Appendix 4-6A

Estimated Construction Noise Levels

Due to Planned RD Site

Appendix 4-6A-1 Indicative Construction Programme for Planned RD Site Construction Activity Site Formation: Site clearance and Site Formation, Filling and A Excavation Dump Trucks Travelling on Haul Road during Site G Formation Sub-structure (Pile Cap) F Construction of Underground Services and Utilities Construction of Underground B Services and Utilities Roadworks C Road works Foundation D Foundation Superstructure E Superstructure Concurrent Construction Activities by Work Group A+G+F **Duration of Concurrent** 3.5 Works (no. of months)

Remark:

The above Construction Programme for Site Formation is prepared with the following assumption: Working hours = 08:00 to 18:00 hours

Working days = 25 days per months

Appendix 4-6A-2 Summary Table of Calculated Construction Noise Level at NSRs (Mitigated Scenario with QPMEs and Movable Noise Barriers)

NSR Label	Descriptions	Cons	truction	Noise L	evel fro	Cumulative	Highest Noise				
		Α	В	С	D	E	F	G	A+G+F	Level, dB(A)	Noise Criteria, dB(A)
		Site Formation, Filling and Excavation	Construction of Underground Services and Utilities	Road works	Foundation	Superstructure	Sub-structure (Pile Cap)	Dump Trucks Travelling on Haul Road			
Existin	ng NSRs										
N1	Fairview Park	54	52	54	56	52	52	55	59	59	75
N2	Fairview Park	54	52	54	56	52	52	56	59	59	75
N3	Fairview Park	59	57	59	61	57	57	58	62	62	75
N4	Fairview Park	60	58	60	62	58	58	59	64	64	75
N5	Fairview Park	60	58	60	62	58	58	58	64	64	75
N6	Fairview Park	58	56	58	60	56	56	57	62	62	75
N7	Yau Mei San Tsuen	61	59	61	63	59	59	59	65	65	75
N8	Chuk Yuen Tsuen	73	71	73	75	71	71	65	75	75	75
N9	Chuk Yuen Tsuen	72	70	72	74	70	70	64	74	74	75
N10	Bethel High School	57	55	57	59	55	55	57	61	61	70 (65 during examination)
N11	Helene Terrace	54	52	54	56	52	52	56	59	59	75
N12	Villa Camllia	54	52	54	56	52	52	56	59	59	75
N13	Fairview Park	53	51	53	55	51	51	55	58	58	75
N14	Wong Chan Sook Ying Memorial School	52	50	52	54	50	50	54	57	57	70 (65 during examination)
N15	Man Yuen Tsuen	52	50	52	54	50	50	54	57	57	75
N16	Fairview Park	58	56	58	60	56	56	57	62	62	75
N17	Palm Springs	53	51	53	55	51	51	55	58	58	75
N18	Temp. house at Yau Mei San Tsuen	57	55	57	59	55	55	57	61	61	75
N19	Existing village house	56	54	56	58	54	54	56	60	60	75
N20	Fairview Park	59	57	59	61	57	57	58	63	63	75

Appendix 4-6-3 Plant Inventory and Calculated SWLs for Construction Noise Impact Assessment (with QPMEs, Movable Noise Barriers)

				PMEs Inv	entory - N	litigate	d (with Q	PMEs an	d Movable Noise Barrie	rs)			,
Construction Activity	s	ub. 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
(A)	A1	Excavation and Filling	Air Compressor	CNP001	100	2	103		Movable noise barrier	-10	93		
Site Formation, Filling and Excavation			Breaker, mini-robot mounted	EPD *	115	1	115	117	Movable noise barrier and Installation of commercially made sound proof hammer bracket # & ##	-10	105		
			F	KATO model HD820V	99	3	104		Movable noise barrier	-5	99	112	
			Excavator, wheeled/tracked Generator, super silenced	(EPD-01233) CNP103	95	3	100		Movable noise barrier	-10	90		112
			Dump Truck (5.5 tonne <			-							
			Gross vehicle weight <= 38 tonne)	EPD *	105	4	111				111		
	A2	Ground Compression	Pollor vibratory	SAKAI model SW250-1 (EPD-00509)	95	3	100				100		
			Roller, vibratory	(EPD-00509) Komatsu modelled D21A		_	407	108			407	108	
ļ			Bulldozer	8	102	3	107				107		
(B) Construction of Underground Services and Utilities	B1	Earthwork	Breaker, mini-robot mounted	EPD *	115	1	115	116	Movable noise barrier and Installation of commercially made sound proof hammer bracket # & ##	-10	105	•	
			Dump Truck (5.5 tonne <					110				110	110
			Gross vehicle weight <= 38 tonne)	EPD *	105	2	108			_	108		
			Excavator, mini-robot mounted	EPD -	94	2	97		Movable noise barrier	-5	92		
	B2	Utilities laying	Air Compressor	CNP001	100	2	103		Movable noise barrier	-10	93	108	
			Generator, super silenced	CNP103	95	2	98		Movable noise barrier	-10	88		
			Lorry (5.5 tonne < Gross vehicle weight <= 38 tonne)	EPD *	105	2	108	110			108		
			Water Pump, Submersible(electric)	CNP283	85	2	88		Movable noise barrier	-10	78		
	В3	Ground											
		reinstatement	Concrete Lorry Mixer	CNP044 Dynapac model LT700	109	2	112		Movable noise barrier	-10	102	105	
			Power rammer (petrol)	(EPD-00536)	107	2	110	115	Movable noise barrier	-10	100		İ
			Poker, vibratory, hand-held (electric)	EPD *	102	2	105		Movable noise barrier	-10	95	100	
			Roller, vibratory	SAKAI model 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	3	110	110			110	110	
			Excavator, wheeled/tracked	KATO model HD820V (EPD-01233)	99	2	102	110	Movable noise barrier	-5	97		
	C2	Concreting Works	Concrete Lorry Mixer	CNP044	109	3	114		Movable noise barrier	-10	104	405	
			Generator, super silenced	CNP103	95	3	100	114	Movable noise barrier	-10	90		
			Poker, vibratory, hand-held	EPD *		2	105		Movable noise barrier	-10	95		
			(electric)		102								112
	C3	Road Finishing	Air Compressor	CNP001	100	2	103		Movable noise barrier	-10	93		
			Asphalt Paver	VOLVO model. No. ABG5770 (EPD-01226)	104	2	107				107		
			Generator, super silenced	CNP103	95	2	98		Movable noise barrier	-10	88		
			Lorry (5.5 tonne < Gross vehicle weight <= 38 tonne)	EPD *	105	3	110	114			110	112	
				Dynapac model LT700 (EPD-00536)	107	2	110		Movable noise barrier	-10	100		
			Power rammer (petrol) Road roller	HITACHI model CP220- 3 (EPD-01183)	97	2	100				100		
(5)	1 54	0							I				l I
(D) Foundation	D1	General foundation construction	Air Compressor	CNP001	100	5	107		Movable noise barrier	-10	97		
			Bar bender and cutter (electric		90	5	97		Movable noise barrier	-10	87		
			Mobile Crane	Hitachi Sumitomo SCX700, 132kW	101	3	106	06	Movable noise barrier	-5	101		
			Generator, super silenced Lorry (5.5 tonne < Gross	CNP103	95	4	101		Movable noise barrier	-10	91		
			vehicle weight <= 38 tonne)	EPD *	105	3	110	118			110	112	
			Drill/grinder, hand-held (electric)	CNP065	98	4	104		Movable noise barrier	-10	94		
				KATO model HD820V		3	104		Movable noise barrier	-5	99		
			Excavator, wheeled/tracked Saw, circular, wood	(EPD-01233) CNP201	99 108	5	115		Movable noise barrier	-10	105		444
			Water pump, submersible										114
Ì	1		(electric)	CNP283	85	4	91		Movable noise barrier	-10	81		

			PMEs Inventory - Mitigated (with QPMEs and Movable Noise Barriers)										
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)
	D2	Piling works	Generator, super silenced	CNP103	95	4	101		Movable noise barrier	-10	91		1
			Continuous Flight Auger (CFA) piles (piling, earth auger)		114	3	119	119	Provision of acoustic shielding	-5		114	
	D3	Concreting works	Concrete Lorry Mixer	CNP044	109	5	116		Movable noise barrier	-10	106		
			Generator, super silenced	CNP103	95	4	101	117	Movable noise barrier	-10	91	107	
			Poker, vibratory, hand-held (electric)	EPD *	102	4	108		Movable noise barrier	-10	98		
(E)	E1	General construction	Air Compressor	CNP001	100	6	108		Movable noise barrier	-10	98		
Superstructure		works	Bar bender and cutter (electric)	CNP021	90	9	100		Movable noise barrier	-10	90		
			Mobile Crane	Hitachi Sumitomo SCX700, 132kW	101	3	106	120	Movable noise barrier	-5	101	110	110
			Drill/grinder, hand-held (electric)	CNP065	98	10	108		Movable noise barrier	-10	98		
			Generator, super silenced	CNP103	95	4	101		Movable noise barrier	-10			
			Saw, circular, wood	CNP201	108	12	119		Movable noise barrier	-10	109		
	E2	Concreting works	Concrete Lorry Mixer	CNP044	109	8	118		Movable noise barrier	-10	108	110	
			Concrete Pump	CNP047	109	4	115	120	Movable noise barrier	-10			
			Generator, super silenced Poker, vibratory, hand-held	CNP103	95	4	101		Movable noise barrier	-10			
			(electric)	EPD *	102	7	110		Movable noise barrier	-10	100		
(F) Sub-structure (Pile		General pile cap construction	Bar bender and cutter (electric)	CNP021	90	10	100		Movable noise barrier	-10	90	2 108	
Cap)			Generator, super silenced	CNP103	95	5	102	109	Movable noise barrier	-10	92		
			Lorry (5.5 tonne < Gross vehicle weight <= 38 tonne)	EPD *	105	2	108			0	108		
	F2	Concreting works	Concrete Lorry Mixer	CNP044	109	3	114		Movable noise barrier	-5	109		
			Concrete Pump	CNP047	109	1	109	116	Movable noise barrier	-10	99	110	110
			Generator, super silenced	CNP103	95	6	103		Movable noise barrier	-10	93		
			Poker, vibratory, hand-held (electric)	EPD *	102	2	105		Movable noise barrier	-10	95		
	F3	Backfill and reinstate	<u> </u>	<u> </u>	_			_					
	гэ	Dackiii and remstate	Excavator, wheeled/tracked	KATO model HD820V (EPD-01233)	99	2	102	103	Movable noise barrier	-5	-5 97 98		
			Roller, vibratory	SAKAI model SW250-1 (EPD-00509)	95	1	95		Movable noise barrier	-5	90		
(G) Dump Trucks Travelling on Haul Road During Site Formation		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)

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)

^{*} 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.

[#] 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).

[@] 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.

Appendix 4-6A-4 Calculation of Construction Noise Level (Mitigated Scenario with QPMEs and Movable Noise Barriers)

| NSR | Construction Activity | | | 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
B</th><th>Site Formation, Filling and Excavation Construction of Underground Services and Utilities</th><th>112
110</th><th>420
420</th><th>50
50</th><th>470
470</th><th>-61.4
-61.4</th><th>3.0
3.0</th><th>54
52</th></tr><tr><td></td><td>C</td><td>Road works</td><td>112</td><td>420</td><td>50</td><td>470</td><td>-61.4</td><td>3.0</td><td>54</td></tr><tr><td></td><td>D</td><td>Foundation</td><td>114</td><td>420</td><td>50</td><td>470</td><td>-61.4</td><td>3.0</td><td>56</td></tr><tr><td></td><td>E
F</td><td>Superstructure Sub-structure (Pile Cap)</td><td>110
110</td><td>420
420</td><td>50
50</td><td>470
470</td><td>-61.4
-61.4</td><td>3.0</td><td>52
52</td></tr><tr><td>V2</td><td>А</td><td>Site Formation, Filling and Excavation</td><td>112</td><td>382</td><td>50</td><td>432</td><td>-60.7</td><td>3.0</td><td>54</td></tr><tr><td>NZ</td><td>В</td><td>Construction of Underground Services and Utilities</td><td>110</td><td>382</td><td>50</td><td>432</td><td>-60.7</td><td>3.0</td><td>52</td></tr><tr><td></td><td>С</td><td>Road works</td><td>112</td><td>382</td><td>50</td><td>432</td><td>-60.7</td><td>3.0</td><td>54</td></tr><tr><td></td><td>D
E</td><td>Foundation Superstructure</td><td>114</td><td>382
382</td><td>50
50</td><td>432
432</td><td>-60.7
-60.7</td><td>3.0</td><td>56
52</td></tr><tr><td></td><td>F</td><td>Sub-structure (Pile Cap)</td><td>110</td><td>382</td><td>50</td><td>432</td><td>-60.7</td><td>3.0</td><td>52</td></tr><tr><td>N3</td><td>Α</td><td>Site Formation, Filling and Excavation</td><td>112</td><td>216</td><td>50</td><td>266</td><td>-56.5</td><td>3.0</td><td>59</td></tr><tr><td></td><td>В</td><td>Construction of Underground Services and Utilities</td><td>110</td><td>216</td><td>50</td><td>266</td><td>-56.5</td><td>3.0</td><td>57</td></tr><tr><td></td><td>C
D</td><td>Road works
Foundation</td><td>112
114</td><td>216
216</td><td>50
50</td><td>266
266</td><td>-56.5
-56.5</td><td>3.0</td><td>59
61</td></tr><tr><td></td><td>Е</td><td>Superstructure</td><td>110</td><td>216</td><td>50</td><td>266</td><td>-56.5</td><td>3.0</td><td>57</td></tr><tr><td></td><td>F</td><td>Sub-structure (Pile Cap)</td><td>110</td><td>216</td><td>50</td><td>266</td><td>-56.5</td><td>3.0</td><td>57</td></tr><tr><td>N4</td><td>Α</td><td>Site Formation, Filling and Excavation</td><td>112</td><td>174</td><td>50</td><td>224</td><td>-55.0</td><td>3.0</td><td>60</td></tr><tr><td></td><td>В</td><td>Construction of Underground Services and Utilities</td><td>110
112</td><td>174</td><td>50</td><td>224
224</td><td>-55.0</td><td>3.0</td><td>58</td></tr><tr><td></td><td>C
D</td><td>Road works
Foundation</td><td>112</td><td>174
174</td><td>50
50</td><td>224</td><td>-55.0
-55.0</td><td>3.0</td><td>60
62</td></tr><tr><td></td><td>E</td><td>Superstructure</td><td>110</td><td>174</td><td>50</td><td>224</td><td>-55.0</td><td>3.0</td><td>58</td></tr><tr><td></td><td>F</td><td>Sub-structure (Pile Cap)</td><td>110</td><td>174</td><td>50</td><td>224</td><td>-55.0</td><td>3.0</td><td>58</td></tr><tr><td>V5</td><td>A</td><td>Site Formation, Filling and Excavation</td><td>112</td><td>178</td><td>50</td><td>228</td><td>-55.1</td><td>3.0</td><td>60</td></tr><tr><td></td><td>B
C</td><td>Construction of Underground Services and Utilities
Road works</td><td>110
112</td><td>178
178</td><td>50
50</td><td>228
228</td><td>-55.1
-55.1</td><td>3.0</td><td>58
60</td></tr><tr><td></td><td>D</td><td>Foundation</td><td>114</td><td>178</td><td>50</td><td>228</td><td>-55.1</td><td>3.0</td><td>62</td></tr><tr><td></td><td>E
F</td><td>Superstructure Sub-structure (Pile Cap)</td><td>110
110</td><td>178
178</td><td>50
50</td><td>228
228</td><td>-55.1
-55.1</td><td>3.0
3.0</td><td>58
58</td></tr><tr><td></td><td></td><td>Sub-structure (File Cap)</td><td>110</td><td></td><td>30</td><td></td><td>-55.1</td><td>3.0</td><td>36</td></tr><tr><td rowspan=2>N6</td><td>A
B</td><td>Site Formation, Filling and Excavation</td><td>112
110</td><td>242
242</td><td>50
50</td><td>292
292</td><td>-57.3
-57.3</td><td>3.0</td><td>58
56</td></tr><tr><td>С</td><td>Construction of Underground Services and Utilities Road works</td><td>110</td><td>242</td><td>50</td><td>292</td><td>-57.3</td><td>3.0</td><td>58</td></tr><tr><td></td><td>D</td><td>Foundation</td><td>114</td><td>242</td><td>50</td><td>292</td><td>-57.3</td><td>3.0</td><td>60</td></tr><tr><td></td><td>E
F</td><td>Superstructure Sub-structure (Pile Cap)</td><td>110
110</td><td>242
242</td><td>50
50</td><td>292
292</td><td>-57.3
-57.3</td><td>3.0</td><td>56
56</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
B</td><td>Site Formation, Filling and Excavation Construction of Underground Services and Utilities</td><td>112
110</td><td>147
147</td><td>50
50</td><td>197
197</td><td>-53.9
-53.9</td><td>3.0</td><td>61
59</td></tr><tr><td></td><td>C</td><td>Road works</td><td>112</td><td>147</td><td>50</td><td>197</td><td>-53.9</td><td>3.0</td><td>61</td></tr><tr><td rowspan=2></td><td>D
E</td><td>Foundation</td><td>114
110</td><td>147
147</td><td>50
50</td><td>197
197</td><td>-53.9
-53.9</td><td>3.0</td><td>63
59</td></tr><tr><td>F</td><td>Superstructure Sub-structure (Pile Cap)</td><td>110</td><td>147</td><td>50</td><td>197</td><td>-53.9</td><td>3.0</td><td>59</td></tr><tr><td>NO</td><td></td><td></td><td>440</td><td>^</td><td></td><td></td><td>10.5</td><td>2.0</td><td>70</td></tr><tr><td>N8</td><td></td><td>Site Formation, Filling and Excavation</td><td>112</td><td>3</td><td>50</td><td>53</td><td>-42.5</td><td>3.0</td><td>73</td></tr><tr><td></td><td>A
B</td><td></td><td>110</td><td>3</td><td>50</td><td>53</td><td>-42.5</td><td>3.0</td><td>71</td></tr><tr><td></td><td>B
C</td><td>Construction of Underground Services and Utilities
Road works</td><td>112</td><td>3</td><td>50</td><td>53</td><td>-42.5</td><td>3.0</td><td>73</td></tr><tr><td></td><td>B
C
D</td><td>Construction of Underground Services and Utilities
Road works
Foundation</td><td>112
114</td><td>3</td><td>50
50</td><td>53
53</td><td>-42.5
-42.5</td><td>3.0
3.0</td><td>73
75</td></tr><tr><td></td><td>B
C</td><td>Construction of Underground Services and Utilities
Road works</td><td>112</td><td>3</td><td>50</td><td>53</td><td>-42.5</td><td>3.0</td><td>73</td></tr><tr><td>Na</td><td>B
C
D
E
F</td><td>Construction of Underground Services and Utilities
Road works
Foundation
Superstructure
Sub-structure (Pile Cap)</td><td>112
114
110
110</td><td>3
3
3
3</td><td>50
50
50
50</td><td>53
53
53
53</td><td>-42.5
-42.5
-42.5
-42.5</td><td>3.0
3.0
3.0
3.0</td><td>73
75
71
71</td></tr><tr><td>N9</td><td>B
C
D
E
F</td><td>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</td><td>112
114
110
110
110</td><td>3
3
3
3
3</td><td>50
50
50
50
50
50</td><td>53
53
53
53
53
59</td><td>-42.5
-42.5
-42.5
-42.5
-43.4
-43.4</td><td>3.0
3.0
3.0
3.0
3.0
3.0</td><td>73
75
71
71
71
72
70</td></tr><tr><td>N9</td><td>B
C
D
E
F</td><td>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>112
114
110
110
112
110
112</td><td>3
3
3
3
3
9
9</td><td>50
50
50
50
50
50
50
50</td><td>53
53
53
53
53
59
59</td><td>-42.5
-42.5
-42.5
-42.5
-43.4
-43.4
-43.4</td><td>3.0
3.0
3.0
3.0
3.0
3.0
3.0</td><td>73
75
71
71
72
70
72</td></tr><tr><td>N9</td><td>B
C
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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>N15</th><th>Α</th><th>Site Formation, Filling and Excavation</th><th>112</th><th>531</th><th>50</th><th>581</th><th>-63.3</th><th>3.0</th><th>52</th></tr><tr><td></td><td>В</td><td colspan=2></td><td>531</td><td>50</td><td>581</td><td>-63.3</td><td>3.0</td><td>50</td></tr><tr><td></td><td>С</td><td colspan=2></td><td>531</td><td>50</td><td>581</td><td>-63.3</td><td>3.0</td><td>52</td></tr><tr><td></td><td>D</td><td colspan=2></td><td>531</td><td>50</td><td>581</td><td>-63.3</td><td>3.0</td><td>54</td></tr><tr><td></td><td>Е</td><td>Superstructure</td><td>110</td><td>531</td><td>50</td><td>581</td><td>-63.3</td><td>3.0</td><td>50</td></tr><tr><td></td><td>F</td><td>Sub-structure (Pile Cap)</td><td>110</td><td>531</td><td>50</td><td>581</td><td>-63.3</td><td>3.0</td><td>50</td></tr><tr><td>N16</td><td>Α</td><td>Site Formation, Filling and 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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	470	10	55
N2	G	Dump Trucks Travelling on Haul Road	10	115	432	10	56
N3	G	Dump Trucks Travelling on Haul Road	10	115	266	10	58
N4	G	Dump Trucks Travelling on Haul Road	10	115	224	10	59
N5	G	Dump Trucks Travelling on Haul Road	10	115	228	10	58
N6	G	Dump Trucks Travelling on Haul Road	10	115	292	10	57
N7	G	Dump Trucks Travelling on Haul Road	10	115	197	10	59
N8	G	Dump Trucks Travelling on Haul Road	10	115	53	10	65
N9	G	Dump Trucks Travelling on Haul Road	10	115	59	10	64
N10	G	Dump Trucks Travelling on Haul Road	10	115	309	10	57
N11	G	Dump Trucks Travelling on Haul Road	10	115	446	10	56
N12	G	Dump Trucks Travelling on Haul Road	10	115	432	10	56
N13	G	Dump Trucks Travelling on Haul Road	10	115	520	10	55
N14	G	Dump Trucks Travelling on Haul Road	10	115	569	10	54
N15	G	Dump Trucks Travelling on Haul Road	10	115	581	10	54
N16	G	Dump Trucks Travelling on Haul Road	10	115	292	10	57
N17	G	Dump Trucks Travelling on Haul Road	10	115	519	10	55 57
N18	G	Dump Trucks Travelling on Haul Road	10	115	325	10	
N19	G	Dump Trucks Travelling on Haul Road	10	115	371	10	56
N20	G	Dump Trucks Travelling on Haul Road	10	115	260	10	58

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,
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.