



Appendix 10.5

CONSTRUCTION PLANT ASSUMPTIONS & NOISE PREDICTIONS

Noise & Vibration Appendix 10.5:

Construction Plant Assumptions & Construction Noise Predictions

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Table 1 Construction Plant Assumptions

Activity	Plant / Equipment	Qty	On-time in working day (%)	5228 Ref	LAeq 10 m
Demolition (building basement and foundations)	13T Excavator with breaker	2	30	Measured	86
	13T Excavator with hydraulic crusher/jaws	2	40	C1.4	76
	1T skid-steer loader	2	30	C2.8	68
	20T excavator	2	20	C2.16	75
	Generator	1	100	C4.87	65
	Mobile elevated working platform (MEWP)	2	50	C4.57	67
	Tracked crusher	1	60	C1.14	82
Earthworks & Infrastructure	70T Tracked Excavator	1	90	C2.2	77
	30T Tracked Excavator	2	90	C2.16	75
	20T Tracked Excavator	2	90	C2.3	78
	20T Self-propelled Vibratory Roller	4	80	C2.39	74
	A35 Dump Trucks	6	90	C4.6	79
	D6 Dozers (18T)	3	90	C2.12	81
	12T Excavator	3	90	C4.17	71
	Twin Drum Roller	2	30	C5.24	84
	RAMAX trench roller	2	40	C5.27	67
	9T Dumper	3	40	C4.4	76
Groundworks/ Foundations	20T Tracked Excavator	2	80	C2.3	78
	15T Tracked Excavator	2	90	C2.6	76
	5T Tracked Excavator	2	90	C4.67	74
	12T Dumper	1	50	C4.4	76
	9T Dumper	2	70	C4.4	76
	Twin Drum Roller	2	30	C2.39	74
	Disc Cutter	3	20	C4.73	84
	Handheld Breaker w/Compressor	2	20	C1.6	83
	Breaker mounted on Excavator	2	20	C1.9	90
	20T Tipper Truck	2	40	C8.20	79
	Concrete trucks	2	40	C4.27	79
	HIAB Truck	1	10	C6.21	80
Piling	Tracked Excavator	1	90	C2.21	71
	Concrete Pump	1	90	C3.25	78
	Piling rig	1	90	C3.21	79
	Crawler Crane	1	90	C4.50	75
Superstructure	Mobile Crane	1	90	C4.50	75
	Telehandler	3	70	C2.35	71
	HIAB Trucks	1	30	C6.21	80
	Concrete trucks	1	20	C4.27	79

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	MEWPS	2	80	C2.35	71
Paving	20T Tipper Wagons	1	80	C8.20	79
	10T Vibratory Rollers (on Asphalt)	2	90	C5.24	84
	Floor Saw	1	10	C4.73	84
	Heavy Breaker mounted on Small Tractor (Asphalt)	1	10	C5.1	88
	Paving Machine	1	90	C5.31	77

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Table 2: Begbroke Hill Construction Works

Receptor	Predicted Construction Noise Level LAeq,T (dB) for each activity and categorisation according to Table 10.7			
	Earthworks	Groundworks	Superstructure	Paving
R16 3 Poppy Cl 1.5m	65 Between LOAEL & SOAEL	65 Between LOAEL & SOAEL	56 < LOAEL	62 < LOAEL
R17 204 Woodstock Rd 1.5m	69 Between LOAEL & SOAEL	69 Between LOAEL & SOAEL	59 < LOAEL	66 Between LOAEL & SOAEL
R18 Garden Centre 1.5m	70 Between LOAEL & SOAEL	69 Between LOAEL & SOAEL	61 < LOAEL	66 Between LOAEL & SOAEL
R19 226 Woodstock Rd 1.5m	77 ≥ SOAEL	76 ≥ SOAEL	67 Between LOAEL & SOAEL	73 Between LOAEL & SOAEL
R22 74 Fernhill Rd 1.5m	72 Between LOAEL & SOAEL	71 Between LOAEL & SOAEL	62 < LOAEL	68 Between LOAEL & SOAEL
R20b Science Park 2 1.5m	68 Between LOAEL & SOAEL	67 Between LOAEL & SOAEL	58 < LOAEL	64 < LOAEL
F2 PR9 Development	72 Between LOAEL & SOAEL	71 Between LOAEL & SOAEL	62 < LOAEL	69 Between LOAEL & SOAEL

Note: At all other receptors the noise level would be below LOAEL
The minimum levels when construction works are occurring in that parcel are below the LOAEL.

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Table 3: Begbroke Science Park Construction Works

Receptor	Predicted Construction Noise Level LAeq,T (dB) for each activity and categorisation according to Table 10.7				
	Earthworks	Groundworks	Piling	Superstructure	Paving
R13 88 Sandy Lane 1.5m	74 Between LOAEL & SOAEL	65 Between LOAEL & SOAEL	74 Between LOAEL & SOAEL	64 < LOAEL	71 Between LOAEL & SOAEL
R14 Stanley Cl 1.5m	68 Between LOAEL & SOAEL	68 Between LOAEL & SOAEL	60 < LOAEL	59 < LOAEL	65 Between LOAEL & SOAEL
R15 31 Sandy Lane 1.5m	75 ≥ SOAEL	74 Between LOAEL & SOAEL	67 Between LOAEL & SOAEL	65 Between LOAEL & SOAEL	72 Between LOAEL & SOAEL
R20a Science Park 1 1.5m	78 ≥ SOAEL	78 ≥ SOAEL	70 Between LOAEL & SOAEL	68 Between LOAEL & SOAEL	75 ≥ SOAEL
R20b Science Park 2 1.5m	76 ≥ SOAEL	75 ≥ SOAEL	68 Between LOAEL & SOAEL	66 Between LOAEL & SOAEL	73 Between LOAEL & SOAEL
R20c Science Park 3 1.5m	76 ≥ SOAEL	76 ≥ SOAEL	68 Between LOAEL & SOAEL	67 Between LOAEL & SOAEL	73 Between LOAEL & SOAEL

Note: At all other receptors the noise level would be below LOAEL
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Table 4: Parkers Farm Construction Works

Receptor	Predicted Construction Noise Level LAeq,T (dB) for each activity and categorisation according to Table 10.7				
	Earthworks	Groundworks	Piling	Superstructure	Paving
R4 Crossing Caravans 1.5m	73 Between LOAEL & SOAEL	72 Between LOAEL & SOAEL	64 < LOAEL	63 < LOAEL	69 Between LOAEL & SOAEL
R5 Crossing Cottage 1.5m	67 Between LOAEL & SOAEL	67 Between LOAEL & SOAEL	59 < LOAEL	58 < LOAEL	63 < LOAEL
R13 88 Sandy Lane 1.5m	83 ≥ SOAEL	82 ≥ SOAEL	74 Between LOAEL & SOAEL	73 Between LOAEL & SOAEL	80 ≥ SOAEL
R20a Science Park 1 1.5m	75 ≥ SOAEL	74 Between LOAEL & SOAEL	67 Between LOAEL & SOAEL	65 Between LOAEL & SOAEL	71 Between LOAEL & SOAEL
R20c Science Park 3 1.5m	65 Between LOAEL & SOAEL	64 < LOAEL	57 < LOAEL	55 < LOAEL	61 < LOAEL
R20d Science Park 4 1.5m	74 Between LOAEL & SOAEL	74 Between LOAEL & SOAEL	66 Between LOAEL & SOAEL	64 < LOAEL	71 Between LOAEL & SOAEL

Note: At all other receptors the noise level would be below LOAEL
The minimum levels when construction works are occurring in that parcel are below the LOAEL.

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Table 5: Foxes Cover Construction Works

Receptor	Predicted Construction Noise Level LAeq,T (dB) for each activity and categorisation according to Table 10.7			
	Earthworks	Groundworks	Superstructure	Paving
R4 Crossing Caravans 1.5m	79 ≥ SOAEL	78 ≥ SOAEL	69 Between LOAEL & SOAEL	76 ≥ SOAEL
R5 Crossing Cottage 1.5m	76 ≥ SOAEL	75 ≥ SOAEL	66 Between LOAEL & SOAEL	72 Between LOAEL & SOAEL
R6 Littlemarsh Playing Fields 1.5m	68 Between LOAEL & SOAEL	67 Between LOAEL & SOAEL	58 < LOAEL	63 < LOAEL
R8 105 Woodstock Rd 1.5m	73 Between LOAEL & SOAEL	73 Between LOAEL & SOAEL	64 < LOAEL	70 Between LOAEL & SOAEL
R9 128 Woodstock Rd 1.5m	72 Between LOAEL & SOAEL	71 Between LOAEL & SOAEL	62 < LOAEL	69 Between LOAEL & SOAEL
R10 23 Gravel Pits Ln 1.5m	76 ≥ SOAEL	76 ≥ SOAEL	67 Between LOAEL & SOAEL	74 Between LOAEL & SOAEL
R11 4 Ryder Cl 1.5m	76 ≥ SOAEL	75 ≥ SOAEL	66 Between LOAEL & SOAEL	73 Between LOAEL & SOAEL
R12 3 Ryder Close 1.5m	75 ≥ SOAEL	75 ≥ SOAEL	66 Between LOAEL & SOAEL	72 Between LOAEL & SOAEL
R13 88 Sandy Lane 1.5m	83 ≥ SOAEL	82 ≥ SOAEL	73 Between LOAEL & SOAEL	80 ≥ SOAEL
F1 Former Piggery Residential Development	77 ≥ SOAEL	76 ≥ SOAEL	67 Between LOAEL & SOAEL	74 Between LOAEL & SOAEL

Note: At all other receptors the noise level would be below LOAEL
The minimum levels when construction works are occurring in that parcel are below the LOAEL.