MANGAONE (being the allotment where the Temporary Construction Laydown and Site Administration Area is located) and Sec: 17 Blk: IX SD: MANGAONE (being the neighbouring allotment to the north) must be submitted for certification to the Tararua District Council at **least forty 40 working days prior** to construction commencing. The Landscape Plan must show:
  - i. a scale;
  - ii. the individual location and species (with both scientific and common names);
  - iii. PB size of proposed plants; and
  - iv. ~~and~~ details of plants to be removed or pruned.
- c) The planting must be completed by the next planting following the certification under **Condition WFL7(b)**. The screen planting must be capable of attaining a height of 3 metres at maturity ~~and must be undertaken in the immediate planting season following the certification under Condition WFL3(c).~~
- d) The planting must be monitored and maintained for at **least eighteen (18) months** from time of planting in order to allow for plant establishment. Within this period, monitoring includes the removal of weeds within the vicinity of the plantings and the replacement of plants that die, or are removed unlawfully, with plants of the same species and original size. All plantings must continue to be monitored and maintained by the Consent Holder for the life of the Wind Farm. Any plants that fail must be replaced at the expense of the Consent Holder.

#### CIVIL AVIATION REQUIREMENTS

- CAR1 Any turbines deemed to require aviation obstacle lighting by the Civil Aviation Authority must be lit with aviation obstacle lighting as required by the Civil Aviation Authority.

## VISUAL EFFECTS MITIGATION

### VM1 Visual Effects Mitigation:

- a) ~~At least six (6) months prior to the commencement of~~ Within twelve months of the commencement of construction activities the Consent Holder must consult with the owners of the properties listed in Schedule 2 of these consents and offer, at the Consent Holder's cost, to appoint a SQEP to develop a landscape mitigation plan for mitigation of visual effects of the Project on the dwelling and curtilage area within that property.
- b) The objective for each landscape plan for mitigation required under **clause (a)** is to reduce the visual effects from the Project on the dwelling and curtilage area of each site as far as practicable.
- c) The Consent Holder must provide each draft landscape mitigation plan undertaken to the District Councils for information and comment within **ten (10) working days** of the draft landscape assessment been completed. Where the District Councils provide comment the Consent Holder must confirm how it has responded to the District Councils' feedback in writing as soon as practicable, including reasons why any recommendations have not been adopted.
- d) The Consent Holder must update the Councils on progress against **Condition VM1** at least **three (3) months** prior to the start of construction activities and thereafter through the monthly reporting requirements required by **Condition CM7**.
- e) The Consent Holder has complied with **Condition VM1** if:
  - i. The owner of the dwelling agrees to the offered mitigation, and the mitigation is implemented within **twelve (12) months** of the agreement being reached; or
  - ii. The owner of the dwelling does not agree to the offered mitigation; or
  - iii. An alternate agreement for the mitigation of visual effects is reached and implemented between the Consent Holder and the dwelling owner.
- f) The Consent Holder must provide the District Councils with a description of mitigation offered and implemented under **clause (a)** as soon as practicable following the implementation of the offered mitigation.

## TELECOMMUNICATIONS PATHWAY CLEARANCES

- TP1 At least **thirty (30) working days prior** to the construction of the Project, the Consent Holder must engage a SQEP in fixed radio services to undertake an assessment of the confirmed turbine location(s). The purpose of the assessment shall be to confirm that the wind turbines are located outside any fixed radio high-capacity links or wide area coverage services in the vicinity of the wind farm.

## CONSTRUCTION MANAGEMENT

### CM1 Submission of Plans and Design Reports

- a) At least **forty (40) working days** prior to the commencement of construction, the Consent Holder must provide the Councils with a set of final design drawings and accompanying detailed design report(s) for the Project. The final design drawings must, as a minimum, include:
  - i) The layout and spacing of the wind turbines;
  - ii) The specifications of the wind turbines, turbine platforms, foundations and hard stand / material laydown areas;
  - iii) The location and specifications of all supporting infrastructure, including the location and design of any permanent and temporary stormwater controls, and confirmation that these ~~which will~~ comply with the permitted activity standards in the Regional and District Plans;
  - iv) The location of cabling within the Site;
  - ~~v) The location of the concrete batching plant and the mobile crushing plant;~~
  - v) The location of the wind monitoring mast;
  - vi) The location of the site and the terminal substations;
  - vii) The location of the operations building and associated structures;
  - viii) The layout and pavement composition of the internal access road network;
  - ix) The location, area and volume of all fill disposal sites to be used;
  - x) The footprint of all cut slopes; and
  - xi) A landscape treatment plan for the fill disposal sites to be used and the cut slopes.
  - xii) The location of the temporary laydown areas, the concrete batching plant and the mobile crushing plant;
- b) The detailed design report required by **Condition CM1** must also include as a minimum:
  - (1) A slope stability assessment of any cuts and fills greater than 2 metres in height that are required (and which are verified by an independent SQEP in geotechnical engineering) including all information contained within **Condition EW2**;
  - (2) A landscape assessment for the fill disposal sites to be used and of the cut slopes, confirming the finish is in general accordance with the assessment outcomes in the *Mount Munro Wind Farm Landscape Effects Assessment, Prepared for Meridian Energy Limited, Boffa Miskell, dated 12 May 2023*] and *Indicative Fill Disposal Areas Plan* (Drawing No. 1016884.1000-016), Tonkin + Taylor, dated October 2023;
  - (3) Any and all information to demonstrate compliance with the stormwater infrastructure and culvert design standards contained in **Conditions CU1, CU2 and CU3**.
  - (4) Any and all information to demonstrate that the construction and operational stormwater matters meet the relevant permitted activity

provisions in the Regional and District Plans. This may be achieved through demonstrating the effects of and mitigation measures including the hydrological and hydraulic calculations including design drawings and controls, point of stormwater discharges, the design measures to ensure the finalised stormwater management demonstrate the effects of and mitigation measures:

- i. For potential flooding to land upstream and downstream of the development including on the downstream flood plains;
- ii. Erosion protection structures;
- iii. For water quality mitigation; and
- iv. Modifications to natural flow patterns and overland flow paths following construction of road corridors, fill disposal areas and other works.

- (5) The updated waterway classification per the Auckland Unitary Plan Practice and Guidance Note for stream classification if required under Condition EC13.

#### CM2 Appointment and Notification of Project Representative

Prior to the commencement of works authorised by these resource consents, the Consent Holder must appoint a Project Representative and provide the name and contact details of that person to the Councils principal contact person(s). Should this person change during the term of these consents, the principal contact person(s) must be informed of the new representative's name and how they can be contacted within **forty-eight (48) hours** of the change.

#### CM3 Pre-Construction and Annual Site Meetings

- a) The purpose of the pre-construction and annual site meetings is to share information in respect of the works methods, erosion and sediment control measures, any ecological constraints, Management Plan requirements and compliance with the conditions of these resource consents.
- b) The Consent Holder must arrange a pre-construction site meeting that is to be held prior to the commencement of the construction activities authorised by these resource consents.
- c) The Consent Holder must arrange annual site meetings that is to be held:
  - i. As a minimum, annually prior to the commencement of bulk earthworks activities to be undertaken during the months of October to April (inclusive); and
  - ii. For any additional sites identified in a Site-Specific Erosion and Sediment Control Plan (SSESCP) required under **Condition ES4**.

##### *Details of Site Meetings*

- d) The following parties must be invited to the ~~annual~~ pre-construction and annual site meetings with at least minimum of ten (10) working days' notice:
  - i. A representative of each of the Councils;
  - ii. A representative of Rangitāne o Wairarapa;
  - iii. A representative of Rangitāne o Tāmaki nui-ā-Rua;
  - iv. A representative of Ngāti Kahungunu ki Wairarapa;
  - v. A representative of Ngāti Kahungunu ki Tāmaki nui-ā-Rua;
  - vi. The nominated Project Representative(s) under **Condition CM2**;
  - vii. The appointed contractor(s) undertaking the works; and
  - viii. Any other relevant party representing the Consent Holder.
- e) The following information must be made available to the invited parties listed in **clause (d)** at least **five (5) working days** prior to the pre-construction or any annual site meeting:
  - i. Timeframes for key stages of the works authorised by these consents;
  - ii. Nature and application of the relevant conditions of these consents;
  - iii. The Erosion and Sediment Control Plan (ESCP) as required by **Condition ES2**; and
  - iv. Relevant Site-Specific Erosion and Sediment Control Plan(s) (SSESCPs) as required by **Condition ES4**.
- f) If any of the invited parties listed in **clause (d)** other than the Project Representative(s), do not attend a pre-construction site meeting, this condition is deemed to have been met, provided the invitation requirements in **clause (e)** are met.

#### CM4 Construction Environmental Management Plan (CEMP)

- a) A CEMP must be prepared and submitted to the Councils for information at least **forty (40) working days** prior to the commencement of works authorised by these resource consents.
- b) The objective of the CEMP required by **clause (a)** is to describe the measures that must be implemented to comply with the conditions of these consents and to appropriately remedy, mitigate, offset or compensate any adverse effects of the construction activities authorised by these resource consents ~~and provide confirmation that all resource consents are necessary for the construction of the Wind Farm have been obtained.~~
- c) The CEMP required by **clause (a)** must include:

- i. The following Management Plans (certified where required by these conditions):
    - a. Erosion and Sediment Control Plan in accordance with **Condition ES2**;
    - b. Dust Management Plan in accordance with **Condition DM2**.
    - c. Flocculation Management Plan in accordance with **Condition ES9**;
    - d. Concrete Batching Management Plan in accordance with **Condition CB4**;
    - e. Construction Traffic Management Plan in accordance with **Condition CTM5**;
    - f. Construction Noise and Vibration ~~Noise~~ Management Plan in accordance with **Condition CN3**;
    - g. Lizard Management Plan in accordance with **Condition EC7**;
    - h. Bird Strike Monitoring Plan in accordance with **Condition EC9**;
    - i. Bat Monitoring and Management Plan in accordance with **Condition EC11**; and
    - j. Freshwater Ecology Management Plan in accordance with **Condition EC14**.
  - ii. The roles and responsibilities of staff and contractors;
  - iii. Details of the Project Manager and the Project Representative(s), including their contact details;
  - iv. Details of the Consent Holder or representative(s) who will be the key contact person(s) for public information, queries, stakeholder liaison and complaints;
  - v. The programme of any construction activities for the physical works authorised by these resource consents (including any proposed staging approach);
  - vi. The proposed hours of operation for any construction activities;
  - vii. The details of construction lighting from all activities associated with the construction of the Project including:
    - a. the measures included to ensure lighting does not exceed 8 lux at the site boundaries (including but not limited to the extent, types, installation details and operational constraints of lighting).
    - b. All outdoor lighting shall have a colour temperature not exceeding 3000K, with the exception of the Concrete Batching Plant which shall have a colour temperature not exceeding 4000K.
    - c. Provision of signage and active management to ensure that all vehicles, directly associated with the Project, operating within the site boundaries and along the length of Old Coach Road, shall have headlights dipped to low beam at all times between dusk and dawn.
  - viii. The location and details of construction site infrastructure including fencing, site offices, site amenities, construction yards, laydown areas, construction access locations, construction lighting, refuelling areas and fuel and oil storage areas;
  - ix. A description of permitted activities in relation to construction phase and operational phase stormwater discharges and air discharges under the District Plan(s) and/or Regional Plan(s) and how each of these standards are met by the Project;
  - x. Procedures for incident management and complaints in accordance with the requirements of **Conditions GA7 and GA8**;
  - xi. Details of the monitoring, management, contingency measures, and reporting requirements;
  - xii. Site staff cultural and ecological induction procedures, including measures to prevent the introduction of pest plants and pest animals;
  - xiii. Procedures to avoid or minimise the likelihood of spread or introduction of invasive plant and animal species, and diseases of native plants and animals as a result of Project-related activities;
  - xiv. Measures to ensure that all earthmoving machinery to be utilised in the exercise of this resource consent is cleaned prior to being transported to / from the site to remove all seed propagules and / or plant matter. A record of the maintenance and cleaning of equipment imported to / exported from the site must be maintained by the Consent Holder in general accordance with the 'Keep it Clean – Machinery and Vehicle Hygiene Guidelines and Logbook to Prevent the Spread of Pests and Weeds (2015)' Guideline. A copy of this record must be provided within **two (2) working days** on request from the Councils;
  - xv. Procedures that will be followed in the event of unexpected discovery of contamination during works
  - xvi. A summary of any feedback received from any consultees about the CEMP (refer to **clause (e)**), changes made in response to that feedback (if any), and where a change is not made the reason(s) for that.
- d) Where changes are identified and subsequently made to the nominated parties or information required by **subclauses (i) to (xiii) of clause (c)**, a copy of the updated CEMP must be provided to the Councils within **five (5) working days** of the changes being made.
- e) At least **twenty (20) working days** prior to the CEMP being submitted for ~~certification~~ information in accordance with **Condition CM4(a)**, the Consent Holder must provide a copy of the draft CEMP to the following parties and invite their views on it:
- i. The Councils;
  - ii. Rangitāne o Wairarapa;
  - iii. Rangitāne o Tāmaki nui-ā-Rua;
  - iv. Ngāti Kahungunu ki Wairarapa;
  - v. Ngāti Kahungunu ki Tāmaki nui-ā-Rua; and
  - vi. The Stakeholder Liaison Group established under **Condition SLG1**.

CM5 A copy of the CEMP required by **Condition CM4** of these resource consents must be kept onsite (whether electronically or in hard copy) at all times that physical works authorised by these consents are being undertaken. A copy of the CEMP and these resource consents must be produced without unreasonable delay on request from the Councils.

**CM6 Construction Management Standards**

- a) All earthmoving machinery, pumps, generators, and ancillary equipment must be operated in a manner that ensures spillages of fuel, oils and other contaminants are prevented, particularly during refuelling and machinery services and maintenance.
- b) Refuelling and lubrication activities must be carried out either:
  - i. At least **fifty (50) metres** from any natural waterbody, ephemeral waterbody or overland flowpath; or
  - ii. Within a containment bund that has a capacity of 1.5 times the fuel storage capacity of equipment and storage facilities maintained temporarily at the site.

**CM7 Monthly Reporting**

- a) A monthly report must be provided to the Councils for the duration of the construction phase of the Project.
- b) The monthly report required by **clause (a)** must be provided within **ten (10) working days** of the end of the preceding month.
- c) During the months of May to September inclusive, the Councils may waive the requirement to provide a monthly report if the extent of construction works being undertaken is limited.
- d) The purpose of the monthly report required by **clause (a)** is to provide regular updates in respect of works occurring, progress of works, including the undertaking and completing of activities required by the conditions of these resource consents, and of any issues that have arisen during the preceding month that may have had an impact on compliance with the conditions of these consents.
- e) The monthly report must include:
  - i. A progress and programme update, including works that have been undertaken during the preceding month and works that are scheduled to occur in the subsequent month;
  - ii. Details of any non-compliance(s) with the conditions of these consents and any action(s) undertaken to prevent the likelihood of future non-compliance(s);
  - iii. Any complaint(s) received, and action(s) undertaken (including to prevent the same or similar complaint arising in the future);
  - iv. Details of the programming of any Management Plan update(s), proposed amendments and associated certification requirements (if any);
  - v. The outcomes of monitoring and accompanying reporting, other than as included in the Annual Report under **Condition CM8**, required by Management Plans and/or the conditions of these resource consents

**ADVICE NOTE: Condition CM7(e)(ii)** does not preclude any other enforcement action that may need to be taken to address non-compliance(s) with the conditions of these resource consents.

**CM8 Annual Reporting**

- a) An annual report for the prior **twelve (12) month** period ending 30 April must be provided to the Councils by **31 July each year** during the construction phase of the Project and in the year following the turbines becoming fully operational.
- b) The purpose of the annual report is to provide an overview of the works authorised by these resource consents that have been undertaken during the preceding year, including associated monitoring and reporting.
- c) The annual report must include:
  - i. All monitoring reports required by Management Plans and/or the conditions of these consents;
  - ii. A summary of amendments made to Management Plan(s) and proposed amendments and associated certification requirements (if any);
  - iii. An analysis of the monitoring data in respect of observed effects on the environment collected as required by Management Plans and/or the conditions of these consents;
  - iv. Details of any non-compliances, the reason(s) for the non-compliance(s) or any difficulties achieving compliance with the conditions of this resource consent, including the requirements of Management Plans;
  - v. Any measures that have been implemented to address compliance issues or to reduce adverse effects on the environment;
  - vi. Any recommendations on alterations to the monitoring to be implemented in the subsequent year;
  - vii. An overview of works anticipated in the subsequent year, including any works to reduce adverse effects on the environment; and
  - viii. Any ongoing reporting requirements to ensure compliance with the proposed offsetting requirements.
  - ix. A summary of the initiatives applied to manage and/or minimise the greenhouse gas emissions for the Project.
  - x. The results of the BCDP curtailment strategy, if required under **Condition EC11**.
- d) The raw monitoring data collected as required by the Management Plans and/or by the conditions of these resource consents must be made available to the Councils within **ten (10) working days** of a request.
- e) An annual report must continue to be provided by 31 July each year after the turbines are commissioned and fully operational where it is necessary

to meet ongoing reporting requirements to ensure compliance with these conditions (for example, offsetting conditions), Where an annual report is no longer required under clause (a), the annual report will be limited to the specific reporting requirements of each of the offsetting conditions.

## ARCHAEOLOGICAL AND HISTORIC HERITAGE

### AH1 Accidental Discovery Protocol

- a) In the event that the activities authorised by these resource consents discover or disturb an archaeological site, kōiwi tāngata, wāhi tapu or wāhi taonga, the Consent Holder must immediately cease further work within 10 metres of the discovery or disturbance and inform:
- Heritage New Zealand Pouhere Taonga;
  - Rangitāne o Wairarapa;
  - Rangitāne o Tāmaki nui-ā-Rua;
  - Ngāti Kahungunu ki Wairarapa;
  - Ngāti Kahungunu ki Tāmaki nui-ā-Rua;
  - the Councils (subject to the relevant territorial jurisdictions); and
  - New Zealand Police (only in the event of kōiwi being discovered).
- b) Further work within 10 metres of the discovery or disturbance must be suspended until:
- Procedures for the recording and removal of the archaeological material are completed; and
  - Heritage New Zealand Pouhere Taonga, relevant iwi/hapū authorities, the Councils (subject to the relevant territorial jurisdictions) have advised that the work can recommence.
- c) **Clauses (a) and (b)** do not apply where the works are subject to an archaeological authority granted under section 48 of the Heritage New Zealand Pouhere Taonga Act 2014.

## CLIMATE CHANGE

### CC1 Climate Change

- a) The Consent Holder must include consideration of the whole-of-life embodied carbon for the Project when undertaking the detailed design and procurement for the wind farm.
- ADVICE NOTE:** The whole of life-embodied carbon considerations should align with the concepts of [Whole-of-life embodied carbon emissions reduction framework \(mbie.govt.nz\)](#), or similar relevant framework.
- b) The Consent Holder must prepare a framework for the management and/or minimization of greenhouse gas emissions from construction, operation and at end of life of the wind farm. The framework must be prepared and submitted to the Councils for information at least **forty (40) working days** prior to the commencement of works authorised by these resource consents.
- c) The Consent Holder must include a summary of the initiatives applied to manage and/or minimise the greenhouse gas emissions for the Project as part of the annual report required by **Condition CM8**.

## EARTHWORKS STABILITY STANDARDS

### EW1 Cleanfill Material

- a) All earthworks material and imported material deposited as part of the works authorised by these consents must be cleanfill material.

### EW2 Cut and Fill Locations and Stability

- a) Prior to the completion of detailed design, the Consent Holder must undertake further investigations and assessment to confirm the geotechnical conditions to inform the detailed design of cut and fill earthworks including treatment of existing slope instability, road cut batter stability and fill batter stability, in accordance with *Indicative Fill Disposal Areas Plan* (Drawing No. 1016884.1000-016), Tonkin + Taylor, dated October 2023.
- b) The outcome of the assessment required by **Condition EW2(a)** must be provided to the Councils for information and comment within **twenty (20) working days** of the assessment being completed. ~~The Councils will provide any comments they have on the assessment within **ten (10) working days** of receiving it.~~ Where the Councils provide comment the Consent Holder must confirm how it has responded to the Councils' feedback as part of the detailed design reporting required by **Condition CM1**, including reasons why any recommendations have not been adopted.
- c) The Consent Holder must engage a SQEP who is a Chartered Professional Engineer with experience in geotechnical engineering or geology to ensure that the requirements of **Condition EW2(a)-(b)** and **(f)-(g)** are met and to confirm that:
- fill areas and fill disposal sites are assessed and confirmation of the appropriate batter angle is confirmed if, for example, thick surficial deposits, groundwater seepages, adversely oriented prominent discontinuities in the rock or fault zones are exposed. This person must ensure all contracted operations and personnel have clearly defined roles and responsibilities to monitor compliance with the conditions of these resource consents. This person must be available to meet with the Councils on request; and
  - the permanent cut slopes and fill sites are appropriately assessed for stability during and following construction. If instability / failure is observed during or following construction, appropriate mitigation measures such as material clearance, slope batter reprofiling/benching, localised drainage controls or localised slope stabilisation measures must be implemented within **five (5) working days** of the instability / failure occurring.
- d) Earthwork fill areas with the exception of the proposed access roads must be finished with a maximum gradient of 1(vertical):3(horizontal).
- e) Engineered fill utilised for roads can be finished with a gradient of 1 (vertical):2(horizontal).



- f) Fill placement within the disposal areas must be assessed in accordance with the following criteria:
- i. Avoidance of wetlands and streams.
  - ii. Avoidance of indigenous vegetation.
  - iii. Geotechnical considerations including the criteria outlined in **clause (g)**;
  - iv. Minimization of catchment area above fill site (5ha maximum); and
  - v. Sufficiency of room for the placement of erosion and sediment control measures.
- g) Geotechnical criteria for the assessment of fill locations (prior to and during construction) includes:
- i. An inspection by a suitably qualified and experienced Chartered Professional Engineer with experience in geotechnical engineering or geology to approve the fill site location and the proposed batter slope profiles.
  - ii. Fill disposal areas must be chosen in areas that are visibly free of groundwater seepages and instability.
  - iii. All topsoil and soft or loose surficial soils is to be removed prior to fill placement where needed to ensure fill slope stability.
  - iv. Bench in the base of the fill disposal area into stiff or medium dense soil, or rock.
  - v. A suitably qualified and experienced engineer or geologist Chartered Professional Engineer with experience in geotechnical engineering or geology must determine under drainage details including layout and centres, additional drains and capacity to be installed over potential seepage zones.
  - vi. Fills must be placed and compacted in layer thicknesses and to compaction standards defined during detailed design.
  - vii. Fill placement must be inspected by a suitably qualified engineer or geologist.

### EW3 Unnamed Active Faults - Site Specific Investigation

- a) Prior to the completion of detailed design, the Consent Holder shall undertake a site-specific investigation, including detailed fault mapping at 1:35,000 or better and identify appropriate building related mitigation measures associated with potential adverse effects associated with fault rupture hazard (e.g. building set back or engineering measures) for the Terminal Substation and other wind farm infrastructure.
- b) The outcome of the assessment required by **Condition EW3(a)** must be provided to the Tararua District Council for information and comment within **twenty (20) working days** of the assessment being completed. ~~The Councils will provide any comments they have on the assessment within ten (10) working days of receiving it.~~ Where the District Council has provided comment, the Consent Holder must confirm how it has responded to the District Council feedback as part of the detailed design reporting required by **Condition CM1**, including reasons why any recommendations have not been adopted.

### EROSION AND SEDIMENT CONTROL

#### ES1 Supervision

The erosion and sediment control measures to manage the effects of activities authorised by these resource consents must be managed and supervised by a SQEP in erosion and sediment control measures. This person must ensure all contracted operations and personnel have clearly defined roles and responsibilities to monitor compliance with the conditions of these resource consents. This person must be available to meet with the Councils on request.

#### ES2 Erosion and Sediment Control Plan (ESCP)

- a) At least **forty (40) working days** prior to the commencement of construction activities authorised by these resource consents, the Consent Holder must submit an overarching ESCP prepared by a SQEP in erosion and sediment control to the Regional Councils for certification.
- b) The purpose of the ESCP is to establish the erosion and sediment principles that are to be implemented for the Project.
- c) The ESCP required by **clause (a)** must be prepared in general accordance with the document titled "*Erosion and Sediment Control Guide for Land Disturbing Activities in the Wellington Region*" dated February 2021 (the GW Guidelines), or any later revision of the GW Guidelines.
- d) The ESCP must include the following information:
  - i. Details of all principles, procedures and practices that will be implemented to undertake erosion and sediment control across the site and minimise the potential for sediment discharges;
  - ii. A Dewatering Management Procedure to ensure that the required level of sediment treatment is achieved on site during dewatering operations;
  - iii. The ESCP must utilise the principles detailed in the prepared by Ridley Dunphy dated May 2023.
  - iv. A construction programme including timing of scheduled earthworks and instream works activities;
  - v. Approaches to weather forecasting and how this relates to onsite monitoring requirements, rainfall response and contingency measures including procedures to minimise adverse effects in the event of extreme rainfall exceeding the applied rainfall trigger event and / or the failure of any key erosion and sediment control structures;
  - vi. Response actions, and timings of action, to implement following exceedances of performance ~~targets~~ standards in **Condition ES3 and Condition EC17**;
  - vii. Procedures for and timing of reviews and / or amendments to the certified ESCP;
  - viii. The approach to establishment, operation and maintenance and, decommissioning of erosion and sediment control devices and measures;

- ix. Details on the frequency of inspections and monitoring of all stormwater, erosion and sediment control measures throughout each stage (if applicable) of construction works, including details of the person(s) responsible for inspections and monitoring; and
  - x. Reporting requirements including rainfall trigger event reporting, reporting following an exceedance of a performance ~~target~~ standard, monthly reporting and annual reporting
- e) Construction activities authorised under these resource consents must not commence until the ESCP required by **clause (a)** has been certified in writing by the Regional Councils.

### ES3 Erosion and Sediment Control Performance

#### *Sediment Control*

- a) Sediment losses to natural water arising from activities authorised by these resource consents must be minimised for the duration of the physical works and until the expiry of the resource consents through the establishment, operation and maintenance of erosion and sediment control measures in general accordance with the GW Guidelines except where a higher standard is referred to in the ESCP or a certified SSESCP, in which case the higher standard applies.
- b) All sediment laden runoff resulting from works authorised by these resource consents must be treated by erosion and sediment control devices and/or measures established and maintained in accordance with a certified SSESCP and the GW Guidelines.
- c) The Consent Holder must ensure that, as far as practicable, all clean water runoff from stabilised surfaces including catchment areas above works areas is diverted away from exposed areas via a stabilised system to prevent erosion, including erosion at any associated outfall(s).
- d) Any excess unsuitable material must be disposed of at a fill disposal site in a manner that ensures it will not lead to any instability or collapse affecting either the fill disposal site or waterbody including any wetlands.

#### *Performance ~~Targets~~ Standards*

- e) Erosion and sediment control measures or devices must be designed, operated and maintained to achieve the following performance ~~targets~~ standards from the discharge of sediment control measures:
  - i. pH not less than 5.5 or greater than 8.5;
  - ii. 100mm clarity or greater, measured by Secchi disc or clarity tube or alternative as approved by Council.
- f) Any discharge of dewatered groundwater must meet the performance ~~target~~ standard specified for in **clause (e)** or must be discharged via a sediment retention device provided the device is not currently receiving run-off and is large enough to impound water to achieve the required performance ~~target~~ standard.
- g) Where a performance ~~target~~ standard in **clause (e)** is not achieved, an investigation must be undertaken to:
  - i. confirm the reason why the performance ~~target(s)~~ standard(s) has not been achieved, with reference to the relevant catchment; and
  - ii. develop and implement response measures to achieve the performance ~~target(s)~~ standard(s) in the future.
- h) Following the completion of the investigation required by **clause (g)**, all recommended response measures must be implemented within with **five (5) working days**, except where the Regional Council agrees in writing to a longer timeframe for the implementation of response measures.
- i) Where the performance ~~target~~ standard in **clause (e) ii.** is not achieved in two or more rounds of consecutive monitoring or where there are three or more exceedances within a **six (6) month** period of monitoring, escalating response measures to address poor performance of a sediment retention device must be undertaken to ensure the sediment retention devices achieve 100mm clarity or greater.
- j) A report that summarises the investigation and response measures required by **clauses (g), (h) and (i)** must be provided to the Regional Councils in writing within **five (5) working days** of the performance ~~target~~ standard not being achieved.

#### *Stabilisation*

- k) Where a 'cut and cover' methodology will be utilised as the primary form of erosion and sediment control, any exposed soil surfaces must be covered within **twenty-four (24) hrs** of becoming exposed.
- l) Areas of the site where earthworks have been completed must be stabilised to prevent erosion as soon as practicable and within **fourteen (14) days** of completion of any works authorised by these resource consents, unless otherwise provided for in a certified SSESCP.
- m) For all trenching works or underground service installations, any open trench or otherwise disturbed area must be stabilised prior to any rainfall unless the works are provided for by a certified SSESCP.

#### *Erosion and Sediment Control Design Standards*

- n) All sediment retention devices including sediment retention ponds, decanting earth bunds and hybrid decanting earth bunds must be designed to a minimum volume of 3% of the contributing catchment area, unless otherwise approved in writing by the Regional Councils and confirmed in the SSESCP.
- o) The locations of all sediment retention devices including sediment retention ponds, decanting earth bunds and hybrid decanting earth bunds must be assessed by a chartered professional geotechnical engineer. In addition, sediment retention ponds shall be subject to geotechnical supervision during construction.
- p) Where the embankment of, or part thereof, any sediment retention devices including sediment retention ponds, decanting earth bunds and hybrid decanting earth bunds is to be constructed using fill material, this work must be undertaken with appropriate geotechnical engineering oversight.

#### *Monitoring and Maintenance*

- q) All erosion and sediment control structures must be monitored to determine compliance with the performance standards set out in **Condition ES3(e)** by being:
- i. Inspected on a weekly basis;
  - ii. Inspected prior to a trigger rainfall event set out in a certified Erosion and Sediment Control Plan required by **Condition ES2**;
  - iii. Inspected following a rainfall trigger rainfall event set out in a certified Erosion and Sediment Control Plan required by **Condition ES2**.
- r) The Consent Holder must carry out monitoring and maintenance of erosion and sediment controls in accordance with the conditions of this resource consent and must maintain records detailing:
- i. The date, time and results of the monitoring undertaken;
  - ii. The erosion and sediment controls that required maintenance; and
  - iii. The date and time when the maintenance was completed.

These records must be provided to the Regional Councils at all reasonable times and within **three (3) days** of a written request to do so.

**ADVICE NOTE:** This Condition does not preclude any other enforcement action that may need to be taken to address non-compliance(s) with the conditions of these resource consents.

#### **ES4 Site-Specific Erosion and Sediment Control Plans (SSESCP)**

- a) At least **ten (10) working days** prior to the commencement of construction activities in any given area of the site the Consent Holder must submit to the Regional Councils a Site-Specific Erosion and Sediment Control Plan (SSESCP) for certification. This SSESCP must be in general accordance with the ESCP as per **Condition ES2**.
- b) Any SSESCP required to be submitted under **clause (a)** of this Condition must be prepared by a SQEP in erosion control and in accordance with the ESCP required by **Condition ES2** and in general accordance with the GW Guidelines.
- c) The SSESCP must include the following information:
- i. A plan or a series of plans showing:
    - Catchment boundaries and contours;
    - Areas to be disturbed;
    - Cut and Fill areas;
    - Soil stockpile areas;
    - Fill disposal sites;
    - Culverts;
    - Stream diversions;
    - Erosion and sediment control devices and measures;
    - Streams and wetlands; and
    - Any exclusions / “no go” areas where works are not to take place. For clarity, this could include ecological features, contaminated areas or archaeological sites that are not to be disturbed.
  - ii. The specific erosion and sediment control measures that will be applied to each stage (if applicable) of earthworks, including the location(s), dimension(s) and capacity of any control structure(s);
  - iii. Details of any further chemical treatment bench testing and recommendations as per **Condition ES9** and specific to the SSESCP;
  - iv. Supporting calculations and design drawings of all erosion and sediment control structures;
  - v. Expected commencement dates for the implementation of erosion and sediment control measures;
  - vi. Location(s) of stabilised entranceway(s);
  - vii. Details of any dewatering and how this will be undertaken in accordance with the Dewatering Management Procedure as per **Condition ES2(d)(ii)**;
  - ix. Identification of any specific erosion and sediment control risk, the nature of the risk, the exposure of works to heavy rainfall and/or flood flows and any specific actions to manage this risk;
  - x. Details of any temporary and / or permanent stabilization with reference to **Condition ES3 (k) and (l)**;
  - xi. Construction methodologies applying to any proposed instream structures;
  - xii. Details of who is undertaking the work and contact details;
  - xiii. Monitoring and maintenance for all erosion and sediment control measures on a regular frequency or within 24 hours of a rain or snowfall event that could impair the function or performance of the control measures;
  - xiv. Expected removal or decommissioning of erosion and sediment control measures;
  - xv. An inspection and reporting schedule, in particular in response to rainfall trigger event;
  - xvi. Maintenance activities.
  - xvii. Decommissioning methodology as per **Condition ES7**.
- d) At least **one (1) working day** prior to bulk earthworks (not including any land disturbance necessary to install erosion and sediment control structures)

commencing within an area and in accordance with a certified SSESCP, the Consent Holder must confirm in writing to the Regional Councils that the erosion and sediment control structures have been constructed in accordance with the certified SSESCP and in general accordance with the GW Guidelines.

- e) The written confirmation required by clause (d) must include the dose rate, and corresponding catch tray and header tank outlet pipe sizes, for each chemical treatment system to be implemented for sediment retention ponds and decanting earth bunds within the area covered by the SSESCP based on the FMP required by **Condition ES9**.

**ES5 SSESCP Certification**

- a) Each SSESCP must be certified in writing by the Regional Councils under the process detailed in **Condition CM1MP1** prior to the commencement of works in any area subject to the SSESCP.
- b) Certification (or withholding certification) is based on the Regional Council's assessment of whether the SSESCP meets the requirements of the conditions of these resource consents and is in general accordance with the requirements and measures in the GW Guidelines.

**ES6 Amending a Certified SSESCP**

- a) Where compliance with the GW Guidelines continues to be achieved, the following may be undertaken prior to an SSESCP being amended subject to a retrospectively amended SSESCP being provided to the Regional Councils within **ten (10) working days**:
  - i. The addition of silt fences and super silt fences;
  - ii. Changes to the dimensions or configuration of a sediment retention pond or decanting earth bund provided the GW Guideline specifications are still met; and
  - iii. The installation of additional erosion and sediment control measures where these do not affect existing devices or measures.
- b) An SSESCP may be amended or updated without the need for certification where:
  - i. An amendment is an administrative change, such as a change in contact details; or
  - ii. The amendment is to the location of an erosion and sediment control where each control is sized for the captured area and shown on as-built plans in a new location and compliance with the GW Guidelines is maintained; or
  - iii. The amendment provides additional laydown areas within the area of works subject to the SSESCP and does not impact on existing controls; or
  - iv. The amendment changes bund or diversion construction (excluding changes to dimension and capacity); or
  - v. The revised SSESCP is provided to the Regional Councils who advises in writing that the amendment need not be certified under **clause (c)** on the basis that the amendments meet the requirements of **clauses (a)(i) to (iii)**; and
  - vi. The amendment does not result in works occurring during the period 1 May to 30 September inclusive unless authorised under **Condition ES8**.
- c) Except as provided for in **clauses (a) and (b)**, amendments to an SSESCP must be certified in writing by the Regional Councils prior to the commencement of works in any area subject to the SSESCP.
- d) Certification (or withholding certification) is based on the Regional Council's assessment of whether the SSESCP meets the requirements of the conditions of these resource consents and, in particular, is in general accordance with the requirements and measures in the GW Guidelines.

**ES7 Decommissioning**

- a) Erosion and sediment control devices or measures must only be removed:
  - i. When the corresponding catchment area has been permanently stabilised; or
  - ii. In accordance with a certified SSESCP.
- b) The removal of an erosion and sediment retention device must only occur after consultation and the receipt of written approval from the Regional Councils. Such approval must be based on information provided by the Consent Holder in relation to the quality of discharged water and the receiving environment and the adequacy of soil stabilisation and/or covering vegetation.

**ES8 Winter Works Authorisation(s)**

- a) Unless otherwise provided for under a certified SSESCP required by **Conditions ES4, ES5 and ES6**, bulk earthworks activities authorised by these resource consents must not be carried out during the winter period between **1 May to 30 September** (inclusive).
- b) The Consent Holder must ensure the site is stabilised by **30 April** of each year unless otherwise provided for by a certified SSESCP under **clause (a)** above. Stabilisation must be in general accordance with the measures detailed in the GW Guidelines where stabilisation may include vegetative and/or structural measures and including pavement, metalling, hydroseeding, re-vegetation and mulching) that will reduce erosion of exposed soil to the extent practicable.
- c) Any request to undertake earthworks during the period **1 May to 30 September** (inclusive) which has not otherwise been provided for under a certified SSESCP must be submitted in writing to the Regional Councils at least **ten (10) working days** prior to works commencing in the specified period. This must be in the form of amendments to the SSESCP in accordance with **Condition ES6**. In considering a request received in accordance with this condition, the Regional Councils will consider the following:
  - i. The scope/nature of the proposed works;
  - ii. Structural controls proposed, or existing, that will be/are installed;

- iii. Additional non-structural controls to be implemented (e.g. increased on site monitoring and staging);
- iv. Maintenance consideration of structural controls to ensure effective access can be achieved to undertake the maintenance and controls continue to work efficiency;
- v. Compliance history and performance of the site, if available; and
- vi. Sensitivity of the receiving environment subject to the winter works.

#### ES9 Flocculation Management Plan

- a) At least **forty (40) working days** prior to the commencement of construction activities authorised by these resource consents, the Consent Holder must engage a SQEP in flocculation management to prepare and submit a Flocculation Management Plan (FMP) for certification to the Regional Councils as an addendum to the ESCP required by **Condition ES2**.
- b) The objective of the FMP required by **clause (a)** is to describe the chemical treatment and flocculation management system(s) to be implemented to enhance the efficiency of sediment retention ponds (SRP), decanting earth bunds (DEB) or hybrid decanting earth bunds (HDEB).
- c) The FMP must include the following information:
  - i. Results of an initial flocculation trial through the provision of site-specific soil bench testing;
  - ii. Dependent upon the results of the bench testing, specific design details of the flocculation system with rainfall or flow activated delivery systems for the sediment retention devices;
  - iii. An analysis of soil reactivity to chemical treatment;
  - iv. Specific design details of the proposed flocculation management system for each sediment retention device including SRPs, DEBs and HDEBs;
  - v. Monitoring (including pH triggers), maintenance and systems for recording dosing and inspections;
  - vi. Appropriate procedures and actions when it is determined through monitoring that chemical treatment is not proving effective and/or the performance ~~targets~~ standards in **Condition ES3** have been exceeded;
  - vii. A spill contingency; and
  - viii. Contact details of the person responsible for the operation and maintenance of the flocculation management system and reporting structure.
- d) Construction activities authorised under these resource consents must not commence until the FMP required by **clause (a)** has been certified in writing by the Regional Councils.
- e) Unless otherwise certified in writing by the Regional Councils acting in a technical certification and confirmed in the SSESCP, the Consent Holder must chemically treat the sediment impoundment devices for the purpose of reducing sediment discharges from the site and must ensure that the Flocculation Management Plan required by **Condition ESC9 (c)** is implemented.

#### SPILL MANAGEMENT

##### SM1 Spill Management Plan

- a) The Consent Holder must submit a Spill Management Plan to the Regional Councils **at least ten (10) days** prior to the commencement of any works authorised by this consent.
- b) The objective of the Spill Management Plan is to detail the procedures that the Consent Holder must follow should any spills occur during construction works.
- c) The Spill Management Plan must include but not be limited to the following information:
  - i. Person(s) responsible for responding to any spills;
  - ii. Potential sources of contaminants from the site and the proposed works; and
  - iii. The proposed response/remedial procedures and related timeframes.

#### POTENTIALLY CONTAMINATED SITES

##### PCS1 Unexpected Contaminant Discovery Protocol

In the event of a discovery of potentially contaminated material during soil disturbance activities authorised by these resource consents (characterised through the presence of one or more of soil staining, odour, uncharacterised fill, construction waste, or demolition waste), the Consent Holder must implement the procedures required in **Condition CM4(c)** and at a minimum:

- a) Immediately cease work and obtain and implement advice from a SQEP in contaminated soil on whether the area must be isolated, and if so the size of the vicinity that is required to be isolated through measures such as within 10m of the discovery and isolate the area by taping, coning or fencing off. Unnecessary access to the isolated area must be prevented;
- b) Prevent all unnecessary access to an isolated area in accordance with **clause (a)**;
- c) Ensure that all surface water, sediment and dust must be is contained;
- d) Have the area inspected by the SQEP in contaminated soil and obtain advice on specific controls;
- e) Inform the relevant Councils of the potential contamination within **twenty-four (24) hours** of the discovery.

~~f) The site Controller must be advised.~~

~~g) The Site Controller is to contact a Contaminated Land Specialist, to inspect and advice on specific controls;~~

~~h) The Site Controller must ensure that the relevant Councils are informed of the potential contamination within twenty four (24) hours of the discovery.~~

PCS2 Works within the vicinity determined by the SQEP in contaminated soil determined in accordance with Condition PCS1(a) ~~10m of the potential contamination discovery~~ must only restart once an agreement has been reached with the Councils as to how the potentially contaminated soil contamination hotspot is to be treated, any management measures which are required have been implemented, and any necessary resource consents have been obtained.

## DUST MANAGEMENT

DM1 There must be no discharge of airborne particulate matter that is objectionable to the extent that it causes an adverse effect at or beyond the boundary of the Project Site.

**ADVICE NOTE:** A discharge of airborne particulate matter will only be considered objectionable, when considering the Frequency, Intensity, Duration, Offensiveness/ Character and Location of Exposure of the discharge to determine whether the discharge is Offensive, Objectionable, Noxious and/or Dangerous; (i.e., the FIDOL Factors)

### DM2 Dust Management Plan

- a) At least **forty (40) working days** prior to the commencement of construction activities authorised by these resource consents, the Consent Holder must engage a SQEP in dust management to prepare and submit a Dust Management Plan (DMP) for certification to the Councils.
- b) The objective of the DMP required by **clause (a)** is to describe the proposed methods and measures that will be implemented to ensure construction activities do not cause noxious, dangerous, offensive or objectionable effects at any point beyond the boundary of the Project Site.
- c) The DMP must be prepared in accordance with the Ministry for the Environment 'Good Practice Guide for Assessing and Managing Dust' and must include the following information:
  - i. Identification of the persons responsible for the management and implementation of the DMP;
  - ii. Identification of potential sources of dust, including but not limited to the Concrete Batching Plant and any mobile aggregate crushing, taking into account construction activities and the construction programme;
  - iii. Identification of all sensitive receivers to potential adverse dust effects and any specific measures to manage soil disturbance activities in close proximity to those receivers.
  - iv. General methods and measures to avoid, where practicable, and otherwise to minimise dust emissions, including contingency measures;
  - v. Methods for monitoring dust emissions, reporting concerning the effectiveness of the dust management measures, and any resultant amendments to improve effectiveness (if required); and
  - vi. Procedures for receiving, recording, validating and responding to dust related complaints in accordance with **Condition GA7 and Condition GA8**.
- d) Construction activities authorised under these resource consents must not commence until the DMP required by **clause (a)** has been certified in writing by the Councils.

## CONCRETE BATCHING

CB1 **One (1)** temporary Concrete Batching Plant may be established within the Turbine Envelope Zone or Turbine Exclusion Zone and must be located at an elevation of at least 350m above sea level and must not operate within 250m of the Project Site access from Old Coach Road.

CB2 The maximum footprint of the temporary Concrete Batching Plant must not exceed 6,000m<sup>2</sup>. The maximum height of the mobile batching plant shall not exceed 7 metres and the maximum height of any ancillary building(s) shall not exceed 3 metres.

CB3 The Consent Holder must notify the relevant Regional Council and relevant District Council fifteen (15) working days prior to the Concrete Batching Plant being commissioned and fifteen (15) working days after the Plant is decommissioned.

### CB4 Concrete Batching Plant Management Plan

- a) At least **forty (40) working days** prior to the commissioning of the Concrete Batching Plant provided for under **Condition CB1**, the Consent Holder or their contractor must prepare and submit a Concrete Batching Plant Management Plan (CBPMP) for certification to the Councils required by **Condition CB4**.
- b) The objective of the CBPMP required by **Condition CB4(a)** is to set out the methodology to manage the operation of the CBP including the management of adverse effects associated with discharges to air, land and water and those associated effects on potentially sensitive receivers.
- c) The Concrete Batching Plant must be managed to comply with the operational non-turbine noise requirements in Condition WFO1.
- d) The CBPMP must, as a minimum, include:
  - i. Confirmation of the location of the Concrete Batching Plant.
  - ii. Details of the plant and equipment to be used for the Concrete Batching Plant.
  - iii. Details of lighting associated with the Concrete Batching Plant and the measures included to ensure lighting does not exceed 8 lux at the site boundary. The Concrete Batching Plant outdoor lighting must have a colour temperature not exceeding 4000K.

- iv. Details of the environmental management measures for the Concrete Batching Plant. These measures must include, but are not limited to:
  - i. How water generated within the Concrete Batching Plant is confined and re- used within the Concrete Batching Plant;
  - ii. Details as to how any water generated by the Concrete Batching Plan is treated for sediment and pH prior to re-use or discharge;
  - iii. Details of the standards (that align with the relevant permitted standard in the Regional Plans, depending on final location of the Concrete Batching Plant) for pH and suspended sediment for any water that is discharged from the Concrete Batching Plant;
  - iv. Details of operational limits for when concrete batching can and cannot take place;
  - v. Details of the drainage system to dissipate any water;
  - vi. Details of how dust associated with the Concrete Batching Plant will be managed in accordance with the DMP required under **Condition DM2**;
  - vii. Details of site records and logs which will be kept, and provided to Manawātū- Whanganui Regional Council, Greater Wellington Regional Council, Masterton District Council and Tararua District Council (whichever is relevant depending on the final location of the Concrete Batching Plant) upon request; and
  - viii. Details of how monitoring and reporting of the above measures (clauses i-vii) will occur;
  - ix. Details of Concrete Batching Plant decommissioning; and
  - x. Details of site reinstatement.

#### **MOBILE AGGREGATE CRUSHING FACILITY**

MACF1 The Mobile Aggregate Crushing Facility must only be operated within the Turbine Envelope Zone or Turbine Exclusion Zone and must not operate within 250m of the Project Site access from Old Coach Road. The Mobile Aggregate Crushing Facility must not be used in the Construction Laydown and Site Administration Area.

MACF2 The Mobile Aggregate Crushing Facility must only operate between the hours of **7.00am and 7.00pm** on weekdays and **7.30am and 6.00pm** on weekends and public holidays.

MACF3 The Mobile Aggregate Crushing Facility must only be used for the crushing of materials sourced within the Project site.

MACF4 The Mobile Aggregate Crushing Facility must be managed to comply with the operational non-turbine noise requirements in **Condition WFO1**.

#### **CONTROLLED BLASTING**

CBL1 **At least forty (40) working days** prior to the commencement of any controlled blasting activities, the Consent Holder must submit a Controlled Blasting Management Plan (CBMP) to the District Councils for certification.

CBL2 The objective of the CBMP required by **clause (a)** shall be to ensure controlled blasting, if required, is designed and implemented to comply with the Hazardous Substances and New Organisms (HSNO) Regulations and Appendix J of Australian Standard AS 2187-2:2006 “Explosives – Storage and use Part 2: Use of explosives”.

CBL3 The CBMP required by **Condition CBL1** must be prepared in accordance with the Hazardous Substances and New Organisms (HSNO) Regulations and Appendix J of Australian Standard AS 2187-2:2006 “Explosives – Storage and use Part 2: Use of explosives” and set out the following:

- a) site protocols and management measures;
- b) health and safety requirements, including that noise does not exceed 115dBL at any dwelling not located on the wind farm site;
- c) blast design and methodologies to be employed;
- d) warning systems, and
- e) noise monitoring requirements as required under current Hazardous Substances and New Organisms (HSNO) Regulations and to meet the requirements of **Condition CBL1**.

#### **CONSTRUCTION TRAFFIC MANAGEMENT**

##### **CTM1 Site Entrances**

All construction traffic must enter and exit the Project site from the following:

- a) Old Coach Road (from/to State Highway 2).
- b) Opaki-Kaiparoro Road (from/to its northern intersection with State Highway 2). Heavy and light construction traffic is not permitted to utilise Opaki-Kaiparoro Road beyond its intersection with Mt Munro Road or Falkner Road north of 40°41'59"S 175°40'36"E. Access from Opaki-Kaiparoro Road to the Transmission Corridor is restricted to vehicles undertaking works within the transmission corridor.
- c) Kaiparoro Road (from/to State Highway 2).
- d) State Highway 2 at its access point to 85151 State Highway 2, Eketāhuna 5881 (to access the Transmission Corridor).

##### **CTM2 Roading and Intersection Upgrades**

- a) The Consent Holder must, at its own cost, undertake improvements to Old Coach Road before any use of Old Coach Road by construction traffic. These improvements will include:

- i) Upgrade of Old Coach Road (including improvements necessary to the State Highway 2 intersection with Old Coach Road) as detailed in the plans prepared by Tonkin and Taylor titled *OCR Widening (TDC 10m Proposal Modified)*, dated Jun 24 and comprised of Drawing Numbers 1016884.1000\_C001 Revision 2, 1016884.1000\_C002 Revision 2 and 1016884.1000\_C100 to 1016884.100\_C109 Revision 2.
  - ii) Sealing of Old Coach Road from State Highway 2 to the site entrance.
  - iii) Prior to construction, the consent holder shall provide the NZ Transport Agency with the detailed designs for the upgrade of the State Highway 2 intersection with Old Coach Road, to be reviewed and approved by the NZ Transport Agency Network Manager. This must be accompanied by an assessment of whether additional turn treatment at this intersection is required.
- b) The Consent Holder must, at its own cost, undertake any necessary improvements in the following locations as are necessary to facilitate the safe movement of construction traffic or over dimension loads before any use by construction traffic (such improvements may include but are not limited to road pavement strengthening and widening, changes to road marking and signage and vegetation clearance):
- i) State Highway 2 northern intersection with Opaki-Kaiparoro Road (and its approaches);
  - ii) Opaki-Kaiparoro Road, between State Highway 2 and Mt Munro Road;
  - iii) State Highway 2 intersection with Kaiparoro Road (and its approaches);
  - iv) Kaiparoro Road, between State Highway 2 and the access point to the Terminal Substation; and
  - v) State Highway 2 at its site access point to 85151 State Highway 2, Eketāhuna 5881 (to access the Transmission Corridor).
- ~~c) The Consent Holder must, at its own cost, undertake any necessary improvements to nominated Project site access points to accommodate turning to and from the site by all construction traffic and including over dimension loads.~~
- c) At least **30 working days** prior to the commencement of any roading, intersection and access construction or upgrade required by **clauses (a)-(b)** the Consent Holder must submit detailed design engineering plans prepared by an SQEP in transport engineering to:
- ii) Tararua District Council outlining details of the proposed works for their approval; and / or
  - iii) Waka Kotahi NZ Transport Agency Network Manager or nominated representative outlining details of the proposed works for their approval.
- ADVICE NOTE:** Under the Local Government Act, the written approval of Council's General Manager – Transportation or nominated representative prior to any changes being made to any public road. This approval will include requirements for temporary traffic management during the roading or intersection upgrade works.
- d) For upgrades on Old Coach Road and at its intersection with State Highway 2, a Detailed Design Safe System Audit (in accordance with NZTA procedures) undertaken by an SQEP in road safety must accompany the detailed design engineering plans. Any significant or serious safety concerns raised in the audit must be addressed to the satisfaction of the appropriate Road Controlling Authority prior to construction of the upgrades.
- e) For upgrades on Old Coach Road and at its intersection with State Highway 2, a Post Construction Safe System Audit (in accordance with NZTA procedures) by a SQEP in road safety must be submitted to NZTA and Tararua District Council once the upgrades are completed. Any significant or serious safety concerns raised in the audit must be addressed to the satisfaction of the appropriate Road Controlling Authority prior to the road being used by construction traffic.
- f) Prior to construction, the Consent Holder must provide the Tararua District Council approval from the Waka Kotahi NZ Transport Agency Network Manager or nominated representative confirming that works in the State highway, including vegetation removal and intersection upgrades, have been undertaken / constructed to Waka Kotahi NZ Transport Agency standards.

### CTM3 Pavement Impact Assessment and Maintenance

- a) At least **forty (40) working days** prior to the commencement of construction activities authorised by these resource consents, the Consent Holder must submit to the District Councils for certification, a Pavement Impact Assessment (PIA) report.
- b) The purpose of the PIA required by **Condition CTM3(a)** must be to determine the pre- existing condition of any road pavement(s) administered by the relevant council to be used as a haulage route during construction (both regular and heavy and / or oversize vehicles) and to ensure that the public roads that form part of a haulage route for the Project are maintained at pre-existing or better road pavement condition throughout the construction period.
- c) The PIA must be prepared by a SQEP in transport engineering and include the following information:
  - I. The method of assessing the pre-existing road pavement condition (which must be agreed with the Councils);
  - II. The location of any pavement strengthening, widening works or other traffic management measures required on any identified local roads to be utilised as a haulage route or construction access to the Project; and
  - III. A monitoring plan including detail of the nature and frequency of monitoring, guiding the inspection and reporting of any damage to local roads, footpaths, berms, kerbs or drains and / or any third-party assets directly attributed to the construction activities.
- d) The Consent Holder must arrange a pre-construction meeting with District Councils to discuss the findings of the PIA under **Condition CTM3 (a)**. All works agreed necessary by a SQEP in traffic engineering that are to complete any strengthening / upgrade of the proposed haulage route must be undertaken at the Consent Holders cost prior to the commencement of haulage activities.
- e) In accordance with **Condition CTM3 (a)** defects directly attributed to the turbine component haulage and / or construction traffic movements over the construction period must be recorded as an addendum to the PIA and provided to the District Councils. Restoration of any damaged asset(s) identified through monitoring must be commenced as soon as practicable and within **ten (10) working days** following submission of the



monitoring results, at the Consent Holders cost.

- f) On completion of any rehabilitation works required by **Condition CTM3 (a)** the Consent Holder must arrange an inspection of the works by the District Councils. The inspection shall be for the purposes of confirming any rehabilitation works have been completed to the satisfaction of the Road Controlling Authority or determine whether further improvements are required, at the Consent Holder's cost, to rectify residual asset damage.

#### CTM4 Over-dimension or over-weight loads

The Consent Holder must obtain all necessary over-dimension and / or over-weight load permits from the relevant issuing authority(s) for any over-dimension or over-weight loads travelling to the site. A copy of all permits issued to the Consent Holder, in compliance with this condition, must be provided to the District Councils within **one (1) working day** of the Consent Holder receiving the permit.

#### CTM5 Construction Traffic Management Plan

- a) At least **forty (40) working days** prior to the commencement of construction activities authorised by these resource consents, the Consent Holder must submit a Construction Traffic Management Plan (CTMP) to the ~~Tararua District Council and Masterton District Councils~~ for certification.
- ~~b) The CTMP required by **Condition CTM6 (a)** must be based on the Draft CTMP dated [placeholder]~~
- b) The objective of the CTMP required by **Condition CTM5 (a)** is to minimise adverse effects on property access, minimise damage to private and public property including roads, and to promote traffic safety and efficiency as a result of construction works activities.
- c) The CTMP must be prepared by a SQEP in transport engineering and include the following information:
- The construction phasing and programme;
  - Confirmed haulage routes to be used during construction and which will require assessment under **Condition CTM3**;
  - The heavy and / or oversize vehicles volumes estimated on each haulage route for each construction phase;
  - Driver protocols aimed at ensuring safe driving practices and full compliance with the law including speed limits, appropriate following distances, observing engine braking restrictions, use of low beam headlights and affording priority to private residents and public traffic;
  - The details of how driver safety briefings will be provided on driving in windy conditions, and details as to what wind speeds are considered unsafe, and would cause a postponement of truck movements;
  - The details of how driver safety briefings will be provided to ensure the road safety of all road users, including cyclists who may be on the route of the Heartland Ride, and pedestrians;
  - The details of the intended traffic arrangements and provision for the delivery of over- dimension and / or over-weight loads to the site;
  - Provision of access for residents of Old Coach Road and how this will be maintained at all times, except for brief periods when over-dimension loads are being transported along Old Coach Road and how this will be managed;
  - The nature and timing of any road and / or intersection improvements to be implemented;
  - Measures for the removal of debris and/or tracking materials during construction from public roads or places;
  - Temporary traffic management measures (including signage) to be installed at the site accesses, intersections, level crossings, stock crossings and / or local accesses;
  - The timing of construction traffic to minimise disruption to, and any potential safety effects on, users of the local transport network, including any opportunity for travel plans including shared vehicle use to minimise traffic movements;
  - Written evidence of consultation with Waka Kotahi NZ Transport Agency, the Councils, emergency services, NZ Post, PowerCo, residents on Old Coach Road, and / or any other identified affected person(s) in the preparation of this CTMP and any amendments to the Plan resulting from that consultation;
  - Procedures for consulting and communicating with local residents along Old Coach Road, Waka Kotahi NZ Transport Agency, the Councils, emergency services, NZ Post, PowerCo and / or any other identified affected person(s) including provision of prior notice of traffic arrangements and any road closures;
  - Requirements for the monitoring of construction traffic volumes and speeds; and
  - Procedures for the ongoing review and evaluation of the contents of the CTMP throughout the period of construction works to achieve ongoing compliance with the condition(s) of these resource consents.

#### CONSTRUCTION NOISE

##### CN1 Construction Noise - General

- a) Noise generated from all activities associated with the construction of the Project must be measured and assessed in accordance with the long-term duration noise limits in Table 2 of 'NZS6803:1999 Acoustics – Construction Noise' (~~Annexure B-2~~) [insert table]. The exceptions to this requirement are the Concrete Batching Plant and Mobile Aggregate Plant which are subject to the noise limits specified in **Condition WFO1**.
- b) Night operation of the Concrete Batching Plant must only occur for the pouring of large foundations which cannot be completed during daytime hours. This night operation must be managed to ensure noise levels are kept as low as reasonably practicable and that residents who may experience noise that exceeds the night-time noise limits are informed 7 days in advance.
- c) The upgrade of Old Coach Road, internal Project roads and the Construction Laydown and Site Administration Area must only occur between the hours

of 7.30am and 6.00pm, Monday to ~~Saturday~~ Friday.

**CN2 Construction Noise – Controlled Blasting**

- a) Blasting activities must be measured and assessed in accordance with Appendix J of Australian Standard AS 2187-2:2006 “Explosives – Storage and use Part 2: Use of explosives” with:
  - i. ground vibration levels for control of damage to structures not exceeding 5mm/s as detailed in Table J4.5(A) insert table in Annexure B-3; and
  - ii. airblast levels not exceeding the limits described in Section J5.4 of that Standard.
- b) All blasting (~~excluding production blasting~~) is restricted to occurring between the hours of ~~09.00am to 175.00pm~~, **Monday to Friday**.

**CN3 Construction Noise and Vibration Management Plan**

- a) At least **forty (40) working days** prior to the commencement of construction activities authorised by these resource consents, the Consent Holder must submit a Construction Noise and Vibration Management Plan (CNVMP) to the District Council for certification. The CNVMP must be prepared by a SQEP in acoustics. The CNVMP must be prepared generally in accordance with the relevant annexures of ‘NZS6803:1999 Acoustics – Construction Noise’ detailing the applicable construction methodologies and procedures to be carried out to ensure compliance with the relevant standards.
- b) The objective of the CNVMP required by **Condition CN3(a)** shall be to ensure construction related noise effects are:
  - I. Designed and implemented to comply with the requirements of ‘NZS6803:1999 Acoustics – Construction Noise’ as specified in **Condition CN1**, as measured and assessed in accordance with that standard;
  - II. Designed and implemented to consider vibration effects on buildings on Old Coach Road and as described in Table 1 – Guideline values for vibration velocity, for evaluating the effects of short-term vibration on structures’ of DIN 4150-3:2016-12 insert table (Annexure B-4).”
  - III. Implemented in accordance with the requirements of section 16 of the Act so as to adopt the best practicable option to ensure the emission of noise during construction activities does not exceed a reasonable level.
- c) The CNVMP must include the following information:
  - I. Operating hours of construction works and any time restrictions on the operation of particular machinery and equipment;
  - II. Details on the machinery and equipment (including both regular and heavy and / or oversize vehicles) to be utilised during the construction works;
  - III. Predictions of sound levels from machinery and equipment (including both regular and heavy and / or oversize vehicles) to be utilised during the construction works; and
  - IV. Identification of mitigation measures associated with the operation of machinery and equipment (including both regular and heavy and / or oversize vehicles) for residents along Old Coach Road.

**ADVICE NOTE:** Mitigation measures include (but is not limited to) any feasible mitigation including: reduced speeds for heavy vehicles; road sealing and maintenance (to avoid potholes); driver/operator education; noise barriers; offers of noise insulation and ventilation of dwellings; and offers of relocation of residents for the period of construction or for respite.
  - V. Procedures for the reporting and logging of noise related complaints in accordance with the requirements of **Conditions GA7 and GA8**;
  - VI. A summary of any feedback received from any consultees about the CNVMP, changes made in response to that feedback (if any) from those parties identified in **Condition CN3(d)** below, and where a change is not made the reason(s) for that.
- d) At least **15 working days prior** to the CNVMP being submitted for certification, the Consent Holder must provide a copy of the draft CNVMP to the adjoining properties listed in Schedule 1 to be confirmed of these resource consents and invite their views on it.

**Condition Study**

- CN 4 At least forty (40) working days prior to the commencement of construction activities authorised by these resource consents, the Consent Holder must offer the owner of the Old Bush Cottage at 103 Old Coach Road (being the dwelling located on Lot 1 DP 51171 and Rural Sec 1 PT Rural Secs 2 3) Eketahuna Settlement) a condition study of the dwelling, to inform any liability rectification, and monitor vibration levels and any cosmetic damage as works progress so that the work methods can be adjusted if unreasonable vibration levels are demonstrated. The Consent Holder must provide the District Councils with a report on the outcomes of any condition study as soon as practicable following its completion.

**SHADOW FLICKER**

- SF1 The Consent Holder must ensure that shadow flicker effects from the final layout and turbine model at any dwelling and arising from the operation of the Project are no greater than:
  - (a) the limit for modelled duration of 30 hours per year or 30 minutes per day as defined in the Australian *Draft National Wind Farm Development Guidelines* 2010; or,
  - (b) should the modelled duration exceed the limit in clause (a) at a dwelling, the limit for measured duration of 10 hours per year and 30 minutes per day, as defined in the Australian *Draft National Wind Farm Development Guidelines* 2010.
- SF2 In accordance with the Australian *Draft National Wind Farm Development Guidelines* 2010, the measured duration in **Condition SF1(b)** can take account of blocking of the sun by cloud and take account of vegetation and structures at times when they block the sun at the windows of any habitable dwelling. When assessing the blocking of the sun by cloud a 0.5x clear sky irradiance should be applied. The Consent Holder may use a curtailment strategy to achieve the limits set out in **Condition SF1(b)**.

**ADVICE NOTE:** This condition does not apply to those dwellings on the properties on which wind turbines are to be located, or where the property owner has provided their written approval under Section 95E(3) of the Act and this approval has been provided to the Tararua District Council and/or Masterton District Council. Dwellings for the purpose of this condition means any dwelling which has been lawfully established or is authorised by a resource consent or building consent at the date of notice of the decision on the resource consent applications for the Mt Munro Wind Farm under Section 114 of the Resource Management Act 1991.

- SF3 At least **twenty 20 working days prior** to the commencement of construction works authorised as part of this resource consent, the Consent Holder must submit for certification a Pre-Instalment Shadow Flicker Assessment to the District Councils in accordance with **Condition MP1**. The Pre-Instalment Shadow Flicker Assessment must take account of the design details of potentially impacted dwellings, and demonstrate that the proposed number, layout, type and operation of wind turbines (including the curtailment strategy for turbines if necessary) will be managed to comply with the shadow flicker limits specified in **Condition SF1**. The curtailment strategy must, as a minimum, describe how the irradiance threshold for determining whether a turbine is in sunny or cloudy conditions has been applied and how the shadow flicker duration will be monitored and enforced.
- SF4 Following certification of the Pre-Instalment Shadow Flicker Assessment required under **Condition SF3**, should the Consent Holder become aware of a change (or potential change) to any structures or vegetation at a modelled dwelling which would significantly change the shielding at that dwelling, an amended Shadow Flicker Assessment for the potentially impacted dwelling must be prepared. The amended Shadow Flicker Assessment must be submitted to the relevant District Council and recertified in accordance with **Condition MP2**.

## ECOLOGY

### EC1 Wetland Offset

- The extent of natural inland wetland loss must not exceed 0.35 hectares in the Manawatū- Whanganui Region, and there must be no loss of natural inland wetland in the Greater Wellington Region.
- Where areas of natural inland wetland are lost in accordance with **clause (a)**, this must be offset through the restoration of other natural inland wetlands within the wind farm site on the site at a ratio of 1:1.
- All plant material used, or seed sourced, for the purpose of the restoration offset required by **clause (b)** must be sourced from the Pahiatua Ecological Region and/or be otherwise eco- sourced.
- Planting will involve no less than seven native hydrophytic plant species in addition to the native species already present within the identified offset site(s) and may include any direct transfer of *Sphagnum perchaetiale* or *Luzula leptophylla* under **Condition EC2** where these species are not already present in the offset site(s).

### EC2 Direct Transfer of Wetland Vegetation

- Prior to construction, wetlands affected by loss of extent must be surveyed by a SQEP wetland botanist for the presence of *Sphagnum perchaetiale* or *Luzula leptophylla*. If present, there must be the translocation of wetland material containing these species into appropriately suited habitat within the wetland offset sites identified under **Condition EC4**.
- The transfer must be undertaken by a SQEP wetland botanist who shall determine the timing and volume of transfer needed to achieve successful translocation.
- If the direct transfer of wetland vegetation required by **clause (a)** fails either entirely or in part within **one (1) year** of the transfer, replacement planting with eco-sourced plants of the same species must be undertaken the following spring and in accordance with the Ecology Offset Layout Plans under **Condition EC24** below.

### EC3 Poroporo

- Prior to any vegetation clearance, the Consent Holder must carry out a site walkover to identify the presence of any poroporo (*Solanum aviculare* var. *aviculare*) plants within the Project Envelope.
- Where any poroporo (*Solanum aviculare* var. *aviculare*) plants that are over a height of one (1) metre are removed, each plant must be replaced by planting at a ratio of 1:1 into appropriate dryland habitat in one or more of the sites where the offsetting required by **Condition EC1 and Condition EC23** is undertaken.

### EC4 Wetland and Poroporo Offsetting Monitoring

- Monitoring reports must be prepared and provided to the Councils for each of the wetland and poroporo offset sites in the **fifth year** following the completion of the measures required by **Conditions EC1, EC2 and EC3** ~~as part of the Annual Reporting required by **Condition CM8**~~.
- The reports required by **clause (a)** must:
  - summarise the progress towards achieving the performance targets in clause (c);
  - provide information on any incidents, or pest plant infestation, that have had a material impact on progress to achieving the performance targets in **clause (c)** and any measures that have been adopted to improve progress.
  - confirmation of whether net gain outcomes for wetland ecology have been achieved, or are expected to be achieved, in the timeframes provided for with reference to **clause (c)**; and
  - if necessary, set out any additional measures that have been, or will be, implemented to achieve a net gain outcome **ten (10) years** after the completion of the measures required by **Conditions EC1, EC2, EC3 and EC23**.
- Within **five (5) years** after the completion of the measures required by **Conditions EC1, EC2 and EC3**, offset sites must be assessed against the following performance targets:

- i. 80% indigenous hydrophyte canopy cover at wetland offset sites;
  - ii. At least nine (9) native hydrophytic species at wetland sites;
  - iii. The presence of *Sphagnum perchaetiale* or *Luzula leptophylla* following any direct transfer;
  - iv. 1:1 replacement of poroporo.
- d) If the report required by **clause (ea)** does not confirm that these outcomes are achieved, the Ecology Site Layout Plan required by **Condition EC24** must be revised to provide for additional offset requirements to achieve a net indigenous biological diversity gain, recalculated using the Biodiversity Offsets Accounting Model (or similar) to account for ecological lag, using attributes of wetland extent, canopy cover and plant diversity, projected over a timeframe no longer than **ten (10) years** following construction, accounting for the existing ecological condition of recipient sites.
- e) The Ecology Site Layout Plan must be re-certified in accordance with **Conditions EC25 and MP2**.

#### EC5 New Zealand Pipit

- a) Prior to the commencement of the New Zealand pipit breeding season any rank grassland within the construction envelope that is not being actively grazed must be mowed and then maintained to continuously achieve a length of less than 200mm long between the months of August to March inclusive where that area may accommodate construction activities during the same period.
- b) Where grass within the construction envelope exceeds 200mm between the months of August to March inclusive, a pre-construction survey of must be undertaken to identify any nesting New Zealand pipit where that area may accommodate construction activities during the same period.
- c) Where an active nesting site is identified by the pre-construction survey required by **clause (b)**, a fifty (50) metre radius exclusion zone, measured from the nest, must be established within which no person or machinery may enter, until the chicks have fledged or the nest has failed or otherwise been naturally abandoned.
- d) Where no active nesting site is identified by the pre-construction survey required by **clause (b)** construction activities authorised by these resource consents that are located in the rank grassland subject to the survey must commence within **three (3) days** of the survey required by **clause (b)** being undertaken.

#### EC6 Biosecurity

- a) To avoid the spread of hornwort and *Didymosphenia geminata*, known as didymo:
  - i. machinery or vehicles entering a waterbody must either:
    - A. have a standdown of at least **forty-eight (48) hours** prior to being in contact with any waterbody in a different catchment; or
    - B. be subject to check, clean and dry procedures.
  - ii. standard check, clean and dry procedures must be adopted for clothing or footwear that has been in contact with a waterbody in a different catchment within the previous **forty-eight (48) hours**.
- b) To manage the risk of invasion by plague skinks, all potting mix and plant material must be inspected for individual skinks and eggs prior to entering a planting area.
- c) To manage the risk of myrtle rust, all new plantings of myrtle species must come from nurseries that are certified under Plant Pass, the voluntary biosecurity certification scheme offered by New Zealand Plant Producers, or an equivalent scheme.
- d) To manage the spread of field horsetail and yellow bristlegrass:
  - i. a pre-construction survey for the presence of these species must be undertaken at all material supply sites identified on **[drawing reference]**;
  - ii. where the survey required by **clause (d)(i)** identifies the presence of these species where practicable, no machinery, equipment or vehicles may be removed from the material supply site until management responses have been completed;
  - iii. in addition to the survey required by **clause (d)(i)**, where these species are discovered during construction the protocols set out in clause (d)(ii) must be implemented; and
  - iv. The results of the survey required by **clause (d)(i)** must be provided to the Regional Councils prior to the construction activities occurring at the material supply sites.

#### EC7 Lizard Management Plan

- a) At least **six (6) months** prior to the commencement of construction activities, the Consent Holder must engage a SQEP in herpetology to prepare a Lizard Management Plan (LMP).
- b) The objective of the LMP is to minimise adverse effects of the Project on lizards to the greatest extent practicable, and where there are residual adverse effects that are more than minor, to offset or compensate those effects.
- c) The LMP must be submitted for certification by the Regional Councils at least **forty (40) working days** prior to the commencement of construction activities.
- d) The clearance of any vegetation within the habitat types listed in **clause (e)** below must not be undertaken during the period of May to September (inclusive) of any year.
- e) Pre-construction lizard surveys and salvage must be undertaken by a SQEP in herpetology no less than **three (3) working days** prior to the clearance of any vegetation within the rank grass (being ungrazed and/or unmaintained improved pasture).
- f) The LMP must include the following:

- i. A Wildlife Act Authorisation (wildlife permit) issued by the Department of Conservation;
- ii. Identification of key personnel including their roles and responsibilities in implementation of the LMP;
- iii. Descriptions of the methodologies to be used for survey, salvage, transfer and release, including the identification of potential habitats for survey and any planned relocations, including the following:
  - A. Pre-clearance salvaging including deployment of Artificial Cover Objects, live capture traps, manual day searching and nocturnal searching;
  - B. Construction-assisted searching;
  - C. During construction searching of felled trees;
  - D. A search effort protocol;
  - E. A handling, data collection and release protocol; and
  - F. Requirements for vegetation stockpiling;
  - G. Identification of suitable release sites subject to habitat enhancement and pest management measures;
  - H. Approaches for the management of injury or death to any individual lizard;
  - I. Protocols for any incidental discoveries of lizards; and
  - J. Descriptions of any reporting requirements.
- g) At least **thirty (30) working days** prior to the LMP being submitted for certification, the Consent Holder must provide a copy of the draft LMP to the Department of Conservation and invite their views on it.
- h) The LMP must include a summary of any feedback received from any consultees about the LMP, changes made in response to that feedback (if any), and where a change is not made the reason(s) for that.

#### EC8 **Bird Strike Monitoring**

- a) Post-construction bird strike monitoring of the wind farm and transmission line should be conducted by a SQEP for **one (1) year** immediately after the wind farm becomes fully operational. If any mortalities of At Risk or Threatened species are detected, a review will be undertaken to determine if further monitoring is required, and any remedial, mitigation or offsetting actions need to be implemented.
- b) Reports of the monitoring required by clause (a) must be produced annually as part of the Annual Reporting under **Condition CM8** and copies must be provided to the Councils.

#### EC9 **Bird Strike Monitoring Plan**

- a) At least **forty (40) working days** prior to the commissioning of the first wind turbine, the Consent Holder shall require a SQEP in terrestrial ecology to prepare and submit a Bird Strike Management Plan (BSMP) for certification by the Regional Councils that meets the information requirements of clauses (b).
- b) The BCMP shall describe the methods to be adopted for recording the frequency of collisions resulting in mortality for all bird species. These methods shall define a search area relative to the height and rotor span of the wind turbines and include the following information:
  - i. Calculation of the probability of bird carcass loss to scavengers, decomposition and other causes, taking into account temporal, environmental and other sources of variation;
  - ii. Calculation of the probability of carcass detection by searchers which may include searching assisted by suitably trained dogs, taking into account temporal, environmental, searcher identity and other sources of variation;
  - iii. A data collection and analysis regime specifying the timing, location and duration of monitoring at a statistically derived number of wind turbines;
  - iv. The data collection and analysis regime shall ensure that a reliable estimate of bird strike mortality and a range of environmental conditions at wind turbines is obtained, while accounting for seasonal variations;
  - v. Methods to accurately record the condition (partial carcass, entire carcass or feather spot) and probable cause of death;
  - vi. Methods for the reporting of bird strike and mortality; and
  - vii. Methods to record, and electronically store, audit and backup data.

#### EC10 **~~Long-tailed Bat~~ Monitoring and Management**

- a) Acoustic bat monitoring must be undertaken at all constructed turbines during the first **five (5) years** of operation of the wind farm, in accordance with the ~~Long-tailed Bat~~ Monitoring and Management Plan in **Condition EC11**.

#### EC11 **~~Long-tailed Bat~~ Monitoring and Management Plan**

- a) At least **forty (40) working days** prior to the commissioning of the first wind turbine, the Consent Holder shall submit to the ~~Manawatu Whanganui and Greater Wellington~~ Regional Councils for certification a ~~Long-tailed Bat~~ Monitoring and Management Plan (BMMP). The BMMP, which will cover both Long-Tailed and Short-Tailed bats, must be prepared by a SQEP bat ecologist with input from a SQEP in biostatistics.

- b) The purpose of the BMMP is to set out the monitoring and adaptive management measures to address actual and potential effects of the Wind Farm on ~~Long-tailed~~ Bats.
- c) The BMMP must include details of a five-year post-construction monitoring plan, and specifically include:
  - i. The survey method, based on best practice;
  - ii. The design and implementation of the acoustic bat surveys, including the sample site locations, must be determined by a SQEP in bat ecology;
  - iii. At least one (1) acoustic bat survey per year must be undertaken to coincide with the peak period of activity for bats (being October to April), and must include at least fourteen survey nights.
- d) A copy of the BMMP must be submitted for certification by the Regional Councils at least **forty (40) working days** prior to the turbines becoming fully operational.
- e) The results of the five-year post-construction bat monitoring shall be provided in writing annually to the Manawatu-Whanganui and Greater Wellington Regional Council, and must include an assessment by a SQEP in bat ecology as to whether regular bat activity near the turbines has been detected at levels which could result in a more than minor effect on ~~long-tailed~~ bats from blade strike.
- f) If an assessment within an annual report required under **clause (d)** is that there could be a more than minor effect on bats from blade strike, or a bat carcass is discovered per **Condition EC12**, then a Bat Curtailment Design Plan (BCDP) shall be submitted for certification to Manawatu-Whanganui Regional Council and Greater Wellington Regional Council.
  - i. The purpose of the BCDP would be to identify measures to reduce the risk of blade strike to bats so that effects are no more than minor.
  - ii. The BCDP would include specific timeframes and conditions under which turbines will cease operation. These parameters would be selected based on site-specific data with input from a SQEP in biostatistics.
  - iii. The BCDP must include the design of a revised adaptive bat monitoring programme to measure the efficacy of the curtailment strategy.
  - iv. The results of the curtailment strategy must be provided to the Councils as part of the annual reporting under **Condition CM8**.

#### EC12 General Response to Bird and Bat Carcasses

- a) Notwithstanding any monitoring and reporting requirements required by **Conditions EC9 and EC11**, the Consent Holder must record and report in writing any evidence of bird and bat strikes identified during any visit by staff or authorised consultant(s) and contractor(s) of Meridian Energy Limited, a SQEP in avian ecology or the relevant councils. Should a bird or bat species that is nationally Threatened or At-Risk as listed in the New Zealand Threat Classification System (<https://nztcs.org.nz/home>) be found injured or dead at the site, the Department of Conservation (Operations Manager, Manawatū) is to be notified immediately. The bird or bat must be photographed as found and the location noted on a map of the site. All injured birds or bats must be transported to the nearest veterinarian and all deceased animals must be bagged, labelled, frozen and transported to the Massey University Veterinary Teaching Hospital for identification and autopsy. If any mortalities of At Risk or Threatened species are detected, a review will be undertaken to determine if further monitoring is required, and any remedial, mitigation or offsetting actions need to be implemented.

#### EC13 Stream Classification

The Consent Holder must, **at least forty (40) working days** prior to the commencement of construction, overlay the existing stream classification with the mapped wetland layer. Where this shows that ephemeral/intermittent systems are not wetlands, the Consent Holder must reassess the classification of those reaches following the Auckland Unitary Plan Practice and Guidance Note for stream classification and provide this to the Councils in accordance with **Condition CM1(b)(5)**.

#### EC14 Fish Removal or Recovery

- a) Where practicable, construction activities should be avoided in a reach of a stream or wetland during the times when migratory fish species could be expected to be passing through the affected reach.
- b) Fish, Kōura and Kākahi must be deterred, removed or recovered from any streams or wetland up to a maximum of **three (3) days** prior to the commencement of construction activities authorised by these resource consents that may impact the reach of stream by:
  - i. capture and relocation in accordance with **clause (d)**; and
  - ii. the use of techniques to encourage fish, Kōura or Kākahi species to move out of the impacted reach.
- c) Fish, Kōura and Kākahi recovery must, depending on habitat type, be undertaken by using a combination of:
  - i. electro-fishing;
  - ii. trapping;
  - iii. spotlighting and netting; or
  - iv. dewatering and muck out; and
  - v. relocating to a suitable habitat.
- d) Except where **clause (e)** applies, the fish recovery required by clause (b) must continue until:
  - i. The catch rate is less than 10% of the first or second (whichever is the greater) recovery event and last recovery event is achieved;



- ii. no brown trout, rainbow trout, Taonga species, 'Threatened' species or 'At Risk – Declining' species are captured.
- e) Where fish numbers are low, such that compliance with clause (d)(i) cannot be achieved, the fish recovery must be completed as directed by a SQEP experienced in aquatic ecology.
- f) Where pest fish species and exotic fish, with the exception of sports fish, are captured they must be humanely euthanised.
- g) Prior to the decommissioning of any temporary diversion channels, fish, Kōura and Kāhaki must be captured and relocated in accordance with **clause (b)**.
- h) A record of the species and number of individual fish recovered in accordance with **clause (b)** must be provided to the Regional Councils on an annual basis, as part of the annual reporting required under **Condition CM8**.

#### EC15 Fish Passage

- a) At least **twenty (20) working days** prior to construction of any culvert(s), the detailed design of fish passage provided through this culvert(s) by a SQEP in freshwater ecology must be provided to the Regional Councils for certification.

**ADVICE NOTE:** Certification (or withholding certification) is based on whether the culvert design achieves fish passage.

- b) Fish passage must be provided for and maintained at all times for any:
  - i. temporary diversions and culverts that are in place for a period of more than **seven (7) days**; and
  - ii. any new permanent culvert or bridge.
- c) Once a permanent culvert is lived, fish passage upstream and downstream through the culvert must be maintained and monitored to ensure that the provision for fish passage does not reduce over its lifetime.

#### EC16 Freshwater Ecology Management Plan

- a) At least **forty (40) working days** prior to the commencement of construction activities authorised by these resource consents, the Consent Holder must submit a Freshwater Ecology Management Plan (FEMP) for certification.
- b) The objective of the FEMP required by **clause (a)** is to appropriately avoid, remedy, mitigate and/or offset any adverse effects ~~minimise the effects~~ of the Project on the freshwater ecology and to demonstrate how the conditions of consent will be met.
- c) The FEMP required by **clause (a)** must contain at least the following:
  - i. the identification of key personnel undertaking the implementation of FEMP, including their roles and responsibilities;
  - ii. fish recovery protocols to provide procedures for the salvage and relocation of fish;
  - iii. site-specific guidance of fish migration and spawning times;
  - iv. confirmation of culvert designs that provide fish passage through:
    - i. alignment with the stream simulation method set out in the design principles contained in the 'New Zealand Fish Passage Guidelines: For structures up to 4 metres, 2018'; and
    - ii. a requirement for culvert design to be reviewed by a SQEP in terms of the design principles contained in the 'New Zealand Fish Passage Guidelines: For structures up to 4 metres, 2018' the capacity of the culvert to enable fish passage through the stream simulation method.
  - v. approaches to stream enhancement, including parameters to enhance the complexity of the habitat within the created channel such as instream debris, pool creation, riffle and run sequences;
  - vi. a description of methods for the ongoing management of, and reporting on, the offsetting measures;
  - vii. a restoration plan designed to achieve the measures set out in **Condition EC19(a)**;
  - viii. response actions and measures to be implemented, including timeframes, where triggered by the results of the monitoring required by **Condition EC17**; and
  - ix. post-construction measurement and monitoring of fish passage parameters at culverts and through new stream reaches;

#### EC17 Freshwater ecology monitoring during construction

- a) Freshwater ecology monitoring must be carried out at existing water quality monitoring sites or where the sites are suitable as determined by an SQEP ecologist, for deposited sediment and macroinvertebrate monitoring;
- b) The monitoring required by **clause (a)** must include:
  - i. baseline monitoring of one event per site with three quantitative samples;
  - ii. ~~response incident~~ monitoring in each catchment when construction activities are being undertaken in that catchment, and result in a sediment discharge that exceeds the visual clarity performance ~~target standard~~ specified in **Condition ES3(e)(ii)**;
  - iii. If visual clarity performance ~~target standard~~ in **Condition ES3(e)(ii)** is exceeded, ~~then~~ SAM2 and SAM5 must be carried out as soon as the water is clear enough to survey. If either SAM2 or SAM5 thresholds are not met, then quantitative macroinvertebrate sampling must be undertaken using Protocol C3 or Protocol C4 set out in the document titled "Protocols for sampling macroinvertebrates in wadeable streams" dated November 2001.<sup>1</sup> Three replicate ~~separate~~ samples must be undertaken, with the results assessed against the baseline parameters

<sup>1</sup> See <https://docs.niwa.co.nz/library/public/ProtocolsManual.pdf>

listed in **subclause (i)** above;

- iv. ~~Include~~ Where practicable, an upstream and downstream location for each identified site. ~~Use of an upstream/downstream regime is likely to be particularly useful in the Mangaroa River catchment. The existing upstream site happens to fall within the restoration reach it was noted.~~
- c) Baseline and routine monitoring during construction must include:
- monthly monitoring of pH, deposited sediment, water velocity, wetted channel width, visual water clarity and photos of stream bed; and
  - bi-annual monitoring of macroinvertebrates and deposited sediment; and
  - during trout spawning period (May – September (inclusive)) whether from the downstream or paired upstream/downstream monitoring of deposited sediment there should be no more than a 10% increase in deposited sediment. Where there is a greater than 10% increase in the extent detected, the response actions set out in the FEMP required by **Condition EC14** and the ESCP required by **Condition ES2** must be implemented so that the trigger levels are no longer exceeded. This discernible increase in deposited sediment may or may not indicate an adverse effect on trout spawning but will trigger onsite investigations into erosion and sediment management practices.
  - If there is any exceedance under **subclause (iii)** above, the Consent Holder must inform the Regional Councils within **two (2) working days** of discovery, and within **two (2) working days** provide confirmation of the response actions being completed demonstrating that trigger levels are no longer exceeded.
- d) Where paired or unpaired monitoring is undertaken and SAM 2 or SAM 5 surveys find a greater than 20% increase in sediment deposition then macroinvertebrate monitoring should be undertaken to assess effects.
- e) Parameters to be used to assess effects required under **clause (d)** must be:
- Quantitative Macroinvertebrate Community Index (QMCI) (noting that one QMCI Unit decline is an indication of adverse effect)
  - Average Score Per Metric (ASPM);
  - Sensitive taxa (i.e., MCI score >7)
- f) Where macroinvertebrate results in accordance with **clause (d) and (e)** indicate an adverse effect, then the Consent Holder must engage a SQEP ecologist to provide recommendations for remediation and/or further monitoring and assessment of adverse effects, and over what timeframes the remediation or monitoring should occur.
- g) A summary report of any monitoring and remediation required to be undertaken must be included in the Annual Report required by **Condition CM8**.
- h) Records of freshwater ecology monitoring must be made available to the Regional Councils on request.

#### EC18 Freshwater ecology monitoring post construction

- a) ~~For post construction~~— In catchments where **Condition EC17(d)** ~~a breach (triggering SAM 2 or 5) has occurred at some time~~ has been breached during construction then a final survey (following the methods set out in **Condition EC17(b)(iv), (c)(iii), (d), and (e)** (following baseline methods) of macroinvertebrates shall must be undertaken to assess effects from the Project on that catchment. The recommendations from the SQEP ecologist for remediation and/or further monitoring shall must be submitted to the Regional Council for certification.
- i. Parameters to be used to assess effects on macroinvertebrates must be:
- QMCI (one QMCI Unit decline is an indication of adverse effect)
  - ASPM
  - Sensitive taxa (i.e., MCI score >7)
- b) Where macroinvertebrate results in accordance with **clause (a)** indicate adverse effect, then the Consent Holder must engage a SQEP ecologist to an expert should provide recommendations for remediation and/or further monitoring and assessment of adverse effects, and over what timeframes remediation or monitoring should occur.
- c) A summary report of the monitoring and remediation undertaken must be included in the Annual Report required by **Condition CM8**.
- d) Records of freshwater ecology monitoring must be made available to the Regional Councils on request.

#### EC19 Measures to offset residual effects on freshwater ecology

- a) Except where revised through the process set out in **Condition EC23**, residual adverse effects on freshwater ecology must be addressed offset to result in no net loss of ecological function through the provision of the following:
- Enhancement of stream length of the Mangaroa tributary on the Project site through the calculated offset ratios of 1:**X** for proposed culverts and 1:**X** for any loss without replacement by way of fencing from stock, planting with indigenous riparian vegetation, instream habitat additions (being the installation of boulders and moderate to large woody debris to enhance existing habitat values), and plant and animal pest management.
  - Following installation of stock fencing, riparian planting of **X**m<sup>2</sup> to a width of 10 metres on either side of the stream.
  - All plant material must be sourced from the rohe in which it is to be planted or be otherwise eco-sourced except, where it is not practicable to do so, the restoration plan required by the FEMP must set out a process of consultation with the Regional Councils to confirm an alternative source.
- b) The ~~offset~~ measures required by **clause (a)** must be specified in a restoration plan required as part of the FEMP that is certified by Council, and the restoration must be completed **within one (1) year** of the completion of the works. ~~and must achieve the following standards set in the condition~~



below.

#### EC20 Environmental compensation performance targets

- a) The measures to offset residual adverse effects required by **Condition EC17** must be implemented to achieve the following outcomes and performance targets, so as to achieve the calculated SEV gain over the offset area ~~and. Outcomes and performance targets are to~~ achieve an indigenous biodiversity net gain:
- Riparian margins that are revegetated with appropriate indigenous species along a combined stream length of [XX];
  - Livestock must be excluded;
  - Pest plants absent or suppressed after **three (3) years** from site preparation;
  - Greater than 80% canopy cover achieved after three (3) to five (5) years from planting.

#### EC21 Sites for offset and compensation measures

- a) Water body diversions or water body loss authorised by these resource consents must not commence until the Regional Councils have been provided with written confirmation that the Consent Holder has entered into enduring legal agreements or holds other authorisations, necessary to allow entry onto land to carry out, continue and maintain all offset measures required by **Conditions EC19 and EC20**.
- b) The written confirmation provided under **clause (a)** must describe the specific enduring legal arrangements and the land to which they apply, including on-going maintenance requirements, that have been entered into to provide the planted areas to be retained in perpetuity and may include land purchase, agreement by providing for covenanting or similar registered title instrument.

#### EC22 Review of measures to offset residual effects on freshwater ecology

- a) ~~Should the Prior to the commencement of construction activities, the offset measures required by Conditions EC19 and EC20 need to be recalculated, this must be undertaken using the published Stream Ecological Valuations (SEV) and Environmental Compensation Ratio (ECR) methodologies, including a re-evaluation of the baseline assumptions of the recipient sites relative to the offsetting model calculations, in respect of the Project construction impact on stream habitat and confirmed locations for offsetting measures. must be confirmed, including the extent and area of the offset measures.~~
- b) Where the recalculation required by clause (a) results in offset requirements that differ to those required by Conditions EC19 and EC20, then within thirty (30) working days the FEMP required by Condition EC16 must be revised to provide for the new offset requirements and submitted to the Regional Councils for certification.

#### EC23 Freshwater Ecology Offset monitoring

- a) Monitoring reports must be prepared and provided to the Regional Councils for each of the ecology offset sites in the third, seventh and tenth year following the completion of the measures required by **Condition EC19** as part of the Annual Report required by **Condition CM8**.
- b) The reports required by **clause (a)** must summarise the progress towards achieving the performance targets in **Condition EC20**;

#### EC24 Ecology Offset Site Layout Plans

- a) Ecology Offset Site Layout Plans must be prepared for:
- offset planting, replacement planting and wetland restoration required by **Conditions EC1 and EC2**;
  - stream enhancement and riparian planting required by **Conditions EC19 and EC20**; and
  - replacement of poroporo as required by **Condition EC3**.
- b) Ecology Offset Site Layout Plans must include, but not be limited to:
- a description of the offset measures to be implemented with reference to **Conditions EC1, EC2, EC3 and Conditions EC19 and EC20**;
  - The volumes and timing of transfer, monitoring and details of replacement until successful transfer is achieved with reference to **Condition EC2**;
  - a site layout plan;
  - a programme for undertaking or implementing the offsetting measures;
  - a description of methods for the ongoing management of the offsetting measures; and
  - confirmation that any necessary resource consents for the implementation of the offset measures have been obtained.
- c) Any Ecology Offset Site Layout Plan must be provided to the Regional Councils for certification at least twenty (20) working days prior to the commencement of the offsetting measures described in that Ecology Offset Site Layout Plan.

#### EC25 Amending an Ecology Offset Site Layout Plan

Any amendments to an Ecology Offset Site Layout Plan must be provided to the Regional Councils for re-certification approval within **ten (10) working days** of the amendment being made. The amendment cannot be implemented until it has been certified by Regional Councils.

#### EC26 Offsetting Oversight and Implementation

- a) Prior to commencement of works authorised by these resource consents, a person or persons must be appointed to oversee the implementation of

the measures required by **Conditions EC1, EC2, EC3 and Conditions EC19 and EC20**.

- b) The name of the person appointed under **clause (a)** must be advised in writing to the Councils.
- c) Where the person appointed under **clause (a)** is replaced temporarily or permanently, the name of the replacement person must be advised in writing to the Councils.
- d) Within **thirty (30) working days** of the implementation of measures required by **Conditions EC1, EC2, EC3 and Conditions EC19 and EC20**, a report must be provided to the Councils to confirm that the work to implement the measures has been completed.

#### **CULVERT DESIGN AND CONSTRUCTION STANDARDS**

- CU1 Culverts must be designed based on rainfall obtained from NIWA HIRDS Version 4 RCP8.5 (2081-2100) applied to the subject catchment area.
- CU2 Culverts must not adversely affect the ability of watercourses to convey flood flows up to and including the flows from a 5% annual exceedance probability (20-year return period) flood event without overtopping, unless the overtopping flows to a specifically designed spillway.
- CU3 Culverts must be designed to convey the flows from a 10-year return period flood event without heading up.
- CU4 Culverts and any erosion protection works must be free of any significant projections out of the smooth line of culvert and any headwall(s) and must tie into the waterbody banks upstream and downstream of the works in a secure and hydraulically smooth fashion, where practicable.
- CU5 Activities authorised by these resource consents must not result in the discharge of contaminants that are toxic to aquatic ecosystems.
- CU6 Any materials (including stockpiles, mounds, depressions, trees / vegetation, excavated material, holes or surplus materials), machinery or equipment from the works authorised by these resource consents must:
  - a) Not be stored in or on the bed of any waterbody; and
  - b) Be removed within **five (5) working days** following the completion of works in that waterbody;
  - c) Be disposed of in an appropriate manner where it will not adversely affect the stream channel or impede the flow of water.
- CU7 Any discharge of sediment into water directly caused by the works authorised by this resource consent must not, after reasonable mixing, cause any change in visual clarity by more than 30% for more than **twenty-four (24) hours** in total across **five (5) consecutive days**.
- CU8 All measures must be taken to ensure that no uncured cement or cement-based products enter the flowing water of a waterbody. Any uncured concrete placed in or near the watercourse must be undertaken in such a manner that no concrete or cement leaches out and enters the watercourse. Such measures may include, but will not be limited to:
  - a) Working during summer low-flow conditions; and
  - b) Containing new concrete in a watertight boxing.
- CU9 New concrete or mortar must not be exposed to the flow of water before the concrete or mortar has hardened to a strength of at least ten (10) megapascal (MPa), or for at least **forty-eight (48) hours** from completion of pouring.
- CU10 Except where a written request is made to the Regional Councils and approved through the SSES CP process, works in the bed of a stream or river must only commence where there is at least **four (4) consecutive days** of settled weather forecast by the New Zealand Meteorological Service for that waterbody's catchment.
- CU11 Except where a written request is made to the Regional Councils and approved through the SSES CP that specified works can proceed, works in the bed of a stream or river must only be undertaken where flows greater than 1% ARI can be diverted around the works area.
- CU12 Remediation of erosion, scour or instability of the stream bed or banks that is attributable to the construction works authorised by these resource consents must be undertaken within **ten (10) working days** or as soon as practicable.
- CU13 Within **twenty (20) working days** of the completion of culvert works specified in a SSES CP, the information required by Regulations 62 and 63 of the Resource Management (National Environmental Standards for Freshwater) Regulations 2020 must be collected and provided to the Regional Councils.
- CU14 Within **twenty (20) working days** of the completion of culvert works specified in a SSES CP, as-built plans must be provided to the Regional Council to demonstrate that the structures have been constructed in accordance with the conditions of these resource consents.
- CU15 In addition to the requirements in **Conditions CU13 and CU14**, within **twenty (20) working days** of the installation and livening of each culvert, an assessment that each individual fish passage structure has been constructed to meet the stream simulation methods (i.e., resulting in a continuous streambed that simulates natural channel width, depth and slope) for fish passage and maintenance of aquatic habitat within and through culverts must be undertaken and provided to the Regional Councils.

#### **Works Completion**

- WC1 Within **forty (40) working days** of completion of construction works for the Project, the Consent Holder must provide the Councils with a set of as-built plans for the following:
  - a) All wind turbines, turbine platforms and foundation areas;
  - b) The internal access road network;
  - c) The location of cabling within the Site;
  - d) All fill disposal sites;
  - e) All culverts and bridges;

- f) All permanent supporting infrastructure; and
- g) Engineering survey plans and sections of major earthworks.

WC2 Within **three (3) months** of the wind farm being fully operational, the following temporary structures must be removed and the land that they were on reinstated to the satisfaction of the Councils:

- a) All portacom and portaloos;
- b) Concrete batching plant;
- c) Fuel storage structures; and
- d) Mobile aggregate crushing plant.

## WIND FARM OPERATION

### Operational Noise

#### *Operational Noise – Non-Turbine Related*

WFO1 Noise generated by any operational activities within the Project Envelope, other than wind turbine construction and operational activities, must not exceed the following limits when measured at, or within, the notional boundary of any consented dwelling:

- a) 7.00 am – 7.00 pm daily 55 dB  $L_{Aeq(15min)}$
- b) 7.00 pm – 7.00 am daily 45 dB  $L_{Aeq(15min)}$  and 75 dB  $L_{AFmax}$

Except as otherwise provided for by the conditions of this resource consent, noise must be measured in accordance with the requirements of 'NZS6801:2008 Acoustics – Measurement of Sound' and assessed in accordance with the requirements of 'NZSS6802:2008 Acoustics – Assessment of Environmental Sound'.

**ADVICE NOTE:** Consented dwelling for the purpose of this condition means any dwelling authorised by a resource consent or building consent at the date of granting of these resource consents. For the avoidance of doubt this includes any lawfully established dwellings.

**ADVICE NOTE:** For the avoidance of doubt this shall include operation of any meteorological masts, including wind-related noise from their structures.

#### *Operational Noise – Turbine Operation*

WFO2 All wind turbines must be designed, constructed, operated and maintained to ensure sound levels generated by turbines do not exceed the background sound plus 5dB  $L_{A90(10min)}$  or a level of 40 dB  $L_{A90(10min)}$  whichever is the greater.

WFO3 For the purpose of demonstrating compliance with **Condition WFO2**, wind farm sound must be measured and assessed in accordance with the requirements of 'NZS6808:2010 Acoustics – Wind Farm Noise'. The following points are to be observed in carrying out this measurement and assessment:

- a) The operational and background noise levels are to be assessed for the night-time period only (generally this period starts one (1) hour after sunset and ends one (1) hour before sunrise);
- b) All noise data is to be referenced to hub height wind speeds and wind directions as measured at the meteorological mast;
- c) Any periods including curtailment or other limited operation of turbines shall be identified, and included in the assessment only if they appropriately represent normal operation of the wind farm;
- d) If tonality is suspected it is to be assessed using the reference method prescribed in Annex C to ISO 1996-2:2017, and using the tonal audibility level determined in accordance with ISO/PAS 20065:2016.
- e) If special audible characteristics other than tonality are suspected, they will be assessed as required by section 5.4 in NZS6808:2010 using prevailing best practices.

**ADVICE NOTE:** Consented dwellings for the purpose of this condition means any dwelling authorised by a resource consent or building consent at the date of granting of these resource consents. For the avoidance of doubt this includes any lawfully established dwellings.

#### *Pre-Instalment Acoustic Assessment*

WFO4 At least **ten (10) working days** prior to the installation of any wind turbine authorised by these resource consents, the Consent Holder must submit a Noise Modelling Report prepared by a SQEP in acoustics to the District Councils for information in accordance with 'NZS6808:2010 Acoustics – Wind Farm Noise'.

WFO5 The Noise Modelling Report required by **Condition WFO4** must:

- a) Demonstrate, based on the sound power level of the nominated turbine, that the limits referenced in **Condition WFO2** can be met;
- b) Include the 35 dBA contour for the proposed turbine(s); and
- c) Identify the representative consented dwellings within the 35 dBA contour to be measured and assessed in accordance with **Condition WFO3**.
- d) Include the 40 dBA contour for the proposed turbine(s) to enable the Councils to describe the area which may be unreasonable to establish new dwellings.

### Operational Noise Management Plan

WFO6 At least **twenty (20) working days** prior to the commissioning of the first wind turbine as part of the Project, the Consent Holder must submit an Operational Noise Management Plan (ONMP) prepared by a SQEP in acoustics to the District Councils for certification.

WFO7 The objective of the ONMP required by **Condition WFO6** shall be to ensure:

- a) The operation of the wind turbines complies with the requirements of **Condition WFO2** of these resource consents; and
- b) Operational noise generated by the turbines is managed in accordance with the requirements of section 16 of the Act, so as to adopt the best practicable option to ensure the emission of noise does not exceed a reasonable level.

WFO8 The ONMP must, as a minimum, include the following information:

- a) An assessment of background sound levels in accordance with the requirements of 'NZS6808:2010 Acoustics – Wind Farm Noise' prior to the commencement of any construction work;
- b) Wind turbine selection, having regard to the sound power level predictions obtained in accordance with Section 6.2 and the special audible characteristics in Clause 5.4.1 of the Standard;
- c) Procedures for ensuring compliance with the noise conditions of these consents, including noise compliance testing, methods for addressing non-compliance, designated contact persons and complaints procedures;
- d) Procedures for addressing turbine malfunctions that cause material noise effects beyond typical operational noise;
- e) Procedures for ensuring that the best practicable option is adopted to ensure the emission of noise from the operation of the Project does not exceed a reasonable level;
- f) Requirements for post-construction noise monitoring and assessment;
- g) Provisions regarding the review, and updating, of the ONMP;
- h) A summary of any feedback received from the SQEP acting on behalf of the District Councils about the ONMP arising from the invitation for comment made under **Condition WFO9**, changes made in response to that feedback (if any), and where a change is not made the reason(s) for that.

WFO9 At least **fifteen (15) working days** prior to the ONMP being submitted for certification, the Consent Holder must provide a copy of the draft ONMP to the SQEP acting on behalf of the District Councils, and the SLG and invite their views on it.

### Compliance Testing

WFO10 Within **three (3) months** of completion of commissioning of the last turbine, a Compliance Assessment Report must be prepared by a SQEP in acoustics in accordance with the requirements of 'NZS6808:2010 Acoustics – Wind Farm Noise' and submitted to the District Council for information.

WFO11 The Compliance Assessment Report required by **Condition WFO10** must demonstrate compliance of the turbines with the sound levels specified by **Condition WFO2** and must demonstrate compliance of the meteorological mast with the sound levels specified by **Condition WFO1**.

### Operational Lighting

WFO12 A detailed lighting design shall be prepared by a SQEP in lighting design and submitted to ~~Tararua District Council and Masterton~~ the District Councils for information at **least forty 40 working days** prior to construction for comment. The lighting design will, as a minimum, include the following information:

- a) An assessment outlining the results of obtrusive light calculations for spill light and glare ~~to confirm~~ based on the initial lumen output of the luminaires and applying ~~accounting for~~ a Maintenance Factor of 1.0.
- b) Demonstration of compliance with the relevant District Plan standards.
- c) Confirmation of the Civil Aviation requirements for the marking of wind farm turbines and obstacle lighting and any other requirements specified through compliance with **Condition CAR1**.
- d) Confirmation that all luminaires, other than aviation obstacle warning lights, shall be selected, designed, shielded and/or mounted in such a manner to ensure that they emit no direct light above the luminaire.
- e) Confirmation that all fixed outdoor lighting (i.e. lighting other than vehicle mounted lighting), except aviation obstacle warning lights, shall have a colour temperature not exceeding 3000K.
- f) Confirmation that all fixed lighting shall be designed to comply with the recommended light spill and luminous intensity limits set out in AS/NZS 4282:2023 (Control of the obtrusive effects of outdoor lighting). The applicable receiving environment shall be zone A2 (low district brightness).
- g) The aviation obstacle warning lights shall have the following initial characteristics as advised by the manufacturer:

<u>AVIATION WARNING LIGHT TYPE</u>	<u>DECLINATION ANGLE (ZERO IS HORIZONTAL THROUGH THE LUMINAIRE) – DEGREES (°)</u>	<u>MAXIMUM NIGHT TIME LUMINOUS INTENSITY BETWEEN DUSK AND DAWN – CANDELAS (cd)</u>
<u>LOW INTENSITY</u>	<u>Any</u>	<u>32</u>
<u>MEDIUM</u>	<u>0</u>	<u>2000</u>

<u>INTENSITY</u>	<u>-1.5</u>	<u>800</u>
	<u>-3</u>	<u>200</u>
	<u>-5</u>	<u>60</u>

WFO13 Within **one (1)** month of wind farm an operational lighting report prepared by a SQEP in lighting design confirming that the lighting has been installed in accordance with the requirements of **Condition WFO12** and **Condition CAR1**.

#### DECOMISSIONING OF WINDFARM

DT1 In the event the Wind Farm ceases to generate electricity for a continuous period of **thirty-six (36) months**, the Consent Holder must remove from the site all turbines and other above- ground structures and revegetate exposed surfaces within a period of no more than **four (4) months** following the close of the prior period. All turbine foundations, hardstand areas and any other ancillary building foundations must be covered with topsoil and/or cleanfill material and revegetated. Notice that decommissioning of the Wind Farm and site remediation activities have been completed must be provided to the Councils within **five (5) working days** of completion. All remedial works must be completed to achieve 80% coverage of exposed surfaces to the satisfaction of the Council(s). Appropriate traffic management must be in place when using local roads.

**ADVICE NOTE:** For the avoidance of doubt, the obligations under this condition does not apply to the terminal substation.

**ADVICE NOTE:** This requirement does not extend to closure of the Wind Farm for any reason of force majeure, including but not limited to any natural hazard event.