

Appendix 11.5

Construction Stage Noise Calculations

Description	No. of Plant	SWL [dB(A)]	Closest Distance [m]	Percentage on time (1.0 = 100%)	ADJUSTMENT (dB(A))					Resultant Noise Level dB(A)
					Distance Correction dB	No. of Plant Correction	Screening Correction dB	Reflection Correction dB	Duration Correction dB	
Bulldozer	2	103	140	80%	-50.9	3.0	0	3	-0.97	57.1
Concrete crusher	2	110	140	80%	-50.9	3.0	0	3	-0.97	64.1
Concrete splitter	1	111	140	30%	-50.9	0.0	0	3	-5.23	57.8
Concrete saw	1	119	140	30%	-50.9	0.0	0	3	-5.23	65.8
Hand held tools	5	103	140	50%	-50.9	7.0	0	3	-3.01	59.1
Tracked excavators	1	103	140	80%	-50.9	0.0	0	3	-0.97	54.1
Breaker	1	111	140	30%	-50.9	0.0	0	3	-5.23	57.8
Diesel generators	2	88	140	100%	-50.9	3.0	0	3	0.00	43.1
Access platform	2	95	140	10%	-50.9	3.0	0	3	-10.00	40.1
HGV	1	108	140	10%	-50.9	0.0	0	3	-10.00	50.1
								Activity Noise Level		70

Description	No. of Plant	SWL [dB(A)]	Closest Distance [m]	Percentage on time (1.0 = 100%)	ADJUSTMENT (dB(A))					Resultant Noise Level dB(A)
					Distance Correction dB	No. of Plant Correction	Screening Correction dB	Reflection Correction dB	Duration Correction dB	
Atric dump truck	2	108	110	80%	-48.8	3.0	0	3	-0.97	64.2
Hydraulic tracked excavator	1	107	110	80%	-48.8	0.0	0	3	-0.97	60.2
Tracked loader lorry	1	105	110	80%	-48.8	0.0	0	3	-0.97	58.2
Generator	1	88	110	100%	-48.8	0.0	0	3	0.00	42.2
HGV	1	108	110	20%	-48.8	0.0	0	3	-6.99	55.2
								Activity Noise Level		67

Description	No. of Plant	SWL [dB(A)]	Closest Distance [m]	Percentage on time (1.0 = 100%)	ADJUSTMENT (dB(A))					Resultant Noise Level dB(A)
					Distance Correction dB	No. of Plant Correction	Screening Correction dB	Reflection Correction dB	Duration Correction dB	
Atric dump truck	2	108	140	80%	-50.9	3.0	0	3	-0.97	62.1
Hydraulic tracked excavator	1	107	140	80%	-50.9	0.0	0	3	-0.97	58.1
Tracked loader lorry	1	105	140	80%	-50.9	0.0	0	3	-0.97	56.1
Generator	1	88	140	100%	-50.9	0.0	0	3	0.00	40.1
HGV	1	108	140	20%	-50.9	0.0	0	3	-6.99	53.1
								Activity Noise Level		65

Calculation 4 – Piling – P1

Description	No. of Plant	SWL [dB(A)]	Closest Distance [m]	Percentage on time (1.0 = 100%)	ADJUSTMENT (dB(A))					Resultant Noise Level dB(A)
					Distance Correction dB	No. of Plant Correction	Screening Correction dB	Reflection Correction dB	Duration Correction dB	
CFA	1	105	110	50%	-48.8	0.0	0	3	-3.01	56.2
Activity Noise Level										56

Calculation 5 – Concreting – P1

Description	No. of Plant	SWL [dB(A)]	Closest Distance [m]	Percentage on time (1.0 = 100%)	ADJUSTMENT (dB(A))					Resultant Noise Level dB(A)
					Distance Correction dB	No. of Plant Correction	Screening Correction dB	Reflection Correction dB	Duration Correction dB	
Concrete silo and ready mix	6	103	110	60%	-48.8	7.8	0	3	-2.22	62.7
Diesel generators	12	88	110	100%	-48.8	10.8	0	3	0.00	53.0
Concrete pumps	12	95	110	100%	-48.8	10.8	0	3	0.00	60.0
Hydraulic cutters	6	111	110	60%	-48.8	7.8	0	3	-2.22	70.7
Hydraulic access platform	6	95	110	60%	-48.8	7.8	0	3	-2.22	54.7
HGV	1	108	110	25%	-48.8	0.0	0	3	-6.02	56.2
Activity Noise Level										72

Calculation 5 – Main Build – P1

Description	No. of Plant	SWL [dB(A)]	Closest Distance [m]	Percentage on time (1.0 = 100%)	ADJUSTMENT (dB(A))					Resultant Noise Level dB(A)
					Distance Correction dB	No. of Plant Correction	Screening Correction dB	Reflection Correction dB	Duration Correction dB	
Mobile crane	6	105	110	60%	-48.8	7.8	0	3	-2.22	64.7
Hand held tools	6	103	110	60%	-48.8	7.8	0	3	-2.22	62.7
Diesel generators	12	88	110	100%	-48.8	10.8	0	3	0.00	53.0
Hydraulic cutters	6	111	110	60%	-48.8	7.8	0	3	-2.22	70.7
Hydraulic access platform	6	95	110	60%	-48.8	7.8	0	3	-2.22	54.7
Concrete pumps	12	95	110	100%	-48.8	10.8	0	3	0.00	60.0
HGV	1	108	110	5%	-48.8	0.0	0	3	-13.01	49.2
Activity Noise Level										73

Calculation 7 – Piling – P2

Description	No. of Plant	SWL [dB(A)]	Closest Distance [m]	Percentage on time (1.0 = 100%)	ADJUSTMENT (dB(A))					Resultant Noise Level dB(A)
					Distance Correction dB	No. of Plant Correction	Screening Correction dB	Reflection Correction dB	Duration Correction dB	
CFA	1	105	20	50%	-34.0	0.0	0	3	-3.01	71.0
Activity Noise Level										71

Description	No. of Plant	SWL [dB(A)]	Closest Distance [m]	Percentage on time (1.0 = 100%)	ADJUSTMENT (dB(A))					Resultant Noise Level dB(A)
					Distance Correction dB	No. of Plant Correction	Screening Correction dB	Reflection Correction dB	Duration Correction dB	
Concrete silo and ready mix	6	103	20	60%	-34.0	7.8	0	3	-2.22	77.5
Diesel generators	12	88	20	100%	-34.0	10.8	0	3	0.00	67.8
Concrete pumps	12	95	20	100%	-34.0	10.8	0	3	0.00	74.8
Hydraulic cutters	6	111	20	60%	-34.0	7.8	0	3	-2.22	85.5
Hydraulic access platofrm	6	95	20	60%	-34.0	7.8	0	3	-2.22	69.5
HGV	1	108	20	25%	-34.0	0.0	0	3	-6.02	71.0
								Activity Noise Level		87

Description	No. of Plant	SWL [dB(A)]	Closest Distance [m]	Percentage on time (1.0 = 100%)	ADJUSTMENT (dB(A))					Resultant Noise Level dB(A)
					Distance Correction dB	No. of Plant Correction	Screening Correction dB	Reflection Correction dB	Duration Correction dB	
Mobile crane	6	105	20	60%	-34.0	7.8	0	3	-2.22	79.5
Hand held tools	6	103	20	60%	-34.0	7.8	0	3	-2.22	77.5
Diesel generators	12	88	20	100%	-34.0	10.8	0	3	0.00	67.8
Hydraulic cutters	6	111	20	60%	-34.0	7.8	0	3	-2.22	85.5
Hydraulic access platofrm	6	95	20	60%	-34.0	7.8	0	3	-2.22	69.5
Concrete pumps	12	95	20	100%	-34.0	10.8	0	3	0.00	74.8
HGV	1	108	20	5%	-34.0	0.0	0	3	-13.01	64.0
								Activity Noise Level		87

Description	No. of Plant	SWL [dB(A)]	Closest Distance [m]	Percentage on time (1.0 = 100%)	ADJUSTMENT (dB(A))					Resultant Noise Level dB(A)
					Distance Correction dB	No. of Plant Correction	Screening Correction dB	Reflection Correction dB	Duration Correction dB	
CFA	1	105	50	50%	-42.0	0.0	0	3	-3.01	63.0
								Activity Noise Level		63

Description	No. of Plant	SWL [dB(A)]	Closest Distance [m]	Percentage on time (1.0 = 100%)	ADJUSTMENT (dB(A))					Resultant Noise Level dB(A)
					Distance Correction dB	No. of Plant Correction	Screening Correction dB	Reflection Correction dB	Duration Correction dB	
Concrete silo and ready mix	6	103	50	60%	-42.0	7.8	0	3	-2.22	69.6
Diesel generators	12	88	50	100%	-42.0	10.8	0	3	0.00	59.8
Concrete pumps	12	95	50	100%	-42.0	10.8	0	3	0.00	66.8
Hydraulic cutters	6	111	50	60%	-42.0	7.8	0	3	-2.22	77.6
Hydraulic access platofrm	6	95	50	60%	-42.0	7.8	0	3	-2.22	61.6
HGV	1	108	50	25%	-42.0	0.0	0	3	-6.02	63.0
								Activity Noise Level		79

Description	No. of Plant	SWL [dB(A)]	Closest Distance [m]	Percentage on time (1.0 = 100%)	ADJUSTMENT (dB(A))					Resultant Noise Level dB(A)
					Distance Correction dB	No. of Plant Correction	Screening Correction dB	Reflection Correction dB	Duration Correction dB	
Mobile crane	6	105	50	60%	-42.0	7.8	0	3	-2.22	71.6
Hand held tools	6	103	50	60%	-42.0	7.8	0	3	-2.22	69.6
Diesel generators	12	88	50	100%	-42.0	10.8	0	3	0.00	59.8
Hydraulic cutters	6	111	50	60%	-42.0	7.8	0	3	-2.22	77.6
Hydraulic access platofrm	6	95	50	60%	-42.0	7.8	0	3	-2.22	61.6
Concrete pumps	12	95	50	100%	-42.0	10.8	0	3	0.00	66.8
HGV	1	108	50	5%	-42.0	0.0	0	3	-13.01	56.0
								Activity Noise Level		79