

Appendix 10.1 – Noise Assessment Tables

Table 1 – Change in Predicted Operational Noise Level – Ludenhill Turbine

Table 1																										
NSR ID		NSR1	NSR2	NSR3	NSR4	NSR5	NSR6	NSR7	NSR8	NSR9	NSR10	NSR11	NSR12	NSR13	NSR14	NSR15	NSR16	NSR17	NSR18	NSR19	NSR20	NSR21	NSR22	NSR23	NSR24	NSR25
Standardised 10m wind speed, m/s	2024 updated prediction, dBLA90																									
	4	35.1	34.1	32.8	29.7	29.9	29.1	31.4	34.5	36.7	35.5	27.0	27.1	29.5	26.5	26.2	25.6	25.9	25.1	23.4	17.3	13.0	20.9	21.1	23.4	23.2
	5	40.0	39.0	37.7	34.6	34.8	34.0	36.3	39.4	41.6	40.4	31.9	32.0	34.4	31.4	31.1	30.5	30.8	30.0	28.3	22.2	17.9	25.8	26.0	28.3	28.1
	6	42.3	41.3	40.0	36.9	37.1	36.3	38.6	41.7	43.9	42.7	34.2	34.3	36.7	33.7	33.4	32.8	33.1	32.3	30.6	24.5	20.2	28.1	28.3	30.6	30.4
	7	42.3	41.3	40.0	36.9	37.1	36.3	38.6	41.7	43.9	42.7	34.2	34.3	36.7	33.7	33.4	32.8	33.1	32.3	30.6	24.5	20.2	28.1	28.3	30.6	30.4
	8	42.3	41.3	40.0	36.9	37.1	36.3	38.6	41.7	43.9	42.7	34.2	34.3	36.7	33.7	33.4	32.8	33.1	32.3	30.6	24.5	20.2	28.1	28.3	30.6	30.4
	9	42.3	41.3	40.0	36.9	37.1	36.3	38.6	41.7	43.9	42.7	34.2	34.3	36.7	33.7	33.4	32.8	33.1	32.3	30.6	24.5	20.2	28.1	28.3	30.6	30.4
	10	42.3	41.3	40.0	36.9	37.1	36.3	38.6	41.7	43.9	42.7	34.2	34.3	36.7	33.7	33.4	32.8	33.1	32.3	30.6	24.5	20.2	28.1	28.3	30.6	30.4
	11	42.3	41.3	40.0	36.9	37.1	36.3	38.6	41.7	43.9	42.7	34.2	34.3	36.7	33.7	33.4	32.8	33.1	32.3	30.6	24.5	20.2	28.1	28.3	30.6	30.4
	12	42.3	41.3	40.0	36.9	37.1	36.3	38.6	41.7	43.9	42.7	34.2	34.3	36.7	33.7	33.4	32.8	33.1	32.3	30.6	24.5	20.2	28.1	28.3	30.6	30.4
Standardised 10m wind speed, m/s	Comparison of predicted levels from Ludenhill turbine; consented turbine minus existing turbine, dB																									
	4	0.2	0.2	0.2	0.0	0.0	-0.2	0.0	0.5	0.6	0.6	0.1	-0.7	-0.4	-0.4	-0.3	-0.3	-0.3	-0.2	-0.3	0.2	0.8	0.0	0.0	-0.3	-0.4
	5	0.2	0.2	0.2	0.0	0.0	-0.2	0.0	0.5	0.6	0.6	0.1	-0.7	-0.4	-0.4	-0.3	-0.3	-0.3	-0.2	-0.3	0.2	0.8	0.0	0.0	-0.3	-0.4
	6	0.1	0.1	0.1	-0.1	-0.1	-0.3	-0.1	0.4	0.5	0.5	0.0	-0.8	-0.5	-0.5	-0.4	-0.4	-0.4	-0.3	-0.4	0.1	0.7	-0.1	-0.1	-0.4	-0.5
	7	2.1	2.2	2.4	2.3	2.3	2.2	2.3	2.5	2.5	2.5	2.4	1.8	2.0	2.1	2.2	2.3	2.3	2.3	2.4	3.1	3.7	2.7	2.7	2.4	2.3
	8	2.1	2.1	2.3	2.2	2.2	2.1	2.2	2.4	2.5	2.5	2.3	1.7	1.8	2.0	2.1	2.1	2.1	2.2	2.2	2.9	3.4	2.5	2.5	2.2	2.1
	9	1.4	1.4	1.5	1.5	1.4	1.3	1.5	1.7	1.7	1.7	1.6	0.9	1.1	1.3	1.4	1.4	1.4	1.5	1.5	2.2	2.7	1.8	1.8	1.5	1.4
	10	0.8	0.9	1.0	0.9	0.9	0.8	1.0	1.2	1.2	1.2	1.0	0.4	0.6	0.7	0.8	0.8	0.9	0.9	0.9	1.6	2.2	1.3	1.2	0.9	0.8
	11	0.8	0.8	0.9	0.8	0.8	0.7	0.9	1.1	1.2	1.2	0.9	0.3	0.5	0.6	0.7	0.7	0.8	0.8	0.8	1.5	2.1	1.2	1.2	0.8	0.7
	12	0.8	0.8	1.0	0.9	0.8	0.7	0.9	1.1	1.2	1.2	1.0	0.3	0.5	0.6	0.7	0.8	0.8	0.8	0.9	1.5	2.2	1.2	1.2	0.9	0.8

Note – Red highlighting shows an increase over previous predictions. Negative numbers/no highlighting shows a decrease or no change.

Table 2 – Updated RNLs

Table 2		Updated RNL, dBL _{A90,10min}																									
NSR ID		NSR1	NSR2	NSR3	NSR4	NSR5	NSR6	NSR7	NSR8	NSR9	NSR10	NSR11	NSR12	NSR13	NSR14	NSR15	NSR16	NSR17	NSR18	NSR19	NSR20	NSR21	NSR22	NSR23	NSR24	NSR25	
Daytime period (07:00 - 23:00)		4	44.7	44.8	44.8	44.9	44.9	44.8	44.9	44.6	44.4	44.5	34.2	35.6	35.4	34.1	34.3	34.4	34.6	34.6	33.8	34.9	35.0	33.4	33.4	36.3	34.3
Standardised 10m wind speed, m/s	5	44.7	44.8	44.9	44.9	45.0	44.8	45.0	44.5	44.5	44.6	34.4	36.4	36.6	33.8	34.1	34.4	34.6	34.3	33.7	32.5	35.0	25.6	25.6	38.4	34.4	
	6	45.0	45.0	45.0	44.8	44.9	44.6	45.0	44.5	45.0	45.0	34.4	36.7	37.2	34.0	34.3	34.9	35.2	35.2	36.9	35.5	38.0	27.8	27.8	40.3	35.5	
	7	44.5	44.7	45.0	44.6	44.6	44.2	45.0	43.7	44.2	44.4	36.1	37.4	37.7	34.5	35.0	35.4	36.2	36.3	37.9	36.4	39.0	30.0	30.0	42.9	38.0	
	8	44.5	44.6	44.8	44.6	44.5	43.8	45.0	43.0	44.1	43.5	38.7	39.3	39.4	36.3	36.9	37.0	37.6	37.8	38.8	37.5	40.0	32.2	32.2	45.9	41.4	
	9	44.0	44.6	44.5	44.6	44.4	43.1	45.0	44.6	44.1	42.9	41.3	41.1	41.2	37.9	38.5	38.8	39.3	39.3	39.9	40.9	41.0	42.1	42.2	45.8	44.4	
	10	43.6	44.2	44.2	44.6	44.1	44.8	45.0	44.6	44.1	44.3	43.8	43.1	43.2	39.3	39.9	40.3	40.7	40.8	41.2	42.0	42.0	42.1	42.1	45.8	46.7	
	11	43.2	44.1	44.0	44.6	43.9	44.8	44.8	45.9	45.5	43.9	46.1	45.1	45.1	40.7	41.3	41.7	42.0	42.1	40.9	42.0	42.0	42.0	42.1	45.8	46.7	
	12	43.2	44.1	44.0	44.6	43.9	44.8	44.8	48.0	47.8	46.6	48.1	47.0	47.0	42.0	42.5	42.8	43.0	43.1	40.9	42.0	42.0	42.0	42.1	45.8	46.7	
Night-time period (07:00 - 23:00)		4	44.6	44.8	44.8	44.9	44.9	44.8	44.9	44.6	44.4	44.5	42.9	42.9	42.9	42.9	42.9	42.9	42.9	33.8	34.9	35.0	42.8	42.8	42.7	42.9	
Standardised 10m wind speed, m/s	5	44.7	44.8	44.9	44.9	45.0	44.8	45.0	44.5	44.5	44.6	42.9	42.9	43.0	42.8	42.9	42.9	42.9	42.9	33.7	32.5	35.0	42.4	42.5	42.3	42.8	
	6	45.0	45.0	45.0	44.8	44.9	44.6	45.0	44.5	45.0	44.6	42.9	42.9	43.0	42.7	42.7	42.8	42.8	42.8	36.9	35.5	38.0	41.5	41.6	41.3	42.6	
	7	44.5	44.7	45.0	44.6	44.6	44.2	45.0	43.7	44.2	43.9	42.9	42.7	42.8	42.4	42.5	42.6	42.7	42.7	37.9	36.4	39.0	43.0	40.1	33.0	42.2	
	8	44.6	44.8	44.8	44.9	44.9	44.8	44.9	44.6	44.4	44.5	42.9	42.9	42.9	42.9	42.9	42.9	42.9	42.9	33.8	34.9	35.0	42.8	42.8	42.7	42.9	
	9	44.0	44.6	44.5	44.6	44.4	44.8	45.0	44.6	44.1	44.3	42.8	45.8	45.8	42.0	42.1	42.3	42.5	42.6	39.9	40.9	41.0	42.9	40.0	41.4	43.4	
	10	43.6	44.2	44.2	44.6	44.1	44.8	45.0	44.6	44.1	44.3	42.9	48.6	48.6	41.6	41.9	42.2	42.4	42.5	41.2	42.0	42.0	43.4	40.8	41.4	43.4	
	11	43.2	44.1	44.0	44.6	43.9	44.8	44.8	45.2	44.7	44.9	45.4	50.9	50.9	41.3	41.7	42.2	42.4	42.5	40.9	42.0	42.0	43.3	40.7	41.3	43.4	
	12	43.2	44.1	44.0	44.6	43.9	44.8	44.8	47.6	47.3	47.4	47.7	52.3	52.3	42.6	42.9	43.2	43.4	43.5	40.9	42.0	42.0	43.3	40.7	41.3	43.4	

Table 3 – Predicted operational noise level from Proposed Development

Table 3		Predicted level from Proposed Development, dBL _{A90}																								
Standardised 10m wind speed, m/s	NSR ID	NSR1	NSR2	NSR3	NSR4	NSR5	NSR6	NSR7	NSR8	NSR9	NSR10	NSR11	NSR12	NSR13	NSR14	NSR15	NSR16	NSR17	NSR18	NSR19	NSR20	NSR21	NSR22	NSR23	NSR24	NSR25
	4	35.1	34.1	32.8	29.7	29.9	29.1	31.4	34.5	36.7	35.5	27.0	27.1	29.5	26.5	26.2	25.6	25.9	25.1	23.4	17.3	13.0	20.9	21.1	23.4	23.2
	5	40.0	39.0	37.7	34.6	34.8	34.0	36.3	39.4	41.6	40.4	31.9	32.0	34.4	31.4	31.1	30.5	30.8	30.0	28.3	22.2	17.9	25.8	26.0	28.3	28.1
	6	42.3	41.3	40.0	36.9	37.1	36.3	38.6	41.7	43.9	42.7	34.2	34.3	36.7	33.7	33.4	32.8	33.1	32.3	30.6	24.5	20.2	28.1	28.3	30.6	30.4
	7	42.3	41.3	40.0	36.9	37.1	36.3	38.6	41.7	43.9	42.7	34.2	34.3	36.7	33.7	33.4	32.8	33.1	32.3	30.6	24.5	20.2	28.1	28.3	30.6	30.4
	8	42.3	41.3	40.0	36.9	37.1	36.3	38.6	41.7	43.9	42.7	34.2	34.3	36.7	33.7	33.4	32.8	33.1	32.3	30.6	24.5	20.2	28.1	28.3	30.6	30.4
	9	42.3	41.3	40.0	36.9	37.1	36.3	38.6	41.7	43.9	42.7	34.2	34.3	36.7	33.7	33.4	32.8	33.1	32.3	30.6	24.5	20.2	28.1	28.3	30.6	30.4
	10	42.3	41.3	40.0	36.9	37.1	36.3	38.6	41.7	43.9	42.7	34.2	34.3	36.7	33.7	33.4	32.8	33.1	32.3	30.6	24.5	20.2	28.1	28.3	30.6	30.4
	11	42.3	41.3	40.0	36.9	37.1	36.3	38.6	41.7	43.9	42.7	34.2	34.3	36.7	33.7	33.4	32.8	33.1	32.3	30.6	24.5	20.2	28.1	28.3	30.6	30.4
	12	42.3	41.3	40.0	36.9	37.1	36.3	38.6	41.7	43.9	42.7	34.2	34.3	36.7	33.7	33.4	32.8	33.1	32.3	30.6	24.5	20.2	28.1	28.3	30.6	30.4

Table 4 – Comparison of predicted operational noise level from Proposed Development (including proposed mitigation) with adopted RNL

Table 4		Comparison of predicted level from Proposed Development with adopted updated RNL (RNL minus predicted level), dB(A)																								
Standardised 10m wind speed, m/s	NSR ID	NSR1	NSR2	NSR3	NSR4	NSR5	NSR6	NSR7	NSR8	NSR9	NSR10	NSR11	NSR12	NSR13	NSR14	NSR15	NSR16	NSR17	NSR18	NSR19	NSR20	NSR21	NSR22	NSR23	NSR24	NSR25
	Daytime period (07:00 - 23:00)																									
	4	9.6	10.7	12.0	15.2	15.0	15.7	13.5	10.1	7.7	9.0	7.2	8.5	5.9	7.6	8.1	8.8	8.7	9.5	10.4	17.6	22.0	12.5	12.3	12.9	11.1
	5	4.7	5.8	7.2	10.3	10.2	10.8	8.7	5.1	2.9	4.2	2.5	4.4	2.2	2.4	3.0	3.9	3.8	4.3	5.4	10.3	17.1	-0.2	-0.4	10.1	6.3
	6	2.7	3.7	5.0	7.9	7.8	8.3	6.4	2.8	1.1	2.3	0.2	2.4	0.5	0.3	0.9	2.1	2.1	2.9	6.3	11.0	17.8	-0.3	-0.5	9.7	5.1
	7	2.2	3.4	5.0	7.7	7.5	7.9	6.4	2.0	0.3	1.7	1.9	3.1	1.0	0.8	1.6	2.6	3.1	4.0	7.3	11.9	18.8	1.9	1.7	12.3	7.6
	8	2.2	3.3	4.8	7.7	7.4	7.5	6.4	1.3	0.2	0.8	4.5	5.0	2.7	2.6	3.5	4.2	4.5	5.5	8.2	13.0	19.8	4.1	3.9	15.3	11.0
	9	1.7	3.3	4.5	7.7	7.3	6.8	6.4	2.9	0.2	0.2	7.1	6.8	4.5	4.2	5.1	6.0	6.2	7.0	9.3	16.4	20.8	14.0	13.9	15.2	14.0
	10	1.3	2.9	4.2	7.7	7.0	8.5	6.4	2.9	0.2	1.6	9.6	8.8	6.5	5.6	6.5	7.5	7.6	8.5	10.6	17.5	21.8	14.0	13.8	15.2	16.3
	11	0.9	2.8	4.0	7.7	6.8	8.5	6.2	4.2	1.6	1.2	11.9	10.8	8.4	7.0	7.9	8.9	8.9	9.8	10.3	17.5	21.8	13.9	13.8	15.2	16.3
	12	0.9	2.8	4.0	7.7	6.8	8.5	6.2	6.3	3.9	3.9	13.9	12.7	10.3	8.3	9.1	10.0	9.9	10.8	10.3	17.5	21.8	13.9	13.8	15.2	16.3
Standardised 10m wind speed, m/s	Night-time period (23:00 - 07:00)																									
	4	9.5	10.7	12.0	15.2	15.0	15.7	13.5	10.1	7.7	9.0	15.9	15.8	13.4	16.4	16.7	17.3	17.0	17.8	10.4	17.6	22.0	21.9	21.7	19.3	19.7
	5	4.7	5.8	7.2	10.3	10.2	10.8	8.7	5.1	2.9	4.2	11.0	10.9	8.6	11.4	11.8	12.4	12.1	12.9	5.4	10.3	17.1	16.6	16.5	14.0	14.7
	6	2.7	3.7	5.0	7.9	7.8	8.3	6.4	2.8	1.1	1.9	8.7	8.6	6.3	9.0	9.3	10.0	9.7	10.5	6.3	11.0	17.8	13.4	13.3	10.7	12.2
	7	2.2	3.4	5.0	7.7	7.5	7.9	6.4	2.0	0.3	1.2	8.7	8.4	6.1	8.7	9.1	9.8	9.6	10.4	7.3	11.9	18.8	14.9	11.8	2.4	11.8
	8	2.3	3.5	4.8	8.0	7.8	8.5	6.3	2.9	0.5	1.8	8.7	8.6	6.2	9.2	9.5	10.1	9.8	10.6	3.2	10.4	14.8	14.7	14.5	12.1	12.5
	9	1.7	3.3	4.5	7.7	7.3	8.5	6.4	2.9	0.2	1.6	8.6	11.5	9.1	8.3	8.7	9.5	9.4	10.3	9.3	16.4	20.8	14.8	11.7	10.8	13.0
	10	1.3	2.9	4.2	7.7	7.0	8.5	6.4	2.9	0.2	1.6	8.7	14.3	11.9	7.9	8.5	9.4	9.3	10.2	10.6	17.5	21.8	15.3	12.5	10.8	13.0
	11	0.9	2.8	4.0	7.7	6.8	8.5	6.2	3.5	0.8	2.2	11.2	16.6	14.2	7.6	8.3	9.4	9.3	10.2	10.3	17.5	21.8	15.2	12.4	10.7	13.0
	12	0.9	2.8	4.0	7.7	6.8	8.5	6.2	5.9	3.4	4.7	13.5	18.0	15.6	8.9	9.5	10.4	10.3	11.2	10.3	17.5	21.8	15.2	12.4	10.7	13.0