

Appendix 5: Noise and Vibration Assessment (NVA) Addendum

8 January 2025

Umwelt (Australia) Pty Ltd
Level 11
213 Miller Street
North Sydney NSW 2060

Attention: Thomas Buchan

Dear Thomas

RESPONSE TO SUBMISSIONS - MDA COMMENTS

Umwelt (Australia) Pty Ltd (Umwelt) have advised Marshall Day Acoustics (MDA) that they are preparing a Submissions Report to respond to community submissions and Government agency advice received on the Bullawah Wind Farm Project (Project) Environmental Impact Statement (EIS).

As part of the Submissions Report, Umwelt have engaged MDA to review and respond to advice received from National Parks and Wildlife Service (NPWS). ¹ MDA's comments are related to the Project noise and vibration assessment (NVA) which was prepared to support the EIS for the Project. ²

This letter provides MDA's response to Item 1 and Recommendation 1a of Attachment A of the NPWS Submission. Recommendation 1b and 1c relate to the assessment of noise-related impacts to fauna, which are addressed specifically within Section 4.2.3 of the Submissions Report.

NPWS SUBMISSION

The relevant item is reproduced below:

1. Noise and vibration

NPWS has reviewed the EIS and Appendix 10 – Noise and Vibration Assessment (20211154) prepared by Marshall Day Acoustics, dated 30 July 2024 (NVIA).

The reports do not identify Oolambeyan NP as a sensitive receiver, nor does the assessment consider the maximum noise as recorded on NPWS land.

The NVIA indicates that, based on the groupings of major plant items during key construction tasks, total noise emissions for the proposed construction stages will range from 115 dB(A) to 120 dB(A). However construction noise impacts to Oolambeyan NP have not been considered.

The NVIA includes a noise level contour at Figure 2 which indicates an upper limit of 45 dB(A) within Oolambeyan NP along the southern boundary interface during the wind farm's operation.

¹ DOC24/762572 Advice on EIS – NPWS (NPWS Submission).

² Rp 003 r01 20211154 – Bullawah Wind Farm Project – Noise and Vibration Assessment, dated 30 July 2024

The NPWS Submission subsequently sets out the following:

Recommendations:

1. *As part of the response to submissions, revise the NVIA and mitigation measures to:*
 - a. *Apply a baseline noise limit criterion of 35 dB(A) to Oolambeyan NP to reflect its treatment as a sensitive receiver.*
 - b. *Acknowledge noise levels above 40 dB(A) have the potential to impact on wildlife occupying Oolambeyan NP, including critically endangered bird species. If exceedance occurs, impacts on biodiversity values of Oolambeyan NP will need to be assessed in more detail.*
 - c. *Provide an acoustic (noise) monitoring program to ensure stated noise levels are adhered to and effects on Oolambeyan NP are reported. If noise limits affecting NPWS estate exceed 40 dB(A) additional assessment and biodiversity monitoring is requested as part of the Biodiversity Management Plan.*

MDA COMMENTS

Assessment requirements

Per the *State Significant Infrastructure Guidelines*, dated March 2024:

The SEARs (secretary's environmental assessment requirements) identify the information that must be provided in the EIS (environmental impact statement), including the matters that require further assessment and the community engagement that must be carried out during the preparation of the EIS.....

The proponent must ensure the EIS for the project addresses the SEARs and the relevant requirements of the EP&A Regulation (Environmental Planning & Assessment Regulation 2021).

The assessment requirements for the Project EIS are set out in the SEARs (SSD- 50505215) dated 12 December 2022. Key issues related to noise and vibration are reproduced below:

Noise and Vibration – including:

- *an assessment of the wind turbine noise in accordance with the NSW Wind Energy: Noise Assessment Bulletin (EPA/DPE, 2016);*
- *an assessment of the noise generated by ancillary infrastructure in accordance with the NSW Noise Policy for Industry (EPA, 2017);*
- *assessment of the construction noise under the Interim Construction Noise Guideline (DECC, 2009) and a draft noise management plan if the assessment shows construction noise is likely to exceed applicable criteria);*
- *assessment of the traffic noise under the NSW Road Noise Policy (DECCW, 2011);*
- *an assessment of vibration under the Assessing Vibration: A Technical Guideline (DECC, 2006); and*
- *assessment of the cumulative noise impacts (considering other developments in the area).*

The Project EIS and supporting NVA has therefore been prepared to address the above key issues. National parks, including Oolambeyan National Park (ONP), are not identified as a key issue for noise and no specific wind turbine noise criteria is presented in the guidelines and policy above for such an assessment. Criteria for wind turbine noise assessment set out in the NSW Wind Energy: Noise Assessment Bulletin applies to dwellings only.

It is noted that the recently finalised NSW Department of Planning, House and Infrastructure (DPHI) *Wind Energy – Technical Supplement for Noise Impact Assessment* (Technical Supplement for Noise) provides information with respect to noise assessment for national parks. While the Technical Supplement for Noise does not currently apply to the Project, it is referred to for context. It states:

Noise limits for national parks

The predicted noise level, adjusted for tonality and low-frequency noise, should not exceed L_{Aeq} 50 dB(A) at designated passive recreation areas within national parks (when in use) for wind speed of 4 m/s or cut-in speed, whichever is greater. This criterion applies only to national parks and not to other types of protected areas, such as flora reserves or state conservation areas, as defined by a statutory source.

This aligns with Table 2.2 of the NSW EPA *Noise Policy for Industry* (NPfI), which sets out a noise criterion of 50 dB L_{Aeq} intended for the assessment of noise amenity within areas reserved for passive recreation. National parks are specifically identified as an example of a receiver within this category.

This criterion is only applicable within areas specifically designated for passive recreation use. There is no noise criterion nominated for national park boundary positions, or for the specific protection of fauna.

Information available via the NPWS website identifies the Oolambeyan Homestead picnic area (OHPA) as the only publicly accessible facility within the national park. Based on the Project layout documented within the NVA, OHPA is located approximately 15 km from the nearest wind turbine and 20 km from the nearest ancillary infrastructure location (refer Appendix A). Noise levels from the Project will be negligible at these distances.

With respect to construction noise, Table 3 of the NSW DECC *Interim Construction Noise Guideline* (ICNG) sets out a noise management level of 60 dB $L_{Aeq, 15 \text{ min}}$ for the assessment of construction noise to passive recreation areas.

On this basis the comments and recommendations set out in the NPWS Submission are inconsistent with the noise assessment requirement for national parks included in the new Technical Supplement for Noise. Further the 'baseline noise limit criterion of 35 dB(A)' described by NPWS does not align with noise criteria for the assessment of noise impacts to a national park within any known Australian noise policy.

Indicative assessment

For due diligence, MDA has conducted a high-level assessment of noise levels from the operation and construction of the Project at the boundary of ONP. This has been conducted with reference to the consistent 50 dB L_{Aeq} operational noise criterion referred to in the newly introduced Technical Supplement for Noise, and 60 dB L_{Aeq} noise management level set out in the ICNG. This is more conservative than the assessment typically required in each guideline, which would ordinarily apply at the nearest location within the national park at which passive recreation would occur, and not the boundary.

Noise levels are predicted using the same methods set out in the NVA.

Operational noise

The operational noise contours presented in Appendix A indicate noise levels at the southern boundary of ONP in the order of 40 – 45 dB $L_{Aeq, 10 \text{ min}}$. This is approximately 5 – 10 dB below the passive recreation area noise criterion of 50 dB L_{Aeq} .

It should be noted that the operational noise predictions are based on the maximum sound power level exhibited by the candidate wind turbine, occurring at – 12 m/s - rather than the lower wind speed specified within the Technical Supplement for Noise. Based on the information provided by the manufacturer, noise levels at 4 m/s would be more than 10 dB below the predicted noise contours indicated in Appendix A.

Construction noise

The shortest distance between any proposed Project construction work area and the boundary of ONP is approximately 450 to 500 m, being the distance between the ONP boundary and the nearest wind turbines. Works at such distances would comprise a minor proportion of the construction works associated with the Project and occur for short durations relative to the broader construction program.

On this basis a revised assessment has been carried out to predict noise levels at the ONP boundary for construction tasks related to the wind turbine locations. This is summarised in Table 1.

Table 1: Indicative range of construction noise predictions at ONP boundary, dB L_{Aeq} 15 min

Construction phase	Predicted level range	Passive recreation area management level	Exceedance
Cable trench digging	50-55	60	-
Concrete pours	50-55	60	-
Excavation and foundation construction	55-60	60	-
Turbine delivery and erection	50-55	60	-

SUMMARY

In response to the submission of the Project EIS, NPWS have issued agency advice. This letter provides MDA's response to Item 1 and Recommendation 1a of Attachment A of the NPWS Submission.

These items within the NPWS Submission are specifically related to noise associated with the Project and the adjacent ONP.

MDA's response highlights that the NVA, included in the Project EIS, has been prepared to address the specific key noise and vibration issues set out in the Project SEARs (SSD- 50505215).

In the absence of specific guidance within the Project SEARs, MDA has set out the noise criteria that might be applied to national parks, based on the newly introduced Technical Supplement for Noise. Noise from the Project has been verified to comply with the identified noise criteria, while adopting a conservative assessment at the ONP boundary.

We trust this meets your needs at this time.

Yours faithfully,

MARSHALL DAY ACOUSTICS LTD



Oskar Wesley-Smith

Consultant

APPENDIX A PREDICTED NOISE CONTOURS

