



# INFORMATION REGARDING ENVIRONMENTAL AUDIT REPORTS

August 2007

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# ADVERTISED PLAN

# Pre-construction Noise Assessment Audit



## Wombelano Wind Farm

2055 Charam-Wombelano Road, Wombelano

**John Cumming**

**Infotech Research**

345 Densley Road, Woolamai, Victoria 3995

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CARMS 78767-1 Service order: 8006891

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## Wind Farm preconstruction noise assessment audit – John Cumming

### Audit report summary

Item	Description
Auditor	John Cumming
Auditor account number	75697
Auditor appointment end date	31/07/2022
Audit type	Section 53v for noise at a wind farm
Date EPA notified of audit	28/01/2020
Audit service order number	8006891
Name of person requesting audit	Jerome Rowcroft
Relationship to premise/location	Director - Wombelano Wind Farm (Wind Projects Australia Project 1 Pty Ltd)
Date of request	16/11/2020
Completion date of audit	21/12/2020
Reason for audit	Preconstruction noise risk audit for the Wombelano Wind Farm
Audit categorization	Noise compliance with New Zealand Standard NZS6809:2010 and planning permit noise conditions
Environmental segments	Air (noise) for the noise sensitive locations situated in the locality of the Wombelano Wind Farm
If the audit was required by an EPA notice or other please provide EPA reference number	Planning Permit submission
Current land use zoning	FZ (farming)
EPA region	North West region
Dominant – lot on plan	Lot 48A Vol 09388 Fol. 180
Additional - lot on plan	
Site/premise name	Wombelano Wind Farm
Building/complex sub-unit No.	
Street/lot – Lower no.	2055
Street/lot – Upper no.	
Street name	Charam-Wombelano
Street type (road,court etc.)	Road
Street Suffix (north, south etc.)	
Suburb	Wombelano
Postcode	3401
GIS coordinates of centroid	
Latitude (GDA94)	-37.003569
Longitude (GDA94)	141.543578
Site area (in square meters)	2,520,000
Members and categories of support team members used	Nil
Nature and extent of continuing risk	The risk of wind farm noise affecting the amenity at noise sensitive locations was considered to be very low.
Outcome of audit	The planned wind energy facility is predicted to meet the following: Compliance with NZS 6808:2010 Compliance with NIRV Guidelines Compliance with VPP Guidelines for Wind Farms Recommendations: 1. Background noise assessment is undertaken to confirm operational noise compliance. 2. SACs are checked for turbine noise when the wind farm is operational

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**Wind Farm preconstruction noise assessment audit – John Cumming**

Historic land use	Farming
Current land use	Farming
Proposed future land use	Farming
Surrounding land use - north	Farming
Surrounding land use - south	Farming
Surrounding land use - east	Farming
Surrounding land use - west	Farming
Proposed land use zoning	FZ
Nearest surface water receptor - name	N/A
Nearest surface water receptor - direction	N/A
Likely point of groundwater discharge	N/A
Groundwater segment	N/A

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Wind Farm preconstruction noise assessment audit – John Cumming

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## Background:

A wind farm has been proposed at a site in Wombelano, 21 km east of Edenhope, in the Mallee region of Victoria. The wind farm is planned to consist of up to 7 Vestas V162-6.0 MW wind turbines, or equivalent.

This audit is a statutory requirement for the application for the permit of wind energy facilities that requires a pre-construction assessment of noise by a qualified acoustics consultant. The audit is to verify that the pre-construction noise assessment complies with the standard: NZS6808:2010 – Acoustics Wind Farm Noise. Thereby providing an assurance that the proposed wind energy facility will not adversely affect the amenity of sensitive receptors, nearby residents, to an unacceptable level.

## Audit objectives:

To assess compliance of the Wind Farm Pre-construction Environmental Noise Assessment Report with the requirements set out in:

1. Section 5.1.2 (a) Noise of the Policy and Planning Guidelines for the Development of Wind Energy Facilities in Victoria – March 2019 (VPPG)
2. New Zealand Standard: Acoustics – Wind Farm Noise NZS 69808:2010 (The Standard),
3. Victorian Planning Provisions (VPP) - Amendment VC149 (Sec. 52.32-4 application requirements – Mandatory Noise Assessment),
4. EPA Victoria – Wind energy facility noise auditor guidelines (Publication 1692 October 2018).

And from this compliance assessment, to conclude on the risk of amenity impact to the residents near the facility of adverse impacts on the amenity from noise generated.

## Scope:

Activity	Wind energy facility (WEF)
Element	Noise from turbine blades, the generators, gearboxes and hydraulics
Segment	The air environment of Wombelano environs surrounding the WEF positioned at adjacent to Harrow-Goroke Road, Wombelano, Victoria
Elements	Air (noise)
Beneficial uses	Residential accommodation, recreation, other sensitive land uses and farming
Risk assessment	Effect on amenity of receptor sites applicable to noise
Time period	N/A
Exclusions	The audit has not considered construction noise, nor noise generated from equipment on site other than that listed. Compliance with other requirements of the VPPG and the Victorian Planning Scheme were not considered

Table 1.

## Audit criteria:

The VPP states:

- Section 52.32-3 that written consent of the owner of a dwelling positioned within one kilometer of the nearest wind turbine is required for planning approval. Stated in Section 4.3.1 (a) *Evidence of written consent*
- Section 5.1.2(b) Noise: that *the facility should comply with the noise limits recommended for dwellings and other noise sensitive locations set out in the New Zealand Standard – NZS 6808:2010 Acoustics- Wind Farm Noise.*
- *Similarly, the local government Planning Scheme in Clause 52.32-5 refers to the New Zealand standard and the VPPG as criteria for planning approvals.*

**Wind Farm preconstruction noise assessment audit – John Cumming**

NZS 6808:2010 Noise limits

- Section 4.4.2 – Acceptable limit (40 dB LA90(10min) , or background + 5 dB if higher)
- Considered as reasonable limit for an involved party (45 LA90(10min) , or background + 5 dB if higher)
- Section 4.4.3 - Special Audible Characteristics (tonal, impulsiveness, or amplitude modulation) receive up to a 6 dB penalty added to the noise level.
- Section 5.3 - High Amenity Areas (35 dB LA90(10min), or background + 5 dB if higher) was also considered.

These noise limits produced in the Standard apply to all times of the day.

The EPA released a guidance note for noise in regional areas, Noise from Industry in Regional Victoria (NIRV). This provides recommended maximum noise levels for various receptors of industrial noise outside major urban areas. Using variations to the noise limits in the NIRV for roadside utilities, the box on page 10 gives the following limits in LAeq:

- Day 45 dB
- Evening 39 dB and
- Night 34 dB.

These limits apply to ancillary plant and equipment but not to the wind turbines themselves.

**Audit method:**

The noise assessment was examined with reference to the compliance criteria. Explanations were sought from the author of the pre-construction Noise Assessment report. The proponents of the WEF were interviewed and provided further documentation to support the proposal.

Plans were checked against maps to confirm dwelling locations.

Task	Comment (ref. to documents / site visit)
1. Confirmation noise outputs of the wind turbines	Refer to Vestas V162 turbine spec. No.0067-4767 V05 V150-4.0/4.2MW
2. Confirm the criteria relevant to the NZS 6808: 2010 standard and the EPA noise from industry in regional Victoria guidelines.	Refer to Standard NZS 6808:2010 and EPA NIRV Guidelines
3. Site check of the receptor locations and site specific issues relating to noise generation and reception	Site visit was completed on November 29 <sup>th</sup> 2020 (See site inspection report appended )
4. Check the models used and outputs provided in the assessment report	Refer to: pre-construction Environmental Noise Assessment (M200708RP1 Revision B December 18, 2020)
5. Risk evaluation and audit report preparation	Refer to: Wind energy facility noise auditor guidelines (EPA pub. 1692 October 2018) Preparation of Environmental audit reports on risk to the environment (EPA pub. 952.5 December 2015)

**Table 2. Task list**

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## Wind Farm preconstruction noise assessment audit – John Cumming

### Documents examined:

1. Policy and Planning Guidelines for the Development of Wind Energy Facilities in Victoria (the Guidelines) March 2019
2. Victorian Planning Policy Clause 52-32-3
3. NZS 6808:2010 Acoustics - Wind Farm Noise
4. WEF – pre-construction Environmental Noise Assessment (M200708RP1 Revision B December 18 2020)
5. Planning Zone map (Land.vic.gov.au)
6. Contour map (Resonate – Figure 1B)
7. Preparation of Environmental audit reports on risk to the environment (EPA pub. 952.5 December 2015)
8. Wind energy facility noise auditor guidelines (EPA pub. 1692 October 2018)

### Audit findings:

Resonate Consultants has provided a pre-construction noise assessment report with a method for noise level prediction for the planned Wombelano Wind Farm, as specified by Wind Projects Australia – Project 1. This is for seven wind turbines using the Vestas V162 6.0MW turbine sound power specifications situated at Wombelano in the southern Mallee, Victoria.

The wind turbines sound power level peaked at 105.3 dB LWA at a hub height wind speed of >10 m/s. This includes +1dB to allow for error.

The noise prediction methodology employed is in accordance with the Standard (NZS 6808:2010). Resonate Consultants used SoundPLAN version 8.2 software that uses the standard ISO 9613-2:1996 Acoustics – Attenuation of sound during propagation outdoors – Part 2: General method of calculation with adjustments for wind turbine noise published by the UK Institute of Acoustics guidance.

The key parameters used include:

Point noise source at the hub of the turbine

Ground absorption factor 50%  $G=0.5$

Temperature = 10°C

Relative humidity = 70%

+3dB applied when a concave topography is observed

and topographical shielding limited to 2 dB

These parameters present a conservative approach to sound propagation that have been tested under Australian conditions and flat topography.

The highest predicted wind farm noise levels in dB  $L_{A90}$  were tabulated for the nearest 63 receptor locations. As no background noise monitoring has been undertaken the results were compared with the minimum applicable noise level of 40 dB  $L_{A90}$  for all receptors except the involved landowner site at 45 dB  $L_{A90}$ .

Tom Evans is the report author and is a qualified and well experienced acoustical engineer. The author is a member of the society of acoustics engineers.

### Noise sensitive locations

Receptor sites, termed noise sensitive locations by the standard, were mapped out for the area in the planning phase. The 63 closest residential buildings to the proposed turbine positions were examined. The identity of receptors was determined during the planning process by Wind Farm Developments. The audit inspection on November 29, 2020 examined these receptor sites and did not find other sites that could be considered as noise sensitive locations under the Standard.

None of the receptor sites were predicted to exceed the compliance level of 40 (or 45) dB  $L_{A90}$ . The sites closest to the highest predicted wind farm noise are given in Table 3.



## Wind Farm preconstruction noise assessment audit – John Cumming

Receptor Site <sup>1</sup>	Highest predicted noise level L <sub>A(90)</sub> (dB)	Compliance margin (dB) L <sub>A(90)</sub> (dB)	Comment
12	33	7	Limit 40 dB
1	31	9	Limit 40 dB
5	28	12	Limit 40 dB
10	27	13	Limit 40 dB
11	27	13	Limit 40 dB
4	27	13	Limit 40 dB
6 Landowner <sup>2</sup>	26	19	Limit 45 dB
Total modelled = 63			

**Table 3. Noise compliance at receptor sites**

A set of predictive noise contours were mapped by Resonate Consultants for wind farm noise the regions to 35 dB in Appendix 2B. No receptors fell within the 35 dB contour, the nearest receptors were over 1 km from the nearest turbine (R1: 1.37 km and R12: 1.24 km).

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<sup>2</sup> No contract has been established between the land owner and the wind farm proponent, Wind Developments Australia at this stage.

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Wind Farm preconstruction noise assessment audit - John Cunningham

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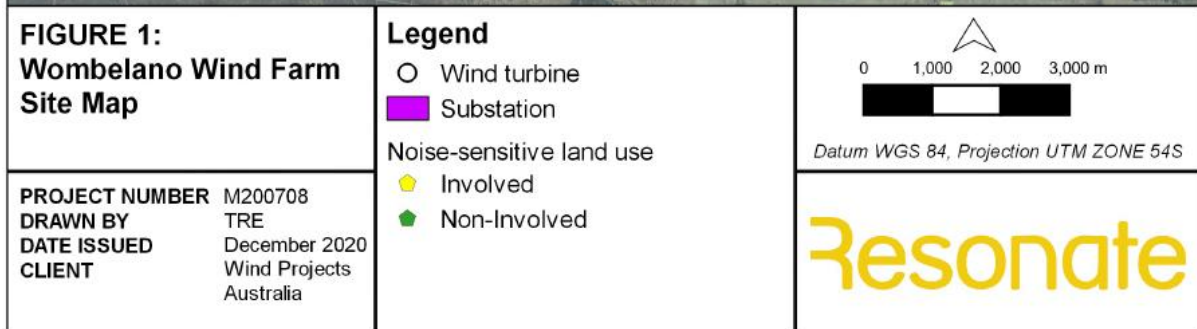


Figure 1 – Predicted Noise contours from the Resonate Consultants assessment report

### Cumulative effects

A review of the planned and operating wind energy facilities<sup>3</sup> in Victoria did not find any within 50 km of Wombelano. Murra Warra (operating), Wimmera Plains and Jung (proposed) were the closest, but still over 50 km from Wombelano. Consequently the issue was not considered in the Resonate Consultants noise assessment report.

### High Amenity Areas

If a site is classified as a high amenity area under the New Zealand standard a 5 dB penalty applies. No high amenity areas were identified during the planning process by Wind Projects Australia, nor Resonate Consultants. This was further confirmed by consideration of the 35 dB predicted wind farm noise contour. No receptors were within the 35 dB contour and as such need not be considered as per the Standard C5.3.1.

It is also commonly considered that receptors in farming zones need not be considered as high amenity areas.

### Background noise assessment

Background noise has not been considered as no receptors are within the 35 dB contour and the wind farm is expected to meet the minimum noise level of 40 dB.

There may be a need to measure background levels of noise to determine compliance if the total noise levels exceed 40 dB, in which case on/off testing may be required at the chosen monitoring locations.

### Special Audible Characteristics

The New Zealand standard requires a noise penalty for noise containing special audible characteristics such as including tonality, impulsiveness and amplitude modulation. If the maximum penalty of + 6dB was applied to the six closest receptor sites given in Table 3, these receptor sites would still comply with the noise limit. The Vestas turbine in contention has not been tested for special audible characteristics. This is an issue that needs to be checked in the monitoring post operation. Special audible characteristics of the wind farm noise will be tested where the turbine operation is clearly audible possibly on the 45 dB contour post construction.

### Noise from substations

Noise from sub stations comes under the guidelines published by the EPA – Noise from Industry in Regional Victoria.

The noise limits required by the NIRV Guidelines for roadside utilities are as follows:  
Day < 45 dB(A) Evening < 39 dB(A) and Night 34 dB(A)

Resonate Consultants has chosen to model the sound power levels from the transformer at a rating of 50 MVA with a A weighted sound level of 89.8 dB LWA which will certainly meet the NIRV requirements for night time noise at the nearest receptor R12 with a predicted noise level of 21dB L<sub>A(eq)</sub>.

R12 has an existing substation to the south of it for local transmission lines. There was no noise observed from the Charam Wombelano Road during the inspection from this substation.

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<sup>3</sup> <https://www.planning.vic.gov.au/permits-and-applications/specific-permit-topics/wind-energy-facilities/wind-energy-projects-planning>

### Risk to the environment

This audit report is aimed at providing a clear outcome in evaluating the risk to amenity of noise generated by the Wombelano Wind Farm to nearby residents. 40 dB is considered by the adopted New Zealand Standard (NZS 6808:2010 Acoustics – Wind Farm Noise) to not adversely affect resident amenity with consideration of all time activities. When background is included the standard recommends a limit of 40 dB ( $L_{A90}$ ) or background plus 5 dB whichever is greater.

This does not mean that the wind farm noise will not be audible at times, but rather the noise should be low enough to protect against sensitive uses of the space, such as sleep.

The noise assessment for the turbines and their distribution on the site predicts compliance with the 40dB limit and a significant margin for error being 9dB at a minimum. The assessment method uses a conservative approach to the noise level predictions at the receptors adding further confidence of compliance.

The resultant noise risk is therefore considered to be very low. This is an expected result due to the distances from the turbines to the receptors being 1.3 km distant from the nearest turbine for the nearest receptor.

### Conclusions

1. The Resonate Consultants noise predictions were conducted in accordance with the appropriate standards and guidelines.
2. Noise level predictions comply with limits set in the *New Zealand standard NZS 6808:2010*.
3. The compliance margins of the receptor sites modelled are sufficient to negate the risk of non-compliance due to errors in the predicted noise modelling.
4. The audit site inspection did not find high amenity areas. All of the receptors were outside the 35 dB contour for predicted noise in any case.
5. It can be concluded that the proposed Wombelano Wind Farm complies with the noise requirements set out in the PPG and the Standard.
6. The risk to amenity at the sensitive receptor sites nearby to the wind farm from noise is very low.

### Audit recommendations:

1. The assumptions used in the noise predictions provided by Resonate Consultants can be tested with post construction noise monitoring at receptor sites R12 and R1 and in line at the intermediate 45 dB contour to test the wind farm noise for sound level and SACs (special audible characteristics).
2. The compliance requirement may be met with or without SACs, nevertheless noise monitoring should include an analysis of audible noise for SACs.
3. The Resonate Consultants preconstruction noise assessment report and this audit will be available via the EPA audit web site but should be made available to uninvolved stakeholders as well as the involved stakeholders actively.

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**Appendix A**

**Preconstruction Noise Assessment**

**Wombelano Wind Farm**

Wind farm noise assessment	<b>Audit of assessment</b>				
	Condition	Requirement	Noise assessment report	Comment	Rectification required
<b>Planning Scheme (Victoria)</b>					
	Planning condition VC124 Planning amendment (noise sensitive locations within 1 km of wind turbines have written agreement)		Fig 1.	There are no sensitive receptors within 1 km of the nearest turbine	
<b>Planning Scheme</b>	Conformance to the Victorian Guidelines and NZS 6808:2010		6.0 Conclusions	Conclusion of proposal compliance	
<b>Policy and Planning Guidelines for Developments of Wind Energy Facilities in Victoria (March 2019)</b>	Written consent of owners of dwellings within 1 km of any turbine	VPP Sec. 2.1.6	Fig 1.	There are no sensitive receptors within 1 km of the nearest turbine	
	Not in an urban growth zone or within 5 km of major regional cities	VPP Sec. 2.1.5	Planning zone map	The area within 2 km of the turbines is Farming zone FZ	
	An Environmental Effects Statement is either completed or not required	VPP Sec.3.3.1		Dependent on planning application outcome	
	Approval under the EPBC Act has been given has been given or is not required	VPP Sec.3.3.2		No suggestion of endangered species presence was determined	

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## Wind Farm preconstruction noise assessment audit – John Cumming

	Condition	Requirement	Noise assessment report	Comment	Rectification required
	15a. Acoustic compliance report for the proposed wind energy facility is prepared by a suitably qualified and experienced acoustics engineer	VPP Sec.4.3.3		The pre-construction noise assessment report was prepared by Tom Evans of Resonate Consultants, an experienced and qualified acoustics engineer	
	15b. Noise assessment positions located according to the standard and shown on a map		Table A3. Appendix A	A compliant table and GPS positions for the receptors were given in Appendix A	
	15e. Compliance reports are to be publicly available			The pre-construction noise assessment report and audit report will be available on the EPA web site	
	Sec. 5.1.2a requires compliance with noise limits for dwellings and other noise sensitive locations stated in NZS 6808:2010	VPP Sec.5.1.2a	Sec. 4 Assessment	Noise predictions were given for 63 receptor locations all of which were within the 40 dB limit with margins of at least 7 dB.	
Local Government					
Planning Approval conditions	Compliance with NZS 6808:2010 noise levels	Clause 11	Sec. 4 Noise assessment Table 5	Compliance check was concluded in the pre-construction noise assessment	
	Preparation of a pre-construction noise assessment	Clause 13		Resonate Wombaleno Wind Farm Environmental Noise Assessment M200708RP1	
	Preparation of a compliant Noise Management Plan	Clause 15		Not required until noise is monitored	

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## Wind Farm preconstruction noise assessment audit – John Cumming

	Condition	Requirement	Noise assessment report	Comment	Rectification required
<b>NZS 6808:2010 Acoustics - Wind Farm Noise</b>		<b>NZS 6808:2010</b>			
<b>Compliance assessment</b>	Assessment to include all noise sources coming from the wind farm - blades, generator, gearbox, hydraulics and from transformers on site	C1.5	Sec. 2.3 Noise Emissions	Assessment of turbines and the sub station were included in the report	
	A 40 dB limit is applied for noise sensitive locations with allowance for background noise on top	5.1	Sec. 3.1.3 Noise Limits	Compliance requirements were provided for the turbines and the transformer	
	High amenity receptors are considered	5.3.1	Sec. 3.1.4	High amenity receptors were considered.	
	Special audible characteristics are considered	5.4	Sec. 4.1.3 SACs	The report suggests that SACs be tested when in operational mode.	
	Uncertainty of measurements / calculations is considered	5.7	Appendix C	The report indicates a random error of $\pm 3$ dB, but also points out the systematic conservatism of the prediction method.	
	Prediction of the 35 dB wind farm sound contour mapped	7.6.1	Appendix B Fig. B2	35, 40 and 45 dB contours were mapped	

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**Wind Farm preconstruction noise assessment audit – John Cumming**

	Condition	Requirement	Noise assessment report	Comment	Rectification required
	Prediction of sound levels for all noise sensitive locations inside the 35 dB contour	7.6.1	Sec. 4 Table 5.	Receptors within 15 km were modelled all of which were outside the 35 dB contour	
<b>Report requirements</b>	Map showing topography (contours)	8.1 (a)	Appendix B Figure B1	Contour map is satisfactory	
	Map showing position of turbines	8.1 (a)	Sec 2.2 Fig.1	Adequate map	
	Map showing positions of receptors (noise sensitive locations)	8.1 (a)	Sec 2.2 Fig.1	Adequate map	
	Sound levels calculated for noise sensitive locations - receptors	8.1 (b)	Sec 4.1.2 Table 5	Highest predicted noise levels as dB LA(A90) were given	
	Wind turbine sound power levels provided	8.1 (c)	Sec 2.2 Tables 1&2	Sound power levels at operating wind speeds were provided	
	Make and model of wind turbines provided	8.1 (d)	Sec. 2.2	Vestas V162 wind turbines were specified in the report	
	Hub height of the wind turbines provided	8.1 (e)	Sec 2.2	Hub height give at 162 m	
	Distance to noise sensitive locations described	8.1 (f)	Appendix A	GPS position and distance to nearest turbine were provided for each receptor	

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**Wind Farm preconstruction noise assessment audit – John Cumming**

	Condition	Requirement	Noise assessment report	Comment	Rectification required
	Calculation procedures provided	8.1 (g)	Sec 4.0	The use of ISO 9613-2:1996 was described with the use of SoundPLAN version 8.2 software	
	Meteorological conditions provided	8.1 (h)	Sec 4.1.1	The seasonal conditions including wind speed and direction were considered in the NMP	This data could be included in the noise report
	Air absorption parameters used in calculations	8.1 (i)	Sec. 4.1.1	Atmospheric conditions were discussed	
	Ground attenuation parameters provided	8.1 (j)	Sec. 4.1.1	A ground attenuation factor of G=0.5 was used and justified	
	Topography / screening stated	8.1 (k)	Sec. 4.1.1	Topographical shielding was limited to 2 dB and valley effects to + 3dB	
	Predicted far field wind farm sound levels	8.1 (l)	Sec. 4.1.1	Far field calculations used ISO 9613-2:1996 standard	

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**Wind Farm preconstruction noise assessment audit – John Cumming**

Electrical Sub station	Condition	EPA (Vic) NIRV Guideline	Noise report	Comment	Rectification required
<b>Victoria EPA Guidelines Noise from Industry in Regional Victoria</b>	Substation location		Figure 1.	Substation positioning was given in the inset of the map in the NE corner of the site.	
	Substation sound power levels and dB(A)		Sec 4.2	Estimated from an 80 MVA transformer	
	Maximum Noise levels (Day , Evening, Night)	Table 1	Sec 4.2.1	Farm zone noise dB requirements under the NIRV are 45 Day, 39 Evening and 34 Night (Utilities)	
	Compliance with limits provided		Sec 4.2.2	This compliance was calculated for R12 at 21 dB	

**Legend**

Fully compliant		Partially compliant		Not compliant	
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## Appendix B: Wombelano WEF site visit notes

Date: November 29, 2020

### Site description:

The site is situated along the western side of Goroke-Harrow Road running south from Charam-Wombelano Road. It is commonly called "Harry's Block" from its owner from a soldier settlement. At 252 Ha, the site is fairly flat with a depression that holds water in wet periods at the extreme north eastern corner. The site is sparsely covered in mature eucalypts (Red Gums), otherwise it is covered in pasture grass and is used primarily for sheep grazing.

There is a shearing shed and associated buildings on Goroke-Harrow Road side, otherwise it is clear of developments.

### Location:

The site is situated in the western Wimmera region (West Wimmera Council) consisting of flat to gently undulating alluvial clay plains dotted with lakes some of which are ephemeral. There are nature reserves and some tree plantations: in particular the Konnepra Nature Reserve to the north east of the site and a smaller nature reserve at the south eastern corner of the site.

### Noise Sensitive Locations:

A tour around the vicinity of the proposed site revealed a number of residences and many sheds and silos associated with grain cropping and sheep grazing. No evidence was found for the potential for high amenity areas within a radius of 10 km of the proposed site.

The following residences were found in line with that given in the Resonate report (Wombelano Wind Farm – Environmental Noise Assessment M200708RP1 – 16 November 2020). The receptors are numbered according to Figure 1 of the assessment report.

R	Address		Description	Position
1	891 Goroke-Harrow Road		W/B residence, single storey, banks of sheds and silos Some tree protection	SE of the site
2	116 Pine Hills No.2 Road		W/B residence, single storey, Garage, sheds, 3 silos A few trees in the house paddock	South east of site
3/4	289 Pine Hills No.2 Road		W/B residence, single storey, Machinery and stuff around the house	South of site
5	415 Pine Hills No.2 Road		W/B residence, single storey, Also had a lot of used equipment around the house with some vegetation	South west of the site
6	Mitchell Road (site owner)		W/B residence, single storey, 5 sheds and silos Some vegetation and trees	North west of the site
7	1289 Charam-Wombelano Road (opposite Mitchell Road)		W/B residence, single storey, Some trees and palms around the house	North west of the site
10	17 McLennans Road		W/B residence, single storey, Sheds to the SE Trees to the east and west	North of the site

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11	88 Mitchell Road		W/B residence, single storey, Surrounded by mature eucalypts with shedding to the east of the house	West of the site
12	1687 Charam-Wombelano Road “Gray Hills”		A small new cottage set back from the road with one large shed to the west, set in an open forest	North east of the site
13	99 Poyntons Road		Single storey residence with sheds and a silo	East of the site behind a nature reserve with scrubby trees
14	8148 Nhill-Harrow Road		Residence, single storey with a red roof, well surrounded with tree cover	East of the site
17	8007 Nhill-Harrow Road		W/B residence, single storey cottage, 1 shed and a brick building, with a garden and some trees	East of the site
18	3017 Charam-Wombelano Road		Victorian W/B cottage set back from the road with some small sheds	East of the site
19	7977 Nhill-Harrow Road		Single storey brick residence with an established garden and shrubbery, a few sheds were on this site	East of the site
20	7920 Nhill-Harrow Road		W/B residence, single storey, Some sheds and a garden	East of the site
?	2005 Charam-Wombelano Road This was not picked up in the map in Figure 1. Of the report		A small house that did appear to be occupied was set amongst trees near a reserve.	East of the site

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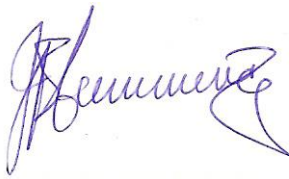
**End note**

There do not appear to be any circumstances that could adversely affect the compliance of the proposed turbine positions.

The site is fairly flat presenting a clear line of site of the turbines for most of the receptor sites. The site is cleared for pasture and has some areas of sparse bush with clumps of mature eucalypts.

The auditor does not have any interest in the Wombelano Wind Farm or the district and as such does not have a conflict of interest in this matter.

This audit report has been prepared for Wind Projects Australia Project 1 Pty Ltd - for the Wombelano Wind Farm development. The conclusions rely on the data provided and the findings rest on this data being correct and that the development will proceed as planned.



John Cumming  
Auditor pursuant to the Environment Protection Act (1970)  
21<sup>st</sup> December 2020

End

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