



Environmental Team Services for Contract No.  
CV/2012/02 Construction of Sewage Pumping  
Station near Tsz Tin Road and Associated  
Sewerage Works in Area 54, Tuen Mun

Quarterly EM&A Report for  
May to July 2014 (Rev. A)  
August 2014

Civil Engineering and Development Department





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# Issue and revision record

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Rev. A	August 2014	Florence Kwong	Terence Kong	Eric Ching	Submission to EPD

## Information Class: Standard

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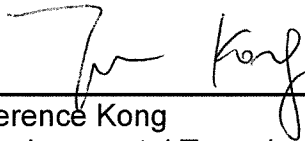
**Contract No. CV/2012/02**

**Construction of Sewage Pumping Station**

**near Tsz Tin Road and Associated Sewerage Works in Area 54, Tuen Mun**

**Quarterly EM&A Summary Report for May to July 2014 (Rev. A)**

**Certified by:**




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Terence Kong  
Environmental Team Leader (ETL)  
Mott MacDonald Hong Kong Limited

**Date**

15 August 2014

**Verified by:**



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F N Wong  
Independent Environmental Checker (IEC)  
Hyder Consulting Limited

**Date**

18 August 2014





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# Executive Summary

On 26 October 2012, Mott MacDonald Hong Kong Limited (MMHK) was commissioned by the Civil Engineering and Development Department (CEDD) under Agreement No. LW 02/2012 to undertake the Environmental Team (ET) services (including environmental monitoring and audit (EM&A)) for the Construction of Sewage Pumping Station near Tsz Tin Road and Associated Sewerage Works in Area 54, Tuen Mun (The Project).

The Environmental Permit for the “Tuen Mun Area 54 Sewage Pumping Station” was granted by the Environmental Protection Department (EPD) on 4 January 2010. The construction works commenced on 22 February 2013. This is the May to July 2014 Quarterly EM&A Summary Report which summarises the findings on EM&A during the reporting period of May to July 2014.

## **Exceedance of Action and Limit Levels**

There was no breach of Action or Limit levels for Air Quality (1-hr TSP and 24-hr TSP) and Noise level (as  $L_{eq}$ ) in this reporting period.

## **Implementation of Mitigation Measures**

Site inspection was carried out weekly in the reporting period to confirm the implementation measures undertaken by the Contractor in the reporting month. The status of implementation of mitigation measures in the site is shown in **Appendix C**.

## **Record of Complaints**

There was no record of complaints received in the reporting period.

## **Record of Notification of Summons and Successful Prosecutions**

There was no record of Notification of summons and successful prosecution in the reporting period.

## 1.1 Background

On 26 October 2012, Mott MacDonald Hong Kong Limited (MMHK) was commissioned by the Civil Engineering and Development Department (CEDD) under Agreement No. LW 02/2012 to undertake the Environmental Team (ET) services (including environmental monitoring and audit (EM&A)) for the Construction of Sewage Pumping Station near Tsz Tin Road and Associated Sewerage Works in Area 54, Tuen Mun (The Project).

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## 1.2 Project Organization

The organisation chart and lines of communication with respect to the on-site environmental management structure together with the contact information of the key personnel are shown in [Appendix A](#).

## 1.3 Works Undertaken

During the reporting period, construction works of the Project undertaken included:

### May 2014

#### **Portion A**

- Excavation
- Construction of DN500 twin rising main
- Installation of sheet pile
- Support pipe laying
- Pipe Jacking
- Construction of manhole and valve pit
- Formwork
- Steel fixing
- Concreting
- Stockpile and disposal of soil

#### **Portion B**

- Construction of pump room
- Formwork
- Steel Fixing
- Concreting
- Stockpile of soil

## **June 2014**

### **Portion A**

- Excavation
- Construction of DN500 twin rising main
- Installation of sheet pile
- Support pipe laying
- Pipe Jacking
- Construction of manhole and valve pit
- Formwork
- Steel fixing
- Concreting
- Stockpile and disposal of soil

### **Portion B**

- Construction of pump room
- Formwork
- Steel Fixing
- Concreting
- Stockpile of soil

## **July 2014**

### **Portion A**

- Excavation
- Construction of DN500 twin rising main
- Installation of sheet pile
- Temporary Support
- Pipe laying
- Pipe Jacking
- Construction of manhole and valve pit formwork
- Steel fixing
- Concreting
- Stockpile and disposal of soil

### **Portion B**

- Construction of pump room - formwork
- Steel Fixing
- Concreting
- Stockpile of soil

A layout plan of the Project is provided in **Figure 1.1**.

## 1.4 Summary of EM&A Requirements

The EM&A programme requires environmental monitoring of air quality and noise as specified in the approved EM&A Manual.

A summary of impact EM&A requirements is presented in **Table 4-1**.

Table 4-1: Summary of Impact EM&A Requirements

Parameters	Descriptions	Remarks	Frequencies	Locations
Air Quality	24-hour TSP		Once every 6 days	Project Site Office (A5)
	1-hour TSP		3 times every 6 days	
Noise	Leq, L90 & L10 (30 min)	Daytime on normal weekdays (0700-1900 hrs)	Once every week	G/F of Block 6 of Unicorn Garden (N1) No. 140 of Kei Lun Wai (N2)

The locations of the monitoring stations are shown in **Figure 2.1**. The Environmental Quality Performance Limits for air quality and noise are shown in **Appendix B**.

## 1.5 Summary of EM&A Programme in the Reporting Period

A summary of the EM&A Programme is presented in **Table 5-1**.

Table 5-1: Summary of Impact EM&A Requirements

Parameters	Monitoring Station	Descriptions	Monitoring Date
Air Quality	A5 (Project Site Office)	24-hour TSP	2, 8, 14, 20, 26 and 30 May 2014
		1-hour TSP	5, 11, 17, 23 and 27 June 2014
			3, 9, 15, 21, 25 and 31 July 2014
Noise	N1 (Unicorn Garden)	Leq, L90 & L10 (30 min)	8, 14, 20 and 26 May 2014
	N2 (Kei Lun Wai)		5, 11, 17 and 23 June 2014
			3, 9, 15, 21 and 31 July 2014

The 1-hr TSP, 24-hr TSP, noise level (as  $L_{eq}$ ) under monitoring have been checked against established Action and Limit levels. There was no breach of Action and Limit Levels for 1-hr TSP, 24-hr TSP and noise in the reporting period.

## 1.6 Implementation Status of Environmental Mitigation Measures

The EM&A programme followed the recommended mitigation measures in the EM&A Manual. The EM&A requirements of the environmental mitigation measures are provided in **Appendix C**.

## **1.7 Advice on the Solid and Liquid Waste Management Status**

The Contractor has been registered as a chemical waste producer for the Project. Construction and demolition (C&D) material sorting will be carried out on site. A sufficient number of receptacles were available for general refuse collection.

138 m<sup>3</sup> of C&D material, 18 kg of paper/cardboard packaging and 24 m<sup>3</sup> of general refuse have been disposed during the reporting period.

## **1.8 Summary of Non-Compliances**

No exceedance or non-compliance was recorded during the reporting period.

No notifications of summons or successful prosecutions was received during the reporting period.

## **1.9 Review of Reasons for and the Implications of Non-compliance**

As no exceedance or non-compliance was recorded during the reporting period, this section is not applicable.

## **1.10 Actions Taken in the event of Non-compliance**

As no exceedance or non-compliance was recorded during the reporting period, this section is not applicable.

## **1.11 Summary of Environmental Complaints Received**

No Environmental Complaint was received in the reporting period.

## **1.12 Comments and Recommendations**

Based on the observations made during site audits and landscape inspections, and monitoring results recorded during noise and construction dust monitoring, no non-compliances and exceedances of air quality and noise limits were recorded. Reviewing the implementation of the recommended mitigation measures in the EM&A Manual, it was observed that they were effective and efficient in controlling the potential impacts due to construction of the project during the reporting period. Review of the effectiveness and efficiency of the EM&A programme will be continued, and recommendations will be provided to remediate any potential impacts due to the project and to improve the EM&A programme.

### 1.13 Conclusions

The EM&A programme as recommended in the EM&A Manual has been undertaken since the construction works commenced on 22 February 2013.

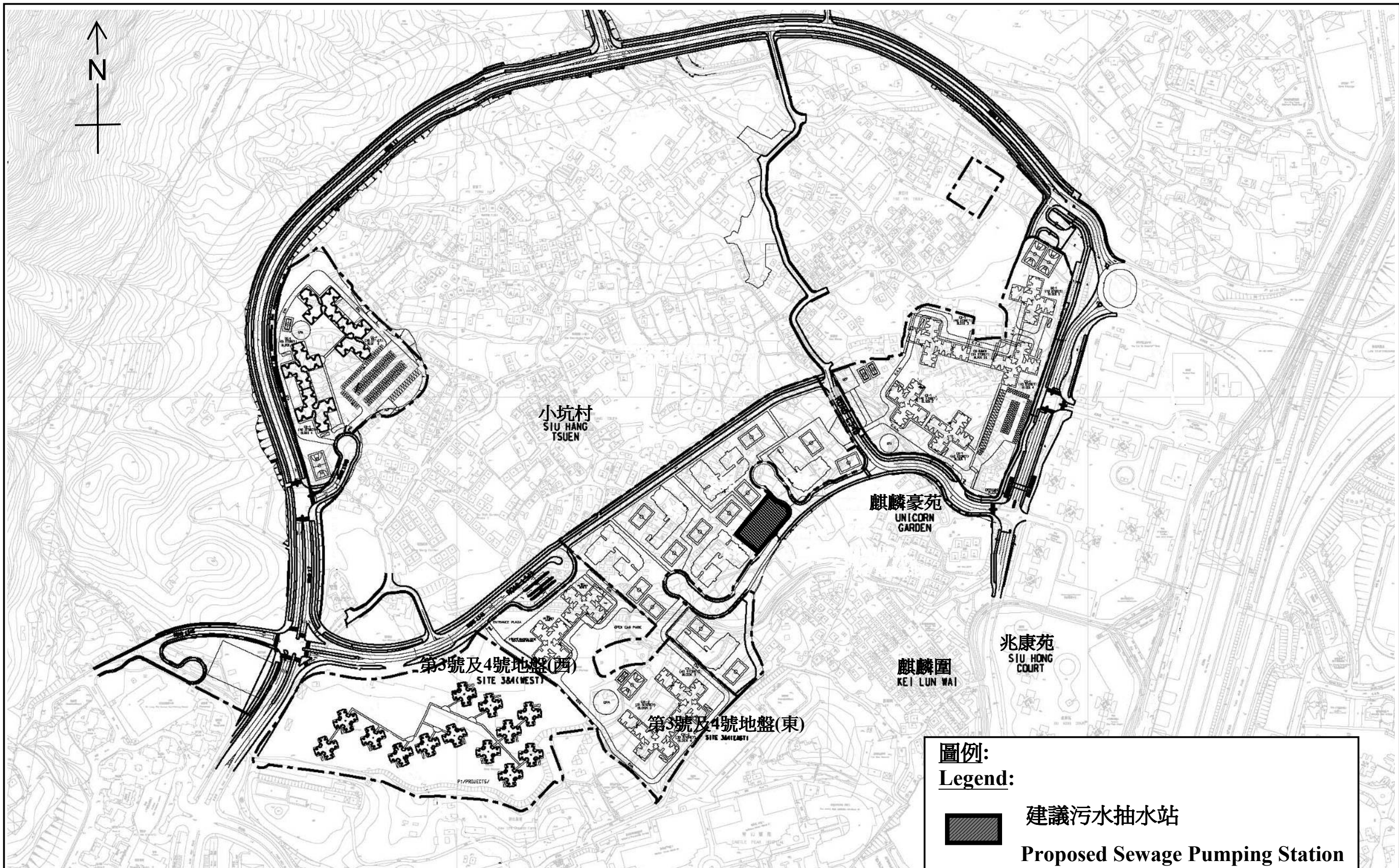
Monitoring of air quality and noise impact due to the Project was under way. In particular, the 1-hr TSP, 24-hr TSP, noise level (as  $L_{eq}$ ) under monitoring have been checked against established Action and Limit levels. There was no breach of Action and Limit Levels for 1-hr TSP, 24-hr TSP and noise in the reporting period.

There were no complaints, notifications of summons or successful prosecutions during the reporting period.

From site observations and no exceedances of environmental parameters were recorded during monitoring, it was observed that the recommended mitigation measures in the EM&A Manual were effective and efficient in controlling the potential impacts due to construction of the project during the reporting period.





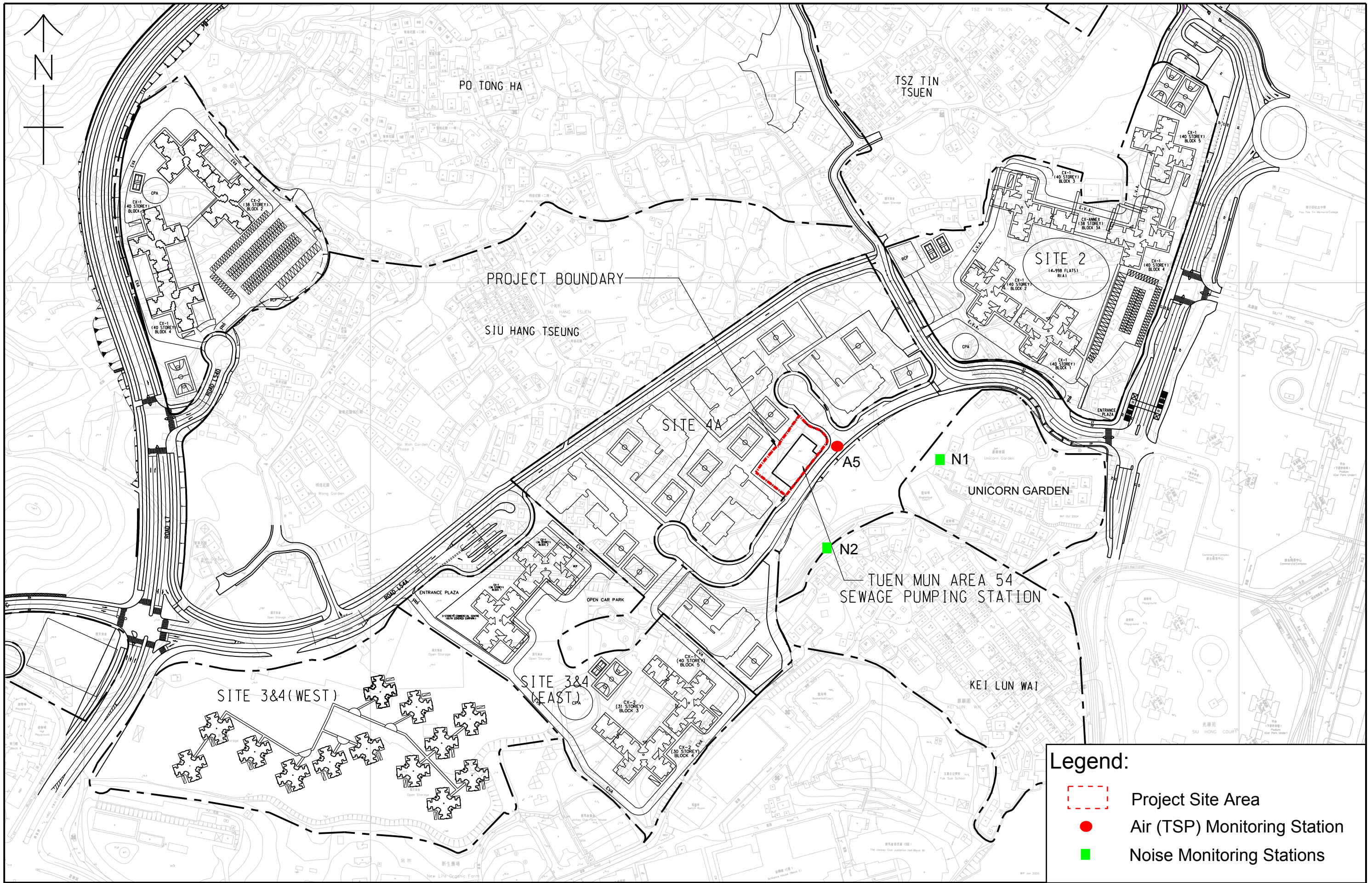


屯門第54區污水抽水站 –  
**Tuen Mun Area 54 Sewage Pumping Station –**  
 建議污水抽水站位置  
 Location of Proposed Sewage Pumping Station

Figure 1.1

環境許可證：EP-381/2009  
 Environmental Permit: EP-381/2009





**Legend:**

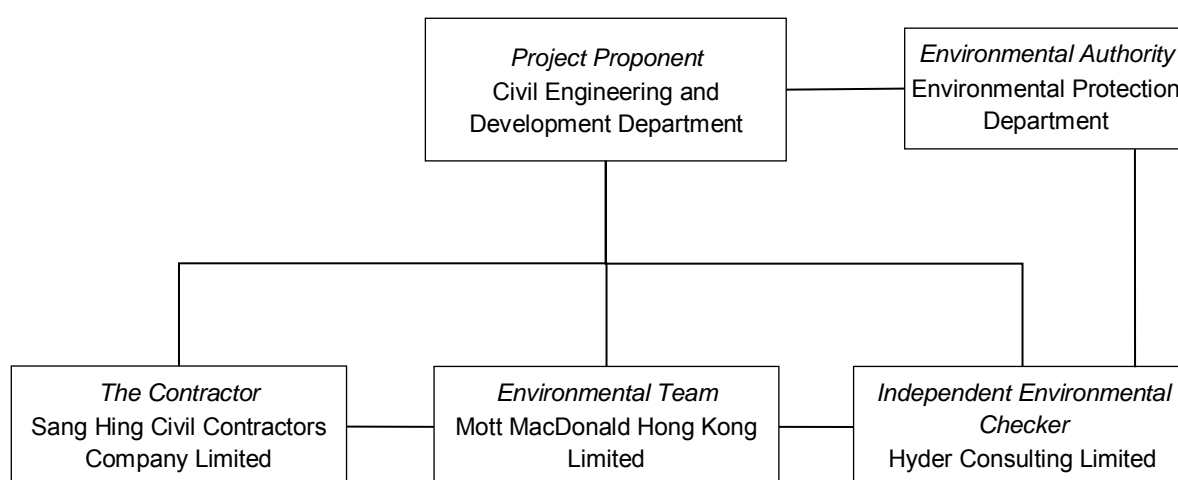
- Project Site Area
- Air (TSP) Monitoring Station
- Noise Monitoring Stations

Figure 2.1 Locations of Monitoring Stations

(Not to Scale)

# Appendix A. Project Organization

Contact information:



Company / Department	Position	Name	Telephone / Mobile
Civil Engineering and Development Department	Engineer's Representative	Mr Henry Tsang	2760 5781
Hyder Consulting Limited	Independent Environmental Checker	Mr. F N Wong	2911 2744
Mott MacDonald Hong Kong Ltd.	Environmental Team Leader	Mr Terence Kong	2828 5919
Sang Hing Civil Contractors Company Limited	Project Director	Mr. P Y Cheng	9023 4821
Sang Hing Civil Contractors Company Limited	Site Agent	Mr. K H Lai	9187 7116
Sang Hing Civil Contractors Company Limited	Environmental Officer	Mr Y M Leung	9844 7741



## Appendix B. Action and Limit Levels for Construction Phase

### Air Quality

The Action and Limit Levels for 1-hour and 24-hour TSP for the monitoring station are presented in following tables:

Table B1: Action and Limit Levels for 1-hour TSP

Monitoring Station	Action Level ( $\mu\text{g}/\text{m}^3$ )	Limit Level ( $\mu\text{g}/\text{m}^3$ )
A5	375	500

Table B2: Action and Limit Levels for 24-hour TSP

Monitoring Station	Action Level ( $\mu\text{g}/\text{m}^3$ )	Limit Level ( $\mu\text{g}/\text{m}^3$ )
A5	188	260

### Noise

The Action and Limit Levels for Noise for the monitoring stations are presented in following table:

Table B3: Action and Limit Levels for Construction Noise

Time Period & Monitoring Locations	Action Level	Limit Level
N1& N2 0700-1900 hours on normal weekdays	When one documented complaint is received from any one of the sensitive receivers	75 dB(A)



# Appendix C. Environmental Mitigation Measures – Implementation Status

Table C1: Air Quality – Recommended Mitigation Measures

* EM&A / ^ EP ref:	Recommended measures	Implementation Status
*2.57, Table A1	Implementation of the dust suppression measures stipulated in the Air Pollution Control (Construction Dust) Regulation.	✓
*2.57, Table A1	Skip hoist for material transport should be totally enclosed by impervious sheeting;	✓
	Vehicle washing facilities should be provided at every vehicle exit point;	✓
	The area where vehicle washing takes place and the section of the road between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcore;	✓
	Where a site boundary adjoins a road, streets or other areas accessible to the public, hoarding of not less than 2.4 m high from ground level should be provided along the entire length except for a site entrance or exit;	✓
	Use of regular watering, with complete coverage, to reduce dust emissions from exposed site surfaces and unpaved roads, particularly during dry weather	P
	Side enclosure and covering of any aggregate or dusty material storage piles to reduce emissions. Where this is not practicable owing to frequent usage, watering shall be applied to aggregate fines;	✓
	Open stockpiles shall be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs	✓
	Tarpaulin covering of all dusty vehicle loads transported to, from and between site locations	✓
	Every stock of more than 20 bags of cement should be covered entirely by impervious sheeting placed in an area sheltered on the top and the 3 sides;	N/A
	Every vehicle should be washed to remove any dusty materials from its body and wheels before leaving the construction sites	✓
Instigation of an environmental monitoring and auditing program to monitor the construction process in order to enforce controls and modify method of work if dusty conditions arise.	✓	

Table C2: Noise – Recommended Mitigation Measures

* EM&A / ^ EP ref:	Recommended measures	Implementation Status
*3.16, Table A2	Adoption of quiet plant for following construction activities/scenarios: Site clearance Bulk excavation for sub-structure and site formation Steel fixing concreting of sub-structure Steel fixing and concreting of roof and columns Brick Works & Finishing, M&E Installation & Pipeworks, Landscape Works & Roadworks	✓
	Only well-maintained plant shall be operated on-site and plant shall be serviced regularly during the construction program;	✓
	Silencers or mufflers on construction equipment should be utilised and should be properly maintained during the construction program	✓
	Mobile plant should be sited as far away from NSRs as possible.	✓
	Machines and plant that may be in intermittent use should be shut down between	✓

* EM&A / ^ EP ref:	Recommended measures	Implementation Status
	work periods or should be throttled down to a minimum.	
	Plant known to emit noise strongly in one direction, should, where possible, be orientated to direct noise away from nearby NSRs.	✓
	Material stockpiles and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.	✓

Table C3: Water Quality – Recommended Mitigation Measures

* EM&A / ^ EP ref:	Recommended measures	Implementation Status
*4.3, Table A3	At the start of site establishment, perimeter cut-off drains to direct off-site water around the site should be constructed with internal drainage works and erosion and sedimentation control facilities implemented. Channels, earth bunds or sand bag barriers should be provided on site to direct storm water to silt removal facilities.	✓
	Sand/silt removal facilities such as sand/silt traps and sediment basins should be provided to remove sand/silt particles from runoff.	✓
	All drainage facilities and erosion and sediment control structures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly during rainstorms.	✓
	Measures should be taken to minimize the ingress of site drainage into excavations. Water pumped out from foundation excavations should be discharged into storm drains via silt removal facilities.	✓
	Temporarily exposed slope/soil surfaces should be covered by a tarpaulin or other means and temporary access roads should be protected by crushed stone or gravel, as excavation proceeds. Interception channels should be provided to prevent storm runoff from washing across exposed soil surfaces.	✓
	All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads.. Wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains.	P
	Open stockpiles of construction materials or construction wastes on-site of more than 50m3 should be covered with tarpaulin or similar fabric during rainstorms	N/O
^4.4-4.5, Table A3	Construction waste, debris and refuse generated on-site shall be collected, handled and disposed of properly to avoid entering any nearby storm water drain. Stockpiles of cement and other construction materials shall be kept covered when not being used.	✓
	Oils and fuels shall only be used and stored in designated areas which have pollution prevention facilities. All fuel tanks and storage areas shall be provided with locks and be sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank. The bund shall be drained of rainwater after a rain event.	P
*4.6, Table A3	Construction work force sewage shall be handled by temporary facilities, such as portable chemical toilets should be employed on-site. A licensed contractor shall be responsible for appropriate disposal and maintenance of these facilities	✓



Table C4: Waste Management – Recommended Mitigation Measures

* EM&A / ^ EP ref:	Recommended measures	Implementation Status
*5.5, Table A4	Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site	✓
	Training of site personnel in proper waste management and chemical handling procedures	✓
	Provision of sufficient waste disposal points and regular collection of waste	✓
	Appropriate measures to minimise windblown litter and dust during transportation of waste by either covering trucks or by transporting wastes in enclosed containers	✓
	Regular cleaning and maintenance programme for drainage systems, sumps and oil interceptors.	✓
	Separation of chemical wastes for special handling and appropriate treatment at the Chemical Waste Treatment Facility.	✓
*5.6, Table A4	Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal.	✓
	Encourage collection of aluminium cans by providing separate labelled bins to enable this waste to be segregated from other general refuse generated by the work force	✓
	Proper storage and site practices to minimise the potential for damage or contamination of construction materials.	✓
	Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste.	✓
	A recording system for the amount of wastes generated, recycled and disposed (including disposal sites) shall be proposed.	✓
	Training shall be provided to workers about the concepts of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycle.	✓
*5.8, Table A4	General refuse should be stored in enclosed bins or compaction units separate from C&D material.	✓
*5.9, Table A4	The excavated C&D material should be reused on-site as fill material as far as possible for general filling. The surplus excavated material should be disposed of at the designated public fill reception facility, as agreed with the Secretary of the Public Fill Committee, for other beneficial uses.	✓
	A trip-ticket system should be included to monitor the disposal of C&D material at the public fill reception facility and landfill.	✓
*5.10, Table A4	The Contractor should register with the EPD as a Chemical Waste Producer and to follow the guidelines stated in the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes.	✓
	Appropriate labels should be securely attached on each chemical waste container.	✓
	Chemical waste should be disposed of in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.	✓

Table C5: Landscape and Visual Impact – Recommended Mitigation Measures

* EM&A / ^ EP ref:	Recommended measures	Implementation Status
*Table 7.2, Table A5	“No-intrusion Zone” should be set up and maintained around the existing trees, woodland, plantation areas and ground vegetation. No activities or storage should be performed inside the “No-intrusion Zone”.	N/A
*Table 7.2, Table A 5	Hoarding or boundary fencing for construction should fit into the existing environment when looking from outside.	✓
*Table 7.2, Table A 5	Workers should be properly and cleanly dressed.	✓
	The construction contract should require the main contractor to issue guideline to the construction works to minimize disturbance to existing village, rustic dwellings and workshops. .	✓
*Table 7.2, Table A	Excavation works and demolition of existing squatters / workshops which will be highly visible from surrounding areas should be well planned and with precautions to suppress dust.	✓
	Exposed soil shall be covered or ‘camouflaged’ and watered often. Areas that are expected to be left with bare soil for a long period of time after excavation shall be properly covered with suitable protective fabric. Silt and erosion shall be controlled by ground barriers around the slope cutting area.	✓
*Table 7.2, Table A	All security floodlights for construction sites shall be equipped with adjustable shield, frosted diffusers and reflective covers, and be carefully controlled to minimize light pollution and night-time glare to nearby village.	✓
	The Contractor shall consider other security measures which shall minimize the visual impacts.	✓
*Table 7.2, Table A	Existing topsoil shall be re-used where possible for new planting areas within the project.	N/A

Table C6: Others

* EM&A / ^ EP ref:	Recommended measures	Implementation Status
^1.5	A copy of the valid Environmental Permit shall be displayed conspicuously on the Project site(s) at all vehicular site entrances/exits or at a convenient location for public information at all times. The most updated information about the Permit, including any amended Permit, shall be displayed at such locations. If the Permit Holder surrenders a part or whole of the Permit, the notice he send to the Director shall also be displayed at the same locations as the original Permit. The suspended, varied or cancelled Permit shall be removed from display at the Project site(s).	✓
n/a	The required licenses should be obtained by the Contractor (including CNP (if any), WPCO license, etc.)	✓

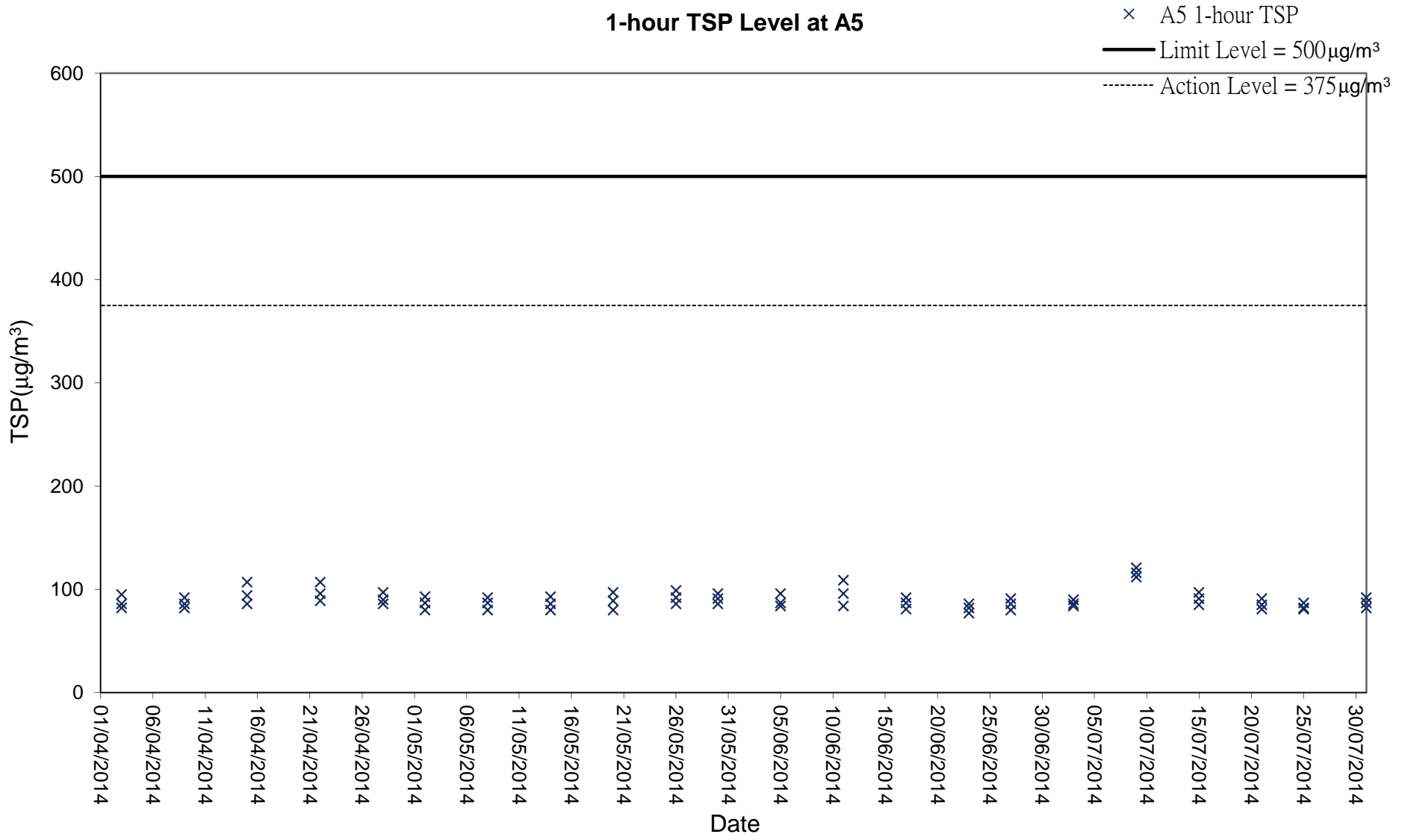
Legend:

- ✓ Implemented
- × Not implemented
- P Partially implemented
- N/A Not applicable
- N/O Not observed

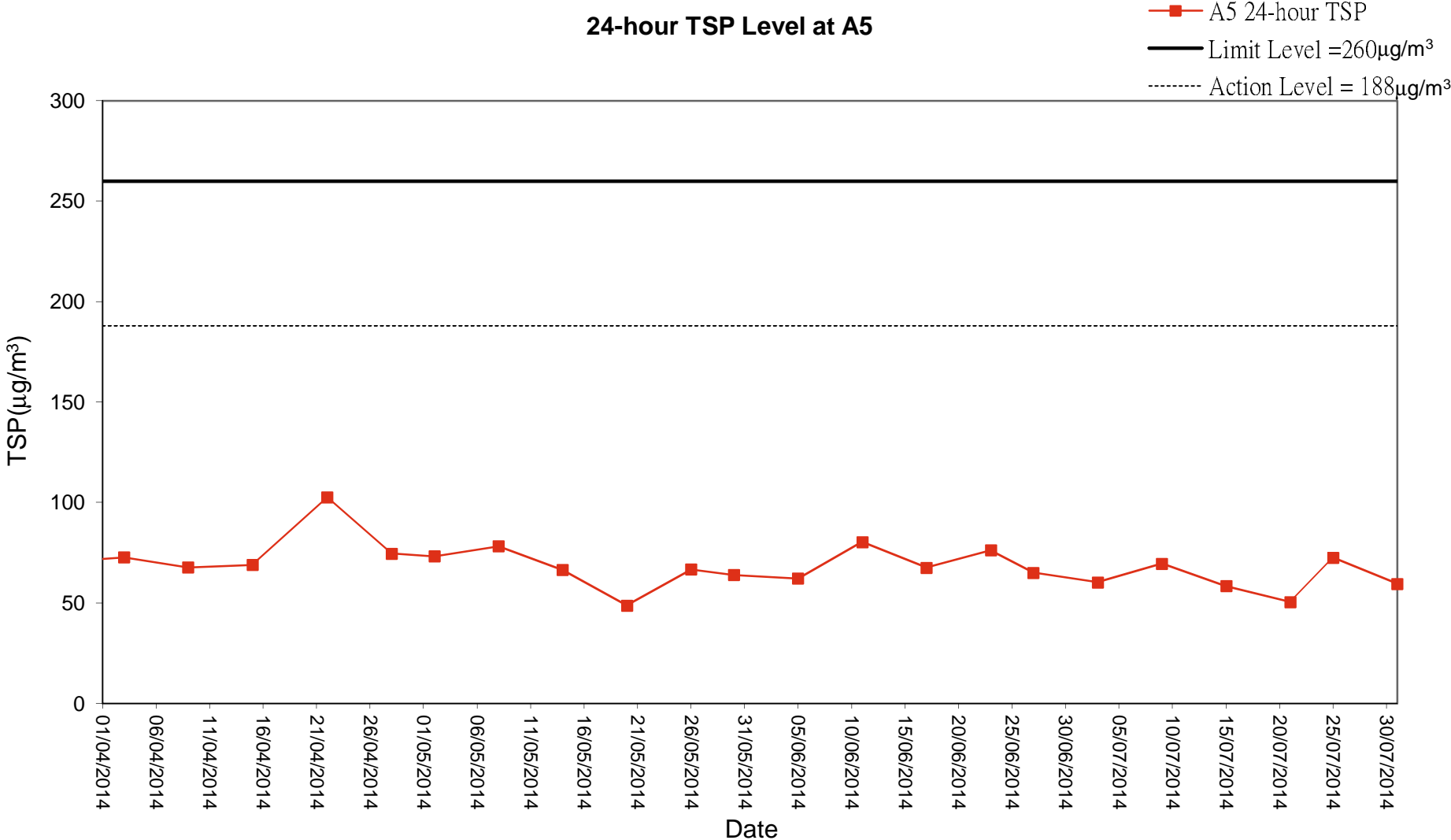
## Appendix D. Graphical Plots of the Monitoring Results



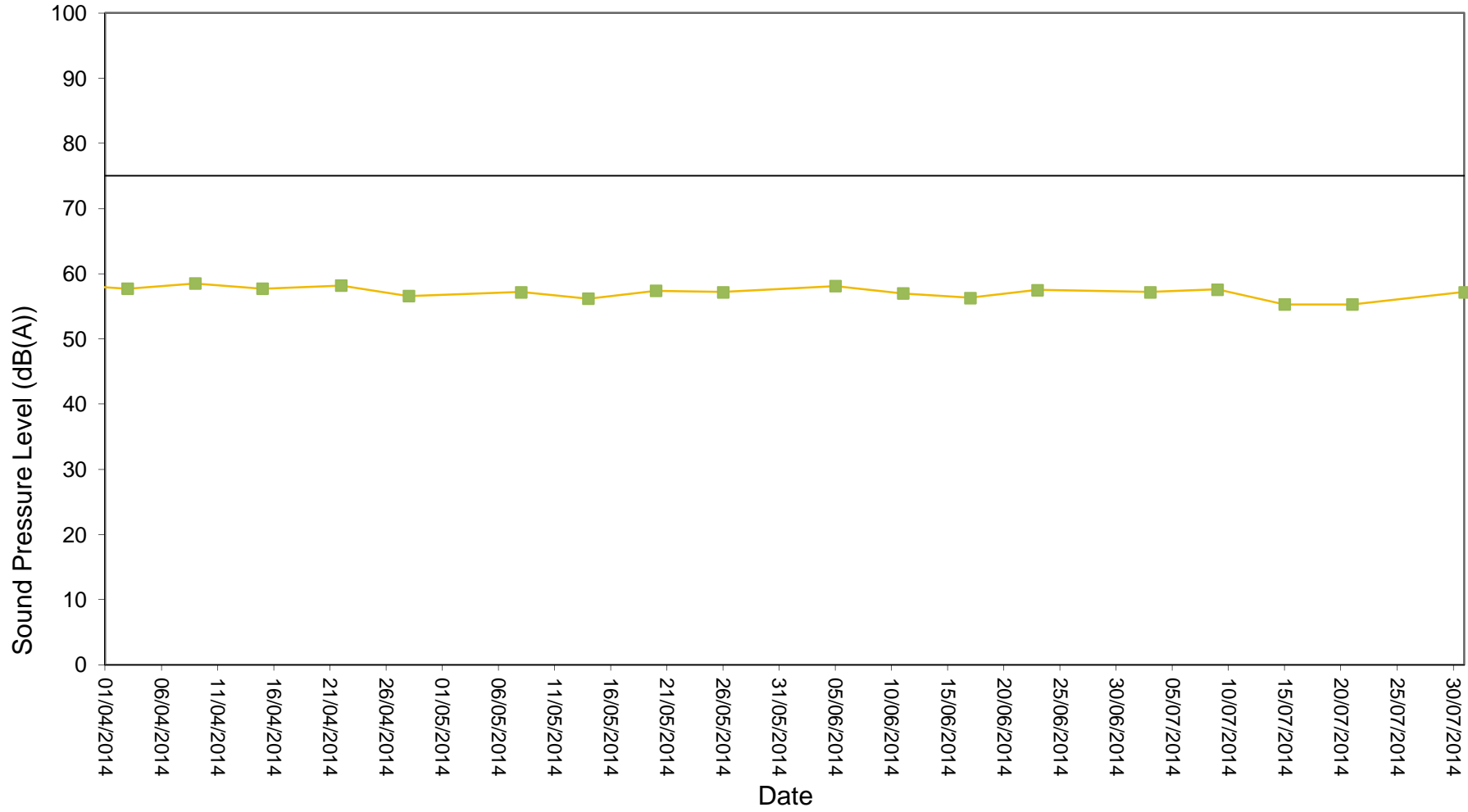
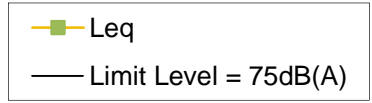
### 1-hour TSP Level at A5



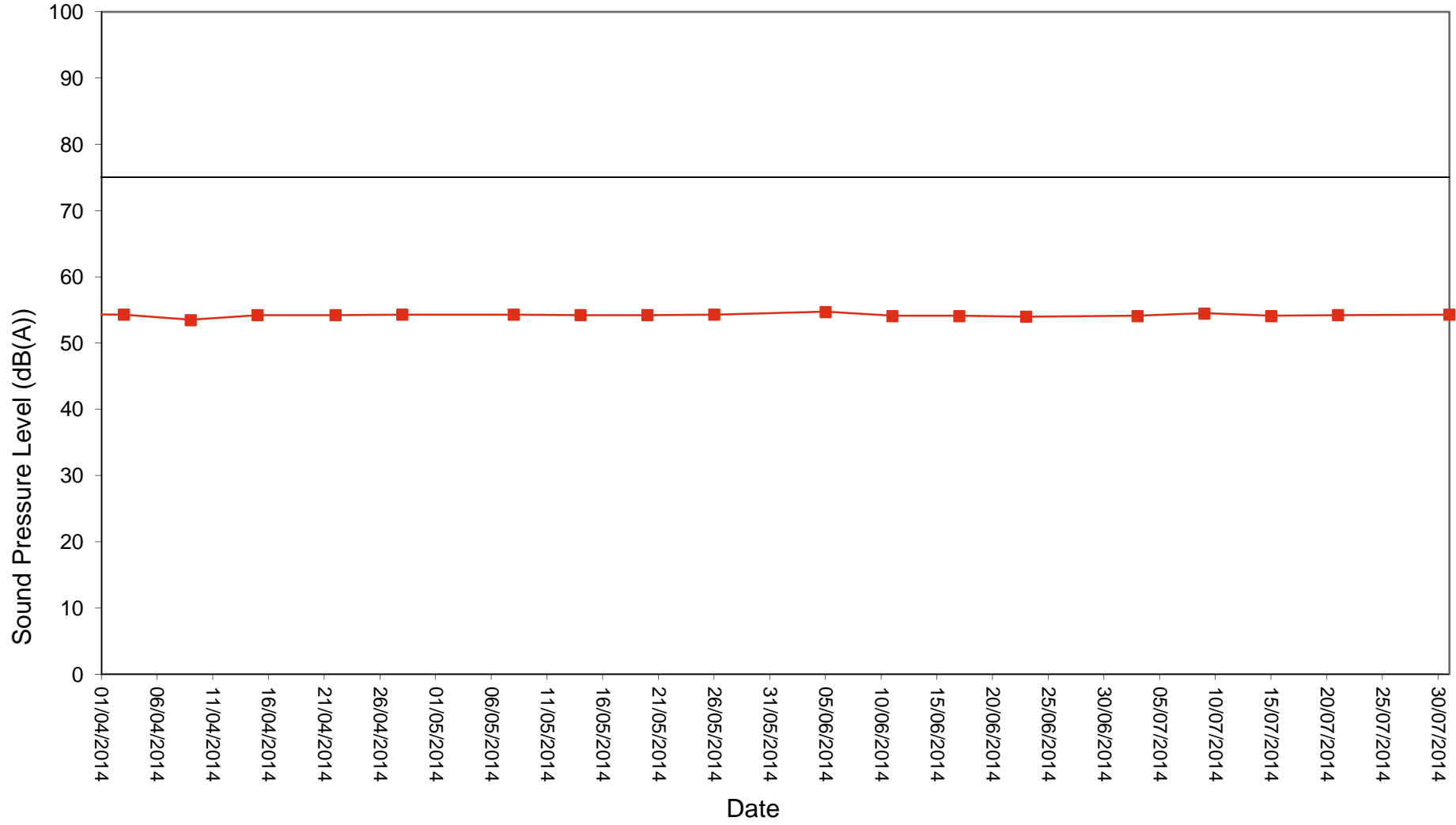
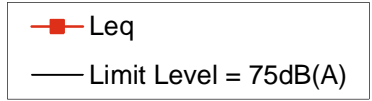
### 24-hour TSP Level at A5



Noise Level for 30 min, dB(A), at N1



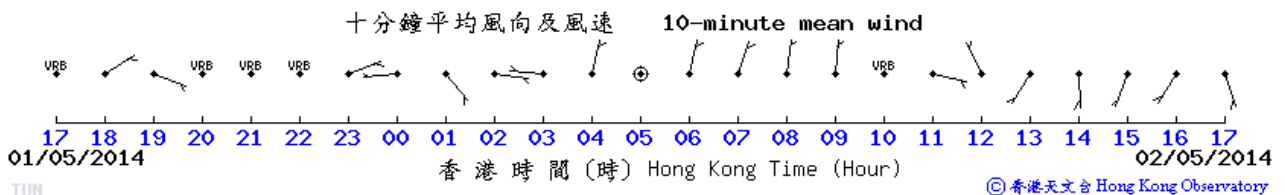
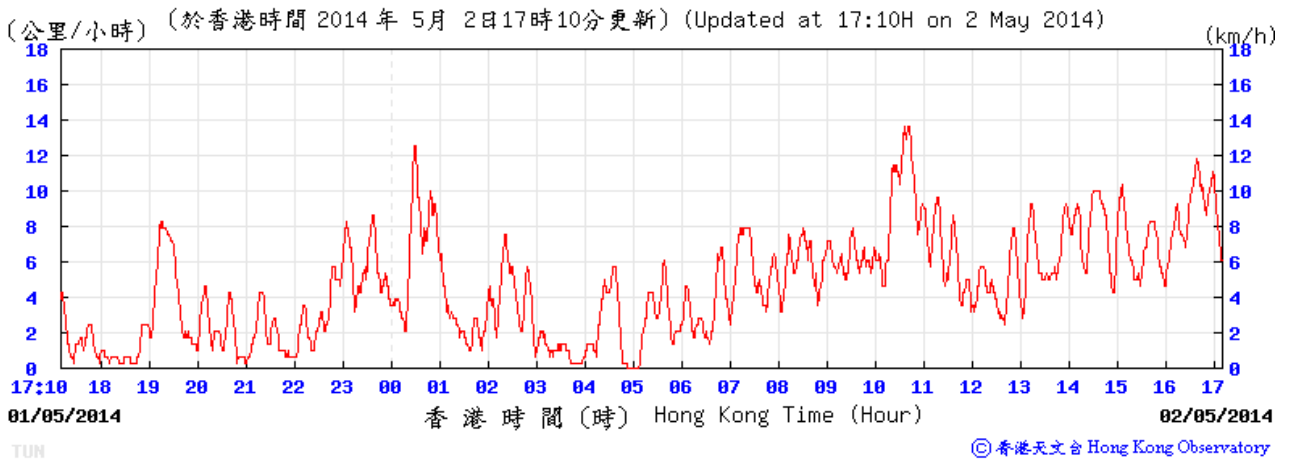
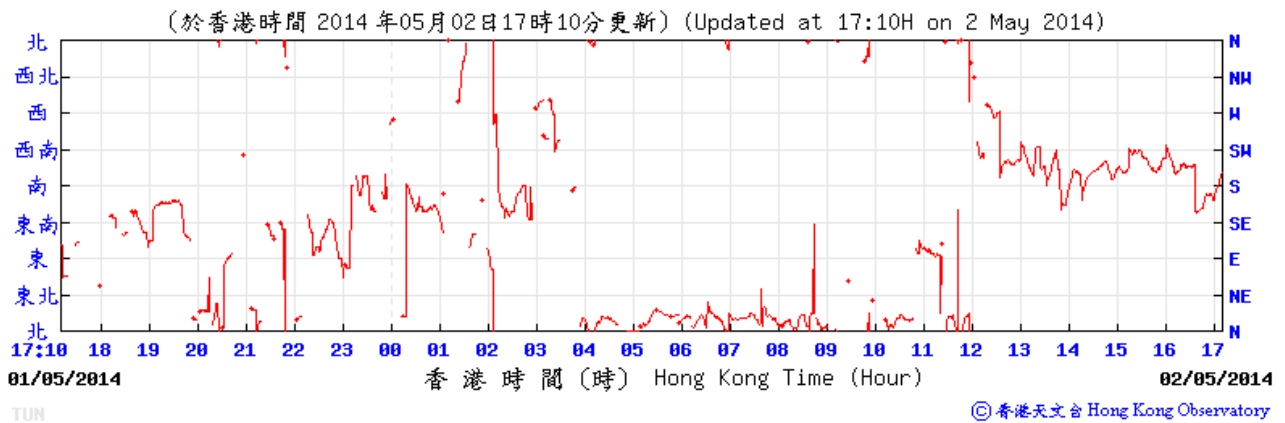
Noise Level for 30 min, dB(A), at N2





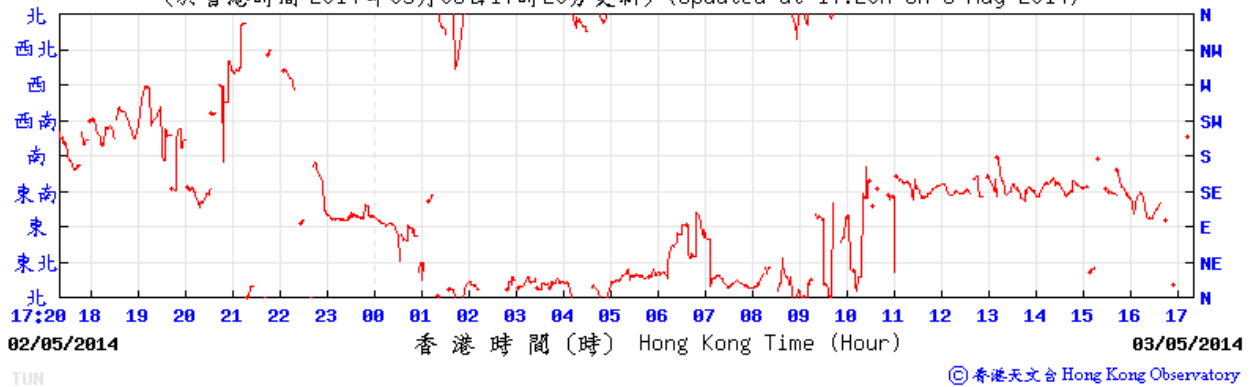
# Appendix E. Wind Data from Hong Kong Observatory Weather Station

Tuen Mun – 2 May 2014

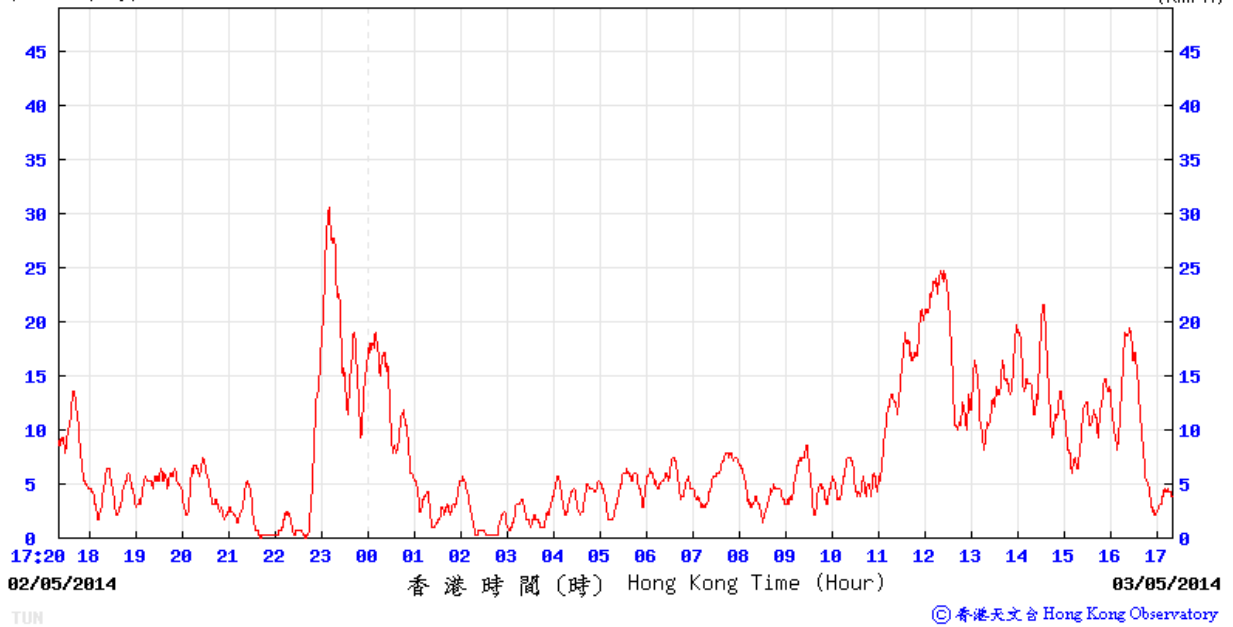


### Tuen Mun – 3 May 2014

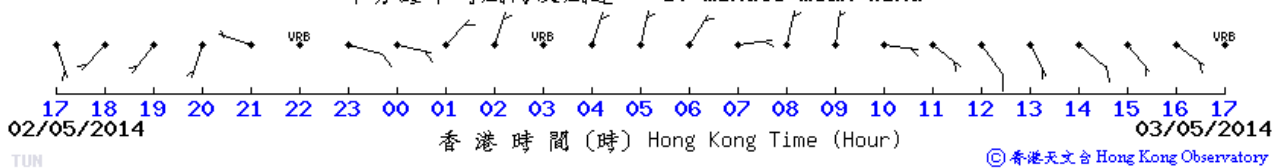
(於香港時間 2014 年 05 月 03 日 17 時 20 分更新) (Updated at 17:20H on 3 May 2014)



(公里/小時) (於香港時間 2014 年 5 月 3 日 17 時 20 分更新) (Updated at 17:20H on 3 May 2014) (km/h)

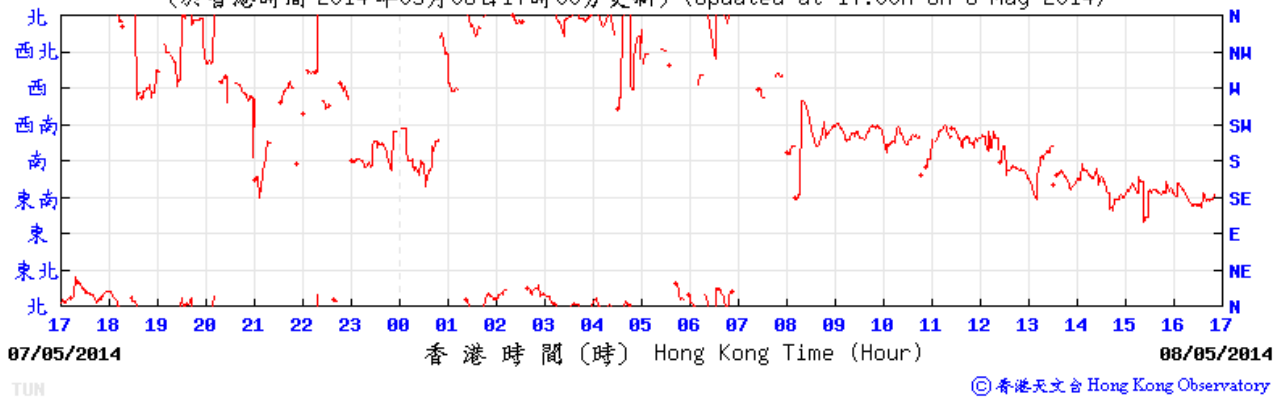


十分鐘平均風向及風速 10-minute mean wind

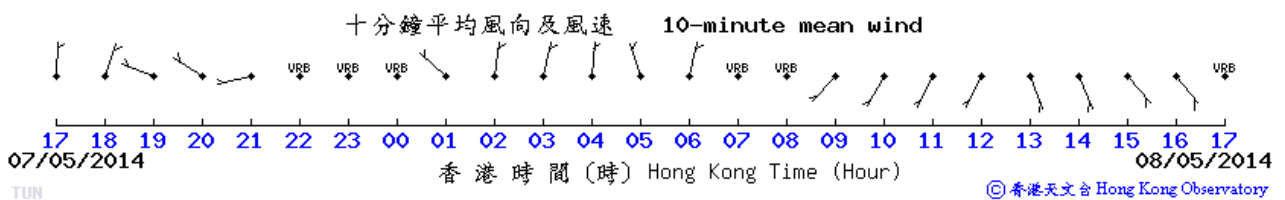
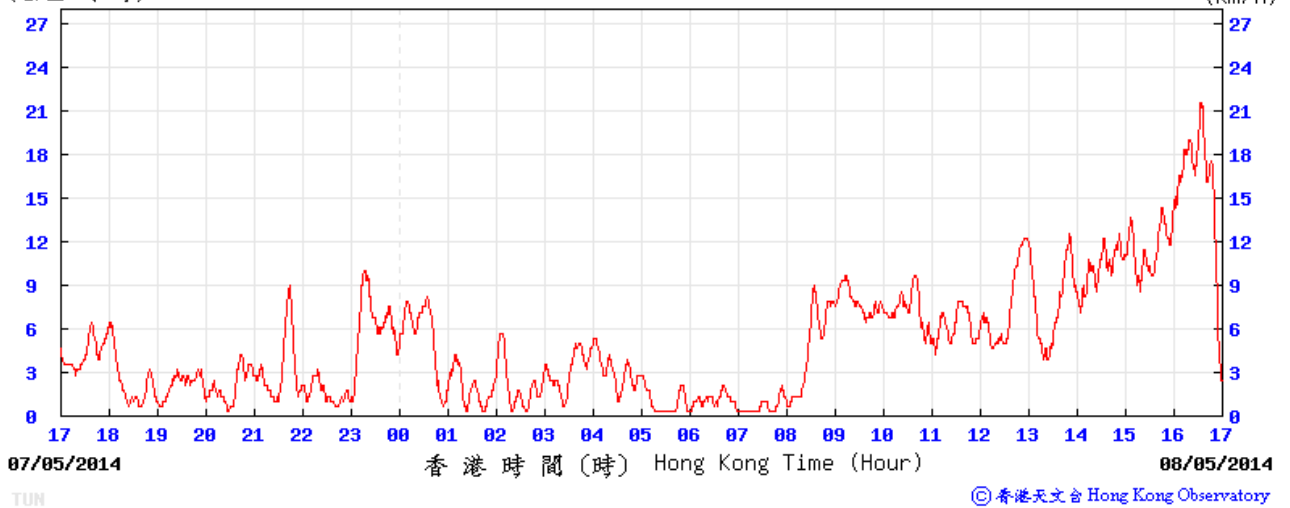


**Tuen Mun – 8 May 2014**

(於香港時間 2014 年 05 月 08 日 17 時 00 分更新) (Updated at 17:00H on 8 May 2014)

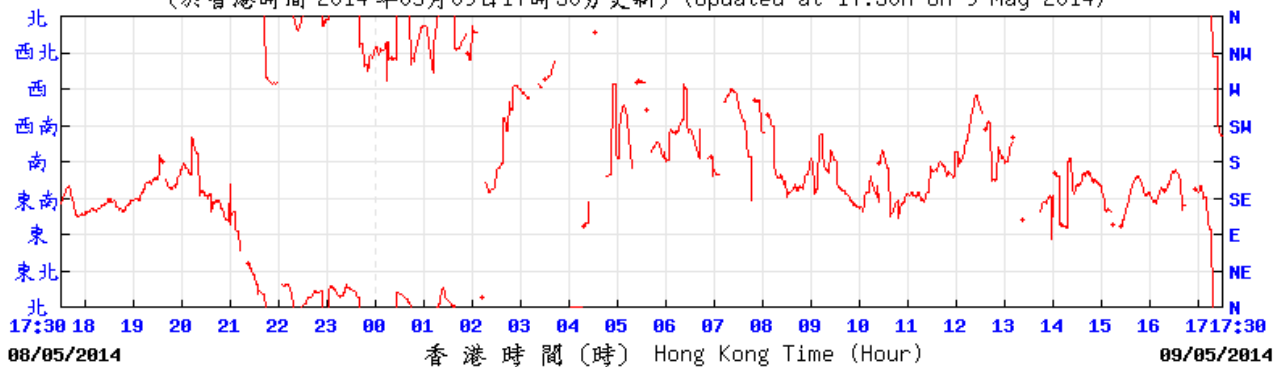


(公里/小時) (於香港時間 2014 年 5 月 8 日 17 時 0 分更新) (Updated at 17:00H on 8 May 2014) (km/h)



**Tuen Mun – 9 May 2014**

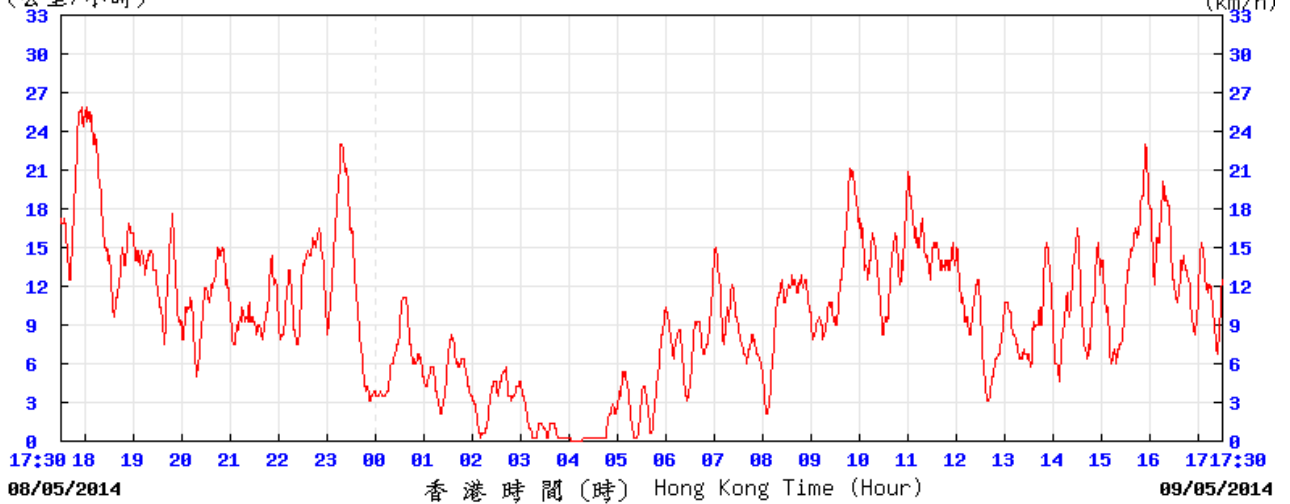
(於香港時間 2014 年 05 月 09 日 17 時 30 分更新) (Updated at 17:30H on 9 May 2014)



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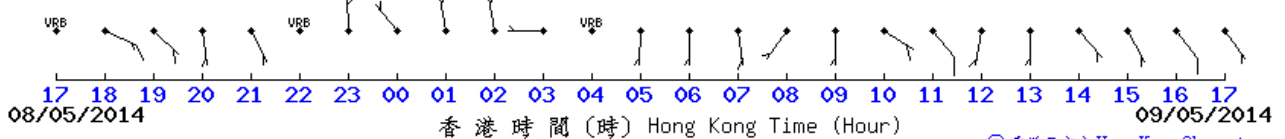
(公里/小時) (於香港時間 2014 年 5 月 9 日 17 時 30 分更新) (Updated at 17:30H on 9 May 2014)



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十分鐘平均風向及風速 10-minute mean wind

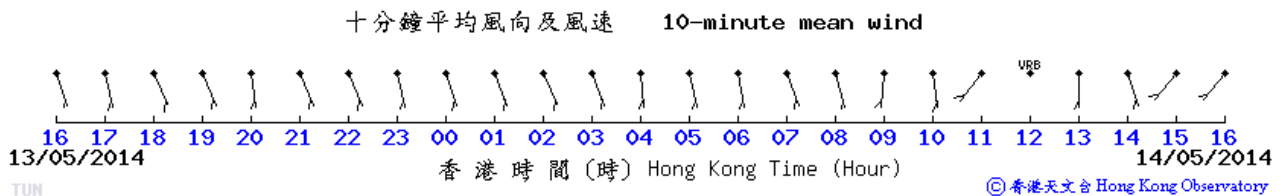
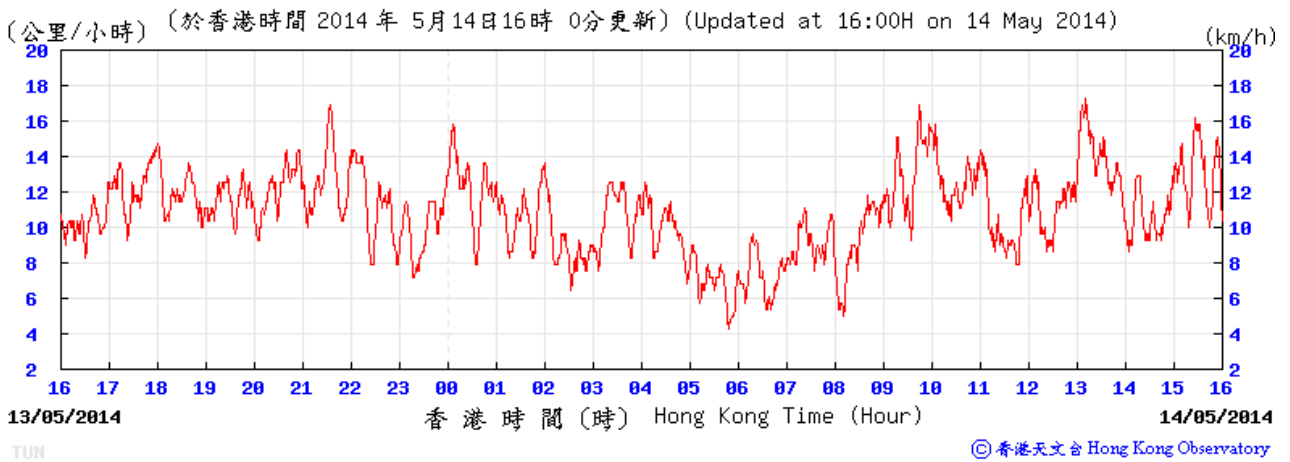
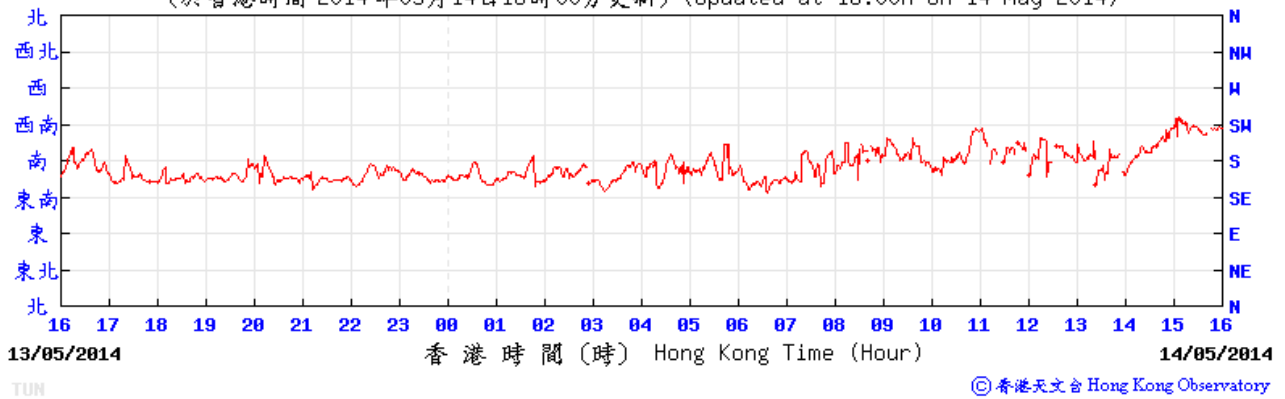


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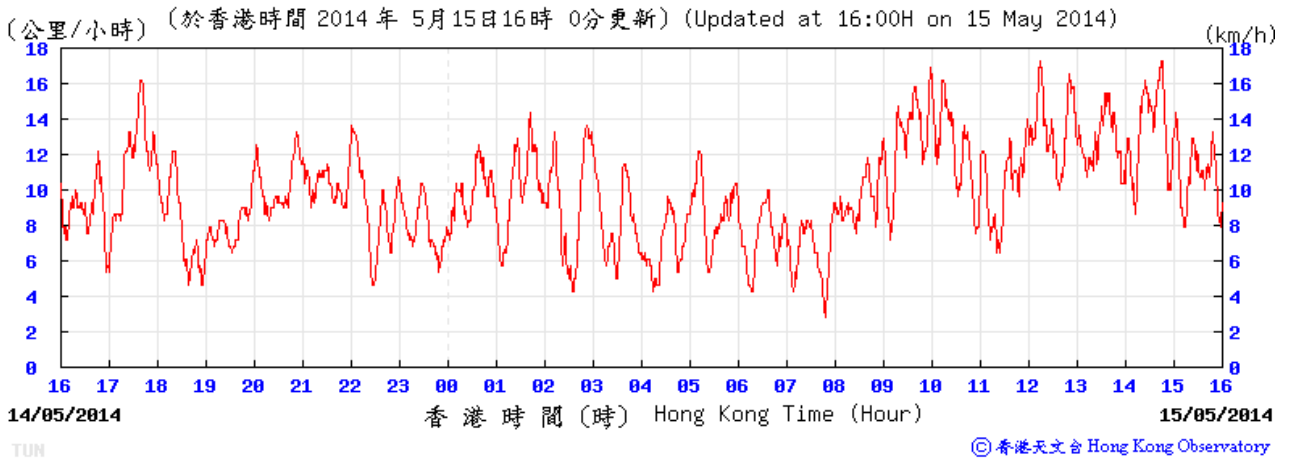
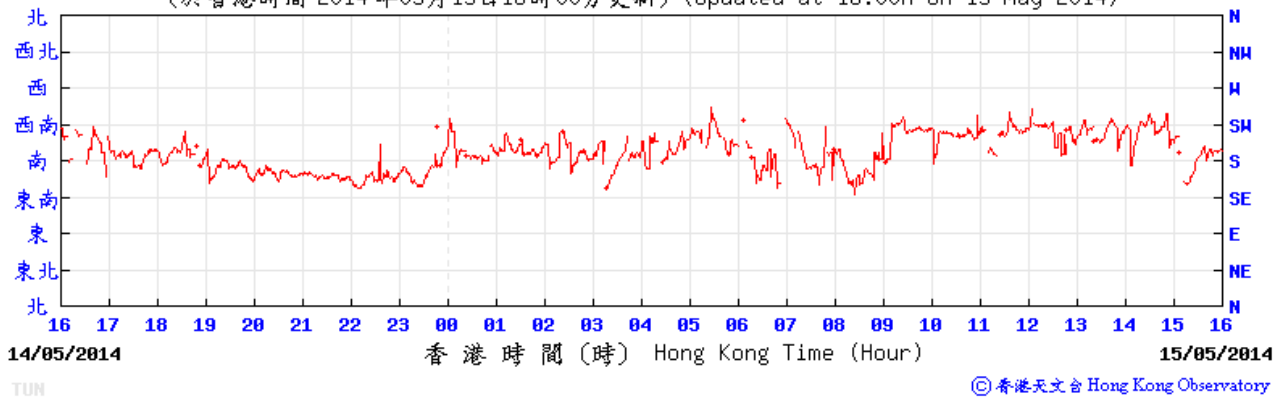
**Tuen Mun – 14 May 2014**

(於香港時間 2014 年 05 月 14 日 16 時 00 分更新) (Updated at 16:00H on 14 May 2014)

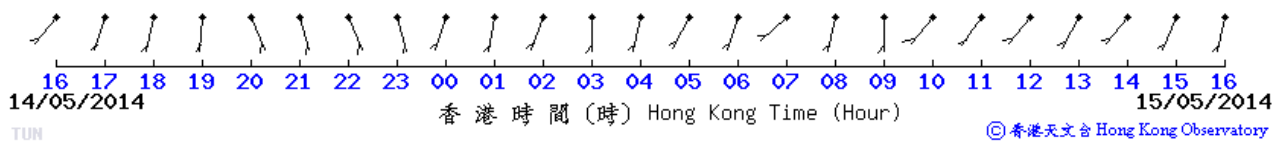


**Tuen Mun – 15 May 2014**

(於香港時間 2014 年 05 月 15 日 16 時 00 分更新) (Updated at 16:00H on 15 May 2014)

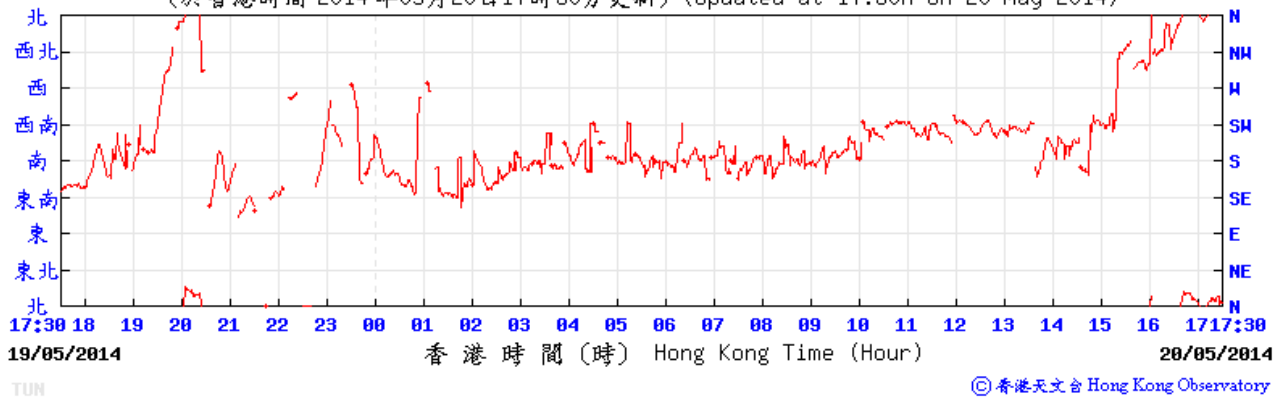


十分鐘平均風向及風速 10-minute mean wind

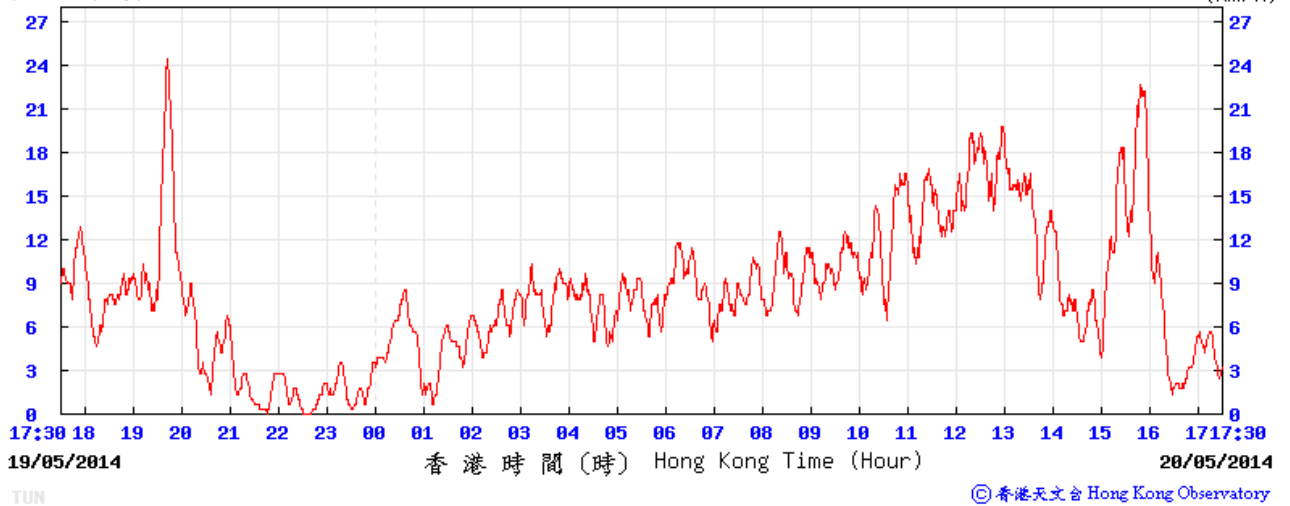


**Tuen Mun – 20 May 2014**

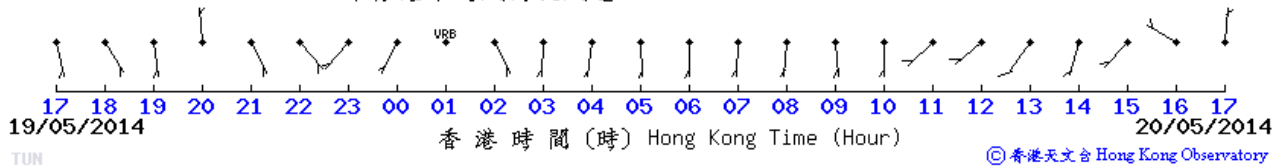
(於香港時間 2014 年 05 月 20 日 17 時 30 分更新) (Updated at 17:30H on 20 May 2014)



(公里/小時) (於香港時間 2014 年 5 月 20 日 17 時 30 分更新) (Updated at 17:30H on 20 May 2014) (km/h)

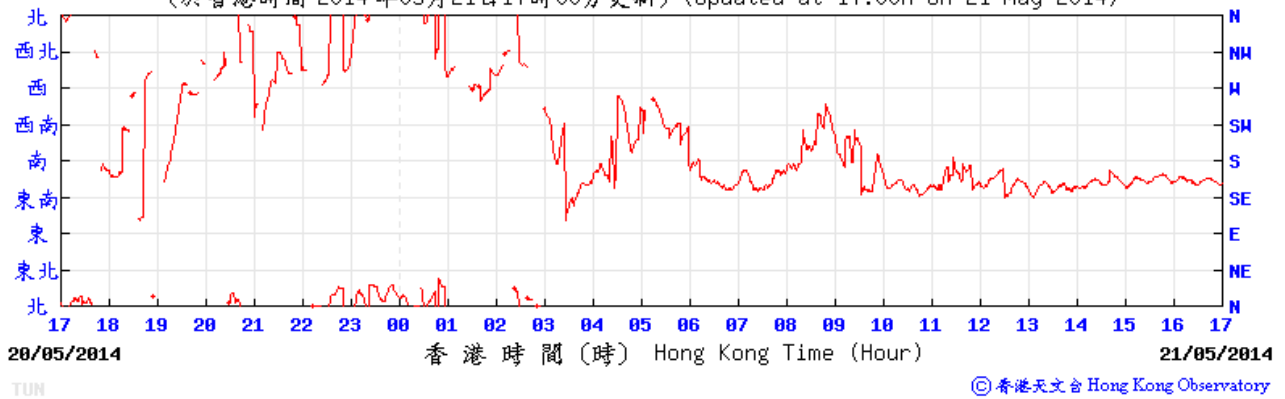


十分鐘平均風向及風速 10-minute mean wind

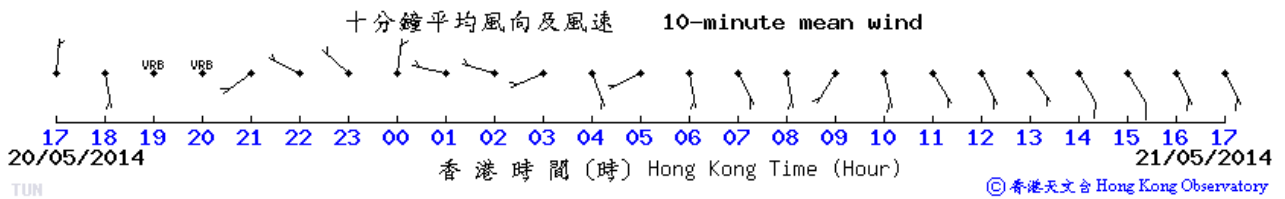
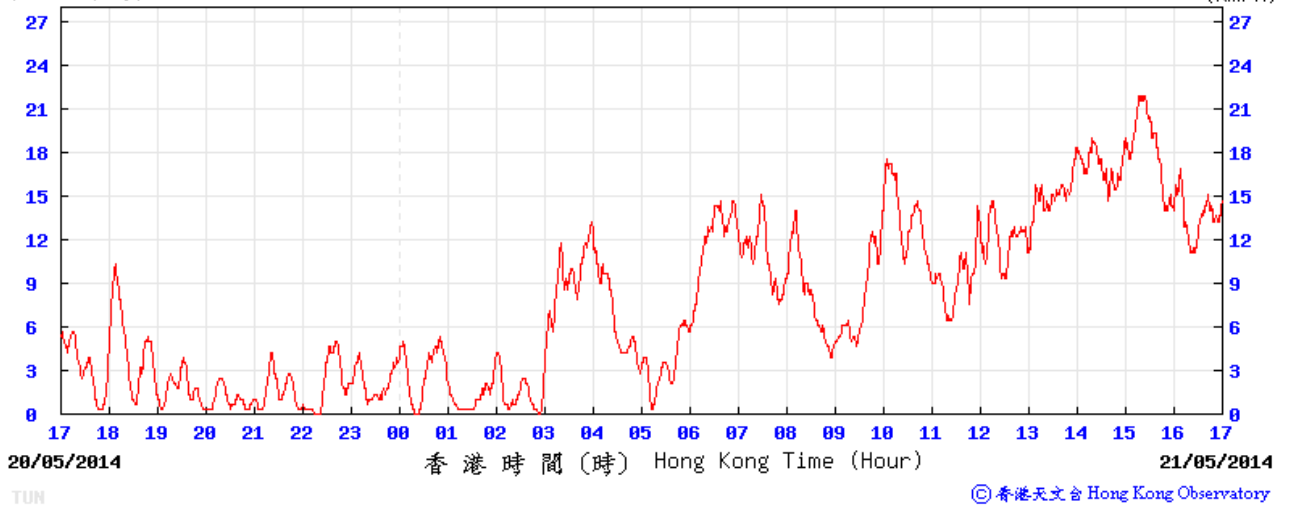


**Tuen Mun – 21 May 2014**

(於香港時間 2014 年 05 月 21 日 17 時 00 分更新) (Updated at 17:00H on 21 May 2014)



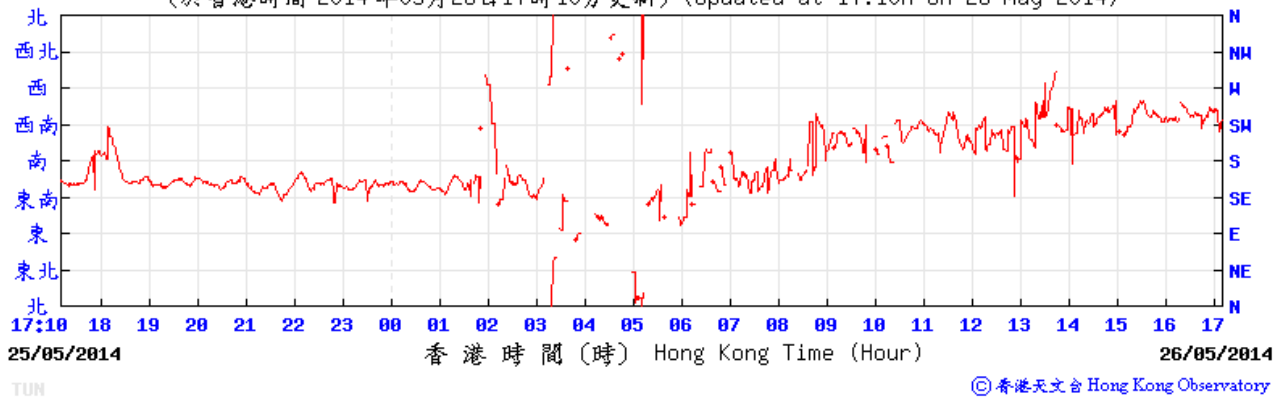
(公里/小時) (於香港時間 2014 年 5 月 21 日 17 時 0 分更新) (Updated at 17:00H on 21 May 2014) (km/h)



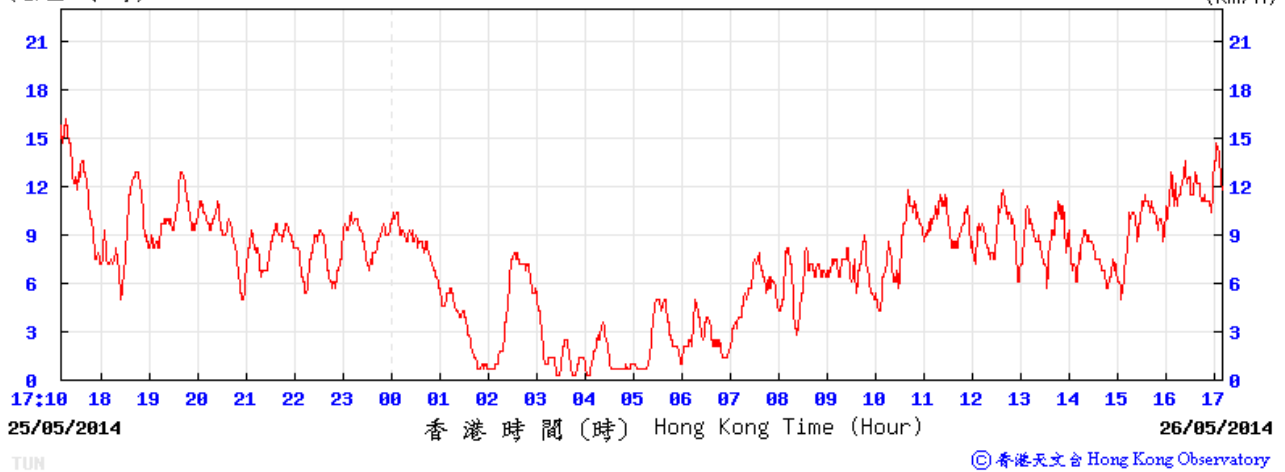


**Tuen Mun – 26 May 2014**

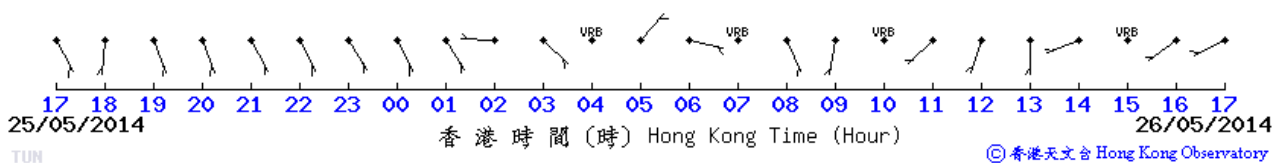
(於香港時間 2014 年 05 月 26 日 17 時 10 分更新) (Updated at 17:10H on 26 May 2014)



(公里/小時) (於香港時間 2014 年 5 月 26 日 17 時 10 分更新) (Updated at 17:10H on 26 May 2014) (km/h)

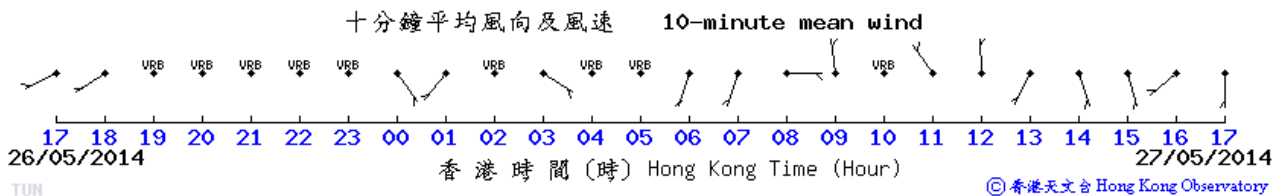
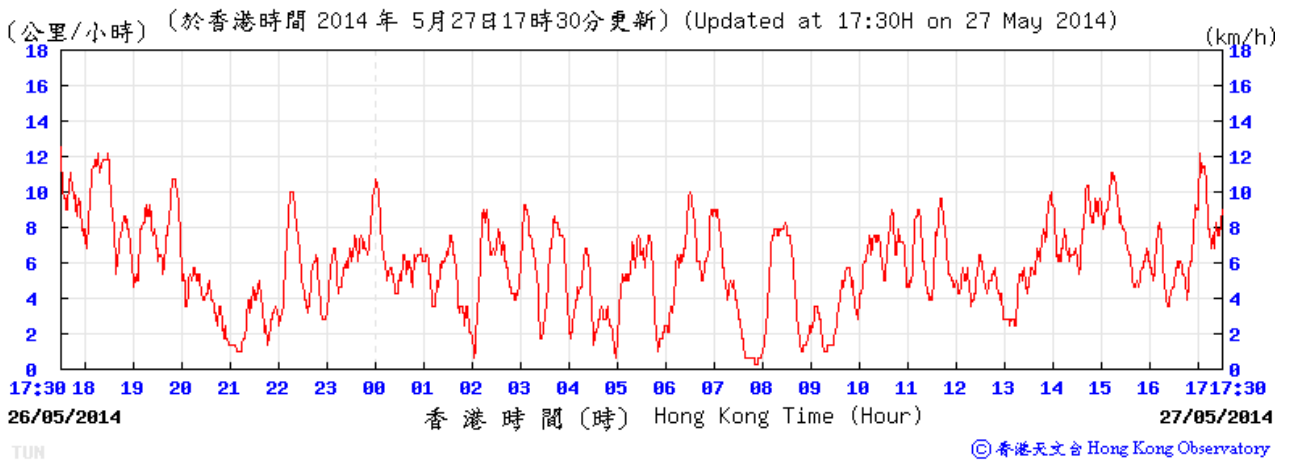
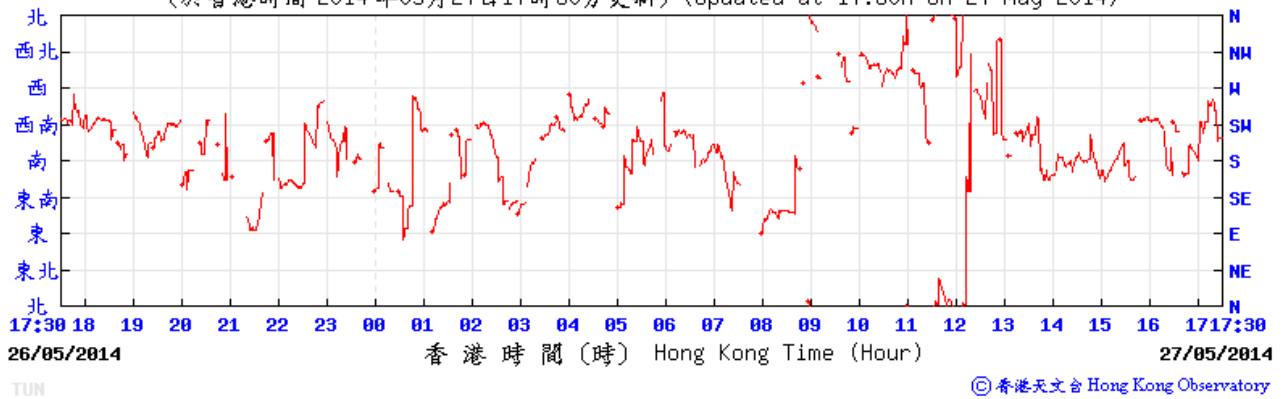


十分鐘平均風向及風速 10-minute mean wind



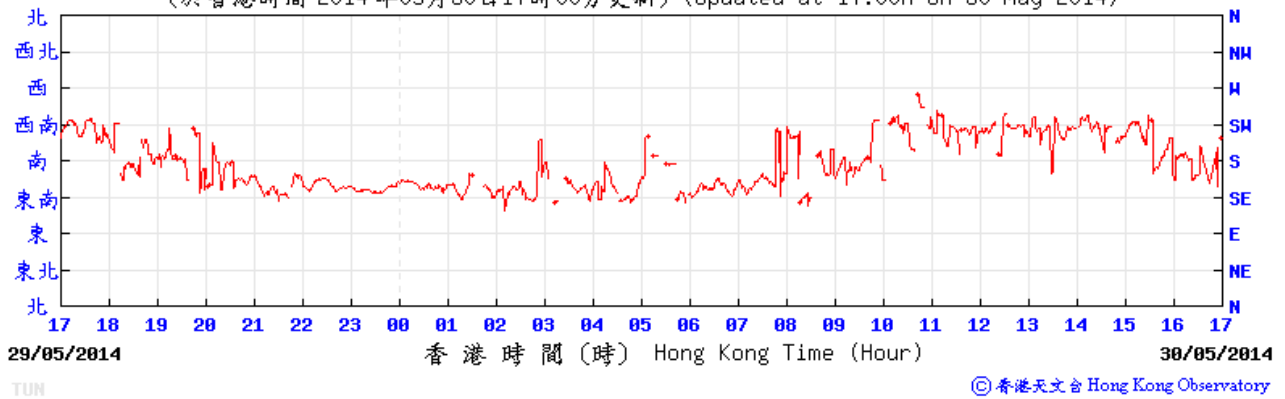
**Tuen Mun – 27 May 2014**

(於香港時間 2014 年 05 月 27 日 17 時 30 分更新) (Updated at 17:30H on 27 May 2014)

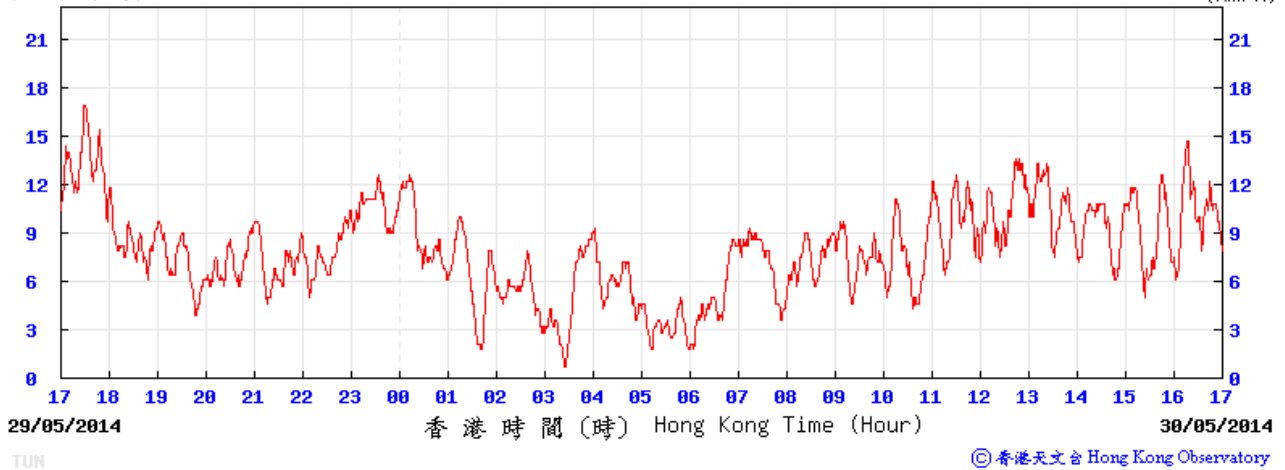


**Tuen Mun – 30 May 2014**

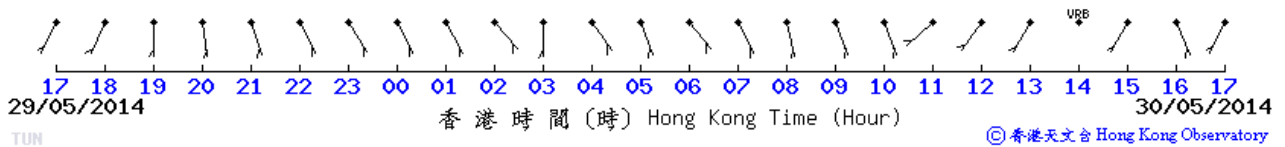
(於香港時間 2014 年 05 月 30 日 17 時 00 分更新) (Updated at 17:00H on 30 May 2014)



(公里/小時) (於香港時間 2014 年 5 月 30 日 17 時 0 分更新) (Updated at 17:00H on 30 May 2014) (km/h)

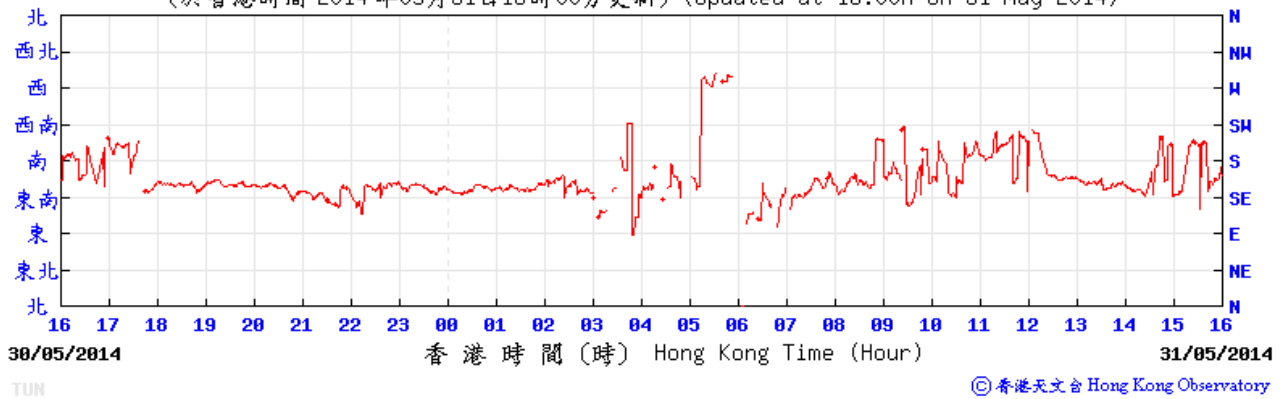


十分鐘平均風向及風速 10-minute mean wind

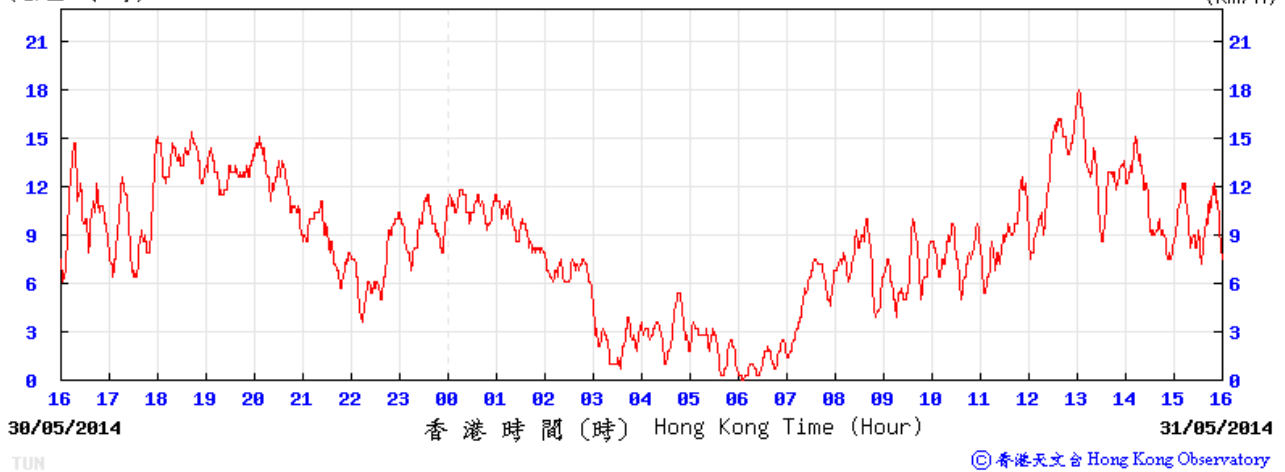


### Tuen Mun – 31 May 2014

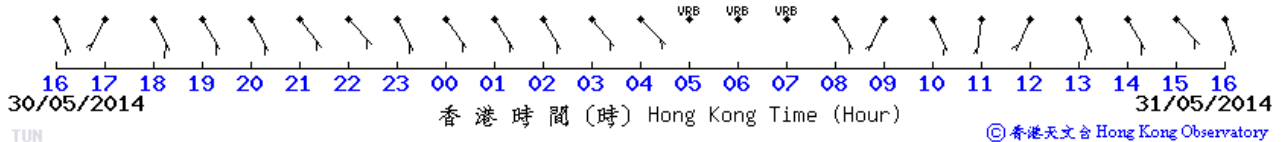
(於香港時間 2014 年 05 月 31 日 16 時 00 分更新) (Updated at 16:00H on 31 May 2014)



(公里/小時) (於香港時間 2014 年 5 月 31 日 16 時 0 分更新) (Updated at 16:00H on 31 May 2014) (km/h)

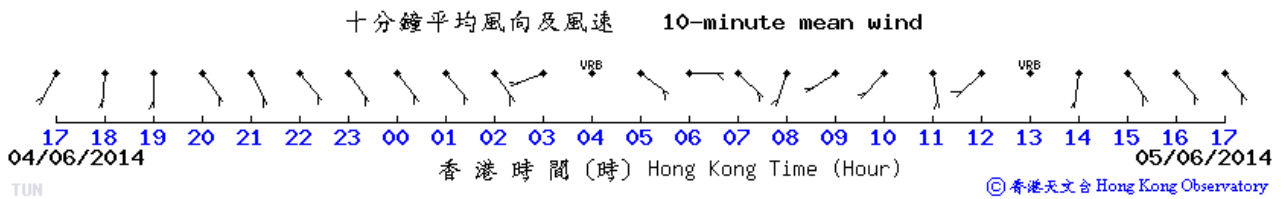
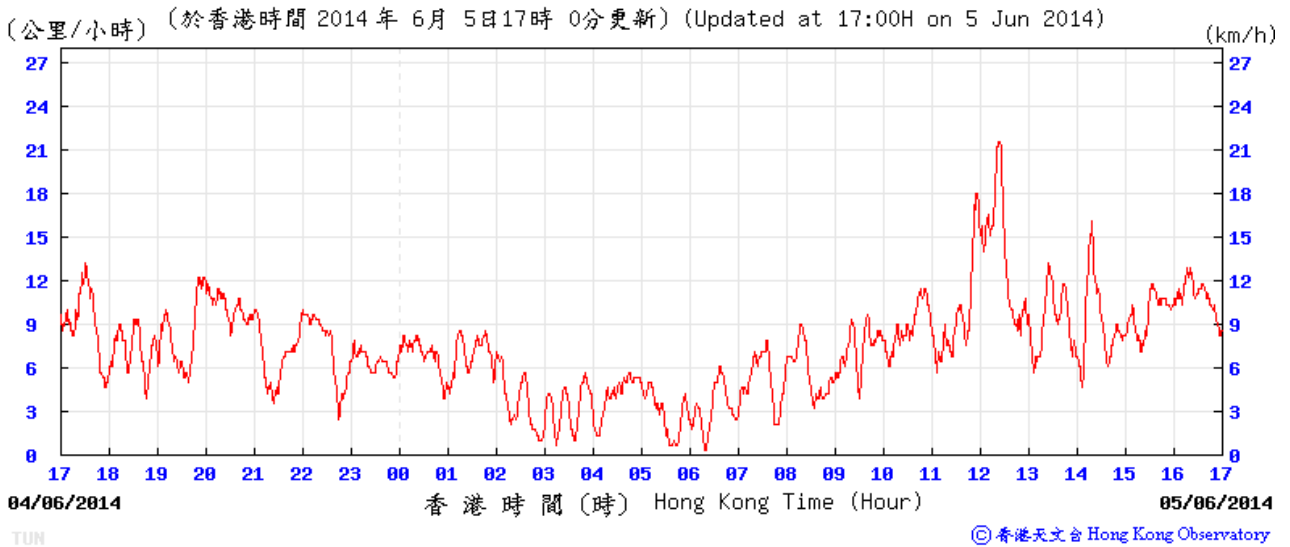
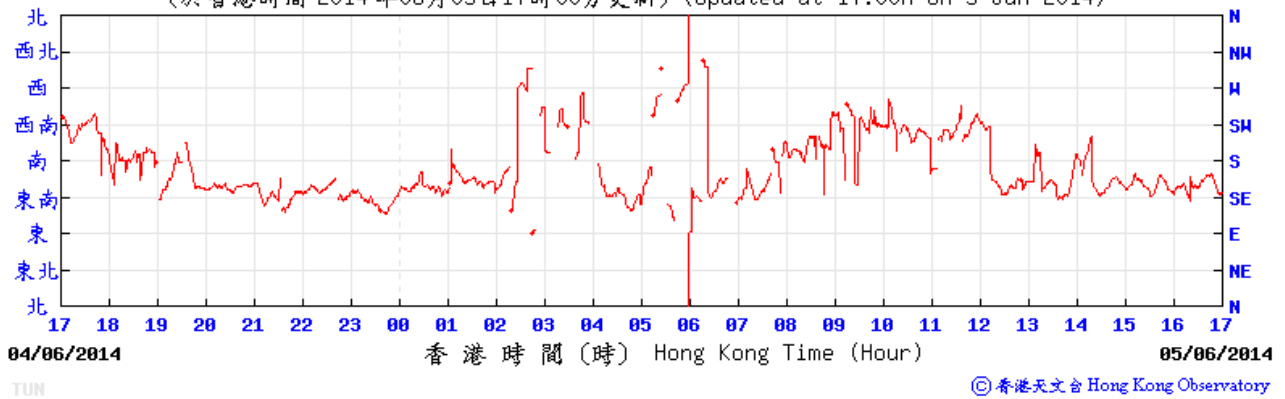


十分鐘平均風向及風速 10-minute mean wind



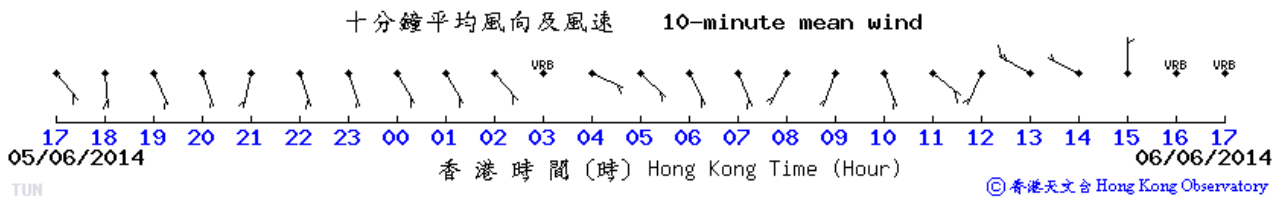
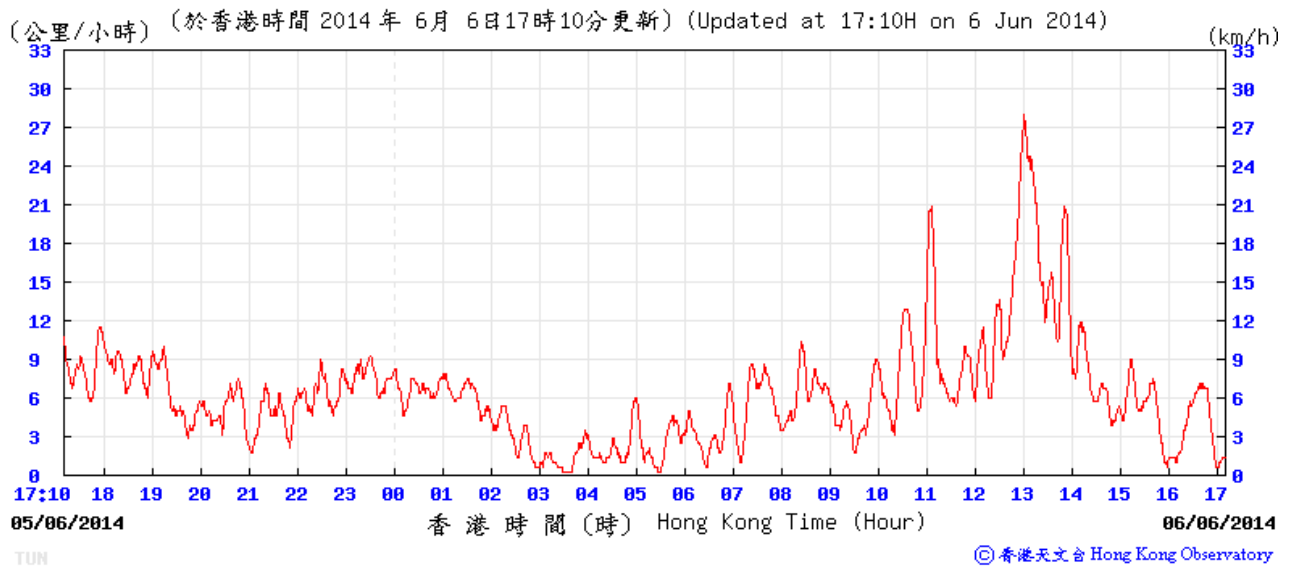
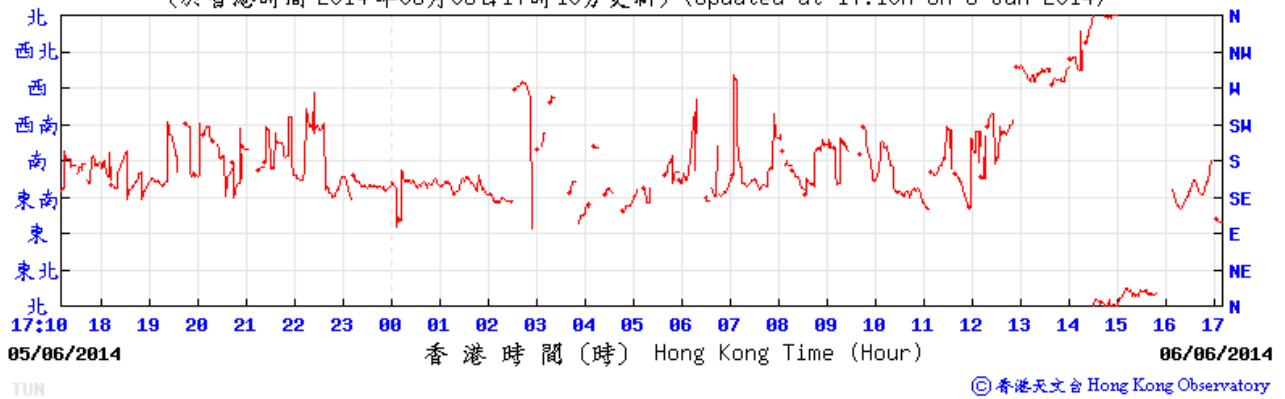
**Tuen Mun – 5 June 2014**

(於香港時間 2014 年 06 月 05 日 17 時 00 分更新) (Updated at 17:00H on 5 Jun 2014)



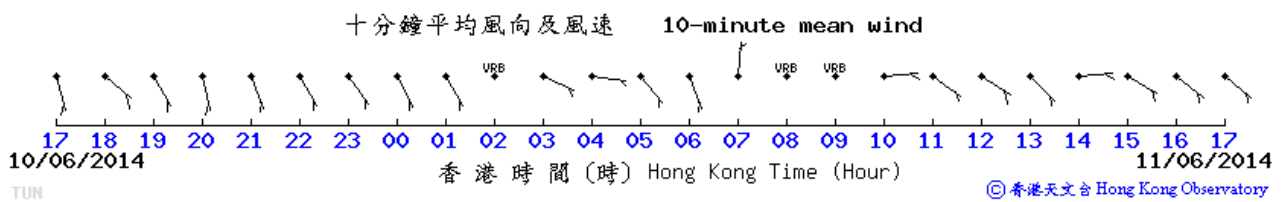
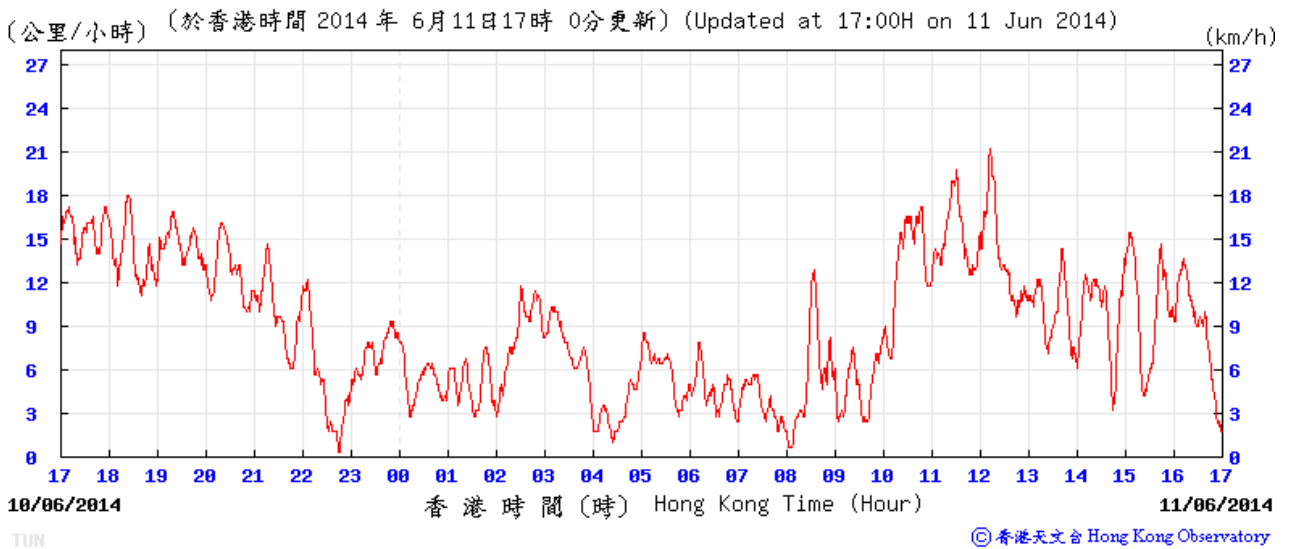
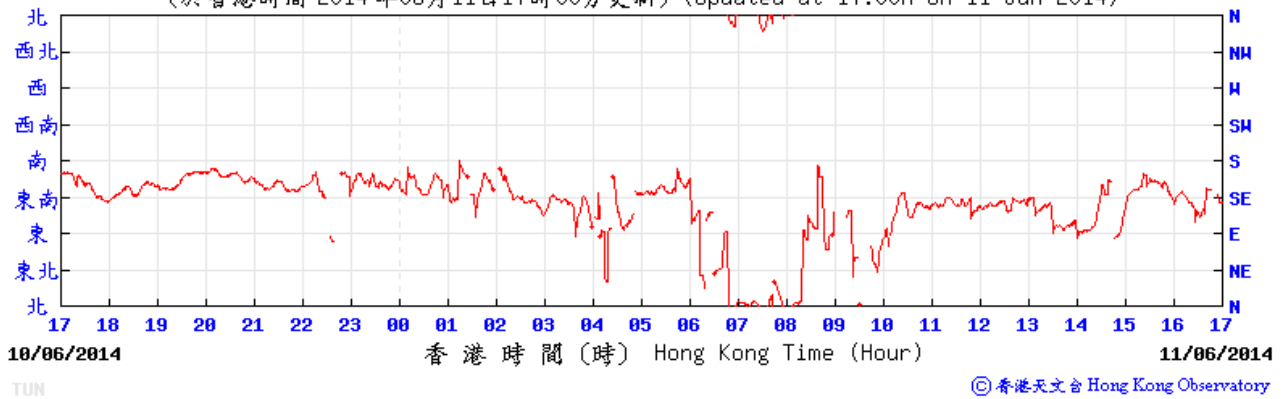
**Tuen Mun – 6 June 2014**

(於香港時間 2014 年 06 月 06 日 17 時 10 分更新) (Updated at 17:10H on 6 Jun 2014)



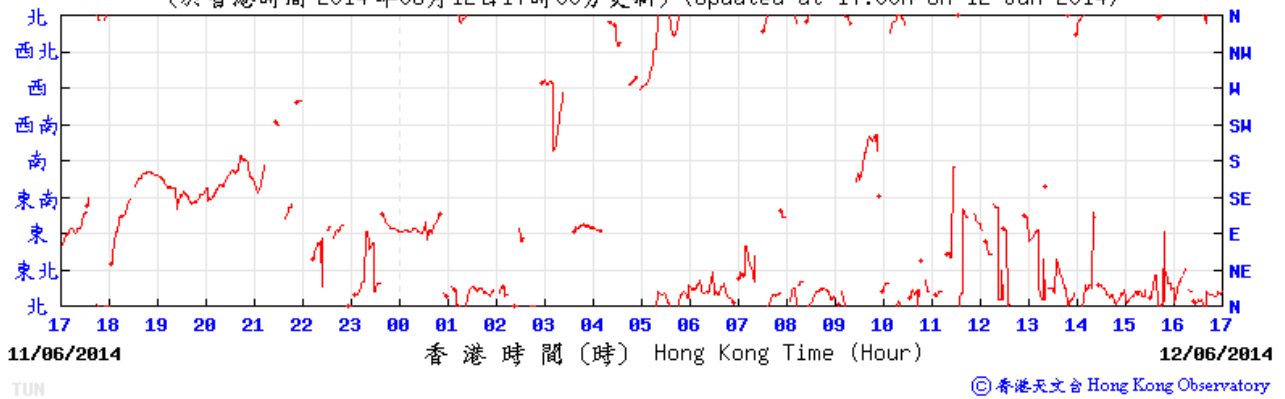
**Tuen Mun – 11 June 2014**

(於香港時間 2014 年 06 月 11 日 17 時 00 分更新) (Updated at 17:00H on 11 Jun 2014)

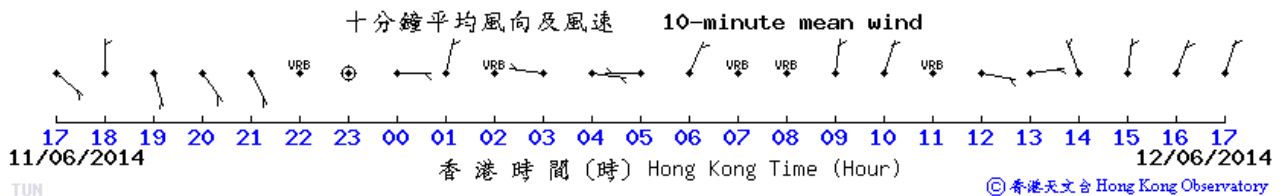
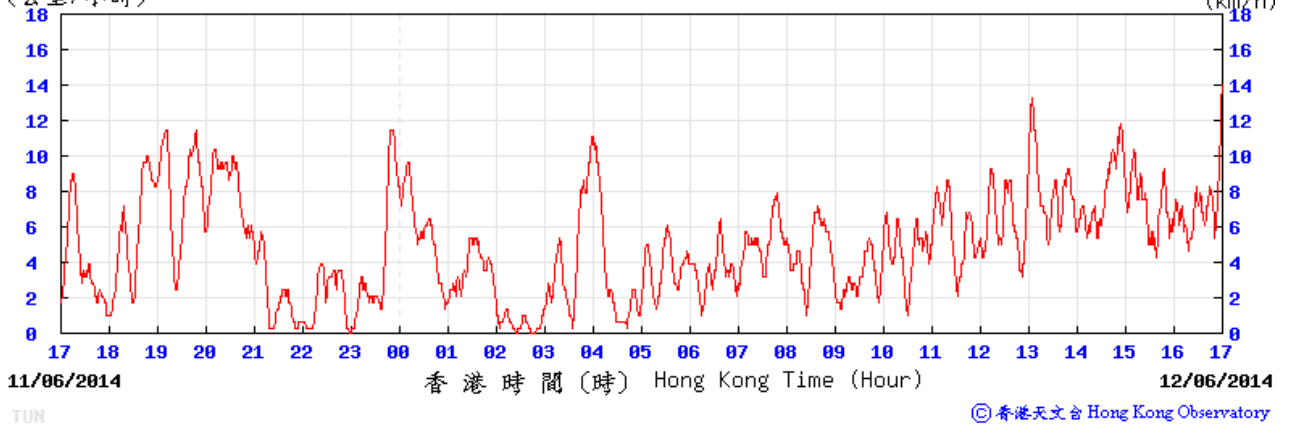


**Tuen Mun – 12 June 2014**

(於香港時間 2014 年 06 月 12 日 17 時 00 分更新) (Updated at 17:00H on 12 Jun 2014)



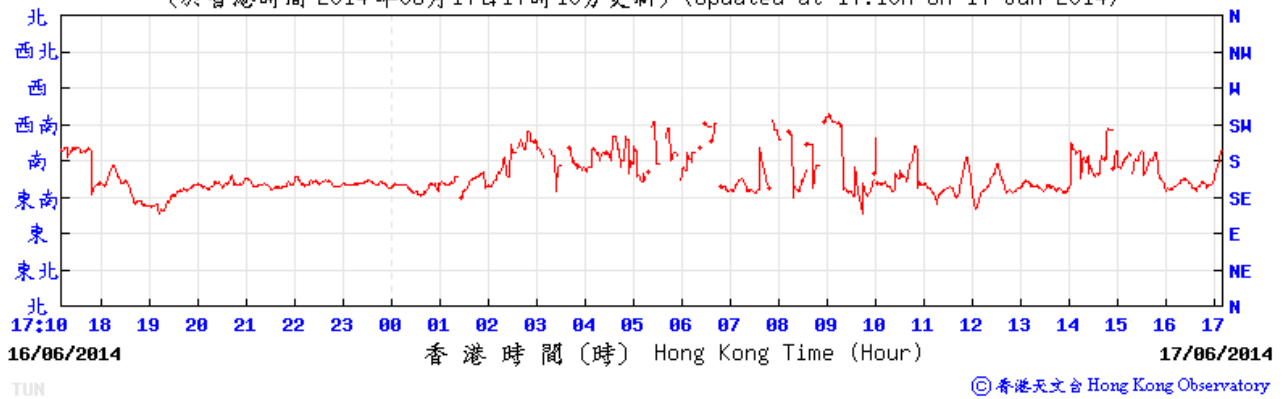
(公里/小時) (於香港時間 2014 年 6 月 12 日 17 時 0 分更新) (Updated at 17:00H on 12 Jun 2014) (km/h)



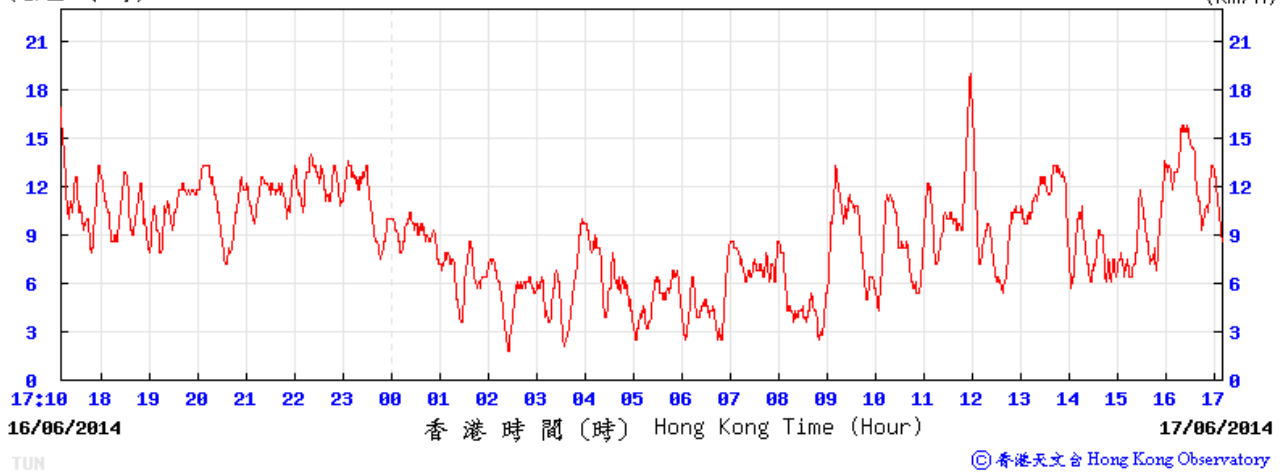


**Tuen Mun – 17 June 2014**

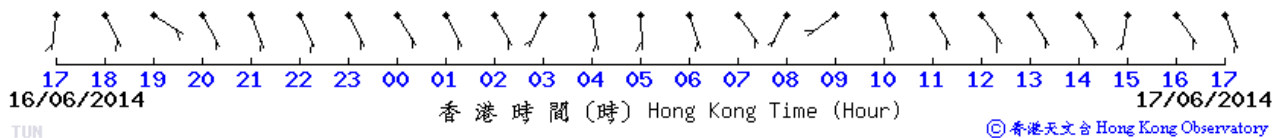
(於香港時間 2014 年 06 月 17 日 17 時 10 分更新) (Updated at 17:10H on 17 Jun 2014)



(公里/小時) (於香港時間 2014 年 6 月 17 日 17 時 10 分更新) (Updated at 17:10H on 17 Jun 2014) (km/h)

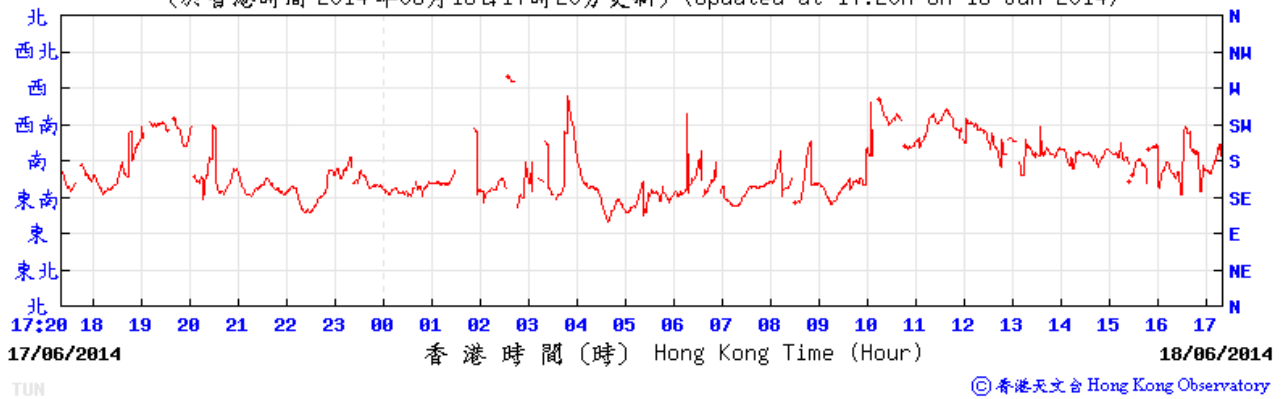


十分鐘平均風向及風速 10-minute mean wind

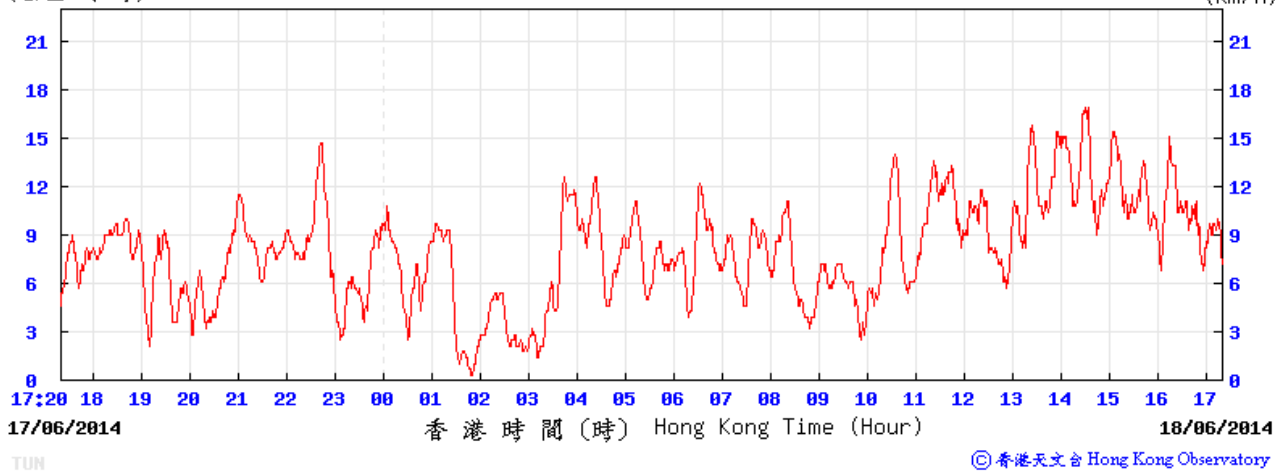


**Tuen Mun – 18 June 2014**

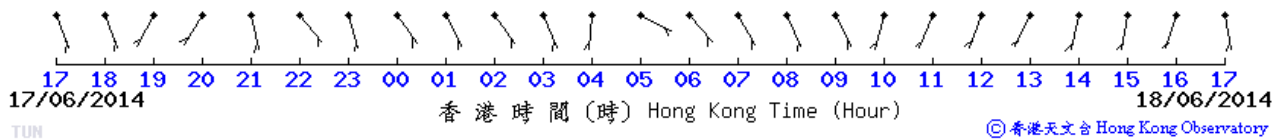
(於香港時間 2014 年 06 月 18 日 17 時 20 分更新) (Updated at 17:20H on 18 Jun 2014)



(公里/小時) (於香港時間 2014 年 6 月 18 日 17 時 20 分更新) (Updated at 17:20H on 18 Jun 2014) (km/h)

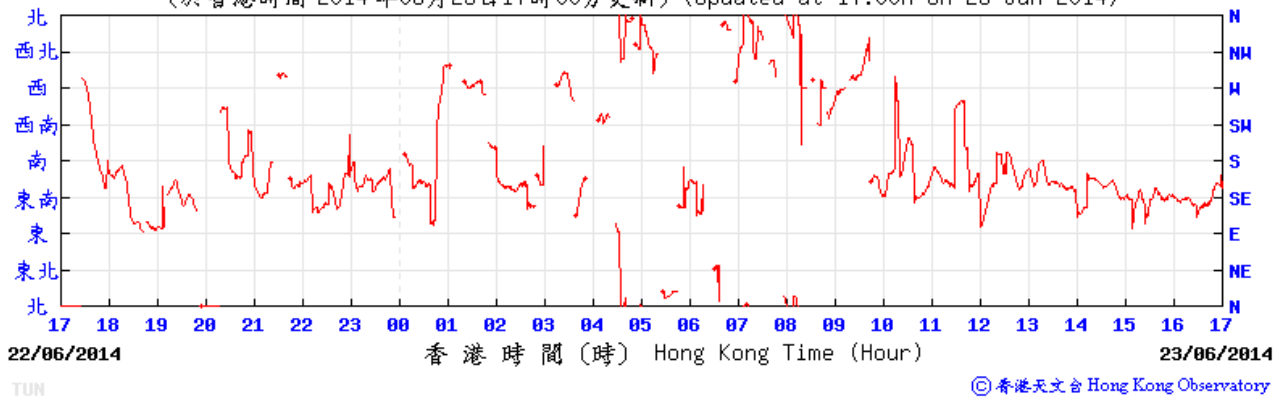


十分鐘平均風向及風速 10-minute mean wind

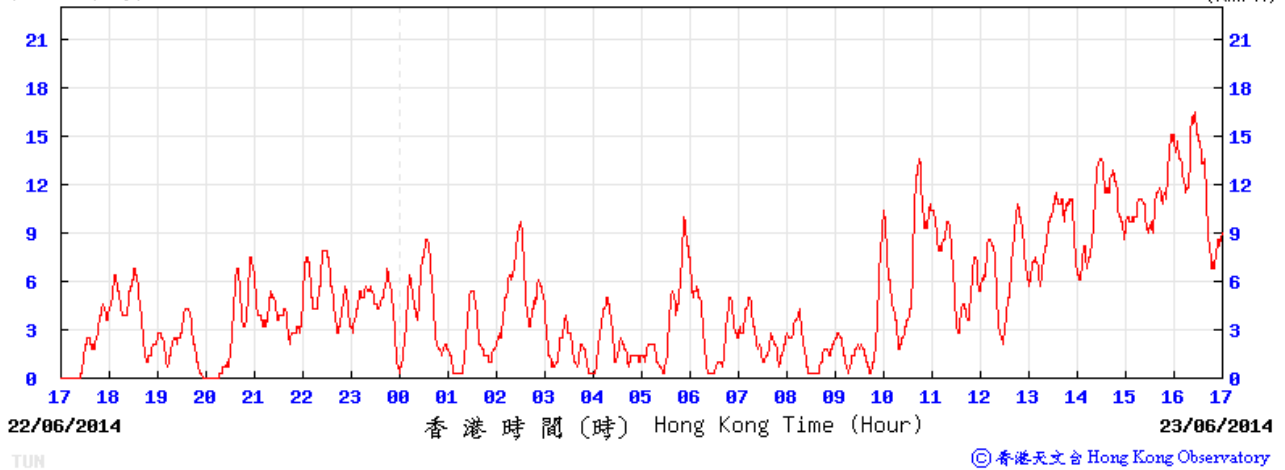


**Tuen Mun – 23 June 2014**

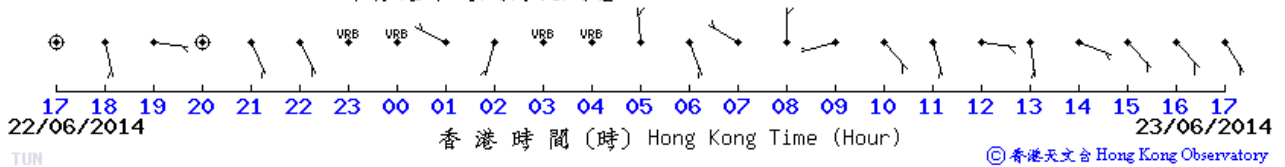
(於香港時間 2014 年 06 月 23 日 17 時 00 分更新) (Updated at 17:00H on 23 Jun 2014)



(公里/小時) (於香港時間 2014 年 6 月 23 日 17 時 0 分更新) (Updated at 17:00H on 23 Jun 2014) (km/h)

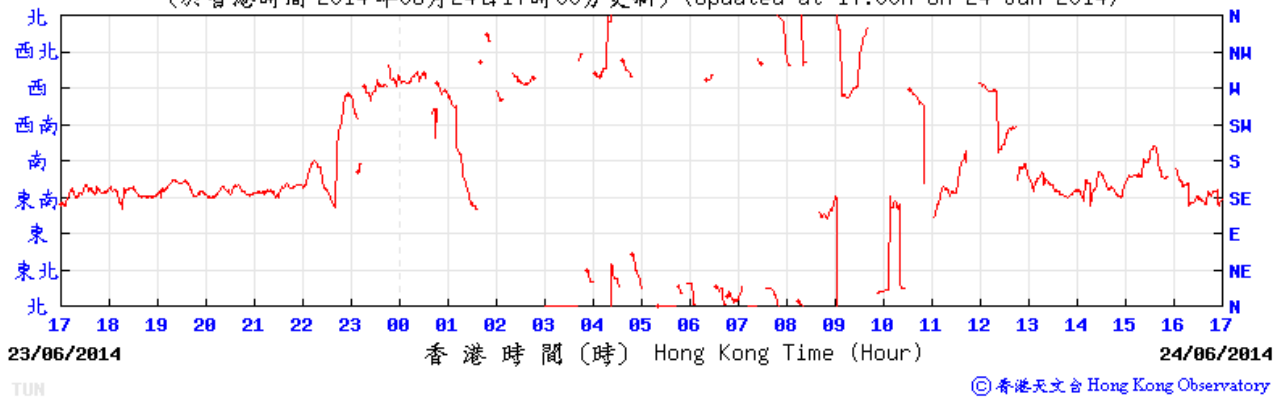


十分鐘平均風向及風速 10-minute mean wind

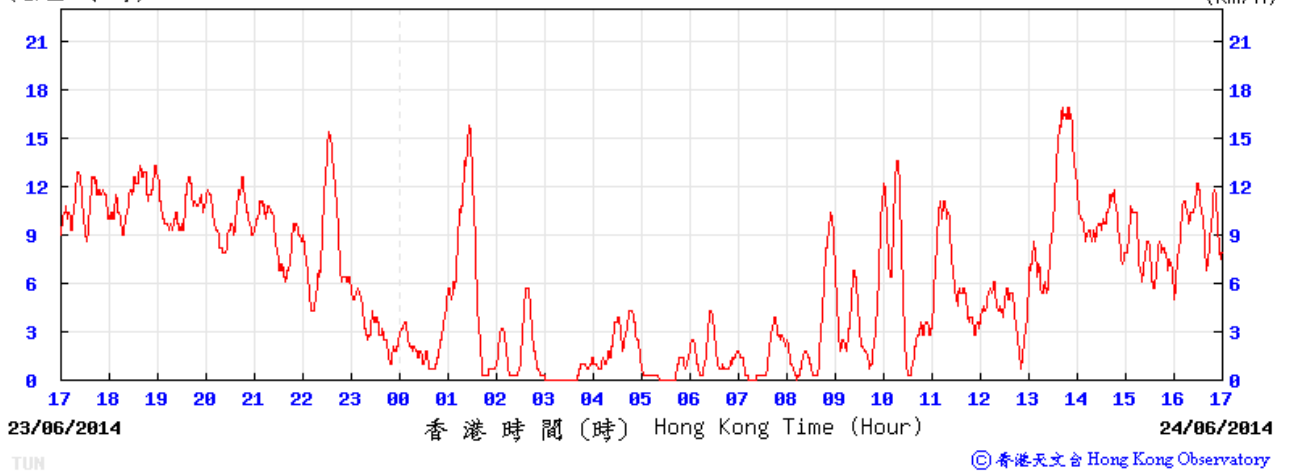


**Tuen Mun – 24 June 2014**

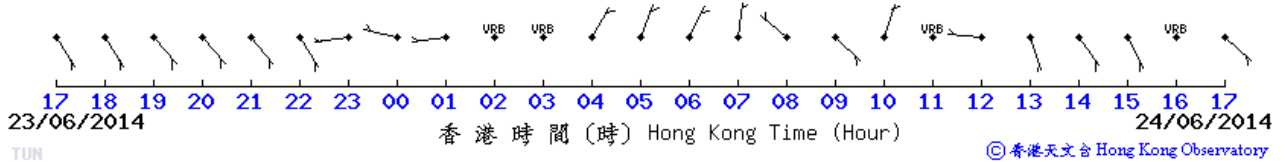
(於香港時間 2014 年 06 月 24 日 17 時 00 分更新) (Updated at 17:00H on 24 Jun 2014)



(公里/小時) (於香港時間 2014 年 6 月 24 日 17 時 0 分更新) (Updated at 17:00H on 24 Jun 2014) (km/h)

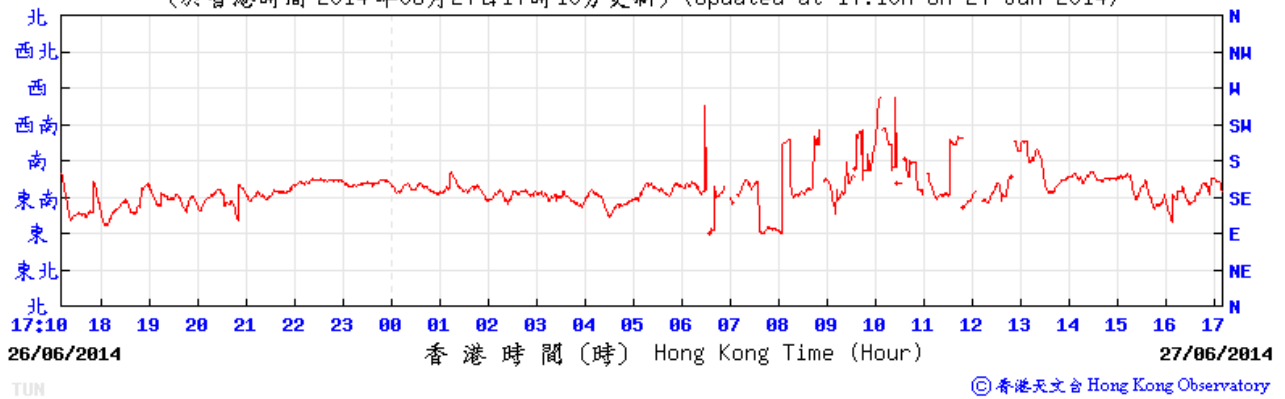


十分鐘平均風向及風速 10-minute mean wind

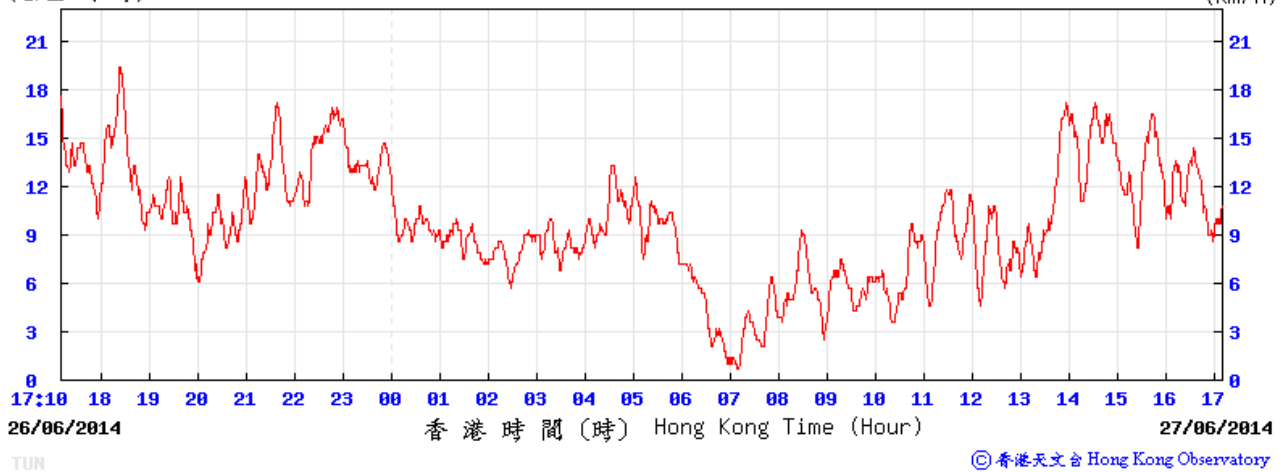


**Tuen Mun – 27 June 2014**

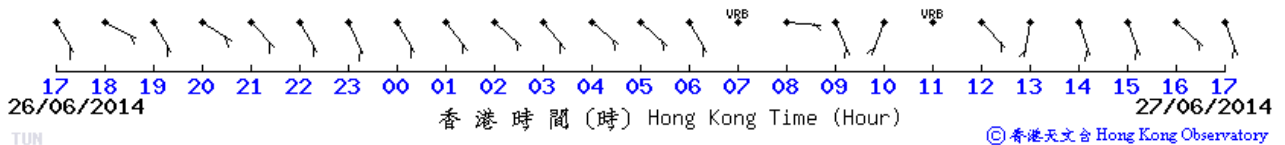
(於香港時間 2014 年 06 月 27 日 17 時 10 分更新) (Updated at 17:10H on 27 Jun 2014)



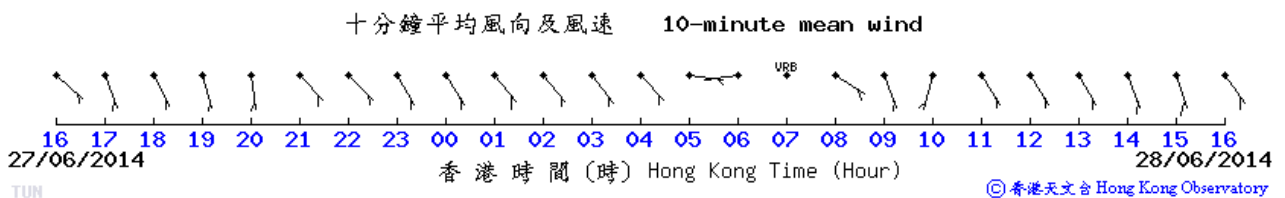
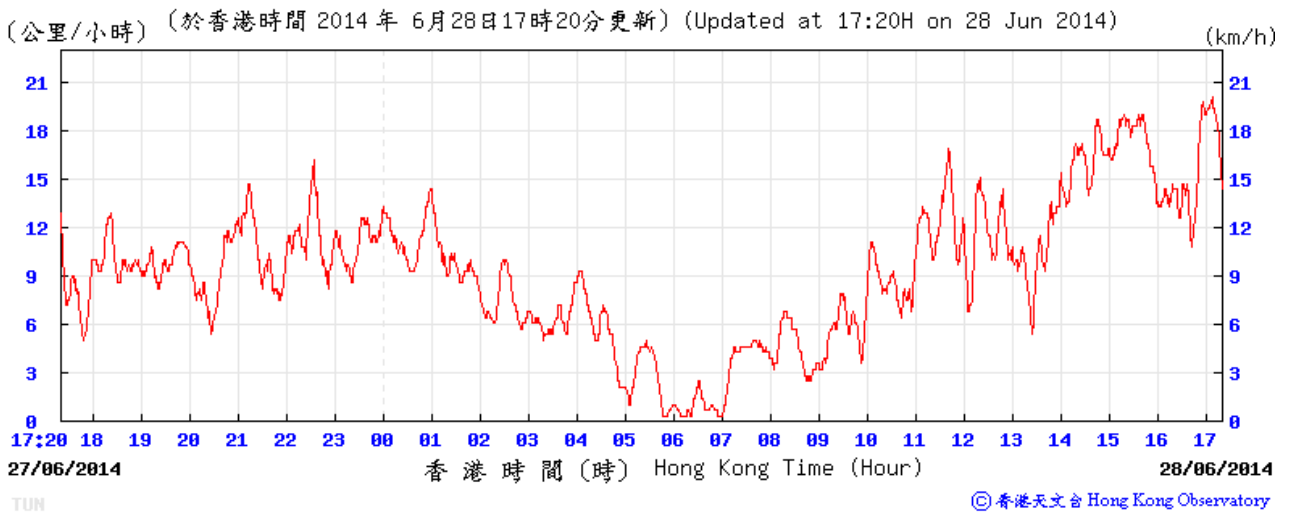
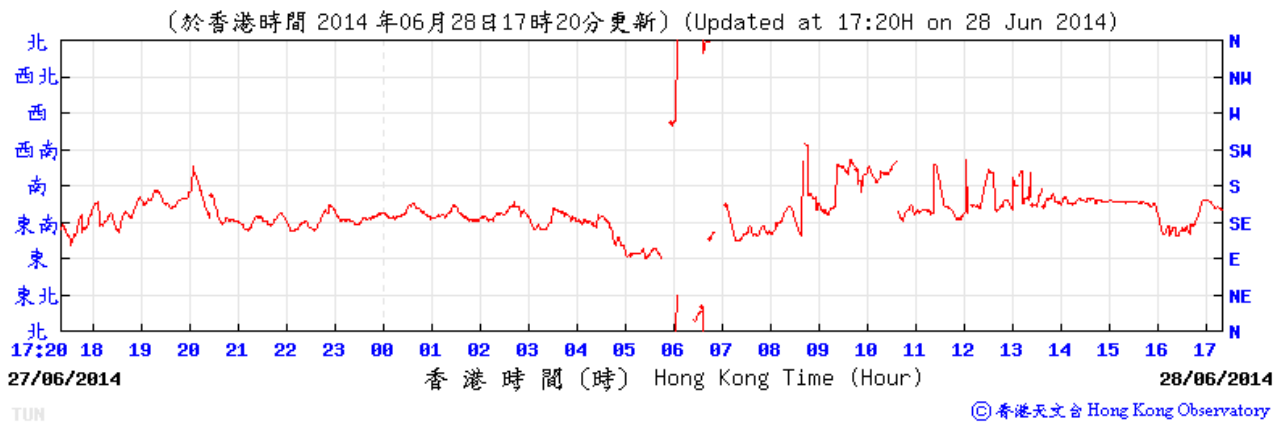
(公里/小時) (於香港時間 2014 年 6 月 27 日 17 時 10 分更新) (Updated at 17:10H on 27 Jun 2014) (km/h)



十分鐘平均風向及風速 10-minute mean wind

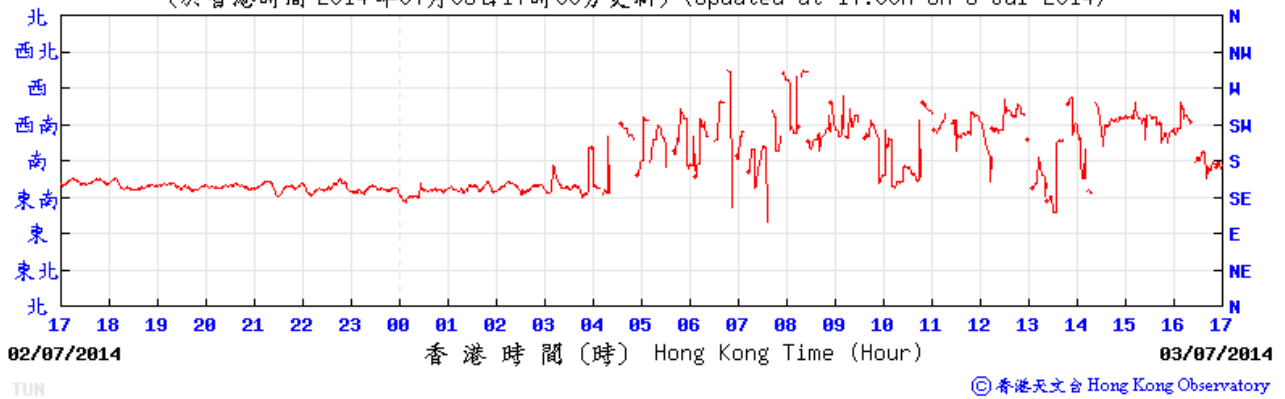


**Tuen Mun – 28 June 2014**

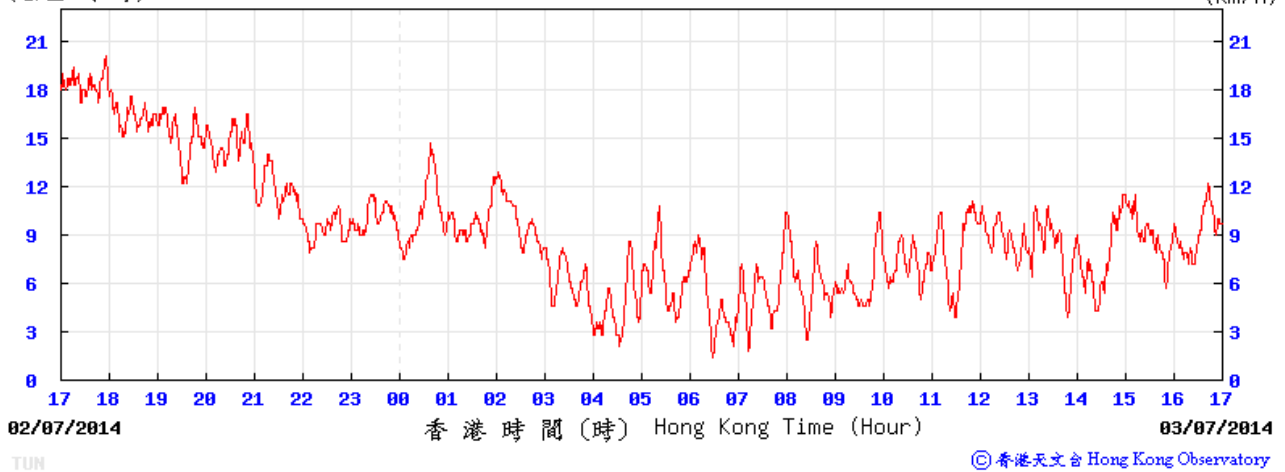


**Tuen Mun – 3 July 2014**

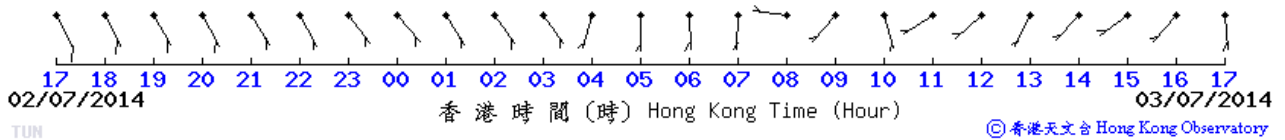
(於香港時間 2014 年 07 月 03 日 17 時 00 分更新) (Updated at 17:00H on 3 Jul 2014)



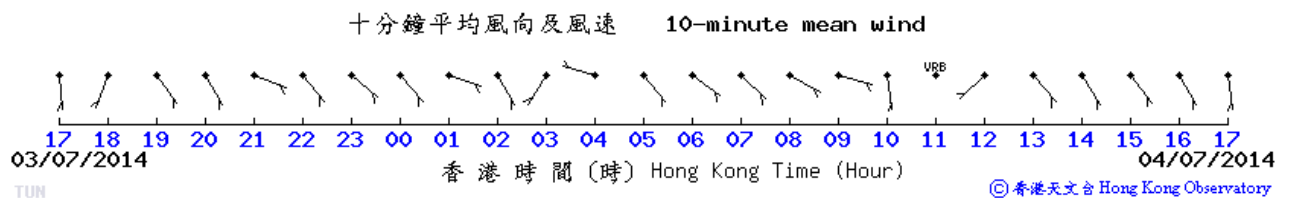
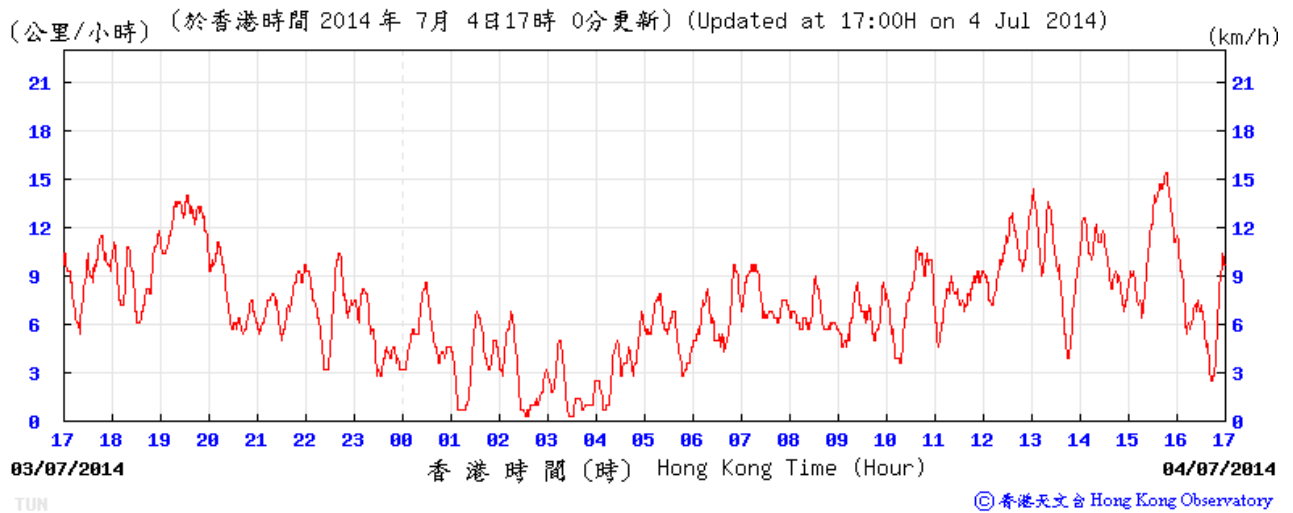
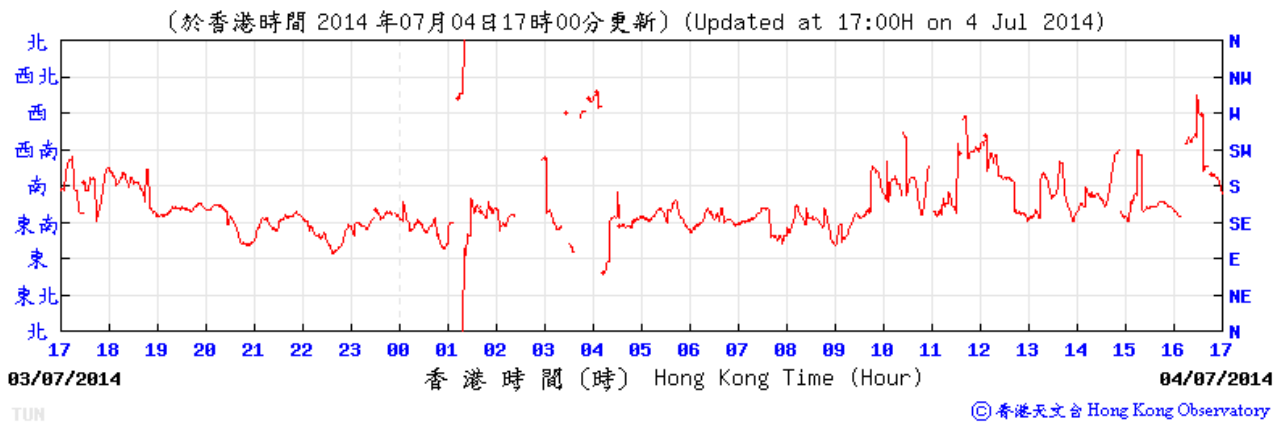
(公里/小時) (於香港時間 2014 年 7 月 3 日 17 時 0 分更新) (Updated at 17:00H on 3 Jul 2014) (km/h)



十分鐘平均風向及風速 10-minute mean wind

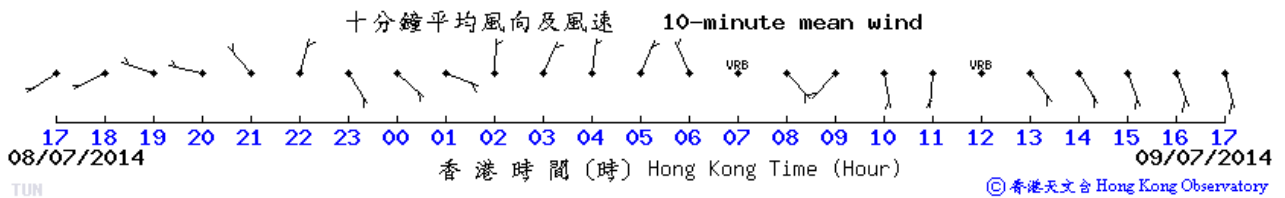
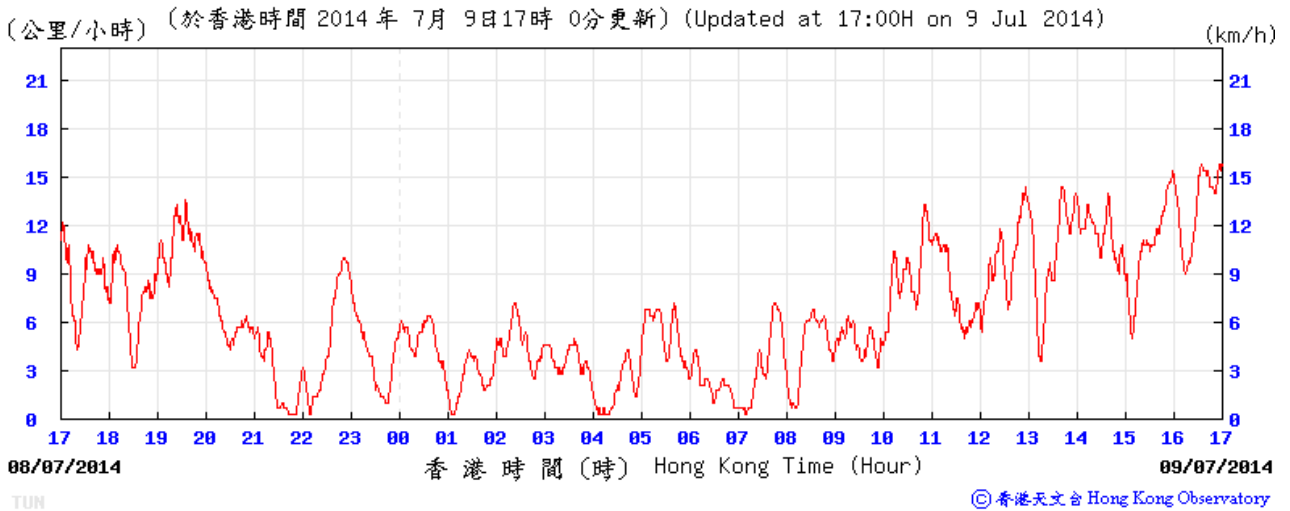
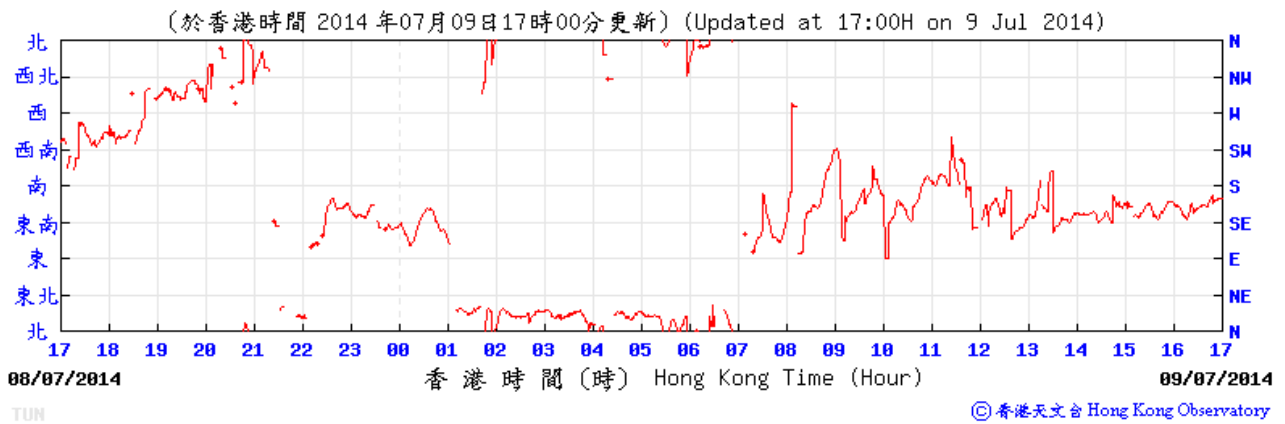


### Tuen Mun – 4 July 2014



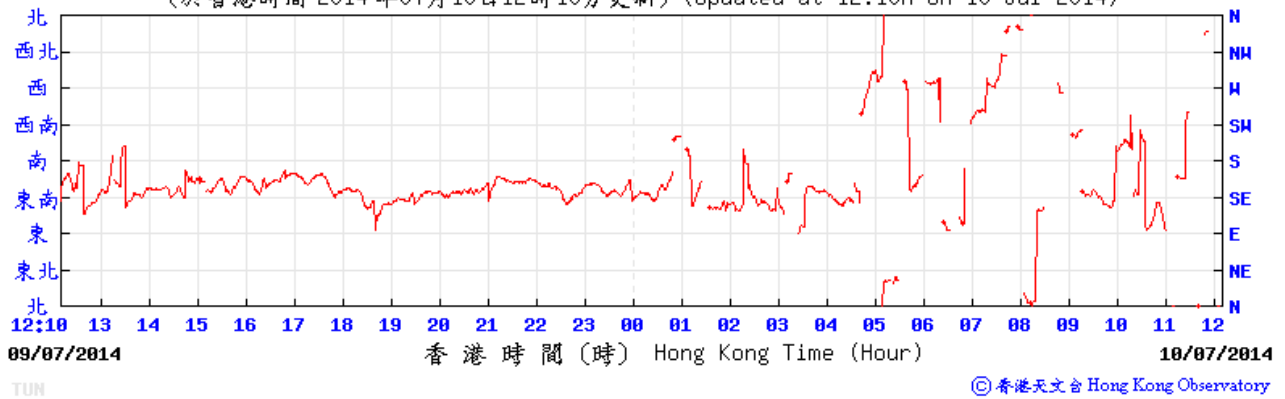


**Tuen Mun – 9 July 2014**

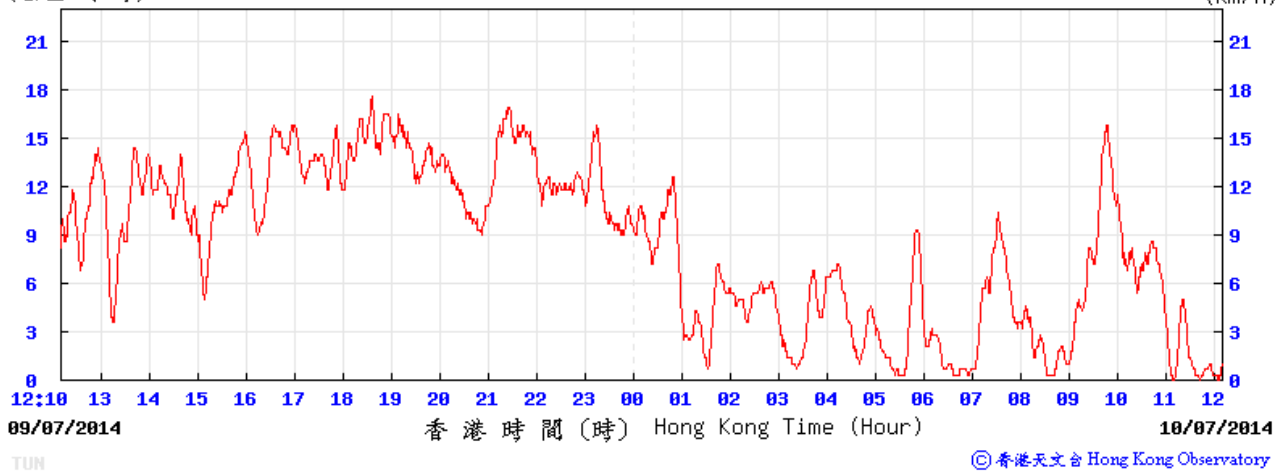


**Tuen Mun – 10 July 2014**

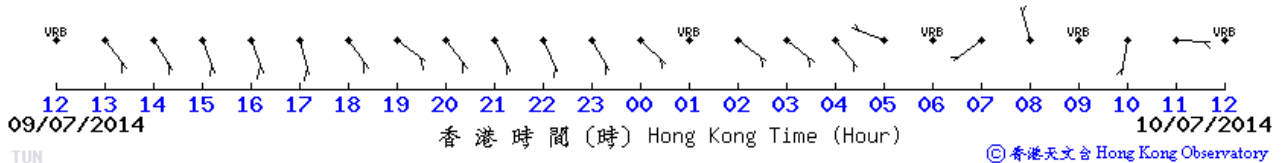
(於香港時間 2014 年 07 月 10 日 12 時 10 分更新) (Updated at 12:10H on 10 Jul 2014)



(公里/小時) (於香港時間 2014 年 7 月 10 日 12 時 10 分更新) (Updated at 12:10H on 10 Jul 2014) (km/h)

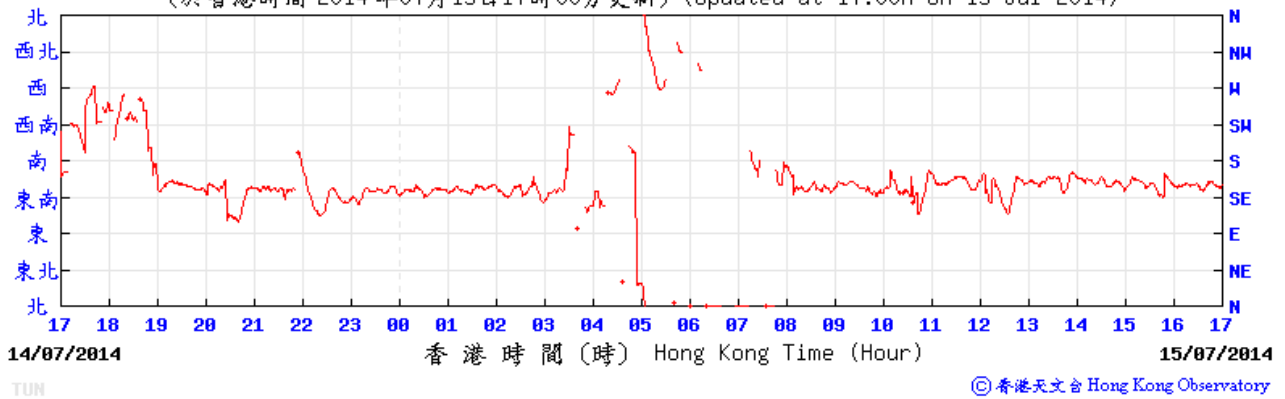


十分鐘平均風向及風速 10-minute mean wind

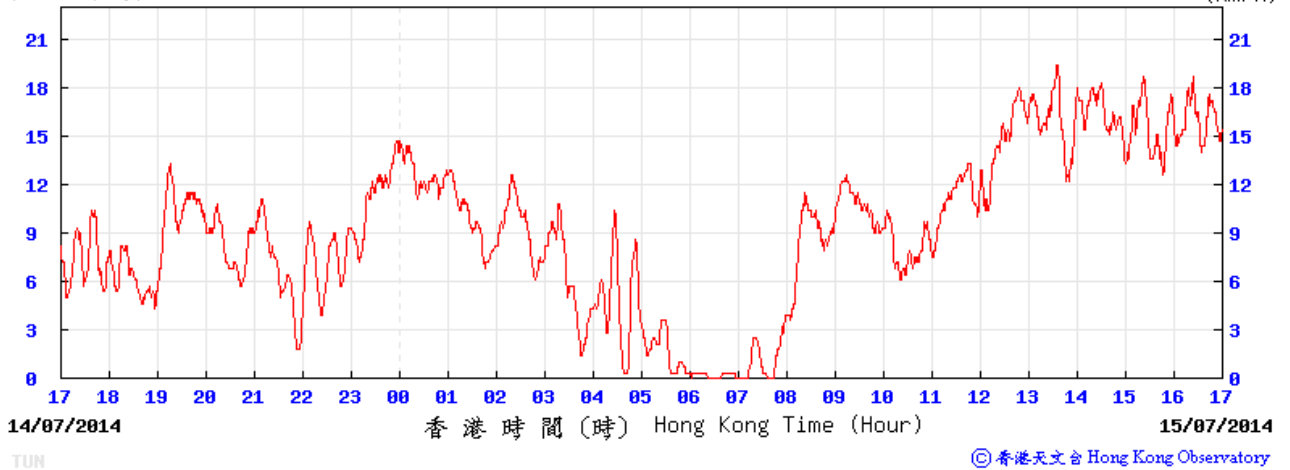


**Tuen Mun – 15 July 2014**

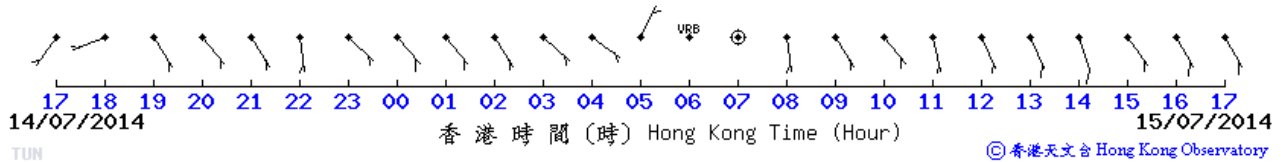
(於香港時間 2014 年 07 月 15 日 17 時 00 分更新) (Updated at 17:00H on 15 Jul 2014)



(公里/小時) (於香港時間 2014 年 7 月 15 日 17 時 0 分更新) (Updated at 17:00H on 15 Jul 2014) (km/h)

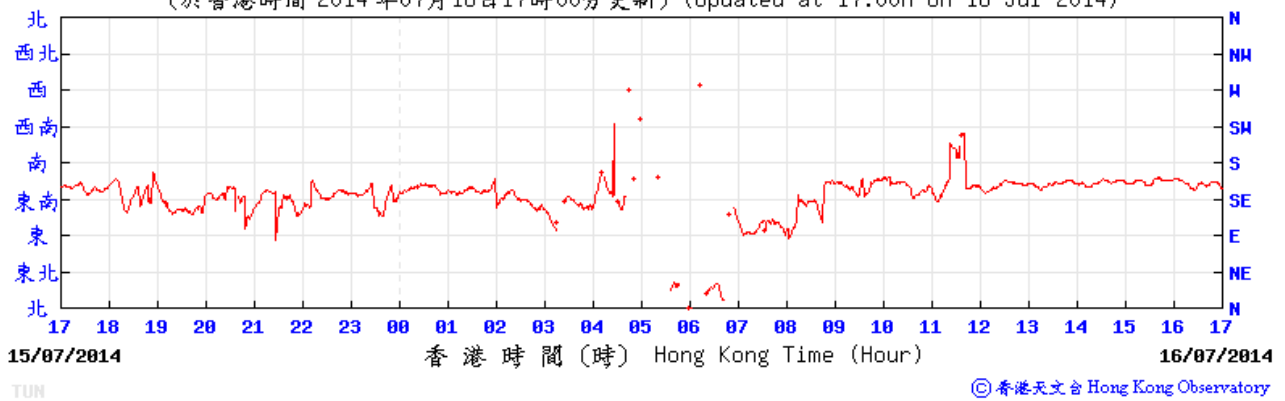


十分鐘平均風向及風速 10-minute mean wind

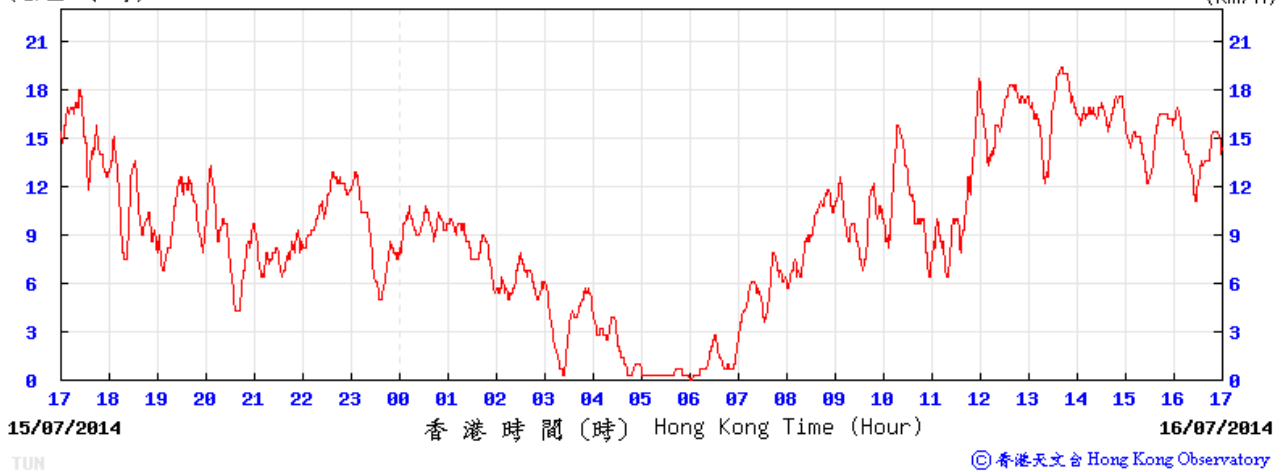


**Tuen Mun – 16 July 2014**

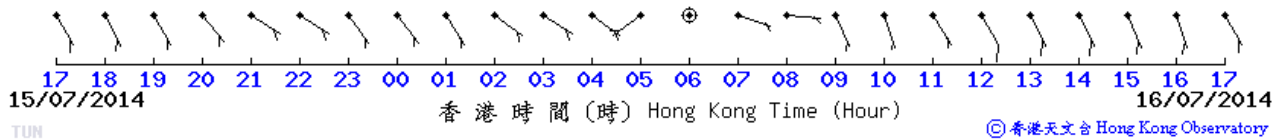
(於香港時間 2014 年 07 月 16 日 17 時 00 分更新) (Updated at 17:00H on 16 Jul 2014)



(公里/小時) (於香港時間 2014 年 7 月 16 日 17 時 0 分更新) (Updated at 17:00H on 16 Jul 2014) (km/h)

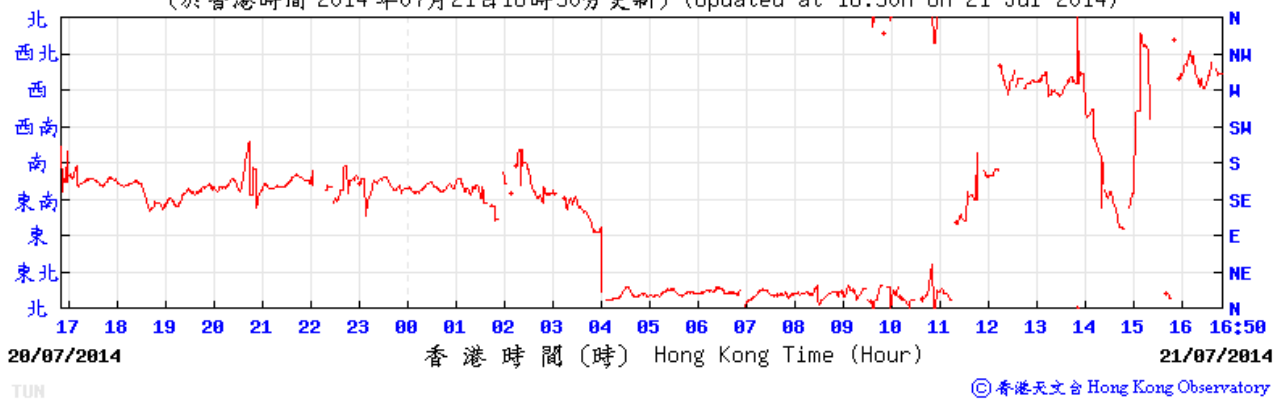


十分鐘平均風向及風速 10-minute mean wind

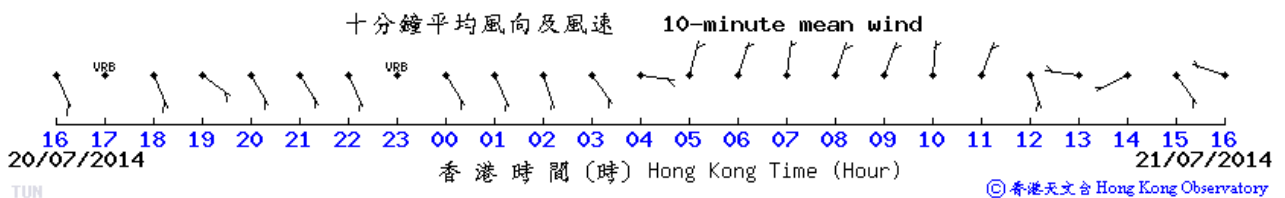
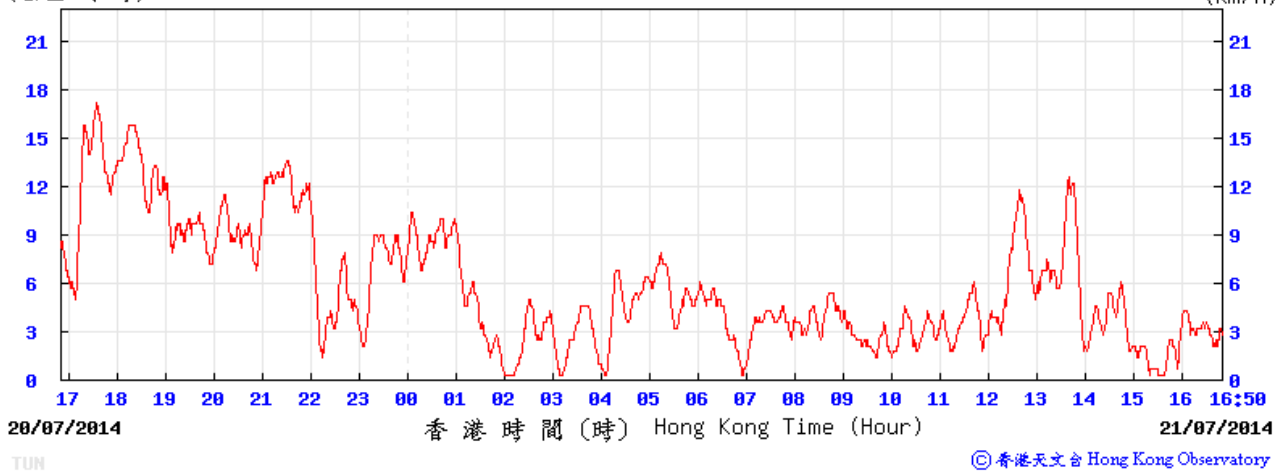


**Tuen Mun – 21 July 2014**

(於香港時間 2014 年 07 月 21 日 16 時 50 分更新) (Updated at 16:50H on 21 Jul 2014)

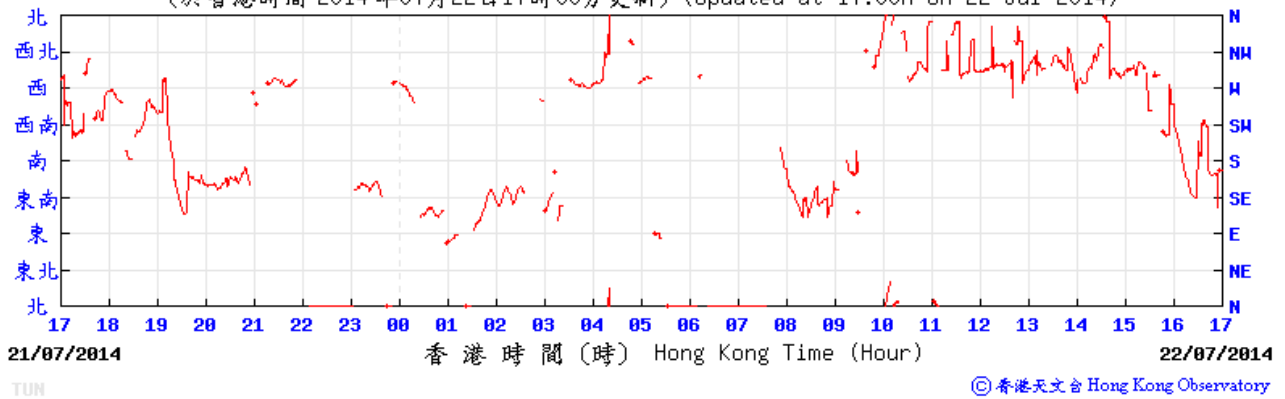


(公里/小時) (於香港時間 2014 年 7 月 21 日 16 時 50 分更新) (Updated at 16:50H on 21 Jul 2014) (km/h)

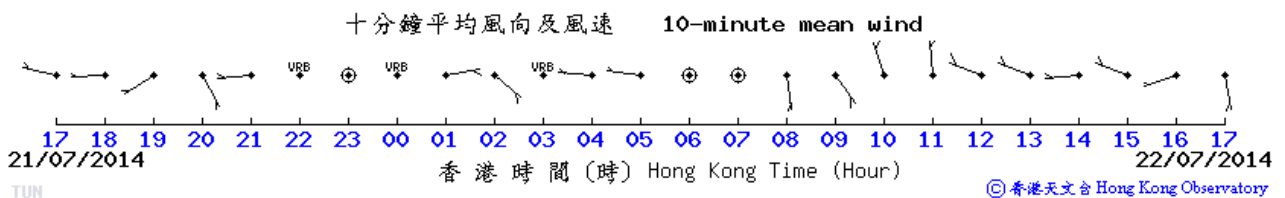
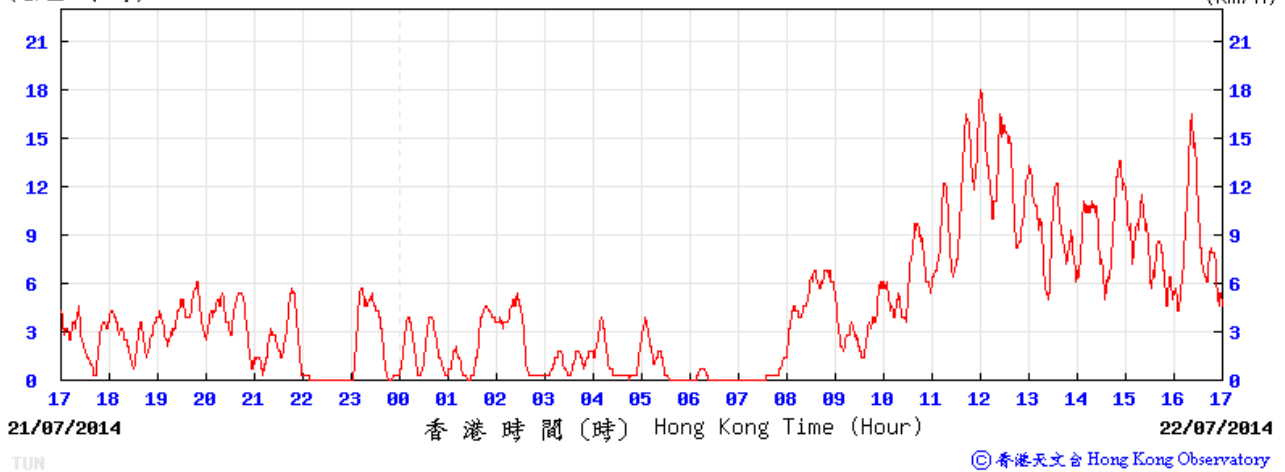


**Tuen Mun – 22 July 2014**

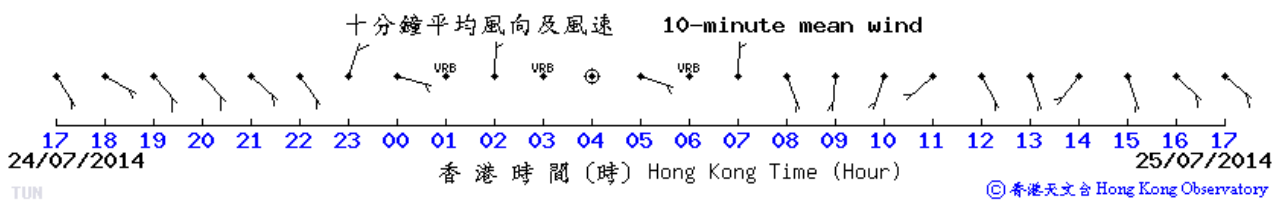
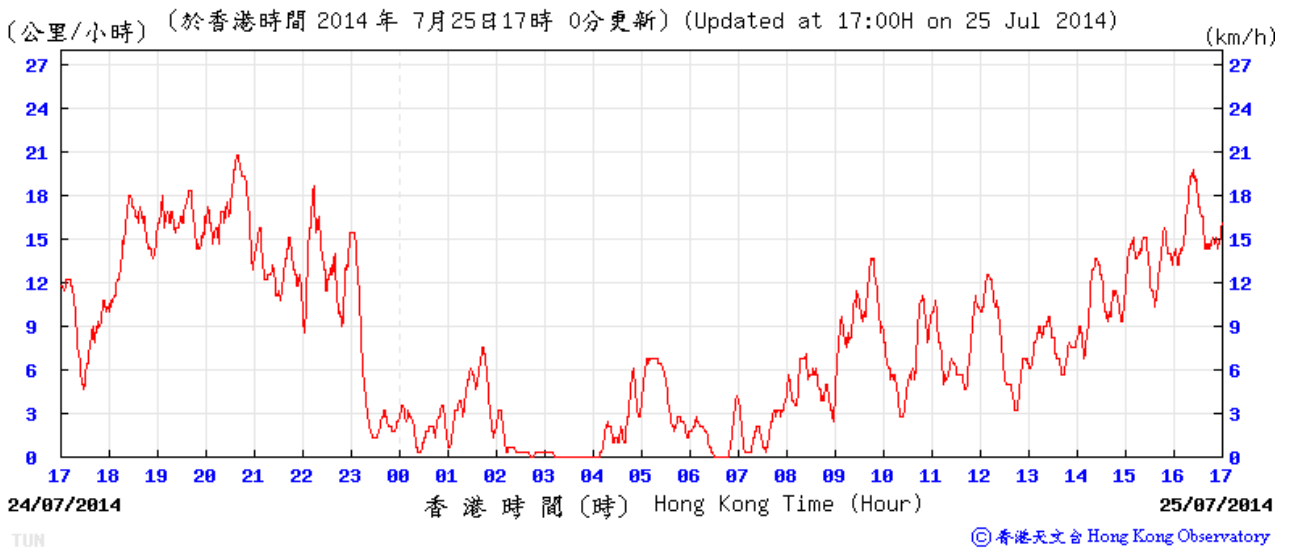
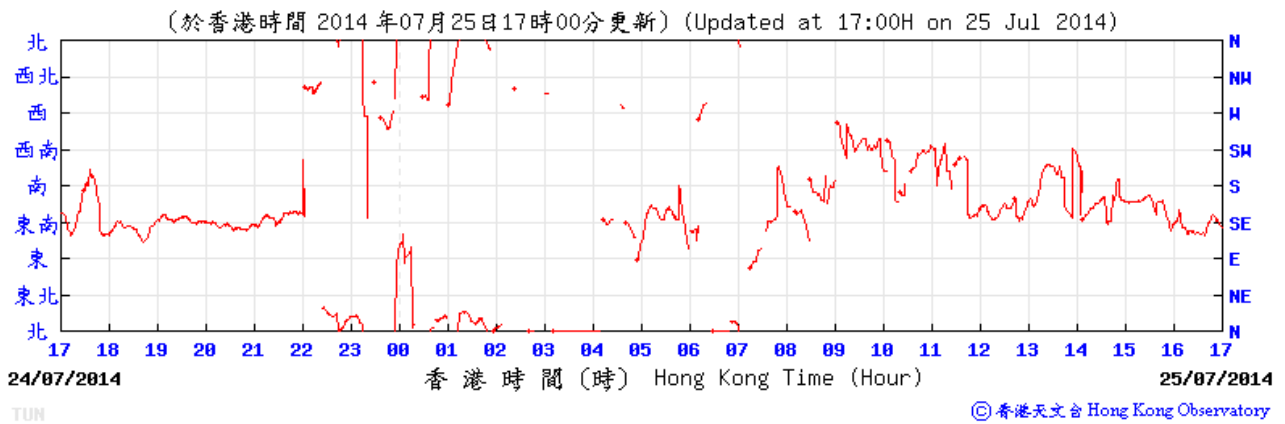
(於香港時間 2014 年 07 月 22 日 17 時 00 分更新) (Updated at 17:00H on 22 Jul 2014)



(公里/小時) (於香港時間 2014 年 7 月 22 日 17 時 0 分更新) (Updated at 17:00H on 22 Jul 2014) (km/h)

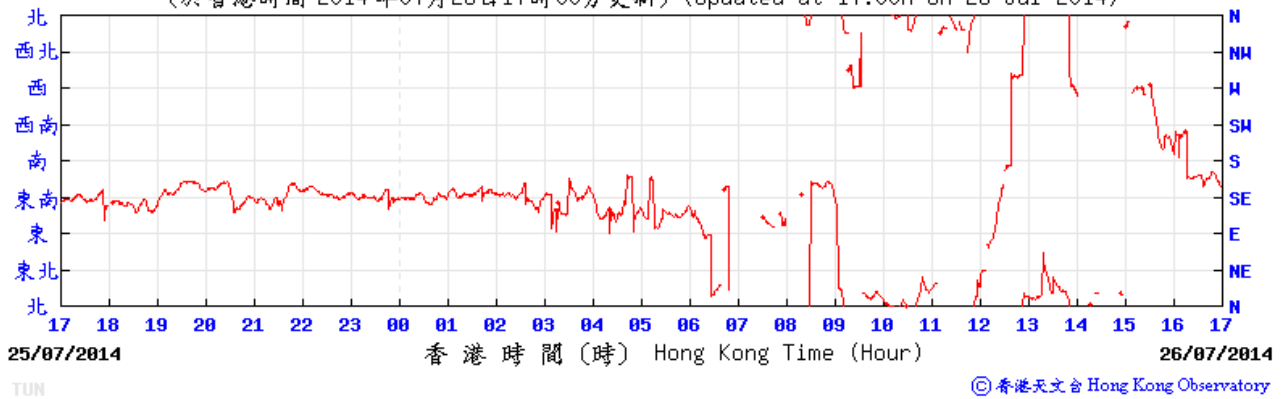


**Tuen Mun – 25 July 2014**

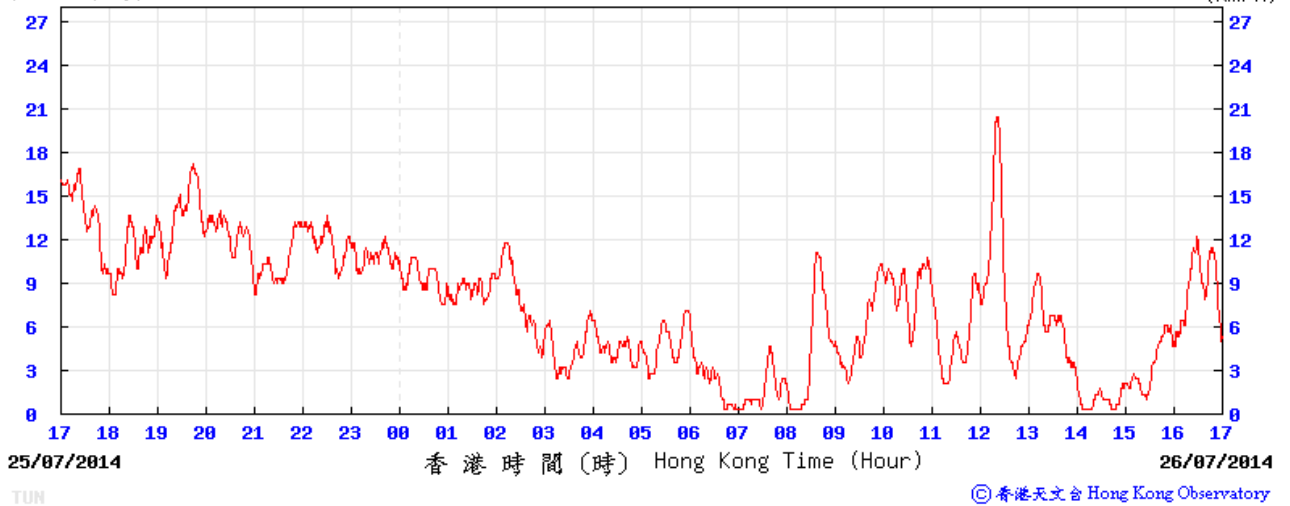


**Tuen Mun – 26 July 2014**

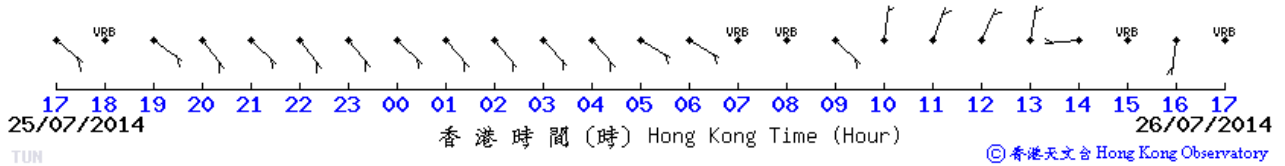
(於香港時間 2014 年 07 月 26 日 17 時 00 分更新) (Updated at 17:00H on 26 Jul 2014)



(公里/小時) (於香港時間 2014 年 7 月 26 日 17 時 0 分更新) (Updated at 17:00H on 26 Jul 2014) (km/h)



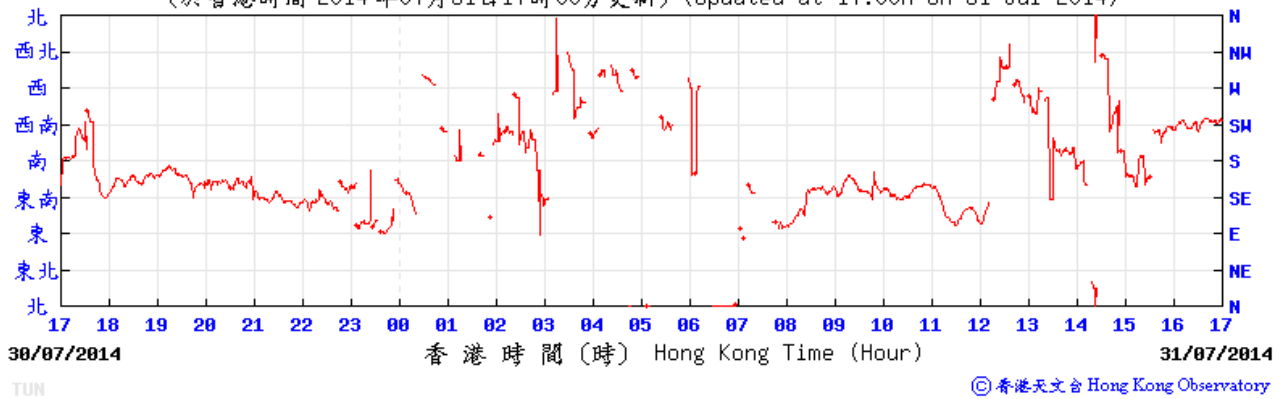
十分鐘平均風向及風速 10-minute mean wind



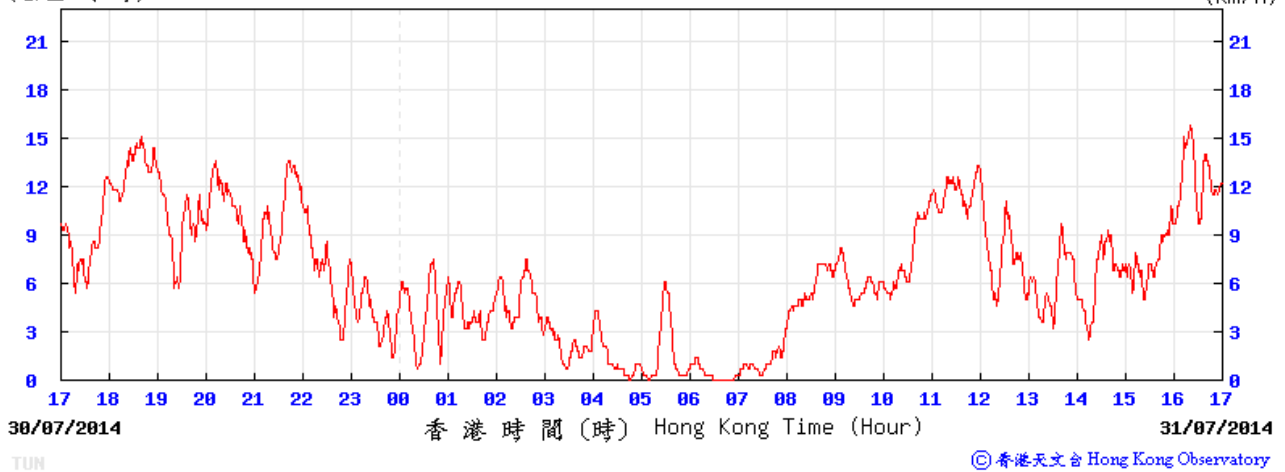


**Tuen Mun – 31 July 2014**

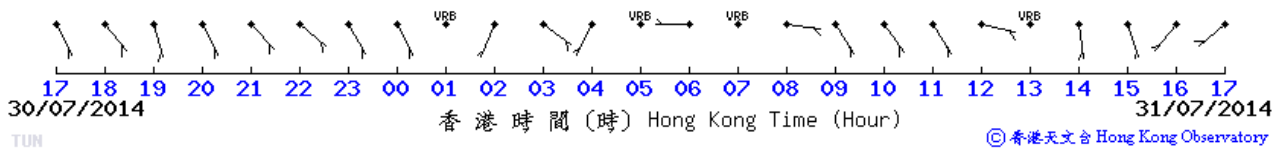
(於香港時間 2014 年 07 月 31 日 17 時 00 分更新) (Updated at 17:00H on 31 Jul 2014)



(公里/小時) (於香港時間 2014 年 7 月 31 日 17 時 0 分更新) (Updated at 17:00H on 31 Jul 2014) (km/h)



十分鐘平均風向及風速 10-minute mean wind



**Tuen Mun – 1 August 2014**

