

Annex E5

Construction Noise Impact Assessment (With Mitigation)

Pilot Project for Public-Private Partnership Conservation Scheme at Sha Lo Tung Valley

Annex E5-1 Construction Plant Inventory - Mitigated

For V2 only [5].

No. Activities	Plant	TM / EPD ^[1] / BS 5228 ref. ^[1]	No. of PME	On- time %	Unit SWL, dB(A)	SWL, dB(A) ^[2]	Total SWL, dB(A) ^[2]	Type of Noise Control ^[3]	Noise reduction, dB(A)	Total SWL, dB(A) ^[2]
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D) Sha Lo Tung Road Improvement

1 Road Improvement Works Phase 1							Maximum SWL for Phase 1 ^[4] = 112	Maximum SWL for Phase 1 ^[4] = 110
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Group A: Slope Works	Drill, hand-held	EPD/PME/11	6	100%	89	97	111			108	
	Air Compressor, air flow > 10m ³ /min and < 30r	CNP 002	2	100%	102	105					
	Generator, silenced, 75dB(A) at 7m	CNP 102	2	100%	100	103					
	Grout pump	EPD/PME/15	2	100%	105	108					
Group B: Excavation Works	Lorry, with crane/grab, 5.5 tonne < gross vehicle	EPD/PME/36	1	100%	105	105	110			110	
	Tracked Excavator/loader	BS D3 97	2	100%	105	108					
Group C: Filling Works	Compactor, vibratory	CNP 050	1	100%	105	105	105			105	
Group D: Road Works	Hydraulic breaker, excavator mounted	BS D8 12	2	100%	106	109	112	Noise Barrier		-5	110
	Tracked Excavator/loader	BS D3 97	2	100%	105	108					
	Concrete mixer (electric)	CNP 045	2	100%	96	99					
	Poker, vibratory, hand-held	BS D6 40	1	100%	98	98					

2 Road Improvement Works Phase 2							Maximum SWL for Phase 2 ^[4] = 112
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Group A: Slope Works	Drill, hand-held	EPD/PME/11	6	100%	89	97	111			
	Air Compressor, air flow > 10m ³ /min and < 30r	CNP 002	2	100%	102	105				
	Generator, silenced, 75dB(A) at 7m	CNP 102	2	100%	100	103				
	Grout pump	EPD/PME/15	2	100%	105	108				
Group B: Minipile construction	Drill, hand-held	EPD/PME/11	2	100%	89	92	108			
	Air Compressor, air flow > 10m ³ /min and < 30r	CNP 002	1	100%	102	102				
	Generator, silenced, 75dB(A) at 7m	CNP 102	1	100%	100	100				
	Grout pump	EPD/PME/15	1	100%	105	105				
Group C: RC Wall Construction	Concrete mixer (electric)	CNP 045	1	100%	96	96	110			
	Concrete pump, stationary/lorry mounted	CNP 047	1	100%	109	109				
	Poker, vibratory, hand-held	BS D6 40	1	100%	98	98				
Group D: Excavation Works	Lorry, with crane/grab, 5.5 tonne < gross vehicle	EPD/PME/36	1	100%	105	105	110			
	Tracked Excavator/loader	BS D3 97	2	100%	105	108				
Group E: Filling Works	Compactor, vibratory	CNP 050	1	100%	105	105	105			105
Group F: Road Works	Hydraulic breaker, excavator mounted	BS D8 12	2	100%	106	109	112			
	Tracked Excavator/loader	BS D3 97	2	100%	105	108				
	Concrete mixer (electric)	CNP 045	2	100%	96	99				

3 Road Improvement Works Phase 3							Maximum SWL for Phase 3 ^[4] = 112
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Group A: Slope Works	Drill, hand-held	EPD/PME/11	6	100%	89	97	111			
	Air Compressor, air flow > 10m ³ /min and < 30r	CNP 002	2	100%	102	105				
	Generator, silenced, 75dB(A) at 7m	CNP 102	2	100%	100	103				
	Grout pump	EPD/PME/15	2	100%	105	108				
Group B: Excavation Works	Lorry, with crane/grab, 5.5 tonne < gross vehicle	EPD/PME/36	1	100%	105	105	110			
	Tracked Excavator/loader	BS D3 97	2	100%	105	108				
Group C: Filling Works	Compactor, vibratory	CNP 050	1	100%	105	105	105			105
Group D: Road Works	Hydraulic breaker, excavator mounted	BS D8 12	2	100%	106	109	112			
	Tracked Excavator/loader	BS D3 97	2	100%	105	108				
	Concrete mixer (electric)	CNP 045	2	100%	96	99				

Notes:

- [1] SWLs of EPD/PME items refer to the document prepared by the Noise Control Authority (http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf)
BS - British Standard BS 5228:2009, Part 1 Noise and Vibration Control on Construction and Open Sites
- [2] The figures are rounded-up to a whole number.
- [3] Noise barrier for mobile PME -5dB(A)
Noise barrier for stationary PME -10dB(A)
- [4] Either Group A, B, C, D, E or F will be undertaken at any one time.
- [5] If there is any occupant lives within the village zone during the construction of Road Improvement Works Phase I, the noise barriers will be provided for grout pump, hydraulic breaker and poker.

Annex E5-2 Summary of Predicted Noise Levels during Daytime Period - Mitigated

NSR Location	EIAO-TM Noise Criteria, dB(A)	Predicted Construction Noise Level (dB(A))																																				Max. CNL, dB(A)												
		Year 1												Year 2												Year 3													Year 4											
		Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan		Feb	Mar	Apr	May	Jun	Jul						
N1	Village house at Fung Yuen Lo Tsuen	75	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	67	67	59	59	59	59	61	61	61	61	61	61	57	58	58	58	58	58	51	51	51	51	51	51	51	67							
N2	Village house at Fung Yuen	75	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	68	68	59	59	59	59	61	61	61	61	61	61	56	57	57	57	57	57	50	50	50	50	50	50	50	68						
N3	Village house at Mak Uk	75	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	68	68	58	58	58	58	60	60	60	60	60	60	56	57	57	57	57	57	50	50	50	50	50	50	50	68						
N4	Village house at Tin Sam	75	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	67	67	55	55	55	55	57	57	57	57	57	57	53	54	54	54	54	54	47	47	47	47	47	47	47	67						
N5	Ha Hang Government Staff Quarters	75	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	56	56	56	56	58	58	58	58	58	58	54	55	55	55	55	55	47	47	47	47	47	47	47	71							
V1	NSR at Village Zone	75	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73	54	54	54	54	56	56	56	56	56	56	52	53	53	53	53	53	46	46	46	46	46	46	46	73							
V2	NSR at Village Zone	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	55	55	55	55	57	57	57	57	57	57	53	54	54	54	54	54	46	46	46	46	46	46	46	75							
V3	NSR at Village Zone (Lei Uk)	75	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	68	68	67	67	67	67	69	69	69	69	69	69	69	69	65	66	66	66	66	66	59	59	59	59	59	59	69					

