

BEFORE THE HEARING COMMISSIONERS
AT PALMERSTON NORTH

IN THE MATTER OF of the Resource Management Act 1991

AND

IN THE MATTER OF of a review by PALMERSTON NORTH CITY
COUNCIL of the conditions of consent for
Te Rere Hau Windfarm under section 128
of the Act

**JOINT WITNESS STATEMENT ON PLANNING MATTERS OF CRAIG AUCKRAM
AND ADRIAN LOW**

11 SEPTEMBER 2017

1. INTRODUCTION

- 1.1 This joint statement has been prepared by Adrian Low of Mitchell Daysh Limited in his capacity as a planning expert engaged by New Zealand Windfarms Limited ("**NZ Windfarms**") and Craig Auckram of Palmerston North City Council ("**PNCC**") in his capacity as the planning expert for PNCC.
- 1.2 Expert conferencing occurred on 6 September 2017.
- 1.3 Adrian Low's qualifications and experience are set out in his primary statement of evidence, and Craig Auckram's qualifications and experience are set out in his s42A report prepared for this hearing.
- 1.4 We confirm that we have read and agree to comply with the Code of Conduct for Expert Witnesses set out in the Environment Court's Practice Note. This evidence is within our area of expertise except where we have stated that we are relying on the evidence of another person. We have not omitted to consider material facts known to us that might alter or detract from our expressed opinions.

2. SCOPE

- 2.1 This joint statement covers:
- 2.1.1 the relevant plan provisions relating to the PNCC review under section 128 of the Resource Management Act 1991 ("**RMA**") of the conditions of consent for Te Rere Hau ("**TRH**") in Palmerston North; and
- 2.1.2 the proposed wording of consent conditions.
- 2.2 We were provided the *Joint Statement of Acoustic Experts for New Zealand Windfarms Limited and Palmerston North City Council (8 September 2017)* (hereafter referred to as the "**Acoustic Joint Statement**") after our 6 September 2017 conferencing, but before completing this statement. We have considered its content in preparing this statement, and refer to it where relevant.

3. RELEVANT PLAN PROVISIONS

3.1 It is agreed the planning documents containing relevant provisions under s104(1)(b) are:

3.1.1 The National Policy Statement on Renewable Electricity Generation 2011 ("**NPSREG**")

3.1.2 The Manawatu-Wanganui Regional Council One Plan ("**One Plan**");

3.1.3 The Operative Palmerston North City District Plan ("**Operative District Plan**"); and

3.1.4 The Operative Palmerston North City District Plan as amended by the Decisions Version of Plan Change 15A-G ("**PC15**").

3.2 It is also agreed that the most relevant provisions in those planning documents are those set out in Attachment 2 of Mr Low's statement except for the District Plan objectives and policies in Chapter 9 addressing airport noise which Mr Low has listed in error.¹

3.3 With respect to the provisions of the relevant planning documents it is agreed that:

3.3.1 The planning documents attribute TRH and the renewable electricity it generates regional and national significance.

3.3.2 The planning documents direct that the continued operation of TRH be provided for, and that regard is to be had to the benefits of enabling its increased generation capacity and efficiency.

3.3.3 The planning documents contemplate this type of infrastructure activity locating in PNCC's rural environment.

3.3.4 The planning documents do not seek artificial noise in the rural environment be inaudible beyond the boundary, and that principle applies to wind farm noise. But the planning documents do seek the adverse effects of activities in the rural environment be avoided, remedied or mitigated such that the amenities of the area are maintained.

¹ Objective 5 and 6 and their associated policies.

- 3.3.5 The planning documents do not identify the receiving environment for TRH noise as having any particularly special or unique amenity values or characteristics relative to other rural areas in Palmerston North City. The only exception being where PC15 identifies the area within nearby rural residential overlay as a High Amenity Area for the purposes of NZS68089:2010.
- 3.3.6 The planning documents direct that the noise from windfarms in rural areas in the District be assessed, controlled and measured in accordance with the relevant New Zealand Standard.
- 3.3.7 At this site, and in the planning context that applies to it, using NZS6808:2010 would be an appropriate means of managing TRH noise effects, noting that application of the Standard “will provide reasonable protection of health and amenity at noise sensitive locations”.

4. CONDITIONS

- 4.1 It was agreed that the conditions contained in the attachment to Mr Low’s evidence are acceptable, without further adjustment except for:
- 4.1.1 Condition 4.
 - 4.1.2 Condition 5.
 - 4.1.3 Condition 8.
 - 4.1.4 Condition 10.7.
 - 4.1.5 Condition 12.
- 4.2 Matters of agreement and disagreement in respect of each of these conditions are set out in the tables below. With respect to those tables it is noted that:
- 4.2.1 Matters highlighted in blue are changes proposed in the strikethrough version of conditions.
 - 4.2.2 Matters highlighted in yellow are changes proposed in the strikethrough version of conditions attached to Mr Low’s evidence.
 - 4.2.3 Matters highlighted in green are changes agreed in the Acoustic Joint Statement.

4.2.4 Matters highlighted in red are changes proposed in the conditions attached to Mr Low's evidence where there is no agreement.

CONDITION 4

4.3 Matters of agreement and disagreement on condition 4 are as follows:

Changes agreed in Acoustic Joint Statement	Matters Not Agreed in Acoustic Joint Statement	Matters Agreed as Between Mr Low and Mr Auckram	Matters Not Agreed as Between Mr Low and Mr Auckram
<p>4. The wind farm shall operate such that when measured within the notional boundary of any residential dwelling For residences in existence at the time this consent was granted on 30 May 2005 that is are within the Rural Residential Overlay mapped in the Palmerston North District Plan as notified in Plan Change 15, the wind farm shall operate such that wind farm noise does not exceed the greater of:</p> <p>4.1 35 dB(A); OR</p> <p>4.2 The background noise level plus 5 dB(A).</p> <p>This condition only applies twelve months after the conditions have been amended pursuant to PNCC's review under RMA, s 128(1)(c), from 7pm to 7am during evening and night-time, up to a hub height wind speed of [5.7.8 m/s] and where the difference between operational and background noise levels is greater than 3 dB(A) in accordance with Section C5.3.1 of NZS 6808:2010, otherwise condition 5 applies.</p> <p>This condition does not apply to any property owned by the Consent Holder, or which has a covenant in favour of the Consent Holder, or is owned by a home owner who has confirmed in writing that they consent to this condition not applying to their dwelling</p>	<p>Whether condition 4 should apply at windspeeds below 6 or 8 m/s.</p>	<p>It is agreed that whether condition 4 should apply at windspeeds below 6 m/s (as recommended by Dr Chiles and Mr Halstead) or 8 m/s (as recommended by Mr Evans and Mr Lloyd), is a technical matter based on the correct application of NZS6808:2010 to this circumstance.</p> <p>It is agreed that the final paragraph of proposed condition 4 contained in the version of conditions attached to Mr Low's evidence (and accepted in the Joint Acoustic Statement) should be deleted as it would apply to any dwelling NZ Windfarms reaches agreement with in the future, and we understand it could result in the permitted noise contour for TRH being larger than currently contemplated. This could mean other properties may be effected in a different way than currently contemplated, and additional properties may be affected by wind farm noise. However, it is also agreed that the three properties at which the consent holder is currently exempt from complying with noise standards under the current consent should remain exempt under the revised conditions. Therefore, it is agreed the following additional text be added to condition 4 (and 5).</p> <p><i>This condition does not apply to the dwellings on Lot 1 DP 20911 (130 Harrison Rd), Lot 2 SP 85413 (629 Pahiatua Track) and Lot 1 DP 85413 (631 Pahiatua Track).</i></p>	<p>None.</p>

CONDITION 5

4.4 Matters of agreement and disagreement on condition 5 are as follows:

Changes agreed in Acoustic Joint Statement	Matters Not Agreed in Acoustic Joint Statement	Matters Agreed as Between Mr Low and Mr Auckram	Matters Not Agreed as Between Mr Low and Mr Auckram
<p>5. Subject to condition 4, the wind farm shall operate such that when measured at within the notional boundary of any residential dwelling in existence at the time this consent was granted on 30 May 2005, the wind farm noise does not exceed the greater of:</p> <p>5.1 40 dB(A); OR</p> <p>5.2 The background noise level plus 5 dB(A).</p> <p><u>This condition does not apply to any property owned by the Consent Holder, or which has a covenant in favour of the Consent Holder, or is owned by a home owner who has confirmed in writing that they consent to this condition not applying to their dwelling.</u></p>	<p>None.</p>	<p>It is agreed the final paragraph of condition 5 should be deleted and replaced with the following text for the same reasons outlined in paragraph 4.3 above in respect of condition 4:</p> <p><i>This condition does not apply to the dwellings on Lot 1 DP 20911 (130 Harrison Rd), Lot 2 SP 85413 (629 Pahiataua Track) and Lot 1 DP 85413 (631 Pahiataua Track).</i></p>	<p>Mr Low considers the only change required to condition 5 is the agreed change to the final paragraph. Mr Low considers that condition 5 should only apply to dwellings constructed before 30 May 2005 (the date the TRH consent was granted), as after that TRH and its noise effects were part of the existing environment. To require TRH to comply with condition 5 at any new dwelling constructed in the future would cause reverse sensitivity effects that conflict with the relevant planning provisions.</p> <p>Mr Auckram has concerns with condition 5 only applying to dwellings constructed before 2005 and notes the following:</p> <ol style="list-style-type: none"> i. These amendments exclude from the protection of the primary noise limit, properties constructed after 2005 despite that limit being identified in NZS6808:2010 as necessary to protect human health and amenity. ii. The original consent conditions had limits that were verified by limited reference sites because of the under prediction of noise effects. iii. The question is whether properties constructed after the original consent should be deprived of the protection that NZS6808:2010 provides. There are arguments that they should not because they may have been constructed after consent was granted and before the windfarm was fully operational in circumstances where the effects of the windfarm were unknown. iv. The issue is probably academic as long as the reference sites in Condition 10.1 remain as points of compliance assessment since these will be adequately representative with general compliance with the Standard based on the development patterns in that locality. v. This means however that it is particularly important that the provision in Condition 4 and 5, proposed by NZWL, does not operate so that if NZWL purchased the property or obtains a covenant, replacement representative locations are not identified in substitution.

CONDITION 8

4.5 Matters of agreement and disagreement on condition 8 are as follows:

Changes agreed in Acoustic Joint Statement	Matters Not Agreed in Acoustic Joint Statement	Matters Agreed as Between Mr Low and Mr Auckram	Matters Not Agreed as Between Mr Low and Mr Auckram
<p>None</p>	<p>Mr Evans and Mr Lloyd consider condition 8.2 should read as follows: <u>8.2 If average amplitude modulation exceeding 3 dB is detected for any 10-minute period in accordance with the UK Institute of Acoustics amplitude modulation metric, then a penalty shall be applied to that 10-minute period in accordance with the penalty scheme detailed in the UK Department of Environment and Climate Change Wind Turbine AM Review – Phase 2 Report dated August 2016.</u> Mr Halstead and Dr Chiles consider condition 8.2 should read as follows: <u>8.2 If the AM threshold described in NZS6808:2010 B3.2 Interim Test Method are exceeded on a regular basis, an adjustment of +5 dB shall be applied to the wind farm sound level at that location for the wind conditions under which the modulation occurs.</u> Mr Evans and Mr Lloyd consider condition 8.4 and 8.5 should read as follows: <u>8.4 If less than 10% of the data points within a 1 m/s-wind speed bin attract a penalty, then the 10-minute data points, including penalty, shall be included in the data for the assessment of the overall noise level;</u> <u>8.5 If 10% or more of the data points within a 1 m/s-wide wind speed bin attract a penalty, then the arithmetic average penalty for those penalised data points shall be determined and applied to the overall measured wind farm noise level for that wind speed.</u> Mr Halstead and Dr Chiles consider condition 8.4 and 8.5 should be deleted.</p>	<p>It is agreed that:</p> <p>i. The appropriate conditions for measuring, assessing and imposing penalties for special audible characteristics are a technical matter based on the correct application of NZS6808:2010.</p> <p>ii. It is important that those conditions are certain and enforceable, and provide a clearly understood line for when a penalty is or is not warranted.</p> <p>iii. Proposed condition 8.2 attached to Mr Low's evidence and preferred by Mr Halstead and Dr Chiles is not certain and enforceable as it does not define what "regular basis" means. If it were to be preferred by the Hearings Panel this would need to be rectified.</p> <p>iv NZS6808:2010 does include provisions which address special audible characteristics (including those in Section 5.4 and Appendix B of the Standard). However, if the acoustic circumstances present in this case mean conditions which complement the requirements of NZS6808:2010 are required to "provide reasonable protection of health and amenity" at the neighboring residences, it would be appropriate to impose those conditions to achieve that outcome.</p>	<p>None.</p>

CONDITION 10.7

4.6 Matters of agreement and disagreement on condition 10.7 are as follows:

Changes agreed in Acoustic Joint Statement	Matters Not Agreed in Acoustic Joint Statement	Matters Agreed as Between Mr Low and Mr Auckram	Matters Not Agreed as Between Mr Low and Mr Auckram
<p>10.7 If any mitigation measures are identified within the compliance noise monitoring report, then evidence shall be provided that these measures have been applied at all times of day, unless justification is provided within the compliance noise monitoring report as to why the mitigation measures should be limited to specific times of day. This is not intended to suggest that mitigation required in order to meet the high amenity noise limit should also be applied during hours when that does not apply.</p>	<p>None</p>	<p>It is agreed that the concept captured by the additional text agreed in the Acoustic Joint Statement is already captured by the wording of 10.7 attached to Mr Low's evidence and is not required.</p>	<p>None.</p>

CONDITION 12

4.7 Matters of agreement and disagreement on condition 12 are as follows:

Changes agreed in Acoustic Joint Statement	Matters Not Agreed in Acoustic Joint Statement	Matters Agreed as Between Mr Low and Mr Auckram	Matters Not Agreed as Between Mr Low and Mr Auckram
<p>Stage 4 12. Prior to the installation of any new WTG at the site beyond the 65 already constructed as at 1 November 2016: 12.1 Compliance must have been demonstrated to have been achieved for the 65 installed WTGs at the site in accordance with Conditions 4 to 8, or if an existing WTG is relocated to an existing vacant site it must be demonstrated there is compliance after reconfiguration with Conditions 4 to 8;</p>	<p>None</p>	<p>It is agreed "new" should be deleted so it is clear the condition would apply to any used turbine which is installed on site as part of Stage 4.</p>	<p>None.</p>

Changes agreed in Acoustic Joint Statement	Matters Not Agreed in Acoustic Joint Statement	Matters Agreed as Between Mr Low and Mr Auckram	Matters Not Agreed as Between Mr Low and Mr Auckram
<p>12.2 An acoustic assessment of the proposed additional WTGs must be submitted to PNCC for approval prior to construction demonstrating that predicted noise levels for all stages, including the extension, will achieve compliance with the consent conditions;</p>	None.	None.	None.
<p>12.3 The acoustic assessment should, as a minimum:</p> <p>12.3.1 Provide predicted wind farm noise levels from all WTGs at the site, including the Extension WTGs. The predictions should be validated on the basis of measurements taken from the currently installed WTGs or on Te Rere Hau;</p> <p>12.3.2 Provide evidence supporting the assumed sound power levels for the new Stage 4 WTGs. This should include sound power test data for the WTGs. Sound power levels are to be measured in accordance with IEC 61400-11:2012;</p> <p>12.3.3 Provide justification as to why the addition of the new WTGs would not result in Special Audible Characteristics at residences that would attract a penalty. This should have reference to measurement results from the currently installed WTGs at Te Rere Hau.</p>	None.	It is agreed the changes suggested in the Acoustic Joint Statement clarify the condition and should be accepted.	None.
<p>12.4 When installed, the new WTGs must not exceed following for measurement uncertainty, the sound power levels stated in the acoustic assessment at 12.3. Sound power levels are to be measured and measurement uncertainty is to be quantified in accordance with IEC 61400-11 Edition 3.</p>	<p>Condition not agreed.</p> <p>Mr Halstead and Dr Chiles prefer condition 12.4 be deleted as shown in Mr Low's evidence.</p> <p>Mr Evan's and Mr Lloyd prefer condition 12.4 be retained, and the following additional condition be inserted:</p>	Condition not agreed.	<p>Mr Auckram considers proposed condition 12.4 should be retained. The Council's concern is to ensure that the Consent Holder checks the predictions made based on assumed performance of WTGs before installation. This is achieved in the Turitea Board of Inquiry conditions – 22 – 24, by means of a Noise Management Plan (See CB, Part 10, No. 10.88, p 2582). In particular, an acoustician must certify WTG selection "having regard to the sound power level predictions obtained in accordance with the Standard." That means the NMP provides the check required prior to installation that the WTGs actually</p>

Changes agreed In Acoustic Joint Statement	Matters Not Agreed in Acoustic Joint Statement	Matters Agreed as Between Mr Low and Mr Auckram	Matters Not Agreed as Between Mr Low and Mr Auckram
<p>12.5 Following the installation of the additional WTGs, compliance monitoring should be conducted again to demonstrate compliance of the whole site including TRH extension with conditions 4 – 8 and</p>	<p>A Stage 4 sound power monitoring compliance report shall be provided to PNCC within 3 months of installation of additional WTGs. If the installation is itself staged, then a compliance report shall be provided within 3 months of each stage. The compliance report shall produce test results from a minimum of 2 WTGs, unless only 1 additional WTG has been installed in which case only that WTG need be tested. PNCC must approve the WTGs selected for testing prior to the commencement of testing.</p>	<p>None.</p>	<p>installed meet the prediction. The same outcome is sought to be achieved by Condition 12.4. This avoids the following:</p> <ul style="list-style-type: none"> i. A situation where because of changes in WTG performance, non-compliance is only ascertained post construction, which then means that you are dealing with problems after the fact through review processes which is not an ideal outcome for any party; and ii. A situation where representative sites are selected without accurate predictions and new representative sites are required, which is the exact problem we have encountered with the TRH Windfarm. <p>Mr Low remains of the view that it is the noise effects on sensitive receptors in the receiving environment and not effects on the TRH site that are important, and notes that the primary focus of condition 12 is on demonstrating compliance with conditions 4 to 8. However, Mr Low agrees that the outcomes Mr Auckram notes in (i) and (ii) above are undesirable, particularly given the history associated with this site and the Windflow turbines. But rather than requiring strict compliance with the sound power levels stated in the acoustic assessment required by condition 12.3 (and the prospect of enforcement action if this is not the case), Mr Low suggests a condition should be considered which requires prior to commissioning of Stage 4, that a suitable qualified acoustic consultant:</p> <ul style="list-style-type: none"> i. Measure the sound power levels of a representative selection of the new wind turbines; and ii. Identify any further procedures necessary for ensuring compliance with the noise limits in conditions 4 to 8 should those sound power levels not align with those included in the acoustic assessment required by condition 12.3. <p>None.</p>

Changes agreed in Acoustic Joint Statement	Matters Not Agreed in Acoustic Joint Statement	Matters Agreed as Between Mr Low and Mr Auckram	Matters Not Agreed as Between Mr Low and Mr Auckram
<p>the compliance monitoring report referred to in condition 10 should be re-submitted to PNCC.</p> <p>12.5AA Stage 4 compliance monitoring report shall be provided to PNCC within 12 months of installation of the additional WTGs which addresses all the matters required of the post review compliance monitoring report in Condition 10. The Stage 4 compliance monitoring report is to be independently peer reviewed by an acoustic expert acceptable to PNCC</p> <p>12.6 Should the additional WTGs be installed in multiple stages, then compliance monitoring must be undertaken following each stage</p>			

Date: 11 September 2017

Craig Auckram
Palmerston North City Council



Adrian Low
Mitchell Daysh Ltd

Date: 11 September 2017



Craig Auckram
Palmerston North City Council



Adrian Low
Mitchell Daysh Ltd