

Appendix 10-4

SOUND POWER LEVELS

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Wind speed at 10m, m/s	Sound Power Level dB(A) at Octave-band centre frequency, Hz								Overall (dB(A))
	63	125	250	500	1000	2000	4000	8000	
3	78.0	84.5	87.5	88.8	87.6	83.5	76.4	66.5	94.0
4	78.6	85.7	88.7	89.5	88.1	83.8	76.4	66.0	94.8
5	82.9	90.0	93.0	93.7	92.3	87.8	80.3	69.8	99.0
6	86.8	94.4	97.6	97.8	96.1	91.5	83.9	73.1	103.2
7	88.2	95.8	99.0	99.2	97.5	92.9	85.3	74.5	104.6
8	88.5	96.0	99.2	99.4	97.8	93.2	85.7	75.0	104.8
9	88.6	96.2	99.4	99.6	98.0	93.5	86.0	75.4	105.0
10	88.7	96.5	99.7	100.0	98.5	94.0	86.5	75.9	105.4
11	88.5	96.4	99.8	100.2	98.7	94.2	86.6	75.9	105.5

Table 1 Assumed Turbine Sound Power Levels for Proposed Ballinla Turbines (V162 at 104 m Hub Height)

Wind speed at 10m, m/s	Sound Power Level dB(A) at Octave-band centre frequency, Hz								Overall (dB(A))
	63	125	250	500	1000	2000	4000	8000	
3	79.8	83.8	86.7	83.4	88.1	84.7	77.9	66.0	93.1
4	81.6	86.3	89.5	88.7	91.3	89.8	82.1	63.8	96.7
5	85.1	90.1	93.4	93.9	95.8	94.3	86.6	68.3	101.1
6	87.2	92.6	96.6	98.2	99.1	98.2	90.4	70.8	104.7
≥7	88.0	93.4	97.4	99.0	99.9	99.0	91.2	71.6	105.5

Table 2 Assumed Turbine Sound Power Levels for Cloncreen Turbines (V136 Turbine at 102m Hub Height)

Wind speed at 10m, m/s	Sound Power Level dB(A) at Octave-band centre frequency, Hz								Overall (dB(A))
	63	125	250	500	1000	2000	4000	8000	
4	73.8	85.7	92.4	95.7	92.4	84.5	73.6	70.3	99.0
5	78.7	90.6	97.3	100.6	97.3	89.4	78.5	75.2	103.9
6	80.6	92.5	99.2	102.5	99.2	91.3	80.4	77.1	105.8
≥7	81.8	93.7	100.4	103.7	100.4	92.5	81.6	78.3	107.0

Table 3 Assumed Turbine Sound Power Levels for Mount Lucas Turbines (S101 Turbine at 99.5m Hub Height)

Wind speed at 10m, m/s	Sound Power Level dB(A) at Octave-band centre frequency, Hz								Overall (dB(A))
	63	125	250	500	1000	2000	4000	8000	
3	72.7	80.2	87.5	89.0	87.8	85.7	78.7	71.0	94.0
4	74.0	80.9	87.8	89.5	90.9	90.8	84.5	69.6	96.4
5	80.7	87.9	92.1	93.8	96.4	96.5	92.5	79.6	101.9
6	83.8	90.1	94.8	96.9	99.1	98.8	94.9	82.7	104.5
≥7	84.6	90.9	94.7	96.8	99.7	99.7	95.4	83.3	105.0

Table 4 Assumed Turbine Sound Power Levels for Yellow River Turbines (V126 Turbine at 106m Hub Height)