Appendix 9.12 Cumulative Construction Noise Assessment for Kowloon Area - Mitigated Scenario

HH9 - Harbourfront Horizon

Mitigated

Package	Construction Activity	Work [1] Site No.	SWL	Dist [2] (m)	SPL [3]	Building Screening	2013												2014												2015												2016											
							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
15 HUH SAT	**Demolition of Freight Buidling**																																																					
	Demolition of Freight Buidling	803	121	248	68	0																							68	68	68																								
12 HUH Landfall	**HUH Landfall**																																																					
	Existing Fender Piles Removal, Cofferdam Wall Construction and Shear Pining	80102	118	253	64	0																									64	64	64	64	64	64	64	64	64																
	Soft Ground Excavation	80102	115	253	62	0																																		62	62	62													
	Excavation Work	80102	121	253	67	0																																			67	67	67	67	67	67								
	Tunnel Box Construction	80102	115	253	62	0																																								62	62	62							
	E&M Installation	80102	114	253	61	0																																											61						
	Cofferdam Wall Removal and Fender Piles Reinstatement	80102	115	253	62	0																																											62						
	Backfilling and Reinstatement	80101	116	267	63	0																																												63	63	63	63	63	
	HUH Freight Pier																																																						
	Operation of Barging Point and rock crushing plant [4]	-	-	-	-	-																																																	
	Demolition of Existing Freight Pier	804	116	243	64	0																					64	64	64	64	64	64																								
	Piling Construction	804	123	243	70	0																																																	
	Concrete Deck Construction and Marine Furniture	804	115	243	62	0																																																	
13 NOV	**NOV Construction**																																																						
	Site Clearance, Fencing & Hoarding	802	118	258	65	0																																				65													
	Excavate Soft Material (+4.0mPD to -17.5mPD)	802	120	258	67	0																																					67	67											
	Construct NOV	802	114	258	61	0																																						61	61	61	61								
	Overall Noise Level (SCL(HUH-ADM)), Leq (30min), dB(A)						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	64	64	69	69	71	67	64	64	64	64	64	64	64	62	68	70	70	71	69	69	65	65	63	63	63	63	63	-
SCL (MKK-HUH)	Construction SCL (MKK-HUH)	-	-	-	-	-	68	67	67	69	68	68	64	64	64	64	66	66	66	66	66	66	64	65	66	66	65	65	67	65	69	69	69	69	69	71	71	70	72	73	72	70	70	69	67	67	67	72	72	73	73	73	73	67
	Overall Noise Level (SCL(HUH-ADM) and SCL (MKK-HUH)), Leq (30min), dB(A)						68	67	67	69	68	68	64	64	64	64	66	66	66	66	66	66	64	65	66	66	68	68	71	71	73	71	71	71	70	72	72	71	73	73	73	73	73	73	71	71	69	72	72	73	73	73	73	67
SCL (TAW-HUH)	Construction SCL (TAW-HUH)	-	-	-	-	-																																																	
	Overall Noise Level (SCL(HUH-ADM) and SCL (TAW-HUH)), Leq (30min), dB(A)						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	64	64	69	69	71	67	64	64	64	64	64	64	64	62	68	70	70	71	69	69	65	65	63	63	63	63	63	-
	Overall Noise Level (SCL(HUH-ADM), SCL(MKK-HUH) and SCL (TAW-HUH)), Leq (30min), dB(A)						68	67	67	69	68	68	64	64	64	64	66	66	66	66	66	66	64	65	66	66	68	68	71	71	73	71	71	71	70	72	72	71	73	73	73	73	73	73	71	71	69	72	72	73	73	73	73	67

Remarks:

[1] The Works Area with length to width ratio exceeding 5 : 1 is divided into Subareas.

[2] Noise source at more than 300m from the sensitive receiver are not considered in the noise assessment due to large distance attenuation effect.

[3] For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

[4] Barging point and rock crushing plant will be used by SCL(MKK-HUH) and SCL(TAW-HUH) during the same period. Operation of barging point and rock-crushing plant has been assessed in SCL(MKK-HUH) EIA Report and will not be assessed in this assessment.

Appendix 9.12 Cumulative Construction Noise Assessment for Kowloon Area - Mitigated Scenario

HH9 - Harbourfront Horizon

Mitigated

Package	Construction Activity	Work [1] Site No.	SWL	Dist [2] (m)	SPL [3]	Building Screening
15 HUH SAT	**Demolition of Freight Buidling**					
	Demolition of Freight Buidling	803	121	248	68	0
12 HUH Landfall	**HUH Landfall**					
	Existing Fender Piles Removal, Cofferdam Wall Construction and Shear Pining	80102	118	253	64	0
	Soft Ground Excavation	80102	115	253	62	0
	Excavation Work	80102	121	253	67	0
	Tunnel Box Construction	80102	115	253	62	0
	E&M Installation	80102	114	253	61	0
	Cofferdam Wall Removal and Fender Piles Reinstatement	80102	115	253	62	0
	Backfilling and Reinstatement	80101	116	267	63	0
	HUH Freight Pier					
	Operation of Barging Point and rock crushing plant [4]	-	-	-	-	-
	Demolition of Existing Freight Pier	804	116	243	64	0
	Piling Construction	804	123	243	70	0
	Concrete Deck Construction and Marine Furniture	804	115	243	62	0
13 NOV	**NOV Construction**					
	Site Clearance, Fencing & Hoarding	802	118	258	65	0
	Excavate Soft Material (+4.0mPD to -17.5mPD)	802	120	258	67	0
	Construct NOV	802	114	258	61	0
	Overall Noise Level (SCL(HUH-ADM)), Leq (30min), dB(A)					
SCL (MKK-HUH)	Construction SCL (MKK-HUH)	-	-	-	-	-
	Overall Noise Level (SCL(HUH-ADM) and SCL (MKK-HUH)), Leq (30min), dB(A)					
SCL (TAW-HUH)	Construction SCL (TAW-HUH)	-	-	-	-	-
	Overall Noise Level (SCL(HUH-ADM) and SCL (TAW-HUH)), Leq (30min), dB(A)					
	Overall Noise Level (SCL(HUH-ADM), SCL(MKK-HUH) and SCL (TAW-HUH)), Leq (30min), dB(A)					

2017

Construction Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	49	50	51	52	53	54	55	56	57	58	59	60
Overall Noise Level (SCL(HUH-ADM)), Leq (30min), dB(A)	-	-	-	-	-	-	-	-	-	-	-	-
Construction SCL (MKK-HUH)	67	67	64	64	64	64	64	64	64	64	64	64
Overall Noise Level (SCL(HUH-ADM) and SCL (MKK-HUH)), Leq (30min), dB(A)	67	67	64	64	64	64	64	64	64	64	64	64
Construction SCL (TAW-HUH)						54	54	50				
Overall Noise Level (SCL(HUH-ADM) and SCL (TAW-HUH)), Leq (30min), dB(A)	-	-	-	-	-	54	54	50	-	-	-	-
Overall Noise Level (SCL(HUH-ADM), SCL(MKK-HUH) and SCL (TAW-HUH)), Leq (30min), dB(A)	67	67	64	64	64	64	64	64	64	64	64	64

2018

Construction Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	61	62	63	64	65	66	67	68	69	70	71	72
Overall Noise Level (SCL(HUH-ADM)), Leq (30min), dB(A)	70	70	70	62	62	62	62	62	62	-	-	-
Construction SCL (MKK-HUH)	64	64	64	64	64	64	64	64	64	64	64	64
Overall Noise Level (SCL(HUH-ADM) and SCL (MKK-HUH)), Leq (30min), dB(A)	71	71	71	66	66	66	66	66	66	64	64	64
Construction SCL (TAW-HUH)												
Overall Noise Level (SCL(HUH-ADM) and SCL (TAW-HUH)), Leq (30min), dB(A)	70	70	70	62	62	62	62	62	62	-	-	-
Overall Noise Level (SCL(HUH-ADM), SCL(MKK-HUH) and SCL (TAW-HUH)), Leq (30min), dB(A)	71	71	71	66	66	66	66	66	66	64	64	64

2019

Construction Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	73	74	75	76	77	78	79	80	81	82	83	84
Overall Noise Level (SCL(HUH-ADM)), Leq (30min), dB(A)	-	-	-	-	-	-	-	-	-	-	-	-
Construction SCL (MKK-HUH)												
Overall Noise Level (SCL(HUH-ADM) and SCL (MKK-HUH)), Leq (30min), dB(A)	-	-	-	-	-	-	-	-	-	-	-	-
Construction SCL (TAW-HUH)												
Overall Noise Level (SCL(HUH-ADM) and SCL (TAW-HUH)), Leq (30min), dB(A)	-	-	-	-	-	-	-	-	-	-	-	-
Overall Noise Level (SCL(HUH-ADM), SCL(MKK-HUH) and SCL (TAW-HUH)), Leq (30min), dB(A)	-	-	-	-	-	-	-	-	-	-	-	-

Remarks:

[1] The Works Area with length to width ratio exceeding 5 : 1 is divided into Subareas.

[2] Noise source at more than 300m from the sensitive receiver are not considered in the noise assessment due to large distance attenuation effect.

[3] For the calculation of sound pressure levels (SPL), the PMEs are assumed to be placed at the notional source position according to the "Technical Memorandum on Noise from Construction Work other than Percussive Piling" by EPD.

[4] Barging point and rock crushing plant will be used by SCL(MKK-HUH) and SCL(TAW-HUH) during the same period. Operation of barging point and rock-crushing plant has been assessed in SCL(MKK-HUH) EIA Report and will not be assessed in this assessment.

Appendix 9.12 Cumulative Construction Noise Assessment for Kowloon Area - Mitigated Scenario

Cumulative Impact of SCL (HUH-ADM), SCL (MKK-HUH) and SCL (TAW-HUH)

NSR	Noise Criteria	2013												2014												2015											
		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
HH9	75	68	67	67	69	68	68	64	64	64	64	66	66	66	66	66	66	64	65	66	66	68	68	71	71	73	71	71	71	70	72	72	71	73	73	73	73

NSR	Noise Criteria	2016												2017												2018											
		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
HH9	75	73	73	71	71	69	72	72	73	73	73	73	67	67	67	64	64	64	64	64	64	64	64	64	64	71	71	71	66	66	66	66	66	66	64	64	64

NSR	Noise Criteria	2019											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
HH9	75	-	-	-	-	-	-	-	-	-	-	-	-