

**Appendix 4-3C**  
**Calculation of Construction Noise Levels**  
**(Mitigated Scenario with QPMEs, Movable Noise**  
**Barriers and Temporary Fixed Noise Barriers)**



**Appendix 4-3C-2 Plant Inventory and Calculated SWLs of Yau Mei San Tsuen Project (Mitigated with QPMEs, Movable Noise Barrier and Temporary Fixed Noise Barriers)**

PMEs Inventory - Mitigated (with QPMEs and Noise Barriers)																						
Construction Area	Construction Activity	Sub. Work Group	Powered Mechanical Equipment	Reference	SWL per unit	Qty	Total, SWL	Total SWL, dB(A)	At-source Noise Mitigation Measure	Noise Barrier Effect **	Total SWL (Mitigated)	Total SWL, dB(A)	Highest SWL of Each Construction Activity, dB(A)									
Wetland Restoration (Phase A)	(A) Reprofiting of pond and planting work	A1	Earthworks	Air Compressor	CNP001	100	1	100	107	Movable noise barrier	-10	90	101									
				Generator, super silenced	CNP103	95	2	98		Movable noise barrier	-10	88										
				Dump Truck (5.5 tonne < Gross vehicle weight <= 38 tonne)	EPD *	105	1	105		Movable noise barrier	-5	100										
				Excavator, wheeled/tracked	JCB model 8016 (EPD-01176)	93	3	98		Movable noise barrier	-5	93										
		A2	Ground stabilization	Roller, vibratory	SAKAI model SW250-1 (EPD-00509)	95	3	100	108	Movable noise barrier	-5	95	99									
	Power rammer (petrol)	Dynapac model LT700 (EPD-00536)	107	1	107	Movable noise barrier	-10	97														
	(B) Vegetation Clearance	B1	Vegetation Clearance	Dump Truck (5.5 tonne < Gross vehicle weight <= 38 tonne)	EPD *	105	1	105	106	Movable noise barrier	-5	100	101									
				Excavator, mini-robot mounted	EPD *	94	2	97		Movable noise barrier	-5	92										
				Generator, super silenced	CNP103	95	2	98		Movable noise barrier	-10	88										
	Site Formation/preloading (Phase B)	(C) General site clearance	C1	General Site Clearance	Air Compressor	CNP001	100	2	103	119	Movable noise barrier	-10	93	110								
Breaker, mini-robot mounted					EPD *	115	2	118	Movable noise barrier and Installation of commercially made sound proof hammer bracket # & ##		-10	108										
Dump Truck (5.5 tonne < Gross vehicle weight <= 38 tonne)					EPD *	105	2	108	Fixed Temp. Boundary Noise Barrier		-5	103										
Excavator, wheeled/tracked					KATO model HD820V (EPD-01233)	99	4	105	Movable noise barrier		-5	100										
Generator, super silenced					CNP103	95	2	98	Movable noise barrier		-10	88										
Water Pump, Submersible (electric)					CNP283	85	2	88	Movable noise barrier		-10	78										
(D) Retaining wall construction					D1	Earthwork	Breaker, mini-robot mounted	EPD *	115		1	115	116		Movable noise barrier and Installation of commercially made sound proof hammer bracket # & ##	-10	105	107				
							Dump Truck (5.5 tonne < Gross vehicle weight <= 38 tonne)	EPD *	105		1	105			Fixed Temp. Boundary Noise Barrier	-5	100					
							Excavator, wheeled/tracked	KATO model HD820V (EPD-01233)	99		3	104			Movable noise barrier	-5	99					
							Water Pump, Submersible (electric)	CNP283	85		2	88			Movable noise barrier	-10	78					
							D2	General Work	Air Compressor		CNP001	100			1	100	112		Movable noise barrier	-10	90	104
									Bar Bender and Cutter		CNP021	90			1	90			Movable noise barrier	-10	80	
		Mobile Crane	Hitachi Sumitomo SCX700, 132kW	101					1	101	Movable noise barrier and Fixed Temp. Boundary Noise Barrier	-10		91								
		Generator, super silenced	CNP103	95					2	98	Movable noise barrier	-10		88								
		Lorry (5.5 tonne < Gross vehicle weight <= 38 tonne)	EPD *	105	1	105			Fixed Temp. Boundary Noise Barrier	-5	100											
		Power rammer (petrol)	Dynapac model LT700 (EPD-00536)	107	1	107			Movable noise barrier	-10	97											
		Saw, circular, wood	CNP201	108	1	108			Movable noise barrier	-10	98											
		Water Pump, Submersible (electric)	CNP283	85	1	85			Movable noise barrier	-10	75											
		D3	Foundation	Continuous Flight Auger (CFA) piles (piling, earth auger)	CNP167	114	2	117	117	Fixed Temp. Noise Barrier and provision of Acoustic Shielding	-10	107	107									
				Generator, super silenced	CNP103	95	1	95		Movable noise barrier	-10	85										
				D4	Concreting	Concrete Lorry Mixer	CNP044	109		1	109	114		Movable noise barrier and fixed Temp. Noise Barrier	-10	99	104					
						Concrete Pump	CNP047	109		2	112			Movable noise barrier	-10	102						
Poker, vibratory, hand-held (electric)		EPD *	102	1	102	Movable noise barrier	-10	92														
(E) Installation of Vertical Drain		E1	Installation of Vertical Drain	Band Drain Installation Machine	CNP050	105	12	116	116	Movable noise barrier	-10	106	106	106								
(F) Placement of Fill and Surcharge		F1	Placement of Filling and Surcharge	Bulldozer	Komatsu modelled D21A-B	102	3	107	112	Fixed Temp. Boundary Noise Barrier	-5	102	107									
				Dump Truck (5.5 tonne < Gross vehicle weight <= 38 tonne)	EPD *	105	3	110		Fixed Temp. Boundary Noise Barrier	-5	105										
				Excavator, mini-robot mounted	EPD *	94	2	97		Movable noise barrier	-5	92										
				Generator, super silenced	CNP103	95	2	98		Movable noise barrier	-10	88										
	Roller, vibratory			SAKAI model SW250-1 (EPD-00509)	95	3	100	Fixed Temp. Boundary Noise Barrier		-5	95											
(G) Removal of surcharge	G1	Removal of Surcharge	Bulldozer	Komatsu modelled D21A-B	102	2	105	111	Fixed Temp. Boundary Noise Barrier	-5	100	106										
			Dump Truck (5.5 tonne < Gross vehicle weight <= 38 tonne)	EPD *	105	3	110		Fixed Temp. Boundary Noise Barrier	-5	105											
			Excavator, mini-robot mounted	EPD *	94	2	97		Movable noise barrier	-5	92											
			Generator, super silenced	CNP103	95	2	98		Movable noise barrier	-10	88											
Site Formation/preloading (Phase C)	(H) General Site clearance	H1	General Site Clearance	Air Compressor	CNP001	100	2	103		Movable noise barrier	-10	93										
				Breaker, mini-robot mounted	EPD *	115	2	118		Movable noise barrier and Installation of commercially made sound proof hammer bracket # & ##	-10	108										

PMEs Inventory - Mitigated (with QPMEs and Noise Barriers)														
Construction Area	Construction Activity	Sub. Work Group	Powered Mechanical Equipment	Reference	SWL per unit	Qty	Total SWL	Total SWL, dB(A)	At-source Noise Mitigation Measure	Noise Barrier Effect **	Total SWL (Mitigated)	Total SWL, dB(A)	Highest SWL of Each Construction Activity, dB(A)	
			Dump Truck (5.5 tonne < Gross vehicle weight <= 38 tonne)	EPD *	105	3	110	119	Fixed Temp. Boundary Noise Barrier	-5	105	110	110	
			Excavator, wheeled/tracked	KATO model HD820V (EPD-01233)	99	4	105		Movable noise barrier	-5	100			
			Generator, super silenced	CNP103	95	2	98		Movable noise barrier	-10	88			
			Water Pump, Submersible (electric)	CNP283	85	2	88		Movable noise barrier	-10	78			
	(I) Retaining Wall construction	11	Earthwork	Breaker, mini-robot mounted	EPD *	115	1	115	116	Movable noise barrier and Installation of commercially made sound proof hammer bracket # & ##	-10	105	107	
				Dump Truck (5.5 tonne < Gross vehicle weight <= 38 tonne)	EPD *	105	1	105		Fixed Temp. Boundary Noise Barrier	-5	100		
				Excavator, wheeled/tracked	KATO model HD820V (EPD-01233)	99	3	104		Movable noise barrier	-5	99		
				Water Pump, Submersible (electric)	CNP283	85	2	88		Movable noise barrier	-10	78		
		12	General Work	Air Compressor	CNP001	100	1	100	112	Movable noise barrier	-10	90	104	107
				Bar Bender and Cutter	CNP021	90	1	90		Movable noise barrier	-10	80		
				Mobile Crane	Hitachi Sumitomo SCX700, 132kW	101	1	101		Movable noise barrier and Fixed Temp. Boundary Noise Barrier	-10	91		
				Generator, super silenced	CNP103	95	2	98		Movable noise barrier	-10	88		
				Lorry (5.5 tonne < Gross vehicle weight <= 38 tonne)	EPD *	105	1	105		Fixed Temp. Boundary Noise Barrier	-5	100		
				Power rammer (petrol)	Dynapac model LT700 (EPD-00536)	107	1	107		Movable noise barrier	-10	97		
13	Foundation	Continuous Flight Auger (CFA) piles (piling, earth auger)	CNP167	114	2	117	117	Fixed Temp. Noise Barrier and provision of Acoustic Shielding	-10	107	107			
		Generator, super silenced	CNP103	95	1	95		Movable noise barrier	-10	85				
14	Concreting	Concrete Lorry Mixer	CNP044	109	1	109	114	Movable noise barrier and fixed Temp. Noise Barrier	-10	99	104			
		Concrete Pump	CNP047	109	2	112		Movable noise barrier	-10	102				
		Poker, vibratory, hand-held (electric)	EPD *	102	1	102		Movable noise barrier	-10	92				
(J) Installation of Vertical Drain	J1	Installation of Vertical Drain	Band Drain Installation Machine	CNP050	105	12	116	116	Movable noise barrier	-10	106	106	106	
(K) Placement of Filling and surcharge	K1	Placement of Filling and Surcharge	Bulldozer	Komatsy modelled D21A-B	102	3	107	112	Fixed Temp. Boundary Noise Barrier	-5	102	107	107	
			Dump Truck (5.5 tonne < Gross vehicle weight <= 38 tonne)	EPD *	105	3	110		Fixed Temp. Boundary Noise Barrier	-5	105			
			Excavator, mini-robot mounted	EPD *	94	2	97		Movable noise barrier	-5	92			
			Generator, super silenced	CNP103	95	2	98		Movable noise barrier	-10	88			
			Roller, vibratory	SAKAI model SW250-1 (EPD-00509)	95	3	100		Fixed Temp. Boundary Noise Barrier	-5	95			
(L) Removal of surcharge	L1	Removal of Surcharge	Bulldozer	Komatsy modelled D21A-B	102	2	105	111	Fixed Temp. Boundary Noise Barrier	-5	100	106	106	
			Dump Truck (5.5 tonne < Gross vehicle weight <= 38 tonne)	EPD *	105	3	110		Fixed Temp. Boundary Noise Barrier	-5	105			
			Excavator, mini-robot mounted	EPD *	94	2	97		Movable noise barrier	-5	92			
			Generator, super silenced	CNP103	95	2	98		Movable noise barrier	-10	88			
Site Formation/preloading (Phase D)	(M) General site clearance	M1	General Site Clearance	Air Compressor	CNP001	100	2	103	119	Movable noise barrier	-10	93	110	110
				Breaker, mini-robot mounted	EPD *	115	2	118		Movable noise barrier and Installation of commercially made sound proof hammer bracket # & ##	-10	108		
				Dump Truck (5.5 tonne < Gross vehicle weight <= 38 tonne)	EPD *	105	3	110		Fixed Temp. Boundary Noise Barrier	-5	105		
				Excavator, wheeled/tracked	KATO model HD820V (EPD-01233)	99	3	104		Movable noise barrier	-5	99		
				Generator, super silenced	CNP103	95	2	98		Movable noise barrier	-10	88		
				Water Pump, Submersible (electric)	CNP283	85	2	88		Movable noise barrier	-10	78		
	(N) Retaining wall construction	N1	Earthwork	Breaker, mini-robot mounted	EPD *	115	1	115	115	Movable noise barrier and Installation of commercially made sound proof hammer bracket # & ##	-10	105	106	
				Dump Truck (5.5 tonne < Gross vehicle weight <= 38 tonne)	EPD *	105	1	105		Fixed Temp. Boundary Noise Barrier	-5	100		
				Excavator, wheeled/tracked	KATO model HD820V (EPD-01233)	93	3	98		Movable noise barrier	-5	93		
				Water Pump, Submersible (electric)	CNP283	85	2	88		Movable noise barrier	-10	78		
N2	General Work	Air Compressor	CNP001	100	1	100	114	Movable noise barrier	-10	90	104			
		Bar Bender and Cutter	CNP021	90	1	90		Movable noise barrier	-10	80				
		Mobile Crane	Hitachi Sumitomo SCX700, 132kW	101	1	101		Movable noise barrier and Fixed Temp. Boundary Noise Barrier	-10	91				





Appendix 4-3C-3 Calculation of Construction Noise Level (Mitigated Scenario with QPMEs, Movable Noise Barriers and Fixed Temp. Noise Barriers)

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)	
N2a	Phase A	(A) Reprofiting of pond and planting work	101	37	33	70	-44.9	3.0	59
		(B) Vegetation Clearance	101	37	33	70	-44.9	3.0	59
		(C) General site clearance	110	200	26	226	-55.1	3.0	58
	Phase B	(D) Retaining wall construction	107	200	26	226	-55.1	3.0	55
		(E) Installation of Vertical Drain	106	200	26	226	-55.1	3.0	54
		(F) Placement of Fill and Surcharge	107	200	26	226	-55.1	3.0	55
	Phase C	(G) Removal of surcharge	106	200	26	226	-55.1	3.0	54
		(H) General Site clearance	110	55	32	87	-46.8	3.0	66
		(I) Retaining Wall construction	107	55	32	87	-46.8	3.0	63
		(J) Installation of Vertical Drain	106	55	32	87	-46.8	3.0	62
		(K) Placement of Filling and surcharge	107	55	32	87	-46.8	3.0	63
		(L) Removal of surcharge	106	55	32	87	-46.8	3.0	62
	Phase D	(M) General site clearance	110	97	17	114	-49.1	3.0	64
		(N) Retaining wall construction	107	97	17	114	-49.1	3.0	61
		(O) Installation of vertical drain	106	97	17	114	-49.1	3.0	60
	Phase B to D	(P) Placement of filling and surcharge	107	97	17	114	-49.1	3.0	61
		(Q) Removal of surcharge	106	97	17	114	-49.1	3.0	60
		(R) Foundation	110	95	36	131	-50.3	3.0	63
N3	Phase A	(A) Reprofiting of pond and planting work	101	79	31	110	-48.8	3.0	55
		(B) Vegetation Clearance	101	79	31	110	-48.8	3.0	55
		(C) General site clearance	110	135	26	161	-52.1	3.0	61
	Phase B	(D) Retaining wall construction	107	135	26	161	-52.1	3.0	58
		(E) Installation of Vertical Drain	106	135	26	161	-52.1	3.0	57
		(F) Placement of Fill and Surcharge	107	135	26	161	-52.1	3.0	58
	Phase C	(G) Removal of surcharge	106	135	26	161	-52.1	3.0	57
		(H) General Site clearance	110	28	22	48	-41.6	3.0	71
		(I) Retaining Wall construction	107	28	22	48	-41.6	3.0	68
		(J) Installation of Vertical Drain	106	28	22	48	-41.6	3.0	67
		(K) Placement of Filling and surcharge	107	28	22	48	-41.6	3.0	68
		(L) Removal of surcharge	106	28	22	48	-41.6	3.0	67
	Phase D	(M) General site clearance	110	36	20	56	-42.9	3.0	70
		(N) Retaining wall construction	107	36	20	56	-42.9	3.0	67
		(O) Installation of vertical drain	106	36	20	56	-42.9	3.0	66
	Phase B to D	(P) Placement of filling and surcharge	107	36	20	56	-42.9	3.0	67
		(Q) Removal of surcharge	106	36	20	56	-42.9	3.0	66
		(R) Foundation	110	33	35	68	-44.6	3.0	68
N4	Phase A	(A) Reprofiting of pond and planting work	101	101	31	132	-50.4	3.0	54
		(B) Vegetation Clearance	101	101	31	132	-50.4	3.0	54
		(C) General site clearance	110	209	29	238	-55.5	3.0	58
	Phase B	(D) Retaining wall construction	107	209	29	238	-55.5	3.0	55
		(E) Installation of Vertical Drain	106	209	29	238	-55.5	3.0	54
		(F) Placement of Fill and Surcharge	107	209	29	238	-55.5	3.0	55
	Phase C	(G) Removal of surcharge	106	209	29	238	-55.5	3.0	54
		(H) General Site clearance	110	115	23	138	-50.8	3.0	62
		(I) Retaining Wall construction	107	115	23	138	-50.8	3.0	59
		(J) Installation of Vertical Drain	106	115	23	138	-50.8	3.0	58
		(K) Placement of Filling and surcharge	107	115	23	138	-50.8	3.0	59
		(L) Removal of surcharge	106	115	23	138	-50.8	3.0	58
	Phase D	(M) General site clearance	110	83	19	102	-48.2	3.0	65
		(N) Retaining wall construction	107	83	19	102	-48.2	3.0	62
		(O) Installation of vertical drain	106	83	19	102	-48.2	3.0	61
	Phase B to D	(P) Placement of filling and surcharge	107	83	19	102	-48.2	3.0	62
		(Q) Removal of surcharge	106	83	19	102	-48.2	3.0	61
		(R) Foundation	110	85	40	125	-49.9	3.0	63
N4a	Phase A	(A) Reprofiting of pond and planting work	101	91	32	123	-49.8	3.0	54
		(B) Vegetation Clearance	101	91	32	123	-49.8	3.0	54
		(C) General site clearance	110	194	29	223	-54.9	3.0	58
	Phase B	(D) Retaining wall construction	107	194	29	223	-54.9	3.0	55
		(E) Installation of Vertical Drain	106	194	29	223	-54.9	3.0	54
		(F) Placement of Fill and Surcharge	107	194	29	223	-54.9	3.0	55
	Phase C	(G) Removal of surcharge	106	194	29	223	-54.9	3.0	54
		(H) General Site clearance	110	97	23	120	-49.6	3.0	63
		(I) Retaining Wall construction	107	97	23	120	-49.6	3.0	60
		(J) Installation of Vertical Drain	106	97	23	120	-49.6	3.0	59
		(K) Placement of Filling and surcharge	107	97	23	120	-49.6	3.0	60
		(L) Removal of surcharge	106	97	23	120	-49.6	3.0	59
	Phase D	(M) General site clearance	110	71	19	90	-47.1	3.0	66
		(N) Retaining wall construction	107	71	19	90	-47.1	3.0	63
		(O) Installation of vertical drain	106	71	19	90	-47.1	3.0	62
	Phase B to D	(P) Placement of filling and surcharge	107	71	19	90	-47.1	3.0	63
		(Q) Removal of surcharge	106	71	19	90	-47.1	3.0	62
		(R) Foundation	110	74	38	112	-49.0	3.0	64
Phase B to D	(S) Superstructure	108	74	38	112	-49.0	3.0	62	
	(T) Construction of Underground Utilities	105	74	38	112	-49.0	3.0	59	
	(U) Roadworks Construction	105	74	38	112	-49.0	3.0	59	

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)	
N4c	Phase A	(A) Reproffing of pond and planting work	101	101	35	136	-50.7	3.0	53
		(B) Vegetation Clearance	101	101	35	136	-50.7	3.0	53
	Phase B	(C) General site clearance	110	141	29	170	-52.6	3.0	60
		(D) Retaining wall construction	107	141	29	170	-52.6	3.0	57
		(E) Installation of Vertical Drain	106	141	29	170	-52.6	3.0	56
		(F) Placement of Fill and Surcharge	107	141	29	170	-52.6	3.0	57
		(G) Removal of surcharge	106	141	29	170	-52.6	3.0	56
		(H) General Site clearance	110	66	22	88	-46.9	3.0	66
		(I) Retaining Wall construction	107	66	22	88	-46.9	3.0	63
	Phase C	(J) Installation of Vertical Drain	106	66	22	88	-46.9	3.0	62
		(K) Placement of Filling and surcharge	107	66	22	88	-46.9	3.0	63
		(L) Removal of surcharge	106	66	22	88	-46.9	3.0	62
		(M) General site clearance	110	22	18	40	-40.0	3.0	73
	Phase D	(N) Retaining wall construction	107	22	18	40	-40.0	3.0	70
		(O) Installation of vertical drain	106	22	18	40	-40.0	3.0	69
		(P) Placement of filling and surcharge	107	22	18	40	-40.0	3.0	70
		(Q) Removal of surcharge	106	22	18	40	-40.0	3.0	69
	Phase B to D	(R) Foundation	110	24	37	61	-43.7	3.0	69
		(S) Superstructure	108	24	37	61	-43.7	3.0	67
		(T) Construction of Underground Utilities	105	24	37	61	-43.7	3.0	64
(U) Roadworks Construction		105	24	37	61	-43.7	3.0	64	
N5	Phase A	(A) Reproffing of pond and planting work	101	4	12	16	-32.1	3.0	72
		(B) Vegetation Clearance	101	4	12	16	-32.1	3.0	72
	Phase B	(C) General site clearance	110	34	39	73	-45.2	3.0	68
		(D) Retaining wall construction	107	34	39	73	-45.2	3.0	65
		(E) Installation of Vertical Drain	106	34	39	73	-45.2	3.0	64
		(F) Placement of Fill and Surcharge	107	34	39	73	-45.2	3.0	65
		(G) Removal of surcharge	106	34	39	73	-45.2	3.0	64
		(H) General Site clearance	110	138	50	188	-53.5	3.0	60
		(I) Retaining Wall construction	107	138	50	188	-53.5	3.0	57
	Phase C	(J) Installation of Vertical Drain	106	138	50	188	-53.5	3.0	56
		(K) Placement of Filling and surcharge	107	138	50	188	-53.5	3.0	57
		(L) Removal of surcharge	106	138	50	188	-53.5	3.0	56
		(M) General site clearance	110	149	24	173	-52.7	3.0	60
	Phase D	(N) Retaining wall construction	107	149	24	173	-52.7	3.0	57
		(O) Installation of vertical drain	106	149	24	173	-52.7	3.0	56
		(P) Placement of filling and surcharge	107	149	24	173	-52.7	3.0	57
		(Q) Removal of surcharge	106	149	24	173	-52.7	3.0	56
	Phase B to D	(R) Foundation	110	32	50	82	-46.3	3.0	67
		(S) Superstructure	108	32	50	82	-46.3	3.0	65
		(T) Construction of Underground Utilities	105	32	50	82	-46.3	3.0	62
(U) Roadworks Construction		105	32	50	82	-46.3	3.0	62	
N7	Phase A	(A) Reproffing of pond and planting work	101	66	11	77	-45.7	3.0	58
		(B) Vegetation Clearance	101	66	11	77	-45.7	3.0	58
	Phase B	(C) General site clearance	110	96	33	129	-50.2	3.0	63
		(D) Retaining wall construction	107	96	33	129	-50.2	3.0	60
		(E) Installation of Vertical Drain	106	96	33	129	-50.2	3.0	59
		(F) Placement of Fill and Surcharge	107	96	33	129	-50.2	3.0	60
		(G) Removal of surcharge	106	96	33	129	-50.2	3.0	59
		(H) General Site clearance	110	137	27	164	-52.3	3.0	61
		(I) Retaining Wall construction	107	137	27	164	-52.3	3.0	58
	Phase C	(J) Installation of Vertical Drain	106	137	27	164	-52.3	3.0	57
		(K) Placement of Filling and surcharge	107	137	27	164	-52.3	3.0	58
		(L) Removal of surcharge	106	137	27	164	-52.3	3.0	57
		(M) General site clearance	110	205	33	238	-55.5	3.0	58
	Phase D	(N) Retaining wall construction	107	205	33	238	-55.5	3.0	55
		(O) Installation of vertical drain	106	205	33	238	-55.5	3.0	54
		(P) Placement of filling and surcharge	107	205	33	238	-55.5	3.0	55
		(Q) Removal of surcharge	106	205	33	238	-55.5	3.0	54
	Phase B to D	(R) Foundation	110	103	50	153	-51.7	3.0	61
		(S) Superstructure	108	103	50	153	-51.7	3.0	59
		(T) Construction of Underground Utilities	105	103	50	153	-51.7	3.0	56
(U) Roadworks Construction		105	103	50	153	-51.7	3.0	56	
N8	Phase A	(A) Reproffing of pond and planting work	101	136	12	148	-51.4	3.0	53
		(B) Vegetation Clearance	101	136	12	148	-51.4	3.0	53
	Phase B	(C) General site clearance	110	166	33	199	-54.0	3.0	59
		(D) Retaining wall construction	107	166	33	199	-54.0	3.0	56
		(E) Installation of Vertical Drain	106	166	33	199	-54.0	3.0	55
		(F) Placement of Fill and Surcharge	107	166	33	199	-54.0	3.0	56
		(G) Removal of surcharge	106	166	33	199	-54.0	3.0	55
		(H) General Site clearance	110	172	35	207	-54.3	3.0	59
		(I) Retaining Wall construction	107	172	35	207	-54.3	3.0	56
	Phase C	(J) Installation of Vertical Drain	106	172	35	207	-54.3	3.0	55
		(K) Placement of Filling and surcharge	107	172	35	207	-54.3	3.0	56
		(L) Removal of surcharge	106	172	35	207	-54.3	3.0	55
		(M) General site clearance	110	269	32	301	-57.6	3.0	55
	Phase D	(N) Retaining wall construction	107	269	32	301	-57.6	3.0	52
		(O) Installation of vertical drain	106	269	32	301	-57.6	3.0	51
		(P) Placement of filling and surcharge	107	269	32	301	-57.6	3.0	52
		(Q) Removal of surcharge	106	269	32	301	-57.6	3.0	51
	Phase B to D	(R) Foundation	110	176	50	226	-55.1	3.0	58
		(S) Superstructure	108	176	50	226	-55.1	3.0	56
		(T) Construction of Underground Utilities	105	176	50	226	-55.1	3.0	53
(U) Roadworks Construction		105	176	50	226	-55.1	3.0	53	



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)	
N_ch	Phase A	(A) Reproffing of pond and planting work	101	145	9	154	-51.7	3.0	52
		(B) Vegetation Clearance	101	145	9	154	-51.7	3.0	52
	Phase B	(C) General site clearance	110	191	32	223	-54.9	3.0	58
		(D) Retaining wall construction	107	191	32	223	-54.9	3.0	55
		(E) Installation of Vertical Drain	106	191	32	223	-54.9	3.0	54
		(F) Placement of Fill and Surcharge	107	191	32	223	-54.9	3.0	55
		(G) Removal of surcharge	106	191	32	223	-54.9	3.0	54
	Phase C	(H) General Site clearance	110	290	42	332	-58.4	3.0	55
		(I) Retaining Wall construction	107	290	42	332	-58.4	3.0	52
		(J) Installation of Vertical Drain	106	290	42	332	-58.4	3.0	51
		(K) Placement of Filling and surcharge	107	290	42	332	-58.4	3.0	52
		(L) Removal of surcharge	106	290	42	332	-58.4	3.0	51
	Phase D	(M) General site clearance	110	321	43	364	-59.2	3.0	54
		(N) Retaining wall construction	107	321	43	364	-59.2	3.0	51
		(O) Installation of vertical drain	106	321	43	364	-59.2	3.0	50
		(P) Placement of filling and surcharge	107	321	43	364	-59.2	3.0	51
		(Q) Removal of surcharge	106	321	43	364	-59.2	3.0	50
	Phase B to D	(R) Foundation	110	190	50	240	-55.6	3.0	57
		(S) Superstructure	108	190	50	240	-55.6	3.0	55
		(T) Construction of Underground Utilities	105	190	50	240	-55.6	3.0	52
	(U) Roadworks Construction	105	190	50	240	-55.6	3.0	52	
N11	Phase A	(A) Reproffing of pond and planting work	101	6	11	17	-32.6	3.0	71
		(B) Vegetation Clearance	101	6	11	17	-32.6	3.0	71
	Phase B	(C) General site clearance	110	31	31	62	-43.8	3.0	69
		(D) Retaining wall construction	107	31	31	62	-43.8	3.0	66
		(E) Installation of Vertical Drain	106	31	31	62	-43.8	3.0	65
		(F) Placement of Fill and Surcharge	107	31	31	62	-43.8	3.0	66
		(G) Removal of surcharge	106	31	31	62	-43.8	3.0	65
	Phase C	(H) General Site clearance	110	79	34	113	-49.0	3.0	64
		(I) Retaining Wall construction	107	79	34	113	-49.0	3.0	61
		(J) Installation of Vertical Drain	106	79	34	113	-49.0	3.0	60
		(K) Placement of Filling and surcharge	107	79	34	113	-49.0	3.0	61
		(L) Removal of surcharge	106	79	34	113	-49.0	3.0	60
	Phase D	(M) General site clearance	110	138	20	158	-52.0	3.0	61
		(N) Retaining wall construction	107	138	20	158	-52.0	3.0	58
		(O) Installation of vertical drain	106	138	20	158	-52.0	3.0	57
		(P) Placement of filling and surcharge	107	138	20	158	-52.0	3.0	58
		(Q) Removal of surcharge	106	138	20	158	-52.0	3.0	57
	Phase B to D	(R) Foundation	110	41	50	91	-47.2	3.0	66
		(S) Superstructure	108	41	50	91	-47.2	3.0	64
		(T) Construction of Underground Utilities	105	41	50	91	-47.2	3.0	61
	(U) Roadworks Construction	105	41	50	91	-47.2	3.0	61	
N12	Phase A	(A) Reproffing of pond and planting work	101	278	14	292	-57.3	3.0	47
		(B) Vegetation Clearance	101	278	14	292	-57.3	3.0	47
	Phase B	(C) General site clearance	110	240	28	268	-56.5	3.0	57
		(D) Retaining wall construction	107	240	28	268	-56.5	3.0	54
		(E) Installation of Vertical Drain	106	240	28	268	-56.5	3.0	53
		(F) Placement of Fill and Surcharge	107	240	28	268	-56.5	3.0	54
		(G) Removal of surcharge	106	240	28	268	-56.5	3.0	53
	Phase C	(H) General Site clearance	110	332	36	368	-59.3	3.0	54
		(I) Retaining Wall construction	107	332	36	368	-59.3	3.0	51
		(J) Installation of Vertical Drain	106	332	36	368	-59.3	3.0	50
		(K) Placement of Filling and surcharge	107	332	36	368	-59.3	3.0	51
		(L) Removal of surcharge	106	332	36	368	-59.3	3.0	50
	Phase D	(M) General site clearance	110	226	16	242	-55.7	3.0	57
		(N) Retaining wall construction	107	226	16	242	-55.7	3.0	54
		(O) Installation of vertical drain	106	226	16	242	-55.7	3.0	53
		(P) Placement of filling and surcharge	107	226	16	242	-55.7	3.0	54
		(Q) Removal of surcharge	106	226	16	242	-55.7	3.0	53
	Phase B to D	(R) Foundation	110	227	32	259	-56.2	3.0	57
		(S) Superstructure	108	227	32	259	-56.2	3.0	55
		(T) Construction of Underground Utilities	105	227	32	259	-56.2	3.0	52
	(U) Roadworks Construction	105	227	32	259	-56.2	3.0	52	
N13	Phase A	(A) Reproffing of pond and planting work	101	270	13	283	-57.0	3.0	47
		(B) Vegetation Clearance	101	270	13	283	-57.0	3.0	47
	Phase B	(C) General site clearance	110	240	28	268	-56.5	3.0	57
		(D) Retaining wall construction	107	240	28	268	-56.5	3.0	54
		(E) Installation of Vertical Drain	106	240	28	268	-56.5	3.0	53
		(F) Placement of Fill and Surcharge	107	240	28	268	-56.5	3.0	54
		(G) Removal of surcharge	106	240	28	268	-56.5	3.0	53
	Phase C	(H) General Site clearance	110	335	40	375	-59.5	3.0	54
		(I) Retaining Wall construction	107	335	40	375	-59.5	3.0	51
		(J) Installation of Vertical Drain	106	335	40	375	-59.5	3.0	50
		(K) Placement of Filling and surcharge	107	335	40	375	-59.5	3.0	51
		(L) Removal of surcharge	106	335	40	375	-59.5	3.0	50
	Phase D	(M) General site clearance	110	236	17	253	-56.0	3.0	57
		(N) Retaining wall construction	107	236	17	253	-56.0	3.0	54
		(O) Installation of vertical drain	106	236	17	253	-56.0	3.0	53
		(P) Placement of filling and surcharge	107	236	17	253	-56.0	3.0	54
		(Q) Removal of surcharge	106	236	17	253	-56.0	3.0	53
	Phase B to D	(R) Foundation	110	238	33	271	-56.6	3.0	56
		(S) Superstructure	108	238	33	271	-56.6	3.0	54
		(T) Construction of Underground Utilities	105	238	33	271	-56.6	3.0	51
	(U) Roadworks Construction	105	238	33	271	-56.6	3.0	51	

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)	
N14	Phase A	(A) Reproffing of pond and planting work	101	130	9	139	-50.8	3.0	53
		(B) Vegetation Clearance	101	130	9	139	-50.8	3.0	53
	Phase B	(C) General site clearance	110	163	41	204	-54.2	3.0	59
		(D) Retaining wall construction	107	163	41	204	-54.2	3.0	56
		(E) Installation of Vertical Drain	106	163	41	204	-54.2	3.0	55
		(F) Placement of Fill and Surcharge	107	163	41	204	-54.2	3.0	56
		(G) Removal of surcharge	106	163	41	204	-54.2	3.0	55
	Phase C	(H) General Site clearance	110	262	50	312	-57.9	3.0	55
		(I) Retaining Wall construction	107	262	50	312	-57.9	3.0	52
		(J) Installation of Vertical Drain	106	262	50	312	-57.9	3.0	51
		(K) Placement of Filling and surcharge	107	262	50	312	-57.9	3.0	52
		(L) Removal of surcharge	106	262	50	312	-57.9	3.0	51
	Phase D	(M) General site clearance	110	273	26	299	-57.5	3.0	56
		(N) Retaining wall construction	107	273	26	299	-57.5	3.0	53
		(O) Installation of vertical drain	106	273	26	299	-57.5	3.0	52
		(P) Placement of filling and surcharge	107	273	26	299	-57.5	3.0	53
		(Q) Removal of surcharge	106	273	26	299	-57.5	3.0	52
	Phase B to D	(R) Foundation	110	170	50	220	-54.8	3.0	58
		(S) Superstructure	108	170	50	220	-54.8	3.0	56
		(T) Construction of Underground Utilities	105	170	50	220	-54.8	3.0	53
(U) Roadworks Construction	105	170	50	220	-54.8	3.0	53		
N1P	Phase A	(A) Reproffing of pond and planting work	101	166	18	184	-53.3	3.0	51
		(B) Vegetation Clearance	101	166	18	184	-53.3	3.0	51
	Phase B	(C) General site clearance	110	121	25	146	-51.3	3.0	62
		(D) Retaining wall construction	107	121	25	146	-51.3	3.0	59
		(E) Installation of Vertical Drain	106	121	25	146	-51.3	3.0	58
		(F) Placement of Fill and Surcharge	107	121	25	146	-51.3	3.0	59
		(G) Removal of surcharge	106	121	25	146	-51.3	3.0	58
	Phase C	(H) General Site clearance	110	200	38	238	-55.5	3.0	58
		(I) Retaining Wall construction	107	200	38	238	-55.5	3.0	55
		(J) Installation of Vertical Drain	106	200	38	238	-55.5	3.0	54
		(K) Placement of Filling and surcharge	107	200	38	238	-55.5	3.0	55
		(L) Removal of surcharge	106	200	38	238	-55.5	3.0	54
	Phase D	(M) General site clearance	110	98	17	115	-49.2	3.0	64
		(N) Retaining wall construction	107	98	17	115	-49.2	3.0	61
		(O) Installation of vertical drain	106	98	17	115	-49.2	3.0	60
		(P) Placement of filling and surcharge	107	98	17	115	-49.2	3.0	61
		(Q) Removal of surcharge	106	98	17	115	-49.2	3.0	60
	Phase B to D	(R) Foundation	110	101	33	134	-50.5	3.0	61
		(S) Superstructure	108	101	33	134	-50.5	3.0	61
		(T) Construction of Underground Utilities	105	101	33	134	-50.5	3.0	58
(U) Roadworks Construction	105	101	33	134	-50.5	3.0	58		
N2P	Phase A	(A) Reproffing of pond and planting work	101	109	14	123	-49.8	3.0	54
		(B) Vegetation Clearance	101	109	14	123	-49.8	3.0	54
	Phase B	(C) General site clearance	110	87	28	115	-49.2	3.0	64
		(D) Retaining wall construction	107	87	28	115	-49.2	3.0	61
		(E) Installation of Vertical Drain	106	87	28	115	-49.2	3.0	60
		(F) Placement of Fill and Surcharge	107	87	28	115	-49.2	3.0	61
		(G) Removal of surcharge	106	87	28	115	-49.2	3.0	60
	Phase C	(H) General Site clearance	110	172	50	222	-54.9	3.0	58
		(I) Retaining Wall construction	107	172	50	222	-54.9	3.0	55
		(J) Installation of Vertical Drain	106	172	50	222	-54.9	3.0	54
		(K) Placement of Filling and surcharge	107	172	50	222	-54.9	3.0	55
		(L) Removal of surcharge	106	172	50	222	-54.9	3.0	54
	Phase D	(M) General site clearance	110	104	22	126	-50.0	3.0	63
		(N) Retaining wall construction	107	104	22	126	-50.0	3.0	60
		(O) Installation of vertical drain	106	104	22	126	-50.0	3.0	59
		(P) Placement of filling and surcharge	107	104	22	126	-50.0	3.0	60
		(Q) Removal of surcharge	106	104	22	126	-50.0	3.0	59
	Phase B to D	(R) Foundation	110	104	42	146	-51.3	3.0	62
		(S) Superstructure	108	104	42	146	-51.3	3.0	60
		(T) Construction of Underground Utilities	105	104	42	146	-51.3	3.0	57
(U) Roadworks Construction	105	104	42	146	-51.3	3.0	57		
N3P	Phase A	(A) Reproffing of pond and planting work	101	173	36	209	-54.4	3.0	50
		(B) Vegetation Clearance	101	173	36	209	-54.4	3.0	50
	Phase B	(C) General site clearance	110	176	27	203	-54.1	3.0	59
		(D) Retaining wall construction	107	176	27	203	-54.1	3.0	56
		(E) Installation of Vertical Drain	106	176	27	203	-54.1	3.0	55
		(F) Placement of Fill and Surcharge	107	176	27	203	-54.1	3.0	56
		(G) Removal of surcharge	106	176	27	203	-54.1	3.0	55
	Phase C	(H) General Site clearance	110	141	21	162	-52.2	3.0	61
		(I) Retaining Wall construction	107	141	21	162	-52.2	3.0	58
		(J) Installation of Vertical Drain	106	141	21	162	-52.2	3.0	57
		(K) Placement of Filling and surcharge	107	141	21	162	-52.2	3.0	58
		(L) Removal of surcharge	106	141	21	162	-52.2	3.0	57
	Phase D	(M) General site clearance	110	6	39	45	-41.0	3.0	72
		(N) Retaining wall construction	107	6	39	45	-41.0	3.0	69
		(O) Installation of vertical drain	106	6	39	45	-41.0	3.0	68
		(P) Placement of filling and surcharge	107	6	39	45	-41.0	3.0	69
		(Q) Removal of surcharge	106	6	39	45	-41.0	3.0	68
	Phase B to D	(R) Foundation	110	6	50	56	-42.9	3.0	70
		(S) Superstructure	108	6	50	56	-42.9	3.0	68
		(T) Construction of Underground Utilities	105	6	50	56	-42.9	3.0	65
(U) Roadworks Construction	105	6	50	56	-42.9	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)	
V1P	Phase A	(A) Reprofilling of pond and planting work	101	98	12	110	-48.8	3.0	55
		(B) Vegetation Clearance	101	98	12	110	-48.8	3.0	55
	Phase B	(C) General site clearance	110	104	29	133	-50.5	3.0	63
		(D) Retaining wall construction	107	104	29	133	-50.5	3.0	60
		(E) Installation of Vertical Drain	106	104	29	133	-50.5	3.0	59
		(F) Placement of Fill and Surcharge	107	104	29	133	-50.5	3.0	60
		(G) Removal of surcharge	106	104	29	133	-50.5	3.0	59
	Phase C	(H) General Site clearance	110	199	50	249	-55.9	3.0	57
		(I) Retaining Wall construction	107	199	50	249	-55.9	3.0	54
		(J) Installation of Vertical Drain	106	199	50	249	-55.9	3.0	53
		(K) Placement of Filling and surcharge	107	199	50	249	-55.9	3.0	54
		(L) Removal of surcharge	106	199	50	249	-55.9	3.0	53
	Phase D	(M) General site clearance	110	137	25	162	-52.2	3.0	61
		(N) Retaining wall construction	107	137	25	162	-52.2	3.0	58
		(O) Installation of vertical drain	106	137	25	162	-52.2	3.0	57
		(P) Placement of filling and surcharge	107	137	25	162	-52.2	3.0	58
		(Q) Removal of surcharge	106	137	25	162	-52.2	3.0	57
	Phase B to D	(R) Foundation	110	132	47	179	-53.0	3.0	60
		(S) Superstructure	108	132	47	179	-53.0	3.0	58
		(T) Construction of Underground Utilities	105	132	47	179	-53.0	3.0	55
		(U) Roadworks Construction	105	132	47	179	-53.0	3.0	55

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) ®
N2a	Dump Trucks Travelling on Haul Road	10	110	112	10	57
N3	Dump Trucks Travelling on Haul Road	10	110	72	10	58
N4	Dump Trucks Travelling on Haul Road	10	110	160	10	55
N4a	Dump Trucks Travelling on Haul Road	10	110	142	10	56
N4c	Dump Trucks Travelling on Haul Road	10	110	117	10	56
N5	Dump Trucks Travelling on Haul Road	10	110	76	10	58
N7	Dump Trucks Travelling on Haul Road	10	110	132	10	56
N8	Dump Trucks Travelling on Haul Road	10	110	201	10	54
N10	Dump Trucks Travelling on Haul Road	10	110	218	10	54
N_ch	Dump Trucks Travelling on Haul Road	10	110	219	10	54
N11	Dump Trucks Travelling on Haul Road	10	110	71	10	59
N12	Dump Trucks Travelling on Haul Road	10	110	226	10	54
N13	Dump Trucks Travelling on Haul Road	10	110	239	10	53
N14	Dump Trucks Travelling on Haul Road	10	110	209	10	54
N1P	Dump Trucks Travelling on Haul Road	10	110	101	10	57
N2P	Dump Trucks Travelling on Haul Road	10	110	115	10	56
N3P	Dump Trucks Travelling on Haul Road	10	110	137	10	56
V1P	Dump Trucks Travelling on Haul Road	10	110	140	10	56

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":  $LA_{eq} = SWL - 33 + 10 \log_{10} Q - 10 \log_{10} V - 10 \log_{10} D$

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)