
APPENDIX 12.6 – CONSTRUCTION NOISE ASSESSMENT TABLES

Table 12.6.1: Assessment Locations

Name	Easting	Northing
NML01	283345	190161
NML02	283967	191030
NML03	284670	192439
NML04	282322	194981
NML05	281914	192389
NML06	281964	191858
NML07	280829	191390
NML08	280160	189850
NML09	284251	189036
NML11	284496	191604
R1	284994	193601
R2	284781	193054
R3	285331	194626
R4	285213	194602
R5	283610	195530
R6	282515	195007
R7	282737	195073
R8	282316	194987
R9	283168	195414
Morlais Road Nearest*	278474	187862
Arnallt Brook Nearest*	278934	187572

*Morlais Road and Arnallt Brook locations are the closest residential locations to the track construction and improvements as part of the M4 access, and therefore has been included in the construction noise assessment in addition to the other locations to account for this specific potential impact. In terms of operational predicted noise levels these receptors are distant from the turbine locations and therefore impacts will be negligible.

Table 12.6.2: Assumed Plant Location and Number

Location/Activity	Plant List	No. of Items
Quasi Static Track Construction	Dozer	1
	Wheeled Backhoe Loader	1
	Dump Truck	1
	Tracked Excavator 27kW	1
	Road Roller	1
	Vibratory Compacter (Asphalt) 3kW (for M4 access track only)	1
	Asphalt Paver (+tipper lorry) 94kW (for M4 access track only)	1
Excavation for Turbine Base	Tracked Excavator 27kW	1
	Dump Truck (Empty)	1
	Wheeled Backhoe Loader	1
Build of Turbine Base	Concrete Pump + Cement Mixer Truck (Pumping to 5th Floor)	1
	Concrete Mixer Truck	1
	Water pump (diesel)	1
Crane in Turbines	Tracked Mobile Crane (390 kW)	1
	Tracked Mobile Crane (240 kW)	1
	Road Lorry (full)	1
Breakup of Foundation Bases	Dump Truck (Empty)	1
	Tracked Mobile Crane (390 kW)	1

Table 12.6.2: Assumed Plant Location and Number		
Location/Activity	Plant List	No. of Items
	Tracked Mobile Crane (240 kW)	1
	Tracked Excavator 226kW	1
	Backhoe Mounted Hydraulic Breaker	1
Borrow Pits	Tracked Semi-Mobile Crusher	1
	Tracked Mobile Drilling Rig	1
	Tracked Hydraulic Excavator	1
	Dump Truck	1
Construction Compound	Concrete Mixer Truck	1
	Dozer	1
	Articulated Dump Truck	1
	Concrete Pump + Cement Mixer Truck (Discharging)	1

Table 12.6.3: Assumed Plant Noise Levels

Plant List	Table Ref (from BS 5228:2009)	Ref. no	Octave Band Sound Pressure Levels (Hz)								A-weighted sound power level, dB L _{WA}
			63	125	250	500	1k	2k	4k	8k	
Articulated dump truck	C.5	16	116	118	108	107	104	99	93	89	109.4
Asphalt Paver (+tipper lorry)	C.5	32	115	112	109	108	107	104	102	93	111.8
Backhoe mounted hydraulic breaker	C.5	1	114	108	106	105	109	111	110	109	116.6
Concrete Mixer Truck	C.4	27	112	102	102	101	101	103	93	87	107.1
Concrete Pump + cement mixer truck (discharging)	C.4	24	97	92	92	94	91	87	81	75	95.5
Concrete Pump + Cement Mixer Truck (Pumping to 5th Floor)	C.4	25	111	109	106	107	105	102	99	94	109.8
Dozer	C.5	12	108	106	99	98	102	96	93	89	104.7
Dump Truck	C.9	16	114	117	116	116	114	111	104	98	118.5
Dump Truck (Empty)	C.2	31	114	107	107	107	107	112	97	88	114.8
Road Lorry (full)	C.6	21	124	110	102	101	105	100	99	92	108.6
Road Roller	C5	19	115	113	103	101	103	101	97	91	107.7
Tracked Excavator 27kW	C.5	35	110	100	99	97	97	98	89	82	102.7

Table 12.6.3: Assumed Plant Noise Levels

Plant List	Table Ref (from BS 5228:2009)	Ref. no	Octave Band Sound Pressure Levels (Hz)								A-weighted sound power level, dB L _{WA}
			63	125	250	500	1k	2k	4k	8k	
Tracked Excavator 226kW	C.2	14	113	106	105	105	101	99	96	91	107
Tracked Hydraulic Excavator	C.9	6	123	121	117	117	114	110	104	102	118.9
Tracked Mobile Crane 390kW	C.4	50	96	99	96	90	94	94	83	74	98.6
Tracked Mobile Crane 240 kW	C.4	52	101	99	94	95	102	94	86	77	103.4
Tracked Mobile Drilling Rig	C.9	1	114	120	113	116	112	111	106	105	118.1
Tracked Semi-mobile crusher	C.9	15	126	126	125	122	119	116	110	100	124.4
Vibratory Compacter (Asphalt)	C.5	29	104	106	102	105	105	105	101	98	110.5
Water pump (diesel)	C.4	88	98	93	94	92	92	91	84	74	96.8
Wheeled Backhoe Loader	C.2	8	102	94	92	92	91	88	87	78	95.9

Table 12.6.4: Results of Construction and Decommissioning Noise Predictions							
Receptor Location	Predicted sound pressure level (dB L _{Aeq}) at receptor location						
	Quasi-Static Track Construction	Excavation for Bases	Build of Bases	Turbine Build	Breakup of Foundation Bases	Borrow Pits	Construction Compound
NML01	54	40	38	38	43	55	43
NML02	74	34	33	33	38	48	37
NML03	49	38	36	36	41	57	40
NML04	41	31	30	31	34	40	28
NML05	43	37	36	36	41	46	31
NML06	45	40	38	38	44	47	31
NML07	41	35	34	34	39	49	28
NML08	48	43	41	40	46	53	33
NML09	43	38	36	36	41	49	31
NML11	49	34	33	33	37	50	40
R1	28	37	35	35	40	50	35
R2	45	39	38	38	43	56	39
R3	36	29	29	30	33	43	29
R4	37	30	29	30	34	43	30
R5	37	30	29	30	34	40	28
R6	40	31	31	31	35	41	29
R7	39	32	31	32	36	41	29
R8	41	30	30	31	34	40	28
R9	37	31	30	31	34	40	28
Morlais Nearest Road	74	23	23	24	26	41	25
Arnallt Nearest Brook	71	23	23	25	27	42	27