

Appendix A17.1

Typical Construction Plant
and Noise Levels



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1. Typical Construction Equipment

1.1.1. Table A17.1 provides indicative construction equipment and typical noise levels associated with the activity.

Table A1.1: Indicative Construction Equipment and Associated Noise Levels

Phase	Activity	Equipment	Quantity	Sound Power (dBA)	ONTIME (percent)	ONTIME CORR (dB)	Corrected Sound Power (dBA)	Combined Sound Power for Activity (dBA)
Advance Works	Utility Diversions	Vibrating Roller Small	1	102	10	-10	92	105.0
		360 Excavator, 15T	1	97	50	-3	94	
		Hiab	1	105	25	-6	99	
		Dumper, 2T	1	105	50	-3	102	
		Pick up	1	102	25	-6	96	
Road Works	Site Set-up	Hiab	1	105	25	-6	99	108.8
		Small Vibrating Roller	1	102	50	-3	99	
		360 Excavator, 15T	1	97	50	-3	94	
		Dumper, 2T	1	105	50	-3	102	
		Delivery lorry	1	109	25	-6	103	
		front lend loader	1	109	25	-6	103	
		Fork lift	1	99	25	-6	93	
	Earthworks	360 Excavator, 30T	1	103	75	-1.2	101.8	112.5
		360 Excavator, 30T	1	103	75	-1.2	101.8	
		360 Excavator, 20T	1	99	75	-1.2	97.8	
		40T Dumper truck	1	107	50	-3	104	
		40T Dumper truck	1	107	50	-3	104	
		40T Dumper truck	1	107	50	-3	104	

Phase	Activity	Equipment	Quantity	Sound Power (dBA)	ONTIME (percent)	ONTIME CORR (dB)	Corrected Sound Power (dBA)	Combined Sound Power for Activity (dBA)
		40T Dumper truck	1	107	50	-3	104	111.5
		Bomag 120	1	106	10	-10	96	
		Dozer	1	107	75	-1.2	105.8	
	Road Formation	Dozer	1	103	50	-3	100	
	Road delivery lorries	1	110	40	-4	106		
	Tracked excavator (22T)	1	106	40	-4	102		
	Twin drum vibrating roller (2m wide)	1	108	50	-3	105		
	Articulated dump truck (25 T)	1	109	40	-4	105		
	Road paver (Blaw Knox type)	1	103	50	-3	100		
	Three point drum roller	1	95	30	-5.2	89.8		
	Wheeled backhoe loader (JCB type)	1	96	30	-5.2	90.8		
	Signs & Lighting	Specific use road truck with Hi-ab	1	105	30	-5.2	99.8	108.9
	Access platform	1	95	20	-7	88		
	Specific use road truck with Hi-ab (signage)	1	105	90	-0.5	104.5		
	Tracked excavator (5T)	1	93	40	-4	89		
	Specific use road truck (road markings)	1	105	20	-7	98		
	Site dumper (5T)	1	106	20	-7	99		
	Specific use road truck with Hi-ab (road restraint)	1	105	40	-4	101		
	Safety barrier piling rig	1	104	20	-7	97		
	Safety barrier piling rig compressor	1	103	30	-5.2	97.8		
Rock Cutting	Petrol hand held saw	1	119	20	-7	112	117.9	
Rock saw	1	113	20	-7	106			
Rock hammer	1	121	20	-7	114			
Excavator (JCB)	1	97	75	-1.2	95.8			

Phase	Activity	Equipment	Quantity	Sound Power (dBA)	ONTIME (percent)	ONTIME CORR (dB)	Corrected Sound Power (dBA)	Combined Sound Power for Activity (dBA)			
		Tracked loader (CAT)	1	112	75	-1.2	110.8				
		Excavated material lorries (8 wheeled)	1	109	40	-4	105				
		Compressor	1	102	50	-3	99				
Structures	Substructure	360 Excavator, 20T	1	99	50	-3	96	110.7			
		Delivery lorry	1	109	10	-10	99				
		Bomag 120	1	106	10	-10	96				
		25T Dumper truck	1	109	30	-5.2	103.8				
		25T Dumper truck	1	109	30	-5.2	103.8				
		CFA piling rig (Soilmec CM45)	1	108	30	-5.2	102.8				
		Hiab	1	105	25	-6	99				
		Concrete mixer truck	1	108	5	-13	95				
		mobile crane, 55T	1	98	20	-7	91				
		Concrete pump	1	103	5	-13	90				
		Pick up	1	102	25	-6	96				
		Hand held air tools	1	115	5	-13	102				
		Compressor	1	102	5	-13	89				
		Super structure	Super structure	Hiab	1	105	30		-5.2	99.8	107.6
				Pick up	1	102	25		-6	96	
mobile crane, 55T	1			98	30	-5.2	92.8				
mobile crane, 600T	1			99	5	-13	86				
Concrete pump	1			103	10	-10	93				
Compressor	1			102	5	-13	89				
Concrete mixer truck	1			108	10	-10	98				

Phase	Activity	Equipment	Quantity	Sound Power (dBA)	ONTIME (percent)	ONTIME CORR (dB)	Corrected Sound Power (dBA)	Combined Sound Power for Activity (dBA)	
		Concrete mixer truck	1	108	10	-10	98	105.9	
		Circular saw/Cut off saw/Disc cutter	1	115	5	-13	102		
		Compressor, small petrol driven poker vibrators	1	105	10	-10	95		
		Delivery lorry	1	109	10	-10	99		
	Underpass	360 Excavator, 20T	1	99	50	-3	96		
		Delivery lorry	1	109	10	-10	99		
		Vibrating Roller Medium Bomag 120	1	106	25	-6	100		
		Concrete mixer truck	1	108	5	-13	95		
		Mobile Crane 55T	1	98	20	-7	91		
		Compressor, small petrol driven poker vibrators	1	105	5	-13	92		
		Pick up	1	102	25	-6	96		
		Vibratory Plate (petrol)	1	108	10	-10	98		
	Compressor	1	102	5	-13	89			
	Culvert	360 Excavator, 20T	1	99	50	-3	96		110.9
		25T Dumper truck	1	109	50	-3	106		
		25T Dumper truck	1	109	50	-3	106		
		Vibrating Roller Medium Bomag 120	1	106	25	-6	100		
		Hiab	1	105	10	-10	95		
		Concrete mixer truck	1	108	5	-13	95		
Mobile Crane 55T		1	98	20	-7	91			
Vibratory Plate (petrol)		1	108	25	-6	102			
Pick up		1	102	25	-6	96			
Compressor		1	102	5	-13	89			

Phase	Activity	Equipment	Quantity	Sound Power (dBA)	ONTIME (percent)	ONTIME CORR (dB)	Corrected Sound Power (dBA)	Combined Sound Power for Activity (dBA)
	Demolition	Tracked crane (70T crawler)	1	98	10	-10	88	117.2
		Dumper (2T)	1	105	50	-3	102	
		Excavator (JCB)	1	97	75	-1.2	95.8	
		Tracked loader (CAT)	1	112	75	-1.2	110.8	
		Excavated material lorries (8 wheeled)	1	109	40	-4	105	
		Excavated material lorries (8 wheeled)	1	109	40	-4	105	
		Hand held air tools (Pneumatic breakers)	1	111	50	-3	108	
		Compressor	1	102	50	-3	99	
		Excavator mounted breaker	1	120	25	-6	114	
Environmental	Landscape	Tractor and rotovator	1	108	40	-4	104	109.4
		Tractor and seeder	1	108	30	-5.2	102.8	
		Tracked excavator (22T)	1	106	30	-5.2	100.8	
		Articulated dump truck	1	109	40	-4	105	
	Watercourse	20T 360 deg Excavator	1	99	70	-1.5	97.5	112.7
		30T excavator	1	103	70	-1.5	101.5	
		30T excavator	1	103	70	-1.5	101.5	
		Dozer	1	107	50	-3	104	
		25T Dumper	1	109	50	-3	106	
		25T Dumper	1	109	50	-3	106	
		25T Dumper	1	109	50	-3	106	
		Pick up	1	102	25	-6	96	
		Hiab	1	105	10	-10	95	