



Maeda Corporation

MTRCL Contract C3840-13C Tsim Sha Tsui  
Station Carnarvon Road Subway and Entrances  
Modification Works

Quarterly EM&A Report (March to May 2014)

---

Hyder Consulting Limited  
Company Number 126012  
47th Floor, Hopewell Centre  
183 Queen's Road East  
Wanchai  
Hong Kong

Tel: +852 2911 2233

Fax: +852 2805 5028

hyder.hk@hyderconsulting.com  
www.hyderconsulting.com



**MAEDA**

## Maeda Corporation

# MTRCL Contract C3840-13C Tsim Sha Tsui Station Carnarvon Road Subway and Entrances Modification Works

## Quarterly EM&A Report (March to May 2014)

**Author** Kelvin Chiang

Handwritten signature of Kelvin Chiang in blue ink, positioned above a horizontal line.

**Checker** F.N. Wong

Handwritten signature of F.N. Wong in blue ink, positioned above a horizontal line.

**Approver** John Berry

Handwritten signature of John Berry in blue ink, positioned above a horizontal line.

**Report No** EB001340R0062

**Date** 18 July 2014

This Quarterly EM&A Report is prepared for Maeda Corporation in accordance with the terms and conditions of appointment dated 30 October 2013. Hyder Consulting Limited (Company Number 126012) cannot accept any responsibility for any use of or reliance on the contents of this report by any third party.



15 August 2014

By Email and Post

MTR Corporation Limited  
Fo Tan Railway House  
No. 9, Lok King Street, Fo Tan  
Shatin, N.T., Hong Kong

Your reference:

Our reference: 40032976/431638

Attention: Mr. Kenneth Chow / Environmental  
Engineer II

Dear Sir,

**Consultancy Agreement A130-13  
Independent Environmental Checker for CRS and LTS  
CRS - Verification for First Quarterly Environmental Monitoring and  
Audit (EM&A) Report (March to May 2014) (Report No.: EB001340R0062)**

---

We refer to the First Quarterly EM&A Report (March to May 2014) received under cover of the email from the Environmental Team, Hyder Consulting Limited (HCL), dated on 11 August 2014.

Further to our comments provided on 14 August 2014 and subsequent revision of the Report by HCL on 14 August 2014, we have no comment and have verified the captioned report (Report No.: EB001340R0062).

Should you have any queries, please feel free to contact the undersigned at 2410 3750 or our Mr. Thomas Wong at 2410 3795.

Yours faithfully  
**URS Hong Kong Ltd**

Thomas Wong  
Deputy Independent Environmental Checker

TWKW/wwsc

cc. via email  
Hyder Consulting Limited (Attn.: Mr. F. N. Wong)  
Maeda Corporation (Attn.: Ms. Cecilia Lee)

URS Hong Kong Ltd  
優斯(香港)有限公司  
38th Floor, Metroplaza Tower 1  
223 Hing Fong Road, Kwai Fong, Hong Kong  
Tel: +852 2428 8866 Fax: +852 2428 9922  
email: hk.info@urs.com  
[www.urs.com](http://www.urs.com)



ISO 9001 : 2008  
Certificate No.: CC 213

# CONTENTS

---

EXECUTIVE SUMMARY.....	1
1. INTRODUCTION.....	2
1.1 Reporting Period.....	2
1.2 Project Background.....	2
1.3 Environmental Status.....	2
1.4 Construction Activities.....	3
2. EM&A REQUIREMENTS.....	4
2.1 Baseline Monitoring.....	4
2.2 Air Quality.....	4
2.3 Construction Noise.....	5
3. MONITORING RESULTS.....	7
3.1 Air Quality.....	7
3.2 Construction Noise.....	8
3.3 Conclusions and Recommendations.....	9
4. ENVIRONMENTAL AUDIT.....	10
4.1 Site Inspection.....	10
4.2 Compliance with Legal/ Contractual Requirements.....	11
4.3 Environmental Complaints.....	11
4.4 Notification of Summons/Successful Prosecutions.....	12
5. WASTE MANAGEMENT.....	12
5.1 Waste Management.....	12
5.2 Waste Management Record.....	12
6. COMMENTS AND RECOMMENDATIONS.....	13
6.1 Comments.....	13
6.2 Recommendations.....	13



## TABLES

---

Table 1-3-1	Summary of Status of Environmental Licenses and Permits
Table 1-4-1	Construction Activities Undertaken during the Reporting Period
Table 2-2-1	Derivation of Action and Limit Levels for Air Quality at K11, $\mu\text{g}/\text{m}^3$
Table 2-2-2	Action & Limit Levels for Air Quality at K11, $\mu\text{g}/\text{m}^3$
Table 2-3-1	Noise Monitoring Parameters and Frequency
Table 2-3-2	Action and Limit Levels for Construction Noise
Table 3-1-1	Summary of 24-Hr TSP Monitoring Results, $\mu\text{g}/\text{m}^3$
Table 3-2-1	Summary of Construction Noise Monitoring Results at K11, dB(A)
Table 4-1-1	Summary of Findings and Follow-Up Actions of the Site Inspection
Table 4-2-1	Summary of Breaches of Legal and Contractual Requirements
Table 4-3-1	Summary of Complaint
Table 4-4-1	Summary of Summon and Successful Prosecutions

## APPENDICES

---

Appendix A	Site Location Plan
Appendix B	Management Structure
Appendix C	Construction Programme
Appendix D	Implementation Schedule
Appendix E	Status of Environmental Licenses and Permits
Appendix F	Event and Action Plan
Appendix G	Weather Information Extracted from HK Observatory
Appendix H	Monitoring Results and Plots
Appendix I	Flow Chart for Handling Environmental Complaints
Appendix J	Waste Management Records

# EXECUTIVE SUMMARY

## Key Issues (Reporting Period)

### Breaches of Action and Limit Levels

- ES01 No Notice of Exceedance 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 corrective actions were required as the environmental audit during the Reporting Period observed:
1. No deficiencies with major environmental significance of the required environmental mitigation measures;
  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 complaints were recorded during the Reporting Period.

### Notification of Summons and 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 of Appendix D, is recommended. Proper maintenance and improvement of the implemented mitigation measures are reminded, when necessary.

### Air quality

- ES07 Construction dust is considered to be one of the key issues in the coming construction period, in particular during dusty activities under dry and windy conditions.
- ES08 Where appropriate, 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, etc., are reminded.

### Construction Noise

- ES09 Construction noise is another key issue in the coming construction period. Working method, equipment and noise mitigation should be regularly reviewed to ensure compliance with statutory and non-statutory requirements and guidelines.

### Water Quality

- ES10 Extra attention is drawn to the compliance of water quality mitigation measures, particularly for the upcoming rainy season.

# 1. INTRODUCTION

## 1.1 Reporting Period

- 1.1.1 This is the 1<sup>st</sup> quarterly EM&A report (hereinafter referred as 'This Report') covering construction period from 1<sup>st</sup> March to 31<sup>st</sup> May 2014 (hereinafter referred as 'the Reporting Period').
- 1.1.2 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 Project Background

- 1.2.1 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 tentative programme for the Project is approximately 25 months, scheduled to be commenced in March 2014.
- 1.2.2 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.
- 1.2.3 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**.
- 1.2.4 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**.
- 1.2.5 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.

## 1.3 Environmental Status

- 1.3.1 As required in the EP, URS Hong Kong Ltd has been appointed as the Independent Environmental Checker under the Project (hereinafter referred as 'the IEC'), whereas Hyder Consulting Limited has been appointed as the Environmental Team under the Project (hereinafter referred as 'the ET').



1.3.2 A dedicated web site ([www.mtrema-crs.com](http://www.mtrema-crs.com)) of the Project has been set up within six weeks after the commencement of construction of the Project, and was operated following the requirements stated in the EP Condition 4.2 and 4.3 within the Reporting Period.

1.3.3 Status of relevant environmental permits, licences, and/or notifications on environmental protection for the Project is summarized in **Table 1-3-1**. Details of the status are presented 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. 365953 acknowledged on 21 Oct 2013.
2	Water Pollution Control Ordinance (Discharge License)	Water Discharge Licence Ref. WT00018229-2014 granted on 4 Mar 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

## 1.4 Construction Activities

1.4.1 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
<b><u>Construction Activities Undertaken during the Reporting Period</u></b>	
1.	Excavation of the trial trench and pit for the exposure of the existing UUs, left in sheet-piles, cables and gas main.
2.	Erection of flood gate inside Entrance D1.
3.	Erection of site hoarding.
4.	Installation of the noise insulation mat to the site hoarding.
5.	Commencement of the demolition of Entrance D1, including construction of the working platform and the removal of Entrance D1 cladding.
6.	Excavation and exposure of the existing unidentified utility (UU) at south side.
7.	Erection of site hoarding.
8.	Installation of the noise insulation mat to the site hoarding.
9.	Demolition of Entrance D1 above ground level
10.	Excavation and exposure of the utility at the southern footpath.
11.	Pipe piling for the excavation lateral support.

## 2. EM&A REQUIREMENTS

### 2.1 Baseline Monitoring

2.1.1 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.

2.1.2 Action and Limit Levels of the relevant parameters at the monitoring location were derived from the baseline monitoring results and were adopted for impact environmental monitoring during the construction period of the Project.

### 2.2 Air Quality Monitoring Parameters and Frequency

2.2.1 24-Hour Total Suspended Particulates (hereinafter referred as '24-Hr TSP') is required to be monitored once a week during construction period of the Project.

2.2.2 1-Hour Total Suspended Particulates (hereinafter referred as '1-Hr TSP') is required to be monitored when exceedances of 24-Hr TSP were recorded, following the Event and Action Plan presented in **Appendix F**.

#### Action and Limit Levels

2.2.3 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 summarised in **Table 2-2-1** as follows:

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

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

**Table 2-2-2 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

2.2.5 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

2.2.6 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
- f) Provision of tarpaulin covering for any dusty materials on a vehicle leaving the site.

2.2.7 Details of the implementation schedule for the required environmental mitigation measures are presented in **Appendix D**.

## 2.3 Construction Noise

### Monitoring Parameters and Frequency

2.3.1 **Table 2-3-1** summarizes the monitoring parameters and frequency for construction noise.

**Table 2-3-1 Noise Monitoring Parameters and Frequency**

Parameters	Frequency
$L_{eq}$ in 30 minutes	Once a week

2.3.2 Monitoring schedules for 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.

### Action and Limit Levels

2.3.3 The Action and Limit levels (hereinafter referred as 'the A/L Levels) at K11 have been established in the **Baseline Monitoring Report**. They are summarised in **Table 2-3-2** as follows:

**Table 2-3-2 Action and Limit Levels for Construction Noise**

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

*Note: \*70 dB(A) for schools and 65 dB(A) during school examination periods. If works are to be carried out during restricted hours, the conditions stipulated in the Construction Noise Permit (CNP) issued by the Noise Control Authority have to be followed.*

### Event and Action Plan

2.3.4 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

2.3.5 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 minimise 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;
- i) Material stockpiles and other structures shall be effectively utilized as noise barriers, whenever practicable; and
- j) Enclosure of Entrance D1 with acoustic mat during demolition.

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

### 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, ug/m<sup>3</sup>**

Monitoring Date	24-Hr TSP	A/L Levels	
4-Mar-14	115.4		
11-Mar-14	114.8		
17-Mar-14	87.7		
24-Mar-14	81.4		
4-Apr-14	141.1		
8-Apr-14	37.2		
10-Apr-14	48.6		
15-Apr-14	97.7		
24-Apr-14	98.1	<b>Action Level: 222</b>	<b>Limit Level: 260</b>
24-Apr-14	62.7		
28-Apr-14	141.1		
7-May-14	41.6		
13-May-14	42.4		
20-May-14	34.4		
27-May-14	35.4		
<b>Mean (Min – Max)</b>	<b>74.2 (34.4 - 141.4)</b>		

## 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 (hereinafter 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
5-Mar-14	65.6	<b>Limit Level: 75</b>
11-Mar-14	65.5	
18-Mar-14	65.2	<b>Action Level:</b>
29-Mar-14	65.9	
4-Apr-14	68.9	<b>Any documented complaint against construction noise.</b>
11-Apr-14	68.5	
15-Apr-14	66.5	
25-Apr-14	66.2	
30-Apr-14	65.5	
8-May-14	73.3	
13-May-14	65.4	
23-May-14	70.2	
27-May-14	65.6	
<b>Mean (Min – Max), Leq (30 min)</b>		

## 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, i.e neither exceedances of Action Level nor exceedances of Limit Level were recorded.
- 3.2.5 Neither NOE nor NOE investigation and the associated remedial actions were required during the Reporting Period.

## Weather Conditions

- 3.2.6 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.
- 3.2.7 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 construction noise were registered during the Reporting Period.
- 3.3.2 No NOE and the associated NOE Investigation as well as the related corrected actions were required 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 Nevertheless, construction dust shall be suppressed during dusty construction activities under dry and windy conditions.
- 3.3.5 In addition, 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 within 48 hours 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**:

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

<u>Date</u>	<u>Deficiencies or findings</u>	<u>Follow-Up Action</u>
4 Mar 2014	No observations were recorded.	Not required.
11 Mar 2014	No observations were recorded.	Not required.
18 Mar 2014	No observations were recorded.	Not required.
25 Mar 2014	No observations were recorded.	Not required.
01 April 2014	No observations were recorded.	Not required.
08 April 2014	Stagnant water was observed within the site, posing potential of direct discharge to the receiving water body and mosquito breeding. Regular clearance was required.	Stagnant water was cleared.
15 April 2014	No observations were recorded.	Not required.
22 April 2014	No observations were recorded.	Not required.
29 April 2014	No observations were recorded.	Not required.
7-May-2014	No adverse environmental impacts were recorded.	Not required.
13-May-2014	No adverse environmental impacts were recorded.	Not required.
20-May-2014	No adverse environmental impacts were recorded.	Not required.
27-May-2014	No adverse environmental impacts were recorded.	Not required.



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.

## 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
March 2014	0	0
April 2014	0	0
May 2014	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 Environmental complaints registered during the Reporting Period are summarised in **Table 4-3-1** below:

**Table 4-3-1 Summary of Complaint**

Month	No. of Complaint	Nature	Cumulative no. from March to June 2014
March 2014	0	Not Applicable	0
April 2014	0	Not Applicable	0
May 2014	0	Not Applicable	0

## 4.4 Notification of Summons/Successful Prosecutions

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

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

Month	Number of Issue	Nature of Issue	Cumulative no. of Issue
March 2014	0	Not Applicable	0
April 2014	0	Not Applicable	0
May 2014	0	Not Applicable	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. COMMENTS AND RECOMMENDATIONS

### 6.1 Comments

- 6.1.1 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. It is supported by statistical information of the monitored parameters required in EP Condition 5.6 of the EM&A Plan, including result tables and graphical plots, presented in **Appendix H**.
- 6.1.2 No corrective actions were required as the environmental audit during the Reporting Period observed:
- a) No deficiencies with major environmental significance of the required environmental mitigation measures;
  - b) No non-compliance with the required waste management; and
  - c) No adverse environmental impacts on the sensitive receivers environed with the site of the Project.
- 6.1.3 In addition, no remedial actions were required as no environmental complaints, notification of summons and successful prosecutions were reported during the Reporting Period.
- 6.1.4 Nevertheless, occasional observations of inadequacies of proactive environmental mitigation measures were recorded during the regular site inspection and audit. They were rectified in situ or before the following site audit upon identification or notification.
- 6.1.5 Based on the impact monitoring results and weekly site observations, it is concluded that the mitigation measures recommended in the EM&A Manual were effective and efficient in controlling the environmental pollutions from the project, during the Reporting Period.

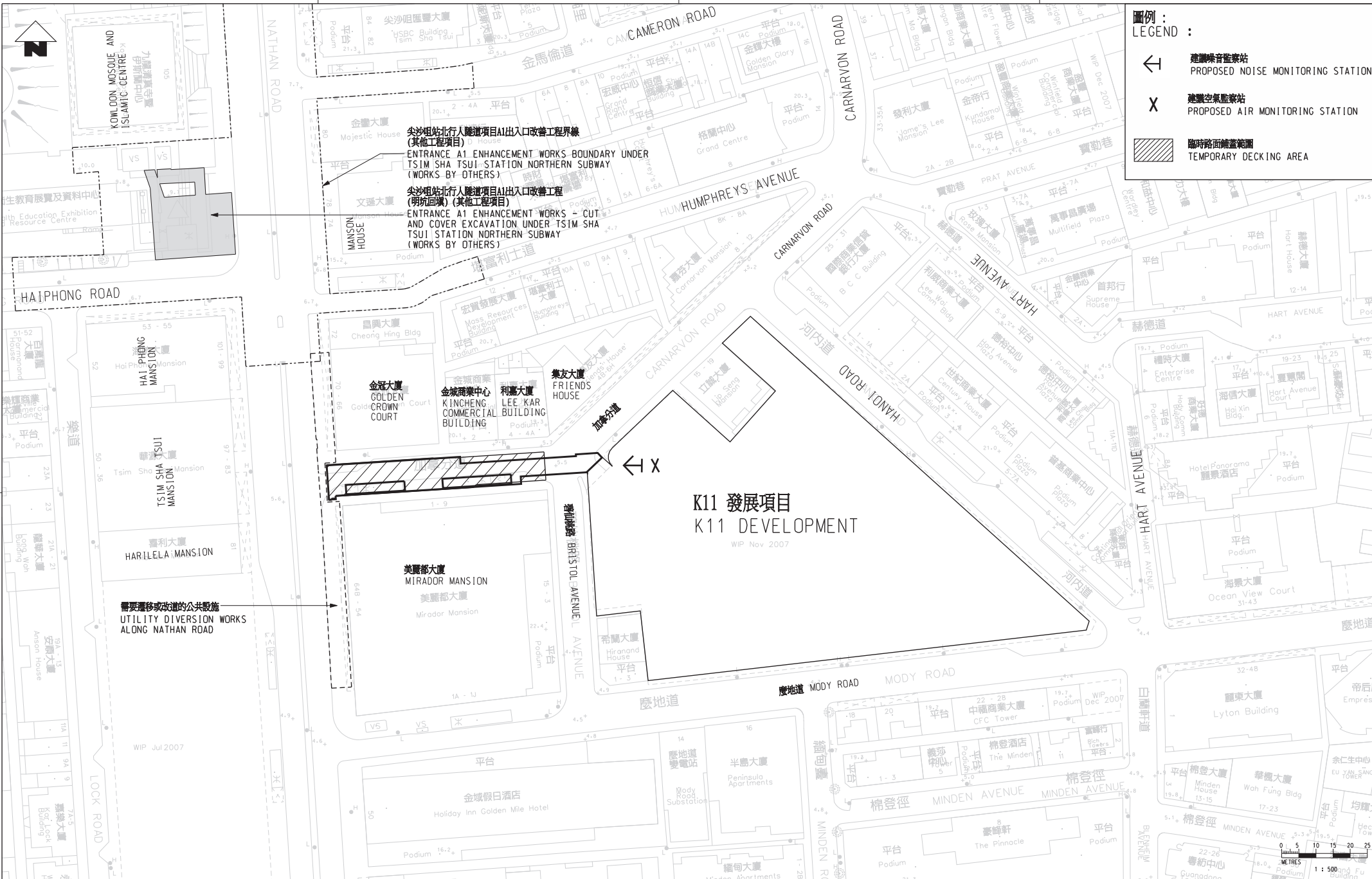
### 6.2 Recommendations

- 6.2.1 Full implementation of the environmental mitigation measures stipulated in the EM&A Plan and summarized in **Implementation Schedule** of **Appendix D** is required. Where necessary, proper maintenance and improvement of the implemented mitigation measures are reminded.
- 6.2.2 Particular attention is drawn to the compliance with water quality mitigation measures during the approaching rain season.
- 6.2.3 In addition, suppression of construction dust is required during dusty construction activities under dry and windy conditions.
- 6.2.4 Furthermore, construction noise shall be eliminated to avoid adverse impacts on the nearby sensitive receivers.

# Appendix A

---

## Site Location Plan



**圖例：**  
**LEGEND :**

- ← 建議噪音監察站  
PROPOSED NOISE MONITORING STATION
- X 建議空氣監察站  
PROPOSED AIR MONITORING STATION
- ▨ 臨時路面鋪蓋範圍  
TEMPORARY DECKING AREA

尖沙咀站北行人隧道項目A1出入口改善工程界線  
(其他工程項目)  
ENTRANCE A1 ENHANCEMENT WORKS BOUNDARY UNDER  
TSM SHA TSUI STATION NORTHERN SUBWAY  
(WORKS BY OTHERS)

尖沙咀站北行人隧道項目A1出入口改善工程  
(明坑回填) (其他工程項目)  
ENTRANCE A1 ENHANCEMENT WORKS - CUT  
AND COVER EXCAVATION UNDER TSM SHA  
TSUI STATION NORTHERN SUBWAY  
(WORKS BY OTHERS)

需要遷移或改道的公共設施  
UTILITY DIVERSION WORKS  
ALONG NATHAN ROAD

**K11 發展項目**  
**K11 DEVELOPMENT**  
WIP Nov 2007

G:\MTR\_A3.BW.COL.dwg 08/02/07 44682  
 PLOT BY: 繪圖日期: 08/02/07  
 FILENAME: A320288-KEN-PROJECT\_PROFILE-022-A350-3-1.dwg

REV	DESCRIPTION	BY	DATE	APPROVED	REV	DESCRIPTION	BY	DATE	APPROVED
A	PROJECT PROFILE				HO				

DRAWN	HO
DESIGNED	--
CHECKED	--
APPROVED	--
DATE	--

**MTR**

**TST STATION CARNARVON ROAD SUBWAY**

ORIGINATOR

**Mott MacDonald**

30/F The Landmark, 100 Hing Fong Street, Hong Kong

In association with Hatched Architect Ltd, 8/F 80 Wing Lok Street, Hong Kong

CADD REF.

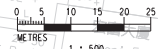
TITLE

**CONSULTANCY AGREEMENT NO. NEX/1049**  
**DETAILED DESIGN FOR CARNARVON ROAD SUBWAY**  
**AIR AND NOISE MONITORING LOCATIONS**  
**空氣及噪音監察站位置圖**

SCALE: 1:500 (A1)

DRAWING NO. **APPENDIX B**

REV. **A**



# Appendix B

---

## Management Structure

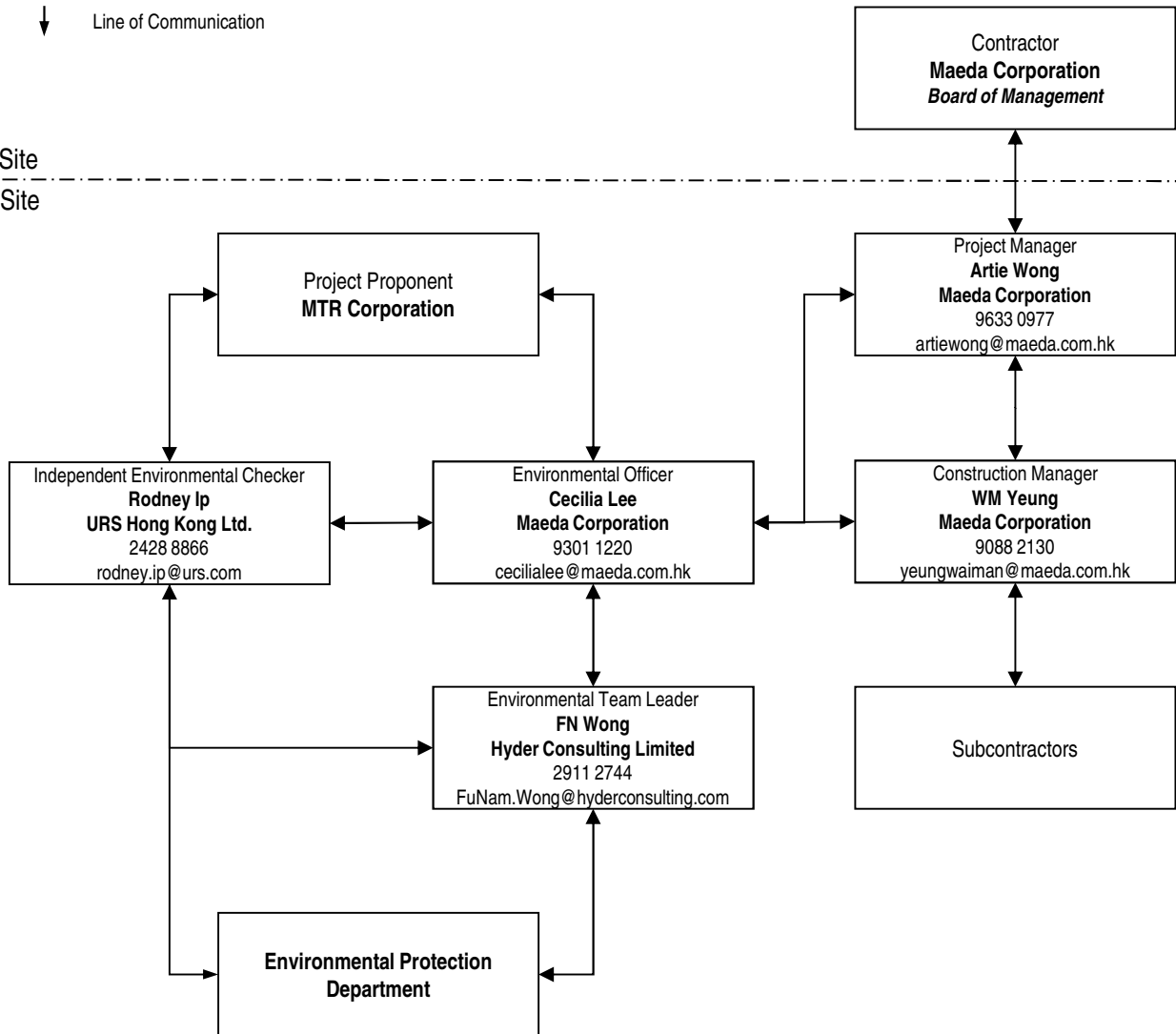
# Project Organization Chart in Environmental Management (Rev.01)

Effective Date: 2 Apr 2014

**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























## 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
	Noise Impact					
S.3.1	Use of quieter plant	To minimise construction noise emissions	Contractor	Work site	Construction Stage	ProPECC PN2/93 and Noise Control Ordinance
S.3.1	Use of noise enclosure and movable barrier <ul style="list-style-type: none"> <li>• movable barrier can achieve a 5 dB(A) reduction for movable PME and 10 dB(A) reduction for stationary PME;</li> <li>• noise enclosure can achieve 15dB(A) reduction for PME;</li> <li>• 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;</li> <li>• Barrier material of surface mass in excess of 7kg/m<sup>2</sup> shall be required to achieve the maximum screening effect (and minimum 10kg/m<sup>2</sup> for noise enclosure);</li> <li>• 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.</li> </ul>	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	General Construction Noise Control Measures <ul style="list-style-type: none"> <li>• The Code of Practice on Good Management Practice</li> </ul>	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"> <li>• The statutory and non-statutory requirements and guidelines shall be complied with;</li> <li>• 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;</li> <li>• 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;</li> <li>• Noisy equipment and noisy activities shall be located as far away from the NSRs as is practical;</li> <li>• Unused equipment shall be turned off;</li> <li>• PME should be kept to a minimum and the parallel use of noisy equipment / machinery should be avoided;</li> <li>• All plant and equipment shall be maintained regularly; and</li> <li>• Material stockpiles and other structures shall be effectively utilized as noise barriers, whenever practicable.</li> </ul>	emissions				Ordinance
	Air Quality Impact					
S.3.2	<p>Construction Dust Control Measures</p> <ul style="list-style-type: none"> <li>• Decking will be provided subsequent to the completion of surface excavation works. The duration</li> </ul>	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
	<p>of decking is around 13 months after surface excavation works;</p> <ul style="list-style-type: none"> <li>• Regular watering to reduce dust emissions from all exposed site surface, particularly during dry weather;</li> <li>• Frequent watering for particularly dusty construction areas and areas close to air sensitive receivers;</li> <li>• Cover all excavated or stockpile of dusty material by impervious sheeting or spraying with water to maintain the entire surface wet;</li> <li>• Provision of vehicle washing facilities at the exit points of the site; and</li> <li>• Provision of tarpaulin covering of any dusty materials on a vehicle leaving the site.</li> </ul>	construction works				Dust) Regulation
	Water Quality Impact					
S.3.3	<p>Construction Water Quality Impact Measures</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> </ul>	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"> <li>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.</li> <li>Site toilet facilities, if needed, should be chemical toilets or should have the foul water effluent directed to a foul sewer.</li> </ul>					
	Waste Management					
S.3.4	<p>Construction Waste Management Measures</p> <ul style="list-style-type: none"> <li>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.</li> <li>Waste arising should be kept to a minimum and be handled, transported and disposed of in a suitable manner.</li> <li>The Contractor should adopt a trip ticket system for the disposal of C&amp;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.</li> <li>Chemical waste shall be handled in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Wastes.</li> <li>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</li> </ul>	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.

<b>Project Profile Ref.</b>	<b>Recommended Mitigation Measures</b>	<b>Objectives of the Recommended Measures &amp; Main Concerns to address</b>	<b>Implementation Parties</b>	<b>Location of the measure</b>	<b>When to implement the measure</b>	<b>Relevant requirements or standards for the measure to achieve</b>
	recycling of materials and their proper disposal.					
	Landscape and Visual Impact					
S.3.5	Landscape and Visual Measures <ul style="list-style-type: none"> <li>• Screening of construction works by hoardings/noise barriers around works area with visually unobtrusive colours</li> </ul>	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"> <li>• Reinstating the affected amenity planting area at Salisbury Road after the completion of works</li> </ul>	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



**Licence Summary**

Item No.	Govt. Ord.	Type? (License / 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	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	Notification	Construction Dust Notification	Form NA – Notification S3(1) of APCO (Construction Dust)	365953	18 - 10 - 2013	21 - 10 - 2013	01 - 11 - 2013	01 - 12 - 2014	Site Formation	
001	APCO	Notification	Construction Dust Notification	Form NA – Notification S3(1) of APCO (Construction Dust)	365953	18 - 10 - 2013	21 - 10 - 2013	01 - 02 - 2014	01 - 10 - 2016	Demolition of a Building	
001	APCO	Notification	Construction Dust Notification	Form NA – Notification S3(1) of APCO (Construction Dust)	365953	18 - 10 - 2013	21 - 10 - 2013	01 - 08 - 2014	01 - 08 - 2016	Work carried out in any part of a tunnel that is within 100m of any exit to the open air	
001	APCO	Notification	Construction Dust Notification	Form NA – Notification S3(1) of APCO (Construction Dust)	365953	18 - 10 - 2013	21 - 10 - 2013	01 - 01 - 2016	01 - 03 - 2017	Construction of the Superstructure of a Building	
001	APCO	Notification	Construction Dust Notification	Form NA – Notification S3(1) of APCO (Construction Dust)	365953	18 - 10 - 2013	21 - 10 - 2013	01 - 11 - 2016	10 - 09 - 2017	Road Construction Work	
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	Licence	Water Discharge Licence	EPD-117 (Form A) Application for a Licence of Water Discharge	WT00018229-2014	09 - 01 - 2014	04 - 03 - 2014	04 - 03 - 2014	31 - 03 - 2019	Self Monitoring Only FlowRate 9m3/d, pH 6-9, SS 50mg/L, COD 100mg/L	
004	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	



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

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

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 Extracted from HK Observatory

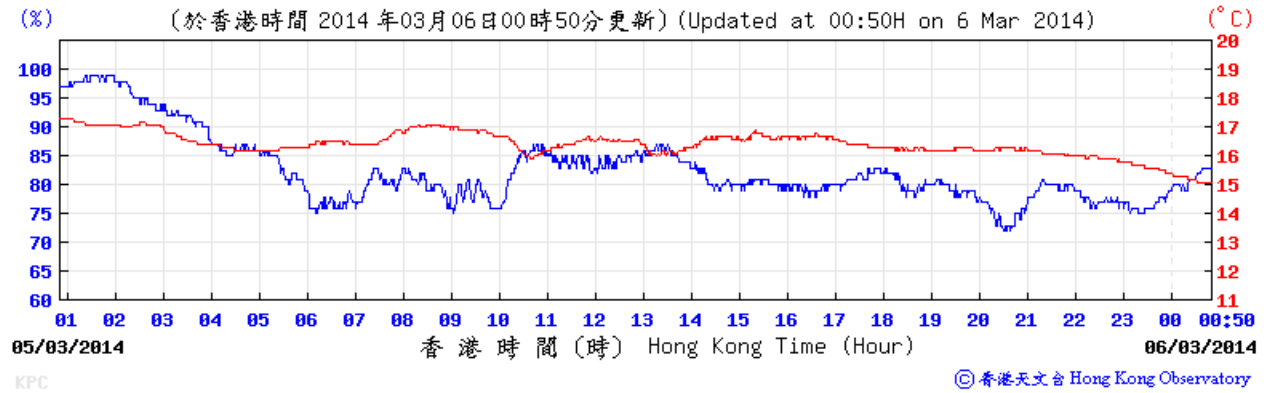
Daily Total Rainfall (mm) at King's Park HKO Weather Monitoring Station in March 2014

Day	Mar	24-hr TSP	Noise	Remarks
1	-			
2	-			
3	-			
4	8.8	✓		
5	0.3		✓	No rainfall recorded on site during Noise Monitoring
6	-			
7	0.1			
8	0.8			
9	-			
10	-			
11	0.2	✓	✓	No rainfall recorded on site during Noise Monitoring
12	0.2			
13	0.4			
14	0.9			
15	-			
16	-			
17	-	✓		
18	0.1		✓	No rainfall recorded on site during Noise Monitoring
19	-			
20	-			
21	-			
22	-			
23	-			
24	-	✓		
25	-			
26	-			
27	-			
28	-			
29	22.1		✓	No rainfall recorded on site during Noise Monitoring
30	115.6			
31	84.4			
<b>Total</b>	<b>233.9</b>			

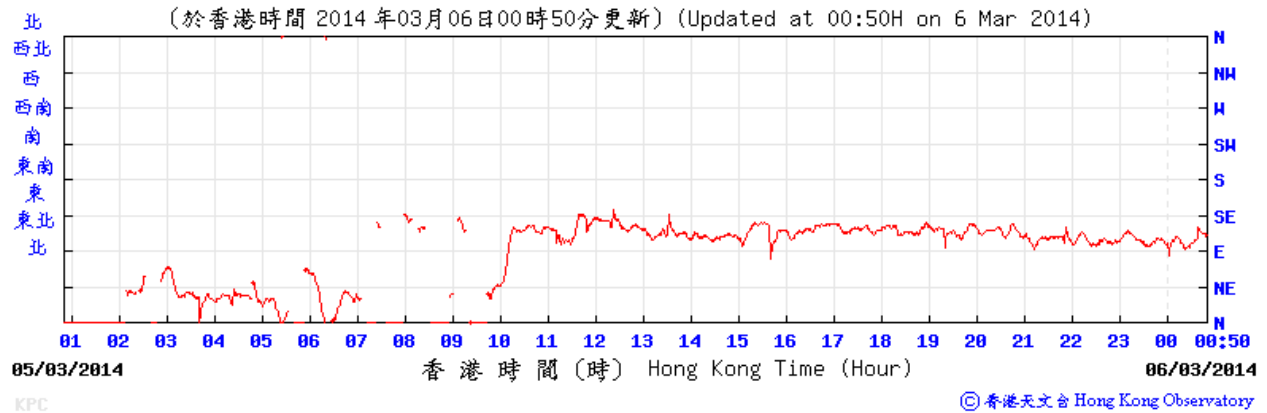


# King's Park Weather Station - 05 March 2014

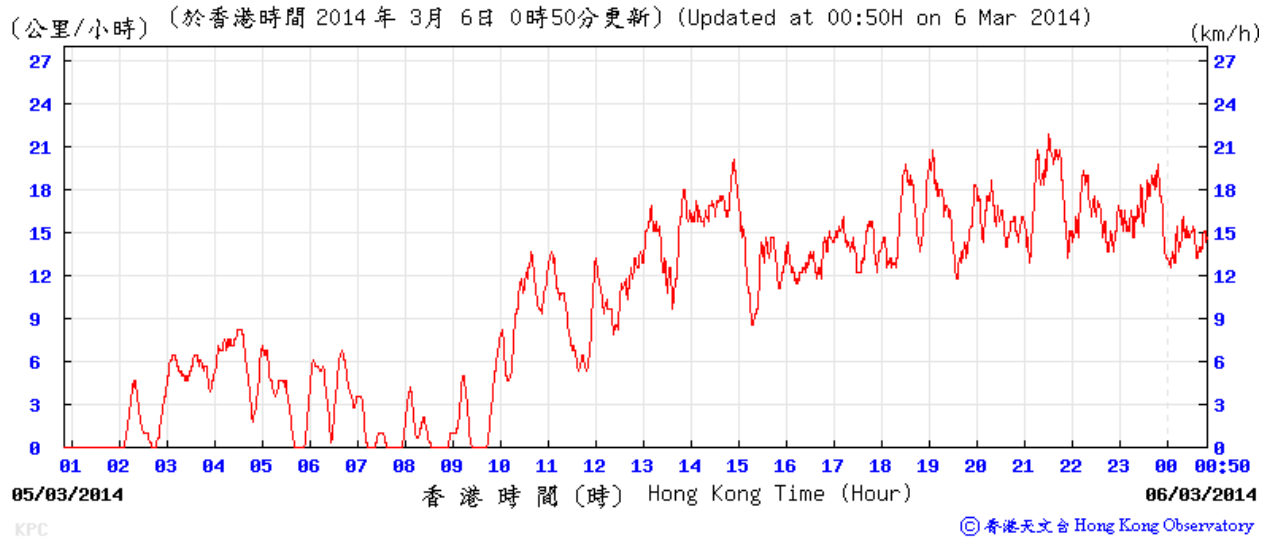
Temperature/ Humidity:



Wind Direction:

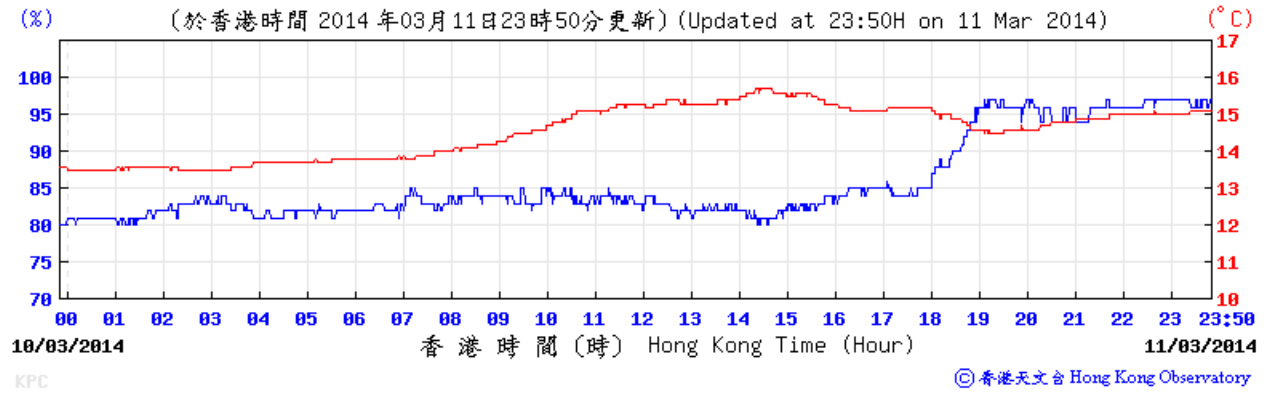


Wind Speed:

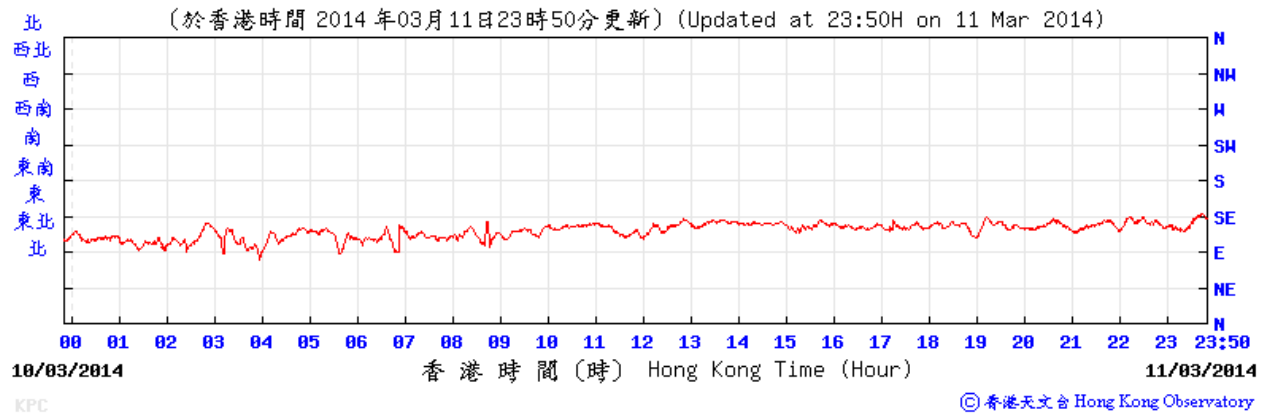


# King's Park Weather Station - 11 March 2014

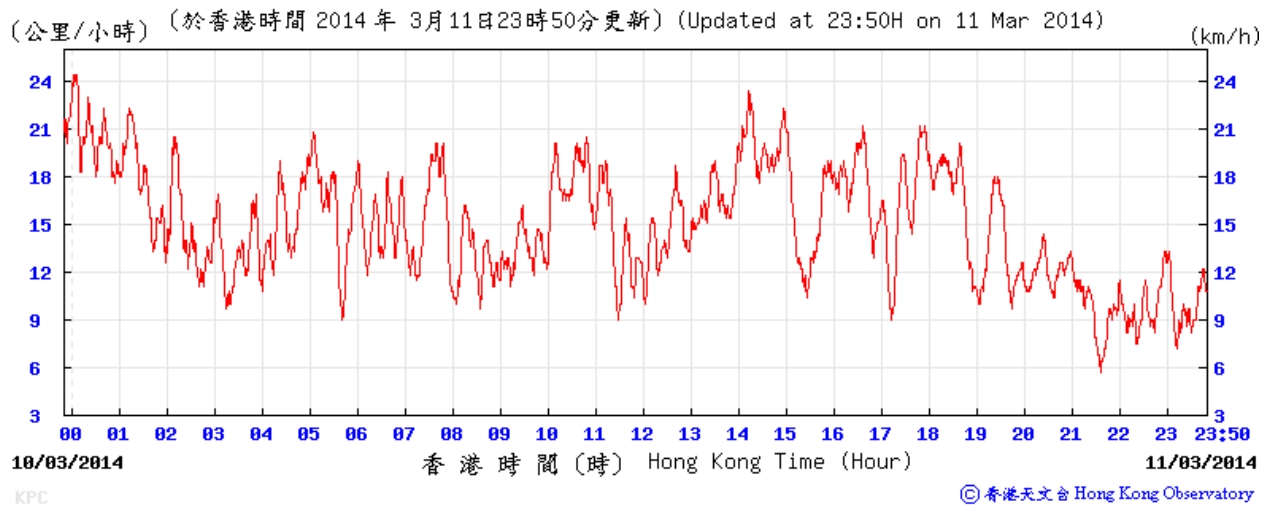
Temperature/ Humidity:



Wind Direction:

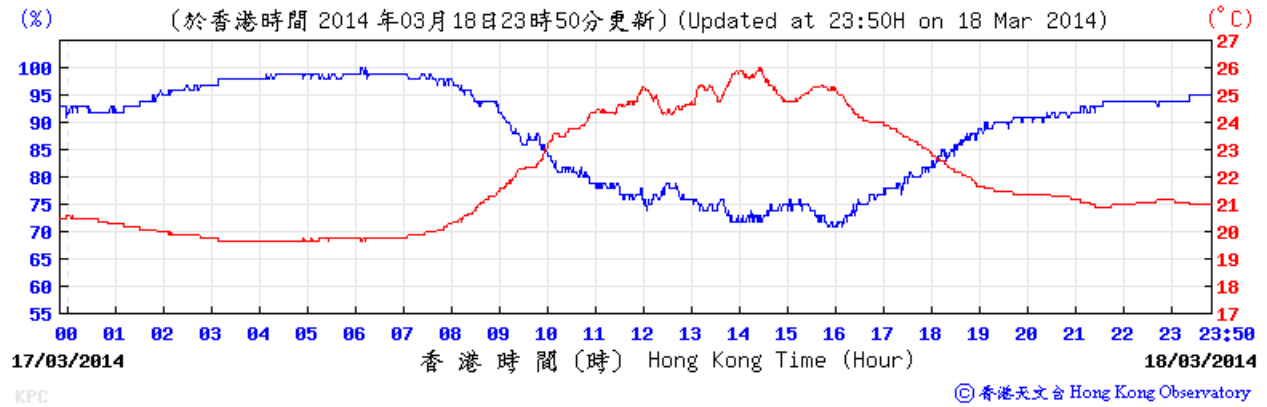


Wind Speed:

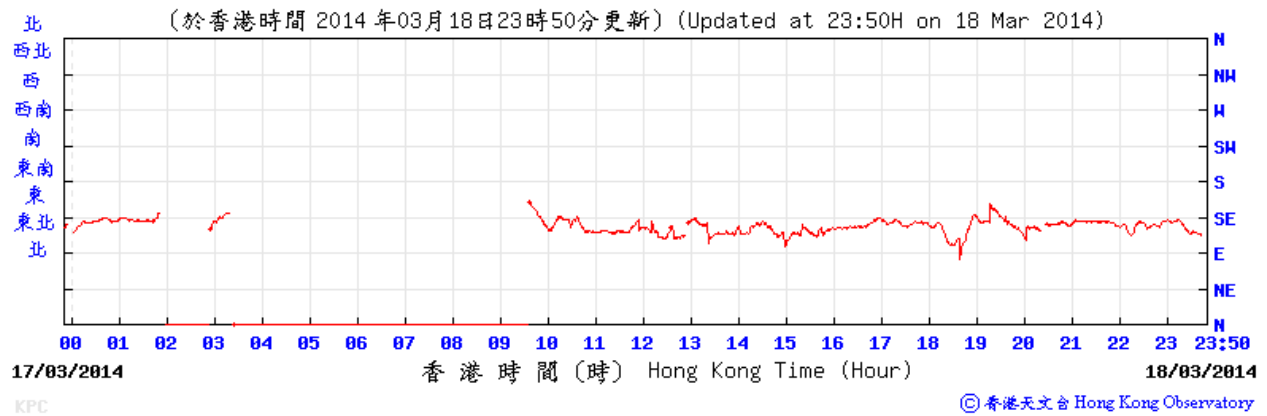


# King's Park Weather Station - 18 March 2014

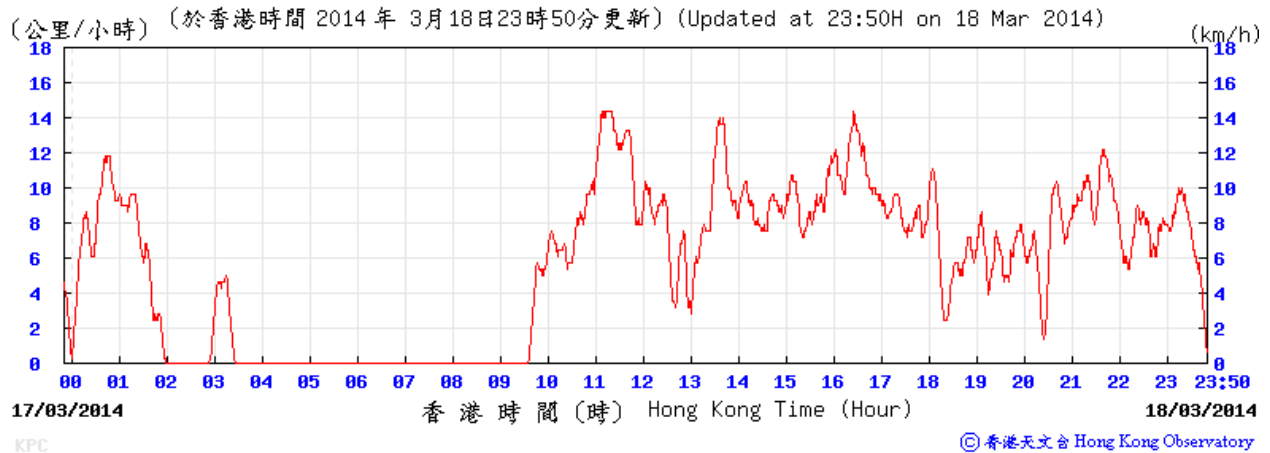
Temperature/ Humidity:



Wind Direction:

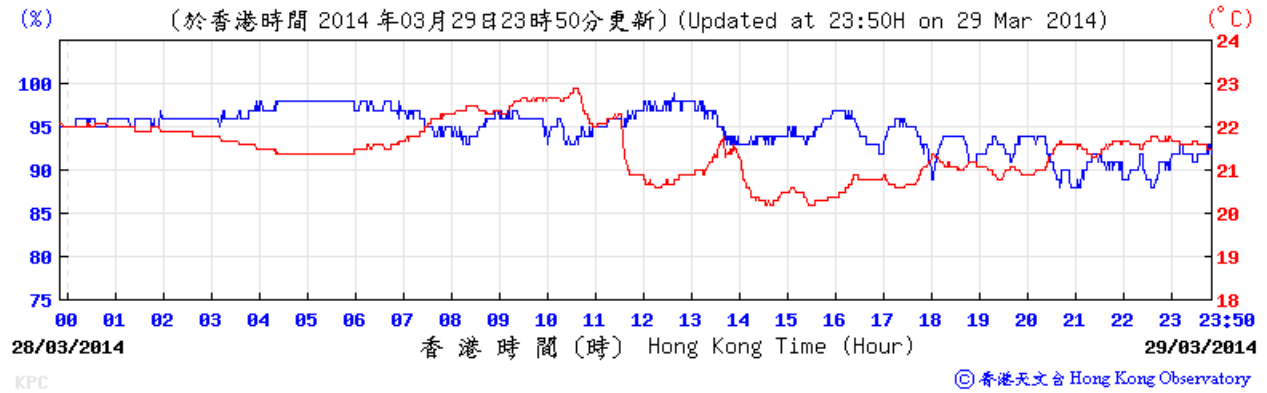


Wind Speed:

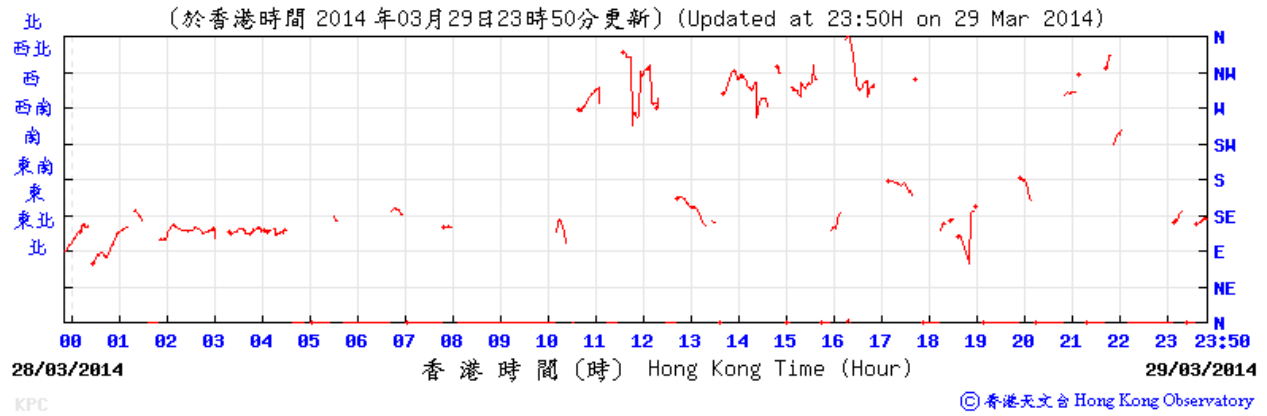


# King's Park Weather Station - 29 March 2014

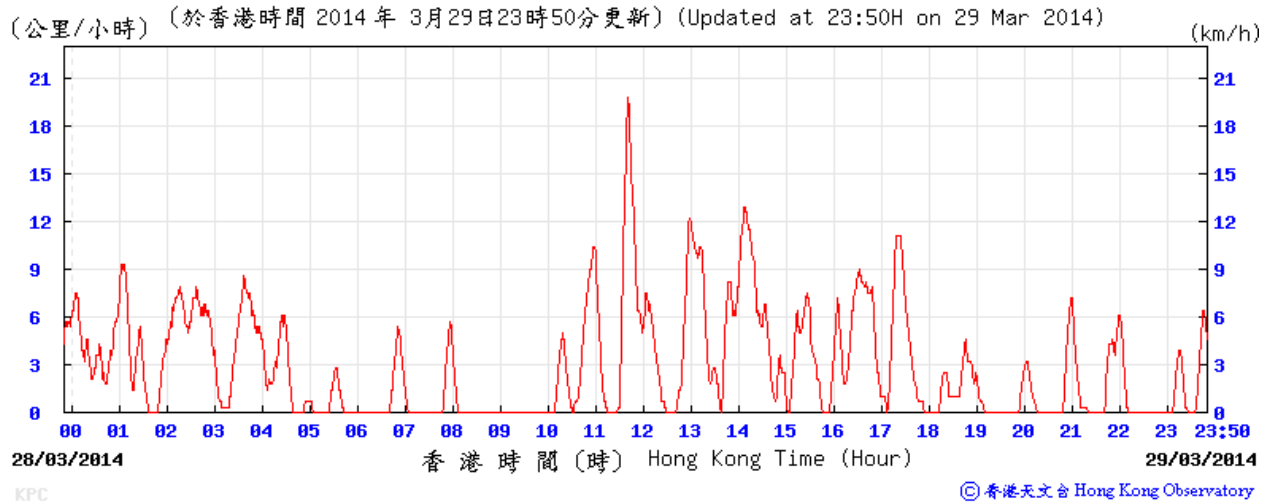
Temperature/ Humidity:



Wind Direction:



Wind Speed:

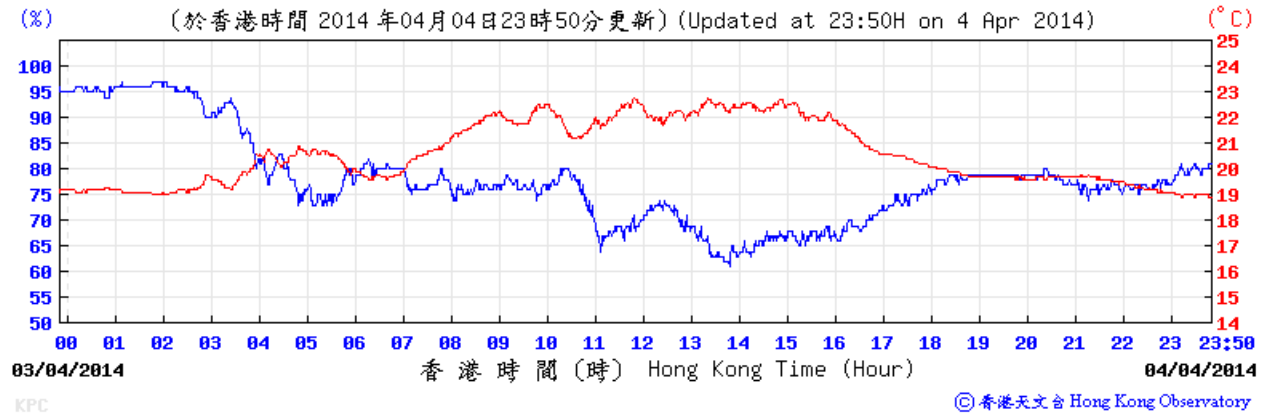


Daily Total Rainfall (mm) at King's Park HKO Weather Monitoring Station in April 2014

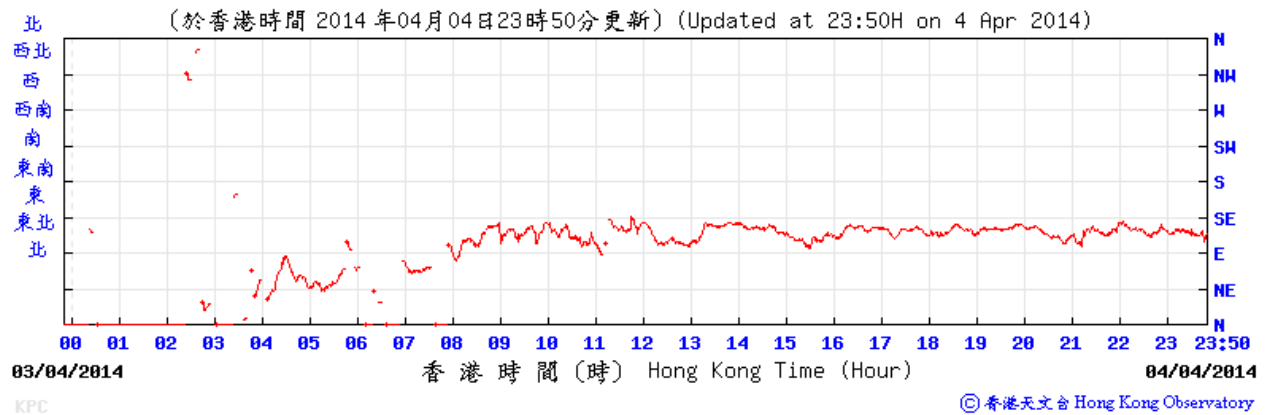
Day	Apr	24-hr TSP	Noise	Remarks
1	8.8			
2	26.7			
3	39.2			
4	-	✓	✓	No rainfall recorded on site during Noise Monitoring
5	-			
6	8.9			
7	0.1			
8	30.2	✓		
9	-			
10	-	✓		
11	-		✓	No rainfall recorded on site during Noise Monitoring
12	-			
13	-			
14	0.1			
15	-	✓	✓	No rainfall recorded on site during Noise Monitoring
16	-			
17	-			
18	-			
19	-			
20	-			
21	0.6			
22	-			
23	11.1			
24	1.3	✓		
25	1.3		✓	No rainfall recorded on site during Noise Monitoring
26	2.5			
27	-			
28	-	✓		
29	-			
30	0.7		✓	No rainfall recorded on site during Noise Monitoring
31				
<b>Total</b>	<b>131.5</b>			

# King's Park Weather Station - 04 April 2014

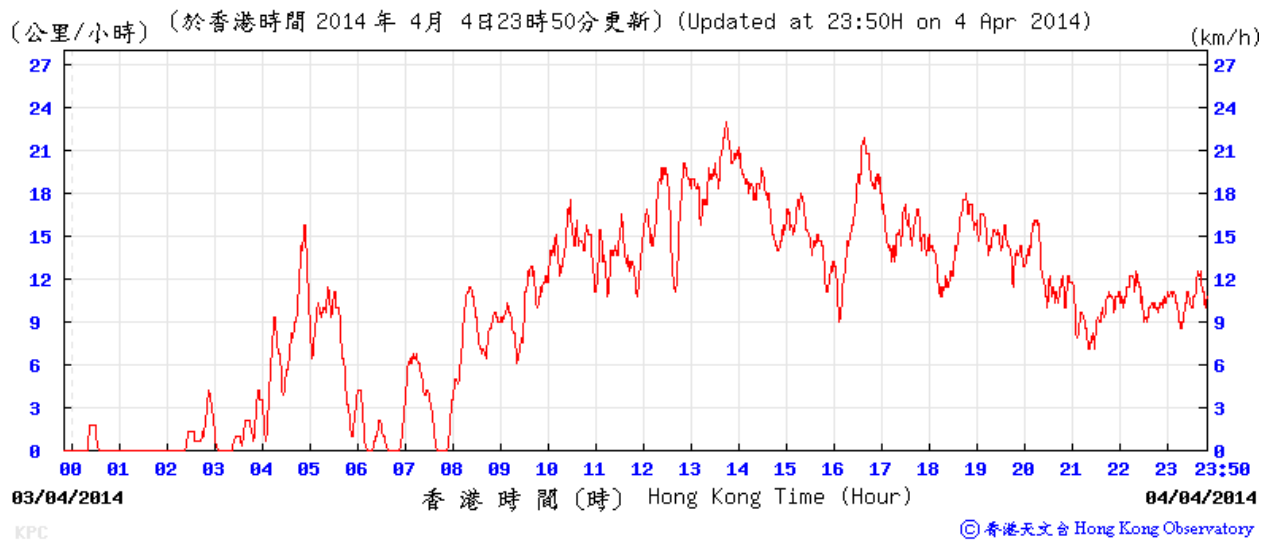
## Temperature/ Humidity:



## Wind Direction:

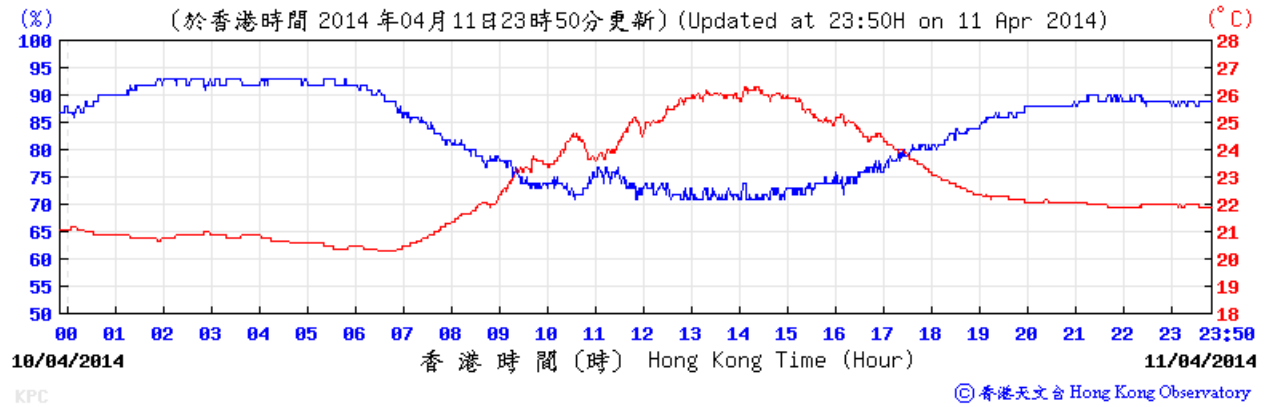


## Wind Speed:

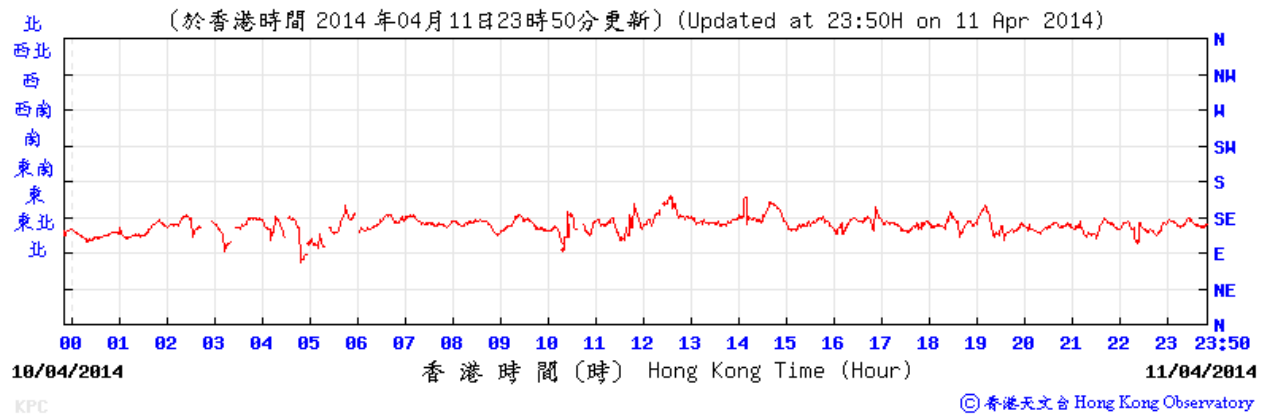


# King's Park Weather Station - 11 April 2014

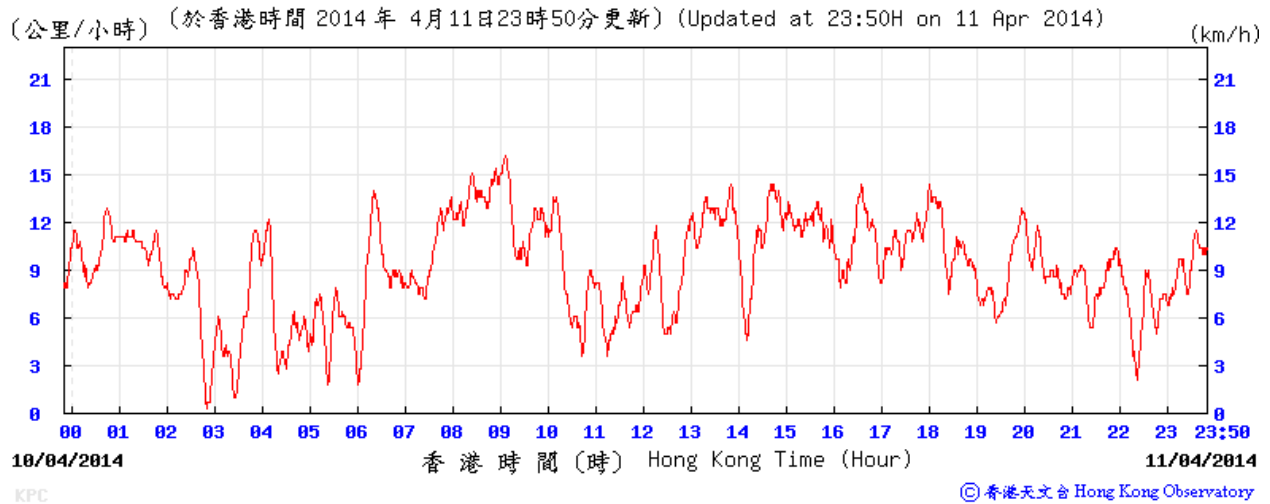
Temperature/ Humidity:



Wind Direction:

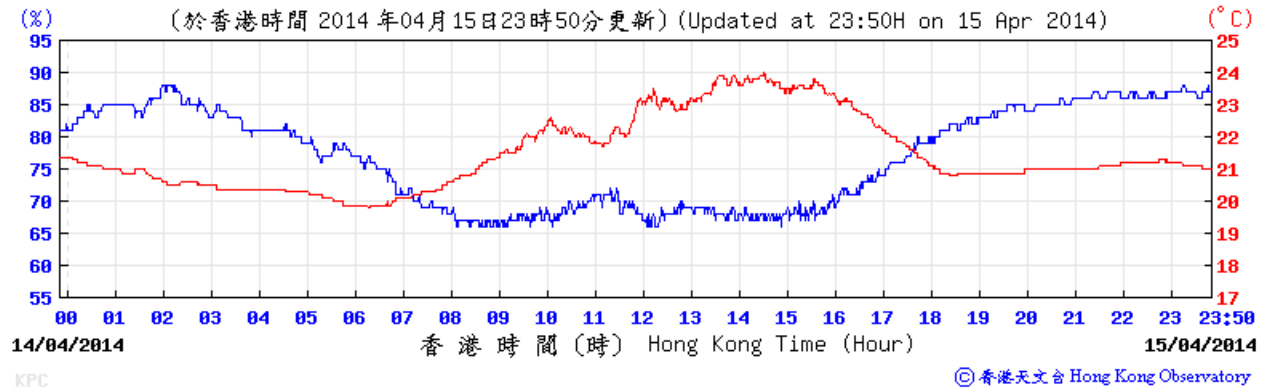


Wind Speed:

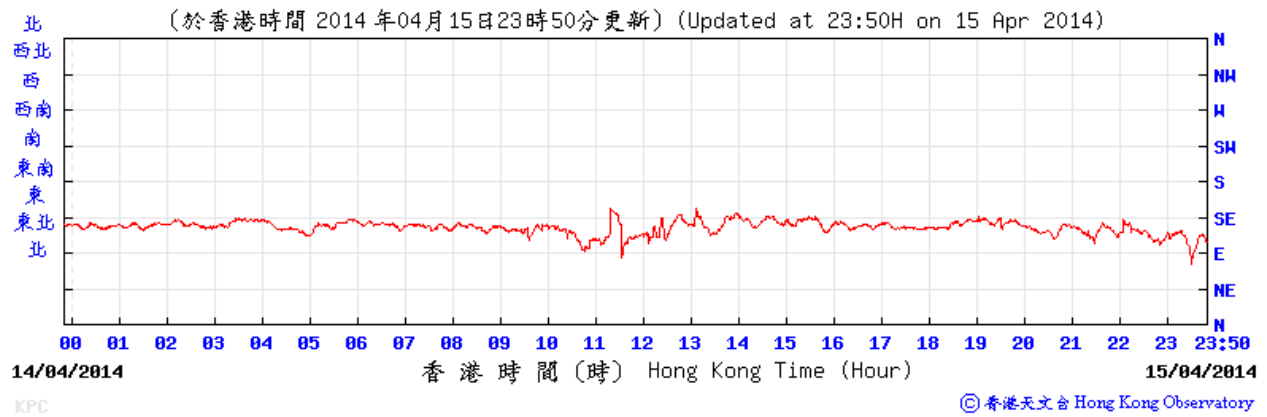


# King's Park Weather Station – 15 April 2014

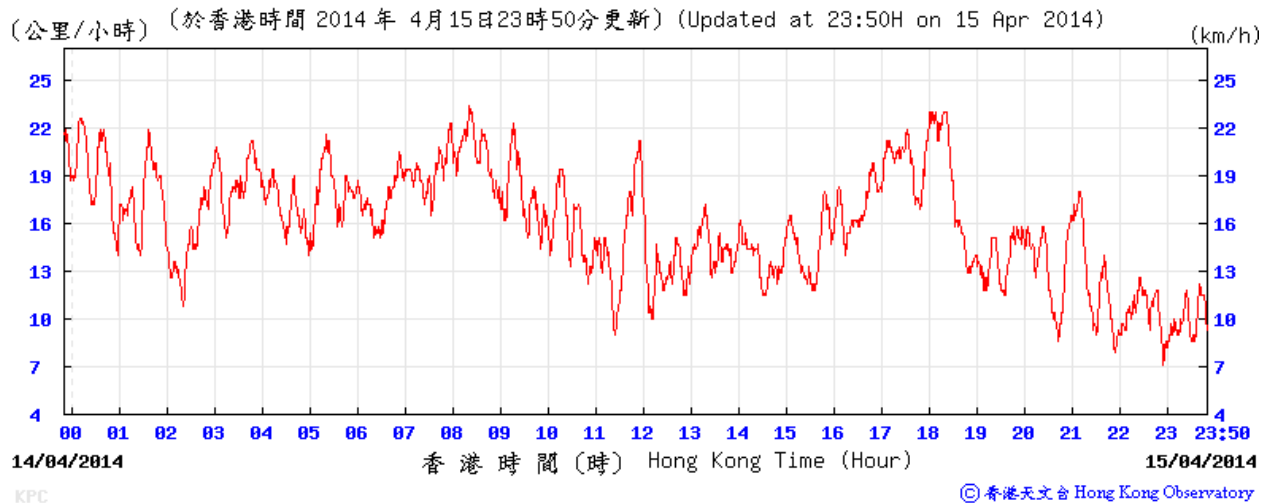
Temperature/ Humidity:



Wind Direction:



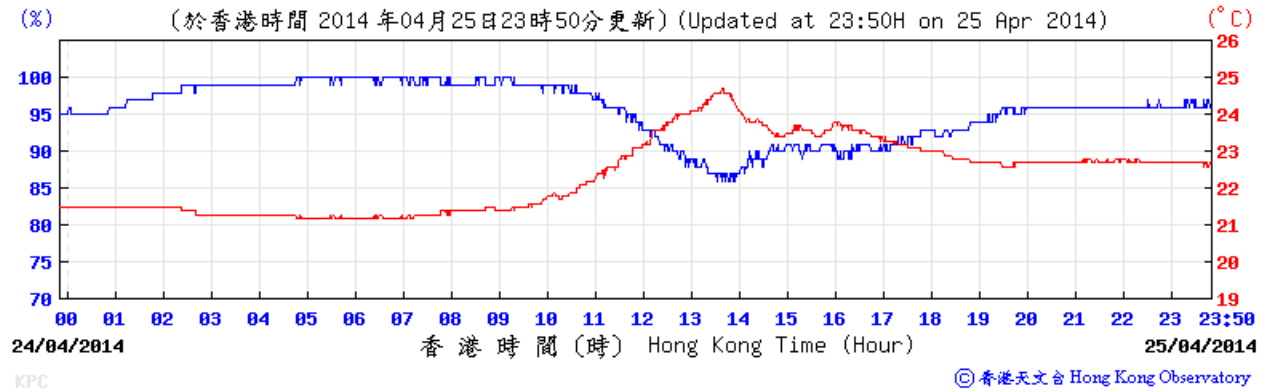
Wind Speed:



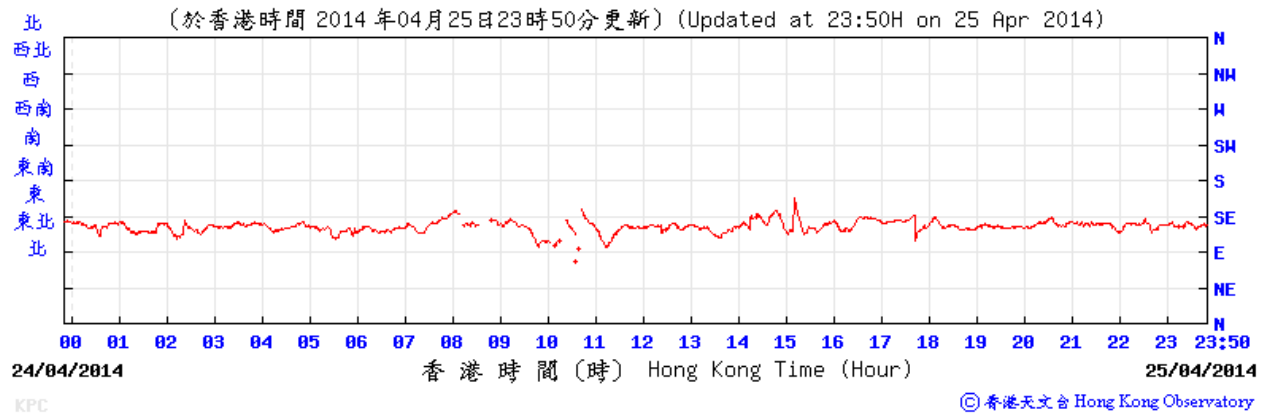


# King's Park Weather Station – 25 April 2014

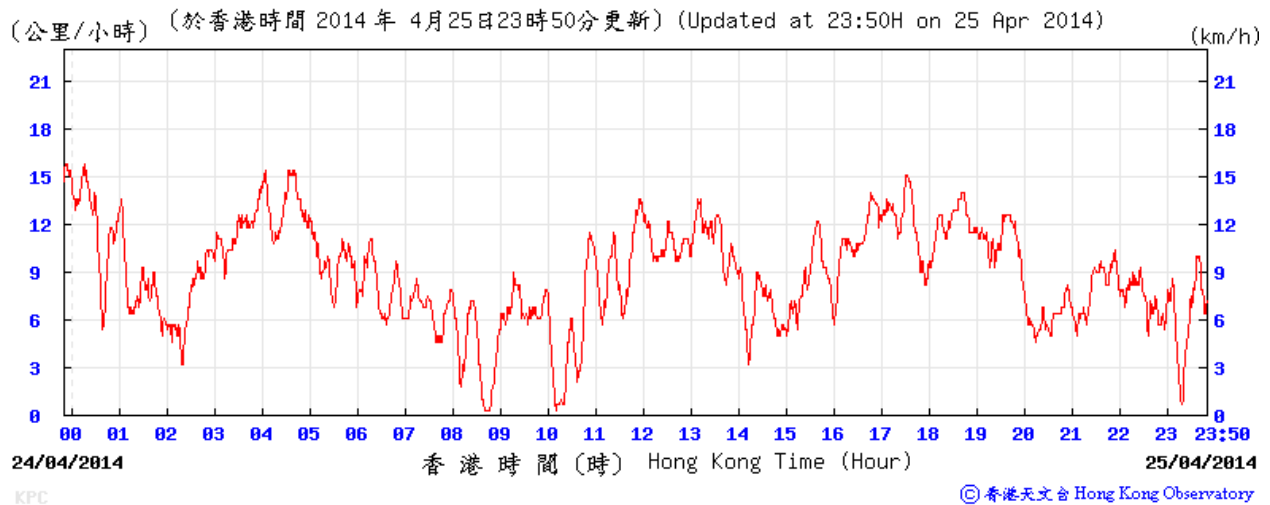
Temperature/ Humidity:



Wind Direction:

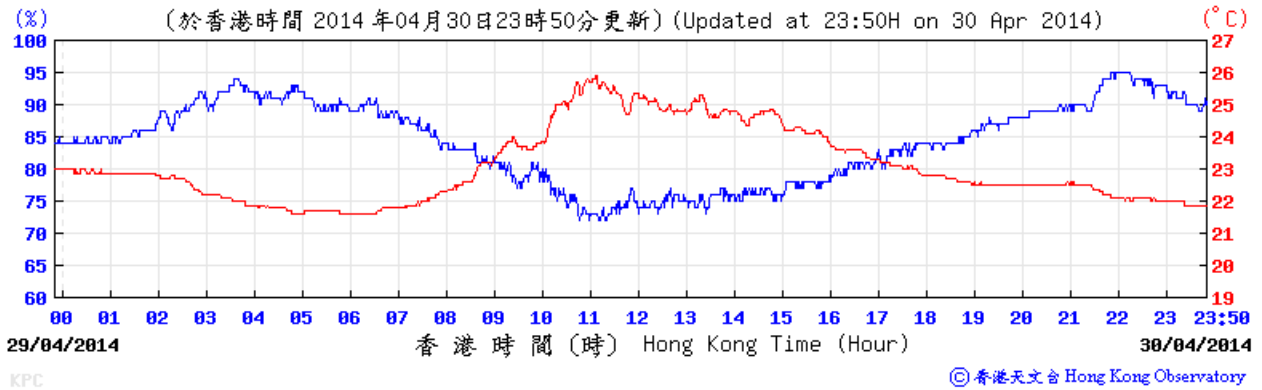


Wind Speed:

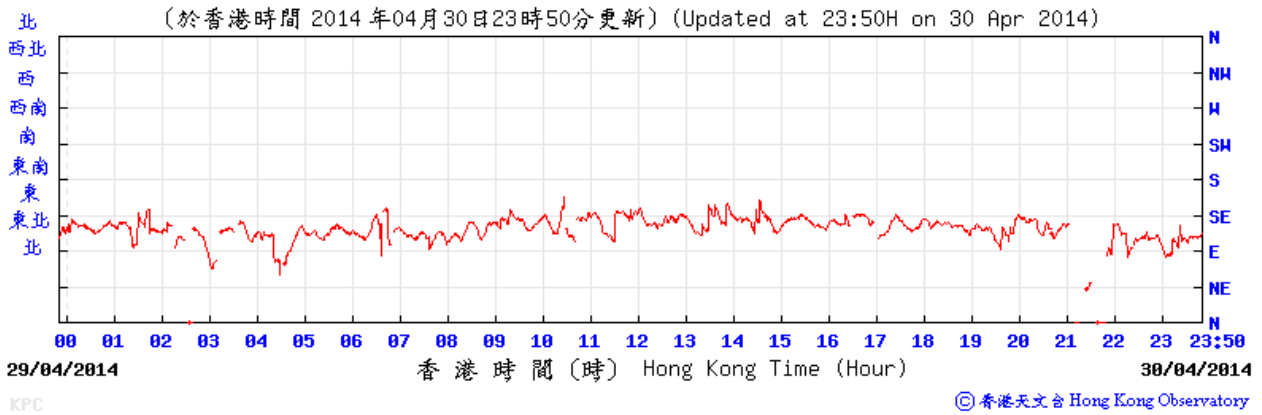


# King's Park Weather Station – 30 April 2014

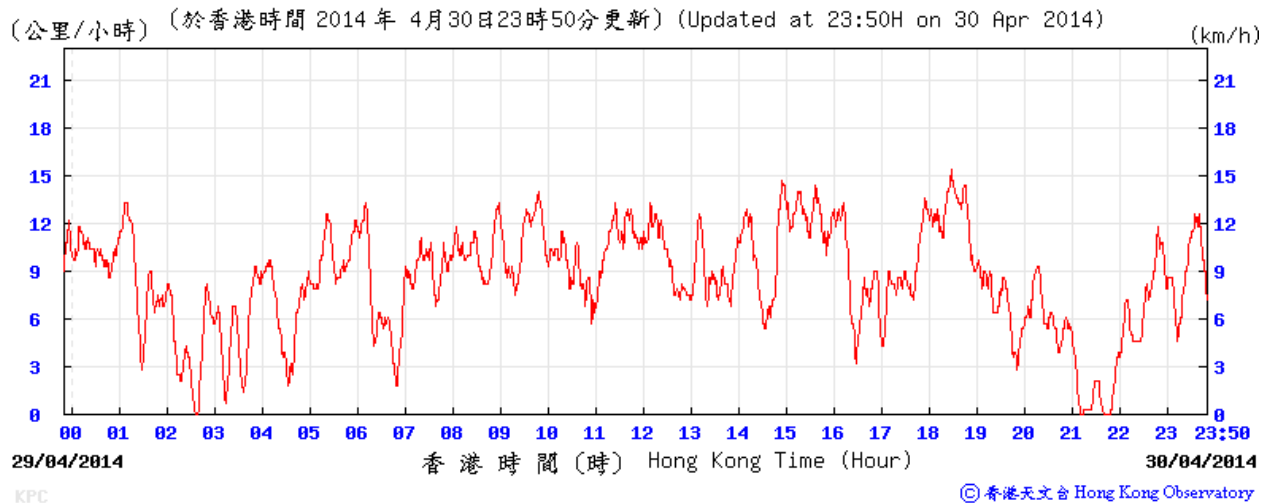
Temperature/ Humidity:



Wind Direction:



Wind Speed:

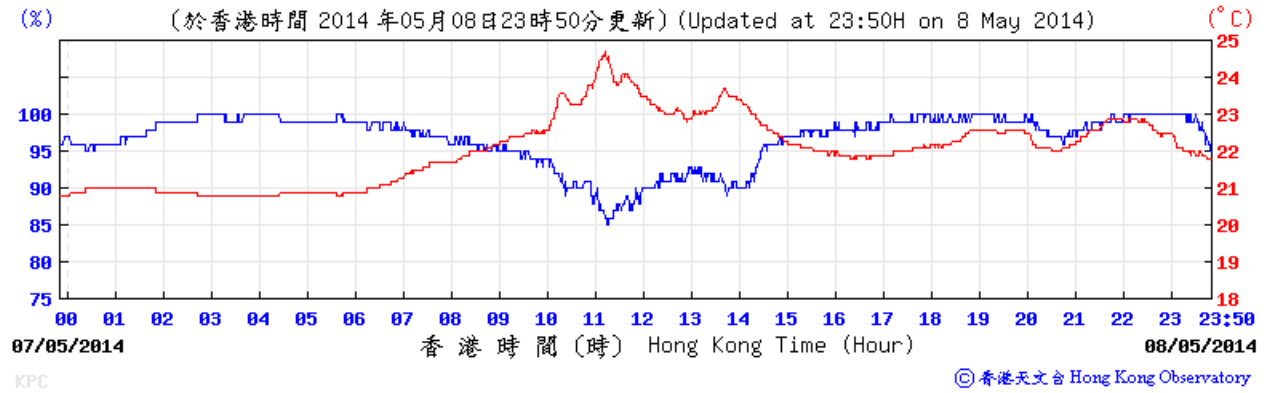


Daily Total Rainfall (mm) at King's Park HKO Weather Monitoring Station in May 2014

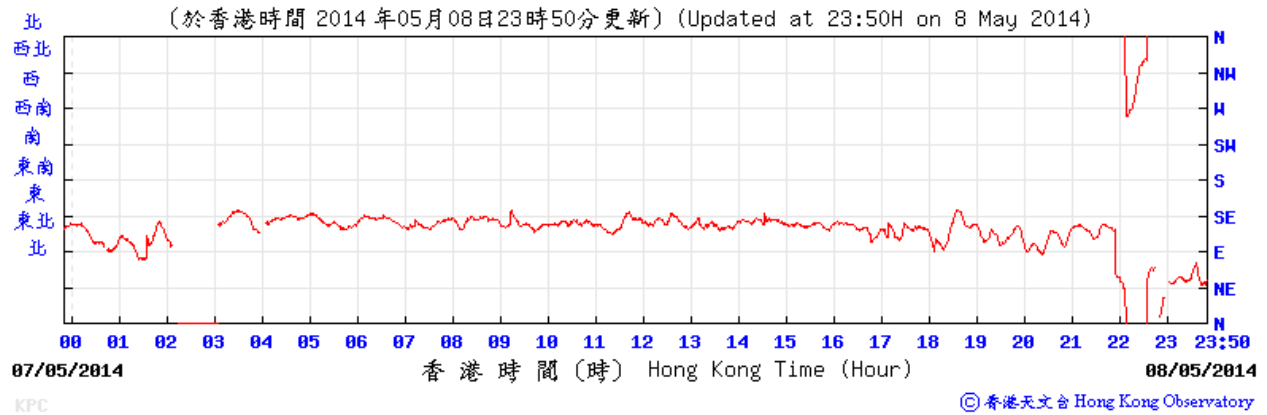
Day	May	24-hr TSP	Noise	Remarks
1	2.5			
2	-			
3	-			
4	5.4			
5	29.1			
6	1.2			
7	3.7	✓		
8	99.6		✓	No rainfall recorded on site during Noise Monitoring
9	93.2			
10	11.6			
11	165.1			
12	37.7			
13	56.2	✓	✓	No rainfall recorded on site during Noise Monitoring
14	4.5			
15	2.5			
16	14.1			
17	11.5			
18	3.1			
19	2.7			
20	60.1	✓		
21	43.3			
22	0.3			
23	23.5		✓	No rainfall recorded on site during Noise Monitoring
24	-			
25	0.3			
26	-			
27	-	✓	✓	No rainfall recorded on site during Noise Monitoring
28	-			
29	-			
30	2.8			
31	-			
<b>Total</b>	<b>674.0</b>			

# King's Park Weather Station – 08 May 2014

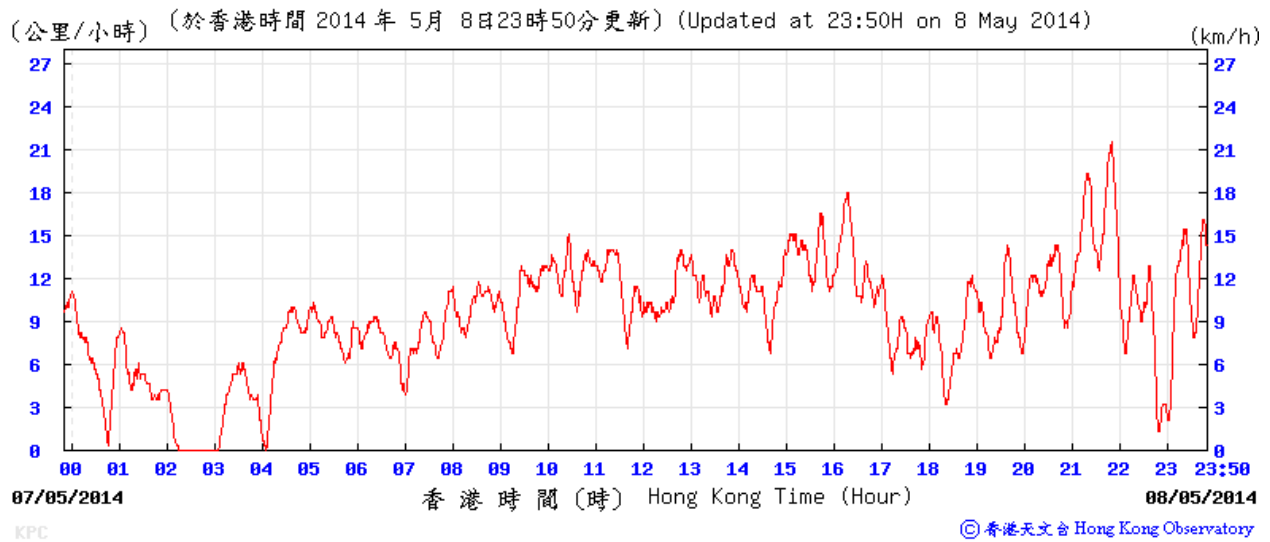
## Temperature and Humidity:



## Wind Direction:

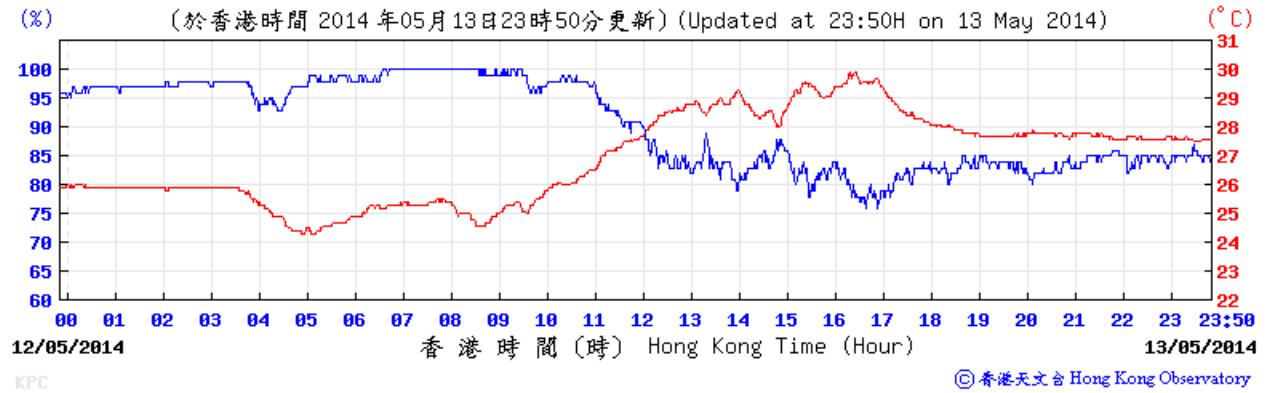


## Wind Speed:

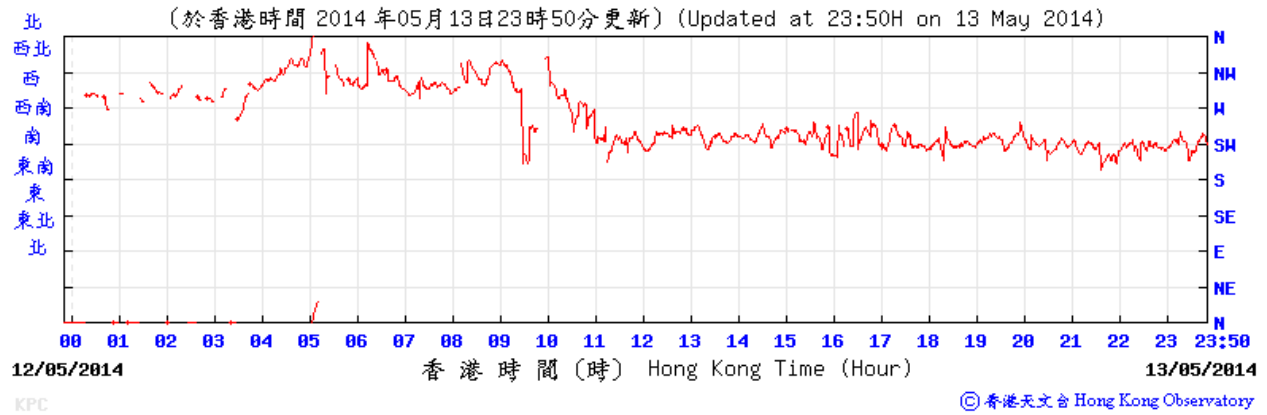


# King's Park Weather Station – 13 May 2014

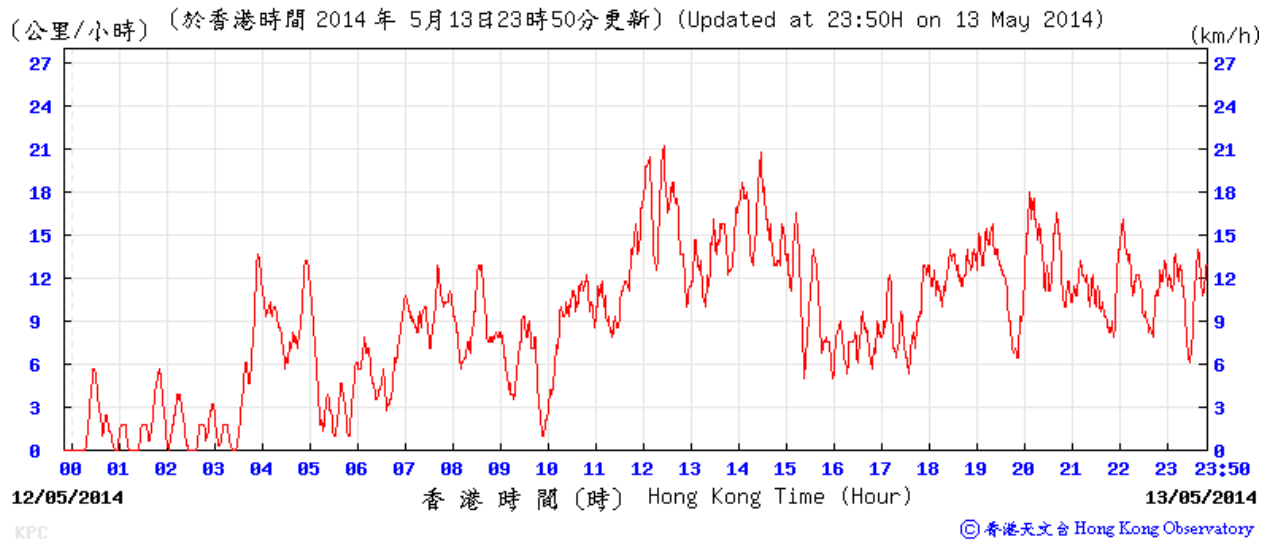
## Temperature and Humidity:



## Wind Direction:

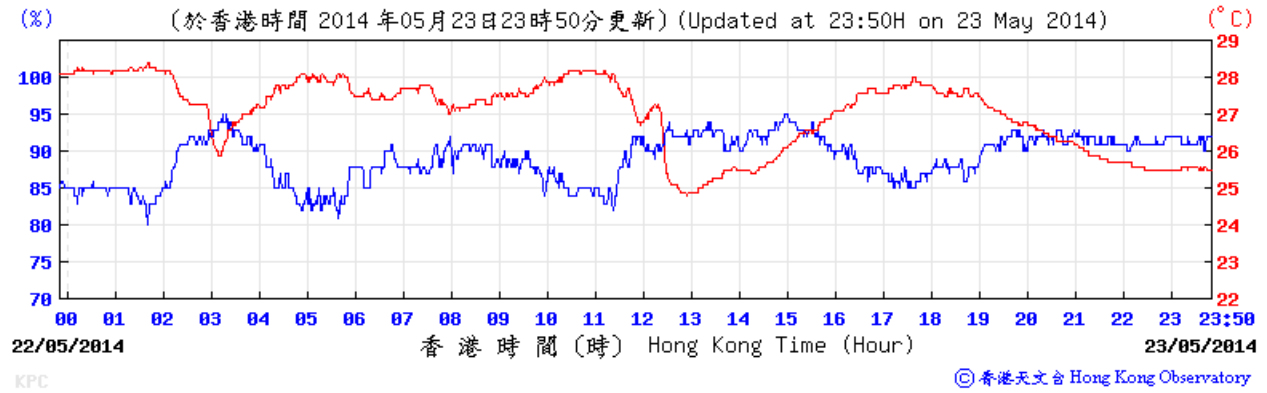


## Wind Speed:

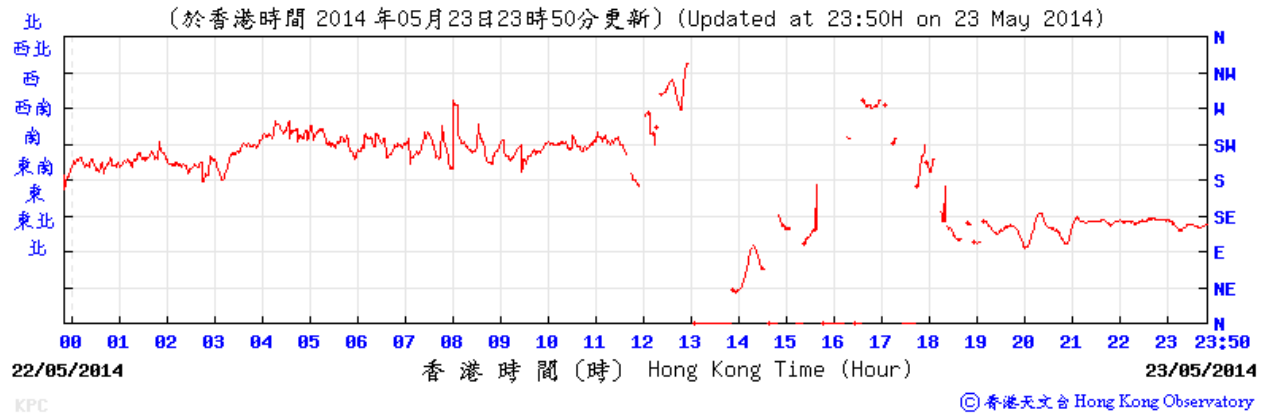


# King's Park Weather Station – 23 May 2014

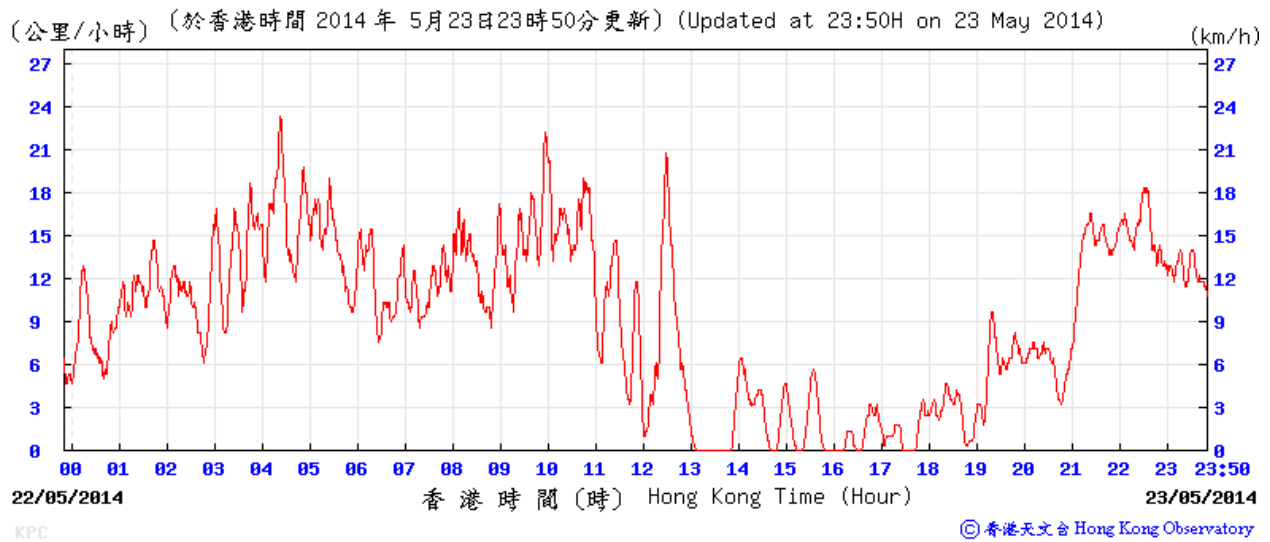
## Temperature and Humidity:



## Wind Direction:

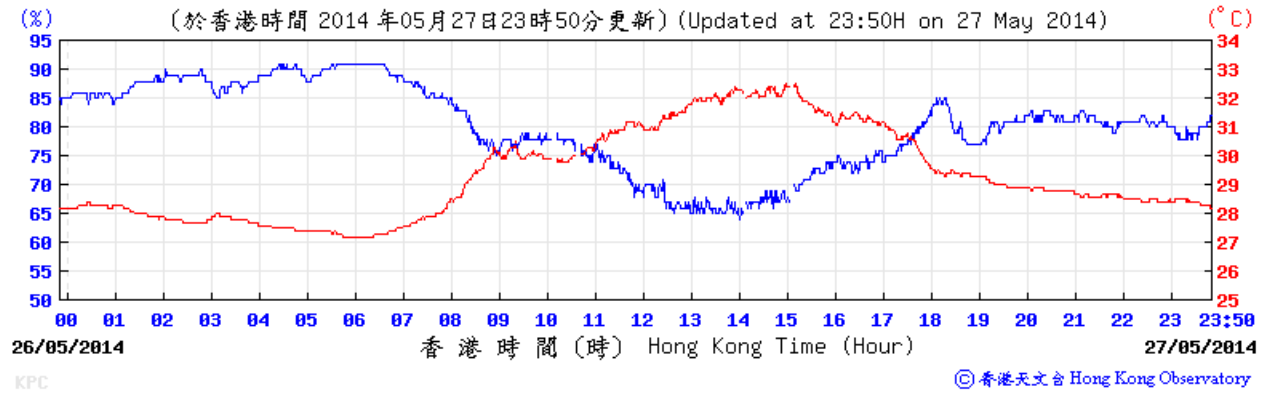


## Wind Speed:

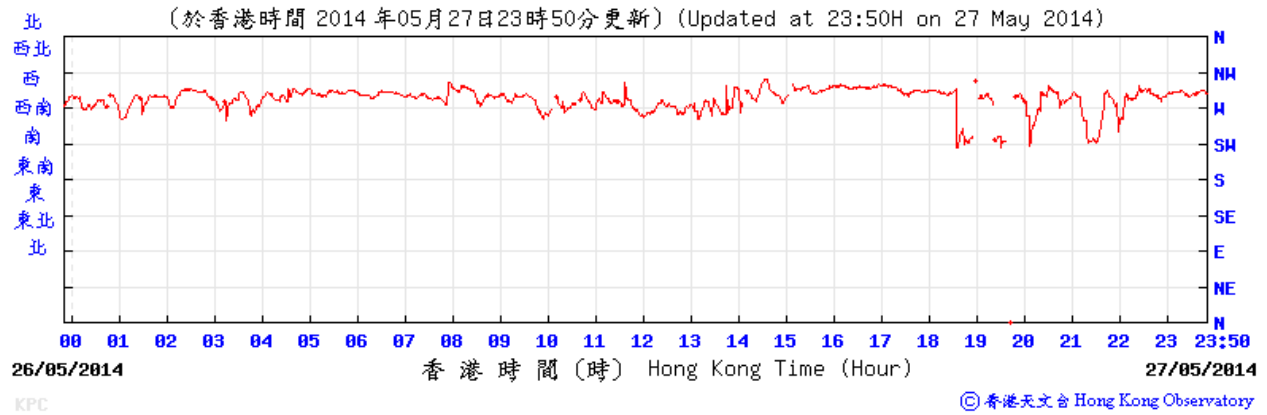


# King's Park Weather Station – 27 May 2014

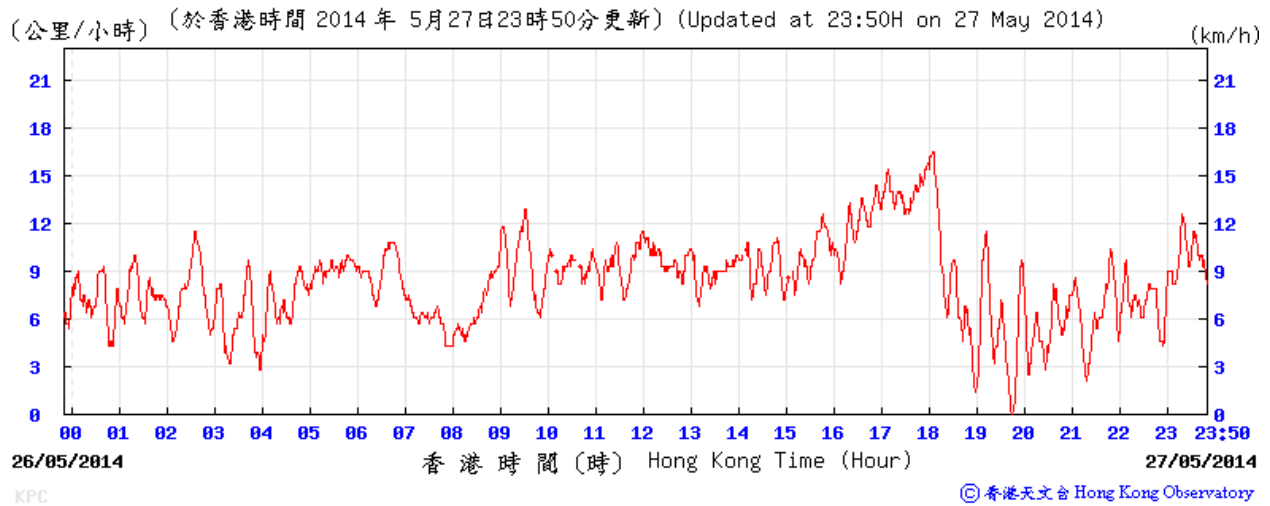
## Temperature and Humidity:



## Wind Direction:



## Wind Speed:



## Appendix H

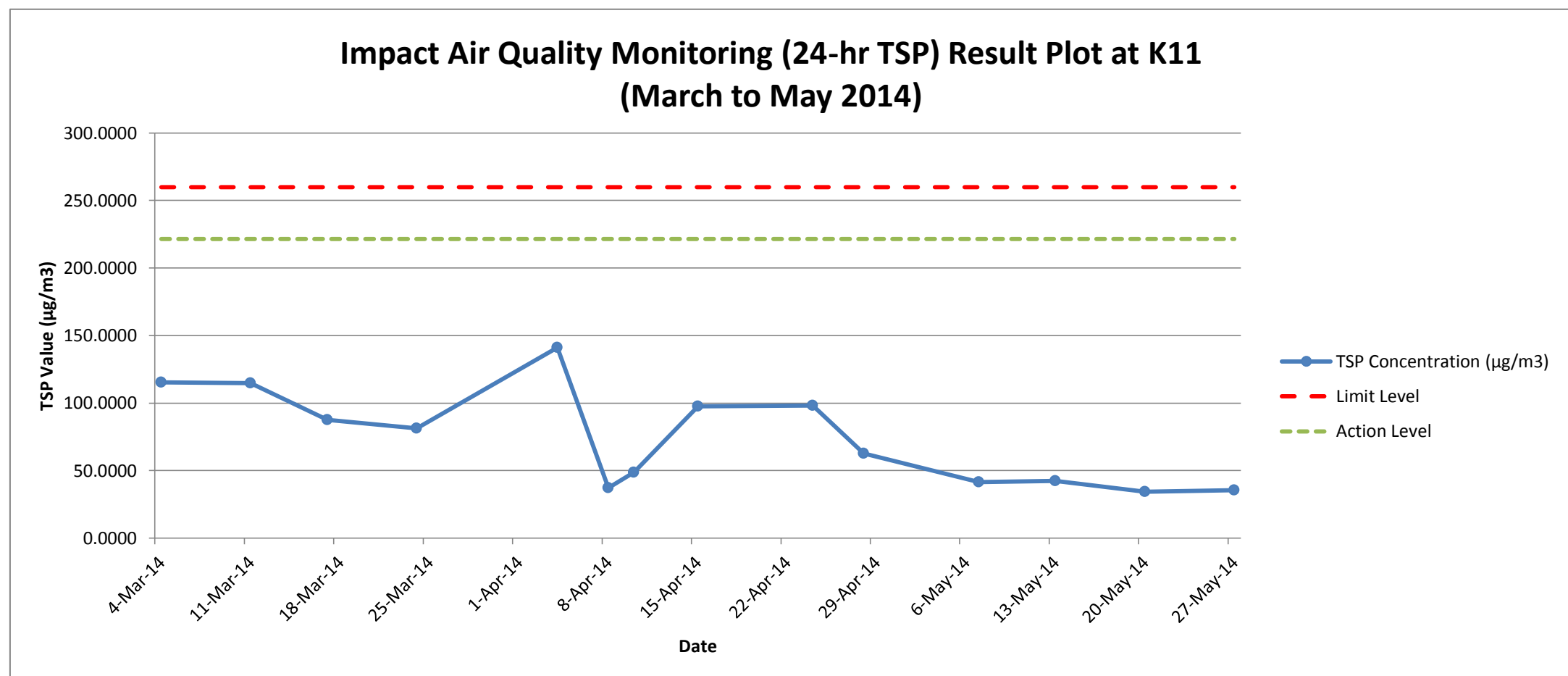
---

# Monitoring Results and Plots



**C3840-13C MTRCL Tsim Sha Tsui Station Carnarvon Road Subway and Entrances Modification Works  
Impact Air Quality Monitoring (24-hr TSP) Results at K11 (March to May 2014)**

Location	Monitoring Date	Start Time	Weather Conditions	Temperature	Elapse Time			Flow Rate (CFM)			TSP Concentration (µg/m3)	Action/Limit Levels
					Initial	Final	Sampling Hours	Initial	Final	Average Flow Rate		
K11	4-Mar-14	12:30	Overcast	17	651543	653943	1440.0	43	43	43.0	115.4283	221.6/260
	11-Mar-14	12:20	Overcast	18	653943	656343	1440.0	41	41	41.0	114.8103	221.6/260
	17-Mar-14	11:30	Fine	18	656343	658743	1440.0	40	40	40.0	87.7068	221.6/260
	24-Mar-14	11:00	Rainy	19	658743	661143	1440.0	40	40	40.0	81.4212	221.6/260
	4-Apr-14	14:32	Fine	17	661153	663553	1440.0	40	40	40.0	141.1340	221.6/260
	8-Apr-14	12:00	Rainy	20	663553	665953	1440.0	40	40	40.0	37.1895	221.6/260
	10-Apr-14	10:00	Rainy	22	666300	668700	1440.0	45	45	45.0	48.6158	221.6/260
	15-Apr-14	11:05	Fine	22	668701	671101	1440.0	40	40	40.0	97.6589	221.6/260
	24-Apr-14	11:05	Fine	21	673502	675902	1440.0	40	40	40.0	98.1245	221.6/260
	28-Apr-14	10:05	Fine	26	676501	678901	1440.0	33	35	34.0	62.7186	221.6/260
	7-May-14	11:05	Overcast	20	678301	680701	1440.0	34	40	37.0	41.5511	221.6/260
	13-May-14	12:20	Overcast	28	680702	683102	1440.0	40	40	40.0	42.4275	221.6/260
	20-May-14	12:16	Overcast	26	683102	685502	1440.0	40	45	42.5	34.3959	221.6/260
	27-May-14	11:45	Sunny	31	685502	687902	1440.0	39	40	39.5	35.3604	221.6/260



C3840-13C MTRCL Tsim Sha Tsui Station Carnarvon Road Subway and Entrances Modification Works  
 Noise Impact Monitoring Results at K11 (March to May 2014)

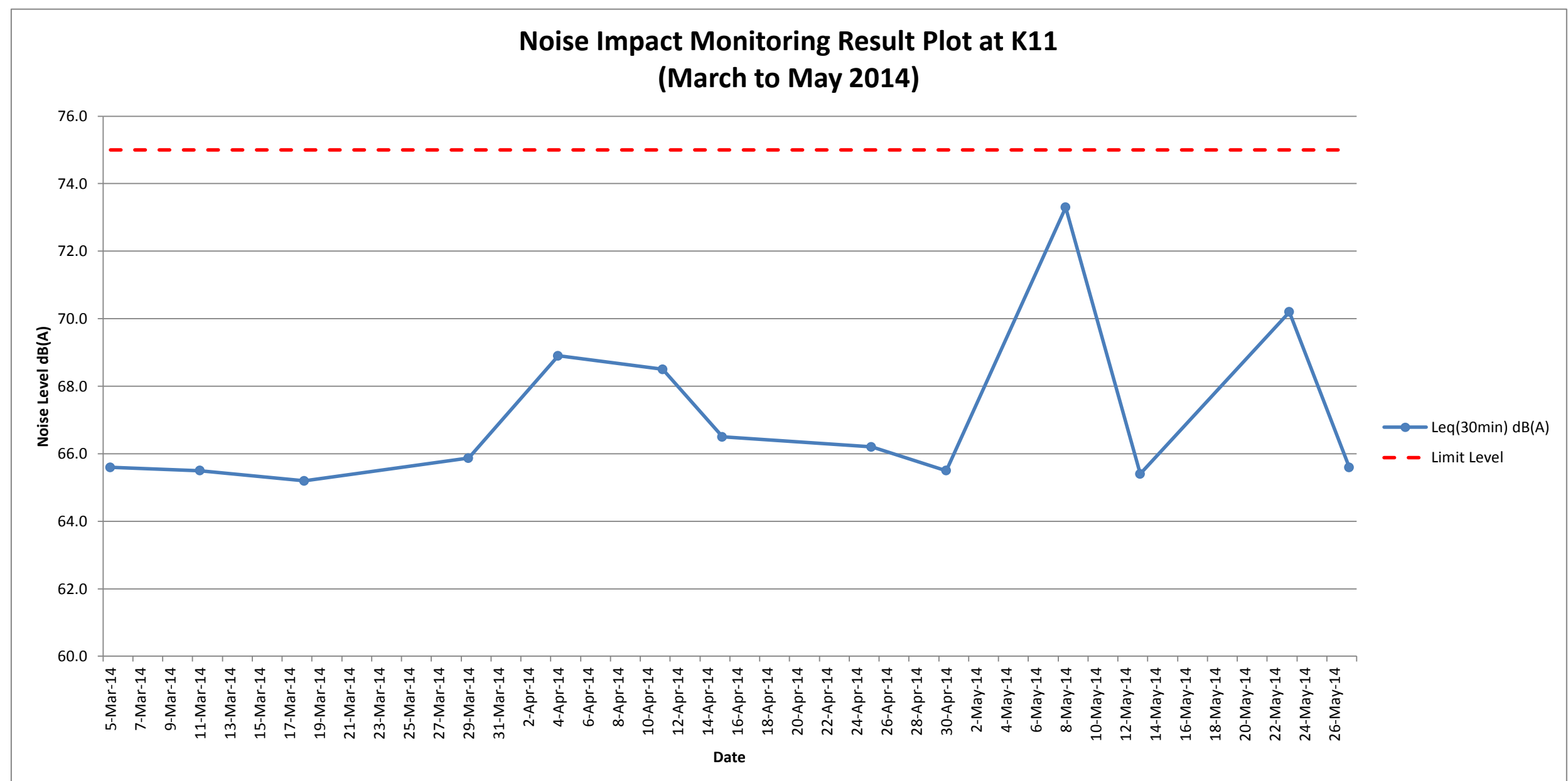
Monitoring Locations	Date	Weather Conditions	Temperature	Wind Speed (m/s)	Start Time	End Time	Background Level dB(A)	Limit Level dB(A)	Leq(30min) dB(A)	L10(30min) dB(A)	L90(30min) dB(A)
11 Art Mall	5-Mar-14	Overcast	17	1.0	11:56	12:26	65.3	75	65.6	- *	- *
	11-Mar-14	Overcast	18	1.8	12:47	13:17	65.3	75	65.5	66.5	63.0
	18-Mar-14	Fine	18	1.0	11:00	11:30	65.3	75	65.2	66.5	62.5
	29-Mar-14	Cloudy	21	0.5	16:22	16:52	65.3	75	65.9	67.3	63.8
	4-Apr-14	Sunny	20	0.3	14:20	14:50	65.3	75	68.9	70.9	65.3
	11-Apr-14	Sunny	20	0.3	14:48	15:18	65.3	75	68.5	71.5	65.3
	15-Apr-14	Fine	22	0.3	11:10	11:40	65.3	75	66.5	67.9	64.7
	25-Apr-14	Cloudy	26	0.3	10:32	11:02	65.3	75	66.2	68.1	64.1
	30-Apr-14	Fine	25	0.2	11:25	11:55	65.3	75	65.5	67.0	63.0
	8-May-14	Overcast	23	0.9	10:45	11:15	65.3	75	73.3	73.5	67.0
	13-May-14	Overcast	28	2.3	11:45	12:15	65.3	75	65.4	66.5	63.0
	23-May-14	Overcast	28	2.1	16:10	16:40	65.3	75	70.2	71.5	67.0
27-May-14	Sunny	31	1.5	11:35	12:05	65.3	75	65.6	67.2	63.4	

\* Not collected

Note:

The limit level of NSR1 is 65dB(A) during school examination period.

**Red Bold indicates an exceedance of Limit Level**

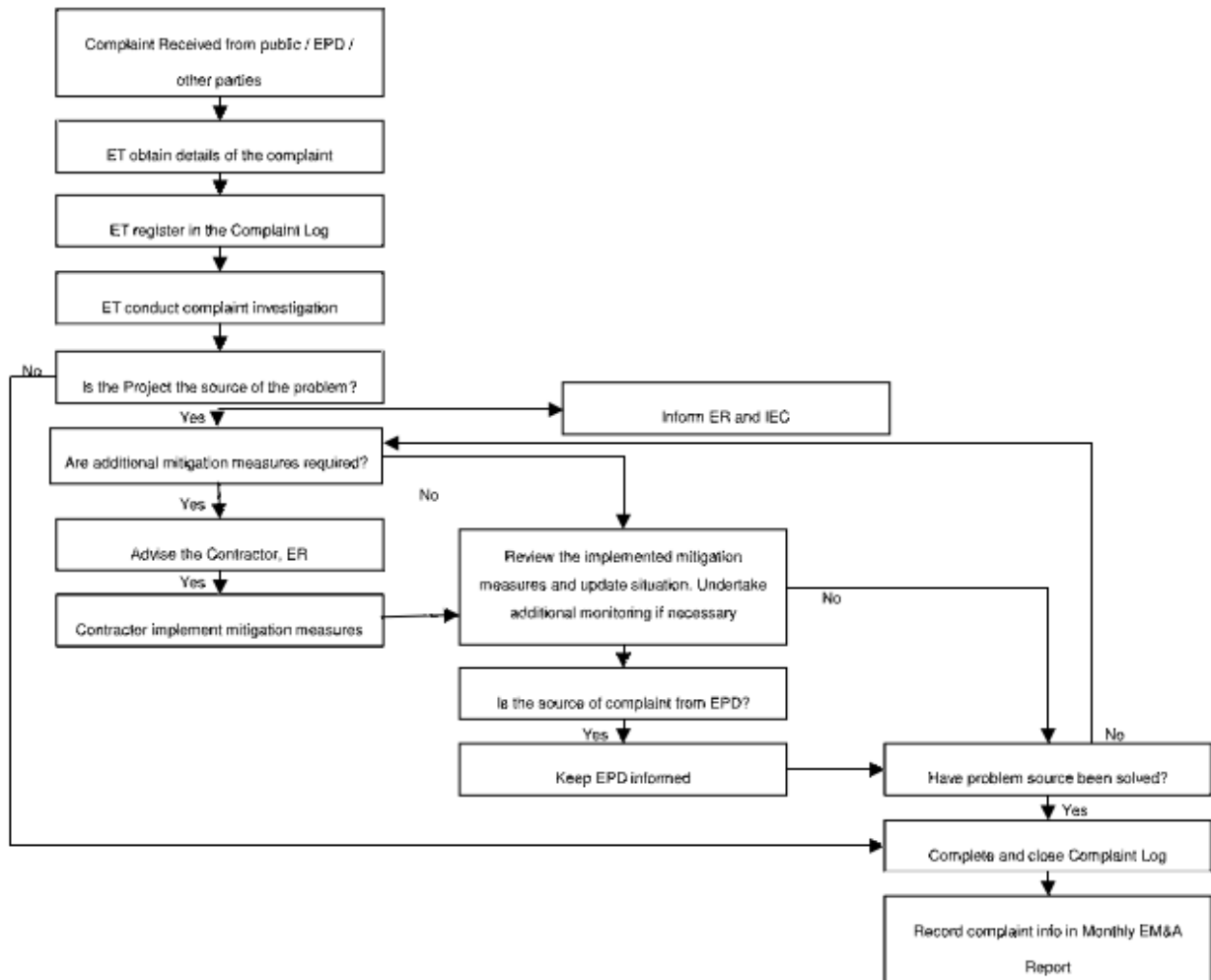


# Appendix I

---

## Flow Chart for Handling Environmental Complaints

# Complaint Response Procedure



## Appendix J

---

# Waste Management Records

## Monthly Summary Waste Flow Table for 2014 (year)

**Contract No:** C3840-13C Tsim Sha Tsui Station Carnarvon Road Subway  
**Date Reported:** 2-June-2014

Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of Non-inert C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rocks and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics	Chemical Waste	Others, e.g. general refuse
		(See Note 3)							(see Note 2)		
(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> /tonne)
Jan	0.0206	-	-	-	0.0206	-	-	-	-	-	-
Feb	0.0233	-	-	-	0.0233	-	-	-	-	-	-
Mar	0.0120	-	-	-	0.0120	-	-	-	-	-	-
Apr	0.0281	-	-	-	0.0281	-	-	-	-	-	0.0035
May	0.0059	-	-	-	0.0059	-	-	-	-	-	-
June	-	-	-	-	-	-	-	-	-	-	-
Sub-total	0.0899	-	-	-	0.0899	-	-	-	-	-	0.0035
July	-	-	-	-	-	-	-	-	-	-	-
Aug	-	-	-	-	-	-	-	-	-	-	-
Sept	-	-	-	-	-	-	-	-	-	-	-
Oct	-	-	-	-	-	-	-	-	-	-	-
Nov	-	-	-	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	-	-	-
Total	0.0899	-	-	-	0.0899	-	-	-	-	-	0.0035

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.