

Appendix 7

Addendum noise and vibration impact assessment







MEMO

Project:	Valley of the Winds	Wind Farm	Docu	ment No.:	Mm	005 r05	
То:	ACEN Australia Pty	Ltd	Date:		25 S	eptember 2023	
Attention:	Jon Williamson		Cross	Reference:	Rp 0	03 r01 20191254	
Delivery:	Email		Proje	ct No.:	2019)1254	
From:	Yuxiao Chen		No. P	ages:	24	Attachments:	No
CC:	Jeremy Ellis	Belinda Sinclair	-	Claire Butter	field		
Subject:	Addendum to Rp 00	03 r01 20191254					

1.0 INTRODUCTION

Marshall Day Acoustics Pty Ltd (MDA) has previously conducted an Environmental Impact Statement (EIS) noise assessment for Valley of the Winds Wind Farm (VoWWF). This was summarised in the EIS Noise Assessment¹ dated 23 February 2022.

Following changes to the project, ACEN Australia Pty Ltd (ACEN) has requested that MDA update the noise assessment for the project. Changes indicated by ACEN include:

- Modifications to the wind turbine and dwelling layout; and
- Introduction of a new proposed substation within the Mount Hope cluster.

In addition to the above ACEN has requested that MDA provide clarification on noise related to public road upgrades close to the village of Uarbry.

This memo provides a summary of the clarifications and resultant changes to the EIS Noise Assessment results and findings.

2.0 WIND TURBINE NOISE ASSESSMENT

2.1 Wind Turbine and Dwelling Layout

Revised wind turbine and dwelling layouts used in this assessment were provided by Ramboll Australia Pty Ltd (Ramboll) via emails:

- Ramboll_VoW_TurbineLayout_20230810.shp, received on 14 August 2023
- Ramboll_VoW_DwellingsONLYPostEIS_20230911_extract.shp, received on 13 September 2023.

The superseded wind turbine layout referenced in the EIS Noise Assessment comprises one hundred and forty-eight (148) wind turbines.

The revised wind turbine layout comprises one hundred and thirty-one (131) wind turbines, with seventeen (17) wind turbines removed, and changes made to individual wind turbine locations.

The coordinates of the wind turbines are presented in tabular format in Appendix A.

Revisions to the dwelling layout are primarily related to changes in associated/non-associated status, specifically receivers 2, 3, 18, 81, 82, 83, 88, 151, 179, 189, 298, 314, 324 and 505 changing from non-associated to associated, receiver 284 changed from associated to non-associated, receiver 502 has been added to the assessment as a non-associated receiver, and receiver 509 has been added as an associated receiver.



 $^{^{\}rm 1}$ Rp 003 r01 20191254 Valley of the Winds wind farm - EIS Noise Assessment



Due to the above wind turbine changes, the number of receivers within 3 km of a turbine position has also changed.

The coordinates of the receivers identified within 3 km of a wind turbine are tabulated in Appendix B. A highlevel summary of turbine and dwelling changes is provided in Table 1.

Table 1: Comparison between original layout and updated layout

		Receivers	Receivers within 3 km of a wind turbine		
Layout	Turbine count	Total	Associated	Non-associated	
EIS Noise Assessment (superseded)	148	57	22	35	
Updated	131	56	36	20	

The revised site plans illustrating the wind turbine layout, 3 km scale line and receiver positions are provided in Figure 1 to Figure 3, for each of the clusters.



Figure 1: Site layout – Mount Hope cluster

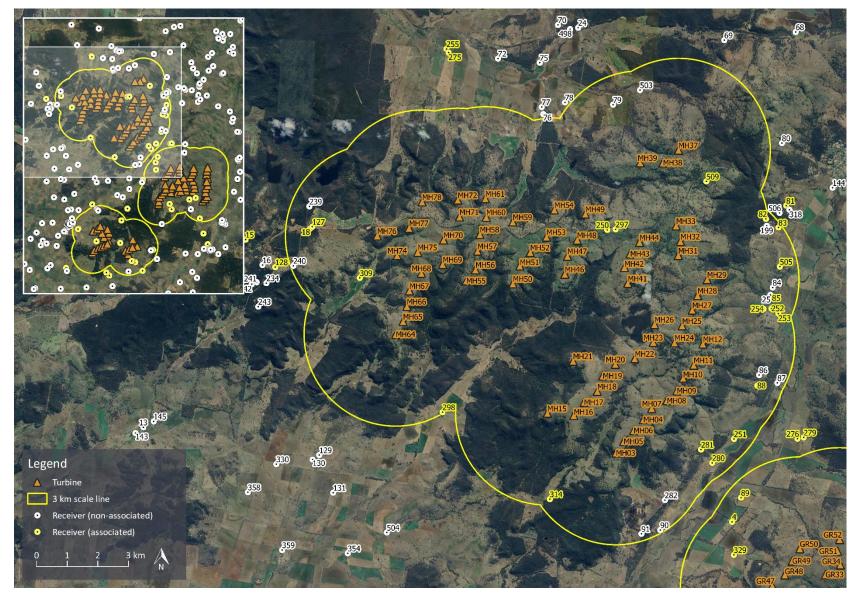




Figure 2: Site layout – Girragulang Road cluster

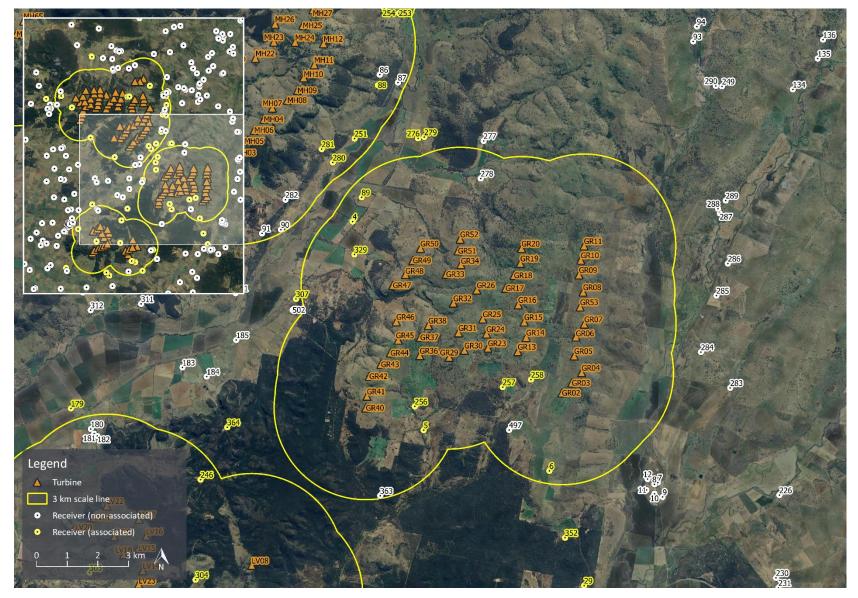
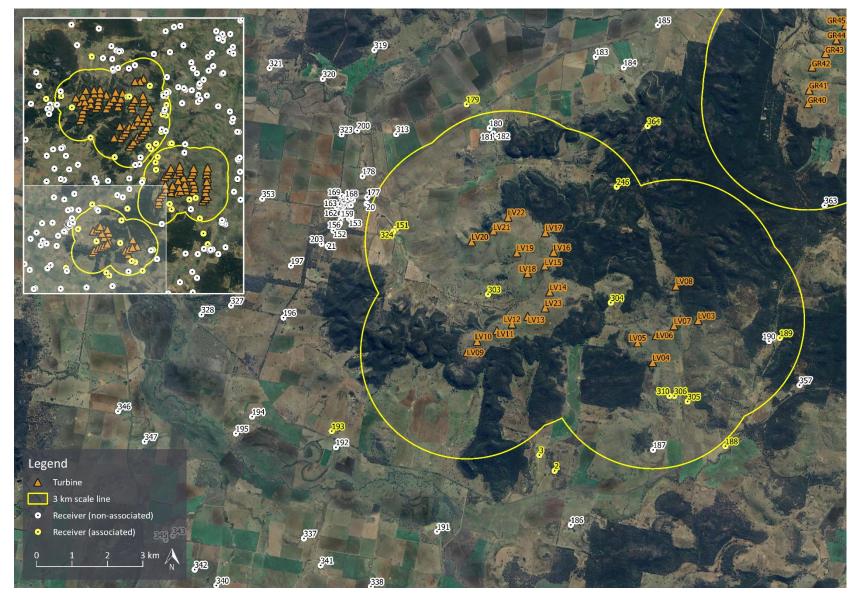




Figure 3: Site layout – Leadville cluster



2.2 Predicted Noise Levels

Noise modelling has been updated to incorporate the revised wind turbine and dwelling layouts. All other noise modelling parameters, including wind turbine source noise levels, topography, and ground factor inputs is the same as stated in the EIS Noise Assessment.

The receivers where operational wind turbine noise levels are predicted to be higher than 30 dB L_{Aeq} are listed in Table 2 for non-associated receivers and Table 3 for associated receivers. The value of 30 dB L_{Aeq} is referenced here for informative purposes. In some cases, receivers at which predicted noise levels are above 30 dB L_{Aeq} may be greater than 3 km from a turbine.

As detailed in the EIS Noise Assessment, the minimum wind turbine noise limit applicable at non-associated receivers is 35 dB L_{Aeq} , and the reference level for associated receivers is 45 dB L_{Aeq} . The predicted wind turbine noise levels from the proposed wind farm are below the noise limit for all non-associated receivers, and below the reference level for all associated receivers.

Receiver	SG 6.2-170	GE 6.0-164	V162-6.2 MW
25	31.3	32.7	31.6
76 ^[1]	30.4	31.7	30.8
77 ^[1]	29.9	31.1	30.2
78 ^[1]	29.7	30.9	30.0
79	30.4	31.7	30.7
84	30.0	31.4	30.3
86	31.9	33.3	32.2
87	30.8	32.0	31.0
90	31.5	32.7	31.8
91	31.4	32.5	31.6
180	29.3	30.6	29.5
181	29.7	31.1	30.0
182	30.0	31.4	30.3
199	29.6	30.9	29.9
239	29.1	30.3	29.4
277 ^[1]	29.8	30.9	30.0
278	32.1	33.4	32.4
282	32.6	33.9	32.9
497	32.7	34.1	33.1
501 ^[1]	29.1	30.0	29.1
502 ^[1]	30.5	31.6	30.7
506 ^[1]	28.9	30.1	29.2

Table 2: Highest predicted noise level at non-associated receivers with predicated levels above 30 dB LAeq

^[1] These receivers are located more than 3 km from a turbine but have been included as predicted noise levels are above 30 dB L_{Aeq} for at least one turbine model



Table 3: Highest predicted noise level at associate	d receivers with predicated levels above 30 dB LAeq
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Receiver	SG 6.2-170	GE 6.0-164	V162-6.2 MW
4	32.6	33.9	32.9
5	32.8	34.3	33.2
6	30.5	31.6	30.7
82	29.2	30.3	29.3
83	28.9	30.1	29.1
85	31.2	32.6	31.5
88	31.7	33.0	32.0
89	32.3	33.5	32.6
127	29.1	30.5	29.4
151	29.2	30.6	29.5
246	29.1	30.5	29.4
250	40.6	42.3	40.7
251	32.4	33.7	32.7
252	31.3	32.7	31.6
253	30.8	32.1	31.1
254	32.0	33.4	32.3
256	35.5	37.2	35.9
257	37.0	38.7	37.3
258	38.7	40.4	38.9
276 ^[1]	31.2	32.3	31.4
279 ^[1]	31.2	32.3	31.4
280	33.2	34.6	33.6
281	33.8	35.3	34.1
297	40.3	42.0	40.4
298	30.4	31.6	30.7
303	39.1	40.9	39.2
304	35.6	37.3	35.9
305	31.7	33.4	32.1
306	33.6	35.3	33.8
307 ^[1]	30.7	31.8	30.9
309	35.3	37.0	35.6
310	34.3	36.0	34.4



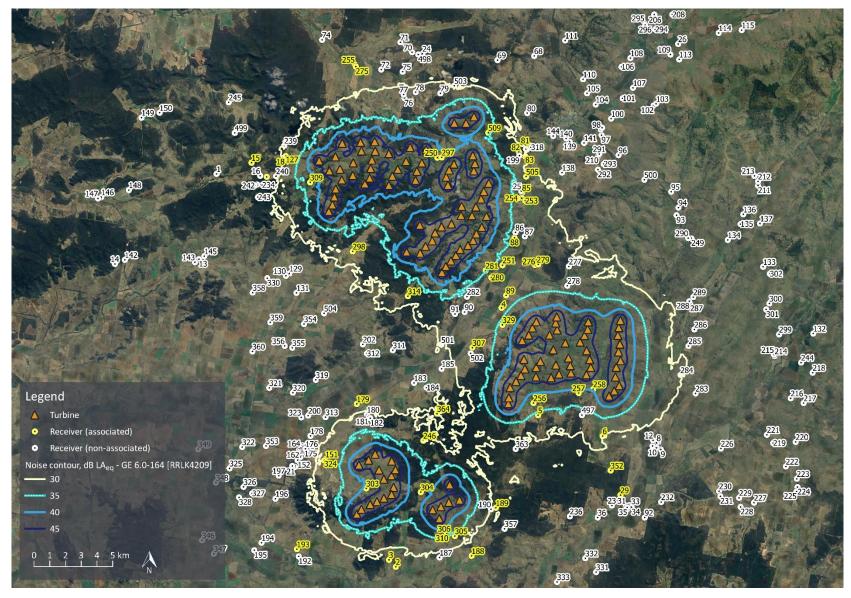
Receiver	SG 6.2-170	GE 6.0-164	V162-6.2 MW
314	30.6	31.8	30.8
324	29.2	30.6	29.6
329	34.2	35.7	34.6
364 ^[1]	30.0	31.0	30.1
505	29.6	30.8	29.8
509	35.2	36.7	35.4

^[1]] These receivers are located more than 3 km from a turbine but have been included as predicted noise levels are above 30 dB L_{Aeq} for at least one turbine model

The location of the total predicted 30 dB, 35 dB, 40 dB, and 45 dB L_{Aeq} noise contours for the candidate turbine model with the highest predicted noise levels (GE 6.0-164) is illustrated in Figure 4.



Figure 4: Highest predicted noise level contours for GE 6.0-164, dB LAeq





2.3 Cumulative Assessment

Noise predictions have also been updated for the cumulative assessment considering Liverpool Range Wind Farm (LRWF), which is located approximately 10 km away from the proposed VoWWF site.

The modelling method described in the EIS Noise assessment has been reproduced, updated for the changed VoWWF wind turbine and dwelling layouts.

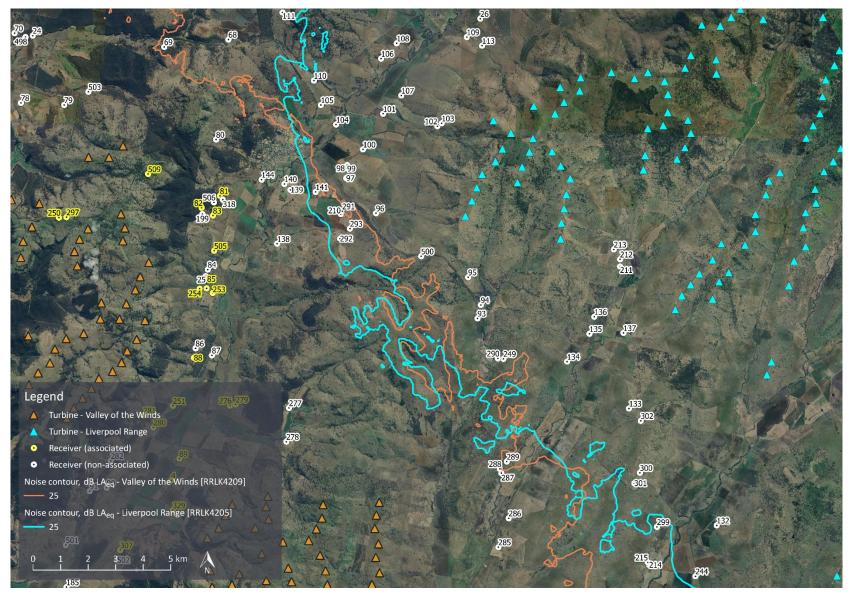
Figure 5 compares the predicted 25 dB L_{Aeq} contours for each project.

Table 4 and Table 5 present the highest cumulative noise level at receivers relevant to VoWWF and LRWF, respectively. Only receivers with predicted noise level from either wind farms higher than 32 dB L_{Aeq} were included as relevant receivers.

Predicted noise levels indicate that the compliance outcome for any relevant receiver of either wind farm does not change because of the VoWWF wind turbine and dwelling layout revisions.



Figure 5: Predicted 25 dB LAeq noise contour map for the Liverpool Range Wind Farm and Valley of the Winds wind farm





Receiver	LRWF (GE 5.5 – 158)	VoWWF (GE 6.0-164)	Cumulative	Change in compliance outcome due to cumulative effects with respect to the base criterion
Non-associ	iated receivers			
25	21.2	32.7	33.0	No
86	20.5	33.3	33.5	No
87	19.7	32.0	32.2	No
90	17.2	32.7	32.8	No
91	17.8	32.5	32.6	No
278	18.2	33.4	33.5	No
282	17.7	33.9	34.0	No
497	19.4	34.1	34.2	No
Associated	receivers			
4	17.6	33.9	34.0	No
5	16.1	34.3	34.4	No
85	21.2	32.6	32.9	No
88	20.2	33.0	33.2	No
89	17.9	33.5	33.6	No
250	19.9	42.3	42.3	No
251	18.8	33.7	33.8	No
252	21.0	32.7	33.0	No
253	20.8	32.1	32.4	No
254	21.0	33.4	33.6	No
256	16.4	37.2	37.2	No
257	19.1	38.7	38.7	No
258	18.5	40.4	40.4	No
276	17.7	32.3	32.4	No
279	17.9	32.3	32.5	No
280	18.3	34.6	34.7	No
281	18.3	35.3	35.4	No
297	19.6	42.0	42.0	No
303	10.2	40.9	40.9	No
304	11.8	37.3	37.3	No
305	11.9	33.4	33.4	No

Table 4: Cumulative assessment for relevant VoWWF receivers (predicted noise level larger than 32 dB), dB LAeq



(GE 5.5 – 158) (GE 6.0-164) due to cumulative effects w					
30913.737.037.0No31011.836.036.0No32917.035.735.8No	Receiver			Cumulative	Change in compliance outcome due to cumulative effects with respect to the base criterion
310 11.8 36.0 36.0 No 329 17.0 35.7 35.8 No	306	11.8	35.3	35.3	No
329 17.0 35.7 35.8 No	309	13.7	37.0	37.0	No
	310	11.8	36.0	36.0	No
509 21.7 36.7 36.8 No	329	17.0	35.7	35.8	No
	509	21.7	36.7	36.8	No

Table 5: Cumulative assessment for relevant LRWF receivers (predicted noise level larger than 32 dB), dB LAeq

Receiver	LRWF (GE 5.5 – 158)	VoWWF (GE 6.0-164)	Cumulative	Change in compliance outcome due to cumulative effects with respect to the base criterion
Non-associ	iated receivers			
102	32.8	22.7	33.2	No
103	33.5	22.8	33.9	No
113	32.1	20.0	32.4	No
114	34.4	17.6	34.5	No
115	36.0	16.4	36.0	No
117	34.6	16.3	34.7	No
118	34.9	16.1	35.0	No
119	35.2	16.7	35.3	No
198	36.2	17.5	36.3	No
204	37.7	14.9	37.7	No
205	37.8	14.9	37.8	No
211	34.3	17.7	34.4	No
212	34.3	17.6	34.4	No
213	34.8	17.9	34.9	No
263	32.2	14.2	32.3	No

MARSHALL DAY

3.0 SUBSTATION ASSESSMENT

MDA has been advised that an additional substation is proposed within the Mount Hope cluster.

The position of the additional substation location was provided by Ramboll via email dated 5 April 2023, in spatial data identified as:

• Ramboll_VoW_SubstationArea_20230329.shp

The coordinates used for assessment of the substation, described herein as Mount Hope Substation 2, are detailed in Table 6.

Table 6: MH Substation 2 coordinate - GDA 2020 zone 55

Infrastructure item	Easting, m	Northing, m
Mount Hope substation 2	746,122	6,472,975

Changes in receiver associated status, as well as the introduction of new receivers, as detailed in Section 1.0

INTRODUCTION, mean that the nearest receivers to the substations identified in the EIS Noise Assessment have in some cases changed. This means the existing substation noise assessment needs to be updated.

Operational and construction noise related to the four substations, including Mount Hope Substation 2, are assessed in turn in the following sections.

3.1 Operational noise

The sound power level used for assessment is the same power level used for the assessment of other substations in the project, as detailed in Section 6.2 and Table 18 of the EIS Noise Assessment, being 100 dB L_{WA} .

Predicted noise levels at the nearest non-associated and associated receivers are listed in Table 7, including an adjustment of +5 dB to account for potential tonal characteristics as per the method described in Section 6.3 of the EIS Noise Assessment.

Table 7: Predicted noise levels at the nearest non-associated and associated receivers (including +5 dB tonality penalty),
dB L _{Aeq}

Infrastructure item	Nearest receiver	Distance, m	L _{Aeq}	
Non-associated receivers				
Mount Hope Substation	199	3,117	<15	
Mount Hope Substation 2	76	4,254	<15	
Girragulang Road Substation	497*	4,107	<15	
Leadville Substation	190*	4,034	<15	
Associated receivers				
Mount Hope Substation	509	1,590	22	
Mount Hope Substation 2	250	2,927	16	
Girragulang Road Substation	257*	2,694	19	
Leadville Substation	304*	1,988	20	

* Unchanged since the EIS assessment.

For the purposes of assessment, the most stringent criterion applicable has been considered, being 35 dB L_{Aeq}, developed per Section 6.1 of the EIS Noise Assessment.



While the specific equipment selections would not be finalised until the detailed design phase of the project, noise levels from all substations are predicted to be substantially below the 35 dB L_{Aeq} criterion applicable at the nearest non-associated and associated receivers.

Further, cumulative consideration of Mount Hope Substation2 in conjunction with the other substations and battery energy storage system detailed in Section 6.3 of the EIS Noise Assessment, would be below the criterion of 35 dB L_{Aeq}, even accounting for any adjustments (if applicable at the receiver) for the potential tonal characteristics associated with transformers.

3.2 Construction noise

The construction noise assessment for the Substation Construction task, as detailed in the EIS Noise Assessment has also been updated, considering the introduction of Mount Hope Substation 2, as well as the changes to receivers.

The prediction method and source noise levels for plant and equipment items associated with the construction of Mount Hope Substation 2 have been assumed to align with that for the construction of other substations in the project, per Section 8.0 of the EIS Noise Assessment.

The predicted noise level ranges at the nearest non-associated and associated receivers are listed in Table 8, for the Substation Construction task.

Construction task	Nearest receiver	Predicted level range	Noise affected management level	Exceedance
Non-associated receivers				
Substation Construction	199	30-35	45	-
Associated receivers				
Substation Construction	509	35-40	45	-

Table 8: Indicative range of construction noise predictions, dB LAeq

Noise related to the construction of the substations is therefore predicted to be below the noise affected management level.

4.0 PUBLIC ROADS UPGRADES

Ramboll have advised MDA that public road upgrades are proposed to Turee Street, Main Street, Wyaladra Street and Moorefield Road close to the village of Uarbry.

Whilst not prescriptively referenced in the EIS Noise Assessment, MDA confirms that the proposed extent of public road upgrades has previously been accounted for in the construction activity identified as 'Access road construction' in Section 8.0 of the EIS Noise Assessment.

Table 21 of the EIS Noise Assessment specifically details predicted noise levels for the non-associated and associated receiver nearest to the proposed access road work, being Receiver 31 and Receiver 297 respectively. Predicted noise levels are reproduced in Table 9.

Construction task	Nearest receiver	Predicted level range	Noise affected management level	Exceedance	Highly noise affected management level	Exceedance
Non-associated re	eceivers					
Access road construction ¹	31	80-85	45	35-40	75	5-10
Associated receive	ers					
Access road construction ¹	297	70-75	45	25-30	75	-

¹ Including public road upgrades



It should be noted that Receiver 297 is located close to works proposed for Mount Hope Rd and thus not located in or near the village of Uarbry. Receiver 31 however is located close to works planned for Turee St, being the nearest receiver to any of the roads proposed for upgrade in or around Uarbry.

Noise levels for other receivers in Uarbry are predicted to be below that for Receiver 31. As per the EIS Noise Assessment the predicted noise levels are comparable to, and typical of, noise levels produced by general road maintenance works and activity.

5.0 NOISE FROM OTHER SOURCES

5.1 Construction noise from wind turbines

Changes to the project wind turbine layout is primarily related to removal of wind turbines. This means that construction noise associated with the revised layout is likely to be equivalent to, or for receivers near where turbines have been removed, lower than the predicted construction noise levels detailed in Section 8.0 of the EIS Noise Assessment.

5.2 Traffic noise

The changes made to the project wind turbine layout are not expected to change operational or construction traffic routes or counts.

On this basis it is not expected that the changes made to the project wind turbine and dwellings layouts will change the predicted noise levels or outcomes detailed in Section 9.0 of the EIS Noise Assessment.

6.0 CONCLUSION

Additional assessment was conducted based on the changes in wind turbine and receiver layout, as well as the additional substation within Mount Hope cluster. The assessment results show that the compliance outcome detailed in the previous EIS Noise Assessment remains the same, even with the proposed project changes.



APPENDIX A WIND TURBINE COORDINATES

Table 10 sets out the coordinates of the proposed turbine layout, 'Ramboll_VoW_TurbineLayout_20230810.shp', as supplied by Ramboll via email dated 14 August 2023.

Turbine	Easting	Northing	Terrain elevation
GR02	759,945	6,458,232	600
GR03	760,267	6,458,557	610
GR04	760,587	6,458,894	610
GR05	760,345	6,459,441	599
GR06	760,398	6,460,059	610
GR07	760,673	6,460,478	620
GR08	760,633	6,461,526	610
GR09	760,499	6,462,088	618
GR10	760,559	6,462,572	621
GR11	760,663	6,463,035	630
GR13	758,498	6,459,581	620
GR14	758,775	6,460,045	620
GR15	758,711	6,460,550	630
GR16	758,513	6,461,112	625
GR17	758,101	6,461,652	660
GR18	758,377	6,462,071	680
GR19	758,581	6,462,466	690
GR20	758,622	6,462,951	695
GR23	757,524	6,459,697	631
GR24	757,475	6,460,158	640
GR25	757,356	6,460,645	666
GR26	757,160	6,461,594	679
GR29	756,257	6,459,395	629
GR30	756,756	6,459,623	645
GR31	756,561	6,460,198	640
GR32	756,394	6,461,164	630
GR33	756,157	6,462,109	610
GR34	756,642	6,462,426	620
GR36	755,296	6,459,452	619

Table 10: Proposed wind turbine coordinates - GDA 2020 Zone 55



Turbine	Easting	Northing	Terrain elevation
GR37	755,282	6,460,073	640
GR38	755,578	6,460,433	640
GR40	753,535	6,457,743	622
GR41	753,568	6,458,121	620
GR42	753,648	6,458,775	620
GR43	754,027	6,459,161	620
GR44	754,338	6,459,538	620
GR45	754,591	6,459,956	635
GR46	754,528	6,460,559	610
GR47	754,418	6,461,745	600
GR48	754,829	6,462,101	600
GR49	755,071	6,462,557	610
GR50	755,319	6,462,954	601
GR51	756,547	6,462,873	593
GR52	756,616	6,463,255	590
GR53	760,537	6,461,040	600
LV03	750,433	6,451,624	580
LV04	749,149	6,450,441	560
LV05	748,725	6,450,997	570
LV06	749,248	6,451,202	589
LV07	749,753	6,451,476	600
LV08	749,804	6,452,596	598
LV09	743,905	6,450,719	570
LV10	744,192	6,451,038	585
LV11	744,753	6,451,344	597
LV12	745,181	6,451,523	600
LV13	745,623	6,451,741	593
LV14	746,242	6,452,428	590
LV15	746,104	6,453,165	606
LV16	746,353	6,453,549	590
LV17	746,119	6,454,104	570
LV18	745,619	6,452,949	610
LV19	745,314	6,453,536	610



Turbine	Easting	Northing	Terrain elevation
LV20	744,035	6,453,850	602
LV21	744,651	6,454,155	620
LV22	745,066	6,454,537	574
LV23	746,111	6,451,980	577
MH03	749,310	6,466,082	644
MH04	750,203	6,467,171	692
MH05	749,563	6,466,461	665
MH06	749,886	6,466,815	680
MH07	750,476	6,467,537	709
MH08	750,971	6,467,791	690
MH09	751,298	6,468,114	690
MH10	751,504	6,468,529	716
MH11	751,849	6,468,952	730
MH12	752,151	6,469,642	738
MH15	747,065	6,467,378	680
MH16	747,931	6,467,309	683
MH17	748,267	6,467,739	690
MH18	748,696	6,468,097	670
MH19	748,878	6,468,598	662
MH20	749,287	6,468,979	653
MH21	747,908	6,469,081	649
MH22	749,924	6,469,164	680
MH23	750,527	6,469,695	715
MH24	751,221	6,469,686	750
MH25	751,472	6,470,237	770
MH26	750,567	6,470,282	728
MH27	751,802	6,470,750	730
MH28	751,977	6,471,225	709
MH29	752,288	6,471,746	675
MH31	751,344	6,472,531	720
MH32	751,417	6,472,993	730
MH33	751,276	6,473,502	733
MH37	751,352	6,475,975	730



Turbine	Easting	Northing	Terrain elevation
MH38	750,845	6,475,562	720
MH39	750,101	6,475,563	720
MH41	749,695	6,471,624	650
MH42	749,585	6,472,140	692
MH43	749,773	6,472,587	720
MH44	750,081	6,472,964	720
MH46	747,638	6,471,923	681
MH47	747,721	6,472,511	710
MH48	748,040	6,473,036	744
MH49	748,308	6,473,887	710
MH50	745,939	6,471,612	715
MH51	746,166	6,472,195	720
MH52	746,507	6,472,634	725
MH53	747,036	6,473,136	717
MH54	747,294	6,474,024	720
MH55	744,419	6,471,709	698
MH56	744,718	6,472,071	720
MH57	744,783	6,472,678	730
MH58	744,861	6,473,223	730
MH59	745,936	6,473,627	720
MH60	745,069	6,473,787	727
MH61	745,041	6,474,392	720
MH64	742,115	6,469,958	730
MH65	742,350	6,470,379	723
MH66	742,474	6,470,870	663
MH67	742,560	6,471,381	710
MH68	742,950	6,471,956	720
MH69	743,646	6,472,241	700
MH70	743,673	6,473,041	723
MH71	744,195	6,473,794	725
MH72	744,138	6,474,344	715
MH74	742,158	6,472,531	675
MH75	742,831	6,472,640	730



Turbine	Easting	Northing	Terrain elevation
MH76	741,505	6,473,174	692
MH77	742,546	6,473,428	693
MH78	742,975	6,474,285	701

APPENDIX B RECEIVER COORDINATES

Table 11 sets out the fifty-five (55) receivers within 3 km of a proposed wind turbine position, based on dwelling layout 'Ramboll_VoW_DwellingsONLYPostEIS_20230519.shp' as provided by Ramboll via email dated 14 August 2023.

Receiver	Easting, m	Northing, m	Terrain elevation, m	Distance to the nearest turbine, m	Nearest turbine
Associated rec	ceivers				
4	753,102	6,463,830	450	2,348	GR49
5	755,422	6,457,014	521	2,026	GR40
6	759,531	6,455,686	590	2,583	GR02
18	739,309	6,473,411	642	2,212	MH76
82	754,208	6,473,729	540	2,762	MH29
83	754,620	6,473,447	510	2,888	MH29
85	754,408	6,471,141	486	2,208	MH29
88	753,928	6,468,284	499	2,187	MH11
89	753,396	6,464,622	456	2,549	GR50
127	739,381	6,473,473	644	2,148	MH76
151	741,898	6,454,218	435	2,172	LV20
189	752,739	6,451,131	472	2,361	LV03
246	748,131	6,455,398	518	2,395	LV17
250	749,023	6,473,371	740	890	MH49
251	753,165	6,466,540	456	2,444	MH09
252	754,390	6,470,804	484	2,307	MH29
253	754,612	6,470,636	475	2,578	MH29
254	754,133	6,470,787	493	2,083	MH29
256	755,133	6,457,790	546	1,603	GR40
257	758,006	6,458,422	580	1,264	GR13
258	758,930	6,458,667	555	1,018	GR13
280	752,452	6,465,758	451	2,517	MH08
281	752,090	6,466,196	473	1,952	MH08
297	749,296	6,473,389	735	900	MH44
298	743,640	6,467,417	464	2,966	MH64
303	744,500	6,452,362	515	1,055	LV11
304	747,968	6,452,126	505	1,364	LV05

Table 11: Receivers within 3 km of the proposed turbines – GDA 2020 Zone 55



Receiver	Easting, m	Northing, m	Terrain elevation, m	Distance to the nearest turbine, m	Nearest turbine
305	750,134	6,449,338	493	1,483	LV04
306	749,757	6,449,494	500	1,131	LV04
309	740,935	6,471,803	595	1,428	MH74
310	749,622	6,449,494	515	1,065	LV04
314	747,146	6,464,576	510	2,639	MH03
324	741,826	6,454,138	440	2,231	LV20
329	753,160	6,462,752	469	1,616	GR47
505	754,664	6,472,170	494	2,417	MH29
509	752,262	6,474,954	747	1,367	MH37
Non-associate	d receivers				
25	754,356	6,471,246	491	2,131	MH29
79	749,213	6,477,460	570	2,097	MH39
84	754,430	6,471,486	492	2,161	MH29
86	753,987	6,468,628	511	2,102	MH12
87	754,583	6,468,372	463	2,746	MH12
90	750,756	6,463,567	440	2,904	MH03
91	750,140	6,463,443	464	2,769	MH03
180	744,543	6,457,052	445	2,572	LV22
181	744,652	6,456,901	454	2,403	LV22
182	744,757	6,456,824	462	2,311	LV22
187	749,161	6,447,974	466	2,470	LV04
190	752,433	6,451,041	466	2,087	LV03
199	754,236	6,473,501	538	2,624	MH29
239	739,288	6,474,137	680	2,420	MH76
240	738,763	6,472,198	670	2,913	MH76
278	757,286	6,465,236	505	2,095	GR52
282	750,906	6,464,542	458	2,221	MH03
363	754,001	6,454,872	510	2,911	GR40
497	758,215	6,457,021	570	2,115	GR02
503	750,094	6,477,939	570	2,335	MH37