Appendix 9.5 Predicted Noise Levels from Cumulative Turbines

i

APPENDIX 9.5

This page is intentionally blank.

ii

APPENDIX 9.5

	Noise level, dBL <sub>A90</sub>								
Wind speed m/s	4	5	6	7	8	9	10	11	12
NMP1 – Daytime period									
Measured background, relative to measured 10m wind speed, down- wind conditions	22.8	25.2	28.1	31.2	34.0	36.2	37.5	37.5	35.8
Predicted level, cumulative small turbines	17.1	19.2	21.3	23.4	25.5	27.6	29.7	31.8	33.9
Measured level minus predicted level (log. subtraction)	21.4	24.0	27.2	30.4	33.4	35.6	36.8	36.2	31.7
Difference	1.4	1.3	1.0	0.8	0.7	0.6	0.8	1.4	4.5
NMP1 – Night-time period	d								1
Measured background, relative to measured 10m wind speed, down- wind conditions	27.9	30.1	32.5	34.9	37.0	38.7	39.8	40.0	39.2
Predicted level, cumulative small turbines	16.9	19	21.1	23.2	25.3	27.4	29.5	31.6	33.7
Measured level minus predicted level (log. subtraction)	27.6	29.8	32.2	34.6	36.7	38.4	39.4	39.4	37.8
Difference	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.7	1.5
NMP2 – Daytime period									1
Measured background, relative to measured 10m wind speed, down- wind conditions	33.0	34.7	36.7	38.8	41.0	43.0	44.7	46.0	46.7
Predicted level, cumulative small turbines	22.4	24.5	26.6	28.7	30.8	32.9	35.0	37.1	39.2
Measured level minus predicted level (log. subtraction)	32.6	34.3	36.2	38.4	40.5	42.5	44.2	45.4	45.9
Difference	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.8
NMP2 – Night-time period	d	<u>ı</u>	1	1	1	1	1	1	1
Measured background, relative to measured 10m wind speed, down- wind conditions	30.6	30.9	32.4	34.6	37.2	39.8	42.1	43.5	43.8
Predicted level, cumulative small turbines	22.4	24.5	26.6	28.7	30.8	32.9	35.0	37.1	39.2
Measured level minus predicted level (log. subtraction)	35.4	35.6	37.0	39.3	41.9	44.6	46.8	48.2	48.0
Difference	0.2	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.5

ORKNEY'S COMMUNITY WIND FARM PROJECT-FARAY 1

APPENDIX 9.5