

Appendix 9.1: Construction Groundborne Noise Assessment Results

Project: SCL (TAW-HUH)

Item	NSR	Location	Floor	Horizontal Distance		Vertical Distance		Slant Distance		Distance Attenuation	Source Term [1]	Building Coupling Loss	Floor to Floor Attenuation	Conversion from Vibration to Noise	Conversion to A-Weighted Noise Level	Predicted L_{eq} 30min	EIAO-TM Criteria (Daytime)	Criteria Achieved?
				Up Track	Down Track	Up Track	Down Track	Up Track	Down Track									
1	DIH-1-1	Tsui Chuk Garden Block 5	1	0	0	75	75	75	75	-22.7	115.9	-10	-1	-27	-20	35	65	Yes
2	DIH-2-1	Pak Yuen House	1	295	290	65	65	302	297	-34.7	115.9	-10	-1	-27	-20	23	65	Yes
3	DIH-3-1	Wah Yuen House	1	102	100	50	50	114	112	-26.2	115.9	-10	-1	-27	-20	32	65	Yes
4	DIH-3-2	Nga Yuen House	1	135	120	45	45	142	128	-27.3	115.9	-10	-1	-27	-20	31	65	Yes
5	DIH-3-3	Kwai Yuen House	1	5	15	35	35	35	38	-16.2	115.9	-10	-1	-27	-20	42	65	Yes
6	DIH-3-4	Chui Yuen House	1	55	50	45	45	71	67	-21.7	115.9	-10	-1	-27	-20	36	65	Yes
7	DIH-4-1	Pang Ching Court	1	210	195	70	70	221	207	-31.5	115.9	-10	-1	-27	-20	26	65	Yes
8	DIH-4-2	Carbo Anglo-Chinese Kindergarden [2]	0	130	115	75	75	150	137	-27.9	115.9	-10	0	-27	-20	31	55	Yes
9	DIH-5-1	Rainbow Home	0	60	25	35	35	69	43	-17.9	115.9	-10	0	-27	-20	41	65	Yes
10	DIH-5-2	Residential premises	1	45	10	30	30	54	32	-15.2	115.9	-10	-1	-27	-20	43	65	Yes
11	DIH-5-5	Our Lady's Kindergarden [2]	0	110	85	40	40	117	94	-24.6	115.9	-10	0	-27	-20	34	55	Yes
12	DIH-6-1	Wong Tai Sin Fire Station and Quarters Block A	1	5	5	30	30	30	30	-14.9	115.9	-10	-1	-27	-20	43	65	Yes
13	DIH-7-1	Tropicana Gardens Block 2	4	14	58	40	40	42	70	-17.7	115.9	-10	-4	-27	-20	37	65	Yes
14	DIH-7-2	Tropicana Gardens Block 3	4	10	48	40	40	41	62	-17.5	115.9	-10	-4	-27	-20	37	65	Yes
15	DIH-8-1	Redemption Lutheran Church	0	116	163	20	20	118	164	-26.6	115.9	-10	0	-27	-20	32	65	Yes
16	DIH-9-1	Shek On Building [2]	0	118	156	25	25	121	158	-26.8	115.9	-10	0	-27	-20	32	55	Yes
17	DIH-10-1	Hong Kong Sheung Keung Hui Nursing Home	1	160	188	25	25	162	190	-29.4	115.9	-10	-1	-27	-20	29	65	Yes
18	DIH-11-1	Lung Wan House	1	75	60	25	25	79	65	-21.5	115.9	-10	-1	-27	-20	36	65	Yes
19	DIH-12-1	Galaxia Tower B	5	195	180	30	30	197	182	-30.4	115.9	-10	-5	-27	-20	24	65	Yes
20	DIH-12-2	Galaxia Tower E	5	180	160	30	30	182	163	-29.4	115.9	-10	-5	-27	-20	24	65	Yes
21	DIH-13-1	Canossa Primary School [2]	0	160	200	25	25	162	202	-29.4	115.9	-10	0	-27	-20	30	55	Yes
22	DIH-14-1	Rhythm Garden Block 2	1	28	45	25	25	38	51	-16.7	115.9	-10	-1	-27	-20	41	65	Yes
23	DIH-14-2	Rhythm Garden Block 5	1	18	35	25	25	31	43	-15.0	115.9	-10	-1	-27	-20	43	65	Yes
24	DIH-14-3	Rhythm Garden Block 8	1	175	185	25	25	177	187	-30.1	115.9	-10	-1	-27	-20	28	65	Yes
25	DIH-14-4	Canossa Primary School (San Po Kong) [2]	1	145	160	25	25	147	162	-28.5	115.9	-10	-1	-27	-20	29	55	Yes
26	DIH-14-5	Rhythm Garden Block 1	1	18	40	25	25	31	47	-15.0	115.9	-10	-1	-27	-20	43	65	Yes
27	DIH-14-6	Rhythm Garden Block 3	1	30	45	25	25	39	51	-17.0	115.9	-10	-1	-27	-20	41	65	Yes
28	DIH-15-1	Kam Wan House	0	100	85	25	25	103	89	-24.1	115.9	-10	0	-27	-20	35	65	Yes
29	DIH-15-2	Pik Hoi House	0	75	65	25	25	79	70	-22.1	115.9	-10	0	-27	-20	37	65	Yes
30	DIH-16-1	Wong Tai Sin Temple	0	20	35	35	35	40	49	-17.3	115.9	-10	0	-27	-20	42	65	Yes
31	DIH-17-1	Chuk Yuen United Village	0	15	50	30	30	34	58	-15.7	115.9	-10	0	-27	-20	43	65	Yes
32	DIH-18-1	Upper Wong Tai Sin Estate Po Sin House	1	25	30	40	40	47	50	-18.7	115.9	-10	-1	-27	-20	39	65	Yes
33	DIH-18-2	Upper Wong Tai Sin Estate Tat Sin House	1	35	37	45	45	57	58	-20.3	115.9	-10	-1	-27	-20	38	65	Yes
34	DIH-19-1	Lung Cheung Government Secondary School [2]	0	40	55	45	45	60	71	-20.8	115.9	-10	0	-27	-20	38	55	Yes
35	DIH-20-1	Baptist Rainbow Primary School [2]	0	95	80	45	45	105	92	-24.4	115.9	-10	0	-27	-20	34	55	Yes
36	DIH-21-1	Tin Wang Court Wang King House	1	30	40	40	40	50	57	-19.2	115.9	-10	-1	-27	-20	39	65	Yes
37	DIH-22-1	Price Memorial Catholic Primary School [2]	0	80	95	40	40	89	103	-24.2	115.9	-10	0	-27	-20	35	55	Yes
38	DIH-23-1	Tin Ma Court Chun On House	1	100	115	40	40	108	122	-25.8	115.9	-10	-1	-27	-20	32	65	Yes
39	DIH-24-1	Shing Wong Temple	1	0	5	35	35	35	35	-16.1	115.9	-10	-1	-27	-20	42	65	Yes
40	TKW-1-1	Parc 22	1	85	90	15	27	86	94	-23.9	115.9	-10	-1	-27	-20	34	65	Yes
41	TKW-1-2	Sanford Mansion	1	95	95	15	27	96	99	-24.9	115.9	-10	-1	-27	-20	33	65	Yes

Appendix 9.1: Construction Groundborne Noise Assessment Results

Project: SCL (TAW-HUH)

Item	NSR	Location	Floor	Horizontal Distance		Vertical Distance		Slant Distance		Distance Attenuation	Source Term [1]	Building Coupling Loss	Floor to Floor Attenuation	Conversion from Vibration to Noise	Conversion to A-Weighted Noise Level	Predicted $L_{eq, 30min}$	EIAO-TM Criteria (Daytime)	Criteria Achieved?
				Up Track	Down Track	Up Track	Down Track	Up Track	Down Track									
42	TKW-2-1	Skytower Tower 1	5	140	140	15	27	141	143	-28.2	115.9	-10	-5	-27	-20	26	65	Yes
43	TKW-2-2	Skytower Tower 2	5	140	140	15	27	141	143	-28.2	115.9	-10	-5	-27	-20	26	65	Yes
44	TKW-2-3	Skytower Tower 7	5	235	260	15	27	235	261	-32.6	115.9	-10	-5	-27	-20	21	65	Yes
45	TKW-3-1	Prince Ritz	5	235	255	23	23	236	256	-32.7	115.9	-10	-5	-27	-20	21	65	Yes
46	TKW-3-2	Prosperity House	2	250	270	23	23	251	271	-33.2	115.9	-10	-2	-27	-20	24	65	Yes
47	MTW-6-1	Fok On Building	2	17.5	17.5	15	27	23	32	-12.4	115.9	-10	-2	-27	-20	44	65	Yes
48	MTW-6-2	Hong Kong Society for the Protection of Children	0	10	10	15	27	18	29	-10.3	115.9	-10	0	-27	-20	49	65	Yes
49	MTW-6-3	Chung Nam Mansion	2	20	20	15	27	25	34	-13.2	115.9	-10	-2	-27	-20	44	65	Yes
50	MTW-6-4	Pok Oi Lau	0	10	10	15	27	18	29	-10.3	115.9	-10	0	-27	-20	49	65	Yes
51	MTW-7-1	Geranium House	1	12.5	12.5	17	28	21	31	-11.7	115.9	-10	-1	-27	-20	46	65	Yes
52	MTW-8-1	Horae Palace	3	15	15	17	28	23	32	-12.3	115.9	-10	-3	-27	-20	44	65	Yes
53	MTW-9-1	Majestic Park	3	35	35	18	30	39	46	-17.1	115.9	-10	-3	-27	-20	39	65	Yes
54	MTW-10-1	18 Farm Road	3	15	15	18	30	23	34	-12.6	115.9	-10	-3	-27	-20	43	65	Yes
55	MTW-11-1	Farm Road Government Primary School [2]	0	65	65	18	30	67	72	-21.8	115.9	-10	0	-27	-20	37	55	Yes
56	MTW-12-1	Yuet Fai Mansion	1	17.5	17.5	18	30	25	35	-13.2	115.9	-10	-1	-27	-20	45	65	Yes
57	MTW-12-2	Delight Court	3	17.5	17.5	20	30	27	35	-13.7	115.9	-10	-3	-27	-20	42	65	Yes
58	MTW-12-3	Lucky Mansion	3	15	15	20	30	25	34	-13.2	115.9	-10	-3	-27	-20	43	65	Yes
59	MTW-12-4	352-354 Ma Tau Wai Rd	2	15	15	20	30	25	34	-13.2	115.9	-10	-2	-27	-20	44	65	Yes
60	MTW-12-5	Seng Cheong Building	1	17.5	17.5	17	27	24	32	-12.9	115.9	-10	-1	-27	-20	45	65	Yes
61	MTW-12-6	Great Wall Building	3	30	30	18	30	35	42	-16.1	115.9	-10	-3	-27	-20	40	65	Yes
62	MTW-12-7	197-199 Ma Tau Wai Rd	2	15	15	18	30	23	34	-12.6	115.9	-10	-2	-27	-20	44	65	Yes
63	MTW-12-8	Pak Tai Mansion	1	12.5	12.5	18	30	22	33	-12.0	115.9	-10	-1	-27	-20	46	65	Yes
64	MTW-12-9	Residential premises along Hung Kwong Street	2	10	10	19	32	21	34	-11.8	115.9	-10	-2	-27	-20	45	65	Yes
65	MTW-12-10	Lucky Building	2	15	15	18	28	23	32	-12.6	115.9	-10	-2	-27	-20	44	65	Yes
66	MTW-12-11	Jing Ming Building	2	19	19	20	30	28	36	-14.0	115.9	-10	-2	-27	-20	43	65	Yes
67	MTW-12-12	One Elegance	3	12	12	18	30	22	32	-11.9	115.9	-10	-3	-27	-20	44	65	Yes
68	MTW-13-1	Cheung Chuk Shan Memorial School [2]	0	10	10	20	30	22	32	-12.2	115.9	-10	0	-27	-20	47	55	Yes
69	MTW-14-1	Po Leung Kuk Lam Man Chan English Primary School [2]	1	35	35	20	30	40	46	-17.3	115.9	-10	-1	-27	-20	41	55	Yes
70	MTW-15-1	Hung Hom Lutheran Primary School [2]	0	10	10	20	30	22	32	-12.2	115.9	-10	0	-27	-20	47	55	Yes
71	MTW-16-1	SKH Good Shepherd Primary School [2]	0	10	10	20	30	22	32	-12.2	115.9	-10	0	-27	-20	47	55	Yes
72	MTW-17-1	Loyal Mansion	3	20	20	17	28	26	34	-13.6	115.9	-10	-3	-27	-20	42	65	Yes
73	MTW-19-1	Holy Trinity Church	0	55	65	18	25	58	70	-20.4	115.9	-10	0	-27	-20	38	65	Yes
74	HOM-2-6	Chatham Mansion	1	0	0	19	30	19	30	-10.8	115.9	-10	-1	-27	-20	47	65	Yes
75	HOM-2-1	Farerie Court	1	30	30	15	25	34	39	-15.7	115.9	-10	-1	-27	-20	42	65	Yes
76	HOM-2-2	Lee Wing Building	1	0	0	20	30	20	30	-11.2	115.9	-10	-1	-27	-20	47	65	Yes
77	HOM-2-5	Chat Ma Mansion	1	35	35	10	20	36	40	-16.4	115.9	-10	-1	-27	-20	42	65	Yes
78	MTW-18-1	Residential Premises along Chi Kiang Street	1	55	55	10	20	56	59	-20.1	115.9	-10	-1	-27	-20	38	65	Yes
79	MTW-18-2	No. 2 Kowloon City Road	1	37	37	10	20	38	42	-16.9	115.9	-10	-1	-27	-20	41	65	Yes

Note : [1] The source RMS vibration velocity of 0.625 mm/s is extracted from the approved EIA report^[9-3].

[2] A 5dB(A) reduction to the daytime criterion is adopted for school during examination period as the worst case scenario.

[3] A -18 dB should be adopted for coupling loss of bedrock to pile. However, this correction depends on actual site condition and as a conservative approach, 0 dB is assumed.