

Appendix 9.7 - Calculation of Fixed Plant Noise during Night Time

NSR No.	Description	Plant item	Direction Facing	Distance, m	SWL, dB(A)	Correction for line of sight ⁽¹⁾ , dB(A)	Distance Correction, dB(A)	Facade Correction, dB(A)	SPL, dB(A)	Total SPL, dB(A)	Nighttime Design Target, dB(A)
North Ventilation Building, Plant Rooms and Emergency Access (NOV)											
HH9b											
HH9b	Harbourfront Horizon	HUH VS1 - Exhaust	East	529	92	-10	-62	3	23		
		HUH VS2 - Intake/ Exhaust [2]	North	522	92	-10	-62	3	23		
		HUH VS3 - Intake/ Exhaust [2]	North	514	92	-10	-62	3	23		
		HUH VS4 - Exhaust	North	507	92	-10	-62	3	23		
		HUH VS5 - Intake	North	503	92	-10	-62	3	23		
		HUH VS6 - Exhaust	North	500	92	-10	-62	3	23		
		HUH VS7 - Exhaust	North	497	92	-10	-62	3	23		
		HUH VS8 - Intake	South	245	88	0	-56	3	35		
		HUH VS9 - Exhaust	South	237	88	0	-55	3	36		
		HUH VS10 - Intake/ Exhaust	South	228	88	0	-55	3	36		
		HUH VS11 - Intake/ Exhaust	South	220	88	0	-55	3	36		
		HUH VS12 - Exhaust	South	212	88	0	-55	3	36		
		HUH VS13 - Intake	South	204	88	0	-54	3	37		
		HUH VS14 - Exhaust	South	197	88	0	-54	3	37		
		HUH VS15 - Exhaust	South	189	88	0	-54	3	37		
	Cooling Tower	North_1	307	88	-10	-58	3	23			
		Top_1	309	94	0	-58	3	39			
		Top_2	311	94	0	-58	3	39			
Top_3		311	94	0	-58	3	39				
Top_4		312	94	0	-58	3	39				
Top_5		313	94	0	-58	3	39				
NOV VS1	Top	237	90	0	-55	3	38				
NOV VS2	Top	227	90	0	-55	3	38	50	50		
South Ventilation Shafts, Plant Rooms and Emergency Access (SOV)											
CH1											
CH1	Hoi Deen Court, 276 - 279, Gloucester Road, Causeway Bay,	SOV VS1	South	112	88	0	-49	3	42		
		SOV VS2	South	102	88	0	-48	3	43		
		SOV VS3	South	92	88	0	-47	3	44		
			North	96	88	-10	-48	3	33		
		Transformer Room 1	South	118	88	0	-49	3	42		
		Transformer Room 2	South	124	88	0	-50	3	41		
		Provisional Cooling Tower 1	-	138	92	0	-51	3	44		
		Provisional Cooling Tower 2	-	140	92	0	-51	3	44		
		Electrical Room 1	-	127	65	0	-50	3	18		
		Electrical Room 2	-	128	65	0	-50	3	18		
CH2											
CH2	Hoi Kung Court, 264 - 268, Gloucester Road, Causeway Bay,	SOV VS1	South	67	88	0	-44	3	47		
		SOV VS2	South	61	88	0	-44	3	47		
		SOV VS3	South	56	88	0	-43	3	48		
			North	63	88	-10	-44	3	37		
		Transformer Room 1	South	71	88	0	-45	3	46		
		Transformer Room 2	South	76	88	0	-46	3	45		
		Provisional Cooling Tower 1	-	94	92	0	-47	3	48		
		Provisional Cooling Tower 2	-	95	92	0	-48	3	47		
		Electrical Room 1	-	88	65	0	-47	3	21		
		Electrical Room 2	-	90	65	0	-47	3	21		
CH3											
CH3	Elizabeth House, Block C, 250 - 254, Gloucester Road, Causeway Bay, Hong Kong	SOV VS1	South	127	88	0	-50	3	41		
		SOV VS2	South	136	88	0	-51	3	40		
		SOV VS3	South	145	88	0	-51	3	40		
			North	150	88	-10	-51	3	30		
		Transformer Room 1	South	123	88	0	-50	3	41		
		Transformer Room 2	South	119	88	0	-50	3	41		
		Provisional Cooling Tower 1	-	129	92	0	-50	3	45		
		Provisional Cooling Tower 2	-	125	92	0	-50	3	45		
		Electrical Room 1	-	140	65	0	-51	3	17		
		Electrical Room 2	-	142	65	0	-51	3	17		

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Exhibition Station (EXH)											
EX1											
EX1	Causeway Centre, Block A, 28, Harbour Road, Wan Chai, Hong	EXH VS1	Top opening	301	93	-10	-58	3	28		
		EXH VS2	Top opening	294	93	-10	-57	3	29		
		EXH VS3	Top opening	284	93	-10	-57	3	29		
		EXH VS4	Top opening	274	93	-10	-57	3	29		
		EXH VS5	North	217	93	-10	-55	3	31		
		EXH VS6	West	212	93	-10	-55	3	31		
		EXH VS7	North	203	93	-10	-54	3	32		
		EXH VS8	South	201	93	-10	-54	3	32		
		EXH VS9	West	187	89	-10	-53	3	29		
		EXH VS10	West	185	89	-10	-53	3	29		
		EXH VS11	South	178	89	-10	-53	3	29		
		EXH VS12	North	175	89	-10	-53	3	29		
		EXH VS12	East	175	89	-10	-53	3	29		
		EXH VS13	South	173	89	-10	-53	3	29		
		EXH VS14	South	178	89	-10	-53	3	29		
		EXH VS15	East	81	88	-5	-46	3	40		
		EXH VS16	West	100	84	0	-48	3	39		
		EXH VS17	Top opening	126	85	0	-50	3	38		
		EXH VS18	Top opening	115	85	0	-49	3	39		
		EXH VS19	Top opening	105	84	0	-48	3	39		
		EXH VS20	South	106	84	0	-48	3	39		
		EXH VS21	North	139	89	-10	-51	3	31		
		EXH VS21	Northeast	132	89	-10	-50	3	32		
		EXH VS22	East	126	90	-5	-50	3	38		
		EXH VS23	East	119	90	-5	-50	3	38		
		EXH VS24	East	113	90	-5	-49	3	39		
	EXH VS25	East	107	90	-5	-49	3	39			
	EXH VS26	East	116	90	-5	-49	3	39			
										50	50
Admiralty Station (ADM)											
AD1											
AD1	Ching Yi To Barrack Paget House	ADM VS1	North	236	90	-10	-55	3	28		
		ADM VS1	East	227	90	-10	-55	3	28		
		ADM VS1	South	222	90	0	-55	3	38		
		ADM VS1	West	225	90	-10	-55	3	28		
		ADM VS2	East	221	90	0	-55	3	38		
		ADM VS3	North	222	91	-10	-55	3	29		
		ADM VS3	South	218	90	0	-55	3	38		
		ADM VS3	West	216	90	-5	-55	3	33		
		ADM VS4	North	214	92	-10	-55	3	30		
		ADM VS4	East	210	92	-5	-54	3	36		
		ADM VS4	South	210	89	0	-54	3	38		
		ADM VS5	Top opening	208	89	0	-54	3	38		
		ADM VS6	North	225	92	-10	-55	3	30		
		ADM VS6	Northeast	222	92	-10	-55	3	30		
		ADM VS6	Southeast	201	89	0	-54	3	38		
		ADM VS6	Southwest	200	89	0	-54	3	38		
		ADM VS6	West	215	92	-10	-55	3	30		
		ADM VS6	Northwest	221	92	-10	-55	3	30		
		ADM VS7	Top opening	194	90	0	-54	3	39		
		ADM VS8	Northeast	183	90	-10	-53	3	30		
		ADM VS8	Southwest	181	89	0	-53	3	39		
		Cooling Tower	Top opening	223	90	0	-55	3	38		
			North	234	90	-10	-55	3	28		
		Transformer Bay	South	225	90	-10	-55	3	28		
			West	227	90	-10	-55	3	28		
Hong Kong Park Ventilation Building (HKB)											
AD2											
AD2	Regent on the Park	HKB VS1	Northeast	81	88	-10	-46	3	35		
		HKB VS1	Southeast	79	86	0	-46	3	43		
		HKB VS2	Northeast	86	88	-10	-47	3	34		
		HKB VS2	Northwest	87	88	-10	-47	3	34		
		HKB VS3	Southeast	68	86	0	-45	3	44		
										47	47
AD3											
AD3	Jockey Club New Life Hostel	HKB VS1	Northeast	134	88	-10	-51	3	30		
		HKB VS1	Southeast	133	86	-10	-50	3	29		
		HKB VS2	Northeast	114	88	-10	-49	3	32		
		HKB VS2	Northwest	112	88	0	-49	3	42		
		HKB VS3	Southeast	129	86	-10	-50	3	29		
										43	47

Remark:

[1] A negative correction of 10 dB(A) has been adopted to the direction facing of the ventilation shaft totally screened by buildings and negative correction of 5 dB(A) for NSR do not have direct line of sight to the ventilation shaft.

[2] Ventilation shafts HUH VS2, HUH VS3, HUH VS10 and HUH VS11 will be operated on switch mode, only 1 louver will be on at one time (either intake or exhaust).