

PROPOSED TARARUA DISTRICT COUNCIL TE RERE HAU EASTERN EXTENSION CONDITIONS

General

1. The proposed Te Rere Hau Wind Farm be constructed and operated generally in accordance with all the information, site plans and drawings accompanying the application or submitted as additional information.
2. Each turbine shall be located within a 30m radius of its nominated co-ordinates as outlined in the Application (Kevin O'Connor Associates drawings 1 to 28, Job No. 208166).

Advice Note: The ability to alter the specific location of each turbine within a 30m radius is to provide for likely movement related to detailed design layout, to take into account the geological conditions of the site and the recommendations made in the Applicant's ecologist's report.

Construction Noise

3. Noise from all construction and decommissioning work including (but not limited to):
 - (a) site works;
 - (b) wind turbine generator (WTG) foundation construction;
 - (c) WTG assembly and placement;
 - (d) WTG removal;
 - (e) foundation demolition and removal; and
 - (f) land reinstatement

shall be measured, assessed and controlled using NZS6803:1999 *Acoustics – Construction Noise*. The noise limits shall be those set out in Table 2 of NZS6803:1999 for works of a “long term” duration.

Operational Noise (Non-Turbine Related)

4. Noise from all other activities (other than WTG operation and construction activities) shall not exceed the following limits at or within the boundary of any land (other than the windfarm site or a road):

7.00am to 7.00pm 55dBA L10

7.00pm to 7.00am 45dBA L10 and 70dBA Lmax

Sound levels shall be measured in accordance with New Zealand Standard NZS6801:1999 *Acoustics – Measurement of Environmental Sound* and assessed in accordance with NZS6802:1991 – *Assessment of Environmental Sound*.

Operational Noise (Design of Wind Farm)

5. Prior to the commencement of construction of the TRHE wind farm, a report prepared by a suitably qualified and experienced person shall be submitted to the Manager Environmental Services Tararua District Council stating that the wind farm has been designed and laid out so that sound levels when measured in accordance with NZS6808:1998 together with any sound emitted from any other wind farm in the area (which is consented at the time of the TRHE grant of consent) operating in compliance within its consent conditions, does not exceed the noise limits set out in Condition 9.

Operational Noise Management Plan

6. Prior to the installation of any wind turbines, a noise management plan shall be prepared by suitably qualified and experienced person(s) engaged by the consent holder, with input from representatives of the Tararua District Council. This Plan shall include:
 - A process for managing complaints;
 - Agreed procedures for investigation of complaints;
 - Agreed remediation measures if compliance is not able to be demonstrated;
 - Procedures for ongoing consultation and liaison with the community.
7. The information collected as part of the implementation of the Noise Management Plan shall be provided to the Manager Environmental Services Tararua District Council.

Advice Note: All costs associated with the preparation and implementation of the Noise Management Plan shall be met by the Consent Holder.

Operational Noise (Turbines)

8. For the purposes of these consent conditions, the “notional boundary” mentioned in condition 9 below shall be interpreted as a line 20 metres from any side of a dwelling, or the legal boundary where this is closer to the dwelling.
9. The regression curve representing sound levels measured at Pt Lot 2 DP 51393, Section 115 BLK VI Mangahao SD, and Section 9 BLK XIX Mangahao SD during the operation of TRHE wind farm shall not exceed the greater of 40dBA or the best fit regression curve of the A-weighted background sound level (L95) plus 5dB when measured in accordance with NZS6808:1998 *Acoustics – The Assessment and Measurement of Sound from Wind Turbine Generators* and in accordance with the following additional conditions:
 - (a) The 10 minute background sound levels (L95,10) shall be measured at any point within the notional boundaries of the three dwellings existing at the date of this consent on Pt Lot 2 DP 51393, Section 115 BLK VI Mangahao SD, and Section 9 BLK XIX Mangahao SD]
 - (b) The 10 minute average wind speeds shall be measured at a height of 30 metres concurrently with the wind direction and the 10 minute background L95,10 measurement (and called data pairs).
 - (c) The wind speed and wind direction measurements shall be made within the TRHE site.
 - (d) Background sound level L95,10 shall be correlated with wind speed, and wind direction and time of day.
 - (e) The size of each class in each parameter shall not be more than:
 - wind speed – 1m/s bins
 - wind direction – 45° arc
 - time of day – night time (1 hour after sunset to 1 hour before sunrise) and daytime

The four predominant wind direction areas are:

- WNW – 270°-315° relative to true north (typically 37% frequency)

- NNW – 315°-0° relative to true north (typically 28% frequency)
- SSE – 135°-180° relative to true north (typically 19% frequency)
- ESE – 90°-135° relative to true north (typically 8% frequency)

The total number of data points obtained across all wind speed and directions shall not be less than 1440. In respect of each of the four predominant 45° wind direction arcs, the total number of data points obtained for background sound or compliance testing shall (unless exceptional wind conditions preclude it) be not less than 200 (but not less than 350 for arcs SSE and ESE) and shall be sufficient to cover the range of wind speeds set out in NZS 6808:1998

In respect of the other four 45° wind direction areas, there shall be no minimum number of data points for any or all wind speed bins.

- (f) The pre-installation analysis shall exclude sounds from the existing Te Rere Hau windfarm.
- (g) The following effects shall be excluded from the pre-installation and compliance analysis:
 - seasonal sounds (eg of seasonal cicadas, crickets and frogs etc)
 - other identifiable noise sources (eg tractors working at night, pumps, periods of precipitation etc)
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- (h) Sufficient data shall be gathered such that accurate best-fit regression curves can be obtained.
- (i) Post-installation compliance testing shall be carried out at the same locations as the background sound monitoring as soon as reasonably practicable over a 6 month period after completion of the wind farm. If the wind farm is not completed within a year then compliance testing shall be undertaken annually in any year in which turbines are constructed.
- (j) The same parameters as required for the background noise monitoring shall also be measured for post-installation compliance testing. The cut-in operation times of the WTG shall also be recorded and this shall be indicated on the results.
- (k) A best fit regression curve shall be provided for the day and night time period for each of the four predominant wind directions described in condition (e) above. Each curve shall include wind speeds from cut-in to 14m/s.
- (l) The best fit regression curve of the L95,10 of the WTG's for each of the regression curves prepared under condition (k) above, is not to exceed the relevant noise limit for the site.
- (m) If special audible characteristics are present at the notional boundary of Pt Lot 2 DP 51393, Section 115 BLK VI Mangahao SD, and Section 9 BLK XIX Mangahao SD an appropriate penalty (as identified in 'n' below) shall be applied.
- (n) Tonality shall be assessed at the residential locations listed in condition (m) using the method described in Annexure C to ISO 1996-2:2007 and the penalty for tonality shall be as described in that standard.
- (o) Assessment of compliance of other properties may involve on-off testing. This shall be carried out for Lot 1 DP 73900. Where reasonable doubt exists regarding compliance at any other dwelling (at the notional boundary) existing at the date of this consent then monitoring shall be repeated at that location.

- (p) Sound monitoring equipment shall conform to the following requirements:
- the complete measurement and analysis measurement system shall conform to the requirements of NZS6808:1998 and the Standards referred to by NZS6808, and
 - microphones shall be fitted with a wind shield such that the noise generated by wind on the wind shield is, to the extent practicable, at least 10dBA below the noise being measured.
- (q) All results shall be provided in a timely manner to the Manager Environmental Services, Tararua District Council.
- (r) All sound monitoring shall be carried out by suitably qualified and experienced persons.
- (s) The consent holder shall provide all necessary data required to carry out the compliance testing including:
- wind speeds at 30m and direction during periods of compliance testing;
 - the times at which individual wind turbines are operating above the cut-in wind speed;
 - the number of turbines operating which:
 - where the wind farm is not fully constructed, represent the nominal full operation of the wind farm turbines constructed as at the date of monitoring;
 - once construction is complete, represent the nominal full operation of the wind farm.
 - any other information required by the Manager Environmental Services Tararua District Council.
- (t) The operator of the wind turbines shall pay all costs associated with compliance testing.
- (u) Where compliance is not achieved then the consent holder shall propose and implement remedies within three months. If compliance is not achieved within that time then the consent holder shall cease operation of the WTG's until modifications are made to reduce the noise. Further WTG operation shall only be for sound measurement checks as specifically agreed with Council's Manager Environmental Services to demonstrate compliance.
- (v) For the purposes of ascertaining the contribution of sound from the TRHE wind farm to total wind farm sound received at or within the notional boundary of any dwelling existing at the date of the grant of the consent, the consent holder shall upon reasonable request from the Manager Environmental Services Tararua District Council, make arrangements for the TRHE wind turbines to be temporarily switched off, as soon as reasonably practicable after the request, for the purposes of sound measurements.

Advice Note: Such switch off periods shall only occur for the purposes of sound measurements, and the measurement regime should be designed to minimise the amount of time shutdowns are required.

.Roading and Traffic

10. Prior to any construction works commencing, the Consent Holder shall submit and have approved by Tararua District Council's Roading Manager, a Traffic Management Plan including, but not limited to, a construction timetable, details of heavy vehicle movements to and from the site and specific management techniques to avoid conflict between cyclists and heavy vehicles using the Pahiatua Track.

Advice Note: The Plan is to be prepared in accordance with the Palmerston North City Council (PNCC) Traffic Management Guidelines (2000), as PNCC has delegated responsibility for North Range Road and should provide for safe and practical access to and from the site during the construction phase of the wind farm.

Advice note: During times when the Manawatu Gorge is closed, no heavy vehicle traffic relating to the proposed Te Rere Hau Eastern Extension shall be permitted to turn right into North Range Road from Pahiatua Track.

11. The Consent Holder shall regularly carry out sufficient roading maintenance works to maintain the length of North Range Road from Pahiatua Track to the wind farm site to the same standard (or better) that it was at the date of the grant of this consent. The maintenance works are to be carried out until all construction works for the wind farm have been completed, at which time the maintenance liability will revert back to the Council.
12. No oversize vehicles associated with the construction, use and/or maintenance of the wind farm shall be permitted to access North Range Road via direct right-hand turn from Pahiatua Track in instances where the Manawatu Gorge is closed.

Ecological

Bird Strike

13. The Consent Holder shall engage a suitably qualified avifauna expert to prepare a Strike Monitoring Programme in order to locate and record any bird or bat strike on the TRHE Wind Farm for a period of three years after the wind farm becomes operational. The recorded location from which dead or injured birds have been retrieved / recovered shall be recorded on a New Zealand map grid co-ordinate.
14. The Strike Monitoring Programme shall include:
 - a. A dedicated “collision carcass retrieval team” who will undertake grid searches in an area of 100m² beneath 30% of operational turbines once a day for one day a week in the months of January, August and November for a period of three years post-construction;
 - b. The retrieval of bird carcasses found during routine maintenance at each turbine, with increased surveillance by ground staff during the breeding season (spring and early summer) for the entire consent period;
 - c. The identification and age of bird carcasses as well as the cause of death (where possible) determined by a professional avian autopsy service;
 - d. Recording of the weather conditions at the time the carcass is found and at the time the bird died (where possible).
15. A report will be produced by a qualified avifauna expert at the end of each year detailing all bird fatalities, known or likely cause of death and any species, seasonal or spatial patterns and a copy of this report shall be submitted to the Environmental Services Manager Tararua District Council and the Department of Conservation (Wellington) office.

Resident Birds and New Zealand Pipit

16. A suitably qualified avifauna expert shall develop and undertake a survey for resident birds, in particular kereru, tui and New Zealand pipit, in late spring before construction commences in order to determine relative abundance of these key species, use of the site, use of the turbine rotor sweep area, and locate any

nesting pipit. The results of this survey shall be provided to the Manager Environmental Services Tararua District Council and the Department of Conservation (Wellington Conservancy). Should the Manager Environmental Services Tararua District Council consider that it is necessary, one further survey shall be undertaken in summer and/or one in autumn in the first year after construction has commenced. The results of this survey shall be provided to the Manager Environmental Services Tararua District Council and the Department of Conservation (Wellington Conservancy).

New Zealand Falcon

17. A suitably qualified avifauna expert shall develop and undertake New Zealand falcon surveys in November, December and January in order to determine use of the site by New Zealand Falcon. The results of this survey shall be provided to Manager Environmental Services Tararua District Council and the Department of Conservation (Wellington Conservancy). The November survey shall be undertaken before construction commences. Should any nesting falcon be located, construction works shall be delayed in a 200m radius from the nesting site until the falcon chicks have fledged.
18. If New Zealand falcon are identified as utilising the site, the Consent Holder shall agree the extent of further monitoring required with the Manager Environmental Services Tararua District Council in order to assess how much these falcon use the wind farm area and to establish risk and options for mitigation. The results of this additional monitoring shall be provided to the Manager Environmental Services Tararua District Council and the Department of Conservation (Wellington Conservancy).

Bats

19. A suitably qualified ecologist shall undertake a monitoring survey for bats on the site in late spring and again in summer, using a minimum of four automated bat boxes deployed for a period of seven at each sampling event to confirm whether any bats are utilising the site. The results of this bat survey shall be provided to the Manager Environmental Services Tararua District Council and the Department of Conservation (Wellington Conservancy). The spring survey shall be undertaken before construction commences. Should any bat roost sites be located, construction works shall be delayed in a 200m radius from the roost site until the bats and/or any pups have vacated the roost.
20. If bats are identified as utilising the site the Consent Holder shall agree the extent of further monitoring required with the Manager Environmental Services Tararua District Council in order to assess how much the bats use the wind farm area and to establish risk and options for mitigation. The results of this additional monitoring shall be provided to the Manager Environmental Services Tararua District Council and the Department of Conservation (Wellington Conservancy).

Reptile

21. Prior to construction works commencing a suitably qualified ecologist shall develop and carryout a further survey of reptiles and potential habitats subject to construction activities, to determine whether any reptiles are using these areas, particularity targeting Ornate Skink, Wellington Green Gecko and Pacific Gecko. The results of this survey shall be provided to the Manager Environmental Services Tararua District Council and the Department of Conservation (Wellington Conservancy).
22. If any reptiles are found, a translocation plan shall be developed in consultation with the Manager Environmental Services Tararua District Council and any necessary permits obtained from the Department of Conservation before the translocation occurs.

Advice note: If any reptiles are found in Horopito Scrub habitat, consent for the clearance of that habitat will be required from the Manawatu-Wanganui Regional Council.

Landscaping and Earthworks and Other Site Works

23. The external parts of the turbines shall be finished in a light blue-grey colour to assist in reducing the prominence of the turbines when viewed from a distance. In addition, to minimise blade glint, the paint used for the turbine blades shall have a gloss level not exceeding 30%.
24. The Consent Holder shall submit for approval to Manager Environmental Services Tararua District Council detailed earthwork plans for all cut and fill earthworks. These plans must:
 - identify the disposal sites for fill;
 - for all cuts less than 1.5 metres, show recontouring into the existing topography.
25. The Consent Holder must ensure that all cut and fill earthworks and disposal of fill is undertaken generally in accordance with the approved earthwork plans required by Condition 24.

Cultural and Archaeological

26. If at any time during the site excavations authorised by this Consent potential historic artefacts or cultural remains or koiwi items are discovered, then all work shall stop and the Consent Holder shall immediately advise the Manager Environmental Services Tararua District Council, the Historic Places Trust (to determine whether a consent from the Historic Places Trust is required), Tanenuiarangi Manawatu Inc, Rangitane o Tamaki a nui a rua and Nga Hapu o Himatangi. The Consent Holder shall also call its archaeological advisor to the site to verify whether or not the objects form archaeological evidence. Further excavation work at the site shall be suspended should tangata whenua wish to carry out their procedures and tikanga for removing taonga. In the interim the contractor, supervising engineer or Consent Holder shall secure the site until approval to proceed has been granted. Work at the site shall not recommence until approval to do so has been given by the Manager Environmental Services Tararua District Council.

Advice Note: The Consent Holder is reminded of its obligations under the Historic Places Act 1993.

27. If Historic Places Trust consent is required pursuant to condition 27, work may only recommence once the appropriate consent has been obtained and a copy provided to the Manager Environmental Services Tararua District Council.
28. Where tangata whenua have nominated that sites of significance exist in relation to this site, the Consent Holder shall invite tangata whenua to be present at times excavations are being undertaken in these nominated sites, in order that they may observe the excavations to identify if any historical artefacts or cultural remains or koiwi are uncovered.

Advice Note: Any discussion regarding reimbursement for representatives of tangata whenua being present on the site is a matter that is between the Applicant and tangata whenua.

29. Prior to the commencement of any works on the application site, the Applicant will provide to Council for certification an 'Accidental Discovery Protocol' to be adhered to during the construction phase of the wind farm. This will include, but not be limited to, procedures to respond to any discovery of archaeological or cultural artefacts as described in Condition 26 above.

Implementing Consent

30. Upon completion of the work required by conditions 6, 9, 14, 15, 17, and 22 above and prior to the operation of the wind farm, the Consent Holder shall give written notice to the Manager Environmental Services Tararua District Council, or their nominee, that the conditions that have been complied with. On receipt of that notice the Manager Environmental Services or their nominee will carry out an inspection of the site, if necessary, to ensure that the conditions have been complied with. Once the conditions have

been fully met a performance certificate will be issued and the operation of the wind farm may be commenced.

31. This consent shall lapse eight years after the date of commencement, unless the consent is either given effect to before that lapsing date, or unless the Tararua District Council fixes a longer period pursuant to section 125 of the Resource Management Act 1991.

Wind Farm Decommissioning

32. Within 12 months of the wind farm ceasing to operate all structures used for the operation of the wind farm (including all turbine structures, and accessory buildings but excluding the foundations) shall be removed completely from the site by the Consent Holder.

Consent Monitoring

33. A monitoring fee set in accordance with the Tararua District Council Annual Plan, shall be paid at the time the resource consent is granted to cover the cost of monitoring compliance with the above conditions.
 - (i) A fee will be payable by the Consent Holder if any non-compliance with the conditions of this consent are discovered as a result of monitoring. This fee is set in accordance with Section 36(1) of the Resource Management Act 1991 and Section 690A of the Local Government Act 1974.