

# Submission on behalf of Uary Tongy Lane Alliance (UTLA)

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# Submission for UTLA

- The extant Wind Farm Guideline was issued in November 2024 and has a supporting Technical Supplement for Noise Assessment
- It has been common malpractice to refer to noise limits as xx dB(A) without qualifying the descriptor such as LAeq
- The draft recommended 'Operational Noise Criteria' in Condition B14 suffers from this omission.
- However, the Technical Supplement for Noise Assessment corrects this as follows:

Noise limits for residential receivers

The predicted equivalent noise level, ( $L_{Aeq, 10\text{minute}}$ ), adjusted for tonality and low-frequency noise, should not exceed 35 dB(A) or the background noise ( $L_{A90, 10\text{minute}}$ ) by more than 5 dB(A), whichever is greater, at all relevant receivers for wind speed from cut-in to rated power of the wind turbine generator and each integer wind speed in between.

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- It would be a simple change to the draft condition B14 to insert ' $L_{Aeq,(10\text{minute})}$ ' after '35 dB(A)' in the first sentence.
- Other changes to this draft condition B14 would be to refer to '*Technical Supplement for Noise Assessment, November 2024*' in place of "*Wind Energy Noise Assessment Bulletin (2016)*"

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- The Valley of the Winds Wind Farm (SSD-10461) Assessment Report noted that “ACEN has committed to verify compliance with the Noise Bulletin criteria following detailed design and selection of the final wind turbine model.”
- The draft conditions would benefit from a requirement to prepare a noise prediction for the final layout and wind turbine model selection in accordance with the requirements detailed in the Department’s *Technical Supplement for Noise Assessment, November 2024* to the satisfaction of the Department
- It is not recommended that a condition only required a new noise model; the model prediction must be assessed by the Department.

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- Draft condition B16 refers to Operational Noise Monitoring after staged or full construction of the wind farm has been completed.
- To pre-empt any possible noise problems at an early-stage it is advisable to require that a selection of the first wind turbines that are installed be tested in accordance with IEC61400-11 to check that the sound power level of the final wind turbine choice match those used in the final design noise model.
- In some of my recent work with wind farms constructed in Victoria it has been found that sound power levels from installed wind turbines were 7 dB greater than the manufacturer suggested for use in the final noise model.

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- The *Technical Supplement for Noise Assessment* notes that “The conditions of consent will also require applicants to prepare a specific compliance assessment method and conduct noise compliance monitoring.”
- Such a condition is missing from the draft conditions.
- It is accepted practice that  $L_{A90}$  measurements assist in reducing the influence of extraneous noise when compliance testing.
- However, noise limits are in terms of  $L_{Aeq(10\text{minute})}$ .
- $L_{A90}$  measurements can be converted to  $L_{Aeq}$  by adding 2 dB to measured  $L_{A90}$  results.
- Alternatively,  $L_{Aeq}$  measurements from on/off testing can be directly used to test compliance with the 35 dB(A),  $L_{Aeq(10\text{minute})}$  noise limit.

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- The conversion from  $L_{A90}$  measurements to  $L_{Aeq}$  is standard practice, as outlined in AS4959:2010 'Acoustics – Measurement, prediction and assessment of noise from wind turbine generators'
- To prevent incorrectly equivalencing  $L_{A90}$  to  $L_{Aeq}$  during compliance checking it would be advisable to spell out in the conditions that “when testing compliance against the noise limit from  $L_{A90}$  measurements, the results must be corrected to  $L_{Aeq}$  in accordance with AS4959.”
- AS4959:2010 is referenced in the Bibliography of the current SA Guidelines (2021).
- On/Off testing can measure  $L_{Aeq}$  directly and needs no correction.

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- Thank you for your considerations

- W Les Huson