



APPENDIX 12-4

TURBINE SOUND POWER LEVELS



REG. No. _____

PLANNING (WEST) DEPT

06 NOV 2025

CORK COUNTY COUNCIL
NORTON HOUSE, SKIBBEREEN, Co. CORK

APPENDIX 12-4 TURBINE SOUND POWER LEVELS

This Appendix presents the sound power levels of the various turbine technologies used in the assessment.

Appendix Table 12-4-1. Proposed Curraglass: Nordex N133 at a hub height of 90 m

Standardised 10m Height Wind Speed (m/s)	Octave Band (Hz) Sound Power Levels (dB re 10 ⁻¹² W)								
	63	125	250	500	1k	2k	4k	8k	dB(A)
3	76.5	83.5	88.0	89.3	89.1	86.6	80.9	69.8	95.0
4	77.8	84.8	89.3	90.6	90.4	87.9	82.2	71.1	96.3
5	81.3	88.4	93.2	95.6	96.2	93.7	86.2	73.9	101.3
6	85.5	92.6	97.4	99.8	100.4	97.9	90.4	78.1	105.5
7	87.3	94.4	99.2	101.6	102.2	99.7	92.2	79.9	107.3
8	89.0	94.8	98.0	100.4	102.3	101.4	96.0	82.2	107.5
≥9	89.0	94.8	98.0	100.4	102.3	101.4	96.0	82.2	107.5

Appendix Table 12-2-2. Assumed noise emissions for Grousemount: Siemens SWT-2.3-101 hub height of 79.5 m

Standardised 10m Height Wind Speed (m/s)	Octave Band (Hz) Sound Power Levels (dB re 10 ⁻¹² W)								
	63	125	250	500	1k	2k	4k	8k	dB(A)
3	75.1	86.3	90.4	94	94.2	90.8	83.4	79.1	99.1
4	77.1	88.3	92.4	96	96.2	92.8	85.4	81.1	101.1
5	79.1	90.3	94.4	98	98.2	94.8	87.4	83.1	103.1
6	81.1	92.3	96.4	100	100.2	96.8	89.4	85.1	105.1
7	83.5	94.4	98.1	102.1	102.1	98.4	91.2	87.2	107
8	83.5	94.4	98.1	102.1	102.1	98.4	91.2	87.2	107
9	83.5	94.4	98.1	102.1	102.1	98.4	91.2	87.2	107

Appendix Table 12-2-3. Assumed noise emissions for Shehymore: Nordex N100-3300 at a hub height of 75 m

Standardised 10m Height Wind Speed (m/s)	Octave Band (Hz) Sound Power Levels (dB re 10 ⁻¹² W)								
	63	125	250	500	1k	2k	4k	8k	dB(A)
3	71.1	76.7	82.8	86	87.2	87.8	83.2	69.9	93
4	73.1	78.7	84.8	88	89.2	89.8	85.2	71.9	95
5	74.9	79.2	86.4	91.4	93	92.6	87.5	73.6	98
6	80.9	85	90.4	94.7	97.2	96.4	92.4	78.8	102
7	81.5	87.5	91.9	96.2	98.5	97.4	92.5	79.2	103.2
8	82.6	88.9	92.6	96.7	99.4	98.3	93.3	79.7	104
9	82.6	89.3	91.9	96	100.1	99.5	93.7	79.1	104.5

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Appendix Table 12-2-4. Assumed noise emissions for Silahertane: at a hub height of 55 m

Standardised 10m Height Wind Speed (m/s)	Octave Band (Hz) Sound Power Levels (dB re 10 ⁻¹² W)								dB(A)
	63	125	250	500	1k	2k	4k	8k	
3	75.5	83.4	89.2	94.8	94.5	90.6	84.2	74.0	99.2
4	75.5	83.4	89.2	94.8	94.5	90.6	84.2	74.0	99.2
5	75.5	83.4	89.2	94.8	94.5	90.6	84.2	74.0	99.2
6	80.0	87.9	93.7	99.3	99.0	95.1	88.7	78.5	103.7
7	82.2	90.1	95.9	101.5	101.2	97.3	90.9	80.7	105.9
8	82.7	90.6	96.4	102.0	101.7	97.8	91.4	81.2	106.4
9	82.9	90.8	96.6	102.2	101.9	98.0	91.6	81.4	106.6

Appendix Table 12-2-5. Assumed noise emissions for Maughnaclea, at a hub height of 102.5 m

Standardised 10m Height Wind Speed (m/s)	Octave Band (Hz) Sound Power Levels (dB re 10 ⁻¹² W)								dB(A)
	63	125	250	500	1k	2k	4k	8k	
3	74.8	81.8	85.6	86.5	87.0	85.7	81.4	72.2	93.1
4	76.5	83.5	87.3	88.2	88.7	87.4	83.1	73.9	94.8
5	82.0	89.0	92.8	93.7	94.2	92.9	88.6	79.4	100.3
6	85.8	92.8	96.6	97.5	98.0	96.7	92.4	83.2	104.1
7	86.3	93.3	97.1	98.0	98.4	97.2	92.9	83.7	104.5
8	86.2	93.2	97.0	97.9	98.4	97.1	92.8	83.6	104.5
9	86.2	93.2	97.0	97.9	98.4	97.1	92.8	83.6	104.5

Appendix Table 12-2-6. Assumed noise emissions for Gortloughra: at a hub height of 100 m

Standardised 10m Height Wind Speed (m/s)	Octave Band (Hz) Sound Power Levels (dB re 10 ⁻¹² W)								dB(A)
	63	125	250	500	1k	2k	4k	8k	
3	73.6	81.3	86.1	87.9	86.7	82.5	75.3	65.1	92.7
4	76.7	84.6	89.4	91.3	90.1	86.0	78.8	68.6	96.1
5	81.1	88.9	93.7	95.6	94.5	90.3	83.2	73.0	100.4
6	84.4	92.3	97.2	99.1	98.0	93.9	86.8	76.6	103.9
7	85.1	93.1	98.0	100.0	98.9	94.8	87.7	77.5	104.8
8	85.5	93.3	98.2	100.1	99.0	94.8	87.7	77.6	104.9
9	86.3	93.7	98.2	100.0	98.9	94.8	88.0	78.2	104.9

Appendix Table 12-2-7. Assumed noise emissions for Derragh: at a hub height of 100 m

Standardised 10m Height Wind Speed (m/s)	Octave Band (Hz) Sound Power Levels (dB re 10 ⁻¹² W)								dB(A)
	63	125	250	500	1k	2k	4k	8k	
3	73.0	79.4	83.5	83.5	84.4	84.5	84.3	77.0	91.6
4	75.1	81.5	85.6	85.6	86.5	86.6	86.4	79.1	93.7
5	78.6	85.0	89.1	89.1	90.0	90.1	89.9	82.6	97.2
6	82.7	89.1	93.2	93.2	94.1	94.2	94.0	86.7	101.3
7	83.3	89.7	93.8	93.8	94.7	94.8	94.6	87.3	101.9
8	84.1	90.5	94.6	94.6	95.5	95.6	95.4	88.1	102.7
9	84.4	90.8	94.9	94.9	95.8	95.9	95.7	88.4	103.0