

Appendix 5.2 Calculation of Construction Noise Levels at Representative Noise Sensitive Receivers - Unmitigated Landslide Preventive Works at Po Shan, Mid-levels

NSR : N1 (1/F to 9/F)

Works Area	PME	SWL/item dB(A)	Number	SWL (Total) dB(A)	on-time %	^Distance m	SPL dB(A)
Site clearance and set up							
B	Dump Truck	103	1	103	100	51	64
Soil nail installation, soil nail head construction, rock slope stabilization and raking drain installation							
A	Air Compressor	102	2	105	100	15	76
G	Air Compressor	102	2	105	100	310	50
E	Drill Rig	110	1	110	100	38	73
E	Drill Rig	110	1	110	100	51	71
E	Drill Rig	110	1	110	100	67	68
E	Drill Rig	110	1	110	100	78	67
E	Drill Rig	110	1	110	100	91	66
E	Drill Rig	110	1	110	100	103	65
A	Grouting Machine	105	1	105	100	15	76
G	Grouting Machine	105	2	108	100	310	53
A	Generator	100	1	100	100	15	71
G	Generator	100	1	100	100	310	45
A	Concrete Mixer	96	1	96	100	15	67
G	Concrete Mixer	96	2	99	100	310	44
Total SPL (without Dump Truck) dB(A)							82

NSR : N1 (10/F or above)

Works Area	PME	SWL/item dB(A)	Number	SWL (Total) dB(A)	on-time %	^Distance m	SPL dB(A)
Site clearance and set up							
B	Dump Truck	103	1	103	100	62	62
Soil nail installation, soil nail head construction, rock slope stabilization and raking drain installation							
A	Air Compressor	102	2	105	100	38	68
G	Air Compressor	102	2	105	100	310	50
E	Drill Rig	110	1	110	100	38	73
E	Drill Rig	110	1	110	100	51	71
E	Drill Rig	110	1	110	100	67	68
E	Drill Rig	110	1	110	100	78	67
E	Drill Rig	110	1	110	100	91	66
E	Drill Rig	110	1	110	100	103	65
A	Grouting Machine	105	1	105	100	38	68
G	Grouting Machine	105	2	108	100	310	53
A	Generator	100	1	100	100	38	63
G	Generator	100	1	100	100	310	45
A	Concrete Mixer	96	1	96	100	38	59
G	Concrete Mixer	96	2	99	100	310	44
Total SPL (without Dump Truck) dB(A)							78

Appendix 5.2 Calculation of Construction Noise Levels at Representative Noise Sensitive Receivers - Unmitigated Landslide Preventive Works at Po Shan, Mid-levels

NSR : N2

Works Area	PME	SWL/item dB(A)	Number	SWL (Total) dB(A)	on-time %	^Distance m	SPL dB(A)
Site clearance and set up							
B	Dump Truck	103	1	103	100	70	61
Soil nail installation, soil nail head construction, rock slope stabilization and raking drain installation							
A	Air Compressor	102	2	105	100	35	69
G	Air Compressor	102	2	105	100	300	50
E	Drill Rig	110	1	110	100	38	73
E	Drill Rig	110	1	110	100	49	71
E	Drill Rig	110	1	110	100	66	69
E	Drill Rig	110	1	110	100	80	67
E	Drill Rig	110	1	110	100	94	66
E	Drill Rig	110	1	110	100	108	64
A	Grouting Machine	105	1	105	100	35	69
G	Grouting Machine	105	2	108	100	300	53
A	Generator	100	1	100	100	35	64
G	Generator	100	1	100	100	300	45
A	Concrete Mixer	96	1	96	100	35	60
G	Concrete Mixer	96	2	99	100	300	44
Total SPL (without Dump Truck) dB(A)							79

NSR : N3

Works Area	PME	SWL/item dB(A)	Number	SWL (Total) dB(A)	on-time %	^Distance m	SPL dB(A)
Site clearance and set up							
B	Dump Truck	103	1	103	100	185	53
Soil nail installation, soil nail head construction, rock slope stabilization and raking drain installation							
A	Air Compressor	102	2	105	100	145	57
G	Air Compressor	102	2	105	100	370	49
E	Drill Rig	110	1	110	100	151	61
E	Drill Rig	110	1	110	100	158	61
E	Drill Rig	110	1	110	100	173	60
E	Drill Rig	110	1	110	100	186	60
E	Drill Rig	110	1	110	100	200	59
E	Drill Rig	110	1	110	100	211	59
A	Grouting Machine	105	1	105	100	145	57
G	Grouting Machine	105	2	108	100	370	52
A	Generator	100	1	100	100	145	52
G	Generator	100	1	100	100	370	44
A	Concrete Mixer	96	1	96	100	145	48
G	Concrete Mixer	96	2	99	100	370	43
Total SPL (without Dump Truck) dB(A)							69

Appendix 5.2 Calculation of Construction Noise Levels at Representative Noise Sensitive Receivers - Unmitigated Landslide Preventive Works at Po Shan, Mid-levels

NSR : N4

Works Area	PME	SWL/item dB(A)	Number	SWL (Total) dB(A)	on-time %	^Distance m	SPL dB(A)
Site clearance and set up							
B	Dump Truck	103	1	103	100	210	52
Soil nail installation, soil nail head construction, rock slope stabilization and raking drain installation							
A	Air Compressor	102	2	105	100	175	55
G	Air Compressor	102	2	105	100	360	49
E	Drill Rig	110	1	110	100	172	60
E	Drill Rig	110	1	110	100	176	60
E	Drill Rig	110	1	110	100	189	59
E	Drill Rig	110	1	110	100	201	59
E	Drill Rig	110	1	110	100	212	58
E	Drill Rig	110	1	110	100	222	58
A	Grouting Machine	105	1	105	100	175	55
G	Grouting Machine	105	2	108	100	360	52
A	Generator	100	1	100	100	175	50
G	Generator	100	1	100	100	360	44
A	Concrete Mixer	96	1	96	100	175	46
G	Concrete Mixer	96	2	99	100	360	43
Total SPL (without Dump Truck) dB(A)							68

NSR : N5

Works Area	PME	SWL/item dB(A)	Number	SWL (Total) dB(A)	on-time %	^Distance m	SPL dB(A)
Site clearance and set up							
B	Dump Truck	103	1	103	100	50	64
Soil nail installation, soil nail head construction, rock slope stabilization and raking drain installation							
A	Air Compressor	102	2	105	100	75	63
G	Air Compressor	102	2	105	100	332	50
E	Drill Rig	110	1	110	100	126	63
E	Drill Rig	110	1	110	100	123	63
E	Drill Rig	110	1	110	100	126	63
E	Drill Rig	110	1	110	100	126	63
E	Drill Rig	110	1	110	100	125	63
E	Drill Rig	110	1	110	100	131	63
A	Grouting Machine	105	1	105	100	75	62
G	Grouting Machine	105	2	108	100	332	53
A	Generator	100	1	100	100	75	57
G	Generator	100	1	100	100	332	45
A	Concrete Mixer	96	1	96	100	75	53
G	Concrete Mixer	96	2	99	100	332	44
Total SPL (without Dump Truck) dB(A)							72

Appendix 5.2 Calculation of Construction Noise Levels at Representative Noise Sensitive Receivers - Unmitigated Landslide Preventive Works at Po Shan, Mid-levels

NSR : N6

Works Area	PME	SWL/item dB(A)	Number	SWL (Total) dB(A)	on-time %	^Distance m	SPL dB(A)
Site clearance and set up							
B	Dump Truck	103	1	103	100	75	60
Soil nail installation, soil nail head construction, rock slope stabilization and raking drain installation							
A	Air Compressor	102	2	105	100	60	64
G	Air Compressor	102	2	105	100	380	48
E	Drill Rig	110	1	110	100	114	64
E	Drill Rig	110	1	110	100	127	63
E	Drill Rig	110	1	110	100	139	62
E	Drill Rig	110	1	110	100	151	61
E	Drill Rig	110	1	110	100	162	61
E	Drill Rig	110	1	110	100	173	60
A	Grouting Machine	105	1	105	100	60	64
G	Grouting Machine	105	2	108	100	380	51
A	Generator	100	1	100	100	60	59
G	Generator	100	1	100	100	380	43
A	Concrete Mixer	96	1	96	100	60	55
G	Concrete Mixer	96	2	99	100	380	42
Total SPL (without Dump Truck) dB(A)							72

Note: (^) The distance between drill rig locations and the NSR is measured horizontally as worst case consideration.
Slant distance is used for calculating noise levels at NSR N1.