

## **Appendix 4-9**

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

**Appendix 4-9-1 Summary Table of Calculated Construction Noise Level at NSRs (Mitigated Scenario with QPMEs and Movable Noise Barriers)**

NSR Label	Descriptions	Construction Noise Level from Each Work Group												Highest Noise Level, dB(A)	Noise Criteria, dB(A)
		Construction Noise Level from Each Work Group						Cumulative Construction Noise Due to Concurrent Works							
		A	B	C	D	E	F	A+F	B+D	B+E	C+E				
	Site Formation, Filling and Excavation	Construction of Underground Services and Utilities	Road works	Foundation	Superstructure	Dump Trucks Travelling on Haul Road									
N1	Fairview Park	56	55	56	56	55	55	59	59	58	59	<b>59</b>	75		
N2	Fairview Park	56	55	56	56	55	55	58	58	58	58	<b>58</b>	75		
N3	Fairview Park	61	60	61	61	60	58	63	63	63	63	<b>63</b>	75		
N4	Fairview Park	62	61	62	62	61	58	63	64	64	64	<b>64</b>	75		
N5	Fairview Park	56	55	56	56	55	55	59	59	58	59	<b>59</b>	75		
N6	Chuk Yuen Tsuen	57	56	57	57	56	55	59	59	59	59	<b>59</b>	75		
N7	Chuk Yuen Tsuen	56	55	56	56	55	55	59	59	58	59	<b>59</b>	75		
N8	Bethel High School	60	59	60	60	59	57	61	62	62	62	<b>62</b>	70 (65 during examination)		
N9	Helene Terrace	64	63	64	64	63	59	65	67	66	67	<b>67</b>	75		
N10	Villa Camllia	63	62	63	63	62	59	65	66	65	66	<b>66</b>	75		
N11	Fairview Park	59	58	59	59	58	56	61	61	61	61	<b>61</b>	75		
N12	Wong Chan Sook Ying Memorial School	58	57	58	58	57	56	60	61	60	61	<b>61</b>	70 (65 during examination)		
N13	Man Yuen Tsuen	59	58	59	59	58	56	61	61	61	61	<b>61</b>	75		
N14	Chuk Yuen Tsuen	57	56	57	57	56	56	59	60	59	60	<b>60</b>	75		
N15	Hang Fook Garden	58	57	58	58	57	56	60	61	60	61	<b>61</b>	75		
N16	Ha San Wai	58	57	58	58	57	56	60	61	60	61	<b>61</b>	75		
N17	Ha San Wai	57	56	57	57	56	56	60	60	59	60	<b>60</b>	75		
<b>Planned NSRs</b>															
N1P	Planned Development at REC Site	61	60	61	61	60	57	62	63	63	63	<b>63</b>	75		
N2P	Planned Development at REC Site	64	63	64	64	63	59	65	67	66	67	<b>67</b>	75		
N3P	Planned Development at RD Site	68	67	68	68	67	61	69	71	70	71	<b>71</b>	75		
V1P	Village Zone Development	68	67	68	68	67	61	69	70	70	70	<b>70</b>	75		
V2P	Planned R(D) Zone	71	70	71	71	70	63	72	74	73	74	<b>74</b>	75		
V3P	Planned R(D) Zone	66	65	66	66	65	60	67	68	68	68	<b>68</b>	75		
V4P	Planned "V" Zone	71	70	71	71	70	63	72	74	73	74	<b>74</b>	75		

**Appendix 4-9-2 Plant Inventory and Calculated SWLs for Construction Noise Impact Assessment for Planned Kam Pok Road Site (with QPMEs, Movable Noise Barriers)**

Construction Activity	Sub. Work Group	PMEs Inventory - Mitigated (with QPMEs and Movable Noise Barriers)								Total SWL, dB(A)	Highest SWL of Each Construction Activity, dB(A) <sup>⊗</sup>
		Powered Mechanical Equipment	Reference	SWL per unit	Qty	Total, SWL	At-source Noise Mitigation Measure	Noise Barrier Effect **	Total SWL (Mitigated)		
(A) Site Formation, Filling and Excavation	A1 Excavation and Filling	Air Compressor	CNP001	100	2	103	Movable noise barrier	-10	93	111	111
		Breaker, mini-robot mounted	EPD *	115	2	118	Movable noise barrier and Installation of commercially made sound proof hammer bracket # & ##	-10	108		
		Excavator, wheeled/tracked	KATO model HD820V (EPD-01233)	99	3	104	Movable noise barrier	-5	99		
		Generator, super silenced	CNP103	95	3	100	Movable noise barrier	-10	90		
		Dump Truck (5.5 tonne < Gross vehicle weight <= 38 tonne)	EPD *	105	2	108			108		
	A2 Ground Compression	Roller, vibratory	SAKAI model SW250-1 (EPD-00509)	95	2	98			98	106	
		Bulldozer	Komatsu modelled D21A-8	102	2	105			105		
(B) Construction of Underground Services and Utilities	B1 Earthwork	Breaker, mini-robot mounted	EPD *	115	1	115	Movable noise barrier and Installation of commercially made sound proof hammer bracket # & ##	-10	105	110	110
		Dump Truck (5.5 tonne < Gross vehicle weight <= 38 tonne)	EPD *	105	2	108			108		
		Excavator, mini-robot mounted	EPD *	94	2	97	Movable noise barrier	-5	92		
					0				0		
	B2 Utilities laying	Air Compressor	CNP001	100	2	103	Movable noise barrier	-10	93	105	
		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			105		
		Water Pump, Submersible(electric)	CNP283	85	2	88	Movable noise barrier	-10	78		
	B3 Ground reinstatement	Concrete Lorry Mixer	CNP044	109	1	109	Movable noise barrier	-10	99	102	
		Power rammer (petrol)	Dynapac model LT700 (EPD-00536)	107	1	107	Movable noise barrier	-10	97		
		Poker, vibratory, hand-held (electric)	EPD *	102	1	102	Movable noise barrier	-10	92		
		Roller, vibratory	SAKAI model SW250-1 (EPD-00509)	95	1	95			95		
	(C) Road Works	C1 Earthwork	Dump Truck (5.5 tonne < Gross vehicle weight <= 38 tonne)	EPD *	105	2	108			108	
Excavator, wheeled/tracked			KATO model HD820V (EPD-01233)	99	1	99	Movable noise barrier	-5	94		
C2 Concreting Works		Concrete Lorry Mixer	CNP044	109	2	112	Movable noise barrier	-10	102	103	
		Generator, super silenced	CNP103	95	2	98	Movable noise barrier	-10	88		
		Poker, vibratory, hand-held (electric)	EPD *	102	2	105	Movable noise barrier	-10	95		
C3 Road Finishing		Air Compressor	CNP001	100	2	103	Movable noise barrier	-10	93	111	
		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	2	108			108		
	Power rammer (petrol)	Dynapac model LT700 (EPD-00536)	107	1	107	Movable noise barrier	-10	97			
	Road roller	HITACHI model CP220-3 (EPD-01183)	97	1	97			97			
(D) Foundation	D1 General foundation construction	Air Compressor	CNP001	100	5	107	Movable noise barrier	-10	97	111	
		Bar bender and cutter (electric)	CNP021	90	5	97	Movable noise barrier	-10	87		
		Mobile Crane	Hitachi Sumitomo SCX700, 132kW	101	3	106	Movable noise barrier	-5	101		
		Generator, super silenced	CNP103	95	4	101	Movable noise barrier	-10	91		
		Lorry (5.5 tonne < Gross vehicle weight <= 38 tonne)	EPD *	105	2	108			108		
		Drill/grinder, hand-held (electric)	CNP065	98	4	104	Movable noise barrier	-10	94		

PMEs Inventory - Mitigated (with QPMEs and Movable Noise Barriers)												
Construction Activity	Sub. 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	111		
		Saw, circular, wood	CNP201	108	4	114	Movable noise barrier	-10	104			
		Water pump, submersible (electric)	CNP283	85	4	91	Movable noise barrier	-10	81			
	D2	Piling works	Generator, super silenced	CNP103	95	4	101	Movable noise barrier	-10	91	108	
			Non-percussive piling machine	@@	115	2	118	Movable noise barrier, and provision of acoustic shielding material	-10	108		
	D3	Concreting Works	Concrete Lorry Mixer	CNP044	109	3	114	Movable noise barrier	-10	104	105	
			Generator, super silenced	CNP103	95	4	101	Movable noise barrier	-10	91		
			Poker, vibratory, hand-held (electric)	EPD *	102	3	107	Movable noise barrier	-10	97		
	(E) Superstructure	E1	General construction works	Air Compressor	CNP001	100	6	108	Movable noise barrier	-10	98	110
				Bar bender and cutter (electric)	CNP021	90	9	100	Movable noise barrier	-10	90	
Mobile Crane				Hitachi Sumitomo SCX700, 132kW	101	3	106	Movable noise barrier	-5	101		
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	91		
Saw, circular, wood				CNP201	108	7	116	Movable noise barrier	-10	106		
E2		Concreting works	Concrete Lorry Mixer	CNP044	109	8	118	Movable noise barrier	-10	108	110	
			Concrete Pump	CNP047	109	4	115	Movable noise barrier	-10	105		
			Generator, super silenced	CNP103	95	4	101	Movable noise barrier	-10	91		
			Poker, vibratory, hand-held (electric)	EPD *	102	7	110	Movable noise barrier	-10	100		
(F) Dump Trucks Travelling on Haul Road During Site Formation	F	Dump Trucks Travelling on Haul Road	Dump Truck (5.5 tonne < Gross vehicle weight <= 38 tonne)	EPD *	105	8	114		114	114	114	

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>)

\* 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)

\*\* 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. Construction activities of respective sub-work groups under each Construction Activity will not overlap with one another.  
 @@ Non-percussive type piling machine will be used, subject to the detailed design stage the exact type of non-percussive piling machine will be proposed. To be conservative, noise level of commonly used non-percussive piling machines according to the Technical Memorandum on Noise From Construction Work Other Than Percussive Piling, has been used for noise calculation

The above plant inventory has been based on assumption and plant inventory of similar development project.

Appendix 4-9-3 Calculation of Construction Noise Level (Mitigated Scenario with QPMEs and Movable Noise Barriers)

NSR	Work Type	Construction Activities	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	111	272	43	315	-57.9	3.0	56
	B	Construction of Underground Services and Utilities	110	272	43	315	-57.9	3.0	55
	C	Road works	111	272	43	315	-57.9	3.0	56
	D	Foundation	111	272	43	315	-57.9	3.0	56
	E	Superstructure	110	272	43	315	-57.9	3.0	55
N2	A	Site Formation, Filling and Excavation	111	286	42	328	-58.3	3.0	56
	B	Construction of Underground Services and Utilities	110	286	42	328	-58.3	3.0	55
	C	Road works	111	286	42	328	-58.3	3.0	56
	D	Foundation	111	286	42	328	-58.3	3.0	56
	E	Superstructure	110	286	42	328	-58.3	3.0	55
N3	A	Site Formation, Filling and Excavation	111	130	50	180	-53.1	3.0	61
	B	Construction of Underground Services and Utilities	110	130	50	180	-53.1	3.0	60
	C	Road works	111	130	50	180	-53.1	3.0	61
	D	Foundation	111	130	50	180	-53.1	3.0	61
	E	Superstructure	110	130	50	180	-53.1	3.0	60
N4	A	Site Formation, Filling and Excavation	111	112	50	162	-52.2	3.0	62
	B	Construction of Underground Services and Utilities	110	112	50	162	-52.2	3.0	61
	C	Road works	111	112	50	162	-52.2	3.0	62
	D	Foundation	111	112	50	162	-52.2	3.0	62
	E	Superstructure	110	112	50	162	-52.2	3.0	61
N5	A	Site Formation, Filling and Excavation	111	257	50	307	-57.7	3.0	56
	B	Construction of Underground Services and Utilities	110	257	50	307	-57.7	3.0	55
	C	Road works	111	257	50	307	-57.7	3.0	56
	D	Foundation	111	257	50	307	-57.7	3.0	56
	E	Superstructure	110	257	50	307	-57.7	3.0	55
N6	A	Site Formation, Filling and Excavation	111	242	50	292	-57.3	3.0	57
	B	Construction of Underground Services and Utilities	110	242	50	292	-57.3	3.0	56
	C	Road works	111	242	50	292	-57.3	3.0	57
	D	Foundation	111	242	50	292	-57.3	3.0	57
	E	Superstructure	110	242	50	292	-57.3	3.0	56
N7	A	Site Formation, Filling and Excavation	111	262	50	312	-57.9	3.0	56
	B	Construction of Underground Services and Utilities	110	262	50	312	-57.9	3.0	55
	C	Road works	111	262	50	312	-57.9	3.0	56
	D	Foundation	111	262	50	312	-57.9	3.0	56
	E	Superstructure	110	262	50	312	-57.9	3.0	55
N8	A	Site Formation, Filling and Excavation	111	163	50	213	-54.5	3.0	60
	B	Construction of Underground Services and Utilities	110	163	50	213	-54.5	3.0	59
	C	Road works	111	163	50	213	-54.5	3.0	60
	D	Foundation	111	163	50	213	-54.5	3.0	60
	E	Superstructure	110	163	50	213	-54.5	3.0	59
N9	A	Site Formation, Filling and Excavation	111	72	50	122	-49.7	3.0	64
	B	Construction of Underground Services and Utilities	110	72	50	122	-49.7	3.0	63
	C	Road works	111	72	50	122	-49.7	3.0	64
	D	Foundation	111	72	50	122	-49.7	3.0	64
	E	Superstructure	110	72	50	122	-49.7	3.0	63
N10	A	Site Formation, Filling and Excavation	111	86	50	136	-50.7	3.0	63
	B	Construction of Underground Services and Utilities	110	86	50	136	-50.7	3.0	62
	C	Road works	111	86	50	136	-50.7	3.0	63
	D	Foundation	111	86	50	136	-50.7	3.0	63
	E	Superstructure	110	86	50	136	-50.7	3.0	62
N11	A	Site Formation, Filling and Excavation	111	183	50	233	-55.3	3.0	59
	B	Construction of Underground Services and Utilities	110	183	50	233	-55.3	3.0	58
	C	Road works	111	183	50	233	-55.3	3.0	59
	D	Foundation	111	183	50	233	-55.3	3.0	59
	E	Superstructure	110	183	50	233	-55.3	3.0	58
N12	A	Site Formation, Filling and Excavation	111	200	50	250	-55.9	3.0	58
	B	Construction of Underground Services and Utilities	110	200	50	250	-55.9	3.0	57
	C	Road works	111	200	50	250	-55.9	3.0	58
	D	Foundation	111	200	50	250	-55.9	3.0	58
	E	Superstructure	110	200	50	250	-55.9	3.0	57
N13	A	Site Formation, Filling and Excavation	111	186	50	236	-55.4	3.0	59
	B	Construction of Underground Services and Utilities	110	186	50	236	-55.4	3.0	58
	C	Road works	111	186	50	236	-55.4	3.0	59
	D	Foundation	111	186	50	236	-55.4	3.0	59
	E	Superstructure	110	186	50	236	-55.4	3.0	58
N14	A	Site Formation, Filling and Excavation	111	231	50	281	-57.0	3.0	57
	B	Construction of Underground Services and Utilities	110	231	50	281	-57.0	3.0	56
	C	Road works	111	231	50	281	-57.0	3.0	57
	D	Foundation	111	231	50	281	-57.0	3.0	57
N15	A	Site Formation, Filling and Excavation	111	202	50	252	-56.0	3.0	58
	B	Construction of Underground Services and Utilities	110	202	50	252	-56.0	3.0	57
	C	Road works	111	202	50	252	-56.0	3.0	58
	D	Foundation	111	202	50	252	-56.0	3.0	58
	E	Superstructure	110	202	50	252	-56.0	3.0	57
N16	A	Site Formation, Filling and Excavation	111	194	50	244	-55.7	3.0	58
	B	Construction of Underground Services and Utilities	110	194	50	244	-55.7	3.0	57
	C	Road works	111	194	50	244	-55.7	3.0	58
	D	Foundation	111	194	50	244	-55.7	3.0	58
	E	Superstructure	110	194	50	244	-55.7	3.0	57
N17	A	Site Formation, Filling and Excavation	111	221	48	269	-56.6	3.0	57
	B	Construction of Underground Services and Utilities	110	221	48	269	-56.6	3.0	56
	C	Road works	111	221	48	269	-56.6	3.0	57
	D	Foundation	111	221	48	269	-56.6	3.0	57
	E	Superstructure	110	221	48	269	-56.6	3.0	56

NSR	Work Type	Construction Activities	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)
N1P	A	Site Formation, Filling and Excavation	111	133	50	183	-53.2	3.0	61
	B	Construction of Underground Services and Utilities	110	133	50	183	-53.2	3.0	60
	C	Road works	111	133	50	183	-53.2	3.0	61
	D	Foundation	111	133	50	183	-53.2	3.0	61
	E	Superstructure	110	133	50	183	-53.2	3.0	60
N2P	A	Site Formation, Filling and Excavation	111	74	50	124	-49.9	3.0	64
	B	Construction of Underground Services and Utilities	110	74	50	124	-49.9	3.0	63
	C	Road works	111	74	50	124	-49.9	3.0	64
	D	Foundation	111	74	50	124	-49.9	3.0	64
	E	Superstructure	110	74	50	124	-49.9	3.0	63
N3P	A	Site Formation, Filling and Excavation	111	30	50	80	-46.0	3.0	68
	B	Construction of Underground Services and Utilities	110	30	50	80	-46.0	3.0	67
	C	Road works	111	30	50	80	-46.0	3.0	68
	D	Foundation	111	30	50	80	-46.0	3.0	68
	E	Superstructure	110	30	50	80	-46.0	3.0	67
V1P	A	Site Formation, Filling and Excavation	111	32	50	82	-46.3	3.0	68
	B	Construction of Underground Services and Utilities	110	32	50	82	-46.3	3.0	67
	C	Road works	111	32	50	82	-46.3	3.0	68
	D	Foundation	111	32	50	82	-46.3	3.0	68
	E	Superstructure	110	32	50	82	-46.3	3.0	67
V2P	A	Site Formation, Filling and Excavation	111	6	50	56	-42.9	3.0	71
	B	Construction of Underground Services and Utilities	110	6	50	56	-42.9	3.0	70
	C	Road works	111	6	50	56	-42.9	3.0	71
	D	Foundation	111	6	50	56	-42.9	3.0	71
	E	Superstructure	110	6	50	56	-42.9	3.0	70
V3P	A	Site Formation, Filling and Excavation	111	52	50	102	-48.2	3.0	66
	B	Construction of Underground Services and Utilities	110	52	50	102	-48.2	3.0	65
	C	Road works	111	52	50	102	-48.2	3.0	66
	D	Foundation	111	52	50	102	-48.2	3.0	66
	E	Superstructure	110	52	50	102	-48.2	3.0	65
V4P	A	Site Formation, Filling and Excavation	111	26	30	56	-42.9	3.0	71
	B	Construction of Underground Services and Utilities	110	26	30	56	-42.9	3.0	70
	C	Road works	111	26	30	56	-42.9	3.0	71
	D	Foundation	111	26	30	56	-42.9	3.0	71
	E	Superstructure	110	26	30	56	-42.9	3.0	70

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	Work Type	Construction Activities	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	F	Dump Trucks Travelling on Haul Road	8	114	315	10	55
N2	F	Dump Trucks Travelling on Haul Road	8	114	328	10	55
N3	F	Dump Trucks Travelling on Haul Road	8	114	180	10	58
N4	F	Dump Trucks Travelling on Haul Road	8	114	162	10	58
N5	F	Dump Trucks Travelling on Haul Road	8	114	307	10	55
N6	F	Dump Trucks Travelling on Haul Road	8	114	292	10	55
N7	F	Dump Trucks Travelling on Haul Road	8	114	312	10	55
N8	F	Dump Trucks Travelling on Haul Road	8	114	213	10	57
N9	F	Dump Trucks Travelling on Haul Road	8	114	122	10	59
N10	F	Dump Trucks Travelling on Haul Road	8	114	136	10	59
N11	F	Dump Trucks Travelling on Haul Road	8	114	233	10	56
N12	F	Dump Trucks Travelling on Haul Road	8	114	250	10	56
N13	F	Dump Trucks Travelling on Haul Road	8	114	236	10	56
N14	F	Dump Trucks Travelling on Haul Road	8	114	281	10	56
N15	F	Dump Trucks Travelling on Haul Road	8	114	252	10	56
N16	F	Dump Trucks Travelling on Haul Road	8	114	244	10	56
N17	F	Dump Trucks Travelling on Haul Road	8	114	269	10	56
N1P	F	Dump Trucks Travelling on Haul Road	8	114	183	10	57
N2P	F	Dump Trucks Travelling on Haul Road	8	114	124	10	59
N3P	F	Dump Trucks Travelling on Haul Road	8	114	80	10	61
V1P	F	Dump Trucks Travelling on Haul Road	8	114	82	10	61
V2P	F	Dump Trucks Travelling on Haul Road	8	114	56	10	63
V3P	F	Dump Trucks Travelling on Haul Road	8	114	102	10	60
V4P	F	Dump Trucks Travelling on Haul Road	8	114	56	10	63

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) (the horizontal distance between the receiver position and the construction notional noise source is taken in this noise assessment)