

**Appendix 4-3**  
Calculation of Construction Noise Impact Assessment  
(Unmitigated Scenario)

**Appendix 4-3-1 Plant Inventory and Calculated SWLs for Northern Portion of Project Site (Unmitigated)**

Construction Activity	Sub. Work Group	PMEs Inventory - Unmitigated						Highest SWL of Each Construction Activity, dB(A)	
		Powered Mechanical Equipment	TM Ref.	SWL per unit, dB(A)	Qty	Total, SWL	Total SWL, dB(A)		
(A) Site Formation, Filling and Excavation	A1	Excavation and Filling	Air Compressor	CNP003	104	4	110	126	126
			Excavator	CNP081	112	6	120		
			Generator, Standard	CNP101	108	6	116		
			Dump Truck	CNP067	117	6	125		
	A2	Breaking excavated hard/oversize materials	Breaker, Excavator mounted	CNP027	122	2	125	125	
			Excavator	CNP081	112	1	112		
	A3	Ground Compression	Roller, vibratory	CNP186	108	8	117	125	
			Bulldozer	CNP030	115	8	124		
	(B) Construction of Underground Services and Utilities	B1	Earthwork	Breaker, Excavator mounted	CNP027	122	1	122	
Dump Truck				CNP067	117	3	122		
Excavator				CNP081	112	3	117		
B2		Utilities laying	Air Compressor	CNP003	104	2	107	117	
			Generator, Standard	CNP101	108	3	113		
			Lorry	CNP141	112	2	115		
			Water Pump, Submersible (Electric)	CNP283	85	3	90		
B3		Ground reinstatement	Concrete Lorry Mixer	CNP044	109	2	112	119	
			Power Rammer (Petrol)	CNP169	108	2	111		
			Poker, Vibratory, Hand-held	CNP170	113	2	116		
			Roller, Vibratory	CNP186	108	2	111		
(C) Road Works		C1	Earthwork	Dump Truck	CNP067	117	3	122	123
	Excavator			CNP081	112	2	115		
	C2	Concreting Works	Concrete Lorry Mixer	CNP044	109	2	112	119	
			Generator, Standard	CNP101	108	3	113		
			Poker, Vibratory, Hand-held	CNP170	113	2	116		
	C3	Road Finishing	Air Compressor	CNP003	104	2	107	120	
			Asphalt Paver	CNP004	109	2	112		
			Generator, Standard	CNP101	108	3	113		
			Lorry	CNP141	112	2	115		
			Power Rammer (Petrol)	CNP169	108	2	111		
			Road Roller	CNP185	108	2	111		
	(D) Foundation	D1	General foundation works	Air Compressor	CNP003	104	4	110	123
				Bar bender and cutter (electric)	CNP021	90	6	98	
				Generator, standard	CNP101	108	3	113	
				Drill/grinder, hand-held (electric)	CNP065	98	6	106	
Saw, circular, wood				CNP201	108	3	113		
Water pump, submersible (electric)				CNP283	85	6	93		
Excavator				CNP081	112	4	118		

PMEs Inventory - Unmitigated									
Construction Activity	Sub. Work Group	Powered Mechanical Equipment	TM Ref.	SWL per unit, dB(A)	Qty	Total, SWL	Total SWL, dB(A)	Highest SWL of Each Construction Activity, dB(A) <sup>@</sup>	
		Lorry	CNP141	112	3	117		120	
		Mobile Crane	CNP048	112	2	115			
	D2	Piling works	Generator, standard	CNP101	108	3	113		120
			Continuous Flight Auger (CFA) piles (piling, earth auger)	CNP167	114	3	119		
	D3	Concreting Works	Concrete Lorry Mixer	CNP044	109	3	114		120
			Generator, standard	CNP101	108	3	113		
			Poker, vibratory, hand-held	CNP170	113	3	118		
(E) Superstructure	E1	General construction works	Air Compressor	CNP003	104	4	110	121	
			Bar bender and cutter (electric)	CNP021	90	6	98		
			Mobile Crane	CNP048	112	2	115		
			Drill/grinder, hand-held (electric)	CNP065	98	6	106		
			Generator, standard	CNP101	108	4	114		
			Saw, circular, wood	CNP201	108	10	118		
	E2	Concreting works	Concrete Lorry Mixer	CNP044	109	4	115	121	
			Concrete Pump	CNP047	109	2	112		
			Generator, standard	CNP101	108	4	114		
			Poker, vibratory, hand-held	CNP170	113	3	118		
Dump Trucks Travelling on Haul Road During Site Formation	G	Dump Trucks Travelling on Haul Road	Dump Truck (Moving along Haul Road)	CNP067	117	10	127	127	127

**Note:**

@ The highest SWL calculated for each Construction Activity for construction noise impact assessment. Each Construction Activity has been divided into several sub. work groups based on the sequence of construction works. The respective sub-work groups of each Construction Activity will not overlap with one another.

**Appendix 4-3-2 Plant Inventory and Calculated SWLs for Southern Portion  
of Project Site (Unmitigated)**

		PMEs Inventory - Unmitigated						Highest SWL of Each Construction Activity, dB(A) §	
Construction Activity	Sub. Work Group	Powered Mechanical Equipment	TM Ref.	SWL per unit, dB(A)	Qty	Total, SWL	Total SWL, dB(A)		
(A) Site Formation, Filling and Excavation	A1 Excavation and Filling	Air Compressor	CNP003	104	3	109	125	125	
		Excavator	CNP081	112	4	118			
		Generator, Standard	CNP101	108	3	113			
		Dump Truck	CNP067	117	4	123			
	A2 Breaking excavated hard/ oversize materials	Breaker, Excavator mounted	CNP027	122	1	122	122		
		Excavator	CNP081	112	1	112			
	A3 Ground Compression	Roller, vibratory	CNP186	108	4	114	122		
		Bulldozer	CNP030	115	4	121			
	(B) Construction of Underground Services and Utilities	B1 Earthwork	Breaker, Excavator mounted	CNP027	122	1	122		125
Dump Truck			CNP067	117	2	120			
Excavator			CNP081	112	2	116			
B2 Utilities laying		Air Compressor	CNP003	104	3	109	118		
		Generator, Standard	CNP101	108	4	114			
		Lorry	CNP141	112	2	115			
		Water Pump, Submersible (Electric)	CNP283	85	2	88			
B3 Ground reinstatement		Concrete Lorry Mixer	CNP044	109	2	112	119		
		Power Rammer (Petrol)	CNP169	108	2	111			
		Poker, Vibratory, Hand-held	CNP170	113	2	116			
		Roller, Vibratory	CNP186	108	2	111			
(C) Road Works		C1 Earthwork	Dump Truck	CNP067	117	4	123	124	124
	Excavator		CNP081	112	3	117			
	C2 Concreting Works	Concrete Lorry Mixer	CNP044	109	3	114	119		
		Generator, Standard	CNP101	108	4	114			
		Poker, Vibratory, Hand-held	CNP170	113	2	116			
	C3 Road Finishing	Air Compressor	CNP003	104	3	109	120		
		Asphalt Paver	CNP004	109	3	114			
		Generator, Standard	CNP101	108	3	113			
		Lorry	CNP141	112	2	115			
		Power Rammer (Petrol)	CNP169	108	2	111			
		Road Roller	CNP185	108	2	111			
	(D) Foundation	D1 General foundation works	Air Compressor	CNP003	104	6	112		
			Bar bender and cutter (electric)	CNP021	90	6	98		
			Generator, standard	CNP101	108	4	114		
			Drill/grinder, hand-held (electric)	CNP065	98	6	106		

PMEs Inventory - Unmitigated									
Construction Activity	Sub. Work Group	Powered Mechanical Equipment	TM Ref.	SWL per unit, dB(A)	Qty	Total, SWL	Total SWL, dB(A)	Highest SWL of Each Construction Activity, dB(A) <sup>@</sup>	
		Saw, circular, wood	CNP201	108	5	115	123	120	
		Water pump, submersible (electric)	CNP283	85	6	93			
		Excavator	CNP081	112	3	117			
		Lorry	CNP141	112	3	117			
		Mobile Crane	CNP048	112	3	117			
	D2	Piling works	Generator, standard	CNP101	108	4	114		120
			Continuous Flight Auger (CFA) piles (piling, earth auger)	CNP167	114	3	119		
	D3	Concreting Works	Concrete Lorry Mixer	CNP044	109	4	115		121
			Generator, standard	CNP101	108	4	114		
			Poker, vibratory, hand-held	CNP170	113	4	119		
(E) Superstructure	E1	General construction works	Air Compressor	CNP003	104	7	112	123	123
			Bar bender and cutter (electric)	CNP021	90	11	100		
			Mobile Crane	CNP048	112	5	119		
			Drill/grinder, hand-held (electric)	CNP065	98	11	108		
			Generator, standard	CNP101	108	7	116		
			Saw, circular, wood	CNP201	108	11	118		
	E2	Concreting works	Concrete Lorry Mixer	CNP044	109	4	115	122	
			Concrete Pump	CNP047	109	2	112		
			Generator, standard	CNP101	108	6	116		
			Poker, vibratory, hand-held	CNP170	113	3	118		
(F) Sub-structure (Pile Cap)	F1	General pile cap construction	Bar bender and cutter (electric)	CNP021	90	10	100	118	122
			Generator, standard	CNP101	108	5	115		
			Lorry	CNP141	112	2	115		
	F2	Concreting works	Concrete Lorry Mixer	CNP044	109	4	115	122	
			Concrete Pump	CNP047	109	2	112		
			Generator, standard	CNP101	108	6	116		
			Poker, vibratory, hand-held	CNP170	113	3	118		
	F3	Backfill and reinstatement	Excavator	CNP081	112	2	115	116	
			Roller, vibratory	CNP186	108	1	108		
	(G) Dump Trucks Travelling on Haul Road During Site Formation	G	Dump Trucks Travelling on Haul Road	Dump Truck (Moving along Haul Road)	CNP067	117	10	127	

**Note:**

<sup>@</sup> The highest SWL calculated for each Construction Activity for construction noise impact assessment. Each Construction Activity has been divided into several sub. work groups based on the sequence of construction works. Construction activities of respective sub-work groups under each Construction Activity will not overlap with one another.

Appendix 4-3-3 Calculation of Construction Noise Level (Northern Portion) (Unmitigated Scenario)

NSR	Construction Activity	Total SWL, dB(A)	Dist. (NSR to Site Boundary) (A), m	Dist. (Site Boundary to Notional Source) (B), m	Horz. Distance (= A+B), m	Dist. Corr., dB(A)	Façade Corr., dB(A)	CNL, dB(A)
N1	A Site Formation, Filling and Excavation	126	360	50	410	-60.2	3.0	69
	B Construction of Underground Services and Utilities	126	360	50	410	-60.2	3.0	69
	C Road works	123	360	50	410	-60.2	3.0	66
	D Foundation	123	360	50	410	-60.2	3.0	66
	E Superstructure	121	360	50	410	-60.2	3.0	64
N2	A Site Formation, Filling and Excavation	126	303	50	353	-58.9	3.0	70
	B Construction of Underground Services and Utilities	126	303	50	353	-58.9	3.0	70
	C Road works	123	303	50	353	-58.9	3.0	67
	D Foundation	123	303	50	353	-58.9	3.0	67
	E Superstructure	121	303	50	353	-58.9	3.0	65
N3	A Site Formation, Filling and Excavation	126	164	50	214	-54.6	3.0	74
	B Construction of Underground Services and Utilities	126	164	50	214	-54.6	3.0	74
	C Road works	123	164	50	214	-54.6	3.0	71
	D Foundation	123	164	50	214	-54.6	3.0	71
	E Superstructure	121	164	50	214	-54.6	3.0	69
N4	A Site Formation, Filling and Excavation	126	84	50	134	-50.5	3.0	79
	B Construction of Underground Services and Utilities	126	84	50	134	-50.5	3.0	79
	C Road works	123	84	50	134	-50.5	3.0	76
	D Foundation	123	84	50	134	-50.5	3.0	76
	E Superstructure	121	84	50	134	-50.5	3.0	74
N5	A Site Formation, Filling and Excavation	126	16	50	66	-44.4	3.0	85
	B Construction of Underground Services and Utilities	126	16	50	66	-44.4	3.0	85
	C Road works	123	16	50	66	-44.4	3.0	82
	D Foundation	123	16	50	66	-44.4	3.0	82
	E Superstructure	121	16	50	66	-44.4	3.0	80
N6	A Site Formation, Filling and Excavation	126	14	50	64	-44.1	3.0	85
	B Construction of Underground Services and Utilities	126	14	50	64	-44.1	3.0	85
	C Road works	123	14	50	64	-44.1	3.0	82
	D Foundation	123	14	50	64	-44.1	3.0	82
	E Superstructure	121	14	50	64	-44.1	3.0	80
N7	A Site Formation, Filling and Excavation	126	244	50	294	-57.3	3.0	72
	B Construction of Underground Services and Utilities	126	244	50	294	-57.3	3.0	72
	C Road works	123	244	50	294	-57.3	3.0	69
	D Foundation	123	244	50	294	-57.3	3.0	69
	E Superstructure	121	244	50	294	-57.3	3.0	67
N8	A Site Formation, Filling and Excavation	126	230	50	280	-56.9	3.0	72
	B Construction of Underground Services and Utilities	126	230	50	280	-56.9	3.0	72
	C Road works	123	230	50	280	-56.9	3.0	69
	D Foundation	123	230	50	280	-56.9	3.0	69
	E Superstructure	121	230	50	280	-56.9	3.0	67
N9	A Site Formation, Filling and Excavation	126	249	50	299	-57.5	3.0	72
	B Construction of Underground Services and Utilities	126	249	50	299	-57.5	3.0	72
	C Road works	123	249	50	299	-57.5	3.0	69
	D Foundation	123	249	50	299	-57.5	3.0	69
	E Superstructure	121	249	50	299	-57.5	3.0	67
N10	A Site Formation, Filling and Excavation	126	205	50	255	-56.1	3.0	73
	B Construction of Underground Services and Utilities	126	205	50	255	-56.1	3.0	73
	C Road works	123	205	50	255	-56.1	3.0	70
	D Foundation	123	205	50	255	-56.1	3.0	70
	E Superstructure	121	205	50	255	-56.1	3.0	68
N11	A Site Formation, Filling and Excavation	126	483	50	533	-62.5	3.0	67
	B Construction of Underground Services and Utilities	126	483	50	533	-62.5	3.0	67
	C Road works	123	483	50	533	-62.5	3.0	64
	D Foundation	123	483	50	533	-62.5	3.0	64
	E Superstructure	121	483	50	533	-62.5	3.0	62
N12	A Site Formation, Filling and Excavation	126	537	50	587	-63.4	3.0	66
	B Construction of Underground Services and Utilities	126	537	50	587	-63.4	3.0	66
	C Road works	123	537	50	587	-63.4	3.0	63
	D Foundation	123	537	50	587	-63.4	3.0	63
	E Superstructure	121	537	50	587	-63.4	3.0	61
N13	A Site Formation, Filling and Excavation	126	446	50	496	-61.9	3.0	67
	B Construction of Underground Services and Utilities	126	446	50	496	-61.9	3.0	67
	C Road works	123	446	50	496	-61.9	3.0	64
	D Foundation	123	446	50	496	-61.9	3.0	64
	E Superstructure	121	446	50	496	-61.9	3.0	62
N14	A Site Formation, Filling and Excavation	126	517	50	567	-63.1	3.0	66
	B Construction of Underground Services and Utilities	126	517	50	567	-63.1	3.0	66
	C Road works	123	517	50	567	-63.1	3.0	63
	D Foundation	123	517	50	567	-63.1	3.0	63
	E Superstructure	121	517	50	567	-63.1	3.0	61
N15	A Site Formation, Filling and Excavation	126	579	50	629	-64.0	3.0	65
	B Construction of Underground Services and Utilities	126	579	50	629	-64.0	3.0	65
	C Road works	123	579	50	629	-64.0	3.0	62
	D Foundation	123	579	50	629	-64.0	3.0	62
	E Superstructure	121	579	50	629	-64.0	3.0	60
N16	A Site Formation, Filling and Excavation	126	50	50	100	-48.0	3.0	81
	B Construction of Underground Services and Utilities	126	50	50	100	-48.0	3.0	81
	C Road works	123	50	50	100	-48.0	3.0	78
	D Foundation	123	50	50	100	-48.0	3.0	78
	E Superstructure	121	50	50	100	-48.0	3.0	76
N17	A Site Formation, Filling and Excavation	126	288	50	338	-58.6	3.0	70
	B Construction of Underground Services and Utilities	126	288	50	338	-58.6	3.0	70
	C Road works	123	288	50	338	-58.6	3.0	67
	D Foundation	123	288	50	338	-58.6	3.0	67
	E Superstructure	121	288	50	338	-58.6	3.0	65

NSR	Construction Activity	Total SWL, dB(A)	Dist. (NSR to Site Boundary) (A), m **	Dist. (Site Boundary to Notional Source) (B), m ** & #	Horz. Distance (= A+B), m **	Dist. Corr., dB(A)	Façade Corr., dB(A)	CNL, dB(A)
N18	A Site Formation, Filling and Excavation	126	286	50	336	-58.5	3.0	71
	B Construction of Underground Services and Utilities	126	286	50	336	-58.5	3.0	71
	C Road works	123	286	50	336	-58.5	3.0	68
	D Foundation	123	286	50	336	-58.5	3.0	68
	E Superstructure	121	286	50	336	-58.5	3.0	66
N19	A Site Formation, Filling and Excavation	126	453	50	503	-62.0	3.0	67
	B Construction of Underground Services and Utilities	126	453	50	503	-62.0	3.0	67
	C Road works	123	453	50	503	-62.0	3.0	64
	D Foundation	123	453	50	503	-62.0	3.0	64
	E Superstructure	121	453	50	503	-62.0	3.0	62
N20	A Site Formation, Filling and Excavation	126	11	50	61	-43.7	3.0	85
	B Construction of Underground Services and Utilities	126	11	50	61	-43.7	3.0	85
	C Road works	123	11	50	61	-43.7	3.0	82
	D Foundation	123	11	50	61	-43.7	3.0	82
	E Superstructure	121	11	50	61	-43.7	3.0	80

Remark: \*\* Distance is based on shortest horizontal distance.

# The notional noise source location is assumed based on the methodology listed in the statutory Technical Memorandum on Noise from Construction work other than Percussive Piling and that used in the approved EIA report for Wo Shan Wai. It has been assumed that all PME items are operating and gathered within a worksite for a conservative assessment.

#### Calculation of Noise Level Due to Travelling of Dump Truck within the Project Construction Area During Site Formation, Filling and Excavation Stage

NSR	Construction Activity	No. of Trucks/hr.	SWL per Unit, dB(A)	Horz. Distance From NSR, m	Average Speed, km/hr	Calculated LAeq Due to Travelling of Dump Truck, dB(A) @
N1	G Dump Trucks Travelling on Haul Road	10	127	410	10	68
N2	G Dump Trucks Travelling on Haul Road	10	127	353	10	69
N3	G Dump Trucks Travelling on Haul Road	10	127	214	10	71
N4	G Dump Trucks Travelling on Haul Road	10	127	134	10	73
N5	G Dump Trucks Travelling on Haul Road	10	127	66	10	76
N6	G Dump Trucks Travelling on Haul Road	10	127	64	10	76
N7	G Dump Trucks Travelling on Haul Road	10	127	294	10	69
N8	G Dump Trucks Travelling on Haul Road	10	127	280	10	70
N9	G Dump Trucks Travelling on Haul Road	10	127	299	10	69
N10	G Dump Trucks Travelling on Haul Road	10	127	255	10	70
N11	G Dump Trucks Travelling on Haul Road	10	127	533	10	67
N12	G Dump Trucks Travelling on Haul Road	10	127	587	10	66
N13	G Dump Trucks Travelling on Haul Road	10	127	496	10	67
N14	G Dump Trucks Travelling on Haul Road	10	127	567	10	67
N15	G Dump Trucks Travelling on Haul Road	10	127	629	10	66
N16	G Dump Trucks Travelling on Haul Road	10	127	100	10	74
N17	G Dump Trucks Travelling on Haul Road	10	127	338	10	69
N18	G Dump Trucks Travelling on Haul Road	10	127	336	10	69
N19	G Dump Trucks Travelling on Haul Road	10	127	503	10	67
N20	G Dump Trucks Travelling on Haul Road	10	127	61	10	76

Remark: \* According to information available at EPD website: [http://www.epd.gov.hk/epd/english/application\\_for\\_licences/guidance/files/OtherSWLs.pdf](http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLs.pdf)

@ Based on equation in the British Standard "Noise Control on Construction and Open Sites, BS 5228: Part 1: 2009":  $LA_{eq} = SWL - 33 + 10 \log_{10} Q - 10 \log_{10} V - 10 \log_{10} D$

Where,

SWL = Sound Power Level of the dump truck

Q is the number of vehicles per hour

V is the average speed (10 km/hr)

D is the distance of receiver position from the haul road (m) (the horizontal distance between the receiver position and the construction notional noise source is taken in this noise assessment)

Appendix 4-3-4 Calculation of Construction Noise Level (Southern Portion) (Unmitigated Scenario)

NSR	Construction Activity	Total SWL, dB(A)	Dist. (NSR to Site Boundary) (A), m	Dist. (Site Boundary to Notional Source) (B), m	Horz. Distance (= A+B), m	Dist. Corr., dB(A)	Façade Corr., dB(A)	CNL, dB(A)
N1	A Site Formation, Filling and Excavation	125	10	50	60	-43.5	3.0	85
	B Construction of Underground Services and Utilities	125	10	50	60	-43.5	3.0	85
	C Road works	124	10	50	60	-43.5	3.0	84
	D Foundation	123	10	50	60	-43.5	3.0	83
	E Superstructure	123	10	50	60	-43.5	3.0	83
	F Sub-structure (pile cap)	122	10	50	60	-43.5	3.0	82
N2	A Site Formation, Filling and Excavation	125	11	50	61	-43.7	3.0	84
	B Construction of Underground Services and Utilities	125	11	50	61	-43.7	3.0	84
	C Road works	124	11	50	61	-43.7	3.0	83
	D Foundation	123	11	50	61	-43.7	3.0	82
	E Superstructure	123	11	50	61	-43.7	3.0	82
	F Sub-structure (pile cap)	122	11	50	61	-43.7	3.0	81
N3	A Site Formation, Filling and Excavation	125	17	50	67	-44.5	3.0	84
	B Construction of Underground Services and Utilities	125	17	50	67	-44.5	3.0	84
	C Road works	124	17	50	67	-44.5	3.0	83
	D Foundation	123	17	50	67	-44.5	3.0	82
	E Superstructure	123	17	50	67	-44.5	3.0	82
	F Sub-structure (pile cap)	122	17	50	67	-44.5	3.0	81
N4	A Site Formation, Filling and Excavation	125	11	50	61	-43.7	3.0	84
	B Construction of Underground Services and Utilities	125	11	50	61	-43.7	3.0	84
	C Road works	124	11	50	61	-43.7	3.0	83
	D Foundation	123	11	50	61	-43.7	3.0	82
	E Superstructure	123	11	50	61	-43.7	3.0	82
	F Sub-structure (pile cap)	122	11	50	61	-43.7	3.0	81
N5	A Site Formation, Filling and Excavation	125	199	50	249	-55.9	3.0	72
	B Construction of Underground Services and Utilities	125	199	50	249	-55.9	3.0	72
	C Road works	124	199	50	249	-55.9	3.0	71
	D Foundation	123	199	50	249	-55.9	3.0	70
	E Superstructure	123	199	50	249	-55.9	3.0	70
	F Sub-structure (pile cap)	122	199	50	249	-55.9	3.0	69
N6	A Site Formation, Filling and Excavation	125	405	50	455	-61.1	3.0	67
	B Construction of Underground Services and Utilities	125	405	50	455	-61.1	3.0	67
	C Road works	124	405	50	455	-61.1	3.0	66
	D Foundation	123	405	50	455	-61.1	3.0	65
	E Superstructure	123	405	50	455	-61.1	3.0	65
	F Sub-structure (pile cap)	122	405	50	455	-61.1	3.0	64
N7	A Site Formation, Filling and Excavation	125	624	50	674	-64.6	3.0	63
	B Construction of Underground Services and Utilities	125	624	50	674	-64.6	3.0	63
	C Road works	124	624	50	674	-64.6	3.0	62
	D Foundation	123	624	50	674	-64.6	3.0	61
	E Superstructure	123	624	50	674	-64.6	3.0	61
	F Sub-structure (pile cap)	122	624	50	674	-64.6	3.0	60
N8	A Site Formation, Filling and Excavation	125	372	50	422	-60.5	3.0	68
	B Construction of Underground Services and Utilities	125	372	50	422	-60.5	3.0	68
	C Road works	124	372	50	422	-60.5	3.0	67
	D Foundation	123	372	50	422	-60.5	3.0	66
	E Superstructure	123	372	50	422	-60.5	3.0	66
	F Sub-structure (pile cap)	122	372	50	422	-60.5	3.0	65
N9	A Site Formation, Filling and Excavation	125	408	50	458	-61.2	3.0	67
	B Construction of Underground Services and Utilities	125	408	50	458	-61.2	3.0	67
	C Road works	124	408	50	458	-61.2	3.0	66
	D Foundation	123	408	50	458	-61.2	3.0	65
	E Superstructure	123	408	50	458	-61.2	3.0	65
	F Sub-structure (pile cap)	122	408	50	458	-61.2	3.0	64
N10	A Site Formation, Filling and Excavation	125	15	50	65	-44.2	3.0	84
	B Construction of Underground Services and Utilities	125	15	50	65	-44.2	3.0	84
	C Road works	124	15	50	65	-44.2	3.0	83
	D Foundation	123	15	50	65	-44.2	3.0	82
	E Superstructure	123	15	50	65	-44.2	3.0	82
	F Sub-structure (pile cap)	122	15	50	65	-44.2	3.0	81
N11	A Site Formation, Filling and Excavation	125	125	50	175	-52.8	3.0	75
	B Construction of Underground Services and Utilities	125	125	50	175	-52.8	3.0	75
	C Road works	124	125	50	175	-52.8	3.0	74
	D Foundation	123	125	50	175	-52.8	3.0	73
	E Superstructure	123	125	50	175	-52.8	3.0	73
	F Sub-structure (pile cap)	122	125	50	175	-52.8	3.0	72
N12	A Site Formation, Filling and Excavation	125	252	50	302	-57.6	3.0	70
	B Construction of Underground Services and Utilities	125	252	50	302	-57.6	3.0	70
	C Road works	124	252	50	302	-57.6	3.0	69
	D Foundation	123	252	50	302	-57.6	3.0	68
	E Superstructure	123	252	50	302	-57.6	3.0	68
	F Sub-structure (pile cap)	122	252	50	302	-57.6	3.0	67
N13	A Site Formation, Filling and Excavation	125	31	50	81	-46.2	3.0	82
	B Construction of Underground Services and Utilities	125	31	50	81	-46.2	3.0	82
	C Road works	124	31	50	81	-46.2	3.0	81
	D Foundation	123	31	50	81	-46.2	3.0	80
	E Superstructure	123	31	50	81	-46.2	3.0	80
	F Sub-structure (pile cap)	122	31	50	81	-46.2	3.0	79
N14	A Site Formation, Filling and Excavation	125	99	50	149	-51.4	3.0	77
	B Construction of Underground Services and Utilities	125	99	50	149	-51.4	3.0	77
	C Road works	124	99	50	149	-51.4	3.0	76
	D Foundation	123	99	50	149	-51.4	3.0	75
	E Superstructure	123	99	50	149	-51.4	3.0	75
	F Sub-structure (pile cap)	122	99	50	149	-51.4	3.0	74



NSR	Construction Activity	Total SWL, dB(A)	Dist. (NSR to Site Boundary) (A), m	Dist. (Site Boundary to Notional Source) (B), m	Horz. Distance (= A+B), m	Dist. Corr., dB(A)	Façade Corr., dB(A)	CNL, dB(A)
N15	A Site Formation, Filling and Excavation	125	149	50	199	-54.0	3.0	74
	B Construction of Underground Services and Utilities	125	149	50	199	-54.0	3.0	74
	C Road works	124	149	50	199	-54.0	3.0	73
	D Foundation	123	149	50	199	-54.0	3.0	72
	E Superstructure	123	149	50	199	-54.0	3.0	72
	F Sub-structure (pile cap)	122	149	50	199	-54.0	3.0	71
N16	A Site Formation, Filling and Excavation	125	473	50	523	-62.4	3.0	66
	B Construction of Underground Services and Utilities	125	473	50	523	-62.4	3.0	66
	C Road works	124	473	50	523	-62.4	3.0	65
	D Foundation	123	473	50	523	-62.4	3.0	64
	E Superstructure	123	473	50	523	-62.4	3.0	64
	F Sub-structure (pile cap)	122	473	50	523	-62.4	3.0	63
N17	A Site Formation, Filling and Excavation	125	702	50	752	-65.5	3.0	63
	B Construction of Underground Services and Utilities	125	702	50	752	-65.5	3.0	63
	C Road works	124	702	50	752	-65.5	3.0	62
	D Foundation	123	702	50	752	-65.5	3.0	61
	E Superstructure	123	702	50	752	-65.5	3.0	61
	F Sub-structure (pile cap)	122	702	50	752	-65.5	3.0	60
N18	A Site Formation, Filling and Excavation	125	681	50	731	-65.3	3.0	63
	B Construction of Underground Services and Utilities	125	681	50	731	-65.3	3.0	63
	C Road works	124	681	50	731	-65.3	3.0	62
	D Foundation	123	681	50	731	-65.3	3.0	61
	E Superstructure	123	681	50	731	-65.3	3.0	61
	F Sub-structure (pile cap)	122	681	50	731	-65.3	3.0	60
N19	A Site Formation, Filling and Excavation	125	185	50	235	-55.4	3.0	73
	B Construction of Underground Services and Utilities	125	185	50	235	-55.4	3.0	73
	C Road works	124	185	50	235	-55.4	3.0	72
	D Foundation	123	185	50	235	-55.4	3.0	71
	E Superstructure	123	185	50	235	-55.4	3.0	71
	F Sub-structure (pile cap)	122	185	50	235	-55.4	3.0	70
N20	A Site Formation, Filling and Excavation	125	433	50	483	-61.7	3.0	66
	B Construction of Underground Services and Utilities	125	433	50	483	-61.7	3.0	66
	C Road works	124	433	50	483	-61.7	3.0	65
	D Foundation	123	433	50	483	-61.7	3.0	64
	E Superstructure	123	433	50	483	-61.7	3.0	64
	F Sub-structure (pile cap)	122	433	50	483	-61.7	3.0	63

Remark: \*\* Distance is based on shortest horizontal distance.

# The notional noise source location is assumed based on the methodology listed in the statutory Technical Memorandum on Noise from Construction work other than Percussive Piling and that used in the approved EIA report for Wo Shan Wai. It has been assumed that all PME items are operating and gathered within a worksite for a conservative assessment.

**Calculation of Noise Level Due to Travelling of Dump Truck within the Project Construction Area During Site Formation, Filling and Excavation Stage**

NSR	Construction Activity	No. of Trucks/hr.	SWL per Unit, dB(A)	Horz. Distance From NSR, m	Average Speed, km/hr	Calculated LAeq Due to Travelling of Dump Truck, dB(A) *
N1	G Dump Trucks Travelling on Haul Road	10	127	60	10	76
N2	G Dump Trucks Travelling on Haul Road	10	127	61	10	76
N3	G Dump Trucks Travelling on Haul Road	10	127	67	10	76
N4	G Dump Trucks Travelling on Haul Road	10	127	61	10	76
N5	G Dump Trucks Travelling on Haul Road	10	127	249	10	70
N6	G Dump Trucks Travelling on Haul Road	10	127	455	10	67
N7	G Dump Trucks Travelling on Haul Road	10	127	674	10	66
N8	G Dump Trucks Travelling on Haul Road	10	127	422	10	68
N9	G Dump Trucks Travelling on Haul Road	10	127	458	10	67
N10	G Dump Trucks Travelling on Haul Road	10	127	65	10	76
N11	G Dump Trucks Travelling on Haul Road	10	127	175	10	72
N12	G Dump Trucks Travelling on Haul Road	10	127	302	10	69
N13	G Dump Trucks Travelling on Haul Road	10	127	81	10	75
N14	G Dump Trucks Travelling on Haul Road	10	127	149	10	72
N15	G Dump Trucks Travelling on Haul Road	10	127	199	10	71
N16	G Dump Trucks Travelling on Haul Road	10	127	523	10	67
N17	G Dump Trucks Travelling on Haul Road	10	127	752	10	65
N18	G Dump Trucks Travelling on Haul Road	10	127	731	10	65
N19	G Dump Trucks Travelling on Haul Road	10	127	235	10	70
N20	G Dump Trucks Travelling on Haul Road	10	127	483	10	67

Remark: \* According to information available at EPD website: [http://www.epd.gov.hk/epd/english/application\\_for\\_licences/guidance/files/OtherSWLe.pdf](http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf)

@ Based on equation in the British Standard "Noise Control on Construction and Open Sites, BS 5228: Part 1: 2009": LAeq = SWL - 33 + 10log10 Q - 10 Log10 V - 10log10d

Where,

SWL = Sound Power Level of the dump truck

Q is the number of vehicles per hour

V is the average speed (10 km/hr)

D is the distance of receiver position from the haul road (m) (the horizontal distance between the receiver position and the construction notional noise source is taken in this noise assessment)