



M A E D A

Maeda Corporation



MTRCL Contract C3840-13C

**Tsim Sha Tsui Station Carnarvon Road Subway
and Entrances Modification Works**

**QUARTERLY EM&A REPORT
(December 2016 to February 2017)**





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MTRCL Contract C3840-13C

Tsim Sha Tsui Station Carnarvon Road Subway and Entrances Modification Works

QUARTERLY EM&A REPORT (December 2016 to February 2017)

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Report No EB001340R00503

Date 28 March 2017

Your Ref:
Our Ref: 40032976/460235

By Email and Post

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Attn.: Mr. Kenneth Chow / Environmental Engineer II

28 March 2017

Dear Sirs

**Consultancy Agreement A130-13
Independent Environmental Checker for CRS and LTS
CRS - Verification for 12th Quarterly Environmental Monitoring and Audit (EM&A) Report
(December 2016 to February 2017) (Report No.: EB001340R00503)**

We refer to the 12th Quarterly EM&A Report (December 2016 to February 2017) received under cover of the email from the Environmental Team, Arcadis Design & Engineering Limited, dated on 28 March 2017.

We have no comment and have verified the captioned report (Report No.: EB001340R00503).

Should you have any queries, please feel free to contact the undersigned at 3922 9366.

Yours faithfully
AECOM Consulting Services Ltd



Y. W. Fung
Independent Environmental Checker

LLMC/wwsc

cc Arcadis Design & Engineering Limited
Maeda Corporation

(Attn.: Mr. F. N. Wong) via email
(Attn.: Ms. Cecilia Lee) via email

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EXECUTIVE SUMMARY

Breaches of Action and Limit Levels

- ES01 No Notice of Exceedance (NOE) and the associated investigation and follow-up actions were required as the environmental monitoring results registered no exceedances of Action/ Limit Levels of air quality and construction noise during the Reporting Period.
- ES02 No major corrective actions were taken as the environmental audit during the Reporting Period observed:
- 1) Two minor findings without environmental significance, one of which was promptly rectified in-situ whereas the other was corrected and verified in the following week;
 - 2) No non-compliance with the required waste management; and
 - 3) No adverse environmental impacts on the sensitive receivers environed with the site of the Project.

Environmental Complaints

- ES03 No environmental complaint was recorded during the Reporting Period.

Notification of Summons & Successful Prosecutions

- ES04 No notification of summons and successful prosecutions were recorded during the Reporting Period.

Reporting Changes

- ES05 No major reporting changes were made during the Reporting Period.

Future Key Issues

General

- ES06 Full implementation of the environmental mitigation measures, which are required in the EM&A Plan and summarized in Implementation Schedule, are recommended. Whenever necessary, proper maintenance and improvement of the implemented mitigation measures are reminded.

Construction Noise

- ES07 Particular attention should be paid to construction noise mitigation measures, especially during piling works during the coming construction period to ensure full compliance with statutory and non-statutory requirements and guidelines. Proactive review of working methods, careful selection and arrangement of the noisy equipment as well as effective noise mitigation measures are strongly recommended.

Water Quality

- ES08 In addition, compliance with water quality mitigation measures remains one of the key environmental issues within the construction period, especially when water usage is high.

Air quality

- ES09 Furthermore, implying of construction dust suppression measures are recommended during dusty activities under dry and windy conditions.
- ES10 Construction dust suppression measures including decking over the excavation areas, watering of exposed site surface and covering of all excavated and stockpiles of dusty material by impervious sheeting or similar materials are reminded.

1 INTRODUCTION

1.1 Project Background

- 1.1.1 In order to improve the appearance of Carnarvon Road Entrance D1 and D2 of Tsim Sha Tsui (hereafter referred as 'TST') Station and to provide a more comfortable walking environment nearby, MTR Corporation Limited (hereafter referred as 'MTRC' or 'the Corporation') has commissioned Maeda Corporation (hereinafter referred as 'MC') the contract **MTR Tsim Sha Tsui Station Carnarvon Road Subway and Entrances Modification Works** (hereafter referred as 'the Project'). The Project is proposed to rebuild the existing Entrance D1 and D2 and construct a new Entrance D3 at the basement B2 level of the K11 Art Mall to connect to the TST station by a subway, which extends from the Entrance D1 and D2 and runs approximately 80m along Carnarvon Road and across the Bristol Avenue to the Entrance D3. The project was commenced in March 2014 and is anticipated to be completed in September 2017.
- 1.1.2 The existing TST Station had been in operation before the Environmental Impact Assessment Ordinance (hereafter referred as 'EIAO') came into effect on 1 April 1998. It constitutes an exempted Designated Project (hereinafter referred as 'DP') according to Section 9(2) (g) of the EIAO (Cap. 499). As the Project involves a material change to an exempted DP which may have potential environmental impacts, an environmental permit is required prior to the commencement of the modification works. The Project Profile has been developed to provide information for direct application of an environmental permit. The EP has been granted since 18 July 2012, where the Project Profile and the associated EM&A Plan are registered.
- 1.1.3 Site map, works area and locations of the environmental monitoring under the Project are illustrated in Figure 1.1 Site Location Plan of **Appendix A**.
- 1.1.4 Management structure of the Project, including organization chart, lines of communication and contact names and telephone numbers of key personnel, is demonstrated in **Appendix B**.
- 1.1.5 Construction programme is shown in **Appendix C**, whereas implementation schedule for the recommended environmental mitigation measures (hereinafter referred as 'the Implementation Schedule') is summarized in **Appendix D**, which fine tunes construction activities and shows inter-relationship with environmental protection / mitigation measures for the construction period.
- 1.1.6 This is the 12th quarterly EM&A report (hereinafter referred as 'This Report') covering construction period from 1st December 2016 to 28th February 2017 (hereinafter referred as 'the Reporting Period').
- 1.1.7 This Report has been written in accordance with the Environmental Monitoring and Audit Plan (hereinafter referred as 'the EM&A Plan') enclosed in the Project Profile – MTR Tsim Sha Tsui Station Carnarvon Road Subway and Entrances Modification Works, which is registered in the Environmental Permit No. EP-440/2012 (hereinafter referred as 'the EP') (Register No.: PP-462/2012).

1.2 Environmental Status

- 1.2.1 As required in the EP, AECOM Consulting Services Limited (formerly known as "URS Hong Kong Limited") has been appointed as the Independent Environmental Checker under the Project (hereinafter referred as 'the IEC'), whereas Arcadis Design & Engineering Limited (hereinafter referred as 'Arcadis') (formerly Hyder Consulting Limited) has been appointed as the Environmental Team under the Project (hereinafter referred as 'the ET').
- 1.2.2 According to the EP Condition 3.2 (a) under Environmental Monitoring and Audit (EM&A) during the Construction Period, baseline monitoring has been completed and the required Baseline Monitoring Report has been submitted to EPD on 14 February 2014 prior to commencement of the works under the Project.
- 1.2.3 Status of relevant environmental permits, licences, and/or notifications on environmental protection for the Project is summarized in **Table 1-3-1**. They are detailed in **Appendix E**.

Table 1-3-1 Summary of Status of Environmental Licenses and Permits

Item	Description	License/Permit Status
1	Air Pollution Control (Construction Dust)	Notification Ref. 403252 dated 02 Jun 2016 has superseded Notification Ref. 365953 acknowledged on 21 Oct 2013.
2	Water Pollution Control Ordinance (Discharge License)	The discharge license Ref No. WT0019722-2014 granted on 01 Sep 2014 has superseded the discharge license Ref No. WT00018229-2014.
3	Billing Account for Disposal of Construction Waste	A/C Ref. 7018523 granted on 25 Oct 2013
4	Chemical Waste Producer Registration	Registration Ref. 5213-2214-M2446-16 granted on 4 Mar 2014
5	Construction Noise Permit	<p>a) CNP No. GW-RE0804-16 approved on 4 August 2016 for operation of 4 submersible water pumps (electric) from 15 August 2016 to 14 February 2017.</p> <p>b) CNP No. GW-RE0064-17 approved on 6 February 2017 for operation of 4 submersible water pumps (electric) from 15 February to 14 August 2017.</p>

1.3 Construction Activities

1.3.1 Construction activities undertaken during the Reporting Period are summarized in **Table 1-4-1**:

Table 1-4-1 Construction Activities Undertaken during the Reporting Period

Item	Description
<i>Construction Activities Undertaken during the Reporting Period</i>	
1	Demolition the existing subway
2	Excavation of the mined tunnel
3	Installation of strut and waling for C&C tunnel
4	Portal frame and steel rib installation for the mined tunnel
5	Erection framework for vertical blinding
6	Construction of vertical blinding
7	Excavation of C&C tunnel

2 EM&A REQUIREMENTS

2.1 Air Quality

2.1.1 Monitoring of 24-Hour Total Suspended Particulates (hereinafter referred as '24-Hr TSP') is required to be conducted on a weekly basis during construction period of the Project.

2.1.2 Monitoring of 1-Hour Total Suspended Particulates (hereinafter referred as '1-Hr TSP') is required to be conducted on a weekly basis when exceedances of 24-Hr TSP were recorded, following the Event and Action Plan presented in **Appendix F**.

Action and Limit Levels

2.1.3 The Action and Limit levels (hereinafter referred as 'the A/L Levels) at K11 have been established in the Baseline Monitoring Report in accordance with the derivation criteria specified in Section 3.7 of the EM&A Plan, which are summarized in **Table 2-1-1** as follows:

Table 2-1-1 Derivation of Action and Limit Levels for Air Quality at K11, $\mu\text{g}/\text{m}^3$

Parameter	Action Level	Limit Level
24-Hr TSP	For baseline level $\leq 200 \mu\text{g}/\text{m}^3$, Action level = (130% of baseline level + Limit level)/2 For baseline level $> 200 \mu\text{g}/\text{m}^3$, Action level = Limit level	260
1-Hr TSP	For baseline level $\leq 384 \mu\text{g}/\text{m}^3$, Action level = (130% of baseline level + Limit level)/2 For baseline level $> 384 \mu\text{g}/\text{m}^3$, Action level = Limit level	500

2.1.4 The established A/L Levels for 24-Hr and 1-Hr TSP are summarized in Table 2-1-2 as follows:

Table 2-1-2 Action & Limit Levels for Air Quality at K11, $\mu\text{g}/\text{m}^3$

Parameter	Action Level	Limit Level
24-Hr TSP	222	260
1-Hr TSP	373	500

Event and Action Plan

2.1.5 In case exceedances of Action and/or Limit levels for air quality occur, Event and Action Plan for Air Quality enclosed in Appendix F will be implemented.

Environmental Mitigation Measures for Air Quality

2.1.6 Although most of the construction works would be carried out underground, appropriate dust mitigation measures as stipulated in the EP, Project Profile, related environmental regulation including Air Pollution Control (Construction Dust) Regulation as well as those recommended in the Implementation Schedule should be implemented to control fugitive dust emission. The following key dust suppression measures are recommended:

- a) Decking over the excavation areas;
- b) Regular watering to reduce dust emissions from all exposed site surface, particularly during dry weather;
- c) Frequent watering for particularly dusty construction areas and areas close to air sensitive receivers;
- d) Cover all excavated or stockpiles of dusty material by impervious sheeting or spraying with water to maintain the entire surface wet;
- e) Provision of vehicle washing facilities at the exit points of the site; and

2.1.7 Provision of tarpaulin covering for any dusty materials on a vehicle leaving the site. Details of the implementation schedule for the required environmental mitigation measures are presented in **Appendix D**.

2.2 Construction Noise

Monitoring Parameters and Frequency

2.2.1 **Table 2-2-1** summarizes the monitoring parameters and frequency for construction noise.

Table 2-2-1 Noise Monitoring Parameters and Frequency

<u>Parameters</u>	<u>Frequency</u>
Leq in 30 minutes	Once a week

Action and Limit Levels

2.2.2 The Action and Limit levels (hereinafter referred as 'the A/L Levels) at K11 have been established in the Baseline Monitoring Report. They are summarized in Table 2-2-2 as follows:

Table 2-2-2 Action and Limit Levels for Construction Noise

<u>Time Period</u>	<u>Action Level</u>	<u>Limit Level</u>
0700-1900 hours on normal weekdays	When one valid documented complaint is received.	75

Event and Action Plan

2.2.3 In case exceedances of Action and/or Limit levels for construction noise occur, the Event and Action Plan enclosed in **Appendix F** will be implemented.

Mitigation Measures for Construction Noise

2.2.4 Although no residual noise impact would be generated after the proposed mitigation measures are in place, the general construction noise control measures stipulated in the EP, Project Profile as well as those recommended in the Implementation Schedule should be fully implemented in order to minimize noise impacts during the construction phase. They are summarized as follows:

- a) The Code of Practice on Good Management Practice to Prevent Violation of the Noise Control Ordinance (Chapter 400) (for Construction Industry) published by EPD shall be adopted;
- b) The statutory and non-statutory requirements and guidelines shall be complied with;
- c) Approval for the method of working, equipment and noise mitigation measures intended to be used at the site shall be granted from the Project Engineer before commencing any work;
- d) Working methods to minimize the noise impact on the surrounding NSRs shall be formulated and executed, and the implementation of these methods shall be monitored by experienced personnel with suitable training;
- e) Noisy equipment and noisy activities shall be located as far away from the NSRs as is practical;
- f) Unused equipment shall be turned off;
- g) PME should be kept to a minimum and the parallel use of noisy equipment / machinery should be avoided;

- h) All plant and equipment shall be maintained regularly; and
- i) Material stockpiles and other structures shall be effectively utilized as noise barriers, whenever practicable.

2.2.5 Details of the implementation schedule for the mitigation measures are presented in **Appendix D**.

2.3 Monitoring Schedules

2.3.1 Monitoring schedules for 24-Hr TSP and construction noise for the Reporting Period and the next Reporting Period are prepared and submitted to MTRC, IEC and MC prior to implementation via e-mail and/ or facsimile for ease of necessary inspection. Where amendment is necessary under ad hoc conditions, including actual and broadcast adverse weather, accidental instrument failures, etc., advanced notification is given at least 24 hours prior to implementation or as practical as possible.

3 MONITORING RESULTS

3.1 Air Quality

Monitoring Results

- 3.1.1 24-Hr TSP monitoring during the Reporting Period was conducted following the agreed monitoring schedule.
- 3.1.2 24-Hr TSP results of the Reporting Period are summarized in the following **Table 3-1-1**. Graphical plots of the parameter are illustrated in **Appendix H**.

Table 3-1-1 Summary of 24-Hr TSP Monitoring Results, $\mu\text{g}/\text{m}^3$

Monitoring Date	24-Hr TSP	A/L Levels	
05-Dec-16	82.7		
12-Dec-16	63.0		
19-Dec-16	74.7		
28-Dec-16	75.0		
03-Jan-16	42.4		
09-Jan-16	67.2	Action Level: 222	Limit Level: 260
16-Jan-16	55.7		
23-Jan-16	76.6		
03-Feb-17	53.7		
06-Feb-17	89.3		
13-Feb-17	60.6		
20-Feb-17	64.7		
Mean (Min – Max)			
	67.1 (42.4 – 89.3)		

Discussion

- 3.1.3 **Table 3-1-1** demonstrates that all 24-Hr TSP results of the Reporting Period were fluctuated below the A/L Level, there were no Action Level or Limit Level exceedances recorded during the Reporting Period.
- 3.1.4 No Notice of Exceedances (thereinafter referred as 'NOE') and the associated NOE Investigation and remedial actions were required during the Reporting Period.

3.2 Construction Noise

Monitoring Results

- 3.2.1 Construction noise monitoring during the Reporting Period was conducted following the agreed monitoring schedule.
- 3.2.2 Construction noise monitoring results of the Reporting Period are summarized in the following **Table 3-2-1**. Graphical plots of the parameter are illustrated in **Appendix H**.
- 3.2.3 Weather condition, including wind speeds and directions, during the monitoring period are recorded and shown in **Appendix G**.

Table 3-2-1 Summary of Construction Noise Monitoring Results at K11, dB(A)

Monitoring Date	Leq (30 min)	A/L Levels
06-Dec-16	69.6	Action Level: Any documented complaint against construction noise.
13-Dec-16	69.6	
20-Dec-16	70.1	
28-Dec-16	68.1	
03-Jan-16	67.8	Limit Level: 75 dB(A)
10-Jan-16	68.1	
19-Jan-16	69.7	
24-Jan-16	69.4	
03-Feb-17	71.2	
07-Feb-17	69.3	
14-Feb-17	68.7	
21-Feb-17	70.8	
Mean (Min – Max)	69.5 (67.8 – 71.2)	

Discussion

- 3.2.4 No environmental complaint against construction noise was registered during the Reporting Period, whereas **Table 3-2-1** demonstrates that all construction noise results of the Reporting Period fell below the Limit Level of the parameter.
- 3.2.5 Neither NOE nor NOE investigation and the associated remedial actions were required during the Reporting Period.
- 3.2.6 The Contractor was reminded to pay extra attention to noisy construction activities within the Reporting Month and the coming month. The ET will liaise closely with the Contractor on any unusual level of noise recorded in the upcoming month.
- 3.2.7 It is re-instated that adequate mitigation measures should be implemented during the noisy construction activities in order to alleviate noise nuisance generated from the Project related construction activities.

Weather Conditions

- 3.2.8 No weather conditions and any other factors were identified to have significant effects on the monitoring results of air quality and construction noise during the Reporting Period.
- 3.2.9 Weather information during the Reporting Period which is extracted from Hong Kong Observatory King's Park Weather Station is enclosed for reference in Appendix G.

3.3 Conclusions and Recommendations

Conclusions

- 3.3.1 No exceedances of A/L Levels of air quality and no exceedances of Action Level of construction noise were registered during the Reporting Period.
- 3.3.2 No air quality related complaint was recorded during the Reporting Period.

Recommendations

- 3.3.3 Full implementation of the environmental mitigation measures, which are required in the EM&A Plan and summarized in Implementation Schedule of Appendix D, is recommended. Where necessary, proper maintenance and improvement of the implemented mitigation measures are reminded.
- 3.3.4 Construction dust shall be suppressed during dusty construction activities under dry and windy conditions.
- 3.3.5 Construction noise shall be eliminated to avoid adverse impacts on the nearby sensitive receivers.

4 ENVIRONMENTAL AUDIT

4.1 Site Inspection

- 4.1.1 Weekly site inspections during the Reporting Period are conducted by MTRC, MC and ET, whereas monthly site inspections of the Reporting Period were jointly conducted by the IEC, MTRC, MC and ET. The site inspection follows strictly the agreed Site Inspection Checklist, which covers all the site audit requirements stipulated in the EM&A Plan, PS and all relevant environmental laws.
- 4.1.2 The completed Site Inspection Checklists are distributed to all relevant parties upon completion of the site inspection for agreement and signature of the relevant parties and, where appropriate, for implementation of the recommended corrected actions to promptly rectify the situation.
- 4.1.3 There were 13 site inspections conducted within the Reporting Period. Deficiencies or findings of the site audits and the associated follow up actions are summarized in **Table 4-1-1**:
- 4.1.4 As shown in **Table 4-1-1**, no deficiencies or non-compliance of environmental mitigation measures or adverse environmental impacts were observed during the Reporting Period.

Table 4-1-1 Summary of Findings and Follow-Up Actions of the Site Inspection

Date	Deficiencies or findings	Follow-Up Action
06-December-2016	Follow-up item(s)	
	No follow-up item.	Not required.
	Observation(s) on the day of inspection	
	No deficiency was observed on site.	Not required.
13- December-2016	Follow-up item(s)	
	No follow-up item.	Not required.
	Observation(s) on the day of inspection	
	No deficiency was observed on site.	Not required.
20- December-2016	Follow-up item(s)	
	No follow-up item.	Not required.
	Observation(s) on the day of inspection	
	No deficiency was observed on site.	Not required.
28- December-2016	Follow-up item(s)	
	No follow-up item.	Not required.
	Observation(s) on the day of inspection	
	No deficiency was observed on site.	Not required.
03-January-2017	Follow-up item(s)	
	No follow-up item.	Not required.
	Observation(s) on the day of inspection	
	No deficiency was observed on site.	Not required.
10-January-2017	Follow-up item(s)	
	No follow-up item.	Not required.
	Observation(s) on the day of inspection	
	No deficiency was observed on site.	Not required.
17-January-2017	Follow-up item(s)	
	No follow-up item.	Not required.
	Observation(s) on the day of inspection	
	No deficiency was observed on site.	Not required.

Table 4-1-1 (Continued)

26-January-2017	Follow-up item(s)	
	No follow-up item.	Not required.
	Observation(s) on the day of inspection	
	No deficiency was observed on site.	Not required.
03-February-2017	Follow-up item(s)	
	No follow-up item.	Not required.
	Observation(s) on the day of inspection	
	Containers of chemical were observed on site without proper spillage control measures.	The Contractor was reminded to provide proper spillage control measures for all chemical storage on site.
	Batteries disposal was not stored in the appropriate area. The Contractor was reminded to be disposed or recycled the batteries and wastes should be sorted properly.	Not required as the case was closed after immediate sorting of the batteries in appropriate storage area.
07-February-2017	Follow-up item(s)	
	The containers of chemicals were properly stored on site surrounded with sandbag and protected from direct sunlight by canvas.	Not required.
	Observation(s) on the day of inspection	
	No deficiency was observed on site.	Not required.
14-February-2017	Follow-up item(s)	
	No follow-up item.	Not required.
	Observation(s) on the day of inspection	
	No deficiency was observed on site.	Not required.
21-February-2017	Follow-up item(s)	
	No follow-up item.	Not required.
	Observation(s) on the day of inspection	
	No deficiency was observed on site.	Not required.
28-February-2017	Follow-up item(s)	
	No follow-up item.	Not required.
	Observation(s) on the day of inspection	
	No deficiency was observed on site.	Not required.

4.2 Compliance with Legal/ Contractual Requirements

4.2.1 Construction activities under the Project must comply with all environmental protection and pollution control laws in Hong Kong, as well as the contractual requirements of the Project. **Table 4-2-1** summarizes breaches of legal and contractual requirements.

Table 4-2-1 Summary of Breaches of Legal and Contractual Requirements

Month	No. of Breaches	Cumulative no. of Breaches
Dec 2016	0	0
Jan 2017	0	0
Feb2017	0	0

4.3 Environmental Complaints

- 4.3.1 Environmental complaints are handled following closely the flow chart of complaint response procedure which is enclosed in **Appendix I**.
- 4.3.2 No complaint was received during the Reporting Period.
- 4.3.3 Environmental complaints registered during the Reporting Period and cumulative statistics of environmental complaints are summarized in **Table 4-3-1** below:

Table 4-3-1 Summary of Complaint

Month	No. of Complaint	<i>Cumulative no. from March 2014 to the Reporting Period</i>
Dec 2016	0	5
Jan 2017	0	5
Feb2017	0	5

4.4 Notification of Summons/Successful Prosecutions

- 4.4.1 Notification of summons and successful prosecutions registered during the Reporting Period are summarized in **Table 4-4-1** below:

Table 4-4-1 Summary of Summon and Successful Prosecutions

Month	Number of Issue	<i>Cumulative no. from March 2014 to the Reporting Period</i>
Dec 2016	0	0
Jan 2017	0	0
Feb2017	0	0

5 WASTE MANAGEMENT

5.1 Waste Management

- 5.1.1 Despite small scale of the Project and the amount of C&D material that needs to be hauled off site and disposed of is anticipated not to be significant, 3-R waste management i.e. Reduce, Reuse and Recycle, is adopted in order to minimize adverse environmental impacts to be generated from construction of the Project.
- 5.1.2 Waste management under the Project is performed in accordance with the Waste Management Plan, which has been prepared for implementation of the construction waste mitigation measures in compliance with the requirements stipulated in the EM&A Plan, PS, Waste Disposal Ordinance and the associated subsidiary regulations.

5.2 Waste Management Record

- 5.2.1 Updated waste management status is detailed in **Appendix J**, where the 3-R status of the construction waste generated from construction of the Project during the Reporting Period is presented.

6 FUTURE ENVIRONMENTAL ISSUES

6.1 Key Environmental Issues

- 6.1.1 Future key environmental issues include:
- 1) Air quality in particular construction dust during dusty construction activities on site, e.g. demolition of the Entrance D2 and excavation works, under dry and windy conditions;
 - 2) Construction noise during noisy activities; and
 - 3) Site surface water run-off and construction wastewater discharge.

6.2 Mitigation Measures

- 6.2.1 To avoid potential adverse environmental impacts of the future key environmental issues stated above, full implementation of the mitigation measures as stipulated in the Implementation Schedule shown in **Appendix D** is required.
- 6.2.2 Mitigation measures for air quality, construction noise and water quality implemented to date shall be properly maintained.
- 6.2.3 Where appropriate, improvement of the implemented mitigation measures is reminded to ensure effectiveness of the mitigation measures.

7 COMMENTS AND RECOMMENDATIONS

7.1 Conclusion

- 7.1.1 Neither NOE & the associated NOE investigation nor follow-up actions were required as the environmental monitoring results registered no exceedances of A/L Levels of air quality and construction noise during the Reporting Period.
- 7.1.2 In addition, no remedial actions were required as no notification of summons and successful prosecutions were reported during the Reporting Period.
- 7.1.3 No major corrective actions were taken as the environmental audit during the Reporting Period observed:
- 1) Two minor findings without environmental significance, one of which was promptly rectified in-situ whereas the other was corrected and verified in the following week;
 - 2) No non-compliance with the required waste management; and
 - 3) No adverse environmental impacts on the sensitive receivers environed with the site of the Project.

7.2 Recommendations

- 7.2.1 Full implementation of the environmental mitigation measures stipulated in the EM&A Plan and summarized in **Implementation Schedule** of **Appendix D**, are recommended. Where necessary, proper maintenance and improvement of the implemented mitigation measures are reminded.
- 7.2.2 As noisy construction activities such as piling works were being conducted during the Reporting Period, adequate mitigation measures should be implemented in order to alleviate noise nuisance.
- 7.2.3 In addition, suppression of construction dust is required during dusty construction activities, especially under the upcoming dry season.
- 7.2.4 Furthermore, monitoring of site water runoff is reminded to prevent any direct water discharge off site, especially when water usage is high during the construction period. When necessary, the Contractor is reminded to apply additional precautionary measures to prevent any possible environmental deficiency.

APPENDIX A

SITE LOCATION PLAN

APPENDIX B

MANAGEMENT STRUCTURE

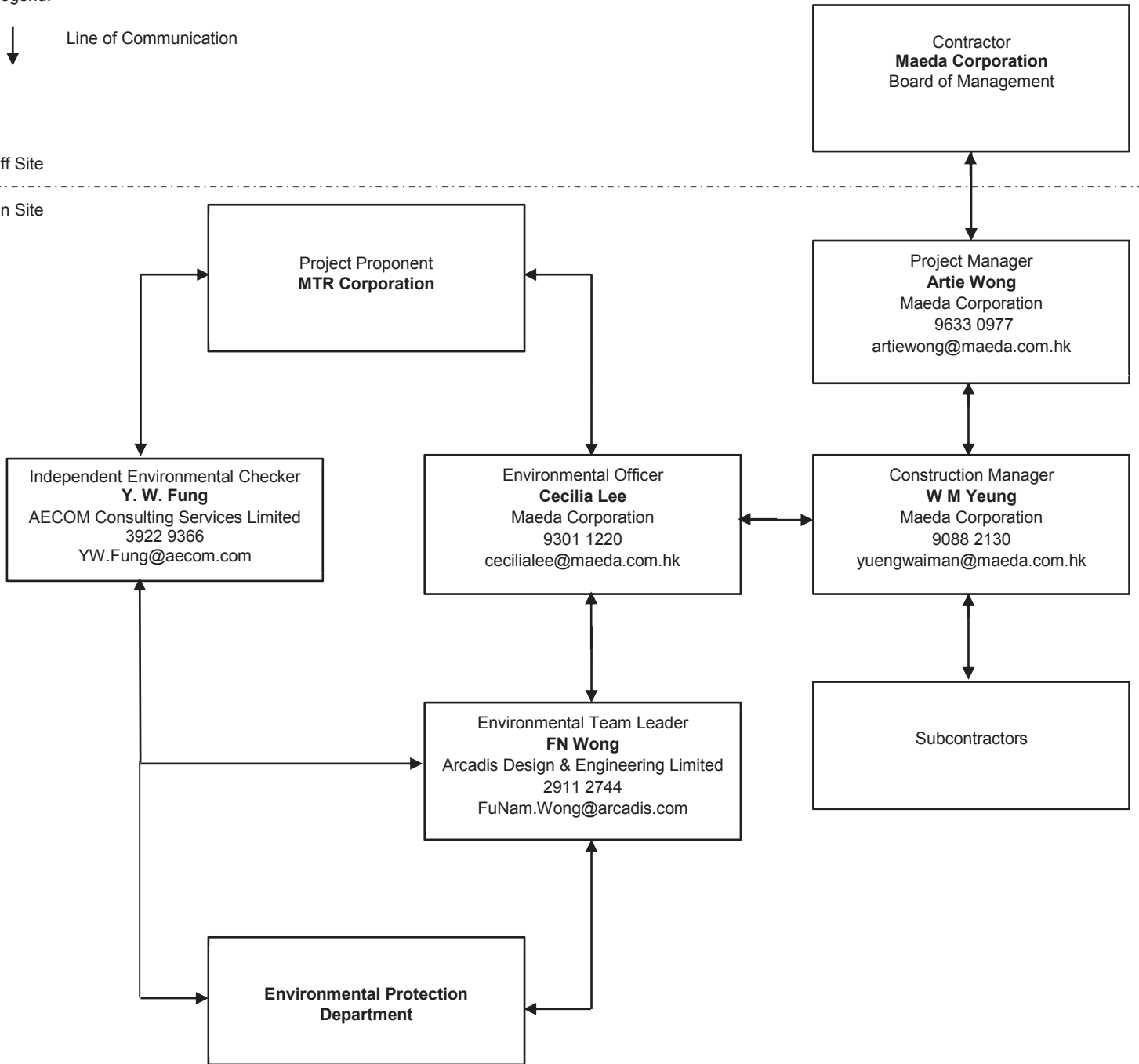
Project Organization Chart in Environmental Management (Rev.04)

Legend:

↓ Line of Communication

Off Site

On Site



Note: In Compliance with

i) Clause.1.3 of Environmental Monitoring and Audit Manual (Appendix VII of Project Profile PP462/2012)

APPENDIX C

CONSTRUCTION PROGRAMME



CONTRACT C3840-13C Tsim Sha Tsui Station, Carnarvon Road Subway



Activity ID	Activity Name	Orig Dur	2016												Total Float
			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Preliminary Master Programme Revision 2															
Preliminaries															
Contract Key Dates															
C3840-CD-20	Date of Commencement	82d	14-Oct-13	31-Jun-16											0d
C3840-CD-20	Date of Completion	82d	14-Oct-13	31-Jun-16											0d
C3840-CD-20	Date of Commencement	0d	14-Oct-13	14-Oct-13											0d
C3840-CD-20	Date of Completion	0d	14-Oct-13	14-Oct-13											0d
C3840-CD-2A	Complete to Dep. 1 status for all civil engineering works and ABWF in Subway outside K11 Lot Boundary (31-Jul-16)	0d	31-Jul-16	31-Jun-16											0d
C3840-AD-20	Access Date for Works Area 3840.W1 (subject to SLG/TMLG Approval)	0d	31-Oct-13	31-Oct-13											0d
C3840-SS-20	Validate the survey record and carry out any necessary additional survey at Works Area 3840.W1 & W2	35d	31-Oct-13	10-Dec-13											0d
C3840-SS-20	Validate the survey record and carry out any necessary additional survey at Works Area 3840.W1 & W2	35d	31-Oct-13	10-Dec-13											0d
Temporary Works Design & Approval Process (incl. Demolition)															
Temporary Traffic Management Scheme (TTM)															
C3840-TTM-100	Appoint Traffic Consultant	0d	16-Oct-13	30-Oct-13											0d
C3840-TTM-110	Prepare & submit review by Eng Outline TTM Schemes as per PS P20.4	6d	17-Oct-13	23-Oct-13											0d
C3840-TTM-120	Eng review Outline TTM Schemes	4d	24-Oct-13	28-Oct-13											0d
C3840-TTM-130	Prepare Detailed TTM	5d	24-Oct-13	29-Oct-13											0d
C3840-TTM-140	Discuss and agree in principle at TMLG Meeting	1d	30-Oct-13	30-Oct-13											0d
Carnarvon Road Subway and Entrances															
Open Cut Sequence 1 (Advance Ground Works & Piling Works)															
Advance Ground Works															
C3840-AGW-020	Trial Pit/bench excavation	69d	14-Nov-13	08-Feb-14											0d
C3840-AGW-040	Pre-drilling works	24d	27-Dec-13	24-Jan-14											0d
Piles & Grouting for Vertical Shaft															
C3840-EVS-010	Mobilization for Piling Rig and Setup	4d	27-Feb-14	03-Mar-14											0d
C3840-EVS-020	52 nos. pile piles with 1m. to 2.2m. minimum rock socket	35d	04-Mar-14	14-Apr-14											0d
C3840-EVS-030	Grouting for Vertical Shaft Bulk Head	18d	17-Mar-14	07-Apr-14											8d
C3840-EVS-040	Curtain Grouting vertical shaft	18d	08-Apr-14	02-May-14											8d
Tunnel (Vertical Shaft Excavation)															
C3840-SH-100	Pump Test	24d	03-May-14	31-Jun-14											8d
C3840-SH-110	Excavation for 1st layer 140m3 5m/3/day	3d	03-Jun-14	05-Jun-14											8d
C3840-SH-120	Install 1st walig, strut & lagging wall	4d	06-Jun-14	10-Jun-14											8d
C3840-SH-130	Shotcrete 1st layer	2d	11-Jun-14	12-Jun-14											8d

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◆ Milestone

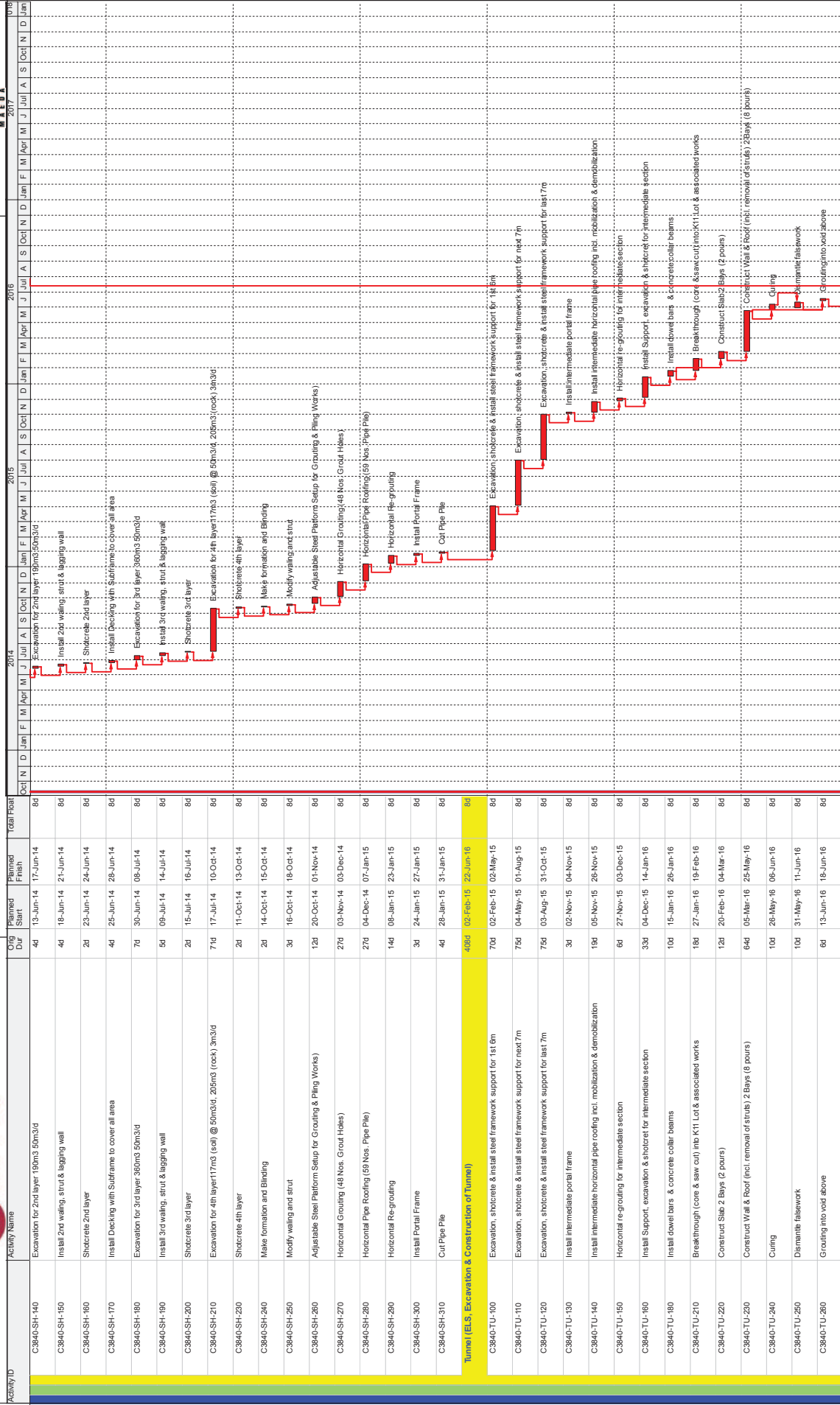
◆ Actual Work

◆ Remaining Work

◆ Critical Remaining Work



CONTRACT C3840-13C Tsim Sha Tsui Station, Carnarvon Road Subway



■ Actual Work
■ Remaining Work
■ Critical Remaining Work

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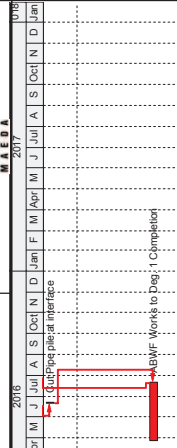




CONTRACT C3840-13C Tsim Sha Tsui Station, Carnarvon Road Subway



Activity ID	Activity Name	Orig Dur	Planned Start	Planned Finish	Total Float
C3840-TU-270	Cut Pipe pile at Interface	3d	20-Jun-16	22-Jun-16	8d
Building Services & ABWF Works					
BS & ABWF Works at Subway Conc. Level (incl Plant Room & DR)		70d	27-Apr-16	21-Jun-16	8d
C3840-BSS-120	ABWF Works to Deg. 1 Completion	70d	27-Apr-16	21-Jun-16	8d



- Actual Work
- Remaining Work
- Critical Remaining Work
- Milestone

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CONTRACT C3840-13C Tsim Sha Tsui Station, Carnarvon Road Subway



Activity ID	Activity Name	Orig Dur	Planned Start	Planned Finish	Total Float
Preliminary Master Programme Revision 2					
Preliminaries					
Contract Key Dates					
C3840-CD-10	Date of Contract Award	89d	11-Oct-13	23-Oct-18	0d
C3840-CD-20	Date of Commencement	89d	11-Oct-13	23-Oct-18	0d
C3840-CD-2C	Complete energisation of the power isolator in the Telephone Equipment Rm (23 Oct 16)	3d	11-Oct-13	14-Oct-13	0d
C3840-AD-20	Access date for Works Area 3840.W1 (subject to SLG/TMLG Approval)	0d	11-Oct-13	11-Oct-13	0d
C3840-SS-20	Validate the survey record and carry out any necessary additional survey at Works Areas 3840.W1 & W2	35d	31-Oct-13	16-Dec-13	0d
C3840-PPC-140	Temporary Traffic Diversion (Consultant)	4d	11-Oct-13	16-Oct-13	0d
C3840-TTM-100	Appoint Traffic Consultant	0d	16-Oct-13	16-Oct-13	0d
C3840-TTM-110	Prepare & submit review by Eng Outline TTM Schemes as per PS P20.4	6d	17-Oct-13	23-Oct-13	0d
C3840-TTM-120	Eng review Outline TTM Schemes	4d	24-Oct-13	28-Oct-13	0d
C3840-TTM-130	Prepare Detailed TTMS	5d	24-Oct-13	29-Oct-13	0d
C3840-TTM-140	Discussion and agree in principle at TMLG Meeting	1d	30-Oct-13	30-Oct-13	0d
Carnarvon Road Subway and Entrances					
C3840-LTD-260	Diversion of Gasmain as necessary	57d	10-Feb-14	17-Apr-14	0d
C3840-AGW-020	Trial Pit/Trench excavation	69d	14-Nov-13	18-May-14	0d
C3840-EVS-010	Mobilization for Piling Rig and Setup	35d	04-Mar-14	14-Apr-14	0d
C3840-EVS-020	52 nos. pipe piles with 1m. to 2.2m. minimum rock socket	53d	15-Apr-14	28-Jun-14	0d
C3840-ETS-020	70 nos. pipe piles along Grid Line A with 1m. to 3.1m minimum rock socket	47d	15-Apr-14	14-Jun-14	0d

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Actual Work

Remaining Work

Critical Remaining Work

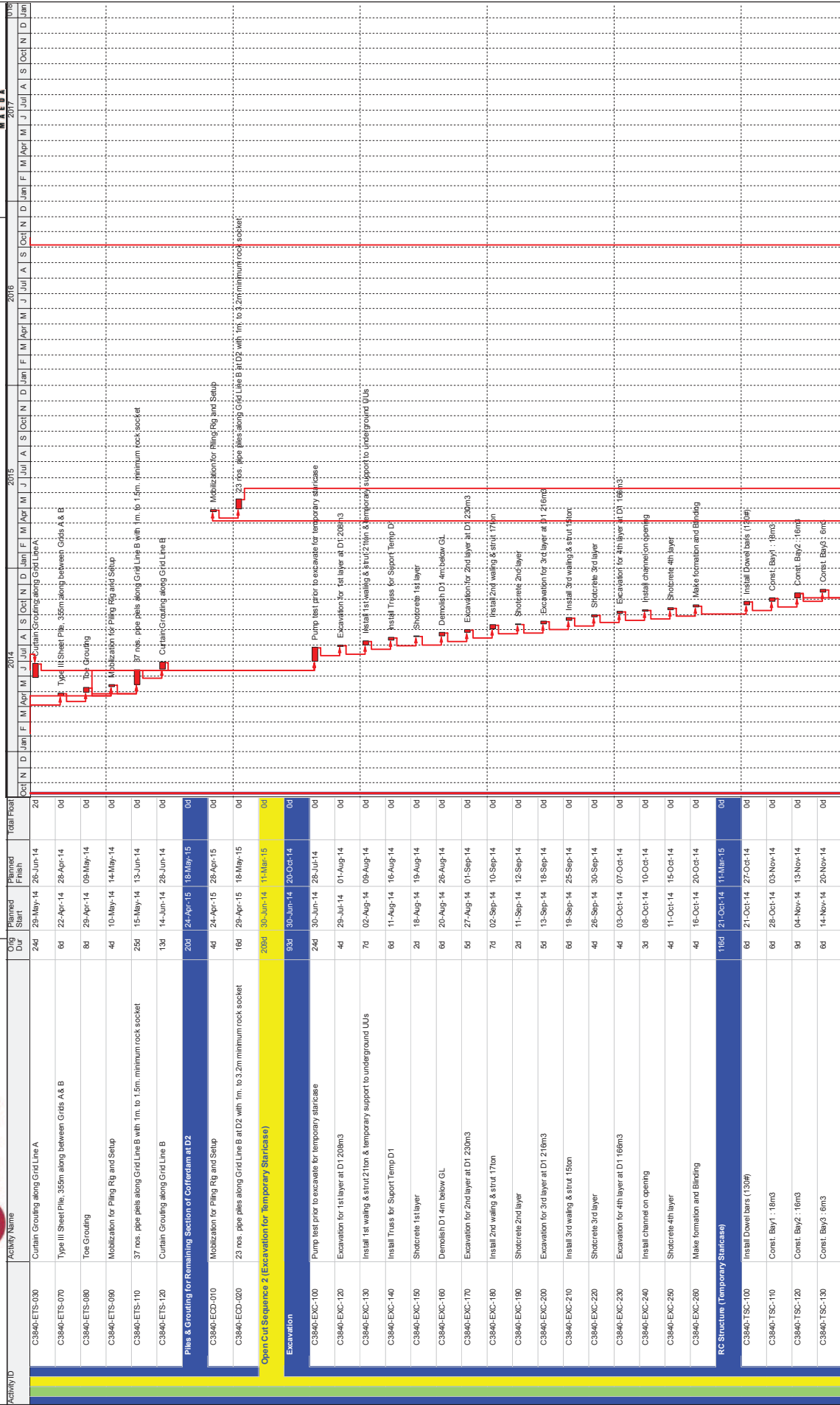
◆ Milestone

Legend:

- █ Actual Work
- █ Remaining Work
- █ Critical Remaining Work
- ◆ Milestone



CONTRACT C3940-13C Tsim Sha Tsui Station, Carnarvon Road Subway



Actual Work
 Remaining Work
 Critical Remaining Work

◆ Milestone

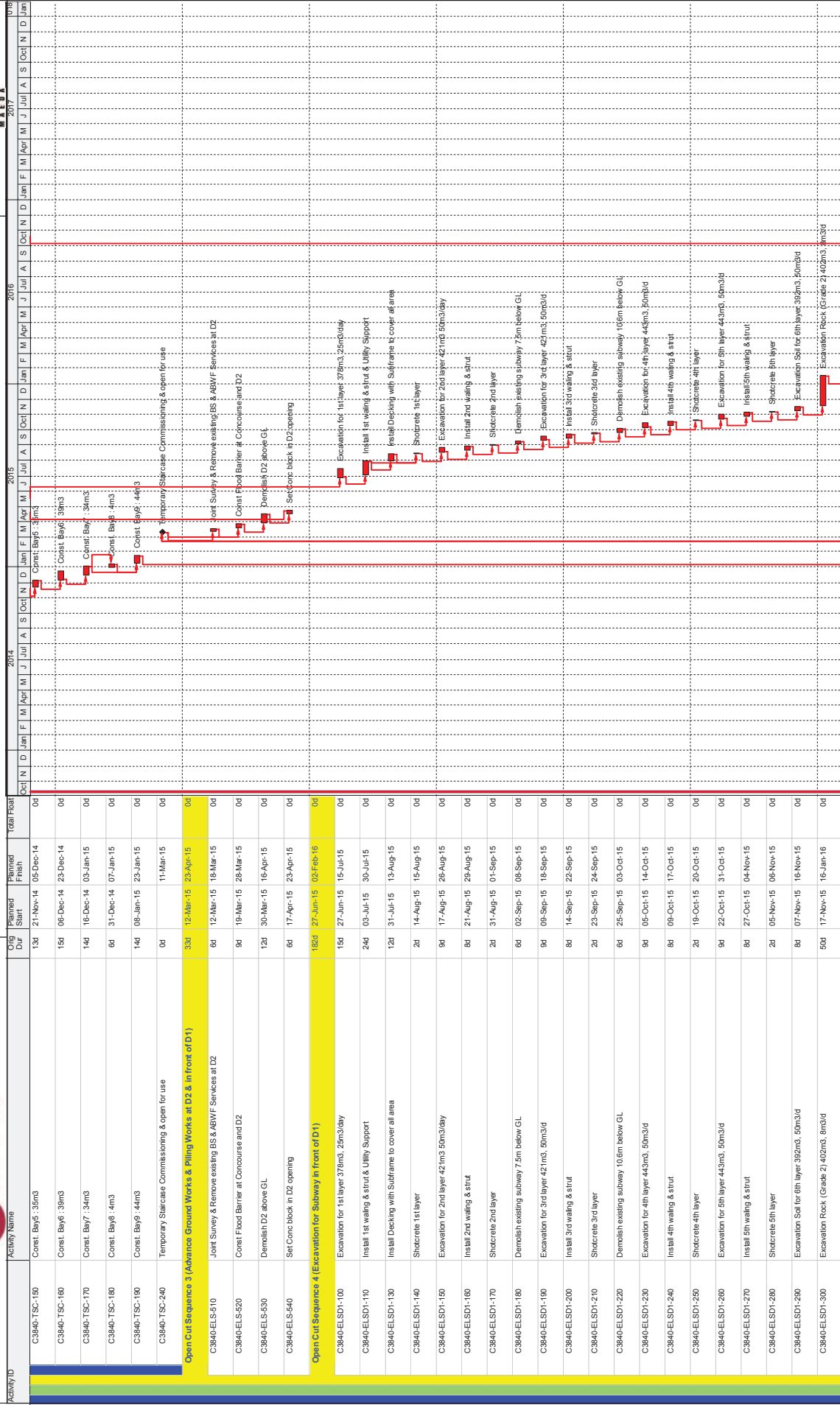
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CONTRACT C3840-13C Tsim Sha Tsui Station, Carnarvon Road Subway



Activity ID	Activity Name	Orig Dur	Planned Start	Planned Finish	Total Float
C3840-TSC-150	Const. Bay5: 3m3	13d	21-Nov-14	05-Dec-14	0d
C3840-TSC-160	Const. Bay6: 3m3	15d	06-Dec-14	23-Dec-14	0d
C3840-TSC-170	Const. Bay7: 3m3	14d	16-Dec-14	03-Jan-15	0d
C3840-TSC-180	Const. Bay8: 4m3	6d	31-Dec-14	07-Jan-15	0d
C3840-TSC-190	Const. Bay9: 4m3	14d	06-Jan-15	23-Jan-15	0d
C3840-TSC-240	Temporary Staircase Commissioning & open for use	0d	11-Mar-15	11-Mar-15	0d
Open Cut Sequence 3 (Advance Ground Works & Piling Works at D2 & in front of D1)					
C3840-EELS-210	Joint Survey & Remove existing BS & ABWF Services at D2	6d	12-Mar-15	23-Apr-15	0d
C3840-EELS-220	Const Flood Barrier at Concourse and D2	9d	12-Mar-15	18-Mar-15	0d
C3840-EELS-230	Demolish D2 above GL	12d	30-Mar-15	16-Apr-15	0d
C3840-EELS-240	Set Conc block in D2 opening	6d	17-Apr-15	23-Apr-15	0d
Open Cut Sequence 4 (Excavation for Subway in front of D1)					
C3840-EELS-1-100	Excavation for 1st layer 37m3, 25m3/day	15d	27-Jun-15	02-Feb-16	0d
C3840-EELS-1-110	Install 1st walling & strut & Utility Support	24d	03-Jul-15	30-Jul-15	0d
C3840-EELS-1-120	Install Decking with Subframe to cover all area	12d	31-Jul-15	13-Aug-15	0d
C3840-EELS-1-140	Shotcrete 1st layer	2d	14-Aug-15	15-Aug-15	0d
C3840-EELS-1-150	Excavation for 2nd layer 42m3, 50m3/day	9d	17-Aug-15	26-Aug-15	0d
C3840-EELS-1-160	Install 2nd walling & strut	8d	21-Aug-15	29-Aug-15	0d
C3840-EELS-1-170	Shotcrete 2nd layer	2d	31-Aug-15	01-Sep-15	0d
C3840-EELS-1-180	Demolish existing subway 7.5m below GL	6d	02-Sep-15	08-Sep-15	0d
C3840-EELS-1-190	Excavation for 3rd layer 42m3, 50m3/day	9d	09-Sep-15	18-Sep-15	0d
C3840-EELS-1-200	Install 3rd walling & strut	8d	14-Sep-15	22-Sep-15	0d
C3840-EELS-1-210	Shotcrete 3rd layer	2d	23-Sep-15	24-Sep-15	0d
C3840-EELS-1-220	Demolish existing subway 10.5m below GL	6d	25-Sep-15	03-Oct-15	0d
C3840-EELS-1-230	Excavation for 4th layer 44m3, 50m3/day	9d	05-Oct-15	14-Oct-15	0d
C3840-EELS-1-240	Install 4th walling & strut	8d	09-Oct-15	17-Oct-15	0d
C3840-EELS-1-250	Shotcrete 4th layer	2d	19-Oct-15	20-Oct-15	0d
C3840-EELS-1-260	Excavation for 5th layer 44m3, 50m3/day	9d	22-Oct-15	31-Oct-15	0d
C3840-EELS-1-270	Install 5th walling & strut	8d	27-Oct-15	04-Nov-15	0d
C3840-EELS-1-280	Shotcrete 5th layer	2d	05-Nov-15	06-Nov-15	0d
C3840-EELS-1-290	Excavation Soil for 6th layer 392m3, 50m3/day	8d	07-Nov-15	16-Nov-15	0d
C3840-EELS-1-300	Excavation Rock (Grade 2) 402m3, 5m3/day	50d	17-Nov-15	16-Jan-16	0d

■ Actual Work
■ Remaining Work
■ Critical Remaining Work

◆ Milestone

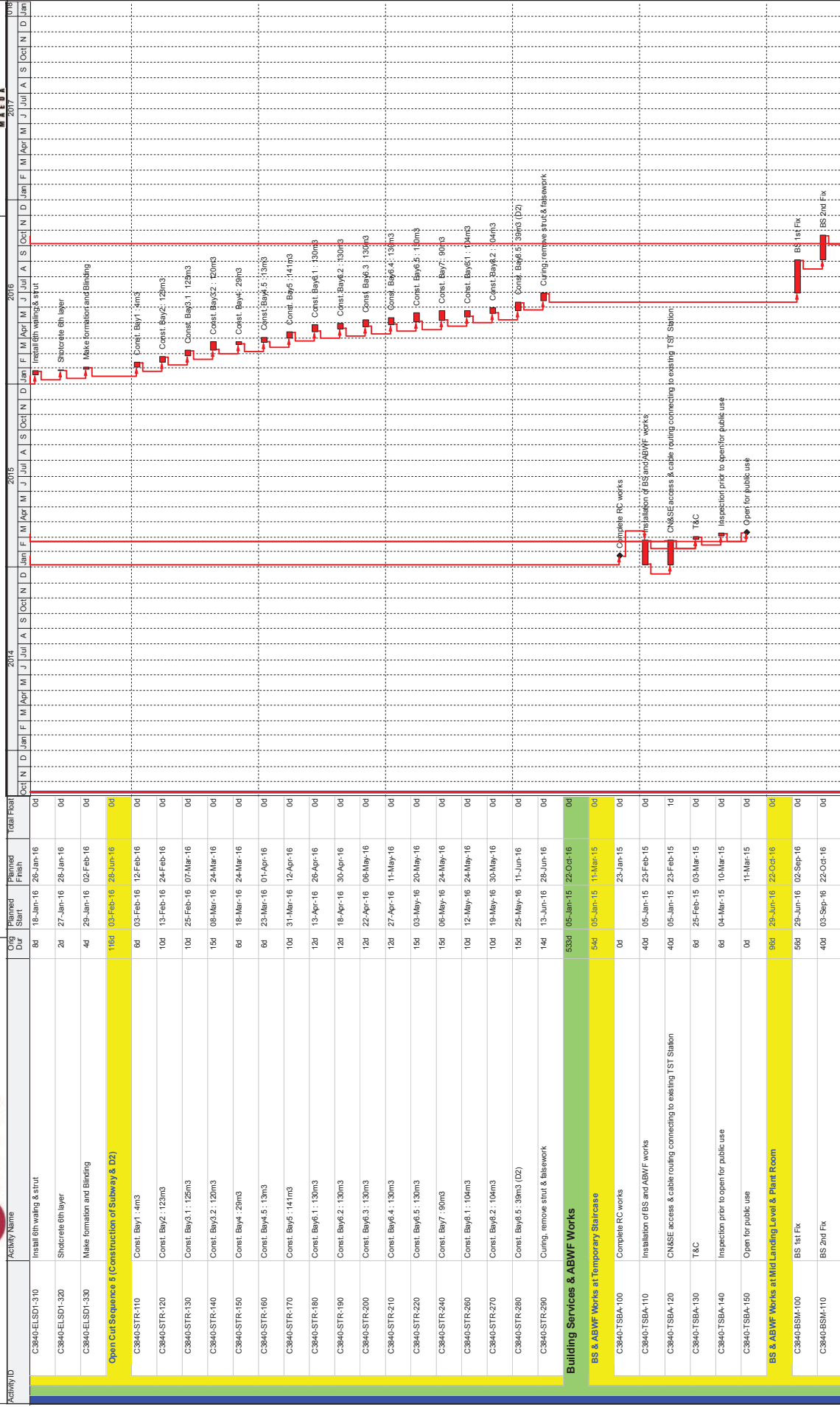
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CONTRACT C3840-13C Tsim Sha Tsui Station, Carnarvon Road Subway



■ Actual Work
■ Remaining Work
■ Critical Remaining Work

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Maeda/P/MP/2



CONTRACT C3840-13C Tsim Sha Tsui Station, Carnarvon Road Subway



Activity ID	C3840-BSM-120	Activity Name	Complete all BS works in TER	Orig Dur	0d	Planned Start	22-Oct-16	Planned Finish	22-Oct-16	Total Float	0d
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2014												2015												2016												2017											
Oct	N	D	Jan	F	M	Apr	M	J	Jul	A	S	Oct	N	D	Jan	F	M	Apr	M	J	Jul	A	S	Oct	N	D	Jan	F	M	Apr	M	J	Jul	A	S	Oct	N	D	Jan	F	M	Apr	M	J	Jul	A	S



Actual Work (Blue bar) **Remaining Work** (Green bar) **Critical Remaining Work** (Red bar)

◆ Milestone

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APPENDIX D

IMPLEMENTATION SCHEDULE

Appendix VIII

Implementation Schedule

Project Profile Ref.	Recommended Mitigation Measures		Objectives of the Recommended Measures & Main Concerns to address	Implementation Parties	Location of the measure	When to implement the measure	Relevant requirements or standards for the measure to achieve
S.3.1	Noise Impact	Use of quieter plant	To minimize construction noise emissions	Contractor	Work site	Construction Stage	ProPECC PN2/93 and Noise Control Ordinance
S.3.1		<p>Use of noise enclosure and movable barrier</p> <ul style="list-style-type: none"> movable barrier can achieve a 5 dB(A) reduction for movable PME and 10 dB(A) reduction for stationary PME; noise enclosure can achieve 15dB(A) reduction for PME; A typical design barrier with a steel frame of vertical / cantilever type would be adopted and located close to the noise generating part of PME; Barrier material of surface mass in excess of 7kg/m² shall be required to achieve the maximum screening effect (and minimum 10kg/m² for noise enclosure); The length of barrier should generally be at least five times greater than its height and the minimum height of a barrier should be such that no part of the noise source will be visible from the noise sensitive receiver being protected. 	To minimize construction noise emissions	Contractor	Work site	Construction Stage	ProPECC PN2/93, Noise Control Ordinance and EIAO Guidance Note NO. 9/2010
S.3.1		<p>General Construction Noise Control Measures</p> <ul style="list-style-type: none"> The Code of Practice on Good Management Practice 	To minimize construction noise	Contractor	Work site	Construction Stage	ProPECC PN2/93 and Noise Control

Project Profile Ref.	Recommended Mitigation Measures		Objectives of the Recommended Measures & Main Concerns to address	Implementation Parties	Location of the measure	When to implement the measure	Relevant requirements or standards for the measure to achieve
		<p>to Prevent Violation of the Noise Control Ordinance (Chapter 400) (for Construction Industry) published by EPD shall be adopted;</p> <ul style="list-style-type: none"> • The statutory and non-statutory requirements and guidelines shall be complied with; • Approval for the method of working, equipment and noise mitigation measures intended to be used at the site shall be granted from the Project Engineer before commencing any work; • Working methods to minimize the noise impact on the surrounding NSRs shall be formulated and executed, and the implementation of these methods shall be monitored by experienced personnel with suitable training; • Noisy equipment and noisy activities shall be located as far away from the NSRs as is practical; • Unused equipment shall be turned off; • PME should be kept to a minimum and the parallel use of noisy equipment / machinery should be avoided; • All plant and equipment shall be maintained regularly; and • Material stockpiles and other structures shall be effectively utilized as noise barriers, whenever practicable. 	emissions				Ordinance
	Air Quality Impact						
S.3.2	<p>Construction Dust Control Measures</p> <ul style="list-style-type: none"> • Decking will be provided subsequent to the completion of surface excavation works. The duration 		To minimise the dust impacts arising from the	Contractor	Work site	Construction Stage	Air Pollution Control (Construction)

Project Profile Ref.	Recommended Mitigation Measures		Objectives of the Recommended Measures & Main Concerns to address	Implementation Parties	Location of the measure	When to implement the measure	Relevant requirements or standards for the measure to achieve
	Recommended Mitigation Measures						
		<p>of decking is around 13 months after surface excavation works;</p> <ul style="list-style-type: none"> Regular watering to reduce dust emissions from all exposed site surface, particularly during dry weather; Frequent watering for particularly dusty construction areas and areas close to air sensitive receivers; Cover all excavated or stockpile of dusty material by impervious sheeting or spraying with water to maintain the entire surface wet; Provision of vehicle washing facilities at the exit points of the site; and Provision of tarpaulin covering of any dusty materials on a vehicle leaving the site. 	construction works				Dust) Regulation
S.3.3	<p>Water Quality Impact</p> <p>Construction Water Quality Impact Measures</p> <ul style="list-style-type: none"> The Contractor should design and implement all the mitigation measures and practices specified in the ProPECC PN 1/94 "Construction Site Drainage" and "Recommended Pollution Control Clauses for Construction Contracts" issued by EPD. All runoffs arising from the construction site should be properly collected and treated to ensure the discharge standards as stipulated in WPCO are met. Silt trap and oil interceptor should be provided to remove the oil, lubricants, grease, silt, grit and debris from the wastewater before being pumped to the public stormwater drainage system. The silt traps and oil interceptors should be cleaned and maintained regularly. 		To reduce water quality impact induced by the construction work	Contractor	Work Site	Construction Stage	ProPECC PN1/94; Water Pollution Control Ordinance

Project Profile Ref.	Recommended Mitigation Measures		Objectives of the Recommended Measures & Main Concerns to address	Implementation Parties	Location of the measure	When to implement the measure	Relevant requirements or standards for the measure to achieve
		<ul style="list-style-type: none"> Any foul effluent should not be discharged into any public sewer and stormwater drain, unless an effluent discharge permit is obtained under the WPCO by the Contractor. Site toilet facilities, if needed, should be chemical toilets or should have the foul water effluent directed to a foul sewer. 					
S.3.4	Waste Management Construction Waste Management Measures <ul style="list-style-type: none"> Excavated material should be reused on site as far as possible to minimise off-site disposal. Scrap metals or abandoned equipment should be recycled if possible. Waste arising should be kept to a minimum and be handled, transported and disposed of in a suitable manner. The Contractor should adopt a trip ticket system for the disposal of C&D materials to any designated public filling facility and/or landfill. Independent audits of the Contractor and resident site staff will be undertaken to ensure that the correct procedures are being followed. Chemical waste shall be handled in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Wastes. All general refuse should be segregated and stored in enclosed bins or compaction units and waste separation facilities for paper, aluminium cans, plastic bottles etc. should be provided to facilitate reuse or 		To adopt waste management measures in the way of avoiding, minimising, reusing and recycling so as to reduce waste generation	Contractor	Work Site	Construction Stage	Waste Disposal Ordinance (Cap. 54); Waste Disposal (Chemical Waste) (General) Regulation; ETWB TCW No. 31/2004; ETWB TCW No. 19/2005.

Project Profile Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Parties	Location of the measure	When to implement the measure	Relevant requirements or standards for the measure to achieve
	recycling of materials and their proper disposal.					
	Landscape and Visual Impact					
S.3.5	Landscape and Visual Measures <ul style="list-style-type: none"> Screening of construction works by hoardings/noise barriers around works area with visually unobtrusive colours 	To reduce visual impact by construction works.	Contractor	Temporary Storage Area at Salisbury Road	Construction Stage	EIAO
S.3.5	<ul style="list-style-type: none"> Reinstating the affected amenity planting area at Salisbury Road after the completion of works 	To prevent loss of planter after construction	Contractor	Temporary Storage Area at Salisbury Road	Operation Stage	ETWB TCW No. 2/2004

APPENDIX E

STATUS OF ENVIRONMENTAL LICENSES AND PERMITS



Maeda Corporation

Contract No. C3840-13C

Tsim Sha Tsui Station Carnarvon Road Subway

Last Update: 11-February-2017

Licence Summary

Item No.	Our Ref.	Govt. Ord.	Type? (Licence / Permit / Account / Notification / Registration & etc.)	Description	Submission	Ref. No	Date of Submission (to EPD) (DD-MM-YYYY)	Date of Approval / Receipt (from EPD) (DD-MM-YYYY)	Date of Activation (DD-MM-YYYY)	Date of Expiry (DD-MM-YYYY) Green = expire next mth; Yellow = expire this wk; Red = Expired	Description	Remarks
000	000	EIAO	Permit	Environmental Permit	N/A	AEP-440/2012	N/A	N/A	18 - 07 - 2012	N/A	Baseline, Air & Noise Impact Monitoring	
001	APCO #002	APCO	Notification	Construction Dust Notification	Form NB – Notification S3(3) of APCO (Construction Dust)	403252	27 - 05 - 2016	02 - 06 - 2016	01 - 02 - 2014	31 - 10 - 2017	Demolition of a Building	Change of anticipated date of completed is notified
001	APCO #002	APCO	Notification	Construction Dust Notification	Form NB – Notification S3(3) of APCO (Construction Dust)	403252	27 - 05 - 2016	02 - 06 - 2016	01 - 08 - 2014	31 - 08 - 2018	Work carried out in any part of a tunnel that is within 100m of any exit to the open air	Change of anticipated date of completed is notified
001	APCO #002	APCO	Notification	Construction Dust Notification	Form NB – Notification S3(3) of APCO (Construction Dust)	403252	27 - 05 - 2016	02 - 06 - 2016	01 - 01 - 2016	31 - 08 - 2018	Construction of the Superstructure of a Building	Change of anticipated date of completed is notified
001	APCO #002	APCO	Notification	Construction Dust Notification	Form NB – Notification S3(3) of APCO (Construction Dust)	403252	27 - 05 - 2016	02 - 06 - 2016	01 - 11 - 2016	28 - 02 - 2019	Road Construction Work	Change of anticipated date of completed is notified
002	APCO #002	WDO	Account	Construction Waste Billing Account	EPD-211 (Form 1) Application for a Billing Account for Disposal of Construction Waste	7018523	18 - 10 - 2013	25 - 10 - 2013	25 - 10 - 2013	N/A	Disposal of C&D Waste	Application No. WFG12765
003	WPCO #002	WPCO	Licence	Water Discharge Licence	EPD-117 (Form A) Application for a Licence of Water Discharge	WT00019722-2014	24 - 07 - 2014	01 - 09 - 2014	01 - 09 - 2014	31 - 03 - 2019	Quarterly Report FlowRate 25m3/d, pH 6-9, SS 30mg/L, COD 80mg/L	
004	CWP #001	WDO	Registration	Chemical Waste Producer	EPD-129 Application for Registration as a Chemical Waste Producer	5213-2214-M2446-16	15 - 01 - 2014	04 - 03 - 2014	04 - 03 - 2014	N/A	Surplus paint, spent lubricating oil, spent battery	
005	CNP#006	NCO	Permit	Construction Noise Permit	EPD74A(s) Form 1 - Application for a Construction Noise Permit	Application: 405344 Permit: GW-RE0804-16	22 - 07 - 2016	04 - 08 - 2016	15 - 08 - 2016	14 - 02 - 2017	Apply for 4nos Submersible Water pump (Electric) w/ whole site area	
005	CNP#007	NCO	Permit	Construction Noise Permit	EPD74A(s) Form 1 - Application for a Construction Noise Permit	OSS Ref: 002058279 Permit: GW-RE0064-17	18 - 01 - 2017	06 - 02 - 2017	15 - 02 - 2017	14 - 08 - 2017	Apply for 4nos Submersible Water pump (Electric) w/ whole site area	

APPENDIX F

EVENT AND ACTION PLAN

Event and Action Plan for Air Quality

In case the Action and Limit Levels are not complied during construction stage, the Event and Action Plan shown below should be followed.

Event / Action	ET	IEC	ER	Contractor
Action Level				
Exceedance for one sample	<ol style="list-style-type: none"> 1. Identify source; 2. If valid, inform IEC and ER; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily. 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET; 2. Check Contractor's working method. 	<ol style="list-style-type: none"> 1. Notify Contractor 	<ol style="list-style-type: none"> 1. Rectify any unacceptable practice; 2. Amend working methods if appropriate
Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> 1. Identify source; 2. Inform IEC and EPD; 3. Repeat measurements to confirm findings; 4. Increase monitoring frequency to daily; 5. Discuss with IEC and Contractor on remedial action required; 6. If exceedance continues, arrange meeting with IEC and ER; 7. If exceedance stops, cease additional monitoring. 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ER on the effectiveness of the proposed remedial measures; 5. Supervise implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Ensure remedial measure properly implemented. 	<ol style="list-style-type: none"> 1. Submit proposals for remedial action to IEC within 3 working days of notification; 2. Implement the agreed proposals; 3. Amend proposal if appropriate.
Limit Level				
Exceedance for one sample	<ol style="list-style-type: none"> 1. Identify source; 2. Inform ER and EPD; 3. Repeat measurement to confirm finding; 4. Increase 	<ol style="list-style-type: none"> 1. Check monitoring 2. data submitted by ET; 3. Check Contractor's working 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Ensure remedial 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC

Event / Action	ET	IEC	ER	Contractor
	<p>monitoring frequency to daily;</p> <p>5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.</p>	<p>method;</p> <p>4. Discuss with ET and the Contractor on possible remedial measures;</p> <p>5. Advise the ER on the effectiveness of the proposed remedial measures;</p> <p>6. Supervise implementation of remedial measures.</p>	<p>measures properly implemented.</p>	<p>within 3 working days of notification;</p> <p>3. Implement the agreed proposals;</p> <p>4. Amend proposal if appropriate.</p>
Exceedance for two or more consecutive samples	<p>1. Notify IEC, ER, Contractor and EPD;</p> <p>2. Identify sources;</p> <p>3. Repeat measurement to confirm findings;</p> <p>4. Increase monitoring frequency to daily;</p> <p>5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented;</p> <p>6. Arrange meeting with IEC and ER to discuss the remedial actions to be taken;</p> <p>7. Assess the effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the</p>	<p>1. Discuss amongst ER, ET and Contractor on the potential remedial actions;</p> <p>2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ET accordingly.</p> <p>3. Supervise the implementation of remedial measures.</p>	<p>1. Confirm receipt of notification of failure in writing;</p> <p>2. Notify Contractor;</p> <p>3. In consultation with IEC, agree with the Contractor on the remedial measures to be implemented;</p> <p>4. Ensure remedial measures properly implemented;</p> <p>5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.</p>	<p>1. Take immediate action to avoid further exceedance;</p> <p>2. Submit proposals for remedial actions to IEC within 3 working days of notification;</p> <p>3. Implement the agreed proposals;</p> <p>4. Resubmit proposals if problem still not under control;</p> <p>5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.</p>

Event / Action	ET	IEC	ER	Contractor
	results; 8. If exceedance stops, cease additional monitoring.			

Event and Action Plan for Construction Noise

In case the Action and Limit Levels are not complied during the construction stage, the Event and Action Plan shown below should be followed.

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

Event / Action	ET	IEC	ER	Contractor
	remedial actions and keep IEC, EPD, ER informed of the results 8. If exceedance stops, cease additional monitoring			

APPENDIX G

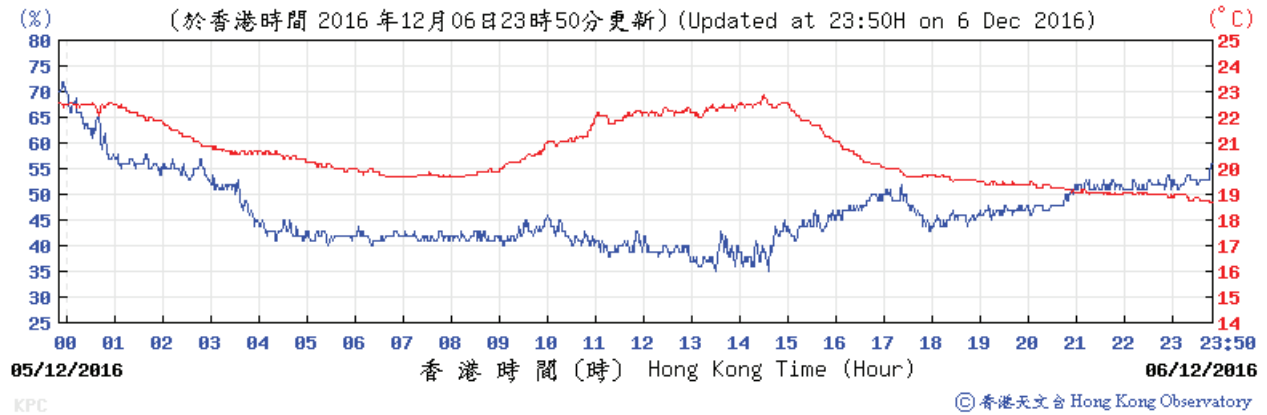
WEATHER INFORMATION

Daily Total Rainfall at King's Park HKO Weather Monitoring Station - December 2016

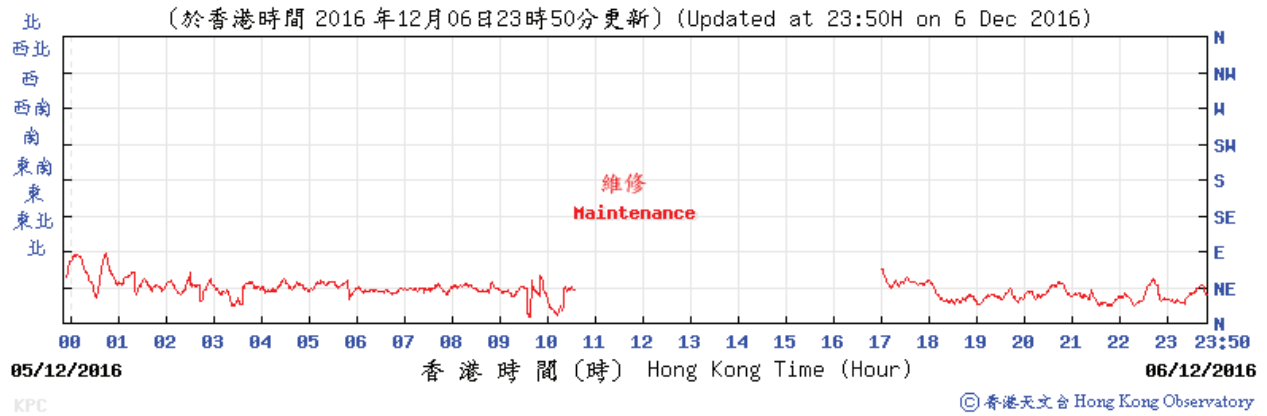
Day	Total Rainfall, mm	24-hr TSP	Noise	Remarks
1	0			
2	0			
3	0			
4	Trace			
5	0	✓		
6	Trace		✓	It was Sunny without rainfall on site during noise monitoring.
7	Trace			
8	0			
9	0			
10	0			
11	Trace			
12	Trace	✓		
13	Trace		✓	It was Cloudy without rainfall on site during noise monitoring.
14	Trace			
15	0			
16	0			
17	0			
18	0			
19	0	✓		
20	0		✓	It was sunny without rainfall on site during noise monitoring.
21	2.8			
22	0.1			
23	Trace			
24	3.7			
25	Trace			
26	0			
27	0			
28	0	✓	✓	It was cloudy without rainfall on site during noise monitoring.
29	0			
30	0			
31	0			
Mean/Total	6.6			

King's Park Weather Station – 05 December 2016

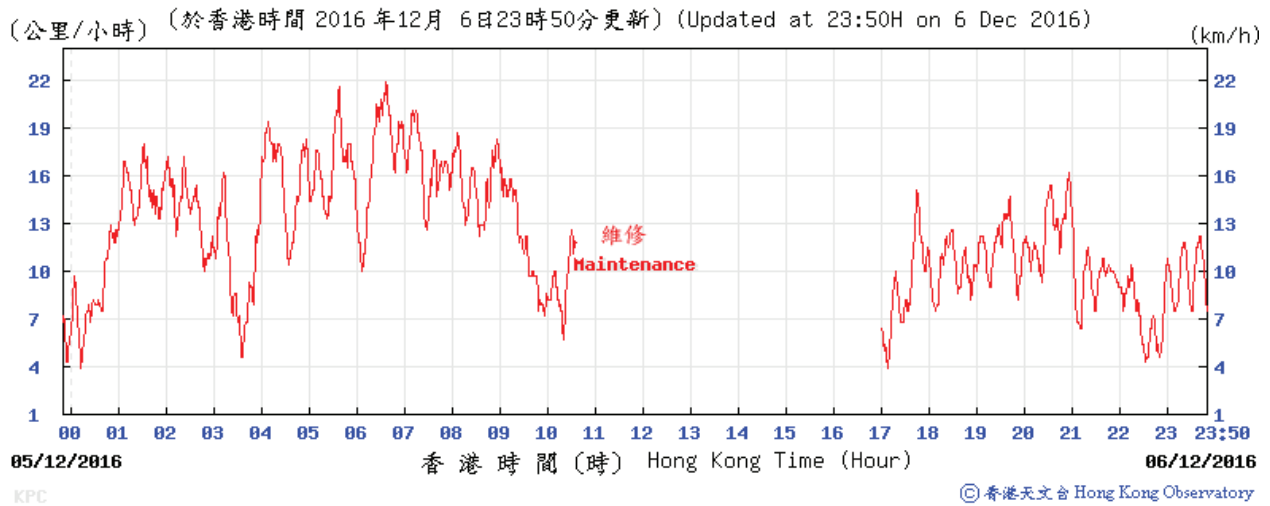
Temperature/Humidity:



Wind Direction:

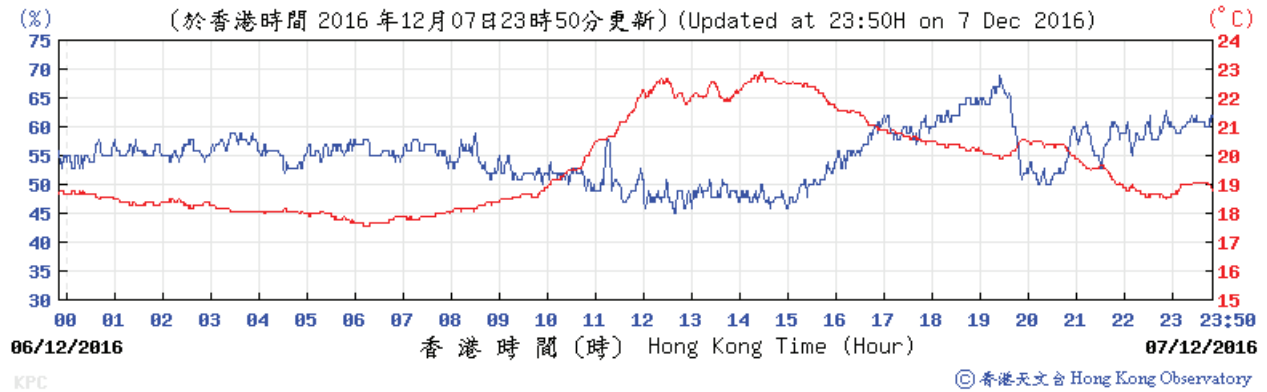


Wind Speed:

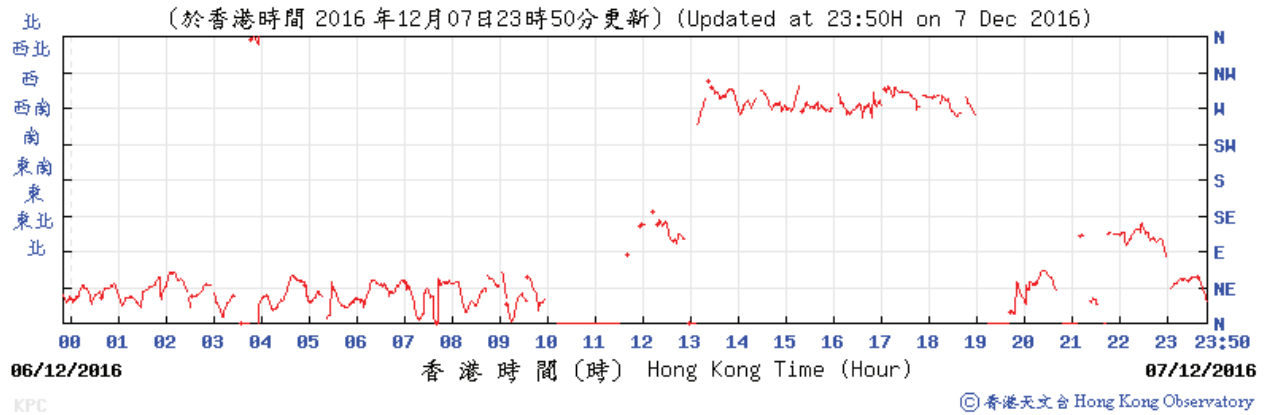


King's Park Weather Station – 06 December 2016

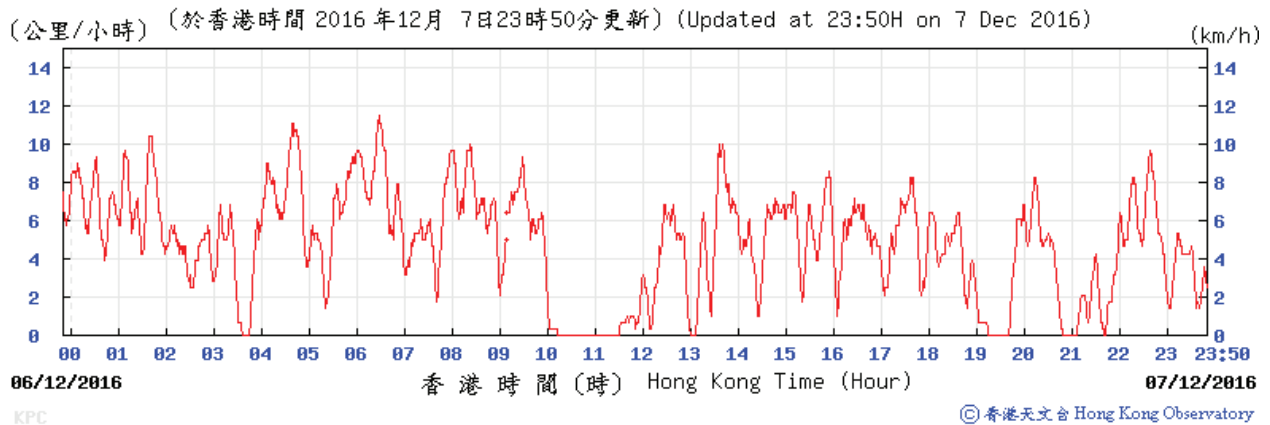
Temperature/Humidity:



Wind Direction:

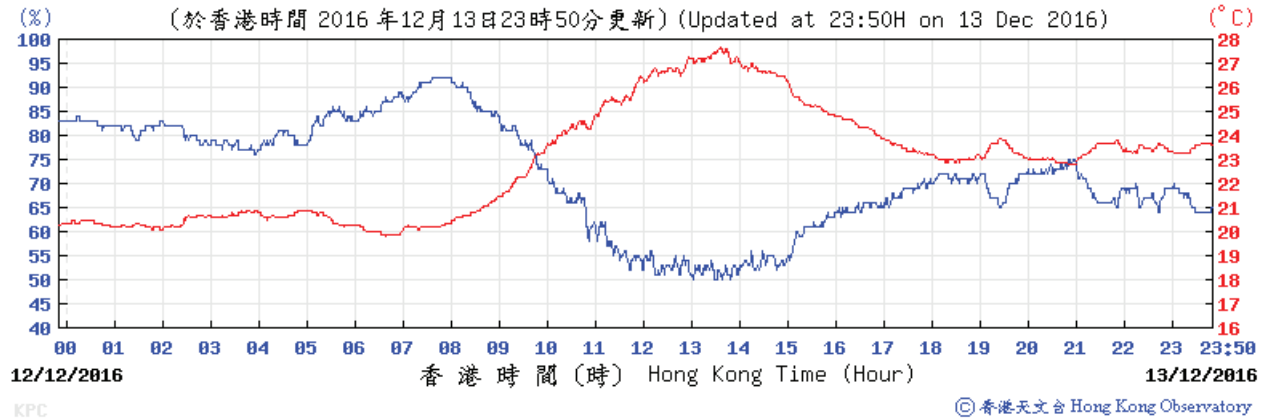


Wind Speed:

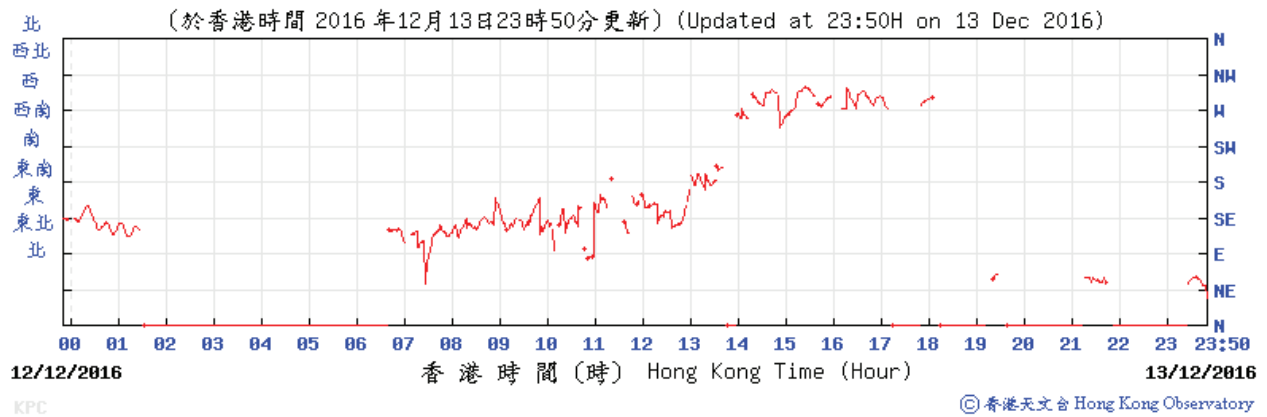


King's Park Weather Station – 12 December 2016

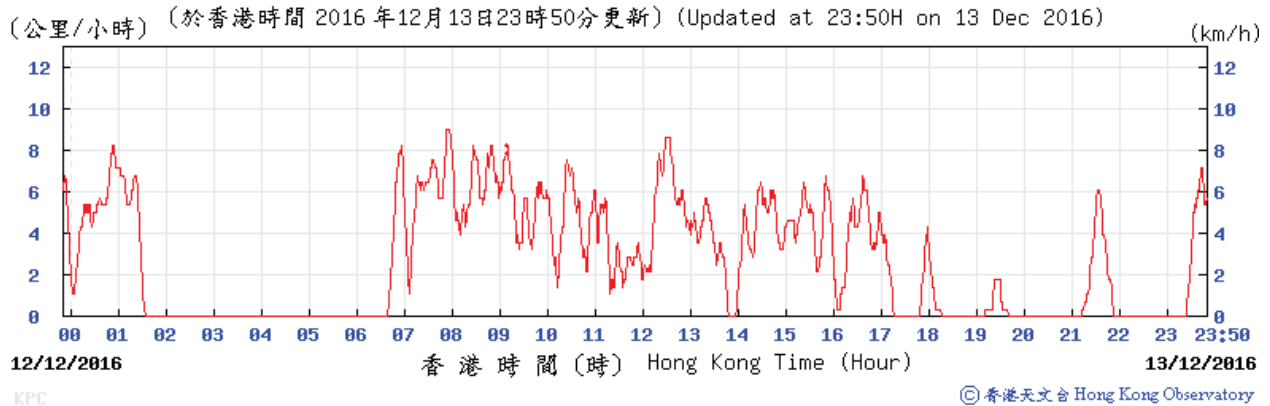
Temperature/Humidity:



Wind Direction:

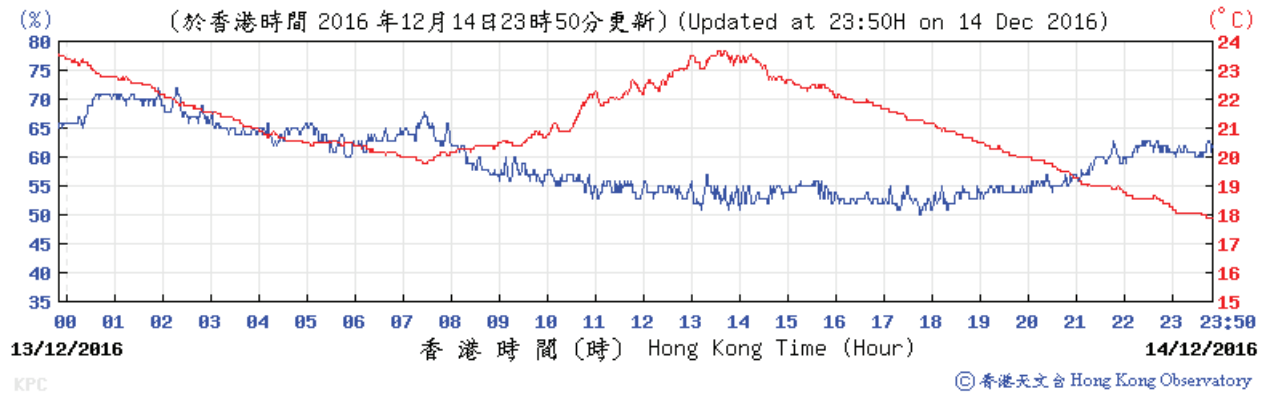


Wind Speed:

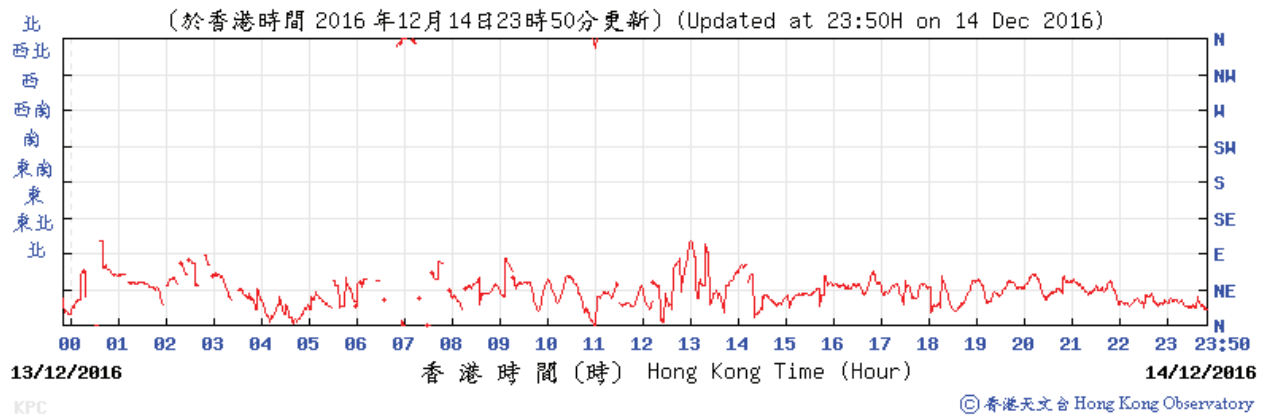


King's Park Weather Station – 13 December 2016

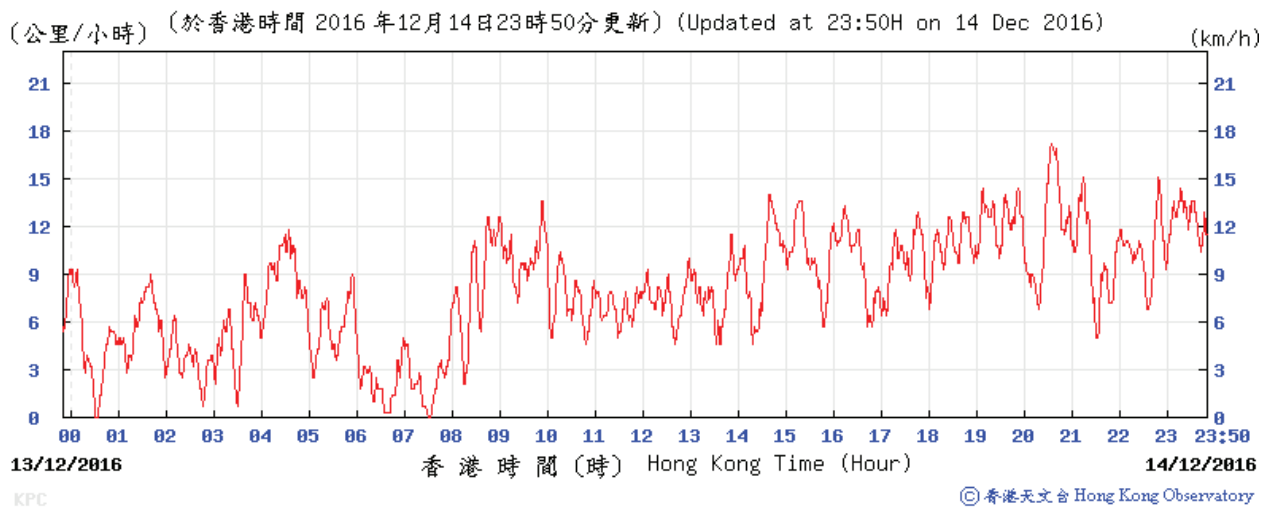
Temperature/Humidity:



Wind Direction:

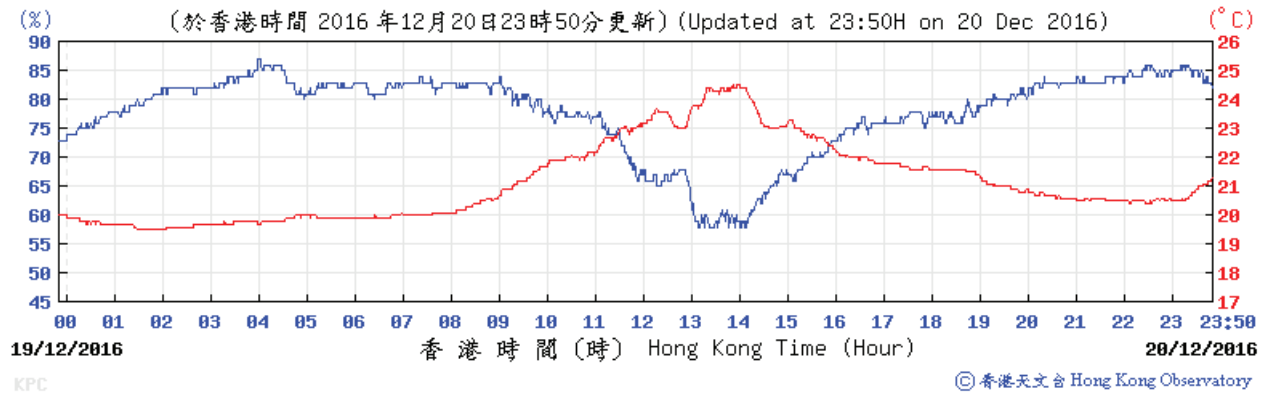


Wind Speed:

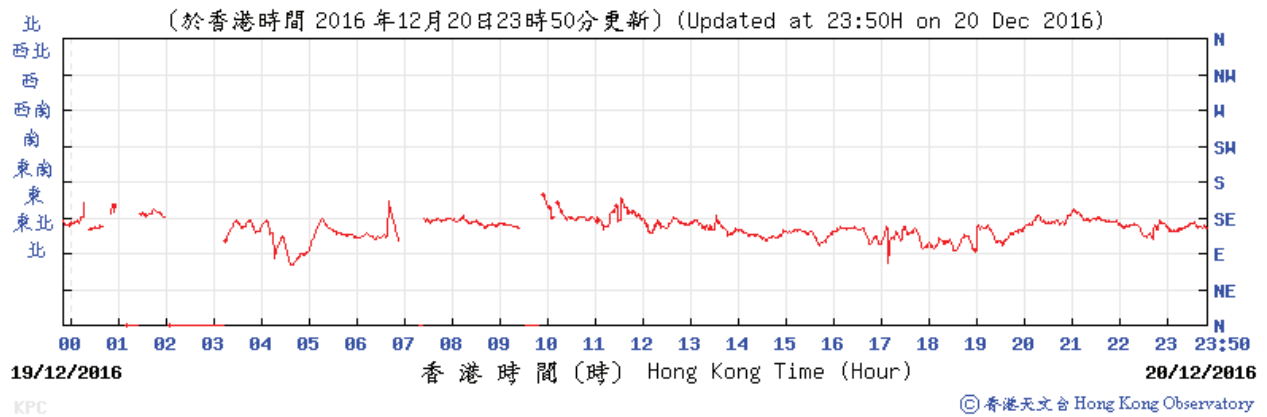


King's Park Weather Station – 19 December 2016

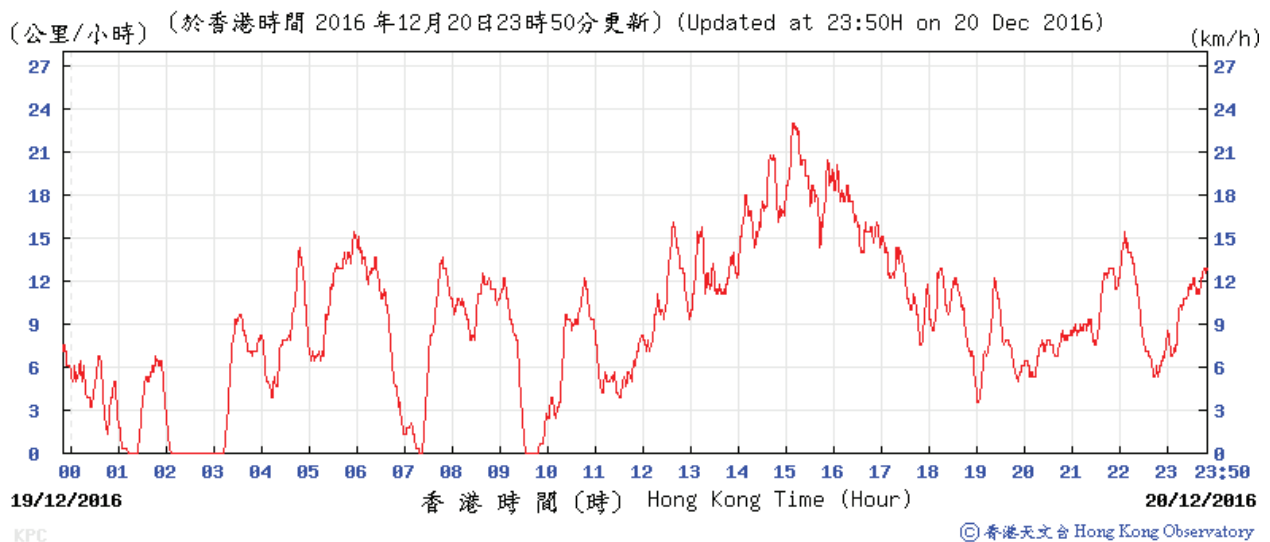
Temperature/Humidity:



Wind Direction:

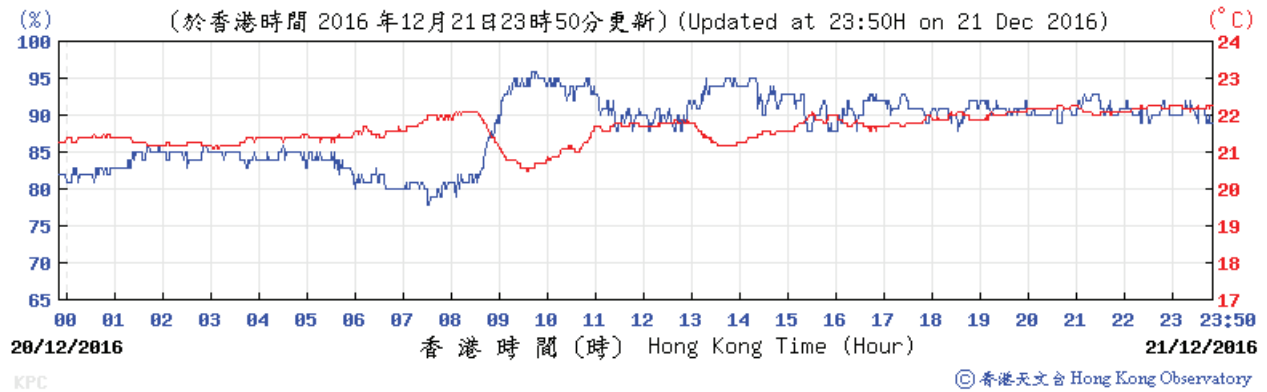


Wind Speed:

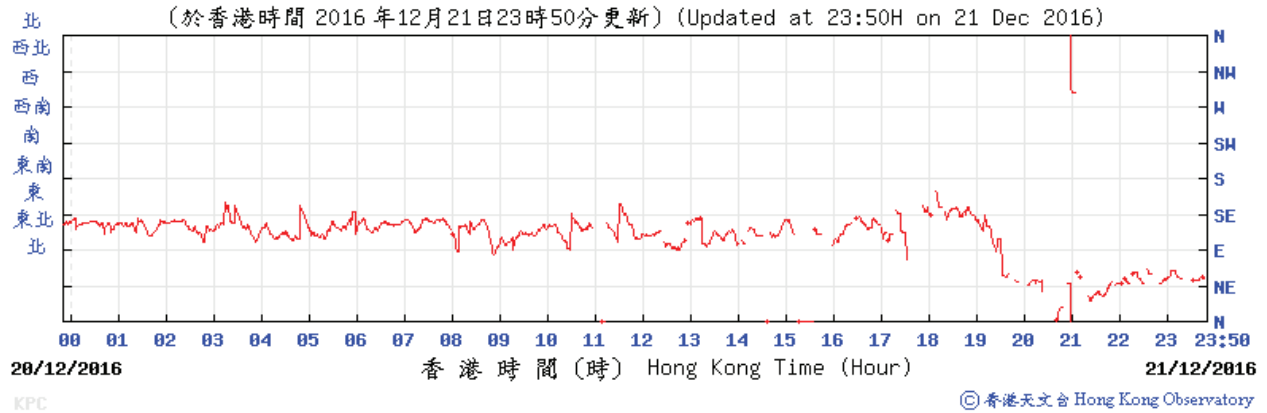


King's Park Weather Station – 20 December 2016

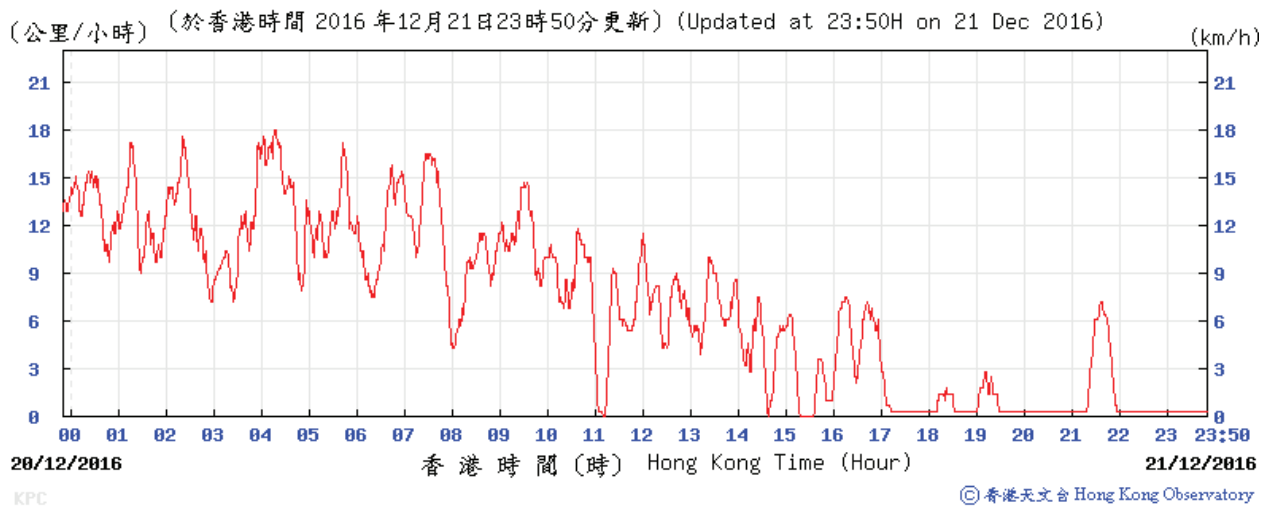
Temperature/Humidity:



Wind Direction:

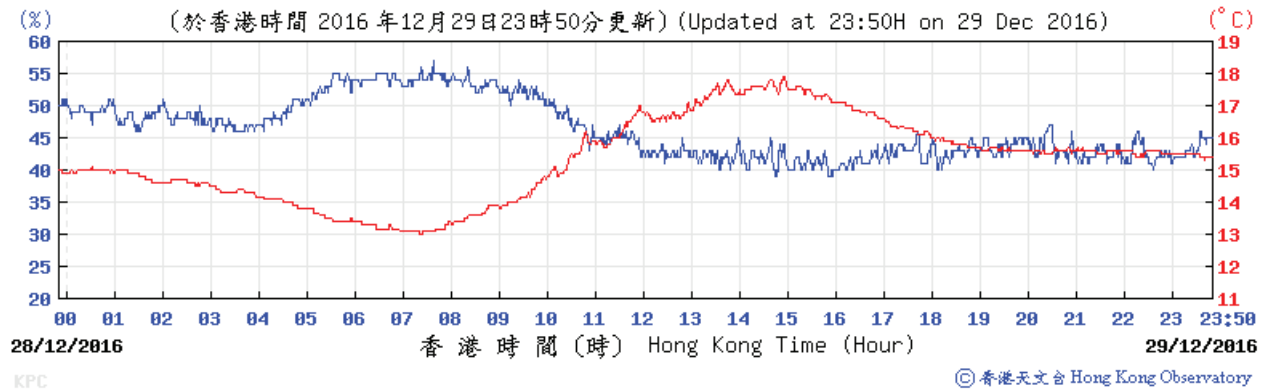


Wind Speed:

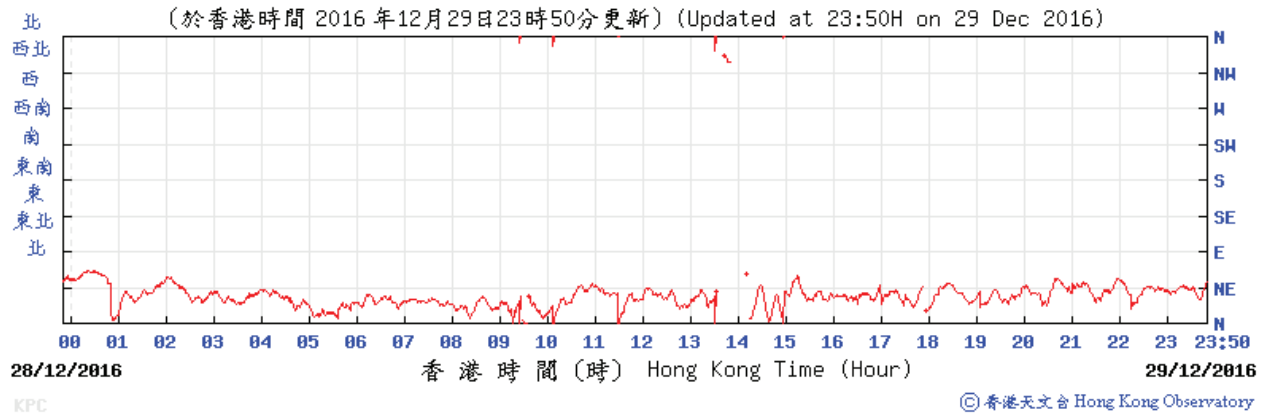


King's Park Weather Station – 28 December 2016

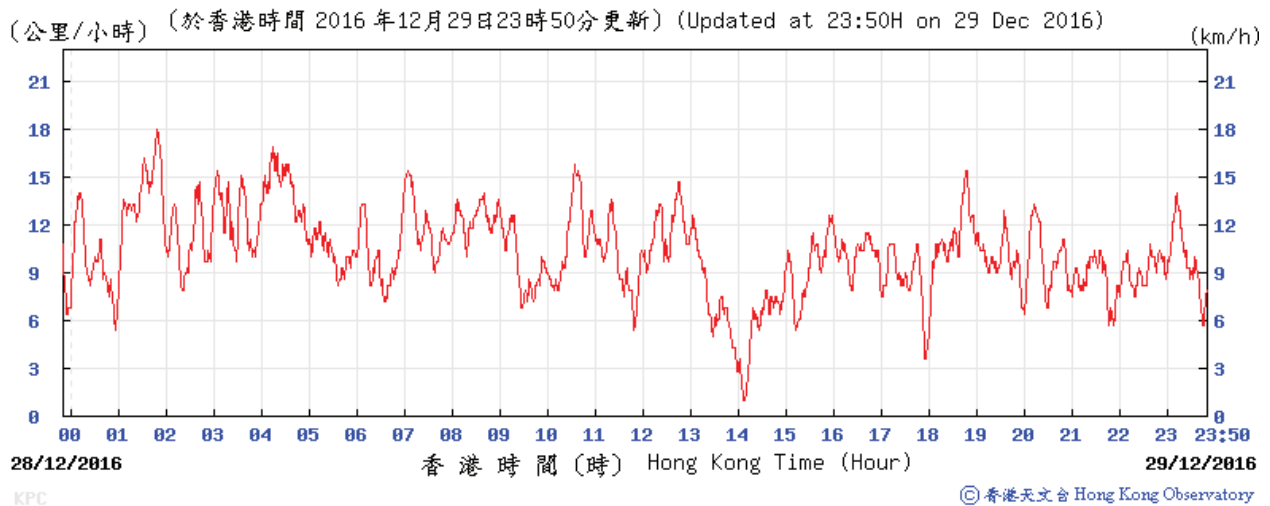
Temperature/Humidity:



Wind Direction:

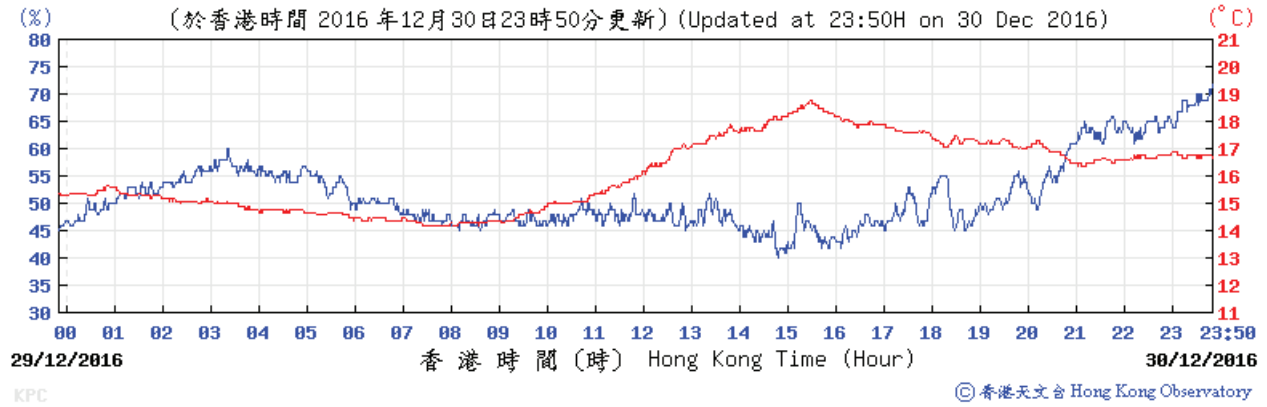


Wind Speed:

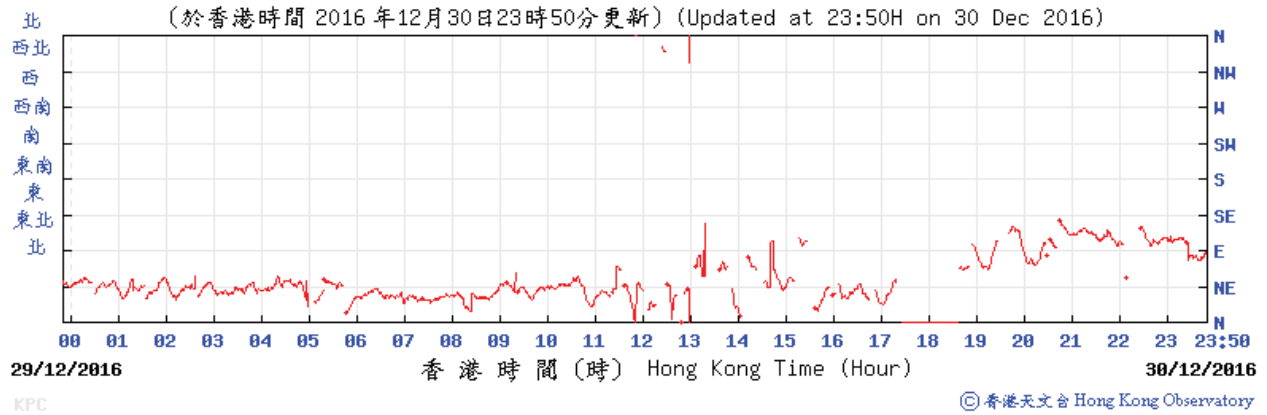


King's Park Weather Station – 29 December 2016

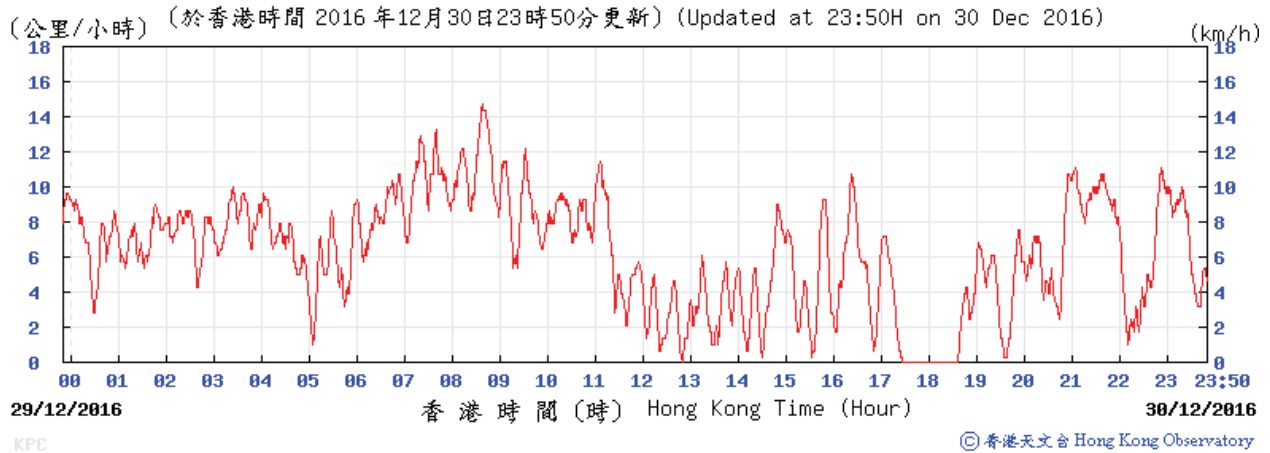
Temperature/Humidity:



Wind Direction:



Wind Speed:

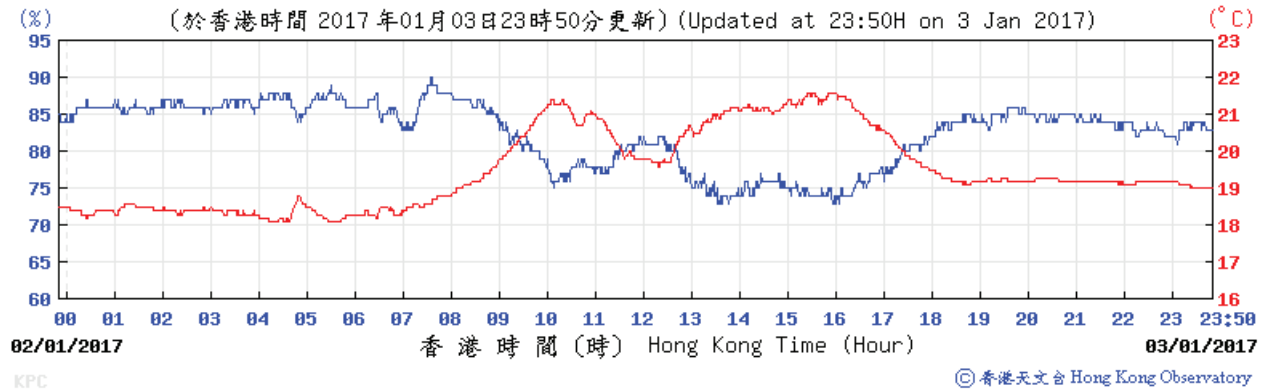


Daily Total Rainfall at King's Park HKO Weather Monitoring Station - January 2017

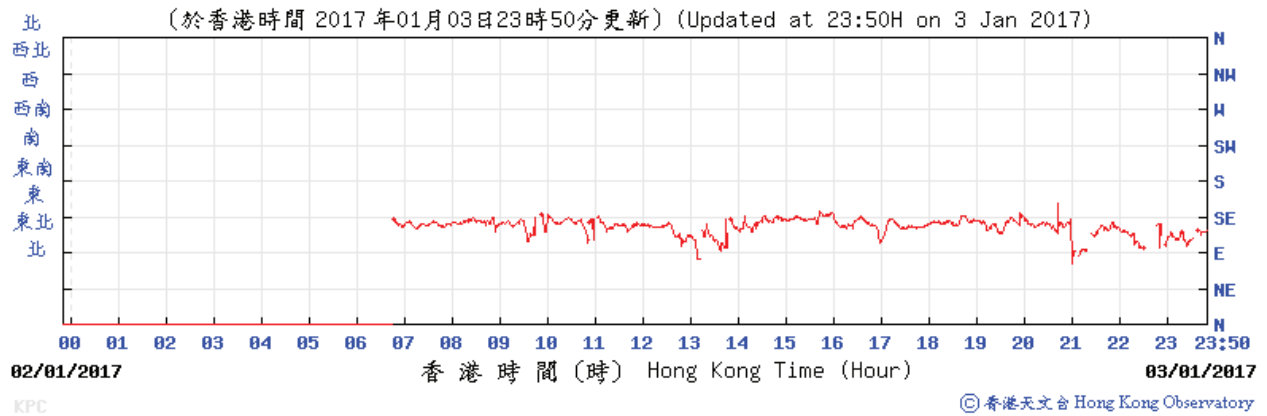
Day	Total Rainfall, mm	24-hr TSP	Noise	Remarks
1	0.0			
2	0.0			
3	0.0	✓	✓	It was sunny without rainfall on site during noise monitoring.
4	0.0			
5	0.0			
6	0.0			
7	0.0			
8	0.0			
9	0.0	✓		
10	0.0		✓	It was sunny without rainfall on site during noise monitoring.
11	0.0			
12	Trace			
13	0.5			
14	1.0			
15	1.5			
16	0.4	✓		
17	0.0			
18	Trace			
19	0.0		✓	It was sunny without rainfall on site during noise monitoring.
20	Trace			
21	0.0			
22	0.0			
23	0.0	✓		
24	0.0		✓	It was sunny without rainfall on site during noise monitoring.
25	0.0			
26	0.0			
27	0.0			
28	0.3			
29	2.4			
30	1.2			
31	0.5			
Mean/Total	7.8			

King's Park Weather Station – 03 January 2017

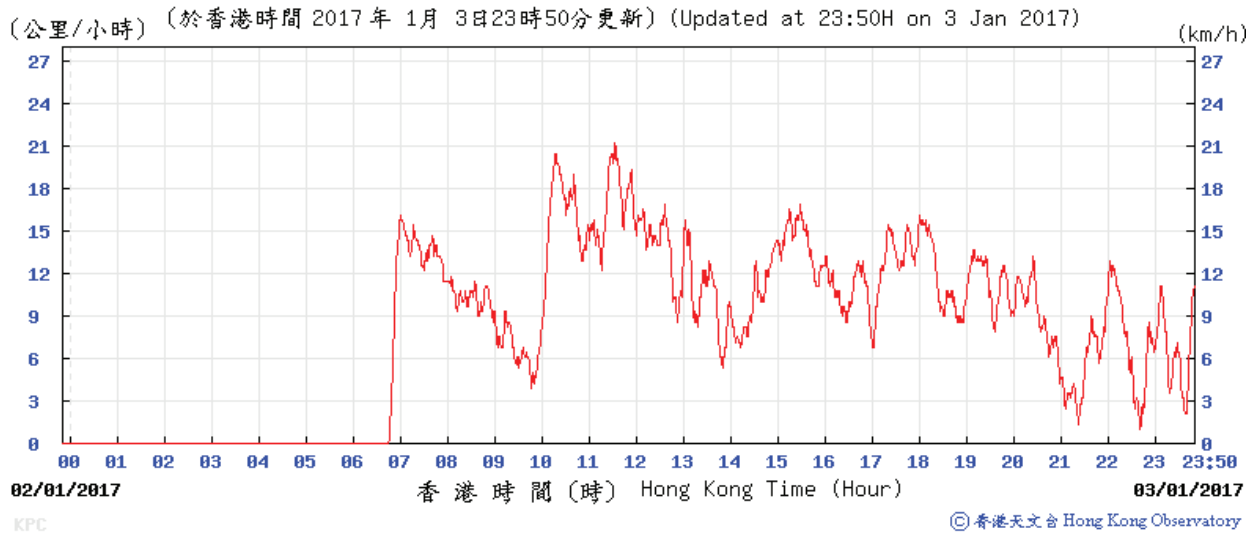
Temperature/Humidity:



Wind Direction:

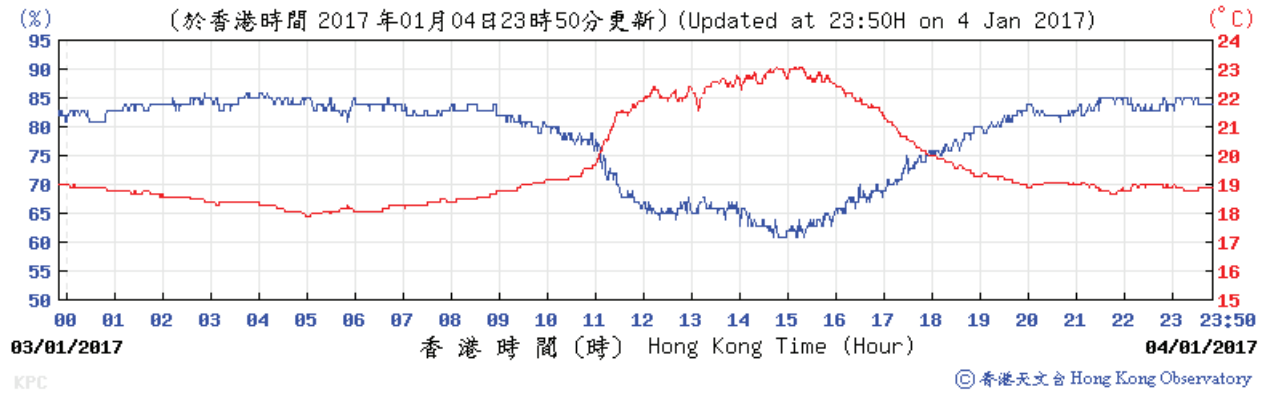


Wind Speed:

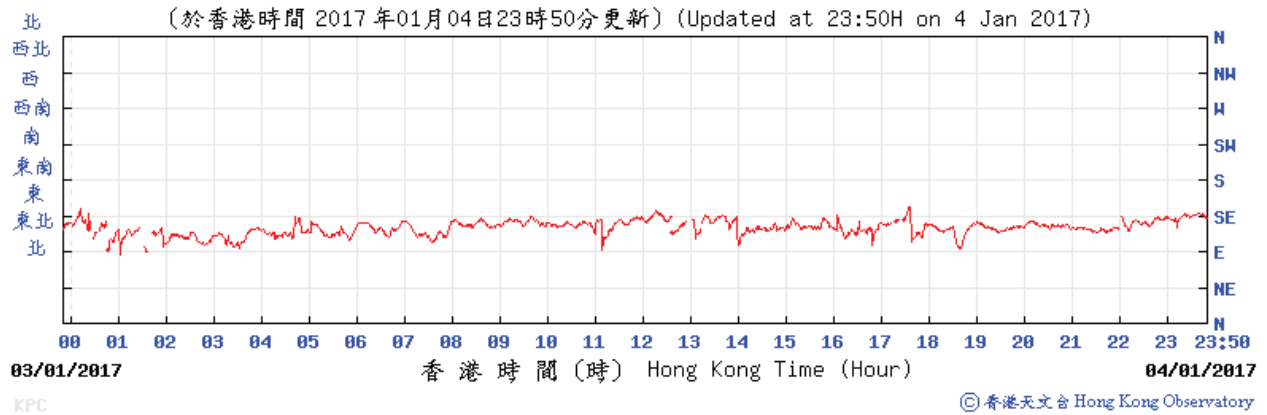


King's Park Weather Station – 04 January 2017

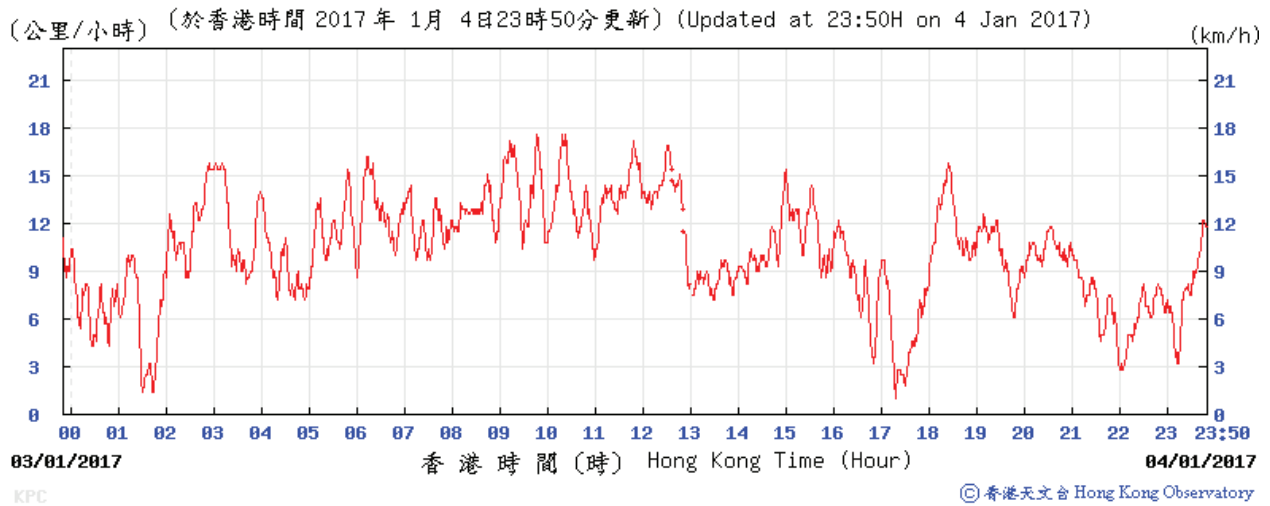
Temperature/Humidity:



Wind Direction:

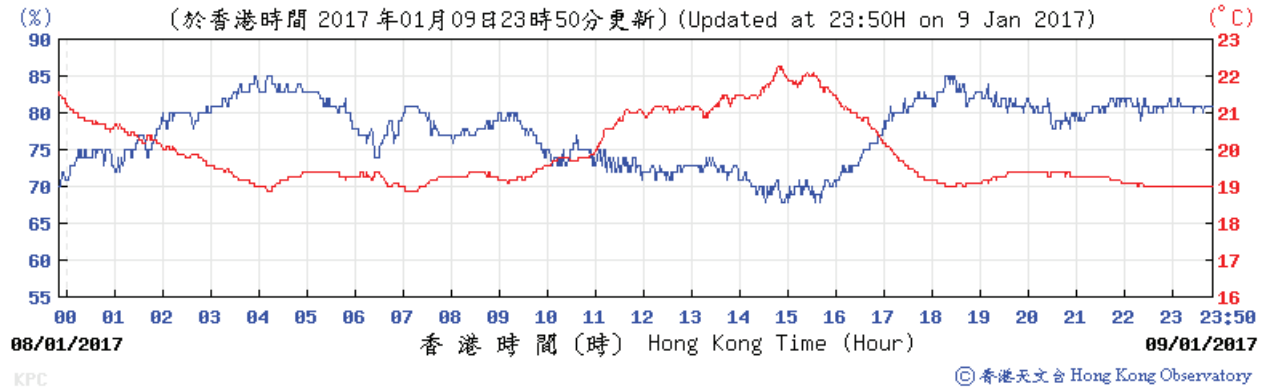


Wind Speed:

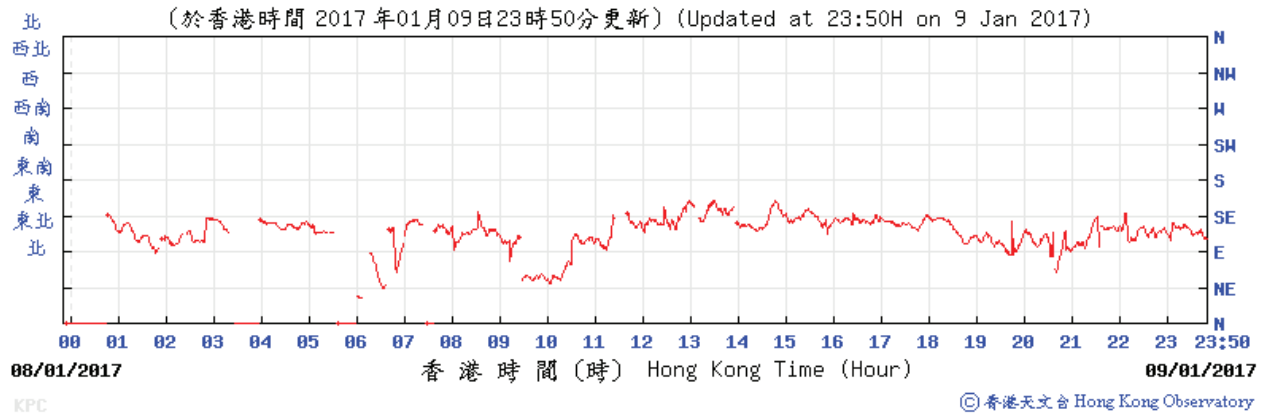


King's Park Weather Station – 09 January 2017

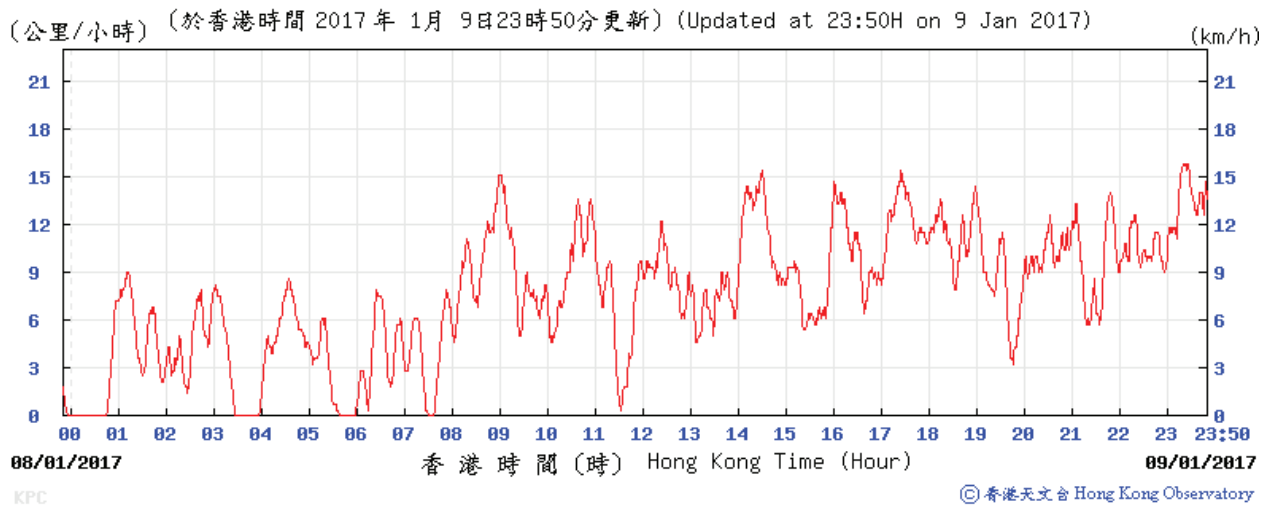
Temperature/Humidity:



Wind Direction:

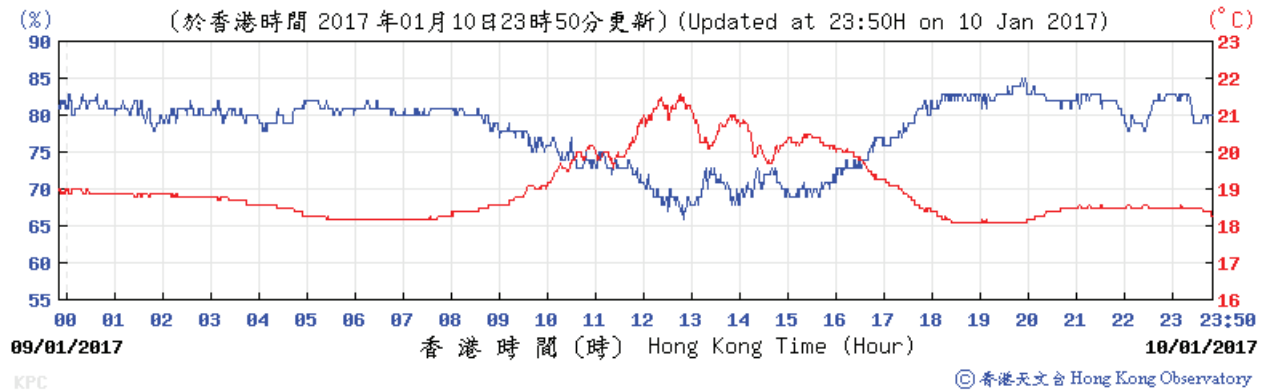


Wind Speed:

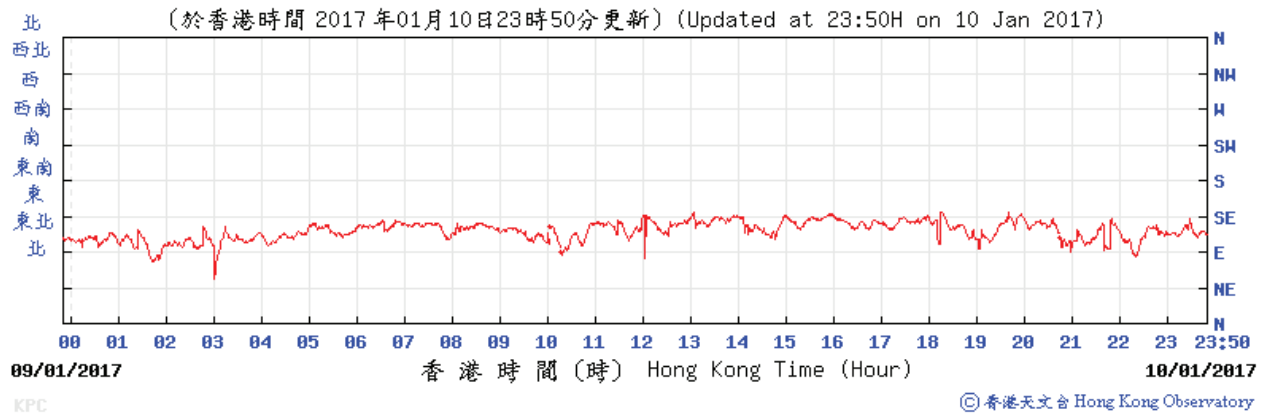


King's Park Weather Station – 10 January 2017

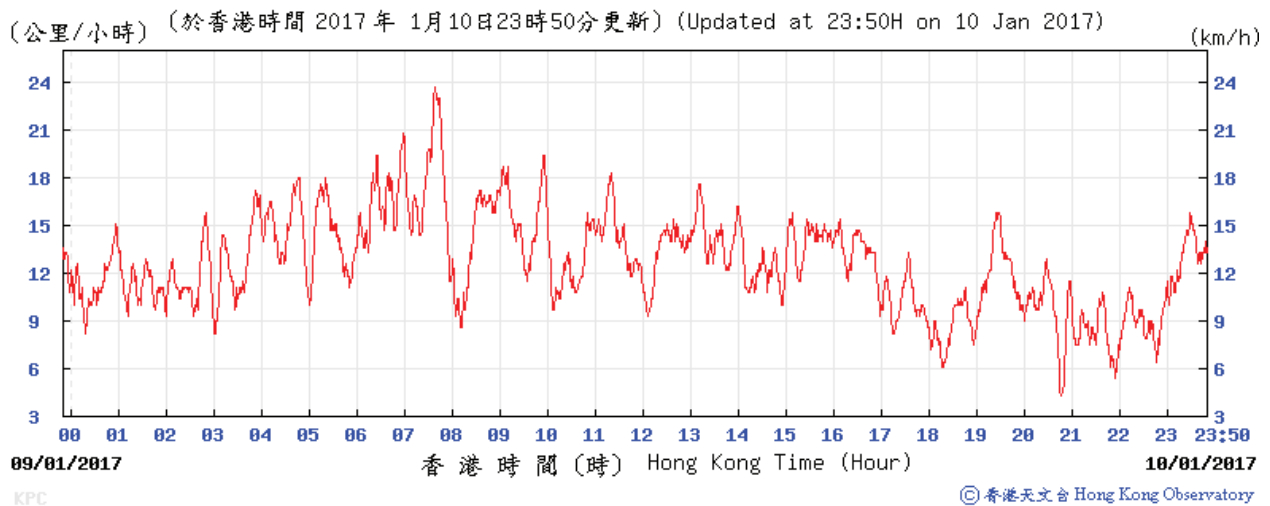
Temperature/Humidity:



Wind Direction:

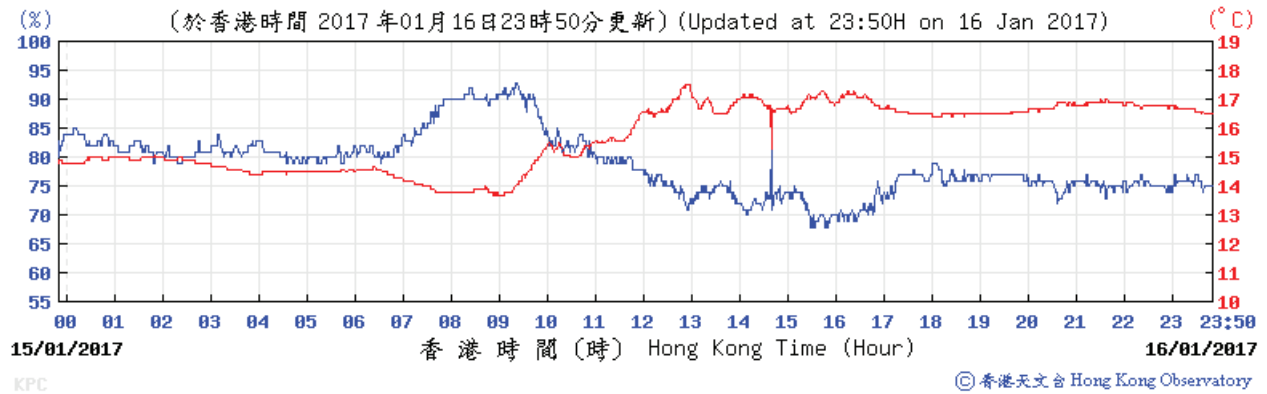


Wind Speed:

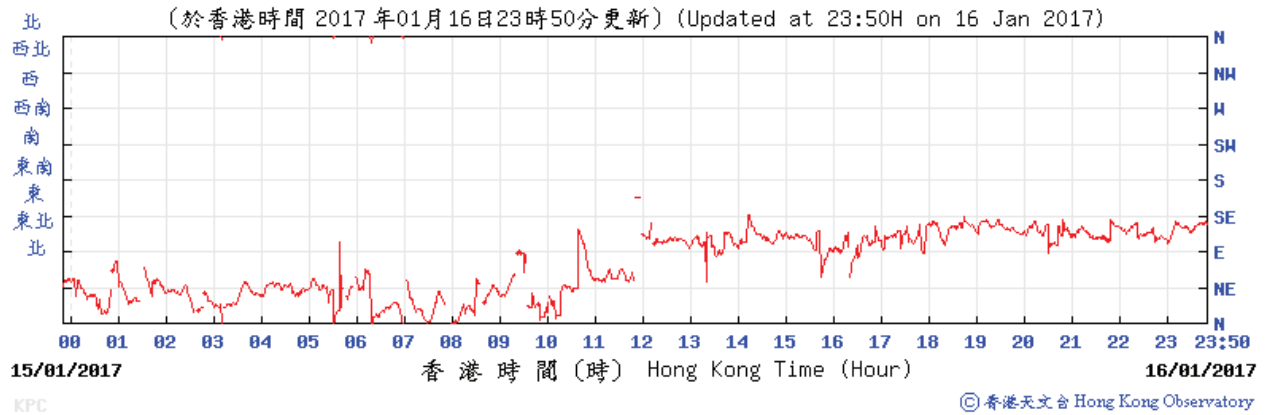


King's Park Weather Station – 16 January 2017

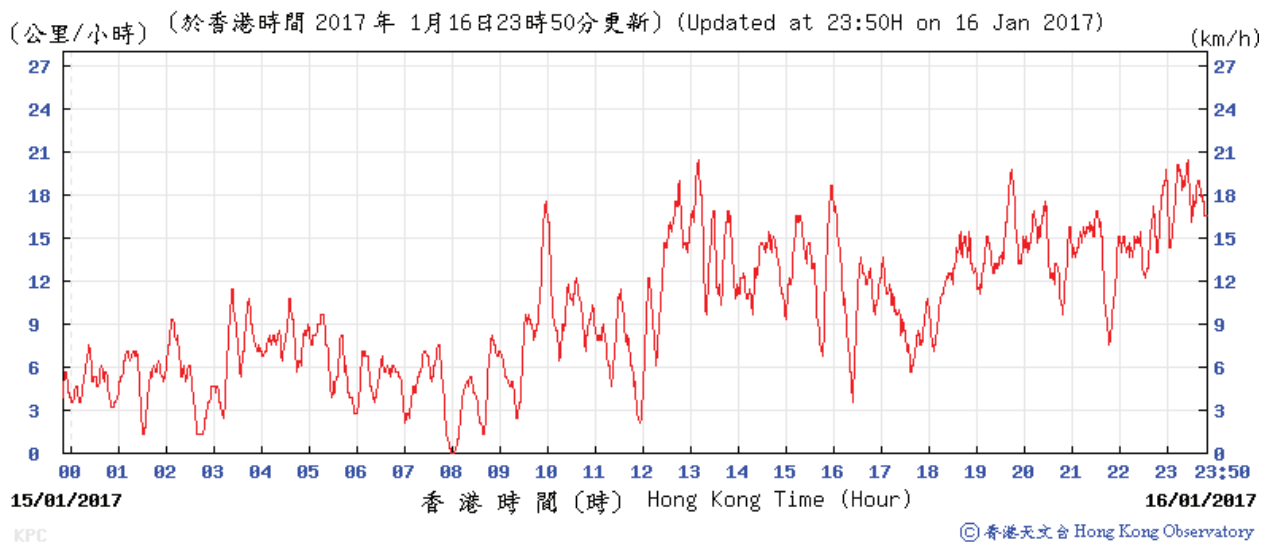
Temperature/Humidity:



Wind Direction:

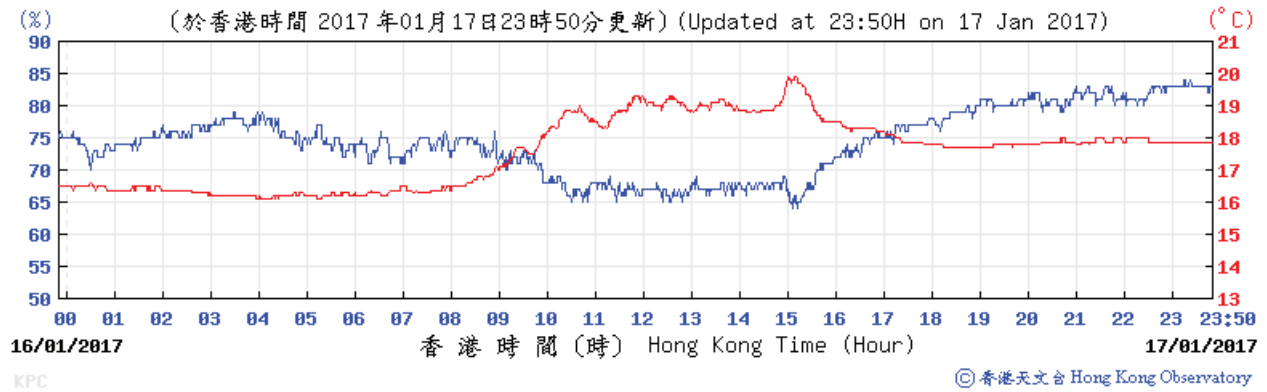


Wind Speed:

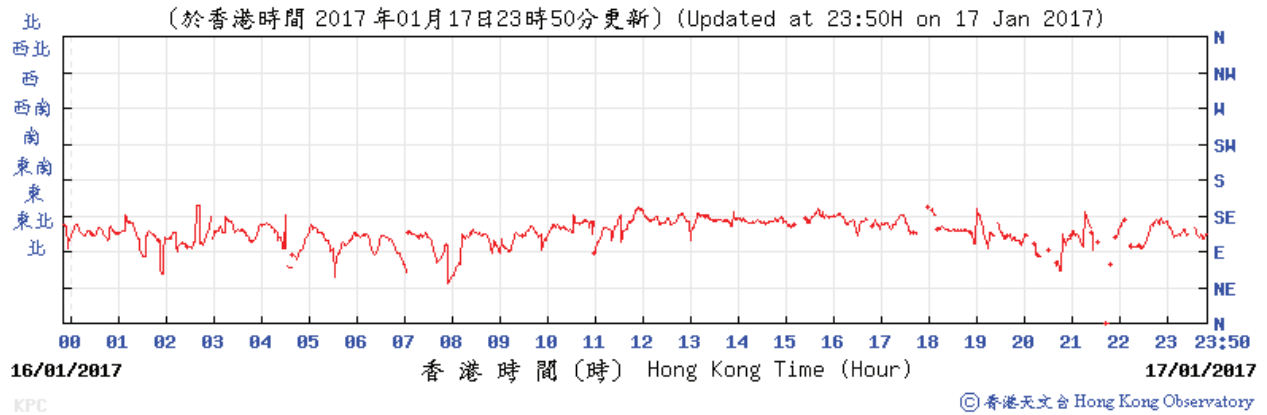


King's Park Weather Station – 17 January 2017

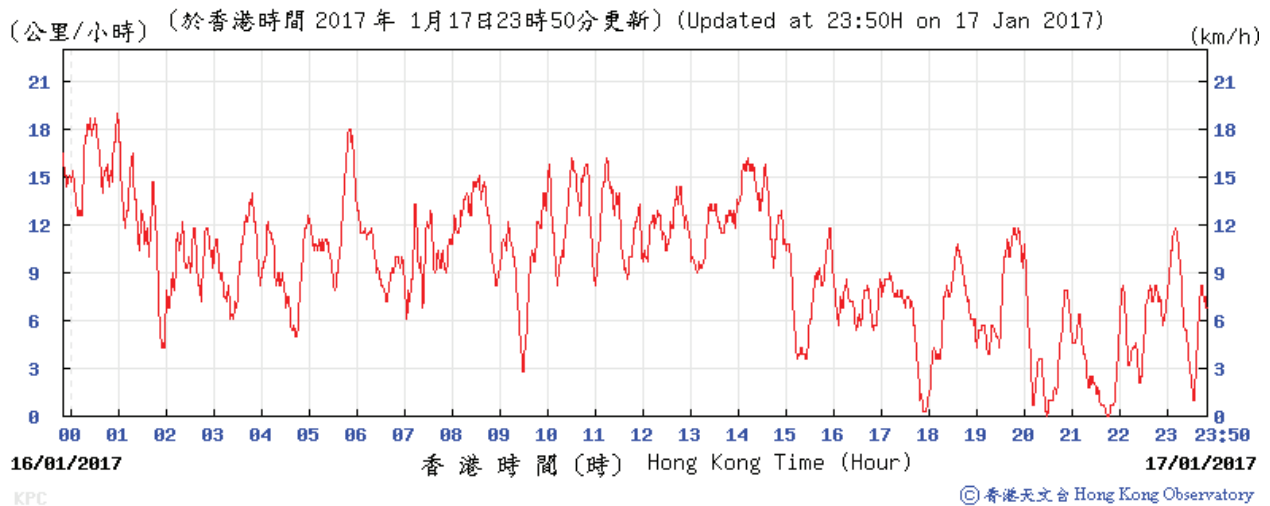
Temperature/Humidity:



Wind Direction:

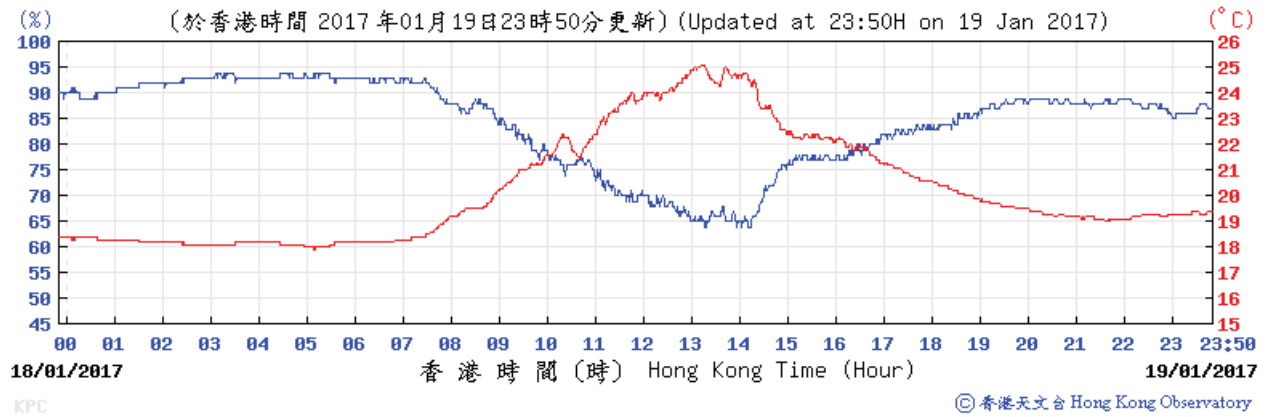


Wind Speed:

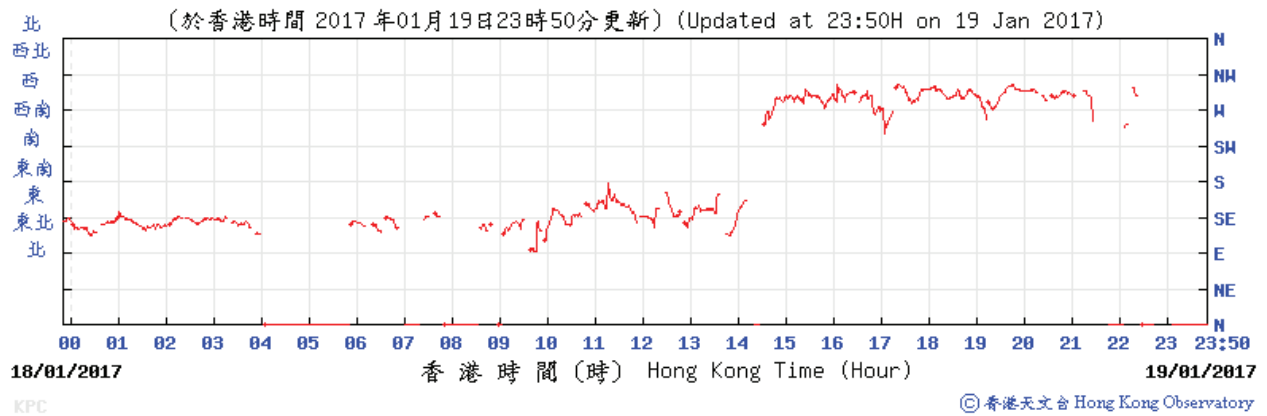


King's Park Weather Station – 19 January 2017

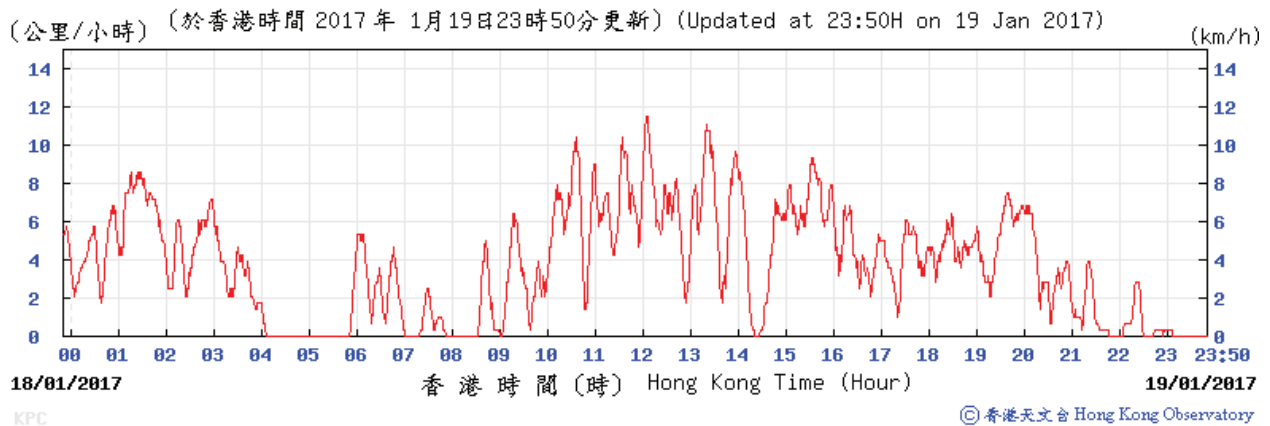
Temperature/Humidity:



Wind Direction:

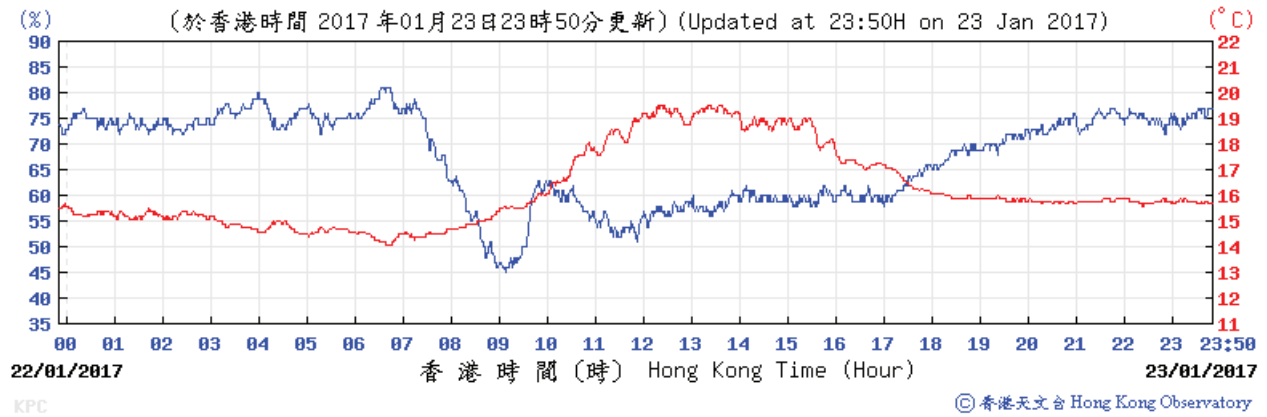


Wind Speed:

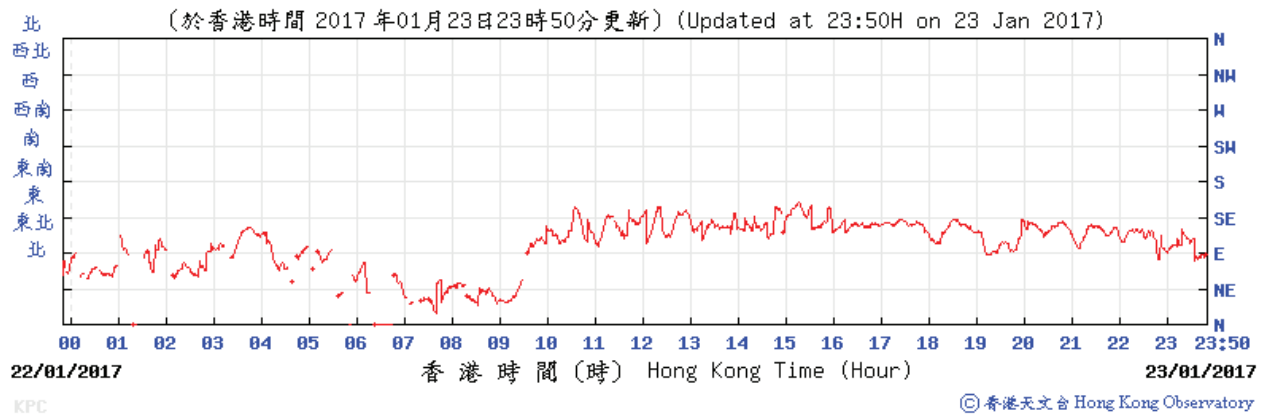


King's Park Weather Station – 23 January 2017

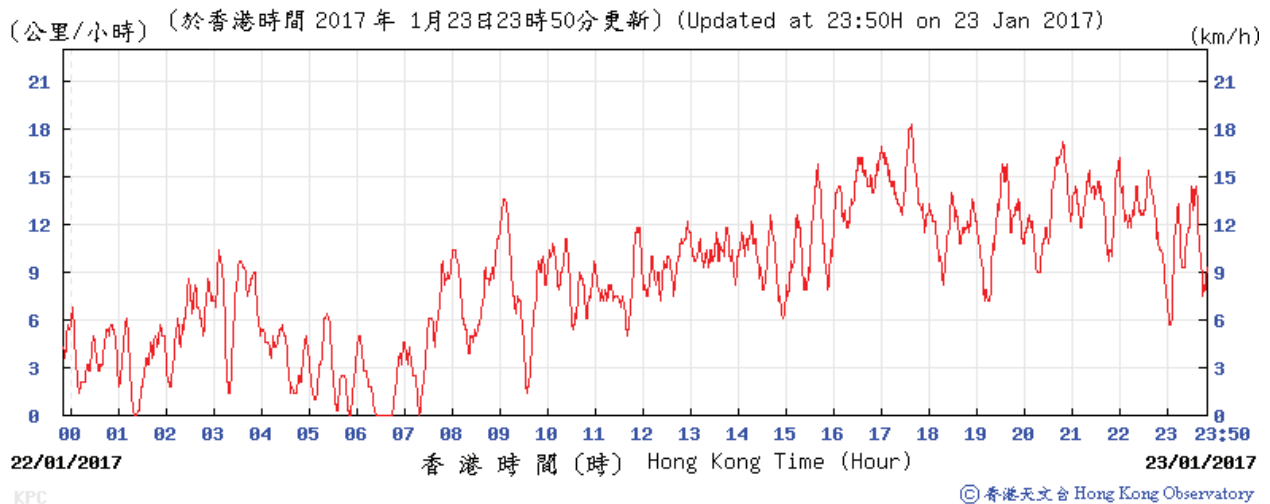
Temperature/Humidity:



Wind Direction:

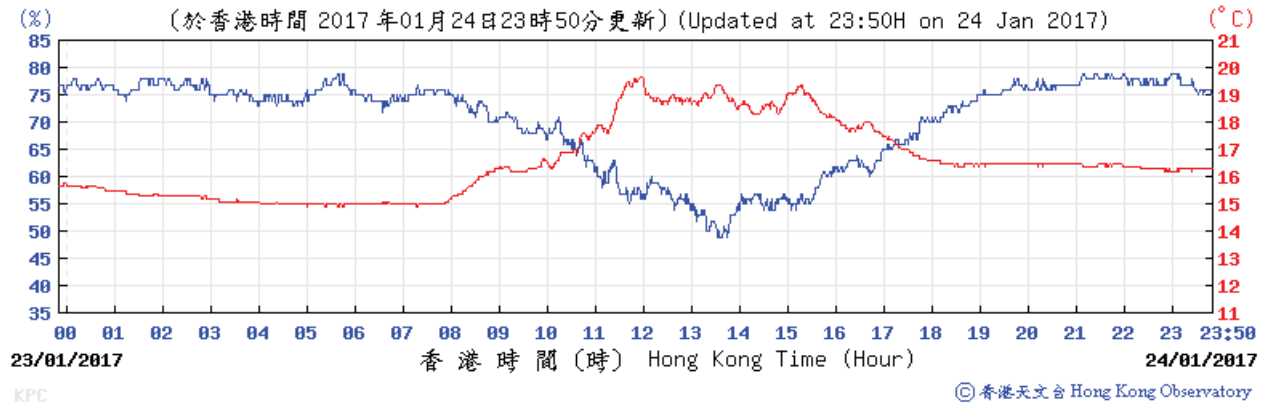


Wind Speed:

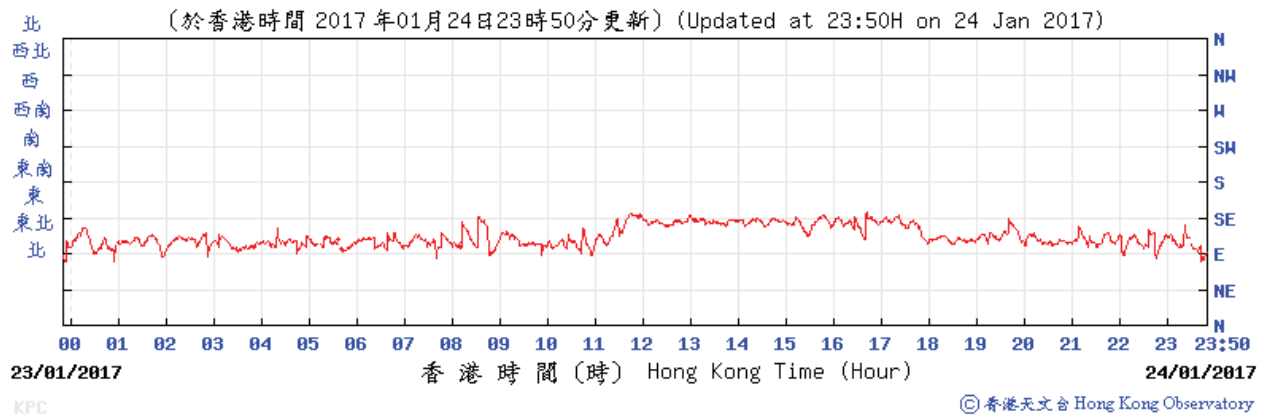


King's Park Weather Station – 24 January 2017

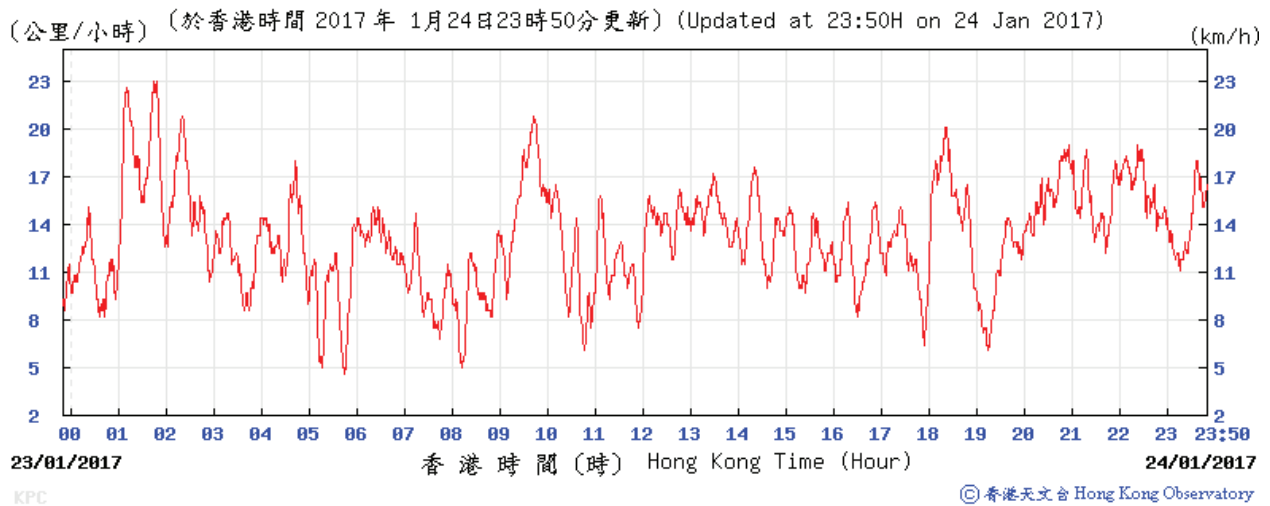
Temperature/Humidity:



Wind Direction:



Wind Speed:

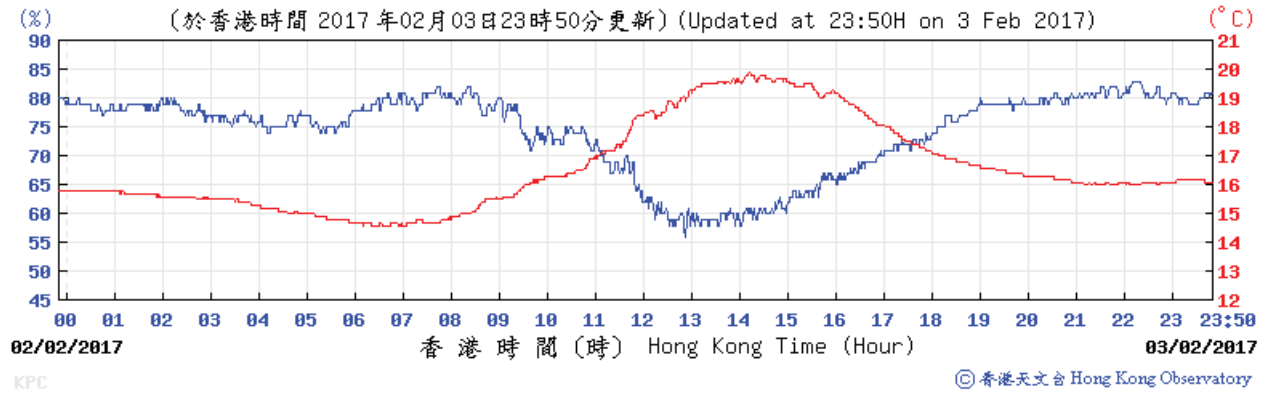


Daily Total Rainfall at King's Park HKO Weather Monitoring Station - February 2017

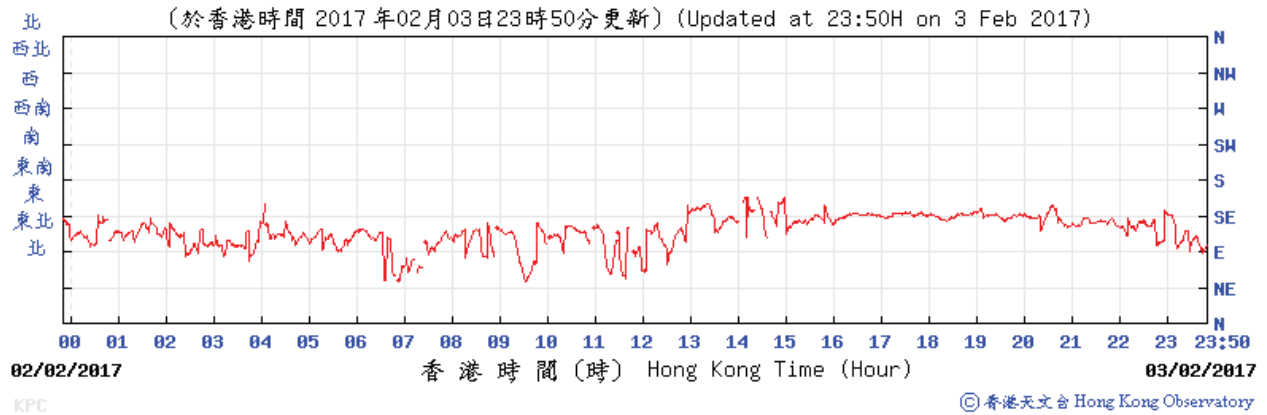
Day	Total Rainfall, mm	24-hr TSP	Noise	Remarks
1	Trace			
2	Trace			
3	0.0	✓	✓	It was cloudy without rainfall on site during noise monitoring.
4	1.6			
5	3.3			
6	Trace	✓		
7	0.0		✓	It was cloudy without rainfall on site during noise monitoring.
8	Trace			
9	Trace			
10	0.0			
11	0.0			
12	0.0			
13	0.0	✓		
14	0.0		✓	It was sunny without rainfall on site during noise monitoring.
15	0.0			
16	0.0			
17	0.0			
18	0.0			
19	0.0			
20	Trace	✓		
21	4.9		✓	It was cloudy without rainfall on site during noise monitoring.
22	8.0			
23	Trace			
24	Trace			
25	0.7			
26	1.4			
27	0.0			
28	0.0			
Mean/Total	19.9			

King's Park Weather Station – 03 February 2017

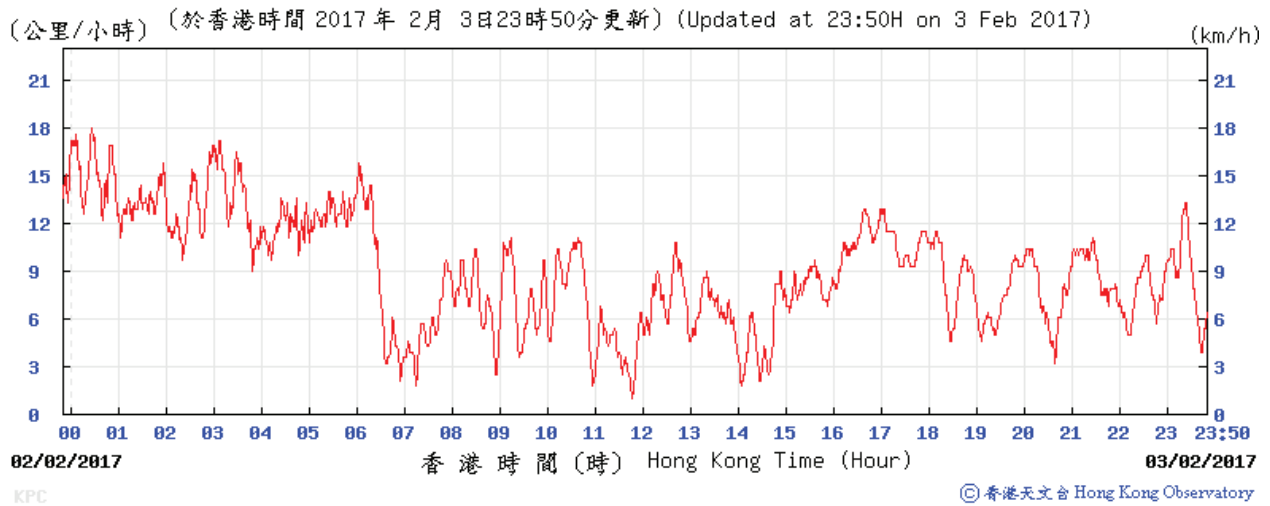
Temperature/Humidity:



Wind Direction:

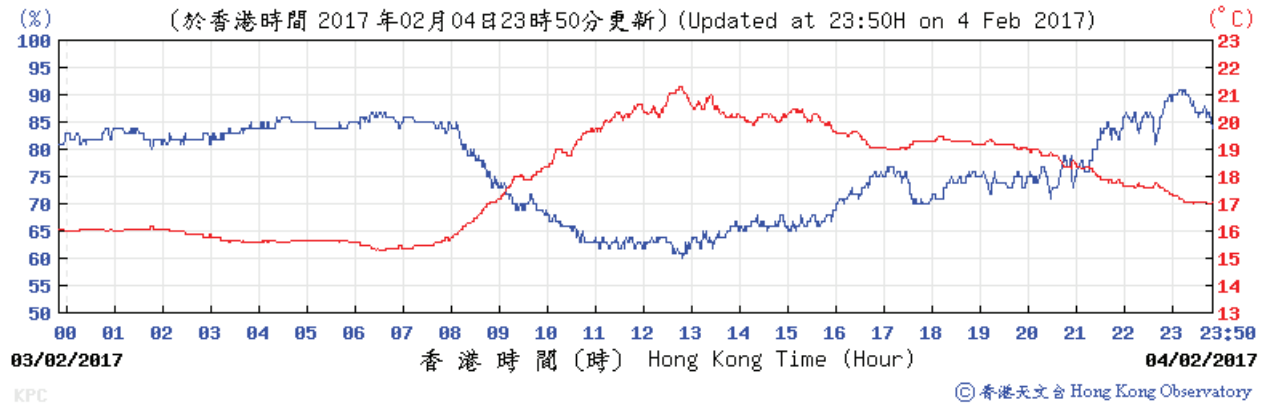


Wind Speed:

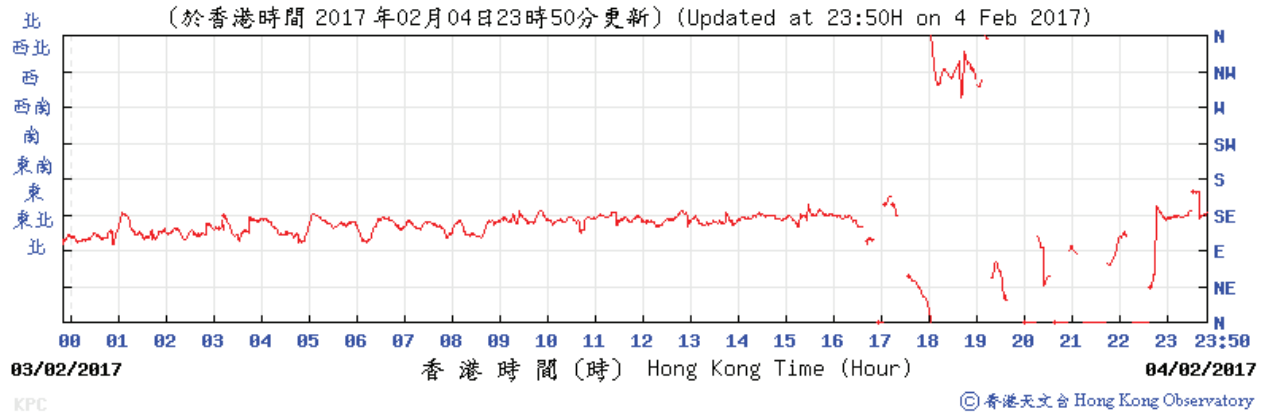


King's Park Weather Station – 04 February 2017

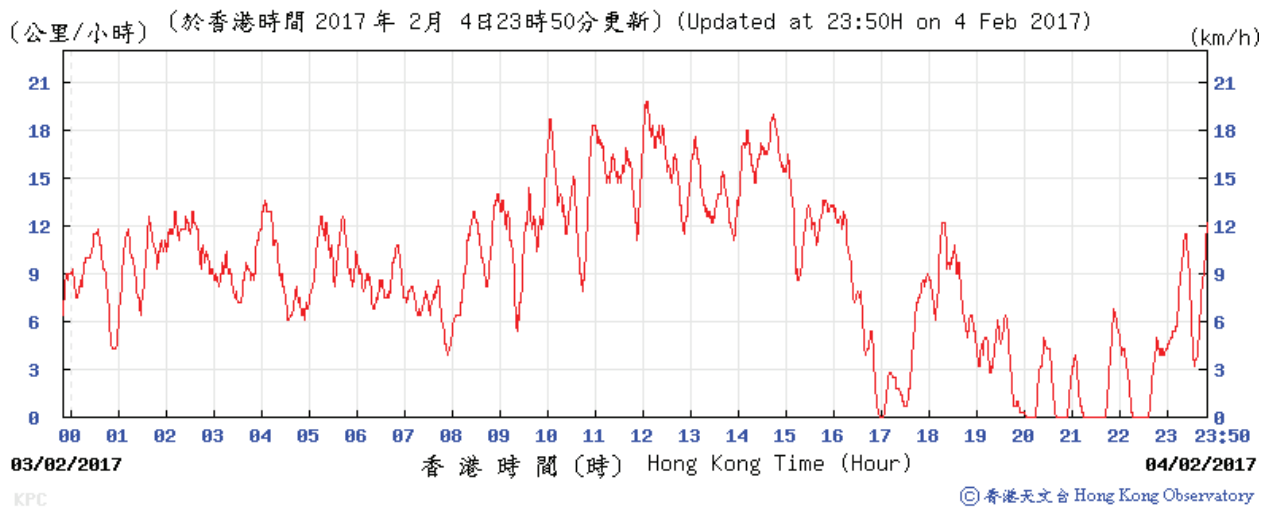
Temperature/Humidity:



Wind Direction:

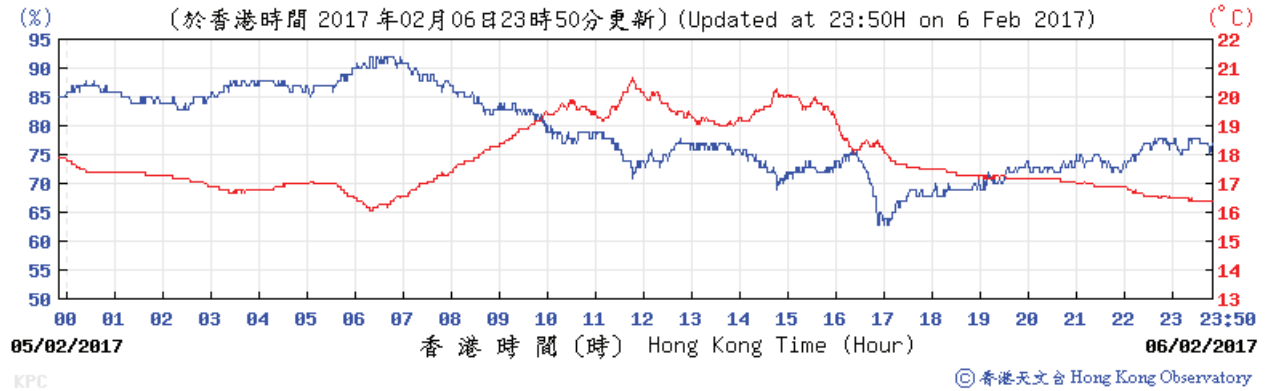


Wind Speed:

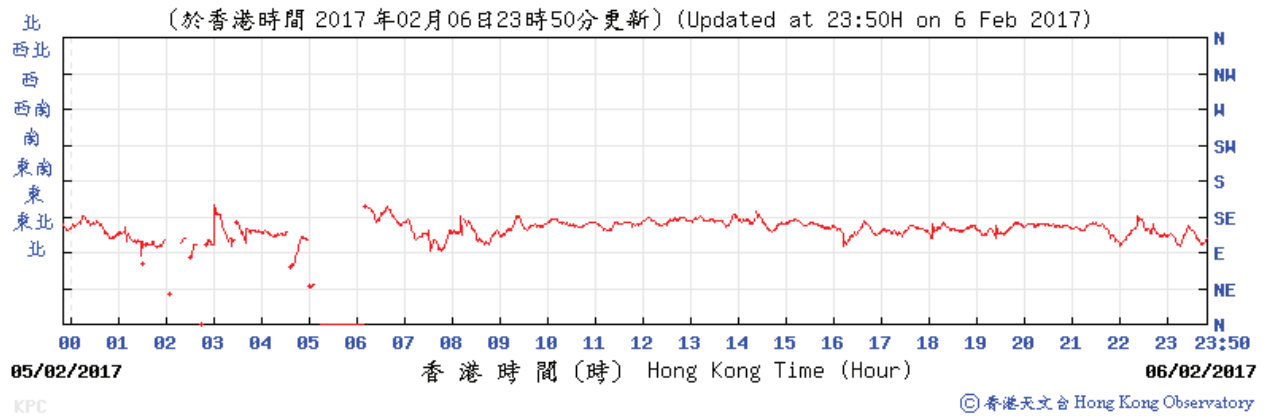


King's Park Weather Station – 06 February 2017

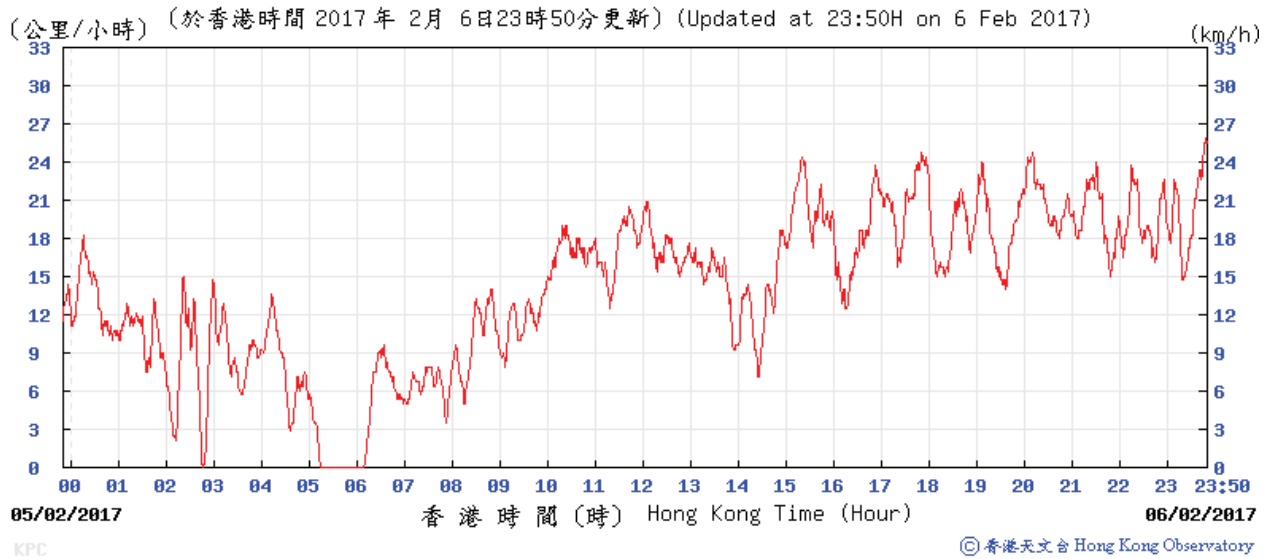
Temperature/Humidity:



Wind Direction:

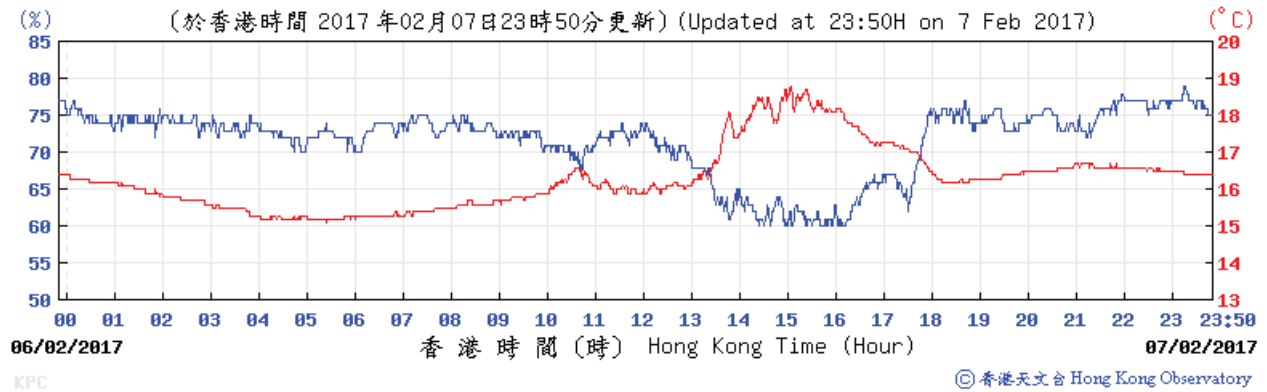


Wind Speed:

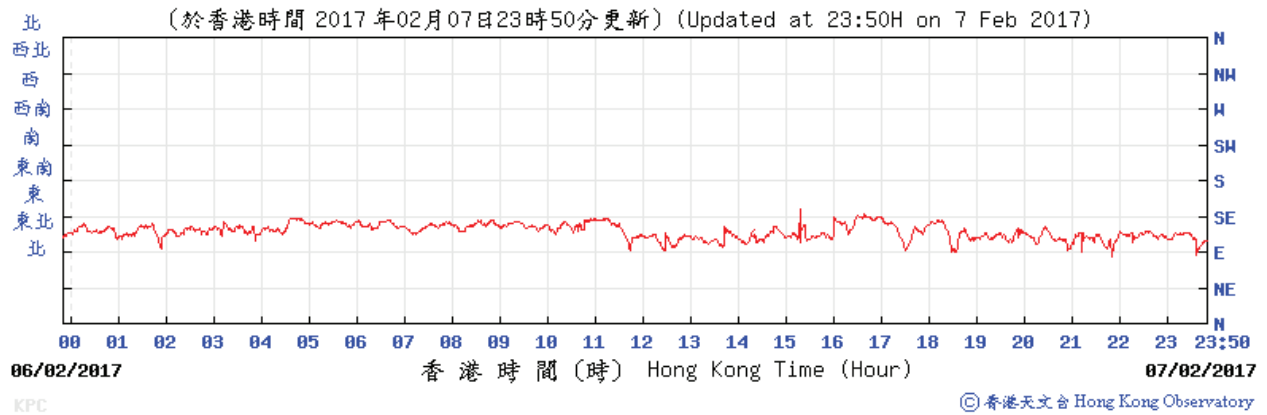


King's Park Weather Station – 07 February 2017

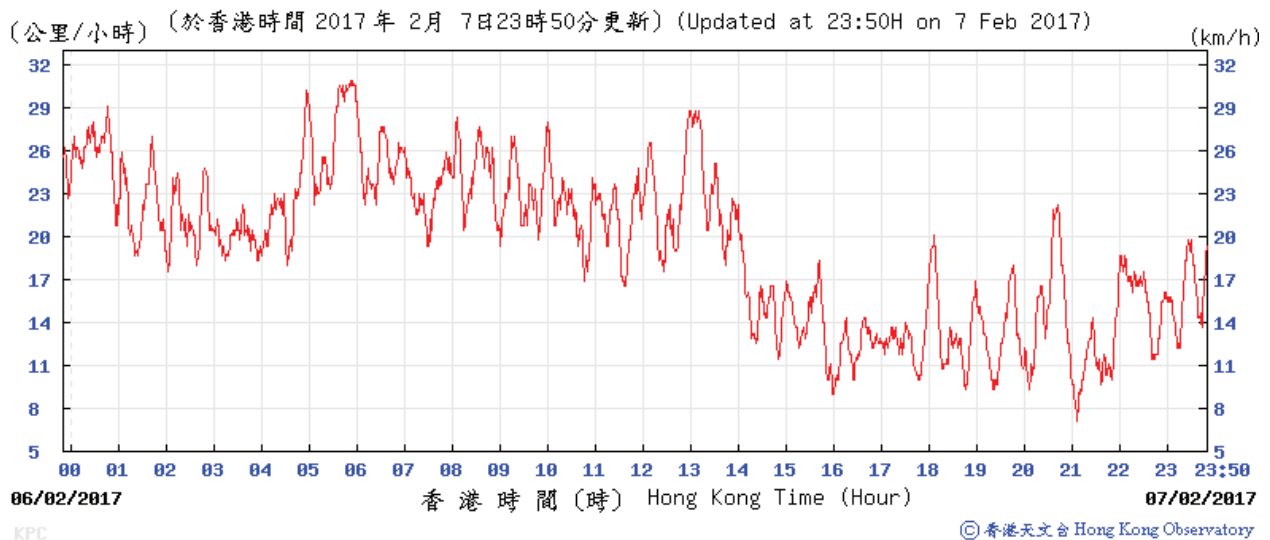
Temperature/Humidity:



Wind Direction:

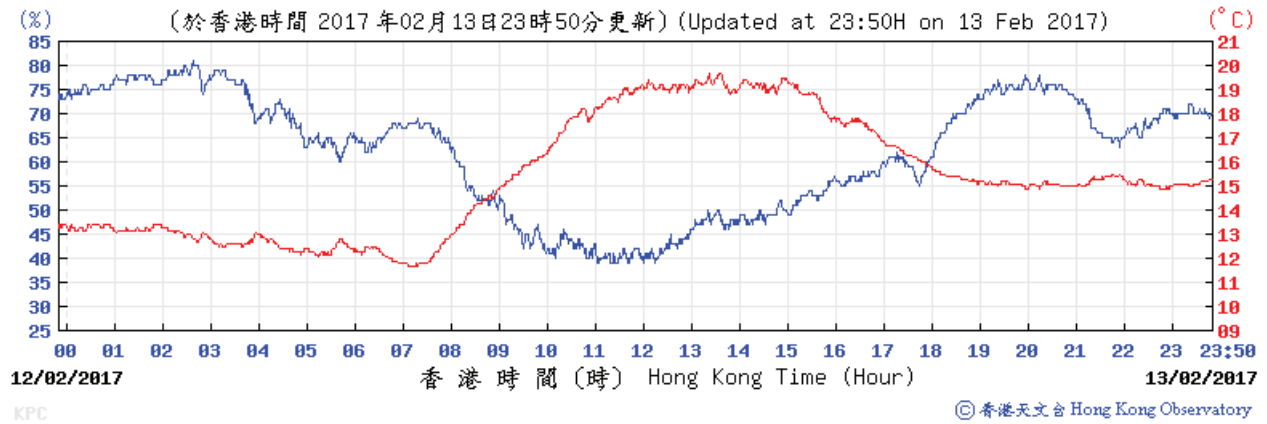


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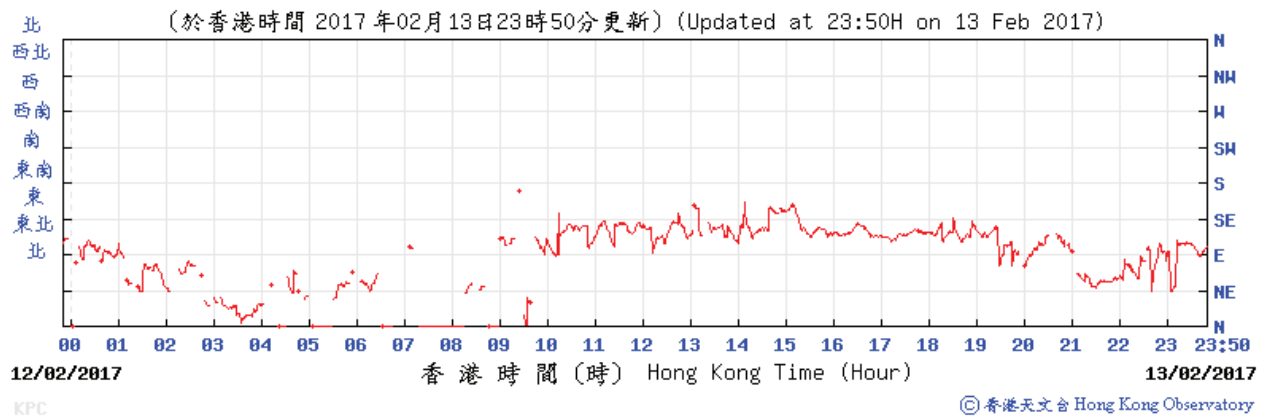


King's Park Weather Station – 13 February 2017

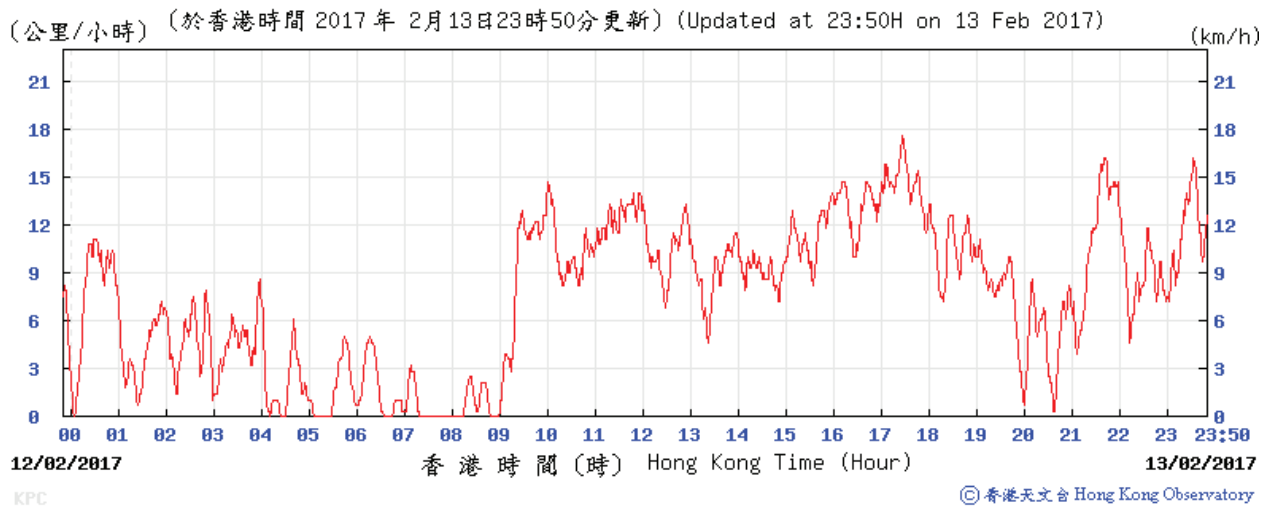
Temperature/Humidity:



Wind Direction:

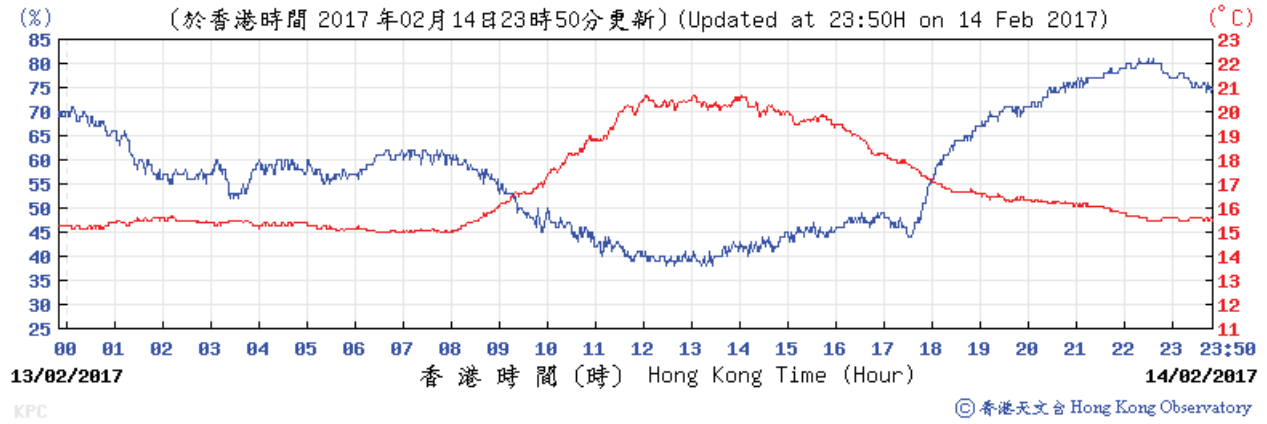


Wind Speed:

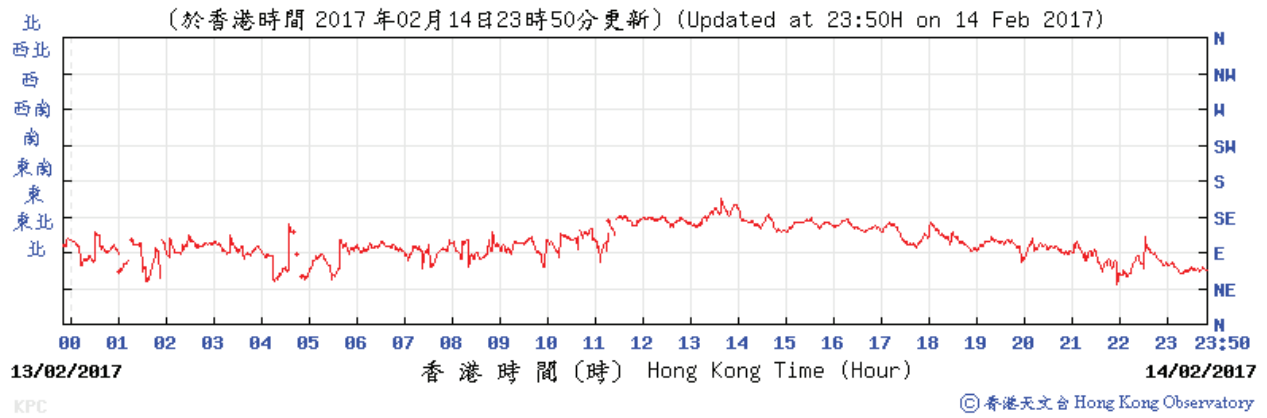


King's Park Weather Station – 14 February 2017

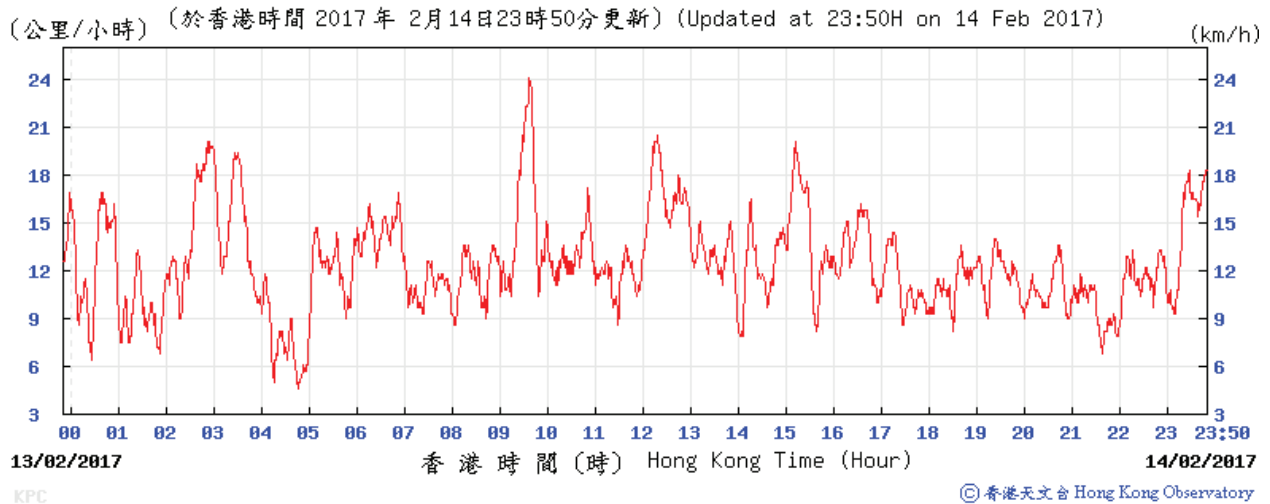
Temperature/Humidity:



Wind Direction:

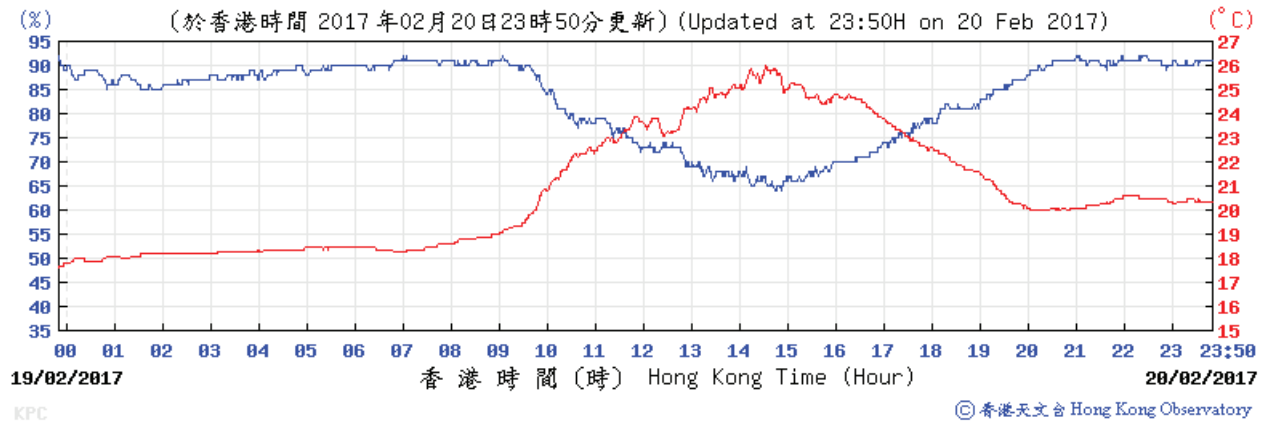


Wind Speed:

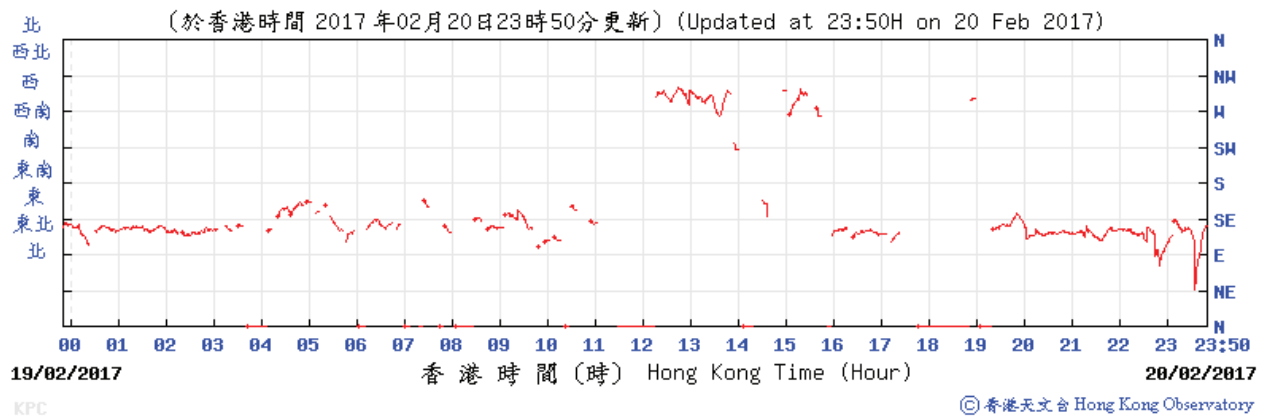


King's Park Weather Station – 20 February 2017

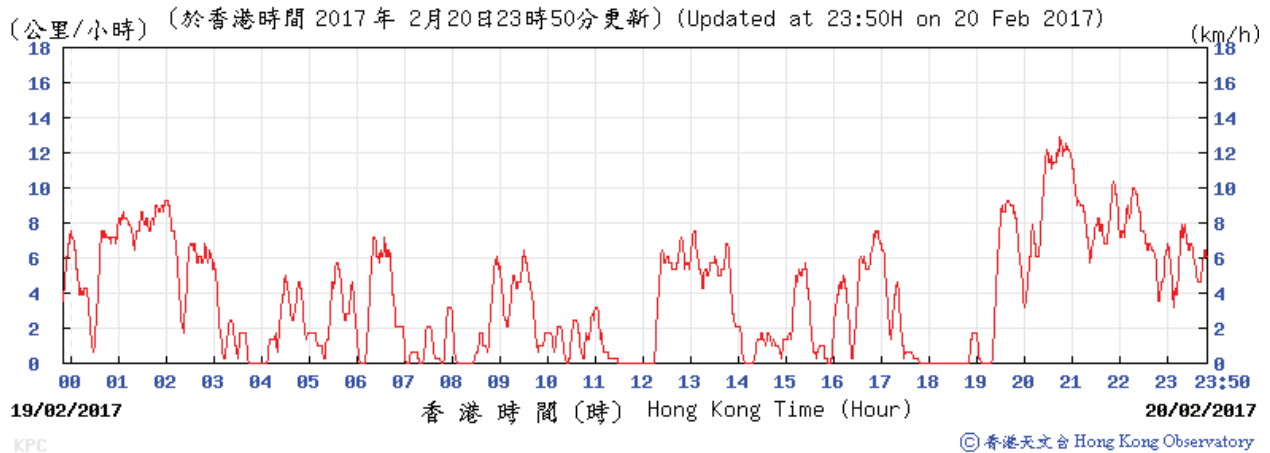
Temperature/Humidity:



Wind Direction:

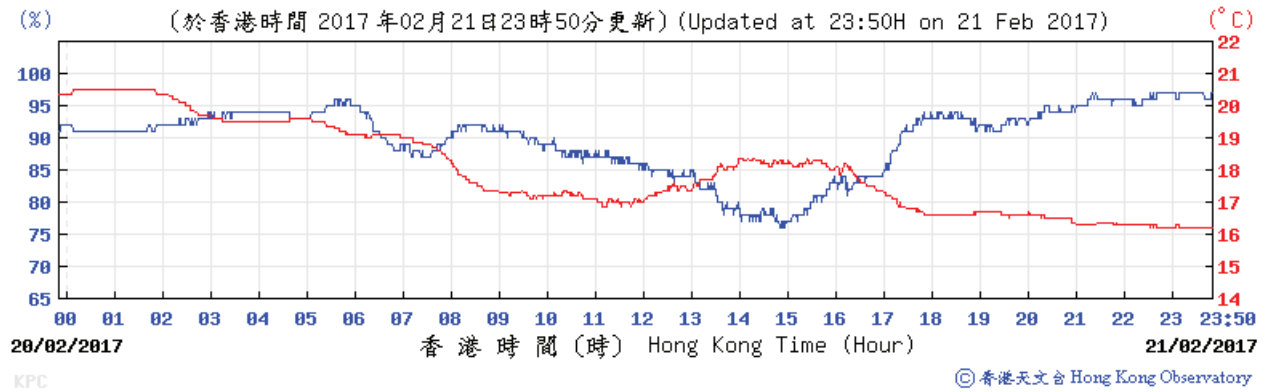


Wind Speed:

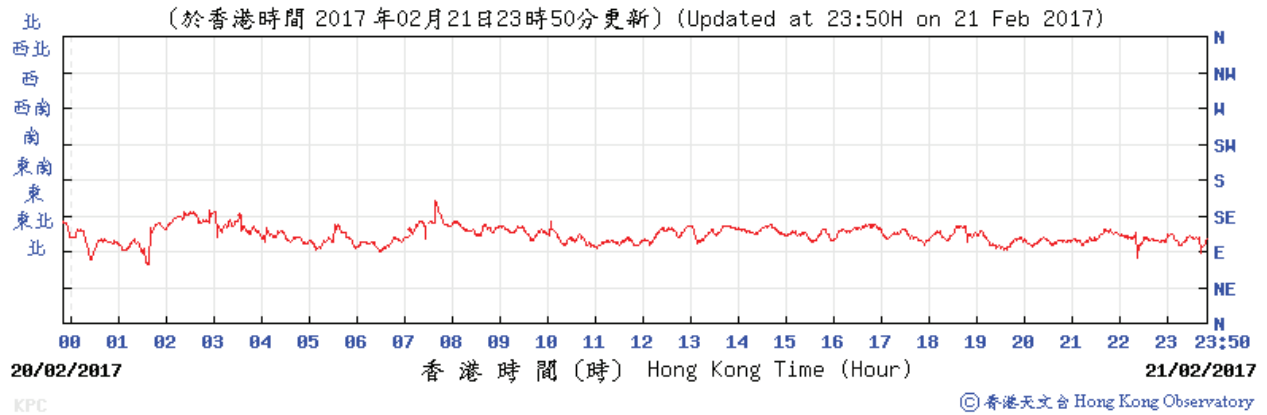


King's Park Weather Station – 21 February 2017

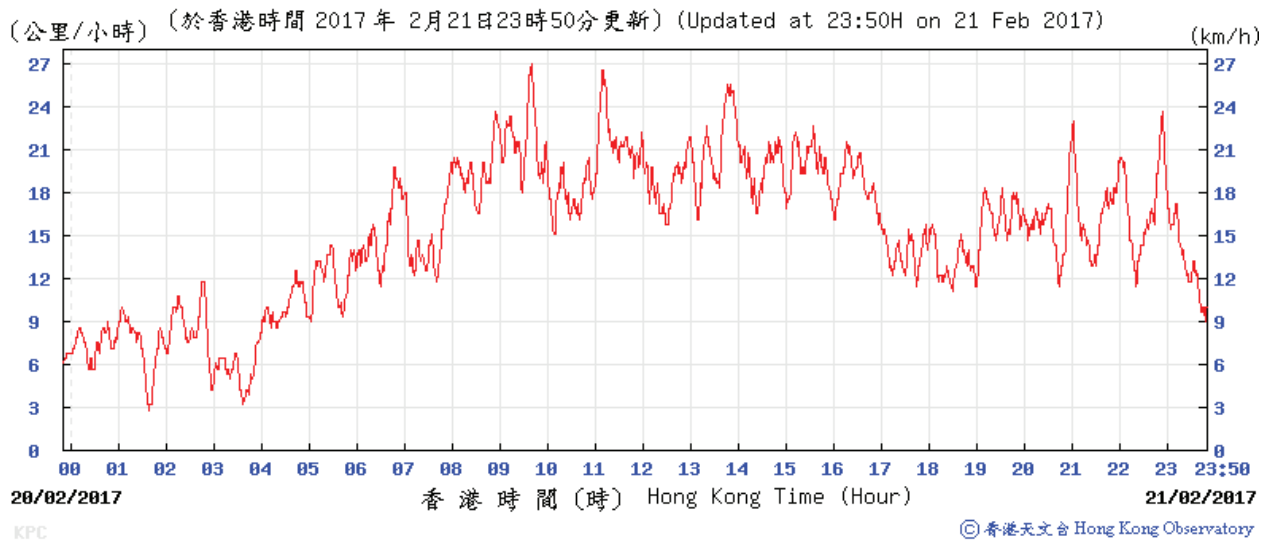
Temperature/Humidity:



Wind Direction:



Wind Speed:



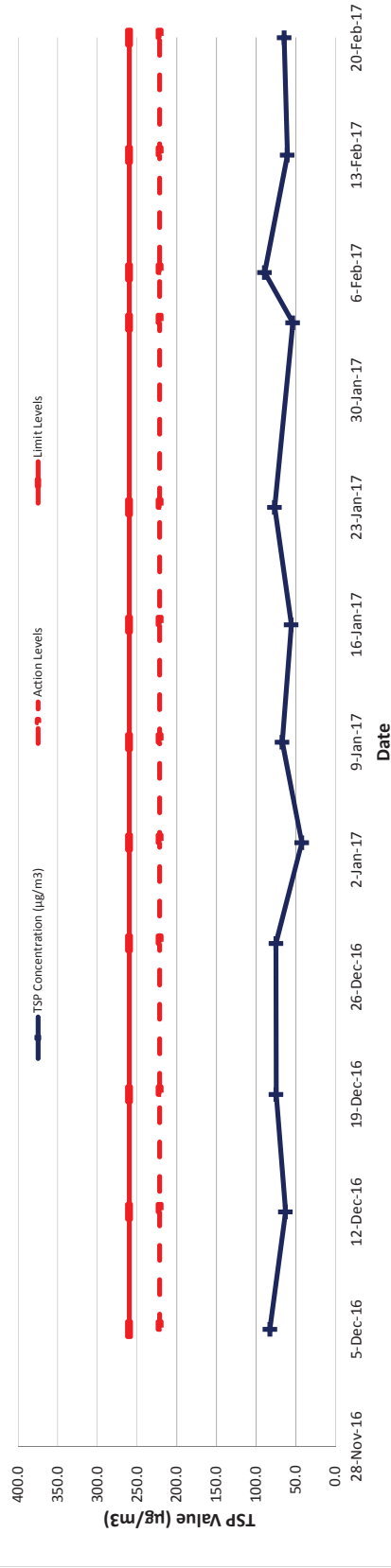
APPENDIX H

MONITORING RESULTS AND PLOTS

Impact Air Quality Monitoring Results : 24-Hour TSP at K11 (Q12: Dec 2016 - Feb 2017)

Location	Monitoring Date	Start Time	Weather Conditions	Temperature	Elapsed Time		Flow Rate (CFM)			Average Flow Rate	TSP Concentration (µg/m3)	Action Levels	Limit Levels
					Initial	Final	Sampling Hours	Initial	Final				
K11 Art Mall	5-Dec-16	8:30	Sunny	25.9	749651	752089	24	34	34	34	82.7	221.6	260
	12-Dec-16	8:30	Sunny	19.0	752089	754498	24	33	36	35	63.0	221.6	260
	19-Dec-16	8:30	Sunny	17.5	754498	756928	24	33	33	33	74.7	221.6	260
	28-Dec-16	13:15	Sunny	15.0	759375	762088	27	33	33	33	75.0	221.6	260
	3-Jan-17	13:30	Sunny	21.5	762088	764537	25	31	34	33	42.4	221.6	260
	9-Jan-17	10:15	Sunny	20.0	764537	766937	24	24	25	25	67.2	221.6	260
	16-Jan-17	8:30	Overcast	15.0	766937	769375	24	34	34	34	55.7	221.6	260
	23-Jan-17	11:15	Sunny	18.5	769375	771776	24	30	31	31	76.6	221.6	260
	3-Feb-17	10:00	Sunny	16.2	771776	774578	28	33	33	33	53.7	221.6	260
	6-Feb-17	15:30	Sunny	20.0	774583	777286	28	31	32	32	89.3	221.6	260
	13-Feb-17	20:00	Sunny	18.0	777286	779724	24	35	36	36	60.6	221.6	260
	20-Feb-17	10:30	Cloudy	23.3	779724	782149	24	36	36	36	64.7	221.6	260

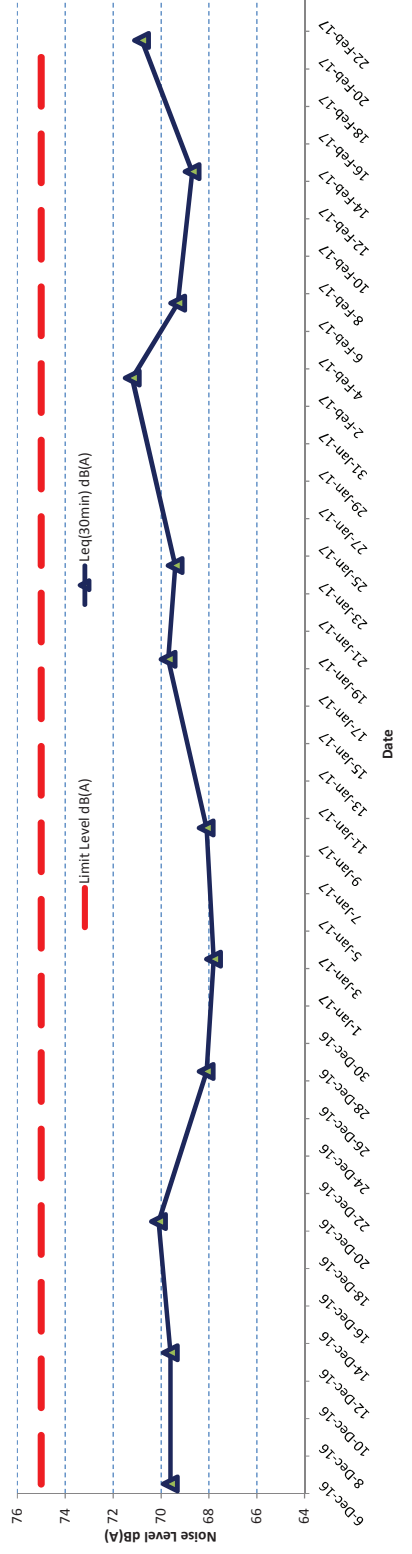
24-Hours TSP Monitoring Results (Q12: Dec 2016 to Feb 2017)



Noise Monitoring Results at K11 (Q12: Dec 2016 - Feb 2017)

Monitoring Locations	Date	Weather Conditions	Wind Speed (m/s)	Start Time	End Time	Background Level dB(A)	Limit Level dB(A)	Leq(30min) dB(A)	L10(30min) dB(A)	L90(30min) dB(A)
K11 Art Mall	6-Dec-16	Sunny	0.1	13:00	13:30	65.3	75	69.6	71.5	64.0
	13-Dec-16	Overcast	0.3	10:18	10:48	65.3	75	69.6	70.5	68.0
	20-Dec-16	Sunny	2.2	14:31	15:01	65.3	75	70.1	71.5	68.0
	28-Dec-16	Cloudy	1.8	13:12	13:42	65.3	75	68.1	70.0	64.5
K11 Art Mall	3-Jan-17	Sunny	3.6	13:14	13:44	65.3	75	67.8	69.0	66.0
	10-Jan-17	Sunny	4.2	10:27	10:57	65.3	75	68.1	70.0	65.0
	19-Jan-17	Sunny	0.1	10:35	11:05	65.3	75	69.7	71.5	67.0
	24-Jan-17	Sunny	0.1	10:44	11:14	65.3	75	69.4	71.0	66.5
K11 Art Mall	3-Feb-17	Cloudy	2.9	10:03	10:33	65.3	75	71.2	72.5	68.0
	7-Feb-17	Cloudy	4.2	13:06	13:36	65.3	75	69.3	70.0	67.5
	14-Feb-17	Sunny	1.4	13:04	13:34	65.3	75	68.7	70.5	65.0
	21-Feb-17	Cloudy	4.6	10:44	11:14	65.3	75	70.8	72.0	69.0

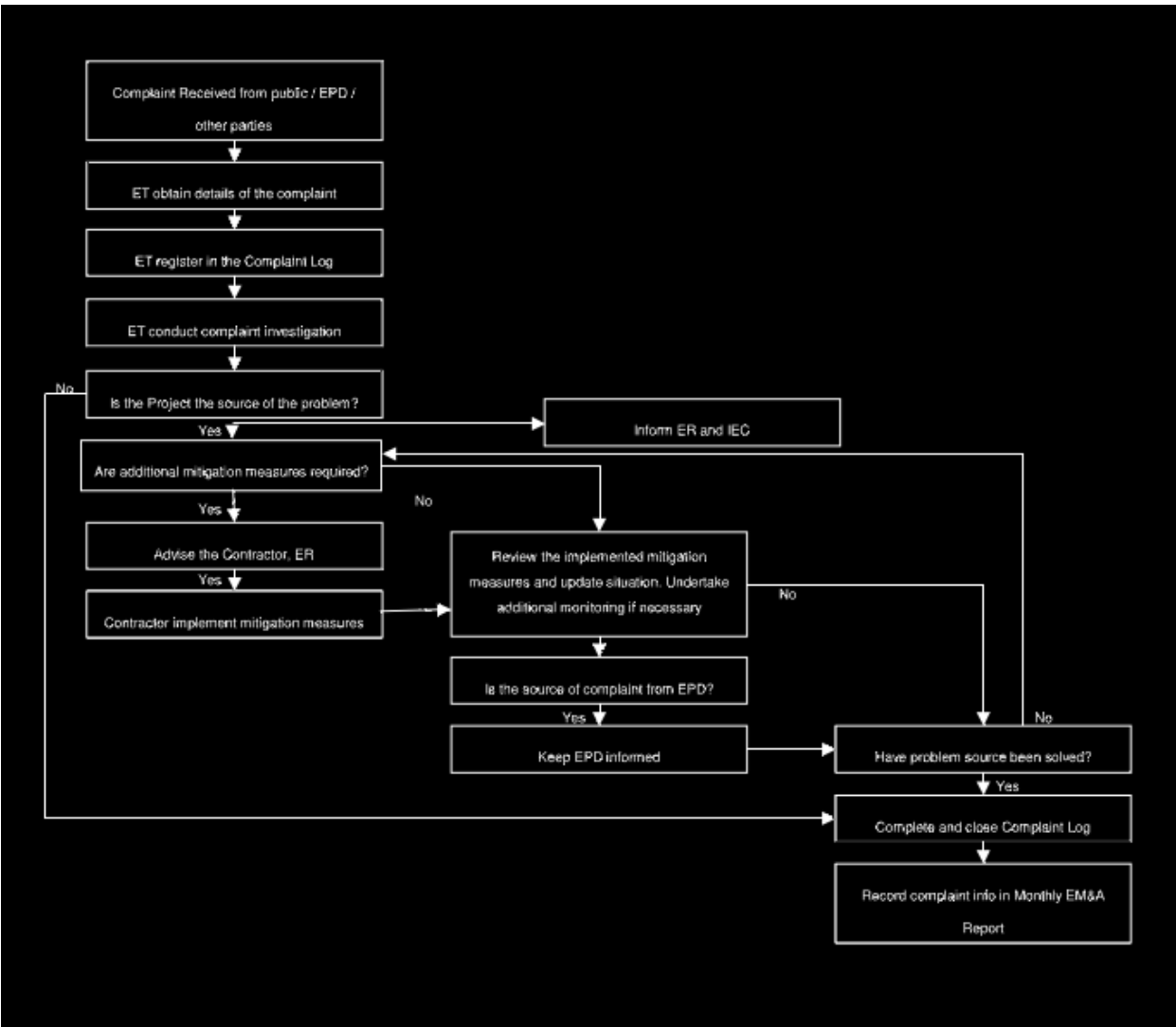
Noise Monitoring Results (Q12: December 2016 - February 2017)



APPENDIX I

FLOW CHART FOR HANDLING ENVIRONMENTAL COMPLAINTS

Complaint Response Procedure



APPENDIX J

WASTE MANAGEMENT RECORDS

Appendix J Monthly Summary Waste Flow Table for 2016 (year)

Contract No: C3840-13C Tsim Sha Tsui Station Carnarvon Road Subway
Date Reported: 2-December-2016

Month	Actual Quantities of Inert C&D Materials Generated Monthly					Actual Quantities of Non-inert C&D Wastes Generated Monthly						
	Total Quantity Generated (in '000m ³)	Hard Rocks and Large Broken Concrete (See Note 3)	Reused in the Contract (in '000m ³)	Reused in other Projects (in '000m ³)	Disposed as Public Fill (in '000m ³)	Imported Fill (in '000m ³)	Metals (in '000kg)	Paper/ cardboard packaging (in '000kg)	Plastics (in '000kg) (see Note 2)	Chemical Waste (in '000kg)	Others, e.g. general refuse (in '000m ³ /tonne)	
Carried from Project Start	2.5295	-	-	-	2.5295	-	-	-	-	-	0.0202	
Jan	0.1751	-	-	-	0.1751	-	-	-	-	-	0.0036	
Feb	0.0326	-	-	-	0.0326	-	-	-	-	-	0.0029	
Mar	0.0932	-	-	-	0.0932	-	-	-	-	-	0.0023	
Apr	0.0786	-	-	-	0.0786	-	-	-	-	-	0.0000	
May	0.1061	-	-	-	0.1061	-	-	-	-	-	0.0033	
June	0.0411	-	-	-	0.0411	-	-	-	-	-	0.0000	
Sub-total	0.5267	-	-	-	0.5267	-	-	-	-	-	0.0121	
July	0.0951	-	-	-	0.0951	-	-	-	-	-	0.0010	
Aug	0.1478	-	-	-	0.1478	-	-	-	-	-	0.0000	
Sept	0.0427	-	-	-	0.0427	-	-	-	-	-	0.0007	
Oct	0.1806	-	-	-	0.1806	-	-	-	-	-	0.0000	
Nov	0.6856	-	-	-	0.6856	-	-	-	-	-	0.0021	
Dec	-	-	-	-	-	-	-	-	-	-	-	
Total	1.6785	-	-	-	1.6785	-	-	-	-	-	0.0159	
Acc. Total	4.2080	(accumulated quantity of the project = carried amount + this year amount)										0.0361

Notes:

- (1) The performance targets are given below:
 - All excavated materials to be sorted for recovering the inert portion of C&D materials, e.g. hard rocks, soil and broken concrete, for reuse on the Site or disposal to designated outlets;
 - All metallic waste to be recovered for collection by recycling contractors;
 - All cardboard and paper packaging (for plant, equipment and materials) to be recovered, properly stockpiled in dry and covered condition to prevent cross contamination;
 - All chemical wastes to be collected and properly disposed of by specialist contractors; and
 - All demolition debris to be stored to recover broken concrete, reinforcement bars, mechanical and electrical fittings, hardware as well as other fitting / materials that have established recycling outlets.
- (2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.
- (3) Broken concrete for recycling into aggregates.
- (4) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.

Monthly Summary Waste Flow Table for 2017 (year)

Contract No: C3840-13C Tsim Sha Tsui Station Carnarvon Road Subway
Date Reported: 2-March-2017

Month	Actual Quantities of Inert C&D Materials Generated Monthly				Actual Quantities of Non-inert C&D Wastes Generated Monthly						
	Total Quantity Generated (in '000m ³)	Hard Rocks and Large Broken Concrete (See Note 3)	Reused in the Contract (in '000m ³)	Reused in other Projects (in '000m ³)	Disposed as Public Fill (in '000m ³)	Imported Fill (in '000m ³)	Metals (in '000kg)	Paper/ cardboard packaging (in '000kg)	Plastics (in '000kg) (see Note 2)	Chemical Waste (in '000kg)	Others, e.g. general refuse (in '000m ³ /tonne)
Carried from Project Start	4.9473	-	-	-	4.9473	-	-	-	-	-	0.0387
Jan	0.6189	-	-	-	0.6189	-	-	-	-	-	0.0017
Feb	0.9219	-	-	-	0.9219	-	-	-	-	-	0.0021
Mar	-	-	-	-	-	-	-	-	-	-	-
Apr	-	-	-	-	-	-	-	-	-	-	-
May	-	-	-	-	-	-	-	-	-	-	-
June	-	-	-	-	-	-	-	-	-	-	-
Sub-total	1.5408	-	-	-	1.5408	-	-	-	-	-	0.0038
July	-	-	-	-	-	-	-	-	-	-	-
Aug	-	-	-	-	-	-	-	-	-	-	-
Sept	-	-	-	-	-	-	-	-	-	-	-
Oct	-	-	-	-	-	-	-	-	-	-	-
Nov	-	-	-	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	-	-	-
Total	1.5408	-	-	-	1.5408	-	-	-	-	-	0.0038
Acc. Total	6.4881	(accumulated quantity of the project = carried amount + this year amount)									

Notes:

- (1) The performance targets are given below:
 - All excavated materials to be sorted for recovering the inert portion of C&D materials, e.g. hard rocks, soil and broken concrete, for reuse on the Site or disposal to designated outlets;
 - All metallic waste to be recovered for collection by recycling contractors;
 - All cardboard and paper packaging (for plant, equipment and materials) to be recovered, properly stockpiled in dry and covered condition to prevent cross contamination;
 - All chemical wastes to be collected and properly disposed of by specialist contractors; and
 - All demolition debris to be stored to recover broken concrete, reinforcement bars, mechanical and electrical fittings, hardware as well as other fitting / materials that have established recycling outlets.
- (2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.
- (3) Broken concrete for recycling into aggregates.
- (4) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.