

Our reference: EF13/4920: DOC13/40524
Contact: Andrew Helms (02) 6332 7604

Mr Neville Osborne
Manager Energy, Infrastructure Projects
Department of Planning and Infrastructure
GPO Box 39
SYDNEY NSW 2001

Attention: Ms Alison Nash

16 August 2013

Dear Mr Osborne

I refer to the Department of Planning and Infrastructure's request to the Environment Protection Authority (EPA) of 6 August 2013, seeking the EPA to review and provide comment on the Response to Submissions/Preferred Project Report prepared for the Crudine Ridge Wind Farm Project MP11_0033 (the Report) in relation to the EPA's submission on the Environmental Assessment.

The EPA has reviewed this report and provides the following comments;

1. The environmental assessment for the project did not provide sufficient data to assess tonality from the modelled turbines. The assessment assumed that a penalty for tonality at any residence in accordance with an accepted methodology would not apply, followed with an undertaking to seek a guarantee of the same from the manufacturer as part of the procurement process. It should be a condition of approval for the project that post-commissioning noise compliance monitoring be undertaken and that the proponent demonstrate during compliance monitoring that a penalty for tonality, in accordance with an accepted methodology, is not applicable to noise emissions at any residence from the selected turbines.

The EPA recommends a condition of approval for the project, such as condition L6.6 in **Attachment 1**, be included stating that the ultimately selected turbines should not attract a tonality penalty at any residence when assessed according to accepted methodology.

2. The Report under Item 3.9.11 seeks to modify the proposed conditions of approval to carry out certain activities outside the standard construction hours. These activities comprise placement of concrete for tower bases, backfilling of electrical trenches and installation of turbine nacelles. The Report cites weather conditions and safety considerations as the reasons for seeking these amendments. The EPA considers that the proposed amendments are reasonable and the protocol put forward for managing the noise aspect of these works is appropriate. Any other out of hours work should be subject to prior justification and approval.
3. The EPA previously recommended noise criteria for the project referred to wind speeds at hub height but contained criteria based on an assessment at 10m height. These criteria have been amended to refer to noise levels measured at 80 metre hub height, and are based on the supplementary analysis containing 80m hub height predictions provided by the proponent (Appendix 1 of the Report). Revised recommended noise criteria for the project (Conditions L6.1 and L6.2) are provided in **Attachment 1**. All other conditions previously recommended by the EPA still apply.

4. From the background noise regression analysis in Table 1 of the Supplementary Analysis, there is a clear difference between the background noise levels obtained over a 24 hour period and the corresponding levels when separated into daytime and night-time periods. While the DGRs for the project state that the assessment should be carried out primarily in accordance with the SA EPA wind farm guidelines, they recommend consideration of any significant differences between daytime and night-time background noise levels when background noise levels exceed 30 dBA. The proponent has considered this by carrying out additional predictions for the night-time period, which show compliance with the nominated criteria except at receiver CR34, where there are some minor 1-2 dB exceedances. The proponent has addressed these exceedances by considering potential noise reduction strategies which involve operating some turbines in a low noise mode, and has shown that the criteria can be met by implementing these measures. The EPA recommends that it be made a condition of approval for the project that, in the event of identified exceedances of the night-time criteria, the proponent should identify and implement noise mitigation and management measures to meet the criteria.

Should you have any questions in relation to this matter please contact Andrew Helms at the Bathurst Regional Office of the EPA by telephoning (02) 6332 7604.

Yours sincerely



DARRYL CLIFT
Head Central West Unit
Environment Protection Authority

ATTACHMENT 1

Crudine Ridge Wind Farm - Recommended Noise Conditions

Limit Conditions

- L6.1** Noise generated at the premises must not exceed the noise limits in the table below. The locations referred to in the table below are indicated in Appendix C of the document *Crudine Ridge Wind Farm Environmental Noise Assessment - Supplementary Analysis* by Sonus Pty Ltd (July 2013).

	L _{eq} (10 minute) NOISE LIMITS (dBA)													
Integer Wind Speed (m/s) at 80 metre hub height	3	4	5	6	7	8	9	10	11	12	13	14	15	16
CR28 Willow Downs	35	35	35	35	35	35	35	35	36	38	41	43	45	45
CR34 Linwood	35	35	35	35	35	35	37	40	42	45	47	50	52	55
CR15	35	35	35	35	35	35	35	36	36	36	36	36	36	36
Any other residential receiver not subject to a negotiated agreement	35	35	35	35	35	35	35	35	35	35	35	35	35	35

- L6.2** For the purposes of condition L6.1, wind speed is to be measured directly in accordance with the most recent version of Chapter 7 of *International Standard IEC 61400-11 Wind turbine generator systems – Part 11: Acoustic noise measurement techniques* (IEC 2002) by electrical power output and a nacelle-mounted anemometer at the following location:

- Turbine XXX as shown in Appendix A of the document *Crudine Ridge Wind Farm Environmental Noise Assessment* by Sonus Pty Ltd (October 2012). [TO BE CONFIRMED]

- L6.6** For the purposes of condition L6.1, noise generated at the premises must not attract a penalty for tonal noise emissions when measured in accordance with a method acceptable to the EPA.