

Construction of a Secondary Boundary Fence and New Sections  
of Primary Boundary Fence and Boundary Patrol Road  
Improvement Works for Mai Po, Lok Ma Chau, Sha Tau Kok and Planting  
Works at Tak Yuet Lau and Demolition Work at Shek Chung Au, Lo Wu to Sha  
Tau Kok – Monthly EM&A Report for May 2016



**Pursuant to Condition 4.5 of Environmental Permit No. EP-347/2009/A,  
this Monthly EM&A Report for May 2016 has been certified by the  
Environmental Team Leader and verified by the Independent  
Environmental Checker as having complied with the requirements as set  
out in the EM&A Manual.**

**Certified by:**

A handwritten signature in black ink, appearing to read 'Brandon Wong'.

\_\_\_\_\_  
Brandon Wong  
Environmental Team Leader (ETL)  
Mott MacDonald Hong Kong Limited

**Date:**

10 June 2016

**Verified by:**

A handwritten signature in black ink, appearing to read 'David Yeung'.

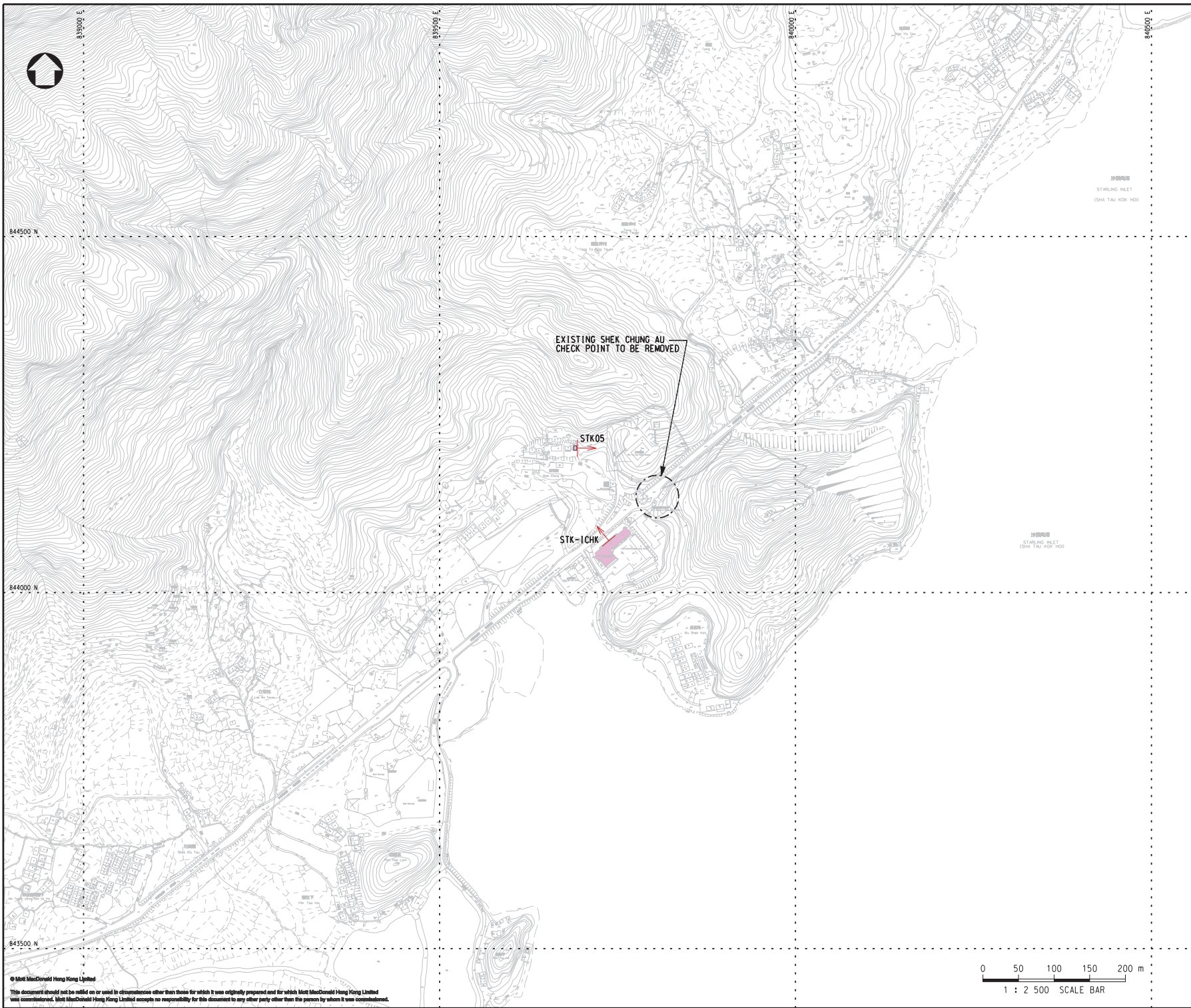
\_\_\_\_\_  
David Yeung  
Independent Environmental Checker (IEC)  
Ramboll Environ Hong Kong Limited

**Date:**

14 June 2016.









Notes


Key to symbols

 NOISE SENSITIVE RECEIVER  
 FACADE FACING

Reference drawings

Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	NOV 15	MING	ISSUE FOR COMMENT	BW	JC

20/F AIA Kowloon Tower  
Landmark East  
100 How Ming Street  
Kowloon Tong, Kowloon  
Hong Kong  
T +852 2828 8757  
F +852 2827 1653  
W www.mottmac.com.hk



**Mott MacDonald**

Client



**ARCHITECTURAL SERVICES DEPARTMENT**

Project

**CONSTRUCTION OF A SECONDARY BOUNDARY FENCE AND NEW SECTIONS OF PRIMARY BOUNDARY FENCE AND BOUNDARY PATROL ROAD**

Title

**LOCATION OF NOISE MONITORING STATION FOR DEMOLITION OF SHEK CHUNG AU CHECK POINT**

Designed	SC	Eng check	JC
Drawn	MING	Coordination	JC
Dwg check	SC	Approved	REV
Scale at A1	1:2500	Status	PRE
Drawing Number		Rev	P1

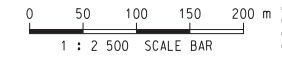


Figure 2.2



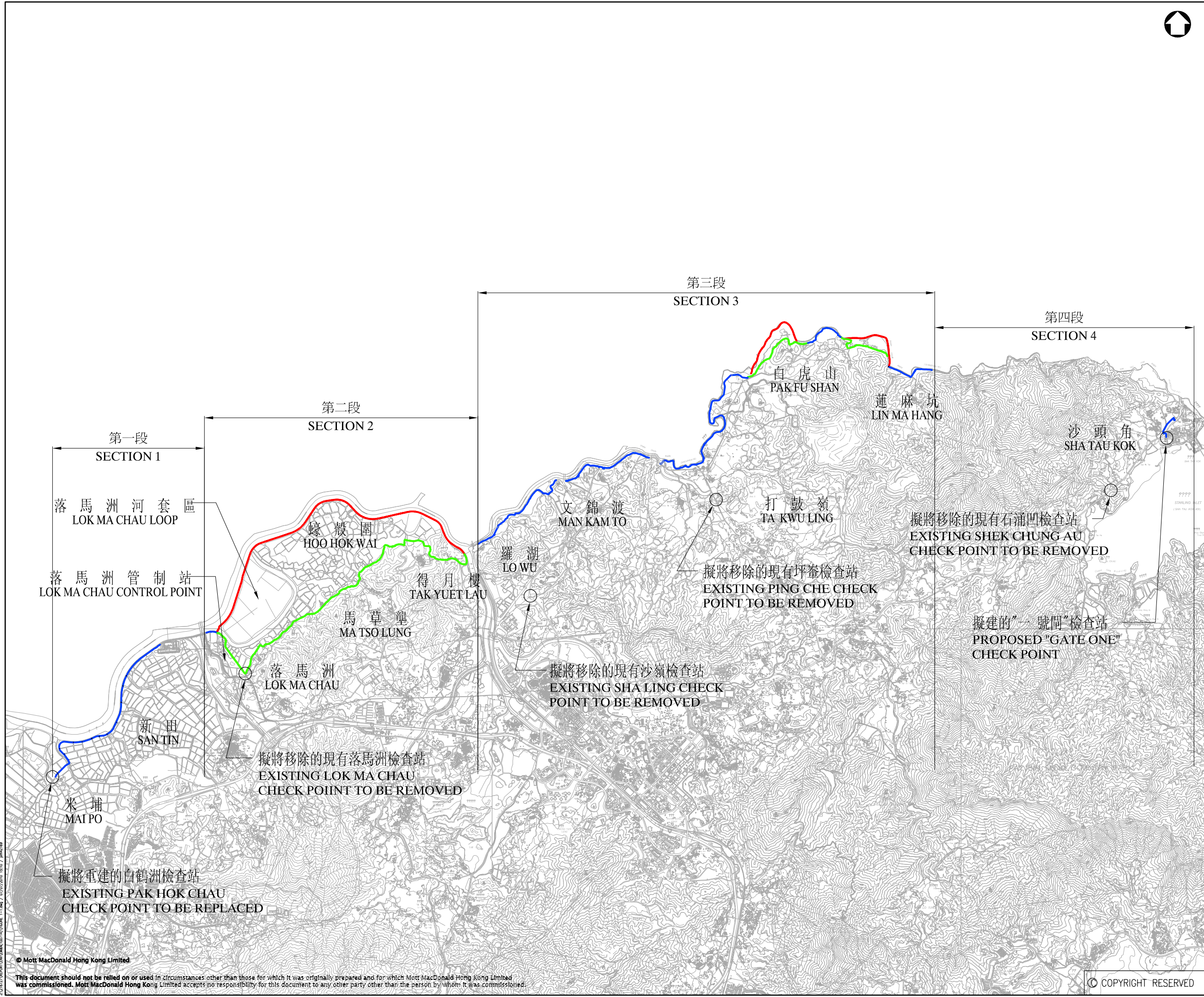






圖例：  
LEGEND:

- 建議於現有邊界巡邏通路興建的輔助邊界圍網  
PROPOSED SECONDARY BOUNDARY FENCE  
ALONG EXISTING BOUNDARY PATROL ROAD
- 建議的主要及輔助邊界圍網及新邊界巡邏通路  
PROPOSED NEW BOUNDARY PATROL ROAD WITH  
PRIMARY AND SECONDARY BOUNDARY FENCES
- 擬將移除的現有邊界圍網  
EXISTING BOUNDARY FENCE TO BE REMOVED



P1	JUL 10	AT	FIRST ISSUE	BW	TI
Rev	Date	Drawn	Description	Ch'k'd	App'd

ARCHITECTURAL SERVICES DEPARTMENT

Mott MacDonald

20/F Two Landmark East  
100 Hoi King Street  
Kowloon, Hong Kong  
T +852 2828 8707  
F +852 2827 1823  
W www.mottmac.com.hk

Project  
CONSTRUCTION OF A SECONDARY BOUNDARY FENCE AND NEW SECTIONS OF PRIMARY BOUNDARY FENCE AND BOUNDARY PATROL ROAD

Title  
概覽圖  
GENERAL LAYOUT PLAN

Designed	WHC	Eng.Chk.	WHC
Drawn	MCL	Coordination	WHC
Dwg.Chk.	WHC	Approved	TI
Scale	Project 216727		Status
N.T.S.	CAD File		INF
Drawing No.	216727/REPORT/DWG/DM&A(100714)/FIGURE 1-1.dwg		Rev

FIGURE 1.1 (圖 1.1)



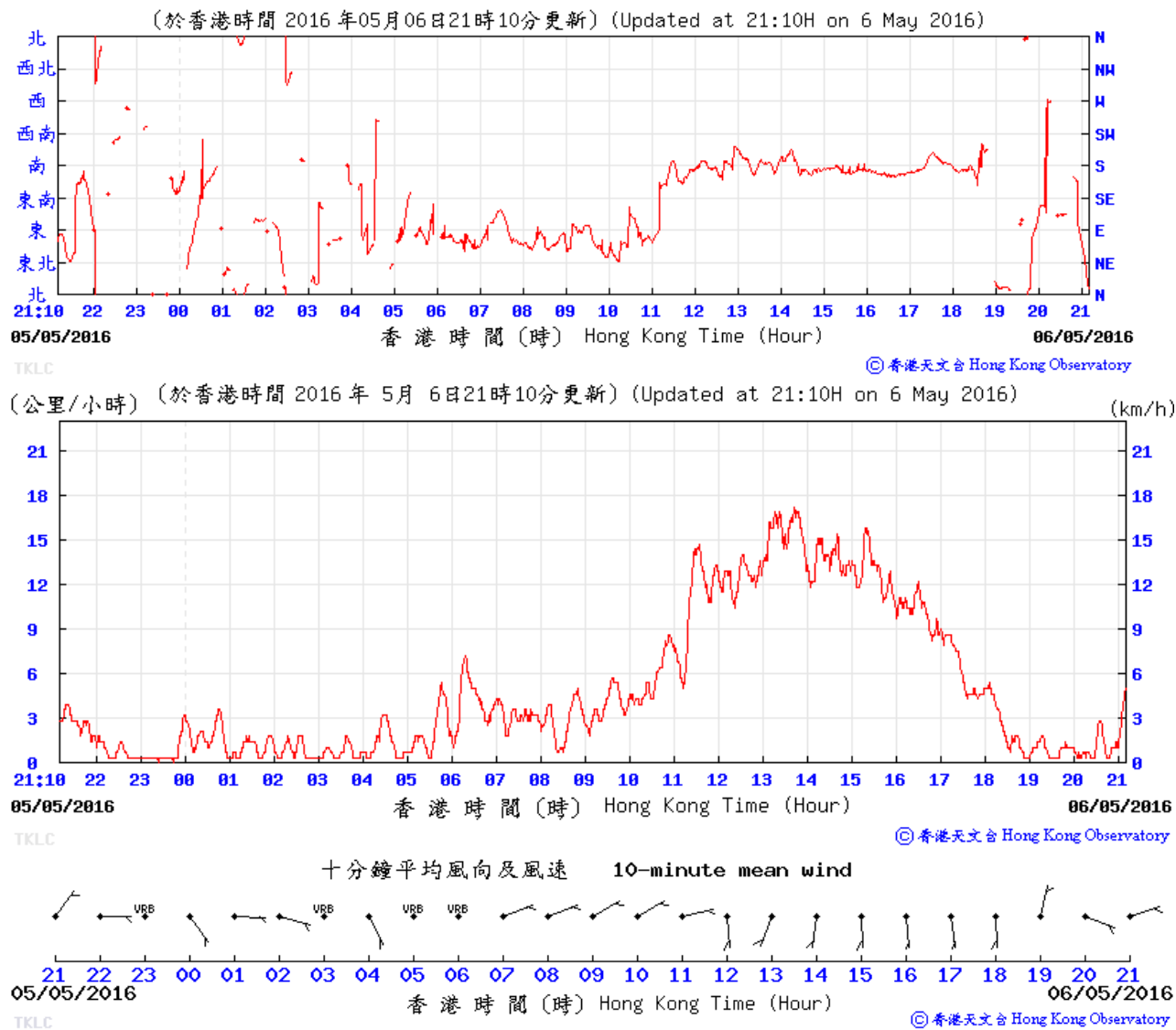
## Appendix K. Weather Information from Hong Kong Observatory

This Appendix presents wind data obtained from the nearest Hong Kong Observatory monitoring station, at Ta Kwu Ling, during noise impact monitoring days.



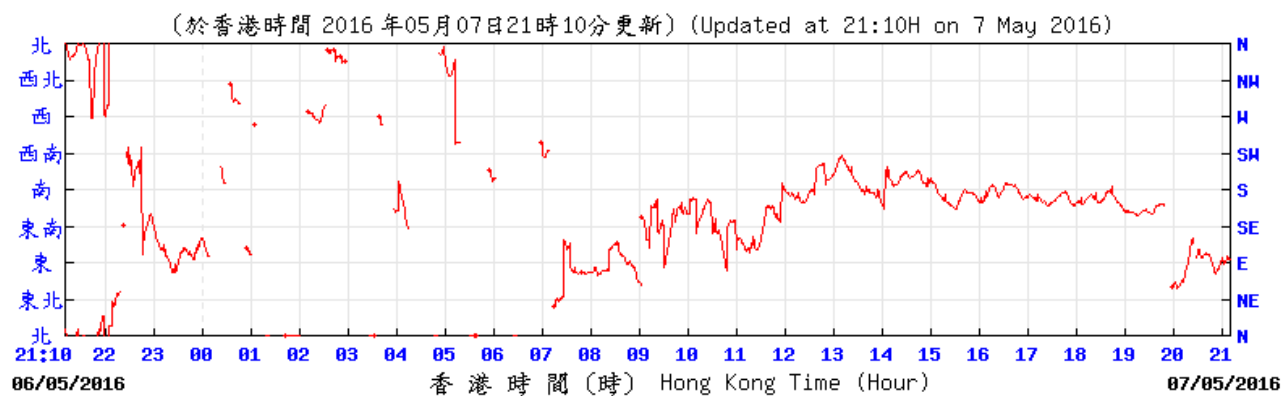
# Wind Data for Ta Kwu Ling

6 May 2016

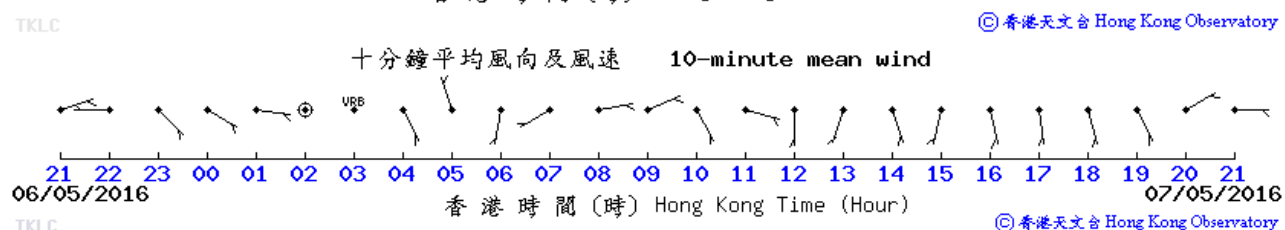
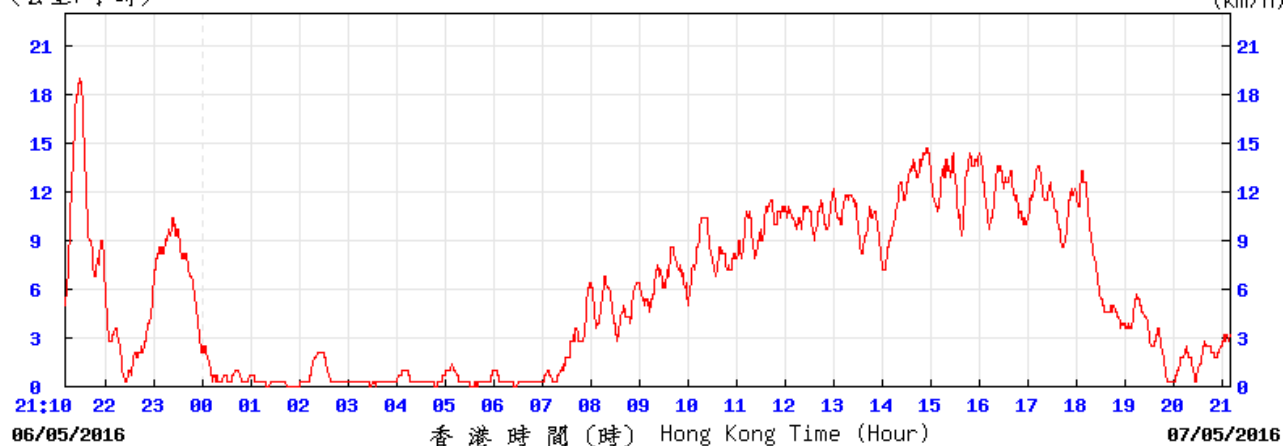


# Wind Data for Ta Kwu Ling

7 May 2016



TKLC (公里/小時) (於香港時間 2016年5月7日21時10分更新) (Updated at 21:10H on 7 May 2016) (km/h)

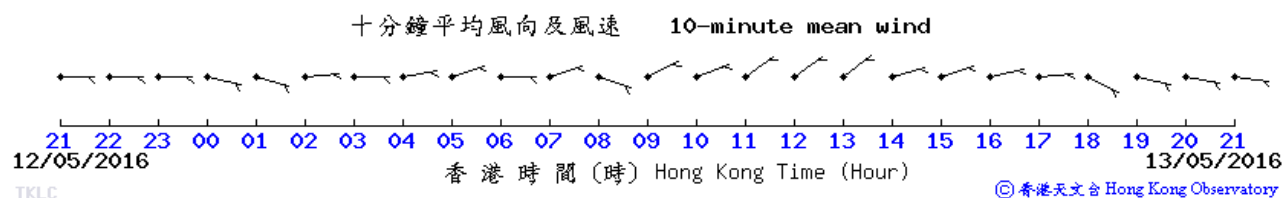
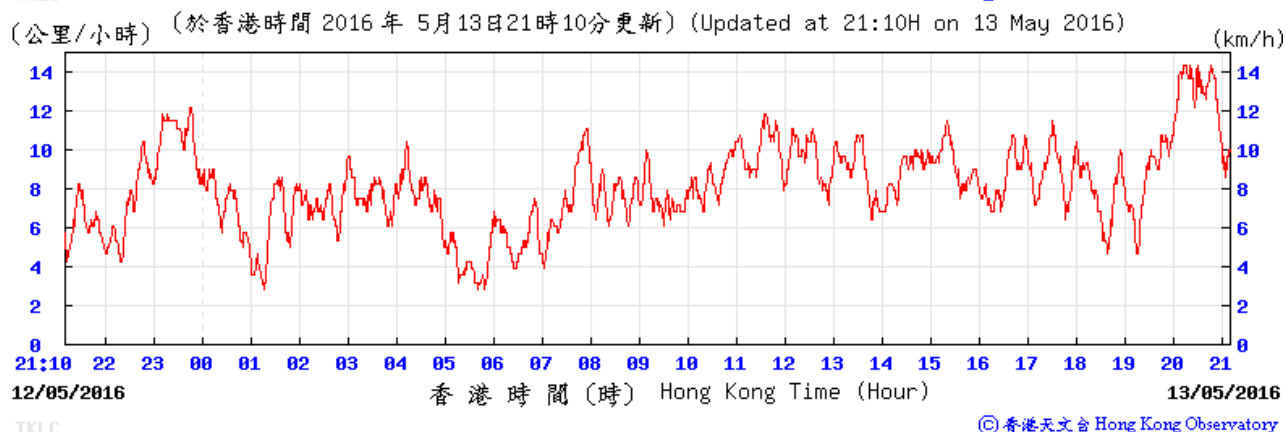
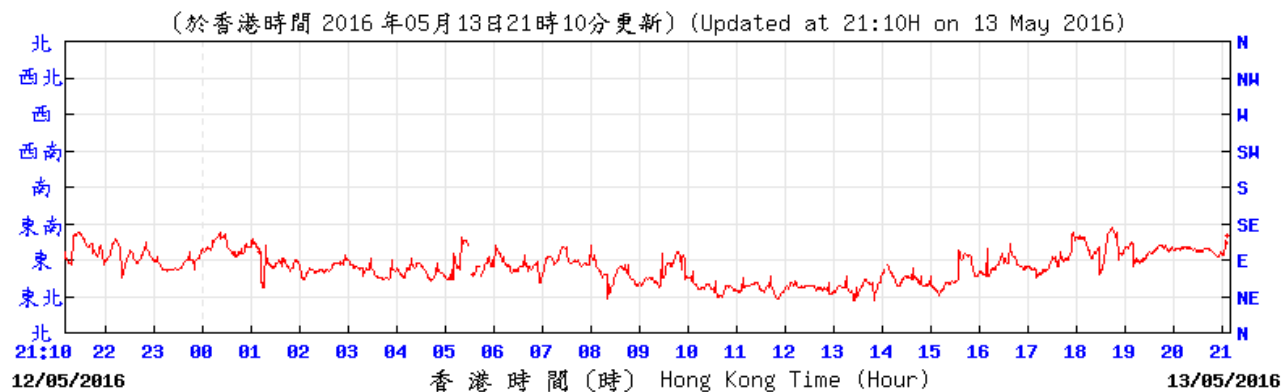


TKLC © 香港天文台 Hong Kong Observatory



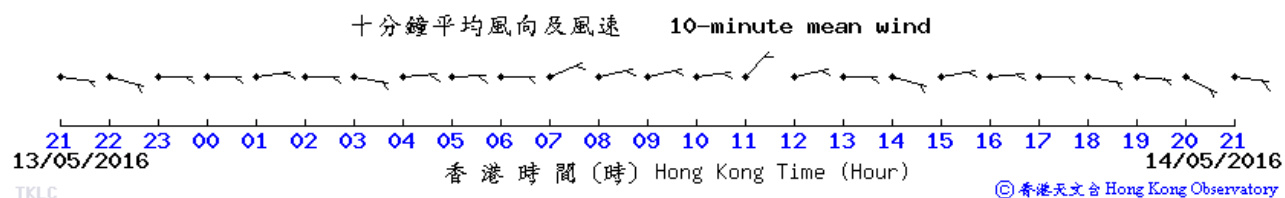
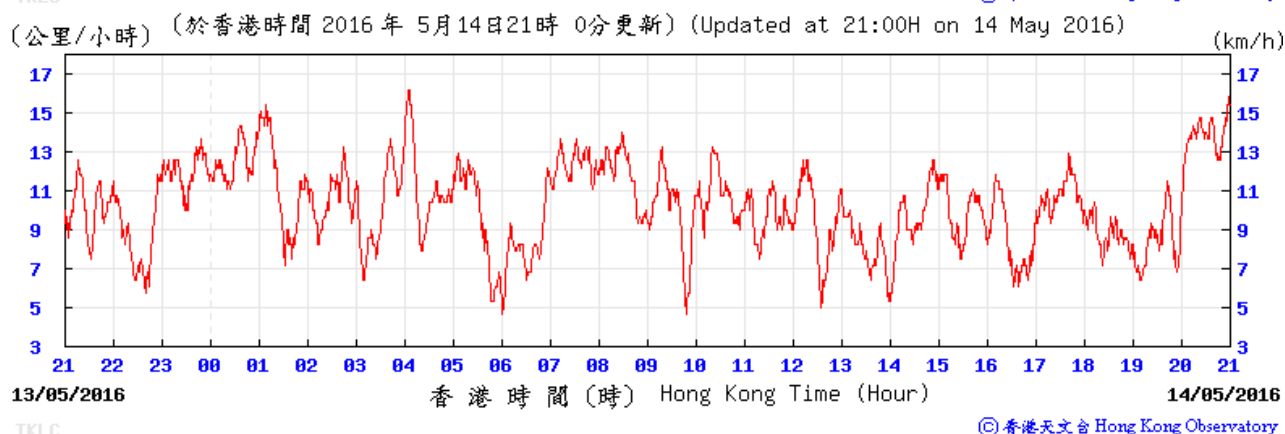
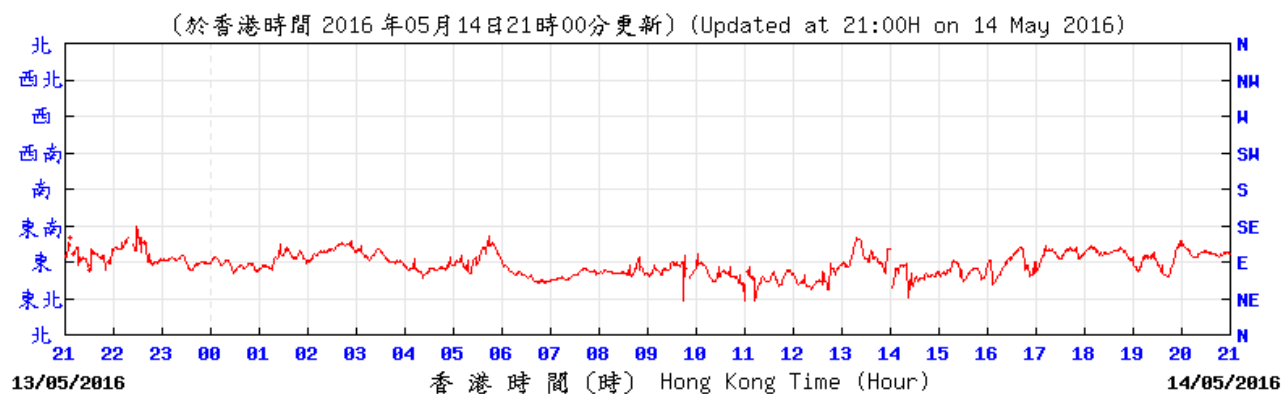
# Wind Data for Ta Kwu Ling

13 May 2016



# Wind Data for Ta Kwu Ling

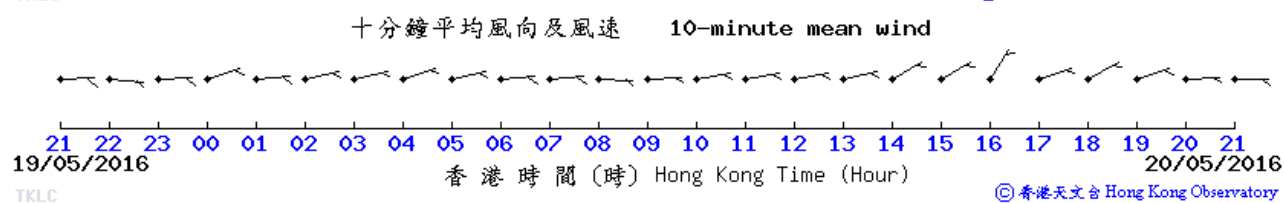
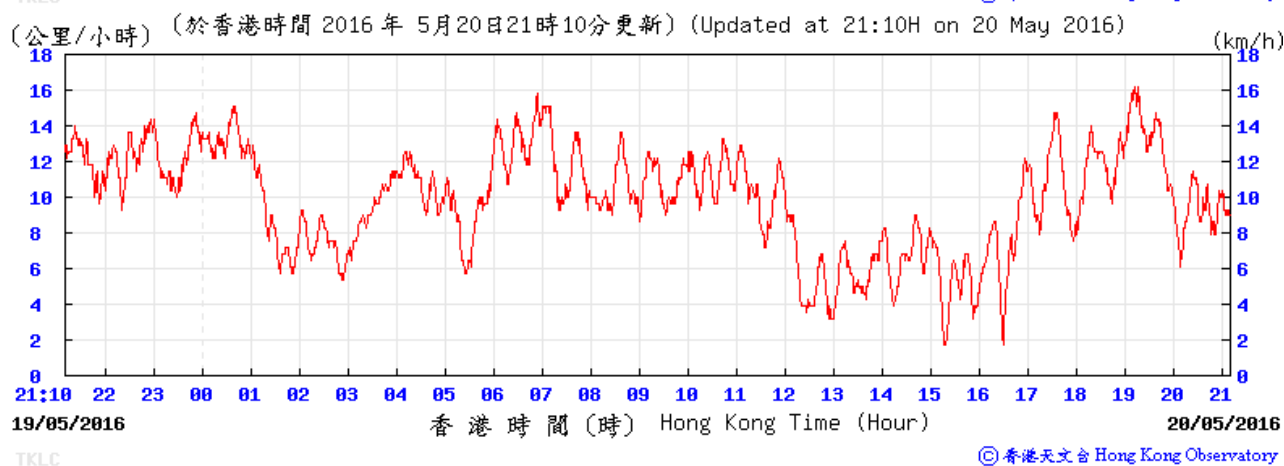
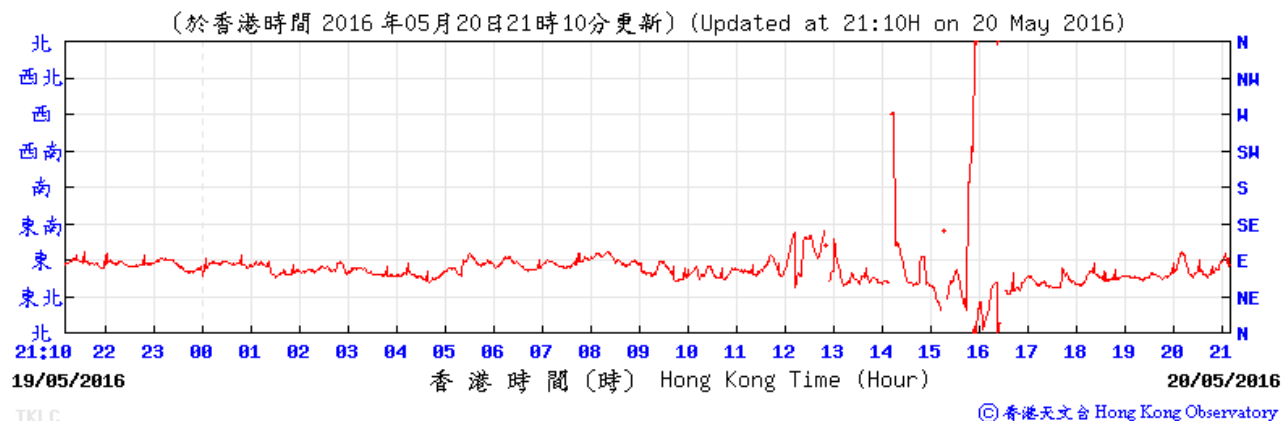
14 May 2016





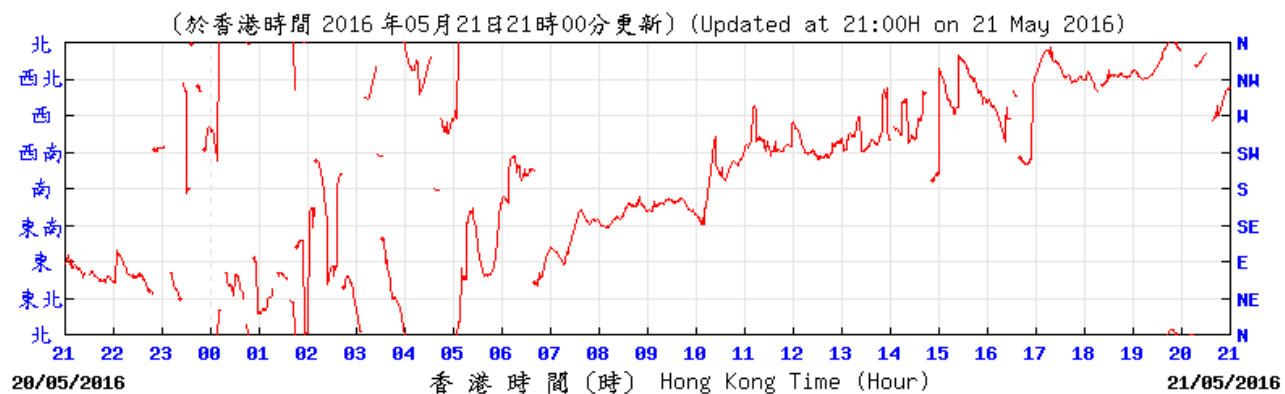
# Wind Data for Ta Kwu Ling

20 May 2016

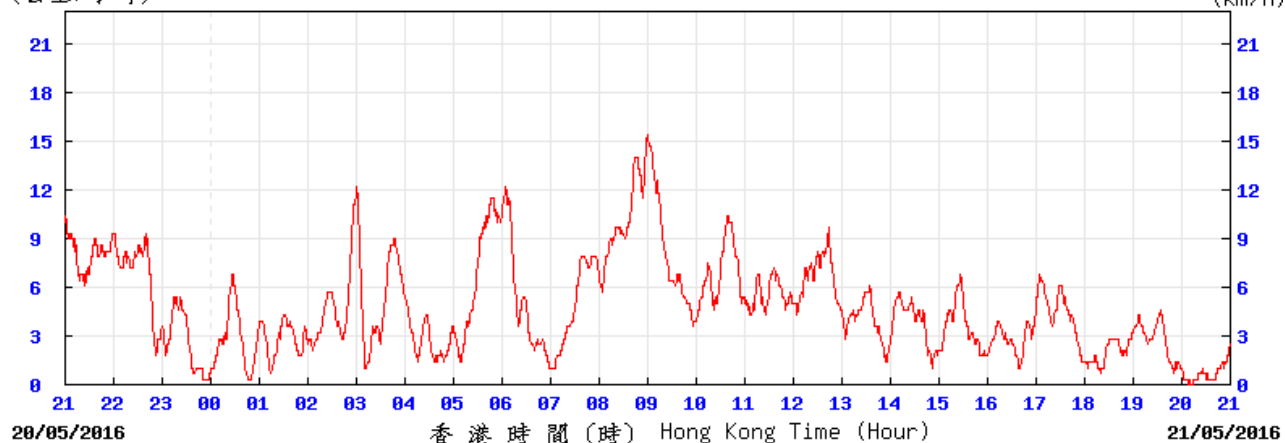


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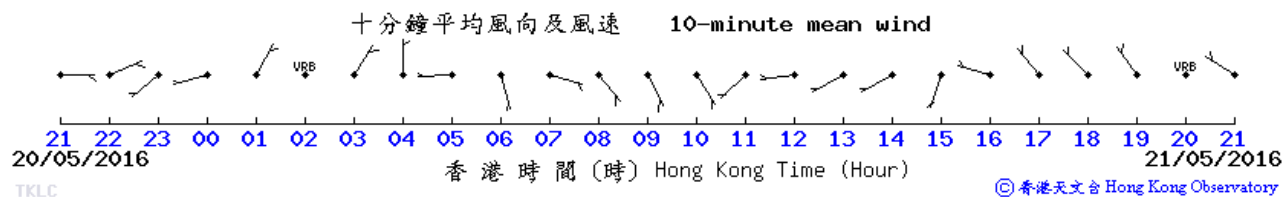
21 May 2016



TKLC © 香港天文台 Hong Kong Observatory  
(公里/小時) (於香港時間 2016 年 5 月 21 日 21 時 0 分更新) (Updated at 21:00H on 21 May 2016) (km/h)



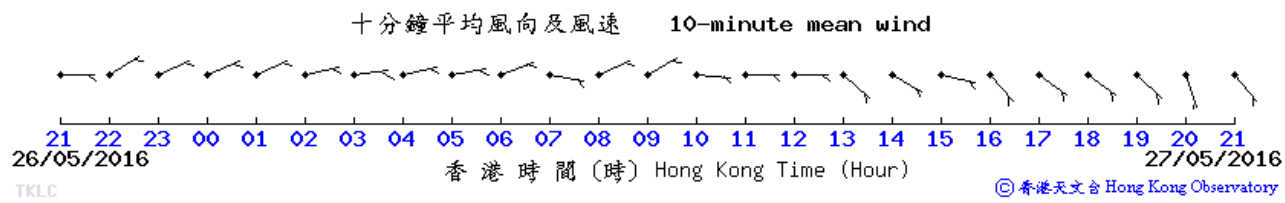
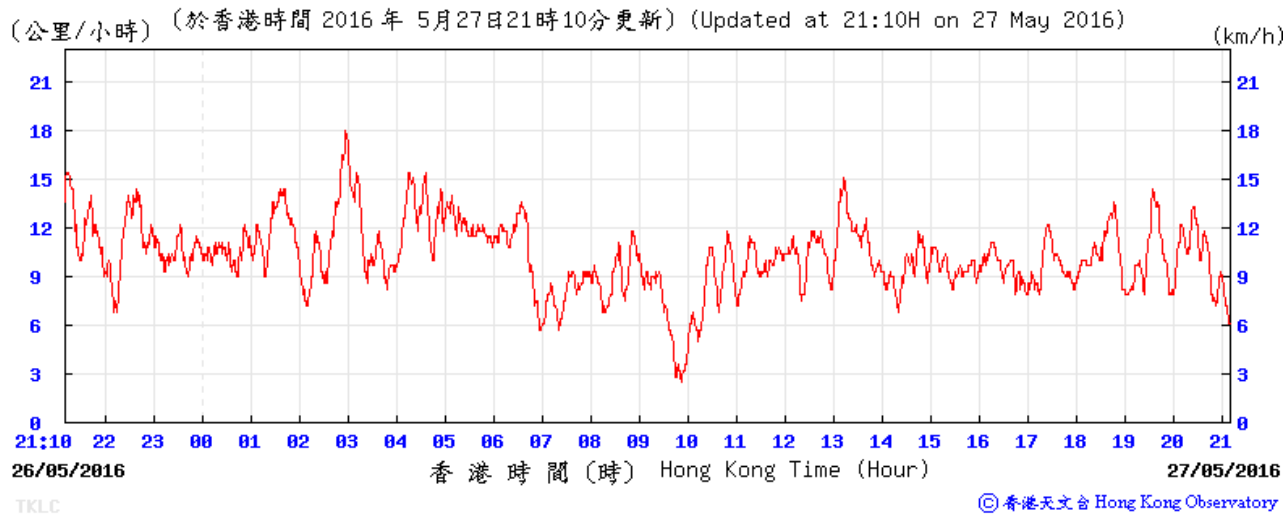
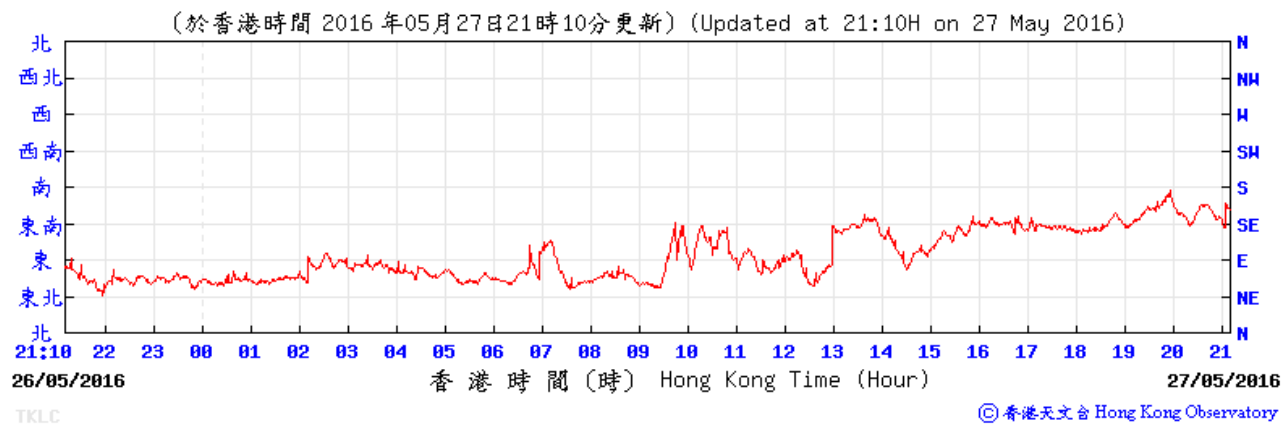
TKLC © 香港天文台 Hong Kong Observatory



TKLC © 香港天文台 Hong Kong Observatory

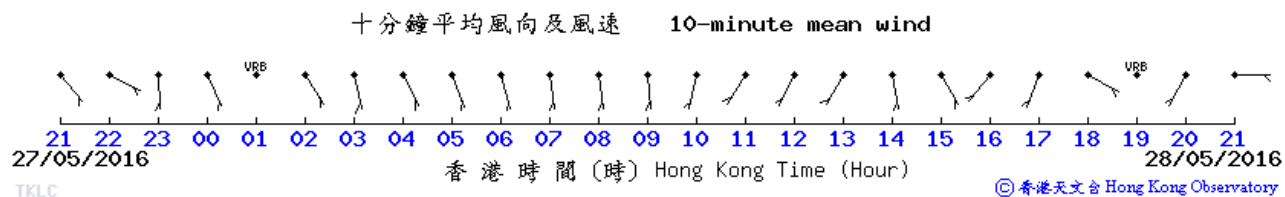
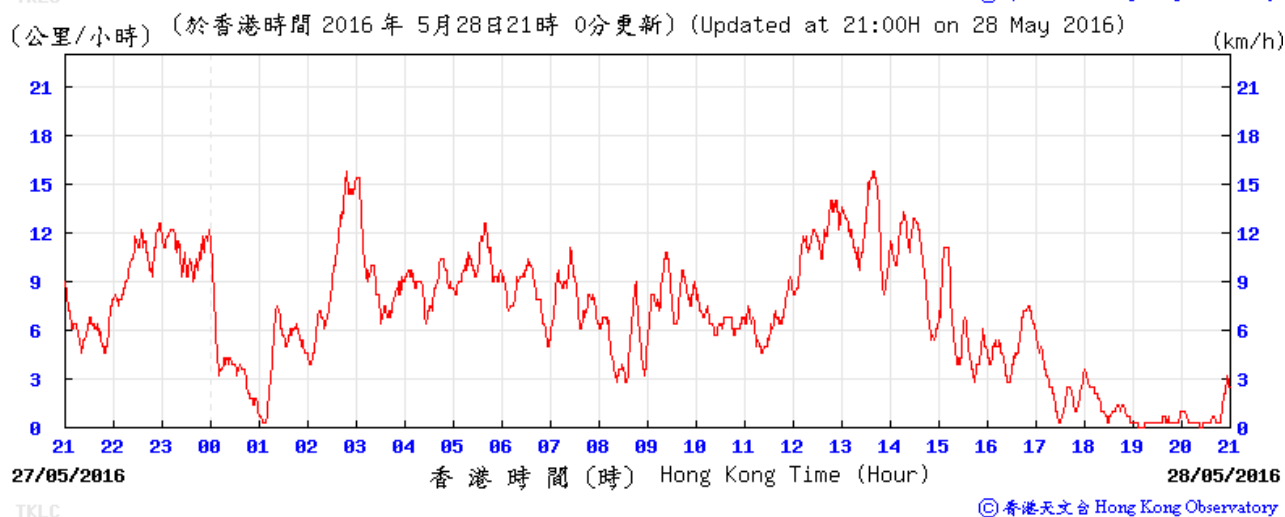
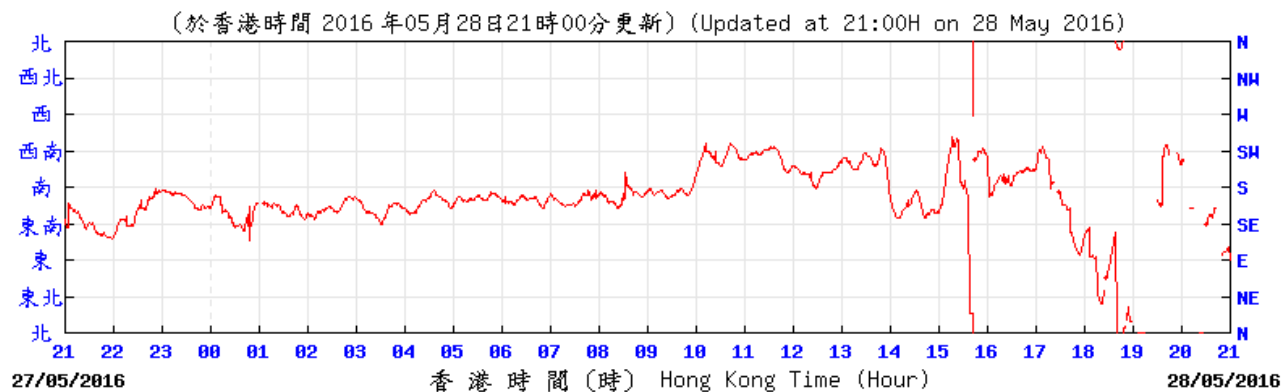
# Wind Data for Ta Kwu Ling

27 May 2016



# Wind Data for Ta Kwu Ling

28 May 2016





**EXTRACT OF METEOROLOGICAL OBSERVATIONS FOR HONG KONG,  
MAY 2016 (Table 1)**

Date May	Mean Pressure (hPa)	Air Temperature			Mean Dew Point Temperature (deg. C)	Mean Relative Humidity (%)	Mean Amount of Cloud (%)	Total Rainfall (mm)
		Maximum (deg. C)	Mean (deg. C)	Minimum (deg. C)				
1	1011.5	23.4	22.2	20.4	20.9	92	90	3.1
2	1011.0	29.8	25.6	22.8	23.6	89	82	0.3
3	1011.4	30.8	26.5	22.8	23.9	86	84	30.7
4	1011.4	28.2	25.8	23.2	23.4	87	82	Trace
5	1010.5	30.9	28.1	26.2	25.1	84	85	-
6	1009.9	30.5	28.4	27.2	25.3	83	84	-
7	1010.6	31.0	28.7	27.1	25.1	81	69	-
8	1011.4	31.2	28.7	27.3	25.2	82	80	-
9	1010.1	30.6	28.7	26.9	25.0	81	69	-
10	1008.1	28.4	26.6	23.7	24.3	87	84	60.3
11	1008.6	28.8	25.5	23.4	20.6	75	62	-
12	1009.8	27.6	25.1	23.7	21.4	80	78	Trace
13	1012.4	27.8	25.5	24.4	22.2	82	88	Trace
14	1014.2	27.7	25.4	24.0	23.4	89	86	4.7
15	1012.1	29.8	26.6	24.4	23.7	85	75	1.0
16	1011.2	27.1	24.8	22.5	19.4	73	69	0.3
17	1012.3	24.6	23.7	23.2	20.1	80	86	1.2
18	1012.0	26.3	24.5	23.4	19.9	76	79	-
19	1009.9	28.1	25.5	24.0	22.5	84	85	Trace
20	1006.9	26.2	25.2	24.3	24.2	94	88	16.1
21	1005.9	28.3	26.5	24.7	24.3	88	77	37.6
22	1007.8	30.8	27.2	25.3	22.7	77	63	-
23	1008.4	28.9	26.8	24.8	23.2	81	65	Trace
24	1007.9	30.7	27.5	25.4	24.1	82	61	Trace
25	1007.8	30.9	28.0	26.2	24.7	82	62	Trace
26	1007.6	29.5	27.6	26.7	24.8	85	84	0.1
27	1006.4	29.1	27.5	26.0	25.5	89	88	14.4
28	1007.6	30.3	27.7	24.5	25.6	89	89	62.9
29	1007.9	31.0	29.1	27.2	26.1	84	77	0.8
30	1008.8	32.1	29.8	28.0	26.0	80	73	0.1
31	1009.5	31.8	29.9	28.7	25.7	79	72	-
Mean/Total	1009.7	29.1	26.7	24.9	23.6	83	78	233.6
Normal*	1009.3	28.4	25.9	24.1	22.6	83	76	304.7
Station	Hong Kong Observatory							

**EXTRACT OF METEOROLOGICAL OBSERVATIONS FOR HONG KONG,  
MAY 2016 (Table 2)**

Date May	Number of hours of Reduced Visibility <sup>#</sup> (hours)	Total Bright Sunshine (hours)	Daily Global Solar Radiation (MJ/m <sup>2</sup> )	Total Evaporation (mm)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
1	2	0.5	12.76	1.3	050	23.7
2	2	2.0	12.24	4.2	050	11.1
3	0	3.1	14.16	4.5	220	11.8
4	0	2.7	13.32	1.5	040	9.2
5	0	2.0	13.21	3.1	180	15.4
6	0	2.9	14.04	1.2	190	15.5
7	0	4.7	16.31	6.1	170	12.1
8	0	3.8	16.11	2.8	150	9.5
9	0	3.9	14.85	3.7	170	16.3
10	0	0.3	2.74	N.A.	220	12.0
11	0	8.8	23.96	5.4	080	26.0
12	3	5.0	19.20	4.7	070	28.6
13	2	1.2	13.35	1.6	050	24.9
14	1	2.8	9.13	4.8	070	28.3
15	0	7.7	21.85	4.3	050	15.7
16	0	7.2	18.54	5.0	010	21.9
17	0	0.3	8.48	3.2	080	39.5
18	0	4.8	19.70	3.7	070	30.3
19	0	3.5	17.86	3.4	070	26.4
20	0	0.1	4.28	N.A.	040	22.3
21	0	1.9	8.71	6.0	230	25.9
22	0	5.6	17.33	0.3	020	11.3
23	0	6.4	15.57	3.5	020	7.9
24	0	7.6	18.81	3.7	180	7.4
25	0	8.8	23.44	5.1	100	16.2
26	0	1.8	10.39	2.5	070	34.8
27	0	1.2	10.73	4.0	130	32.5
28	0	1.2	6.53	N.A.	200	24.0
29	0	3.6	14.33	3.3	210	19.0
30	0	9.8	25.14	6.0	220	22.8
31	0	7.0	21.04	6.1	220	25.2
Mean/Total	10	122.2	14.78	105.0 <sup>&amp;</sup>	070	20.2
Normal*	47.3 <sup>§</sup>	140.4	14.19	110.7	080	19.7
Station	Hong Kong International Airport	King's Park		Waglan Island <sup>^</sup>		

The minimum pressure recorded at the Hong Kong Observatory was 1004.1 hectopascals at 0438 HKT on 21 May.

The maximum air temperature recorded at the Hong Kong Observatory was 32.1 degrees C at 1542 HKT on 30 May.

The minimum air temperature recorded at the Hong Kong Observatory was 20.4 degrees C at 0104 HKT on 1 May.

The maximum gust peak speed recorded at Waglan Island was 72 kilometres per hour from 160 degrees at 1210 HKT on 27 May.

The maximum 1-minute mean rainfall rate recorded at the Hong Kong Observatory was 133 millimetres per hour at 1109 HKT on 10 May.

# Reduced visibility refers to visibility below 8 kilometres when there is no fog, mist or precipitation.

- The visibility readings at the Hong Kong International Airport are based on hourly observations by professional meteorological observers in 2004 and before, and average readings over the 10-minute period before the clock hour of the visibility meter near the middle of the south runway from 2005 onwards. The change of the data source in 2005 is an improvement of the visibility assessment using instrumented observations following the international trend.

- Before 10 October 2007, the number of hours of reduced visibility at the Hong Kong International Airport in 2005 and thereafter displayed in this web page was based on hourly visibility observations by professional meteorological observers. Since 10 October 2007, the data have been revised using the average visibility readings over the 10-minute period before the clock hour, as recorded by the visibility meter near the middle of the south runway.

^ In case the data are not available from Waglan Island, observations of Cheung Chau or other nearby weather stations will be incorporated in computing the Prevailing Wind Direction and Mean Wind Speed.

\* 1981-2010 Climatological Normal, unless otherwise specified

§ 1997-2015 Mean value

& Data incomplete

## Appendix J. Complaint Log

Table J.1: Complaint Log for the Reporting Month

Log Ref.	Location	Complainant / Date of Contact	Details of Complaint	Investigation / Mitigation Action	File Closed
N/A	N/A	N/A	N/A	N/A	N/A

Note: No environmental complaint was received in May 2016.



# Appendix I. Monthly Waste Flow Table

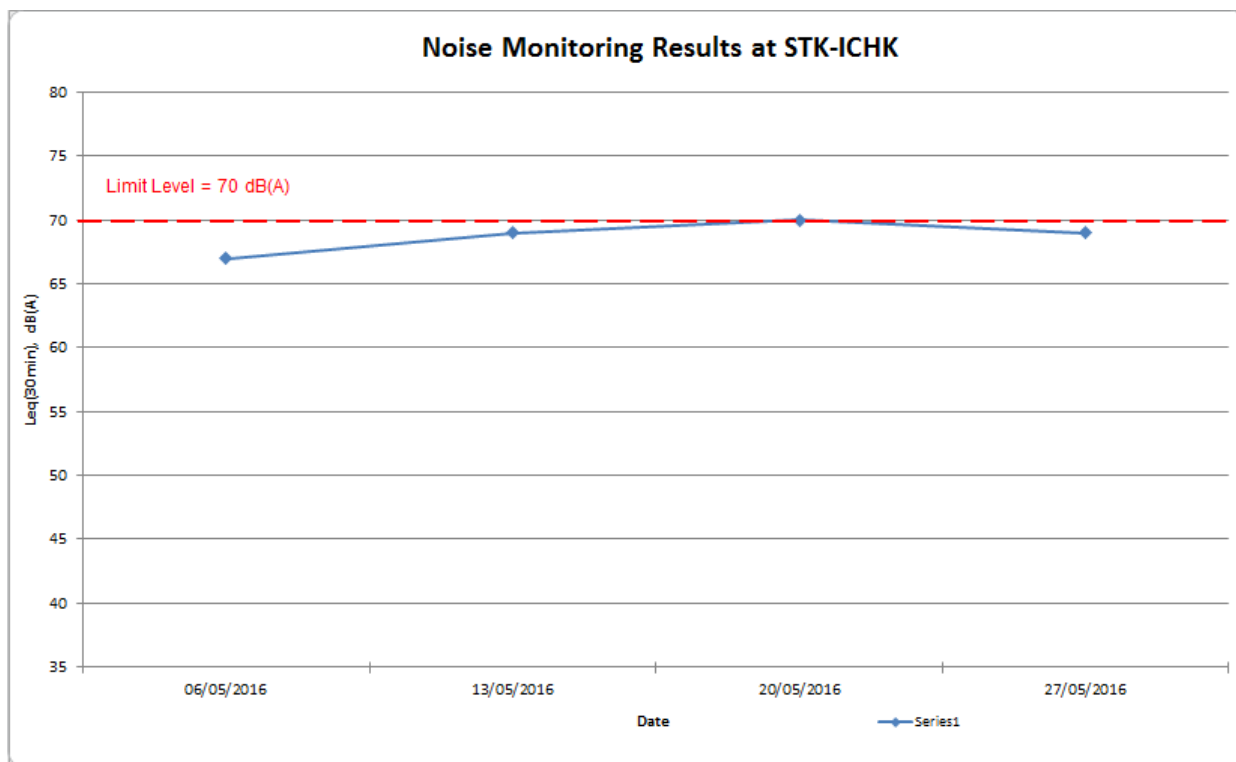
Table I.1: Monthly Summary Waste Flow Table for Reporting Month (from April 2015)

Month	Actual Quantities of Inert C&D Materials Generated Monthly (in '000 m <sup>3</sup> )										Actual Quantities of C&D Wastes Generated Monthly									
	Total Quantity Generated		Broken Concrete		Reused in the Contract		Reused in other Projects		Disposed of at Public Fill		Metals ('000 kg)		Paper/ Cardboard ('000 kg)		Plastics ('000 kg)		Chemical waste ('000 kg)		Others (e.g. refuse) ('000 m <sup>3</sup> )	
	Est.	Act.	Est.	Act.	Est.	Act.	Est.	Act.	Est.	Act.	Est.	Act.	Est.	Act.	Est.	Act.	Est.	Act.	Est.	Act.
Jan-15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Feb-15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mar-15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Apr-15	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0
May-15	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0
Jun-15	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0
<b>Sub-total</b>	-	<b>0</b>	-	<b>0</b>	-	<b>0</b>	-	<b>0</b>	-	<b>0</b>	-	<b>0</b>	-	<b>0</b>	-	<b>0</b>	-	<b>0</b>	-	<b>0</b>
Jul-15	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0
Aug-15	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0
Sep-15	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0
Oct-15	-	0.0065	-	0	-	0	-	0	-	0.0065	-	0	-	0	-	0	-	0	-	0
Nov-15	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0
Dec-15	-	0.0189	-	0	-	0	-	0	-	0.0189	-	0	-	0	-	0	-	0	-	0
<b>Sub-total</b>	-	<b>0.0254</b>	-	<b>0</b>	-	<b>0</b>	-	<b>0</b>	-	<b>0.0254</b>	-	<b>0</b>	-	<b>0</b>	-	<b>0</b>	-	<b>0</b>	-	<b>0</b>
Jan-16	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0
Feb-16	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0
Mar-16	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0
Apr-16	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0
May-16	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0	-	0
<b>Total</b>	-	<b>0.0254</b>	-	<b>0</b>	-	<b>0</b>	-	<b>0</b>	-	<b>0.0254</b>	-	<b>0</b>	-	<b>0</b>	-	<b>0</b>	-	<b>0</b>	-	<b>0</b>

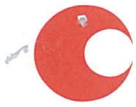
# Appendix H. Noise Monitoring Results and Graphical Presentation

**Daytime Noise Monitoring Results at Station STK-ICHK**

Date	Weather Conditions	Wind Speed,	Noise Level for 30-min, dB(A)					Major Construction Noise Sources	Other Noise Sources during monitoring	Remarks
			Start	End	Leq	L10	L90			
06-May-16	Sunny	1.1	09:32	10:02	67	71	56	Nil	Road traffic noise, DSD site opposite ICHK operation of excavator <b>(not Project-related)</b>	No demolition or construction work at Project site
13-May-16	Fine	1.7	09:44	10:14	69	73	56	Nil	Road traffic noise, DSD site opposite ICHK operation of excavator <b>(not Project-related)</b>	No demolition or construction work at Project site
20-May-16	Cloudy	1.4	09:39	10:09	70	73	63	Nil	Road traffic noise, DSD site opposite ICHK operation of excavator <b>(not Project-related)</b>	No demolition or construction work at Project site
27-May-16	Cloudy	1.4	10:13	10:43	69	72	63	Nil	Road traffic noise, insect noise, DSD site opposite ICHK operation of excavator, lorry <b>(not Project-related)</b>	No demolition or construction work at Project site
					Min.	67				
					Max.	70				



## Appendix G. Calibration Certificates



# Calibration Certificate

Certificate No. **510616**

Page 1 of 3 Pages

**Customer :** Hyder Consulting Limited

**Address :** 20/F, AXA Tower, Landmark East, 100 How Ming Street, Kwun Tong, HK

**Order No. :** Q54035

**Date of receipt :** 1-Dec-15

## Item Tested

**Description :** Sound Level Meter

**Manufacturer :** B&K

**Model :** 2238

**Serial No. :** 2448529

## Test Conditions

**Date of Test :** 7-Dec-15

**Supply Voltage :** --

**Ambient Temperature :** (23 ± 3)°C

**Relative Humidity :** (50 ± 25) %

## Test Specifications

Calibration check.

Ref. Document/Procedure: Z01,IEC 61672.

## Test Results

All results were within the IEC 61672 Type1 specification.

The results are shown in the attached page(s).

Main Test equipment used:

<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Traceable to</u>
S017	Multi-Function Generator	C147450	SCL-HKSAR
S240	Sound Level Calibrator	500563	NIM-PRC & SCL-HKSAR

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI), or by reference to a natural constant.

The test results apply to the above Unit-Under-Test only

**Calibrated by :**   
Alan Chu

**Approved by :**   
Steve Kwan

**Date:** 7-Dec-15

This Certificate is issued by:

Hong Kong Calibration Ltd.

Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street, Kwai Chung, NT, Hong Kong.

Tel: 2425 8801 Fax: 2425 8646





# Calibration Certificate

Certificate No. 510616

Page 2 of 3 Pages

Results :

1. Self-generated noise: 19.8 dBA

2. Acoustical signal test

UUT Setting			Applied Value (dB)	UUT Reading (dB)
Range (dB)	Frequency Weighting	Time Weighting		
40-120	A	F	94.0	93.5
		S		93.5
	C	F		93.5
	L	F		93.5
	A	F	114.0	113.5
				S
		C		113.5
				L

IEC 61672 Type 1 Spec. : ± 1.1 dB

Uncertainty : ± 0.1 dB

3 Electrical signal tests of frequency weightings (A weighting)

Frequency	Attenuation (dB)	IEC 61672 Type 1 Spec.
31.5 Hz	- 39.2	- 39.4 dB, ± 2 dB
63 Hz	- 26.1	- 26.2 dB, ± 1.5 dB
125 Hz	- 16.2	- 16.1 dB, ± 1.5 dB
250 Hz	- 8.7	- 8.6 dB, ± 1 dB
500 Hz	- 3.3	- 3.2 dB, ± 1.4 dB
1 kHz	0.0 (Ref)	0 dB, ± 1.1 dB
2 kHz	+ 1.2	+ 1.2 dB, ± 1.6 dB
4 kHz	+ 1.0	+ 1.0 dB, ± 1.6 dB
8 kHz	- 1.1	- 1.1 dB, + 2.1 dB ~ -3.1 dB
16 kHz	- 6.6	- 6.6 dB, + 3.5 dB ~ - 17.0 dB

Uncertainty : ± 0.1 dB

# Calibration Certificate

Certificate No. 510616

Page 3 of 3 Pages

## 4. Frequency & Time weightings at 1 kHz

### 4.1 Frequency Weighting (Fast)

UUT Setting	Applied Value (dB)	UUT Reading (dB)	Difference (dB)	IEC 61672 Type 1 Spec.
A	94.0	93.5 (Ref.)	--	± 0.4 dB
C	94.0	93.5	0.0	
L	94.0	93.5	0.0	

### 4.2 Time Weighting (A-weighted)

UUT Setting	Applied Value (dB)	UUT Reading (dB)	Difference (dB)	IEC 61672 Type 1 Spec.
Fast	94.0	93.5 (Ref.)	--	± 0.3 dB
Slow	94.0	93.5	0.0	
Time-averaging	94.0	93.5	0.0	

Uncertainty : ± 0.1 dB

Remarks : 1. UUT : Unit-Under-Test

2. The uncertainty claimed is for a confidence probability of not less than 95%.

3. Atmospheric Pressure : 1018 hPa.

4. Preamplifier model : ZC 0030 , S/N : --

5. Firmware Version: 1.2.0

6. Power Supply Check: OK

7. The UUT was adjusted with the laboratory's sound calibrator at the reference sound pressure level before the calibration.

----- END -----



# Calibration Certificate

Certificate No. **601581**

Page 1 of 2 Pages

**Customer :** Hyder Consulting Limited

**Address :** 20/F, AXA Tower, Landmark East, 100 How Ming Street, Kwun Tong, HK

**Order No. :** Q60555

**Date of receipt :** 24-Feb-16

## Item Tested

**Description :** Sound Level Calibrator

**Manufacturer :** B&K

**I.D. :** --

**Model :** Type 4231

**Serial No. :** 2699361

## Test Conditions

**Date of Test :** 7-Mar-16

**Supply Voltage :** --

**Ambient Temperature :** (23 ± 3)°C

**Relative Humidity :** (50 ± 25) %

## Test Specifications

Calibration check.

Ref. Document/Procedure : F21, Z02, IEC 942.

## Test Results

All results were within the IEC 942 Class 1 specification.

The results are shown in the attached page(s).

Main Test equipment used:

<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Traceable to</u>
S014	Spectrum Analyzer	505317	NIM-PRC & SCL-HKSAR
S240	Sound Level Calibrator	601604	NIM-PRC & SCL-HKSAR
S041	Universal Counter	506951	SCL-HKSAR
S206	Sound Level Meter	506958	SCL-HKSAR

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI), or by reference to a natural constant. The test results apply to the above Unit-Under-Test only

**Calibrated by :**   
Elva Chong

**Approved by :**   
Alan Chu

This Certificate is issued by:  
Hong Kong Calibration Ltd.  
Unit 8B, 24/F., Well Fung Industrial Centre, No. 58-76, Ta Chuen Ping Street, Kwai Chung, NT, Hong Kong.  
Tel: 2425 8801 Fax: 2425 8646

**Date:** 7-Mar-16



# Calibration Certificate

Certificate No. **601581**

Page 2 of 2 Pages

Results :

## 1. Level Accuracy

UUT Nominal Value (dB)	Measured Value (dB)	IEC 942 Class 1 Spec.
94	93.8	± 0.3 dB
114	113.8	

Uncertainty : ± 0.1 dB

## 2. Frequency

UUT Nominal Value	Measured Value	IEC 942 Class 1 Spec.
1 kHz	1.001 kHz	± 2 %

Uncertainty : ± 3.6 x 10<sup>-6</sup>

## 3. Level Stability : 0.0 dB

IEC 942 Class 1 Spec. : ± 0.1 dB

Uncertainty : ± 0.01 dB

## 4. Total Harmonic Distortion : < 0.8 %

IEC 942 Class 1 Spec. : < 3 %

Uncertainty : ± 2.3 % of reading

Remark : 1. UUT : Unit-Under-Test

2. The uncertainty claimed is for a confidence probability of not less than 95%.

3. Atmospheric Pressure : 1015 hPa.

----- END -----





# Calibration Certificate

Certificate No. **503992**

Page 1 of 3 Pages

**Customer :** Mott MacDonald Hong Kong Limited

**Address :** 20/F, Two Landmark East, 100 How Ming Street, Kwun Tong, Kowloon, Hong Kong.

**Order No. :** Q51536

**Date of receipt :** 15-May-15

## Item Tested

**Description :** Precision Integrating Sound Level Meter

**Manufacturer :** Rion

**Model :** NL-31

**Serial No. :** 01262786

## Test Conditions

**Date of Test :** 3-Jun-15

**Supply Voltage :** --

**Ambient Temperature :** (23 ± 3)°C

**Relative Humidity :** (50 ± 25) %

## Test Specifications

Calibration check.

Ref. Document/Procedure : Z01, IEC 651, IEC 804.

## Test Results

All results were within the IEC 651 Type 1 & IEC 804 Type 1 specification.  
The results are shown in the attached page(s).

Main Test equipment used:

<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Traceable to</u>
S017	Multi-Function Generator	C147450	SCL-HKSAR
S240	Sound Level Calibrator	500563	NIM-PRC & SCL-HKSAR

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI).  
The test results apply to the above Unit-Under-Test only

**Calibrated by :**   
Dorothy Cheuk

**Approved by :**   
Steve Kwan

**Date:** 3-Jun-15



# Calibration Certificate

Certificate No. **503992**

Page 2 of 3 Pages

Results :

## 1. SPL Accuracy

UUT Setting			Applied Value (dB)	UUT Reading (dB)
Level Range (dB)	Weight	Response		
20 – 100	L <sub>A</sub>	Fast	94.0	94.0
		Slow		93.9
	L <sub>C</sub>	Fast		94.0
	L <sub>p</sub>	Fast		94.1
30 – 120	L <sub>A</sub>	Fast	94.0	93.9
		Slow		93.9
	L <sub>C</sub>	Fast		94.0
	L <sub>p</sub>	Fast		94.0
30 – 120	L <sub>A</sub>	Fast	114.0	114.0
		Slow		113.9
	L <sub>C</sub>	Fast		114.0
	L <sub>p</sub>	Fast		114.0

IEC 651 Type 1 Spec. :  $\pm 0.7$  dB

Uncertainty :  $\pm 0.1$  dB

## 2. Level Stability : 0.0 dB

IEC 651 Type 1 Spec. :  $\pm 0.3$  dB

Uncertainty :  $\pm 0.01$  dB

## 3. Linearity

### 3.1 Level Linearity

UUT Range (dB)	Applied Value (dB)	UUT Reading (dB)	Variation (dB)	IEC 651 Type 1 Spec. (Primary Indicator Range)
130	114.0	114.0	0.0	$\pm 0.7$ dB
130	104.0	104.0	0.0	
120	94.0	94.0 (Ref.)	--	
110	84.0	84.0	0.0	
100	74.0	74.0	0.0	
90	64.0	64.0	0.0	
80	54.0	54.0	0.0	

Uncertainty :  $\pm 0.1$  dB



# Calibration Certificate

Certificate No. **503992**

Page 3 of 3 Pages

## 3.2 Differential level linearity

UUT Range (dB)	Applied Value (dB)	UUT Reading (dB)	Variation (dB)	IEC 651 Type 1 Spec.
120	84.0	83.9	0.0	± 0.4 dB
	94.0	93.9 (Ref.)	- -	
	95.0	94.9	0.0	± 0.2 dB

Uncertainty : ± 0.1 dB

## 4. Frequency Weighting - A weighting

Frequency	Attenuation (dB)	IEC 651 Type 1 Spec.
31.5 Hz	-39.4	- 39.4 dB, ± 1.5 dB
63 Hz	-26.5	- 26.2 dB, ± 1.5 dB
125 Hz	-16.9	- 16.1 dB, ± 1 dB
250 Hz	-8.7	- 8.6 dB, ± 1 dB
500 Hz	-3.3	- 3.2 dB, ± 1 dB
1 kHz	0.0 (Ref.)	0 dB, ± 1 dB
2 kHz	+1.3	+ 1.2 dB, ± 1 dB
4 kHz	+1.1	+ 1.0 dB, ± 1 dB
8 kHz	-1.1	- 1.1 dB, + 1.5 dB ~ - 3 dB
16 kHz	-6.4	- 6.6 dB, + 3 dB ~ - ∞

Uncertainty : ± 0.1 dB

## 5. Time Averaging

Applied Burst duty Factor	Applied Leq Value (dB)	UUT Reading (dB)	IEC 804 Type 1 Spec.
continuous	40.0	40.0	--
1/10	40.0	39.9	± 0.5 dB
1/10 <sup>2</sup>	40.0	40.0	
1/10 <sup>3</sup>	40.0	40.0	± 1.0 dB
1/10 <sup>4</sup>	40.0	39.9	

Uncertainty : ± 0.1 dB

- Remarks:
1. UUT : Unit-Under-Test
  2. The uncertainty claimed is for a confidence probability of not less than 95%.
  3. Atmospheric Pressure : 998 hPa
  4. The UUT's internal calibration was performed before the calibration.

----- END -----





# Calibration Certificate

Certificate No. **503992**

Page 1 of 3 Pages

**Customer :** Mott MacDonald Hong Kong Limited

**Address :** 20/F, Two Landmark East, 100 How Ming Street, Kwun Tong, Kowloon, Hong Kong.

**Order No. :** Q51536

**Date of receipt :** 15-May-15

## Item Tested

**Description :** Precision Integrating Sound Level Meter

**Manufacturer :** Rion

**Model :** NL-31

**Serial No. :** 01262786

## Test Conditions

**Date of Test :** 3-Jun-15

**Supply Voltage :** --

**Ambient Temperature :** (23 ± 3)°C

**Relative Humidity :** (50 ± 25) %

## Test Specifications

Calibration check.

Ref. Document/Procedure : Z01, IEC 651, IEC 804.

## Test Results

All results were within the IEC 651 Type 1 & IEC 804 Type 1 specification.  
The results are shown in the attached page(s).

Main Test equipment used:

<u>Equipment No.</u>	<u>Description</u>	<u>Cert. No.</u>	<u>Traceable to</u>
S017	Multi-Function Generator	C147450	SCL-HKSAR
S240	Sound Level Calibrator	500563	NIM-PRC & SCL-HKSAR

The values given in this Calibration Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Hong Kong Calibration Ltd. shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to International System of Units (SI).  
The test results apply to the above Unit-Under-Test only

**Calibrated by :**   
Dorothy Cheuk

**Approved by :**   
Steve Kwan

**Date:** 3-Jun-15



# Calibration Certificate

Certificate No. **503992**

Page 2 of 3 Pages

Results :

## 1. SPL Accuracy

UUT Setting			Applied Value (dB)	UUT Reading (dB)
Level Range (dB)	Weight	Response		
20 – 100	L <sub>A</sub>	Fast	94.0	94.0
		Slow		93.9
	L <sub>C</sub>	Fast		94.0
	L <sub>p</sub>	Fast		94.1
30 – 120	L <sub>A</sub>	Fast	94.0	93.9
		Slow		93.9
	L <sub>C</sub>	Fast		94.0
	L <sub>p</sub>	Fast		94.0
30 – 120	L <sub>A</sub>	Fast	114.0	114.0
		Slow		113.9
	L <sub>C</sub>	Fast		114.0
	L <sub>p</sub>	Fast		114.0

IEC 651 Type 1 Spec. :  $\pm 0.7$  dB

Uncertainty :  $\pm 0.1$  dB

## 2. Level Stability : 0.0 dB

IEC 651 Type 1 Spec. :  $\pm 0.3$  dB

Uncertainty :  $\pm 0.01$  dB

## 3. Linearity

### 3.1 Level Linearity

UUT Range (dB)	Applied Value (dB)	UUT Reading (dB)	Variation (dB)	IEC 651 Type 1 Spec. (Primary Indicator Range)
130	114.0	114.0	0.0	$\pm 0.7$ dB
130	104.0	104.0	0.0	
120	94.0	94.0 (Ref.)	--	
110	84.0	84.0	0.0	
100	74.0	74.0	0.0	
90	64.0	64.0	0.0	
80	54.0	54.0	0.0	

Uncertainty :  $\pm 0.1$  dB



# Calibration Certificate

Certificate No. **503992**

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## 3.2 Differential level linearity

UUT Range (dB)	Applied Value (dB)	UUT Reading (dB)	Variation (dB)	IEC 651 Type 1 Spec.
120	84.0	83.9	0.0	± 0.4 dB
	94.0	93.9 (Ref.)	- -	
	95.0	94.9	0.0	± 0.2 dB

Uncertainty : ± 0.1 dB

## 4. Frequency Weighting - A weighting

Frequency	Attenuation (dB)	IEC 651 Type 1 Spec.
31.5 Hz	-39.4	- 39.4 dB, ± 1.5 dB
63 Hz	-26.5	- 26.2 dB, ± 1.5 dB
125 Hz	-16.9	- 16.1 dB, ± 1 dB
250 Hz	-8.7	- 8.6 dB, ± 1 dB
500 Hz	-3.3	- 3.2 dB, ± 1 dB
1 kHz	0.0 (Ref.)	0 dB, ± 1 dB
2 kHz	+1.3	+ 1.2 dB, ± 1 dB
4 kHz	+1.1	+ 1.0 dB, ± 1 dB
8 kHz	-1.1	- 1.1 dB, + 1.5 dB ~ - 3 dB
16 kHz	-6.4	- 6.6 dB, + 3 dB ~ - ∞

Uncertainty : ± 0.1 dB

## 5. Time Averaging

Applied Burst duty Factor	Applied Leq Value (dB)	UUT Reading (dB)	IEC 804 Type 1 Spec.
continuous	40.0	40.0	--
1/10	40.0	39.9	± 0.5 dB
1/10 <sup>2</sup>	40.0	40.0	
1/10 <sup>3</sup>	40.0	40.0	± 1.0 dB
1/10 <sup>4</sup>	40.0	39.9	

Uncertainty : ± 0.1 dB



- Remarks:
1. UUT : Unit-Under-Test
  2. The uncertainty claimed is for a confidence probability of not less than 95%.
  3. Atmospheric Pressure : 998 hPa
  4. The UUT's internal calibration was performed before the calibration.

----- END -----

# Appendix F. EM&A Schedule

Environmental Monitoring and Audit Schedule for May 2016

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
	The Day Following Labour Day				*	
8	9	10	11	12	13	14
					*	The Birthday of the Buddha
15	16	17	18	19	20	21
					*	
22	23	24	25	26	27	28
					**	
29	30	31				

-  Noise Monitoring
- \* Site Audit by Environmental Team (ET) for all subject works
- \*\* Site Audit with Independent Environmental Checker (IEC) for all subject works
-  Public Holiday

Construction of a Secondary Boundary Fence and New Sections of Primary Boundary Fence and Boundary Patrol Road  
 Improvement Works for Mai Po, Lok Ma Chau, Sha Tau Kok, Planting Works at Tak Yuet Lau and Demolition Work at Shek Chung Au, Lo Wu to Sha Tau Kok –  
 Monthly EM&A Report for May 2016



Tentative Environmental Monitoring and Audit Schedule for June 2016

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3 **	4
5	6	7	8	9 Tuen Ng Festival	10 *	11
12	13	14	15	16	17 *	18
19	20	21	22	23	24 *	25
26	27	28				

- Noise Monitoring
- \* Site Audit by Environmental Team (ET) for all subject works
- \*\* Site Audit with Independent Environmental Checker (IEC) for all subject works
- Public Holiday



## Appendix E. Schedule of Mitigation Measures from the EIA Report and EM&A Manual

Table E.1: Recommended Mitigation Measures – Air Quality

EIA Ref.	EM&A Manual Ref.	Recommended Mitigation Measures	Who to implement?	When to implement? (1)	Implementation Status (2)
2.5.2	3.2.2	<p>The following good site practice should be implemented:</p> <ul style="list-style-type: none"> <li>■ any excavated dusty materials or stockpile of dusty materials should be covered entirely by impervious sheeting or sprayed with water so as to maintain the entire surface wet, and recovered or backfilled or reinstated within 24 hours of the excavation or unloading;</li> <li>■ the working area of excavation should be sprayed with water immediately before, during and immediately after the operations so as to maintain the entire surface wet;</li> <li>■ dusty materials carried by vehicle leaving a construction site should be covered entirely by clean impervious sheeting;</li> <li>■ the area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should paved with concrete, bituminous materials or hardcore;</li> <li>■ the portion of road leading only to a construction site that is within 30m of designated vehicle entrance or exit should be kept clear of dusty materials;</li> <li>■ all dusty materials should be sprayed with water prior to any loading, unloading or transfer;</li> <li>■ vehicle speed should be limited to 10kph except on completed access roads;</li> <li>■ every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites.</li> </ul>	Contractor	C	✓

Legend: (1) C - During Construction  
 (2) ✓ - Implemented  
 P - Partially Implemented  
 X - Not Implemented  
 REC - Rectified by Contractor  
 (REC) - Partially Rectified by Contractor  
 ! - Pending Contractor's Rectification Action  
 N/A - Not Applicable

Construction of a Secondary Boundary Fence and New Sections of Primary Boundary Fence and Boundary Patrol Road  
Improvement Works for Mai Po, Lok Ma Chau, Sha Tau Kok, Planting Works at Tak Yuet Lau and Demolition Work at Shek Chung Au, Lo Wu to Sha Tau Kok –  
Monthly EM&A Report for May 2016



Table E.2: Recommended Mitigation Measures – Noise

EIA Ref.	EM&A Manual Ref.	Recommended Mitigation Measures	Who to implement?	When to implement? (1)	Implementation Status (2)
3.8.14	4.8.1	<p>The following good site practical should be implemented:</p> <ul style="list-style-type: none"> <li>■ The Contractor shall adopt the Code of Practice on Good Management Practice to Prevent Violation of the Noise Control Ordinance (Chapter 400) (for Construction Industry) published by EPD;</li> <li>■ The Contractor shall observe and comply with the statutory and non-statutory requirements and guidelines;</li> <li>■ Before commencing any work, the Contractor shall submit to the Engineer Representative for approval the method of working, equipment and noise mitigation measures intended to be used at the site;</li> <li>■ The Contractor shall devise and execute working methods to minimise the noise impact on the surrounding sensitive uses, and provide experienced personnel with suitable training to ensure that those methods are implemented;</li> <li>■ Noisy equipment and noisy activities should be located as far away from the Noise Sensitive Receivers (NSRs) as is practical;</li> <li>■ Unused equipment should be turned off. Powered Mechanical Equipment (PME) should be kept to a minimum and the parallel use of noisy equipment / machinery should be avoided;</li> <li>■ Regular maintenance of all plant and equipment;</li> <li>■ Material stockpiles and other structures should be effectively utilised as noise barriers, where practicable.</li> </ul>	Contractor	C	✓
3.8.1 - 3.8.3	4.8.2 - 4.8.3	<p>Other than good site practice, the Contractor is required to adopt Levels 1 and 2 site-specific direct mitigation measures as specified below during the construction phase.</p> <p>With construction / demolition work undertaken at a distance of 60m or less to the NSRs, below mitigation measures should be included:</p> <p><b>Level 1 – Use of Quiet Plant and Movable Noise Barrier</b></p> <ul style="list-style-type: none"> <li>■ The Contractor shall obtain particular models of plant that are quieter than standards given in the Technical Memorandum on Noise from Construction Work other than Percussive Piling (GW-TM).</li> <li>■ Purpose-built movable noise barriers should be used to mitigate construction noise directly at sources that are not usually mobile provide that the direct line of sight to the source is blocked.</li> </ul>	Contractor	C	✓
3.8.9	4.8.4	<p>In addition to the use of quiet plant and movable noise barrier, alternative demolition method of existing boundary fence at Section 2-3 shall be used where demolition works would be undertaken at a distance of 12m or less to the NSRs. These particular mitigation measures should be included:</p> <p><b>Level 2 – Alternative Demolition Method of Existing Boundary Fence</b></p> <ul style="list-style-type: none"> <li>■ The use of welder is recommended to replace the use of hand-held driller;</li> <li>■ The use of hand-held breaker with movable noise barrier is recommended to replace the use of mini-robot mounted breaker; and the duration for the use of hand-held breaker is minimal as only the surface level of the footing to be broken; and</li> <li>■ The removal of the footing of the existing boundary fence should be carried by concrete crusher mini-robot mounted after the surface level broken by hand-held breaker.</li> </ul>	Contractor	C	N/A
<p>Legend: (1) C - During Construction  (2) ✓ - Implemented (REC) - Partially Rectified by Contractor  P - Partially Implemented ! - Pending Contractor's Rectification Action  X - Not Implemented N/A - Not Applicable  REC - Rectified by Contractor</p>					

Construction of a Secondary Boundary Fence and New Sections of Primary Boundary Fence and Boundary Patrol Road  
Improvement Works for Mai Po, Lok Ma Chau, Sha Tau Kok, Planting Works at Tak Yuet Lau and Demolition Work at Shek Chung Au, Lo Wu to Sha Tau Kok –  
Monthly EM&A Report for May 2016



Table E.3: Recommended Mitigation Measures – Water Quality

EIA Ref.	EM&A Manual Ref.	Recommended Mitigation Measures	Who to implement?	When to implement? (1)	Implementation Status (2)
4.7.1	5.3.1	<p>Good site practices in addition to the implementation of mitigation measures would minimize the impact to the surrounding environment.</p> <p><i>General Prevention and Precaution Measures:</i></p> <ul style="list-style-type: none"> <li>■ The site should be confined to avoid silt runoff to the site.</li> <li>■ No discharge of silty water into the storm drain and drainage channel within and the vicinity of the site.</li> <li>■ Any soil contaminated with chemicals/oils shall be removed from site and the void created shall be filled with suitable materials.</li> <li>■ Stockpiles to be covered by tarpaulin to avoid spreading of materials during rainstorms;</li> <li>■ Suitable containers shall be used to hold the chemical wastes to avoid leakage or spillage during storage, handling and transport;</li> <li>■ Chemical waste containers shall be labelled with appropriate warning signs in English and Chinese to avoid accidents. there shall also be clear instructions showing what action to take in the event of an accidental;</li> <li>■ Storage areas shall be selected at safe locations on site and adequate space shall be allocated to the storage area;</li> <li>■ Any construction plant which causes pollution to the water system due to leakage of oil or fuel shall be removed off-site immediately;</li> <li>■ Spillage or leakage of chemical waste to be controlled by using suitable absorbent materials;</li> <li>■ Chemicals will always be stored on drip trays or in bunded areas where the volume is 110% of the stored volume;</li> <li>■ Regular clearance of domestic waste generated in the temporary sanitary facilities to avoid waste water spillage.</li> <li>■ Temporary sanitary facilities to be provided for on-site workers during construction.</li> </ul>	Contractor	C	✓
4.7.2 - 4.7.3	5.3.2 - 5.3.3	<p><b>Concreting Work</b></p> <p>A temporary drainage channel and associated facilities should be provided to collect the runoff generated and prevent concrete-contaminated water from entering watercourses. Adjustment of pH can be achieved by adding a suitable neutralising reagent to wastewater prior to discharge.</p> <p>The concreting works should be temporarily isolated with proper methods, such as by placing of sandbags or silt curtains with lead edge at bottom and properly supported props.</p>	Contractor	C	N/A
4.7.4	5.3.4	<p><b>Soil Excavation and Stockpiling</b></p> <p>Excavated soil which needs to be temporarily stockpiled should be stored in a specially designated area and provided with a tarpaulin cover to avoid runoff into the drainage channels.</p>	Contractor	C	N/A

# Construction of a Secondary Boundary Fence and New Sections of Primary Boundary Fence and Boundary Patrol Road

Improvement Works for Mai Po, Lok Ma Chau, Sha Tau Kok, Planting Works at Tak Yuet Lau and Demolition Work at Shek Chung Au, Lo Wu to Sha Tau Kok – Monthly EM&A Report for May 2016



EIA Ref.	EM&A Manual Ref.	Recommended Mitigation Measures	Who to implement?	When to implement? (1)	Implementation Status (2)
4.7.5 - 4.7.6	5.3.5 - 5.3.6	<p><b>Site Depot</b></p> <p>All compounds in works areas should be located on areas of hard standing with provision of drainage channels and settlement ponds where necessary to allow interception and controlled release of settled/treated water. Hard standing compounds should drain via an oil interceptor. The oil interceptor should be regularly inspected and cleaned to avoid wash-out of oil during storm conditions. A bypass should be provided to avoid overload of the interceptor's capacity. Any contractor generating waste oil or other chemicals as a result of his activities should register as a chemical waste producer. Disposal of the waste oil should be done by a licensed collector.</p> <p>Good housekeeping practices should be implemented to minimise careless spillage and to keep the storage and the work space in a tidy and clean condition. Appropriate training including safety codes and relevant manuals should be given to the personnel who regularly handle the chemicals on site.</p>	Contractor	C	✓
4.7.7	5.3.7	<p><b>Construction of Checkpoint</b></p> <p>Sewage system should be constructed to divert domestic sewage, which will be generated from the sanitary facilities provided in the new checkpoint at Sha Tau Kok, to public sewer connected to government sewage treatment facilities.</p>	Contractor	C	✓

- Legend: (1) C - During Construction
- (2) ✓ - Implemented  
P - Partially Implemented  
X - Not Implemented  
REC - Rectified by Contractor  
(REC) - Partially Rectified by Contractor  
! - Pending Contractor's Rectification Action  
N/A - Not Applicable

Table E.4: Recommended Mitigation Measures – Waste Management

EIA Ref.	EM&A Manual Ref.	Recommended Mitigation Measures	Who to implement?	When to implement? (1)	Implementation Status (2)
5.6.7	6.3.6	<p><b>Site Clearance</b></p> <p>The topsoil and vegetation removed and excavated material may have to be temporarily stockpiled on-site. Control measures should be taken at the stockpiling area to prevent the generation of dust and pollution of stormwater channels, fish ponds or river channels. However, to eliminate the risk of blocking drains in the wet season, it is recommended that stockpiling of excavated materials during the wet season should be avoided as far as practicable.</p>	Contractor	C	N/A
5.6.10 - 5.6.12	6.3.8	<p><b>Construction and Demolition Materials</b></p> <p>Careful design, planning and good site management can minimize over-ordering and generation of waste materials such as concrete mortars and cement grouts. The design of formwork should maximize the use of standard wooden panels so to achieve high reuse levels. Alternatives such as steel formwork or plastic facing should be considered to increase the potential for reuse.</p> <p>The Contractor should recycle as much of the C&amp;D materials as possible on-site. Proper segregation of waste on-site will increase the feasibility of certain components of the waste stream by the recycling contractors. Different areas of the worksite shall be designated for such segregation and storage wherever site conditions permit.</p> <p>Trip-ticket system should be employed to monitor the disposal of C&amp;D material and solid at public filling facilities and landfills, and to control fly-tipping. Government has established a differentiated charging scheme for the disposal of waste to landfill, construction waste sorting facilities and public fill facilities. This will provide additional incentives to reduce the volume of waste generated and to ensure proper segregation of wastes.</p>	Contractor	C	✓
5.6.13 - 5.6.14	6.3.9 - 6.3.13	<p><b>Chemical Waste</b></p> <p>For those processes which generate chemical waste, it may be possible to find alternatives which generate reduced quantities or even no chemical waste, or less dangerous types of chemical waste. Chemical waste that is produced, as defined by Schedule 1 of the Waste Disposal (Chemical Waste) (General) Regulation, should be handed in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Waste as follows:</p> <p>Containers used for the storage of chemical wastes should:</p> <ul style="list-style-type: none"> <li>■ be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed;</li> <li>■ have a capacity of less than 450 litres unless the specification have been approved by the EPD; and</li> <li>■ display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the Regulations,</li> </ul> <p>The storage area for chemical wastes should:</p> <ul style="list-style-type: none"> <li>■ be clearly labelled and used solely for the storage of chemical waste;</li> <li>■ be enclosed on at least 3 sides;</li> <li>■ have an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in that area</li> </ul>	Contractor	PL	N/A



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EIA Ref.	EM&A Manual Ref.	Recommended Mitigation Measures	Who to implement?	When to implement? (1)	Implementation Status (2)
		<p>whichever is the greatest;</p> <ul style="list-style-type: none"> <li>■ have adequate ventilation;</li> <li>■ be covered to prevent rainfall entering (water collected within the bund must be tested and disposed as chemical waste if necessary); and</li> <li>■ be arranged so that incompatible materials are adequately separated.</li> </ul> <p>Disposal of chemical waste should:</p> <ul style="list-style-type: none"> <li>■ be via a licensed waste collector; and</li> <li>■ be to a facility licensed to receive chemical waste, such as the Chemical Waste Treatment Facility which also offers a chemical waste collection service and can supply the necessary storage containers, or</li> <li>■ to be re-user of the waste, under approval from the EPD.</li> </ul>			
5.6.16	6.3.15	<p><b>General Refuse</b></p> <p>Should be stored in enclosed bins or compaction units separate from C&amp;D and chemical wastes. The Contractor should employ a reputable waste collector to remove general refuse from the site, separate from C&amp;D and chemical wastes, on a regular basis to minimise odour, pest and litter impacts. Burning of refuse on construction sites is prohibited by law.</p>	Contractor	C	✓
5.6.18	6.3.16	<p><b>Construction Waste Management Plan</b></p> <p>A construction waste management plan (CWMP) should be prepared and developed by the contractor to ensure proper collection, treatment and disposal of waste on site. This CWMP will also take into account the requirement to handle chemical wastes on site which will need to be managed by a licensed waste collection contractor.</p>	Contractor	C	✓

- Legend: (1) C - During Construction  
PL - During Construction Planning
- (2) ✓ - Implemented  
P - Partially Implemented  
X - Not Implemented  
REC - Rectified by Contractor  
(REC) - Partially Rectified by Contractor  
! - Pending Contractor's Rectification Action  
N/A - Not Applicable

Construction of a Secondary Boundary Fence and New Sections of Primary Boundary Fence and Boundary Patrol Road  
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Table E.5: Recommended Mitigation Measures – Ecology

EIA Ref.	EM&A Manual Ref.	Recommended Mitigation Measures	Who to implement?	When to implement? (1)	Implementation Status (2)
Table 6.38	7.2	<b>Ecological Impacts on Floral Species of Conservation Concern</b> <ul style="list-style-type: none"> <li>Erection of protective fencing to protect the plant during construction period</li> </ul>	Contractor	C	✓
Table 6.40	7.2	<b>Potential Ecological Impacts on Offsite Habitats</b> <ul style="list-style-type: none"> <li>Good site practices for controlling the dust and water quality (avoid stockpiles adjacent to wetlands, covering the stockpiles with impervious sheeting, control of vehicle speed, no discharge of silty water to the rivers, streams and drainage channels);</li> <li>Clear definition of works limit to avoid impact on adjacent habitats.</li> </ul>	Contractor	C	✓
Table 6.39 - Table 6.45	7.2	<b>Disturbance to Wetland-Dependent Birds, Raptors, Terrestrial Birds and Egretty</b> <ul style="list-style-type: none"> <li>Good working practices include switching off unused equipment, keep minimum number of powered mechanical equipment in operation at the same period, the use of stockpiles and other structures to form noise barriers where practicable, avoidance of feeding the wildlife to cause disturbance, site confinement and proper cover of stockpiles with impervious sheeting to minimize construction noise, uncontrolled surface runoff and discharge of silts;</li> <li>Avoidance of construction works using Power Mechanical Equipments within the Wetland Conservation Area during bird migratory season (15th November – 15th March); and</li> <li>Restriction of excavation works within a 150m buffer zone from the egretty to ardeid non-breeding season (from August to February).</li> </ul>	Contractor	C	✓

- Legend: (1) C - During Construction  
(2) ✓ - Implemented  
P - Partially Implemented  
X - Not Implemented  
REC - Rectified by Contractor  
(REC) - Partially Rectified by Contractor  
! - Pending Contractor's Rectification Action  
N/A - Not Applicable

Table E.6: Recommended Mitigation Measures – Landscape and Visual

EIA Ref.	EM&A Manual Ref.	Recommended Mitigation Measures	Who to implement?	When to implement? (1)	Implementation Status (2)
<b>Preservation of Existing Vegetation</b>					
Table 7-13 CP1	Table 9-1	<ul style="list-style-type: none"> <li>To retain trees that have high amenity or ecology value and contribute most to the landscape and visual amenity of the site and its immediate environs.</li> </ul>	Project Landscape Architect / Contractor	C1	✓
Table 7-13 CP1	Table 9-1	<ul style="list-style-type: none"> <li>Creation of precautionary area around trees to be retained equal to half of the trees canopy diameter. Precautionary area to be fenced.</li> </ul>	Project Landscape Architect / Contractor	BC	✓
Table 7-13 CP1	Table 9-1	<ul style="list-style-type: none"> <li>Prohibition of the storage of materials including fuel, the movement of construction vehicles, and the refuelling and washing of equipment including concrete mixers within the precautionary area.</li> </ul>	Project Landscape Architect / Contractor	C1	✓
Table 7-13 CP1	Table 9-1	<ul style="list-style-type: none"> <li>Phased segmental root pruning for trees to be retained and transplanted over a suitable period (determined by species and size) prior to lifting or site formation works which affect the existing rootball of trees identified for retention. The extent of the pruning will be based on the size and the species of the tree in each case.</li> </ul>	Project Landscape Architect / Contractor	C1	✓
Table 7-13 CP1	Table 9-1	<ul style="list-style-type: none"> <li>Pruning of the branches of existing trees identified for transplantation and retention to be based on the principle of crown thinning maintaining their form and amenity value.</li> </ul>	Project Landscape Architect / Contractor	C1	✓
Table 7-13 CP1	Table 9-1	<ul style="list-style-type: none"> <li>The watering of existing vegetation particularly during periods of excavation when the water table beneath the existing vegetation is lowered.</li> </ul>	Project Landscape Architect / Contractor	C1	N/A
Table 7-13 CP1	Table 9-1	<ul style="list-style-type: none"> <li>The rectification and repair of damaged vegetation following the construction phase to its original condition prior to the commencement of the works or replacement using specimens of the same species, size and form where appropriate to the design intention of the area affected.</li> </ul>	Project Landscape Architect / Contractor	C1	✓
Table 7-13 CP1	Table 9-1	<ul style="list-style-type: none"> <li>All works affecting the trees identified for retention and transplantation will be carefully monitored. This includes the key stages in the preparation of the trees, the implementation of protection measures and health monitoring through out the construction period.</li> </ul>	Project Landscape Architect / Contractor	C1	✓
Table 7-13 CP1	Table 9-1	<ul style="list-style-type: none"> <li>Detailed landscape and tree preservation proposals will be submitted to the relevant government departments for approval under the lease conditions and in accordance with ETWB TCW No. 2/2004 and WBTC No. 3/2006.</li> </ul>	Project Landscape Architect / Contractor	C1	✓
Table 7-13 CP1	Table 9-1	<ul style="list-style-type: none"> <li>The tree preservation works should be implemented by approved Landscape Contractors and inspected and approved on site by a qualified Landscape Architect. A tree protection specification would be included within the contract documents.</li> </ul>	Contractor	C1	✓
<b>Preservation of Existing Topsoil</b>					
Table 7-13 CP2	Table 9-1	<ul style="list-style-type: none"> <li>Topsoil disturbed during the construction phase should be tested using a standard soil testing methodology and where it is found to be worthy of retention stored for re-use.</li> </ul>	Contractor	C1	✓

# Construction of a Secondary Boundary Fence and New Sections of Primary Boundary Fence and Boundary Patrol Road



Improvement Works for Mai Po, Lok Ma Chau, Sha Tau Kok, Planting Works at Tak Yuet Lau and Demolition Work at Shek Chung Au, Lo Wu to Sha Tau Kok – Monthly EM&A Report for May 2016

EIA Ref.	EM&A Manual Ref.	Recommended Mitigation Measures	Who to implement?	When to implement? (1)	Implementation Status (2)
Table 7-13 CP2	Table 9-1	<ul style="list-style-type: none"> <li>The soil will be stockpiled to a maximum height of 2m and will be either temporarily vegetated with hydroseeded grass during construction or covered with a waterproof covering to prevent erosion.</li> </ul>	Contractor	C1	✓
Table 7-13 CP2	Table 9-1	<ul style="list-style-type: none"> <li>The stockpile should be turned over on a regular basis to avoid acidification and the degradation of the organic material, and reused after completion. Alternatively, if this is not practicable, it should be considered for use elsewhere, including other projects.</li> </ul>	Contractor	C1	✓
<b>Permanent and Temporary Works Areas</b>					
Table 7-13 CP3	Table 9-1	<ul style="list-style-type: none"> <li>Where appropriate to the final design the landscape of these works areas should be restored following the completion of the construction phase.</li> </ul>	Contractor	C1	✓
Table 7-13 CP3	Table 9-1	<ul style="list-style-type: none"> <li>Construction site controls should be enforced including the storage of materials, the location and appearance of site accommodation and the careful design of site lighting to prevent light spillage.</li> </ul>	Contractor	C1	✓
<b>Mitigation Planting</b>					
Table 7-13 CP4	Table 9-1	<ul style="list-style-type: none"> <li>Replanting of disturbed vegetation should be undertaken at the earliest possible stage of the construction phase.</li> </ul>	Contractor	C1	✓
Table 7-13 CP4	Table 9-1	<ul style="list-style-type: none"> <li>Use of native plant species predominantly in the planting design for the buffer areas.</li> </ul>	Contractor	C1	✓
Table 7-13 CP4	Table 9-1	<ul style="list-style-type: none"> <li>The tree planting works should be implemented by approved Landscape Contractors and inspected and approved on site by a qualified Landscape Architect. A tree planting specification would be included within the contract documents.</li> </ul>	Contractor	C1	✓
<b>Transplantation of Existing Trees</b>					
Table 7-13 CP5	Table 9-1	<ul style="list-style-type: none"> <li>The tree transplanting works should be implemented by approved Landscape Contractors and inspected and approved on site by a qualified Landscape Architect. A tree protection / transplanting specification would be included within the contract documents.</li> </ul>	Contractor	BC1	✓
<b>Design of the Fence and associated Structures</b>					
Table 7-14 OP1	Table 9-2	<p>Design of Boundary Fence, Boundary Patrol Road and Police Check Point – These structural elements will be designed in accordance with security requirement from Police Force and incorporate design features as part of design mitigation measures including:</p> <ol style="list-style-type: none"> <li>Integrated design approach – the boundary fence should be integrated, as far as technically feasible, with existing built structures such as existing road, footpath and track and embankment of fishponds, river and drainage channel as part of design mitigation measures to reduce the potential cumulative impact of the proposed works. The location and orientation of the police check points should be away from landscape and visually sensitive areas such as wetland, fishpond and agricultural field.</li> <li>Building massing - the proposed use of simple</li> </ol>	ArchSD	D	✓

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# Construction of a Secondary Boundary Fence and New Sections of Primary Boundary Fence and Boundary Patrol Road

Improvement Works for Mai Po, Lok Ma Chau, Sha Tau Kok, Planting Works at Tak Yuet Lau and Demolition Work at Shek Chung Au, Lo Wu to Sha Tau Kok – Monthly EM&A Report for May 2016



EIA Ref.	EM&A Manual Ref.	Recommended Mitigation Measures	Who to implement?	When to implement? (1)	Implementation Status (2)
		<p>responsive design for the built structures with a low building height profile to reduce the potential visual mass of the structure within a rural context.</p> <p>3. Treatment of built structures - the architectural design should seek to reduce the apparent visual mass of the facilities further through the use of natural materials such as wooden frame, vertical greening or other sustainable materials such as recycled plastic.</p> <p>4. Responsive building and fence finishes - In terms of the proposed finishes natural tones should be considered for the colour palette with non-reflective finishes are recommended to reduce glare effect. The use of colour blocking on the proposed fence could be used to break up the visual mass of the structure.</p> <p>5. Responsive lighting design – Aesthetic design of architectural and track lighting with following glare design measures:</p> <ul style="list-style-type: none"> <li>– Directional and full cut off lighting is recommended particularly for areas adjacent to existing village to minimise light spillage.</li> <li>– Minimise geographical spread of lighting, only applied for safety and security reasons;</li> <li>– Limited lighting intensity to meet the minimum safety and operation requirement; and</li> <li>– High-pressure sodium road lighting is recommended for more stringent light control reducing spillage and thus visual impacts.</li> </ul>			
<b>Compensatory Planting Proposals</b>					
Table 7-14 OP2	Table 9-2	<ul style="list-style-type: none"> <li>■ Utilise native to Hong Kong will be utilized within the buffer planting areas.</li> </ul>	Contractor	D	✓
Table 7-14 OP2/3	Table 9-2	<ul style="list-style-type: none"> <li>■ A qualified or registered landscape architect will be involved in the design, construction supervision and monitoring, and maintenance period to oversee the implementation of the recommended landscape and visual mitigation measures including the tree preservation and landscape works on site.</li> </ul>	Contractor	D	✓
Table 7-14 OP2	Table 9-2	<p>Tree and Shrub Planting – Given the rural nature of the proposed alignment it is recommended that the where possible tree and shrub species which are native to Hong Kong be used. In addition where possible the planting of new trees and shrubs will aim to link together existing woodland areas and small tree groups to improve the connectivity between habitats and create more coherent landscape framework. The planting of small groups of trees along the alignment of the proposed fence will serve to de-emphasise the horizontality of the fence structure and provide for better sense of visual integration with the landscape context. Where practicable vertical greening measures should also be considered on engineering structures.</p>	Contractor	D	✓
Table 7-14 OP2	Table 9-2	<p>Compensatory Planting Proposals – Given the works extent is largely limited along existing roadside embankment to minimise impact to existing village settlements and valuable landscape resources such as wetland, fishpond, stream course and existing trees, and considered the importance of</p>	Contractor	D	✓



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EIA Ref.	EM&A Manual Ref.	Recommended Mitigation Measures	Who to implement?	When to implement? (1)	Implementation Status (2)
		tree retention within the works area, new tree planting will concentrate in selected new amenity areas along the alignment, infilling between retained and transplanted trees. The preliminary planting proposals for the proposed works include the planting of some 357 new trees utilising a combination of mature to light standard sized stock (i.e. approximately 15% of mature trees, 75% of standard trees, and 10% light standard trees). These trees will be planted in woodland clumps and small tree groups at strategic locations to de-emphasise the horizontality of the fence alignment. Based on preliminary findings the proposed planting will result in a compensatory planting ratio of 1:1 (new planting: trees recommended for felling). This compares favourably with the report's assertion that some 357 trees would be felled due to the proposed works. With the proposed preservation of existing trees, transplantation of trees in conflict with the proposals and the planting of new trees the project area will contain approximately 2000 trees. Trees forming part of the new planting will provide screening to neighbourhood villagers and will utilise species native to Hong Kong. These proposals will be subject to review at detailed design stage of the project.			

- Legend: (1) C1 - Throughout Construction Phase  
BC - Before Construction Phase Commences  
BC1 - Prior to the Commencement of the Proposed Works  
D - Throughout Design Phase
- (2) ✓ - Implemented  
P - Partially Implemented  
X - Not Implemented  
REC - Rectified by Contractor  
(REC) - Partially Rectified by Contractor  
! - Pending Contractor's Rectification Action  
N/A - Not Applicable

# Construction of a Secondary Boundary Fence and New Sections of Primary Boundary Fence and Boundary Patrol Road



Improvement Works for Mai Po, Lok Ma Chau, Sha Tau Kok, Planting Works at Tak Yuet Lau and Demolition Work at Shek Chung Au, Lo Wu to Sha Tau Kok –  
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## Appendix D. Event and Action Plans

Table D.1: Event and Action Plan for Construction Noise

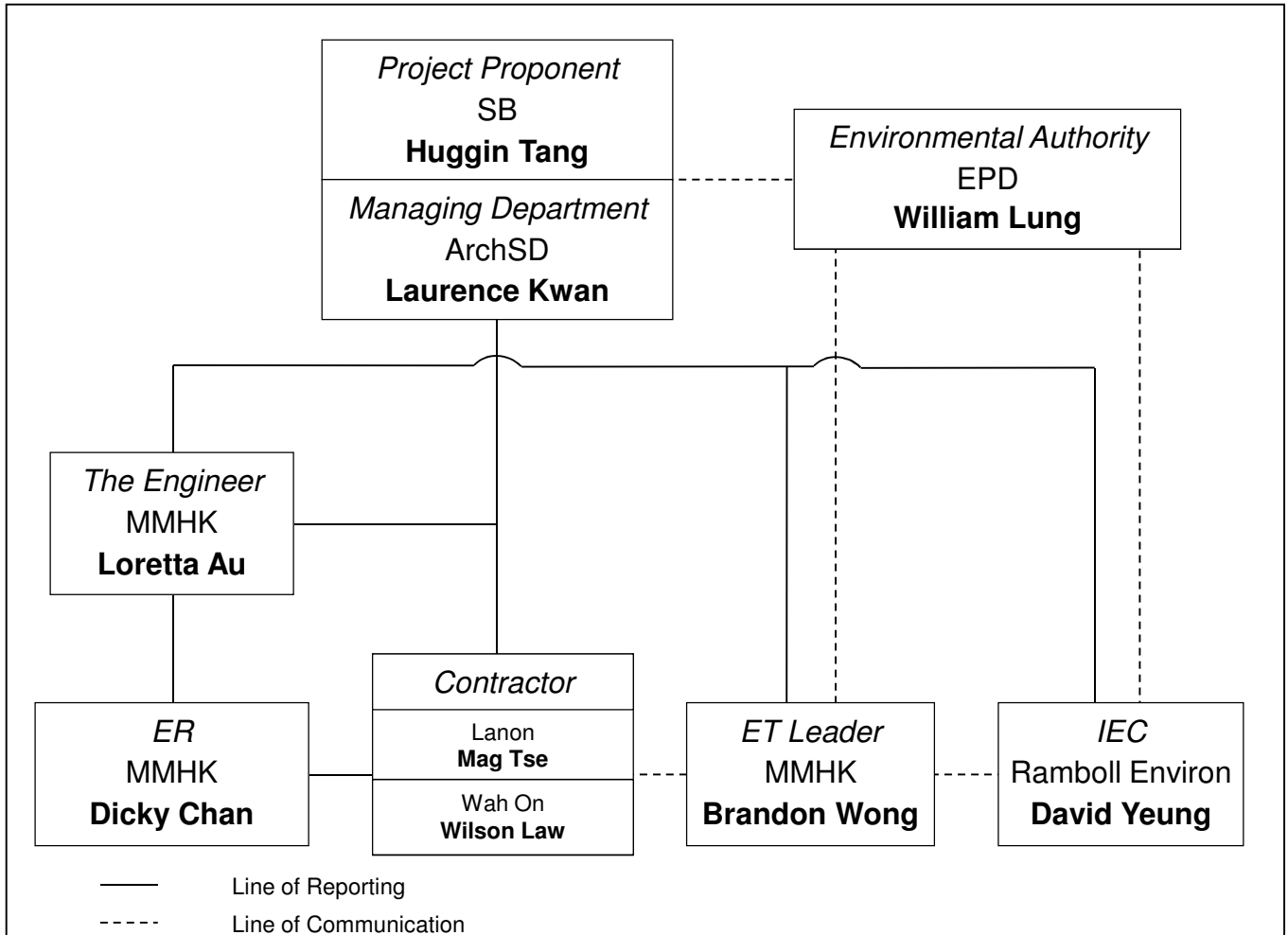
EVENT	ACTION			
	ET Leader	IEC	ER	Contractor
<b>Action Level</b>	<ol style="list-style-type: none"> <li>1. Notify IEC and the Contractor.</li> <li>2. Carry out investigation.</li> <li>3. Report the results of investigation to IEC and the Contractor.</li> <li>4. Discuss with the Contractor and formulate remedial measures.</li> <li>5. Increase monitoring frequency to check mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Review with analyzed results submitted by ET.</li> <li>2. Review the proposed remedial measures by the Contractor and advise ER accordingly.</li> <li>3. Supervise the implement of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing.</li> <li>2. Notify the Contractor.</li> <li>3. Require the Contractor to propose remedial measures for the analyzed noise problem.</li> <li>4. Ensure remedial measures are properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Submit noise mitigation proposals to IEC.</li> <li>2. Implement noise mitigation proposals.</li> </ol>
<b>Limit Level</b>	<ol style="list-style-type: none"> <li>1. Identify the source.</li> <li>2. Notify IEC, ER, EPD and the Contractor.</li> <li>3. Repeat measurement to confirm findings.</li> <li>4. Increase monitoring frequency.</li> <li>5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented.</li> <li>6. Inform IEC, ER, and EPD the causes &amp; actions taken for the exceedances.</li> <li>7. Assess effectiveness of the Contractor's remedial actions and keep IEC, EPD and ER informed of the results.</li> <li>8. If exceedance stops, cease additional monitoring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss amongst ER, ET Leader and the Contractor on the potential remedial actions.</li> <li>2. Review the Contractor's remedial actions whenever necessary to assure their effectiveness and advise ER accordingly.</li> <li>3. Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of exceedance in writing.</li> <li>2. Notify the Contractor.</li> <li>3. Require the Contractor to propose remedial measures for the analyzed noise problem.</li> <li>4. Ensure remedial measures are properly implemented.</li> <li>5. If exceedance continues, consider what activity of the work is responsible and instruct the Contractor to stop that activity of work until the exceedance is abated.</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance.</li> <li>2. Submit proposals for remedial actions to IEC within 3 working days of notification.</li> <li>3. Implement the agreed proposals.</li> <li>4. Resubmit proposals if problem still not under control.</li> <li>5. Stop the relevant activity of works as determined by the ER until the exceedance is abated.</li> </ol>

## Appendix C. Environmental Quality Performance Limits



Table C.1: Action and Limit Levels for Construction Noise

Time Period	Action Level	Limit Level
Daytime (07:00-19:00) except general holidays and Sundays <i>Measurements in <math>L_{eq}</math> (30min)</i>	When one documented complaint is received	75 dB(A) For educational institutions
		70 dB(A) (65dB(A) during examinations)

## Appendix B. Project Organisation Chart



Key Personnel Contact List			
Role	Department / Company	Name	Telephone No.
Project Proponent	Security Bureau (SB)	Mr. Huggin Tang	2810 3523
Managing Department	Architectural Services Department (ArchSD)	Mr. Laurence Kwan	2867 3871
Environmental Authority	Environmental Protection Department (EPD)	Mr. William Lung	2835 1065
The Engineer	Mott MacDonald Hong Kong Limited (MMHK)	Ms. Loretta Au	2828 5807
Engineer's Representative (ER)	Mott MacDonald Hong Kong Limited (MMHK)	Mr. Dicky Chan	2683 1172
Independent Environmental Checker (IEC)	Ramboll Environ Hong Kong Limited (Ramboll Environ)	Mr. David Yeung	3465 2888
Environmental Team (ET) Leader	Mott MacDonald Hong Kong Limited (MMHK)	Mr. Brandon Wong	2828 5875
The Contractor / Project Manager	Lanon Development Limited (Lanon)	Mr. Mag Tse	9161 4727
The Contractor / Project Manager	Wah On Garden Landscaping Limited (Wah On)	Mr. Wilson Law	9046 6205

 Architectural Services Department	 Mott MacDonald	<b>Construction of a Secondary Boundary Fence and New Sections of Primary Boundary Fence and Boundary Patrol Road</b> Phase 2 – Improvement Works for Boundary Fence at Mai Po, Lok Ma Cha and Sha Tau Kok Environmental Permit No. EP-347/2009/A	Title:
			Project Organisation Chart for Phase 2



Construction of a Secondary Boundary Fence and New Sections of  
Primary Boundary Fence and Boundary Patrol Road  
Improvement Works for Mai Po, Lok Ma Chau, Sha Tau Kok, Planting Works at  
Tak Yuet Lau and Demolition Work at Shek Chung Au, Lo Wu to Sha Tau Kok –  
Monthly EM&A Report for May 2016

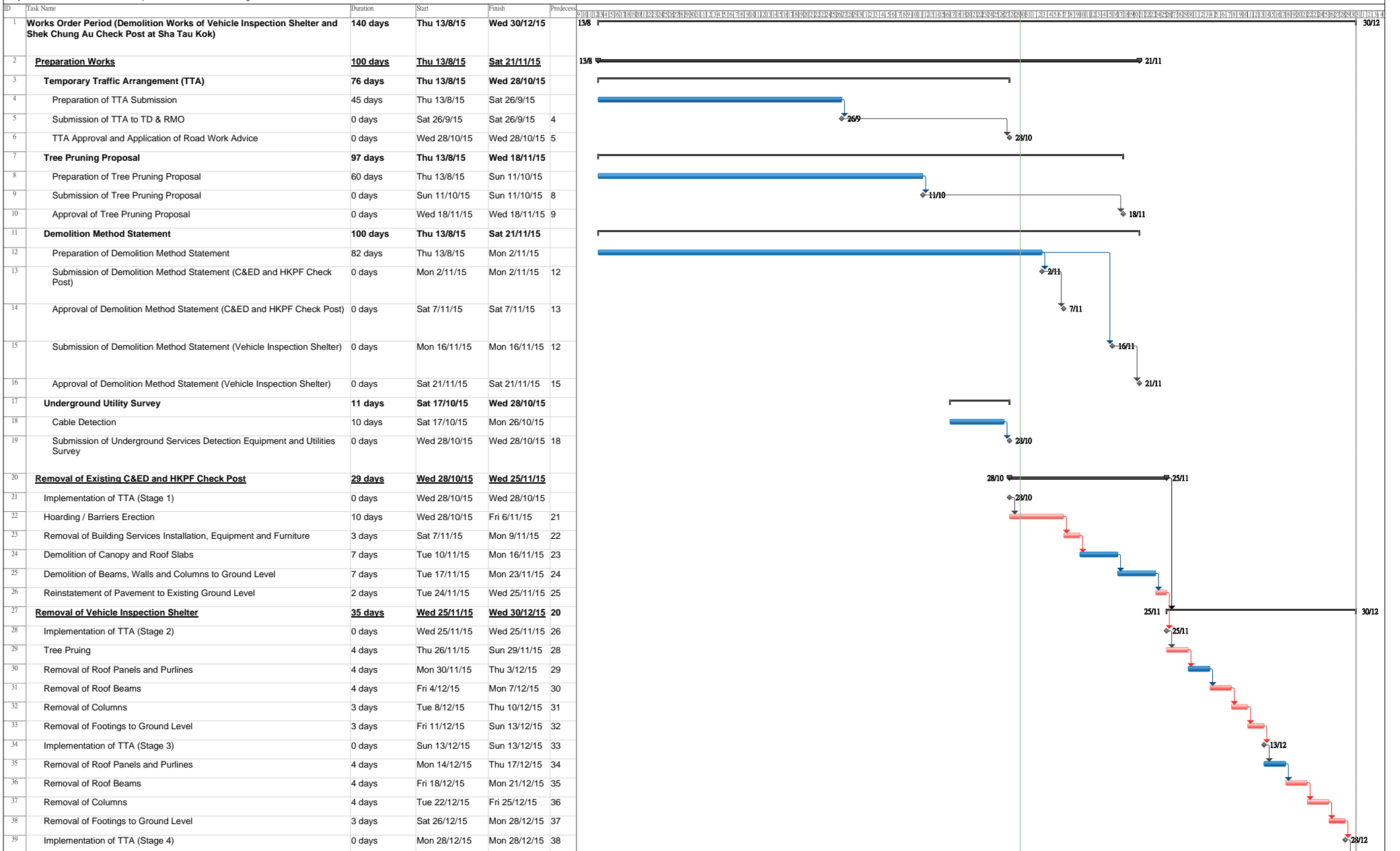


# Appendix A. Construction Works Programme

ID	Task Name	Duration	Start	Finish	Gantt Chart											
					2nd Quarter			3rd Quarter			4th Quarter					
					A	M	J	J	A	S	O	N				
1	<b>Works Order Period (Improvement Works for Boundary Fence at Mai Po, Lok Ma Chau and Sha Tau Kok)</b>	<b>184 days</b>	<b>Tue 28/4/15</b>	<b>Wed 28/10/15</b>	28/4 ————— 28/10											
2	<b>Works Order Commcement Date</b>	<b>0 days</b>	<b>Tue 28/4/15</b>	<b>Tue 28/4/15</b>	◆ 28/4											
3	<b>Mai Po Section</b>	<b>184 days</b>	<b>Tue 28/4/15</b>	<b>Wed 28/10/15</b>	28/4 ————— 28/10											
4	<b>1.) Replacement of Hinge at Gate no. 102C, 102B, 102A, 101K, 101J, 101I, 101H, 99E, 99A, 98 (Total 10 Nos.)</b>	<b>164 days</b>	<b>Tue 28/4/15</b>	<b>Thu 8/10/15</b>	—————											
5	Material Procurement and Fabrication	104 days	Tue 28/4/15	Sun 9/8/15	—————											
6	Replacement of Hinge	60 days	Mon 10/8/15	Thu 8/10/15	—————											
7	<b>2.) Installation Additional CCTV Information Plates at Gate no. 99D, 99G, 100A, 100B, 100E, 100G, 101B, 101C, 101D, 101E, 101G (Toal 11 Nos.)</b>	<b>127 days</b>	<b>Tue 28/4/15</b>	<b>Tue 1/9/15</b>	—————											
8	Material Submission, Procurement and Fabrication	99 days	Tue 28/4/15	Tue 4/8/15	—————											
9	Installation of CCTV Information Plates	28 days	Wed 5/8/15	Tue 1/9/15	—————											
10	<b>3.) Provision of Speed Limit Road Marking at Various Locations as Specified in the Drawings (Details to be Issued)</b>	<b>70 days</b>	<b>Mon 6/7/15</b>	<b>Sun 13/9/15</b>	—————											
11	Material Submission	60 days	Mon 6/7/15	Thu 3/9/15	—————											
12	Provision FCA Road Marking	10 days	Fri 4/9/15	Sun 13/9/15	—————											
13	<b>4.) Removal Existing Vegetation and Top Soil and Provision 75mm Thick Concrete Slab on Verge Area between Fence Kerb and Road Kerb along SBF</b>	<b>160 days</b>	<b>Tue 28/4/15</b>	<b>Sun 4/10/15</b>	—————											
14	Application of Excavation Permit and Lead Time Waiver*	100 days	Tue 28/4/15	Wed 5/8/15	—————											
15	Construction of Concrete Slab on Verge Area	60 days	Thu 6/8/15	Sun 4/10/15	—————											
16	<b>5.) Modification Gate no. 101K including Installation of Additional Horizontal Support and 6 nos. Additional Heavy Duty Hydraulic wheels</b>	<b>184 days</b>	<b>Tue 28/4/15</b>	<b>Wed 28/10/15</b>	—————											
17	Material Submission, Procurement and Fabrication	100 days	Tue 28/4/15	Wed 5/8/15	—————											
18	Modification of Gate	20 days	Fri 9/10/15	Wed 28/10/15	—————											
19	<b>6.) Removal Existing Vegetation and Top Soil and Construction Concrete Pavement at Gate no. 100D and 100H</b>	<b>174 days</b>	<b>Tue 28/4/15</b>	<b>Sun 18/10/15</b>	—————											
20	Application of Excavation Permit and Lead Time Waiver	100 days	Tue 28/4/15	Wed 5/8/15	—————											
21	Detection Survey of Underground Utilities	2 days	Sat 3/10/15	Sun 4/10/15	—————											
22	Construction of Concrete Pavement	14 days	Mon 5/10/15	Sun 18/10/15	—————											
23	<b>7.) Removal Existing Vegetation and Top Soil and Construction Concrete Pavement Run-in at Gate no. 100D and 100H</b>	<b>184 days</b>	<b>Tue 28/4/15</b>	<b>Wed 28/10/15</b>	—————											
24	Application of Excavation Permit and Lead Time Waiver	100 days	Tue 28/4/15	Wed 5/8/15	—————											
25	Detection Survey of Underground Utilities	2 days	Sat 17/10/15	Sun 18/10/15	—————											
26	Construction of Concrete Pavement Run-in	10 days	Mon 19/10/15	Wed 28/10/15	—————											
27	8.) Installation of EPDM Gasket for 150x150 Opening at the Various Gates as per Sketch no. SK009	7 days	Mon 17/8/15	Sun 23/8/15	—————											
28	<b>9.) Trimming Down Existing Pavement outside Pak Hok Chau Checkpoint and Installation Anti-slip Tiles with same FFL with Existing</b>	<b>44 days</b>	<b>Tue 15/9/15</b>	<b>Wed 28/10/15</b>	—————											
29	Material Submission and Procurement	14 days	Tue 15/9/15	Mon 28/9/15	—————											
30	Trimming Down Existing Pavement and Installation of Anti-slip Tiles	30 days	Tue 29/9/15	Wed 28/10/15	—————											
31	<b>Lok Ma Chau Section</b>	<b>184 days</b>	<b>Tue 28/4/15</b>	<b>Wed 28/10/15</b>	28/4 ————— 28/10											
32	<b>10.) Replacement Installed Information Plate at Gate no. 78, 78B, 81A, 89A, 91A, 96A, 97 as per Sketch no. SK046 (Total 7 Nos.)</b>	<b>141 days</b>	<b>Tue 28/4/15</b>	<b>Tue 15/9/15</b>	—————											
33	Material Submission, Procurement and Fabrication	91 days	Tue 28/4/15	Mon 27/7/15	—————											
34	Installation of Information Plates	14 days	Wed 2/9/15	Tue 15/9/15	—————											
35	<b>11.) Installation Additional Information Plate for Gate no. 91A and 91B as per Sketch no. SK047-048</b>	<b>146 days</b>	<b>Tue 28/4/15</b>	<b>Sun 20/9/15</b>	—————											
36	Material Submission, Procurement and Fabrication	91 days	Tue 28/4/15	Mon 27/7/15	—————											
37	Installation of Information Plates	5 days	Wed 16/9/15	Sun 20/9/15	—————											

ID	Task Name	Duration	Start	Finish	2nd Quarter			3rd Quarter			4th Quarter				
					A	M	J	J	A	S	O	N			
38	<b>12.) Installation 1 nos. Proposed Retractable Awning of approx. Size of 5m in width and 3m in Projection for Existing Canopy at Entrance of Tak Yuet Lau Police Post</b>	<b>114 days</b>	<b>Tue 28/4/15</b>	<b>Wed 19/8/15</b>											
39	Material Submission, Procurement and Fabrication	100 days	Tue 28/4/15	Wed 5/8/15											
40	Installation of Proposed Retractable Awning	14 days	Thu 6/8/15	Wed 19/8/15											
41	<b>13.) Installation 8 nos. of "No Climbing" Warning Signs on the Railing at DSD Maintenance Road Behind Ng Tung River</b>	<b>164 days</b>	<b>Tue 28/4/15</b>	<b>Thu 8/10/15</b>											
42	Material Submission, Procurement and Fabrication	91 days	Tue 28/4/15	Mon 27/7/15											
43	Installation of Warning Signs	18 days	Mon 21/9/15	Thu 8/10/15											
44	<b>14.) Construction 4 nos. of "Fish Convex Mirror" and the Associated Installation Works as per Sketch nos. SK052-054</b>	<b>184 days</b>	<b>Tue 28/4/15</b>	<b>Wed 28/10/15</b>											
45	Application of Excavation Permit	100 days	Tue 28/4/15	Wed 5/8/15											
46	Material Submission, Procurement and Fabrication	30 days	Tue 7/7/15	Wed 5/8/15											
47	Detection Survey of Underground Utilities	2 days	Thu 6/8/15	Fri 7/8/15											
48	Installation of "Fish Convex Mirror" and Associated Installation Works	82 days	Sat 8/8/15	Wed 28/10/15											
49	<b>Sha Tau Kok Section</b>	<b>184 days</b>	<b>Tue 28/4/15</b>	<b>Wed 28/10/15</b>											
50	<b>15.) Installation of 2 nos. Anti-mosquito Lantern for Booths of Vehicular Inspection Shelter and 2 nos. Anti-mosquito Lantern for Gate 1 Checkpoint G/F</b>	<b>114 days</b>	<b>Tue 28/4/15</b>	<b>Wed 19/8/15</b>											
51	Material Submission, Procurement and Fabrication	100 days	Tue 28/4/15	Wed 5/8/15											
52	Installation of Anti-mosquito Lantern	14 days	Thu 6/8/15	Wed 19/8/15											
53	<b>16.) Installation of Anti-slip Tiles at Vehicular Inspection Shelters</b>	<b>182 days</b>	<b>Tue 28/4/15</b>	<b>Mon 26/10/15</b>											
54	Application of Excavation Permit	150 days	Tue 28/4/15	Thu 24/9/15											
55	Detection Survey of Underground Utilities	2 days	Fri 25/9/15	Sat 26/9/15											
56	Material Submission, Procurement and Fabrication	40 days	Thu 9/7/15	Mon 17/8/15											
57	Installation of Anti-slip Tiles	30 days	Sun 27/9/15	Mon 26/10/15											
58	<b>17.) Construction Ramp, Handrail and Stainless Steel Wire Mesh Guard at Gate 1 Checkpoint</b>	<b>72 days</b>	<b>Tue 18/8/15</b>	<b>Wed 28/10/15</b>											
59	Consent for Construction at Gate 1 Check Point from HKPF & C&ED	30 days	Tue 18/8/15	Wed 16/9/15											
60	Detection Survey of Underground Utilities	2 days	Thu 17/9/15	Fri 18/9/15											
61	Material Submission, Procurement and Fabrication	30 days	Thu 20/8/15	Fri 18/9/15											
62	Construction Ramp, Handrail and Stainless Steel Wire Mesh Guard	40 days	Sat 19/9/15	Wed 28/10/15											
63	<b>18.) Installation CCTV Plates at Gate M/P4-2, Gate M/P4-7, Gate besides Waterfront, Fence near CCTV Post 26B in VHA, Fence near CCTV Post 20B in VHA, Gate 6 at Shan Tsui Village and Gate 7 at Shan Tsui Village</b>	<b>182 days</b>	<b>Tue 28/4/15</b>	<b>Mon 26/10/15</b>											
64	Material Submission, Procurement and Fabrication	91 days	Tue 28/4/15	Mon 27/7/15											
65	Installation of CCTV Plates	18 days	Fri 9/10/15	Mon 26/10/15											
66	<b>19.) Construction Additional Lamp Poles (Flood Light) to Replace the Existing Lamp as per Sketch no. SK017, 018A and 018B</b>	<b>184 days</b>	<b>Tue 28/4/15</b>	<b>Wed 28/10/15</b>											
67	Application of Excavation Permit	130 days	Tue 28/4/15	Fri 4/9/15											
68	Material Submission, Procurement and Fabrication	100 days	Tue 28/4/15	Wed 5/8/15											
69	Construction Additional Lamp Poles	50 days	Sat 5/9/15	Sat 24/10/15											
70	Testing & Commissioning	4 days	Sun 25/10/15	Wed 28/10/15											
71	<b>20.) Installation Additional Information Plates on Pedestrian Gate no. M/P4-7 and M/P4-2 at Sha Tau Kok</b>	<b>141 days</b>	<b>Tue 28/4/15</b>	<b>Tue 15/9/15</b>											
72	Material Submission, Procurement and Fabrication	91 days	Tue 28/4/15	Mon 27/7/15											
73	Installation of Information Plates	10 days	Sun 6/9/15	Tue 15/9/15											
74	<b>21.) Provision FCA Road Marking at Sha Tau Kok</b>	<b>71 days</b>	<b>Mon 6/7/15</b>	<b>Mon 14/9/15</b>											
75	Material Submission	60 days	Mon 6/7/15	Thu 3/9/15											
76	Provision FCA Road Marking	1 day	Mon 14/9/15	Mon 14/9/15											







Project : Demolition Works of Vehicle Inspection Shelter and Shek Chung Au Check Post at Sha Tau Kok

ID	Task Name	Duration	Start	Finish	Predecessor
40	Reinstatement of Pavement to Existing Ground Level and Removal of Traffic Signs and Light and Water Tank behind	2 days	Tue 29/12/15	Wed 30/12/15	39

識別碼	Activity Description	Duration	Start	Finish	2016年5月				2016年7月				2016年9月					
					M	B	E	M	B	E	M	B	E	M	B			
1	Works Order Commencement Date	0 days	29/4/2016	29/4/2016														
2	<b>Ping Che Checkpost</b>	<b>67 days</b>	<b>29/4/2016</b>	<b>4/7/2016</b>														
3	Submission and approval of method statement	33 days	29/4/2016	31/5/2016														
4	Submission of tree survey report	28 days	4/5/2016	31/5/2016														
5	UU detection	7 days	25/5/2016	31/5/2016														
6	Asbesto Survey	10 days	22/5/2016	31/5/2016														
7	Implementation of TTA (Stage 1)	3 days	22/5/2016	24/5/2016														
8	Removal of existing mass concrete block	7 days	25/5/2016	31/5/2016														
9	Demolition of existing check post	7 days	1/6/2016	7/6/2016														
10	Implementation of TTA (Stage 2)	3 days	8/6/2016	10/6/2016														
11	Temporary relocation of existing shelter and seats at road side	1 day	11/6/2016	11/6/2016														
12	Provision of temporary steel decking	2 days	12/6/2016	13/6/2016														
13	Demolition of existing shelter and associated works	14 days	14/6/2016	27/6/2016														
14	Road works and Reinstatement	7 days	28/6/2016	4/7/2016														
15	<b>Lin Ma Hang (Cable diversion)</b>	<b>75 days</b>	<b>20/5/2016</b>	<b>2/8/2016</b>														
16	Submission of tree survey report	28 days	22/5/2016	18/6/2016														
17	Application to CLP	30 days	20/5/2016	18/6/2016														
18	Construction of pillar box and cable ducts	23 days	19/6/2016	11/7/2016														
19	Electrical installation	22 days	12/7/2016	2/8/2016														
20	<b>Lin Ma Hang (Phase 1)</b>	<b>7 days</b>	<b>1/8/2016</b>	<b>7/8/2016</b>														
21	Demolition of existing fence, light post and associated works	4 days	3/8/2016	6/8/2016														
22	Reinstatement	1 day	7/8/2016	7/8/2016														
23	<b>Lin Ma Hang (Phase 2)</b>	<b>7 days</b>	<b>8/8/2016</b>	<b>14/8/2016</b>														
24	Demolition of existing fence, light post and associated works	4 days	8/8/2016	11/8/2016														
25	Reinstatement	1 day	12/8/2016	12/8/2016														
26	<b>Lin Ma Hang (Phase 3)</b>	<b>5 days</b>	<b>15/8/2016</b>	<b>19/8/2016</b>														
27	Demolition of existing fence, light post and associated works	4 days	15/8/2016	18/8/2016														
28	Reinstatement	1 day	19/8/2016	19/8/2016														
29	<b>Lin Ma Hang (Phase 4)</b>	<b>7 days</b>	<b>3/8/2016</b>	<b>9/8/2016</b>														
30	Provision of temporary steel decking and setting up of TTA	2 days	3/8/2016	4/8/2016														
31	Demolition of existing fence, light post and associated works	4 days	5/8/2016	8/8/2016														
32	Reinstatement	1 day	9/8/2016	9/8/2016														

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Task Critical Task Milestone Summary

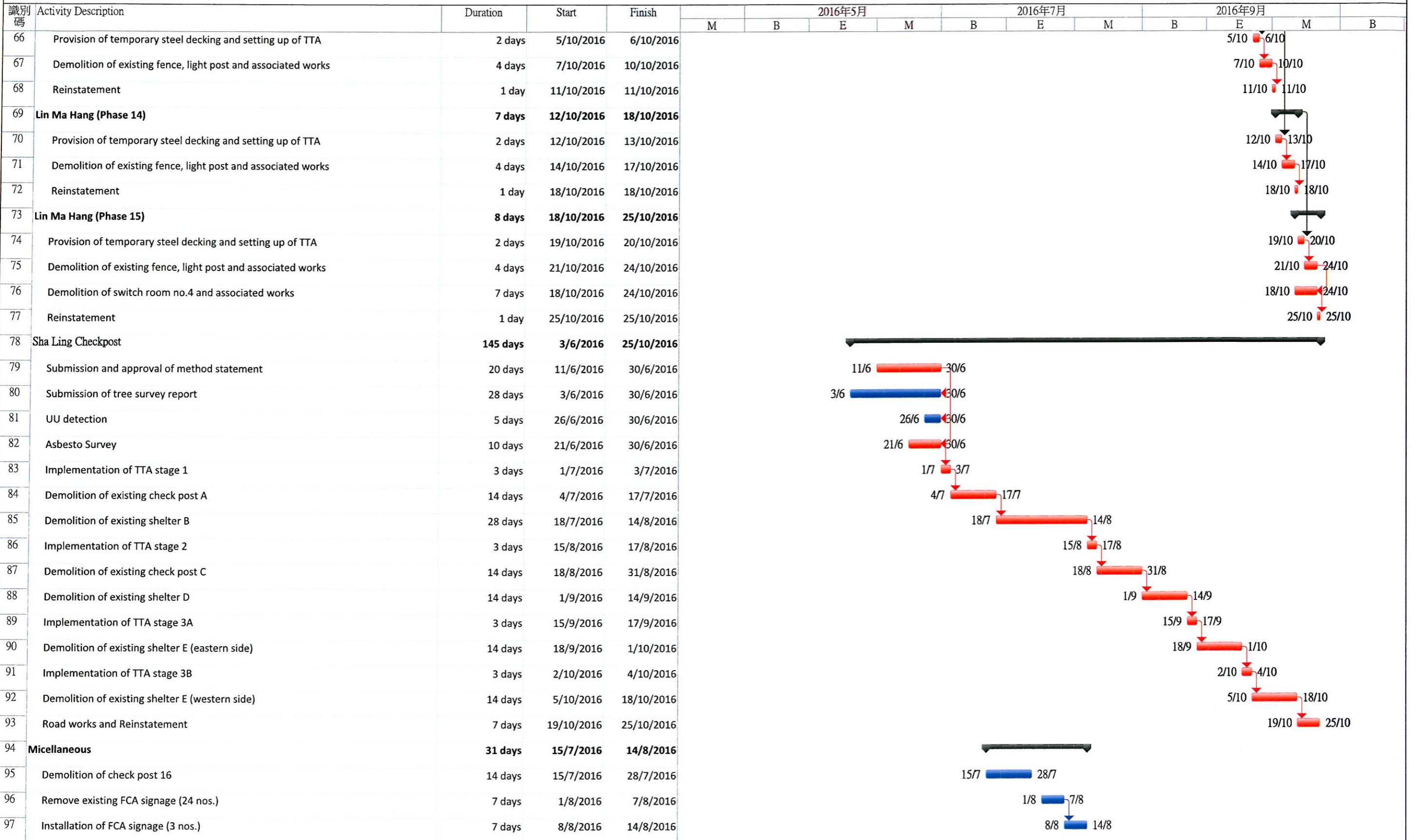


識別碼	Activity Description	Duration	Start	Finish	2016年5月				2016年7月				2016年9月				
					M	B	E	M	B	E	M	B	E	M	B		
33	<b>Lin Ma Hang (Phase 5)</b>	7 days	10/8/2016	16/8/2016													
34	Provision of temporary steel decking and setting up of TTA	2 days	10/8/2016	11/8/2016							10/8	11/8					
35	Demolition of existing fence, light post and associated works	4 days	12/8/2016	15/8/2016							12/8	15/8					
36	Reinstatement	1 day	16/8/2016	16/8/2016							16/8	16/8					
37	<b>Lin Ma Hang (Phase 6)</b>	7 days	17/8/2016	23/8/2016													
38	Provision of temporary steel decking and setting up of TTA	2 days	17/8/2016	18/8/2016							17/8	18/8					
39	Demolition of existing fence, light post and associated works	4 days	19/8/2016	22/8/2016							19/8	22/8					
40	Reinstatement	1 day	23/8/2016	23/8/2016							23/8	23/8					
41	<b>Lin Ma Hang (Phase 7)</b>	7 days	24/8/2016	30/8/2016													
42	Provision of temporary steel decking and setting up of TTA	2 days	24/8/2016	25/8/2016							24/8	25/8					
43	Demolition of existing fence, light post and associated works	4 days	26/8/2016	29/8/2016							26/8	29/8					
44	Reinstatement	1 day	30/8/2016	30/8/2016							30/8	30/8					
45	<b>Lin Ma Hang (Phase 8)</b>	7 days	31/8/2016	6/9/2016													
46	Provision of temporary steel decking and setting up of TTA	2 days	31/8/2016	1/9/2016							31/8	1/9					
47	Demolition of existing fence, light post and associated works	4 days	2/9/2016	5/9/2016							2/9	5/9					
48	Reinstatement	1 day	6/9/2016	6/9/2016							6/9	6/9					
49	<b>Lin Ma Hang (Phase 9)</b>	7 days	7/9/2016	13/9/2016													
50	Provision of temporary steel decking and setting up of TTA	2 days	7/9/2016	8/9/2016							7/9	8/9					
51	Demolition of existing fence, light post and associated works	4 days	9/9/2016	12/9/2016							9/9	12/9					
52	Reinstatement	1 day	13/9/2016	13/9/2016							13/9	13/9					
53	<b>Lin Ma Hang (Phase 10)</b>	7 days	14/9/2016	20/9/2016													
54	Provision of temporary steel decking and setting up of TTA	2 days	14/9/2016	15/9/2016							14/9	15/9					
55	Demolition of existing fence, light post and associated works	4 days	16/9/2016	19/9/2016							16/9	19/9					
56	Reinstatement	1 day	20/9/2016	20/9/2016							20/9	20/9					
57	<b>Lin Ma Hang (Phase 11)</b>	7 days	21/9/2016	27/9/2016													
58	Provision of temporary steel decking and setting up of TTA	2 days	21/9/2016	22/9/2016							21/9	22/9					
59	Demolition of existing fence, light post and associated works	4 days	23/9/2016	26/9/2016							23/9	26/9					
60	Reinstatement	1 day	27/9/2016	27/9/2016							27/9	27/9					
61	<b>Lin Ma Hang (Phase 12)</b>	7 days	28/9/2016	4/10/2016													
62	Provision of temporary steel decking and setting up of TTA	2 days	28/9/2016	29/9/2016							28/9	29/9					
63	Demolition of existing fence, light post and associated works	4 days	30/9/2016	3/10/2016							30/9	3/10					
64	Reinstatement	1 day	4/10/2016	4/10/2016							4/10	4/10					
65	<b>Lin Ma Hang (Phase 13)</b>	7 days	5/10/2016	11/10/2016													

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