Appendix 4-4

Calculation of Construction Noise Impact Assessment (Mitigated Scenario with QPMEs and Movable Noise Barriers)

Appendix 4-4-1 Plant Inventory and Calculated SWLs for <u>Northern Portion</u> of Project Site (Mitigated with QPMEs and Movable Noise Barriers)

A Excavation and Excavation and Excavation and Excavation and Excavation Ar Compressor CNP001 100 4 106 107 Movable noise barrier -10 107	/Mitigated	Total SWL,	Highest SWL of Each
Site Formation, Filling and Excavation wholestificated EPD 1 105 107 107 107 108 107		dB(A)	Construction Activity, dB(A)
Excavation	96		
Construction of Unities Baseler, mini-robot mounted EPD	102		
A2 Breaking Breaker, mini-robot mounted EPD * 115 118	93	113	
Land			
Breaker, mini-robot mounted EPD * 115 118 112 118 112 118 112 118 112 118 112 118 11	113		
Breaker, mini-robot mounted EPD * 115		1	+
Breaker, mini-robot mounted EPD * 115	108		113
Executator, wheeleditracked EPD - 1023) 99 1 99 Movable noise barrier .5	106	108	
Excavator, wheeled/tracked EPP-01233 99			
Compression Roller, vibratory 1 (EPD-00509) 95 8 104 112	94		
Big Compression Roller, vibratory 1 (EPD-00509) 95 6 10 112 112		l	+
Barel Barthwork Breaker, mini-robot mounted EPD * 115	104	112	
Construction of Unitities	111		
Construction of Unitities			1
Breaker, mini-robot mounted EPD * 115			
Dump Truck (5.5 tonne < Gross vehicle weight <= 38 EPD * 105 3 110	105		
B2 Utilities laying		111	
Excavator, mini-robot mounted EPD *	110		
B2 Utilities laying	94		
Company Comp	94	J	
Lorry (5.5 tonne < Gross vehicle weight <= 38 tonne) EPD * 105 2 108 110	93		1
Vehicle weight <= 38 tonne) Vehicle weight <= 38 tonne) Water Pump, Submersible(electric) CNP283 85 3 90 Movable noise barrier -10	90		111
Submersible(electric) CNP263 65 3 90 Movable noise barrier -10	108	108	
B3 Ground reinstatement Concrete Lorry Mixer CNP044 109 2 112 Movable noise barrier -5 Movable noise barrier -10 Power rammer (petrol) Power (petrol) (EPD-00536) 107 2 110 115 Movable noise barrier -10 Power (petrol) Power (petrol) EPD * 102 2 105 Movable noise barrier -10 Movable noise barrier -5 Movable noise barrier -10 Movable noise barrier -10 Movable noise barrier -5 Movable noise barrier -10 Movable noise barrier -5 Movable noise barrier -10 Movable noise barrier -5 Movable noise barrier -10 Movable noise barrier -10	80		
Concrete Lorry Mixer CNP044 109 2 112 Movable noise barrier -5			4
Power rammer (petrol) (EPD-00536) 107 2 110 115	107		
Poker, vibratory, hand-held EPD * 102 2 105 Movable noise barrier -10	100	100	
C1 Earthwork Dump Truck (5.5 tonne < Gross vehicle weight <= 38 tonne) Excavator, wheeled/tracked EPD * 105 3 tonne 110	95	108	
C1 Earthwork Dump Truck (5.5 tonne < Gross vehicle weight <= 38 tonne) EPD * 105 3 110 110 110 Movable noise barrier -5	98		
Road Works Gross vehicle weight <= 38 EPD * 105 3 110 110 110]	<u> </u>
Excavator, wheeled/tracked KATO model HD820V 99 2 102 Movable noise barrier -5	110		
Excavator, wheeled/tracked (EPD-01233) 99 1		110	
Concrete Lorry Mixer	97]	
Generator, super silenced CNP103 95 3 100 113 Movable noise barrier -10	107		1
C3 Road Finishing Air Compressor CNP001 100 2 103 Movable noise barrier -10	90	107	
C3 Road Finishing Air Compressor CNP001 100 2 103 Movable noise barrier -10	95		
All Compressor Civroot 100 2 103 Introduce noise partier -10		I	111
VOLVO model. No.	93		
Asphalt Paver ABG5770 (EPD- 2 107 01226) 104	107		
Generator, super silenced CNP103 95 3 100 Movable noise barrier -10	90		
Lorry (5.5 tonne < Gross Epp. 105 2 109	108	111	
verticie weignit <= 30 tornie) Dynapac model LT700 2 110 Mayabla paire bezrier 10	100		
Power rammer (petrol) (EPU-00336) 107 HITACHI model			
CP220-3 (EPD- 2 100 Road roller 01183) 97	100		
(D) D1 General foundation Air Compressor CNP001 100 4 106 Movable noise barrier -10	96	1	٦
Foundation Works Bar hander and cutter			
CNP021 90 6 98 Movable noise barrier -10	90		
Drill/grinder, hand-held (electric) CNP065 98 6 106 Movable noise barrier -10	96	1	
Saw, circular, wood CNP201 108 3 113 Movable noise barrier -10	103		
Water pump, submersible (electric) CNP283 85 6 93 116 Movable noise barrier -10	83	112	
KATO model HD820V 4 105 Movable noise barrier -5	100		
Excavator, wheeled/tracked (EPD-01233) 99 Lorry (5.5 tonne < Gross EPD * 105 3 110	110		
vehicle weight <= 38 tonne)	110		114
Mobile Crane Hitachi Sumitomo SCX700, 132kW 101 2 104 Movable noise barrier -5	99		
		l -	

				PMEs	Inventory	- Mitigat	ted (with	QPMEs	and Movable Noise Barrie	rs)														
Construction Activity	Sul	o. 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)											
	D2	Piling works	Generator, super silenced	CNP103	95	3	100		Movable noise barrier	-10	90													
			Continuous Flight Auger (CFA) piles (piling, earth auger)	CNP167	114	3	119		Provision of acoustic shielding material	-5	114	114												
	Do	Canada Mada	ı	1																				
	D3	Concreting Works	Concrete Lorry Mixer	CNP044	109	3	114	115	Movable noise barrier	-5	109	109												
			Generator, super silenced	CNP103	95	3	100	110	Movable noise barrier	-10	90	100												
			Poker, vibratory, hand-held	EPD *	102	3	107		Movable noise barrier	-10	97													
i i																								
(E) Superstructure		General construction works		CNP001	100	4	106		Movable noise barrier	-10	96													
			Bar bender and cutter (electric)	CNP021	90	6	98		Movable noise barrier	-10	88													
				Hitachi Sumitomo SCX700, 132kW	101	2	104	119	Movable noise barrier	-5	99	109												
			Drill/grinder, hand-held (electric)	CNP065	98	6	106		Movable noise barrier	-10	96													
			,,,	CNP103	95	4	101		Movable noise barrier	-10	91		111											
			Saw, circular, wood	CNP201	108	10	118		Movable noise barrier	-10	108													
			т.	ı					ı															
	E2	Concreting works	Concrete Lorry Mixer	CNP044	109	4	115		Movable noise barrier	-5	110													
			Concrete Pump	CNP047	109	2	117	2 112 M	2 112 M	2 112 N	117	117	117	117	117	117	117	117	117	Movable noise barrier	-10	102	111	
			Generator, super silenced	CNP103	95	4		1		117												Movable noise barrier	-10	91
			Poker, vibratory, hand-held (electric)	EPD *	102	3	107		Movable noise barrier	-10	97													
(C)	_	Duran Tauralia	1	ı					ı															
(G) Dump Trucks Travelling on Haul Road During Site		Dump Trucks Travelling on Haul Road	Dump Truck (5.5 tonne < Gross vehicle weight <= 38 tonne)	EPD *	105	10	115	115			115	115	115											

Note:

Noise levels of the above construction plants are based on the "Technical Memorandum on Noise From Construction Work Other Than Percussive Piling" and EPD's QPMEs database (available at: http://www.epd.gov.hk/cgi-bin/npg/qpme/index.pl?lang=eng)

- ${}^{\star} \ \mathsf{EPD} \ \mathsf{website:http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf}$
- ** According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed.
- # According to "A Practical Guide for the Reduction of Noise from Construction Works" (page 11), published by HKSAR Gov. Environmental Protection Department, July 1989, excavated-mounted breaker with sound proof hammer bracket installed could achieve a noise reduction up to 10dB(A).
- ## According to the "Best Practice Guide for Environmental Protection on Construction Sites", page 6-9, published by Hong Kong Construction Association, January 2009, excavator-mounted breaker with sound proof hammer bracket can achieve a noise reduction of up to 10dB(A). (Doc. Available at: http://www.hkca.com.hk/front/20090306bpg.pdf)
- @ 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 4-4-2 Plant Inventory and Calculated SWLs for <u>Southern Portion</u> of Project Site (Mitigated with QPMEs and Movable Noise Barriers)

Construction Activity	Su	b. Work Group	Powered Mechanical Equipment	Reference	SWL per unit	Qty	Total, SWL	At-source Noise Mitigation Measure	Noise Barrier Effect **	Total SWL (Mitigated)	Total SWL, dB(A)	Highest SWL of Each Construction Activity, dB(A
(A) Site Formation,	A1	Excavation and Filling	Air Compressor	CNP001 KATO model	100	3	105	Movable noise barrier	-10	95		
Filling and Excavation		9		HD820V (EPD-		4	105	Movable noise barrier	-5	100		
LXCAVALION				01233) CNP103	99 95	3	100	Movable noise barrier	-10	90	111	
			Generator, super silenced Dump Truck (5.5 tonne <	CNF103	95	3	100	Movable noise barrier	-10	90		
				EPD *	105	4	111			111		
	A2	Breaking excavated hard/ oversize materials	Breaker, mini-robot mounted	EPD*	115	1	115	Movable noise barrier and Installation of commercially made sound proof hammer bracket # & ##	-10	105	105	111
			Excavator, wheeled/tracked	KATO model HD820V (EPD- 01233)	99	1	99	Movable noise barrier	-5	94		
	A3	Ground Compression		SAKAI model SW250-1 (EPD-		4	101			101		
			Roller, vibratory	00509) Komatsu modelled	95						109	
			Bulldozer	D21A-8	102	4	108			108		
(B) Construction of Underground Services and Utilities	B1	Earthwork	Breaker, mini-robot	FDD +	445	1	115	Movable noise barrier and Installation of commercially made sound proof hammer bracket # & ##	-10	105		
Ountes			Dump Truck (5.5 tonne < Gross vehicle weight <= 38	EPD *	115	2	108			108	110	
			tonne) Excavator, mini-robot mounted	EPD *	94	2	97	Movable noise barrier	-5	92		
	B2	Utilities laying	Air Compressor	CNP001	100	3	105	Movable noise barrier	-10	95		
	UZ.	Othities laying	Generator, super silenced	CNP103	95	4		Movable noise barrier	-10	91		
			Lorry (5.5 tonne < Gross vehicle weight <= 38 tonne)	EPD *	105	2	108			108	108	110
			Water Pump, Submersible(electric)	CNP283	85	2	88	Movable noise barrier	-10	78		
	В3	Ground reinstatement	Concrete Lorry Mixer	CNP044	109	2	112	Movable noise barrier	-5	107		
			Power rammer (notrel)	Dynapac model LT700 (EPD-	107	2	110	Movable noise barrier	-10	100		
			Power rammer (petrol) Poker, vibratory, hand-held (electric)	EPD *	102	2	105	Movable noise barrier	-10	95	108	
			Roller, vibratory	SW250-1 (EPD- 00509)	95	2	98			98		
(C) Road Works	C1	Earthwork	Dump Truck (5.5 tonne < Gross vehicle weight <= 38 tonne)	EPD *	105	4	111			111		
			Excavator, wheeled/tracked	KATO model HD820V (EPD- 01233)	99	3	104	Movable noise barrier	-5	99	111	
	C2	Concreting Works	Concrete Lorry Mixer	CNP044	109	3	114	Movable noise barrier	-5	109		
			Generator, super silenced	CNP103	95	4	101	Movable noise barrier	-10	91	109	
			Poker, vibratory, hand-held (electric)	EPD *	102	2	105	Movable noise barrier	-10	95		
	C3	Road Finishing	Air Compressor	CNP001	100	3	105	Movable noise barrier	-10	95		112
			Asphalt Paver	VOLVO model. No. ABG5770 (EPD- 01226)	104	3	109			109		
			Generator, super silenced	CNP103	95	3	100	Movable noise barrier	-10	90	112	
			Lorry (5.5 tonne < Gross vehicle weight <= 38 tonne)	EPD * Dynapac model	105	2	108			108	112	
			Power rammer (petrol)	LT700 (EPD- 00536) HITACHI model	107	2		Movable noise barrier	-10	100		
			Road roller	CP220-3 (EPD- 01183)	97	2	100			100		
(D) Foundation	D1	General foundation works	Air Compressor	CNP001	100	6	108	Movable noise barrier	-10	98		
. candadon			Bar bender and cutter	CNP021	90	6	98	Movable noise barrier	-10	88		
			(electric) Generator, super silenced	CNP103	95	4	101	Movable noise barrier	-10	91		
			Drill/grinder, hand-held (electric)	CNP065	98	6	106	Movable noise barrier	-10	96		
			Saw, circular, wood	CNP201	108	5	115	Movable noise barrier	-10	105		
											112	

				PMEs	Inventor	h QPMEs and Movable Bar	MEs and Movable Barriers)					
Construction Activity	Sul	b. Work Group	Powered Mechanical Equipment	Reference	SWL per unit	Qty	Total, SWL	At-source Noise Mitigation Measure	Noise Barrier Effect **	Total SWL (Mitigated)	Total SWL, dB(A)	Highest SWL of Each Construction Activity, dB(A)
			Excavator, wheeled/tracked	KATO model HD820V (EPD- 01233)	99	3	104	Movable noise barrier	-5	99		
			Lorry (5.5 tonne < Gross vehicle weight <= 38 tonne)	EPD *	105	3	110			110		114
			Mobile Crane	Hitachi Sumitomo SCX700, 132kW	101	3	106	Movable noise barrier	-5	101		
	D2	Piling works	Generator, super silenced	CNP103	95	4	101	Movable noise barrier	-10	91		
			Continuous Flight Auger (CFA) piles (piling, earth auger)	CNP167	114	3	119	Provision of acoustic shielding material	-5	114	114	
	D3	Concreting Works	Concrete Lorry Mixer	CNP044	109	4		Movable noise barrier	-5	110		
			Generator, super silenced	CNP103	95	4	101	Movable noise barrier	-10	91	110	
			Poker, vibratory, hand-held (electric)	EPD *	102	4	108	Movable noise barrier	-10	98		
(E)	E1	General	Air Compressor	CNP001	100	7	108	Movable noise barrier	-10	98		
Superstructure		construction works	Bar bender and cutter (electric)	CNP021	90	11	100	Movable noise barrier	-10	90		
			Mobile Crane	Hitachi Sumitomo SCX700, 132kW	101	5	108	Movable noise barrier	-5	103	110	
			Drill/grinder, hand-held (electric)	CNP065	98	11	108	Movable noise barrier	-10	98		
			Generator, super silenced	CNP103	95	7	103	Movable noise barrier	-10	93		111
			Saw, circular, wood	CNP201	108	11	118	Movable noise barrier	-10	108		
	E2	Concreting works	Concrete Lorry Mixer	CNP044	109	4	115	Movable noise barrier	-5	110		
			Concrete Pump	CNP047	109	2	112	Movable noise barrier	-10	102	111	
			Generator, super silenced	CNP103	95	6	103	Movable noise barrier	-10	93		
			Poker, vibratory, hand-held (electric)	EPD *	102	3	107	Movable noise barrier	-10	97		
(F) Sub-structure (Pile Cap)	F1	General pile cap construction	Bar bender and cutter (electric)	CNP021	90	10	100	Movable noise barrier	-10	90		
(i iio oup)			Generator, super silenced	CNP103	95	5	102	Movable noise barrier	-10	92	108	
			Lorry (5.5 tonne < Gross vehicle weight <= 38 tonne)	EPD *	105	2	108		0	108		
	F2	Concreting works	Concrete Lorry Mixer	CNP044	109	4	115	Movable noise barrier	-5	110		
			Concrete Pump	CNP047	109	2	112	Movable noise barrier	-10	102	111	111
			Generator, super silenced	CNP103	95	6	103	Movable noise barrier	-10	93		
			Poker, vibratory, hand-held (electric)	EPD *	102	3	107	Movable noise barrier	-10	97		
	F3	Backfill and reinstate	Excavator, wheeled/tracked	KATO model HD820V (EPD- 01233)	99	2	102	Movable noise barrier	-5	97	98	
			Roller, vibratory	SAKAI model SW250-1 (EPD- 00509)	95	1	95	Movable noise barrier	-5	90	98	
(G) Dump Trucks Travelling on Haul Road During Site	G	Dump Trucks Travelling on Haul Road	Dump Truck (5.5 tonne < Gross vehicle weight <= 38 tonne)	EPD *	105	10	115			115	115	115
		Note:										

Noise levels of the above construction plants are based on the "Technical Memorandum on Noise From Construction Work Other Than Percussive Piling" and EPD's QPMEs database (available at: http://www.epd.gov.hk/cgi-bin/npg/qpme/index.pl?lang=eng)

- $^{\star}~{\sf EPD~website: http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf}$
- ** According to EIAO Guidance Note No. 9/2010, with provision of noise barriers, a 5dB(A) noise reduction for movable plant, 10 dB(A) for stationary plant and 15 dB(A) for enclosed ones can be assumed.
- A According to "A Practical Guide for the Reduction of Noise from Construction Works" (page 11), published by HKSAR Gov. Environmental Protection Department, July 1989, excavated-mounted breaker with sound proof hammer bracket installed could achieve a noise reduction up to 10dB(A).

 ## According to the "Best Practice Guide for Environmental Protection on Construction Sites", page 6-9, published by Hong Kong Construction Association, January 2009, excavator-mounted breaker with sound proof hammer bracket can achieve a noise reduction of up to 10dB(A). (Doc. Available at: http://www.hkca.com.hk/front/20090306bpg.pdf)
- @ 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 4-4-3 Calculation of Construction Noise Level (Northern Portion) (Mitigated Scenario with QPMEs and Movable 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)
N1	A	Site Formation, Filling and Excavation	113	360	50	410	-60.2	3.0	56
	B C	Construction of Underground Services and Utilities Road works	111	360 360	50 50	410 410	-60.2 -60.2	3.0	54 54
	D E	Foundation Superstructure	114 111	360 360	50 50	410 410	-60.2 -60.2	3.0	57 54
N2	А	Site Formation, Filling and Excavation	113	303	50	353	-58.9	3.0	57
	В	Construction of Underground Services and Utilities	111	303	50	353	-58.9	3.0	55
	C D	Road works Foundation	111 114	303 303	50 50	353 353	-58.9 -58.9	3.0	55 58
	E	Superstructure	111	303	50	353	-58.9	3.0	55
N3	A	Site Formation, Filling and Excavation Construction of Underground Services and Utilities	113	164	50	214	-54.6	3.0	61
	B C	Road works	111 111	164 164	50 50	214 214	-54.6 -54.6	3.0	59 59
	D E	Foundation Superstructure	114 111	164 164	50 50	214 214	-54.6 -54.6	3.0	62 59
N4	А	Site Formation, Filling and Excavation	113	84	50	134	-50.5	3.0	66
144	В	Construction of Underground Services and Utilities	111	84	50	134	-50.5	3.0	64
	C D	Road works Foundation	111 114	84 84	50 50	134 134	-50.5 -50.5	3.0	64 67
	E	Superstructure	111	84	50	134	-50.5	3.0	64
N5	A	Site Formation, Filling and Excavation	113	16	50	66	-44.4	3.0	72
	B C	Construction of Underground Services and Utilities Road works	111 111	16 16	50 50	66 66	-44.4 -44.4	3.0	70 70
	D E	Foundation Superstructure	114 111	16 16	50 50	66 66	-44.4 -44.4	3.0 3.0	73 70
NC				•	•				
N6	A B	Site Formation, Filling and Excavation Construction of Underground Services and Utilities	113 111	14 14	50 50	64 64	-44.1 -44.1	3.0 3.0	72 70
	C D	Road works Foundation	111 114	14 14	50 50	64 64	-44.1 -44.1	3.0	70 73
	E	Superstructure	111	14	50	64	-44.1	3.0	70
N7	Α	Site Formation, Filling and Excavation	113	244	50	294	-57.3	3.0	59
	B C	Construction of Underground Services and Utilities Road works	111	244 244	50 50	294 294	-57.3 -57.3	3.0	57 57
	D E	Foundation Superstructure	114 111	244 244	50 50	294 294	-57.3 -57.3	3.0 3.0	60 57
N8	A B	Site Formation, Filling and Excavation Construction of Underground Services and Utilities	113 111	230 230	50 50	280 280	-56.9 -56.9	3.0	59 57
	C	Road works Foundation	111 114	230 230	50 50	280 280	-56.9 -56.9	3.0 3.0	57 60
	E	Superstructure	111	230	50	280	-56.9	3.0	57
N9	Α	Site Formation, Filling and Excavation	113	249	50	299	-57.5	3.0	59
	B C	Construction of Underground Services and Utilities Road works	111 111	249 249	50 50	299 299	-57.5 -57.5	3.0	57 57
	D E	Foundation	114 111	249 249	50 50	299 299	-57.5 -57.5	3.0	60
		Superstructure						3.0	57
N10				205	50	255	-56.1		
1	A B	Site Formation, Filling and Excavation Construction of Underground Services and Utilities	113 111	205	50	255	-56.1	3.0	60 58
	B C	Construction of Underground Services and Utilities Road works	111 111	205	50	255	-56.1 -56.1	3.0 3.0	58 58
	В	Construction of Underground Services and Utilities	111				-56.1	3.0	58
N11	B C D E	Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation	111 111 114 111 113	205 205 205 483	50 50 50	255 255 255 255	-56.1 -56.1 -56.1 -56.1	3.0 3.0 3.0 3.0 3.0	58 58 61 58
N11	B C D	Construction of Underground Services and Utilities Road works Foundation Superstructure	111 111 114 111	205 205 205	50 50 50 50	255 255 255 255 533 533	-56.1 -56.1 -56.1 -56.1	3.0 3.0 3.0 3.0	58 58 61 58
N11	B C D E B C D D	Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation	111 111 114 111 113 111 111 111	205 205 205 205 483 483 483 483	50 50 50 50 50 50 50 50	255 255 255 533 533 533 533	-56.1 -56.1 -56.1 -56.1 -62.5 -62.5 -62.5 -62.5	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	58 58 61 58 54 52 52 55
	B C D E D E	Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Superstructure	111 111 114 111 113 111 111 111 114 111	205 205 205 205 483 483 483 483 483	50 50 50 50 50 50 50 50 50	255 255 255 255 533 533 533 533 533 533	-56.1 -56.1 -56.1 -56.1 -56.1 -62.5 -62.5 -62.5 -62.5 -62.5	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	58 58 61 58 54 52 52 55 52
N11 N12	B C D E B C D D	Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation	111 111 114 111 113 111 111 111	205 205 205 205 483 483 483 483	50 50 50 50 50 50 50 50	255 255 255 533 533 533 533	-56.1 -56.1 -56.1 -56.1 -62.5 -62.5 -62.5 -62.5	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	58 58 61 58 54 52 52 55
	B C D E A B C C	Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works	111 111 114 111 113 111 111 114 111 113 111 111	205 205 205 205 483 483 483 483 483 537 537 537	50 50 50 50 50 50 50 50 50 50 50	255 255 255 255 533 533 533 533 533 533	-56.1 -56.1 -56.1 -56.1 -62.5 -62.5 -62.5 -62.5 -62.5 -63.4 -63.4	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	58 58 61 58 54 52 52 55 52 55 52
	B C D E A B A B	Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Appearance of the Construction of Underground Services and Utilities	111 111 114 111 113 111 111 114 111 113 111	205 205 205 205 483 483 483 483 483 537 537	50 50 50 50 50 50 50 50 50 50	255 255 255 255 533 533 533 533 533 587 587	-56.1 -56.1 -56.1 -56.1 -62.5 -62.5 -62.5 -62.5 -62.5 -62.5 -63.4 -63.4	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	58 58 61 58 54 52 52 55 52 55 52
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N12	B C D E A B C D E E E	Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Superstructure	111 111 111 111 113 111 111 114 111 113 111 111	205 205 205 205 483 483 483 483 537 537 537 537 537	50 50 50 50 50 50 50 50 50 50 50 50 50 5	255 255 255 255 533 533 533 533 533 587 587 587 587 587	-56.1 -56.1 -56.1 -56.1 -62.5 -62.5 -62.5 -62.5 -62.5 -62.5 -63.4 -63.4 -63.4 -63.4	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	58 58 61 58 54 52 52 55 52 55 52 51 51 51
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N12	B C D E A B C D E A B C D E A B C D E E	Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Superstructure	111 111 1114 1111 113 1111 114 1111 113 1111 114 1111 113 1111 1111 1111 1111 1111 1111	205 205 205 205 483 483 483 483 483 537 537 537 537 537 446 446 446	50 50 50 50 50 50 50 50 50 50 50 50 50 5	255 255 255 255 255 533 533 533 533 533	-56.1 -56.1 -56.1 -56.1 -62.5 -62.5 -62.5 -62.5 -62.5 -62.5 -63.4 -63.4 -63.4 -63.4 -63.4 -61.9 -61.9 -61.9	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	58 58 58 61 58 54 52 55 52 55 51 51 54 52 55 52 55 52 55 52 55 52 55 52 55 55
N12	B C D E A B C D E A B C D E A B C D D E D D D D D D D D D D D D D D D D	Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Foundation Filling and Excavation Construction of Underground Services and Utilities Road works Foundation	111 111 1114 1115 1118 1111 1111 1114 1111 1111	205 205 205 205 483 483 483 483 537 537 537 537 537 5446 446 446	50 50 50 50 50 50 50 50 50 50 50 50 50 5	255 255 255 533 533 533 533 533 533 533	-56.1 -56.1 -56.1 -56.1 -62.5 -62.5 -62.5 -62.5 -62.5 -62.5 -63.4 -63.4 -63.4 -63.4 -61.9 -61.9 -61.9	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	58 58 61 58 54 52 52 55 52 53 51 54 51 54 51 54 52 55 55 55 55 55 55 55 55 55
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N12	B C D E A B C D E A B C D E A B C D E A B B C D E A B B C D B B C D B B C D B B B C D B B B C D B B B B	Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Superstructure	111 111 1114 1111 1113 1111 1114 1111 1113 1111 1114 1111 1111 1111 1111 1111 1111 1111 1111	205 205 205 205 483 483 483 483 483 537 537 537 537 537 537 537 537 537 53	50 50 50 50 50 50 50 50 50 50 50 50 50 5	255 255 255 255 255 255 255 253 533 533	-56.1 -56.1 -56.1 -56.1 -62.5 -62.5 -62.5 -62.5 -62.5 -62.5 -63.4 -63.4 -63.4 -61.9 -61.9 -61.9 -61.9 -61.9 -61.9 -61.9	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	58 58 61 58 54 52 55 52 53 51 54 51 54 52 52 55 52 53 51 54 51 54 52 55 55 55 55 55 55 55 55 55
N12	B C D E E A B B C C D E E A B B C C D D E C D D D E C D D D D D D D D D	Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Superstructure	111 111 1114 1111 1113 1111 1114 1111 1113 1111 1114 1111 1111 1111 1111 1111 1111 1111 1111	205 205 205 205 483 483 483 483 483 537 537 537 537 537 537 537 537 537 53	50 50 50 50 50 50 50 50 50 50 50 50 50 5	255 255 255 255 533 533 533 533 533 533	-56.1 -56.1 -56.1 -56.1 -56.1 -56.1 -62.5 -62.5 -62.5 -62.5 -62.5 -63.4 -63.4 -63.4 -63.4 -63.4 -61.9 -61.9 -61.9 -61.9 -61.9 -61.9 -63.1 -63.1 -63.1	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	58 58 61 58 54 52 52 52 53 51 51 54 51 52 52 52 53 51 51 54 51 52 52 53 51 51 54 51 52 52 53 51 51 51 51 52 52 53 51 51 51 51 52 52 53 51 51 51 52 53 54 55 55 55 55 55 55 55 55 55
N12	B C C D E E A B B C C D D E E C C D D D E E C D D E E C D D D E E C D D D E E C D D D E E C D D D E E C D D D D	Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Superstructure	111 111 1114 1111 1113 1111 1114 1111 1113 1111 1114 1111 1114 1111 1114 1111 1111 1111 1111 1111 1111 1111 1111	205 205 205 205 483 483 483 483 483 537 537 537 537 537 517 517 517 517 517 517 517 517	50 50 50 50 50 50 50 50 50 50 50 50 50 5	255 255 255 255 255 533 533 533 533 533	-56.1 -56.1 -56.1 -56.1 -56.1 -56.1 -56.1 -62.5 -62.5 -62.5 -62.5 -62.5 -62.5 -63.4 -63.4 -63.4 -63.4 -63.4 -63.1 -61.9 -61.9 -61.9 -61.9 -63.1 -63.1 -63.1 -63.1 -63.1 -63.1 -64.0	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	58 58 61 58 54 52 52 55 52 53 51 54 51 54 51 52 55 55 51 51 54 51 55 55 55 55 55 55 55 55 55
N12	B C C D E E A B B C C D E E C C D D E E C C D D E E C C D D E E C C D D E E C C D D E E C C D D E E C C D D E E C C D D E E C C D D E E C C D D E E C C D D E E C C D D E E C C D D E E C C D D E E C C D D E E C C D D E E C C D D E E C C D D E E C C D D D D	Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Superstructure	111 111 1114 1111 1113 1111 1114 1111 1113 1111 1114 1111 1114 1111 1111 1111 1111 1111 1111 1111 1111	205 205 205 205 483 483 483 483 483 537 537 537 537 537 537 537 537 537 53	50 50 50 50 50 50 50 50 50 50 50 50 50 5	255 255 255 255 255 533 533 533 533 533	-56.1 -56.1 -56.1 -56.1 -56.1 -56.1 -56.1 -62.5 -62.5 -62.5 -62.5 -62.5 -62.5 -62.5 -62.5 -63.4 -63.4 -63.4 -63.4 -63.4 -63.4 -63.1 -61.9 -61.9 -61.9 -61.9 -61.9 -61.9 -64.0 -64.0 -64.0	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	58 58 58 61 58 54 52 55 52 53 51 54 51 54 52 52 55 52 51 51 54 51 52 55 52 55 51 51 54 51 52 52 55 55 51 51 51 52 55 55 55 55 55 55 55 55 55
N12	B C C D E E A B B C C D E E E E E E E E E E E E E E E E E	Construction of Underground Services and Utilities Road works Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Foundation Superstructure Site Formation, Filling and Excavation Construction of Underground Services and Utilities Foundation Superstructure	111 111 1114 1111 1113 1111 1114 1111 1113 1111 1114 1111 1114 1111 1111 1111 1111 1111 1111 1111 1111	205 205 205 205 483 483 483 483 537 537 537 537 537 537 517 517 517 517 517 517 517 517	50 50 50 50 50 50 50 50 50 50 50 50 50 5	255 255 255 255 533 533 533 533 533 533	-56.1 -56.1 -56.1 -56.1 -56.1 -56.1 -56.1 -62.5 -62.5 -62.5 -62.5 -62.5 -62.5 -63.4 -63.4 -63.4 -63.4 -63.4 -63.1 -61.9 -61.9 -61.9 -61.9 -61.9 -61.9 -64.0 -64.0	3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	58 58 58 61 58 54 52 52 55 52 53 51 54 51 54 52 55 52 55 51 54 51 54 51 52 55 51 51 54 51 52 55 51 51 51 51 52 55 51 51 51 51 52 55 55 55 55 55 55 55 55 55
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NSR		Construction Activity	Total SWL, dB(A)	Dist. (NSR to Site Boundary) (A), m	Dist. (Site Boundary to Notional Source) (B), m "&#</th><th>Horz. Distance (= A+B), m</th><th>Dist. Corr., dB(A)</th><th>Façade Corr., dB(A)</th><th>CNL, dB(A)</th></tr><tr><th>N18</th><th>Α</th><th>Site Formation, Filling and Excavation</th><th>113</th><th>286</th><th>50</th><th>336</th><th>-58.5</th><th>3.0</th><th>58</th></tr><tr><td></td><td>В</td><td>Construction of Underground Services and Utilities</td><td>111</td><td>286</td><td>50</td><td>336</td><td>-58.5</td><td>3.0</td><td>56</td></tr><tr><td></td><td>С</td><td>Road works</td><td>111</td><td>286</td><td>50</td><td>336</td><td>-58.5</td><td>3.0</td><td>56</td></tr><tr><td></td><td>D</td><td>Foundation</td><td>114</td><td>286</td><td>50</td><td>336</td><td>-58.5</td><td>3.0</td><td>59</td></tr><tr><td>\Box</td><td>E</td><td>Superstructure</td><td>111</td><td>286</td><td>50</td><td>336</td><td>-58.5</td><td>3.0</td><td>56</td></tr><tr><td>N19</td><td>Α</td><td>Site Formation, Filling and Excavation</td><td>113</td><td>453</td><td>50</td><td>503</td><td>-62.0</td><td>3.0</td><td>54</td></tr><tr><td>1419</td><td>В</td><td>Construction of Underground Services and Utilities</td><td>111</td><td>453</td><td>50</td><td>503</td><td>-62.0</td><td>3.0</td><td>52</td></tr><tr><td>1</td><td>C</td><td>Road works</td><td>111</td><td>453</td><td>50</td><td>503</td><td>-62.0</td><td>3.0</td><td>52</td></tr><tr><td>1</td><td>D</td><td>Foundation</td><td>114</td><td>453</td><td>50</td><td>503</td><td>-62.0</td><td>3.0</td><td>55</td></tr><tr><td></td><td>E</td><td>Superstructure</td><td>111</td><td>453</td><td>50</td><td>503</td><td>-62.0</td><td>3.0</td><td>52</td></tr><tr><td></td><td></td><td>Caperstructure</td><td></td><td>400</td><td>30</td><td>500</td><td>02.0</td><td>0.0</td><td>J.L</td></tr><tr><td>N20</td><td>Α</td><td>Site Formation, Filling and Excavation</td><td>113</td><td>11</td><td>50</td><td>61</td><td>-43.7</td><td>3.0</td><td>72</td></tr><tr><td></td><td>В</td><td>Construction of Underground Services and Utilities</td><td>111</td><td>11</td><td>50</td><td>61</td><td>-43.7</td><td>3.0</td><td>70</td></tr><tr><td></td><td>С</td><td>Road works</td><td>111</td><td>11</td><td>50</td><td>61</td><td>-43.7</td><td>3.0</td><td>70</td></tr><tr><td></td><td>D</td><td>Foundation</td><td>114</td><td>11</td><td>50</td><td>61</td><td>-43.7</td><td>3.0</td><td>73</td></tr><tr><td></td><td>Е</td><td>Superstructure</td><td>111</td><td>11</td><td>50</td><td>61</td><td>-43.7</td><td>3.0</td><td>70</td></tr><tr><td>N1P</td><td>Α</td><td>Site Formation, Filling and Excavation</td><td>113</td><td>7</td><td>50</td><td>57</td><td>-43.1</td><td>3.0</td><td>73</td></tr><tr><td>INIF</td><td>В</td><td>Construction of Underground Services and Utilities</td><td>111</td><td>7</td><td>50</td><td>57</td><td>-43.1</td><td>3.0</td><td>71</td></tr><tr><td> </td><td>C</td><td>Road works</td><td>111</td><td>7</td><td>50</td><td>57</td><td>-43.1</td><td>3.0</td><td>71</td></tr><tr><td>ŀ</td><td>D</td><td>Foundation</td><td>114</td><td>7</td><td>50</td><td>57</td><td>-43.1</td><td>3.0</td><td>74</td></tr><tr><td> </td><td>E</td><td>Superstructure</td><td>111</td><td>7</td><td>50</td><td>57</td><td>-43.1</td><td>3.0</td><td>71</td></tr><tr><td></td><td></td><td>Superstructure</td><td></td><td></td><td>30</td><td>31</td><td>-40.1</td><td>3.0</td><td>/ !</td></tr><tr><td>N2P</td><td>Α</td><td>Site Formation, Filling and Excavation</td><td>113</td><td>350</td><td>50</td><td>400</td><td>-60.0</td><td>3.0</td><td>56</td></tr><tr><td>l</td><td>В</td><td>Construction of Underground Services and Utilities</td><td>111</td><td>350</td><td>50</td><td>400</td><td>-60.0</td><td>3.0</td><td>54</td></tr><tr><td>l</td><td>С</td><td>Road works</td><td>111</td><td>350</td><td>50</td><td>400</td><td>-60.0</td><td>3.0</td><td>54</td></tr><tr><td>l</td><td>D</td><td>Foundation</td><td>114</td><td>350</td><td>50</td><td>400</td><td>-60.0</td><td>3.0</td><td>57</td></tr><tr><td></td><td>Е</td><td>Superstructure</td><td>111</td><td>350</td><td>50</td><td>400</td><td>-60.0</td><td>3.0</td><td>54</td></tr><tr><td></td><td></td><td>Tour en a seu le</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>N3P</td><td>Α</td><td>Site Formation, Filling and Excavation</td><td>113</td><td>122</td><td>50</td><td>172</td><td>-52.7</td><td>3.0</td><td>63</td></tr><tr><td> </td><td>В</td><td>Construction of Underground Services and Utilities</td><td>111</td><td>122</td><td>50</td><td>172</td><td>-52.7</td><td>3.0</td><td>61</td></tr><tr><td> </td><td>С</td><td>Road works</td><td>111</td><td>122</td><td>50</td><td>172</td><td>-52.7</td><td>3.0</td><td>61</td></tr><tr><td></td><td>D E</td><td>Foundation Superstructure</td><td>114 111</td><td>122 122</td><td>50 50</td><td>172 172</td><td>-52.7 -52.7</td><td>3.0</td><td>64 61</td></tr><tr><td></td><td></td><td>Superstructure</td><td>1111</td><td>122</td><td>50</td><td>172</td><td>-52.7</td><td>3.0</td><td>01</td></tr><tr><td>N4P</td><td>Α</td><td>Site Formation, Filling and Excavation</td><td>113</td><td>76</td><td>50</td><td>126</td><td>-50.0</td><td>3.0</td><td>66</td></tr><tr><td>ľ</td><td>В</td><td>Construction of Underground Services and Utilities</td><td>111</td><td>76</td><td>50</td><td>126</td><td>-50.0</td><td>3.0</td><td>64</td></tr><tr><td>ľ</td><td>С</td><td>Road works</td><td>111</td><td>76</td><td>50</td><td>126</td><td>-50.0</td><td>3.0</td><td>64</td></tr><tr><td>ľ</td><td>D</td><td>Foundation</td><td>114</td><td>76</td><td>50</td><td>126</td><td>-50.0</td><td>3.0</td><td>67</td></tr><tr><td></td><td>Е</td><td>Superstructure</td><td>111</td><td>76</td><td>50</td><td>126</td><td>-50.0</td><td>3.0</td><td>64</td></tr><tr><td></td><td></td><td>T</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>N5P</td><td>A</td><td>Site Formation, Filling and Excavation</td><td>113</td><td>129</td><td>50</td><td>179</td><td>-53.0</td><td>3.0</td><td>63</td></tr><tr><td> </td><td>В</td><td>Construction of Underground Services and Utilities</td><td>111</td><td>129</td><td>50</td><td>179</td><td>-53.0</td><td>3.0</td><td>61</td></tr><tr><td> </td><td>C</td><td>Road works</td><td>111</td><td>129</td><td>50</td><td>179</td><td>-53.0</td><td>3.0</td><td>61</td></tr><tr><td> </td><td>D F</td><td>Foundation</td><td>114</td><td>129</td><td>50</td><td>179</td><td>-53.0</td><td>3.0</td><td>64</td></tr><tr><td></td><td>E</td><td>Superstructure</td><td>111</td><td>129</td><td>50</td><td>179</td><td>-53.0</td><td>3.0</td><td>61</td></tr></tbody></table>
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Remark: ** Distance is based on shortest horizontal distance.

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	115	410	10	56
N2	G	Dump Trucks Travelling on Haul Road	10	115	353	10	57
N3	G	Dump Trucks Travelling on Haul Road	10	115	214	10	59
N4	G	Dump Trucks Travelling on Haul Road	10	115	134	10	61
N5	G	Dump Trucks Travelling on Haul Road	10	115	66	10	64
N6	G	Dump Trucks Travelling on Haul Road	10	115	64	10	64
N7	G	Dump Trucks Travelling on Haul Road	10	115	294	10	57
N8	G	Dump Trucks Travelling on Haul Road	10	115	280	10	58
N9	G	Dump Trucks Travelling on Haul Road	10	115	299	10	57
N10	G	Dump Trucks Travelling on Haul Road	10	115	255	10	58
N11	G	Dump Trucks Travelling on Haul Road	10	115	533	10	55
N12	G	Dump Trucks Travelling on Haul Road	10	115	587	10	54
N13	G	Dump Trucks Travelling on Haul Road	10	115	496	10	55
N14	G	Dump Trucks Travelling on Haul Road	10	115	567	10	55
N15	G	Dump Trucks Travelling on Haul Road	10	115	629	10	54
N16	G	Dump Trucks Travelling on Haul Road	10	115	100	10	62
N17	G	Dump Trucks Travelling on Haul Road	10	115	338	10	57
N18	G	Dump Trucks Travelling on Haul Road	10	115	336	10	57
N19	G	Dump Trucks Travelling on Haul Road	10	115	503	10	55
N20	G	Dump Trucks Travelling on Haul Road	10	115	61	10	64
N1P	G	Dump Trucks Travelling on Haul Road	10	115	57	10	64
N2P	G	Dump Trucks Travelling on Haul Road	10	115	400	10	56
N3P	G	Dump Trucks Travelling on Haul Road	10	115	172	10	60
N4P	G	Dump Trucks Travelling on Haul Road	10	115	126	10	61
N5P	G	Dump Trucks Travelling on Haul Road	10	115	179	10	60

 $\textbf{Remark:} \ \ \textbf{According to information available at EPD website: http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf$ @ 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

Log IV — Torog IVA
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)

[#] 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.

NSR	Construction Activity	Total SWL, dB(A)	Dist. (NSR to Site Boundary) (A), m	Boundary to	Horz. Distance (= A+B), m	Dist. Corr., dB(A)	Façade Corr., dB(A)	CNL, dB(A)
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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	8	114	60	10	62
N2	G	Dump Trucks Travelling on Haul Road	8	114	61	10	62
N3	G	Dump Trucks Travelling on Haul Road	8	114	67	10	62
N4	G	Dump Trucks Travelling on Haul Road	8	114	61	10	62
N5	G	Dump Trucks Travelling on Haul Road	8	114	249	10	56
N6	G	Dump Trucks Travelling on Haul Road	8	114	455	10	54
N7	G	Dump Trucks Travelling on Haul Road	8	114	674	10	52
N8	G	Dump Trucks Travelling on Haul Road	8	114	422	10	54
N9	G	Dump Trucks Travelling on Haul Road	8	114	458	10	53
N10	G	Dump Trucks Travelling on Haul Road	8	114	65	10	62
N11	G	Dump Trucks Travelling on Haul Road	8	114	175	10	58
N12	G	Dump Trucks Travelling on Haul Road	8	114	302	10	55
N13	G	Dump Trucks Travelling on Haul Road	8	114	81	10	61
N14	G	Dump Trucks Travelling on Haul Road	8	114	149	10	58
N15	G	Dump Trucks Travelling on Haul Road	8	114	199	10	57
N16	G	Dump Trucks Travelling on Haul Road	8	114	523	10	53
N17	G	Dump Trucks Travelling on Haul Road	8	114	752	10	51
N18	G	Dump Trucks Travelling on Haul Road	8	114	731	10	51
N19	G	Dump Trucks Travelling on Haul Road	8	114	235	10	56
N20	G	Dump Trucks Travelling on Haul Road	8	114	483	10	53
N1P	G	Dump Trucks Travelling on Haul Road	8	114	411	10	54
N2P	G	Dump Trucks Travelling on Haul Road	8	114	120	10	59
N3P	G	Dump Trucks Travelling on Haul Road	8	114	128	10	59
N4P	G	Dump Trucks Travelling on Haul Road	8	114	184	10	57
N5P	G	Dump Trucks Travelling on Haul Road	8	114	494	10	53

 $\textbf{Remark:} \ \ ^{\star} \ \text{According to information available at EPD website: http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf and a state of the control of the co$ @ 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

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)

Appendix 4-4-4 Calculation of Construction Noise Level (Southern Portion) (Mitigated Scenario with QPMEs and Movable Noise Barriers)

NSR		Construction Activity	Total SWL, dB(A)	Dist. (NSR to Site Boundary) (A), m	Dist. (Site Boundary to Notional Source) (B), m "&#</th><th>Horz. Distance (= A+B), m</th><th>Dist. Corr., dB(A)</th><th>Façade Corr., dB(A)</th><th>CNL, dB(A)</th></tr><tr><th>N1</th><th>A</th><th>Site Formation, Filling and Excavation</th><th>111</th><th>10</th><th>50</th><th>60</th><th>-43.5</th><th>3.0</th><th>71</th></tr><tr><td>-</td><td>B C</td><td>Construction of Underground Services and Utilities Road works</td><td>110 112</td><td>10 10</td><td>50 50</td><td>60 60</td><td>-43.5 -43.5</td><td>3.0</td><td>70 72</td></tr><tr><td>ŀ</td><td>D</td><td>Foundation</td><td>114</td><td>10</td><td>50</td><td>60</td><td>-43.5</td><td>3.0</td><td>74</td></tr><tr><td></td><td>Е</td><td>Superstructure</td><td>111</td><td>10</td><td>50</td><td>60</td><td>-43.5</td><td>3.0</td><td>71</td></tr><tr><td>L</td><td>F</td><td>Sub-structure (pile cap)</td><td>111</td><td>10</td><td>50</td><td>60</td><td>-43.5</td><td>3.0</td><td>71</td></tr><tr><td>N2</td><td>Α</td><td>Site Formation, Filling and Excavation</td><td>111</td><td>11</td><td>50</td><td>61</td><td>-43.7</td><td>3.0</td><td>70</td></tr><tr><td>Ī</td><td>В</td><td>Construction of Underground Services and Utilities</td><td>110</td><td>11</td><td>50</td><td>61</td><td>-43.7</td><td>3.0</td><td>69</td></tr><tr><td></td><td>C</td><td>Road works</td><td>112</td><td>11</td><td>50</td><td>61</td><td>-43.7</td><td>3.0</td><td>71</td></tr><tr><td>ŀ</td><td>D E</td><td>Foundation Superstructure</td><td>114 111</td><td>11 11</td><td>50 50</td><td>61 61</td><td>-43.7 -43.7</td><td>3.0</td><td>73 70</td></tr><tr><td></td><td>F</td><td>Sub-structure (pile cap)</td><td>111</td><td>11</td><td>50</td><td>61</td><td>-43.7</td><td>3.0</td><td>70</td></tr><tr><td>V3</td><td>Α</td><td>Site Formation, Filling and Excavation</td><td>111</td><td>17</td><td>50</td><td>67</td><td>-44.5</td><td>3.0</td><td>70</td></tr><tr><td>NO</td><td>В</td><td>Construction of Underground Services and Utilities</td><td>110</td><td>17</td><td>50</td><td>67</td><td>-44.5 -44.5</td><td>3.0</td><td>69</td></tr><tr><td>Ī</td><td>С</td><td>Road works</td><td>112</td><td>17</td><td>50</td><td>67</td><td>-44.5</td><td>3.0</td><td>71</td></tr><tr><td></td><td>D</td><td>Foundation</td><td>114</td><td>17</td><td>50</td><td>67</td><td>-44.5</td><td>3.0</td><td>73</td></tr><tr><td></td><td>E F</td><td>Superstructure Sub-structure (pile cap)</td><td>111</td><td>17 17</td><td>50 50</td><td>67 67</td><td>-44.5 -44.5</td><td>3.0</td><td>70 70</td></tr><tr><td>L</td><td></td><td></td><td></td><td></td><td></td><td>0.</td><td>11.0</td><td>0.0</td><td></td></tr><tr><td>N4</td><td>A</td><td>Site Formation, Filling and Excavation</td><td>111</td><td>11</td><td>50</td><td>61</td><td>-43.7</td><td>3.0</td><td>70</td></tr><tr><td>-</td><td>B C</td><td>Construction of Underground Services and Utilities Road works</td><td>110 112</td><td>11 11</td><td>50 50</td><td>61 61</td><td>-43.7 -43.7</td><td>3.0</td><td>69 71</td></tr><tr><td>ŀ</td><td>D</td><td>Foundation</td><td>114</td><td>11</td><td>50</td><td>61</td><td>-43.7</td><td>3.0</td><td>73</td></tr><tr><td></td><td>E</td><td>Superstructure</td><td>111</td><td>11</td><td>50</td><td>61</td><td>-43.7</td><td>3.0</td><td>70</td></tr><tr><td>L</td><td>F</td><td>Sub-structure (pile cap)</td><td>111</td><td>11</td><td>50</td><td>61</td><td>-43.7</td><td>3.0</td><td>70</td></tr><tr><td>N5</td><td>Α</td><td>Site Formation, Filling and Excavation</td><td>111</td><td>199</td><td>50</td><td>249</td><td>-55.9</td><td>3.0</td><td>58</td></tr><tr><td>Ī</td><td>В</td><td>Construction of Underground Services and Utilities</td><td>110</td><td>199</td><td>50</td><td>249</td><td>-55.9</td><td>3.0</td><td>57</td></tr><tr><td>ŀ</td><td>C D</td><td>Road works Foundation</td><td>112 114</td><td>199 199</td><td>50 50</td><td>249 249</td><td>-55.9 -55.9</td><td>3.0</td><td>59 61</td></tr><tr><td>ŀ</td><td>E</td><td>Superstructure</td><td>114</td><td>199</td><td>50</td><td>249</td><td>-55.9 -55.9</td><td>3.0</td><td>58</td></tr><tr><td>Ĺ</td><td>F</td><td>Sub-structure (pile cap)</td><td>111</td><td>199</td><td>50</td><td>249</td><td>-55.9</td><td>3.0</td><td>58</td></tr><tr><td>V6</td><td>Α</td><td>Site Formation, Filling and Excavation</td><td>111</td><td>405</td><td>50</td><td>455</td><td>-61.1</td><td>3.0</td><td>53</td></tr><tr><td>10</td><td>В</td><td>Construction of Underground Services and Utilities</td><td>110</td><td>405</td><td>50</td><td>455 455</td><td>-61.1</td><td>3.0</td><td>52</td></tr><tr><td>ţ</td><td>С</td><td>Road works</td><td>112</td><td>405</td><td>50</td><td>455</td><td>-61.1</td><td>3.0</td><td>54</td></tr><tr><td>ļ</td><td>D</td><td>Foundation</td><td>114</td><td>405 406</td><td>50</td><td>455 456</td><td>-61.1 61.1</td><td>3.0</td><td>56</td></tr><tr><td></td><td>E F</td><td>Superstructure Sub-structure (pile cap)</td><td>111</td><td>405 405</td><td>50 50</td><td>455 455</td><td>-61.1 -61.1</td><td>3.0</td><td>53 53</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>N7</td><td>A</td><td>Site Formation, Filling and Excavation</td><td>111 110</td><td>624 624</td><td>50 50</td><td>674 674</td><td>-64.6 -64.6</td><td>3.0</td><td>49 48</td></tr><tr><td>-</td><td>B C</td><td>Construction of Underground Services and Utilities Road works</td><td>112</td><td>624</td><td>50</td><td>674</td><td>-64.6</td><td>3.0</td><td>50</td></tr><tr><td>Ī</td><td>D</td><td>Foundation</td><td>114</td><td>624</td><td>50</td><td>674</td><td>-64.6</td><td>3.0</td><td>52</td></tr><tr><td></td><td>E</td><td>Superstructure</td><td>111</td><td>624</td><td>50</td><td>674</td><td>-64.6</td><td>3.0</td><td>49</td></tr><tr><td>L</td><td>F</td><td>Sub-structure (pile cap)</td><td>111</td><td>624</td><td>50</td><td>674</td><td>-64.6</td><td>3.0</td><td>49</td></tr><tr><td>N8</td><td>Α</td><td>Site Formation, Filling and Excavation</td><td>111</td><td>372</td><td>50</td><td>422</td><td>-60.5</td><td>3.0</td><td>54</td></tr><tr><td>-</td><td>В</td><td>Construction of Underground Services and Utilities</td><td>110</td><td>372</td><td>50</td><td>422</td><td>-60.5</td><td>3.0</td><td>53</td></tr><tr><td></td><td>C D</td><td>Road works Foundation</td><td>112 114</td><td>372 372</td><td>50 50</td><td>422 422</td><td>-60.5 -60.5</td><td>3.0</td><td>55 57</td></tr><tr><td></td><td>E</td><td>Superstructure</td><td>111</td><td>372</td><td>50</td><td>422</td><td>-60.5</td><td>3.0</td><td>54</td></tr><tr><td>Į</td><td>F</td><td>Sub-structure (pile cap)</td><td>111</td><td>372</td><td>50</td><td>422</td><td>-60.5</td><td>3.0</td><td>54</td></tr><tr><td>N9</td><td>Α</td><td>Site Formation, Filling and Excavation</td><td>111</td><td>408</td><td>50</td><td>458</td><td>-61.2</td><td>3.0</td><td>53</td></tr><tr><td></td><td>В</td><td>Construction of Underground Services and Utilities</td><td>110</td><td>408</td><td>50</td><td>458</td><td>-61.2</td><td>3.0</td><td>52</td></tr><tr><td>ļ.</td><td>С</td><td>Road works</td><td>112</td><td>408</td><td>50</td><td>458</td><td>-61.2</td><td>3.0</td><td>54</td></tr><tr><td>-</td><td>D E</td><td>Foundation Superstructure</td><td>114 111</td><td>408 408</td><td>50 50</td><td>458 458</td><td>-61.2 -61.2</td><td>3.0</td><td>56 53</td></tr><tr><td></td><td>F</td><td>Sub-structure (pile cap)</td><td>111</td><td>408</td><td>50</td><td>458</td><td>-61.2</td><td>3.0</td><td>53</td></tr><tr><td>J10</td><td>Α.</td><td>Site Formation, Filling and Excavation</td><td>111</td><td>4.5</td><td>E0</td><td>GE.</td><td>44.2</td><td>2.0</td><td>70</td></tr><tr><td>N10</td><td>A B</td><td>Construction of Underground Services and Utilities</td><td>111 110</td><td>15 15</td><td>50 50</td><td>65 65</td><td>-44.2 -44.2</td><td>3.0</td><td>70 69</td></tr><tr><td>į</td><td>С</td><td>Road works</td><td>112</td><td>15</td><td>50</td><td>65</td><td>-44.2</td><td>3.0</td><td>71</td></tr><tr><td>Ţ</td><td>D</td><td>Foundation</td><td>114</td><td>15</td><td>50</td><td>65 65</td><td>-44.2</td><td>3.0</td><td>73</td></tr><tr><td></td><td>E F</td><td>Superstructure Sub-structure (pile cap)</td><td>111</td><td>15 15</td><td>50 50</td><td>65 65</td><td>-44.2 -44.2</td><td>3.0</td><td>70 70</td></tr><tr><td>L</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>N11</td><td>A</td><td>Site Formation, Filling and Excavation</td><td>111</td><td>125</td><td>50</td><td>175</td><td>-52.8</td><td>3.0</td><td>61</td></tr><tr><td></td><td>В</td><td>Construction of Underground Services and Utilities Road works</td><td>110 112</td><td>125 125</td><td>50 50</td><td>175 175</td><td>-52.8 -52.8</td><td>3.0</td><td>60 62</td></tr><tr><td>ŀ</td><td>С</td><td></td><td></td><td>125</td><td>50</td><td>175</td><td>-52.8</td><td>3.0</td><td>64</td></tr><tr><td></td><td>D</td><td>Foundation</td><td>114</td><td></td><td></td><td></td><td>-52.8</td><td>3.0</td><td>61</td></tr><tr><td>-</td><td>D E</td><td>Foundation Superstructure</td><td>111</td><td>125</td><td>50</td><td>175</td><td></td><td></td><td></td></tr><tr><td></td><td>D</td><td>Foundation</td><td></td><td></td><td></td><td>175 175</td><td>-52.8</td><td>3.0</td><td>61</td></tr><tr><td>N12</td><td>D E F</td><td>Foundation Superstructure Sub-structure (pile cap) Site Formation, Filling and Excavation</td><td>111 111</td><td>125 125 252</td><td>50 50 50</td><td>175 302</td><td>-52.8 -57.6</td><td>3.0</td><td>56</td></tr><tr><td>N12</td><td>D E F A B</td><td>Foundation Superstructure Sub-structure (pile cap) Site Formation, Filling and Excavation Construction of Underground Services and Utilities</td><td>111 111 111 110</td><td>125 125 252 252</td><td>50 50 50 50</td><td>302 302</td><td>-52.8 -57.6 -57.6</td><td>3.0 3.0 3.0</td><td>56 55</td></tr><tr><td>N12</td><td>D E F</td><td>Foundation Superstructure Sub-structure (pile cap) Site Formation, Filling and Excavation</td><td>111 111</td><td>125 125 252</td><td>50 50 50</td><td>175 302</td><td>-52.8 -57.6</td><td>3.0</td><td>56</td></tr><tr><td>N12</td><td>D E F A B C D E</td><td>Foundation Superstructure Sub-structure (pile cap) Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Superstructure</td><td>111 111 111 110 112 114 111</td><td>125 125 252 252 252 252 252 252 252</td><td>50 50 50 50 50 50 50 50</td><td>302 302 302 302 302 302 302</td><td>-52.8 -57.6 -57.6 -57.6 -57.6 -57.6</td><td>3.0 3.0 3.0 3.0 3.0 3.0</td><td>56 55 57 59 56</td></tr><tr><td>N12</td><td>D E F A B C</td><td>Foundation Superstructure Sub-structure (pile cap) Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation</td><td>111 111 111 110 112 114</td><td>125 125 252 252 252 252 252</td><td>50 50 50 50 50 50 50</td><td>302 302 302 302 302</td><td>-52.8 -57.6 -57.6 -57.6 -57.6</td><td>3.0 3.0 3.0 3.0 3.0</td><td>56 55 57 59</td></tr><tr><td></td><td>D E F A B C D E</td><td>Foundation Superstructure Sub-structure (pile cap) Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Superstructure</td><td>111 111 111 110 112 114 111</td><td>125 125 252 252 252 252 252 252 252</td><td>50 50 50 50 50 50 50 50</td><td>302 302 302 302 302 302 302</td><td>-52.8 -57.6 -57.6 -57.6 -57.6 -57.6</td><td>3.0 3.0 3.0 3.0 3.0 3.0</td><td>56 55 57 59 56</td></tr><tr><td></td><td>D E F A B C D E F A B B</td><td>Foundation Superstructure Sub-structure (pile cap) Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Superstructure Sub-structure (pile cap) Site Formation, 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3.0 3.0</td><td>56 55 57 59 56 56 56 68 67 69 71</td></tr><tr><td></td><td>D E F A B C C D E F C C C C C C C C C C C C C C C C C C</td><td>Foundation Superstructure Sub-structure (pile cap) Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works Foundation Superstructure Sub-structure (pile cap) Site Formation, Filling and Excavation Construction of Underground Services and Utilities Road works</td><td>111 111 111 110 112 114 111 111 111 111 110 112</td><td>125 125 252 252 252 252 252 252 252 252</td><td>50 50 50 50 50 50 50 50 50 50 50</td><td>302 302 302 302 302 302 302 302 81 81</td><td>-52.8 -57.6 -57.6 -57.6 -57.6 -57.6 -57.6 -46.2 -46.2 -46.2</td><td>3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0</td><td>56 55 57 59 56 56 56 68 67 69</td></tr><tr><td>N12 </td><td>D E F A B C D E F A B C D E F</td><td>Foundation Superstructure Sub-structure (pile cap) Site Formation, Filling and Excavation Construction of Underground Services and Utilities 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NSR N15	A	Construction Activity Site Formation, Filling and Excavation	Total SWL, dB(A)	Dist. (NSR to Site Boundary) (A), m	Dist. (Site Boundary to Notional Source) (B), m "&#</th><th>Horz. Distance (= A+B), m</th><th>Dist. Corr., dB(A)</th><th>Façade Corr., dB(A)</th><th>CNL, dB(A)</th></tr><tr><td>N15</td><td>B</td><td>Construction of Underground Services and Utilities</td><td>111</td><td>149</td><td>50</td><td>199</td><td>-54.0 -54.0</td><td>3.0</td><td>59</td></tr><tr><td>ŀ</td><td>C</td><td>Road works</td><td>112</td><td>149</td><td>50</td><td>199</td><td>-54.0</td><td>3.0</td><td>61</td></tr><tr><td>l</td><td>D</td><td>Foundation</td><td>114</td><td>149</td><td>50</td><td>199</td><td>-54.0</td><td>3.0</td><td>63</td></tr><tr><td>Ī</td><td>Е</td><td>Superstructure</td><td>111</td><td>149</td><td>50</td><td>199</td><td>-54.0</td><td>3.0</td><td>60</td></tr><tr><td></td><td>F</td><td>Sub-structure (pile cap)</td><td>111</td><td>149</td><td>50</td><td>199</td><td>-54.0</td><td>3.0</td><td>60</td></tr><tr><td>N16</td><td>Α</td><td>Site Formation, Filling and Excavation</td><td>111</td><td>473</td><td>50</td><td>523</td><td>-62.4</td><td>3.0</td><td>52</td></tr><tr><td></td><td>В</td><td>Construction of Underground Services and Utilities</td><td>110</td><td>473</td><td>50</td><td>523</td><td>-62.4</td><td>3.0</td><td>51</td></tr><tr><td>L</td><td>С</td><td>Road works</td><td>112</td><td>473</td><td>50</td><td>523</td><td>-62.4</td><td>3.0</td><td>53</td></tr><tr><td></td><td>D</td><td>Foundation</td><td>114</td><td>473</td><td>50</td><td>523</td><td>-62.4</td><td>3.0</td><td>55</td></tr><tr><td></td><td>E F</td><td>Superstructure Sub-structure (pile cap)</td><td>111</td><td>473 473</td><td>50 50</td><td>523 523</td><td>-62.4 -62.4</td><td>3.0</td><td>52 52</td></tr><tr><td>L</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>N17</td><td>Α</td><td>Site Formation, Filling and Excavation</td><td>111</td><td>702</td><td>50</td><td>752</td><td>-65.5</td><td>3.0</td><td>49</td></tr><tr><td></td><td>В</td><td>Construction of Underground Services and Utilities</td><td>110</td><td>702</td><td>50</td><td>752</td><td>-65.5</td><td>3.0</td><td>48</td></tr><tr><td></td><td>С</td><td>Road works</td><td>112</td><td>702</td><td>50</td><td>752</td><td>-65.5</td><td>3.0</td><td>50</td></tr><tr><td></td><td>D</td><td>Foundation</td><td>114</td><td>702</td><td>50</td><td>752</td><td>-65.5</td><td>3.0</td><td>52 49</td></tr><tr><td></td><td>E F</td><td>Superstructure Sub-structure (pile cap)</td><td>111 111</td><td>702 702</td><td>50 50</td><td>752 752</td><td>-65.5 -65.5</td><td>3.0</td><td>49</td></tr><tr><td>L</td><td></td><td>our structure (pile cap)</td><td>1111</td><td>702</td><td></td><td>102</td><td>-00.0</td><td></td><td></td></tr><tr><td>N18</td><td>Α</td><td>Site Formation, Filling and Excavation</td><td>111</td><td>681</td><td>50</td><td>731</td><td>-65.3</td><td>3.0</td><td>49</td></tr><tr><td> </td><td>В</td><td>Construction of Underground Services and 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Utilities</td><td>110</td><td>185</td><td>50</td><td>235</td><td>-55.4</td><td>3.0</td><td>58</td></tr><tr><td></td><td>С</td><td>Road works</td><td>112</td><td>185</td><td>50</td><td>235</td><td>-55.4</td><td>3.0</td><td>60</td></tr><tr><td>-</td><td>D F</td><td>Foundation</td><td>114</td><td>185 185</td><td>50 50</td><td>235 235</td><td>-55.4 -55.4</td><td>3.0</td><td>62 59</td></tr><tr><td></td><td>F</td><td>Superstructure Sub-structure (pile cap)</td><td>111</td><td>185</td><td>50</td><td>235</td><td>-55.4</td><td>3.0</td><td>59</td></tr><tr><td></td><td></td><td>love a sure ve</td><td></td><td>400</td><td></td><td>400</td><td></td><td></td><td>=0</td></tr><tr><td>N20</td><td>A B</td><td>Site Formation, Filling and Excavation</td><td>111 110</td><td>433 433</td><td>50 50</td><td>483 483</td><td>-61.7 -61.7</td><td>3.0</td><td>52 51</td></tr><tr><td></td><td>C</td><td>Construction of Underground Services and Utilities Road works</td><td>112</td><td>433</td><td>50</td><td>483</td><td>-61.7</td><td>3.0</td><td>53</td></tr><tr><td>ŀ</td><td>D</td><td>Foundation</td><td>114</td><td>433</td><td>50</td><td>483</td><td>-61.7</td><td>3.0</td><td>55</td></tr><tr><td>ı</td><td>E</td><td>Superstructure</td><td>111</td><td>433</td><td>50</td><td>483</td><td>-61.7</td><td>3.0</td><td>52</td></tr><tr><td></td><td>F</td><td>Sub-structure (pile cap)</td><td>111</td><td>433</td><td>50</td><td>483</td><td>-61.7</td><td>3.0</td><td>52</td></tr><tr><td>N1P</td><td>A</td><td>Site Formation, Filling and Excavation</td><td>111</td><td>361</td><td>50</td><td>411</td><td>-60.3</td><td>3.0</td><td>54</td></tr><tr><td>····</td><td>В</td><td>Construction of Underground Services and Utilities</td><td>110</td><td>361</td><td>50</td><td>411</td><td>-60.3</td><td>3.0</td><td>53</td></tr><tr><td>l</td><td>С</td><td>Road 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F</td><td>Foundation Superstructure</td><td>114 111</td><td>70 70</td><td>50 50</td><td>120 120</td><td>-49.6 -49.6</td><td>3.0</td><td>67 64</td></tr><tr><td></td><td>F</td><td>Sub-structure (pile cap)</td><td>111</td><td>70</td><td>50</td><td>120</td><td>-49.6</td><td>3.0</td><td>64</td></tr><tr><td></td><td></td><td></td><td></td><td>1</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>N3P</td><td>A B</td><td>Site Formation, Filling and Excavation</td><td>111</td><td>78 78</td><td>50 50</td><td>128 128</td><td>-50.1 -50.1</td><td>3.0</td><td>64 63</td></tr><tr><td>}</td><td>С</td><td>Construction of Underground Services and Utilities Road works</td><td>110 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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.

NSR	Construction Activity	Total SWL, dB(A)	Dist. (NSR to Site Boundary) (A), m	Notional	Horz. Distance (= A+B), m	Dist. Corr., dB(A)	Façade Corr., dB(A)	CNL, dB(A)
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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		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	115	60	10	64
N2	G	Dump Trucks Travelling on Haul Road	10	115	61	10	64
N3	G	Dump Trucks Travelling on Haul Road	10	115	67	10	64
N4	G	Dump Trucks Travelling on Haul Road	10	115	61	10	64
N5	G	Dump Trucks Travelling on Haul Road	10	115	249	10	58
N6	G	Dump Trucks Travelling on Haul Road	10	115	455	10	55
N7	G	Dump Trucks Travelling on Haul Road	10	115	674	10	54
N8	G	Dump Trucks Travelling on Haul Road	10	115	422	10	56
N9	G	Dump Trucks Travelling on Haul Road	10	115	458	10	55
N10	G	Dump Trucks Travelling on Haul Road	10	115	65	10	64
N11	G	Dump Trucks Travelling on Haul Road	10	115	175	10	60
N12	G	Dump Trucks Travelling on Haul Road	10	115	302	10	57
N13	G	Dump Trucks Travelling on Haul Road	10	115	81	10	63
N14	G	Dump Trucks Travelling on Haul Road	10	115	149	10	60
N15	G	Dump Trucks Travelling on Haul Road	10	115	199	10	59
N16	G	Dump Trucks Travelling on Haul Road	10	115	523	10	55
N17	G	Dump Trucks Travelling on Haul Road	10	115	752	10	53
N18	G	Dump Trucks Travelling on Haul Road	10	115	731	10	53
N19	G	Dump Trucks Travelling on Haul Road	10	115	235	10	58
N20	G	Dump Trucks Travelling on Haul Road	10	115	483	10	55
N1P	G	Dump Trucks Travelling on Haul Road	10	115	411	10	56
N2P	G	Dump Trucks Travelling on Haul Road	10	115	120	10	61
N3P	G	Dump Trucks Travelling on Haul Road	10	115	128	10	61
N4P	G	Dump Trucks Travelling on Haul Road	10	115	184	10	59
N5P	G	Dump Trucks Travelling on Haul Road	10	115	494	10	55

Remark: * According to information available at EPD website: http://www.epd.gov.hk/epd/english/application_for_licences/guidance/files/OtherSWLe.pdf Remark: * According to information available at EPD website: 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,
SWIL = 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)