



## Appendix H.2: Construction Noise Assessment Data

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CadnaA Noise Source Library

Name	ID	Weight	Octave Spectrum (SWL dB)									Total SWL		Source
			31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	A	lin	
Tracked Excavator (25t)	S01		28	123	112	107	101	98	96	92	85	106	124	C.2.19 BS 5228-1:2009+A1:2014: Annex C
Dumper (7t)	S02		28	112	109	102	101	100	96	89	81	104	115	C.4.3 BS 5228-1:2009+A1:2014: Annex C
Road/Dust Sweeper	S03		28	108	103	97	103	99	95	89	86	104	111	C.4.90 BS 5228-1:2009+A1:2014: Annex C
Road Lorry (Full)	S04		28	124	110	102	101	105	100	99	92	109	124	C.6.21 BS 5228-1:2009+A1:2014: Annex C
Tracked Hydraulic Drilling Rig	S05		28	113	121	106	107	108	107	104	102	114	122	C.6.35 BS 5228-1:2009+A1:2014: Annex C
Directional Drilling Generator	S06		28	95	108	102	100	100	100	96	89	106	111	C.2.44 BS 5228-1:2009+A1:2014: Annex C
Wheeled Loader	S07		28	115	110	105	106	101	98	92	85	107	117	C.2.26 BS 5228-1:2009+A1:2014: Annex C
Articulated Dump Truck	S08		28	113	115	105	103	104	101	97	90	109	118	C.2.33 BS 5228-1:2009+A1:2014: Annex C
HVG Tipper Truck	S09		28	101	106	106	106	102	101	96	94	108	112	C.8.20 BS 5228-1:2009+A1:2014: Annex C
MPR-6000 Fluid Recycling System	S10	A	-	-	-	-	112	-	-	-	-	112	115	American Augers/Trencor website
PD150-600 RP-C Drilling Rig on Crawler	S11	A	-	-	-	-	86	-	-	-	-	86	89	Prime HDD Rig Noise Spec sheet from Affric
Site Cabin Generator	S12		28	108	102	85	82	81	76	73	65	89	109	C.4.76 BS 5228-1:2009+A1:2014: Annex C
Mud Pump	S13		0	0	0	0	80	0	0	0	0	77	80	Affric
Roller	S14		28	115	113	103	101	103	101	97	91	108	118	C.5.19 BS 5228-1:2009+A1:2014: Annex C
Wheeled Mobile Telescopic Crane	S15		28	108	107	101	102	101	101	92	83	106	112	C.4.38 BS 5228-1:2009+A1:2014: Annex C
Onshore Winch	S16	A	25	25	25	25	99	25	25	25	25	99	102	Bagela kW10 100kN Grundowinch Data Sheet
Secondary Winch	S17	A	25	25	25	25	99	25	25	25	25	99	102	Bagela kW10 100kN Grundowinch Data Sheet
Tug Boat - Engine Idling	S18	A	-	-	-	-	87	-	-	-	-	87	90	Aberdeen Harbour Expansion - Chapter 20 Noise
Cable Lay Vessel 10000DWT	S19	A	-	-	-	-	102	-	-	-	-	102	105	SWL=66+9 Log (DWT)
Concrete mixer truck (discharging) & concrete pump (pumping)	S20		28	107	108	101	100	97	96	87	81	103	112	C.4.28 BS 5228-1:2009+A1:2014: Annex C
Winch Power Pack at 3m	S21		91	101	85	86	80	79	76	70	65	92	106	Measured by Jim Singleton
Climbers Voice - Loud	Vox1		0	52	63	72	80	80	73	66	55	83	84	ANSI 3.5 American National Standard ...
Climbers Voice - Shout	Vox2		0	52	63	73	84	89	82	75	64	91	91	ANSI 3.5 American National Standard ...
Diesel generator	C.4.86LAeq		28	106	99	94	90	87	83	84	77	94	107	BS 5228-1:2009+A1:2014: Annex C

Name	ID	Spectrum (SWL dBA)										Rating
		31.5	63	125	250	500	1000	2000	4000	8000	A	kW
Mixing/Agitation Pump	SET01	37.3	48.7	56.3	64.3	77.3	84.3	80.3	71.3	60.3	86.5	22
Hydro Cyclone Charging Pump	SET02	35.6	47	54.6	62.6	75.6	82.6	78.6	69.6	58.6	84.8	14.9
Supercharging Tri-Plex Pump	SET03	36.6	48	55.6	63.6	76.6	83.6	79.6	70.6	59.6	85.8	18.6

Point Sources Used Per Activity

Name	Result. PWL			Lw / SPL		Freq.	Height	Coordinates	
	Day	Evening	Night	Type	ID	(Hz)	(m)	X	Y
	(dBA)	(dBA)	(dBA)					(m)	(m)
Activity 1									
NONE									
Activity 2									
Dumper	104.3	104.3	104.3	Lw	S02	Spectrum	1.5	411731	841086
Dumper	104.3	104.3	104.3	Lw	S02	Spectrum	1.5	411731	841084
Tracked Excavator	105.5	105.5	105.5	Lw	S01	Spectrum	1.5	411725	841088
Tracked Excavator	105.5	105.5	105.5	Lw	S01	Spectrum	1.5	411724	841087
Activity 3									
NONE									
Activity 4									
Dumper	104.3	104.3	104.3	Lw	S02	Spectrum	1.5	411587	840207
Tracked Excavator	105.5	105.5	105.5	Lw	S01	Spectrum	1.5	411589	840209
Activity 5									
Crane	106.2	106.2	106.2	Lw	S15	Spectrum	2	412052	840004
Haulage Vehicles	108.6	108.6	108.6	Lw	S04	Spectrum	1.5	412050	840004
Haulage Vehicles	108.6	108.6	108.6	Lw	S04	Spectrum	1.5	411800	840240
Crane	106.2	106.2	106.2	Lw	S15	Spectrum	2.0	411801	840240
Activity 6									
Dumper	104.3	104.3	104.3	Lw	S02	Spectrum	1.5	411793	840278
Dumper	104.3	104.3	104.3	Lw	S02	Spectrum	1.5	411793	840277
Tracked Excavator	105.5	105.5	105.5	Lw	S01	Spectrum	1.5	411790	840278
Tracked Excavator	105.5	105.5	105.5	Lw	S01	Spectrum	1.5	411790	840276
Concreting for Jointing Bay	102.8	102.8	102.8	Lw	S20	Spectrum	1.5	411800	840247
Activity 7									
Fluid Recycling System	112	112	112	Lw	S10	500	3.5	412042	839996
HDD Rig	86	86	86	Lw	S11	Spectrum	1.5	412077	840005
HDD Rig Power Pack	105.7	105.7	105.7	Lw	S06	Spectrum	1.5	412070	839992
HGV Articulated Lorry/Truck	108.5	108.5	108.5	Lw	S08	Spectrum	1.5	412058	840013
HGV Tipper Truck	108.1	108.1	108.1	Lw	S09	Spectrum	1.5	412056	840007
Low Loader	107	107	107	Lw	S07	Spectrum	1.5	412052	840015
Mud Pump #01	85.8	85.8	85.8	Lw	SET03	Spectrum	1.0	412055	839993
Mud Pump #02	84.8	84.8	84.8	Lw	SET02	Spectrum	1.0	412052	839994
Site Cabin Generator	89.4	89.4	89.4	Lw	S12	Spectrum	1.5	412061	840024
Tracked Excavator	105.5	105.5	105.5	Lw	S01	Spectrum	1.5	412050	840009
Mud Pump #03	86.5	86.5	86.5	Lw	SET01	Spectrum	1.0	412036	839998
Activity 8									
Dumper	104.3	104.3	104.3	Lw	S02	Spectrum	1.5	411728	841044
Dumper	104.3	104.3	104.3	Lw	S02	Spectrum	1.5	411728	841042
Tracked Excavator	105.5	105.5	105.5	Lw	S01	Spectrum	1.5	411724	841045
Tracked Excavator	105.5	105.5	105.5	Lw	S01	Spectrum	1.5	411723	841042
Concreting for Jointing Bay	102.8	102.8	102.8	Lw	S20	Spectrum	1.5	411725	841022
Activity 9									
Fluid Recycling System	112	112	112	Lw	S10	500	3.5	411817	840235
HDD Power Pack	105.7	105.7	105.7	Lw	S06	Spectrum	1.5	411785	840239
HDD Rig	86	86	86	Lw	S11	Spectrum	1.5	411796	840251
HGV Articulated Lorry/Truck	108.5	108.5	108.5	Lw	S08	Spectrum	1.5	411810	840227
HGV Tipper Truck	108.1	108.1	108.1	Lw	S09	Spectrum	1.5	411801	840225
Low Loader	107	107	107	Lw	S07	Spectrum	1.5	411799	840233
Mud Pump #02	84.8	84.8	84.8	Lw	SET02	Spectrum	1.0	411818	840228
Mud Pump #01	85.8	85.8	85.8	Lw	SET03	Spectrum	1.0	411819	840224
Site Cabin Generator	89.4	89.4	89.4	Lw	S12	Spectrum	1.5	411786	840224
Tracked Excavator	105.5	105.5	105.5	Lw	S01	Spectrum	1.5	411808	840235
Mud Pump #03	86.5	86.5	86.5	Lw	SET01	Spectrum	1.0	411816	840239
Site Cabin Generator	89.4	89.4	89.4	Lw	S12	Spectrum	1.5	411785	840224
Activity 10									
MV Multicat - Diver Support Vessel	87	87	87	Lw	S18	500	1.5	412302	839933
Cable Lay Vessel	102	102	102	Lw	S19	500	3	412376	839910
Guard Vessel	87	87	87	Lw	S18	500	1.5	412418	839896
Onshore Winch	98.9	98.9	98.9	Lw	S16	500	1.5	412090	840001
Onshore Winch Generator	91.5	91.5	91.5	Lw	S21	Spectrum	1.5	412089	839997
Secondary Winch	98.9	98.9	98.9	Lw	S17	500	1.5	411794	840275
Secondary Winch Generator	91.5	91.5	91.5	Lw	S21	Spectrum	1.5	411791	840274
Generator for Lighting	93.5	93.5	93.5	Lw	C.4.86LAeq	Spectrum	1.5	411786	840224
Generator for Lighting	93.5	93.5	93.5	Lw	C.4.86LAeq	Spectrum	1.5	412061	840025
Activity 11									
NONE									
Activity 6, 8 and 11 Combined									
Dumper	104.3	104.3	104.3	Lw	S02	Spectrum	1.5	411793	840278
Dumper	104.3	104.3	104.3	Lw	S02	Spectrum	1.5	411793	840277
Tracked Excavator	105.5	105.5	105.5	Lw	S01	Spectrum	1.5	411790	840278
Tracked Excavator	105.5	105.5	105.5	Lw	S01	Spectrum	1.5	411790	840276
Concreting for Jointing Bay	102.8	102.8	102.8	Lw	S20	Spectrum	1.5	411800	840247
Dumper	104.3	104.3	104.3	Lw	S02	Spectrum	1.5	411728	841044
Dumper	104.3	104.3	104.3	Lw	S02	Spectrum	1.5	411728	841042
Tracked Excavator	105.5	105.5	105.5	Lw	S01	Spectrum	1.5	411724	841045
Tracked Excavator	105.5	105.5	105.5	Lw	S01	Spectrum	1.5	411723	841042
Concreting for Jointing Bay	102.8	102.8	102.8	Lw	S20	Spectrum	1.5	411725	841022
Climb 1									
Top Rope Voice	90.9	90.9	90.9	Lw	Vox2	Spectrum	1.5	412180	839799
Climb 2									
Belay Voice	90.9	90.9	90.9	Lw	Vox2	Spectrum	1.5	412183	839794

Line Sources Used Per Activity

Name	Movement info				Height (m)
	Number per hour			Speed (km/h)	
	Day	Evening/Weekend	Night		
Activity 1					
Tracked Excavator	ON*	ON*	0	-	1.5
Dumper	ON*	ON*	0	-	1.5
Activity 2					
NONE					
Activity 3					
Tracked Excavator	ON*	ON*	0	-	1.5
Dumper	ON*	ON*	0	-	1.5
Activity 4					
Tracked Excavator	ON*	ON*	0	-	1.5
Dumper	ON*	ON*	0	-	1.5
Dust Sweeper	ON*	ON*	0	-	1.5
Roller	ON*	ON*	0	-	1.5
Activity 5					
Haulage Vehicles	2	0	0	15	1.5
Haulage Vehicles	2	0	0	15	1.5
Activity 6					
NONE					
Activity 7					
NONE					
Activity 8					
NONE					
Activity 9					
NONE					
Activity 10					
NONE					
Activity 11					
Truck with Cable Reel	2	0	0	10	1.5
Tracked Excavator	ON*	ON*	-	-	1.5
Dumper	ON*	ON*	-	-	1.5
Truck with Cable Reel	2	0	0	10	1.5
Tracked Excavator	ON*	ON*	-	-	1.5
Dumper	ON*	ON*	-	-	1.5
Activity 6, 8 and 11 Combined					
Truck with Cable Reel	2	0	0	10	1.5
Tracked Excavator	ON*	ON*	-	-	1.5
Dumper	ON*	ON*	-	-	1.5
Truck with Cable Reel	2	0	0	10	1.5
Tracked Excavator	ON*	ON*	-	-	1.5
Dumper	ON*	ON*	-	-	1.5
Climb 1					
NONE					
Climb 2					
NONE					

\* ON indicates source modelled as a line as opposed to a moving point source and is assumed to be operating continually.