

Appendix 9.2: Operational Groundborne Noise Assessment Results

Project: SCL (TAW-HUH)

Item	NSR	Location	Floor	Horizontal Distance		Vertical Distance		Reference Borehole ^[2]		TCF ^[4]	TOC ^[5]		Track Type ^[6]		CCF	BCF	L _{max} ^[7]	Speed ^[8] kph	Passby Duration (sec)	SEL ^[9] 1UP&DN (dB(A))	Train Frequency no./30m/dir	Predicted L _{eq 30min} (dB(A))			Cumulative Noise Level (dB(A))	NCO Criteria (Nighttime)	Criteria Achieved?
				Up Track (m)	Down Track (m)	Up Track (m)	Down Track (m)	Up	Down		Up	Down	EWL	NSL								KTE					
1	DIH-1-1	Tsui Chuk Garden Block 5	1	0	0	75	75	D064	D064	B	0	0	0	0	N	N	53	95	7	64	6	40	---	---	40	45	Yes
2	DIH-2-1	Pak Yuen House	1	295	290	65	65	D049	D049	B	0	0	0	0	N	N	52	90	8	64	6	39	---	---	39	45	Yes
3	DIH-3-1	Wah Yuen House	1	102	100	50	50	D028	D028	B	0	0	0	0	N	N	52	90	8	64	6	39	---	---	39	45	Yes
4	DIH-3-2	Nga Yuen House	1	135	120	45	45	D028	D028	B	0	0	0	0	N	N	51	80	9	64	6	39	---	---	39	45	Yes
5	DIH-3-3	Kwai Yuen House	1	5	15	35	35	D002	D002	B	0	0	0	0	N	N	55	90	8	66	6	42	---	---	42	45	Yes
6	DIH-3-4	Chui Yuen House	1	55	50	45	45	D028	D028	B	0	0	0	0	N	N	51	80	9	64	6	39	---	---	39	45	Yes
7	DIH-4-1	Pang Ching Court	1	210	195	70	70	D064	D064	B	0	0	0	0	N	N	52	90	8	64	6	39	---	---	39	45	Yes
8	DIH-4-2	Carbo Anglo-Chinese Kindergarten	0	130	115	75	75	D064	D064	B	0	0	0	0	N	N	54	90	8	66	6	47[1]	---	---	47	55[3]	Yes
9	DIH-5-1	Rainbow Home	0	60	25	35	35	D002	D002	B	0	0	0	0	N	N	46	80	9	59	6	34	---	---	34	45	Yes
10	DIH-5-2	Residential premises	1	45	10	30	30	D002	D002	B	0	0	0	0	N	N	48	80	9	60	6	35	---	---	35	45	Yes
11	DIH-5-5	Our Lady's Kindergarten	0	110	85	40	40	D018	D018	B	0	0	0	0	N	N	43	80	9	55	6	37[1]	---	---	37	55[3]	Yes
12	DIH-6-1	WTS Fire Station and Quarters Block A	1	5	5	30	30	D002	D002	B	0	0	0	0	N	N	51	85	8	64	6	39	---	---	39	45	Yes
13	DIH-7-1	Tropicana Gardens Block 2	4	14	58	40	40	D018	D018	C	0	0	0	0	N	N	47	85	8	60	6	35	---	---	35	45	Yes
14	DIH-7-2	Tropicana Gardens Block 3	4	10	48	40	40	D018	D018	C	0	0	0	0	N	N	49	85	8	61	6	37	---	---	37	45	Yes
15	DIH-8-1	Redemption Lutheran Church	0	116	163	20	20	D002	D002	C	0	0	0	0	N	N	37	85	8	49	6	25	---	---	25	45	Yes
16	DIH-9-1	Shek On Building	0	118	156	25	25	D002	D002	C	0	0	0	0	N	N	37	80	9	49	6	30[1]	---	---	30	55[3]	Yes
17	DIH-10-1	Hong Kong Sheung Keung Hui Nursing Home	1	160	188	25	25	D002	D002	C	0	0	0	0	N	N	35	80	9	47	6	22	---	---	22	45	Yes
18	DIH-11-1	Lung Wan House	1	75	60	25	25	D002	D002	S	0	0	0	0	N	N	27	35	20	43	6	<20	---	---	<20	45	Yes
19	DIH-12-1	Galaxia Tower B	5	195	180	30	30	D002	D002	S	0	0	0	0	N	N	22	55	12	36	6	<20	---	---	<20	45	Yes
20	DIH-12-2	Galaxia Tower E	5	180	160	30	30	D002	D002	S	0	0	0	0	N	N	20	45	15	35	6	<20	---	---	<20	45	Yes
21	DIH-13-1	Canossa Primary School	0	160	200	25	25	D002	D002	C	0	0	0	0	N	N	37	85	8	49	6	31[1]	---	---	31	55[3]	Yes
22	DIH-14-1	Rhythm Garden Block 2	1	45	60	25	25	D002	D002	B	0	0	0	0	N	N	39	60	11	53	6	28	---	---	28	45	Yes
23	DIH-14-2	Rhythm Garden Block 5	1	35	50	25	25	D002	D002	B	0	0	0	0	N	N	41	60	11	54	6	30	---	---	30	45	Yes
24	DIH-14-3	Rhythm Garden Block 8	1	175	185	25	25	D002	D002	B	0	0	0	0	N	N	35	60	11	49	6	24	---	---	24	45	Yes
25	DIH-14-4	Canossa Primary School (San Po Kong)	1	145	160	25	25	D002	D002	S	0	0	0	0	N	N	30	60	11	44	6	<20[1]	---	---	<20	55[3]	Yes
26	DIH-14-5	Rhythm Garden Block 1	1	40	50	25	25	D002	D002	B	0	0	0	0	N	N	39	55	12	53	6	29	---	---	29	45	Yes
27	DIH-14-6	Rhythm Garden Block 3	1	45	60	25	25	D002	D002	B	0	0	0	0	N	N	39	60	11	53	6	28	---	---	28	45	Yes
28	DIH-15-1	Kam Wan House	0	100	85	25	25	D002	D002	B	0	0	0	0	N	N	37	60	11	51	6	26	---	---	26	45	Yes
29	DIH-15-2	Pik Hoi House	0	75	65	25	25	D002	D002	B	0	0	0	0	N	N	37	55	12	51	6	26	---	---	26	45	Yes
30	DIH-16-1	Wong Tai Sin Temple	0	22	35	35	35	D002	D002	B	0	0	0	0	N	N	49	85	8	61	6	36	---	---	36	45	Yes
31	DIH-17-1	Chuk Yuen United Village	0	15	50	30	30	D002	D002	B	0	0	0	0	N	N	49	85	8	61	6	36	---	---	36	45	Yes
32	DIH-18-1	Upper Wong Tai Sin Estate Po Sin House	1	25	30	40	40	D018	D018	B	0	0	0	0	N	N	50	85	8	62	6	38	---	---	38	45	Yes
33	DIH-18-2	Upper Wong Tai Sin Estate Tat Sin House	1	35	37	45	45	D028	D028	B	0	0	0	0	N	N	54	90	8	66	6	41	---	---	41	45	Yes
34	DIH-19-1	Lung Cheung Gov. Secondary School	0	40	55	45	45	D028	D028	B	0	0	0	0	N	N	55	90	8	67	6	48[1]	---	---	48	55[3]	Yes
35	DIH-20-1	Baptist Rainbow Primary School	0	95	80	45	45	D028	D028	B	0	0	0	0	N	N	54	90	8	66	6	47[1]	---	---	47	55[3]	Yes
36	DIH-21-1	Tin Wang Court Wang King House	1	30	40	40	40	D018	D018	B	0	0	0	0	N	N	46	90	8	58	6	33	---	---	33	45	Yes
37	DIH-22-1	Price Memorial Catholic Primary School	0	80	95	40	40	D018	D018	B	0	0	0	0	N	N	44	90	8	56	6	37[1]	---	---	37	55[3]	Yes
38	DIH-23-1	Tin Ma Court Chun On House	1	100	115	40	40	D018	D018	B	0	0	0	0	N	N	42	90	8	54	6	29	---	---	29	45	Yes
39	DIH-24-1	Shing Wong Temple	1	0	5	35	35	D002	D002	B	0	0	0	0	N	N	57	90	8	68	6	44	---	---	44	45	Yes
40	DIH-P1-1	Upper Wong Tai Sin Estate Phase 3	2	0	5	37	28	D002	D002	S	0	0	0	0	N	N	45	90	8	57	6	32	---	---	32	45	Yes
41	DIH-P2-1	TBA	2	75	95	20	20	D002	D002	S	0	0	0	0	N	N	30	70	10	43	6	<20	---	---	<20	45	Yes
42	DIH-P2-2	TBA	2	0	0	20	20	D002	D002	S	0	0	0	0	N	N	53	45	15	68	6	43	---	---	43	45	Yes

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				Up Track (m)	Down Track (m)	Up Track (m)	Down Track (m)	Up	Down		Up	Down	EWL	NSL								KTE					
43	DIH-P2-3	TBA	2	0	0	20	20	D002	D002	S	0	0	0	0	N	N	56	60	11	69	6	45	---	---	45	45	Yes
44	DIH-P2-4	TBA	2	30	45	20	20	D002	D002	S	0	0	0	0	N	N	36	60	11	50	6	25	---	---	25	45	Yes
45	KAT-P1-1	Residential premises near Kai Tak Station	2	75	90	15	17	D018	D018	S	1	0	0	0	N	N	32	35	20	48	6	23	---	---	23	45	Yes
46	KAT-P1-2	Residential premises near Kai Tak Station	2	75	90	15	17	D018	D018	S	0	1	0	0	N	N	35	50	14	49	6	25	---	---	25	45	Yes
47	KAT-P1-3	Residential premises near Kai Tak Station	2	55	70	15	17	D018	D018	C	1	0	0	0	N	N	43	70	10	56	6	31	---	---	31	45	Yes
48	KAT-P1-4	Residential premises near Kai Tak Station	2	80	65	15	17	D018	D018	S	0	0	0	0	N	N	30	65	11	44	6	<20	---	---	<20	45	Yes
49	KAT-P1-5	Residential premises near Kai Tak Station Site 1A	2	10	20	15	17	D018	D018	C	0	0	0	0	N	N	51	60	11	64	6	40	---	---	40	45	Yes
50	KAT-P1-6	Residential premises near Kai Tak Station Site 1B	2	180	165	15	17	D018	D018	S	1	0	0	0	N	N	36	55	12	50	6	25	---	---	25	45	Yes
51	KAT-P1-7	Residential premises near Kai Tak Station	2	0	0	15	17	D018	D018	S	0	0	0	0	N	N	57	75	9	69	6	45	---	---	45	45	Yes
52	TKW-1-1	Parc 22	1	85	90	15	27	D018	D002	B	0	0	0	0	N	N	37	70	10	50	6	25	---	---	25	45	Yes
53	TKW-1-2	Sanford Mansion	1	95	95	15	27	D018	D002	B	0	0	0	0	N	N	37	70	10	50	6	25	---	---	25	45	Yes
54	TKW-2-1	Skytower Tower 1	5	140	140	15	27	D018	D002	B	0	0	0	0	N	N	29	70	10	42	6	<20	---	---	<20	45	Yes
55	TKW-2-2	Skytower Tower 2	5	140	140	15	27	D018	D002	B	0	0	0	0	N	N	29	70	10	42	6	<20	---	---	<20	45	Yes
56	TKW-2-3	Skytower Tower 7	5	235	260	15	27	D018	D002	S	0	0	0	0	N	N	24	70	10	37	6	<20	---	---	<20	45	Yes
57	TKW-3-1	Prince Ritz	5	235	255	23	23	D002	D002	S	0	0	0	0	N	N	13	20	34	31	6	<20	---	---	<20	45	Yes
58	TKW-3-2	Prosperity House	2	250	270	23	23	D002	D002	S	0	0	0	0	N	N	26	45	15	41	6	<20	---	---	<20	45	Yes
59	TKW-P1-1	Residential premises near To Kwa Wan Station	1	35	15	22	22	D002	D002	S	0	0	0	0	N	N	40	45	15	55	6	30	---	---	30	45	Yes
60	MTW-6-1	Fok On Building	2	17.5	17.5	15	27	D018	D002	B	0	0	0	0	N	N	48	65	11	62	6	37	---	---	37	45	Yes
61	MTW-6-2	HK Society for the Protection of Children	0	10	10	15	27	D018	D002	B	0	0	0	0	N	N	59	65	11	72	6	53[1]	---	---	53	55[3]	Yes
62	MTW-6-3	Chung Nam Mansion	2	20	20	15	27	D018	D002	B	0	0	0	0	N	N	47	65	11	60	6	35	---	---	35	45	Yes
63	MTW-6-4	Pok Oi Lau	0	12	12	15	27	D018	D002	B	0	0	0	0	N	N	57	65	11	70	6	45	---	---	45	45	Yes
64	MTW-7-1	Geranium House	1	12.5	12.5	17	28	D018	D002	B	0	0	0	0	N	N	52	65	11	65	6	40	---	---	40	45	Yes
65	MTW-8-1	Horae Palace	3	15	15	17	28	D018	D002	B	0	0	0	0	N	N	46	65	11	60	6	35	---	---	35	45	Yes
66	MTW-9-1	Majestic Park	3	35	35	18	30	D012	D002	B	0	0	0	0	N	N	39	65	11	52	6	28	---	---	28	45	Yes
67	MTW-10-1	18 Farm Road	3	15	15	18	30	D012	D002	B	0	0	0	0	N	N	46	65	11	60	6	35	---	---	35	45	Yes
68	MTW-11-1	Farm Road Government Primary School	0	65	65	18	30	D012	D002	B	0	0	0	0	N	N	40	65	11	54	6	35[1]	---	---	35	55[3]	Yes
69	MTW-12-1	Yuet Fai Mansion	1	17.5	17.5	18	30	D012	D002	B	0	0	0	0	N	N	50	65	11	63	6	38	---	---	38	45	Yes
70	MTW-12-2	Delight Court	3	17.5	17.5	20	30	D002	D002	B	0	0	0	0	N	N	45	65	11	58	6	33	---	---	33	45	Yes
71	MTW-12-3	Lucky Mansion	3	15	15	20	30	D002	D002	S	0	0	0	0	N	N	40	55	12	53	6	29	---	---	29	45	Yes
72	MTW-12-4	352-354 Ma Tau Wai Road	2	15	15	20	30	D002	D002	S	0	0	0	0	N	N	39	40	17	54	6	29	---	---	29	45	Yes
73	MTW-12-5	Seng Cheong Building	1	17.5	17.5	17	27	D018	D002	S	0	0	0	0	N	N	42	50	14	57	6	32	---	---	32	45	Yes
74	MTW-12-6	Great Wall Building	3	30	30	18	30	D012	D002	B	0	0	0	0	N	N	42	65	11	55	6	30	---	---	30	45	Yes
75	MTW-12-7	197-199 Ma Tau Wai Road	2	15	15	18	30	D012	D002	B	0	0	0	0	N	N	48	65	11	62	6	37	---	---	37	45	Yes
76	MTW-12-8	Pak Tai Mansion	1	12	12	18	30	D012	D002	B	0	0	0	0	N	N	51	65	11	65	6	40	---	---	40	45	Yes
77	MTW-12-9	Residential premises along Hung Kwong Street	2	12	12	19	32	D012	D002	B	0	0	0	0	N	N	49	65	11	62	6	38	---	---	38	45	Yes
78	MTW-12-10	Lucky Building	2	15	15	18	28	D012	D002	S	0	0	0	0	N	N	42	55	12	56	6	31	---	---	31	45	Yes
79	MTW-12-11	Jing Ming Building	2	19	19	20	30	D002	D002	S	0	0	0	0	N	N	39	50	14	54	6	29	---	---	29	45	Yes
80	MTW-12-12	One Elegance	3	12	12	18	30	D012	D002	B	0	0	0	0	N	N	47	65	11	61	6	36	---	---	36	45	Yes
81	MTW-13-1	Cheung Chuk Shan Memorial School	0	10	10	20	30	D002	D002	S	0	0	0	0	N	N	52	65	11	65	6	47[1]	---	---	47	55[3]	Yes
82	MTW-14-1	PLK Lam Man Chan English Primary School	1	35	35	20	30	D002	D002	S	0	0	0	0	N	N	36	55	12	50	6	32[1]	---	---	32	55[3]	Yes
83	MTW-15-1	Hung Hom Lutheran Primary School	0	10	10	20	30	D002	D002	S	0	0	0	0	N	N	50	50	14	64	6	46[1]	---	---	46	55[3]	Yes
84	MTW-16-1	SKH Good Shepherd Primary School	0	10	10	20	30	D002	D002	S	0	0	0	0	N	N	49	45	15	64	6	45[1]	---	---	45	55[3]	Yes

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				Up Track (m)	Down Track (m)	Up Track (m)	Down Track (m)	Up	Down		Up	Down	EWL	NSL								KTE					
85	MTW-17-1	Loyal Mansion	3	20	20	17	28	D018	D002	B	0	0	0	0	N	N	43	55	12	57	6	32	---	---	32	45	Yes
86	MTW-18-1	Residential premises along Chi Kiang St	2	45	45	17	27	D018	D002	S	0	0	0	0	N	N	31	50	14	46	6	21	---	---	21	45	Yes
87	MTW-18-2	No. 2 Kowloon City Road	2	28	28	17	27	D018	D002	S	0	0	0	0	N	N	35	50	14	49	6	24	---	---	24	45	Yes
88	MTW-19-1	Holy Trinity Church	0	55	65	18	25	D012	D002	B	0	0	0	0	N	N	40	55	12	54	6	29	---	---	29	45	Yes
89	HOM-1-1	Ko Shan Theatre	0	50	50	35	40	D002	D018	B	0	0	0	0	N	N	40	55	12	54	6	30	---	---	30	45	Yes
90	HOM-2-1	Faerie Court	2	20	20	18	29	D012	D002	B	0	0	0	0	N	N	45	55	12	59	6	35	---	---	35	45	Yes
91	HOM-2-2	Lee Wing Building	2	0	0	19	30	D012	D002	B	0	0	0	0	N	N	52	55	12	66	6	41	---	---	41	45	Yes
92	HOM-2-3	Wing Lam Mansion	2	15	15	20	30	D002	D002	B	0	0	0	0	N	N	47	55	12	60	6	36	---	---	36	45	Yes
93	HOM-2-4	Tak Lee Court	1	50	55	35	45	D002	D028	B	0	0	0	0	N	N	46	60	11	60	6	35	---	---	35	45	Yes
94	HOM-2-5	Chat Ma Mansion	1	45	45	20	30	D002	D002	B	0	0	0	0	N	N	39	55	12	53	6	28	---	---	28	45	Yes
95	HOM-2-6	Chatham Mansion	1	0	0	19	30	D012	D002	B	0	0	0	0	N	N	54	55	12	68	6	43	---	---	43	45	Yes
96	HOM-3-1	Fook Sing Mansion	1	85	100	35	40	D002	D018	B	0	0	0	0	N	N	36	55	12	50	6	25	---	---	25	45	Yes
97	HOM-3-2	Marigold Mansion, Block A	1	85	110	45	45	D028	D028	B	0	0	0	0	N	N	48	55	12	62	6	37	---	---	37	45	Yes
98	HOM-4-1	Yee Fu Building	1	40	70	45	45	D028	D028	S	0	0	0	0	N	N	44	55	12	58	6	33	20 ^[10]	<20	33	45	Yes
99	HOM-5-1	271 Chatham Road North	2	75	75	45	45	D028	D028	S	0	0	0	0	N	N	37	35	20	53	6	28	20 ^[10]	23	28	45	Yes
100	HOM-P2	HKPU Phase 3	1	35	65	45	45	D028	D028	S	0	0	0	0	N	N	43	50	14	58	6	39[1]	<20	<20	39	55[3]	Yes
101	HOM-P3-1	Residential Building, HOM Station Development	1	0	0	45	45	D028	D028	S	0	0	0	0	N	N	51	50	14	66	6	41	20 ^[10]	36	41	45	Yes
102	HUH-1-1	Cartas Branchi College of Careers	0	95	125	30	30	D002	D002	S	0	0	0	0	N	N	30	45	15	45	6	<20[1]	20 ^[10]	26	<28	55[3]	Yes
103	HUH-1-2	Lok Ka House	1	55	80	18	18	D012	D012	C	0	0	0	0	N	N	34	50	14	49	6	24	20 ^[10]	<20	24	45	Yes
104	HUH-1-3	Wing Fung Building	1	10	25	18	18	D012	D012	C	0	0	0	0	N	N	49	60	11	63	6	38	20	<20	38	45	Yes

Notes:

- [1] A 3dB(A) upward adjustment is made to account for the daytime headway of 12 EMU trains within a 30 minutes period per direction.
- [2] Reference boreholes are taken from the approved WIL EIA report.
- [3] Daytime criteria are used for educational buildings, church and temple.
- [4] TCF types : B - Bored tunnel, C - Cut and cover tunnel, S - Station
- [5] TOC types : 0 - No turnouts, 1 - turnout, 2 - inclined turnout
- [6] Track Type 0 = Direct Fixation, 1 = At1 Baseplate, Type 2 = Egg Type Baseplate, Type 3 = 12.5Hz FST.
- [7] FDL based on 60kph data and adjusted by the correction factor of 20xlog(V/V_{ref}), in line with FTA manual.
- [8] Calculation based on 8-car train with 23.75m length for each car.
- [9] SEL calculations have incorporated a 3 dB correction factor for the leading and trailing effect.
- [10] Noise levels are estimated from predicted noise level of adjacent NSR.