Appendix 5.2 Construction Noise Calculation – Unmitigated Scenario

NSR: MP6 - Planned Receiver at Village Zone

Act No.	Construction Element	SWL	Dist[1]	SPL[2]	2009 Dec 1	2010 Jan 2	Feb 3	Mar 4	Apr 5	May 6	Jun 7	Jul 8	Aug 9	Sep 10	Oct 11	Nov 12	Dec 13
Works Area A: Mai Po Ventilation Building (MPV)																	
1	Possession of site	118	33	83	0	83	0	0	0	0	0	0	0	0	0	0	0
2	Diaphragm Wall^	120	58	79	0	0	79	79	79	79	79	79	79	0	0	0	0
3	Bulk Excavation/Fill - Soft^	123	83	80	0	0	0	0	0	0	0	0	80	80	80	80	80
4	Concrete Works	116	83	73	0	0	0	0	0	0	0	0	0	0	0	0	0
5	TBM Erection	115	83	71	0	0	0	0	0	0	0	0	0	0	0	0	0
6	TBM Driving	123	83	79	0	0	0	0	0	0	0	0	0	0	0	0	0
7	Ventilation building construction	112	86	69	0	0	0	0	0	0	0	0	0	0	0	0	0
8	Access road construction	112	46	74	0	0	0	0	0	0	0	0	0	0	0	0	0
9	Operation of access road[3]	117	16	76	0	0	76	76	76	76	76	76	76	76	76	76	76
				Total SPL, dB(A)	-	**83**	**81**	**81**	**81**	**81**	**81**	**81**	**81**	**81**	**81**	**81**	**81**
				Exceedance	-	**8**	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**6**

Act No.	Construction Element	2011 Jan 14	Feb 15	Mar 16	Apr 17	May 18	Jun 19	Jul 20	Aug 21	Sep 22	Oct 23	Nov 24	Dec 25
Works Area A: Mai Po Ventilation Building (MPV)													
1	Possession of site	0	0	0	0	0	0	0	0	0	0	0	0
2	Diaphragm Wall^	0	0	0	0	0	0	0	0	0	0	0	0
3	Bulk Excavation/Fill - Soft^	80	80	0	0	0	0	0	0	0	0	0	0
4	Concrete Works	0	73	73	73	73	0	0	0	0	0	0	0
5	TBM Erection	0	0	0	0	71	71	71	71	71	0	0	0
6	TBM Driving	0	0	0	0	0	0	0	79	79	79	79	79
7	Ventilation building construction	0	0	0	0	0	0	0	0	0	0	0	0
8	Access road construction	0	0	0	0	0	0	0	0	0	0	0	0
9	Operation of access road[3]	76	76	76	76	76	76	76	76	76	76	76	76
	Total SPL, dB(A)	**81**	**82**	**78**	**78**	**78**	**77**	**77**	**81**	**81**	**81**	**81**	**81**
	Exceedance	**6**	**7**	**3**	**3**	**3**	**2**	**2**	**6**	**6**	**6**	**6**	**6**

Act No.	Construction Element	2012 Jan 26	Feb 27	Mar 28	Apr 29	May 30	Jun 31	Jul 32	Aug 33	Sep 34	Oct 35	Nov 36	Dec 37
Works Area A: Mai Po Ventilation Building (MPV)													
1	Possession of site	0	0	0	0	0	0	0	0	0	0	0	0
2	Diaphragm Wall^	0	0	0	0	0	0	0	0	0	0	0	0
3	Bulk Excavation/Fill - Soft^	0	0	0	0	0	0	0	0	0	0	0	0
4	Concrete Works	0	0	0	0	0	0	0	0	0	0	0	0
5	TBM Erection	0	0	0	0	0	0	0	0	0	0	0	0
6	TBM Driving	79	79	79	79	79	79	79	79	79	79	79	79
7	Ventilation building construction	0	0	0	0	0	0	69	69	69	69	69	69
8	Access road construction	0	0	0	0	0	0	0	0	0	0	0	0
9	Operation of access road[3]	76	76	76	76	76	76	76	76	76	76	76	76
	Total SPL, dB(A)	**81**	**81**	**81**	**81**	**81**	**81**	**81**	**81**	**81**	**81**	**81**	**81**
	Exceedance	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**6**

Act No.	Construction Element	2013 Jan 38	Feb 39	Mar 40	Apr 41	May 42	Jun 43	Jul 44	Aug 45	Sep 46	Oct 47	Nov 48	Dec 49
Works Area A: Mai Po Ventilation Building (MPV)													
1	Possession of site	0	0	0	0	0	0	0	0	0	0	0	0
2	Diaphragm Wall^	0	0	0	0	0	0	0	0	0	0	0	0
3	Bulk Excavation/Fill - Soft^	0	0	0	0	0	0	0	0	0	0	0	0
4	Concrete Works	0	0	0	0	0	0	0	0	0	0	0	0
5	TBM Erection	0	0	0	0	0	0	0	0	0	0	0	0
6	TBM Driving	79	0	0	0	0	0	0	0	0	0	0	0
7	Ventilation building construction	69	69	69	0	0	0	0	0	0	0	0	0
8	Access road construction	0	0	0	74	74	74	0	0	0	0	0	0
9	Operation of access road[3]	76	76	76	76	76	76	0	0	0	0	0	0
	Total SPL, dB(A)	**81**	**77**	**77**	**78**	**78**	**78**	-	-	-	-	-	-
	Exceedance	**6**	**2**	**2**	**3**	**3**	**3**	-	-	-	-	-	-

Act No.	Construction Element	2014 Jan 50	Feb 51	Mar 52	Apr 53	May 54	Jun 55	Jul 56	Aug 57	Sep 58	Oct 59	Nov 60	Dec 61
Works Area A: Mai Po Ventilation Building (MPV)													
1	Possession of site	0	0	0	0	0	0	0	0	0	0	0	0
2	Diaphragm Wall^	0	0	0	0	0	0	0	0	0	0	0	0
3	Bulk Excavation/Fill - Soft^	0	0	0	0	0	0	0	0	0	0	0	0
4	Concrete Works	0	0	0	0	0	0	0	0	0	0	0	0
5	TBM Erection	0	0	0	0	0	0	0	0	0	0	0	0
6	TBM Driving	0	0	0	0	0	0	0	0	0	0	0	0
7	Ventilation building construction	0	0	0	0	0	0	0	0	0	0	0	0
8	Access road construction	0	0	0	0	0	0	0	0	0	0	0	0
9	Operation of access road[3]	0	0	0	0	0	0	0	0	0	0	0	0
	Total SPL, dB(A)	-	-	-	-	-	-	-	-	-	-	-	-
	Exceedance	-	-	-	-	-	-	-	-	-	-	-	-

Remarks:

1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.
2. For the calculation of sound pressure levels (SPL), the PMEs adopted for the different construction activities are assumed to be placed at the notional source position of the corresponding construction site according to the 'Technical Memorandum on Noise from Construction Work other than Percussive Piling' by EPD.
3. The calculation of sound pressure levels (SPL) for "operation of haul road/access road" is based on the procedures given in British Standard 5228:Part 1:1997 Noise Control on Construction and Open Sites (BS5228:Part 1).

^Construction activities would not be conducted simultaneously, therefore the max SPL among these activities would be used for the calculation of construction noise of that particular month. These actvities include: activity no. 2 and 3 in month 9.

Noise Exceedance

The use of PME would not be visible when viewed from the assessment facade of NSR. The NSR is considered to be totally screened. According to GW-TM, a noise reduction of 10 dB(A) would be achieved.

Appendix 5.2 Construction Noise Calculation – Unmitigated Scenario

NSR: NT2 - Yau Tam Mei Village House

Act No.	Construction Element	SWL	Dist[1]	SPL[2]	2009 Dec 1	2010 Jan 2	Feb 3	Mar 4	Apr 5	May 6	Jun 7	Jul 8	Aug 9	Sep 10	Oct 11	Nov 12	Dec 13	2011 Jan 14	Feb 15	Mar 16	Apr 17	May 18	Jun 19	Jul 20	Aug 21	Sep 22	Oct 23	Nov 24	Dec 25
Works Area B: Ngau Tam Mei Ventilation Building (NTV)																													
10	Possession of site	118	24	85	0	0	0	0	0	0	0	0	85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	Site Formation	117	24	84	0	0	0	0	0	0	0	0	0	84	84	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	Sheet Pile Walls	115	18	84	0	0	0	0	0	0	0	0	0	0	0	84	84	0	0	0	0	0	0	0	0	0	0	0	0
13	Bulk Excavation/Fill - Soft	120	24	87	0	0	0	0	0	0	0	0	0	0	0	0	0	87	87	87	87	0	0	0	0	0	0	0	0
14	Bulk excavation - Rock	120	24	87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	87	87	87	87	87	87	0	0
15	Concrete Works	115	24	82	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	82	82
16	Drill & Blast Tunnelling	124	24	91	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	TBM Removal	113	24	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	Ventilation building construction	112	84	69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
				Total SPL, dB(A)	-	-	-	-	-	-	-	-	**85**	**84**	**84**	**84**	**84**	**87**	**87**	**87**	**87**	**87**	**87**	**87**	**87**	**87**	**82**	**82**
				Exceedance	-	-	-	-	-	-	-	-	**10**	**9**	**9**	**9**	**9**	**12**	**12**	**12**	**12**	**12**	**12**	**12**	**12**	**12**	**7**	**7**

Act No.	Construction Element	2012 Jan 26	Feb 27	Mar 28	Apr 29	May 30	Jun 31	Jul 32	Aug 33	Sep 34	Oct 35	Nov 36	Dec 37	2013 Jan 38	Feb 39	Mar 40	Apr 41	May 42	Jun 43	Jul 44	Aug 45	Sep 46	Oct 47	Nov 48	Dec 49	2014 Jan 50	Feb 51	Mar 52	Apr 53	May 54	Jun 55	Jul 56	Aug 57	Sep 58	Oct 59	Nov 60	Dec 61
Works Area B: Ngau Tam Mei Ventilation Building (NTV)																																					
10	Possession of site	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	Site Formation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	Sheet Pile Walls	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	Bulk Excavation/Fill - Soft	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	Bulk excavation - Rock	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	Concrete Works	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	Drill & Blast Tunnelling	91	91	91	91	91	91	91	91	91	91	91	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	TBM Removal	0	0	0	0	0	80	80	80	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	Ventilation building construction	0	0	0	0	0	0	69	69	69	69	69	69	69	69	69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total SPL, dB(A)	**91**	**91**	**91**	**91**	**91**	**91**	**91**	**91**	**91**	**91**	**91**	69	69	69	69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Exceedance	**16**	**16**	**16**	**16**	**16**	**16**	**16**	**16**	**16**	**16**	**16**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Remarks:

1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.
2. For the calculation of sound pressure levels (SPL), the PMEs adopted for the different construction activities are assumed to be placed at the notional source position of the corresponding construction site according to the 'Technical Memorandum on Noise from Construction Work other than Percussive Piling' by EPD.

Noise Exceedance

The use of PME would not be visible when viewed from the assessment facade of NSR. The NSR is considered to be totally screened. According to GW-TM, a noise reduction of 10 dB(A) would be achieved.

Appendix 5.2 Construction Noise Calculation – Unmitigated Scenario

NSR: SS9 - House 93, Seasons Villas

Act No.	Construction Element	SWL	Dist[1]	SPL[2]	2009	2010												2011												2012												2013												2014											
					Dec 1	Jan 2	Feb 3	Mar 4	Apr 5	May 6	Jun 7	Jul 8	Aug 9	Sep 10	Oct 11	Nov 12	Dec 13	Jan 14	Feb 15	Mar 16	Apr 17	May 18	Jun 19	Jul 20	Aug 21	Sep 22	Oct 23	Nov 24	Dec 25	Jan 26	Feb 27	Mar 28	Apr 29	May 30	Jun 31	Jul 32	Aug 33	Sep 34	Oct 35	Nov 36	Dec 37	Jan 38	Feb 39	Mar 40	Apr 41	May 42	Jun 43	Jul 44	Aug 45	Sep 46	Oct 47	Nov 48	Dec 49	Jan 50	Feb 51	Mar 52	Apr 53	May 54	Jun 55	Jul 56	Aug 57	Sep 58	Oct 59	Nov 60	Dec 61
Works Area C: Tai Kong Po Emergency Access Point (TPP)																																																																			
19	Access road construction	112	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	Prepare Works Area for site office	115	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	Possession of site	115	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	Sheet Pile Wall	115	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	Bulk Excavation/Fill - Soft	118	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	Bulk excavation - Rock	120	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	Concrete Works	115	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	Drill & Blast Tunnelling	120	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	TBM Removal	113	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	TBM Removal	115	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	Ventilation building construction	112	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	Operation of access road[3]	117	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Works Area D: Shek Kong Stabling Sidings - TBM Driving to the North (SSS)																																																																		
31	Possession of site	118	234	66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	66	66	66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	Diaphragm wall	120	273	66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	66	66	66	66	66	66	66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	Bulk excavation/fill - soft	121	273	68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	68	68	68	68	68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	Bulk excavation - rock	121	273	67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	67	67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	Concrete works	116	273	62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	62	62	62	62	62	62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	TBM erection	115	221	63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	63	63	63	0	0	0	0	0	0	0	63	63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	TBM driving	121	221	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	70	70	70	70	0	0	0	70	70	70	70	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	Ventilation structure construction	114	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	Access road construction	112	6	91	0	0	0	0	0	0	0	91	91	91	91	91	91	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	Nursery	111	222	59	0	0	0	0	0	0	0	0	0	0	0	0	0	59	59	59	59	59	59	59	59	59	59	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	59	59	59	59	59	59	59	59	59	59	59	59	59
41	Operation of access road[3]	117	6	77	0	0	0	0	0	0	0	0	0	0	0	0	0	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77
Works Area D: Shek Kong Stabling Sidings - TBM Driving to the South (SSS)																																																																	
42	Possession of site and access road construction	118	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43	Diaphragm wall	120	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
44	Bulk excavation/fill - soft	121	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	Bulk excavation - rock	121	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	Concrete works	116	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	TBM erection	115	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
48	TBM driving	122	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	Ventilation structure construction	114	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	Operation of access road[3]	117	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Works Area D: Shek Kong Stabling Sidings - Main Stabling & ERS (SSS)																																																																	
51	Possession of site	118	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	Diaphragm wall	120	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	Piling	117	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
54	Bulk excavation/fill - soft (include rivier training)	121	254	68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	68	68	68	68	68	68	68	68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
55	Bulk excavation - rock	120	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
56	Structural Steel Erection	110	261	57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	57	57	57	57	57	57	57	57	57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
57	Ventilation Building and Emergency Vehicular Access Construction	112	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
58	Operation of access road[3]	117	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Works Area E: Tse Uk Tsuen Consturction Shaft																																																																	
59	Possession of site and access road construction	119	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
60	Sheet Pile Wall	119	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61	Bulk Excavation/Fill - Soft	121	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	Bulk excavation - Rock	121	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
63	TBM Removal	113	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
64	TBM Removal	113	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
65	Backfill	119	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
66	Operation of access road[3]	117	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Works Area F: Pat Heung Ventilation Building																																																																	
67	Possession of site and access road construction	118	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
68	Tunnel Portal	120	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
69	Drill & Blast Tunnelling	124	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
70	Ventilation Building and Emergency Vehicular Access Construction	114	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
71	Operation of access road[3]	117	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total SPL, dB(A)				-	-	-	-	-	-	-	**91**	**91**	**91**	**91**	**91**	**91**	**77**	**77**	**77**	**77**	**77**	**77**	**77**	**77**	**78**	**78**	**78**	**79**	**79**	**79**	**79**	**78**	**77**	**77**	**77**	**78**	**78**	**78**	**78**	**78**	**77**	**77**	**77**	**77**	**77**	**77**	**77**	**77**	**77**	**77**	**77**	**77**	**77**	**77**	**77**	**77**	**77**	**77**	**77**	**77**	**77**	**77**	**77**	**77**
	Exceedance				-	-	-	-	-	-	-	**16**	**16**	**16**	**16**	**16**	**16**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**3**

Appendix 5.2 Construction Noise Calculation – Unmitigated Scenario

NSR: SM1 - Sau Shan House, Cheung Shan Estate

Act No.	Construction Element	SWL	Dist[1]	SPL[2]	2009	2010												2011												2012												2013												2014											
					Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61
Works Area G: Shing Mun Ventilation Building (SMV)																																																																			
72	Possession of site	115	31	80	0	0	80	80	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
73	shaft excavation	117	52	77	0	0	0	0	0	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
74	shaft lining	107	49	68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	68	68	68	68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
75	Ventilation building construction	109	43	71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	71	71	71	71	71	71	71	71	71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Works Area H: Shek Yam Consturction Shaft																																																																			
76	Possession of site	118	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
77	Tunnel Portal	121	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
78	Drill & Blast Tunnelling	120	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Works Area I: Shek Yam Works Area																																																																			
79	Possession of site	115	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
80	Site storage	112	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total SPL, dB(A)				-	-	**80**	**80**	**80**	**77**	**77**	**77**	**77**	**77**	**77**	**77**	**77**	**77**	**77**	**77**	**77**	**77**	**77**	**77**	**77**	**77**	68	68	68	68	71	71	71	71	71	71	71	71	71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Exceedance				-	-	**5**	**5**	**5**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Remarks:

1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.
2. For the calculation of sound pressure levels (SPL), the PMEs adopted for the different construction activities are assumed to be placed at the notional source position of the corresponding construction site according to the 'Technical Memorandum on Noise from Construction Work other than Percussive Piling' by EPD.

Noise Exceedance

The use of PME would not be visible when viewed from the assessment facade of NSR. The NSR is considered to be totally screened. According to GW-TM, a noise reduction of 10 dB(A) would be achieved.

Appendix 5.2 Construction Noise Calculation – Unmitigated Scenario

NSR: KC2 - No. 1, Ha Kwai Chung Village

Act No.	Construction Element	SWL	Dist[1]	SPL[2]	2009	2010												2011												2012												2013												2014											
					Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61
Works Area J: Kwai Chung Ventilation Building (KCV)																																																																			
81	Possession of site	118	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
82	Tunnel portal	122	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
83	Drill & Blast Tunnelling	124	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
84	Ventilation building construction	114	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Works Area K: Kwai Chung Works Area																																																																			
85	Possession of site	118	124	71	0	0	0	0	0	0	71	71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
86	Site storage	112	124	65	0	0	0	0	0	0	0	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total SPL, dB(A)				-	-	-	-	-	-	71	72	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Exceedance				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Remarks:

1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.
2. For the calculation of sound pressure levels (SPL), the PMEs adopted for the different construction activities are assumed to be placed at the notional source position of the corresponding construction site according to the 'Technical Memorandum on Noise from Construction Work other than Percussive Piling' by EPD.

Noise Exceedance

The use of PME would not be visible when viewed from the assessment facade of NSR. The NSR is considered to be totally screened. According to GW-TM, a noise reduction of 10 dB(A) would be achieved.

Appendix 5-2 Construction Noise Calculation – Unmitigated Scenario

NSR: NC13 - HKIVE Haking Wong Waterfront Annex

Act No.	Construction Element	SWL	Dist[1]	SPL[2]	2009	2010												2011												2012												2013												2014											
					Dec 1	Jan 2	Feb 3	Mar 4	Apr 5	May 6	Jun 7	Jul 8	Aug 9	Sep 10	Oct 11	Nov 12	Dec 13	Jan 14	Feb 15	Mar 16	Apr 17	May 18	Jun 19	Jul 20	Aug 21	Sep 22	Oct 23	Nov 24	Dec 25	Jan 26	Feb 27	Mar 28	Apr 29	May 30	Jun 31	Jul 32	Aug 33	Sep 34	Oct 35	Nov 36	Dec 37	Jan 38	Feb 39	Mar 40	Apr 41	May 42	Jun 43	Jul 44	Aug 45	Sep 46	Oct 47	Nov 48	Dec 49	Jan 50	Feb 51	Mar 52	Apr 53	May 54	Jun 55	Jul 56	Aug 57	Sep 58	Oct 59	Nov 60	Dec 61
Works Area L: Mei Lei Road Consturction																																																																		
87	Possession of Site	112	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
88	Shaft Piling	110	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
89	Excavate Shaft	112	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
90	Drill & Blast Tunnelling	114	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
91	TBM Removal	110	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
92	TBM Removal	110	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Works Area M: Lai Chi Kok Works Area																																																																		
93	Excavate Shaft	115	311	60	0	0	0	0	0	0	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
94	Possession of work site	120	275	66	0	0	66	66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95	Storage at work site	112	275	58	0	0	0	0	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
96	Possession of works area	120	301	66	0	0	66	66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
97	Storage at works area	112	301	57	0	0	0	0	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
98	Remove foundations	115	193	65	0	0	0	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Works Area N, O: Lai Chi Kok Works Area																																																																		
99	Remove Superstructures	110	49	71	0	0	0	71	71	71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100	Remove Foundations	112	49	73	0	0	0	0	0	0	73	73	73	73	73	73	73	73	73	73	73	73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
101	Remove Superstructures	110	15	81	0	0	0	81	81	81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
102	Remove Foundations	112	15	83	0	0	0	0	0	0	83	83	83	83	83	83	83	83	83	83	83	83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
103	Remove Superstructures	110	22	78	0	0	0	78	78	78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
104	Remove Foundations	112	22	80	0	0	0	0	0	0	80	80	80	80	80	80	80	80	80	80	80	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
105	Reprovisioning of Bridge	112	22	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Works Area P: Nam Cheong Ventilation																																																																		
106	Possession of site	115	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
107	Diaphragm Wall	119	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
108	Bulk Excavation/Fill - Soft	123	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
109	Concrete Works	117	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
110	TBM Erection	115	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111	TBM Driving	124	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
112	Ventilation building construction	114	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Works Area Q: Nam Cheong Works Area																																																																		
113	Possession of site	115	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
114	Demolition of Existing Pile Cap	124	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
115	Extention of H-piles	116	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
116	Removal of Bored Piles	112	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
117	Piling Works	114	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
118	Construction of Pile Cap	117	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Works Area R: Nam Cheong Works Area																																																																		
119	Site storage	112	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
120	Diversion of utils	116	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Works Area S: Nam Cheong Works Area																																																																		
121	Diversion of utils	117	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
122	Site storage	112	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
123	Remove Superstructures	110	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
124	Remove Foundations	112	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
125	Reprovisioning of Bridge	112	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Works Area T: Nam Cheong Works Area																																																																		
126	Possession of site	119	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
127	Site storage	112	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Works Area Y: Nam Cheong Works Area																																																																		
128	Conveyor Belt	89	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
129	Nan Cheong Barge point	126	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total SPL, dB(A)				-	-	69	83	83	83	85	85	85	85	85	85	85	85	85	85	85	85	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	61	61	61	61	61	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Exceedance				-	-	-	13	13	13	15	15	15	15	15	15	15	15	15	15	15	15	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Exceedance during examination				-	-	4	18	18	18	20	20	20	20	20	20	20	20	20	20	20	20	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Remarks:

1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.
2. For the calculation of sound pressure levels (SPL), the PMEs adopted for the different construction activities are assumed to be placed at the notional source position of the corresponding construction site according to the 'Technical Memorandum on Noise from Construction Work other than Percussive Piling' by EPD.

Noise Exceedance

The use of PME would not be visible when viewed from the assessment facade of NSR. The NSR is considered to be totally screened. According to GW-TM, a noise reduction of 10 dB(A) would be achieved.

Appendix 5.2 Construction Noise Calculation - Unmitigated Scenario

NSR: WK8 - Tower 3, The Waterfront

Act No.	Construction Element	SWL	Dist[1]	SPL[2]	2009 Dec 1	2010 Jan 2	Feb 3	Mar 4	Apr 5	May 6	Jun 7	Jul 8	Aug 9	Sep 10	Oct 11	Nov 12	Dec 13	2011 Jan 14	Feb 15	Mar 16	Apr 17	May 18	Jun 19	Jul 20	Aug 21	Sep 22	Oct 23	Nov 24	Dec 25
Works Area U: Hoi Ting Road Works Area																													
130	Possession of site	117	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
131	Site storage	112	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Works Area V: Hoi Ting Road Works Area																													
132	Possession of site	112	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
133	Diaphragm Wall	118	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
134	Bulk Excavation/Fill - Soft	120	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
135	Concrete Works	112	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
136	TBM Removal	113	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
137	Ventilation building construction	112	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
138	Backfilling Works	115	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Works Area V: WKT- Zone 1																													
139	Possession of site	116	262	63	63	63	63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
140	Diaphragm Wall	114	199	63	0	0	0	63	63	63	63	63	63	63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
141	Foundation Works	121	271	68	0	0	0	68	68	68	68	68	68	68	68	68	0	0	0	0	0	0	0	0	0	0	0	0	0
142	Bulk Excavation - soft	120	271	66	0	0	0	0	0	0	0	0	0	0	0	0	66	66	66	66	66	66	66	66	66	66	66	66	0
143	Bulk Excavation - hard	123	271	69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	69	69
144	Concrete Works	116	271	63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	63
145	Top Down Excavation - Soft	112	271	58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
146	Top Down Concrete Works	110	271	56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
147	Top Down Excavation - Hard	128	271	74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
148	Backfilling Works	115	271	61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
149	Concrete Batching Plant - Construction Stage	120	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
150	Concrete Batching Plant - Operation Stage	113	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
151	Concrete Batching Plant - Demolition	106	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Works Area V: WKT- Zone 2																													
152	Possession of site	116	114	70	70	70	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
153	Diaphragm Wall	114	49	75	0	0	0	75	75	75	75	75	75	75	75	75	0	0	0	0	0	0	0	0	0	0	0	0	0
154	Foundation Works	124	96	79	0	0	0	79	79	79	79	79	79	79	79	79	0	0	0	0	0	0	0	0	0	0	0	0	0
155	Bulk Excavation - soft	119	96	74	0	0	0	0	0	0	0	0	0	0	0	0	74	74	74	74	74	74	74	74	74	74	74	74	0
156	Concrete Works	117	96	72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	72
157	Top Down Excavation - Soft	120	96	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
158	Top Down Concrete Works	110	96	65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
159	Top Down Excavation - Hard	124	96	79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
160	Backfilling Works	115	96	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
161	ABWF Works for WKT building	109	95	65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Works Area V: WKT-Zone 3																													
162	Possession of site	116	61	75	75	75	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
163	Diaphragm Wall*	114	55	74	0	0	0	74	74	74	74	74	0	0	74	74	0	0	0	0	0	0	0	0	0	0	0	0	0
		114	33	79	0	0	0	0	0	0	0	0	79	79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
164	Foundation Works	123	67	81	0	0	0	81	81	81	81	81	81	81	81	81	0	0	0	0	0	0	0	0	0	0	0	0	0
165	Bulk Excavation - soft	119	67	77	0	0	0	0	0	0	0	0	0	0	0	0	77	77	77	77	77	77	77	77	77	0	0	0	0
166	Bulk Excavation - rock	124	67	82	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	82	82	82	82	82	0
167	Concrete Works	116	67	74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	74
168	Top Down Excavation - Soft	121	67	79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
169	Top Down Concrete Works	110	67	68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170	Top Down Excavation - Hard	126	67	84	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
171	Backfilling Works	115	67	73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
172	ABWF Works for WKT building	109	108	64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Works Area V: C&C Tunnel Zone 4																													
173	Diaphragm Wall	114	205	63	0	0	0	0	0	0	0	0	63	63	63	63	63	63	63	63	0	0	63	63	63	63	63	63	63
174	Foundation Works	121	249	68	0	0	0	0	0	0	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	0
175	Bulk Excavation - soft	116	249	63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	63	63	63	63
176	Bulk Excavation - hard	123	249	70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
177	Concrete Works	112	249	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
178	ABWF Works for PTI and CLP substation	109	318	54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
179	Backfilling Works	115	249	62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Works Area V: C&C Tunnel Zone 5																													
180	Diaphragm Wall	114	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
181	Bulk Excavation - soft	110	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
182	Concrete Works	112	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
183	Backfilling Works	115	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Works Area W: Barging and Stockpiling																													
184	Barging and Stockpiling	127	244	74	0	0	0	0	0	0	0	0	0	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74
	Total SPL, dB(A)				76	76	76	84	84	84	84	84	85	85	85	85	81	81	81	81	80	80	81	84	84	83	83	84	79
	Exceedance				1	1	1	9	9	9	9	9	10	10	10	10	6	6	6	6	5	5	6	9	9	8	8	9	4

Act No.	Construction Element	2012 Jan 26	Feb 27	Mar 28	Apr 29	May 30	Jun 31	Jul 32	Aug 33	Sep 34	Oct 35	Nov 36	Dec 37	2013 Jan 38	Feb 39	Mar 40	Apr 41	May 42	Jun 43	Jul 44	Aug 45	Sep 46	Oct 47	Nov 48	Dec 49
Works Area U: Hoi Ting Road Works Area																									
130	Possession of site	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
131	Site storage	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Works Area V: Hoi Ting Road Works Area																									
132	Possession of site	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
133	Diaphragm Wall	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
134	Bulk Excavation/Fill - Soft	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
135	Concrete Works	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
136	TBM Removal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
137	Ventilation building construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
138	Backfilling Works	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Works Area V: WKT- Zone 1																									
139	Possession of site	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
140	Diaphragm Wall	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
141	Foundation Works	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
142	Bulk Excavation - soft	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
143	Bulk Excavation - hard	69	69	69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
144	Concrete Works	63	63	63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
145	Top Down Excavation - Soft	0	0	0	58	58	58	58	0	58	0	58	0	0	0	0	0	0	0	0	0	0	0	0	0
146	Top Down Concrete Works	0	0	0	0	0	0	0	56	0	56	0	56	0	56	0	0	56	56	0	56	56	0	0	0
147	Top Down Excavation - Hard	0	0	0	0	0	0	0	0	0	0	0	0	74	0	74	74	0	0	74	0	0	0	0	0
148	Backfilling Works	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	61	61
149	Concrete Batching Plant - Construction Stage	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
150	Concrete Batching Plant - Operation Stage	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
151	Concrete Batching Plant - Demolition	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Works Area V: WKT- Zone 2																									
152	Possession of site	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
153	Diaphragm Wall	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
154	Foundation Works	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
155	Bulk Excavation - soft	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
156	Concrete Works	72	72	72	72	72	72	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
157	Top Down Excavation - Soft	0	0	0	0	0	0	75	75	0	75	0	75	0	75	0	0	0	0	0	0	0	0	0	0
158	Top Down Concrete Works	0	0	0	0	0	0	0	0	65	0	65	0	65	0	65	0	0	65	0	65	65	0	0	0
159	Top Down Excavation - Hard	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	79	79	0	79	0	0	0	0	0
160	Backfilling Works	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
161	ABWF Works for WKT building	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	65	65	65	65	65	65
Works Area V: WKT-Zone 3																									
162	Possession of site	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
163	Diaphragm Wall*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
164	Foundation Works	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
165	Bulk Excavation - soft	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
166	Bulk Excavation - rock	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
167	Concrete Works	74	74	74	74	74	74	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
168	Top Down Excavation - Soft	0	0	0	0	0	0	79	0	79	0	79	0	79	0	79	79	0	79	0	0	0	0	0	0
169	Top Down Concrete Works	0	0	0	0	0	0	0	68	0	68	0	68	0	68	0	0	68	0	68	0	68	0	0	0
170	Top Down Excavation - Hard	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	84	0	0	0	0
171	Backfilling Works	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
172	ABWF Works for WKT building	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	64	64	64	64	64	64
Works Area V: C&C Tunnel Zone 4																									
173	Diaphragm Wall	63	63	63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
174	Foundation Works	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
175	Bulk Excavation - soft	63	63	63	63	63	63	63	63	63	63	63	63	0	0	0	0	0	0	0	0	0	0	0	0
176	Bulk Excavation - hard	0	0	0	0	0	0	0	0	0	0	0	0	70	70	70	70	70	0	0	0	0	0	0	0
177	Concrete Works	0	0	0	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59
178	ABWF Works for PTI and CLP substation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	54	54	54	54	54	54	54
179	Backfilling Works	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	62	62	62	62
Works Area V: C&C Tunnel Zone 5																									
180	Diaphragm Wall	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
181	Bulk Excavation - soft	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
182	Concrete Works	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
183	Backfilling Works	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Works Area W: Barging and Stockpiling																									
184	Barging and Stockpiling	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74
	Total SPL, dB(A)	79	79	79	78	78	78	81	78	80	78	80	78	82	79	82	83	81	80	82	85	76	75	75	75
	Exceedance	4	4	4	3	3	3	6	3	5	3	5	3	7	4	7	8	6	5	7	10	1	-	-	-

Act No.	Construction Element	2014 Jan 50	Feb 51	Mar 52	Apr 53	May 54	Jun 55	Jul 56	Aug 57	Sep 58	Oct 59	Nov 60	Dec 61
Works Area U: Hoi Ting Road Works Area													
130	Possession of site	0	0	0	0	0	0	0	0	0	0	0	0
131	Site storage	0	0	0	0	0	0	0	0	0	0	0	0
Works Area V: Hoi Ting Road Works Area													
132	Possession of site	0	0	0	0	0	0	0	0	0	0	0	0
133	Diaphragm Wall	0	0	0	0	0	0	0	0	0	0	0	0
134	Bulk Excavation/Fill - Soft	0	0	0	0	0	0	0	0	0	0	0	0
135	Concrete Works	0	0	0	0	0	0	0	0	0	0	0	0
136	TBM Removal	0	0	0	0	0	0	0	0	0	0	0	0
137	Ventilation building construction	0	0	0	0	0	0	0	0	0	0	0	0
138	Backfilling Works	0	0	0	0	0	0	0	0	0	0	0	0
Works Area V: WKT- Zone 1													

Appendix 5-2 Construction Noise Calculation – Unmitigated Scenario

NSR: TS1 - Village House next to Tai Shu Ha Road West

Act No.	Construction Element	SWL	Dist[1]	SPL[2]	2009 Dec 1	2010 Jan 2	Feb 3	Mar 4	Apr 5	May 6	Jun 7	Jul 8	Aug 9	Sep 10	Oct 11	Nov 12	Dec 13
Works Area Z: Rambler Channel Barging Point																	
185	Rambler Channel Barging Point	112	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Works Area AA: Siu Lam Barging Point																	
186	Sui Lam Barging Point	115	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Works Area AB: Siu Lang Shui Plant Nursery																	
187	Nursery	83	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Works Area AC: So Kwun Wat Magazine Site																	
188	Nursery	101	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
189	Establish Magazine	105	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
190	Magazine	105	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
191	Upgrade road	107	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Works Area AE: Tai Shu Ha Road West Magazine																	
192	Establish Magazine	115	244	62	0	0	0	62	62	62	0	0	0	0	0	0	0
193	Magazine	115	244	62	0	0	0	0	0	0	62	62	62	62	62	62	62
194	Upgrade road	117	61	76	0	0	0	76	76	76	0	0	0	0	0	0	0
Works Area AF: Lung Kwu Sheung Tan Barging																	
195	Dredging	106	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
196	Lung Kwu Sheung Tan Barging Point	112	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Works Area AG: Tsing Chau Tsai Barging Point																	
197	Tsing Chau Tsai Barging Point	112	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
				Total SPL, dB(A)	-	-	-	**76**	**76**	**76**	62	62	62	62	62	62	62
				Exceedance	-	-	-	1	1	1	-	-	-	-	-	-	-

Act No.	Construction Element	2011 Jan 14	Feb 15	Mar 16	Apr 17	May 18	Jun 19	Jul 20	Aug 21	Sep 22	Oct 23	Nov 24	Dec 25
Works Area Z: Rambler Channel Barging Point													
185	Rambler Channel Barging Point	0	0	0	0	0	0	0	0	0	0	0	0
Works Area AA: Siu Lam Barging Point													
186	Sui Lam Barging Point	0	0	0	0	0	0	0	0	0	0	0	0
Works Area AB: Siu Lang Shui Plant Nursery													
187	Nursery	0	0	0	0	0	0	0	0	0	0	0	0
Works Area AC: So Kwun Wat Magazine Site													
188	Nursery	0	0	0	0	0	0	0	0	0	0	0	0
189	Establish Magazine	0	0	0	0	0	0	0	0	0	0	0	0
190	Magazine	0	0	0	0	0	0	0	0	0	0	0	0
191	Upgrade road	0	0	0	0	0	0	0	0	0	0	0	0
Works Area AE: Tai Shu Ha Road West Magazine													
192	Establish Magazine	0	0	0	0	0	0	0	0	0	0	0	0
193	Magazine	62	62	62	62	62	62	62	62	62	62	62	62
194	Upgrade road	0	0	0	0	0	0	0	0	0	0	0	0
Works Area AF: Lung Kwu Sheung Tan Barging													
195	Dredging	0	0	0	0	0	0	0	0	0	0	0	0
196	Lung Kwu Sheung Tan Barging Point	0	0	0	0	0	0	0	0	0	0	0	0
Works Area AG: Tsing Chau Tsai Barging Point													
197	Tsing Chau Tsai Barging Point	0	0	0	0	0	0	0	0	0	0	0	0
	Total SPL, dB(A)	62	62	62	62	62	62	62	62	62	62	62	62
	Exceedance	-	-	-	-	-	-	-	-	-	-	-	-

Act No.	Construction Element	2012 Jan 26	Feb 27	Mar 28	Apr 29	May 30	Jun 31	Jul 32	Aug 33	Sep 34	Oct 35	Nov 36	Dec 37
Works Area Z: Rambler Channel Barging Point													
185	Rambler Channel Barging Point	0	0	0	0	0	0	0	0	0	0	0	0
Works Area AA: Siu Lam Barging Point													
186	Sui Lam Barging Point	0	0	0	0	0	0	0	0	0	0	0	0
Works Area AB: Siu Lang Shui Plant Nursery													
187	Nursery	0	0	0	0	0	0	0	0	0	0	0	0
Works Area AC: So Kwun Wat Magazine Site													
188	Nursery	0	0	0	0	0	0	0	0	0	0	0	0
189	Establish Magazine	0	0	0	0	0	0	0	0	0	0	0	0
190	Magazine	0	0	0	0	0	0	0	0	0	0	0	0
191	Upgrade road	0	0	0	0	0	0	0	0	0	0	0	0
Works Area AE: Tai Shu Ha Road West Magazine													
192	Establish Magazine	0	0	0	0	0	0	0	0	0	0	0	0
193	Magazine	62	62	62	62	62	62	62	62	62	62	62	62
194	Upgrade road	0	0	0	0	0	0	0	0	0	0	0	0
Works Area AF: Lung Kwu Sheung Tan Barging													
195	Dredging	0	0	0	0	0	0	0	0	0	0	0	0
196	Lung Kwu Sheung Tan Barging Point	0	0	0	0	0	0	0	0	0	0	0	0
Works Area AG: Tsing Chau Tsai Barging Point													
197	Tsing Chau Tsai Barging Point	0	0	0	0	0	0	0	0	0	0	0	0
	Total SPL, dB(A)	62	62	62	62	62	62	62	62	62	62	62	62
	Exceedance	-	-	-	-	-	-	-	-	-	-	-	-

Act No.	Construction Element	2013 Jan 38	Feb 39	Mar 40	Apr 41	May 42	Jun 43	Jul 44	Aug 45	Sep 46	Oct 47	Nov 48	Dec 49
Works Area Z: Rambler Channel Barging Point													
185	Rambler Channel Barging Point	0	0	0	0	0	0	0	0	0	0	0	0
Works Area AA: Siu Lam Barging Point													
186	Sui Lam Barging Point	0	0	0	0	0	0	0	0	0	0	0	0
Works Area AB: Siu Lang Shui Plant Nursery													
187	Nursery	0	0	0	0	0	0	0	0	0	0	0	0
Works Area AC: So Kwun Wat Magazine Site													
188	Nursery	0	0	0	0	0	0	0	0	0	0	0	0
189	Establish Magazine	0	0	0	0	0	0	0	0	0	0	0	0
190	Magazine	0	0	0	0	0	0	0	0	0	0	0	0
191	Upgrade road	0	0	0	0	0	0	0	0	0	0	0	0
Works Area AE: Tai Shu Ha Road West Magazine													
192	Establish Magazine	0	0	0	0	0	0	0	0	0	0	0	0
193	Magazine	62	62	62	62	62	62	0	0	0	0	0	0
194	Upgrade road	0	0	0	0	0	0	0	0	0	0	0	0
Works Area AF: Lung Kwu Sheung Tan Barging													
195	Dredging	0	0	0	0	0	0	0	0	0	0	0	0
196	Lung Kwu Sheung Tan Barging Point	0	0	0	0	0	0	0	0	0	0	0	0
Works Area AG: Tsing Chau Tsai Barging Point													
197	Tsing Chau Tsai Barging Point	0	0	0	0	0	0	0	0	0	0	0	0
	Total SPL, dB(A)	62	62	62	62	62	62	-	-	-	-	-	-
	Exceedance	-	-	-	-	-	-	-	-	-	-	-	-

Act No.	Construction Element	2014 Jan 50	Feb 51	Mar 52	Apr 53	May 54	Jun 55	Jul 56	Aug 57	Sep 58	Oct 59	Nov 60	Dec 61
Works Area Z: Rambler Channel Barging Point													
185	Rambler Channel Barging Point	0	0	0	0	0	0	0	0	0	0	0	0
Works Area AA: Siu Lam Barging Point													
186	Sui Lam Barging Point	0	0	0	0	0	0	0	0	0	0	0	0
Works Area AB: Siu Lang Shui Plant Nursery													
187	Nursery	0	0	0	0	0	0	0	0	0	0	0	0
Works Area AC: So Kwun Wat Magazine Site													
188	Nursery	0	0	0	0	0	0	0	0	0	0	0	0
189	Establish Magazine	0	0	0	0	0	0	0	0	0	0	0	0
190	Magazine	0	0	0	0	0	0	0	0	0	0	0	0
191	Upgrade road	0	0	0	0	0	0	0	0	0	0	0	0
Works Area AE: Tai Shu Ha Road West Magazine													
192	Establish Magazine	0	0	0	0	0	0	0	0	0	0	0	0
193	Magazine	0	0	0	0	0	0	0	0	0	0	0	0
194	Upgrade road	0	0	0	0	0	0	0	0	0	0	0	0
Works Area AF: Lung Kwu Sheung Tan Barging													
195	Dredging	0	0	0	0	0	0	0	0	0	0	0	0
196	Lung Kwu Sheung Tan Barging Point	0	0	0	0	0	0	0	0	0	0	0	0
Works Area AG: Tsing Chau Tsai Barging Point													
197	Tsing Chau Tsai Barging Point	0	0	0	0	0	0	0	0	0	0	0	0
	Total SPL, dB(A)	-	-	-	-	-	-	-	-	-	-	-	-
	Exceedance	-	-	-	-	-	-	-	-	-	-	-	-

Remarks:

1. Noise sources at more than 300m from the sensitive receiver are not considered in cumulative noise assessment due to large distance attenuation effect.
2. For the calculation of sound pressure levels (SPL), the PMEs adopted for the different construction activities are assumed to be placed at the notional source position of the corresponding construction site according to the 'Technical Memorandum on Noise from Construction Work other than Percussive Piling' by EPD.

Noise Exceedance

The use of PME would not be visible when viewed from the assessment facade of NSR. The NSR is considered to be totally screened. According to GW-TM, a noise reduction of 10 dB(A) would be