

Noise Measurements for Existing Fixed Plant Noise Sources

Monitoring Period	Day time (07:00 - 19:00)													
	1	2	3	4	5	6	7	8	9	10	11	12	13	
Monitoring Location	N3	N4	N5	N6	N7 ²	N8 ³	N9 ³	N10 ³	N11 ³	N23 - N26 ²	N27-30 ²	N31 ^{2,3}	N32 ^{2,3}	
Measured Noise Source	N3	N4	N5	N6	N7 ²	N8 ³	N9 ³	N10 ³	N11 ³	N23 - N26 ²	N27-30 ²	N31 ^{2,3}	N32 ^{2,3}	
Date of Monitoring	14-Aug-11	14-Aug-11	14-Aug-11	14-Aug-11	14-Aug-11	14-Aug-11	14-Aug-11	14-Aug-11	14-Aug-11	28-Aug-11	28-Aug-11	18-Mar-12	19-Feb-12	
Measurement Start Time	16:53	17:47	18:16	18:40	16:53	17:14	17:34	17:54	18:13	13:40	14:24	11:40	08:39	
Measurement End Time	17:08	18:02	18:31	18:55	17:08	17:29	17:49	18:09	18:28	13:55	14:39	11:55	08:54	
Measurement Time Length (min)	15	15	15	15	15	15	15	15	15	15	15	15	15	
Weather Condition	Sunny	Sunny	Sunny	Sunny	Sunny	Sunny	Sunny	Sunny	Sunny	Cloudy	Cloudy	Cloudy	Cloudy	
Noise Meter Model	NL-31	NL-31	NL-31	NL-31	NL-18	NL-18	NL-18	NL-18	NL-18	NL-18	NL-18	NL-18	NL-18	
Measurement Result, dB (A)														
Leq	69	69	64	65	82	75	79	88	89	61	52	73	54	
Other Noise Sources during Monitoring	Noise from Traffic, bird, helicopter and pedestrians	Noise from Traffic and pedestrians	Noise from Traffic, bird, helicopter and pedestrians	Noise from Traffic, bird, helicopter and pedestrians	Traffic Noise	Traffic Noise	Traffic Noise	Traffic Noise	Traffic Noise	Traffic Noise	N/A	N/A	N/A	
Remarks	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Facade Measurement	X	X	X	X	X	X	√	√	√	X	X	X	X	
Sources Height (meter above ground)	7.5	5.0	10.0	5.0	2.0	4.5	4.5	2.5	5.0	2.0	11.2	5.0	21.5	
Microphone Height (meter above ground)	1.3	1.3	1.3	1.3	1.5	1.5	1.6	1.6	1.6	1.5	1.5	1.5	1.5	
Horizontal Dist between source and SLM (m)	4.0	5.0	7.0	3.5	1.2	3.5	2.5	1.0	3.5	33.7	66.5	3.5	65.0	
Calculated Slant Distance (m)	7.4	6.2	11.2	5.1	1.3	4.6	3.8	1.3	4.9	33.7	67.2	4.9	68.0	
Distance Correction, dB(A)	25	24	29	22	10	21	20	11	22	39	45	22	45	
Facade Correction, dB(A)	0	0	0	0	0	0	3	3	3	0	0	0	0	
Corrected SWL¹	95	93	93	88	92	96	95	95	107	99	97	95	99	

Notes:

1. Corrected Sound Power Level (SWL) = Measured Leq + Distance Correction - Facade Correction
2. Calculated SWL for daytime period is also adopted for evening and night time periods for conservative consideration
3. Fixed plant is not in operation during night time.
4. Background noise have been included in the noise measurement for conservative consideration

Noise Measurements for Existing Fixed Plant Noise Sources

Monitoring Period	Evening Time (19:00-2300)								
Monitoring Location	1	2	3	4	5	6	7	8	9
Measured Noise Source	N3	N4	N5	N6	N7	N8	N9	N10	N11
Date of Monitoring	15-Aug-11	15-Aug-11	15-Aug-11	15-Aug-11	15-Aug-11	15-Aug-11	15-Aug-11	15-Aug-11	15-Aug-11
Measurement Start Time	20:48	21:27	21:53	22:16	20:41	21:02	21:21	21:41	22:04
Measurement End Time	21:03	21:42	22:08	22:31	20:56	21:17	21:36	21:56	22:19
Measurement Time Length (min)	15	15	15	15	15	15	15	15	15
Weather Condition	Sunny	Sunny	Sunny	Sunny	Sunny	Sunny	Sunny	Sunny	Sunny
Noise Meter Model	NL-31	NL-31	NL-31	NL-31	NL-18	NL-18	NL-18	NL-18	NL-18
Measurement Results, dB (A)									
Leq	68	68	63	66	80	74	82	80	85
Other Noise Sources during Monitoring	Ventilation shaft (on and off), Insect Noise, Railway trains via railway tunnel ventilation shaft and helicopter	Ventilation Shaft, Helicopter, Traffic, Pedestrians, noise from inside bus terminus	Insect Noise, Helicopter, traffic noise, and pedestrians	Ventilation Shaft, Traffic and pedestrians	Traffic Noise	Traffic Noise	Traffic Noise	Traffic Noise	Traffic Noise
Remarks	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Facade Measurement	X	X	X	X	X	X	√	√	√
Sources Height (meter above ground)	7.5	5.0	10.0	5.0	2.0	4.5	4.5	6.0	5.0
Microphone Height (meter above ground)	1.3	1.3	1.3	1.3	1.6	1.6	1.6	1.6	1.6
Horizontal Dist between source and SLM (m)	4.0	5.0	7.0	3.5	1.0	3.5	3.0	4.0	3.5
Calculated Slant Distance (m)	7.4	6.2	11.2	5.1	1.1	4.5	4.2	5.9	4.9
Distance Correction, dB(A)	25	24	29	22	9	21	20	23	22
Facade Correction, dB(A)	0	0	0	0	0	0	3	3	3
Corrected SWL¹	93	92	92	88	88	96	99	101	104

Notes:

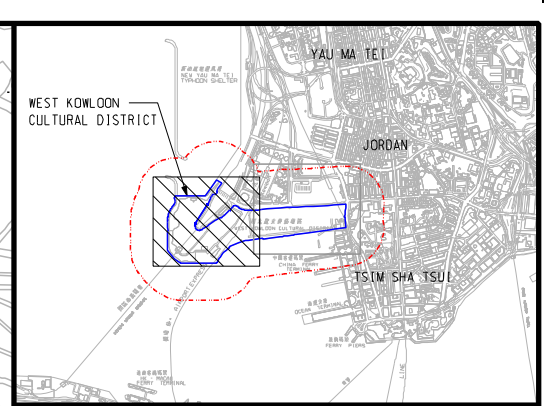
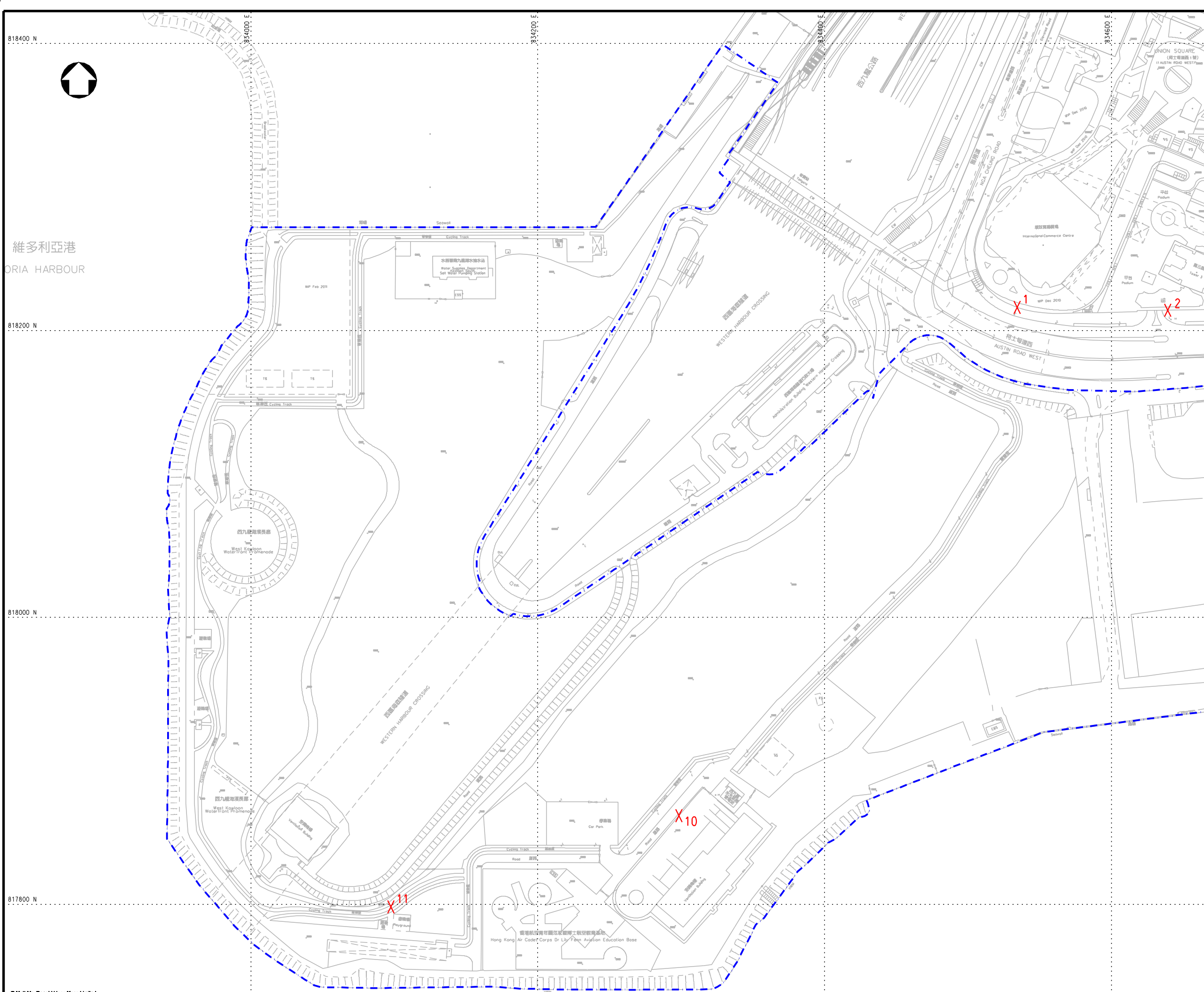
1. Corrected Sound Power Level (SWL) = Measured Leq + Distance Correction - Facade Correction
2. Calculated SWLs for noise source N23 to N32 during daytime period are adopted for evening time periods for conservative consideration
3. Background noise have been included in the noise measurement for conservative consideration

Noise Measurements for Existing Fixed Plant Noise Sources

Monitoring Period	Night Time (2300-0700)			
	1	2	3	4
Monitoring Location	N3	N4	N5	N6
Measured Noise Source	N3	N4	N5	N6
Date of Monitoring	15-Aug-11	16-Aug-11	16-Aug-11	16-Aug-11
Measurement Start Time	23:27	00:04	00:31	00:54
Measurement End Time	23:42	00:19	00:46	01:09
Measurement Time Length (min)	15	15	15	15
Weather Condition	Fine	Fine	Fine	Fine
Noise Meter Model	NL-31	NL-31	NL-31	NL-31
Measurement Results, dB (A)				
Leq	67	64	60	63
Other Noise Sources during Monitoring	Ventilation shaft (on and off), Insect Noise, Railway trains via railway tunnel ventilation shaft and pedestrians	Ventilation Shaft (soft) Traffic, Insect noise, noise from inside bus terminus	Insect Noise, traffic noise, and Ventilation shaft (soft)	Ventilation Shaft and Traffic
Remarks	N/A	N/A	N/A	N/A
Facade Measurement	X	X	X	X
Sources Height (meter above ground)	7.5	5.0	10.0	5.0
Microphone Height (meter above ground)	1.3	1.3	1.3	1.3
Horizontal Dist between source and SLM (m)	4.0	5.0	7.0	3.5
Calculated Slant Distance (m)	7.4	6.2	11.2	5.1
Distance Correction, dB(A)	25.4	23.9	29.0	22.1
Facade Correction, dB(A)				
Corrected SWL¹	93	88	89	85

Notes:

1. Corrected Sound Power Level (SWL) = Measured Leq + Distance Correction - Facade Correction
2. Calculated SWLs for NSR N23 to N30 during daytime period are adopted for night time periods for conservative consideration
3. Fixed plant noise sources N7 to N11, N31 and N32 are not in operation during night time.
4. Background noise have been included in the noise measurement for conservative consideration



KEY PLAN

- LEGEND:
- - - PROJECT BOUNDARY
 - - - 300m STUDY AREA
 - X MEASUREMENT LOCATIONS FOR EXISTING FIXED PLANT NOISE SOURCES

P1	DEC 12	MING	FIRST ISSUE	SC	AFK
Rev	Date	Drawn	Description	Ch'kd	App'd

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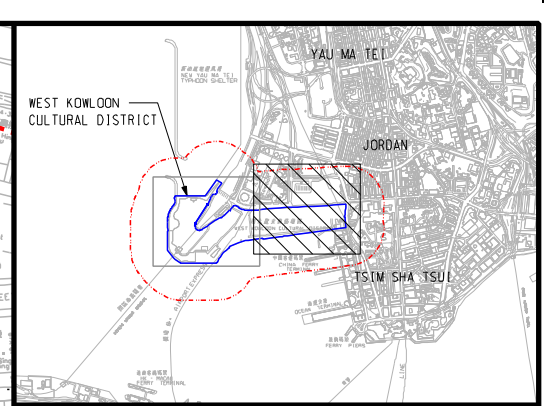
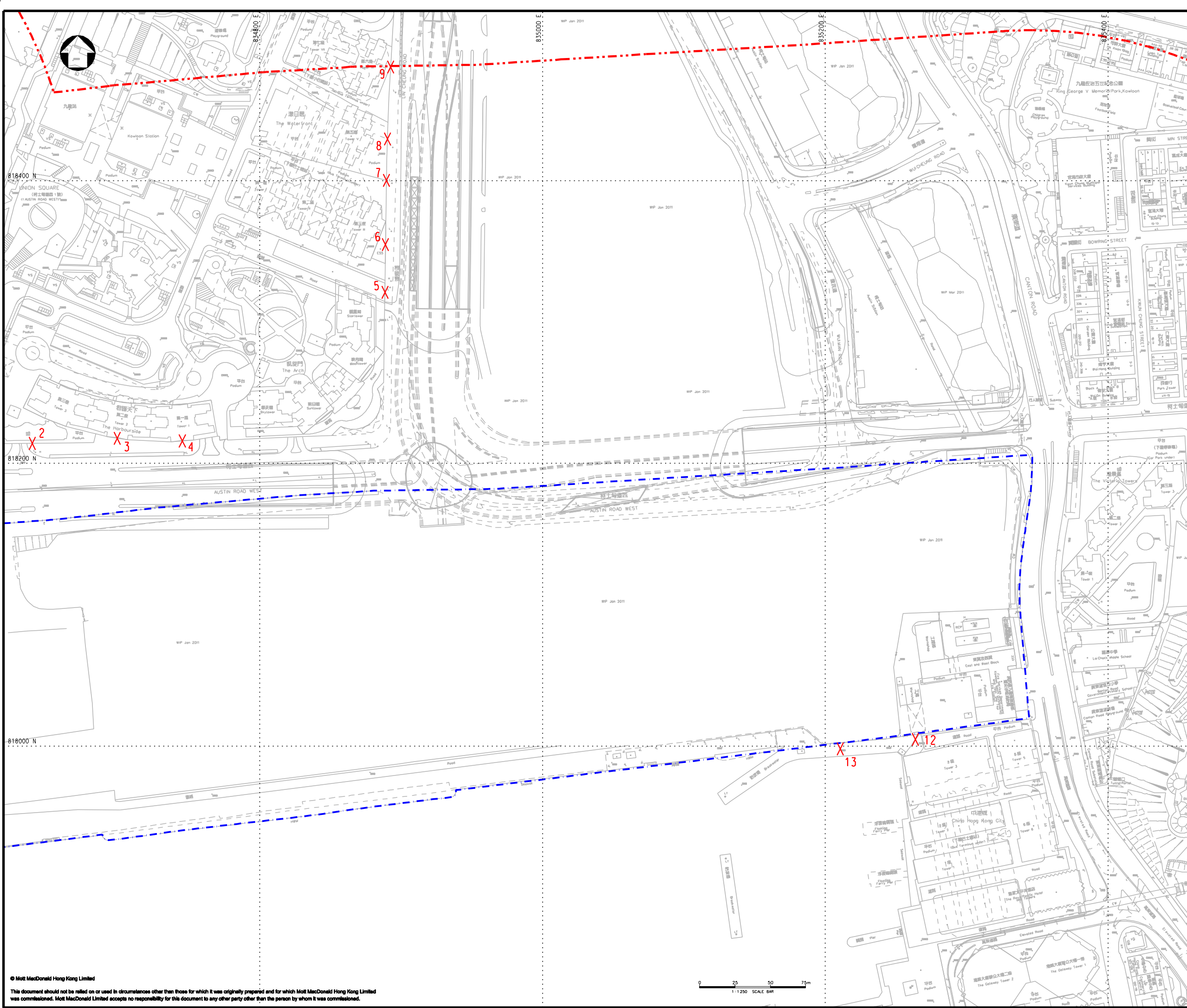
**PROJECT CONSULTANCY STUDY FOR
WEST KOWLOON CULTURAL DISTRICT
DEVELOPMENT PLAN**

Title

**MEASUREMENT LOCATIONS FOR
SOUND POWER LEVELS OF EXISTING
FIXED PLANT NOISE SOURCES
(SHEET 1 OF 2)**

Designed	SC	Eng check	SC
Drawn	MING	Coordination	EC
Dwg check	SC	Approved	AFK
Scale at A1	Status	Rev	
1:1250	PRE	P1	

Drawing Number **APPENDIX 4.1c**



KEY PLAN

LEGEND:

- PROJECT BOUNDARY
- 300m STUDY AREA
- X MEASUREMENT LOCATIONS FOR EXISTING FIXED PLANT NOISE SOURCES

P1	DEC 12	MING	FIRST ISSUE	SC	AFK
Rev	Date	Drawn	Description	Ch'kd	App'd

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Project
PROJECT CONSULTANCY STUDY FOR WEST KOWLOON CULTURAL DISTRICT DEVELOPMENT PLAN

Title
MEASUREMENT LOCATIONS FOR SOUND POWER LEVELS OF EXISTING FIXED PLANT NOISE SOURCES (SHEET 2 OF 2)

Designed	SC	Eng check	SC
Drawn	MING	Coordination	EC
Dwg check	SC	Approved	AFK
Scale at A1	1:1250	Status	PRE
Drawing Number		Rev	P1

APPENDIX 4.1d