
APPENDIX 12.4 – CUMULATIVE PREDICTION SOURCE NOISE TABLES

Foel Trawsnant Wind Farm

Table 12.4.1: Foel Trawsnant Wind Turbine Locations				
Foel Tranwsnant	Easting	Northing	HH	Turbine Type
F1	283979	193524	100	N90
F2	283842	193719	100	N90
F3	283693	193910	100	N90
F4	283428	194260	100	N90
F5	283092	194327	100	N90
F6	282867	194591	100	N90
F7	284161	193808	100	N90
F8	284015	194045	100	N90
F9	283761	194191	100	N90
F10	283728	194431	100	N90
F11	283513	194700	100	N90

Table 12.4.2: Nordex N90 L _{WA} Sound Power Level: dB re: 10 ⁻¹² W									
Wind Speed	L _{WA}	Octave Band Centre Frequency: Hz							
		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
3	96.0	81.2	85.3	89.7	90.1	88.6	87.5	83.5	75.9
4	99.5	84.7	88.8	93.2	93.6	92.1	91.0	87.0	79.4
5	103.0	88.2	92.3	96.7	97.1	95.6	94.5	90.5	82.9
6	106.0	91.2	95.3	99.7	100.1	98.6	97.5	93.5	85.9
7	107.0	92.2	96.3	100.7	101.1	99.6	98.5	94.5	86.9
8	107.5	92.7	96.8	101.2	101.6	100.1	99.0	95.0	87.4
9	107.5	92.7	96.8	101.2	101.6	100.1	99.0	95.0	87.4
10	107.5	92.7	96.8	101.2	101.6	100.1	99.0	95.0	87.4
11	107.5	92.7	96.8	101.2	101.6	100.1	99.0	95.0	87.4
12	107.5	92.7	96.8	101.2	101.6	100.1	99.0	95.0	87.4

The turbine has a rotor diameter of 90 m.

A level of uncertainty of 2 dB was added to the sound power levels.

The sound power level data is for a 100 m hub height with wind speeds standardised to 10 m.

The sound power levels below have been referenced from: NORDEX_N90_MODE00_NonSTE_v3.xlsx.

Source: FT noise chapter

S.73 Foel Trawsnant Wind Farm

Table 12.4.3: Foel Trawsnant Wind Turbine Locations				
Foel Tranwsnant	Easting	Northing	HH	Turbine Type
F1	283979	193524	86.5	N117
F2	283842	193719	86.5	N117
F3				
F4				
F5	283092	194327	78.5	N133
F6	282867	194591	78.5	N133
F7				
F8	284015	194045	86.5	N117
F9	283761	194191	78.5	N133
F10	283728	194431	78.5	N133
F11	283513	194700	78.5	N133

Table 12.4.4: Nordex N117 Mode 0: L _{WA} Sound Power Level: dB re: 10 ⁻¹² W									
Wind Speed	L _{WA}	Octave Band Centre Frequency: Hz							
		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
3	94.4	73.5	80.2	85.1	86.6	89.1	88.0	85.9	76.1
4	98.9	77.9	84.6	89.5	91.0	93.5	92.4	90.3	80.5
5	103.3	82.4	89.1	94.0	95.5	98.0	96.9	94.8	85.0
6	105.4	84.5	91.2	96.1	97.6	100.1	99.0	96.9	87.1
7	106.5	85.5	92.2	97.1	98.6	101.1	100.0	97.9	88.1
8	107.0	86.0	92.7	97.6	99.1	101.6	100.5	98.4	88.6
9	107.0	86.1	92.8	97.7	99.2	101.7	100.6	98.5	88.7
10	107.0	86.1	92.8	97.7	99.2	101.7	100.6	98.5	88.7
11	107.0	86.1	92.8	97.7	99.2	101.7	100.6	98.5	88.7
12	107.0	86.1	92.8	97.7	99.2	101.7	100.6	98.5	88.7

Table 12.4.5: Nordex N133 Mode 0: L _{WA} Sound Power Level: dB re: 10 ⁻¹² W									
		Octave Band Centre Frequency: Hz							
Wind Speed	L _{WA}	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
3	97.0	78.5	85.5	90.0	91.3	91.1	88.6	82.9	71.8
4	97.5	79.0	86.0	90.5	91.8	91.6	89.1	83.4	72.3
5	103.0	83.0	90.1	94.9	97.3	97.9	95.4	87.9	75.6
6	107.2	87.2	94.3	99.1	101.5	102.1	99.6	92.1	79.8
7	109.5	89.5	96.6	101.4	103.8	104.4	101.9	94.4	82.1
8	109.5	91.0	96.8	100.0	102.4	104.3	103.4	98.0	84.2
9	109.5	91.0	96.8	100.0	102.4	104.3	103.4	98.0	84.2
10	109.5	91.0	96.8	100.0	102.4	104.3	103.4	98.0	84.2
11	109.5	91.0	96.8	100.0	102.4	104.3	103.4	98.0	84.2
12	109.5	91.0	96.8	100.0	102.4	104.3	103.4	98.0	84.2

Ffynnon Oer Wind Farm

Table 12.4.6: Ffynnon Oer Wind Turbine Locations				
Ffynnon Oer	Easting	Northing	HH	Turbine Type
FO1	284442	199531	68	MM70
FO2	284634	199399	68	MM70
FO3	284296	199248	68	MM70
FO4	284806	198580	68	MM70
FO5	284118	198635	68	MM70
FO6	284736	198804	68	MM70
FO7	284597	198985	68	MM70
FO8	284475	198427	68	MM70
FO9	284836	198330	68	MM70
FO10	284004	198141	68	MM70
FO11	284392	198633	68	MM70
FO12	284892	199309	68	MM70
FO13	285043	198993	68	MM70
FO14	285116	199228	68	MM70
FO15	284324	198985	68	MM70
FO16	284369	198075	68	MM70

Table 12.4.7: RePower MM70 L _{WA} Sound Power Level: dB re: 10 ⁻¹² W									
		Octave Band Centre Frequency: Hz							
Wind Speed	L _{WA}	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
3	89.6	74.8	78.9	83.3	83.7	82.2	81.1	77.1	69.5
4	93.6	78.8	82.9	87.3	87.7	86.2	85.1	81.1	73.5
5	97.6	82.8	86.9	91.3	91.7	90.2	89.1	85.1	77.5
6	101.1	86.3	90.4	94.8	95.2	93.7	92.6	88.6	81.0
7	104.3	89.5	93.6	98.0	98.4	96.9	95.8	91.8	84.2
8	106.1	91.3	95.4	99.8	100.2	98.7	97.6	93.6	86.0
9	107.0	92.2	96.3	100.7	101.1	99.6	98.5	94.5	86.9
10	107.5	92.7	96.8	101.2	101.6	100.1	99.0	95.0	87.4
11	107.5	92.7	96.8	101.2	101.6	100.1	99.0	95.0	87.4
12	107.5	92.7	96.8	101.2	101.6	100.1	99.0	95.0	87.4

Llynfi Afan Wind Farm

Table 12.4.8: Llynfi Afan Wind Turbine Locations				
Llynfi Afan	Easting	Northing	HH	Turbine Type
LA1	290592	195363	78	G80
LA2	290914	195239	78	G80
LA3	289029	194705	78	G80
LA4	287987	193333	78	G80
LA5	288394	193294	78	G80
LA6	288780	193445	78	G80
LA7	291275	195158	78	G80
LA8	291586	194983	78	G80
LA9	288384	194918	78	G80
LA10	288615	194682	78	G80
LA11	289937	195260	78	G80
LA12	290185	195047	78	G80

Table 12.4.9: Gamesa G80/2000 L _{WA} Sound Power Level: dB re: 10 ⁻¹² W									
		Octave Band Centre Frequency: Hz							
Wind Speed	L _{WA}	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
3	93.6	76.2	82.9	87.0	88.8	87.4	82.9	76.2	65.9
4	98.6	81.2	87.9	92.0	93.8	92.4	87.9	81.2	70.9
5	103.1	85.7	92.4	96.5	98.3	96.9	92.4	85.7	75.4
6	105.0	87.6	94.3	98.4	100.2	98.8	94.3	87.6	77.3
7	105.1	87.7	94.4	98.5	100.3	98.9	94.4	87.7	77.4
8	105.1	87.7	94.4	98.5	100.3	98.9	94.4	87.7	77.4
9	105.1	87.7	94.4	98.5	100.3	98.9	94.4	87.7	77.4
10	105.1	87.7	94.4	98.5	100.3	98.9	94.4	87.7	77.4
11	105.1	87.7	94.4	98.5	100.3	98.9	94.4	87.7	77.4
12	105.1	87.7	94.4	98.5	100.3	98.9	94.4	87.7	77.4

Mynydd Brombil Wind Farm

Table 12.4.10: Llyfni Afan Wind Turbine Locations				
Mynydd Brombil	Easting	Northing	HH	Turbine Type
M1	279039	188991	60	G80
M2	278755	188772	60	G80
M3	278858	188496	60	G80
M4	279129	188272	60	G80

Table 12.4.11: Gamesa G80/2000 L _{WA} Sound Power Level: dB re: 10 ⁻¹² W									
		Octave Band Centre Frequency: Hz							
Wind Speed	L _{WA}	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
3	93.1	75.7	82.4	86.5	88.3	86.9	82.4	75.7	65.4
4	97.9	80.5	87.2	91.3	93.1	91.7	87.2	80.5	70.2
5	102.7	85.3	92.0	96.1	97.9	96.5	92.0	85.3	75.0
6	105.0	87.6	94.3	98.4	100.2	98.8	94.3	87.6	77.3
7	105.1	87.7	94.4	98.5	100.3	98.9	94.4	87.7	77.4
8	105.1	87.7	94.4	98.5	100.3	98.9	94.4	87.7	77.4
9	105.1	87.7	94.4	98.5	100.3	98.9	94.4	87.7	77.4
10	105.1	87.7	94.4	98.5	100.3	98.9	94.4	87.7	77.4
11	105.1	87.7	94.4	98.5	100.3	98.9	94.4	87.7	77.4
12	105.1	87.7	94.4	98.5	100.3	98.9	94.4	87.7	77.4

Pen y Cymoedd Wind Farm

Table 12.4.12: Pen y Cymoedd Wind Turbine Locations				
Pen y Cymoedd	Easting	Northing	HH	Turbine Type
P1	283758	197736	89.5	SWT113
P2	283576	197373	89.5	SWT113
P3	283631	196974	89.5	SWT113
P4	283117	197088	89.5	SWT113
P5	283186	198462	89.5	SWT113
P6	282576	198605	89.5	SWT113
P7	283086	198907	89.5	SWT108
P8	283565	199158	89.5	SWT108
P9	283733	199540	89.5	SWT108
P10	283656	198797	89.5	SWT108
P11	283548	198280	89.5	SWT113
P12	287885	202459	89.5	SWT113
P13	287453	202133	89.5	SWT113
P14	286904	201486	89.5	SWT113
P15	286470	201009	89.5	SWT113
P16	286095	200716	89.5	SWT113
P17	285475	200635	89.5	SWT113
P18	285686	200292	89.5	SWT113
P19	287553	201662	89.5	SWT113
P20	287998	201967	89.5	SWT113
P21	288394	202352	89.5	SWT113
P22	288749	202788	89.5	SWT113
P23	289325	202879	89.5	SWT113
P24	288652	201997	89.5	SWT113
P25	288610	201642	89.5	SWT113
P26	288845	201329	89.5	SWT113

Table 12.4.12: Pen y Cymoedd Wind Turbine Locations				
Pen y Cymoedd	Easting	Northing	HH	Turbine Type
P27	289171	201847	89.5	SWT113
P28	289158	202334	89.5	SWT113
P29	290073	202375	89.5	SWT113
P30	290065	202716	89.5	SWT113
P31	289923	203103	89.5	SWT113
P32	290394	202086	89.5	SWT108
P33	290814	202505	89.5	SWT108
P34	291105	202210	89.5	SWT108
P35	290831	201822	89.5	SWT108
P36	291349	201872	89.5	SWT108
P37	291105	201484	89.5	SWT108
P38	290228	201674	89.5	SWT113
P39	290020	201267	89.5	SWT113
P40	290544	201445	89.5	SWT113
P41	290612	201100	89.5	SWT113
P42	290994	200923	89.5	SWT113
P43	290617	200693	89.5	SWT113
P44	290744	200332	89.5	SWT113
P45	291314	200508	89.5	SWT113
P46	290099	200411	89.5	SWT113
P47	290320	200082	89.5	SWT113
P48	290669	199844	89.5	SWT113
P49	290418	199524	89.5	SWT113
P50	290871	199360	89.5	SWT113
P51	291196	199756	89.5	SWT113
P52	289959	199691	89.5	SWT113
P53	289720	199315	89.5	SWT113

Table 12.4.12: Pen y Cymoedd Wind Turbine Locations				
Pen y Cymoedd	Easting	Northing	HH	Turbine Type
P54	289739	200001	89.5	SWT113
P55	289957	199021	89.5	SWT113
P56	289645	198550	89.5	SWT113
P57	290245	198410	89.5	SWT113
P58	290285	198713	89.5	SWT113
P59	292897	202369	89.5	SWT108
P60	293106	202803	89.5	SWT108
P61	293511	203137	89.5	SWT108
P62	293484	202482	89.5	SWT108
P63	293934	202871	89.5	SWT108
P64	294365	202735	89.5	SWT108
P65	294656	202427	89.5	SWT108
P66	293668	202160	89.5	SWT108
P67	294203	202094	89.5	SWT108
P68	293935	201766	89.5	SWT108
P69	294433	201531	89.5	SWT108
P70	293076	202032	89.5	SWT108
P71	293364	201654	89.5	SWT108
P72	293645	201279	89.5	SWT108
P73	294197	201042	89.5	SWT108
P74	294484	200780	89.5	SWT108
P75	294570	200361	89.5	SWT108
P76	294571	199984	89.5	SWT108

Table 12.4.13: Siemens SWT-3.0-113 L_{WA} Sound Power Level: dB re: 10⁻¹²W

		Octave Band Centre Frequency: Hz							
Wind Speed	L _{WA}	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
3.0	90.7	77.4	79.4	82.7	83.1	84.5	83.7	80.6	71.5
4.0	95.2	81.8	83.8	87.1	87.5	88.9	88.1	85.0	75.9
5.0	99.8	86.4	88.4	91.7	92.1	93.5	92.7	89.6	80.5
6.0	104.2	90.9	92.9	96.2	96.6	98.0	97.2	94.1	85.0
7.0	105.5	92.2	94.2	97.5	97.9	99.3	98.5	95.4	86.3
8.0	105.5	92.2	94.2	97.5	97.9	99.3	98.5	95.4	86.3
9.0	105.5	92.2	94.2	97.5	97.9	99.3	98.5	95.4	86.3
10.0	105.5	92.2	94.2	97.5	97.9	99.3	98.5	95.4	86.3
11.0	105.5	92.2	94.2	97.5	97.9	99.3	98.5	95.4	86.3
12.0	105.5	92.2	94.2	97.5	97.9	99.3	98.5	95.4	86.3

Table 12.4.14: Siemens SWT-3.2-108 L_{WA} Sound Power Level: dB re: 10⁻¹²W

		Octave Band Centre Frequency: Hz							
Wind Speed	L _{WA}	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
3.0	91.0	69.5	77.0	84.4	87.7	84.4	76.5	65.6	62.3
4.0	95.2	73.7	81.2	88.6	91.9	88.6	80.7	69.8	66.5
5.0	99.9	78.4	85.9	93.3	96.6	93.3	85.4	74.5	71.2
6.0	104.5	83.0	90.5	97.9	101.2	97.9	90.0	79.1	75.8
7.0	106.7	85.2	92.7	100.1	103.4	100.1	92.2	81.3	78.0
8.0	107.0	85.5	93.0	100.4	103.7	100.4	92.5	81.6	78.3
9.0	107.0	85.5	93.0	100.4	103.7	100.4	92.5	81.6	78.3
10.0	107.0	85.5	93.0	100.4	103.7	100.4	92.5	81.6	78.3
11.0	107.0	85.5	93.0	100.4	103.7	100.4	92.5	81.6	78.3
12.0	107.0	85.5	93.0	100.4	103.7	100.4	92.5	81.6	78.3