

Development at West Kowloon Cultural District

**Quarterly Environmental Monitoring and Audit (EM&A) Report
(February - April 2021)**

May 2021

This Quarterly EM&A Report has been reviewed and certified by
the Environmental Team Leader (ETL) and verified by the Independent
Environmental Checker (IEC).

Certified by:



CK Wu

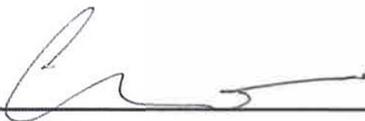
Environmental Team Leader (ETL)

West Kowloon Cultural District Authority

Date

26 May 2021

Verified by:



Claudine Lee

Independent Environmental Checker (IEC)

Meinhardt Infrastructure & Environment Ltd

Date

31 May 2021

This Report Consists of :

**Part-1: EM&A at M+ Museum and
Lyric Theatre Complex**

and

**Part-2: EM&A for Foundation, Excavation
and Lateral Works for Integrated
Basement and Underground Road
in Zone 2A**

Part-1: EM&A at M+ Museum and Lyric Theatre Complex

A large teal graphic element consisting of a triangle pointing upwards, a vertical rectangle to its left, and a trapezoidal shape at the bottom left, all meeting at a point on the left side.

M+ Museum and Lyric Theatre Complex

Mott MacDonald
3/F International Trade
Tower
348 Kwun Tong Road
Kwun Tong
Kowloon
Hong Kong

T +852 2828 5757
mottmac.hk

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Executive summary

This Quarterly EM&A Report presents the monitoring works at both the main works of M+ Museum and Lyric Theatre Complex conducted from 1 February 2021 to 30 April 2021. The construction works and EM&A programme for M+ Museum was completed on 28 February 2021.

The impact stage EM&A programme for the Project includes air quality, noise, water quality, waste, landscape and visual monitoring. The recommended environmental mitigation measures were implemented on site and regular inspections were carried out to ensure that the environmental conditions are acceptable.

The EM&A programme was carried out by the ET in accordance with the EM&A Manual requirements. It is concluded from the environmental monitoring and audit works that adequate environmental mitigation measures have been implemented by the contractors where appropriate in the reporting quarter.

Exceedance of Action and Limit Levels

There was no breach of Action and Limit levels for Air Quality (1-hour TSP and 24-hour TSP) and Noise in this reporting quarter.

Implementation of Mitigation Measures

Construction phase weekly site inspections were carried out to confirm the implementation measures undertaken by the Contractors in the reporting quarter. The status of implementation of mitigation measures during the reporting quarter is shown in **Appendix C**.

Landscape and visual impact inspections were conducted as part of the above-mentioned weekly site inspections during the reporting quarter. No adverse comment on landscape and visual aspects were made during these inspections.

Record of Complaints

Three complaints (not related to M+ Museum and Lyric Complex) were received during the reporting quarter.

Record of Notifications of Summons and Successful Prosecutions

No notifications of summons and successful prosecutions were recorded in the reporting quarter.

1 Introduction

1.1 Background

Mott MacDonald Hong Kong Limited (MMHK) was commissioned to undertake the Environmental Team (ET) services (including environmental monitoring and audit (EM&A)) for the construction of M+ Museum Main Works (Contract No.: CC/2015/3A/022) and Lyric Theatre Complex including the Foundation Works (Contract No.: CC/2015/3A/014), L1 Contract (Contract No. CC/2017/3A/030) and L2 Contract (Contract No. CC/2017/3A/031) at West Kowloon Cultural District (WKCD) (The Project) as part of the WKCD development. The Project Proponent is the West Kowloon Cultural District Authority (WKCDA). The construction works and EM&A programme for M+ Museum was commenced on 31 October 2015 and completed on 28 February 2021, and the construction works and EM&A programme for Lyric Theatre Complex was commenced on 1 March 2016.

The overall works for the WKCD fall under two separate categories of Designated Project (DP) of the Environmental Impact Assessment Ordinance (EIAO), namely an “engineering feasibility study of urban development projects with a study area covering more than 20 ha or involving a total population of more than 100 000” (Item 1 of Schedule 3) and “an underpass more than 100m in length under the built areas” (Item A.9, Part I, Schedule 2). An Environmental Permit No. EP-453/2013/B (EP) was issued with respect to the “Underpass Road and Austin Road Flyover Serving the West Kowloon Cultural District” which specifically includes the abovementioned category of DP under Item A.9, Part I, Schedule 2 of the EIAO. The captioned projects include part of the abovementioned underpass road located within the site boundary also falls under this same category.

The M+ museum development aims to provide an iconic presence for the M+ museum, semi-transparent vertical plane, housing education facilities, a public restaurant and museum offices. At ground and lower levels, generous access will be provided to the park and other West Kowloon Cultural District facilities, alongside a public resource centre, theatres, retail and dining, and back-of-house functions.

The 1,200-seat Lyric Theatre Complex will be Hong Kong's first world-class facility for dance performances, including ballet, contemporary and Chinese dance forms. In the run up to the opening of further major performing arts venues in the WKCD, it will also be used for a wide variety of performing arts events including drama, opera and musical performances. The Lyric Theatre Complex will act as a platform for Hong Kong's leading arts organisations and be a new major venue to show programmes from Asia and worldwide.

The Quarterly EM&A Report is prepared in accordance with the Clause 3.4 of the Environmental Permit No. EP-453/2013/B. This Quarterly EM&A Report presents the monitoring works conducted from 1 February 2021 to 30 April 2021. The purpose of this report is to summarise the findings in the EM&A of the project over the reporting period.

1.2 Project Organisation

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 Status of Construction Works in the Reporting Period

During the reporting period, construction works at M+ Museum undertaken include:

- M+
 - 2/F and B2 fit out
 - 2/F MEP modification works for PPEL
 - Tower UF solar panels installation
 - Overall area MEP flushing out/ rectifications
 - 3F landscaping works rectification
- CSF
 - Defect rectifications
- WKCDA Tower
 - MEP Post-OP installation
 - GF paving
 - Post-OP weather-tight works (indoor)

During the reporting period, construction works at L1 undertaken include:

- Excavation and lateral support works
- Extended basement structure construction
- Slab construction
- Cutting of pipe pile wall
- AET protection – Construction of at-grade Slab
- Construction of dog house
- Column installation
- Box culvert outfall to Victoria Harbour (PIW & Cofferdam B works)
- Austin Road West lay-by (PIW Works)
- Cofferdam at the M+ Museum to LTC interface on the waterfront

During the reporting period, construction works at L2 undertaken include:

- LTC construction
 - Structure
 - Falsework and formwork erection
 - Reinforcement work
 - Concrete work
 - ABWF & MEP work
- DSC cofferdam (Cofferdam A)
 - Remedial work to existing puddle flange in pump cell
 - Construction of valve chamber
 - Lay pipe bedding
 - Install DCS pipes/valve/fitting

- Construct RC thrust blocks
- Modification to existing pump cell
 - ABWF works
- Extended basement
 - ABWF & MEP Work
- Vibration isolation spring system installation
 - Install spring

The Construction Works Programme of the Project is provided in **Appendix B**. A layout plan of the Project is provided in **Figure 1**.

2 Summary of EM&A Requirements and Mitigation Measures

2.1 Monitoring Requirements

In accordance with the EM&A Manual, environmental parameters including air quality, noise, landscape and visual have been monitored. The specific parameters, monitoring frequency and the respective Action and Limit levels are given in **Table 2.1**. Locations of the monitoring stations are provided in **Figure 1**.

Table 2.1: Summary of Impact EM&A Requirements

Parameters	Descriptions	Locations	Frequencies	Action level	Limit level
Air Quality	24-Hour TSP	AM1 - International Commerce Centre	At least once every 6 days	143.6 µg/m ³	260 µg/m ³
	1-Hour TSP	AM1 - International Commerce Centre	At least 3 times every 6 days	273.7 µg/m ³	500 µg/m ³
	24-Hour TSP	AM2 - The Harbourside Tower 1	At least once every 6 days	151.1 µg/m ³	260 µg/m ³
	1-Hour TSP	AM2 - The Harbourside Tower 1	At least 3 times every 6 days	274.2 µg/m ³	500 µg/m ³
Noise	Leq, 30 minutes	NM1- The Harbourside Tower 1	Weekly	When one documented complaint is received from any one of the sensitive receivers	75 dB(A)
Landscape & Visual	Monitor implementation of proposed mitigation measures during the construction stage	As described in Table 9.1 and 9.2 of the EM&A Manual	Bi-weekly	N/A	N/A

In the context of the monitoring activities at M+ Museum and the Lyric Complex, three monitoring stations had been considered, including AM1 (International Commerce Centre), AM2 (The Harbourside Tower 1) for air monitoring, and NM1 (The Harbourside Tower 1) for noise monitoring. Other monitoring locations were so far away from M+ Museum and the Lyric Complex and could not be representative for impact monitoring.

The Harbourside management office formally rejected our proposal of setting up air quality and noise monitoring equipment on its premises at the podium level of Tower 1 (AM2/NM1) on 10 November 2015. Nevertheless, suitable air quality monitoring location at AM2 was identified on the ground floor in front of The Harbourside Tower 1, which is at the same location as that of baseline monitoring for consistency. No management approval is required at the ground floor for

conducting the air monitoring. However, the electricity supply at AM2 was suspended from 31 August 2016 and was no longer available. In order to have a more secure electricity supply, an alternative air monitoring location (AM2A) was identified at Austin Road West opposite to The Harbourside Tower 1, which is close to Lyric Theatre Complex site entrance. This alternative air monitoring location was approved by EPD on 28 September 2016. Due to works programme, the air monitoring location AM2A has been relocated to the alternative monitoring location AM2B at the 1st floor of Gammon's site office, which was approved by EPD on 21 February 2019.

Alternative noise monitoring location was identified at The Arch (NM2); however, The Arch management office formally rejected our proposal of setting up noise monitoring equipment on its premises on 23 November 2015. On the other hand, noise monitoring at G/F of Harbourside could not be representative. However, approval from the management office of the International Commerce Centre has been granted on 29 February 2016 for conducting noise monitoring at the alternative noise monitoring location identified at the podium floor (NM1A) which is free from screening to the construction activities.

In short, 2 air quality monitoring stations and 1 noise impact monitoring station were confirmed for the impact monitoring.

2.2 Environmental Mitigation Measures

Environmental mitigation measures have been recommended in the EM&A Manual. Summary of implementation status of the environmental mitigation measures is provided in **Appendix C**.

3 Summary of EM&A Results

3.1 Monitoring Data

In accordance with the EM&A Manual, impact monitoring has been conducted in the reporting quarter. Meteorological data for the reporting quarter have been extracted from Hong Kong Observatory and presented in **Appendix D**. Monitoring data with graphical presentation for the reporting quarter are shown in **Appendix E**. A summary on the monitoring results are presented in **Table 3.1**.

Table 3.1: Summary of Monitoring Data

Parameter	Monitoring Location	Minimum	Maximum	Average
Air Quality				
1 hour TSP	AM1	19	67	38
	AM2B	30	91	56
24 hour TSP	AM1	13	113	35
	AM2B	17	101	59
Construction Noise				
Leq(30min)	NM1A	67	69	68

3.2 Monitoring Exceedances

Summary of the exceedances in the reporting quarter is tabulated in **Table 3.2**.

Table 3.2: Summary of Exceedances

Monitoring Station	Parameter	No. of Exceedance		Action Taken
		Action Level	Limit Level	
Air Quality				
AM1	1 hour TSP	0	0	N/A
	24 hour TSP	0	0	N/A
AM2B	1 hour TSP	0	0	N/A
	24 hour TSP	0	0	N/A
Construction Noise				
NM1A	Leq(30min)	0	0	N/A

3.2.1 1-hour TSP Monitoring

All 1-hour TSP monitoring was conducted as scheduled in the reporting quarter. No Action/ Limit Level exceedance was recorded.

3.2.2 24-hour TSP Monitoring

All 24-hour TSP monitoring was conducted as scheduled in the reporting quarter. No Action/ Limit Level exceedance was recorded.

3.2.3 Construction Noise Monitoring

All construction noise monitoring was conducted as scheduled in the reporting quarter. No Action/Limit Level exceedance was recorded.

3.2.4 Landscape and Visual Monitoring

All landscape and visual impact inspections were conducted as scheduled in the reporting quarter. No adverse comment on landscape and visual aspects were recorded.

4 Waste Management

4.1 M+ Museum

As advised by the Contractor, 0.0 tonne, 0.0 tonne and 0.0 tonne of inert C&D material was disposed of as public fill to Chai Wan Public Fill Barging Point, Tuen Mun Area 38 and Tseung Kwan O Area 137 Public Fill respectively in the reporting quarter, while 118.0 tonnes of general refuse were disposed of at SENT landfill. 0.0 tonne of metals, 0.0 tonne of paper/cardboard packaging, 0.0 tonne of plastic and 0.0 tonne of timber was collected by recycling contractors in the reporting quarter. 0.0 tonne of inert C&D materials was reused on site. 0.0 tonne of inert C&D materials was reused in other projects and 0.0 tonne of inert C&D materials was disposed to sorting facility. 0.0 tonne of chemical wastes was collected by licensed contractors in the reporting quarter.

The actual amounts of different types of waste generated by the activities of construction works at M+ Museum in the reporting quarter are shown in **Appendix F**.

4.2 Lyric Theatre Complex

As advised by the Contractor (L1 and L2 Contract), 1033.29 tonnes, 550.44 tonnes and 0.00 tonne of inert C&D material were disposed of as public fill to Tseung Kwan O Area 137, Tuen Mun Area 38, and Chai Wan Public Fill Barging Point respectively in the reporting quarter, while 1999.4 tonnes of general refuse were disposed of at SENT and WENT landfill. 986.1 tonnes of metals, 0.6 tonnes of paper/cardboard packaging, 0.0 tonne of plastic and 0.0 tonne of timber were collected by recycling contractors in the reporting quarter. 0.0 tonne of inert C&D materials was reused on site. 0.0 tonne of fill materials was imported for use at site and 0.0 tonne of inert C&D materials was reused in other projects. 0.0 tonne of inert C&D materials was disposed to sorting facility and 0.0 tonne of chemical wastes was collected by licensed contractors in the reporting quarter.

The actual amounts of different types of waste generated by the activities of construction works at Lyric Theatre Complex in the reporting quarter are shown in **Appendix F**.

5 Environmental Non-conformance

There was no breach of Action or Limit levels for Air Quality (1-hour TSP and 24-hour TSP) and Noise in the reporting quarter.

Three complaints (not related to M+ Museum and Lyric Complex) were received in the reporting quarter. No notifications of summons and successful prosecutions were received in the reporting quarter.

The first complaint was referred by EPD from nearby resident about the noise from WKCD site on 28 March 2021. The resident reflected that the construction site area of WKCD next to the West Kowloon Station produces annoying noise every morning, and there is a piling rig operating every morning which possibly produces the concerned noise. The investigation revealed that the complaint was not related to M+ Museum and Lyric Theatre Complex, as the construction works for M+ Museum were ended in February 2021 and both M+ Museum and Lyric Theatre Complex were far away from the concerned area. Also, there were no piling works on Lyric complex sites. Hence the complaint could be attributable to M+ Museum and Lyric Theatre Complex. However, noise mitigation measures will continue to be strictly implemented on site. Nevertheless, the contractors are reminded to strengthen the implementation of the recommended noise mitigation measures to reduce impacts to nearby residents.

The second complaint was received on 12 April 2021, West Kowloon Cultural District Authority (WKCDA) has received a complaint case referred by Home Affairs Bureau (HAB) on the noise disturbance at WKCD construction site. The complainant claimed that construction noise was heard at the construction site close to Xiqu Centre after 20:00. As the complainant specified that the noise was from the construction site next to Xiqu Centre, and Lyric Theatre Complex was far away from the concerned area, hence the complaint could not be attributable to Lyric Theatre Complex. However, noise mitigation measures will continue to be strictly implemented on site to reduce impacts to nearby residents.

The third complaint was referred by EPD. On 18 April 2021, EPD has received a complaint from a resident of The Arch relating to WKCD construction site activities. According to email sent by EPD on 20 April 2021, the complainant claimed that there was a noise from construction site of Zone 2A, including the engine of lorry after 00:00 on 15 and 16 April 2021. As the complainant specified that the noise was from construction site of Zone 2A, and Lyric Theatre Complex was far away from the concerned area, hence the complaint could not be attributable to Lyric Theatre Complex. However, noise mitigation measures will continue to be strictly implemented on site to reduce impacts to nearby residents.

The cumulative statistics on complaints, notifications of summons and successful prosecutions were provided in **Appendix G**.

6 Comments, Recommendations and Conclusion

6.1 Comments

Based on the observations made during site audits, landscape inspections, and construction dust and noise monitoring results, no non-compliances and exceedances of air quality and noise were recorded in the reporting quarter.

6.2 Recommendations

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 continue, and recommendations will be provided to remediate any potential impacts due to the project and to improve the EM&A programme if deficiencies of the existing EM&A programme are identified.

6.3 Conclusion

The EM&A programme as recommended in the EM&A Manual has been undertaken. The construction works of M+ Museum main works commenced on 31 October 2015 and completed on 28 February 2021; and the construction of Lyric Theatre Complex commenced on 1 March 2016.

Monitoring of air quality and noise with respect to the Project is underway. In particular, the 1-hour TSP, 24-hour TSP and noise level (as Leq, 30 minutes) under monitoring have been checked against established Action and Limit levels. There was no breach of Action and Limit levels for Air Quality (1-hour TSP and 24-hour TSP) and Noise in this reporting quarter.

Three complaints were received in the reporting quarter. No notifications of summons and successful prosecutions were received during the reporting quarter.

Weekly construction phase site inspections and bi-weekly landscape and visual impact inspections were conducted during the reporting quarter as required. It was observed that the Contractor had implemented all possible and feasible mitigation measures to mitigate the potential environmental impacts during construction phase works.

Figure 1 Site Layout Plan and Monitoring Stations

Appendices

- A. Project Organisation
- B. Construction Programme
- C. Environmental Mitigation Measures – Implementation Status
- D. Meteorological Data Extracted from Hong Kong Observatory
- E. Graphical Plots of the Monitoring Results
- F. Waste Flow table
- G. Cumulative Statistics on Complaints, Notifications of Summons and Successful Prosecutions

A. Project Organisation

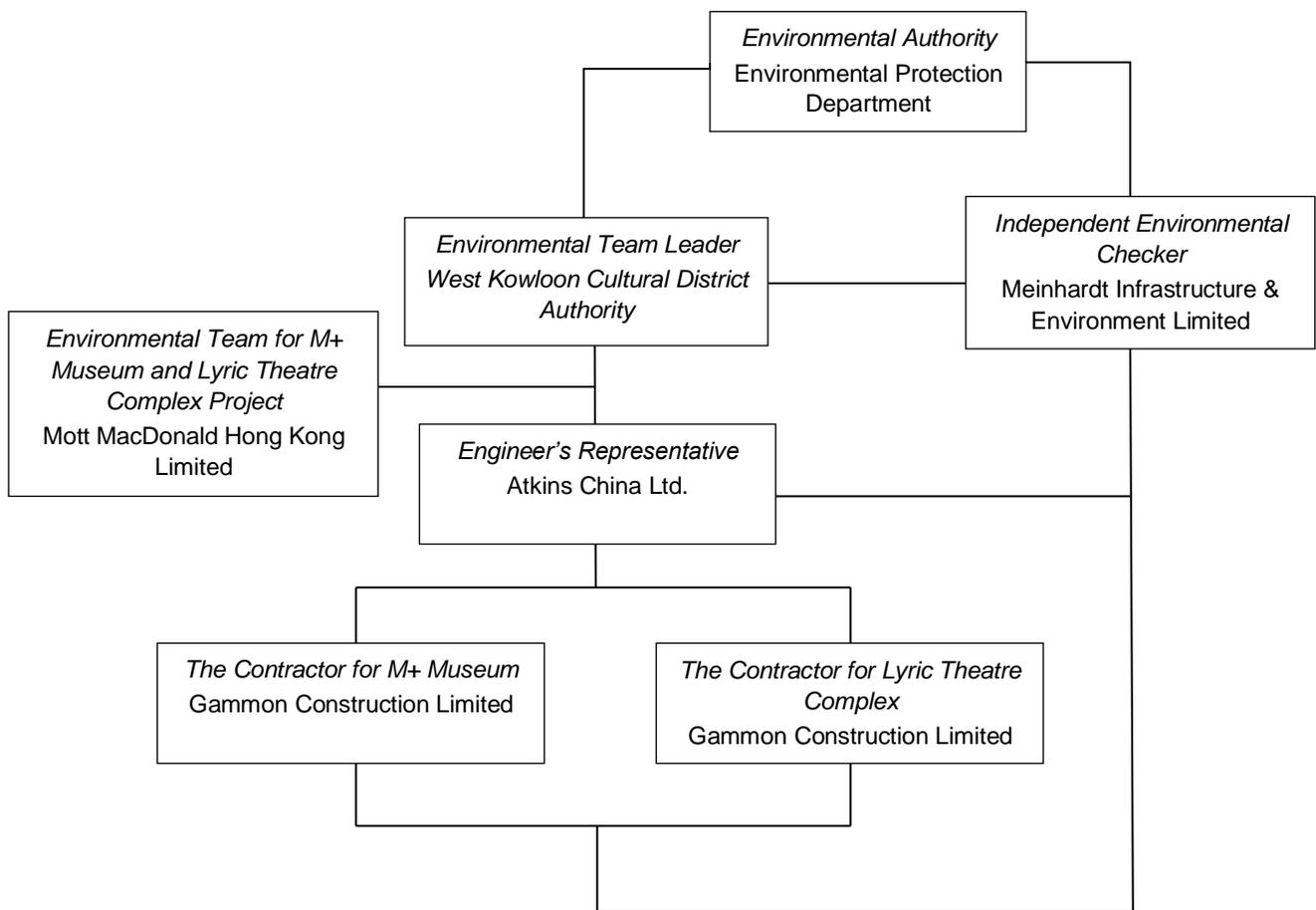


Table A-1: Contact information

Company Name	Role	Name	Telephone	Email
Atkins China Ltd.	Resident Engineer	Ms. Gloria Lui	5506 6361	gloria.lui@atkinglobal.com
Meinhardt Infrastructure & Environment Limited	Independent Environmental Checker	Ms. Claudine Lee	2859 5409	claudinelee@meinhardt.com.hk
Gammon Construction Limited (M+ Museum)	Environmental Manager	Mr. Andy Leung	9489 0035	andy.leung@gammonconstruction.com
Gammon Construction Limited (L1)	Environmental Manager	Ms. Sammie Chan	9864 4296	sammie.chan@gammonconstruction.com
Gammon Construction Limited (L2)	Environmental Manager	Mr. Ivan Chiu	9416 1664	ivan.chiu@gammonconstruction.com
Mott MacDonald Hong Kong Ltd.	Contractor's Environmental Team Leader	Mr. Thomas Chan	2828 5757	thomas.chan@mottmac.com
West Kowloon Cultural District Authority	Senior Project Manager (Safety, Health and Environment)	Mr. C.K. Wu	5506 9178	ck.wu@wkda.hk

B. Construction Programme

M+ Museum

L1

Activity ID	Activity Name	Start Date	Finish Date	2021			
				Feb 38	Mar 39	Apr 40	May 41
L1 Contract for Lyric Theatre Complex (3MRP)							
Cost Centre C - Basement							
Cost Centre C1 - Essential Basement Structure (Excl. AET Protection & Box Culvert)							
SU10000	South Basement - Central Area	30-Apr-19 A	05-Mar-21				
SU11000	South Basement - South / West Area	14-Dec-19 A	26-Feb-21 A				
SU12000	South Basement - East Area	27-Feb-20 A	10-Mar-21				
SU13000	North Basement - North Area	12-Jun-19 A	09-Apr-21				
SU14000	North Basement - Area 6	01-Jun-19 A	15-Mar-21				
Cost Centre C3 - AET Protection							
SU28000	On-grade Slab between Wall Beam	25-Jan-21 A	27-Mar-21				
Cost Centre C4 - Box Culvert							
SU30000	South Section	30-Dec-20 A	30-Mar-21				
SU31000	North Section	22-Jun-20 A	30-Mar-21				
SU32000	Austin Road	29-Jun-20 A	05-Aug-21				
Cost Centre D - Public Infrastructure Works (PIW)							
SU40000	Drainage Works	20-Mar-18 A	27-Mar-21				
SU41000	Utilities & Road Works	04-Oct-18 A	10-Apr-21				
SU42000	Box Culvert Outfall	24-Nov-20 A	06-Sep-21				
Cost Centre E - Miscellaneous Works							
SU50000	External Works - Drainage & Sewerage Works	19-Nov-19 A	31-May-21				
SU510000	External Works - Watermain Works	15-Mar-21*	03-Jul-21				
SU52000	DCS Outfall	24-Nov-20 A	02-Oct-21				

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

Project ID: L13MRP-20210228-ENV
Layout: L1-3MRP (Env)
Page: 1 of 1

West Kowloon Cultural District Authority
L1 Contract for Lyric Theatre Complex & Extended Basement
Three Month Rolling Programme (3MRP) - Status as of 28 Feb 2021



Activity ID	Activity Name	Start Date	Finish Date	2021			
				Mar 39	Apr 40	May 41	Jun 42
L1 Contract for Lyric Theatre Complex (3MRP)							
Cost Centre C - Basement							
Cost Centre C1 - Essential Basement Structure (Excl. AET Protection & Box Culvert)							
SU10000	South Basement - Central Area	30-Apr-19 A	01-Mar-21 A				
SU12000	South Basement - East Area	27-Feb-20 A	04-Mar-21 A				
SU12500	South Basement - Dog House	16-Mar-20 A	20-Aug-21				
SU13000	North Basement - North Area	12-Jun-19 A	12-Apr-21				
SU14000	North Basement - Area 6	01-Jun-19 A	12-Apr-21				
SU14500	North Basement - Dog House	11-Jan-20 A	28-Jul-21				
Cost Centre C3 - AET Protection							
SU28000	On-grade Slab between Wall Beam	25-Jan-21 A	31-Mar-21 A				
Cost Centre C4 - Box Culvert							
SU30000	South Section	30-Dec-20 A	12-Apr-21				
SU31000	North Section	22-Jun-20 A	12-Apr-21				
SU32000	Austin Road	29-Jun-20 A	31-Aug-21				
Cost Centre D - Public Infrastructure Works (PIW)							
SU40000	Utilities & Drainage Works	20-Mar-18 A	14-Apr-21				
SU41000	Road Works	04-Oct-18 A	31-Aug-21				
SU42000	Box Culvert Outfall	24-Nov-20 A	08-Sep-21				
Cost Centre E - Miscellaneous Works							
SU50000	External Works - Drainage & Sewerage Works	19-Nov-19 A	31-May-21				
SU51000	External Works - Watermain Works	15-Apr-21*	30-Jul-21				
SU52000	DCS Outfall	24-Nov-20 A	08-Sep-21				

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

Project ID: L13MRP-20210331-ENV
Layout: L1-3MRP (Env)
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West Kowloon Cultural District Authority
L1 Contract for Lyric Theatre Complex & Extended Basement
Three Month Rolling Programme (3MRP) - Status as of 31 Mar 2021



Activity ID	Activity Name	Start Date	Finish Date	2021			
				Apr 40	May 41	Jun 42	Jul 43
L1 Contract for Lyric Theatre Complex (3MRP)							
Cost Centre C - Basement							
Cost Centre C1 - Essential Basement Structure (Excl. AET Protection & Box Culvert)							
SU10000	South Basement - Central Area	30-Apr-19 A	01-Mar-21 A				
SU12000	South Basement - East Area	27-Feb-20 A	04-Mar-21 A				
SU12500	South Basement - Dog House	16-Mar-20 A	15-Sep-21				
SU13000	North Basement - North Area	12-Jun-19 A	19-Apr-21 A				
SU14000	North Basement - Area 6	01-Jun-19 A	26-Apr-21 A				
SU14500	North Basement - Dog House	11-Jan-20 A	23-Aug-21				
Cost Centre C3 - AET Protection							
SU28000	On-grade Slab between Wall Beam	25-Jan-21 A	31-Mar-21 A				
Cost Centre C4 - Box Culvert							
SU30000	South Section	30-Dec-20 A	29-May-21				
SU31000	North Section	22-Jun-20 A	29-May-21				
SU32000	Austin Road	29-Jun-20 A	31-Aug-21				
Cost Centre D - Public Infrastructure Works (PIW)							
SU40000	Utilities & Drainage Works	20-Mar-18 A	31-May-21				
SU41000	Road Works	04-Oct-18 A	31-Aug-21				
SU42000	Box Culvert Outfall	24-Nov-20 A	08-Sep-21				
Cost Centre E - Miscellaneous Works							
SU50000	External Works - Drainage & Sewerage Works	19-Nov-19 A	30-Jun-21				
SU51000	External Works - Watermain Works	03-May-21*	30-Jul-21				
SU52000	DCS Outfall	24-Nov-20 A	08-Sep-21				

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

Project ID: L13MRP-20210430-ENV
Layout: L1-3MRP (Env)
Page: 1 of 1

West Kowloon Cultural District Authority
L1 Contract for Lyric Theatre Complex & Extended Basement
Three Month Rolling Programme (3MRP) - Status as of 30 Apr 2021



L2

ID	Activity	RD	Start	Finish	BL VAR	LM VAR	TF	2021				2022				2023				2024									
								Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4						
								J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O
<i>L2 CMWP_R01_05 Approved 29Sep20 - 5th Update DD=31Jan21</i>																													
GENERAL & PRELIMINARIES																													
Contract Significant Dates																													
Commencement & Completion Dates																													
Section Keydates																													
KD05	PC for HO of the Remaining Works for M+ Promenade South	0		10-Dec-21*	-80	11	-79																						
KD05A	Complete Required Pedestrian Access Corridor and Floor Finishes at AURW	0		13-May-22*	0	0	0																						
KD05B	Complete Required Pedestrian Access Corridor & associated top slab at Avenue Level [if instructed]	0		13-May-22*	0	0	0																						
KD05C	PC for HO of Landscape Area at Avenue & Pedestrian level between P31 & P34 [if instructed]	0		13-May-22*	0	0	0																						
KD08	PC for HO Loc ICT/Risers Rms to APC for ICT Sys Instn Wrks	0		03-Feb-24*	-96	-28	-96																						
KD10	PC for HO of ASDA, Lyric Theatre Promenade South to Authority	0		03-Feb-24*	-75	-28	-96																						
KD09	PC for HO of RDE areas for Tenancy Fit-out Wrks	0		03-Feb-24*	-96	-28	-96																						
KD11	PC for HO of Extended Basement for HO to Authority & HO of Carriageway to Relevant Govt Authority	0		15-Apr-24*	-107	-33	-107																						
KD07	PRACTICAL COMPLETION for C'Way 3A (M+ Day 2 Works)	0		13-May-24*	-107	-30	-107																						
KD13	PRACTICAL COMPLETION for Lyric Theatre, Extended Basement & C'Way 3B	0		13-May-24*	-107	-30	-107																						
Stage Keydates																													
KD01	Compl Dsgn Coor/Subm and obtn NNO for L1 Contr Bsmt constn wrks	0		20-Jul-19 A	0	0	0																						
KD06	PC for Fountain Related Plantroom(s)	0		30-Apr-22*	0	0	0																						
KD03	OBTAIN OP for Lyric Theatre & Extended Basement	0		03-Feb-24*	-96	-28	-96																						
KD14	Complete U/G road and the associated plantrooms at Zone 3A&3B Integrated Basement	0		26-Feb-24*	-104	-35	-104																						
KD02	Obtain BA14 Acknowledge from BD for M+ Day2 A&A Works	0		11-Apr-24*	-106	-33	-106																						
Summary Program - Level 1																													
SUM10	[LoE] CC_B Lyric Theatre - Substructure RC Structural Concrete	163	06-May-20 A	11-Sep-21	-79	-8	2																						
SUM30	[LoE] CC_H - Vibration Isolation Spring System Remaining as of 30Apr2020 (AS=30Sep19)	10	09-May-20 A	11-Feb-21	-37	3	-14																						
SUM25	[LoE] CC_E - DCS Cofferdam A Works & Obtain BA14	383	23-Jun-20 A	02-Jul-22	-48	19	-48																						
SUM24	[LoE] CC_D - Remaining Works for M+ Promenade South	233	01-Feb-21	10-Dec-21	-63	9	-63																						
SUM14	[LoE] CC_B Lyric Theatre - ABWF Work Including Theatres (Excl. Punch List Works)	858	15-Mar-21	06-Feb-24	-80	-24	-8																						
SUM21	[LoE] CC_C - LT EVA1 & EVA2	772	15-Mar-21	13-Jan-24	-78	-23	-62																						
SUM23	[LoE] CC_C - Artist SQ. Bridge (ASB_1/2/3; ASB_3; P31_2; P34_2; AS_1/2; ASB-6/P31 EVA)	728	15-Mar-21	20-Nov-23	0	-20	-18																						
SUM27	[LoE] CC_G Extended Basement - ABWF Works (Incl. Deferred Areas Under Deck)	652	02-Apr-21	20-Jun-23	-75	-29	147																						
SUM31	[LoE] CC_I Carriageway 3B - ABWF Works	492	02-Apr-21	28-Nov-22	-27	-4	281																						
SUM26	[LoE] CC_F - Mods to Existing Pump Cell Civil & MEP Works (Excl. Options 2 Add. Pumps)	181	13-Apr-21	13-Dec-21	-80	-41	198																						
SUM35	[LoE] CC_J - M+ Day 2 Works (excl. connections to M+ and SZ_1 FS Changeover)	756	22-Apr-21	13-Nov-23	-84	-32	-56																						
SUM28	[LoE] CC_G Extended Basement - MEP 1st Fix to Final Fix (Incl. Deferred Areas Under Deck)	606	07-May-21	30-May-23	-75	-29	-26																						
SUM22	[LoE] CC_C - HoR Development (P32-1, P29-1, P31-EVA)	635	10-May-21	13-Sep-23	30	-29	32																						
SUM11	[LoE] CC_B Lyric Theatre - Superstructure RC Structural Concrete	393	31-May-21	12-Nov-22	-81	-28	-36																						
SUM15	[LoE] CC_B Lyric Theatre - MEP 1st to Final Fix (Excl. TH SYS, TH Non-FSD in Walls, etc.)	681	10-Jun-21	29-Sep-23	-103	-35	-19																						
SUM32	[LoE] CC_I Carriageway 3B - MEP Works (1st Fix to Final Fix)	371	26-Jun-21	26-Sep-22	-20	-4	138																						
SUM40	[LoE] CC_N Lifts & Escalators	539	23-Aug-21	26-Jun-23	-47	-29	18																						
SUM20	[LoE] CC_C - LT Promenade & Pocket Square Bridge	651	25-Aug-21	12-Jan-24	-121	-96	-61																						
SUM41	[LoE] CC_B Lyric Theatre - Structural Steel by CSD	399	10-Sep-21	23-Feb-23	-89	-30	-47																						
SUM12	[LoE] CC_B Lyric Theatre - EWS Weather Tight Type	303	30-Nov-21	07-Jan-23	-78	-14	108																						
SUM17	[LoE] CC_B Lyric Theatre - Theatre Specialist Systems Incl. T&C, Precom. & Commissioning	652	22-Feb-22	13-May-24	-80	-24	-80																						
SUM13	[LoE] CC_B Lyric Theatre - EWS Non-Weather Tight Type 4.1 & 4.3	308	22-Jun-22	10-Aug-23	-73	-27	29																						
SUM29	[LoE] CC_G Extended Basement - T&C	287	30-Jun-22	20-Jun-23	-75	-29	-26																						
SUM39	[LoE] CC_K - Water Main at Promenade	268	04-Jul-22	27-Jun-23	-121	-99	-61																						
SUM42	[LoE] CC_E - DCS Outside of Cofferdam A Works (Connect DIA1,600 & Remove Temp O'fall)	186	09-Jul-22	10-Mar-23	-121	-107	-61																						
SUM33	[LoE] CC_I Underpass 3B & Associated Area - T&C	133	06-Aug-22	13-Jan-23	-50	-8	97																						
SUM16	[LoE] CC_B Lyric Theatre - T&C (Excluding Non-FSD ELV & Electrical)	139	22-Apr-23	07-Oct-23	-80	-24	-80																						
SUM18	[LoE] CC_B Lyric Theatre, EB, C'Way 3B - Stat. Insp. & Approval (from Form 314/501 to BD OP)	98	09-Oct-23	03-Feb-24	-80	-24	-80																						
SUM38	[LoE] CC_J - M+ Day 2 FS Changeover in 3A SZ_1, Connections to M+, Integrated T&C	99	24-Oct-23	26-Feb-24	-80	-24	-80																						
SUM34	[LoE] CC_J Carriageway 3A - Stat. Insp. & Approvals (from Form 314A to BA14)	56	26-Jan-24	11-Apr-24	-80	-24	-80																						



	Base Line ACT		Current - MEP Works
	Base Line MS		Current - ABWF Works
	Milestone		Current - Facade Works
	Current - Other Works		Critical Works
	Current - Struct Works		Actual

L2 CMWP_R01_05 Approved 29Sep20 - 5th Update DD=31Jan21

Date	Revision	Checked	Approved
09-Feb-21	CMWP Rev_1_05 - 5th Update DD 31Jan21	NS	IH

C. Environmental Mitigation Measures – Implementation Status

Table C-1: Environmental Mitigation Measures Implementation Status

EM&A Ref.	Recommendation Measures	Implementation Stage								
		M+ Museum			L1			L2		
		Feb 2021	Mar 2021*	Apr 2021*	Feb 2021	Mar 2021	Apr 2021	Feb 2021	Mar 2021	Apr 2021
Air Quality Impact (Construction)										
2.1 & 10.3.1	General Dust Control Measures Frequent water spraying for active construction areas (12 times a day or once every one hour), including Heavy construction activities such as construction of buildings or roads, drilling, ground excavation, cut and fill operations (i.e., earth moving)	✓			Rem	Rem, Obs	✓	✓	Rem, Obs	✓
2.1 & 10.3.1	Best Practice For Dust Control The relevant best practices for dust control as stipulated in the Air Pollution Control (construction Dust) Regulation should be adopted to further reduce the construction dust impacts from the Project. These best practices include: <i>Good Site Management</i> <ul style="list-style-type: none"> Good site management is important to help reducing potential air quality impact down to an acceptable level. As a general guide, the Contractor should maintain high standard of housekeeping to prevent emission of fugitive dust. Loading, unloading, handling and storage of raw materials, wastes or by-products should be carried out in a manner so as to minimise the release of visible dust emission. Any piles of materials accumulated on or around the work areas should be cleaned up regularly. Cleaning, repair and maintenance of all plant facilities within the work areas should be carried out in a manner minimising generation of fugitive dust emissions. The material should be handled properly to prevent fugitive dust emission before cleaning. <i>Disturbed Parts of the Roads</i> <ul style="list-style-type: none"> Each and every main temporary access should be paved with concrete, bituminous hardcore materials or metal plates and kept clear of dusty materials; or Unpaved parts of the road should be sprayed with water or a dust suppression chemical so as to keep the entire road surface wet. <i>Exposed Earth</i> <ul style="list-style-type: none"> Exposed earth should be properly treated by compaction, hydroseeding, vegetation planting or seeding with latex, vinyl, bitumen within six months after the last construction activity on the site or part of the site where the exposed earth lies. <i>Loading, Unloading or Transfer of Dusty Materials</i>	✓			✓	Obs	Rem	✓	Obs	Rem
		✓			✓	✓	✓	✓	✓	✓
		N/A			✓	✓	✓	✓	✓	✓
		N/A			N/A	N/A	N/A	N/A	N/A	N/A

EM&A Ref.	Recommendation Measures	Implementation Stage								
		M+ Museum			L1			L2		
		Feb 2021	Mar 2021*	Apr 2021*	Feb 2021	Mar 2021	Apr 2021	Feb 2021	Mar 2021	Apr 2021
	<ul style="list-style-type: none"> All dusty materials should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet. 	✓			✓	✓	✓	✓	✓	✓
	<i>Debris Handling</i>									
	<ul style="list-style-type: none"> Any debris should be covered entirely by impervious sheeting or stored in a debris collection area sheltered on the top and the three sides. 	✓			✓	✓	✓	✓	✓	✓
	<ul style="list-style-type: none"> Before debris is dumped into a chute, water should be sprayed so that it remains wet when it is dumped. 	N/A			✓	✓	✓	✓	✓	✓
	<i>Transport of Dusty Materials</i>									
	<ul style="list-style-type: none"> Vehicle used for transporting dusty materials/spoils should be covered with tarpaulin or similar material. The cover should extend over the edges of the sides and tailboards. 	✓			✓	✓	✓	✓	✓	✓
	<i>Wheel washing</i>									
	<ul style="list-style-type: none"> Vehicle wheel washing facilities should be provided at each construction site exit. Immediately before leaving the construction site, every vehicle should be washed to remove any dusty materials from its body and wheels. 	✓			✓	✓	✓	✓	✓	✓
	<i>Use of vehicles</i>									
	<ul style="list-style-type: none"> The speed of the trucks within the site should be controlled to about 10km/hour in order to reduce adverse dust impacts and secure the safe movement around the site. 	✓			✓	✓	✓	✓	✓	✓
	<ul style="list-style-type: none"> Immediately before leaving the construction site, every vehicle should be washed to remove any dusty materials from its body and wheels. 	✓			✓	✓	✓	✓	✓	✓
	<ul style="list-style-type: none"> Where a vehicle leaving the construction site is carrying a load of dusty materials, the load should be covered entirely by clean impervious sheeting to ensure that the dusty materials do not leak from the vehicle. 	✓			✓	✓	✓	✓	✓	✓
	<i>Site hoarding</i>									
	<ul style="list-style-type: none"> Where a site boundary adjoins a road, street, service lane or other area accessible to the public, hoarding of not less than 2.4m high from ground level should be provided along the entire length of that portion of the site boundary except for a site entrance or exit. 	✓			✓	✓	✓	✓	✓	✓
2.1 & 10.3.1	<p>Best Practicable Means for Cement Works (Concrete Batching Plant)</p> <p>The relevant best practices for dust control as stipulated in the Guidance Note on the Best Practicable Means for Cement Works (Concrete Batching Plant) BPM 3/2(93) should be followed and implemented to further reduce the construction dust impacts of the Project. These best practices include:</p> <p>Exhaust from Dust Arrestment Plant</p>									

EM&A Ref.	Recommendation Measures	Implementation Stage								
		M+ Museum			L1			L2		
		Feb 2021	Mar 2021*	Apr 2021*	Feb 2021	Mar 2021	Apr 2021	Feb 2021	Mar 2021	Apr 2021
	<ul style="list-style-type: none"> Wherever possible the final discharge point from particulate matter arrestment plant, where is not necessary to achieve dispersion from residual pollutants, should be at low level to minimise the effect on the local community in the case of abnormal emissions and to facilitate maintenance and inspection 	N/A			N/A	N/A	N/A	N/A	N/A	N/A
	<p>Emission Limits</p> <ul style="list-style-type: none"> All emissions to air, other than steam or water vapour, shall be colourless and free from persistent mist or smoke 	N/A			N/A	N/A	N/A	N/A	N/A	N/A
	<p>Engineering Design/Technical Requirements</p> <ul style="list-style-type: none"> As a general guidance, the loading, unloading, handling and storage of fuel, raw materials, products, wastes or by-products should be carried out in a manner so as to prevent the release of visible dust and/or other noxious or offensive emissions 	N/A			N/A	N/A	N/A	N/A	N/A	N/A
	<p>Non-Road Mobile Machinery (NRMM): All NRMMs operating on-site which are subject to emission control of Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation are approved/exempted (as the case may be) and affixed with the requisite approval/exemption labels.</p>	✓			✓	Obs	✓	✓	Obs	✓
	<p>Noise Impact (Construction)</p>									
3.1 & 10.4.1	<p>Good Site Practice Good site practice and noise management can significantly reduce the impact of construction site activities on nearby NSRs. The following package of measures should be followed during each phase of construction:</p> <ul style="list-style-type: none"> only well-maintained plant to be operated on-site and plant should be serviced regularly during the construction works; machines and plant that may be in intermittent use to be shut down between 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 the NSRs; mobile plant should be sited as far away from NSRs as possible; and material stockpiles and other structures to be effectively utilised, where practicable, to screen noise from on-site construction activities. 	✓			✓	✓	✓	✓	✓	✓
3.1 &	<p>Adoption of Quieter PME</p>									

EM&A Ref.	Recommendation Measures	Implementation Stage								
		M+ Museum			L1			L2		
		Feb 2021	Mar 2021*	Apr 2021*	Feb 2021	Mar 2021	Apr 2021	Feb 2021	Mar 2021	Apr 2021
10.4.1	The recommended quieter PME adopted in the assessment were taken from the EPD's QPME Inventory and "Sound Power Levels of Other Commonly Used PME" are presented in Table 4.26 in the EIA report. It should be noted that the silenced PME selected for assessment can be found in Hong Kong.	✓			✓	✓	✓	✓	✓	✓
3.1 & 10.4.1	Use of Movable Noise Barriers Movable noise barriers can be very effective in screening noise from particular items of plant when constructing the Project. Noise barriers located along the active works area close to the noise generating component of a PME could produce at least 10 dB(A) screening for stationary plant and 5 dB(A) for mobile plant provided the direct line of sight between the PME and the NSRs is blocked.	N/A			✓	✓	✓	✓	✓	✓
3.1 & 10.4.1	Use of Noise Enclosure/ Acoustic Shed The use of noise enclosure or acoustic shed is to cover stationary PME such as air compressor and concrete pump. With the adoption of the noise enclosure, the PME could be completely screened, and noise reduction of 15 dB(A) can be achieved according to the EIAO Guidance Note No. 9/2010.	N/A			✓	✓	✓	✓	✓	✓
3.1 & 10.4.1	Use of Noise Insulating Fabric Noise insulating fabric can also be adopted for certain PME (e.g. drill rig, piling machine etc). The fabric should be lapped such that there are no openings or gaps on the joints. According to the approved Tsim Sha Tsui Station Northern Subway EIA report (AEIAR-127/2008), a noise reduction of 10 dB(A) can be achieved for the PME lapped with the noise insulating fabric.	N/A			✓	Rem	✓	✓	Rem	✓
3.1 & 10.4.1	Scheduling of Construction Works outside School Examination Periods During construction phase, the contractor should liaise with the educational institutions (including NSRs LCS and CRGPS) to obtain the examination schedule and avoid the noisy construction activities during school examination periods.	N/A			N/A	N/A	N/A	N/A	N/A	N/A
Water Quality Impact (Construction)										
4.1 & 10.5.1	Construction site runoff and drainage The site practices outlined in ProPECC Note PN 1/94 should be followed as far as practicable in order to minimise surface runoff and the chance of erosion. The following measures are recommended to protect water quality and sensitive uses of the coastal area, and when properly implemented should be sufficient to adequately control site discharges so as to avoid water quality impacts:									

EM&A Ref.	Recommendation Measures	Implementation Stage								
		M+ Museum			L1			L2		
		Feb 2021	Mar 2021*	Apr 2021*	Feb 2021	Mar 2021	Apr 2021	Feb 2021	Mar 2021	Apr 2021
	<ul style="list-style-type: none"> 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. The design of the temporary on-site drainage system should be undertaken by the WKCDA's Contractor prior to the commencement of construction; 	✓			✓	Obs	✓	Rem	Obs	✓
	<ul style="list-style-type: none"> Sand/silt removal facilities such as sand/silt traps and sediment basins should be provided to remove sand/silt particles from runoff to meet the requirements of the TM standards under the WPCO. The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC Note PN 1/94. Sizes may vary depending upon the flow rate. The detailed design of the sand/silt traps should be undertaken by the WKCDA's Contractor prior to the commencement of construction. 	✓			✓	✓	✓	✓	✓	✓
	<ul style="list-style-type: none"> 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. Deposited silt and grit should be regularly removed, at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times. 	N/A			✓	Rem	✓	✓	Rem	✓
	<ul style="list-style-type: none"> Measures should be taken to minimize the ingress of site drainage into excavations. If excavation of trenches in wet periods is necessary, they should be dug and backfilled in short sections wherever practicable. Water pumped out from foundation excavations should be discharged into storm drains via silt removal facilities. 	N/A			✓	✓	✓	✓	✓	✓
	<ul style="list-style-type: none"> 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. An adequately designed and sited wheel washing facility should be provided at construction site exit where practicable. Wash-water should have sand and silt settled out and removed regularly 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. 	✓			✓	✓	✓	✓	✓	✓
	<ul style="list-style-type: none"> Open stockpiles of construction materials or construction wastes on-site should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system. 	✓			✓	✓	✓	✓	✓	✓

EM&A Ref.	Recommendation Measures	Implementation Stage								
		M+ Museum			L1			L2		
		Feb 2021	Mar 2021*	Apr 2021*	Feb 2021	Mar 2021	Apr 2021	Feb 2021	Mar 2021	Apr 2021
	<ul style="list-style-type: none"> Manholes (including newly constructed ones) should be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and stormwater runoff being directed into foul sewers. Precautions should be taken at any time of the year when rainstorms are likely. Actions should be taken when a rainstorm is imminent or forecasted and actions to be taken during or after rainstorms are summarized in Appendix A2 of ProPECC Note PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events, especially for areas located near steep slopes. Bentonite slurries used in piling or slurry walling should be reconditioned and reused wherever practicable. Temporary enclosed storage locations should be provided on-site for any unused bentonite that needs to be transported away after all the related construction activities are completed. The requirements in ProPECC Note PN 1/94 should be adhered to in the handling and disposal of bentonite slurries. 	✓			✓	✓	✓	✓	✓	✓
	<ul style="list-style-type: none"> Precautions should be taken at any time of the year when rainstorms are likely. Actions should be taken when a rainstorm is imminent or forecasted and actions to be taken during or after rainstorms are summarized in Appendix A2 of ProPECC Note PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events, especially for areas located near steep slopes. 	✓			✓	✓	✓	✓	✓	✓
	<ul style="list-style-type: none"> Bentonite slurries used in piling or slurry walling should be reconditioned and reused wherever practicable. Temporary enclosed storage locations should be provided on-site for any unused bentonite that needs to be transported away after all the related construction activities are completed. The requirements in ProPECC Note PN 1/94 should be adhered to in the handling and disposal of bentonite slurries. 	N/A			N/A	N/A	N/A	N/A	N/A	N/A
	<p>Barging facilities and activities</p> <p>Recommendations for good site practices during operation of the proposed barging point include:</p> <ul style="list-style-type: none"> All vessels should be sized so that adequate clearance is maintained between vessels and the seabed in all tide conditions, to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash; Loading of barges and hoppers should be controlled to prevent splashing of material into the surrounding water. Barges or hoppers should not be filled to a level that will cause the overflow of materials or polluted water during loading or transportation; All hopper barges should be fitted with tight fitting seals to their bottom openings to prevent leakage of material; and Construction activities should not cause foam, oil, grease, scum, litter or other objectionable matter to be present on the water within the site. 	N/A			N/A	N/A	N/A	N/A	N/A	N/A
	<ul style="list-style-type: none"> Loading of barges and hoppers should be controlled to prevent splashing of material into the surrounding water. Barges or hoppers should not be filled to a level that will cause the overflow of materials or polluted water during loading or transportation; 	N/A			N/A	N/A	N/A	N/A	N/A	N/A
	<ul style="list-style-type: none"> All hopper barges should be fitted with tight fitting seals to their bottom openings to prevent leakage of material; and 	N/A			N/A	N/A	N/A	N/A	N/A	N/A
	<ul style="list-style-type: none"> Construction activities should not cause foam, oil, grease, scum, litter or other objectionable matter to be present on the water within the site. 	N/A			N/A	N/A	N/A	N/A	N/A	N/A
4.1 & 10.5.1	<p>Sewage effluent from construction workforce</p> <p>Temporary sanitary facilities, such as portable chemical toilets, should be employed on-site where necessary to handle sewage from the workforce. A licensed contractor should be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance.</p>	✓			✓	✓	✓	✓	✓	✓
4.1 &	General construction activities									

EM&A Ref.	Recommendation Measures	Implementation Stage								
		M+ Museum			L1			L2		
		Feb 2021	Mar 2021*	Apr 2021*	Feb 2021	Mar 2021	Apr 2021	Feb 2021	Mar 2021	Apr 2021
10.5.1	<ul style="list-style-type: none"> Construction solid waste, debris and refuse generated on-site should be collected, handled and disposed of properly to avoid entering any nearby storm water drain. Stockpiles of cement and other construction materials should be kept covered when not being used. Oils and fuels should only be stored in designated areas which have pollution prevention facilities. To prevent spillage of fuels and solvents to any nearby storm water drain, all fuel tanks and storage areas should 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 should be drained of rainwater after a rain event. 	✓			✓	✓	✓	✓	✓	✓
		✓			Rem	Obs	Rem, Obs	Rem	Obs	Rem, Obs
Waste Management Implications (Construction)										
6.1 & 10.7.1	<p>Good Site Practices</p> <p>Recommendations for good site practices during the construction activities include:</p> <ul style="list-style-type: none"> 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/odour during transportation of waste by either covering trucks or by transporting wastes in enclosed containers Provision of wheel washing facilities before the trucks leaving the works area so as to minimise dust introduction to public roads Well planned delivery programme for offsite disposal such that adverse environmental impact from transporting the inert or non-inert C&D materials is not anticipated 	✓			✓	✓	✓	✓	✓	✓
		✓			✓	✓	✓	✓	✓	✓
		✓			✓	✓	Rem	✓	✓	✓
		✓			✓	✓	✓	Rem	✓	✓
		✓			✓	✓	✓	✓	✓	✓
		✓			✓	✓	✓	✓	✓	✓
6.1 & 10.7.1	<p>Waste Reduction Measures</p> <p>Recommendations to achieve waste reduction include:</p> <ul style="list-style-type: none"> Sort inert C&D material to recover any recyclable portions such as metals Segregation and storage of different types of waste in different containers or skips to enhance reuse or recycling of materials and their proper disposal 	✓			✓	✓	✓	✓	✓	✓
		✓			✓	✓	✓	✓	✓	✓

EM&A Ref.	Recommendation Measures	Implementation Stage								
		M+ Museum			L1			L2		
		Feb 2021	Mar 2021*	Apr 2021*	Feb 2021	Mar 2021	Apr 2021	Feb 2021	Mar 2021	Apr 2021
	<ul style="list-style-type: none"> Encourage collection of recyclable waste such as waste paper and aluminium cans by providing separate labelled bins to enable such waste to be segregated from other general refuse generated by the work force Proper site practices to minimise the potential for damage or contamination of inert C&D materials Plan the use of construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of wastes 	✓			✓	✓	✓	✓	✓	✓
6.1 & 10.7.1	<p>Inert and Non-inert C&D Materials</p> <p>In order to minimise impacts resulting from collection and transportation of inert C&D material for off-site disposal, the excavated materials should be reused on-site as fill material as far as practicable. In addition, inert C&D material generated from excavation works could be reused as fill materials in local projects that require public fill for reclamation.</p> <ul style="list-style-type: none"> The surplus inert C&D material will be disposed of at the Government's PFRFs for beneficial use by other projects in Hong Kong. Liaison with the CEDD Public Fill Committee (PFC) on the allocation of space for disposal of the inert C&D materials at PFRF is underway. No construction work is allowed to proceed until all issues on management of inert C&D materials have been resolved and all relevant arrangements have been endorsed by the relevant authorities including PFC and EPD. The C&D materials generated from general site clearance should be sorted on site to segregate any inert materials for reuse or disposal of at PFRFs whereas the non-inert materials will be disposed of at the designated landfill site. In order to monitor the disposal of inert and non-inert C&D materials at respectively PFRFs and the designated landfill site, and to control fly-tipping, it is recommended that the Contractor should follow the Technical Circular (Works) No. 6/2010 for Trip Ticket System for Disposal of Construction & Demolition Materials issued by Development Bureau. In addition, it is also recommended that the Contractor should prepare and implement a Waste Management Plan detailing their various waste arising and waste management practices in accordance with the relevant requirements of the Technical Circular (Works) No. 19/2005 Environmental Management on Construction Site. 	✓			✓	✓	✓	✓	✓	✓
	<ul style="list-style-type: none"> The surplus inert C&D material will be disposed of at the Government's PFRFs for beneficial use by other projects in Hong Kong. Liaison with the CEDD Public Fill Committee (PFC) on the allocation of space for disposal of the inert C&D materials at PFRF is underway. No construction work is allowed to proceed until all issues on management of inert C&D materials have been resolved and all relevant arrangements have been endorsed by the relevant authorities including PFC and EPD. The C&D materials generated from general site clearance should be sorted on site to segregate any inert materials for reuse or disposal of at PFRFs whereas the non-inert materials will be disposed of at the designated landfill site. In order to monitor the disposal of inert and non-inert C&D materials at respectively PFRFs and the designated landfill site, and to control fly-tipping, it is recommended that the Contractor should follow the Technical Circular (Works) No. 6/2010 for Trip Ticket System for Disposal of Construction & Demolition Materials issued by Development Bureau. In addition, it is also recommended that the Contractor should prepare and implement a Waste Management Plan detailing their various waste arising and waste management practices in accordance with the relevant requirements of the Technical Circular (Works) No. 19/2005 Environmental Management on Construction Site. 	✓			✓	✓	✓	✓	✓	✓

EM&A Ref.	Recommendation Measures	Implementation Stage								
		M+ Museum			L1			L2		
		Feb 2021	Mar 2021*	Apr 2021*	Feb 2021	Mar 2021	Apr 2021	Feb 2021	Mar 2021	Apr 2021
6.1 & 10.7.1	<p>Chemical Waste</p> <ul style="list-style-type: none"> If chemical wastes are produced at the construction site, the Contractor will be required to 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”. Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. The Contractor should use a licensed collector to transport and dispose of the chemical wastes at the approved Chemical Waste Treatment Centre or other licensed recycling facilities, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation. Potential environmental impacts arising from the handling activities (including storage, collection, transportation and disposal of chemical waste) are expected to be minimal with the implementation of appropriate mitigation measures as recommended. 	✓			✓	✓	✓	✓	✓	✓
6.1 & 10.7.1	<p>General Refuse</p> <p>General refuse should be stored in enclosed bins or compaction units separated from inert C&D materials. A reputable waste collector should be employed by the Contractor to remove general refuse from the site, separately from inert C&D materials. Preferably an enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material.</p>	✓			✓	✓	✓	✓	✓	✓
Land Contamination (Construction)										
7.1 & 10.8.1	<p>The potential for land contamination issues at the TST Fire Station due to its future relocation will be confirmed by site investigation after land acquisition. Where necessary, mitigation measures for minimising potential exposure to contaminated materials (if any) or remediation measures will be identified. If contaminated land is identified (e.g., during decommissioning of fuel oil storage tanks) after the commencement of works, mitigation measures are proposed in order to minimise the potentially adverse effects on the health and safety of construction workers and impacts arising from the disposal of potentially contaminated materials.</p> <p>The following measures are proposed for excavation and transportation of contaminated material:</p>									

EM&A Ref.	Recommendation Measures	Implementation Stage								
		M+ Museum			L1			L2		
		Feb 2021	Mar 2021*	Apr 2021*	Feb 2021	Mar 2021	Apr 2021	Feb 2021	Mar 2021	Apr 2021
Table 9.1 & 10.8 (CM2)	Compensatory tree planting shall be incorporated to the proposed project and maximize the new tree, shrubs and other vegetation planting to compensate tree felled and vegetation removed. Also, implementation of compensatory planting should be of a ratio not less than 1:1 in terms of quality and quantity within the site.	✓			N/A	N/A	N/A	N/A	N/A	N/A
Table 9.1 & 10.8 (CM3)	Buffer trees for screening purposes to soften the hard architectural and engineering structures and facilities.	✓			N/A	N/A	N/A	N/A	N/A	N/A
Table 9.1 & 10.8 (CM4)	Softscape treatments such as vertical green wall panel /planting of climbing and/or weeping plants, etc, to maximize the green coverage and soften the hard architectural and engineering structures and facilities.	✓			N/A	N/A	N/A	N/A	N/A	N/A
Table 9.1 & 10.8 (CM5)	Roof greening by means of intensive and extensive green roof to maximize the green coverage and improve aesthetic appeal and visual quality of the building/structure.	✓			N/A	N/A	N/A	N/A	N/A	N/A
Table 9.1 & 10.8 (CM6)	Sensitive streetscape design should be incorporated along all new roads and streets.	✓			N/A	N/A	N/A	N/A	N/A	N/A
Table 9.1 & 10.8 (CM7)	Structure, ornamental planting shall be provided along amenity strips to enhance the landscape quality.	✓			N/A	N/A	N/A	N/A	N/A	N/A
Table 9.1 & 10.8 (CM8)	Landscape design shall be incorporated to architectural and engineering structures in order to provide aesthetically pleasing designs.	✓			N/A	N/A	N/A	N/A	N/A	N/A
Table 9.1 (CM9)	Minimize the structure of marine facilities to be built on the seabed and foreshore in order to minimize the affected extent to the waterbody	N/A			N/A	N/A	N/A	N/A	N/A	N/A
Table 9.2 & 10.9 (MCP1)	Use of decorative screen hoarding/boards	✓			✓	✓	✓	✓	✓	✓
Table 9.2 & 10.9 (MCP2)	Early introduction of landscape treatments	✓			N/A	N/A	N/A	N/A	N/A	N/A
Table 9.2 & 10.9 (MCP3)	Adoption of light colour for the temporary ventilation shafts for the basement during the transition period.	N/A			N/A	N/A	N/A	N/A	N/A	N/A
Table 9.2 & 10.9 (MCP4)	Control of night time lighting	✓			✓	✓	✓	✓	✓	✓

EM&A Ref.	Recommendation Measures	Implementation Stage								
		M+ Museum			L1			L2		
		Feb 2021	Mar 2021*	Apr 2021*	Feb 2021	Mar 2021	Apr 2021	Feb 2021	Mar 2021	Apr 2021
Table 9.2 & 10.9 (MCP5)	Use of greenery such as grass cover for the temporary open areas will help achieve the visual balance and soften the hard edges of the structures.	N/A			N/A	N/A	N/A	N/A	N/A	N/A

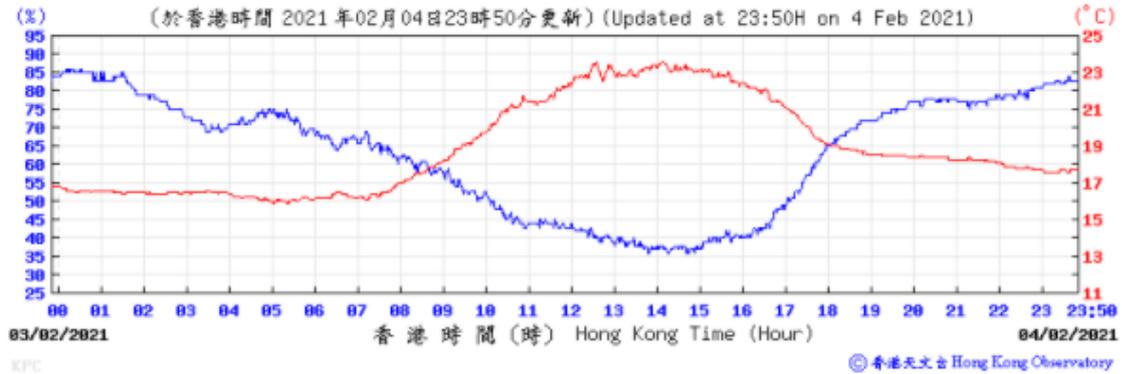
N/A	-	Not Applicable
✓	-	Implemented
Obs	-	Observed
Rem	-	Reminder

Remarks: * Construction works of M+ Museum ended in Feb 2021

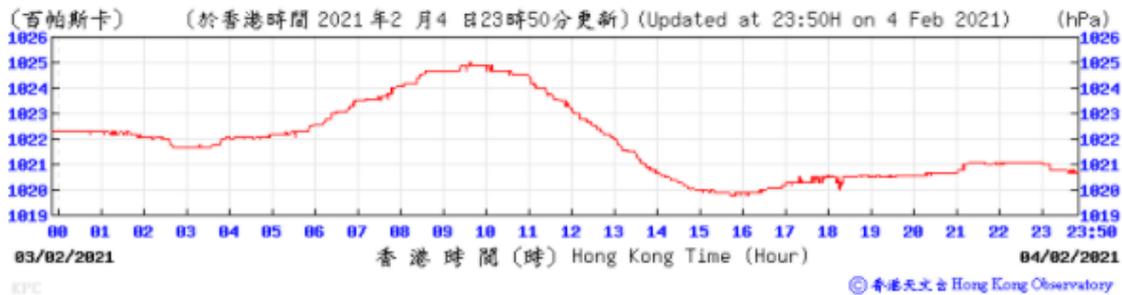
D. Meteorological Data Extracted from Hong Kong Observatory

Table D-1: Extract of Meteorological Observations for King's Park Automatic Weather Station in the reporting quarter

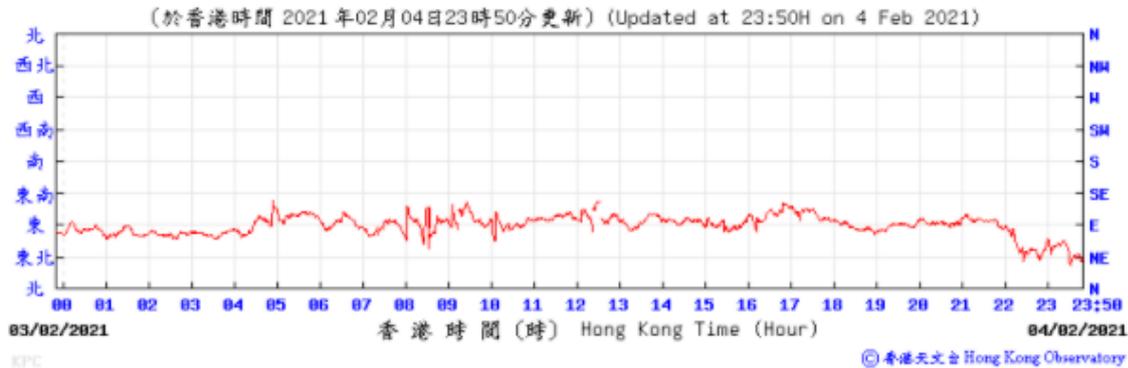
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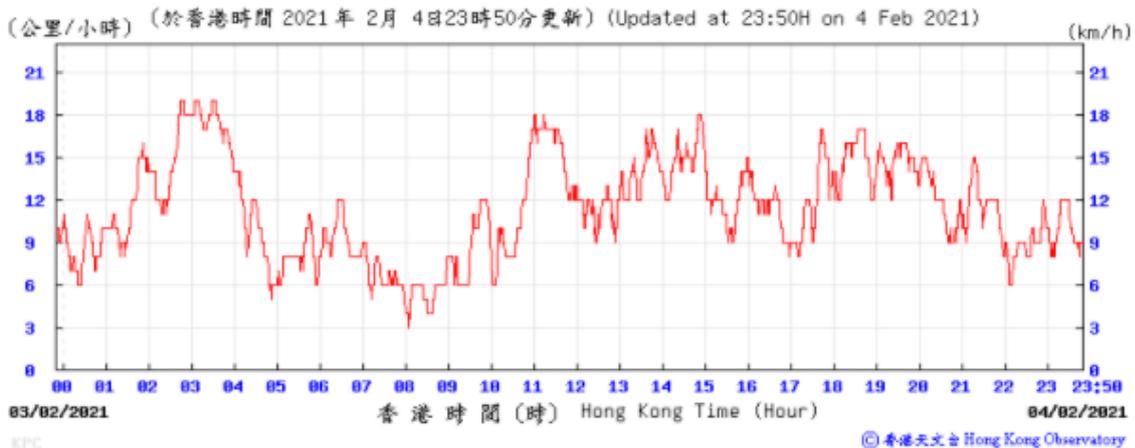
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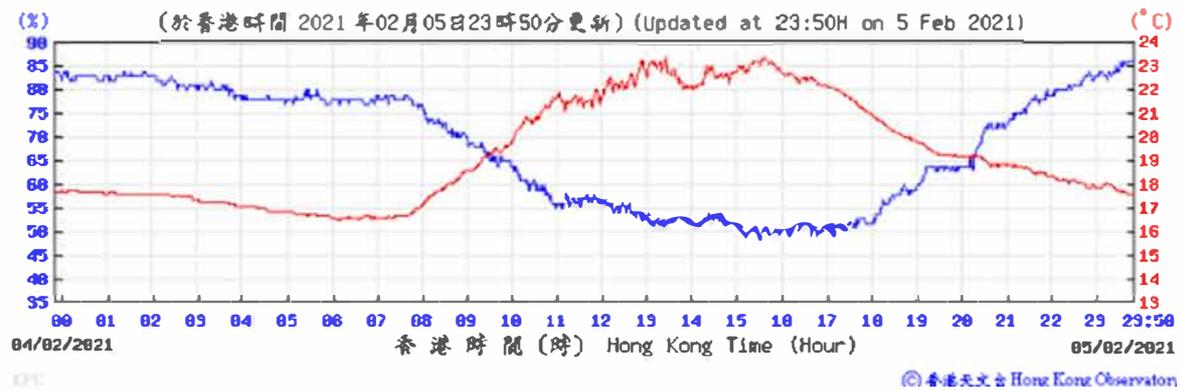
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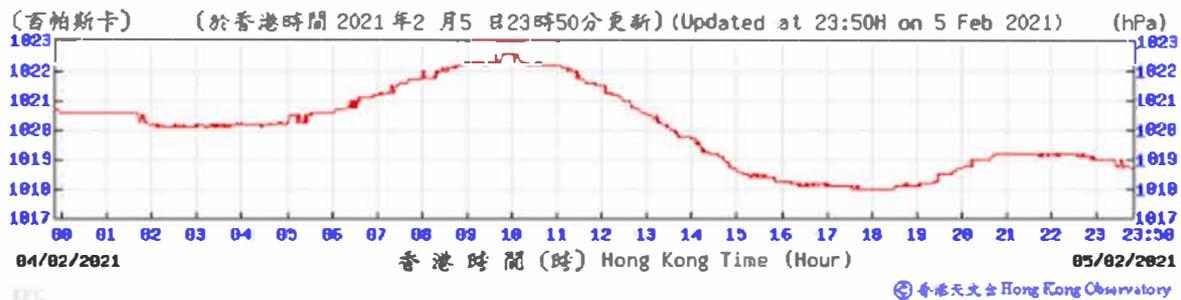
Wind Speed:



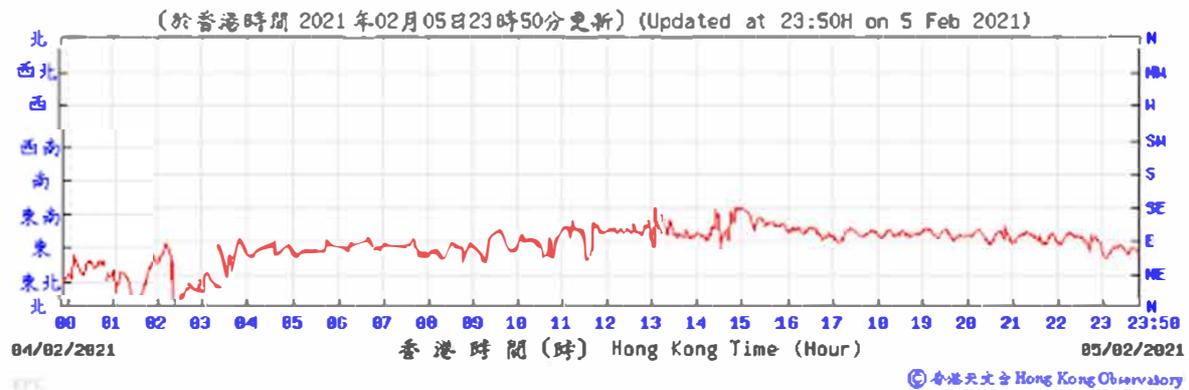
Temperature/Humidity:



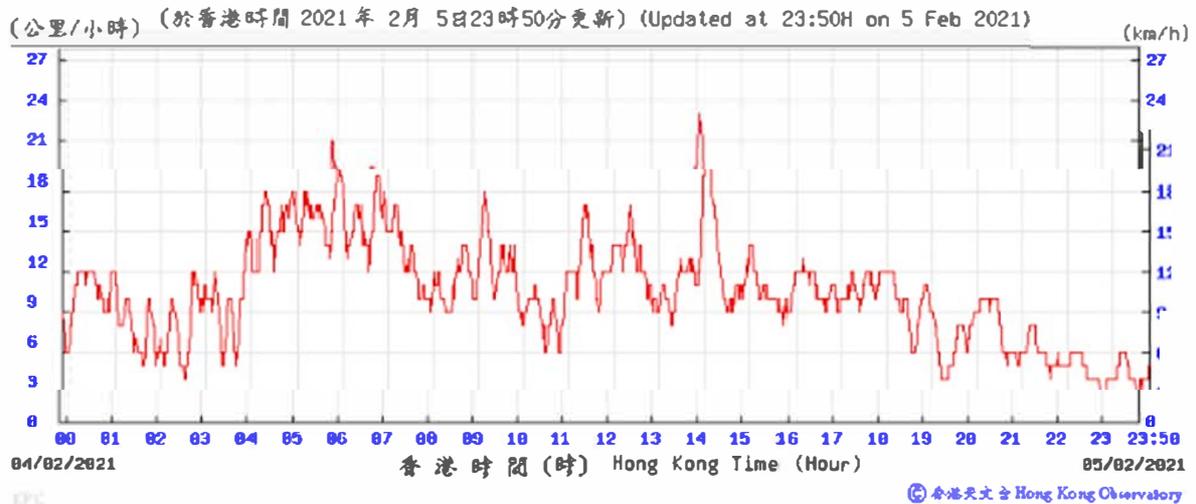
Pressure:



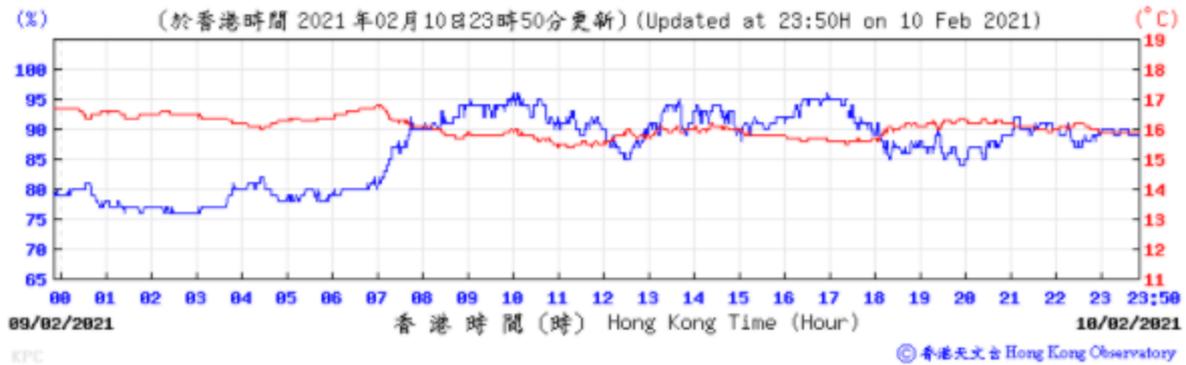
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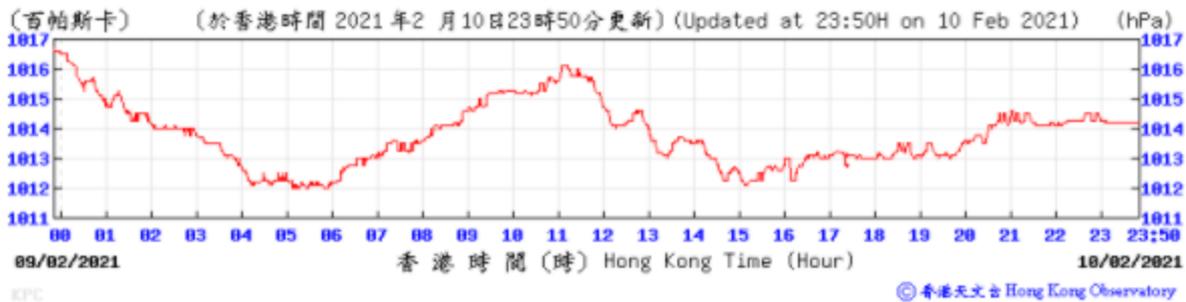
Wind Speed:



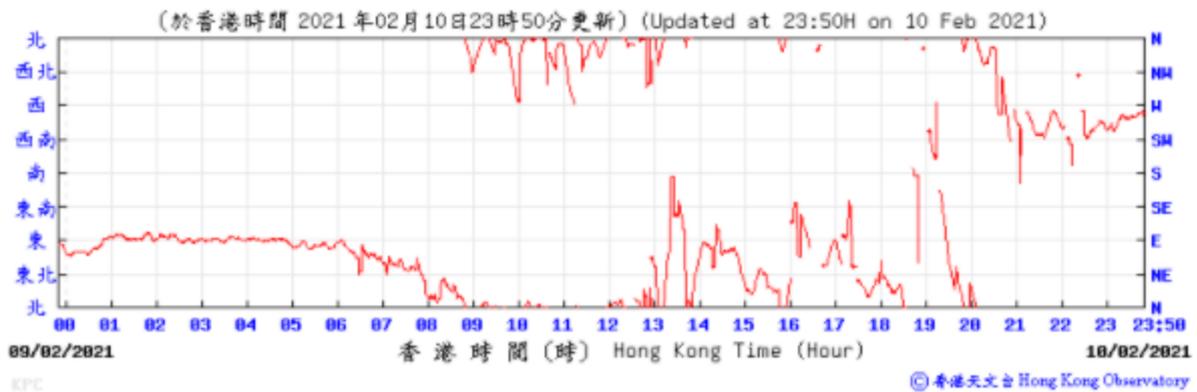
Temperature/Humidity:



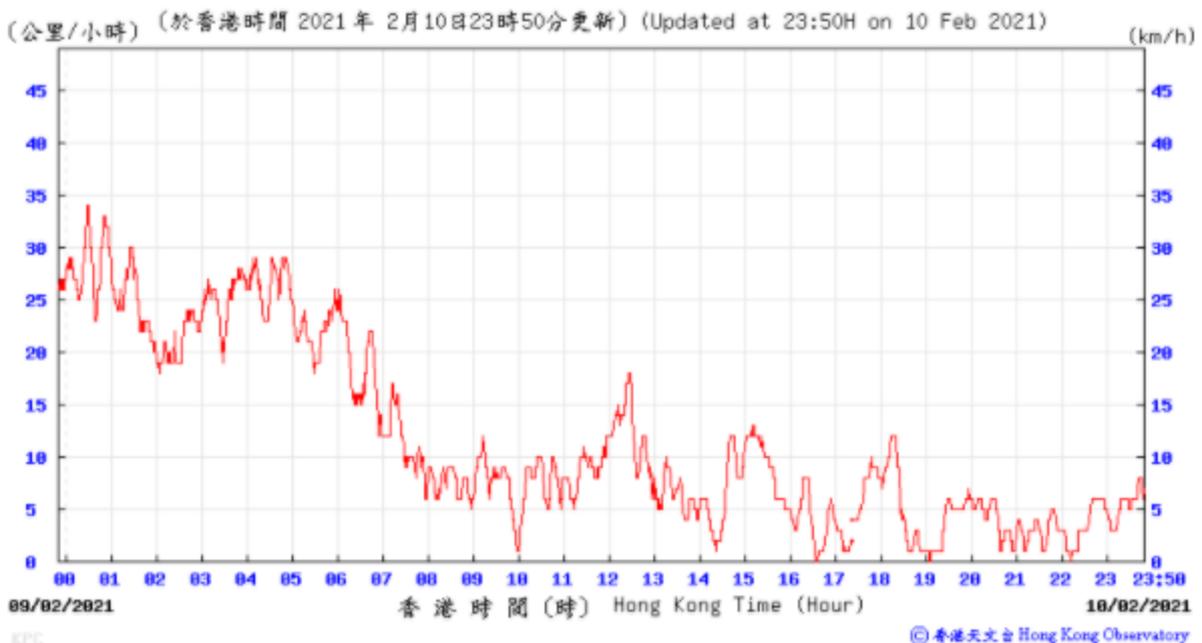
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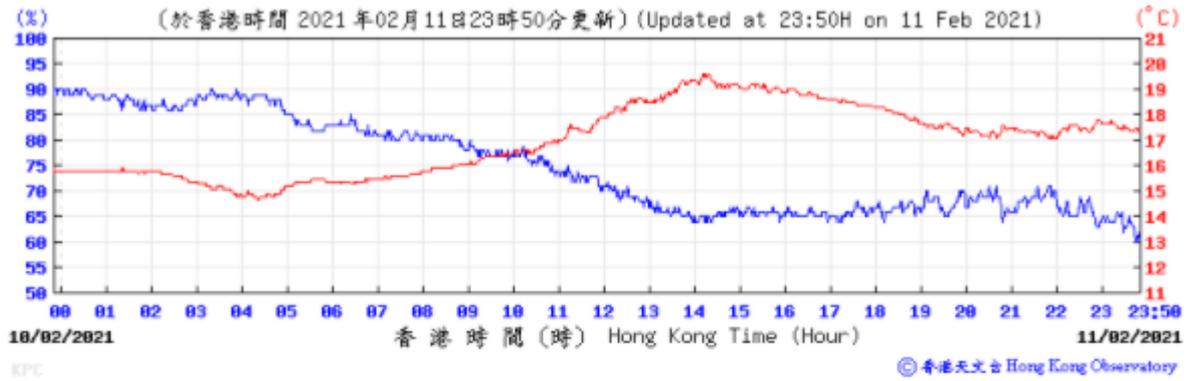
Wind Direction:



Wind Speed:



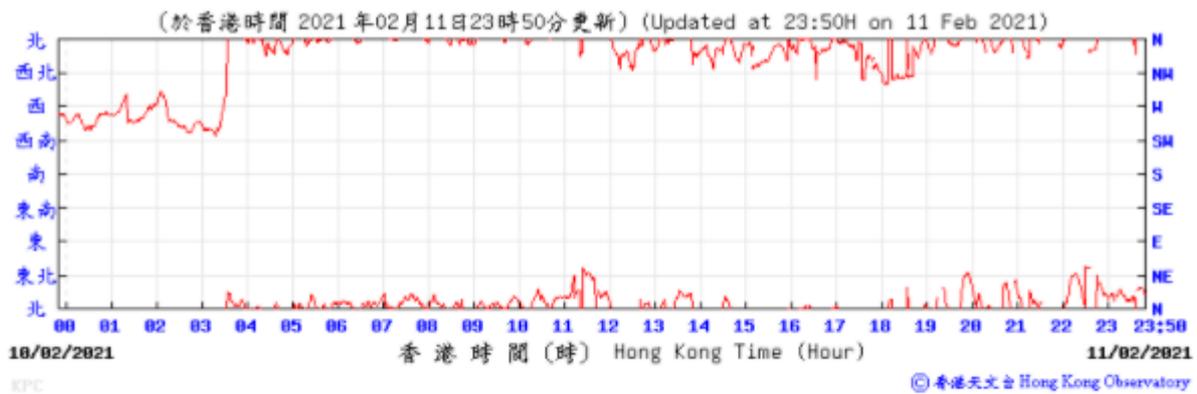
Temperature/Humidity:



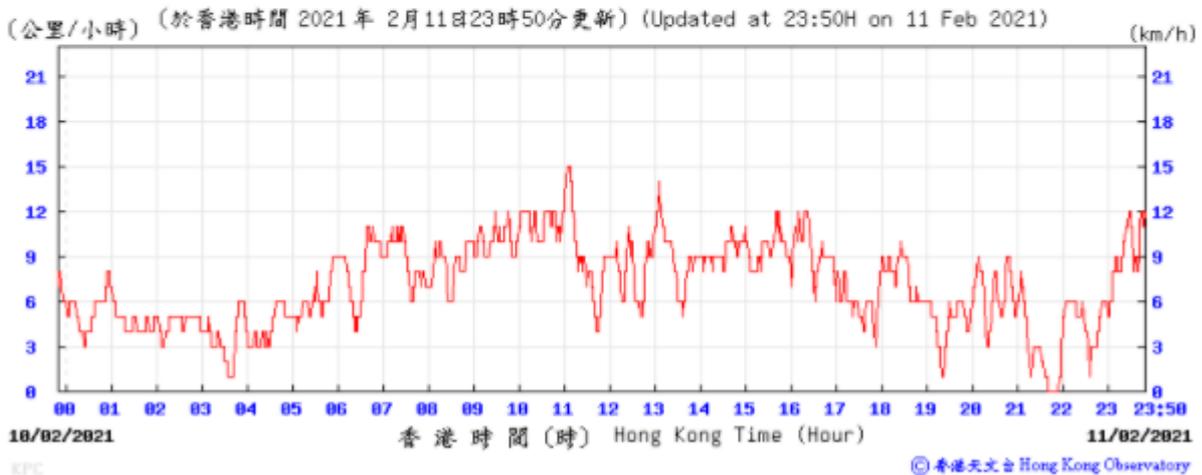
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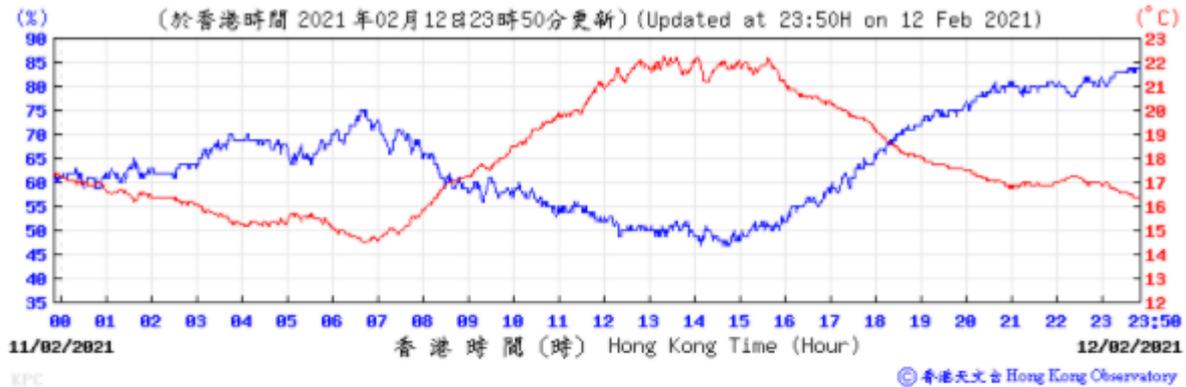
Wind Direction:



Wind Speed:



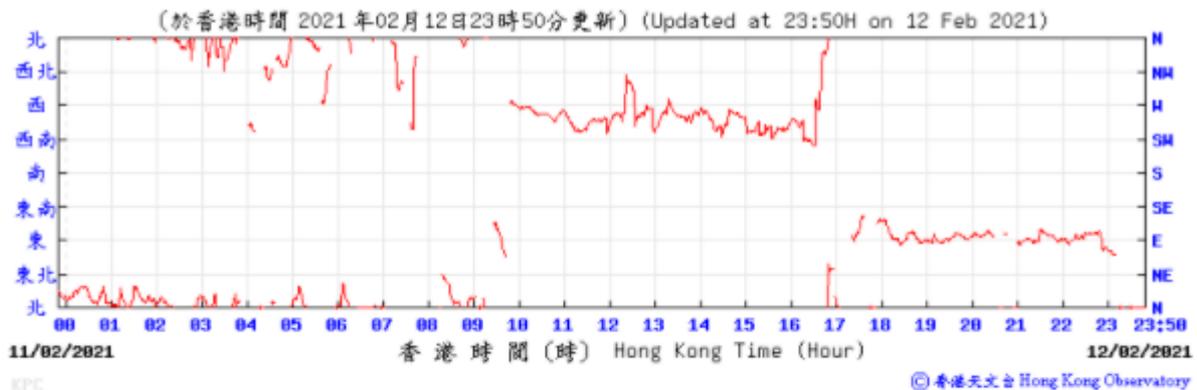
Temperature/Humidity:



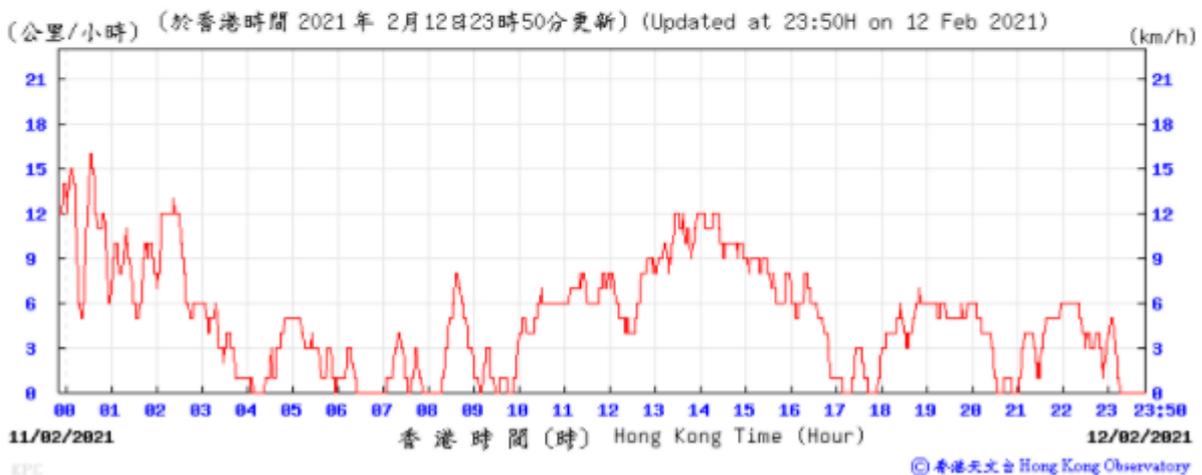
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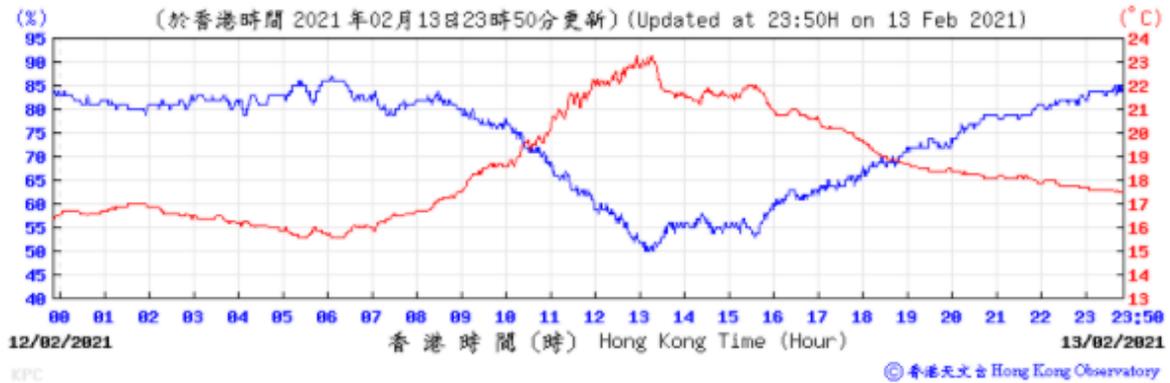
Wind Direction:



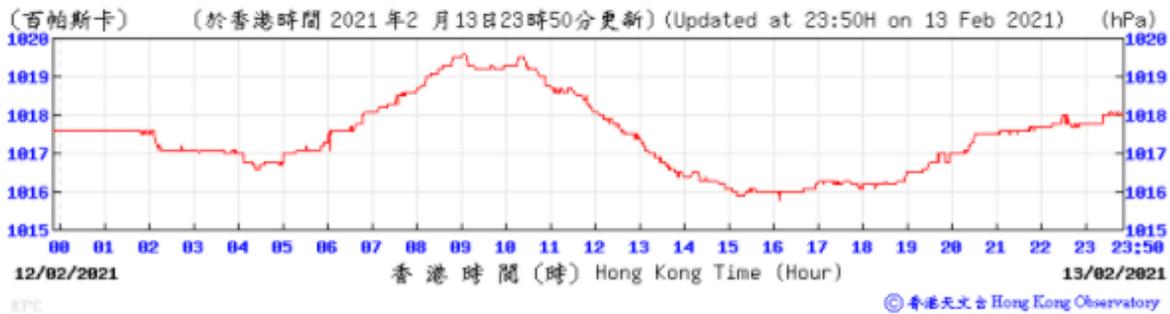
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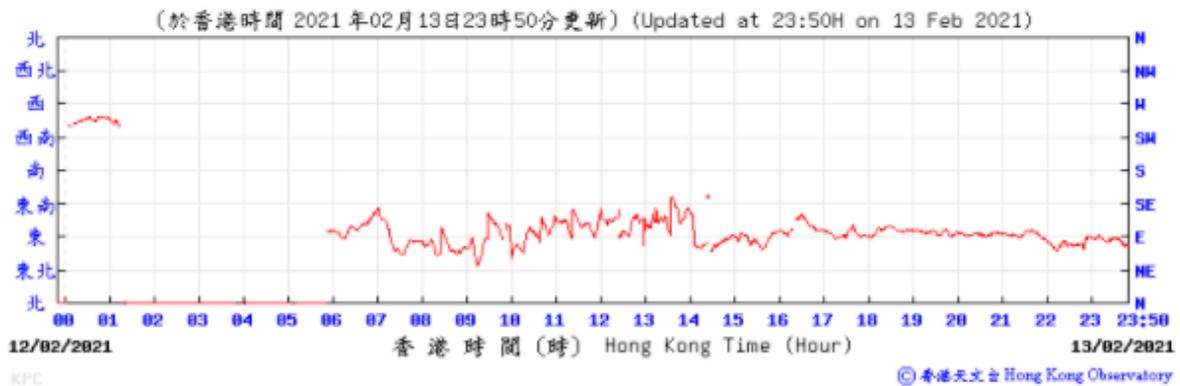
Temperature/Humidity:



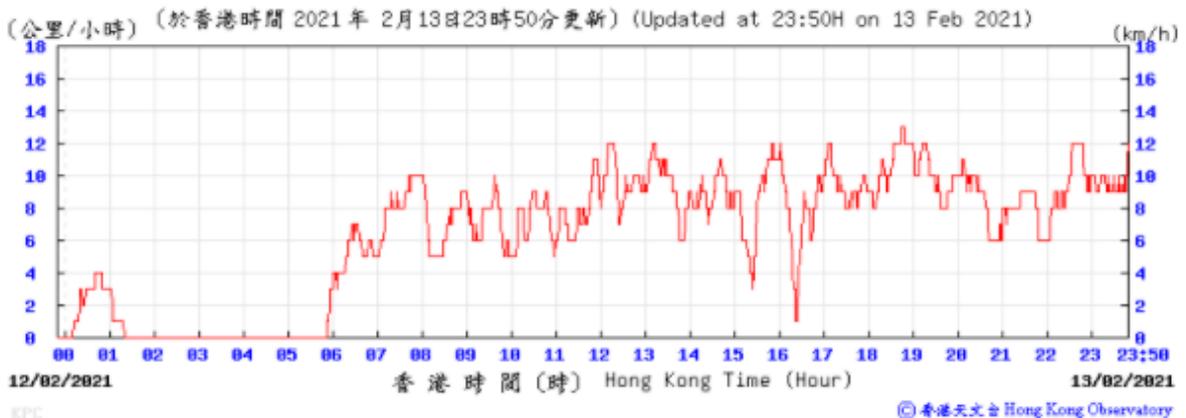
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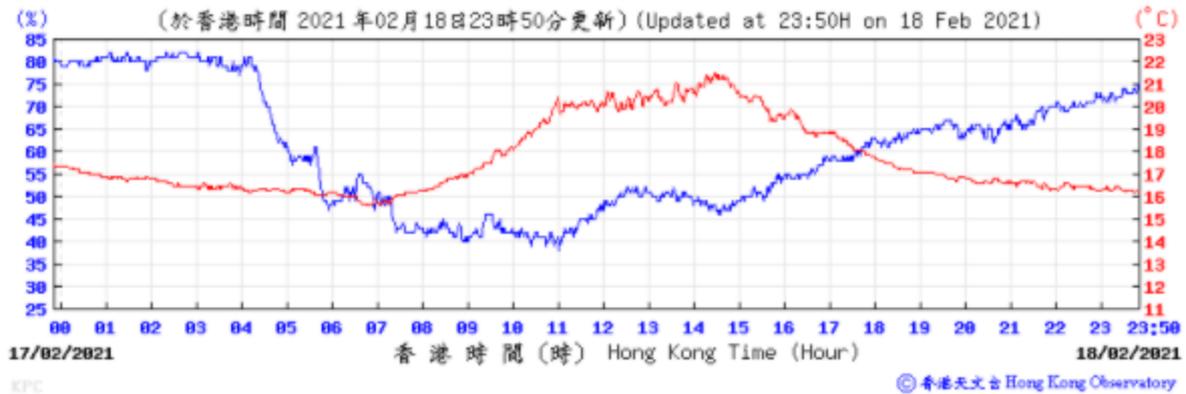
Wind Direction:



Wind Speed:



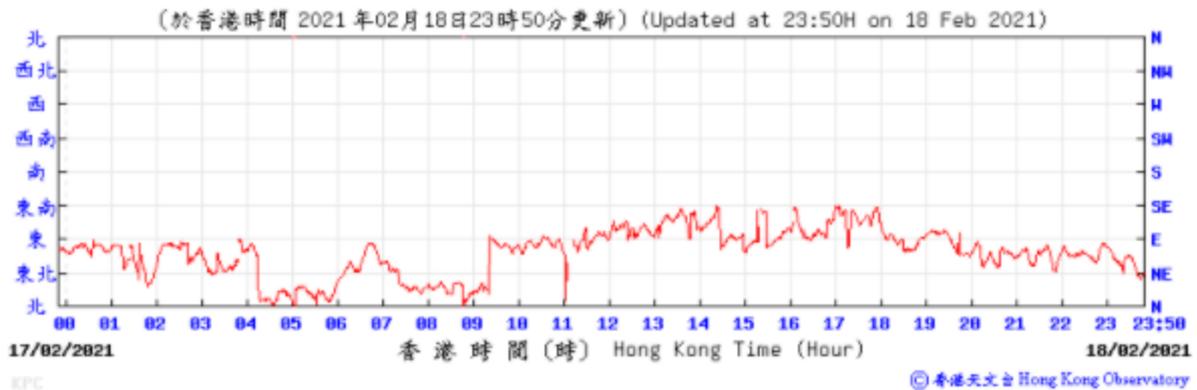
Temperature/Humidity:



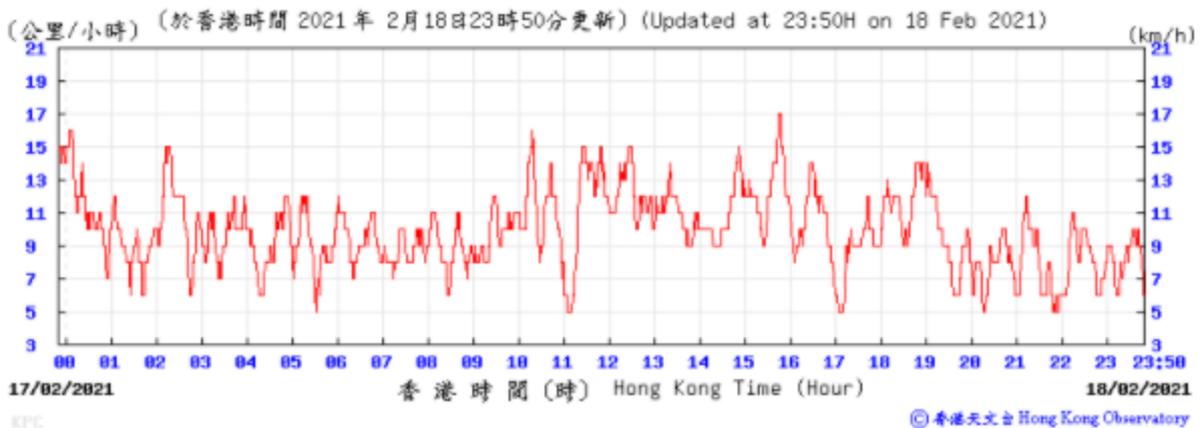
Pressure:



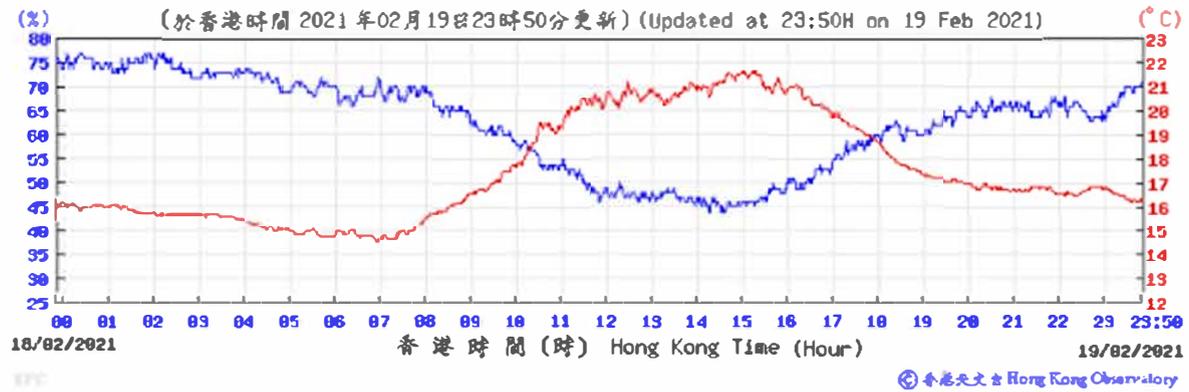
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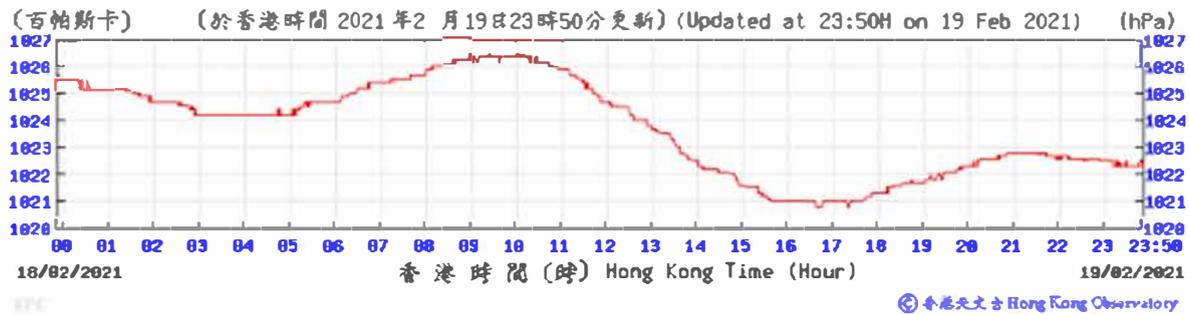
Wind Speed:



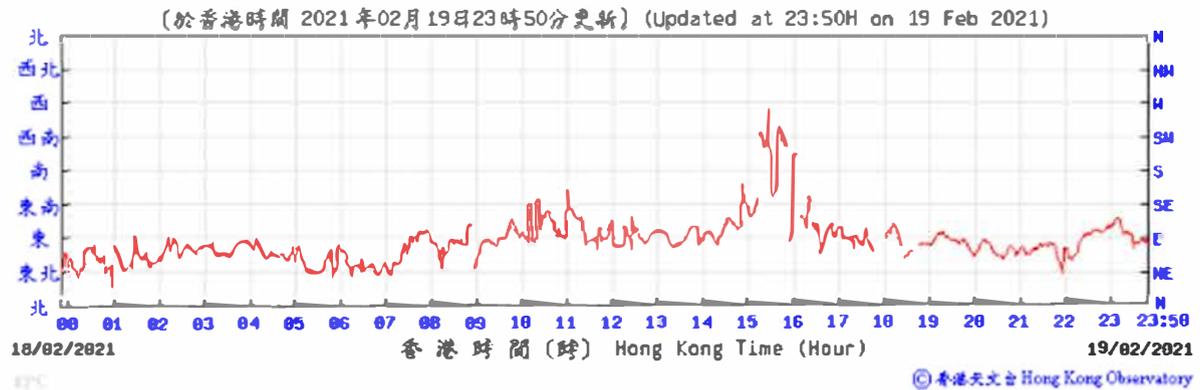
Temperature/Humidity:



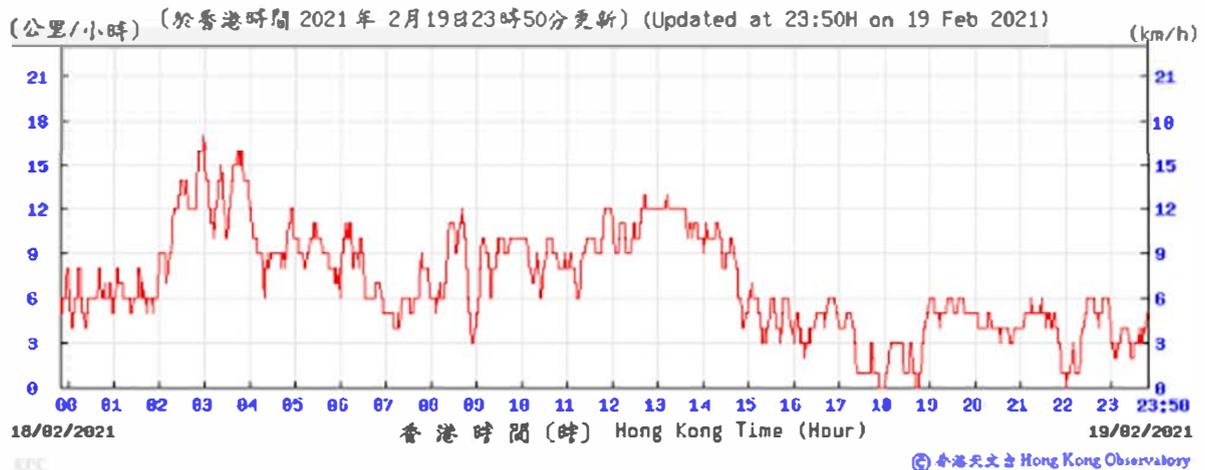
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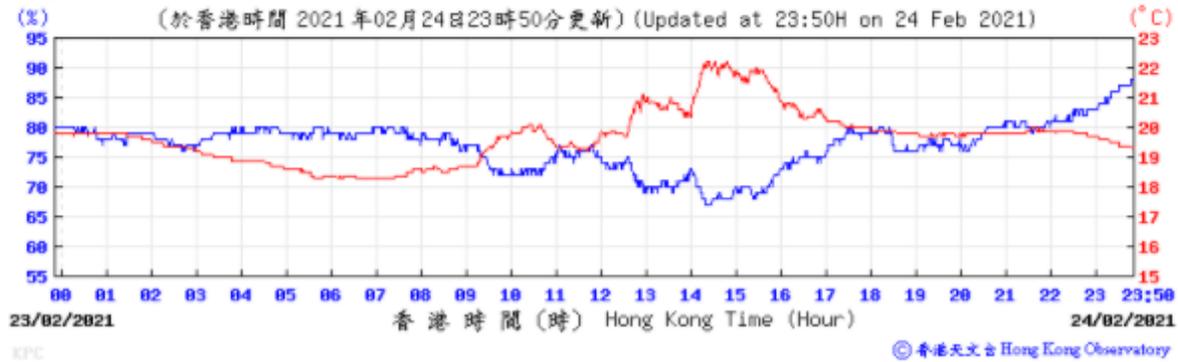
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Wind Speed:



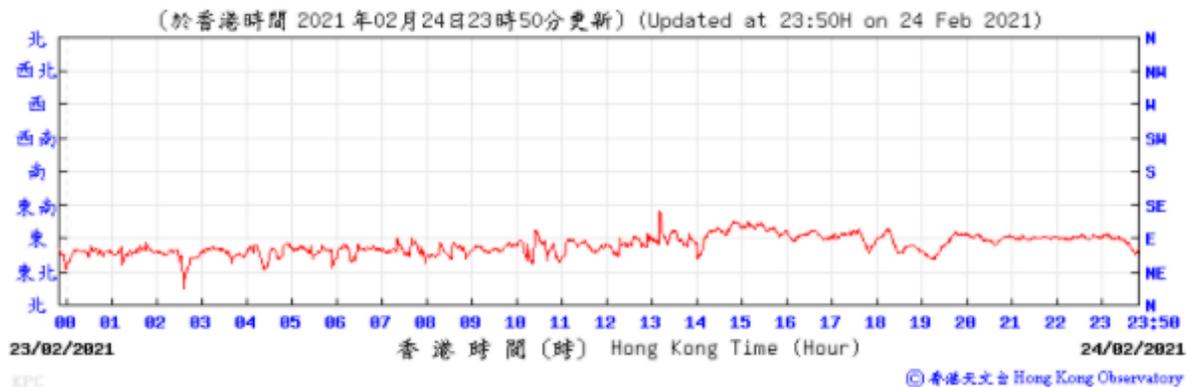
Temperature Humidity:



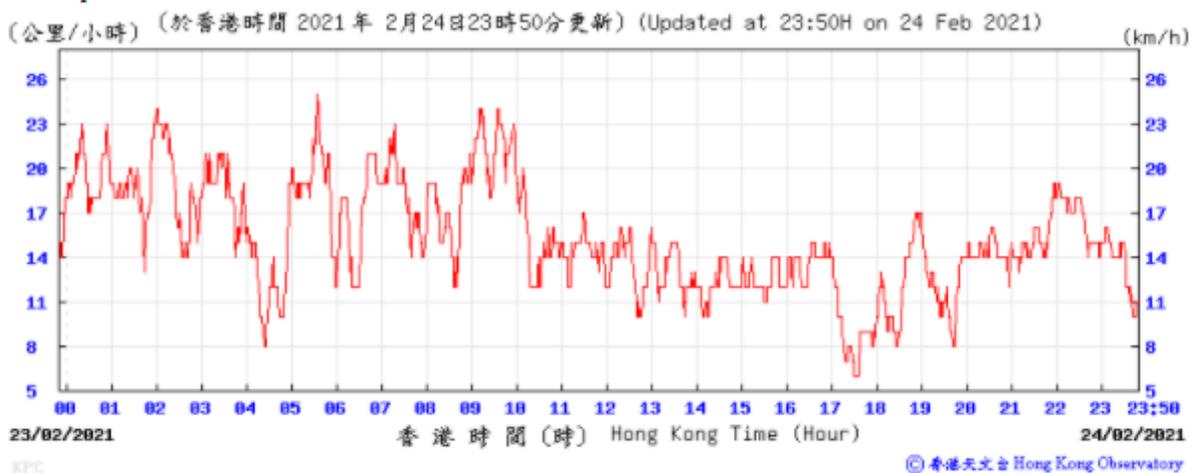
Pressure:



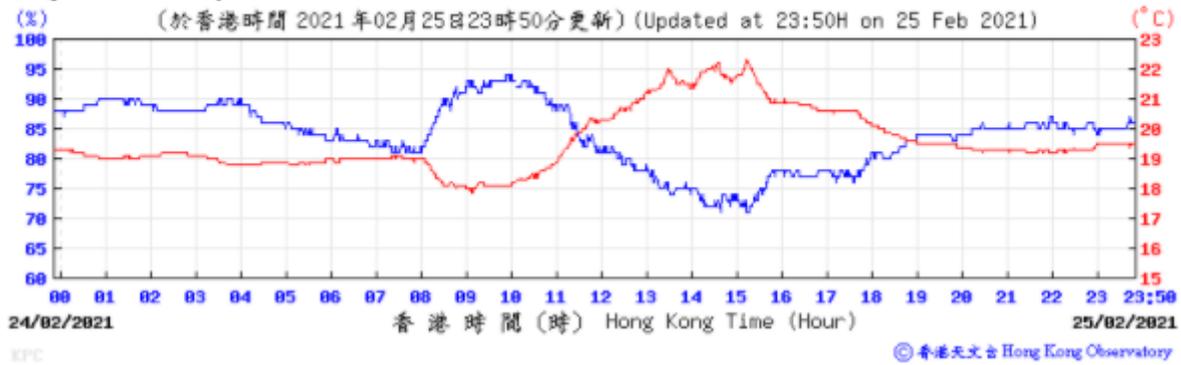
Wind Direction:



Wind Speed:



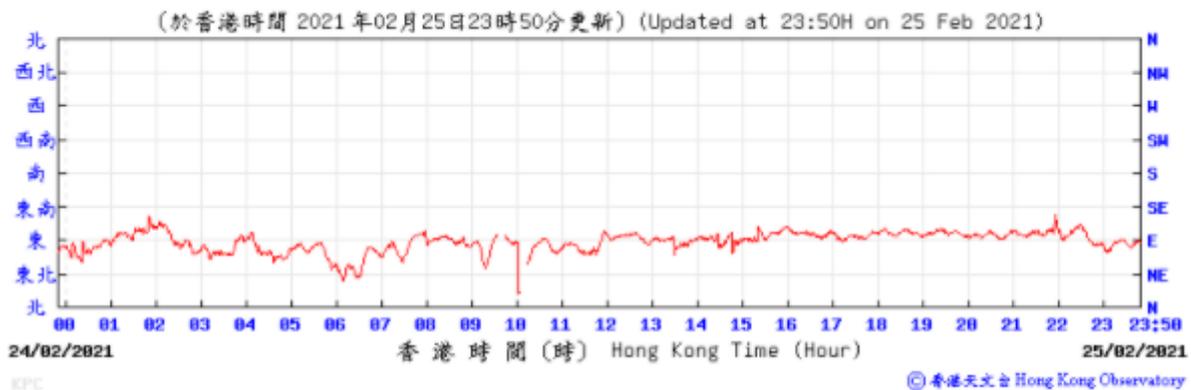
Temperature/Humidity:



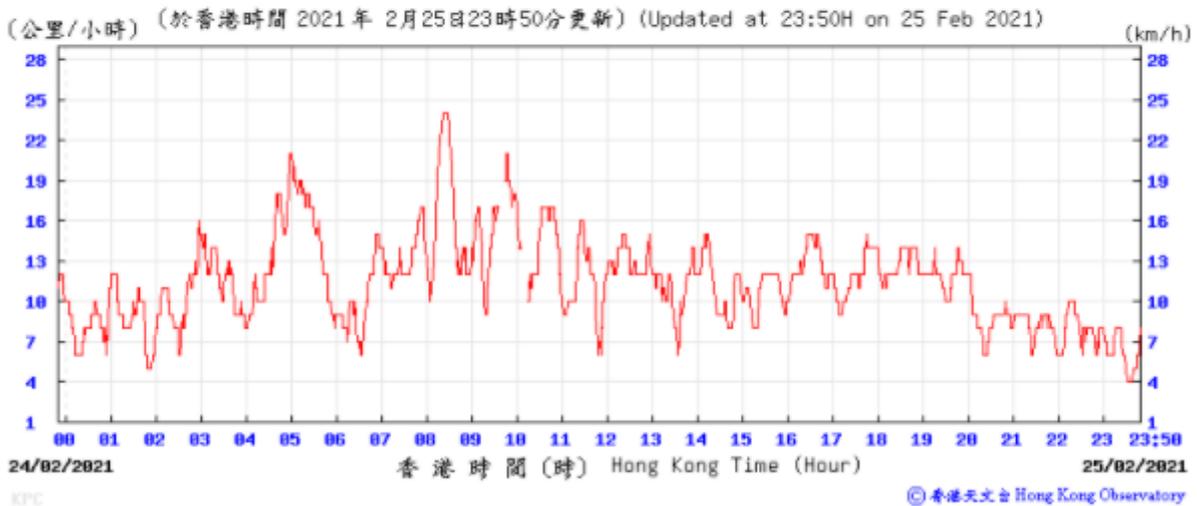
Pressure:



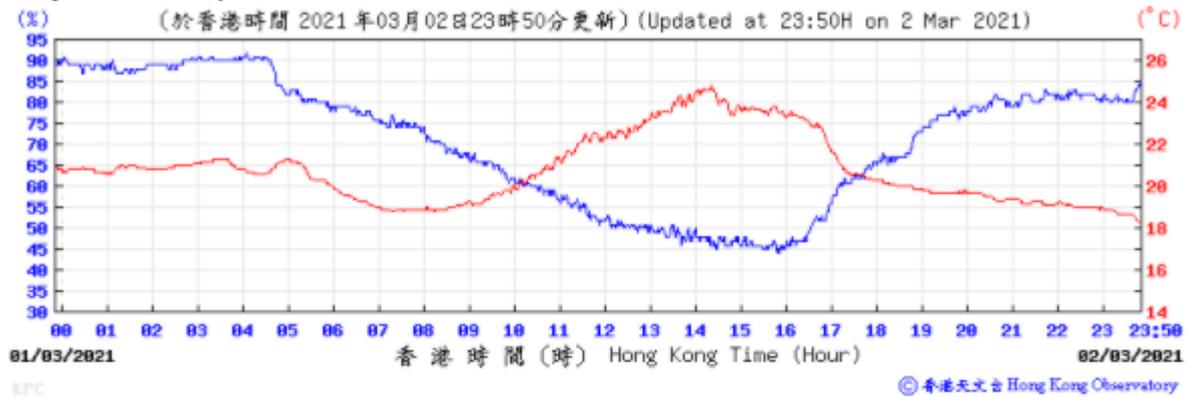
Wind Direction:



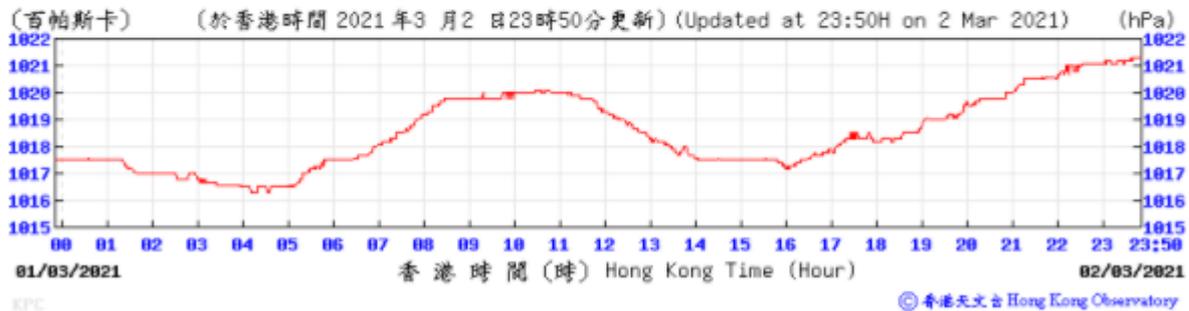
Wind Speed:



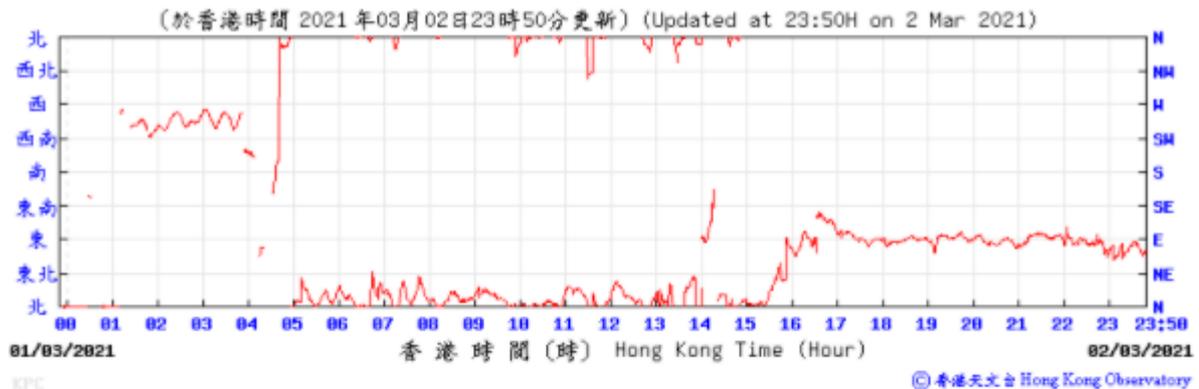
Temperature Humidity:



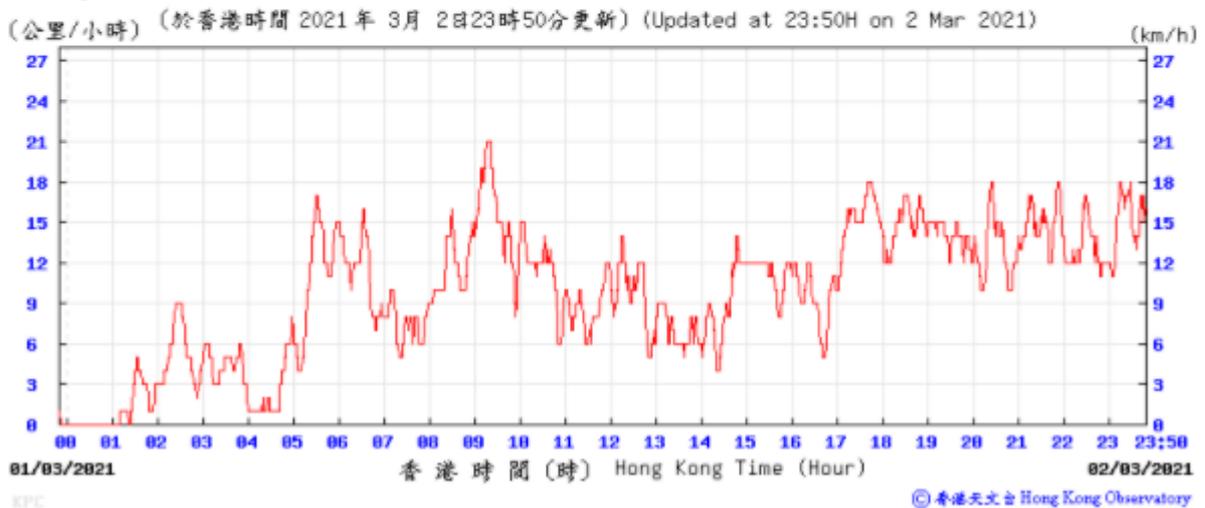
Pressure:



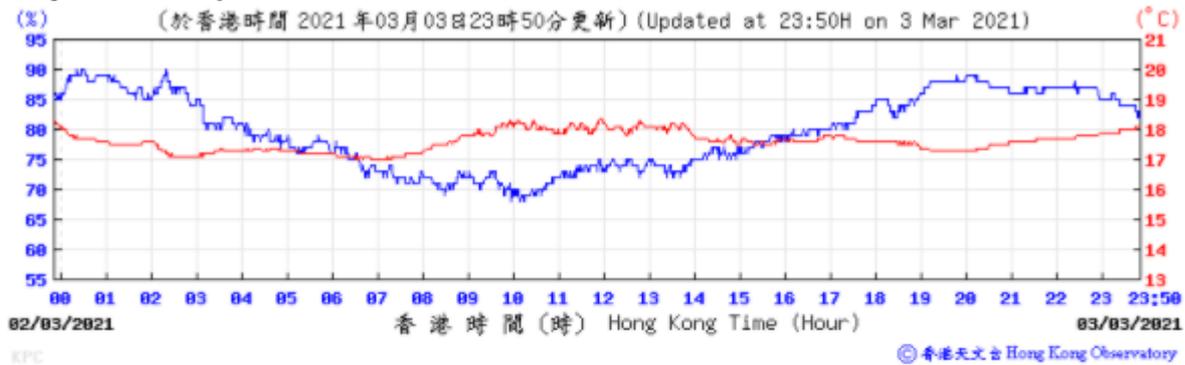
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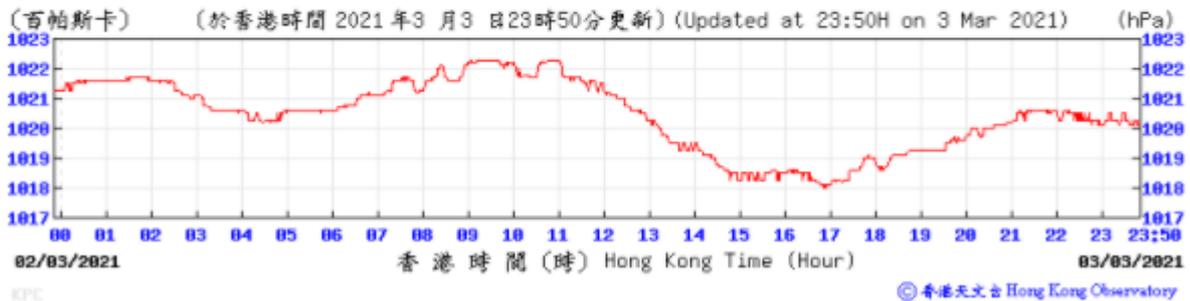
Wind Speed:



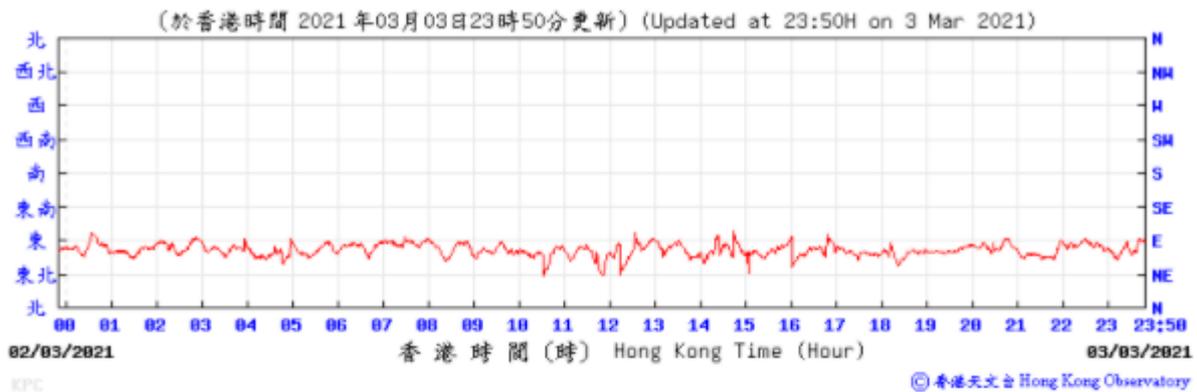
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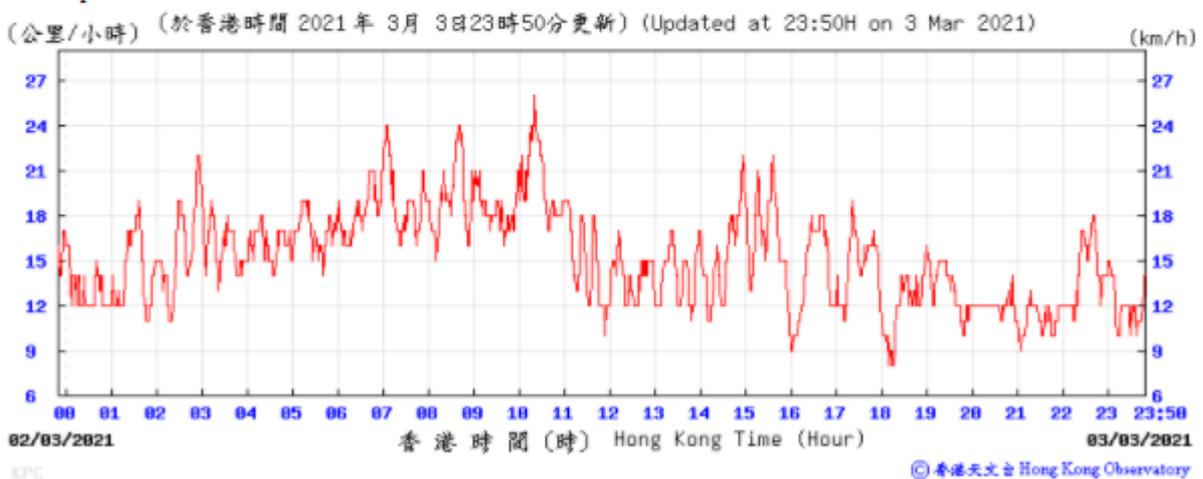
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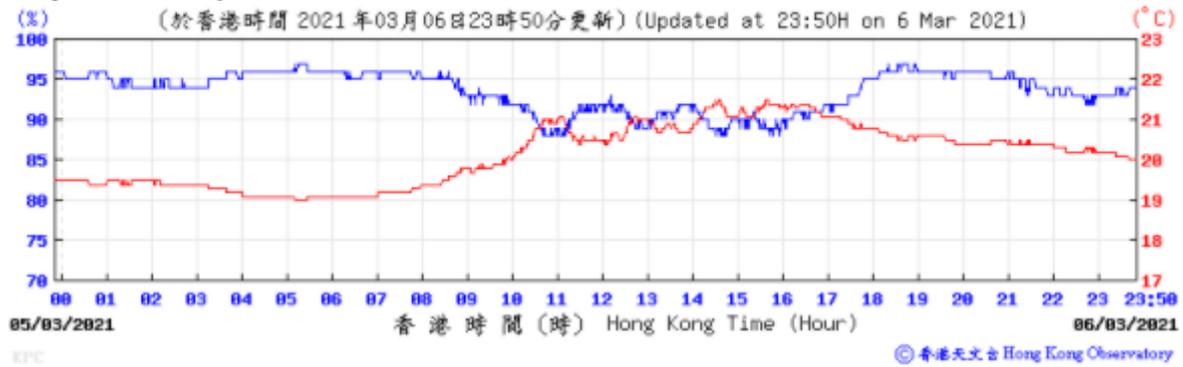
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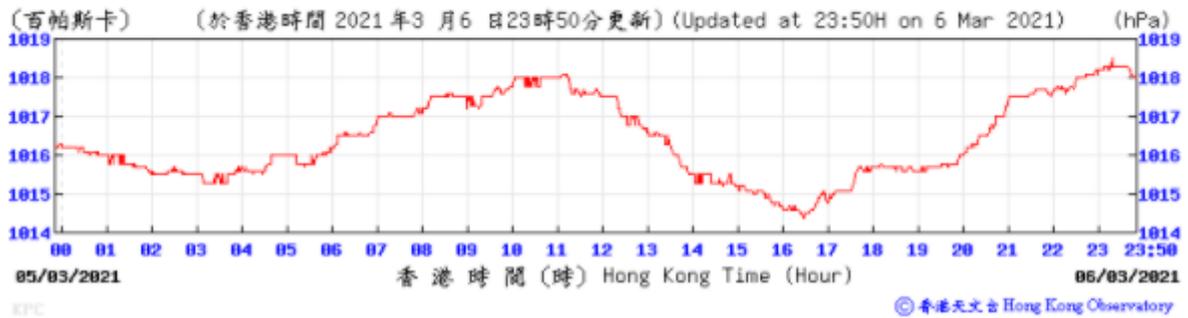
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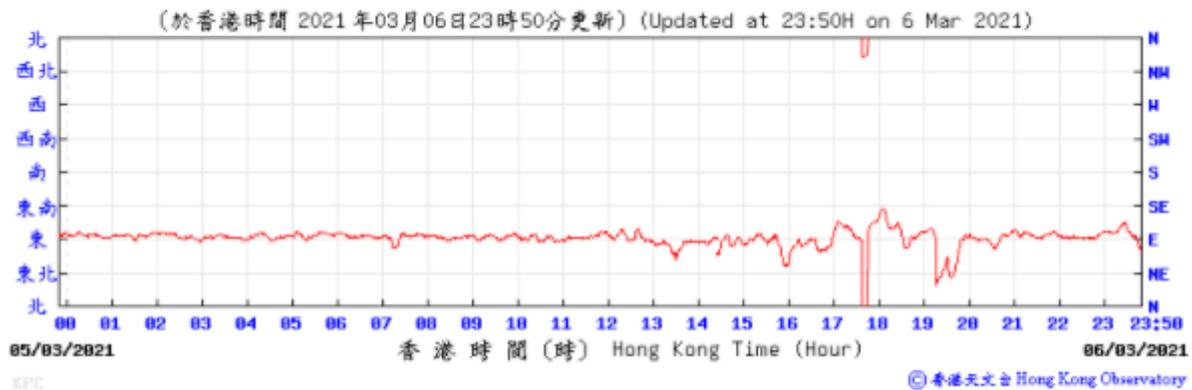
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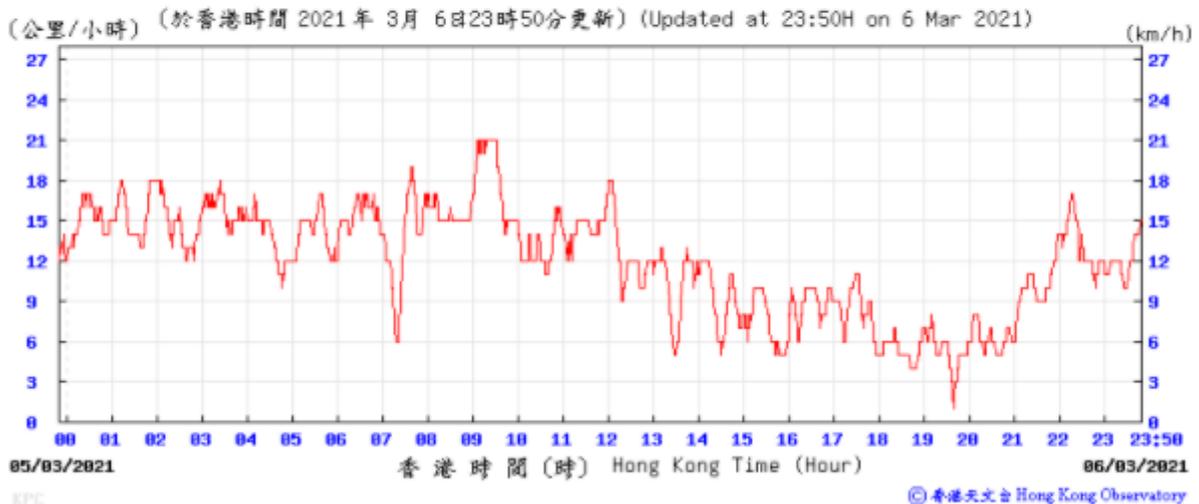
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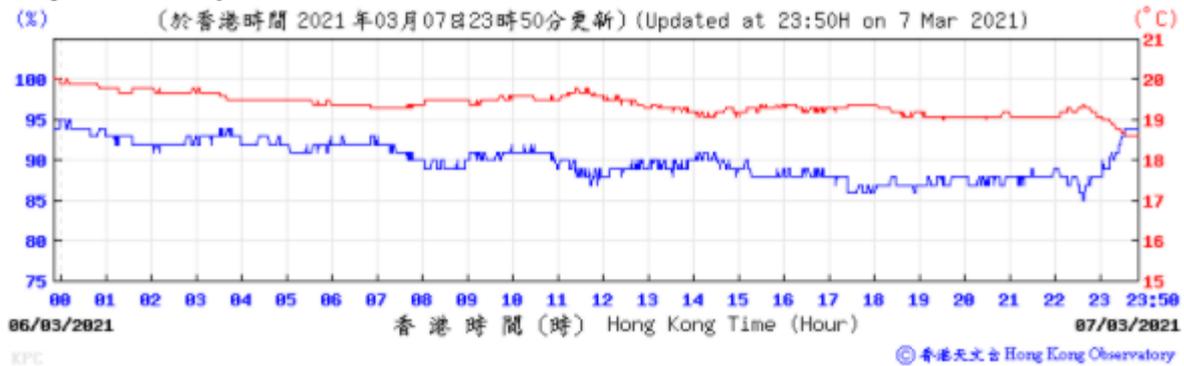
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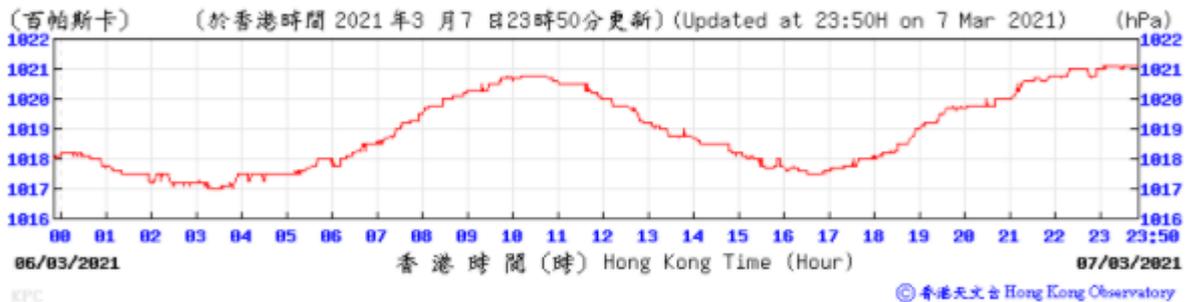
Wind Speed:



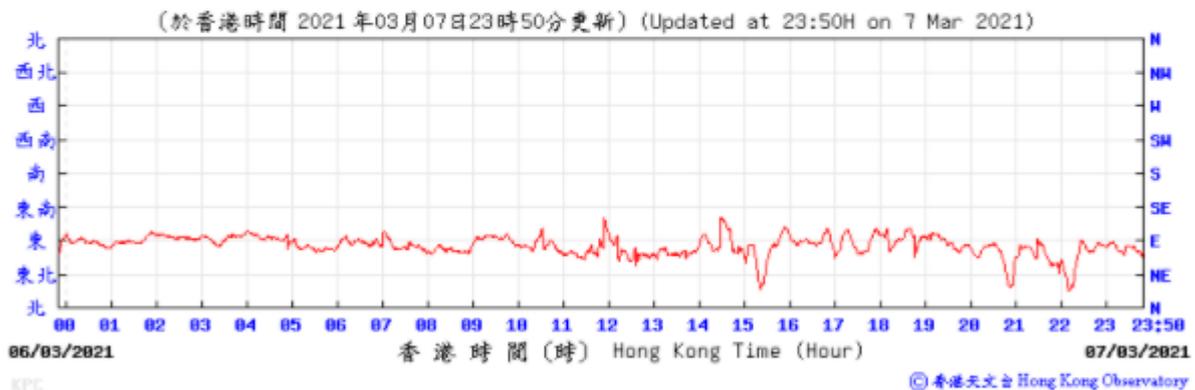
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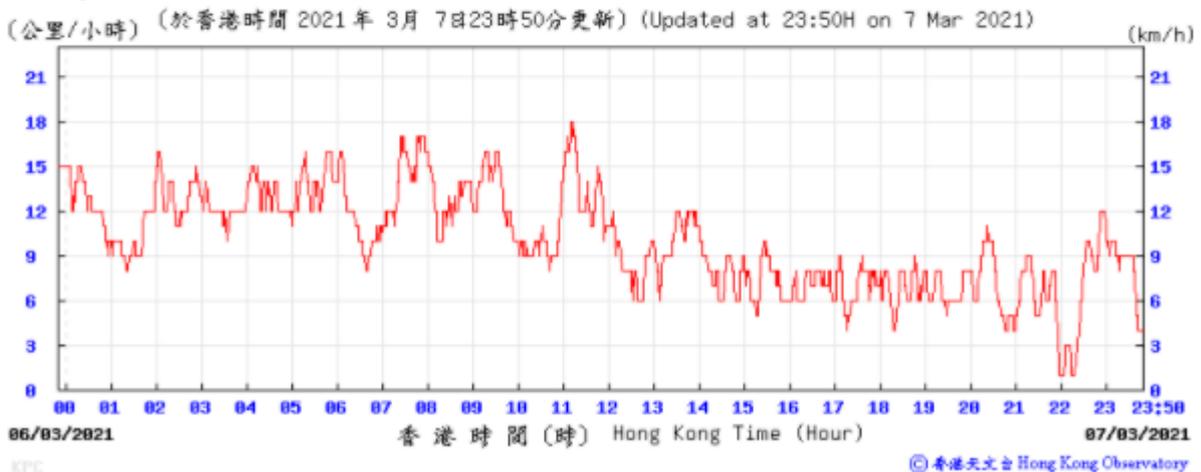
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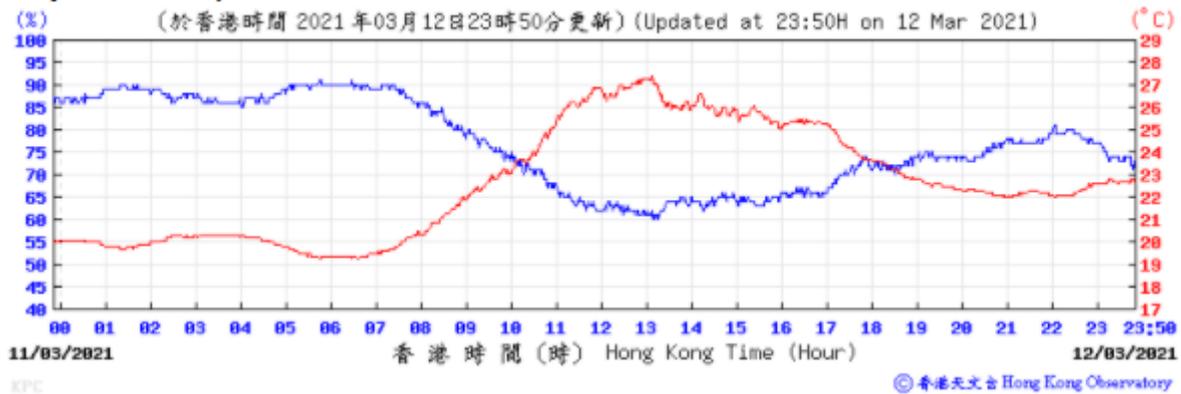
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Wind Speed:



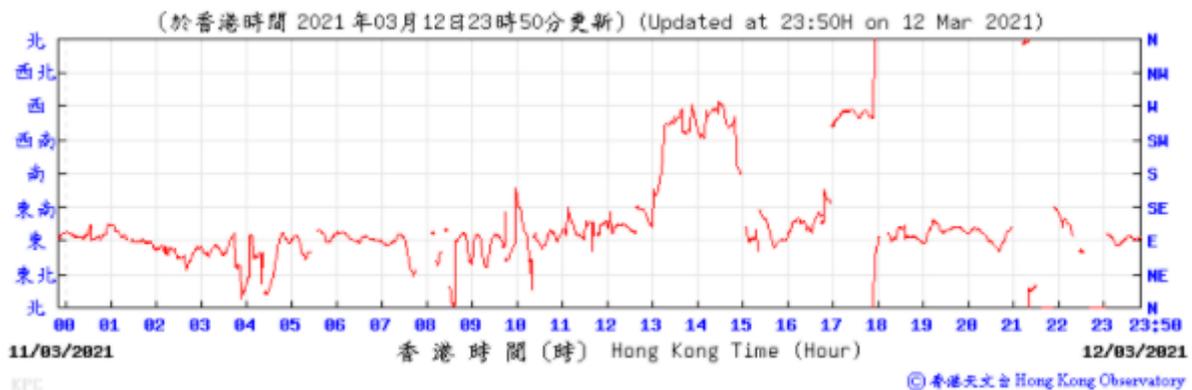
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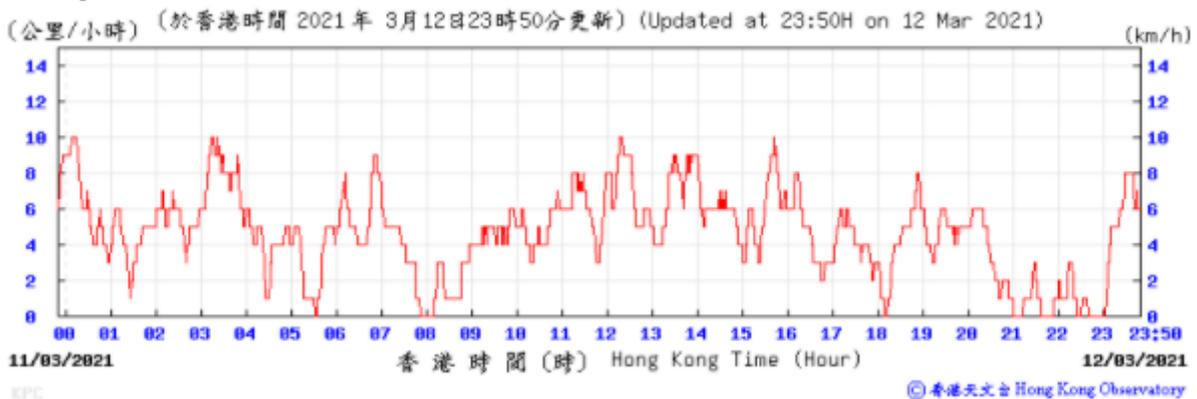
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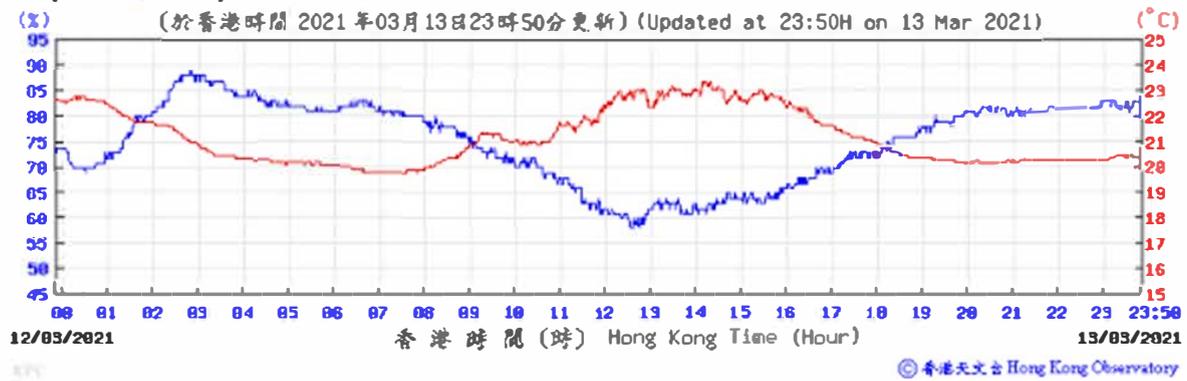
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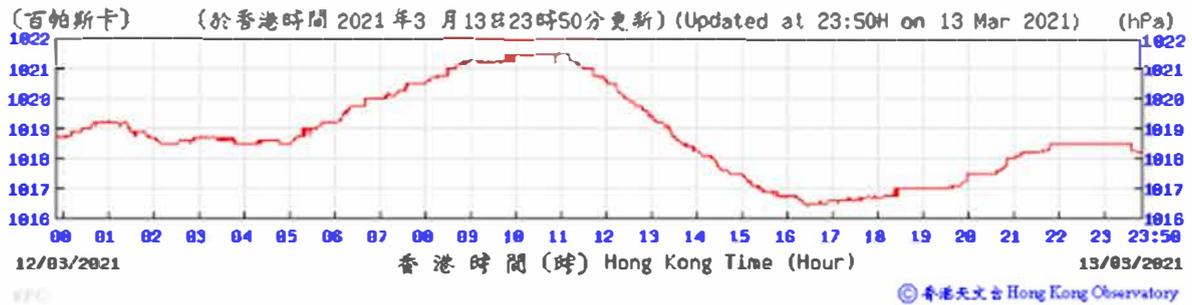
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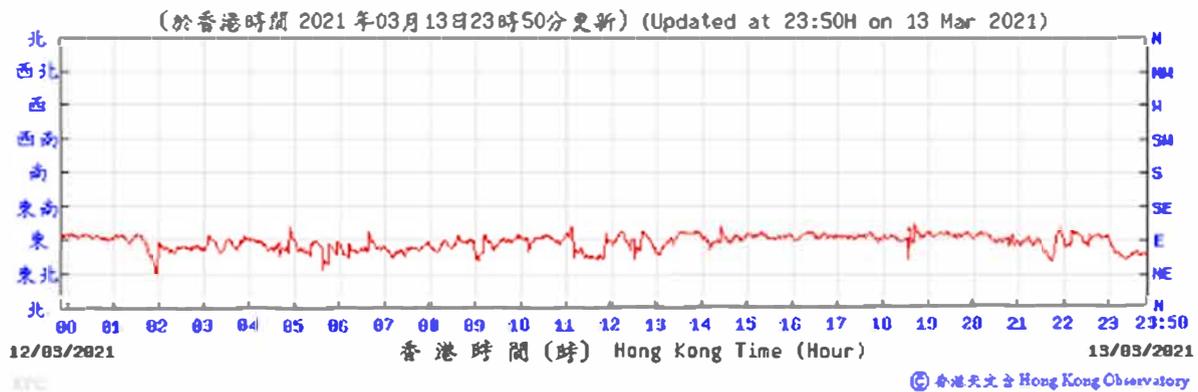
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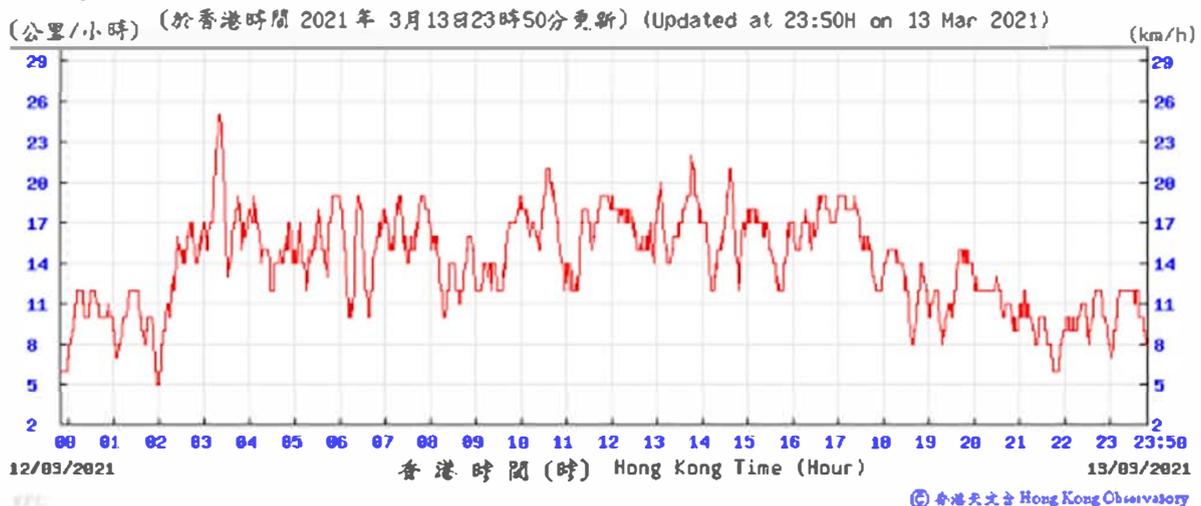
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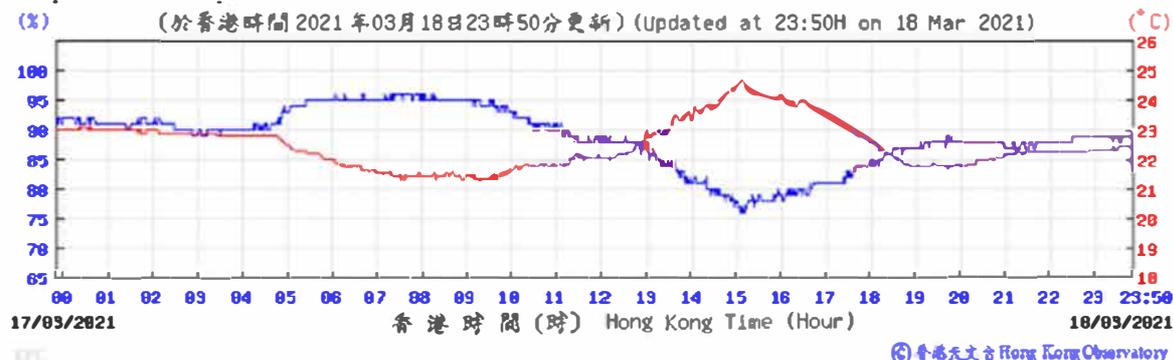
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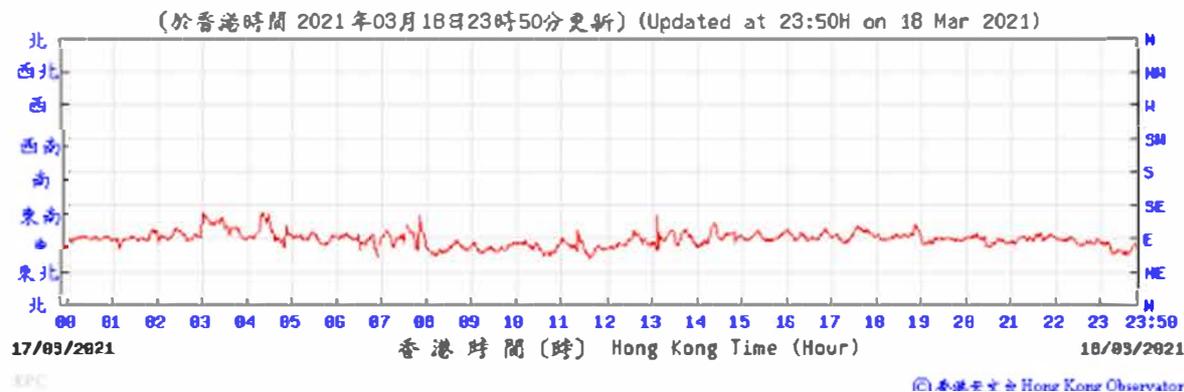
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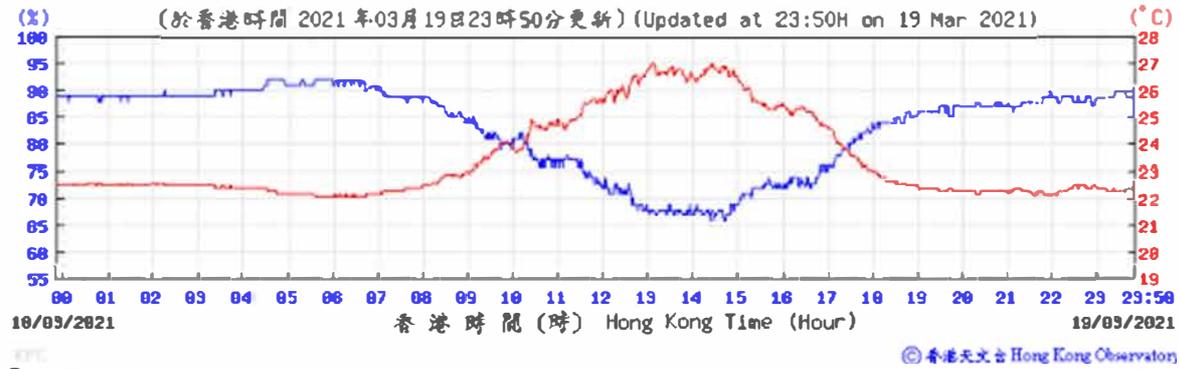
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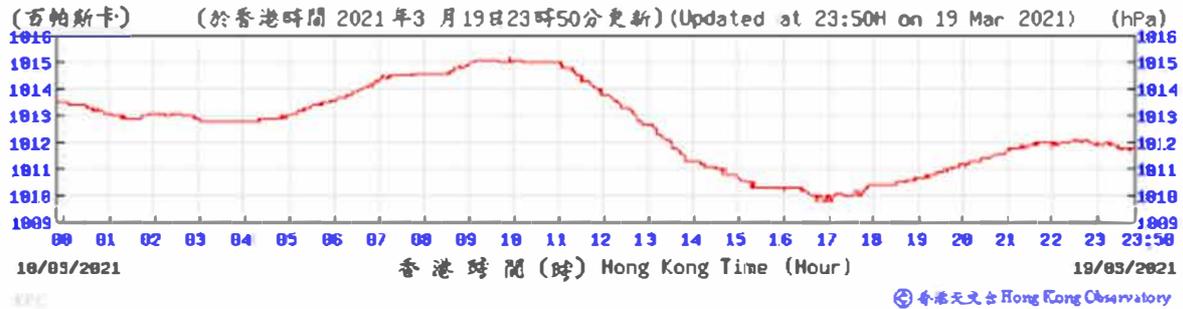
Wind Speed:



Temperature Humidity:



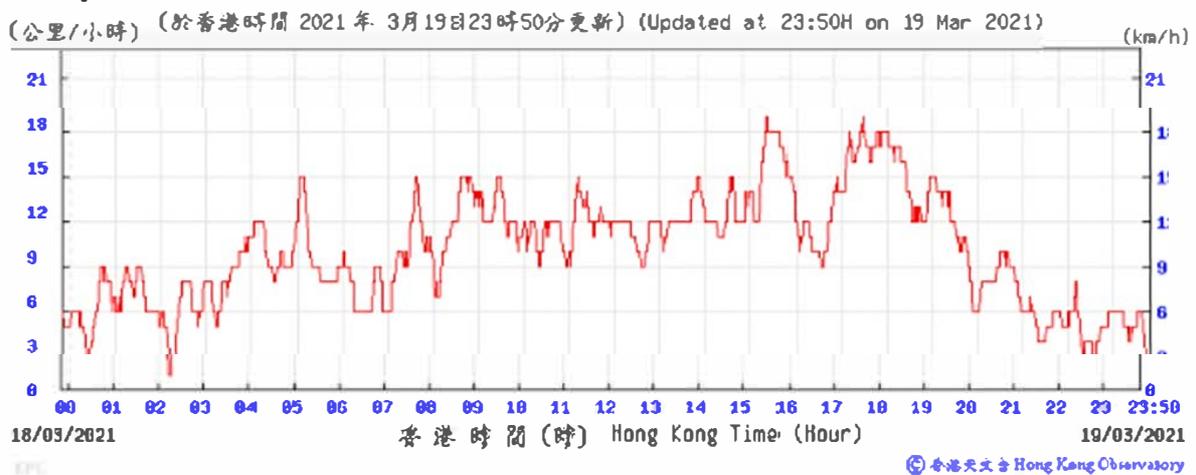
Pressure:



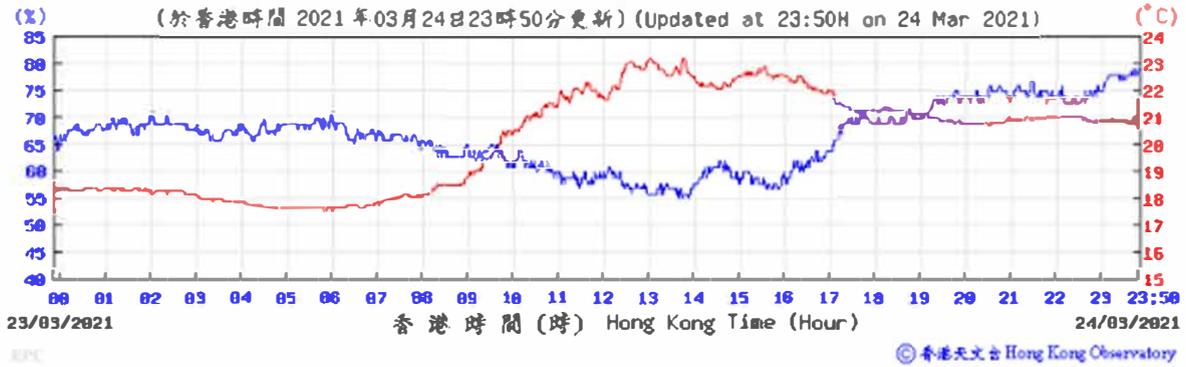
Wind Direction:



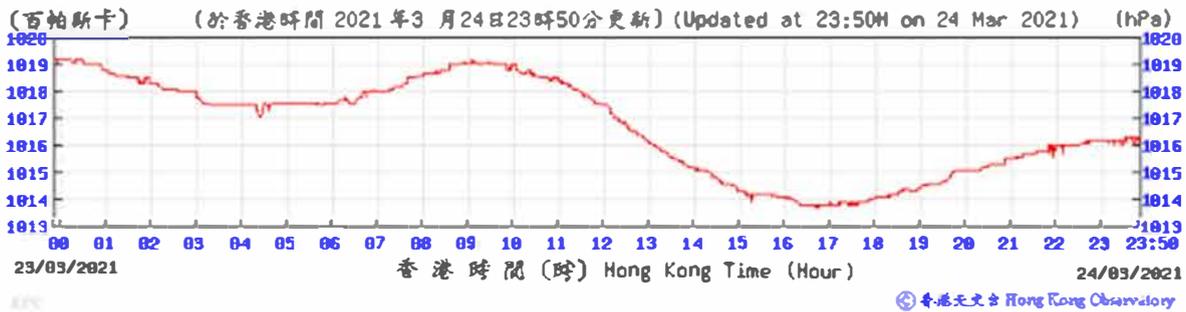
Wind Speed:



Temperature Humidity:



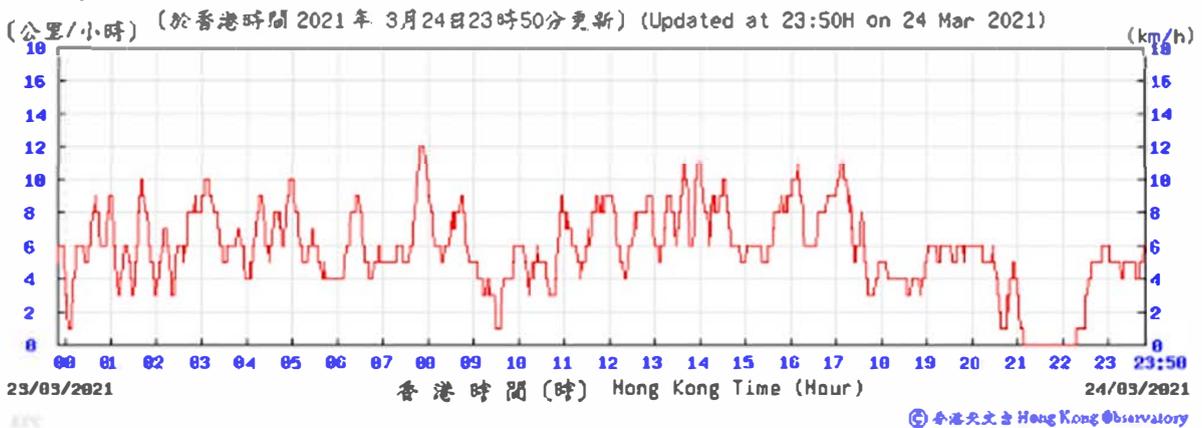
Pressure:



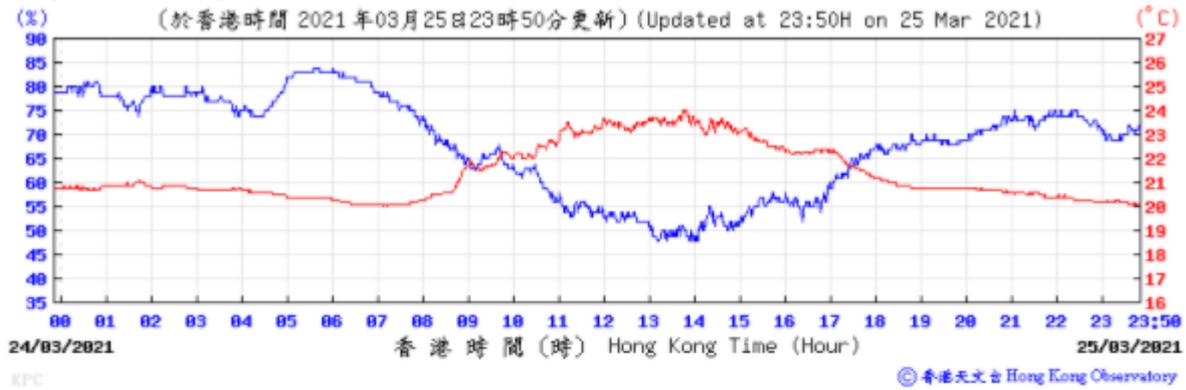
Wind Direction:



Wind Speed:



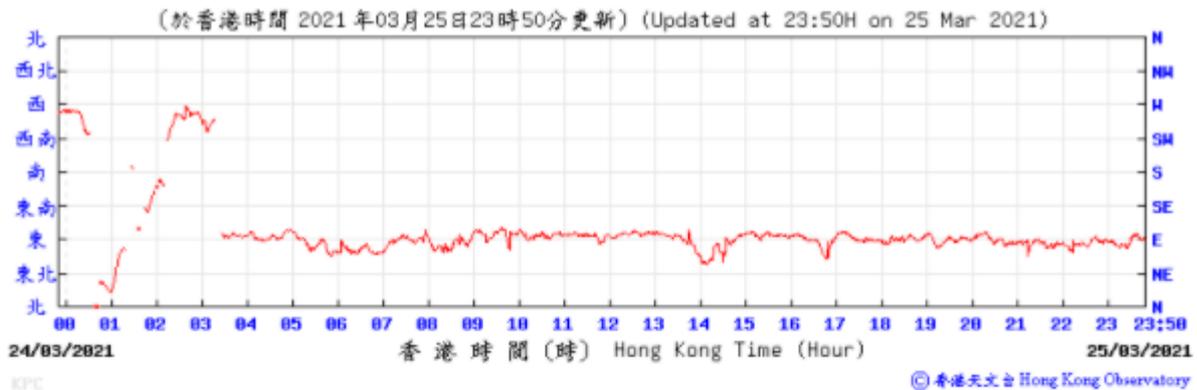
Temperature Humidity:



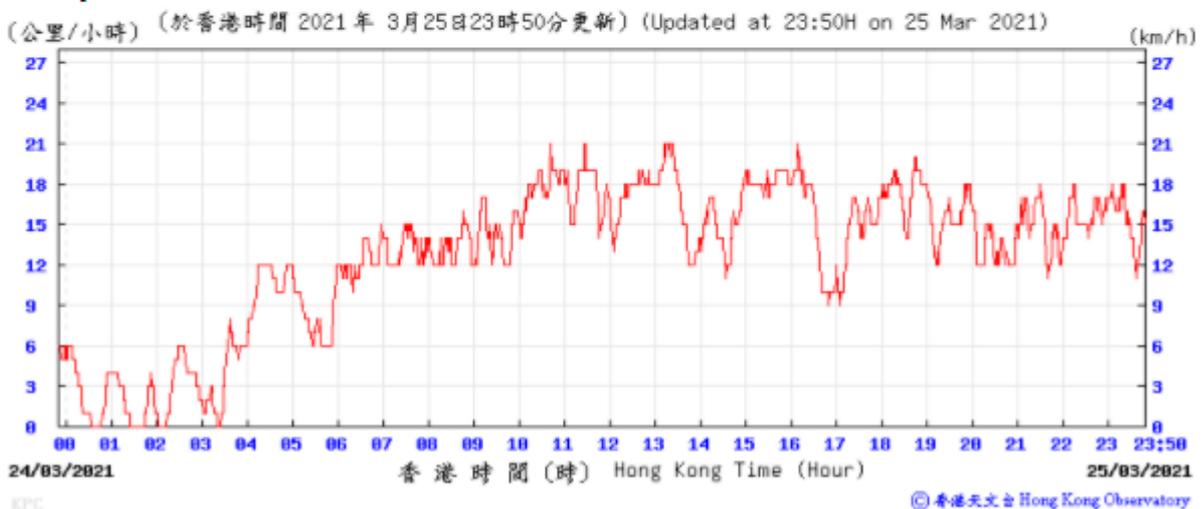
Pressure:



Wind Direction:



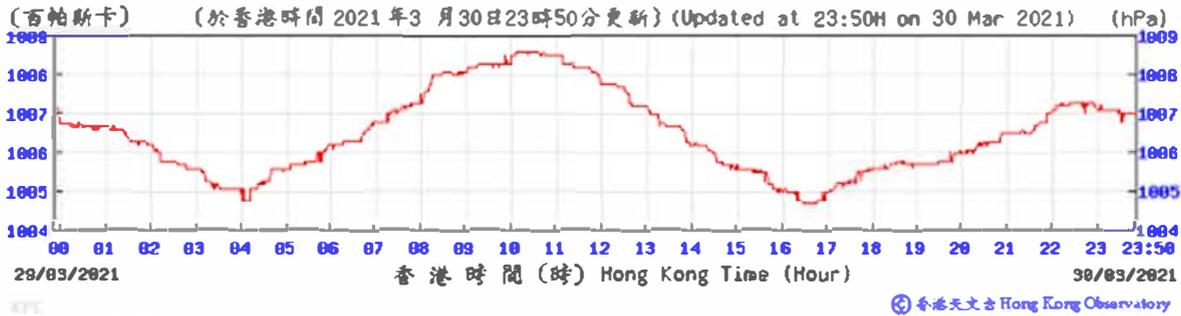
Wind Speed:



Temperature Humidity:



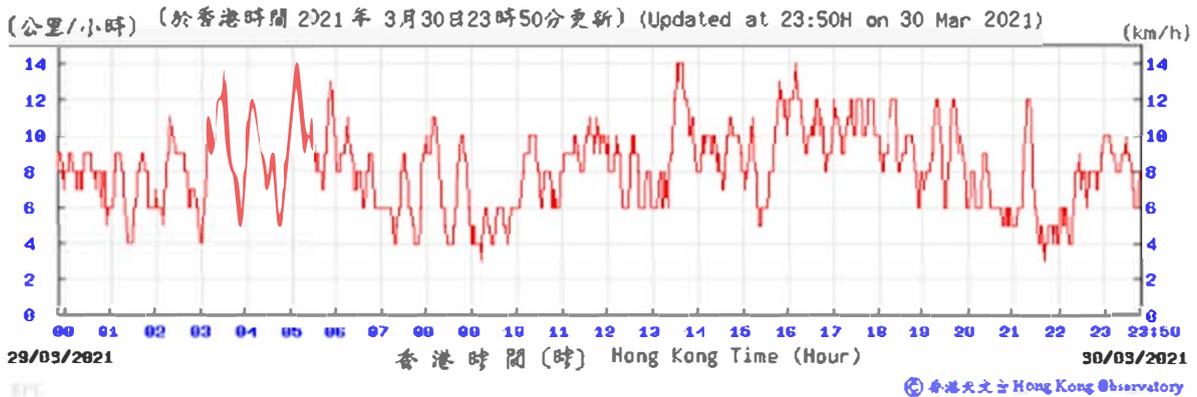
Pressure:



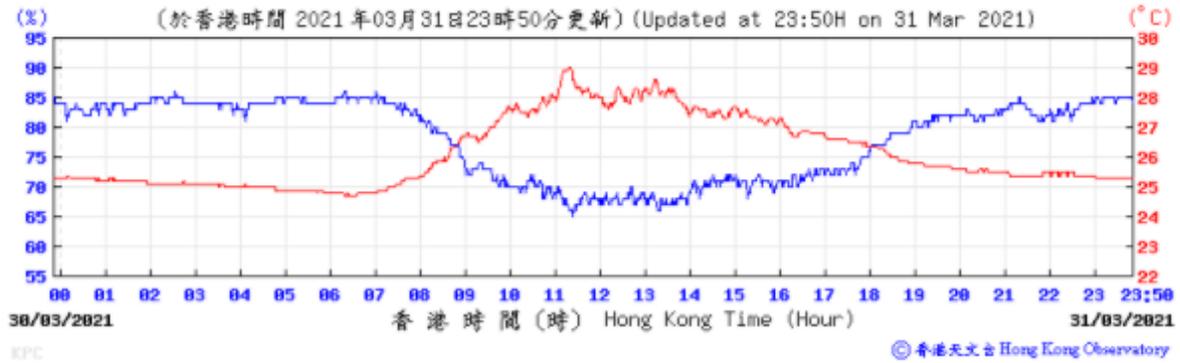
Wind Direction:



Wind Speed:



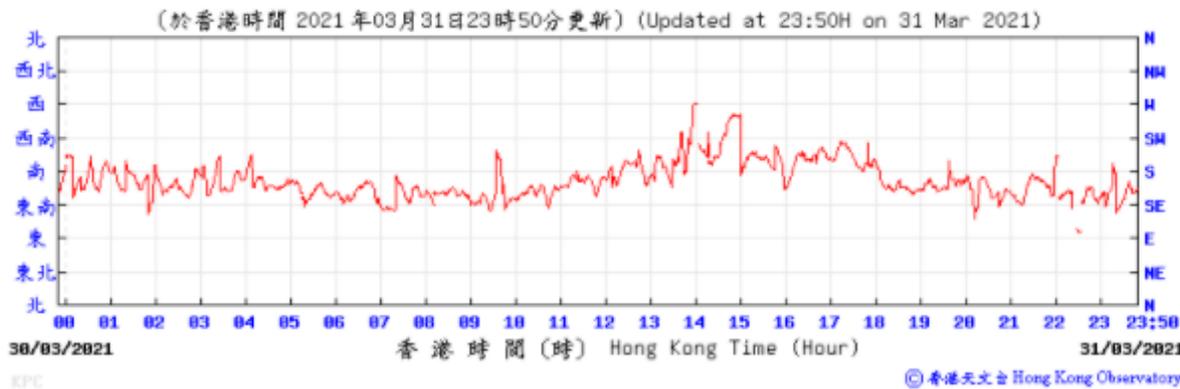
Temperature Humidity:



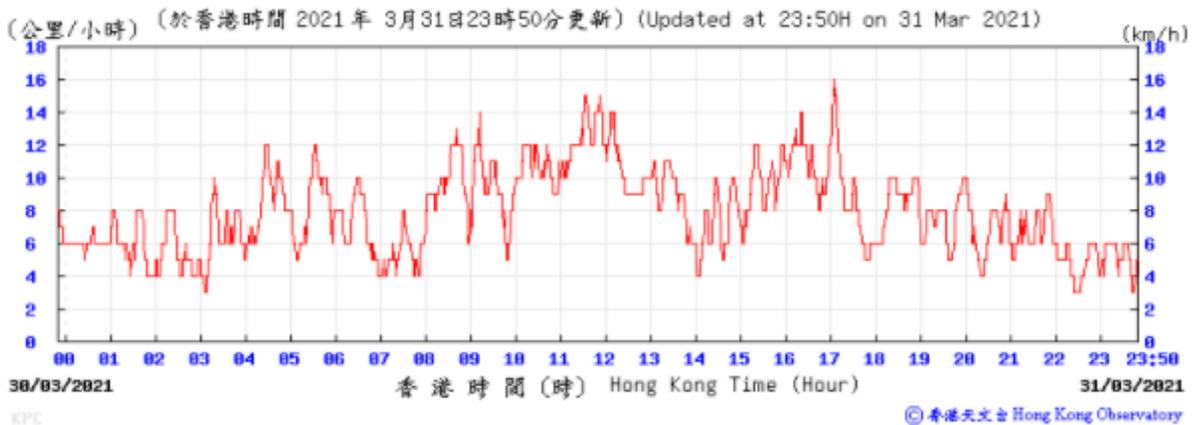
Pressure:



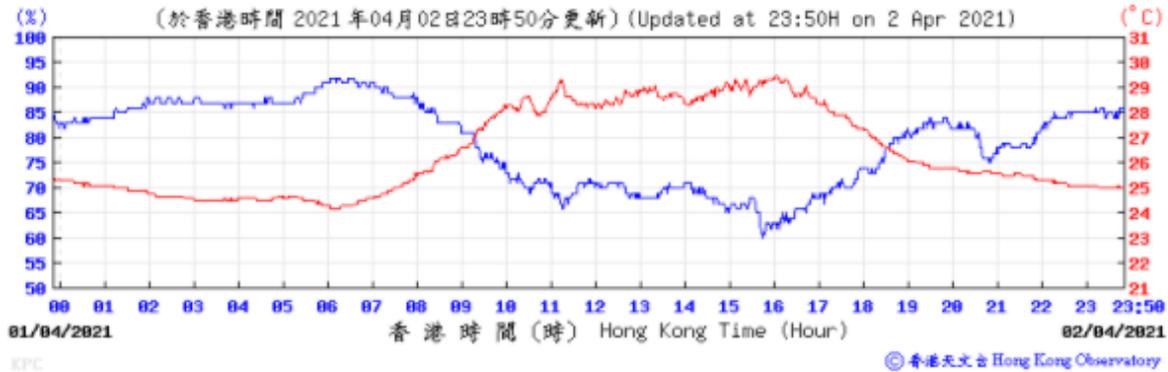
Wind Direction:



Wind Speed:



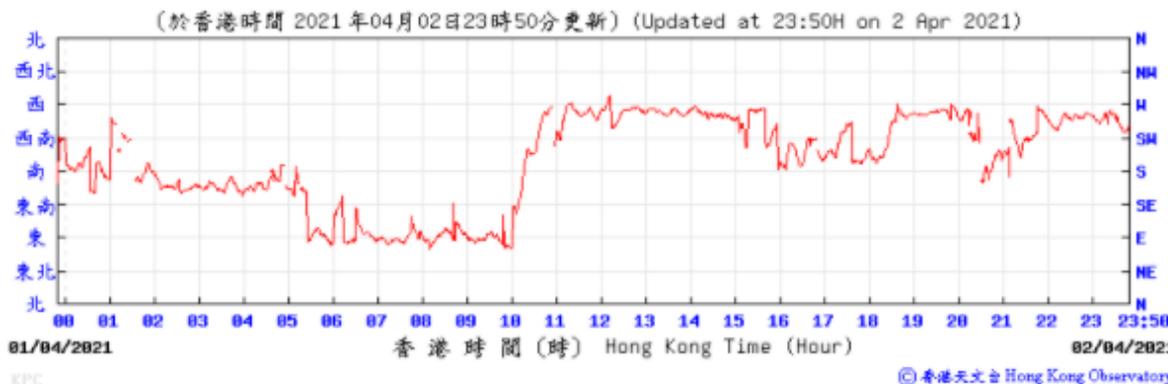
Temperature/Humidity:



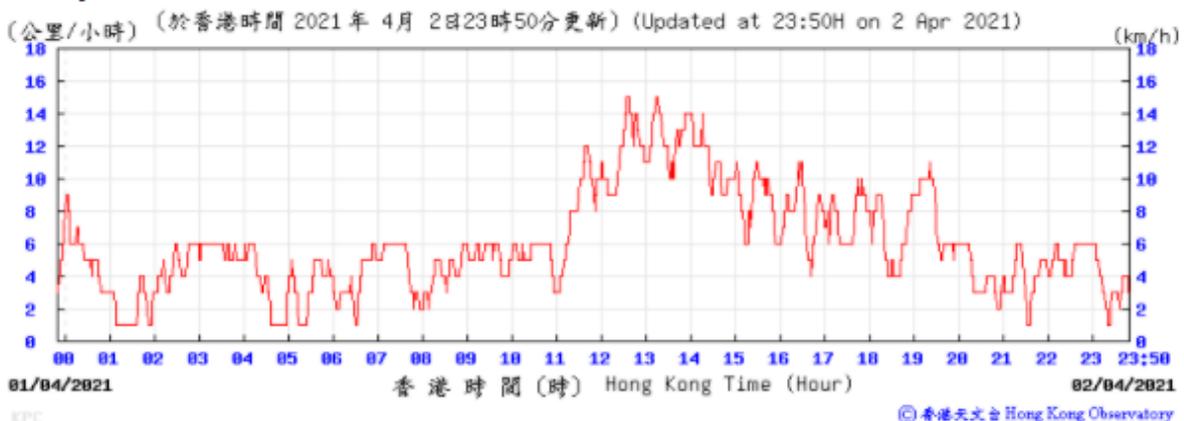
Pressure:



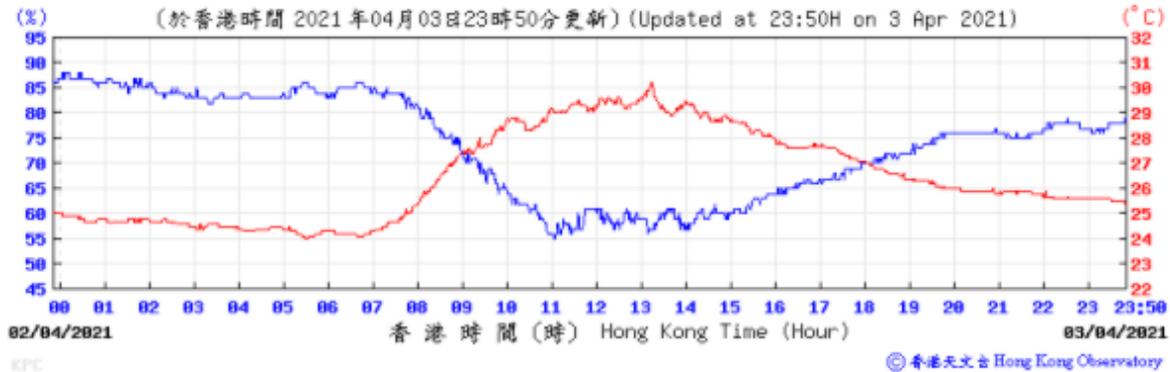
Wind Direction:



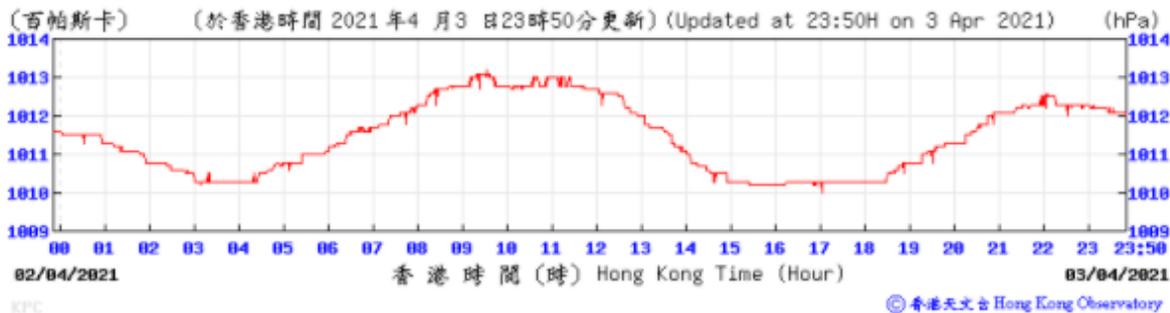
Wind Speed:



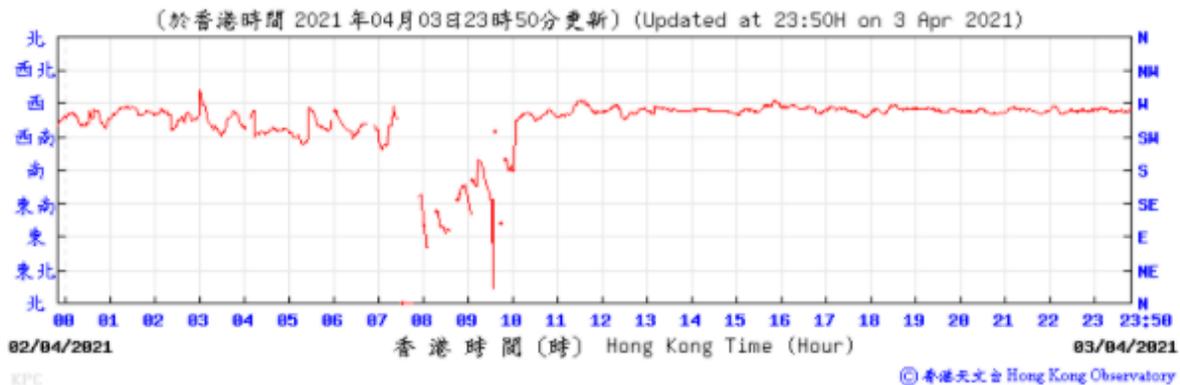
Temperature/Humidity:



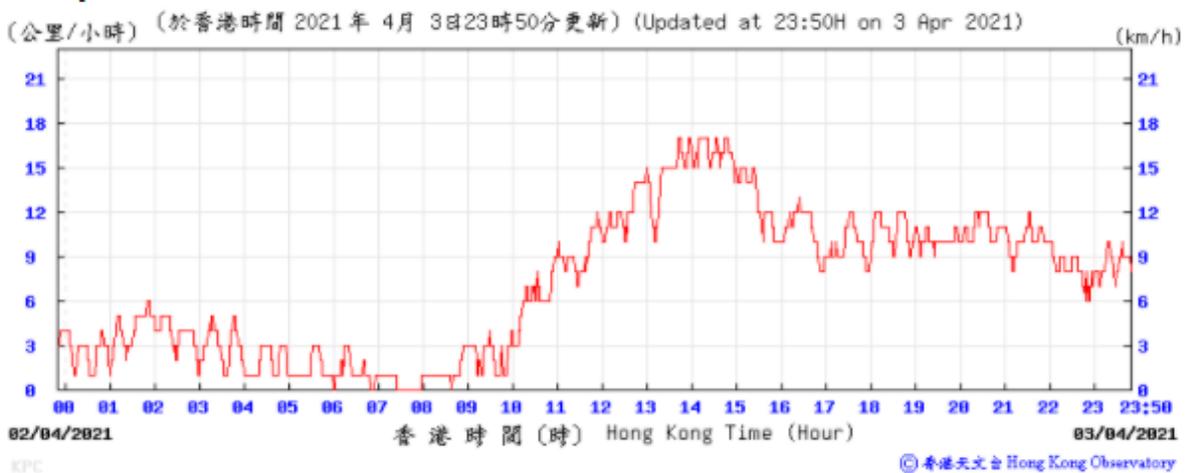
Pressure:



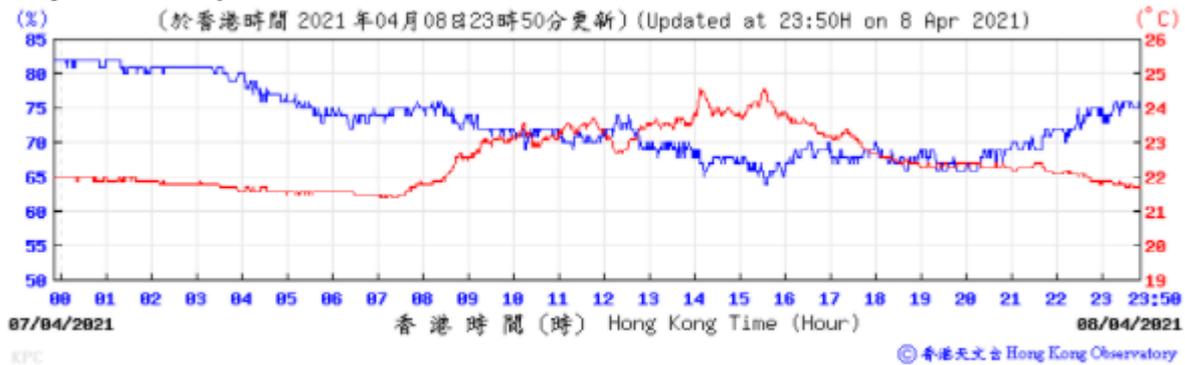
Wind Direction:



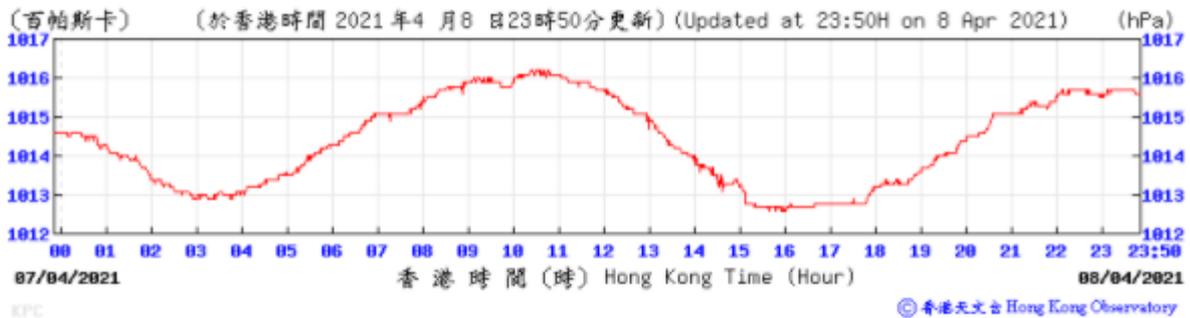
Wind Speed:



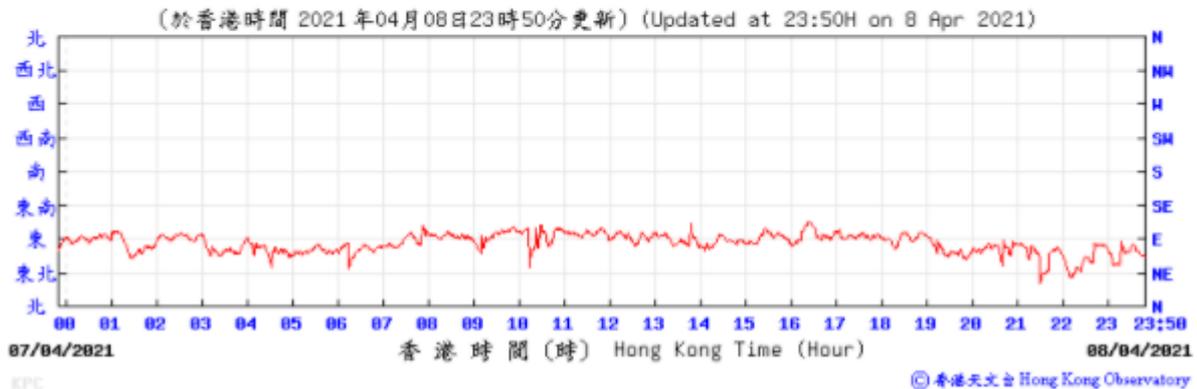
Temperature/Humidity:



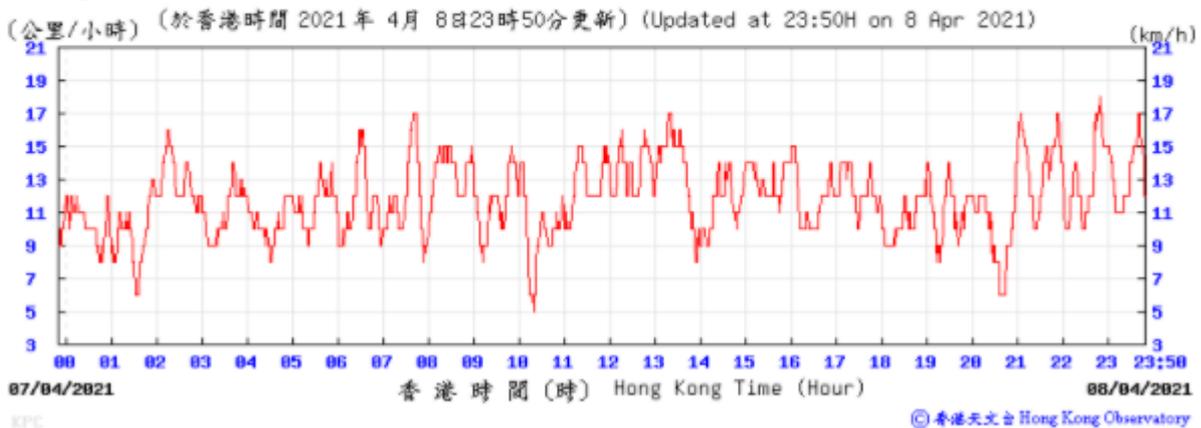
Pressure:



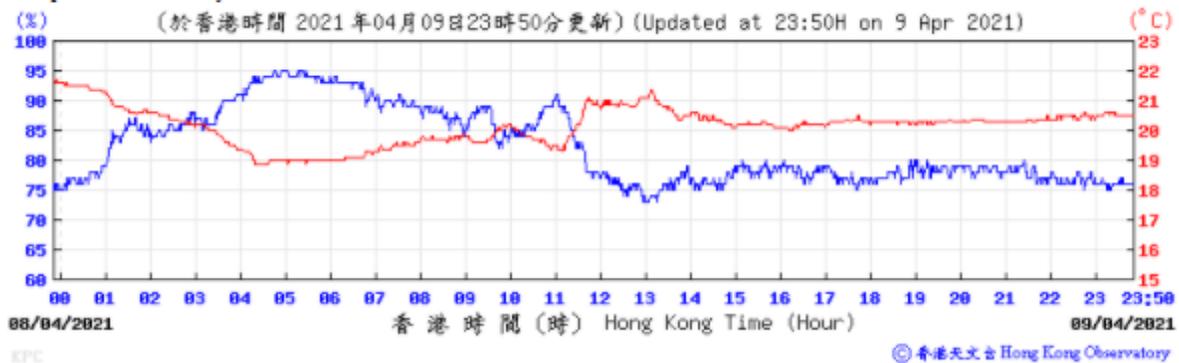
Wind Direction:



Wind Speed:



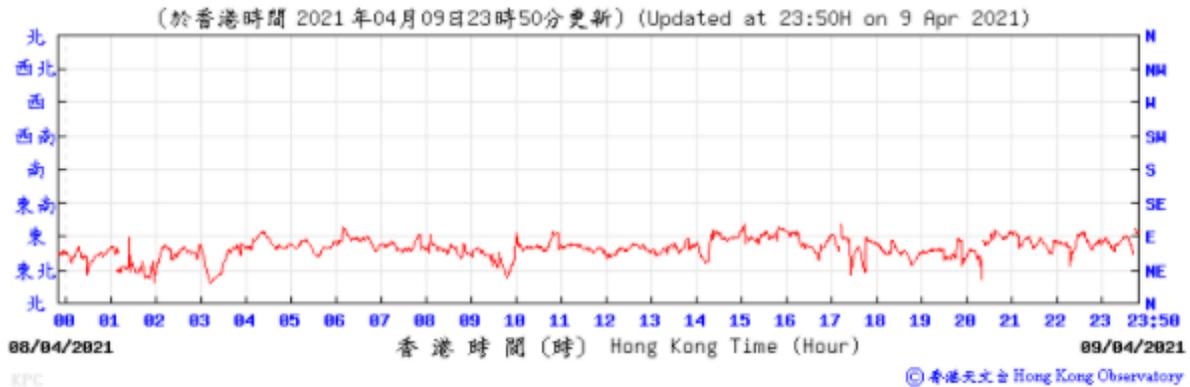
Temperature/Humidity:



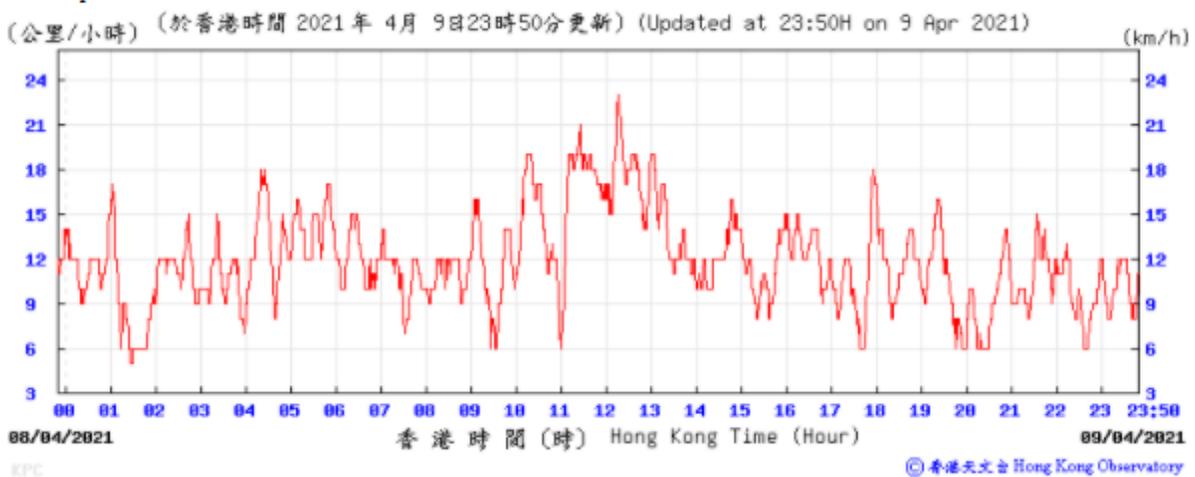
Pressure:



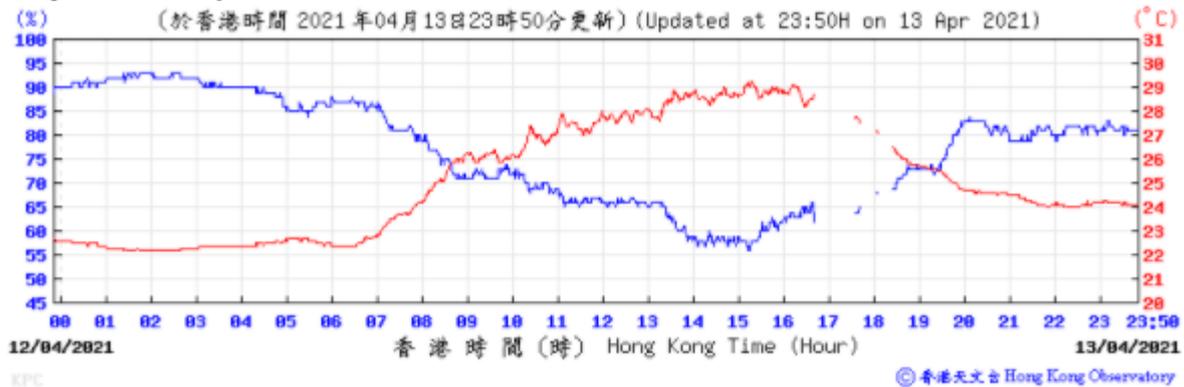
Wind Direction:



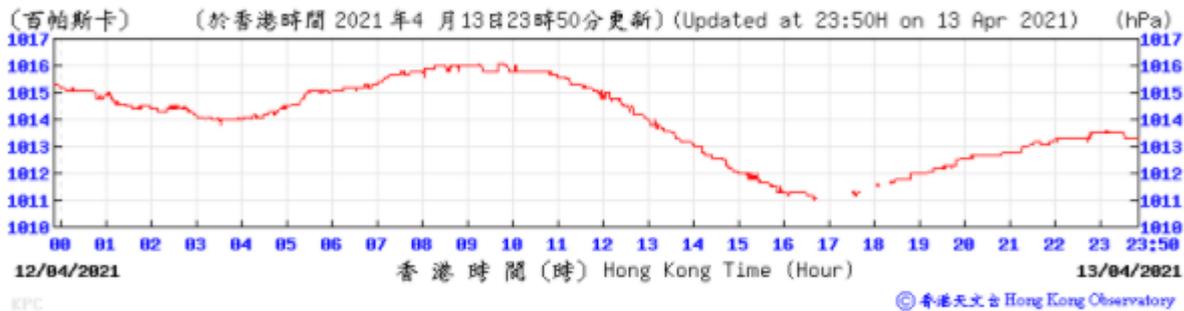
Wind Speed:



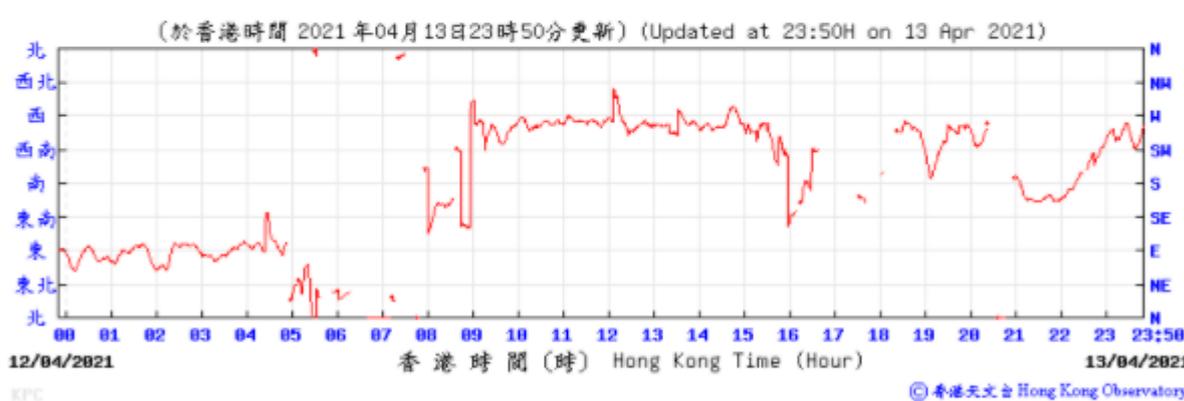
Temperature/Humidity:



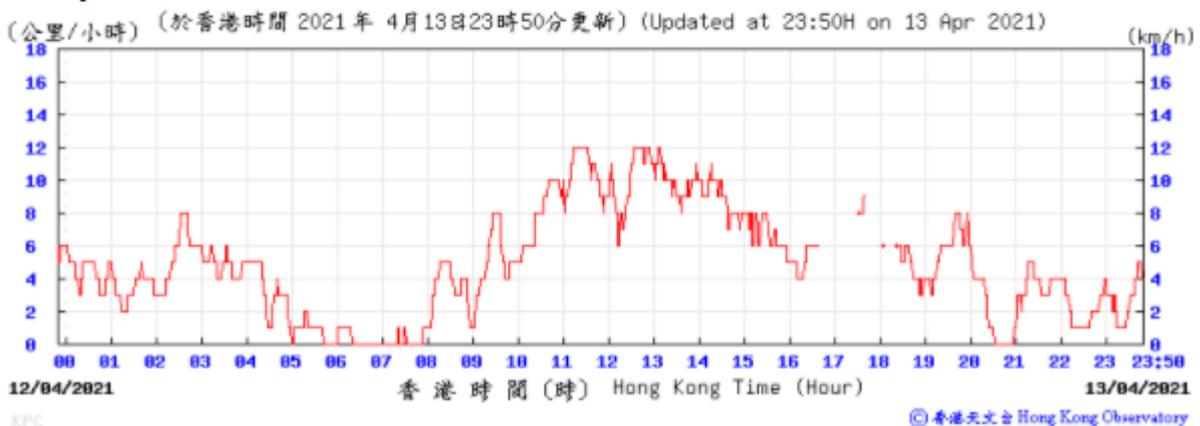
Pressure:



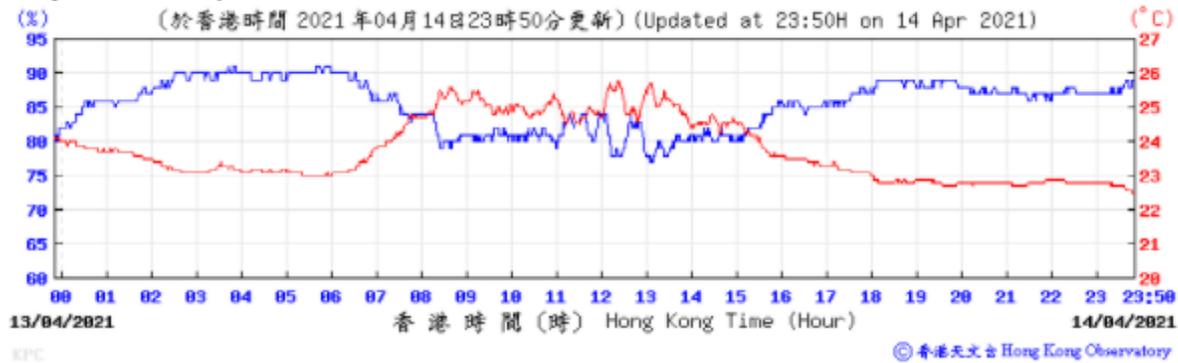
Wind Direction:



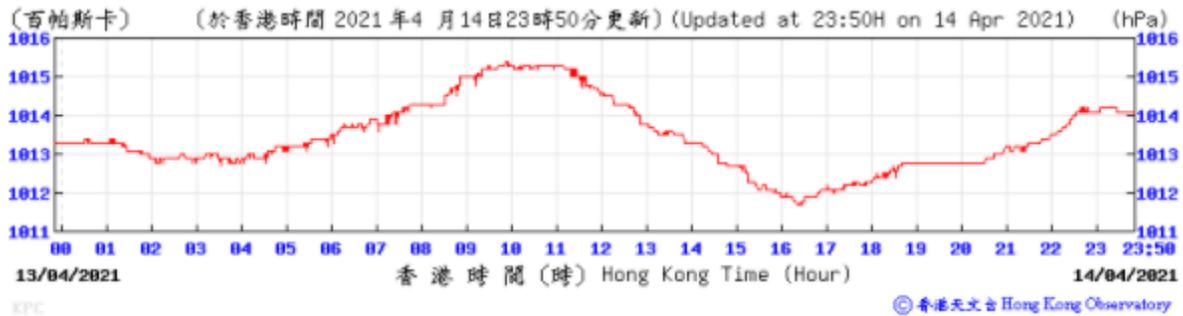
Wind Speed:



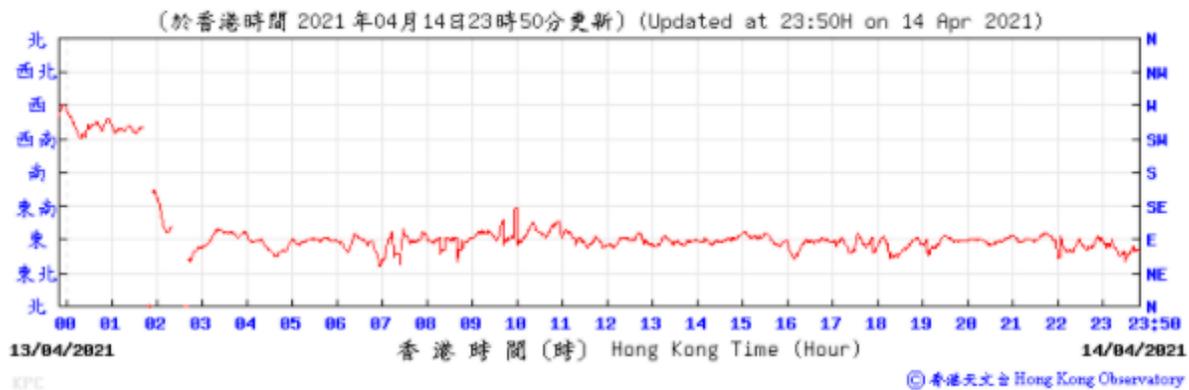
Temperature Humidity:



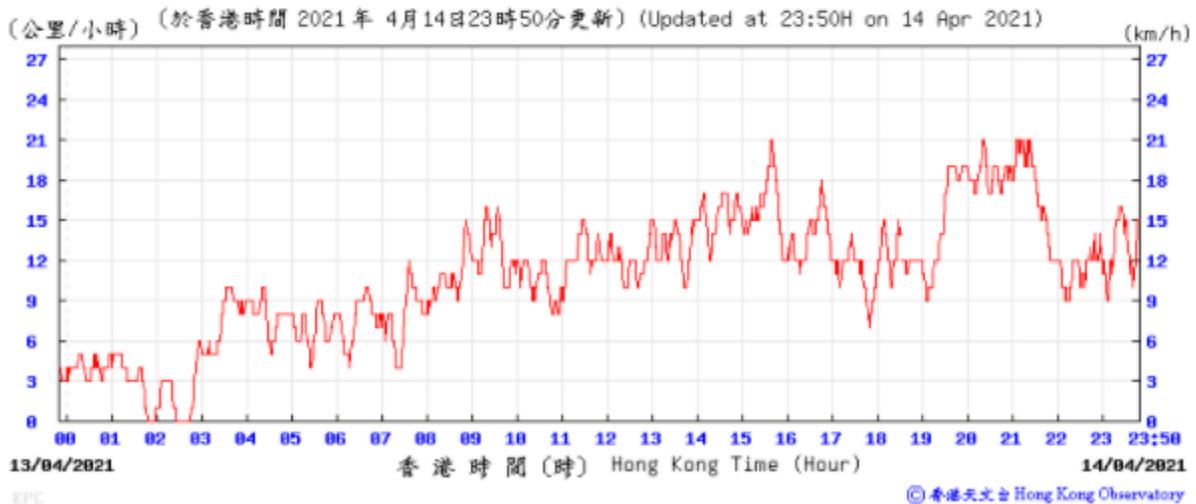
Pressure:



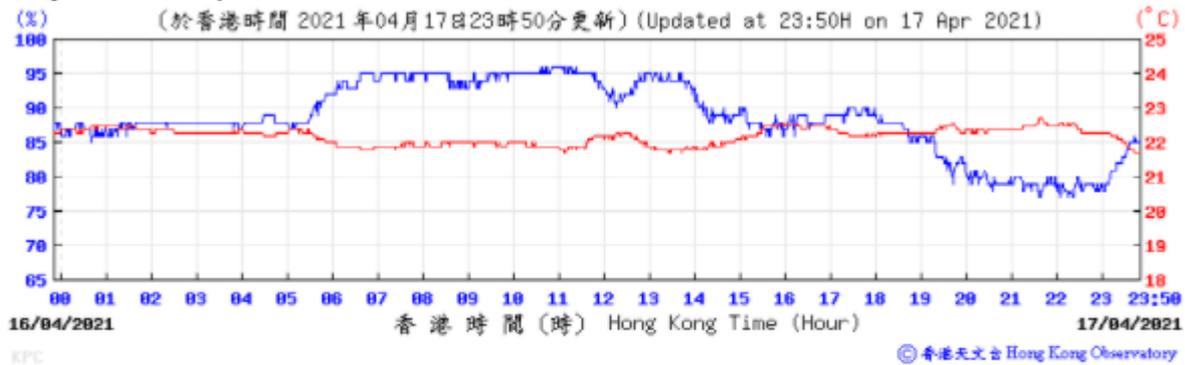
Wind Direction:



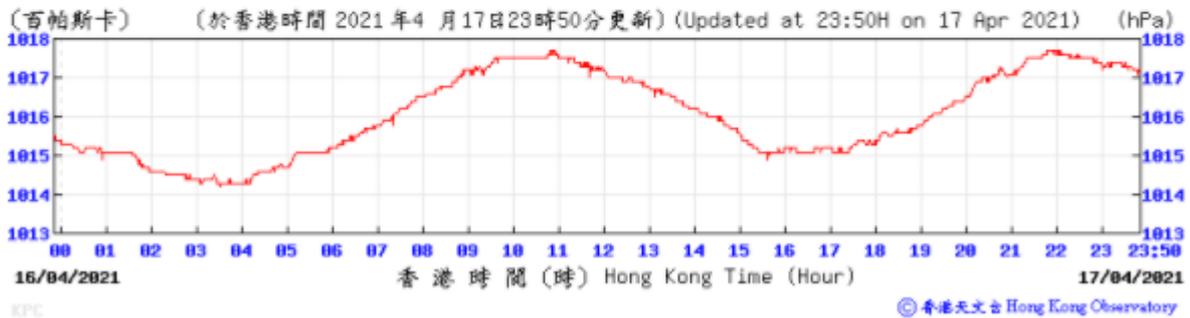
Wind Speed:



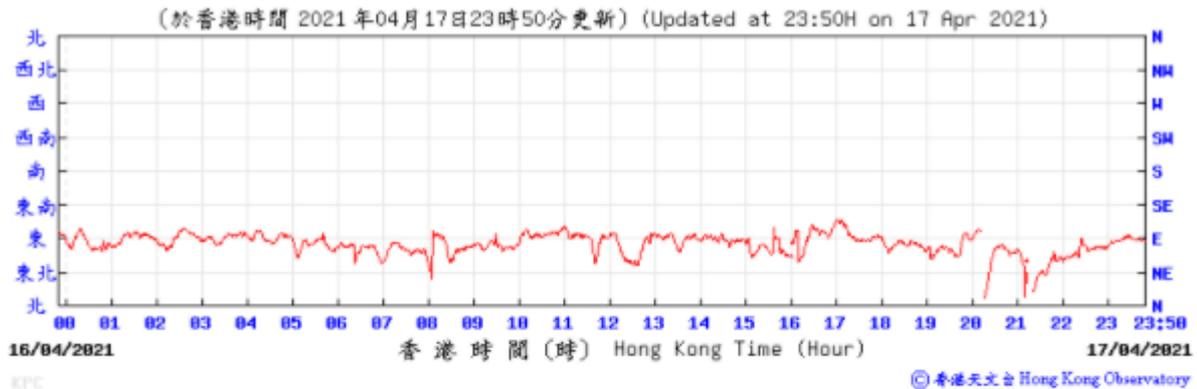
Temperature/Humidity:



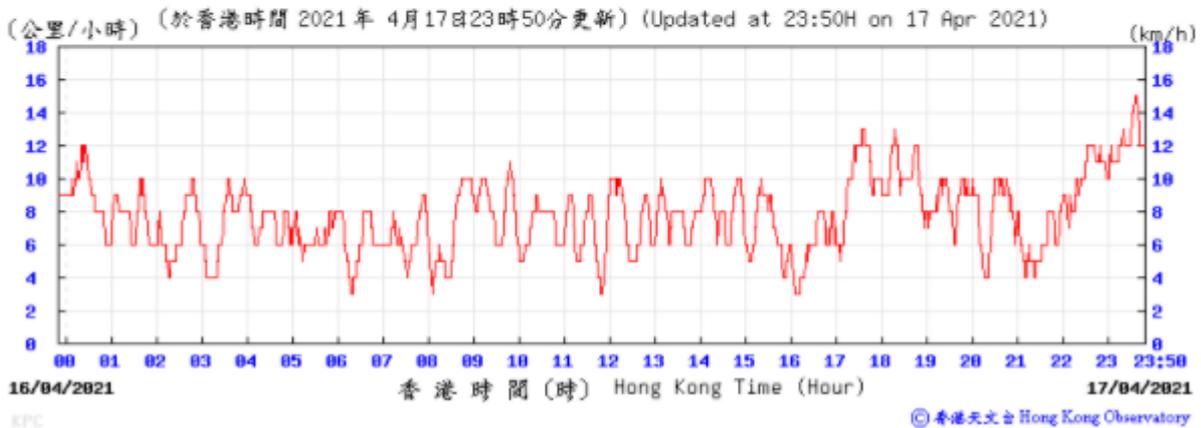
Pressure:



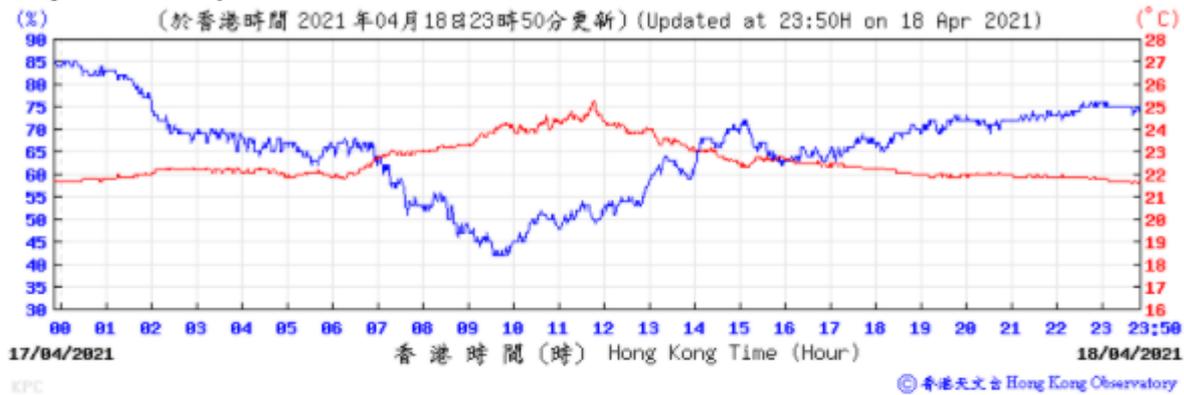
Wind Direction:



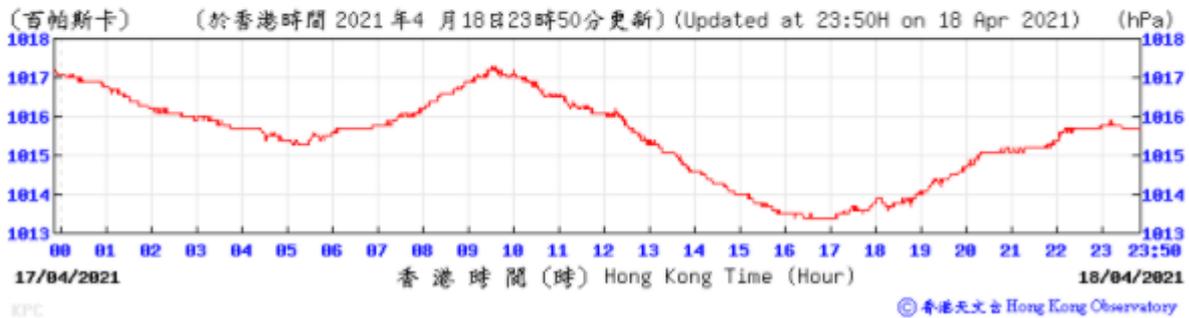
Wind Speed:



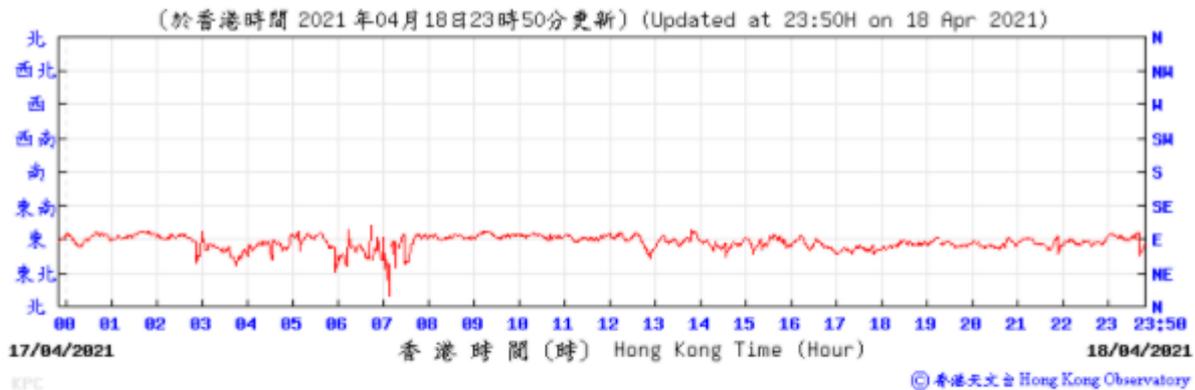
Temperature/Humidity:



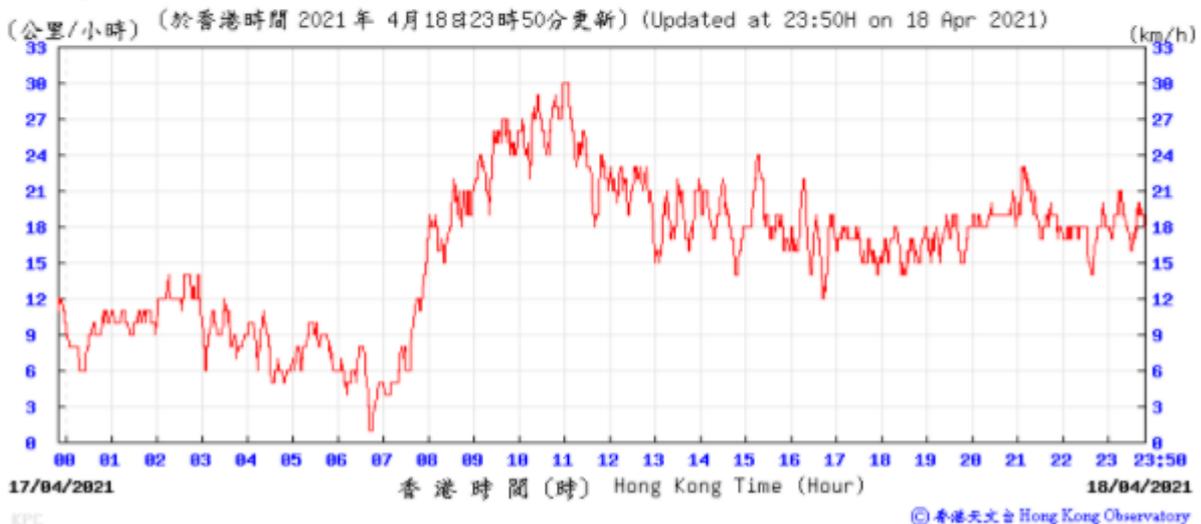
Pressure:



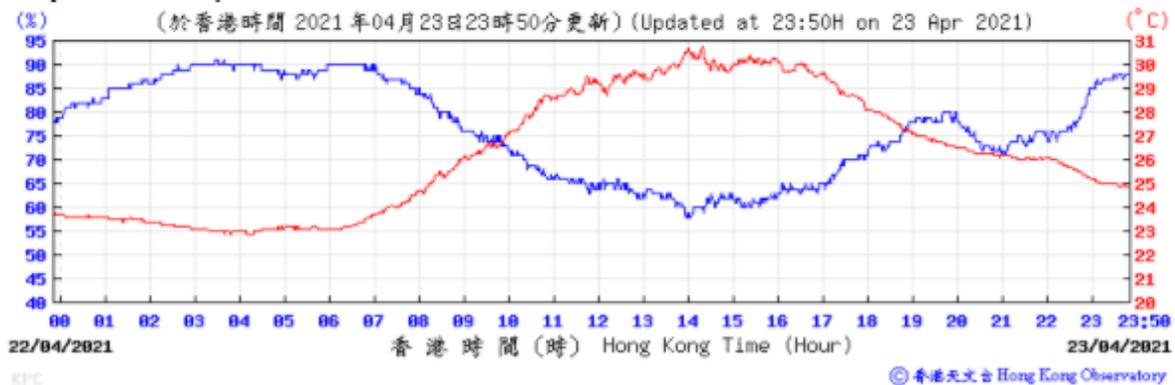
Wind Direction:



Wind Speed:



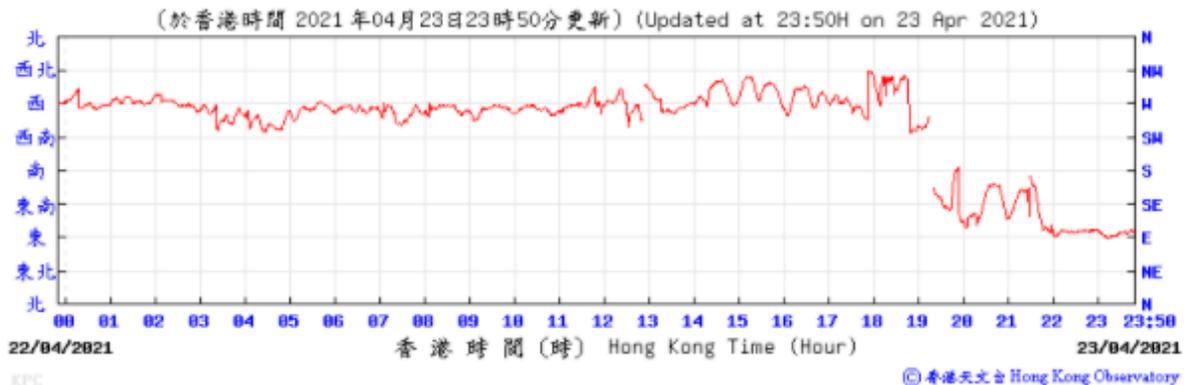
Temperature/Humidity:



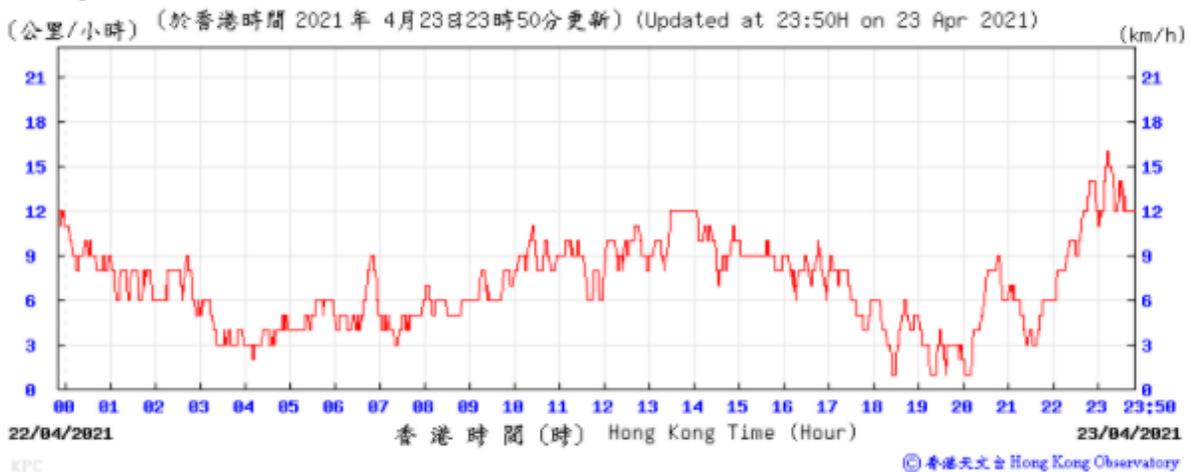
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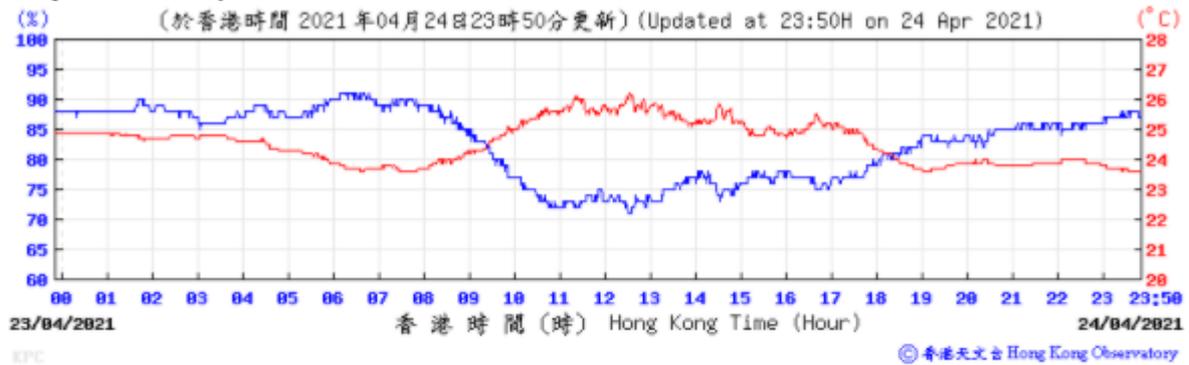
Wind Direction:



Wind Speed:



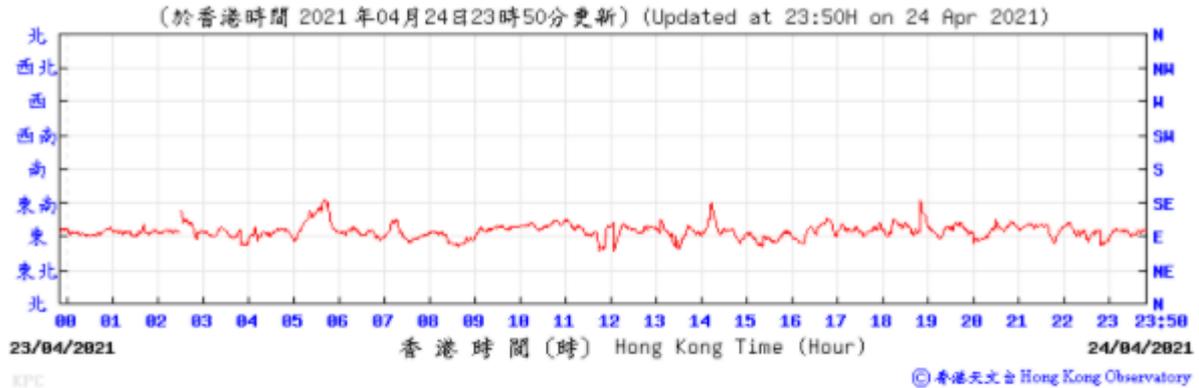
Temperature Humidity:



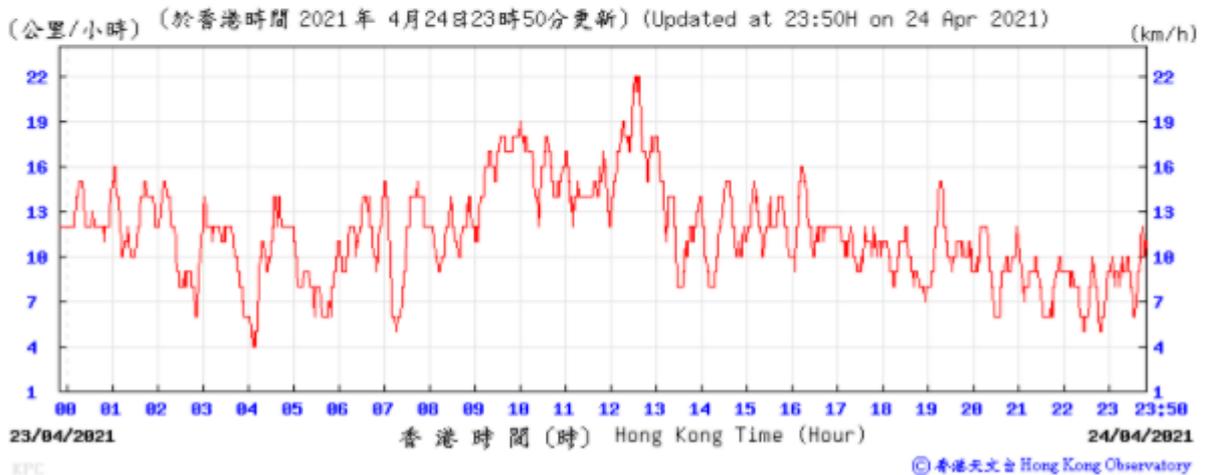
Pressure:



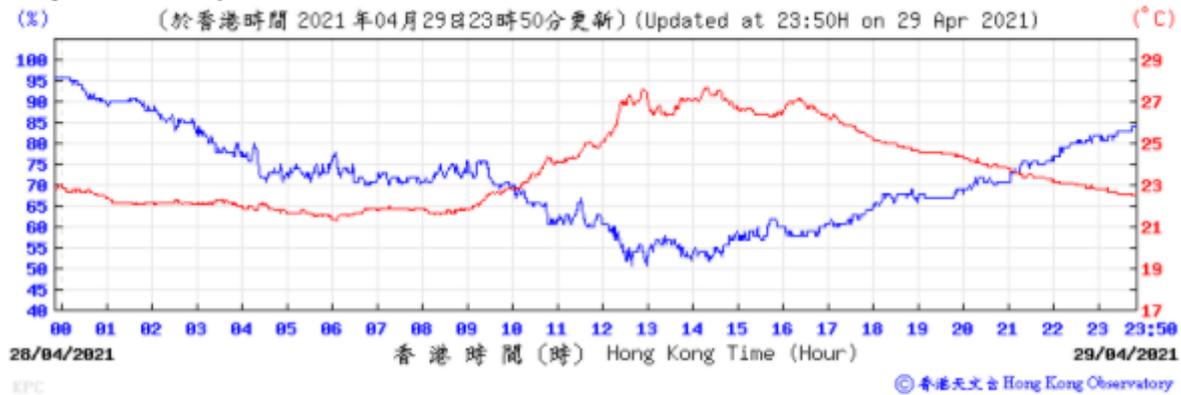
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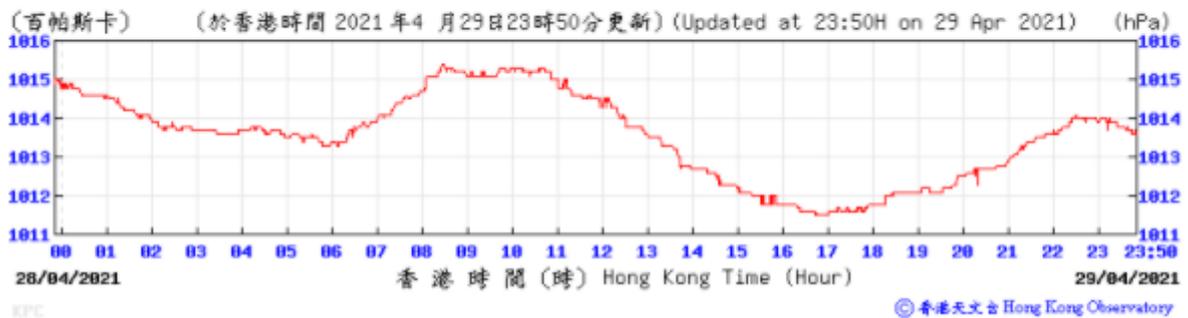
Wind Speed:



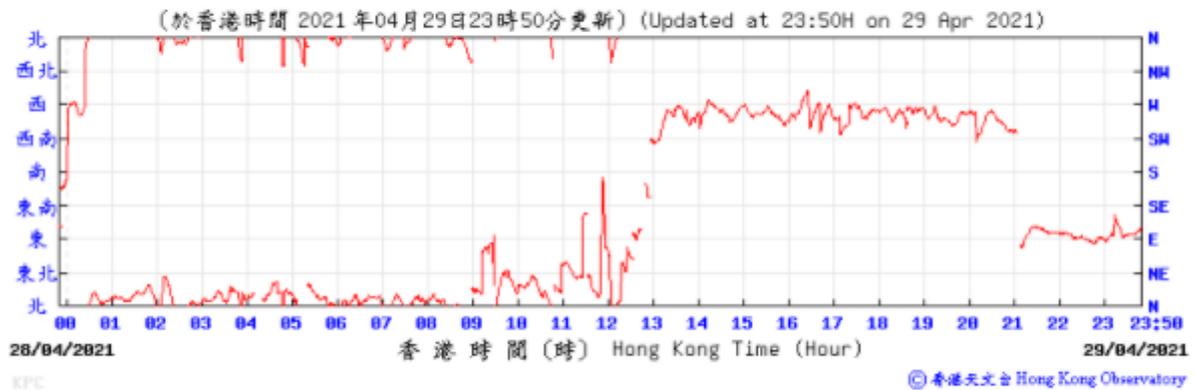
Temperature/Humidity:



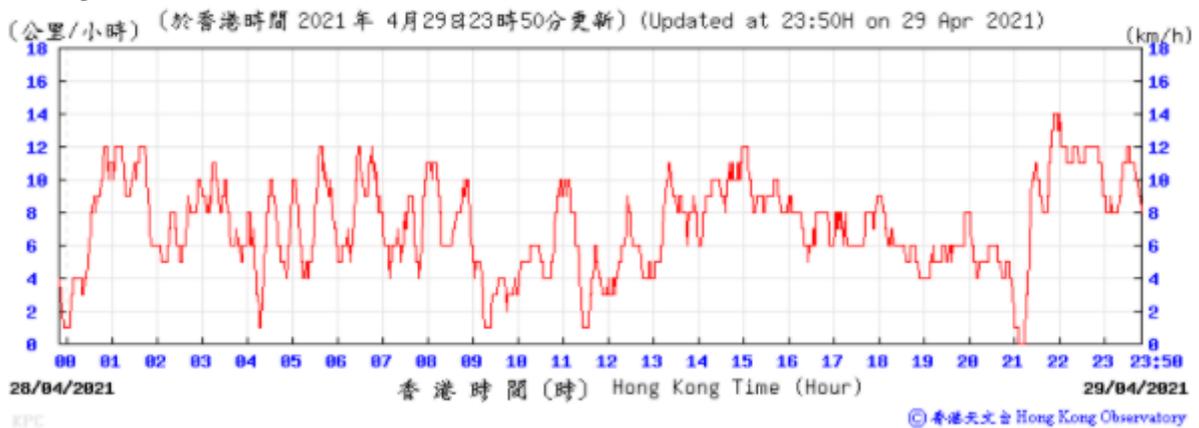
Pressure:



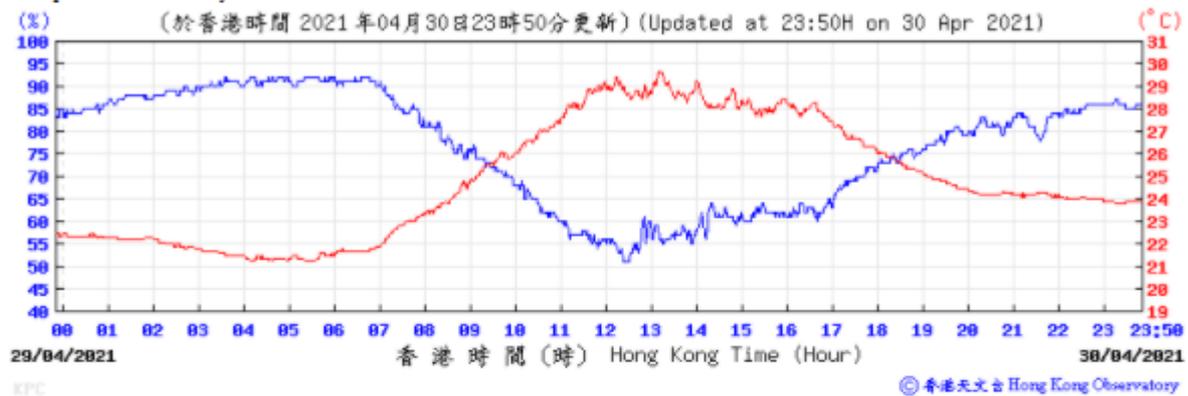
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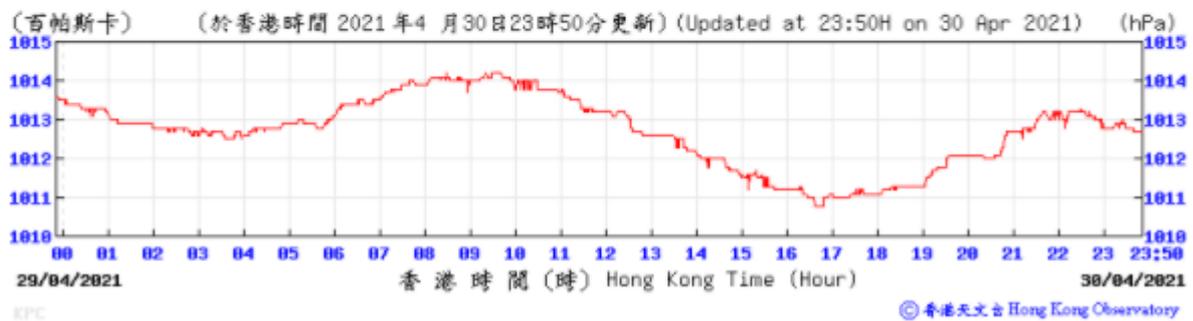
Wind Speed:



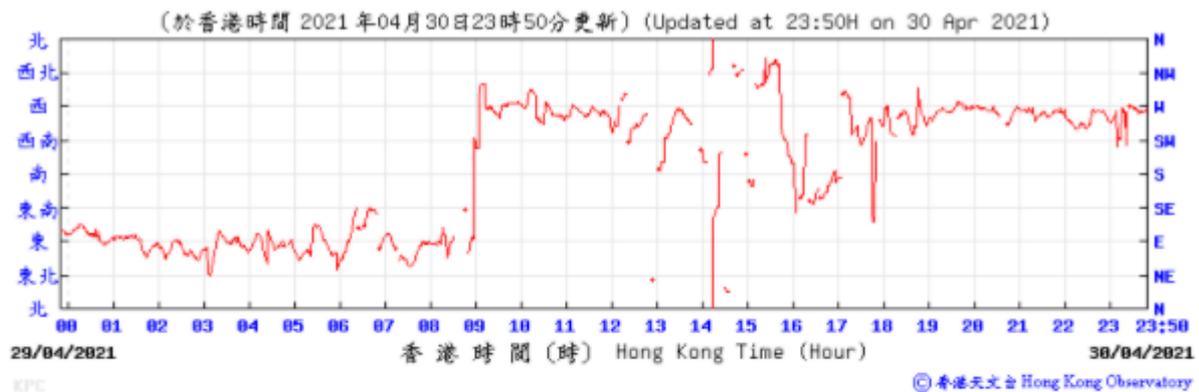
Temperature/Humidity:



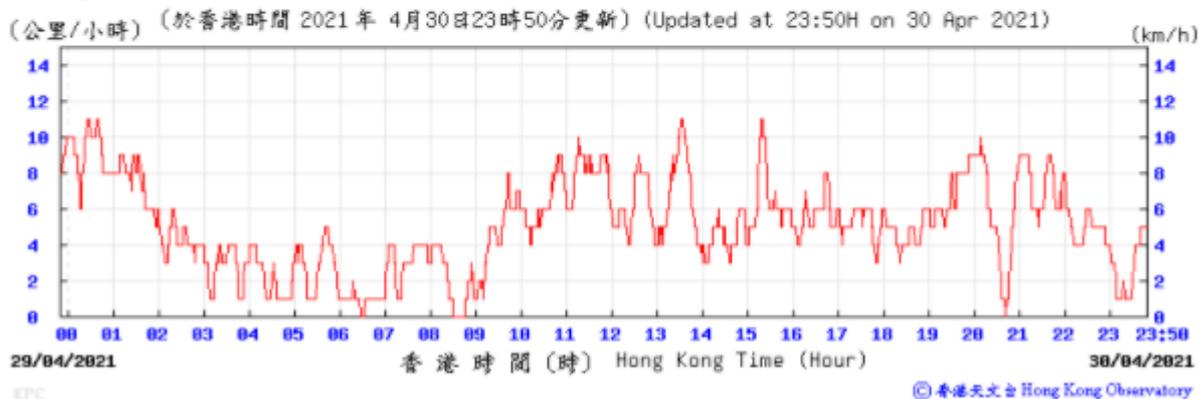
Pressure:



Wind Direction:



Wind Speed:

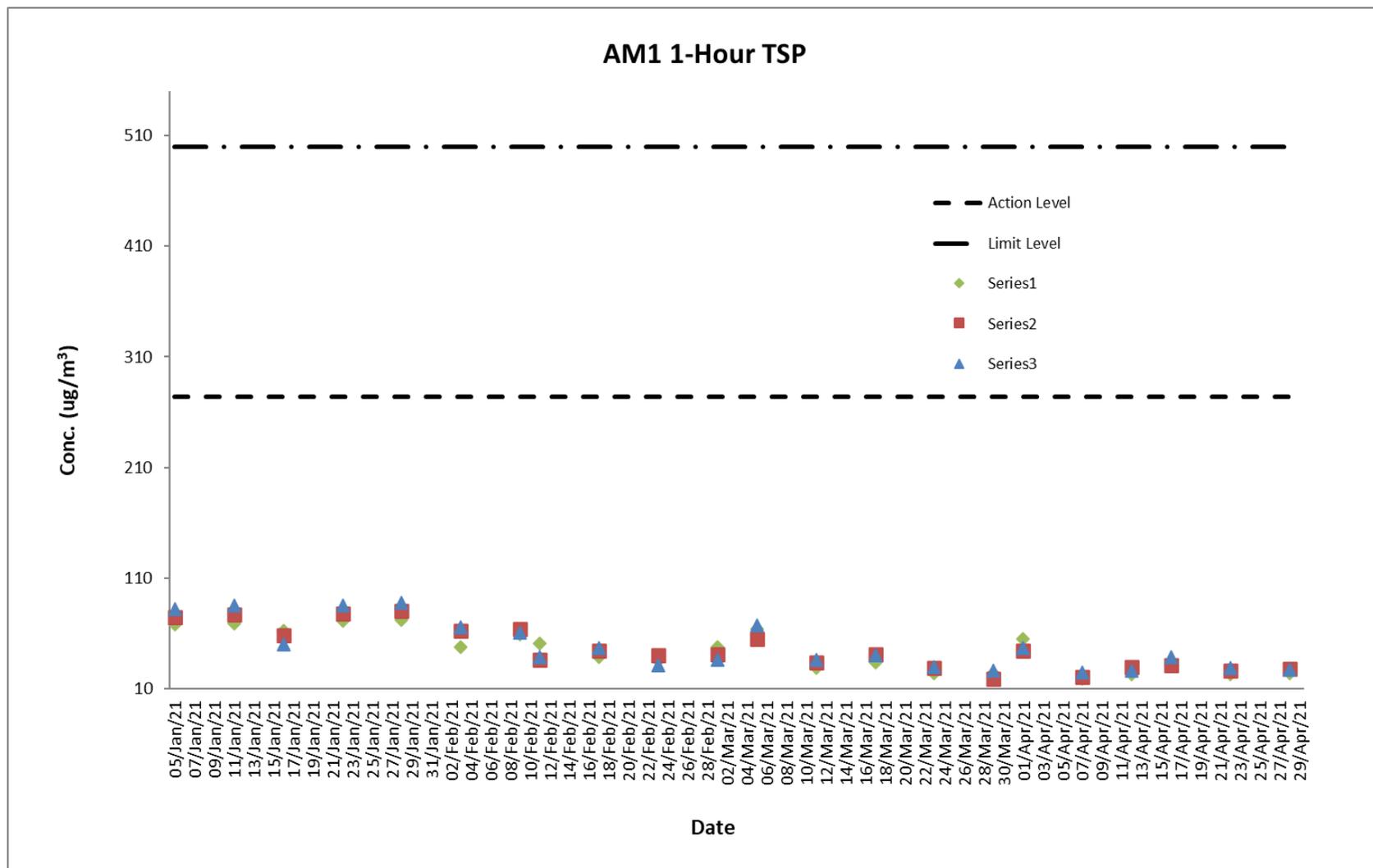


E. Graphical Plots of the Monitoring Results

Air Quality Monitoring Result at Station AM1 (1-hour TSP)

Date	Weather Condition	Time	Conc. ($\mu\text{g}/\text{m}^3$)			Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
			1 st Hour	2 nd Hour	3 rd Hour		
03-Feb-21	Sunny	8:23 - 11:23	48	62	66	273.7	500
09-Feb-21	Cloudy	8:22 - 11:22	59	64	61	273.7	500
11-Feb-21	Cloudy	8:32 - 11:32	51	36	39	273.7	500
17-Feb-21	Sunny	8:22 - 11:22	39	44	47	273.7	500
23-Feb-21	Sunny	8:22 - 11:22	35	40	31	273.7	500
01-Mar-21	Fine	8:22 - 11:22	48	41	36	273.7	500
05-Mar-21	Cloudy	8:22 - 11:22	64	55	67	273.7	500
11-Mar-21	Cloudy	8:27 - 11:27	29	34	36	273.7	500
17-Mar-21	Sunny	8:22 - 11:22	34	41	40	273.7	500
23-Mar-21	Cloudy	8:27 - 11:27	24	29	30	273.7	500
29-Mar-21	Fine	8:32 - 11:32	24	19	26	273.7	500
01-Apr-21	Fine	8:22 - 11:22	55	44	47	273.7	500
07-Apr-21	Cloudy	8:22 - 11:22	19	21	25	273.7	500
12-Apr-21	Cloudy	8:22 - 11:22	23	30	26	273.7	500
16-Apr-21	Cloudy	8:32 - 11:32	32	31	39	273.7	500
22-Apr-21	Sunny	8:32 - 11:32	23	26	29	273.7	500
28-Apr-21	Cloudy	8:22 - 11:22	24	28	27	273.7	500

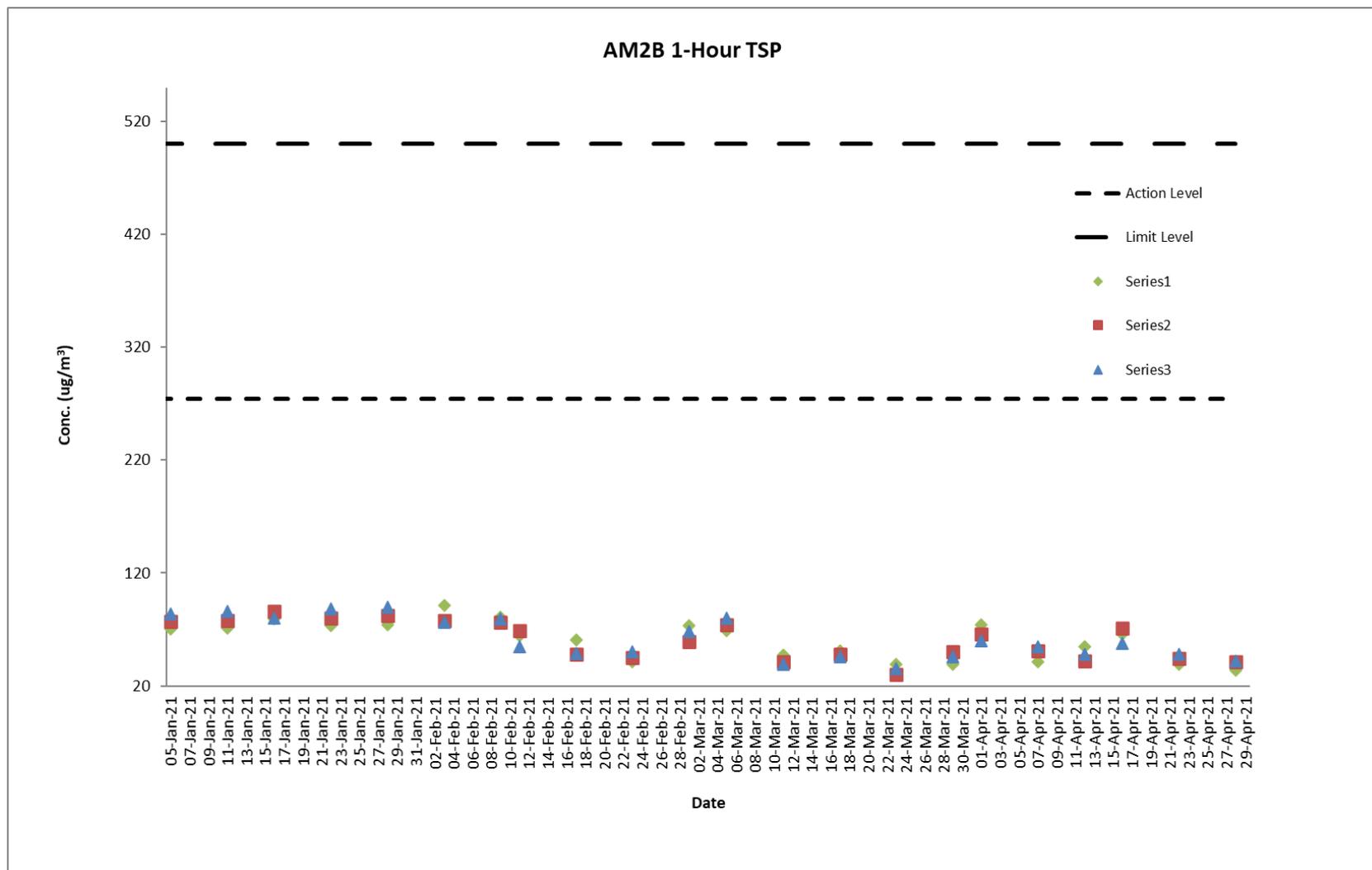
Graphical Presentation of Air Quality Monitoring Result at Station AM1 (1-hour TSP)



Air Quality Monitoring Result at Station AM2B (1-hour TSP)

Date	Weather Condition	Time	Conc. ($\mu\text{g}/\text{m}^3$)			Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
			1 st Hour	2 nd Hour	3 rd Hour		
03-Feb-21	Sunny	8:46 - 11:46	91	78	76	274.2	500
09-Feb-21	Cloudy	8:42 - 11:42	81	76	79	274.2	500
11-Feb-21	Cloudy	8:53 - 11:53	64	69	55	274.2	500
17-Feb-21	Sunny	8:38 - 11:38	61	48	49	274.2	500
23-Feb-21	Sunny	8:42 - 11:42	41	45	50	274.2	500
01-Mar-21	Fine	8:45 - 11:45	73	59	68	274.2	500
05-Mar-21	Cloudy	8:42 - 11:42	69	74	80	274.2	500
11-Mar-21	Cloudy	8:46 - 11:46	47	41	39	274.2	500
17-Mar-21	Sunny	8:42 - 11:42	51	48	46	274.2	500
23-Mar-21	Cloudy	8:50 - 11:50	39	30	35	274.2	500
29-Mar-21	Fine	8:52 - 11:52	39	50	46	274.2	500
01-Apr-21	Fine	8:46 - 11:46	74	66	60	274.2	500
07-Apr-21	Cloudy	8:43 - 11:43	41	51	55	274.2	500
12-Apr-21	Cloudy	8:42 - 11:42	55	42	48	274.2	500
16-Apr-21	Cloudy	8:52 - 11:52	66	71	58	274.2	500
22-Apr-21	Sunny	8:50 - 11:50	39	44	48	274.2	500
28-Apr-21	Cloudy	8:42 - 11:42	34	41	42	274.2	500

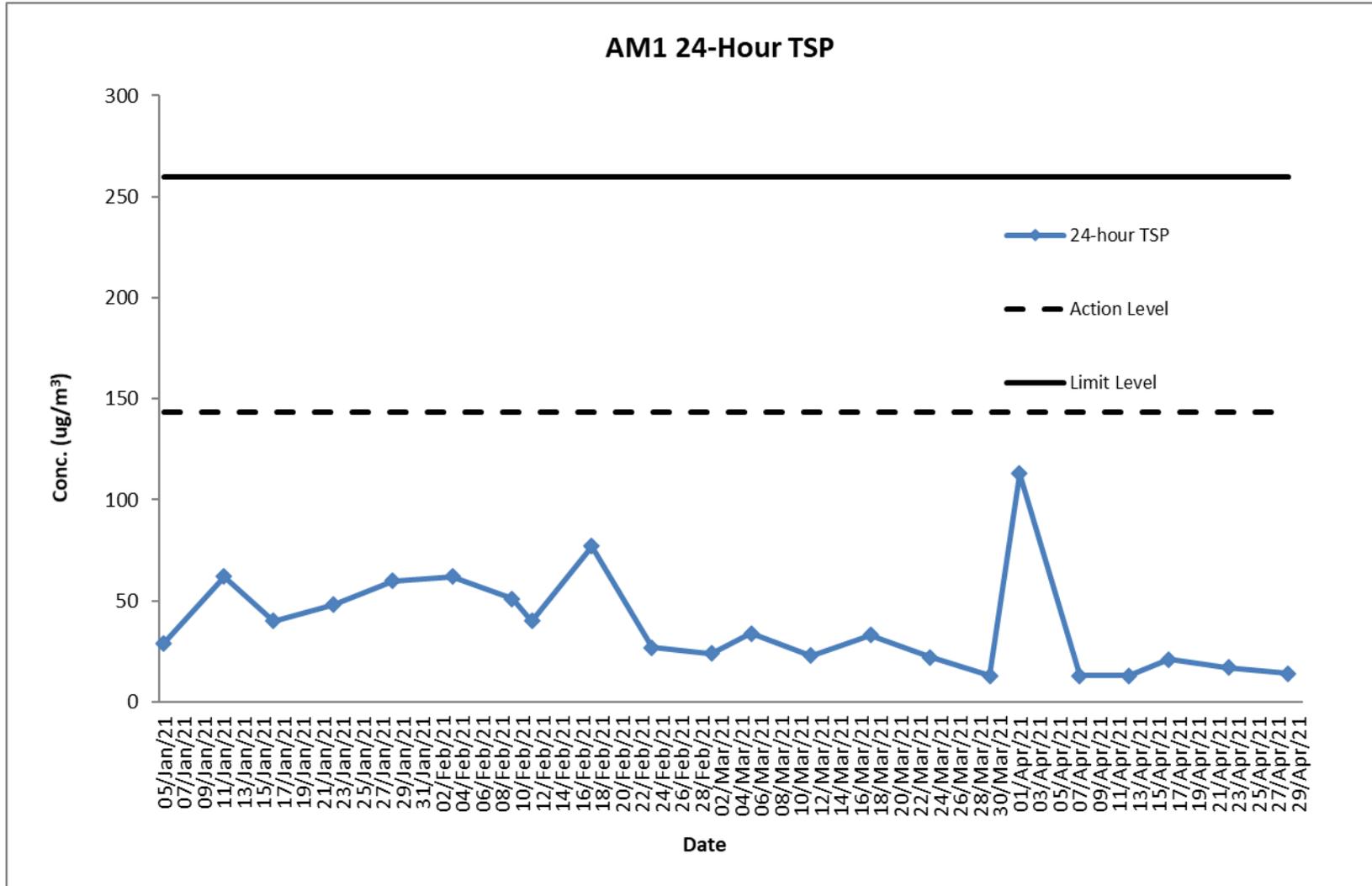
Graphical Presentation of Air Quality Monitoring Result at Station AM2B (1-hour TSP)



Air Quality Monitoring Result at Station AM1 (24-hour TSP)

Start		Finish		Filter Weight (g)		Reading		Sampling Time (hrs)	Flow Rate (m ³ /min)			Conc. (µg/m ³)	Weather Condition	Action Level	Limit Level
Date	Time	Date	Time	Initial	Final	Initial	Final		Initial	Final	Average				
03-Feb-21	08:20	04-Feb-21	08:20	2.6701	2.7829	22904.38	22928.38	24	1.26	1.26	1.26	62	Sunny	143.6	260
09-Feb-21	08:20	10-Feb-21	08:20	2.6828	2.7762	22928.38	22952.38	24	1.26	1.26	1.26	51	Cloudy	143.6	260
11-Feb-21	08:30	12-Feb-21	08:30	2.6967	2.7692	22952.38	22976.38	24	1.26	1.26	1.26	40	Cloudy	143.6	260
17-Feb-21	08:20	18-Feb-21	08:20	2.681	2.8205	22976.38	23000.38	24	1.26	1.26	1.26	77	Sunny	143.6	260
23-Feb-21	08:20	24-Feb-21	08:20	2.6778	2.7265	23000.38	23024.38	24	1.26	1.26	1.26	27	Sunny	143.6	260
01-Mar-21	08:20	02-Mar-21	08:20	2.6587	2.7014	23024.38	23048.38	24	1.26	1.26	1.26	24	Fine	143.6	260
05-Mar-21	08:20	06-Mar-21	08:20	2.6606	2.7224	23048.38	23072.38	24	1.26	1.26	1.26	34	Cloudy	143.6	260
11-Mar-21	08:25	12-Mar-21	08:25	2.6643	2.7064	23072.38	23096.38	24	1.26	1.26	1.26	23	Cloudy	143.6	260
17-Mar-21	08:20	18-Mar-21	08:20	2.6746	2.7351	23096.38	23120.38	24	1.26	1.26	1.26	33	Sunny	143.6	260
23-Mar-21	08:25	24-Mar-21	08:25	2.6786	2.7176	23120.38	23144.38	24	1.23	1.23	1.23	22	Cloudy	143.6	260
29-Mar-21	08:30	30-Mar-21	08:30	2.6729	2.6958	23144.38	23168.38	24	1.23	1.23	1.23	13	Fine	143.6	260
01-Apr-21	08:20	02-Apr-21	08:20	2.6687	2.8693	23168.38	23192.38	24	1.23	1.23	1.23	113	Fine	143.6	260
07-Apr-21	08:20	08-Apr-21	08:20	2.6653	2.6878	23192.38	23216.38	24	1.23	1.23	1.23	13	Cloudy	143.6	260
12-Apr-21	08:20	13-Apr-21	08:20	2.6722	2.6957	23216.38	23240.38	24	1.23	1.23	1.23	13	Cloudy	143.6	260
16-Apr-21	08:30	17-Apr-21	08:30	2.6783	2.7163	23240.38	23264.38	24	1.23	1.23	1.23	21	Cloudy	143.6	260
22-Apr-21	08:30	23-Apr-21	08:30	2.6770	2.7066	23264.38	23288.38	24	1.23	1.23	1.23	17	Sunny	143.6	260
28-Apr-21	08:20	29-Apr-21	08:20	2.6649	2.6892	23288.38	23312.38	24	1.23	1.23	1.23	14	Cloudy	143.6	260

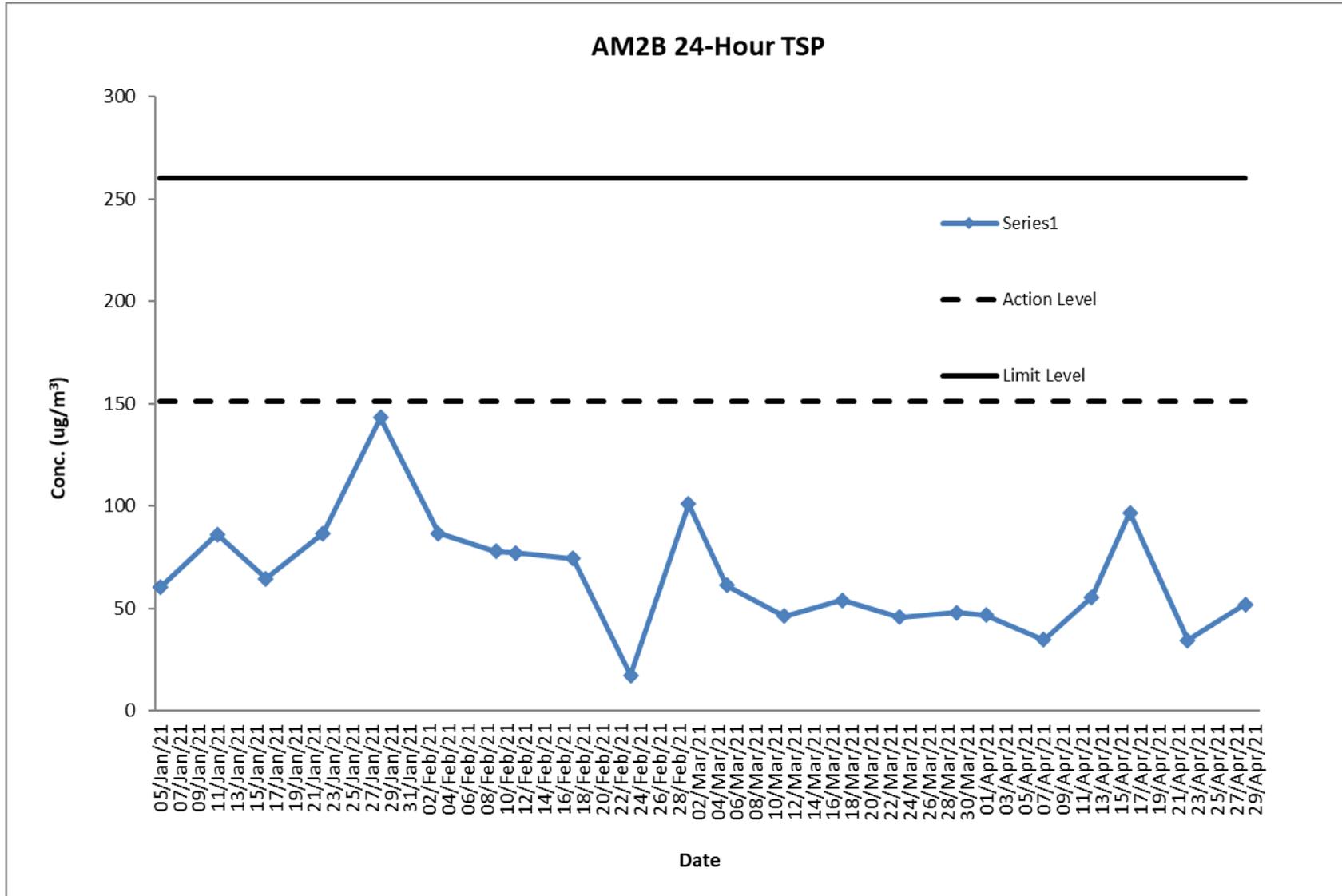
Graphical Presentation of Air Quality Monitoring Result at Station AM1 (24-hour TSP)



Air Quality Monitoring Result at Station AM2B (24-hour TSP)

Start		Finish		Filter Weight (g)		Reading		Sampling Time (hrs)	Flow Rate (m ³ /min)			Conc. (µg/m ³)	Weather Condition	Action Level	Limit Level
Date	Time	Date	Time	Initial	Final	Initial	Final		Initial	Final	Average				
03-Feb-21	08:40	04-Feb-21	08:40	2.6685	2.8206	22459.05	22483.05	24	1.22	1.22	1.22	87	Sunny	151.1	260
09-Feb-21	08:20	10-Feb-21	08:20	2.6975	2.8342	22483.05	22507.05	24	1.22	1.22	1.22	78	Cloudy	151.1	260
11-Feb-21	08:46	12-Feb-21	08:46	2.6974	2.8328	22507.05	22531.05	24	1.22	1.22	1.22	77	Cloudy	151.1	260
17-Feb-21	08:36	18-Feb-21	08:36	2.6810	2.8115	22531.05	22555.05	24	1.22	1.22	1.22	74	Sunny	151.1	260
23-Feb-21	08:36	24-Feb-21	08:36	2.6622	2.6927	22555.05	22579.05	24	1.22	1.22	1.22	17	Sunny	151.1	260
01-Mar-21	08:36	02-Mar-21	08:36	2.6570	2.8343	22579.05	22603.05	24	1.22	1.22	1.22	101	Fine	151.1	260
05-Mar-21	08:36	06-Mar-21	08:36	2.6698	2.7774	22603.05	22627.05	24	1.22	1.22	1.22	61	Cloudy	151.1	260
11-Mar-21	08:40	12-Mar-21	08:40	2.6772	2.7585	22627.05	22651.05	24	1.22	1.22	1.22	46	Cloudy	151.1	260
17-Mar-21	08:36	18-Mar-21	08:36	2.6712	2.7660	22651.05	22675.05	24	1.22	1.22	1.22	54	Sunny	151.1	260
23-Mar-21	08:43	24-Mar-21	08:43	2.6753	2.7530	22675.05	22699.05	24	1.18	1.18	1.18	46	Cloudy	151.1	260
29-Mar-21	08:46	30-Mar-21	08:46	2.6669	2.7482	22699.05	22723.05	24	1.18	1.18	1.18	48	Fine	151.1	260
01-Apr-21	08:36	02-Apr-21	08:36	2.6725	2.7516	22723.05	22747.05	24	1.18	1.18	1.18	47	Fine	151.1	260
07-Apr-21	08:36	08-Apr-21	08:36	2.6617	2.7204	22747.05	22771.05	24	1.18	1.18	1.18	35	Cloudy	151.1	260
12-Apr-21	08:38	13-Apr-21	08:38	2.6725	2.7669	22771.05	22795.05	24	1.18	1.18	1.18	56	Cloudy	151.1	260
16-Apr-21	08:46	17-Apr-21	08:46	2.6794	2.8436	22795.05	22819.05	24	1.18	1.18	1.18	97	Cloudy	151.1	260
22-Apr-21	08:44	23-Apr-21	08:44	2.6829	2.7414	22819.05	22843.05	24	1.18	1.18	1.18	34	Sunny	151.1	260
28-Apr-21	08:35	29-Apr-21	08:35	2.6764	2.7646	22843.05	22867.05	24	1.18	1.18	1.18	52	Cloudy	151.1	260

Graphical Presentation of Air Quality Monitoring Result at Station AM2B (24-hour TSP)



Noise Monitoring Result at Station NM1A

Date	Time	Measured L10 dB(A)	Measured L90 dB(A)	Leq (30 min.) dB(A)
03-Feb-21	09:30	66.2	62.3	69
03-Feb-21	09:35	66.2	62.4	
03-Feb-21	09:40	67.7	63.8	
03-Feb-21	09:45	67.6	63.3	
03-Feb-21	09:50	68.4	64.1	
03-Feb-21	09:55	67.6	63.4	
09-Feb-21	09:24	66.5	62.1	68
09-Feb-21	09:29	67.1	63.6	
09-Feb-21	09:34	66.3	62.5	
09-Feb-21	09:39	66.3	62.4	
09-Feb-21	09:44	67.5	63.4	
09-Feb-21	09:49	68.0	64.7	
17-Feb-21	09:25	68.3	64.1	69
17-Feb-21	09:30	66.3	62.4	
17-Feb-21	09:35	67.1	63.8	
17-Feb-21	09:40	67.6	63.7	
17-Feb-21	09:45	68.4	64.1	
17-Feb-21	09:50	66.0	62.3	
23-Feb-21	09:25	66.4	62.7	68
23-Feb-21	09:30	67.1	63.6	
23-Feb-21	09:35	68.4	64.6	
23-Feb-21	09:40	66.3	62.1	
23-Feb-21	09:45	67.4	63.7	
23-Feb-21	09:50	68.5	64.9	
01-Mar-21	09:28	66.6	62.9	68
01-Mar-21	09:33	65.1	61.7	
01-Mar-21	09:38	67.8	63.7	
01-Mar-21	09:43	67.3	63.4	
01-Mar-21	09:48	68.7	64.6	
01-Mar-21	09:53	66.5	62.6	
11-Mar-21	09:30	66.4	62.3	68
11-Mar-21	09:35	67.0	63.9	
11-Mar-21	09:40	66.1	62.3	
11-Mar-21	09:45	66.2	62.8	
11-Mar-21	09:50	67.5	63.1	
11-Mar-21	09:55	67.6	63.5	
17-Mar-21	09:25	66.0	62.4	68
17-Mar-21	09:30	65.5	61.6	
17-Mar-21	09:35	67.3	63.7	
17-Mar-21	09:40	68.1	64.2	
17-Mar-21	09:45	66.0	62.9	
17-Mar-21	09:50	66.8	62.3	
23-Mar-21	09:33	66.9	62.3	68
23-Mar-21	09:38	68.2	64.7	
23-Mar-21	09:43	67.0	63.4	
23-Mar-21	09:48	66.5	62.6	
23-Mar-21	09:53	66.5	62.6	
23-Mar-21	09:58	68.6	64.9	

29-Mar-21	09:31	66.4	62.6	68
29-Mar-21	09:36	67.0	63.2	
29-Mar-21	09:41	68.2	64.5	
29-Mar-21	09:46	66.2	62.4	
29-Mar-21	09:51	66.6	62.9	
29-Mar-21	09:56	66.7	62.5	
07-Apr-21	09:26	65.4	61.7	67
07-Apr-21	09:31	66.0	62.4	
07-Apr-21	09:36	66.3	62.5	
07-Apr-21	09:41	67.3	63.1	
07-Apr-21	09:46	65.2	61.8	
07-Apr-21	09:51	66.4	62.7	
12-Apr-21	09:24	67.4	63.5	68
12-Apr-21	09:29	66.0	62.5	
12-Apr-21	09:34	66.4	62.7	
12-Apr-21	09:39	67.2	63.6	
12-Apr-21	09:44	66.7	62.6	
12-Apr-21	09:49	66.4	62.8	
22-Apr-21	08:56	66.0	62.2	69
22-Apr-21	09:01	67.2	63.3	
22-Apr-21	09:06	68.3	64.9	
22-Apr-21	09:11	68.4	64.5	
22-Apr-21	09:16	67.4	63.2	
22-Apr-21	09:21	67.7	63.6	
28-Apr-21	09:25	67.4	63.3	69
28-Apr-21	09:30	68.6	64.2	
28-Apr-21	09:35	68.7	64.5	
28-Apr-21	09:40	67.7	63.0	
28-Apr-21	09:45	67.8	63.1	
28-Apr-21	09:50	66.3	62.9	

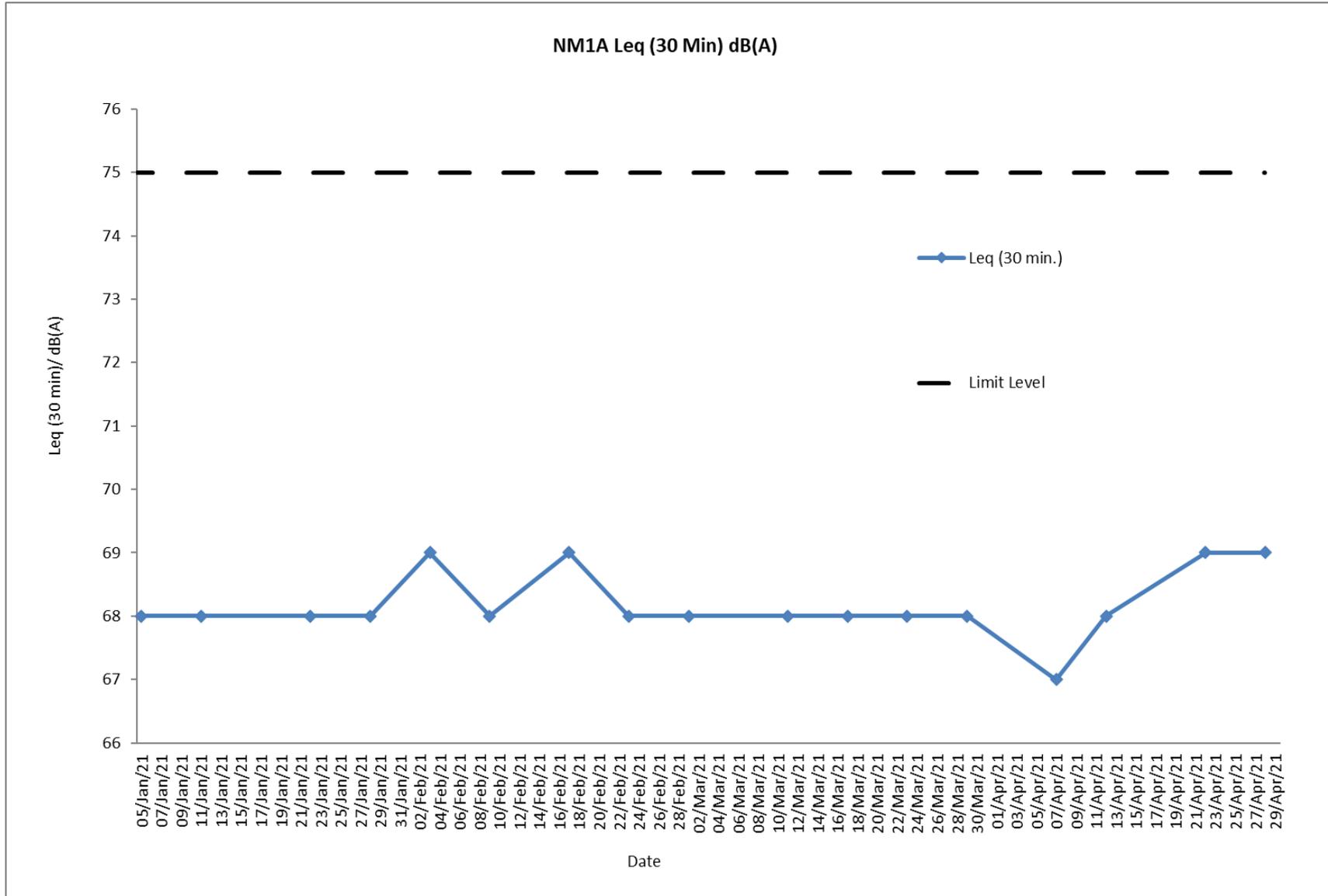
Remarks:

+3dB (A) correction was applied to free-field measurement.



The station set-up of a free-field measurement at Station NM1A.

Graphical Presentation Noise Monitoring Result at Station NM1A



F. Waste Flow table

M+ Museum

Table F-1: Monthly Waste Flow Table for M+ Museum

Month	Actual Quantities of Inert C&D Materials Generated Monthly							Actual Quantities of 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	Disposed to Sorting Facility	Imported Fill	Metals	Paper/ Cardboard Packaging	Plastics	Wood/ Timber	Chemical Waste	Others, e.g. General Refuse
	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)
2015													
Nov	46607.4	0.0	0.0	8240.0	38367.4	0.0	0.0	76.2	0.0	0.0	0.0	0.0	67.6
Dec	29652.9	0.0	0.0	29621.4	31.5	0.0	0.0	26.3	0.0	0.0	0.0	1.0	66.0
Sub-total (2015)	76260.3	0.0	0.0	37861.4	38398.9	0.0	0.0	102.5	0.0	0.0	0.0	1.0	133.6
2016													
Jan	21077.4	0.0	6352.0	14576.0	149.4	0.0	0.0	18.8	0.0	0.0	0.0	0.0	23.2
Feb	7626.2	0.0	3424.0	4048.0	154.2	0.0	0.0	59.8	0.0	0.0	0.0	0.0	20.5
Mar	10442.5	0.0	1600.0	7888.0	954.5	0.0	0.0	29.7	0.0	0.0	0.0	0.0	46.3
Apr	30413.2	0.0	6352.0	23408.0	653.2	0.0	0.0	25.8	0.1	0.0	27.8	0.0	34.5
May	24083.5	0.0	112.0	23216.0	755.5	0.0	0.0	61.5	0.4	0.0	33.6	0.0	62.3
Jun	7880.1	0.0	4736.0	2384.0	760.1	0.0	0.0	106.6	0.1	0.0	14.6	0.0	52.8
Jul	5893.1	0.0	2656.0	2240.0	997.1	0.0	0.0	77.6	0.0	0.0	33.6	0.0	83.1
Aug	13709.6	0.0	0.0	12432.0	1277.6	0.0	0.0	111.3	0.2	0.0	38.5	0.0	104.9
Sep	6702.0	0.0	0.0	5648.0	1000.1	53.9	0.0	104.2	0.0	0.0	45.5	0.2	107.9
Oct	2103.6	0.0	0.0	496.0	1595.4	12.2	0.0	83.0	0.4	0.0	73.5	0.0	108.2
Nov	3302.7	0.0	0.0	2384.0	855.5	63.2	0.0	88.4	0.6	0.0	63.0	0.0	129.1
Dec	899.8	0.0	0.0	736.0	126.8	37.0	0.0	48.3	0.6	0.0	70.0	0.0	89.0
Sub-total (2016)	134133.5	0.0	25232.0	99456.0	9279.3	166.3	0.0	814.9	2.3	0.0	400.1	0.2	861.8

Table F-1: Monthly Waste Flow Table for M+ Museum

Month	Actual Quantities of Inert C&D Materials Generated Monthly							Actual Quantities of 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	Disposed to Sorting Facility	Imported Fill	Metals	Paper/ Cardboard Packaging	Plastics	Wood/ Timber	Chemical Waste	Others, e.g. General Refuse
	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)
2017													
Jan	675.2	0.0	0.0	432.0	237.9	5.3	0.0	79.5	1.0	0.0	70.0	0.0	79.7
Feb	927.7	0.0	0.0	768.0	125.6	34.0	0.0	70.5	0.6	0.0	84.0	0.0	81.4
Mar	1856.7	0.0	0.0	1280.0	466.9	109.8	0.0	62.8	0.4	0.0	98.0	0.0	148.5
Apr	642.4	0.0	0.0	160.0	324.9	157.5	0.0	87.5	0.7	0.0	175.0	0.0	102.5
May	1118.2	0.0	0.0	528.0	416.4	173.7	0.0	118.3	0.0	0.0	280.0	0.0	139.0
June	650.0	0.0	0.0	0.0	451.6	198.4	0.0	199.7	1.4	0.0	350.0	0.0	98.7
Jul	1762.0	0.0	0.0	0.0	1466.6	295.4	0.0	36.9	1.2	0.0	244.0	0.0	164.2
Aug	1231.5	0.0	0.0	0.0	867.5	364.0	0.0	82.5	0.9	0.0	59.0	0.0	186.9
Sep	1681.7	0.0	0.0	0.0	1342.0	339.7	0.0	114.3	0.7	0.0	77.0	0.0	265.3
Oct	483.6	0.0	0.0	0.0	242.5	241.1	0.0	458.1	0.6	0.0	24.1	0.0	128.5
Nov	822.8	0.0	0.0	0.0	344.5	478.3	0.0	1168.9	0.7	0.0	140.0	0.2	219.1
Dec	601.3	0.0	0.0	0.0	236.2	365.1	0.0	995.8	0.8	0.0	320.0	0.0	241.9
Sub-total (2017)	12453.0	0.0	0.0	3168.0	6522.6	2762.4	0.0	3474.8	8.9	0.0	1921.1	0.2	1855.5
2018													
Jan	1015.3	0.0	0.0	0.0	574.1	441.2	0.0	634.6	1.5	0.0	100.0	0.0	183.6
Feb	847.6	0.0	0.0	0.0	608.3	239.3	0.0	14.2	1.0	0.0	25.0	0.0	154.9
Mar	1507.0	0.0	0.0	0.0	1102.1	404.9	0.0	647.5	1.5	0.0	120.0	0.0	264.1
Apr	2942.8	0.0	0.0	0.0	2542.4	400.4	0.0	253.4	0.3	0.0	100.0	0.0	252.5
May	2109.2	0.0	0.0	0.0	1593.3	515.9	0.0	179.4	0.4	0.0	70.0	0.0	311.4
Jun	1697.6	0.0	0.0	0.0	1162.4	535.2	0.0	81.3	0.3	0.0	105.0	0.0	188.2
Jul	945.5	0.0	0.0	0.0	646.1	299.4	0.0	47.6	0.4	0.0	150.0	0.0	277.6
Aug	730.8	0.0	0.0	0.0	461.4	269.4	0.0	29.3	0.0	0.0	40.0	0.0	109.1
Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Oct	1193.1	0.0	0.0	0.0	895.7	297.5	0.0	130.8	2.7	0.0	200.0	0.0	116.6
Nov	1608.9	0.0	0.0	0.0	841.1	767.7	0.0	139.9	1.1	0.0	245.0	0.0	213.9
Dec	1457.8	0.0	0.0	314.4	341.9	801.5	0.0	352.7	0.8	0.0	180.0	0.0	198.2
Sub-total (2018)	16055.4	0.0	0.0	314.4	10768.7	4972.3	0.0	2510.6	9.9	0.0	1335.0	0.0	2270.2

Table F-1: Monthly Waste Flow Table for M+ Museum

Month	Actual Quantities of Inert C&D Materials Generated Monthly							Actual Quantities of 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	Disposed to Sorting Facility	Imported Fill	Metals	Paper/ Cardboard Packaging	Plastics	Wood/ Timber	Chemical Waste	Others, e.g. General Refuse
	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)
2019													
Jan	1632.5	0.0	0.0	153.6	572.3	906.6	0.0	587.8	0.8	0.0	40.0	0.0	303.9
Feb	618.5	0.0	0.0	0.0	397.4	221.2	0.0	158.3	1.2	0.0	20.0	0.0	429.7
Mar	1555.1	0.0	0.0	441.6	920.2	193.2	0.0	371.3	0.0	0.0	20.0	0.0	645.2
Apr	327.4	0.0	0.0	0.0	127.3	200.2	0.0	291.4	1.3	0.0	300.0	0.9	477.4
May	712.8	0.0	0.0	361.9	116.7	234.3	0.0	197.4	0.8	0.0	320.0	0.0	531.1
Jun	219.9	0.0	0.0	0.0	95.6	124.4	0.0	199.6	0.5	0.0	350.0	0.0	448.0
Jul	445.8	0.0	0.0	0.0	171.6	274.1	0.0	137.7	1.1	0.0	300.0	0.6	553.1
Aug	692.6	0.0	0.0	55.2	354.1	283.3	0.0	139.1	0.0	0.0	0.0	0.0	596.8
Sep	549.4	0.0	0.0	72.0	218.2	259.2	0.0	374.9	0.0	0.0	420.0	0.0	560.5
Oct	373.0	0.0	0.0	0.0	204.4	168.6	0.0	161.9	0.0	1.2	450.0	0.4	657.7
Nov	681.1	0.0	0.0	192.0	263.0	226.1	0.0	143.9	0.7	0.9	380.0	0.0	659.8
Dec	727.5	0.0	0.0	240.0	341.0	146.5	0.0	476.1	0.8	0.7	345.0	0.0	682.3
Sub-total (2019)	8535.5	0.0	0.0	1516.3	3781.6	3237.7	0.0	3239.3	7.1	2.8	2945.0	1.9	6545.5
2020													
Jan	404.3	0.0	0.0	0.0	351.1	53.2	0.0	224.2	0.8	0.0	335.0	0.0	523.7
Feb	699.4	0.0	0.0	144.0	511.3	44.1	0.0	61.0	1.7	1.6	280.0	0.0	333.2
Mar	613.8	0.0	0.0	144.0	459.4	10.4	0.0	165.5	0.6	0.7	140.0	0.0	394.9
Apr	365.5	0.0	0.0	0.0	333.6	31.9	0.0	554.3	0.9	0.0	0.0	0.0	389.4
May	96.8	0.0	0.0	0.0	84.2	12.6	0.0	181.2	0.5	0.0	0.0	0.0	401.1
Jun	467.9	0.0	0.0	0.0	455.9	12.0	0.0	89.8	0.4	0.0	0.0	0.0	232.0
Jul	1022.0	0.0	0.0	0.0	1022.0	0.0	0.0	108.8	0.9	0.0	0.0	0.0	282.1
Aug	267.5	0.0	0.0	0.0	261.0	6.5	0.0	137.7	0.4	0.0	0.0	0.0	189.3
Sep	112.6	0.0	0.0	0.0	105.4	7.2	0.0	25.8	0.3	0.0	0.0	0.0	189.3
Oct	489.3	0.0	0.0	413.3	76.1	0.0	0.0	35.5	0.7	0.0	0.0	0.0	227.3
Nov	156.6	0.0	0.0	59.5	46.7	50.3	0.0	175.3	0.3	0.0	0.0	0.0	170.8
Dec	7.3	0.0	0.0	0.0	0.0	7.3	0.0	7.9	0.3	0.0	0.0	0.0	137.7
Sub-total (2020)	4702.9	0.0	0.0	760.8	3706.7	235.5	0.0	1767.1	7.6	2.4	755.0	0.0	3470.8

Table F-1: Monthly Waste Flow Table for M+ Museum

Month	Actual Quantities of Inert C&D Materials Generated Monthly							Actual Quantities of 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	Disposed to Sorting Facility	Imported Fill	Metals	Paper/ Cardboard Packaging	Plastics	Wood/ Timber	Chemical Waste	Others, e.g. General Refuse
	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)
2021													
Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	218.0
Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	118.0
Sub-total (2021)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	336.0
Total	252140.7	0.0	25232.0	143076.9	72457.6	11374.1	0.0	11909.2	35.8	5.1	7356.2	3.2	15473.4

Note:

- 0 tonne, 0 tonne and 0 tonne of inert C&D material were disposed of as public fill to Chai Wan Public Fill Barging Point, Tuen Mun Area 38 and Tseung Kwan O Area 137 Public Fill respectively in the reporting quarter.

- For inert C&D materials reused in other projects, the projects refer to (1) Green Valley; (2) Advance Works for Shek Wu Hui Sewage Treatment Works (3) Design and Construction of Kai Tak Cable Tunnel, CLP; (4) MTR Contract 1002 Whampoa Station and Overrun Tunnel; (5) CEDD Tuen Mun Area 54 Contract No. CV/2015/03; (6) Union Construction Ltd.'s site; (7) Foundation Works at Marriot Hotel at Ocean Park.(8) Ming Tai warehouses (9) No.1 Plantation Road; (10) L1 lyric theater (11) sales to Ho Jet Plant (12) to J3868 Wales Hospital Project; (13) to J3888 AA's ITT project; (14) to J3908 AA's T2 project

- Construction works of M+ Museum ended in Feb 2021

Lyric Theatre Complex

Table F-2: Monthly Waste Flow Table for Lyric Theatre Complex

Month	Actual Quantities of Inert C&D Materials Generated Monthly							Actual Quantities of 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	Disposed to Sorting Facility	Imported Fill	Metals	Paper/ Cardboard Packaging	Plastics	Wood/ Timber	Chemical Waste	Others, e.g. General Refuse
	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)
2016													
Mar	2702.1	0.0	0.0	0.0	2702.1	0.0	0.0	4.5	0.1	0.0	0.0	0.0	30.6
Apr	8631.5	0.0	0.0	0.0	8631.5	0.0	0.0	16.0	0.0	0.0	0.0	0.0	19.2
May	12487.8	0.0	0.0	0.0	12487.8	0.0	0.0	34.0	0.0	0.0	0.0	0.7	60.5
Jun	8600.8	0.0	0.0	0.0	8600.8	0.0	0.0	31.4	0.2	0.0	0.0	0.5	13.5
Jul	12624.2	0.0	0.0	0.0	12624.2	0.0	0.0	19.6	0.0	0.0	0.0	2.0	9.9
Aug	14419.9	0.0	0.0	0.0	14419.9	0.0	0.0	43.9	0.0	0.0	0.0	0.0	11.1
Sep	13671.3	0.0	0.0	0.0	13671.3	0.0	0.0	59.8	0.0	0.0	0.0	1.6	12.4
Oct	13088.9	0.0	0.0	0.0	13088.9	0.0	0.0	36.9	0.2	1.5	0.0	0.0	15.2
Nov	12424.7	0.0	0.0	0.0	12424.7	0.0	0.0	74.7	0.0	0.0	0.0	1.4	10.2
Dec	12487.6	0.0	0.0	0.0	12487.6	0.0	0.0	13.9	0.0	0.0	0.0	1.3	9.0
Sub-total (2016)	111138.8	0.0	0.0	0.0	111138.8	0.0	0.0	334.5	0.4	1.5	0.0	7.6	191.6
2017													
Jan	9607.8	0.0	0.0	0.0	9607.8	0.0	0.0	29.5	0.0	0.0	0.0	0.0	7.3
Feb	9108.2	0.0	0.0	0.0	9108.2	0.0	0.0	50.2	0.2	0.0	0.0	0.7	9.8
Mar	11361.7	0.0	0.0	0.0	11361.7	0.0	0.0	16.1	0.0	0.0	0.0	1.4	8.5
Apr	2591.5	0.0	0.0	0.0	2591.5	0.0	0.0	35.7	0.0	0.0	0.0	0.0	4.7
May	2579.3	0.0	0.0	99.0	2480.3	0.0	0.0	20.9	0.1	0.0	0.0	0.5	10.0
Jun	476.0	0.0	0.0	341.0	129.7	5.3	0.0	0.0	0.0	0.0	0.0	0.0	7.6
Jul	3419.0	0.0	0.0	804.0	2615.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.8
Aug	3730.9	0.0	0.0	1377.5	2353.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4
Sep	2108.2	0.0	0.0	1133.5	974.7	0.0	0.0	34.6	0.2	0.0	0.0	0.0	10.8
Oct	9159.0	0.0	0.0	7868.0	1291.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	9.3
Nov	5095.4	0.0	0.0	4352.0	725.2	18.1	0.0	0.0	0.0	0.0	0.0	0.0	38.8
Dec	3856.2	0.0	0.0	3076.0	780.2	0.0	0.0	0.0	0.2	0.0	0.0	0.4	8.4
Sub-total (2017)	63093.1	0.0	0.0	19051.0	44018.7	23.4	0.0	187.1	0.7	0.0	0.0	3.8	137.3

Table F-2: Monthly Waste Flow Table for Lyric Theatre Complex

Month	Actual Quantities of Inert C&D Materials Generated Monthly							Actual Quantities of 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	Disposed to Sorting Facility	Imported Fill	Metals	Paper/ Cardboard Packaging	Plastics	Wood/ Timber	Chemical Waste	Others, e.g. General Refuse
	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)
2018													
Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5
Mar	6120.2	0.0	0.0	5782.0	338.2	0.0	0.0	0.0	0.0	1.0	0.0	0.5	17.6
Apr	14460.3	0.0	0.0	12484.1	1976.3	0.0	0.0	0.0	0.0	0.2	0.0	0.0	7.6
May	59783.7	0.0	0.0	46989.0	12794.7	0.0	0.0	59.6	0.0	0.0	0.0	0.0	9.4
Jun	53117.5	0.0	0.0	37642.8	15474.7	0.0	0.0	51.5	0.2	0.0	0.0	0.0	12.8
Jul	89901.5	0.0	0.0	85317.1	4584.4	0.0	165.1	114.6	0.0	0.0	0.0	0.0	41.3
Aug	35137.3	0.0	0.0	33731.6	1405.7	0.0	214.3	148.1	0.0	0.0	0.0	0.0	48.5
Sep	4924.3	0.0	0.0	4641.2	196.1	87.0	174.6	40.0	0.0	0.0	0.0	0.0	179.2
Oct	19099.9	0.0	0.0	11301.0	7642.8	156.1	0.0	106.3	0.4	0.0	0.0	0.0	528.5
Nov	104168.0	0.0	0.0	79811.6	24351.0	5.3	0.0	54.5	0.0	0.6	0.0	0.0	31.5
Dec	62989.9	0.0	0.0	51284.4	11699.9	5.6	0.0	95.1	0.0	0.6	0.0	0.0	65.9
Sub-total (2018)	449702.6	0.0	0.0	368984.8	80463.7	254.0	553.9	669.7	0.5	2.4	0.0	0.5	943.7
2019													
Jan	74479.1	0.0	0.0	69249.5	5229.7	0.0	318.0	326.7	0.2	0.0	0.0	0.0	76.3
Feb	21969.9	0.0	0.0	17723.9	4246.0	0.0	16.5	55.2	0.0	0.0	0.0	0.0	26.7
Mar	19311.9	0.0	0.0	8569.9	10742.0	0.0	337.8	61.5	0.0	0.0	0.0	0.0	36.3
Apr	28559.9	0.0	0.0	21280.3	7279.6	0.0	0.0	32.6	0.0	0.8	0.0	0.0	24.9
May	45418.0	0.0	0.0	11200.6	34217.4	0.0	0.0	27.4	0.2	0.5	0.0	0.0	33.7
Jun	66633.4	0.0	0.0	23874.5	42748.0	10.9	59.2	11.9	0.0	0.9	0.0	0.0	35.3
Jul	36619.6	0.0	0.0	1632.7	34960.9	26.0	64.4	120.7	0.0	0.0	0.0	0.0	57.9
Aug	2526.8	0.0	0.0	0.0	2499.0	27.8	31.9	40.2	0.0	0.8	0.0	0.0	66.3
Sep	4117.6	0.0	0.0	0.0	4088.7	28.9	95.2	19.0	0.0	0.6	0.0	0.0	127.4
Oct	6974.2	0.0	0.0	0.0	6948.1	26.1	15.9	11.4	0.2	1.0	0.0	0.6	223.6
Nov	5334.4	0.0	0.0	0.0	5304.1	30.3	0.0	8.9	0.0	0.0	0.0	0.0	151.6
Dec	6236.8	0.0	0.0	0.0	6236.8	0.0	0.0	70.6	0.0	0.0	0.0	0.0	98.9
Sub-total (2019)	318181.6	0.0	0.0	153531.3	164500.1	150.1	938.9	785.8	0.6	4.6	0.0	0.6	959.0

Table F-2: Monthly Waste Flow Table for Lyric Theatre Complex

Month	Actual Quantities of Inert C&D Materials Generated Monthly							Actual Quantities of 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	Disposed to Sorting Facility	Imported Fill	Metals	Paper/ Cardboard Packaging	Plastics	Wood/ Timber	Chemical Waste	Others, e.g. General Refuse
	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)
2020													
Jan	7089.9	0.0	0.0	0.0	7089.9	0.0	0.0	10.6	0.2	0.0	0.0	0.0	65.7
Feb	16822.3	0.0	0.0	0.0	16822.3	0.0	0.0	232.2	0.1	0.0	0.0	0.0	66.3
Mar	6559.0	0.0	0.0	0.0	6559.0	0.0	110.4	63.1	0.0	0.9	0.0	0.0	138.3
Apr	4997.9	0.0	0.0	1615.7	3382.2	0.0	159.2	1123.9	1.9	0.0	0.0	0.0	113.2
May	2236.0	0.0	0.0	452.3	1783.6	0.0	0.0	406.5	0.0	0.0	0.0	0.0	188.8
Jun	1134.3	0.0	0.0	0.0	1134.3	0.0	31.5	262.6	0.2	0.6	0.0	0.0	210.6
Jul	148.8	0.0	0.0	0.0	148.8	0.0	31.5	458.5	0.5	0.0	0.0	0.0	220.0
Aug	540.7	0.0	0.0	0.0	540.7	0.0	0.0	340.8	0.0	0.0	0.0	0.0	238.3
Sep	1432.3	0.0	0.0	0.0	1432.3	0.0	0.0	750.7	0.2	0.0	0.0	0.0	291.9
Oct	1381.5	0.0	0.0	0.0	1381.5	0.0	0.0	717.9	0.2	0.0	0.0	0.0	400.2
Nov	1444.1	0.0	0.0	0.0	1437.4	6.7	475.8	473.6	0.2	0.5	0.0	0.0	377.8
Dec	793.8	0.0	0.0	0.0	793.8	0.0	0.0	478.3	0.2	0.0	0.0	0.0	435.8
Sub-total (2020)	44580.6	0.0	0.0	2068.1	42505.8	6.7	808.3	5318.7	3.7	2.0	0.0	0.0	2746.8
2021													
Jan	881.4	0.0	0.0	0.0	881.4	0.0	0.0	835.1	0.4	0.0	0.0	0.0	497.0
Feb	544.7	0.0	0.0	0.0	544.7	0.0	0.0	100.5	0.3	0.0	0.0	0.0	504.7
Mar	406.1	0.0	0.0	0.0	406.1	0.0	0.0	455.8	0.3	0.0	0.0	0.0	881.8
Apr	633.0	0.0	0.0	0.0	633.0	0.0	0.0	429.9	0.0	0.0	0.0	0.0	613.0
May	0.0												
Jun	0.0												
Jul	0.0												
Aug	0.0												
Sep	0.0												
Oct	0.0												
Nov	0.0												
Dec	0.0												
Sub-total (2021)	2465.1	0.0	0.0	0.0	2465.1	0.0	0.0	1821.2	1.0	0.0	0.0	0.0	2496.5
Total	989161.7	0.0	0.0	543635.2	445092.2	434.3	2301.1	9116.9	6.8	10.5	0.0	12.5	7474.8

Table F-2: Monthly Waste Flow Table for Lyric Theatre Complex

Month	Actual Quantities of Inert C&D Materials Generated Monthly							Actual Quantities of 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	Disposed to Sorting Facility	Imported Fill	Metals	Paper/ Cardboard Packaging	Plastics	Wood/ Timber	Chemical Waste	Others, e.g. General Refuse
	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)

Note:

- 1033.29, 550.44 and 0.00 tonnes of inert C&D material were disposed of as public fill to Tseung Kwan O Area 137, Tuen Mun Area 38, and Chai Wan Public Fill Barging Point respectively in the reporting quarter.

G. Cumulative Statistics on Complaints, Notifications of Summons and Successful Prosecutions

Cumulative statistics for complaints, notifications of summons and successful prosecutions for the Project account for period starting from the date of commencement of construction works (i.e. 31 October 2015 till 28 February 2021 for M+ Museum main works and 1 March 2016 for Lyric Theatre Complex) to the end of the reporting quarter are summarized in **Table G-1** and **Table G-2** below respectively.

Table G-1: Statistics for complaints, notifications of summons and successful prosecutions for M+ Museum Main Works

Reporting Period	Cumulative Statistics		
	Complaints	Notifications of summons	Successful prosecutions
This reporting quarter (Feb 21)	0	0	0
From 31 October 2015 to 28 February 2021	13	1	0

Table G-2: Statistics for complaints, notifications of summons and successful prosecutions for Lyric Theatre Complex

Reporting Period	Cumulative Statistics		
	Complaints	Notifications of summons	Successful prosecutions
This reporting quarter (Feb 21 – Apr 21)	3	0	0
From 1 March 2016 to end of the reporting quarter	19	0	0

END OF PART-1

**Part-2: EM&A for Foundation, Excavation
and Lateral Works for Integrated
Basement and Underground Road
in Zone 2A**

Foundation, Excavation and Lateral Works for Integrated Basement and Underground Road in Zone 2A

APEX TESTING & CERTIFICATION LIMITED
Unit D6A, 10/F, TML Plaza, 3 Hoi Shing Road, Tsuen Wan, N.T.
Hong Kong
Tel: (852) 39733585 Fax: (852) 30079385
Email: info@apextestcert.com

The information supplied and contained within this report is, to the best of our knowledge, correct at time of printing

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Executive summary

This Quarterly EM&A Report presents the monitoring works at Zone 2A conducted from 1 February 2021 to 30 April 2021.

The impact stage EM&A programme for the Project includes air quality, noise, water quality, waste, landscape and visual monitoring. The recommended environmental mitigation measures were implemented on site and regular inspections were carried out to ensure that the environmental conditions are acceptable.

The EM&A programme was carried out by the ET in accordance with the EM&A Manual requirements. It is concluded from the environmental monitoring and audit works that adequate environmental mitigation measures have been implemented by the contractors where appropriate in the reporting quarter.

Exceedance of Action and Limit Levels

There was no breach of Action or Limit levels for Air Quality (1-hour TSP and 24-hour TSP) in the reporting quarter.

Two Action Level exceedances (due to two noise complaints related to Zone 2A) with no Limit Level exceedance of construction noise, were recorded in the reporting quarter.

Implementation of Mitigation Measures

Construction phase weekly site inspections were carried out to confirm the implementation measures undertaken by the Contractors in the reporting quarter. The status of implementation of mitigation measures during the reporting quarter is shown in **Appendix C**.

Landscape and visual impact inspections were conducted as part of the abovementioned weekly site inspections during the reporting quarter. No adverse comment on landscape and visual aspects were made during these inspections.

FEHD inspection was conducted on 15 March 2021. No adverse comment or prosecution was given by FEHD officer.

EPD inspection was conducted on 09 April 2021. No adverse comment in general.

Record of Complaints

Three environmental complaints were received during the reporting quarter.

Record of Notifications of Summons and Successful Prosecutions

No notifications of summons and successful prosecutions were recorded in the reporting quarter.

1 Introduction

1.1 Background

Apex Testing & Certification Limited (Apex) was commissioned to undertake the Environmental Team (ET) services (including environmental monitoring and audit (EM&A)) for the construction activities in Zone 2A at WKCD, consisting of Foundation, Excavation and Lateral Support Works for Integrated Basement and Underground Road (Contract No.: GW/2020/05/073). The construction works and EM&A programme for Zone 2A commenced on 3 October 2020.

The overall works for the WKCD fall under two separate categories of Designated Project (DP) of the Environmental Impact Assessment Ordinance (EIAO), namely an “engineering feasibility study of urban development projects with a study area covering more than 20 ha or involving a total population of more than 100 000” (Item 1 of Schedule 3) and “an underpass more than 100m in length under the built areas” (Item A.9, Part I, Schedule 2). An Environmental Permit No. EP-453/2013/B (EP) was issued with respect to the “Underpass Road and Austin Road Flyover Serving the West Kowloon Cultural District” which specifically includes the abovementioned category of DP under Item A.9, Part I, Schedule 2 of the EIAO. The captioned projects include part of the abovementioned underpass road located within the site boundary falls under this same category.

The purpose of the development in Zone 2A is to reserve for Integrated Basement (IB) and Underground Road (UR). The Zone 2A construction activities involve the foundation, excavation and lateral support (ELS) works, road works, drainage diversion works, and temporary car parking.

The Quarterly EM&A Report is prepared in accordance with the Clause 3.4 of the Environmental Permit No. EP-453/2013/B. This Quarterly EM&A Report presents the monitoring works at Zone 2A from 1 February to 30 April 2021. The purpose of this report is to summarise the findings in the EM&A of the project over the reporting period.

1.2 Project Organisation

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 Environmental Status in the Reporting Period

During the reporting period, construction works at Zone 2A undertaken include:

Zone 2A-1

- Grouting Works (Trial 1)
 - Re-drill Grout Hole
 - Stage 2 Grouting
 - Post Drilling
- Grouting Works (Trial 2)
 - Post Drilling
 - Install Pump Wells

- Bored Pile Works
 - Bored Pile Construction

Zone 2A-2

- Bored Pile Works
 - Predrill
 - Additional Bored Pile Construction
- ELS (Stage 1) – Grouting / Pipe Pile Works
 - Stage 1a & 1b Grouting
 - Pipe Pile Construction
 - King Post

The Construction Works Programme of the Project is provided in **Appendix B**. A layout plan of the Project is provided in **Figure 1**.

2 Summary of EM&A Requirements and Mitigation Measures

2.1 Monitoring Requirements

In accordance with the EM&A Manual, environmental parameters including air quality, noise, landscape and visual have been monitored. The specific parameters, monitoring frequency and the respective Action and Limit levels are given in **Table 2.1**. Locations of the monitoring stations are provided in **Figure 1**.

Table 2.1: Summary of Impact EM&A Requirements

Parameters	Descriptions	Locations	Frequencies	Action level	Limit level
Air Quality	24-Hour TSP	AM3 - The Victoria Towers Tower 1	At least once every 6 days	152.4 µg/m ³	260 µg/m ³
	1-Hour TSP	AM3 - The Victoria Towers Tower 1	At least 3 times every 6 days	280.4 µg/m ³	500 µg/m ³
	24-Hour TSP	AM4 - Canton Road Government Primary School	At least once every 6 days	152.6 µg/m ³	260 µg/m ³
	1-Hour TSP	AM4 - Canton Road Government Primary School	At least 3 times every 6 days	278.5 µg/m ³	500 µg/m ³
	24-Hour TSP	AM5 - Topside Developments at West Kowloon Terminus Site	At least once every 6 days	141.1 µg/m ³	260 µg/m ³
	1-Hour TSP	AM5 - Topside Developments at West Kowloon Terminus Site	At least 3 times every 6 days	275.4 µg/m ³	500 µg/m ³
Noise	Leq, 30 minutes	NM2 - The Arch, Sun Tower	Weekly	When one documented complaint is received from any one of the sensitive receivers	75 dB(A)
	Leq, 30 minutes	NM3 - The Victoria Towers Tower 1	Weekly	When one documented complaint is received from any one of the sensitive receivers	75 dB(A)
	Leq, 30 minutes	NM4 - Canton Road Government Primary School	Weekly	When one documented complaint is received from any one of the sensitive receivers	70/65 dB(A) [^]
	Leq, 30 minutes	NM5 -Development next to Austin Station	Weekly	When one documented complaint is received from any one of the sensitive receivers	75 dB(A)
Landscape & Visual	Monitor implementation of proposed mitigation measures during the construction stage	As described in Table 9.1 and 9.2 of the EM&A Manual	Bi-weekly	N/A	N/A

Note:

[^]70 dB(A) for schools and 65 dB(A) during school examination periods.

The EM&A programme for the Project require 5 air monitoring stations and 5 noise quality monitoring stations located closest to the Project area. With regard to the monitoring activities at M+ Museum and the Lyric Complex, three monitoring stations had been considered, including AM1, AM2 for air monitoring, and NM1 for noise monitoring. In the context of the construction activities in Zone 2A, all other monitoring locations including AM3, AM4, and AM5 for air monitoring; and NM2, NM3, NM4 and NM5 for noise monitoring, have been taken into account. However, access to all these originally designated monitoring stations was declined. Therefore, alternative monitoring stations was identified and proposed.

With regard to air monitoring, alternative monitoring locations (AM3A, AM4A, and AM5A) were identified at ground floor at the Northeast corner of West Kowloon Station's station box, at ground floor at the Southeast corner of West Kowloon Station's station box, and at ground floor at the North of West Kowloon Station's station box respectively. AM3A, AM4A, and AM5A were set in same direction to the area of major construction site activities in Zone 2A. These alternative air monitoring locations (AM3A, AM4A, and AM5A) were approved by EPD on 29 September 2020.

For noise monitoring, alternative noise monitoring location (NM2A) was identified at the ground floor in front of The Arch - Sun Tower, which is at the same location as stated in the EM&A Manual for consistency. This alternative noise monitoring location was approved by EPD on 29 September 2020. Other alternative noise monitoring locations (NM3A, NM4A, and NM5A) were identified at the ground floor in front of the Xiqu Centre, at the ground floor next to Tsim Sha Tsui Fire Station, and at the Pedestrian road (ground floor) outside West Kowloon Station respectively. NM3A, NM4A and NM5A were set closer to the construction site boundary with more direct line sight to the major site activities and higher exposure to the construction noise with no disturbance to the premises' occupants during noise monitoring activities. These alternative noise monitoring locations (NM3A, NM4A, and NM5A) were approved by EPD on 29 September 2020.

Therefore, 3 air quality monitoring stations and 4 noise impact monitoring station were confirmed for the impact monitoring for construction activities in Zone 2A.

2.2 Environmental Mitigation Measures

Environmental mitigation measures have been recommended in the EM&A Manual. Summary of implementation status of the environmental mitigation measures is provided in **Appendix C**.

3 Summary of EM&A Results

3.1 Monitoring Data

In accordance with the EM&A Manual, impact monitoring has been conducted in the reporting quarter. Meteorological data for the reporting quarter have been extracted from Hong Kong Observatory and presented in **Appendix D**. Monitoring data with graphical presentation for the reporting quarter are shown in **Appendix E**. A summary on the monitoring results are presented in **Table 3.1**.

Table 3.1: Summary of Monitoring Data

Parameter	Monitoring Location	Minimum	Maximum	Average
Air Quality				
1 hour TSP	AM3A	30	84	55
1 hour TSP	AM4A	31	83	56
1 hour TSP	AM5A	32	88	56
24 hour TSP	AM3A	31	73	51
24 hour TSP	AM4A	31	74	51
24 hour TSP	AM5A	33	76	51
Construction Noise				
Leq(30min)	NM2A	58	65	62
Leq(30min)	NM3A	65	74	71
Leq(30min)	NM4A	64	70	68
Leq(30min)	NM5A	63	67	65

3.2 Monitoring Exceedances

Summary of the exceedances in the reporting quarter is tabulated in **Table 3.2**.

Table 3.2: Summary of Exceedances

Monitoring Station	Parameter	No. of Exceedance		Action Taken
		Action Level	Limit Level	
Air Quality				
AM3A	1 hour TSP	0	0	N/A
	24 hour TSP	0	0	N/A
AM4A	1 hour TSP	0	0	N/A
	24 hour TSP	0	0	N/A
AM5A	1 hour TSP	0	0	N/A
	24 hour TSP	0	0	N/A
Construction Noise				
NM2A	Leq(30min)	2 exceedances due to two complaints	0	Strengthen the implementation of noise mitigation measures
NM3A	Leq(30min)		0	
NM4A	Leq(30min)		0	
NM5A	Leq(30min)		0	

3.2.1 1-hour TSP Monitoring

All 1-hour TSP monitoring was conducted as scheduled in the reporting quarter. No Action/ Limit Level exceedance was recorded.

3.2.2 24-hour TSP Monitoring

All 24-hour TSP monitoring was conducted as scheduled in the reporting quarter. No exceedance of Action Level of 24-hour TSP for Air Quality was recorded, while there was no Limit Level exceedance.

3.2.3 Construction Noise Monitoring

All construction noise monitoring was conducted as scheduled in the reporting quarter. Two Action Level exceedances (due to two noise complaints related to Zone 2A) with no Limit Level exceedance of Noise was recorded in the reporting quarter.

3.2.4 Landscape and Visual Monitoring

All landscape and visual impact inspections were conducted as scheduled in the reporting quarter. No adverse comment on landscape and visual aspects were recorded.

4 Waste Management

As advised by the Contractor, 411.28 tonnes, 17257.88 tonnes of inert C&D material were disposed of as public fill to Tseung Kwan O Area 137 Public Fill, and Tuen Mun Area 38 respectively in the reporting quarter, while 51.19 tonnes of general refuse were disposed of at SENT landfill. 75.57 tonnes of metals, 0.0 tonne of paper/cardboard packaging, 0.0 tonne of plastic and 0.0 tonne of timber were collected by recycling contractors in the reporting quarter. 0.0 tonne of inert C&D materials were reused on site. 0.0 tonne of fill materials were imported for use at site and 1449.45 tonnes of inert C&D materials was reused in other projects. 0.0 tonne of inert C&D materials was disposed to sorting facility and 0.6 tonnes of chemical wastes was collected by licensed contractors in the reporting quarter.

The actual amounts of different types of waste generated by the activities of construction works at Zone 2A in the reporting quarter are shown in **Appendix F**.

5 Environmental Non-conformance

No exceedance of Action Level for Air Quality was recorded at monitoring station, while there was no breach of Limit Level for Air Quality in the reporting quarter.

Two Action Level exceedances (due to two noise complaints related to Zone 2A) with no Limit Level exceedance of Noise was recorded in the reporting quarter.

Three complaints (of which, one is not related to Zone 2A) were received in the reporting quarter. No notifications of summons and successful prosecutions were received in the reporting quarter.

The first complaint was referred by EPD. On 28 March 2021, EPD received a complaint from nearby resident that the WKCD construction site next to the West Kowloon Station generates some annoying noise in the morning, especially the piling machine. Investigation result revealed that the noise source could be attributable to WKCD Zone 2A-2 construction site. However, no piling works were carried out on 28 March 2021. From 22 to 27 March 2021, most of morning works were carried out after 9:00 a.m. as much as practicable in Zone 2A-2 site to reduce the noise. Subsequent to the complaint, prompt actions have been taken to enhance the noise control measures. Moreover, existing noise control measures have been properly maintained on site (through trainings, noise barrier erection, noise measurement and monitoring with no exceedance, and promotional activities). However, the Contractor is recommended to maintain good practices for site management and continual improvement of noise control measures in order to minimize disturbance to site neighbors.

The second environmental complaint was referred by Home Affairs Bureau (HAB) on the noise disturbance at WKCD construction site was received on 12 April 2021. The complainant claimed that construction noise was heard at the construction site close to Xiqu Centre after 20:00. After investigation, it is deemed that the noise source could be from the RCD machine and associated power pack set on Zone 2A-2 site. Thus, the complaint could be attributable to Zone 2A site. During the construction works at night (i.e. 19:00 to 22:00) on 7 to 10 April and 12 April, one single group process was used and all work process complied with the permitted time (19:00 - 23:00). Prompt actions have been taken to enhance the noise control measures after reception of the complaint. Moreover, existing noise control measures have been properly maintained on site (through trainings, noise barrier erection, noise measurement and monitoring with no exceedance). However, the Contractor is recommended to maintain good practices for site management and continual improvement of noise control measures in order to minimize disturbance to site neighbours.

The third environmental complaint was referred by EPD. On 18 April 2021, EPD has received a complaint from a resident of The Arch relating to WKCD construction site activities. The complainant claimed that there was a noise from construction site of Zone 2A, including the engine of lorry after 00:00 hrs on 15 and 16 April 2021. Investigation result revealed only RCD works had been found out and conducted in night from 19:00 to 22:00 within the Zone 2A site on 15 and 16 April 2021. Construction activity, material transportation / delivery or lorry traffic could not be found out after midnight (after 00:00) within the Zone 2A site on 15 and 16 April 2021. Thereby, the complaint could not be attributable to Zone 2A site. However, the Contractor has been reminded to properly maintain noise mitigation measures on site to avoid disturbance to nearby residents.

The cumulative statistics on complaints, notifications of summons and successful prosecutions were provided in **Appendix G**.

6 Comments, Recommendations and Conclusion

6.1 Comments

Based on the observations made during site audits and landscape inspections, and construction dust and noise monitoring results, no non-compliances and exceedances of air quality limits were recorded, Two action level exceedances (due to two noise complaints related to Zone 2A) with no limit level exceedance of noise was recorded in the reporting quarter.

6.2 Recommendations

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 continue, and recommendations will be provided to remediate any potential impacts due to the project and to improve the EM&A programme if deficiencies of the existing EM&A programme are identified.

6.3 Conclusion

The EM&A programme as recommended in the EM&A Manual has been undertaken since the construction works of Zone 2A commenced on 3 October 2020.

Monitoring of air quality and noise with respect to the Project is underway. In particular, the 1-hour TSP, 24-hour TSP, noise level (as Leq, 30 minutes) under monitoring have been checked against established Action and Limit levels. No exceedance of Action Level for Air Quality was recorded, while there was no breach of Limit Level for Air Quality (1-hour TSP and 24-hour TSP) in the reporting quarter. Two Action Level exceedances (due to two noise complaints related to Zone 2A) with no Limit Level exceedance of Noise was recorded in the reporting quarter.

Three complaints were received in the reporting quarter. No notifications of summons and successful prosecutions were received during the reporting quarter.

Weekly construction phase site inspections and bi-weekly landscape and visual impact inspections were conducted during the reporting quarter as required. It was observed that the Contractor had implemented all possible and feasible mitigation measures to mitigate the potential environmental impacts during construction phase works.

Figure 1 Site Layout Plan and Monitoring Stations

Appendices

- A. Project Organisation
- B. Construction Programme
- C. Environmental Mitigation Measures – Implementation Status
- D. Meteorological Data Extracted from Hong Kong Observatory
- E. Graphical Plots of the Monitoring Results
- F. Waste Flow table
- G. Cumulative Statistics on Complaints, Notifications of Summons and Successful Prosecutions

A. Project Organisation

Project Organization

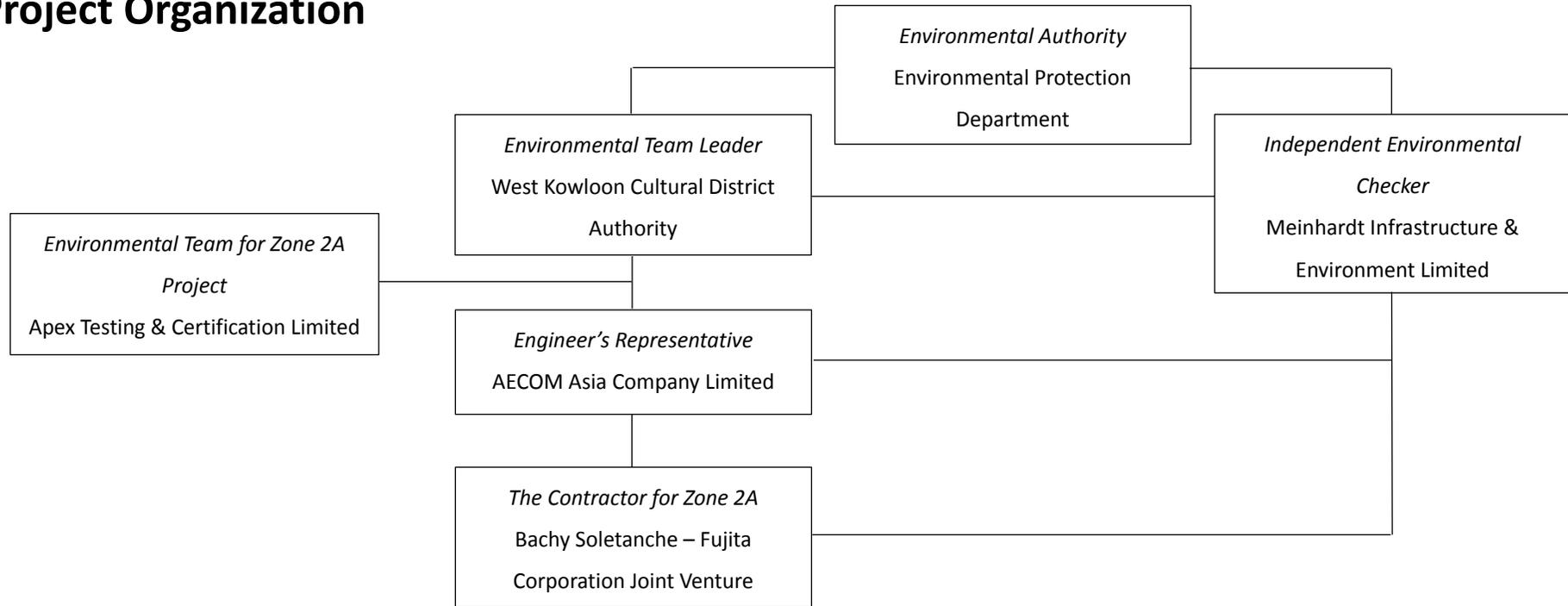


Table A-1: Contract Information

Company Name	Role	Name	Telephone	Email
West Kowloon Cultural District Authority	WKCDA Representative & Project ETL	Mr. C.K. WU	5506 9178	ck.wu@wkcd.a.gov.hk
Meinhardt Infrastructure & Environment Limited	Independent Environmental Checker	Ms. Claudine LEE	2859 5409	caludinelee@meinhardt.com.hk
AECOM Asia Company Limited	Resident Engineer	Mr. Alex GBAGUIDI	3619 6287	alex.gbaguidi@aecom.com
Bachy Soletanche – Fujita Corporation Joint Venture	Quality, Safety, Health & Environmental Manager	Mr. Vincent CHAN	9733 7310	Chuen.Kwok.CHAN@soletanche-bachy.com
Bachy Soletanche – Fujita Corporation Joint Venture	Environmental Engineer	Mr. William CHAN	54083045	william-hou.chan@soletanche-bachy.com
Apex Testing & Certification Limited	Contractor's Environmental Team Leader	Mr. Calvin LUI	9629 9718	calvinlui@apextestcert.com

B. Construction Programme

Project Name: Foundation and ELS Works for Integrated Basement and Underground Road in Zone 2A of the West Kowloon Cultural District

3-Month Rolling Programme

Activity Description	Duration (Cal. Day)	Start Date	Finish Date	2021																				
				Apr					May				June											
				2 W47	9 W48	16 W49	23 W50	30 W51	7 W52	14 W53	21 W54	28 W55	4 W56	11 W57	18 W58	25 W59								
Zone 2A-1 Foundation, ELS Works and Blinding to Formation (KD01)																								
Grouting Works (Trial 1)																								
Re-drill grout hole (24/24 Nos Completed)	19	1-Mar-21	19-Mar-21																					
Stage 2 grouting (4/24 Nos Completed)	29	24-Mar-21	21-Apr-21																					
Post Drilling	16	26-Apr-21	7-May-21																					
Install Pump Wells	8	8-May-21	15-May-21																					
Pumping Test	7	16-May-21	22-May-21																					
Grouting Works (Trial 2)																								
Post Drilling	43	22-Jan-21	5-Mar-21																					
Install Pump Wells	34	10-Mar-21	12-Apr-21																					
Pumping Test	7	24-Apr-21	30-Apr-21																					
ELS (Stage 1) - Grouting / Pipe Pile Works																								
King Post (0/65 Nos Completed)	75	15-Jun-21	28-Aug-21																					
Socketed H-Pile Works																								
Remaining Socketed H-Pile Works (0/53 Nos completed)	101	12-Jun-21	20-Sep-21																					
Bored Pile Works																								
Bored Pile Construction (Total 32 Nos. 2~4 Workfront)																								
BP31L, BP33L, BP34I1, BP34G, BP31P, BP36F1, BP31R, BP33G, BP31M, BP36E1, BP31Q, BP33J, BP33M, BP32P, BP34F, BP35F1, BP33P, BP34K, BP34P (15 Nos. Cast; 1 Nos. completed RCD; 2 Nos. RCD in progress)	250	9-Nov-20	16-Jul-21																					
Zone 2A-2 Foundation, ELS Works and Blinding to Formation (KD02)																								
Bored Pile Works																								
Predrill (23/23 Nos Completed)	84	8-Dec-20	1-Mar-21																					
Additional Bored Pile Construction (Total 16 Nos.) BP15Y, BP16TA (0 Nos. Cast; 1 Nos. completed RCD; 1 Nos. RCD in progress)	200	23-Mar-21	8-Oct-21																					
ELS (Stage 1) - Grouting / Pipe Pile Works																								
King Post (0/86 Nos Completed)	104	14-Jul-21	25-Oct-21																					
Stage 1a & 1b grouting (584/1054 Nos Completed)	330	22-Oct-20	16-Sep-21																					
Pipe Pile Construction (41/523 Nos Completed)	374	17-Nov-20	25-Nov-21																					

- - Actual
- - Remaining Works
- - Critical Remaining Works

C. Environmental Mitigation Measures – Implementation Status

Table C-1: Environmental Mitigation Measures Implementation Status

EM& A Ref.	Recommendation Measures	Implementation Stage		
		Feb 2021	Mar 2021	Apr 2021
Air Quality Impact (Construction)				
2.1	<p>General Dust Control Measures Frequent water spraying for active construction areas (12 times a day or once every one hour), including Heavy construction activities such as construction of buildings or roads, drilling, ground excavation, cut and fill operations (i.e., earth moving)</p>	✓	✓	✓
2.1	<p>Best Practice For Dust Control The relevant best practices for dust control as stipulated in the Air Pollution Control (construction Dust) Regulation should be adopted to further reduce the construction dust impacts from the Project. These best practices include:</p> <p><i>Good Site Management</i></p> <ul style="list-style-type: none"> • Good site management is important to help reducing potential air quality impact down to an acceptable level. As a general guide, the Contractor should maintain high standard of housekeeping to prevent emission of fugitive dust. Loading, unloading, handling and storage of raw materials, wastes or by-products should be carried out in a manner so as to minimise the release of visible dust emission. Any piles of materials accumulated on or around the work areas should be cleaned up regularly. Cleaning, repair and maintenance of all plant facilities within the work areas should be carried out in a manner minimising generation of fugitive dust emissions. The material should be handled properly to prevent fugitive dust emission before cleaning. <p><i>Disturbed Parts of the Roads</i></p> <ul style="list-style-type: none"> • Each and every main temporary access should be paved with concrete, bituminous hardcore materials or metal plates and kept clear of dusty materials; or • Unpaved parts of the road should be sprayed with water or a dust suppression chemical so as to keep the entire road surface wet. 	Obs	Obs	Obs
		✓	✓	✓
		Obs	Obs	✓

EM& A Ref.	Recommendation Measures	Implementation Stage		
		Feb 2021	Mar 2021	Apr 2021
	<i>Exposed Earth</i>	N/A	N/A	N/A
	<ul style="list-style-type: none"> Exposed earth should be properly treated by compaction, hydroseeding, vegetation planting or seeding with latex, vinyl, bitumen within six months after the last construction activity on the site or part of the site where the exposed earth lies. 			
	<i>Loading, Unloading or Transfer of Dusty Materials</i>	✓	✓	✓
	<ul style="list-style-type: none"> All dusty materials should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet. 			
	<i>Debris Handling</i>	✓	✓	✓
	<ul style="list-style-type: none"> Any debris should be covered entirely by impervious sheeting or stored in a debris collection area sheltered on the top and the three sides. Before debris is dumped into a chute, water should be sprayed so that it remains wet when it is dumped. 	N/A	N/A	N/A
	<i>Transport of Dusty Materials</i>	✓	✓	✓
	<ul style="list-style-type: none"> Vehicle used for transporting dusty materials/spoils should be covered with tarpaulin or similar material. The cover should extend over the edges of the sides and tailboards. 			
	<i>Wheel washing</i>	✓	✓	✓
	<ul style="list-style-type: none"> Vehicle wheel washing facilities should be provided at each construction site exit. Immediately before leaving the construction site, every vehicle should be washed to remove any dusty materials from its body and wheels. 			
	<i>Use of vehicles</i>	✓	✓	✓
	<ul style="list-style-type: none"> The speed of the trucks within the site should be controlled to about 10km/hour in order to reduce adverse dust impacts and secure the safe movement around the site. Immediately before leaving the construction site, every vehicle should be washed to remove any dusty materials from its body and wheels. Where a vehicle leaving the construction site is carrying a load of dusty materials, the load should be covered entirely by clean impervious sheeting to ensure that the dusty materials do not leak from the vehicle. 	✓	✓	✓

EM& A Ref.	Recommendation Measures	Implementation Stage		
		Feb 2021	Mar 2021	Apr 2021
	<p><i>Site hoarding</i></p> <ul style="list-style-type: none"> Where a site boundary adjoins a road, street, service lane or other area accessible to the public, hoarding of not less than 2.4m high from ground level should be provided along the entire length of that portion of the site boundary except for a site entrance or exit. 	✓	✓	✓
2.1	<p>Best Practicable Means for Cement Works (Concrete Batching Plant)</p> <p>The relevant best practices for dust control as stipulated in the Guidance Note on the Best Practicable Means for Cement Works (Concrete Batching Plant) BPM 3/2(93) should be followed and implemented to further reduce the construction dust impacts of the Project. These best practices include:</p> <p><i>Exhaust from Dust Arrestment Plant</i></p> <ul style="list-style-type: none"> Wherever possible the final discharge point from particulate matter arrestment plant, where is not necessary to achieve dispersion from residual pollutants, should be at low level to minimise the effect on the local community in the case of abnormal emissions and to facilitate maintenance and inspection <p><i>Emission Limits</i></p> <ul style="list-style-type: none"> All emissions to air, other than steam or water vapour, shall be colourless and free from persistent mist or smoke <p><i>Engineering Design/Technical Requirements</i></p> <ul style="list-style-type: none"> As a general guidance, the loading, unloading, handling and storage of fuel, raw materials, products, wastes or by-products should be carried out in a manner so as to prevent the release of visible dust and/or other noxious or offensive emissions 	N/A	N/A	N/A
	<p>Non-Road Mobile Machinery (NRMM):</p> <p>All NRMMs operating on-site which are subject to emission control of Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation are approved/exempted (as the case may be) and affixed with the requisite approval/exemption labels.</p>	✓	✓	✓
Noise Impact (Construction)				

EM& A Ref.	Recommendation Measures	Implementation Stage		
		Feb 2021	Mar 2021	Apr 2021
3.1	<p>Good Site Practice</p> <p>Good site practice and noise management can significantly reduce the impact of construction site activities on nearby NSRs. The following package of measures should be followed during each phase of construction:</p> <ul style="list-style-type: none"> only well-maintained plant to be operated on-site and plant should be serviced regularly during the construction works; machines and plant that may be in intermittent use to be shut down between 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 the NSRs; mobile plant should be sited as far away from NSRs as possible; and material stockpiles and other structures to be effectively utilised, where practicable, to screen noise from on-site construction activities. 	✓	✓	✓
3.1	<p>Adoption of Quieter PME</p> <p>The recommended quieter PME adopted in the assessment were taken from the EPD's QPME Inventory and "Sound Power Levels of Other Commonly Used PME" are presented in Table 4.26 in the EIA report. It should be noted that the silenced PME selected for assessment can be found in Hong Kong.</p>	✓	✓	✓
3.1	<p>Use of Movable Noise Barriers</p> <p>Movable noise barriers can be very effective in screening noise from particular items of plant when constructing the Project. Noise barriers located along the active works area close to the noise generating component of a PME could produce at least 10 dB(A) screening for stationary plant and 5 dB(A) for mobile plant provided the direct line of sight between the PME and the NSRs is blocked.</p>	Rem	Obs	Obs
3.1	<p>Use of Noise Enclosure/ Acoustic Shed</p> <p>The use of noise enclosure or acoustic shed is to cover stationary PME such as air compressor and concrete pump. With the adoption of the noise enclosure, the PME could be completely screened, and noise reduction of 15 dB(A) can be achieved according to the EIAO Guidance Note No. 9/2010.</p>	✓	✓	✓

EM& A Ref.	Recommendation Measures	Implementation Stage		
		Feb 2021	Mar 2021	Apr 2021
3.1	<p>Use of Noise Insulating Fabric</p> <p>Noise insulating fabric can also be adopted for certain PME (e.g. drill rig, pilling machine etc). The fabric should be lapped such that there are no openings or gaps on the joints. According to the approved Tsim Sha Tsui Station Northern Subway EIA report (AEIAR-127/2008), a noise reduction of 10 dB(A) can be achieved for the PME lapped with the noise insulating fabric.</p>	✓	✓	✓
3.1	<p>Scheduling of Construction Works outside School Examination Periods</p> <p>During construction phase, the contractor should liaise with the educational institutions (including NSRs LCS and CRGPS) to obtain the examination schedule and avoid the noisy construction activities during school examination periods.</p>	✓	✓	✓
Water Quality Impact (Construction)				
4.1	<p>Construction site runoff and drainage</p> <p>The site practices outlined in ProPECC Note PN 1/94 should be followed as far as practicable in order to minimise surface runoff and the chance of erosion. The following measures are recommended to protect water quality and sensitive uses of the coastal area, and when properly implemented should be sufficient to adequately control site discharges so as to avoid water quality impacts:</p> <ul style="list-style-type: none"> 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. The design of the temporary on-site drainage system should be undertaken by the WKCDA's Contractor prior to the commencement of construction; Sand/silt removal facilities such as sand/silt traps and sediment basins should be provided to remove sand/silt particles from runoff to meet the requirements of the TM standards under the WPCO. The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC Note PN 1/94. Sizes may vary depending upon the flow rate. The detailed design of the sand/silt traps should be undertaken by the WKCDA's Contractor prior to the commencement of construction. 	✓	✓	Rem
		✓	✓	✓

EM& A Ref.	Recommendation Measures	Implementation Stage		
		Feb 2021	Mar 2021	Apr 2021
	<ul style="list-style-type: none"> 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. Deposited silt and grit should be regularly removed, at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times. 	Obs	Obs	Obs
	<ul style="list-style-type: none"> Measures should be taken to minimize the ingress of site drainage into excavations. If excavation of trenches in wet periods is necessary, they should be dug and backfilled in short sections wherever practicable. Water pumped out from foundation excavations should be discharged into storm drains via silt removal facilities. 	✓	✓	✓
	<ul style="list-style-type: none"> 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. An adequately designed and sited wheel washing facility should be provided at construction site exit where practicable. Wash-water should have sand and silt settled out and removed regularly 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. 	✓	✓	✓
	<ul style="list-style-type: none"> Open stockpiles of construction materials or construction wastes onsite should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system. 	✓	Obs	Obs
	<ul style="list-style-type: none"> Manholes (including newly constructed ones) should be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and stormwater runoff being directed into foul sewers. 	✓	✓	✓
	<ul style="list-style-type: none"> Precautions should be taken at any time of the year when rainstorms are likely. Actions should be taken when a rainstorm is imminent or forecasted and actions to be taken during or after rainstorms are summarized in Appendix A2 of ProPECC Note PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events, especially for areas located near steep slopes. 	Obs	Obs	Obs

EM& A Ref.	Recommendation Measures	Implementation Stage		
		Feb 2021	Mar 2021	Apr 2021
	<ul style="list-style-type: none"> Bentonite slurries used in piling or slurry walling should be reconditioned and reused wherever practicable. Temporary enclosed storage locations should be provided on-site for any unused bentonite that needs to be transported away after all the related construction activities are completed. The requirements in ProPECC Note PN 1/94 should be adhered to in the handling and disposal of bentonite slurries. 	N/A	N/A	N/A
4.1	<p>Barging facilities and activities</p> <p>Recommendations for good site practices during operation of the proposed barging point include:</p> <ul style="list-style-type: none"> All vessels should be sized so that adequate clearance is maintained between vessels and the seabed in all tide conditions, to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash; Loading of barges and hoppers should be controlled to prevent splashing of material into the surrounding water. Barges or hoppers should not be filled to a level that will cause the overflow of materials or polluted water during loading or transportation; All hopper barges should be fitted with tight fitting seals to their bottom openings to prevent leakage of material; and Construction activities should not cause foam, oil, grease, scum, litter or other objectionable matter to be present on the water within the site. 	N/A	N/A	N/A
4.1	<p>Sewage effluent from construction workforce</p> <p>Temporary sanitary facilities, such as portable chemical toilets, should be employed on-site where necessary to handle sewage from the workforce. A licensed contractor should be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance.</p>	✓	✓	✓
4.1	<p>General construction activities</p> <ul style="list-style-type: none"> Construction solid waste, debris and refuse generated on-site should be collected, handled and disposed of properly to avoid entering any nearby storm water drain. Stockpiles of cement and other construction materials should be kept covered when not being used. 	Obs	Obs	Obs

EM& A Ref.	Recommendation Measures	Implementation Stage		
		Feb 2021	Mar 2021	Apr 2021
	<ul style="list-style-type: none"> Oils and fuels should only be stored in designated areas which have pollution prevention facilities. To prevent spillage of fuels and solvents to any nearby storm water drain, all fuel tanks and storage areas should 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 should be drained of rainwater after a rain event. 	✓	✓	Obs
Waste Management Implications (Construction)				
6.1	<p>Good Site Practices</p> <p>Recommendations for good site practices during the construction activities include:</p> <ul style="list-style-type: none"> 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/odour during transportation of waste by either covering trucks or by transporting wastes in enclosed containers Provision of wheel washing facilities before the trucks leaving the works area so as to minimise dust introduction to public roads Well planned delivery programme for offsite disposal such that adverse environmental impact from transporting the inert or non-inert C&D materials is not anticipated 	✓	✓	✓
6.1	<p>Waste Reduction Measures</p> <p>Recommendations to achieve waste reduction include:</p> <ul style="list-style-type: none"> Sort inert C&D material to recover any recyclable portions such as metals Segregation and storage of different types of waste in different containers or skips to enhance reuse or recycling of materials and their proper disposal Encourage collection of recyclable waste such as waste paper and aluminium cans by providing separate labelled bins to enable such waste to be segregated from other general refuse generated by the work force 	✓	✓	✓

EM& A Ref.	Recommendation Measures	Implementation Stage		
		Feb 2021	Mar 2021	Apr 2021
	<ul style="list-style-type: none"> Proper site practices to minimise the potential for damage or contamination of inert C&D materials Plan the use of construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of wastes 	✓	✓	✓
6.1	<p>Inert and Non-inert C&D Materials</p> <p>In order to minimise impacts resulting from collection and transportation of inert C&D material for off-site disposal, the excavated materials should be reused on-site as fill material as far as practicable. In addition, inert C&D material generated from excavation works could be reused as fill materials in local projects that require public fill for reclamation.</p> <ul style="list-style-type: none"> The surplus inert C&D material will be disposed of at the Government's PFRFs for beneficial use by other projects in Hong Kong. Liaison with the CEDD Public Fill Committee (PFC) on the allocation of space for disposal of the inert C&D materials at PFRF is underway. No construction work is allowed to proceed until all issues on management of inert C&D materials have been resolved and all relevant arrangements have been endorsed by the relevant authorities including PFC and EPD. The C&D materials generated from general site clearance should be sorted on site to segregate any inert materials for reuse or disposal of at PFRFs whereas the non-inert materials will be disposed of at the designated landfill site. In order to monitor the disposal of inert and non-inert C&D materials at respectively PFRFs and the designated landfill site, and to control fly-tipping, it is recommended that the Contractor should follow the Technical Circular (Works) No. 6/2010 for Trip Ticket System for Disposal of Construction & Demolition Materials issued by Development Bureau. In addition, it is also recommended that the Contractor should prepare and implement a Waste Management Plan detailing their various waste arising and waste management practices in accordance with the relevant requirements of the Technical Circular (Works) No. 19/2005 Environmental Management on Construction Site. 	✓	✓	✓
6.1	Chemical Waste			

EM& A Ref.	Recommendation Measures	Implementation Stage		
		Feb 2021	Mar 2021	Apr 2021
	<ul style="list-style-type: none"> If chemical wastes are produced at the construction site, the Contractor will be required to 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”. Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. The Contractor should use a licensed collector to transport and dispose of the chemical wastes at the approved Chemical Waste Treatment Centre or other licensed recycling facilities, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation. Potential environmental impacts arising from the handling activities (including storage, collection, transportation and disposal of chemical waste) are expected to be minimal with the implementation of appropriate mitigation measures as recommended. 	✓	✓	✓
6.1	<p>General Refuse</p> <p>General refuse should be stored in enclosed bins or compaction units separated from inert C&D materials. A reputable waste collector should be employed by the Contractor to remove general refuse from the site, separately from inert C&D materials. Preferably an enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material.</p>	✓	✓	✓
Land Contamination (Construction)				
7.1	<p>The potential for land contamination issues at the TST Fire Station due to its future relocation will be confirmed by site investigation after land acquisition. Where necessary, mitigation measures for minimising potential exposure to contaminated materials (if any) or remediation measures will be identified. If contaminated land is identified (e.g., during decommissioning of fuel oil storage tanks) after the commencement of works, mitigation measures are proposed in order to minimise the potentially adverse effects on the health and safety of construction workers and impacts arising from the disposal of potentially contaminated materials. The following measures are proposed for excavation and transportation of contaminated material:</p>			

EM& A Ref.	Recommendation Measures	Implementation Stage		
		Feb 2021	Mar 2021	Apr 2021
Table 9.1 (CM2)	Compensatory tree planting shall be incorporated to the proposed project and maximize the new tree, shrubs and other vegetation planting to compensate tree felled and vegetation removed. Also, implementation of compensatory planting should be of a ratio not less than 1:1 in terms of quality and quantity within the site.	N/A	N/A	N/A
Table 9.1 (CM3)	Buffer trees for screening purposes to soften the hard architectural and engineering structures and facilities.	N/A	N/A	N/A
Table 9.1 (CM4)	Softscape treatments such as vertical green wall panel /planting of climbing and/or weeping plants, etc, to maximize the green coverage and soften the hard architectural and engineering structures and facilities.	N/A	N/A	N/A
Table 9.1 (CM5)	Roof greening by means of intensive and extensive green roof to maximize the green coverage and improve aesthetic appeal and visual quality of the building/structure.	N/A	N/A	N/A
Table 9.1 (CM6)	Sensitive streetscape design should be incorporated along all new roads and streets.	N/A	N/A	N/A
Table 9.1 (CM7)	Structure, ornamental planting shall be provided along amenity strips to enhance the landscape quality.	N/A	N/A	N/A
Table 9.1 (CM8)	Landscape design shall be incorporated to architectural and engineering structures in order to provide aesthetically pleasing designs.	N/A	N/A	N/A
Table 9.1 (CM9)	Minimize the structure of marine facilities to be built on the seabed and foreshore in order to minimize the affected extent to the waterbody	N/A	N/A	N/A
Table 9.2 (MCP1)	Use of decorative screen hoarding/boards	✓	✓	✓
Table 9.2 (MCP2)	Early introduction of landscape treatments	N/A	N/A	N/A
Table 9.2 (MCP3)	Adoption of light colour for the temporary ventilation shafts for the basement during the transition period.	N/A	N/A	N/A
Table 9.2 (MCP4)	Control of night time lighting	✓	✓	✓

EM& A Ref.	Recommendation Measures	Implementation Stage		
		Feb 2021	Mar 2021	Apr 2021
Table 9.2 (MCP5)	Use of greenery such as grass cover for the temporary open areas will help achieve the visual balance and soften the hard edges of the structures.	N/A	N/A	N/A

N/A - Not Applicable

✓ - Implemented

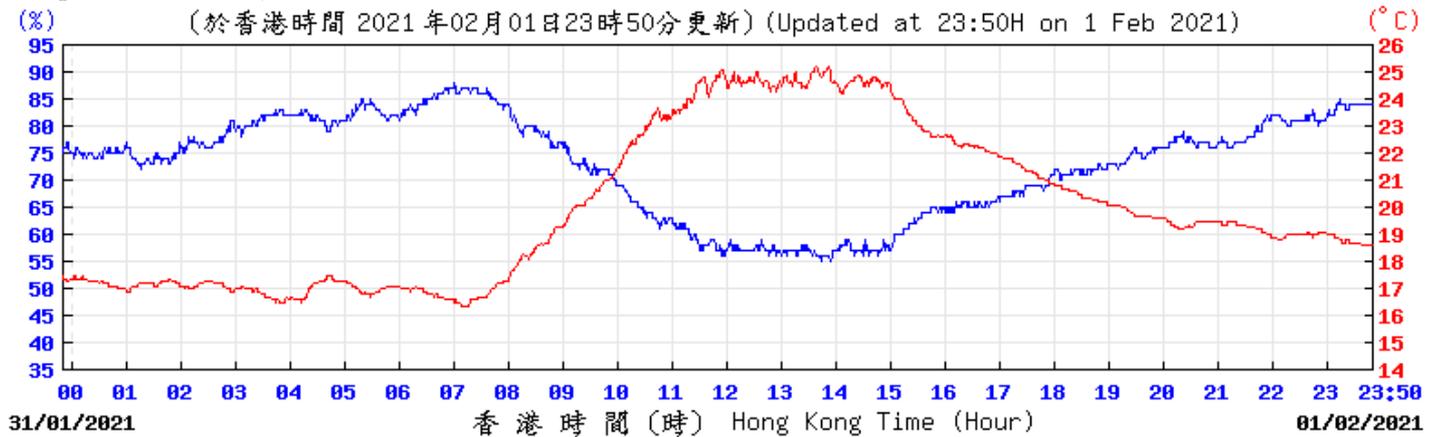
Obs - Observed

Rem - Reminder

D. Meteorological Data Extracted from Hong Kong Observatory

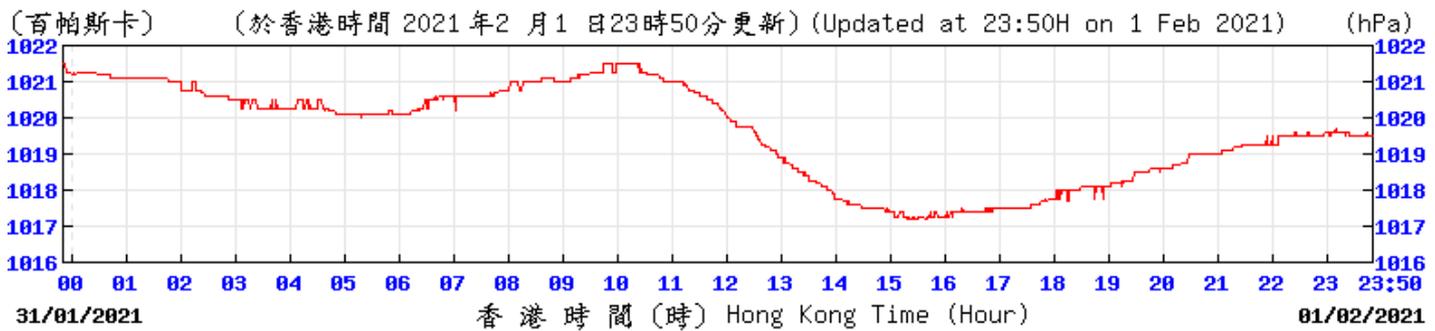
Table D-1: Extract of Meteorological Observations for King's Park Automatic Weather Station in the reporting quarter

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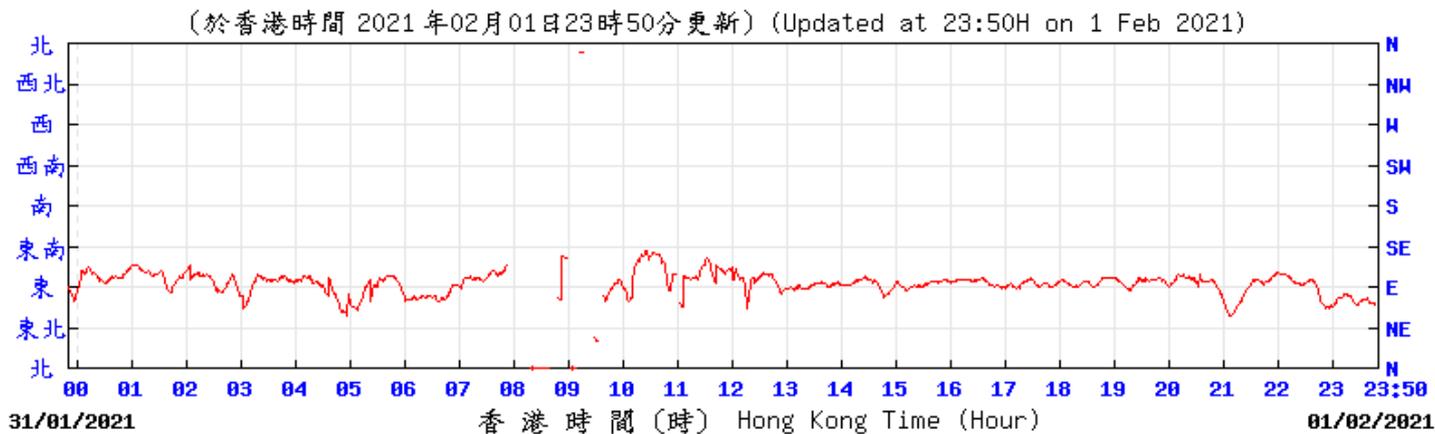
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Pressure:



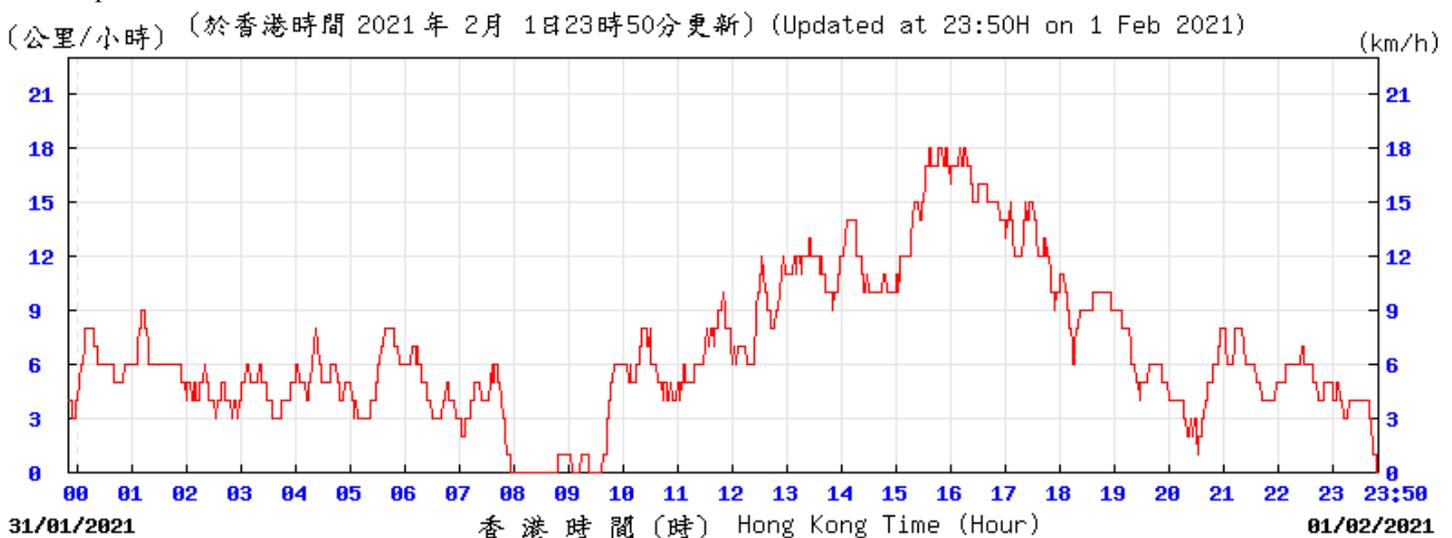
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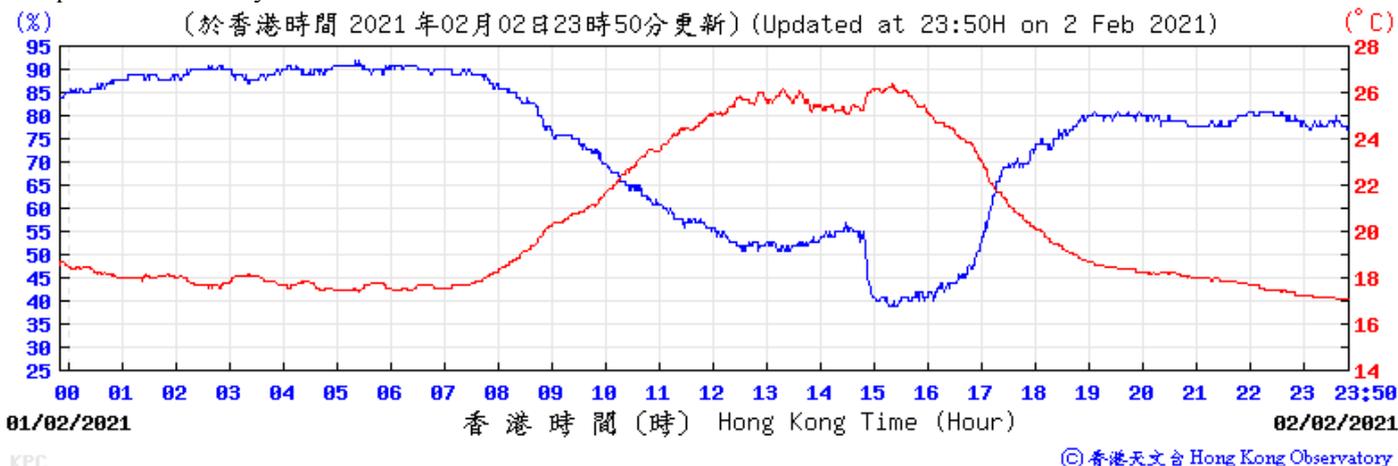
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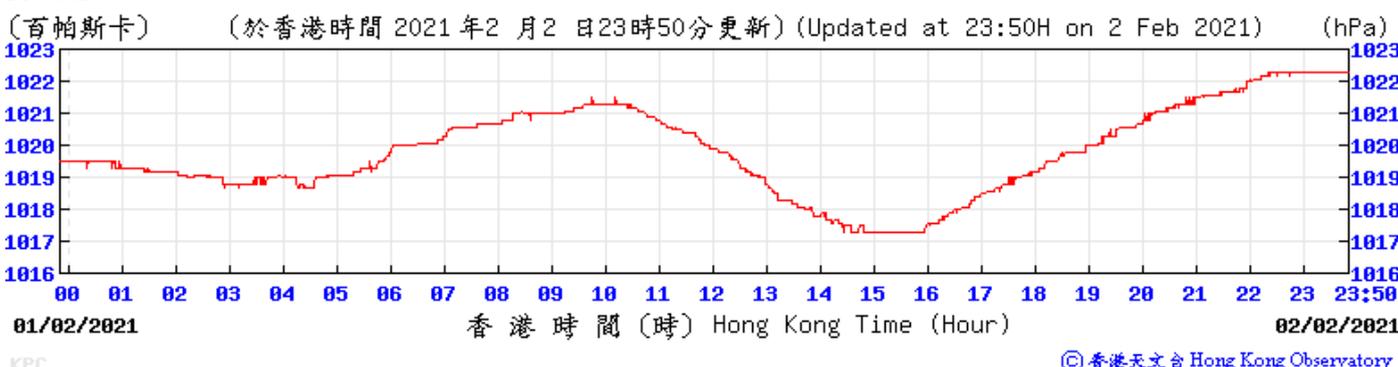


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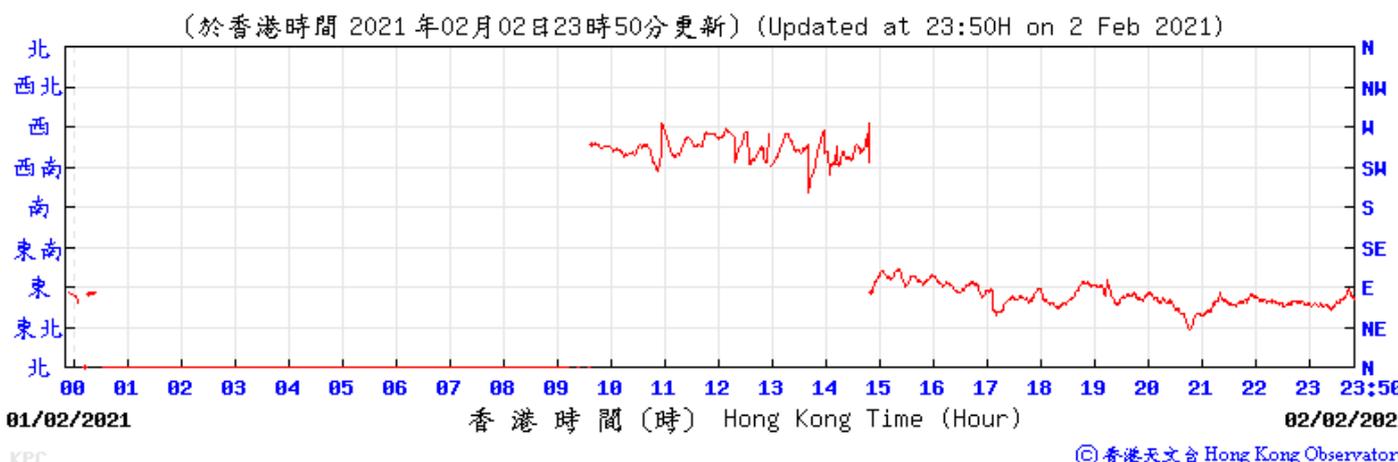
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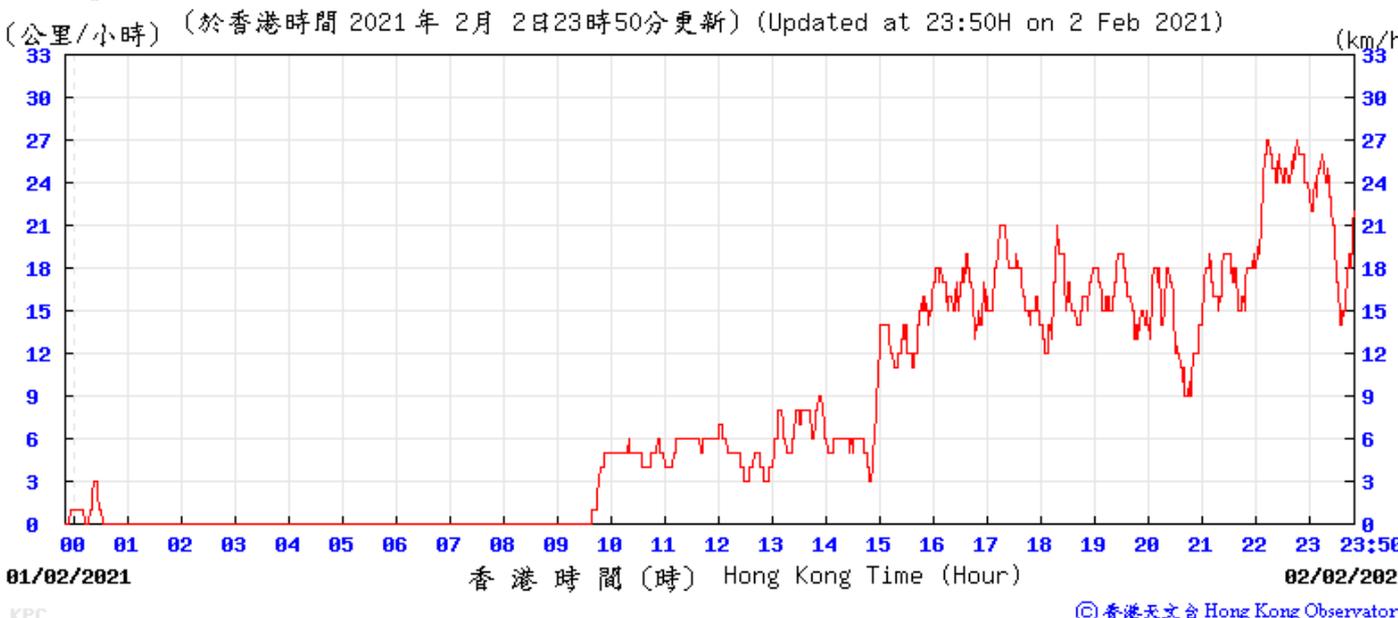
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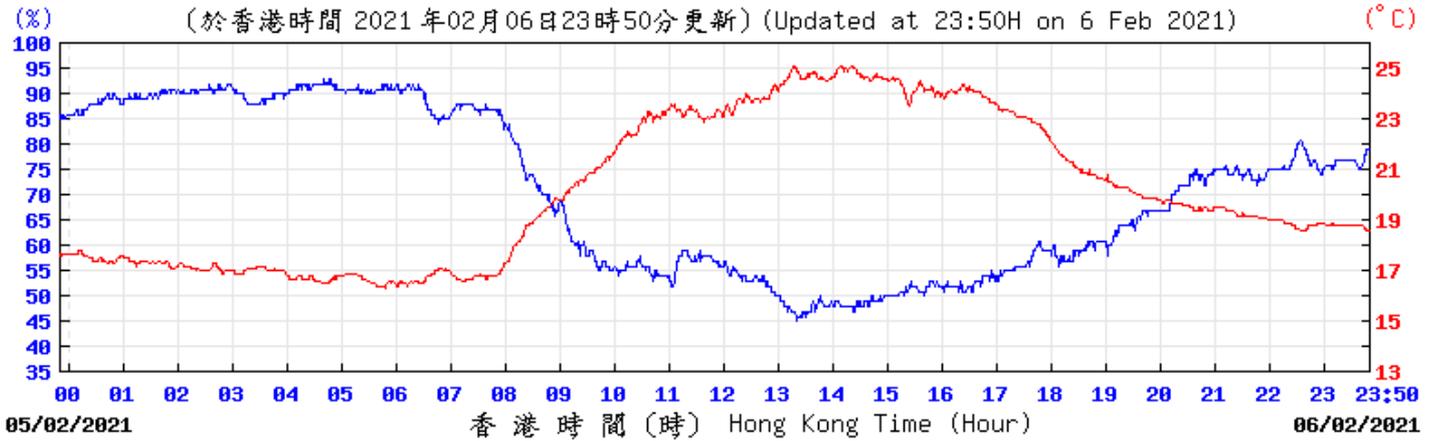
Wind Direction:



Wind Speed:

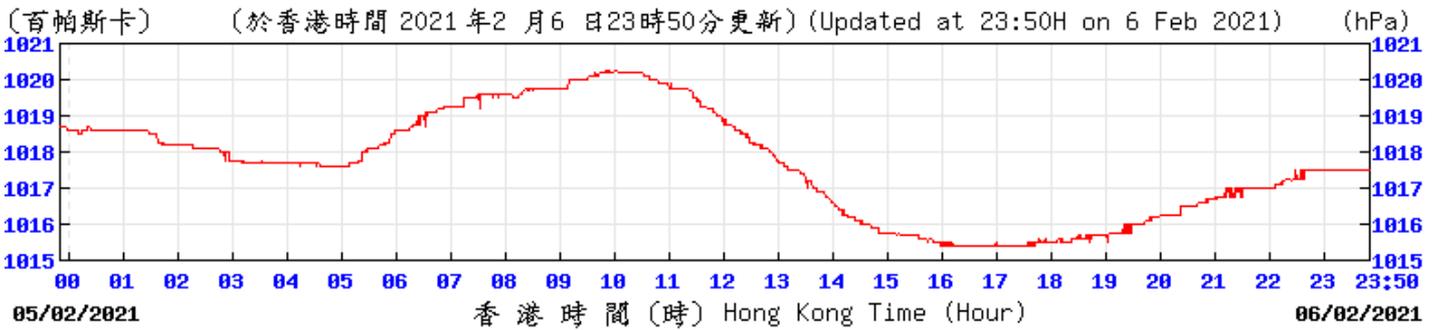


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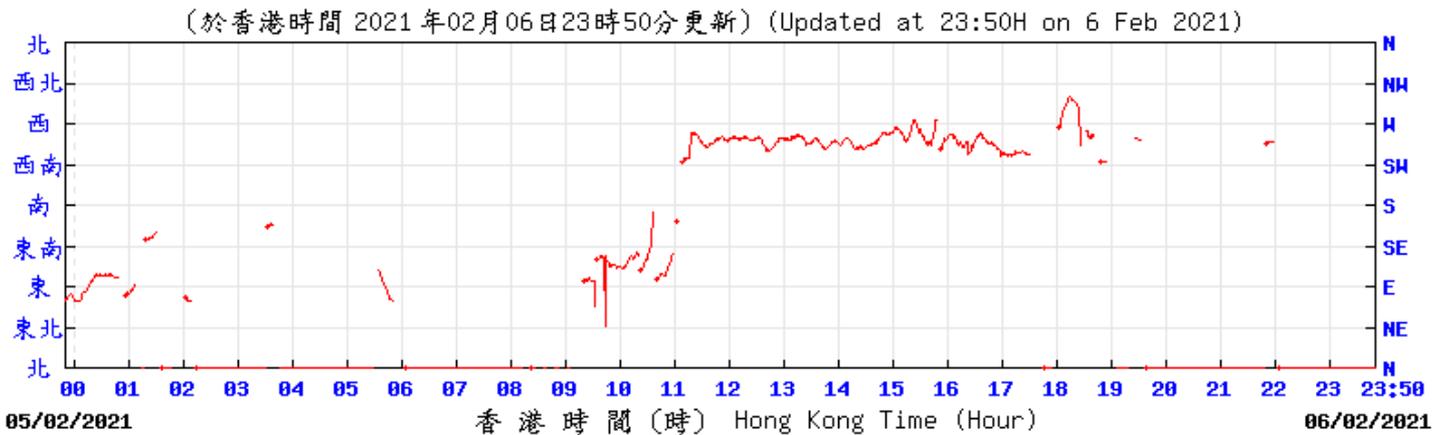
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Pressure:



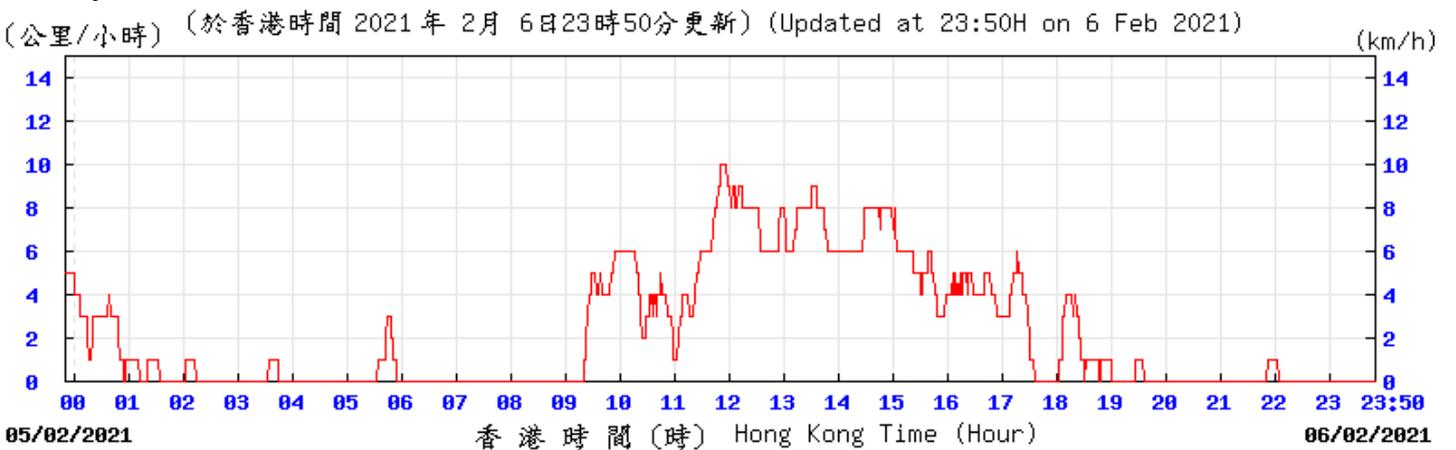
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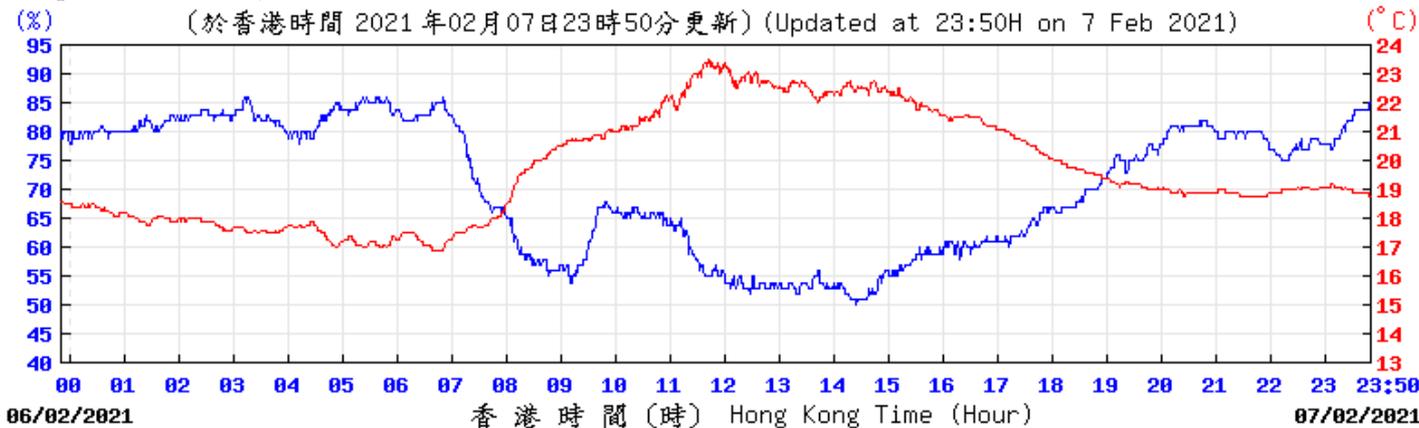
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Wind Speed:



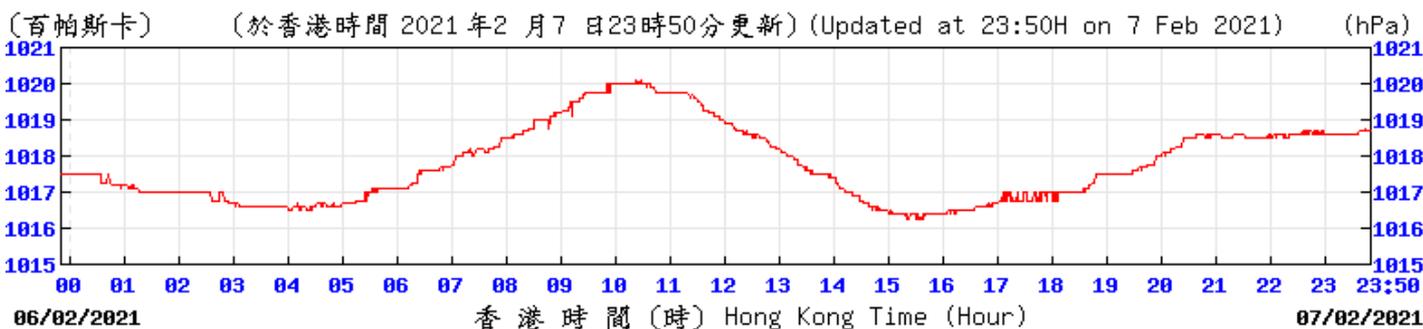
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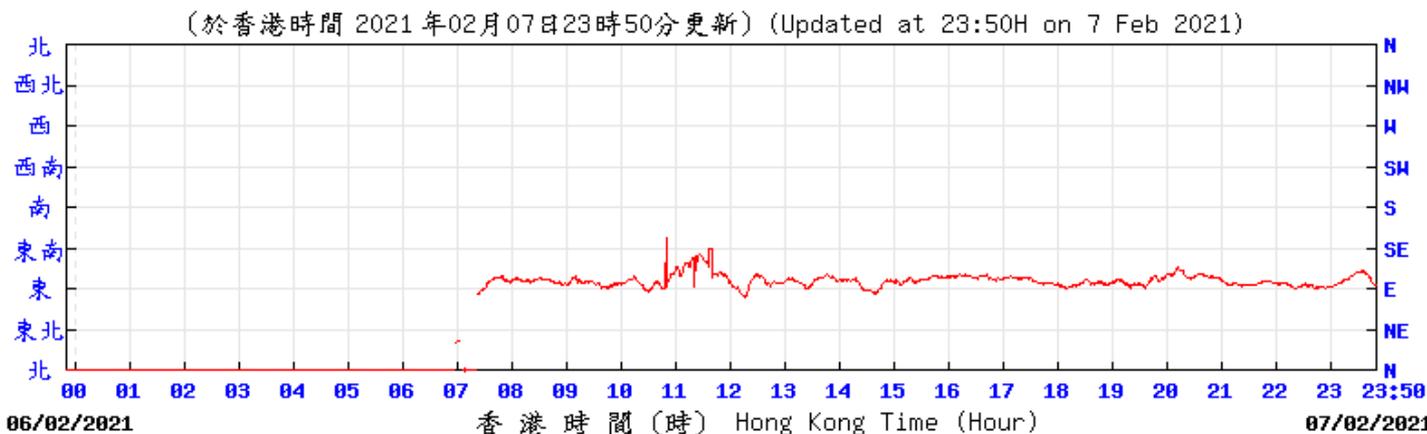
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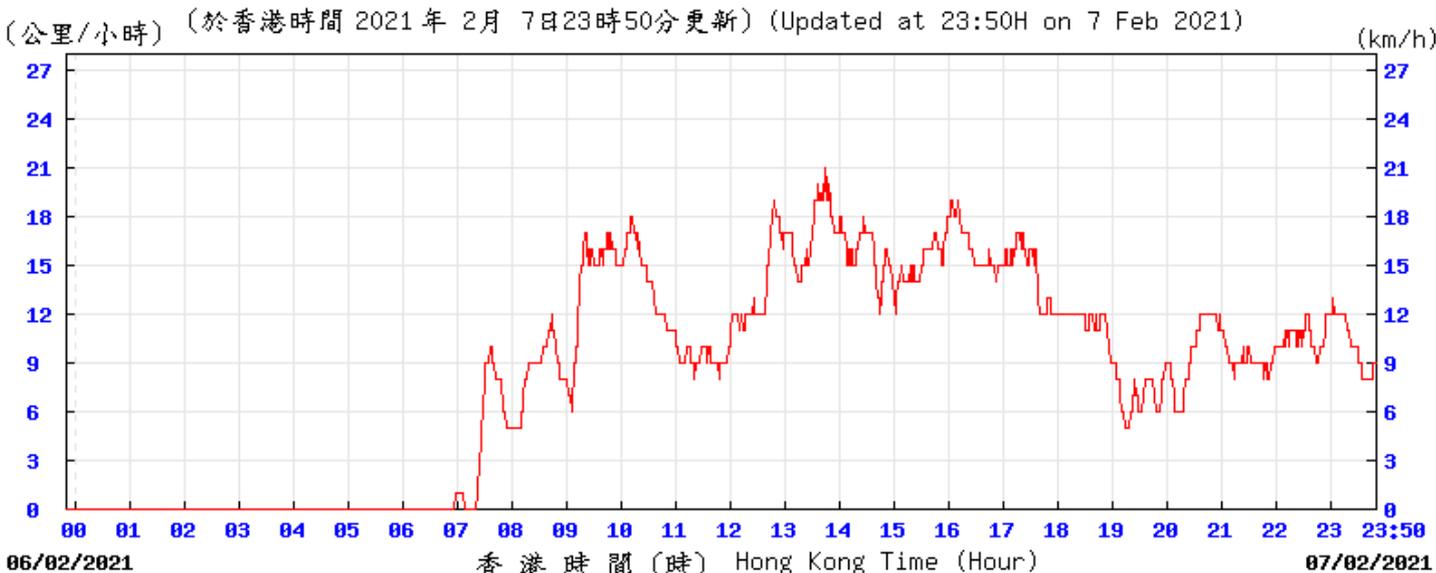
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Wind Direction:



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Wind Speed:

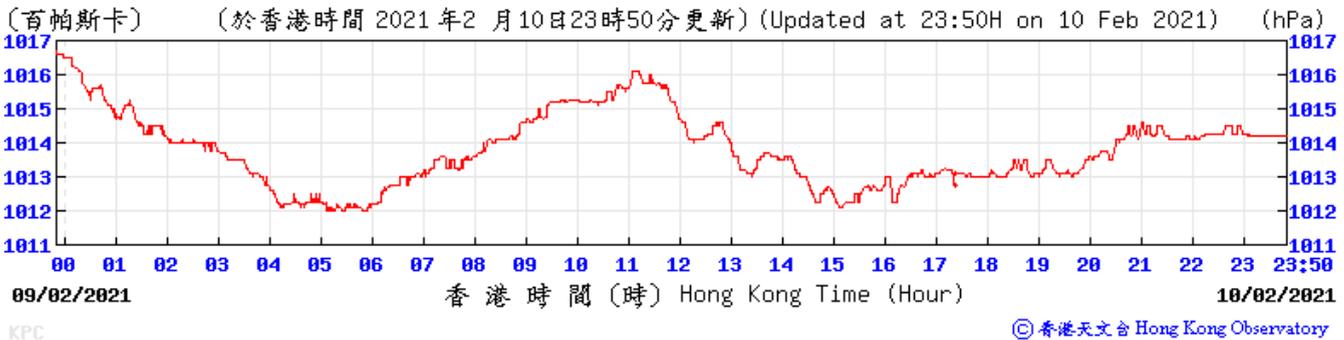


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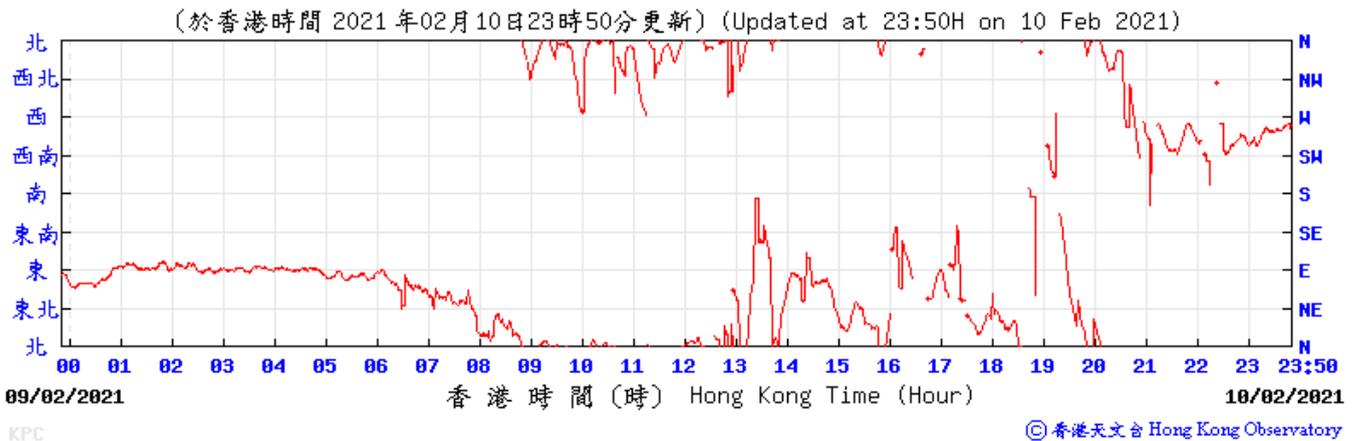
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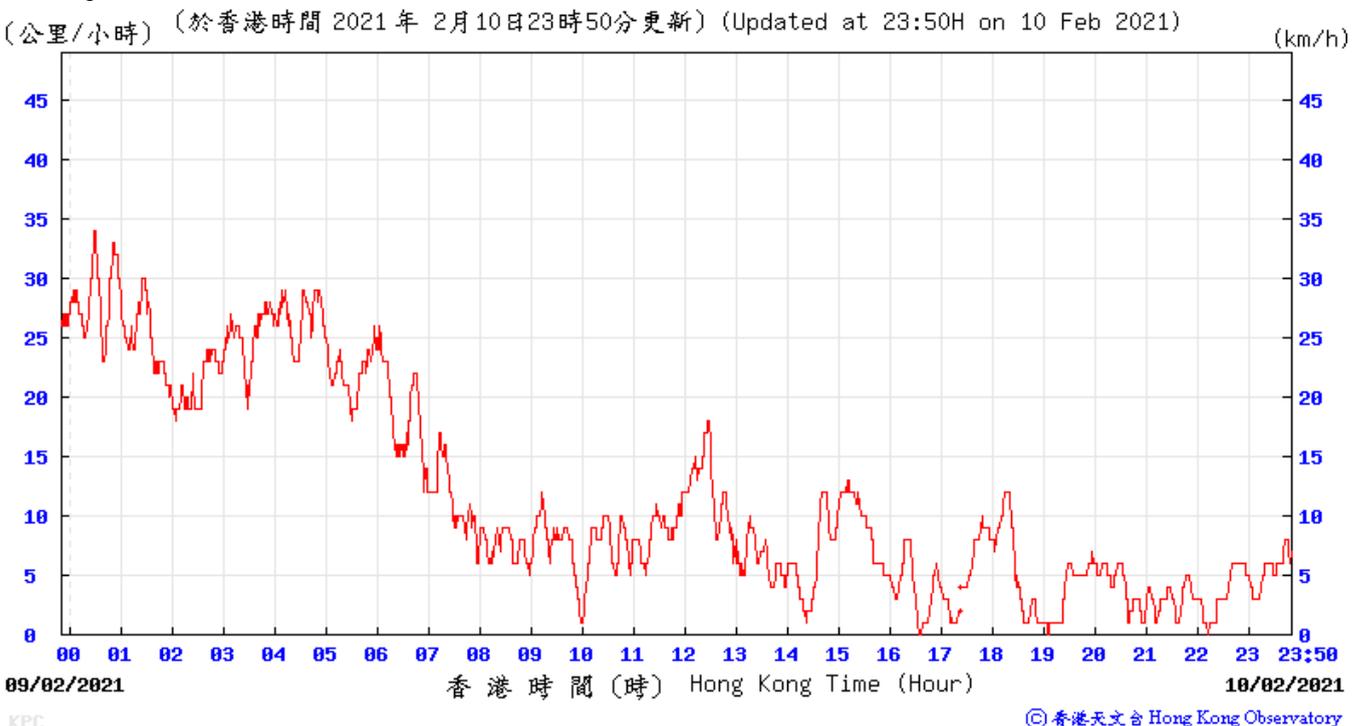
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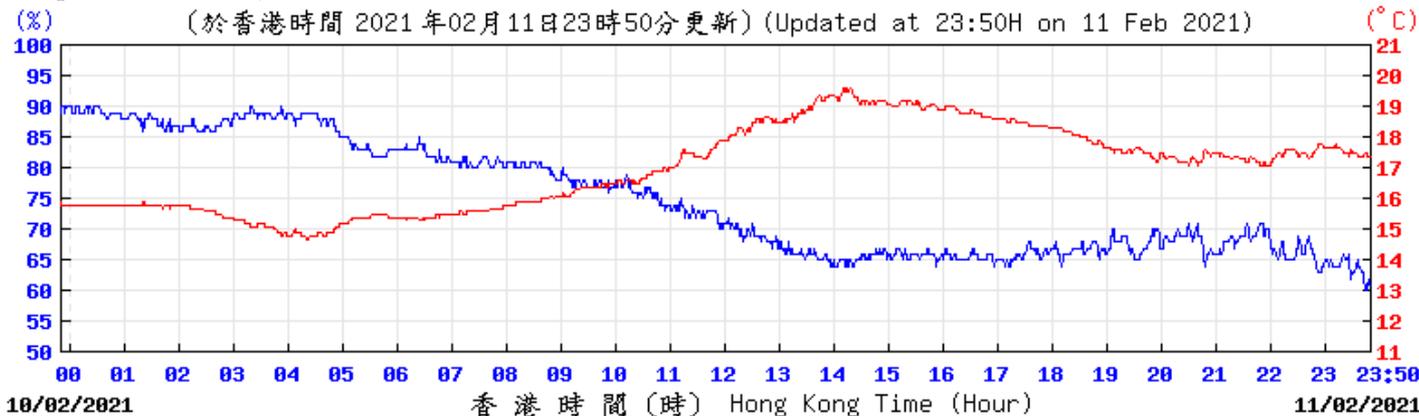
Wind Direction:



Wind Speed:

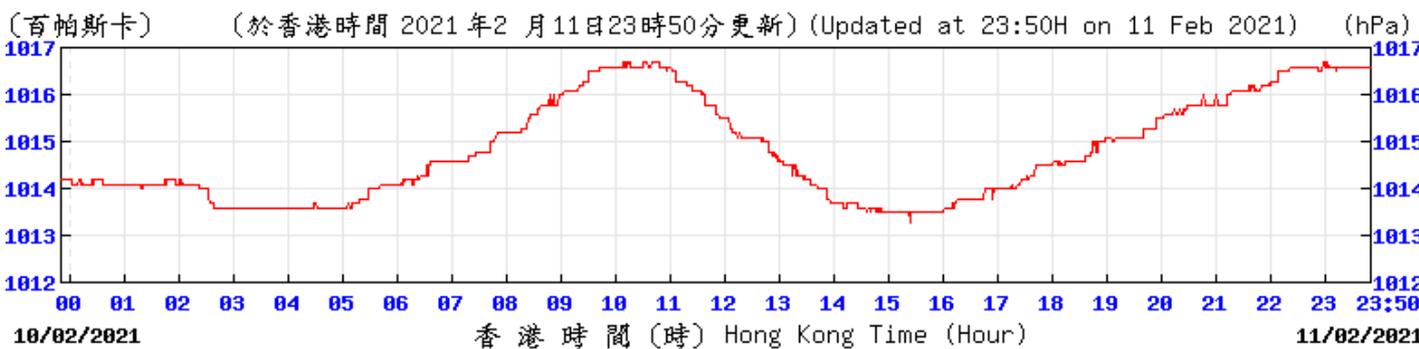


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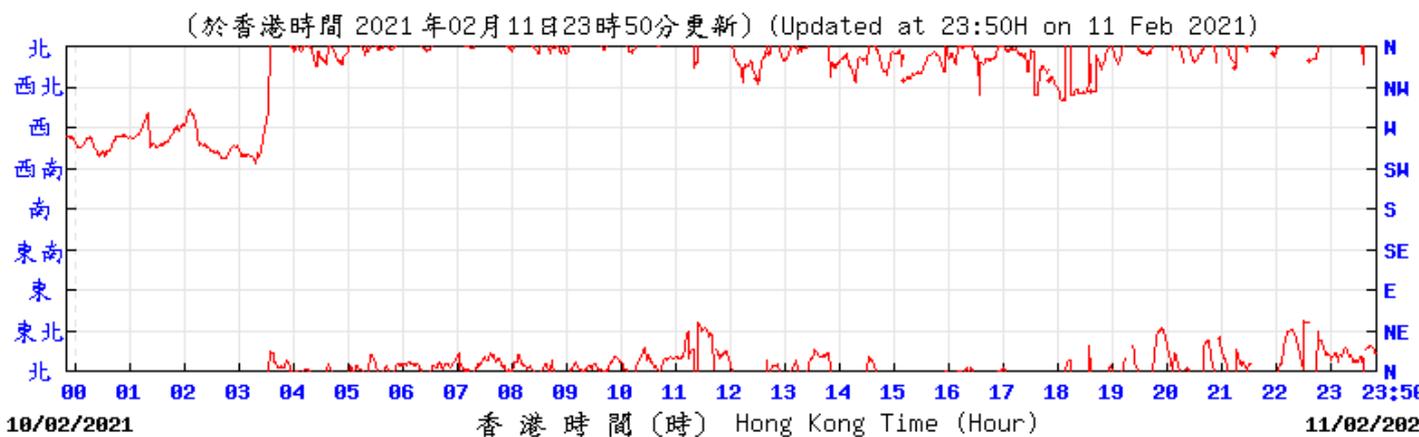
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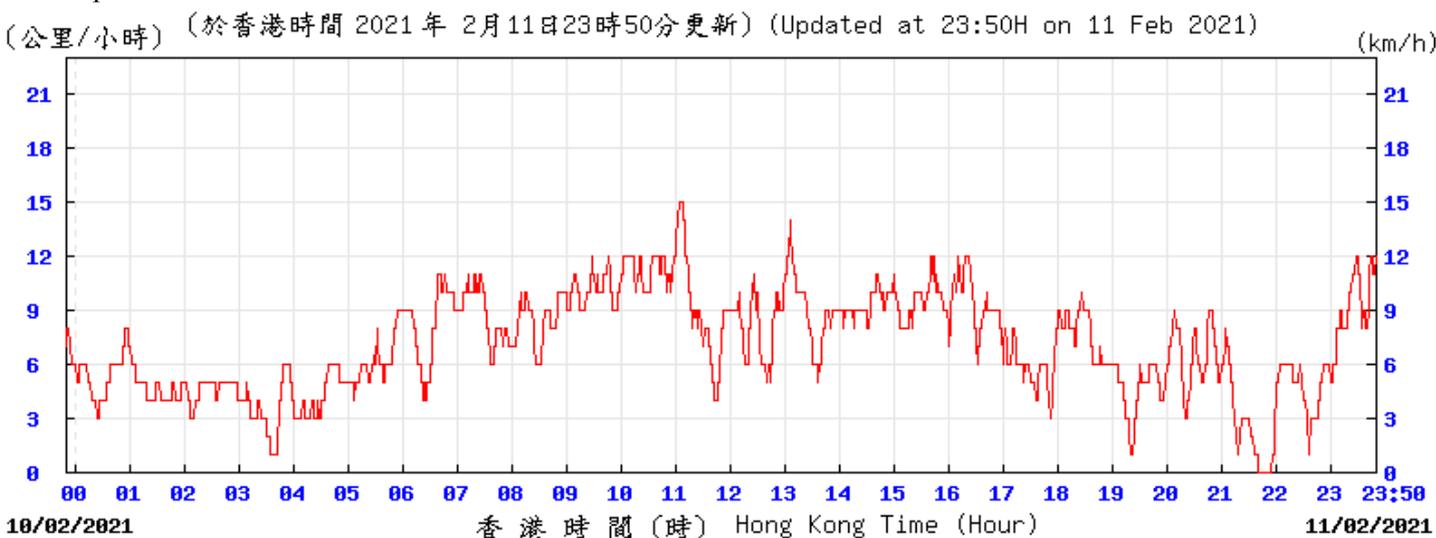
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Wind Direction:



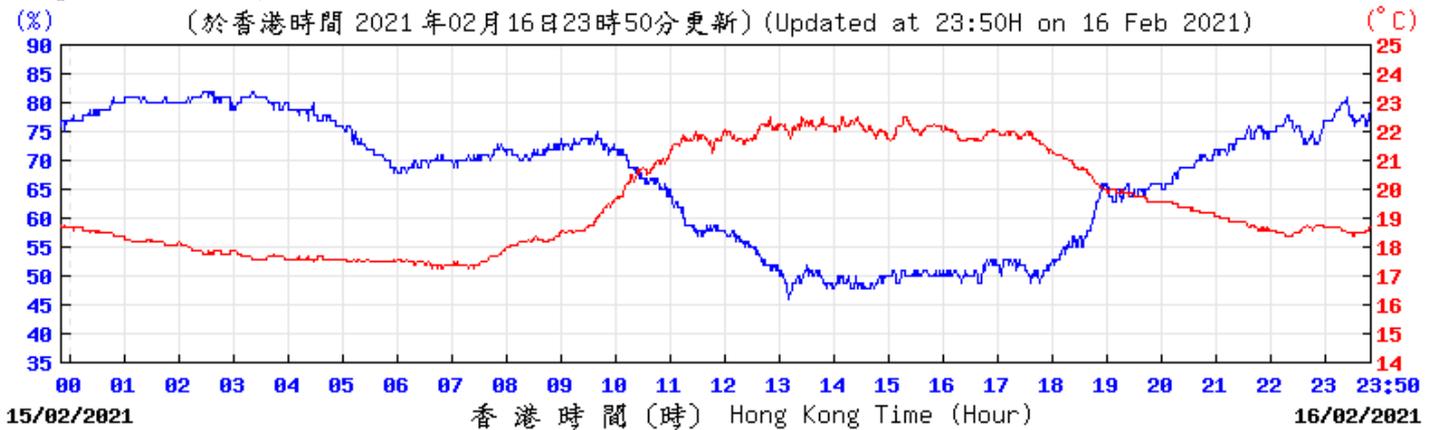
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Wind Speed:



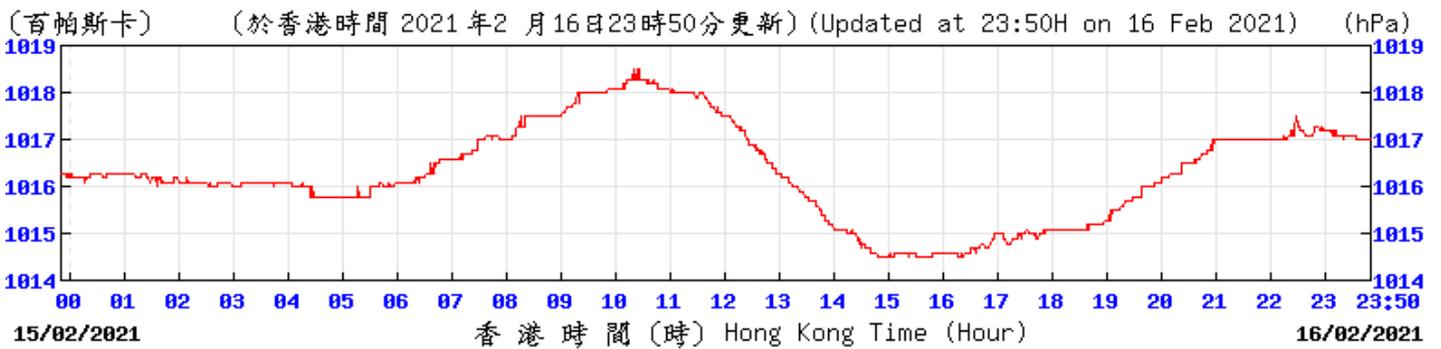
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Temperature/Humidity:



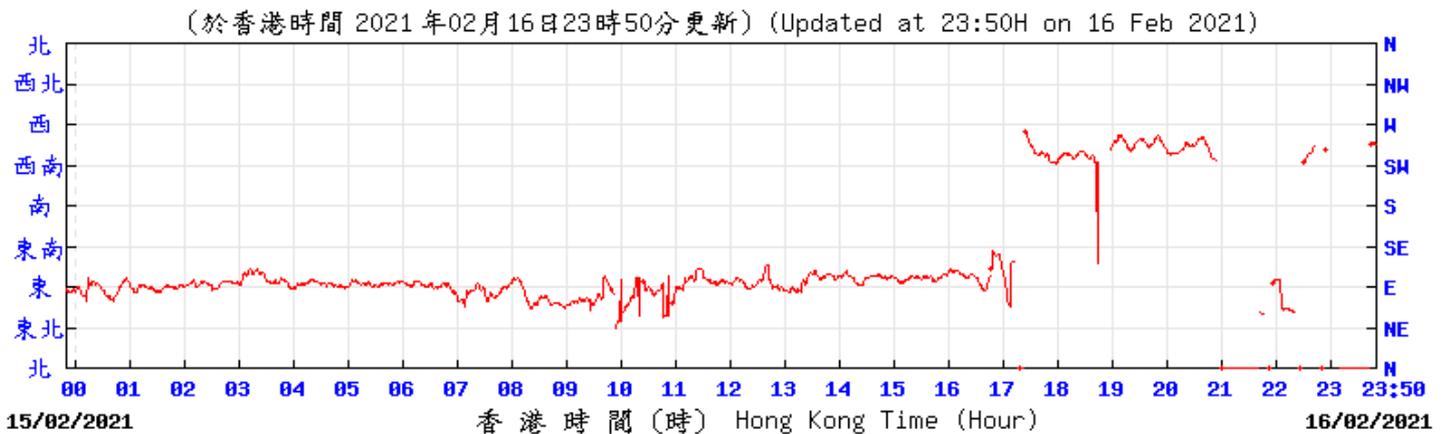
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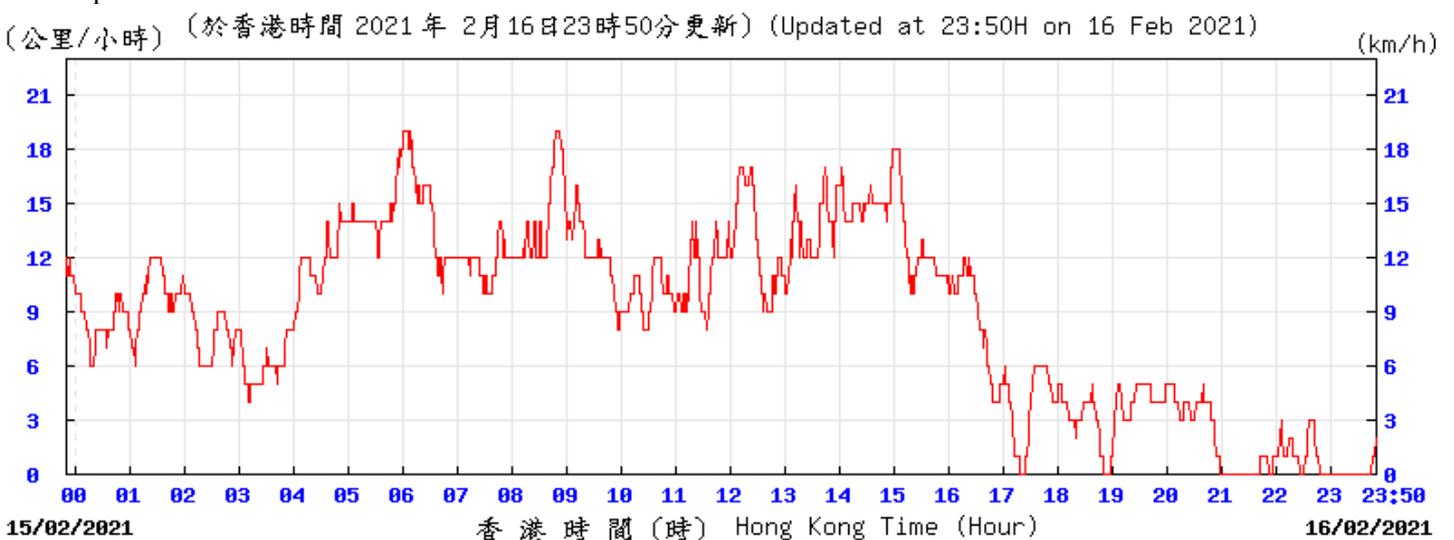
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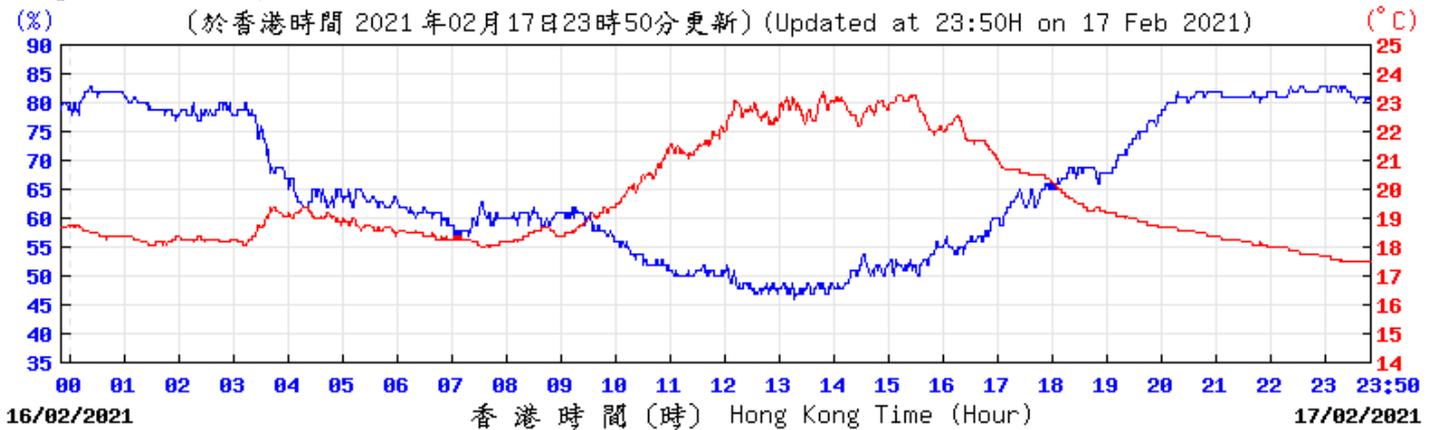
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Wind Speed:

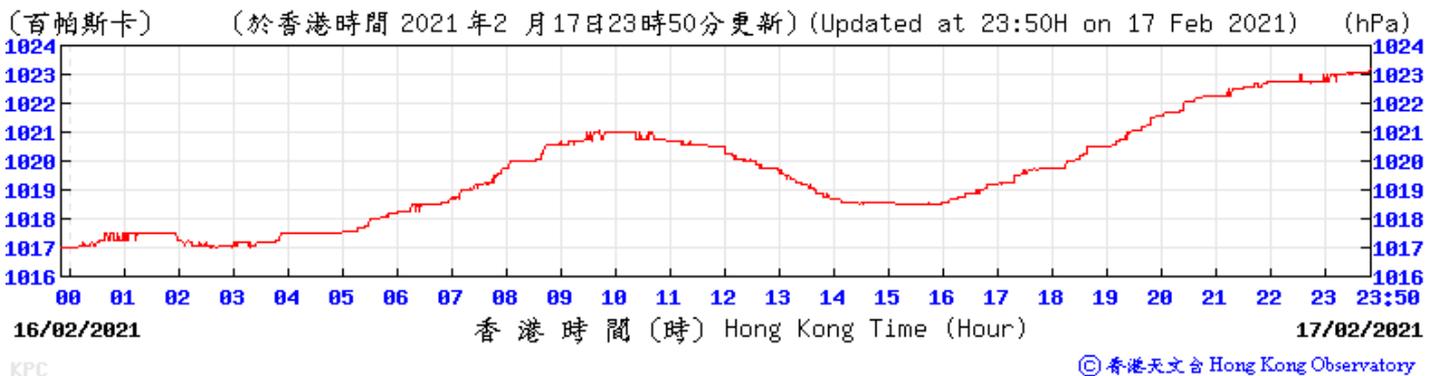


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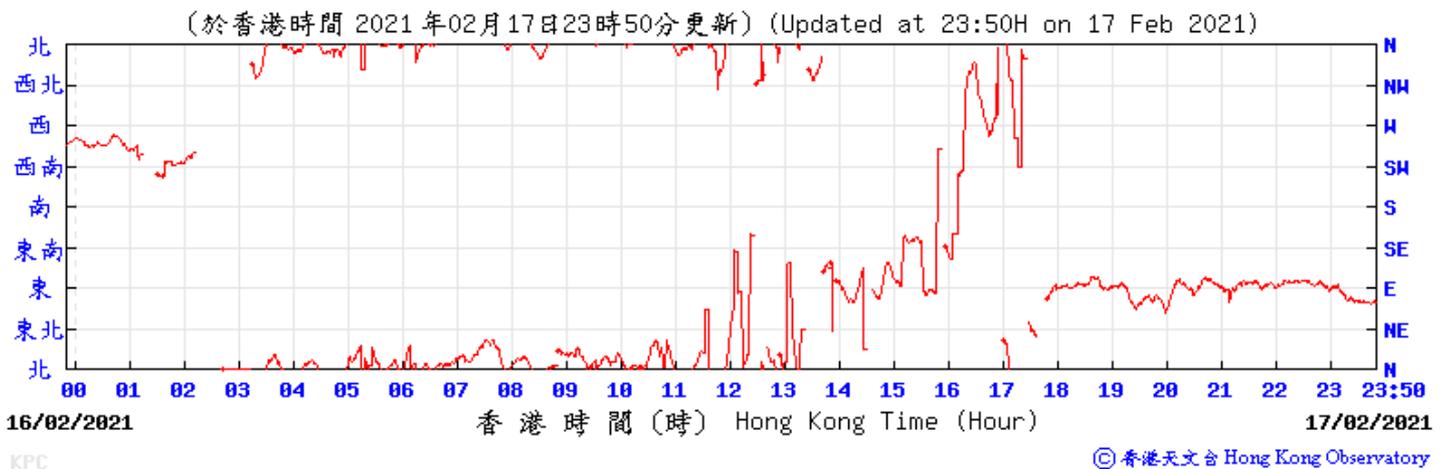
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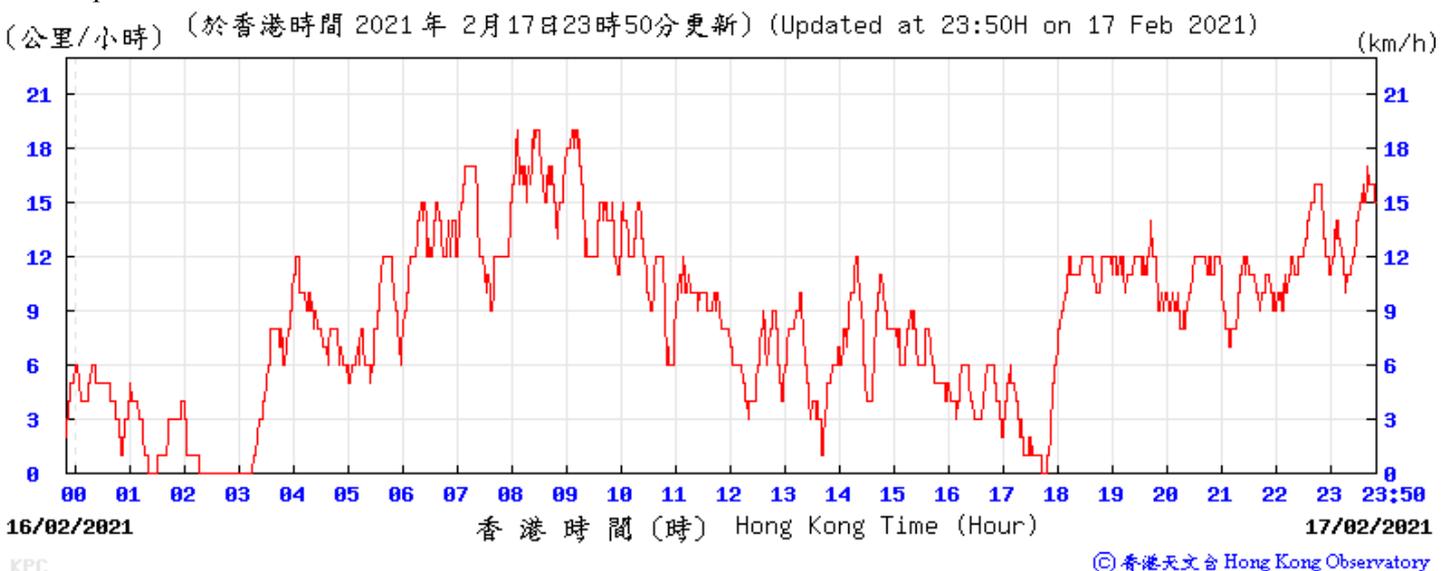
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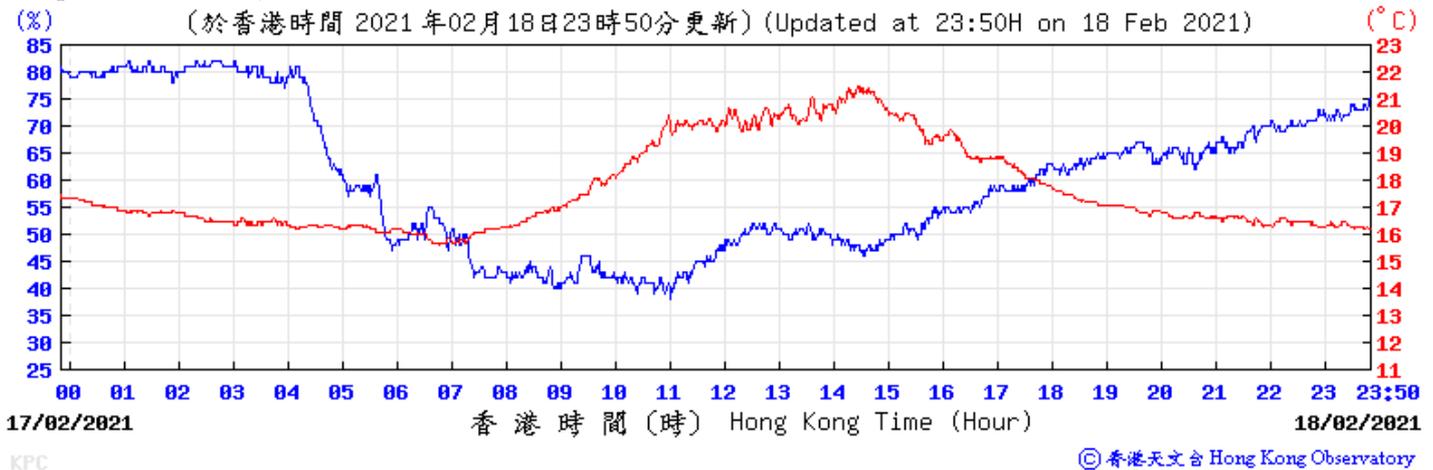
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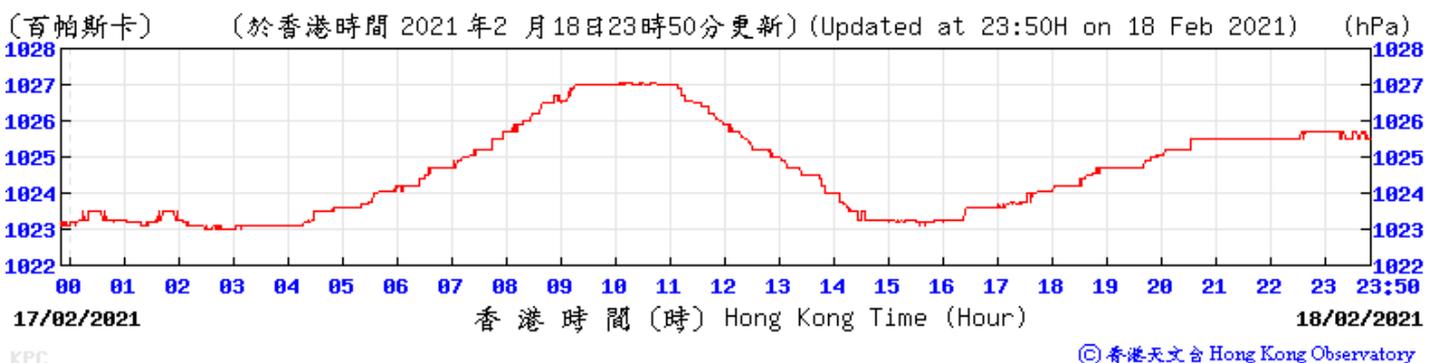
Wind Speed:



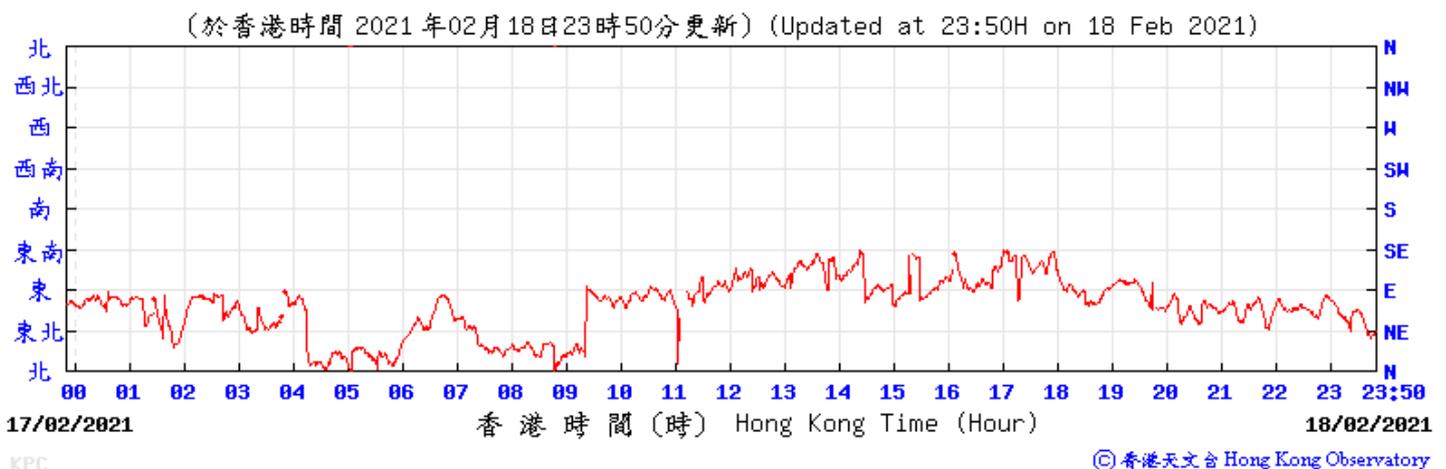
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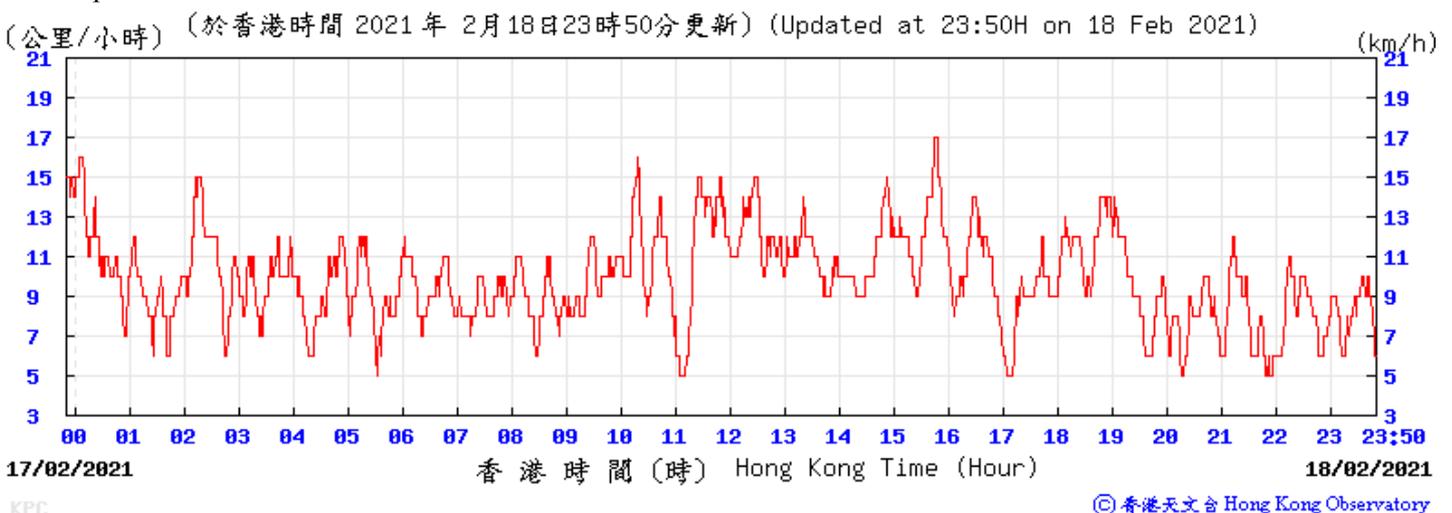
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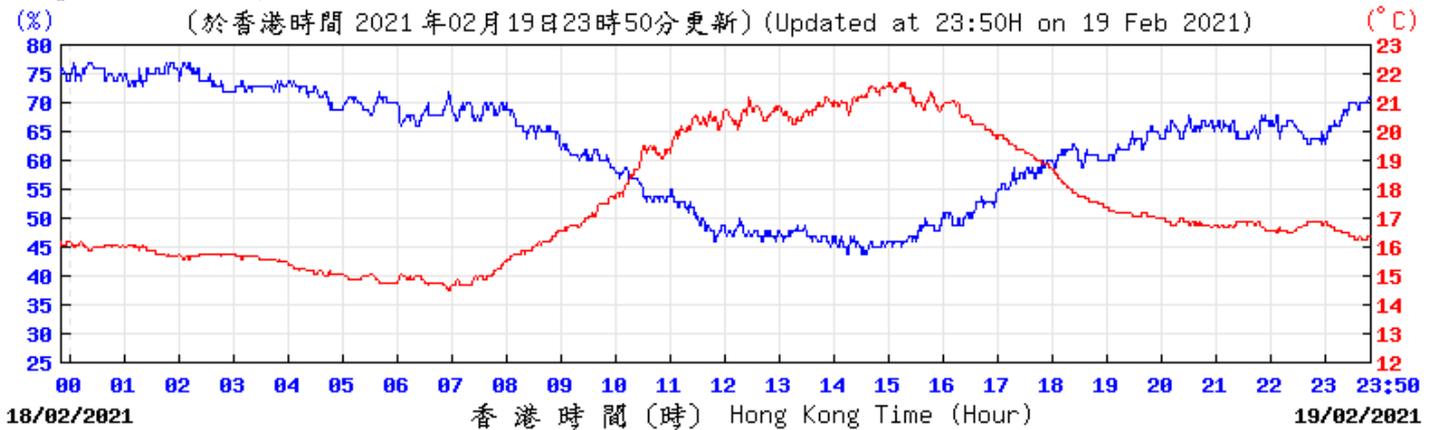
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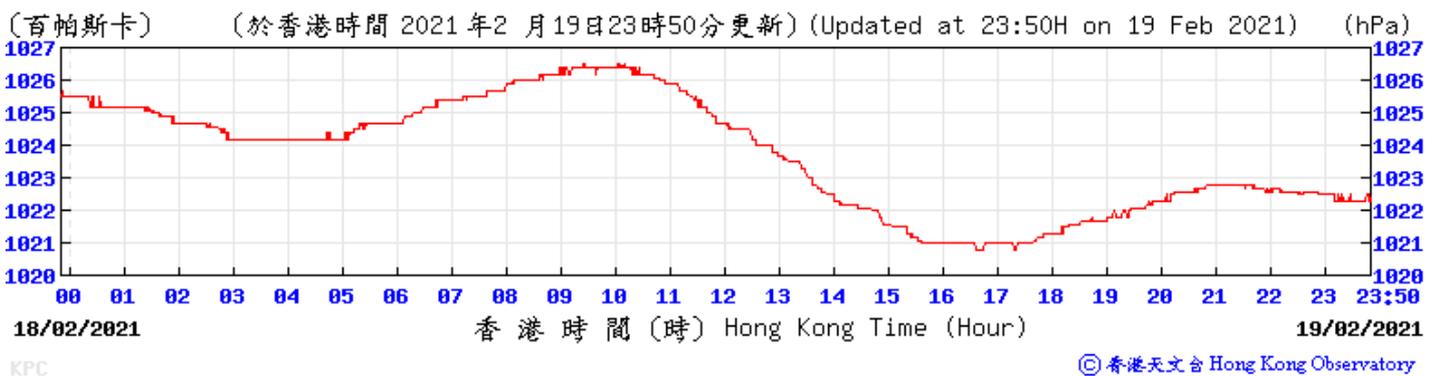
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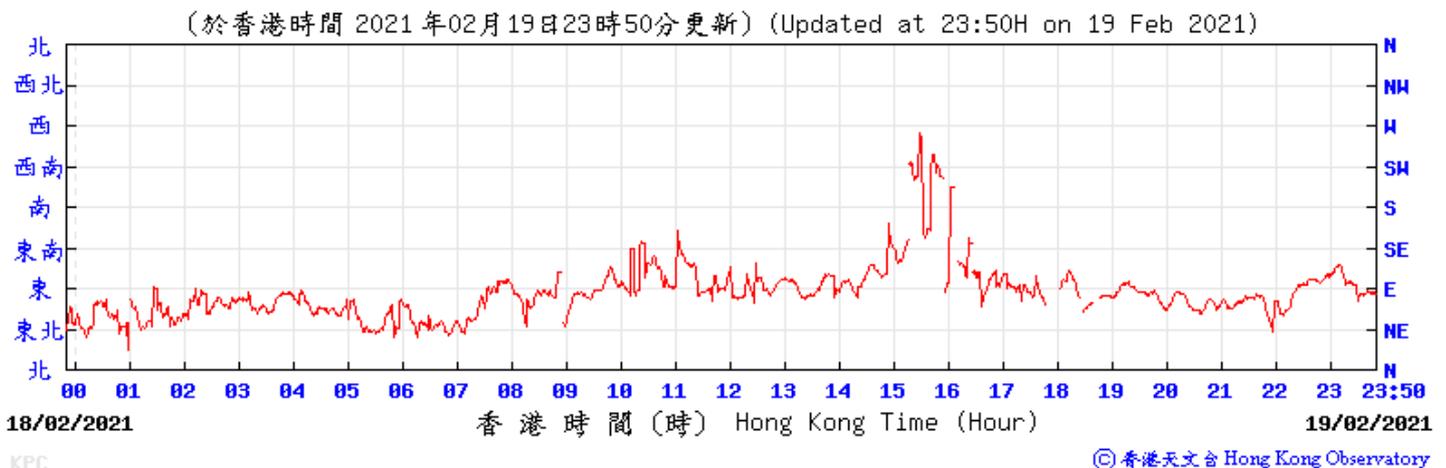
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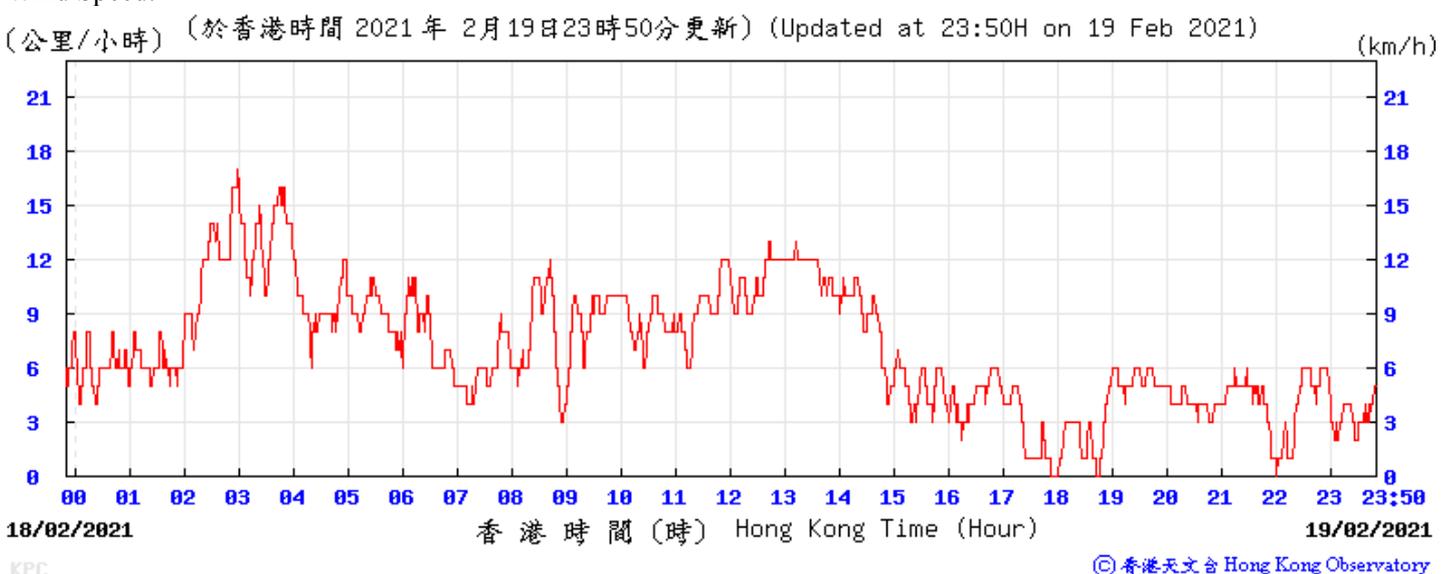
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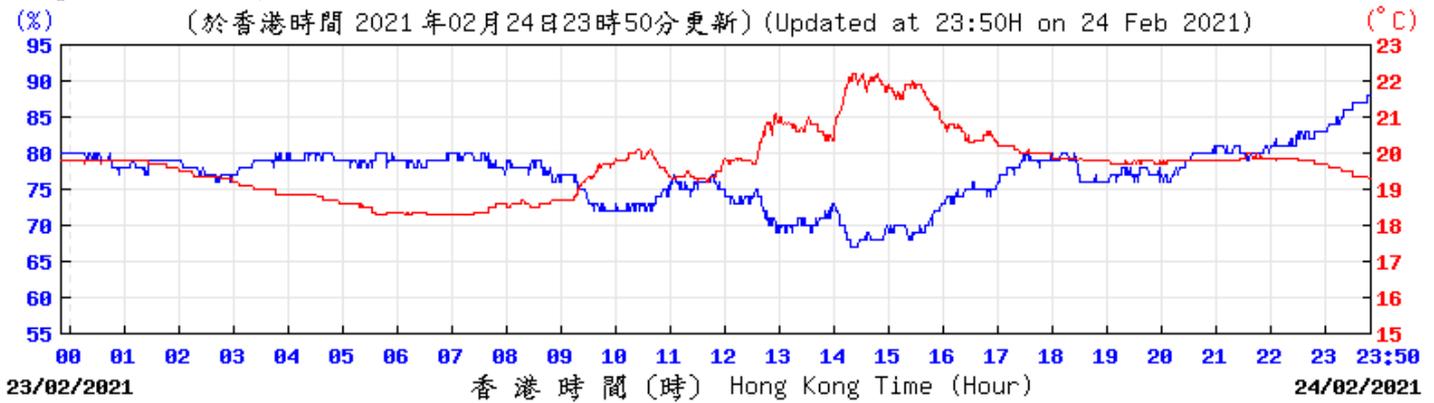
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Wind Speed:

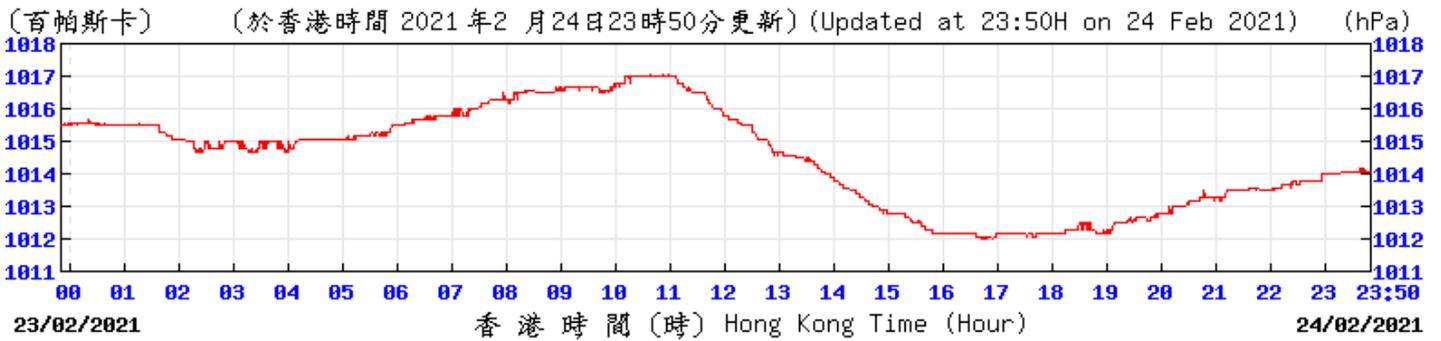


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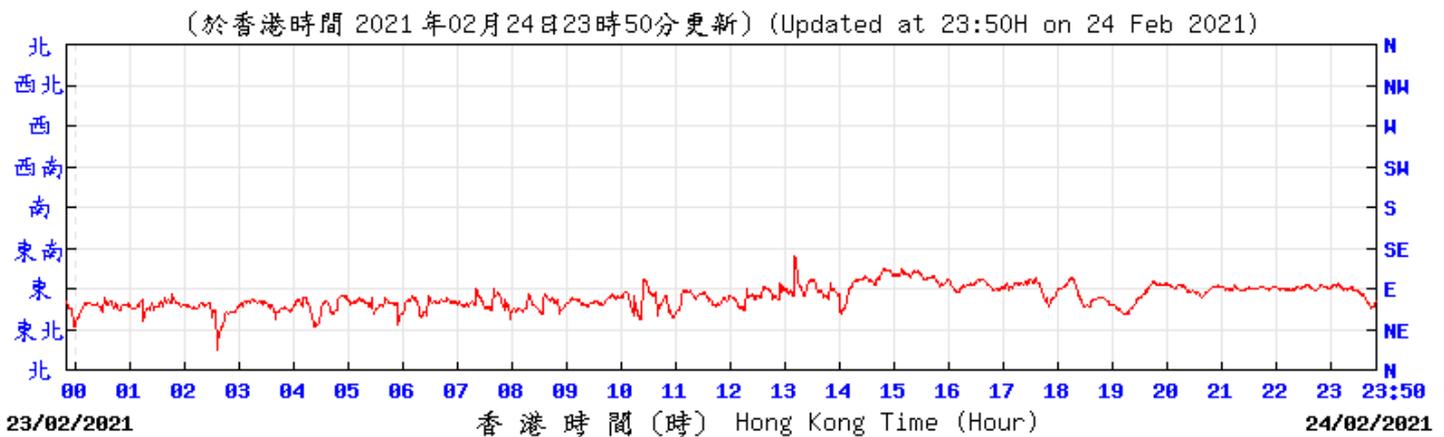
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KPC
Pressure:



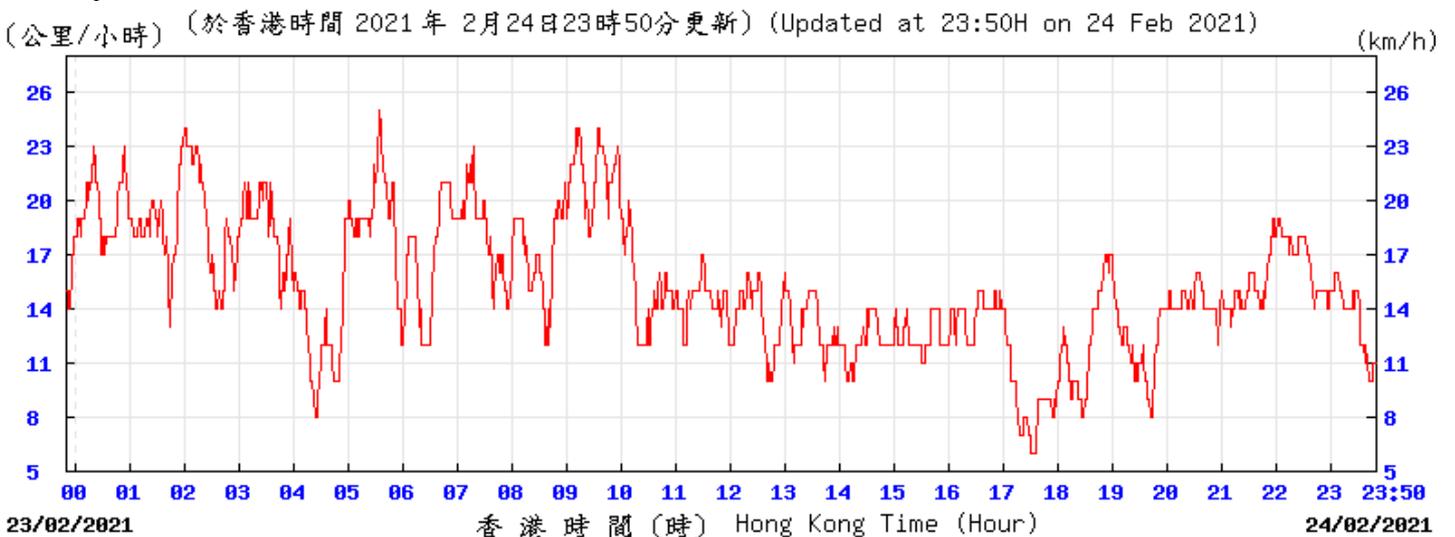
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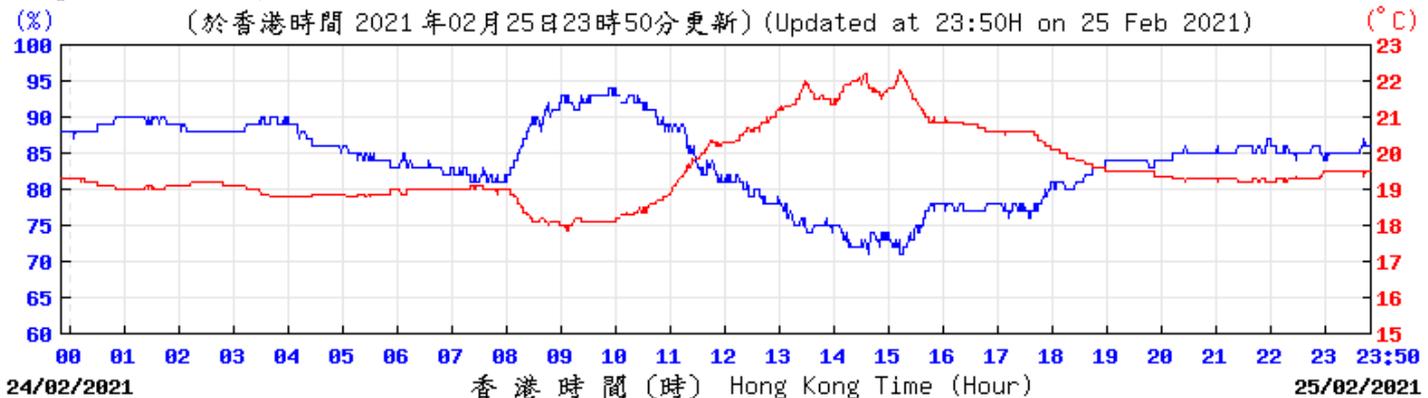
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Wind Speed:



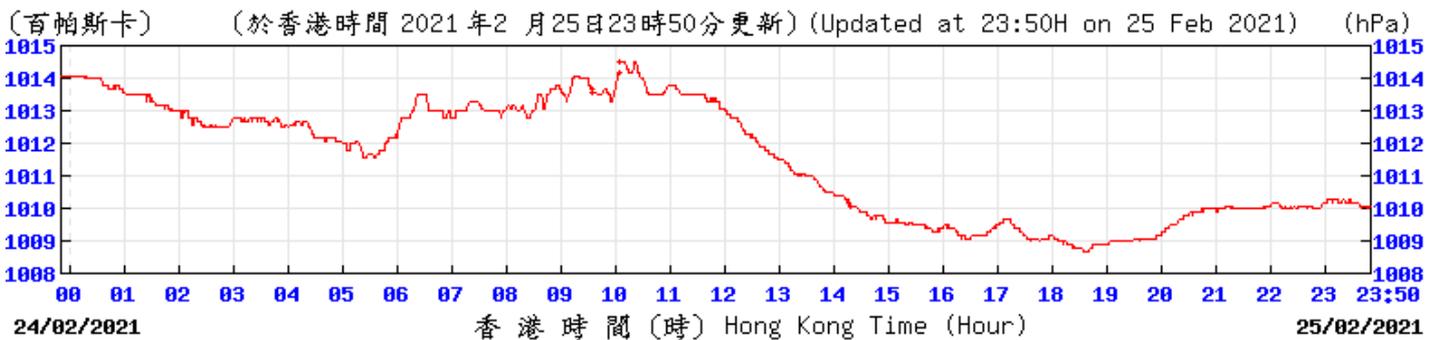
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Temperature/Humidity:



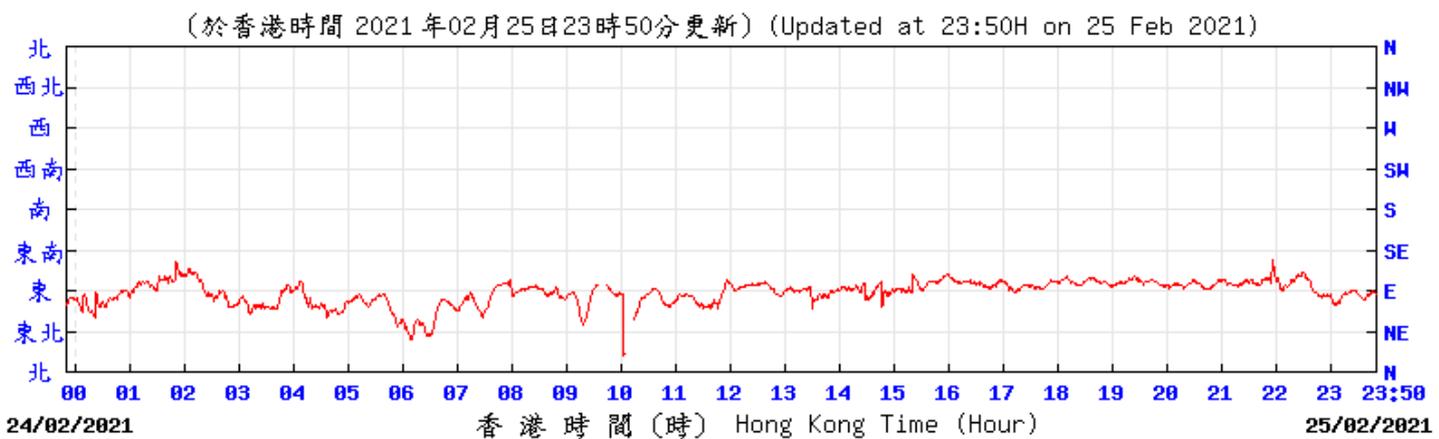
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Pressure:



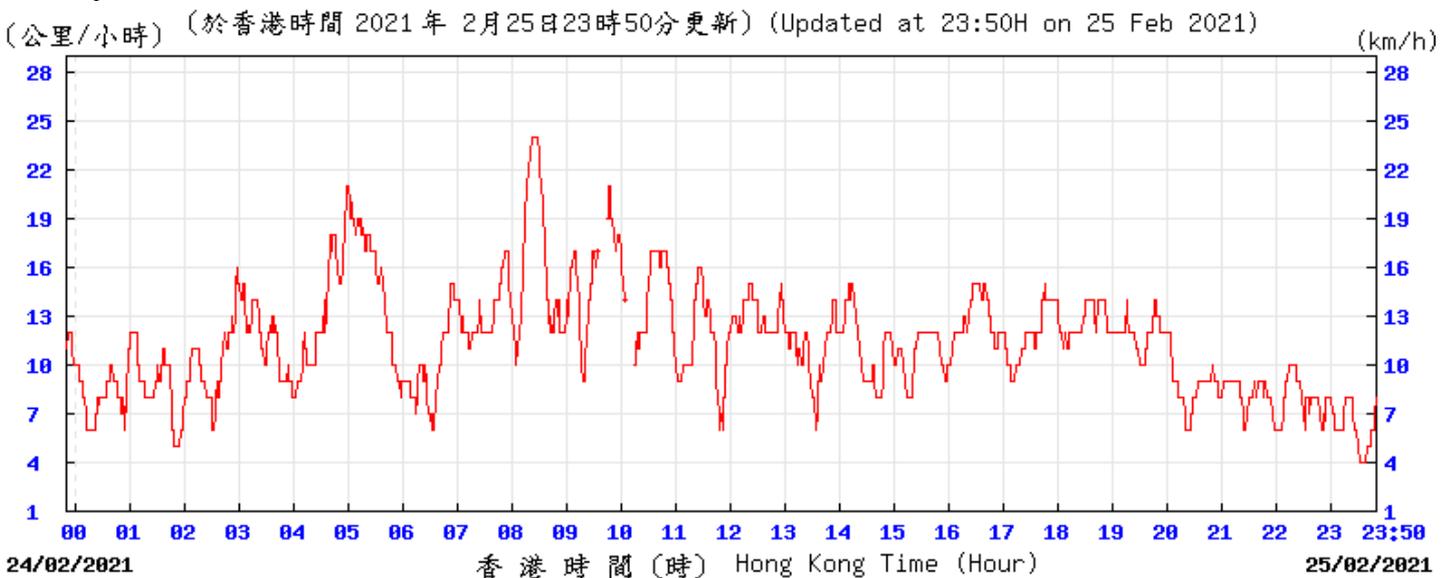
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Wind Direction:



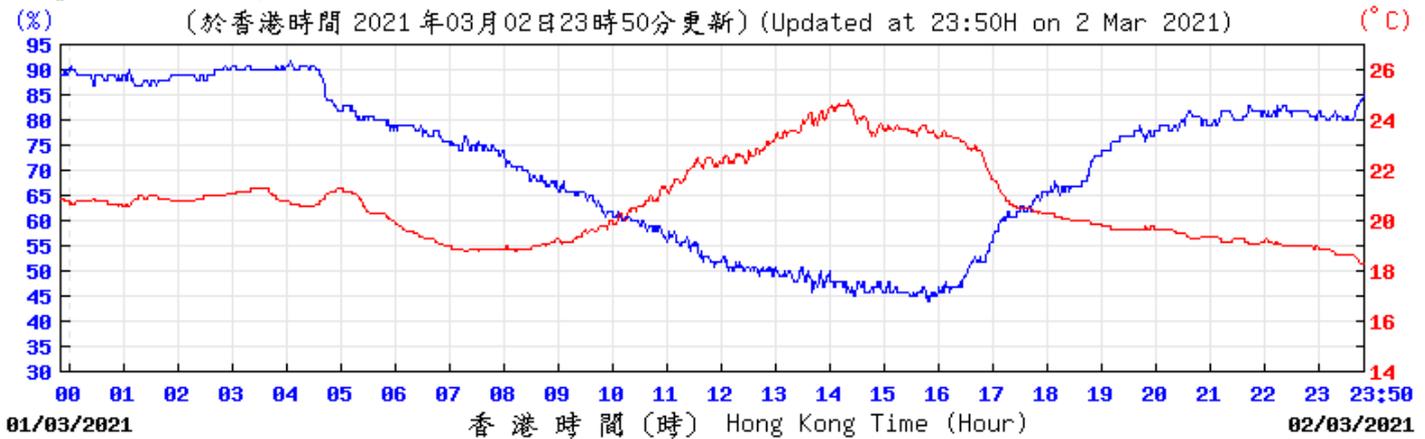
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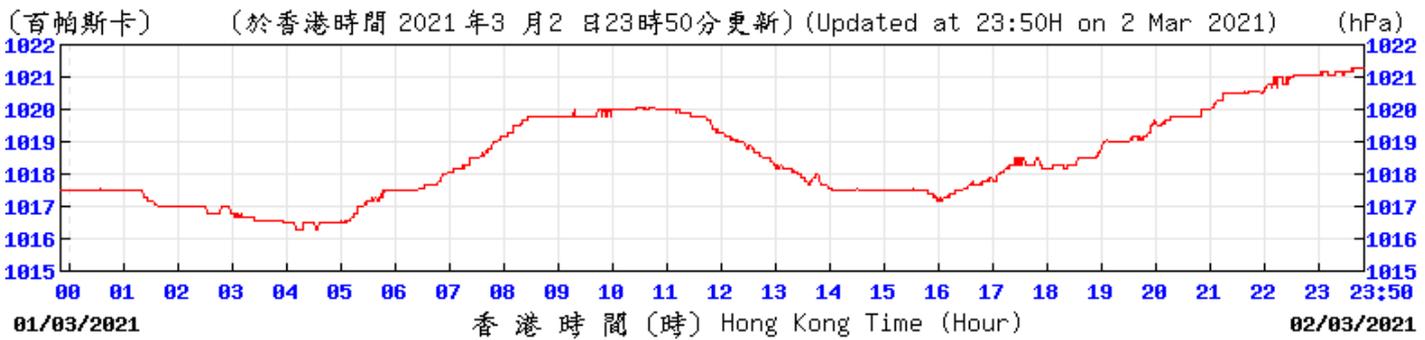
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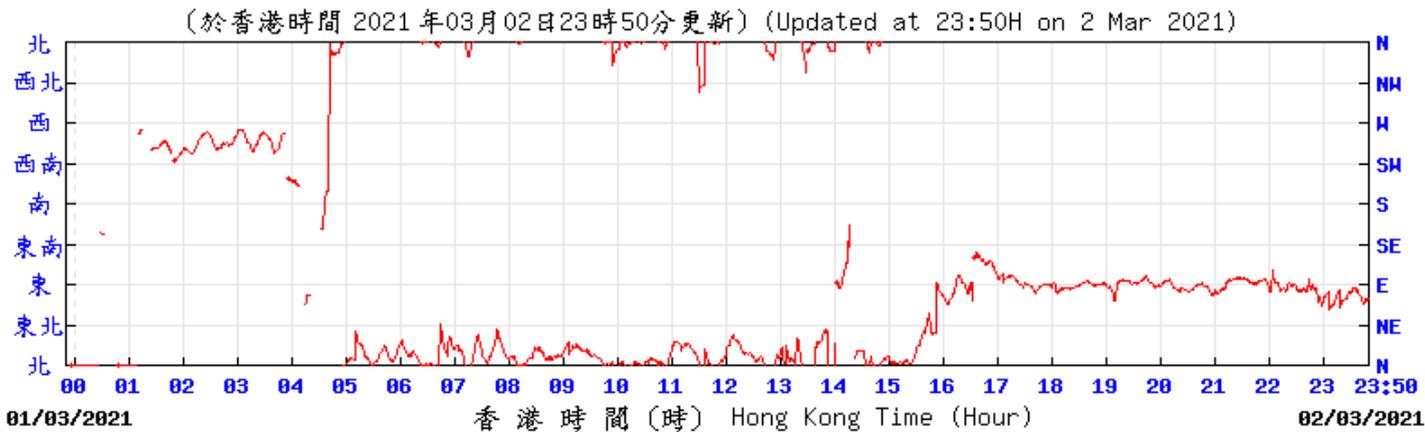
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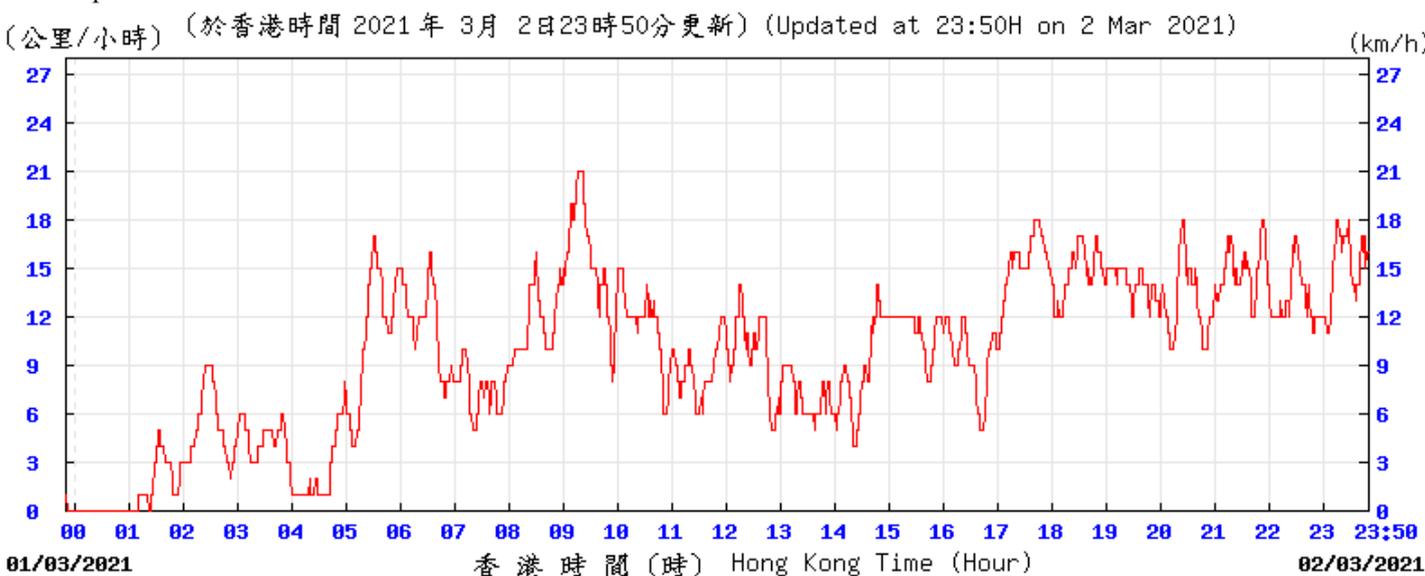
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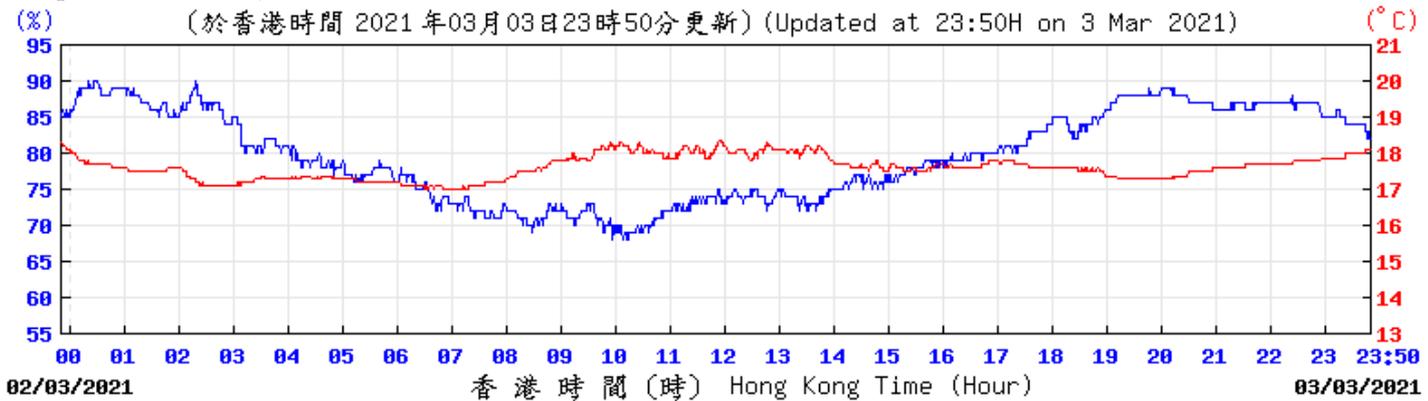
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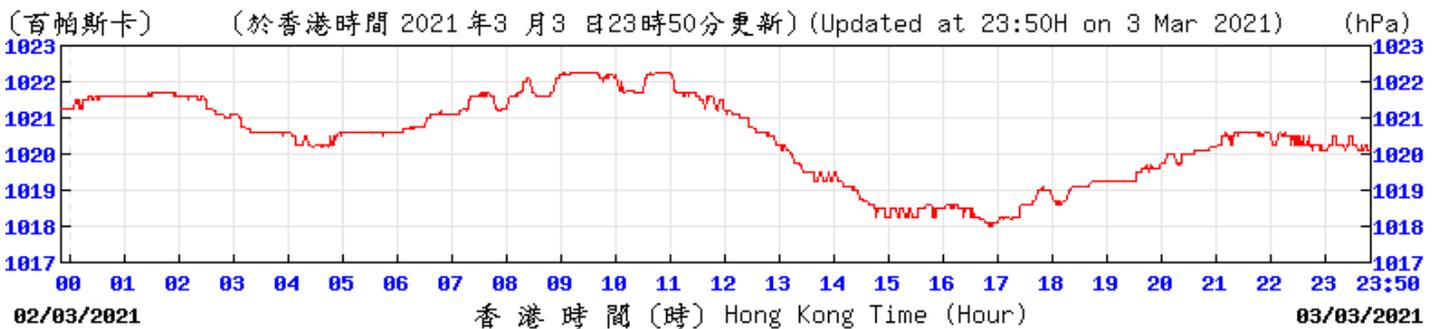
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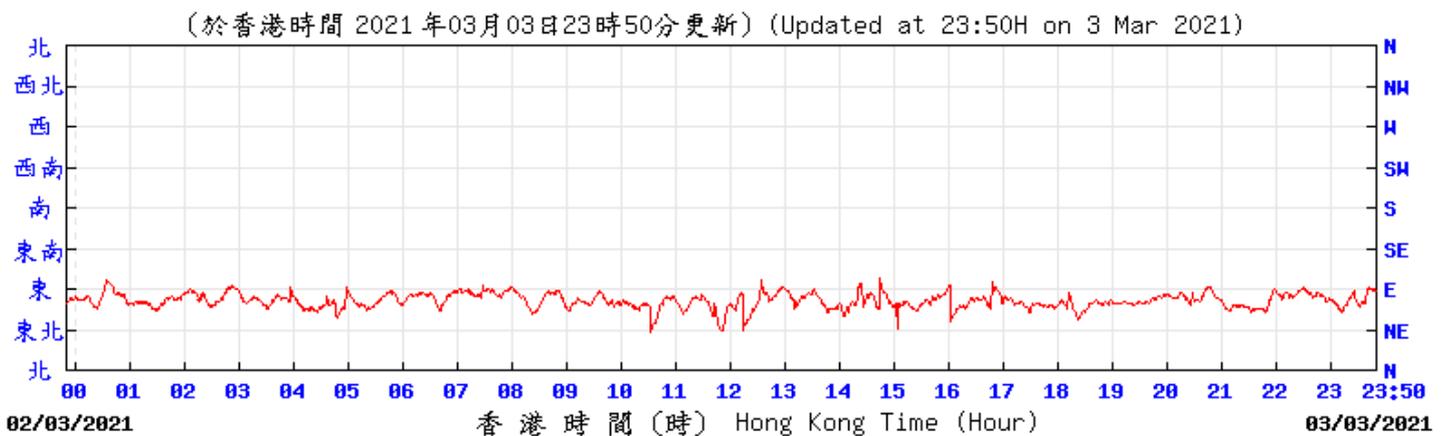
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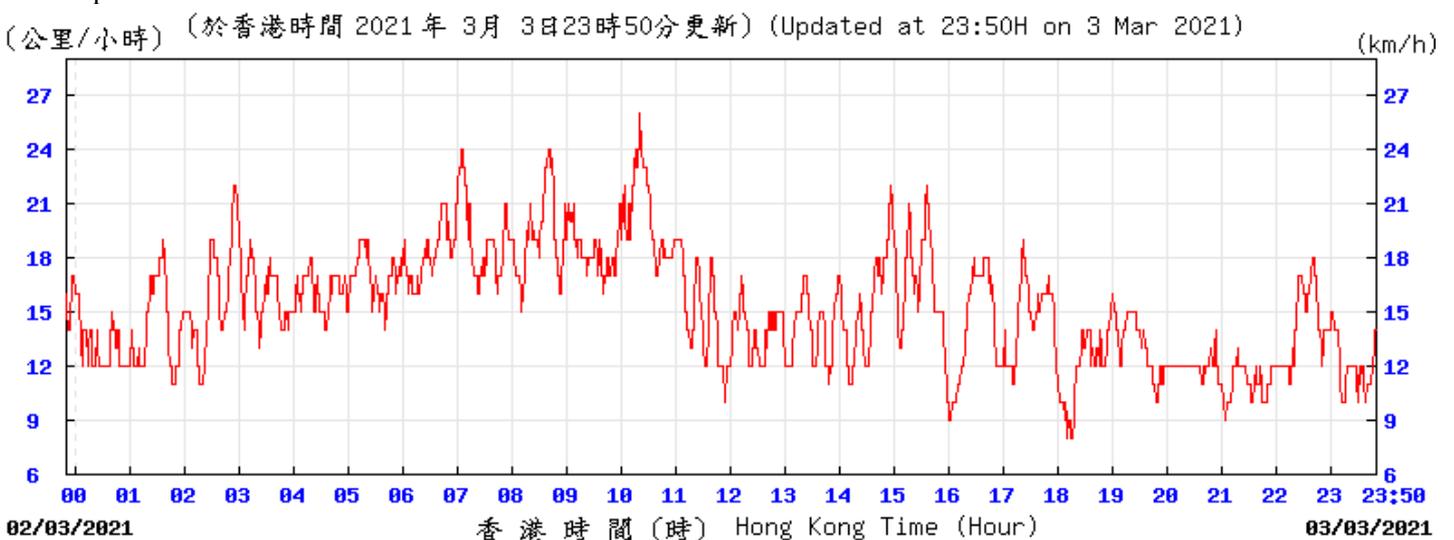
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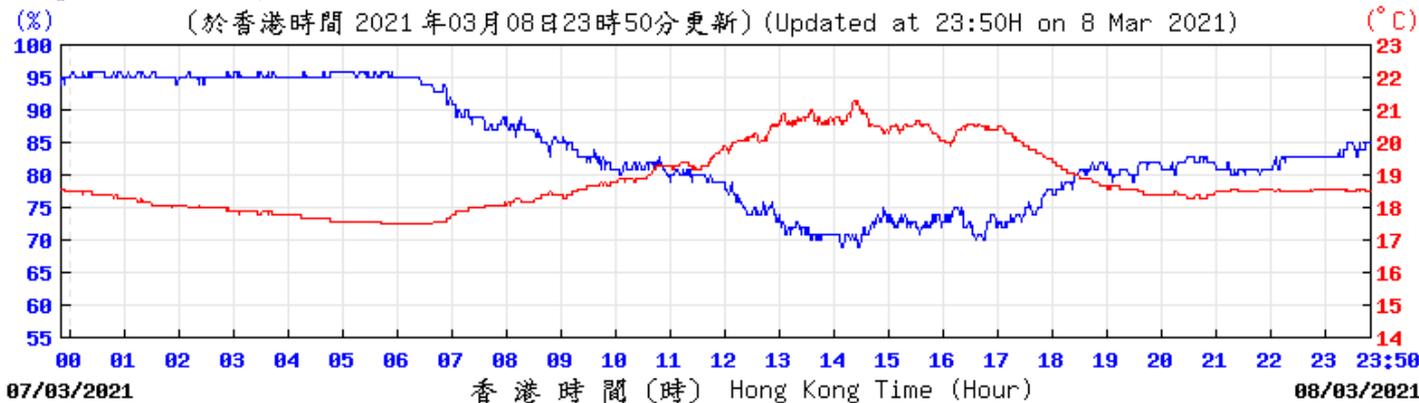
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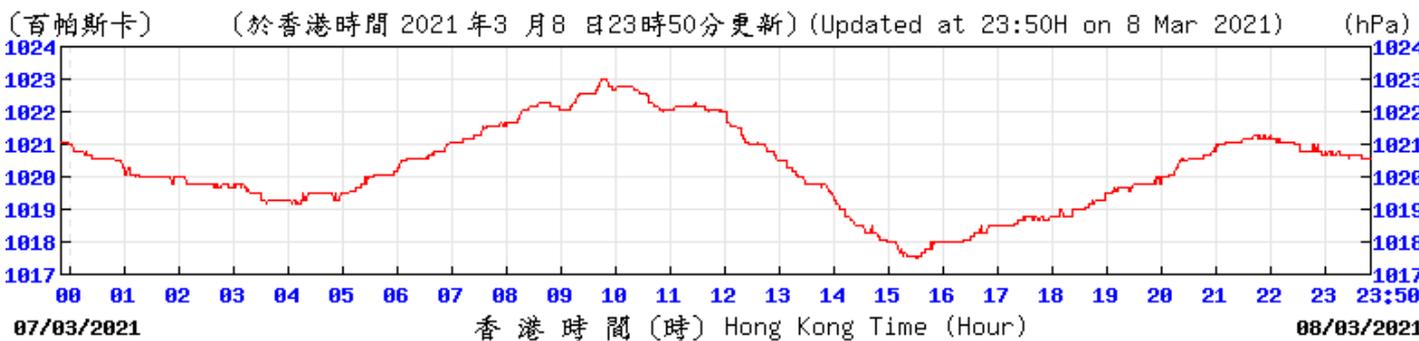
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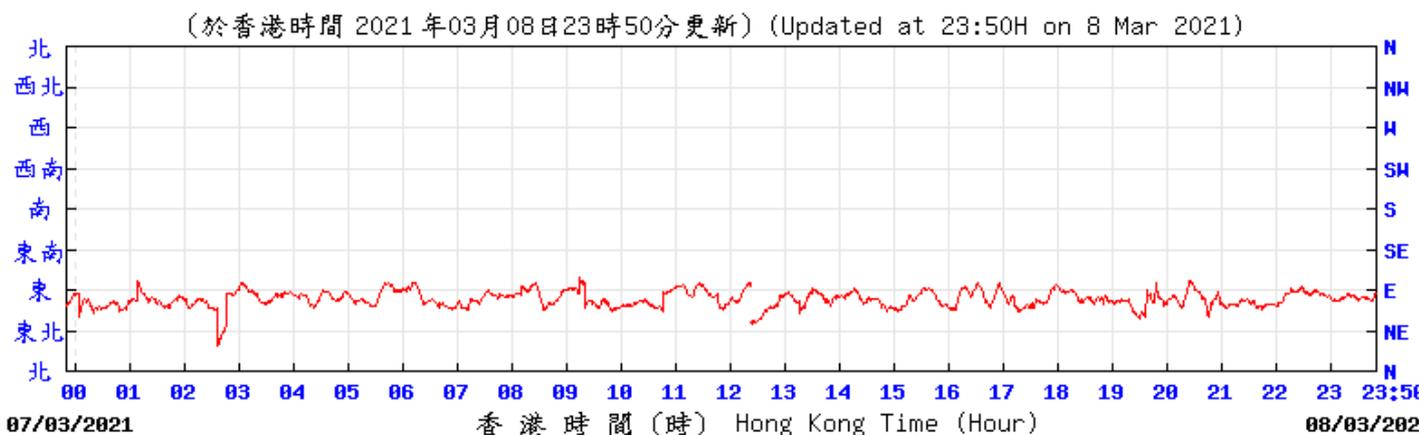
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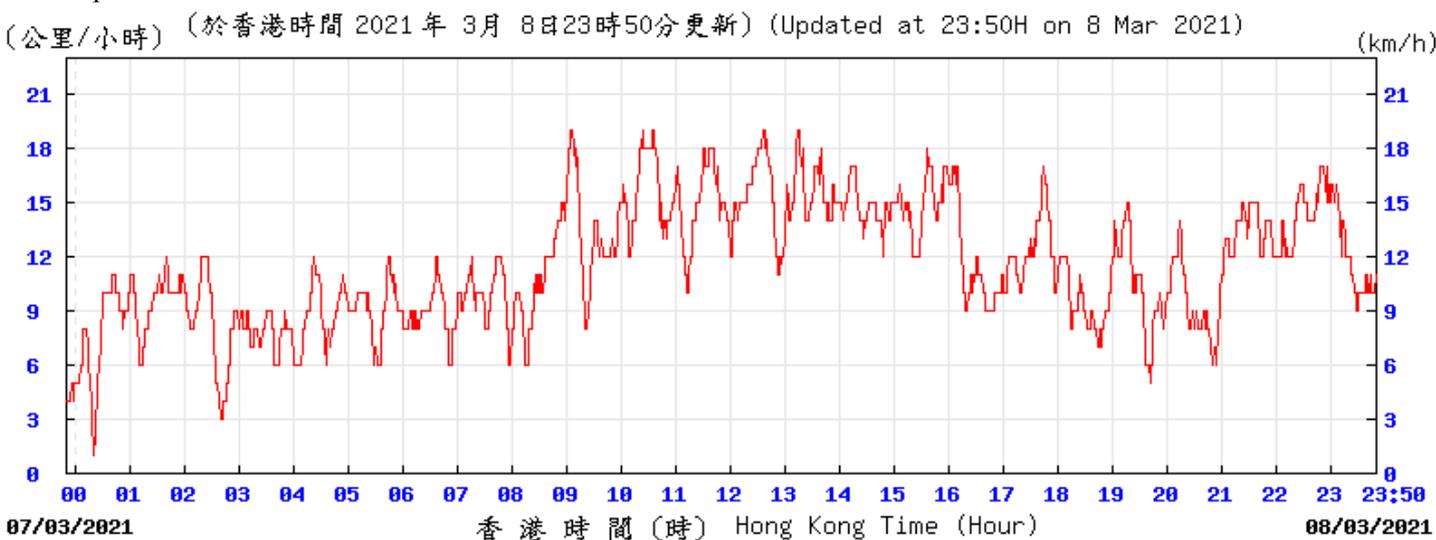
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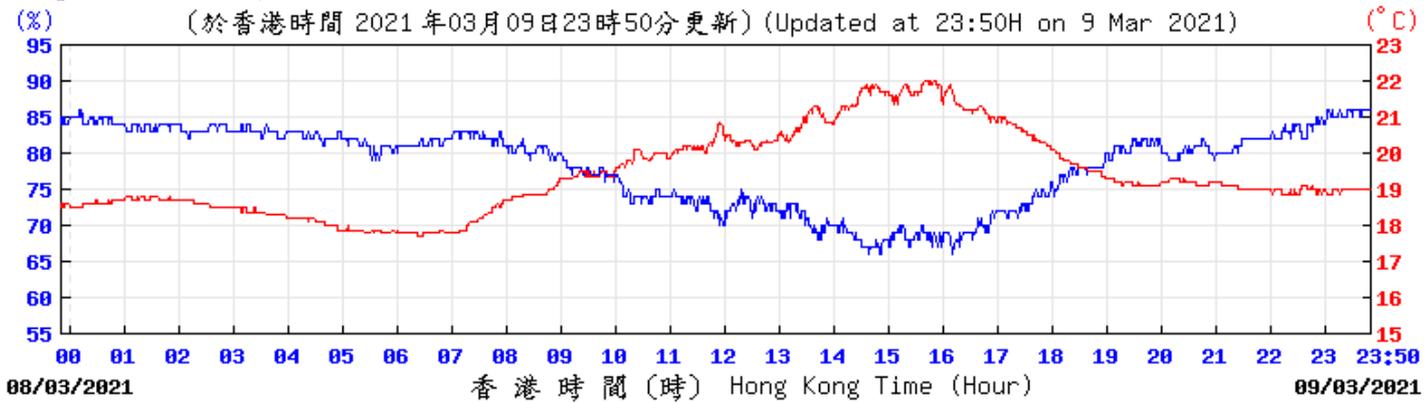
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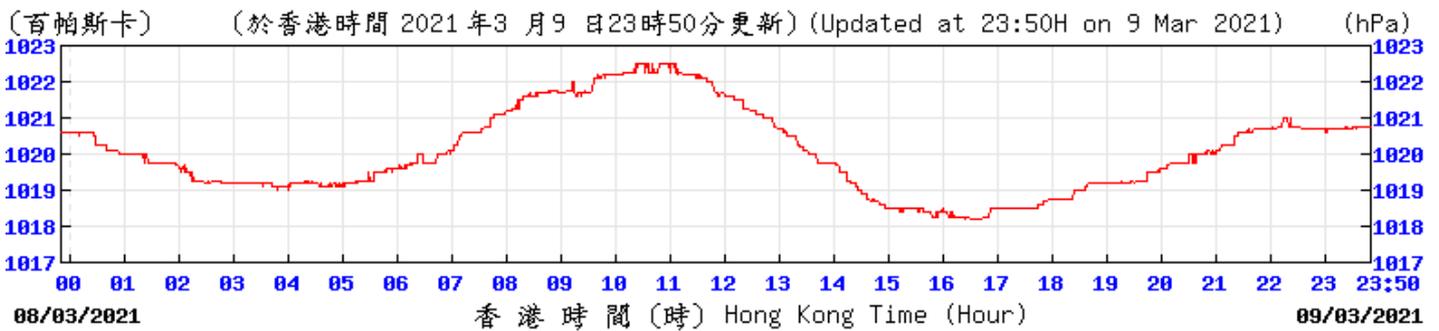
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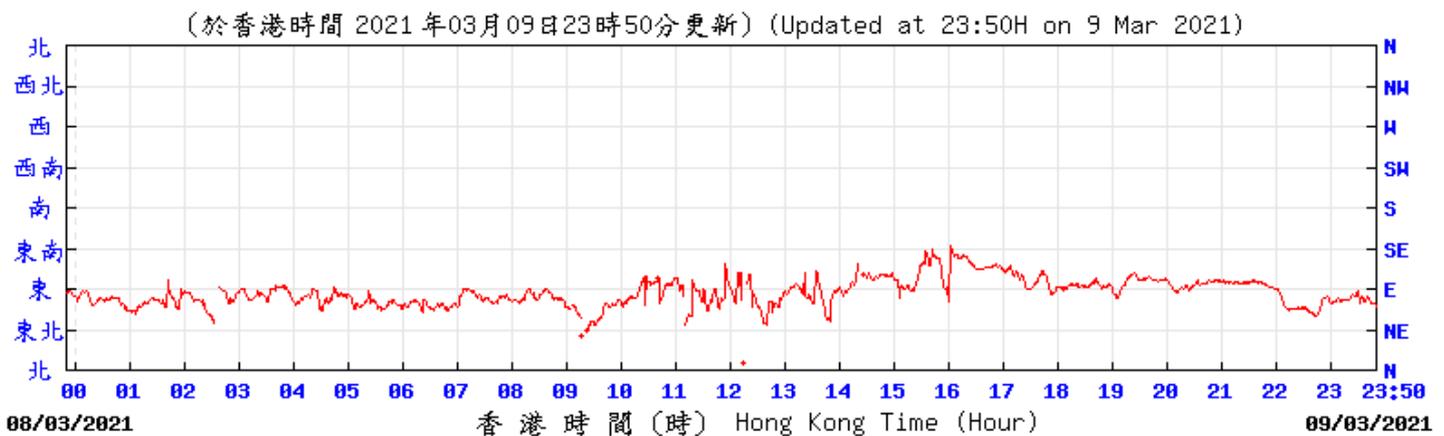
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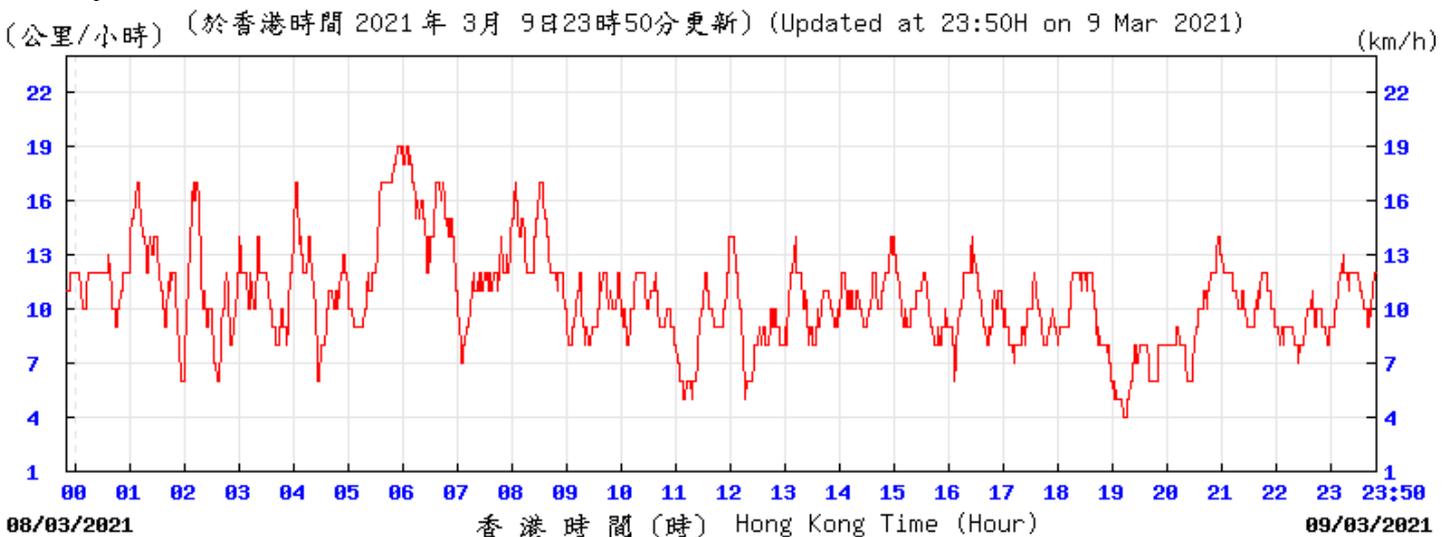
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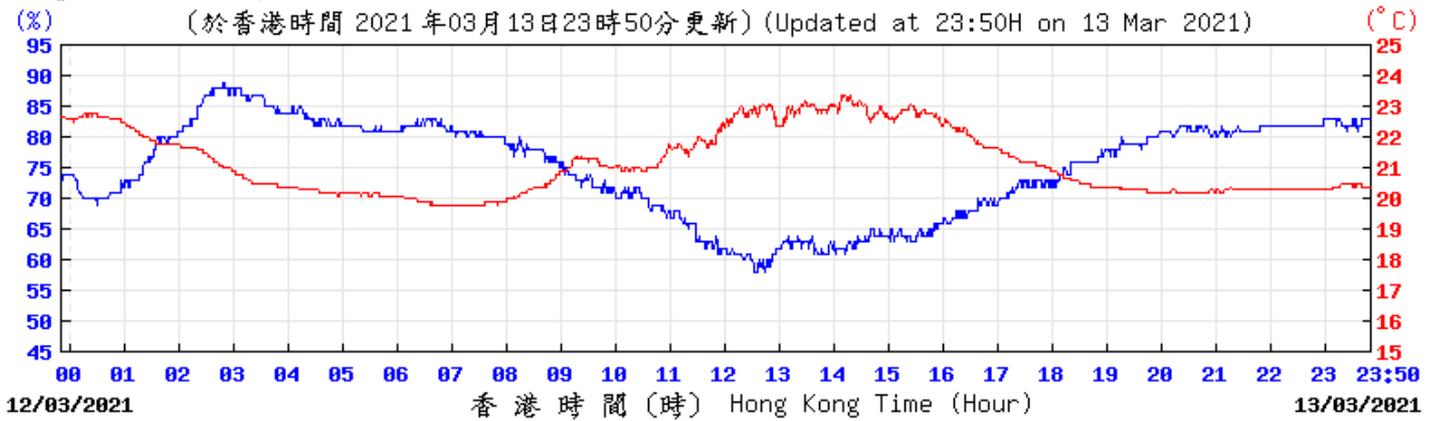
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Wind Speed:



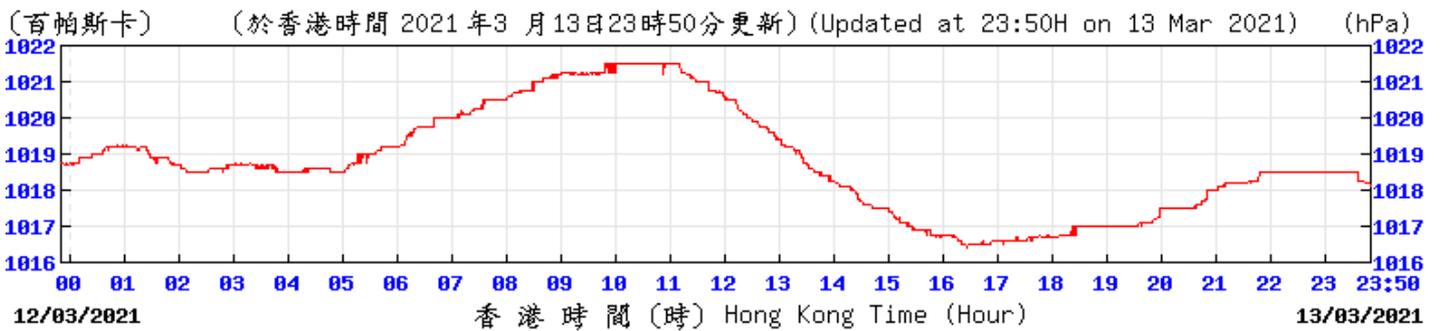
© 香港天文台 Hong Kong Observatory

Temperature/Humidity:



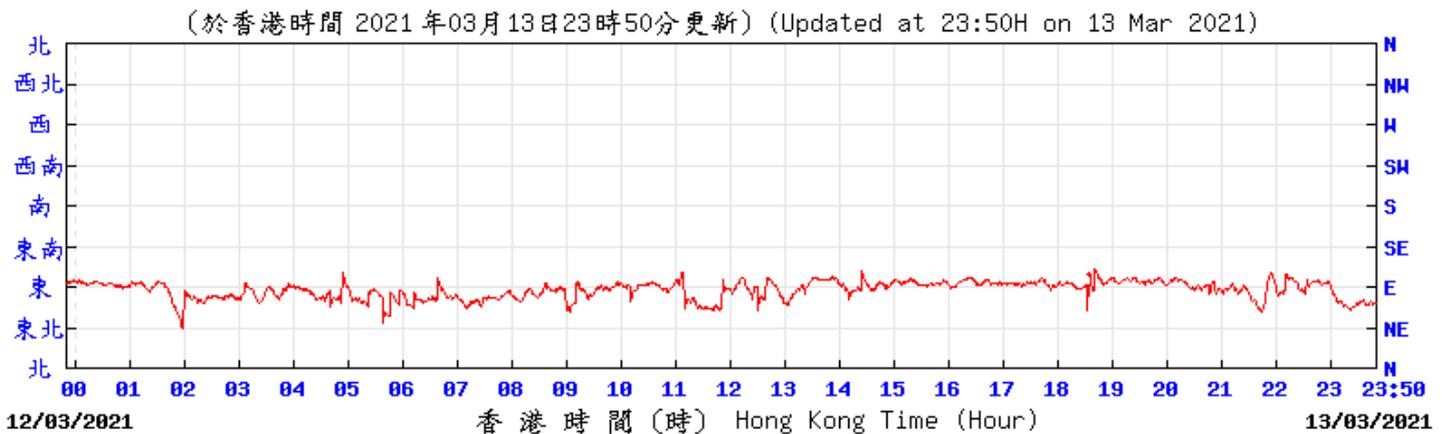
© 香港天文台 Hong Kong Observatory

Pressure:



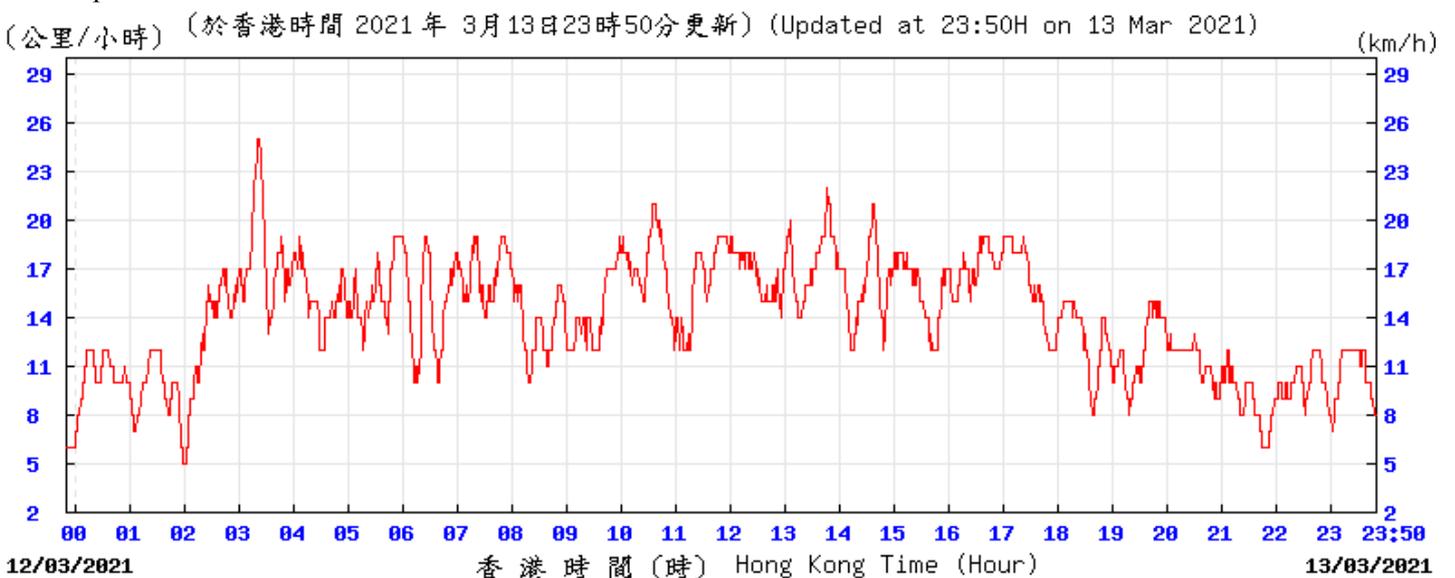
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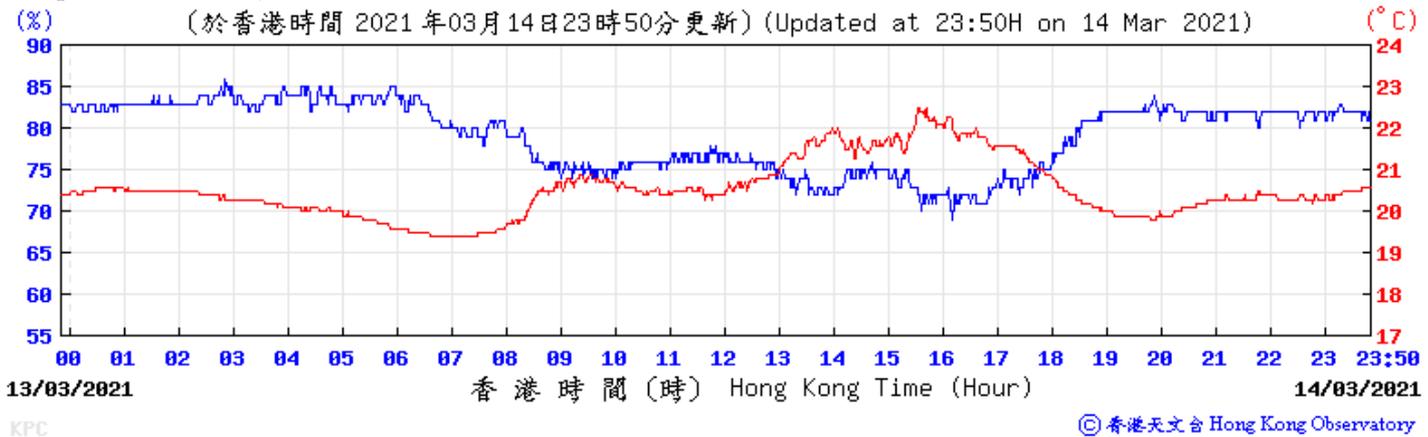
© 香港天文台 Hong Kong Observatory

Wind Speed:

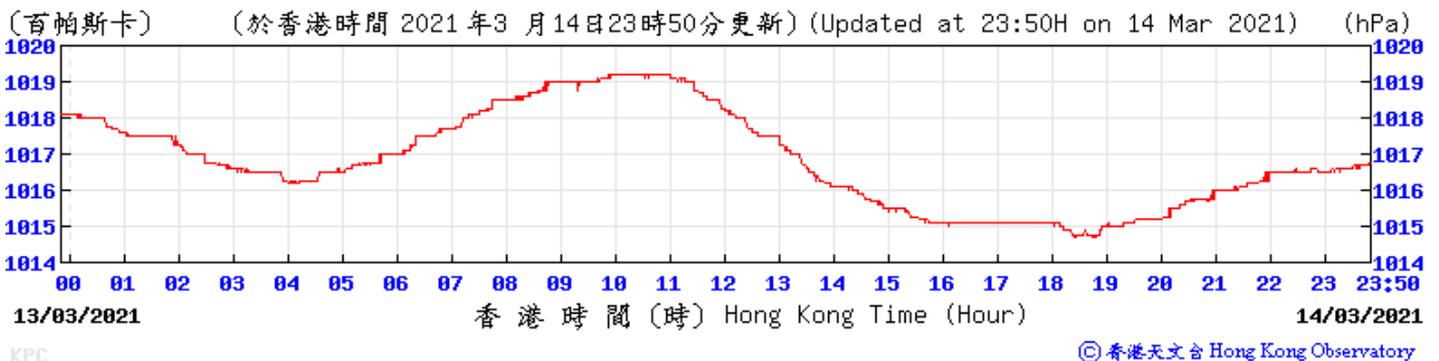


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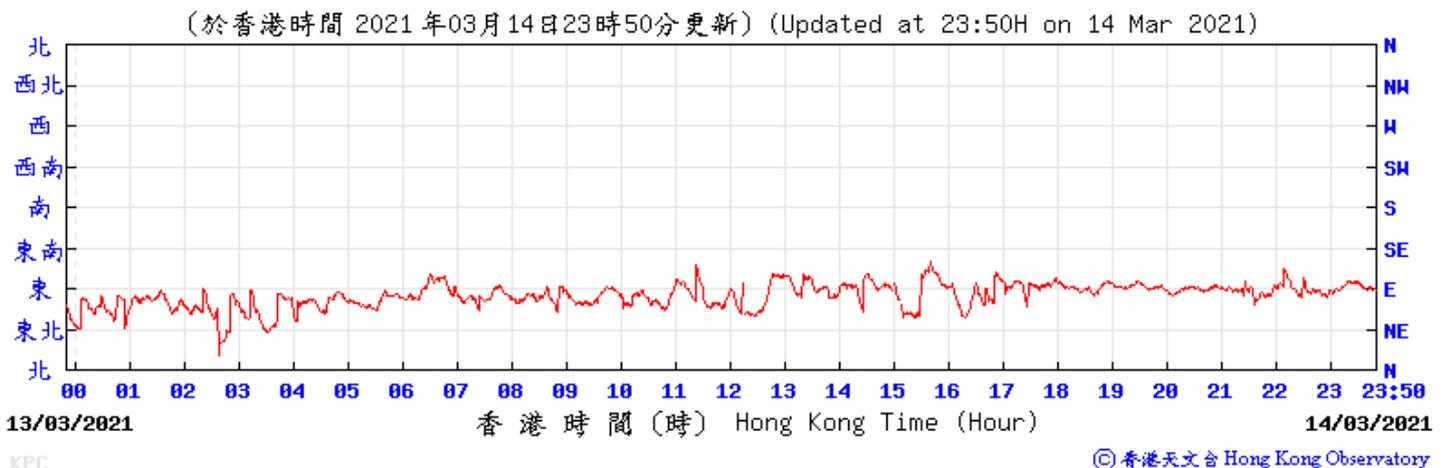
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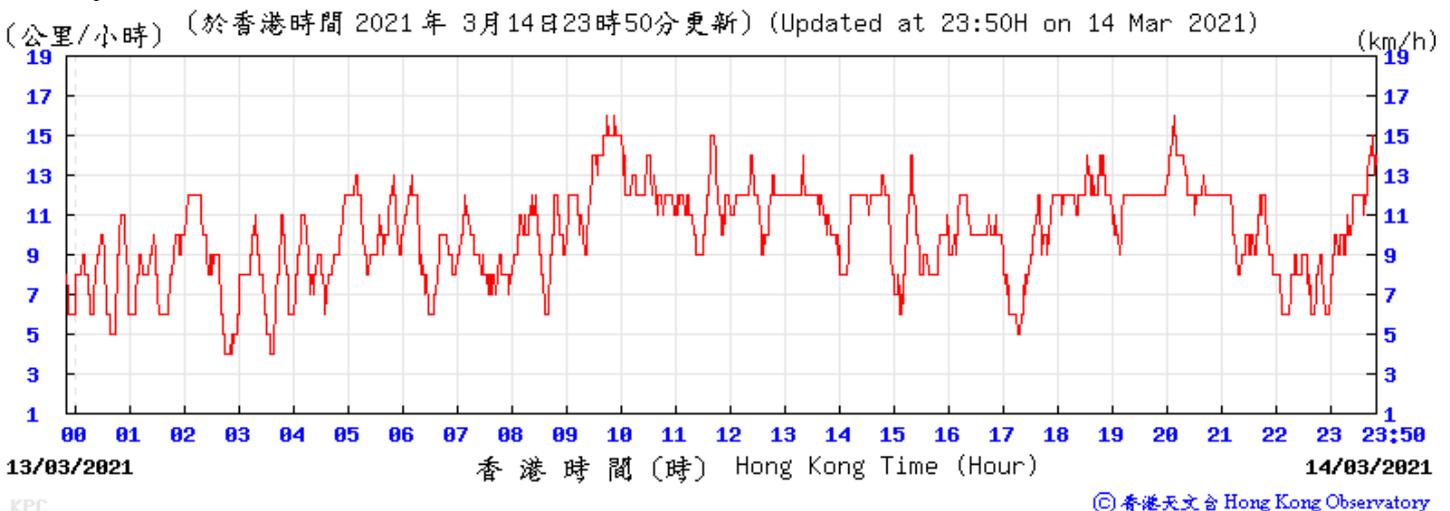
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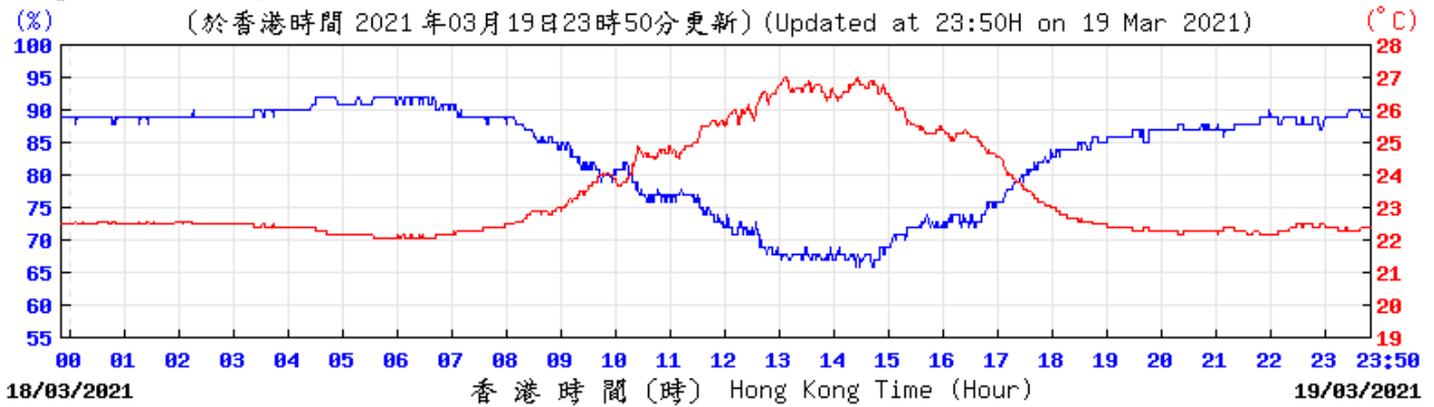
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Wind Speed:



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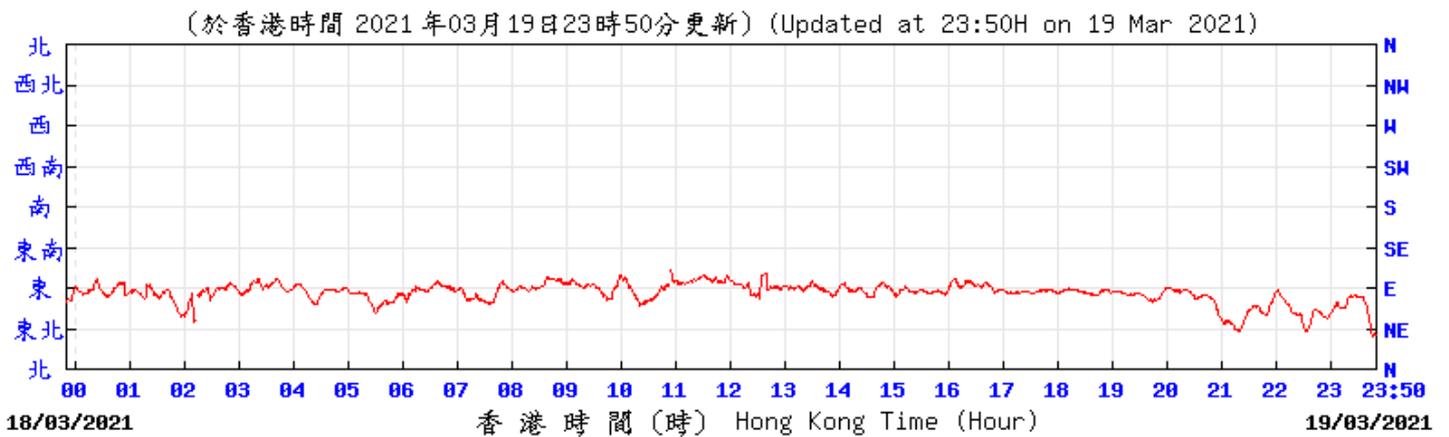
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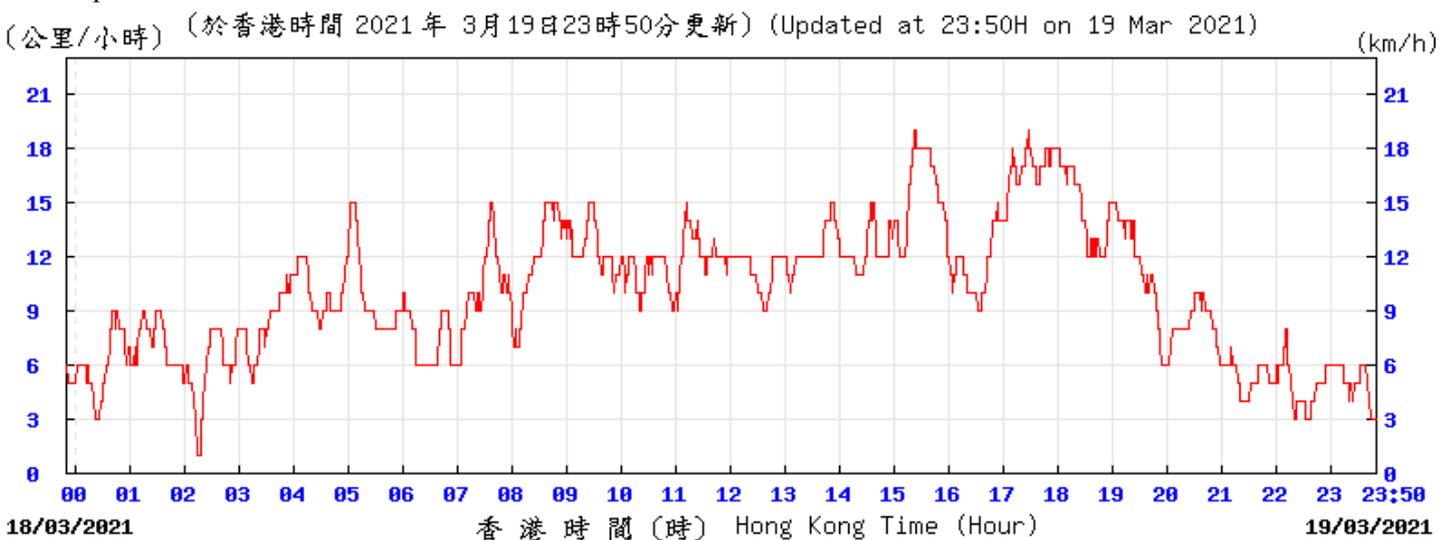
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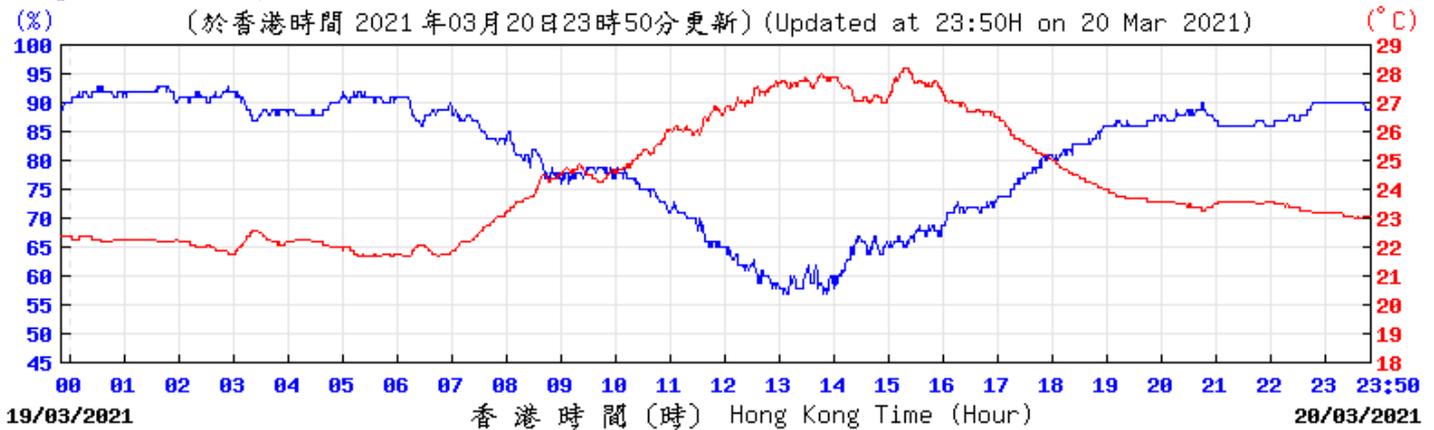
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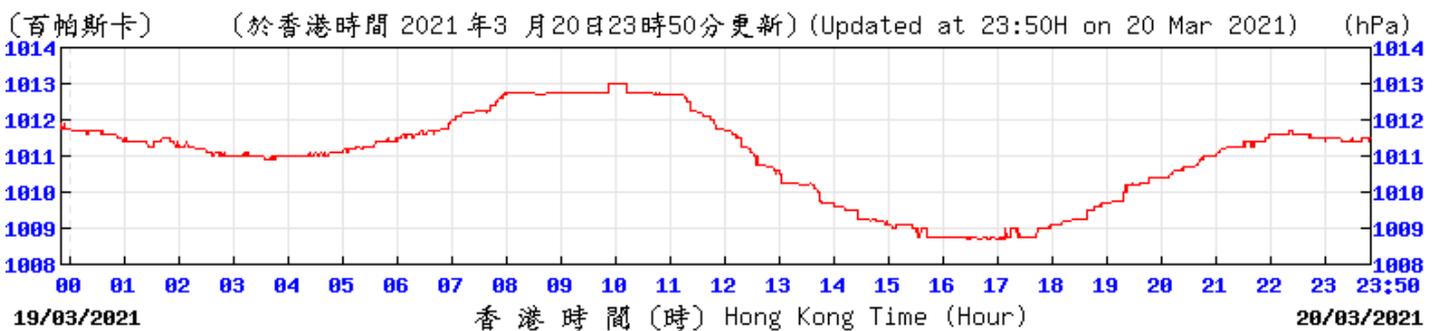


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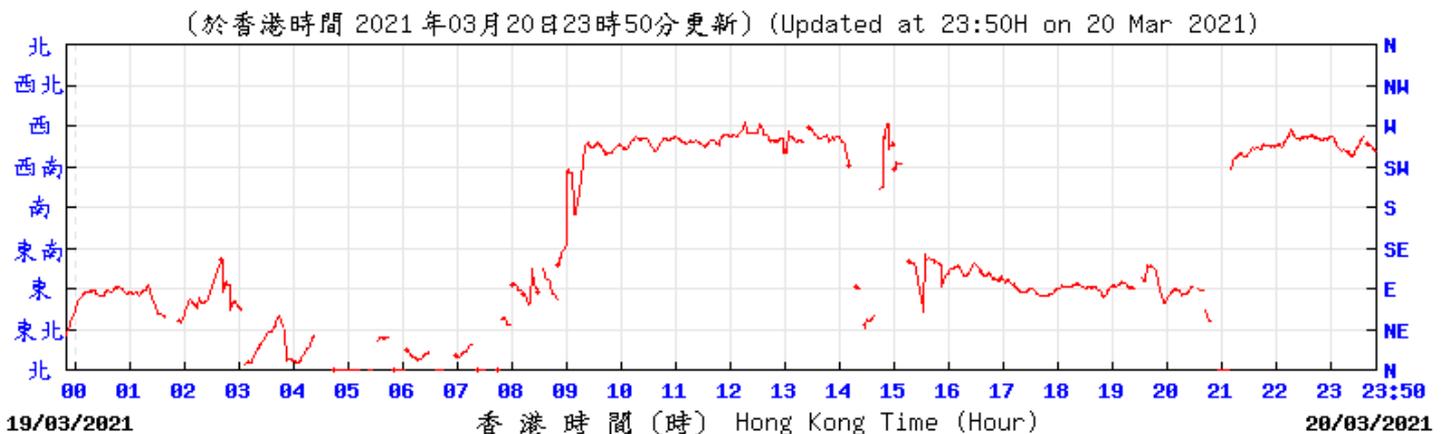
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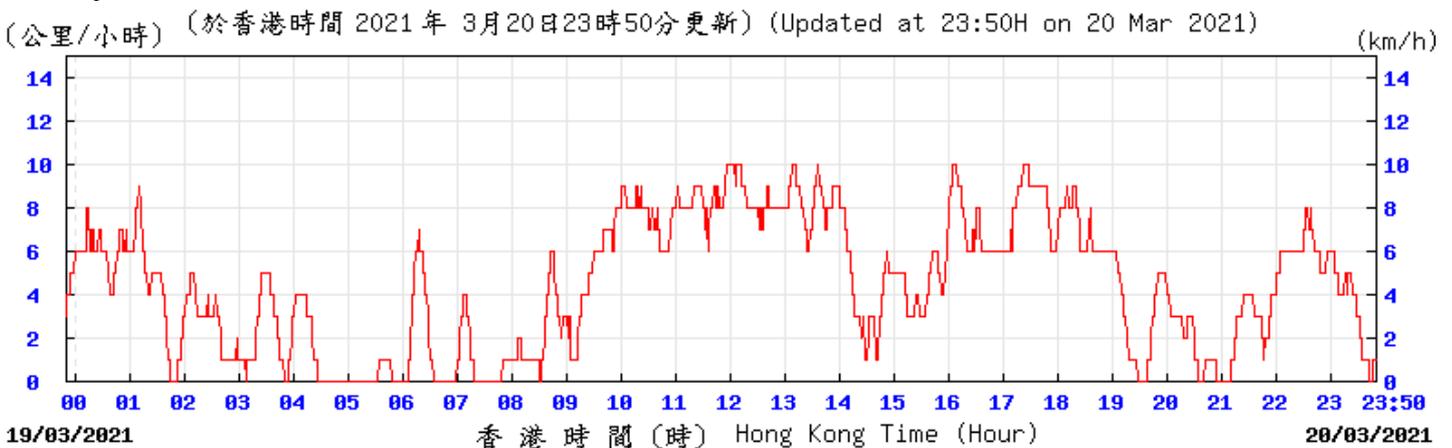
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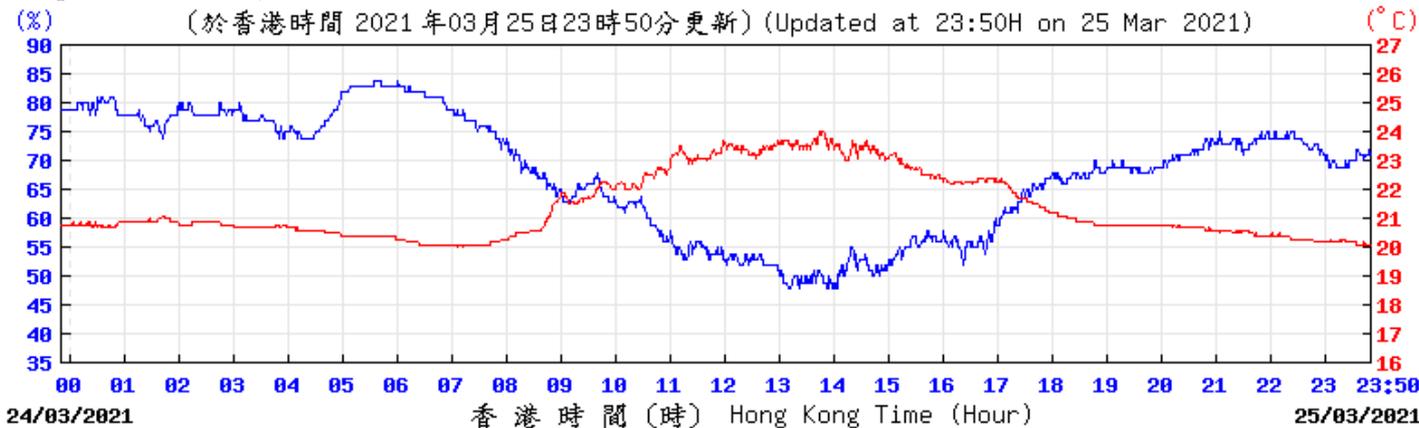
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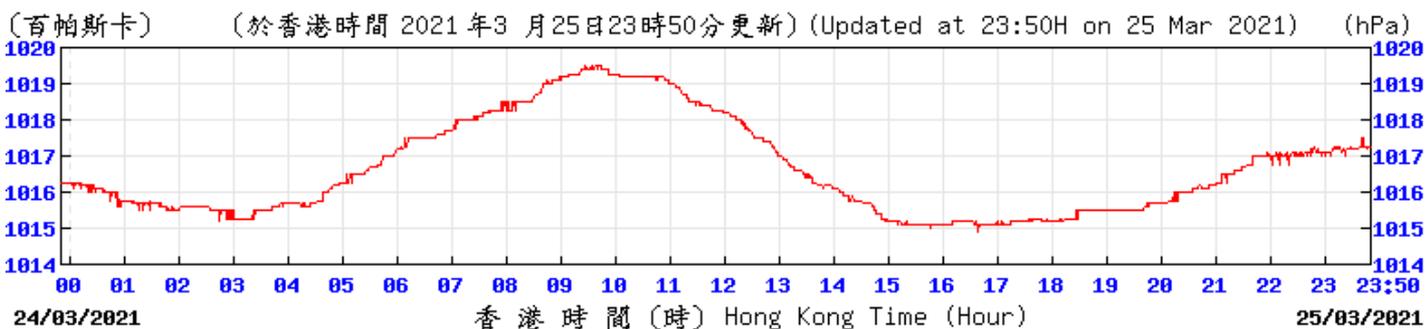


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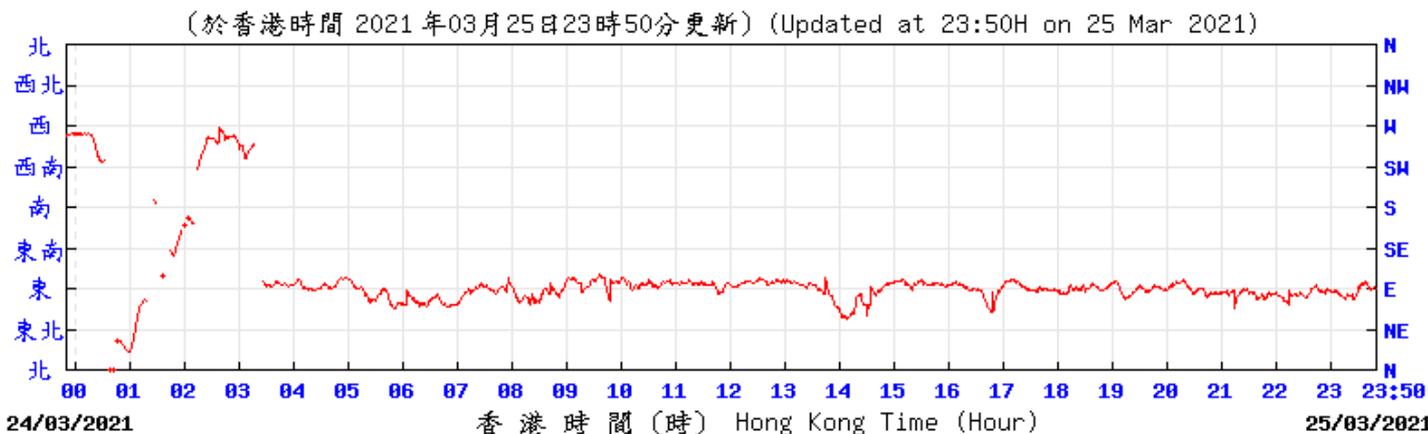
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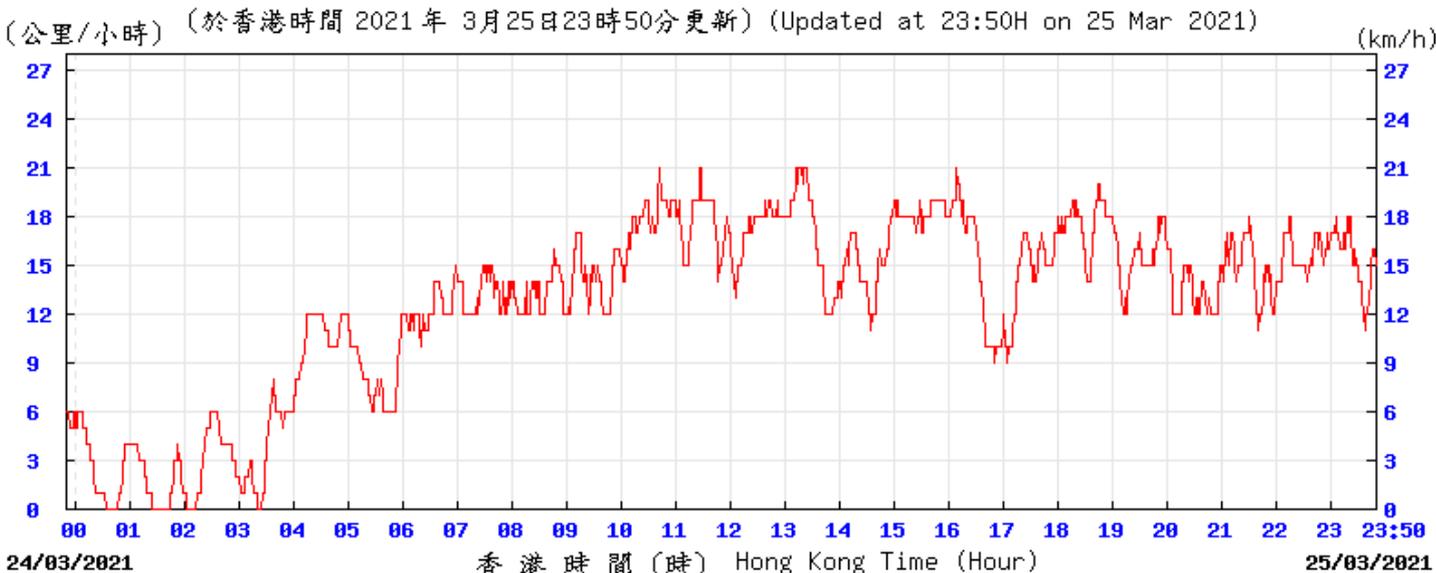
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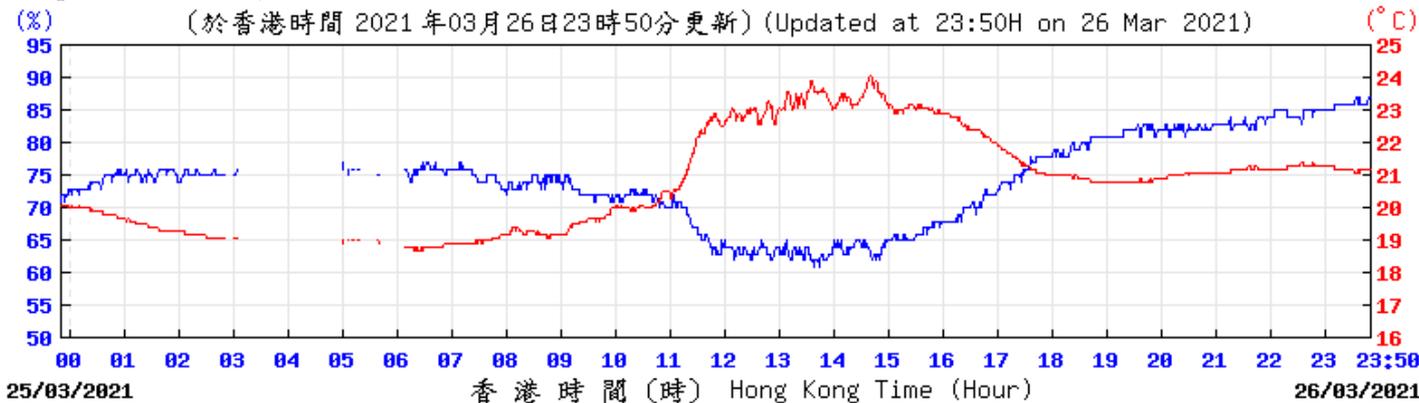
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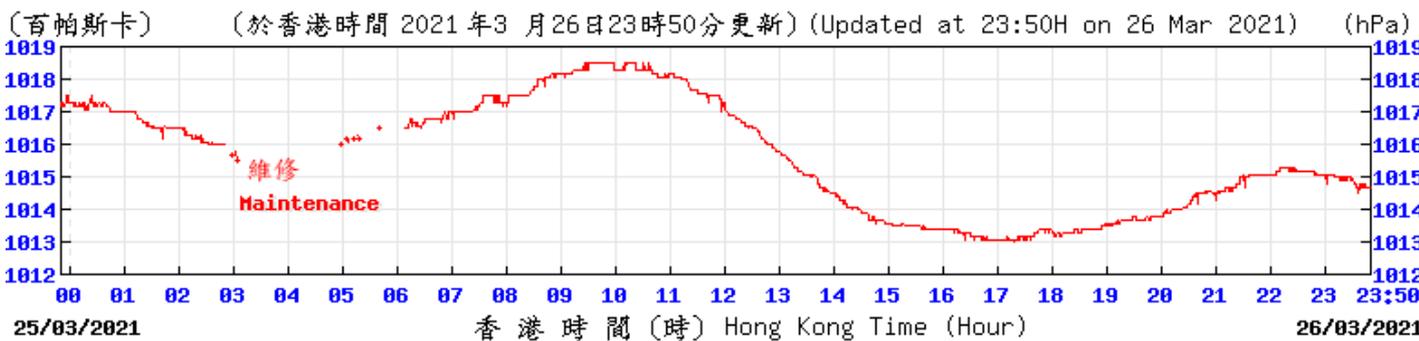
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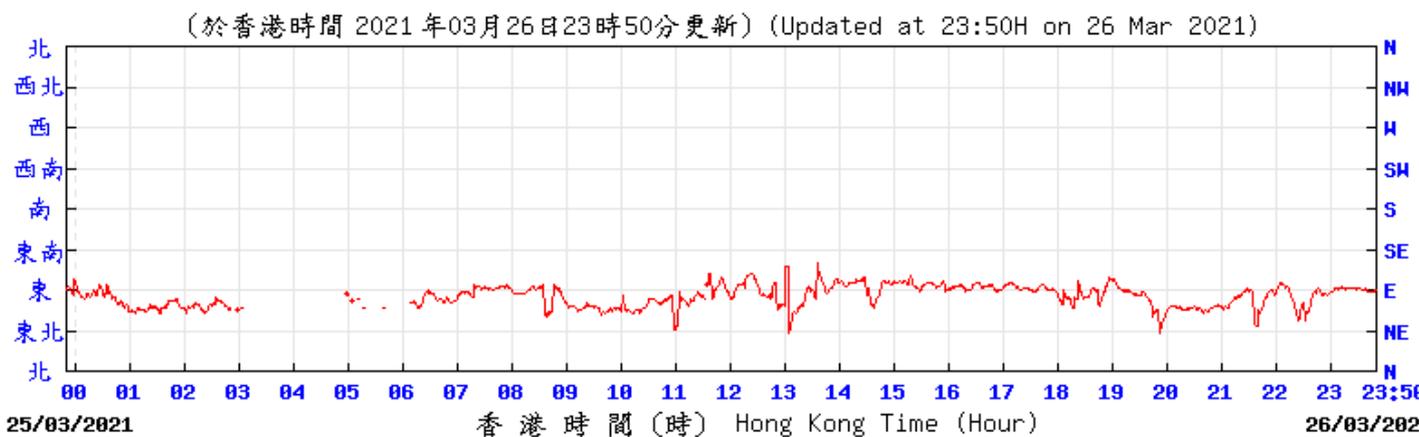
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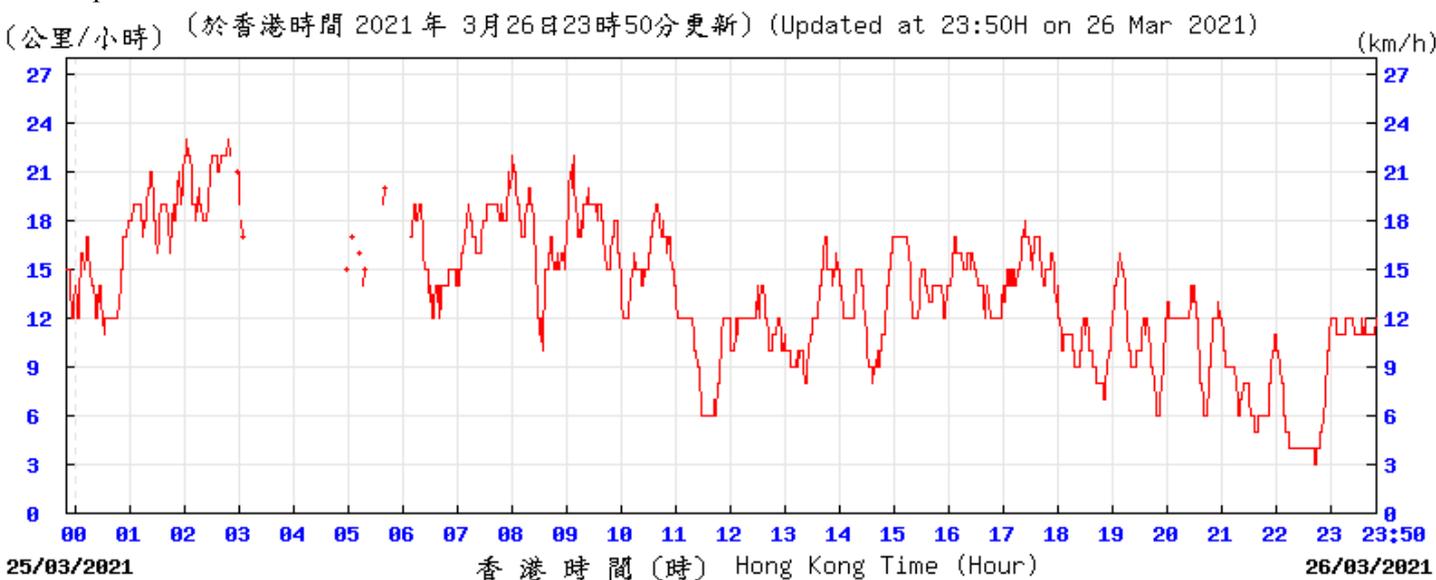
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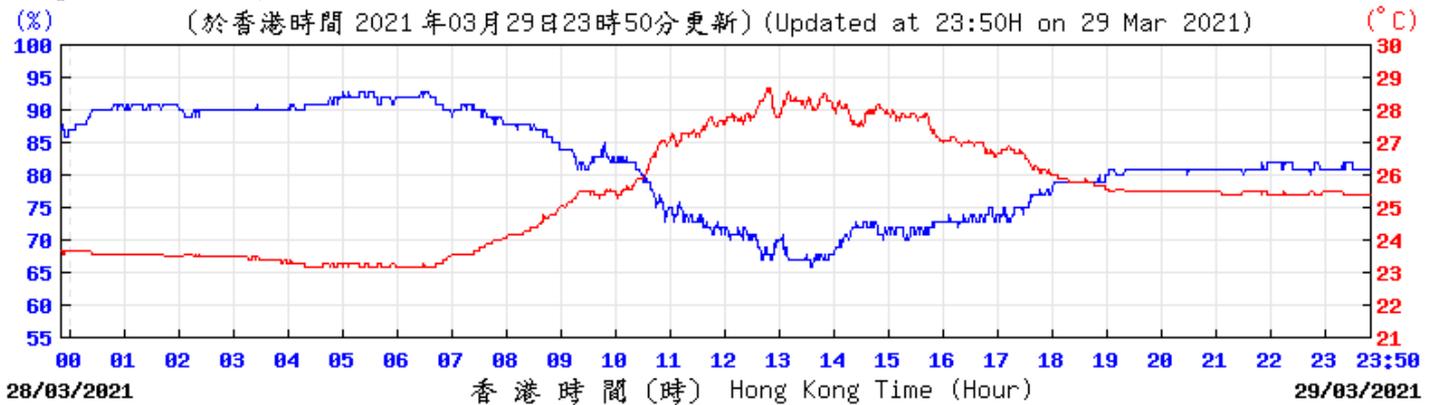
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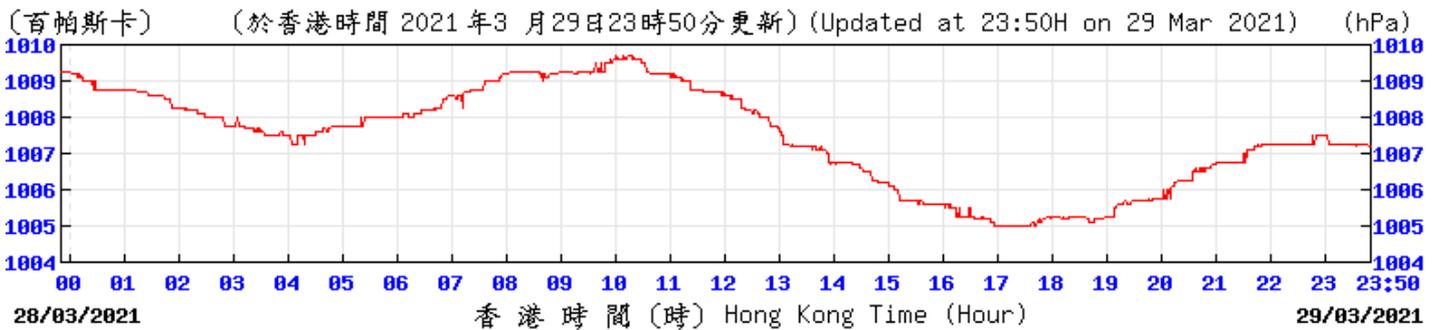
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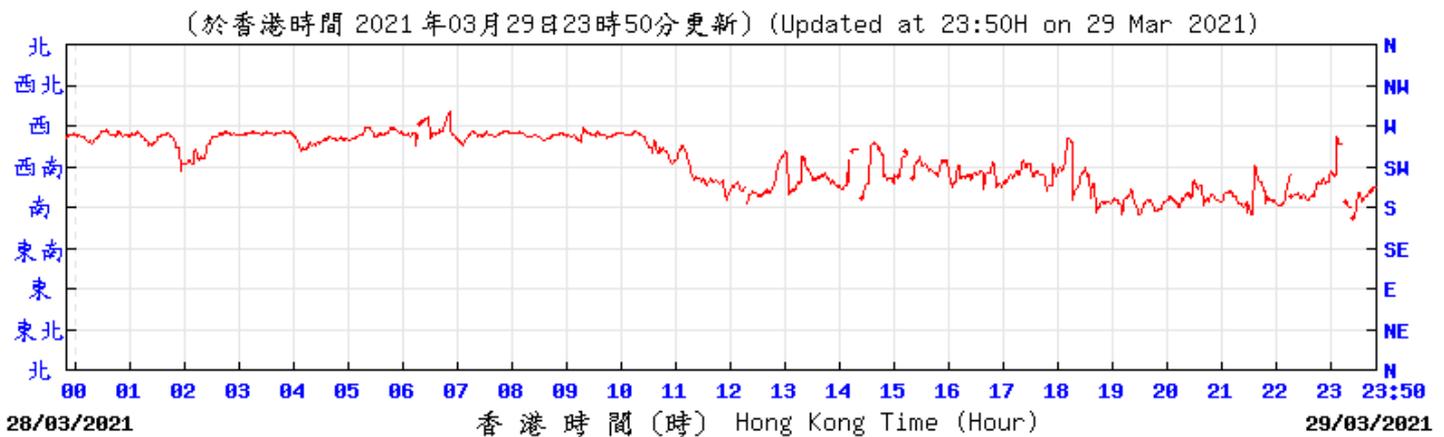
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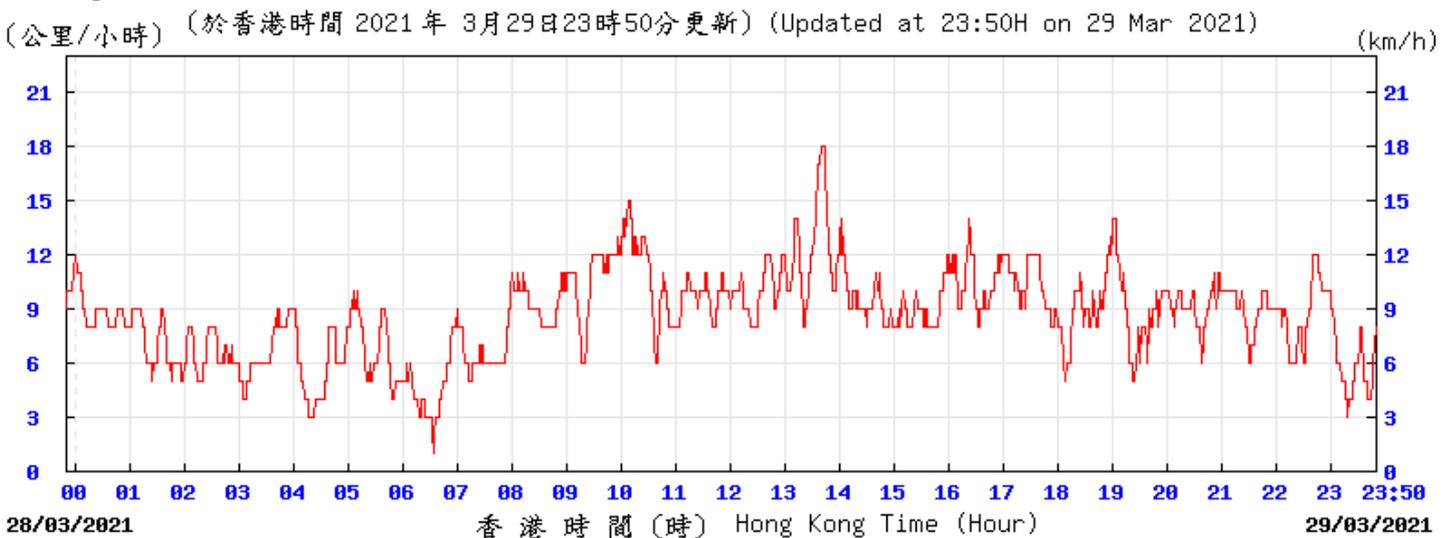
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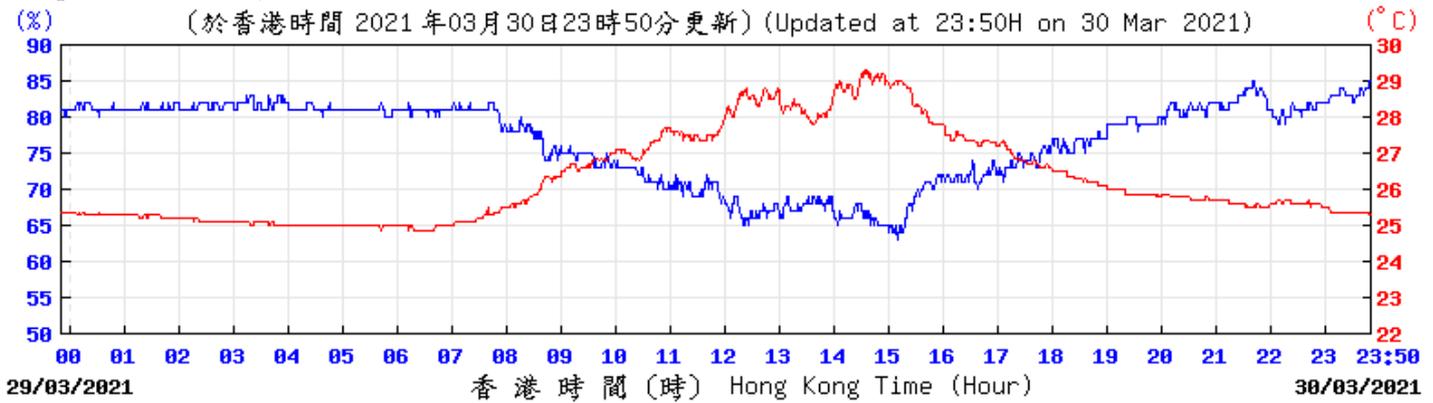
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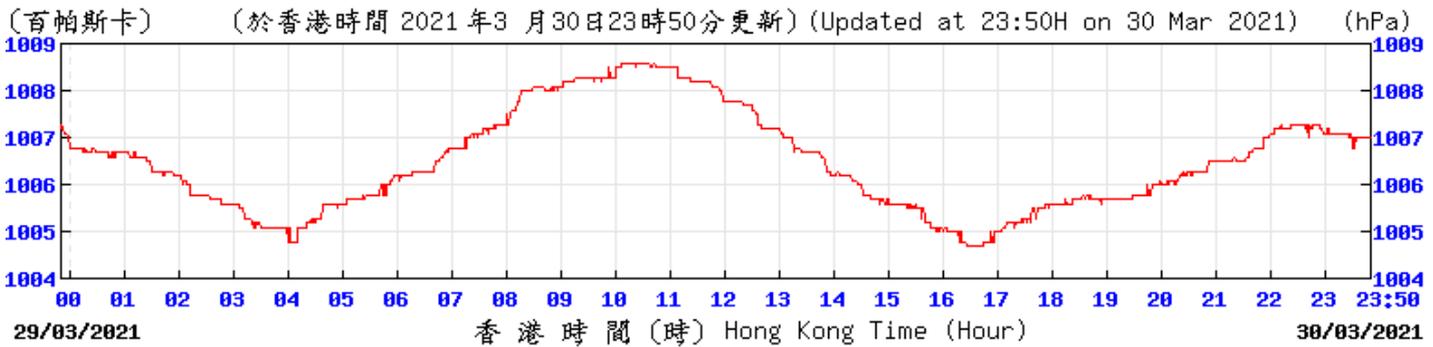
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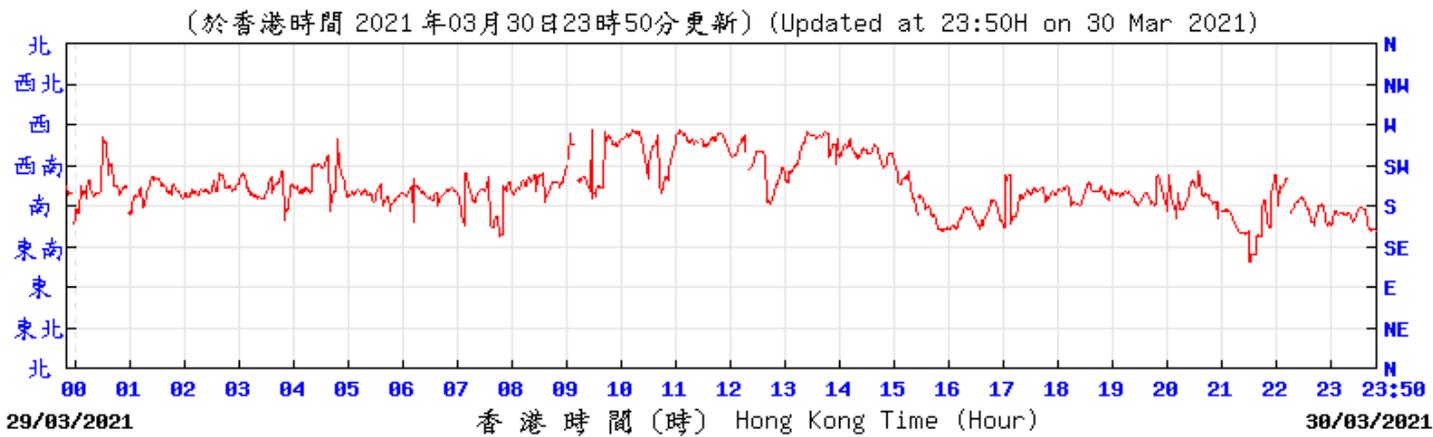
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KPC
Pressure:



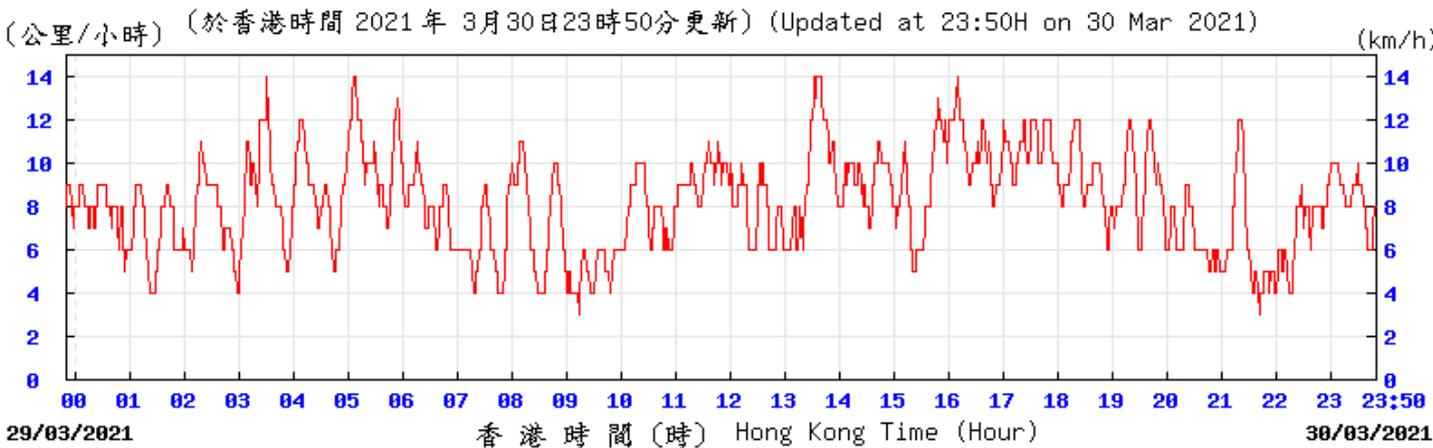
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KPC
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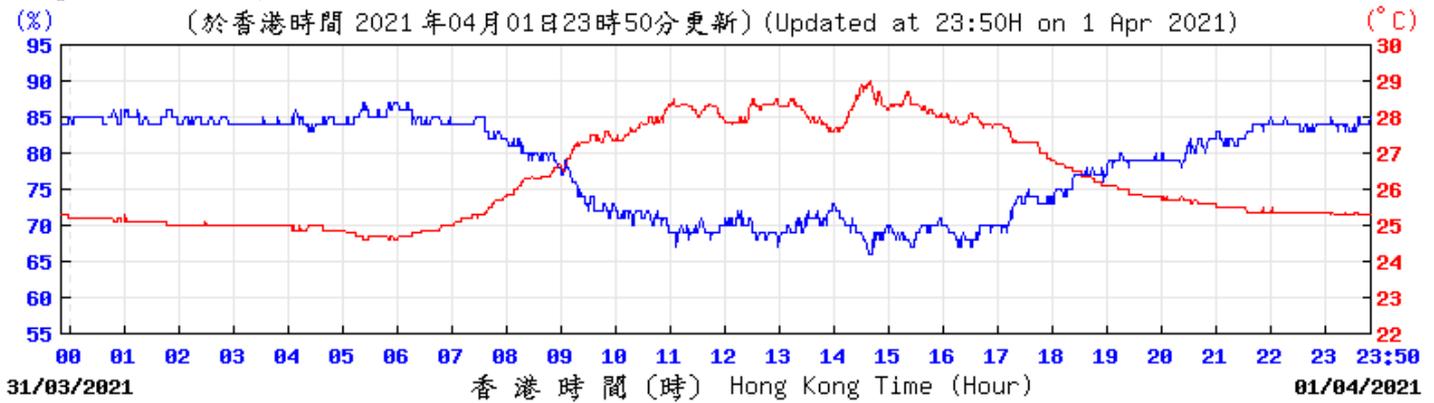
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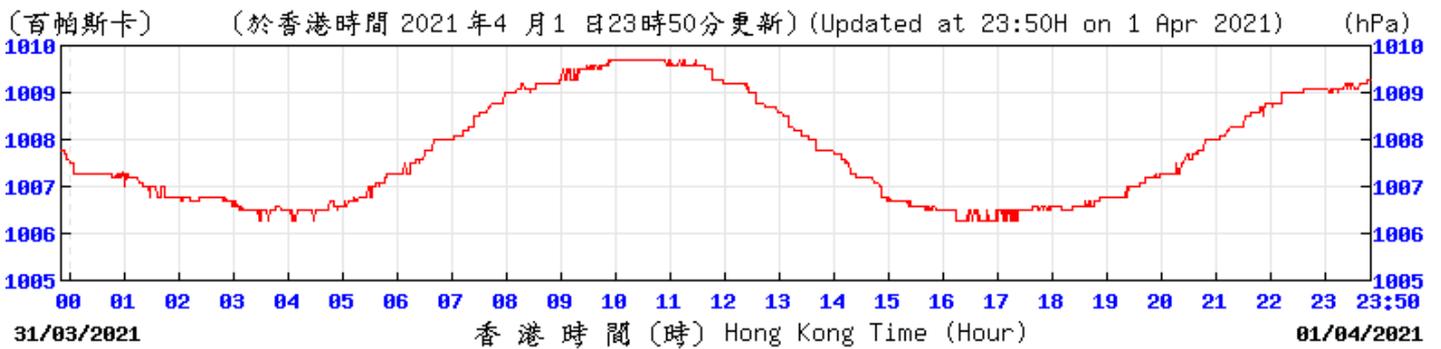
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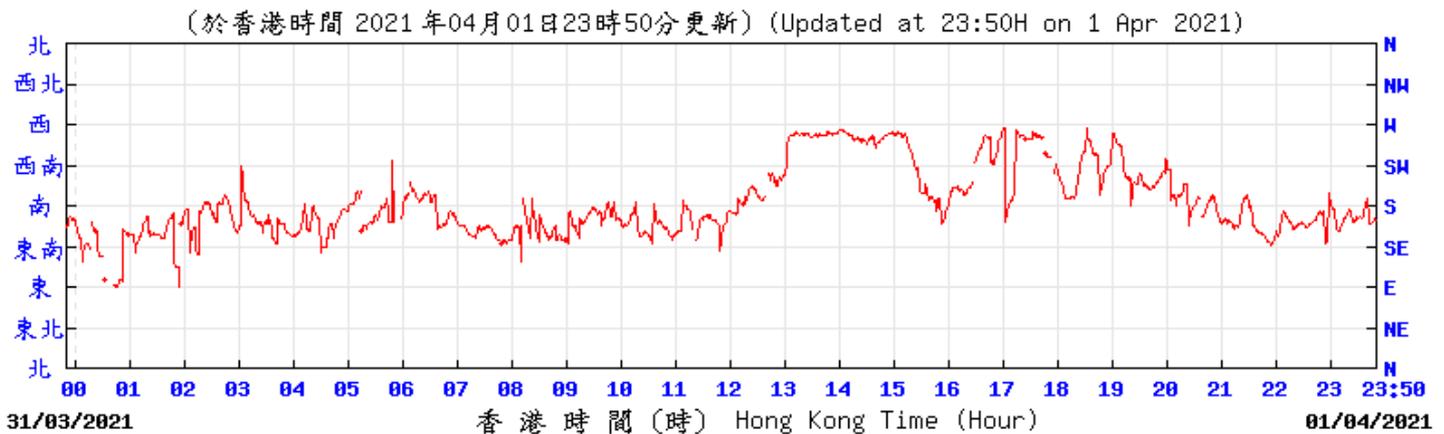
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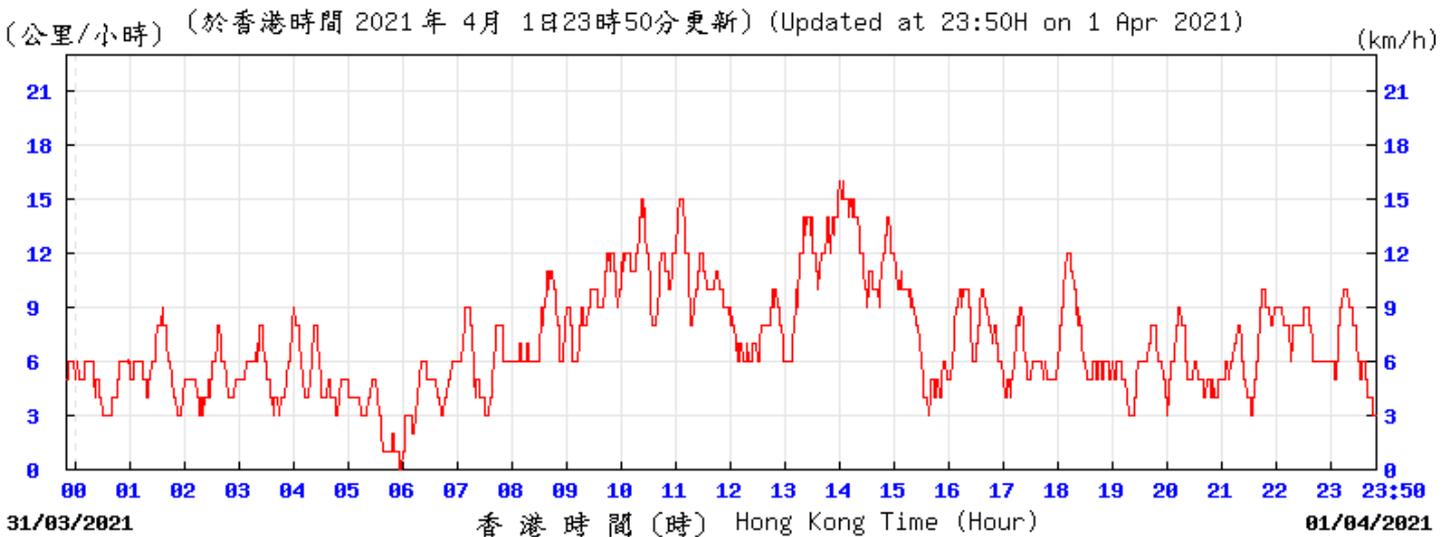
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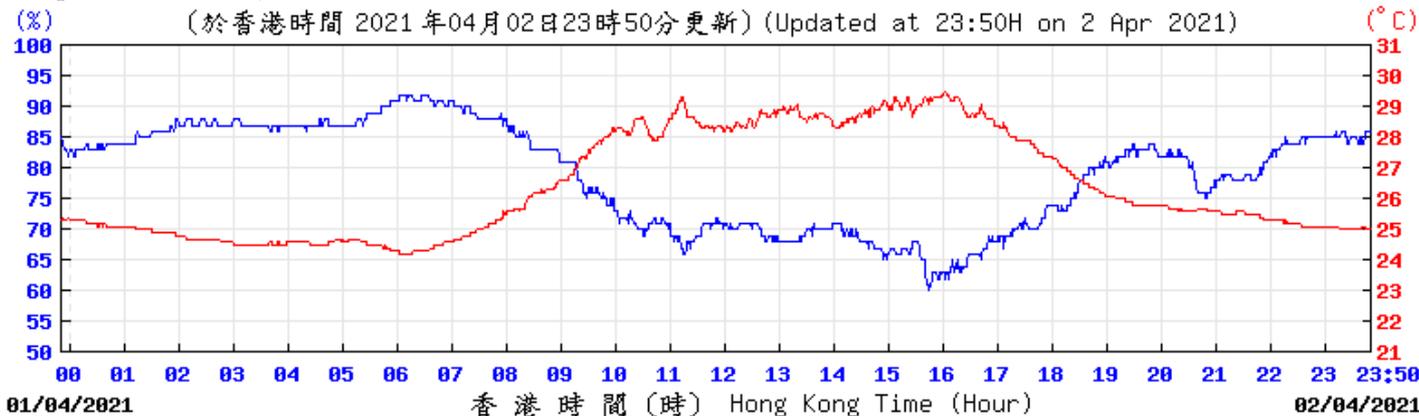
© 香港天文台 Hong Kong Observatory

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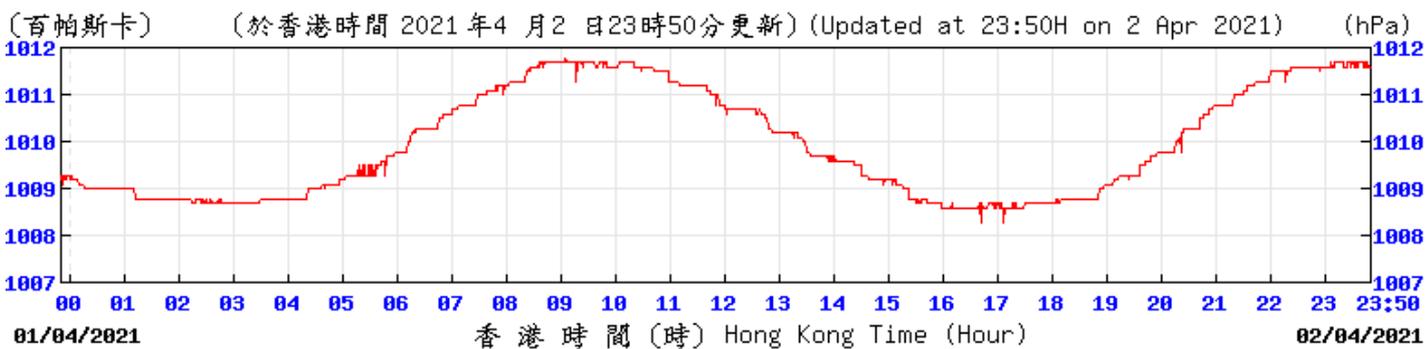
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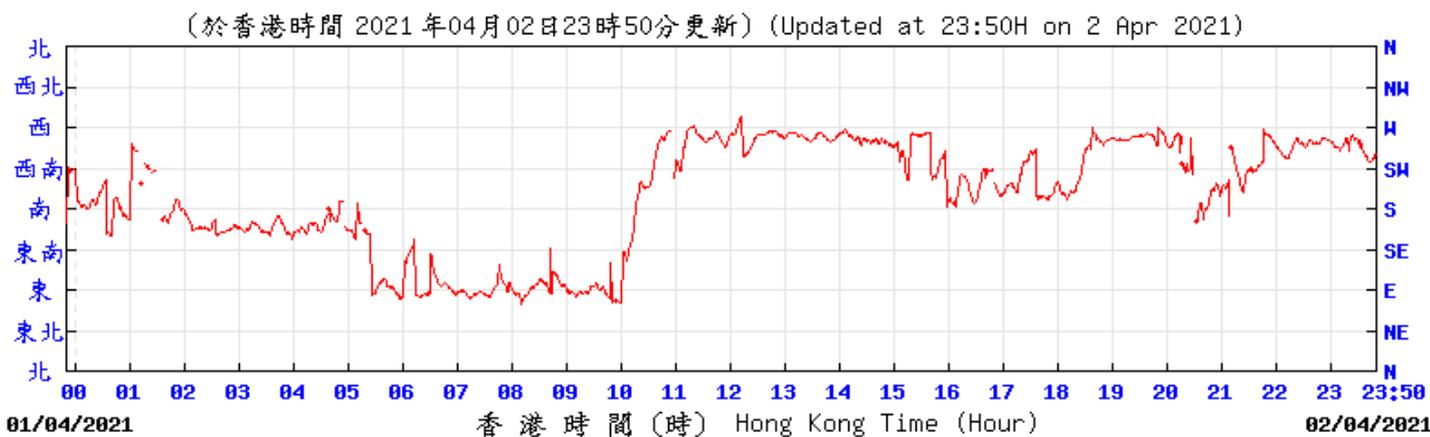
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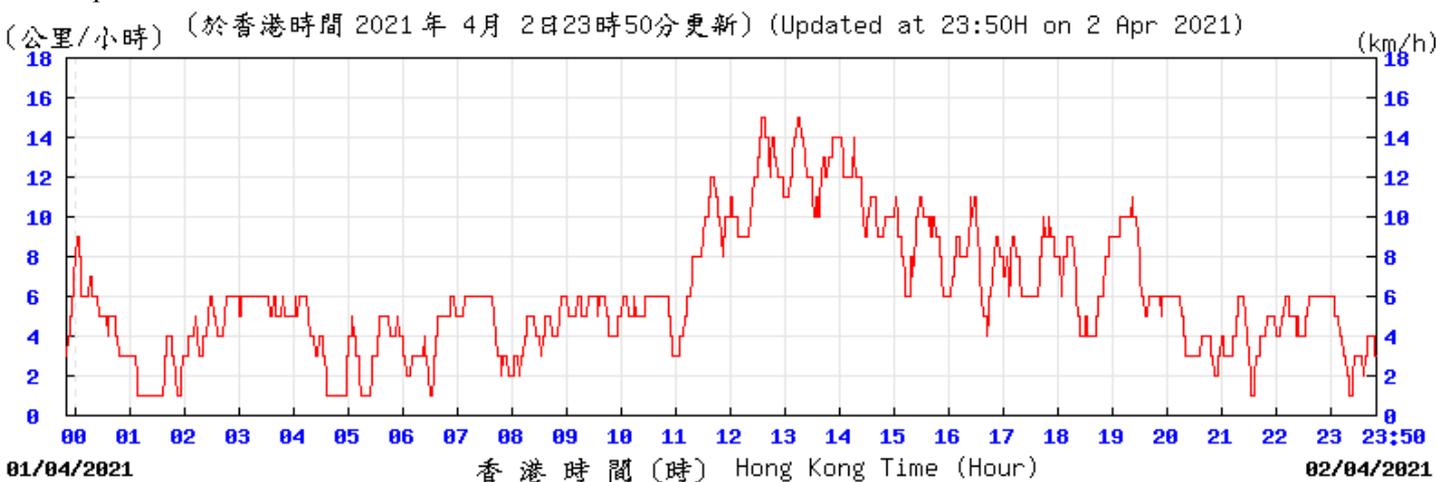
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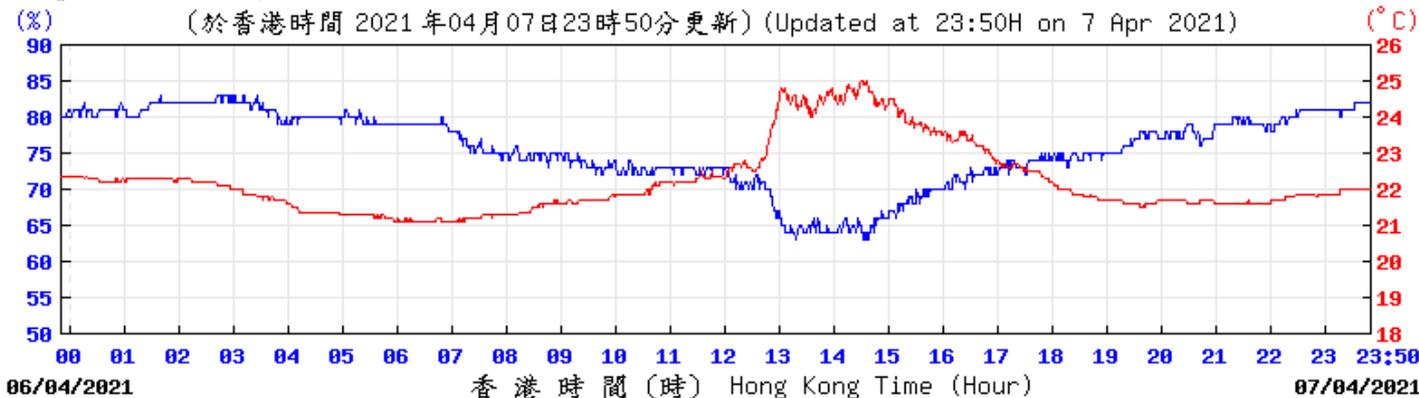
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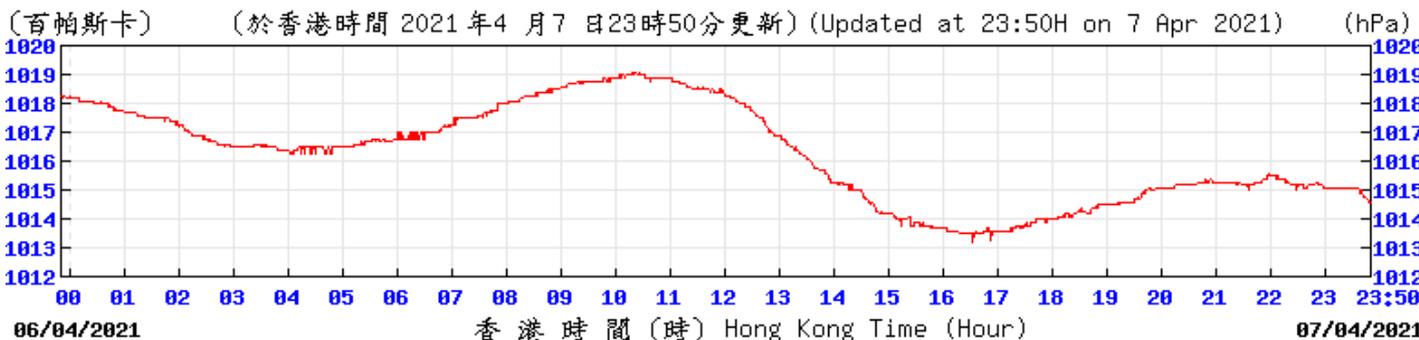
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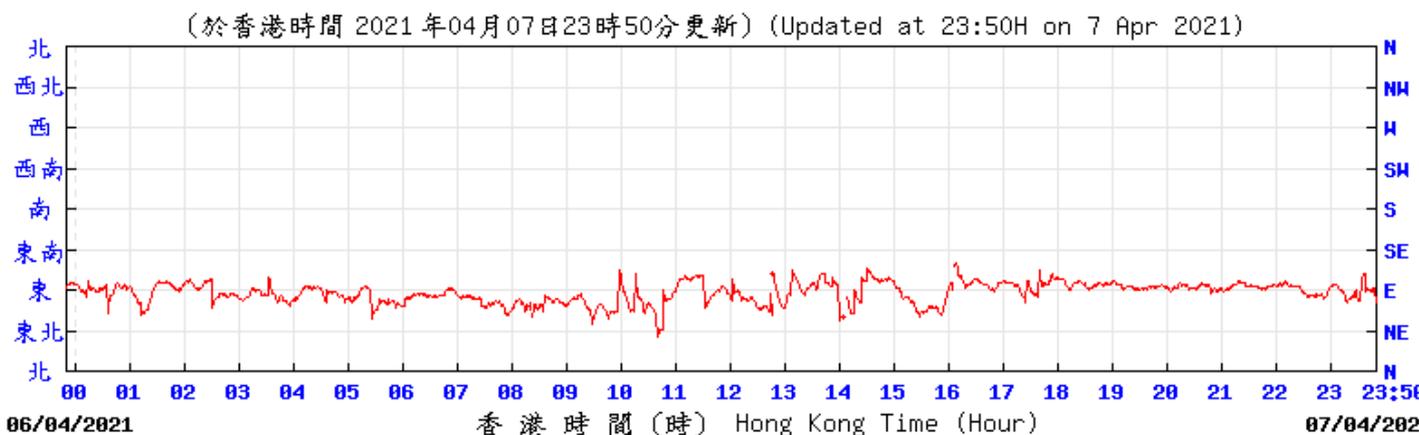
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KPC
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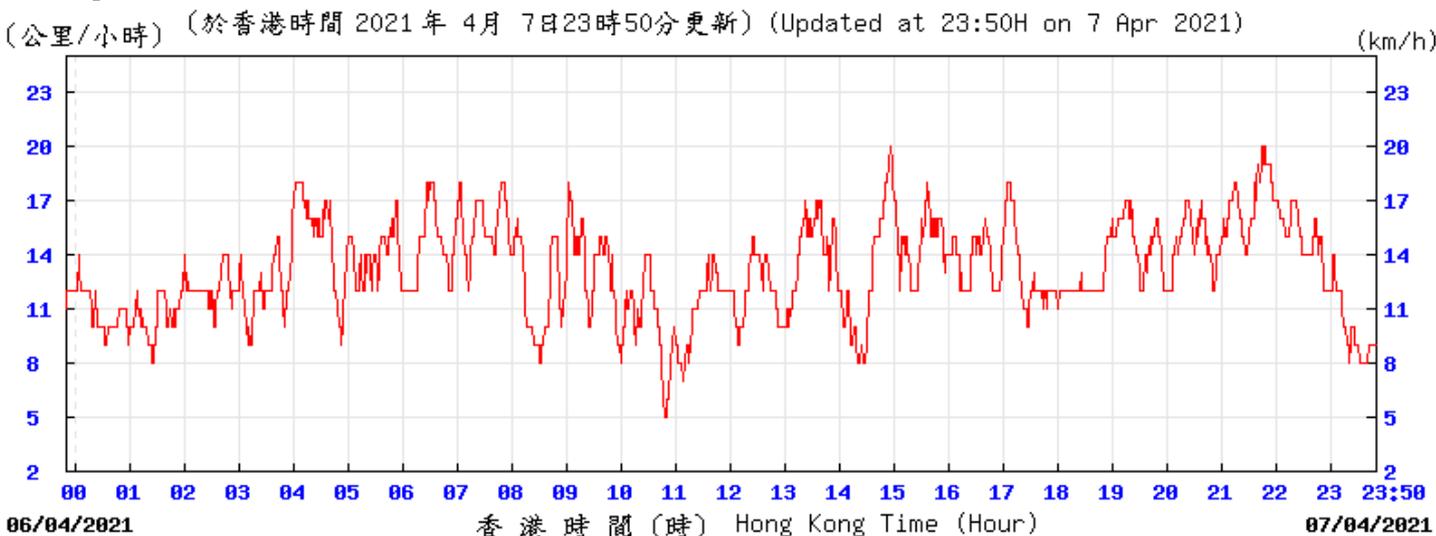
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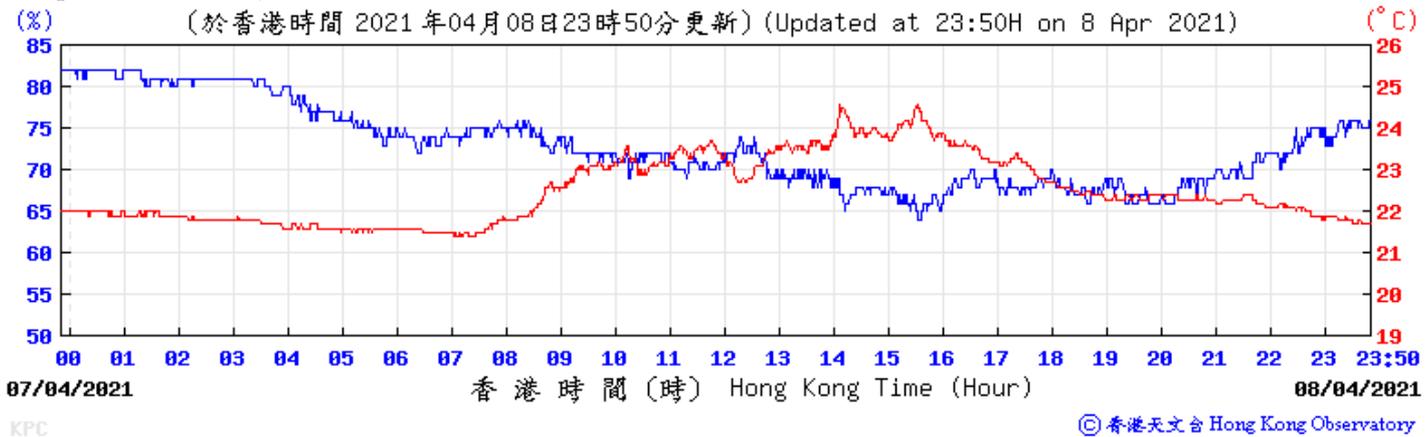
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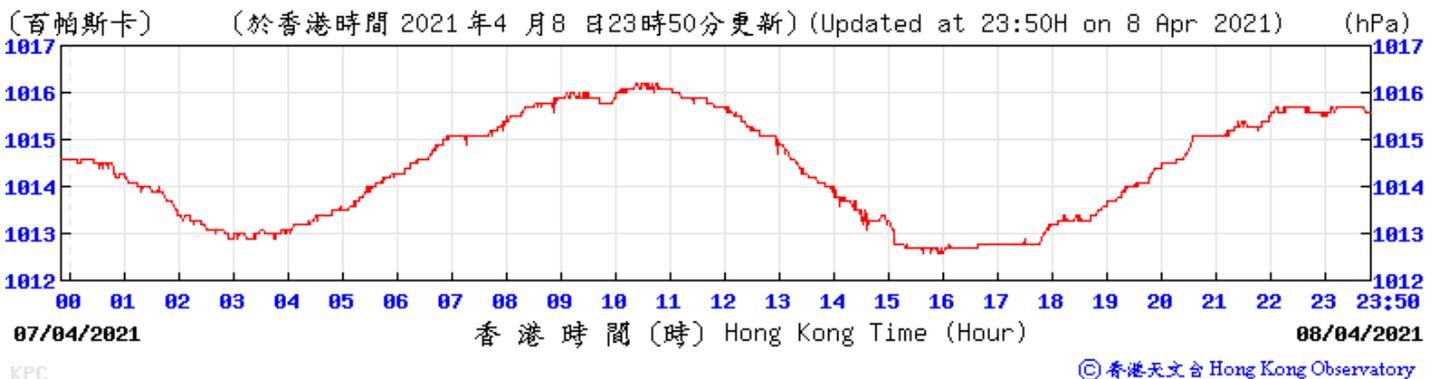


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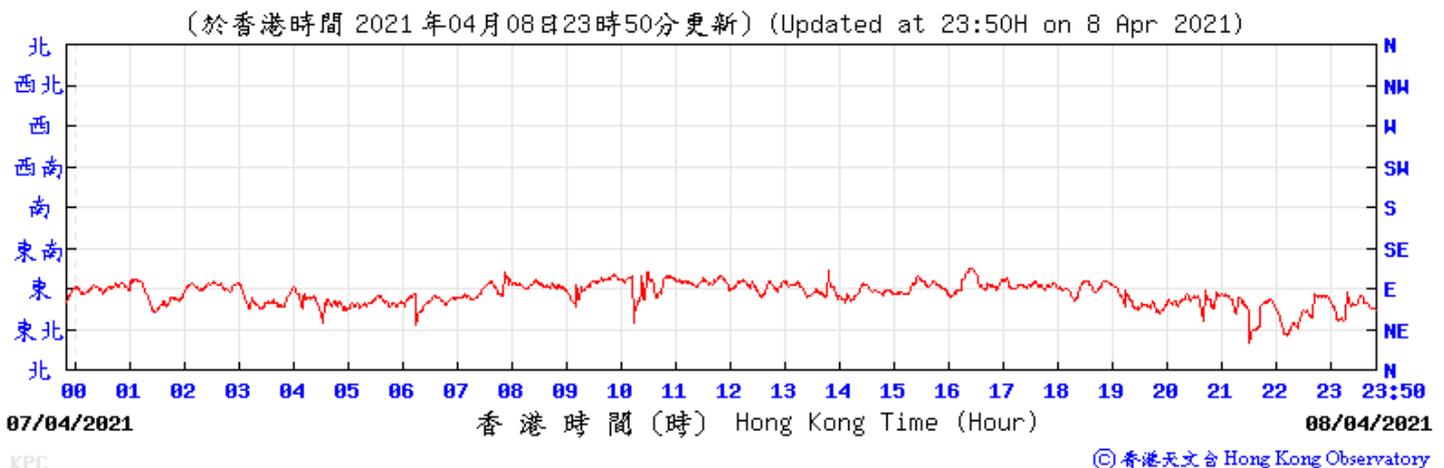
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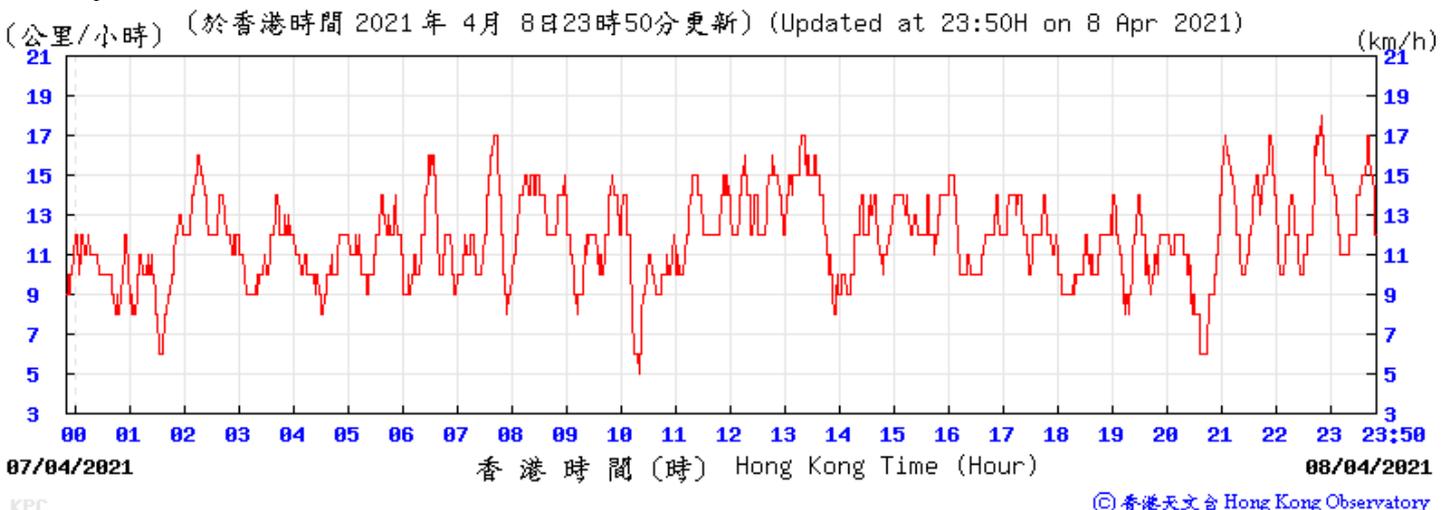
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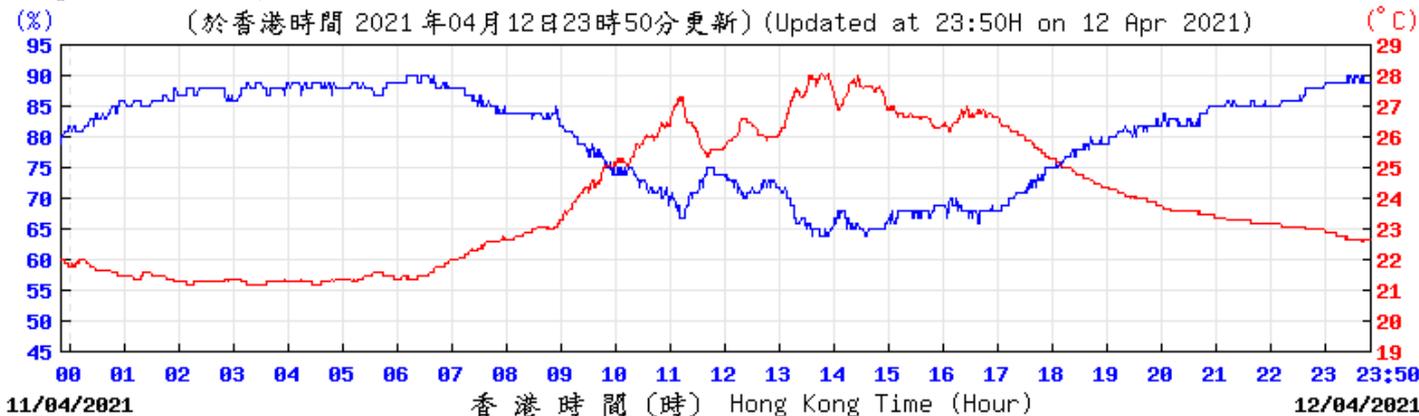
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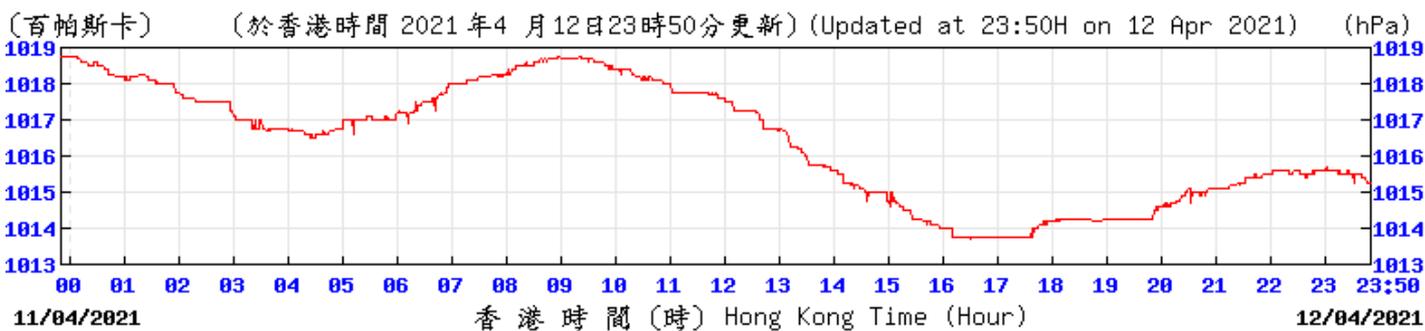


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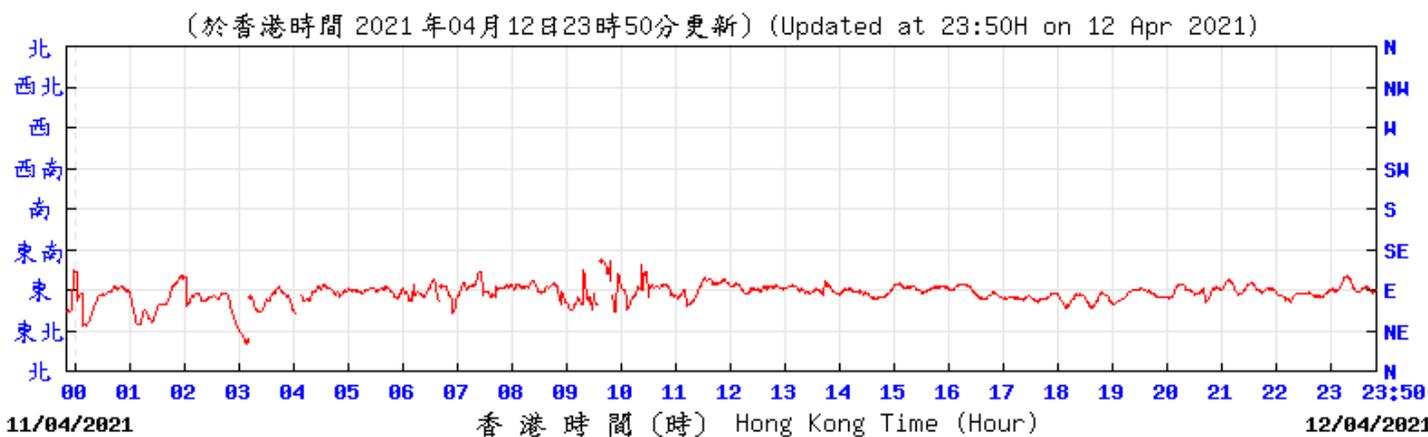
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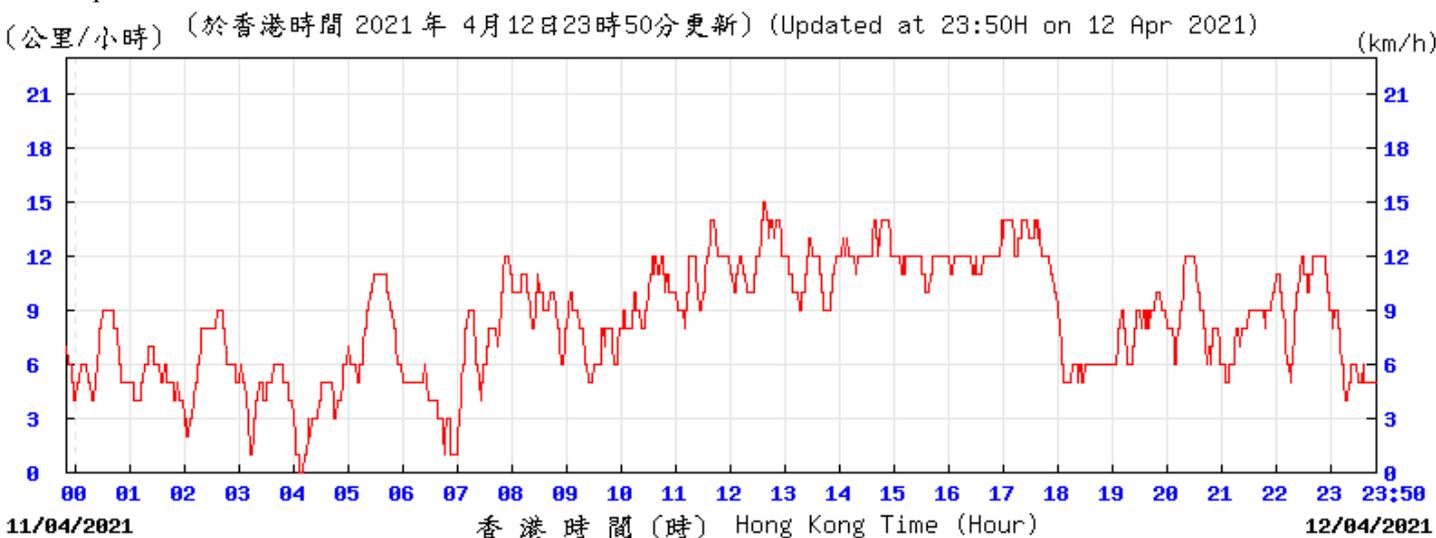
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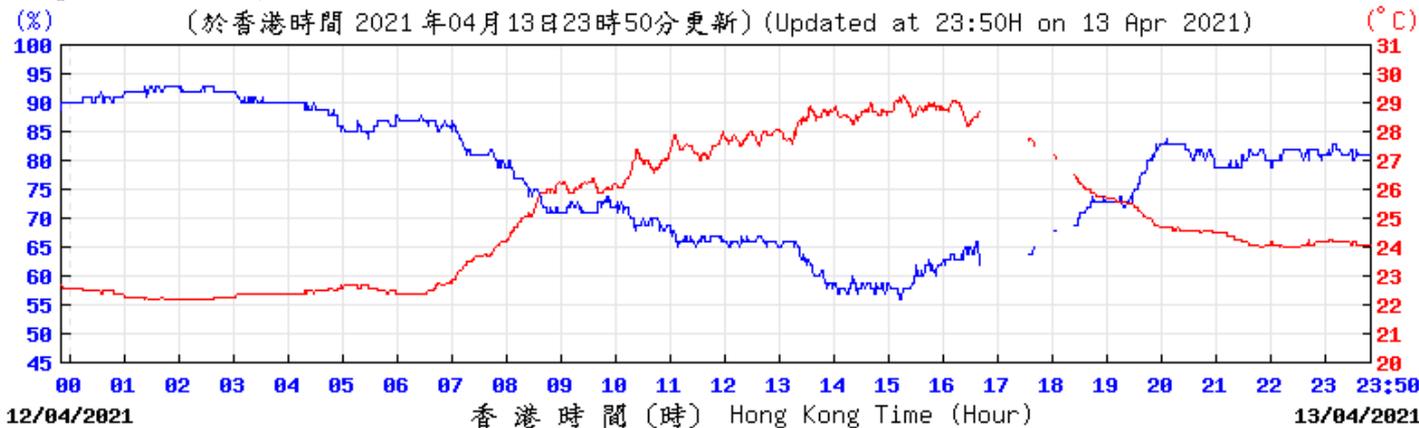
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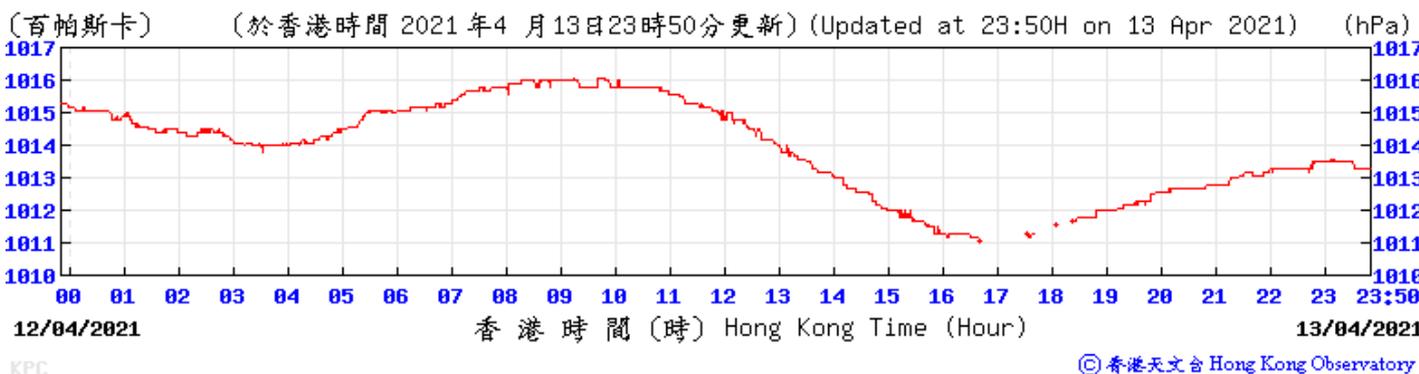


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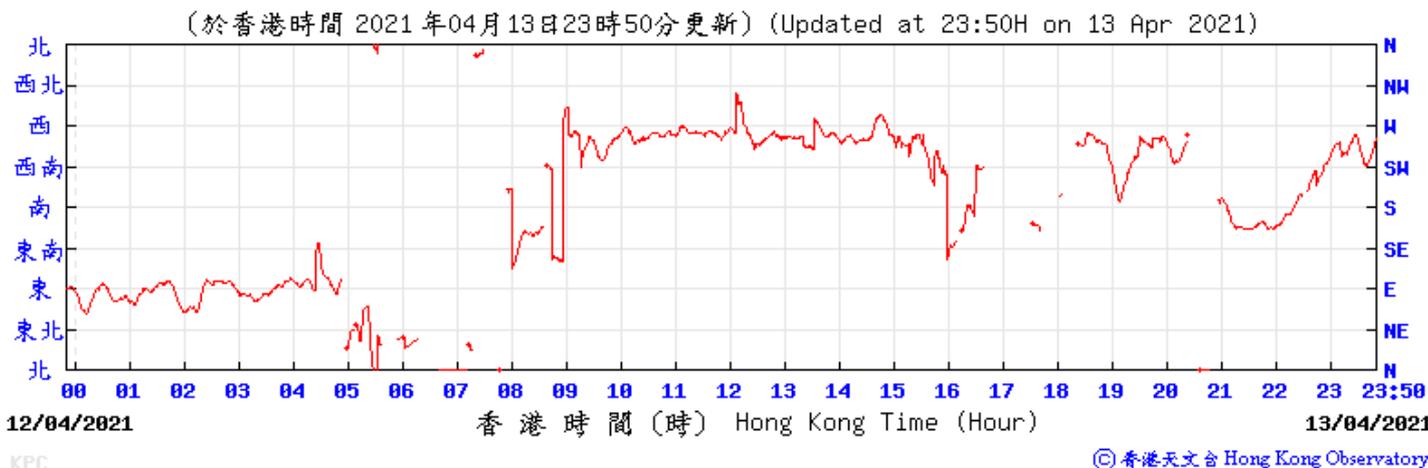
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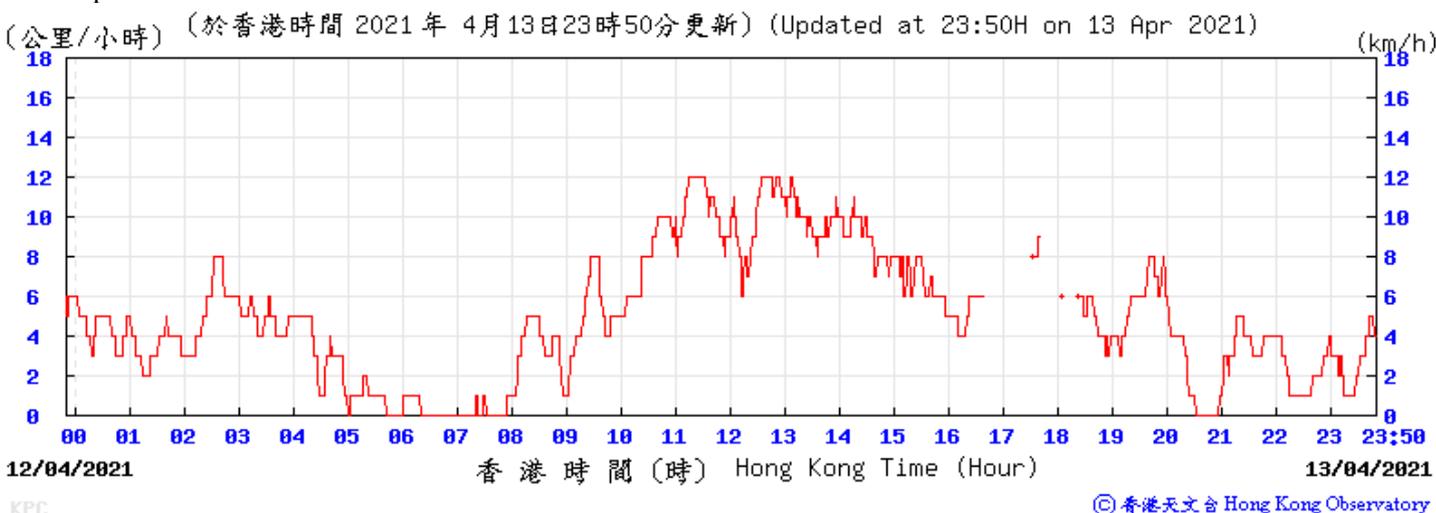
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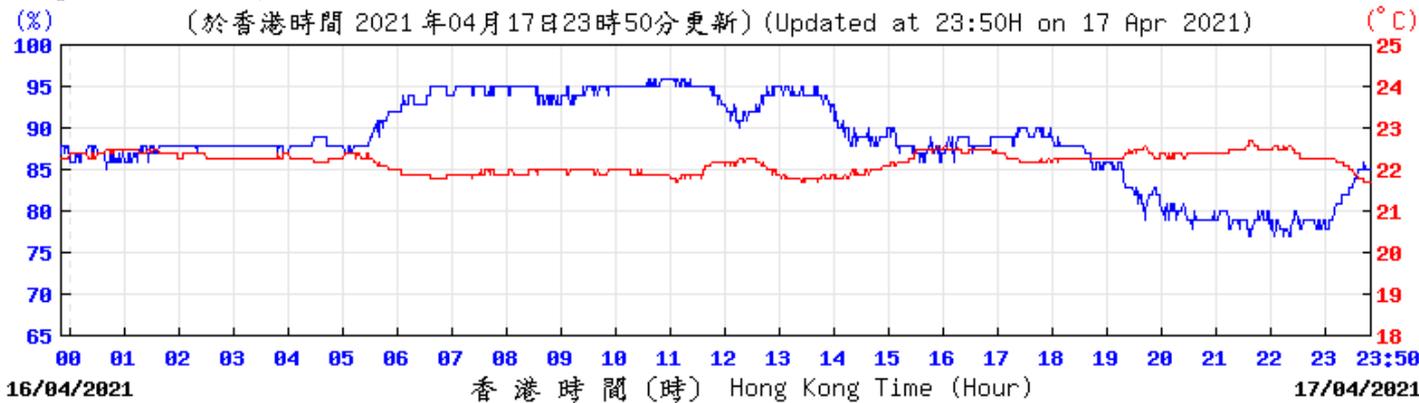
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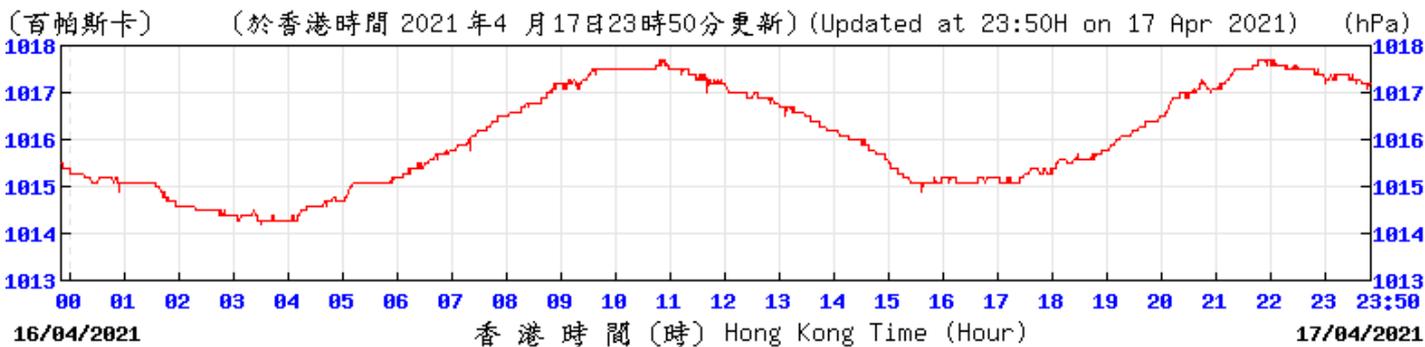


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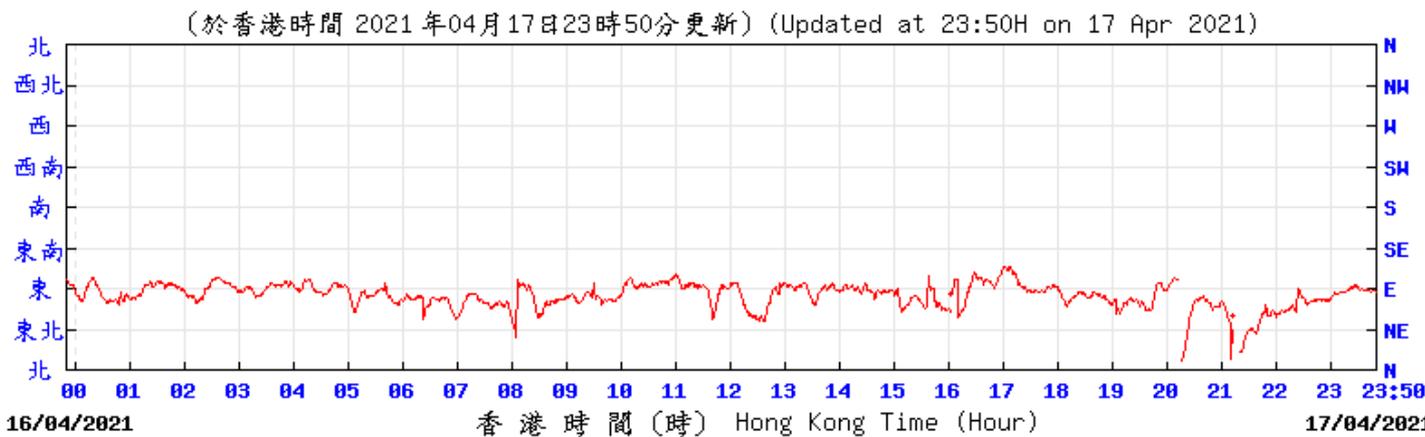
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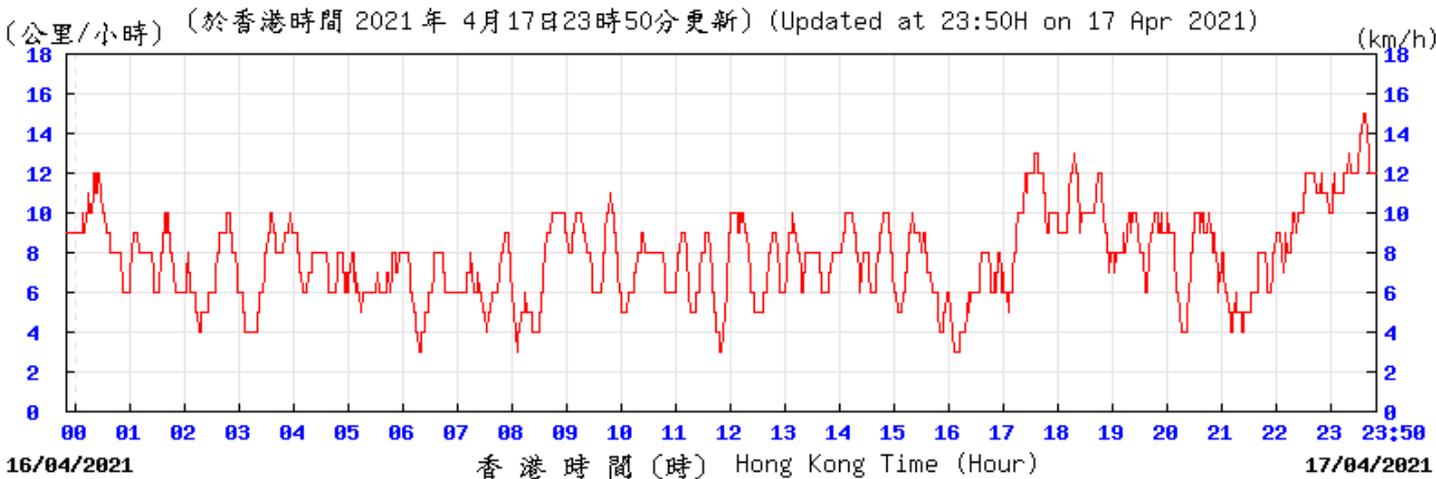
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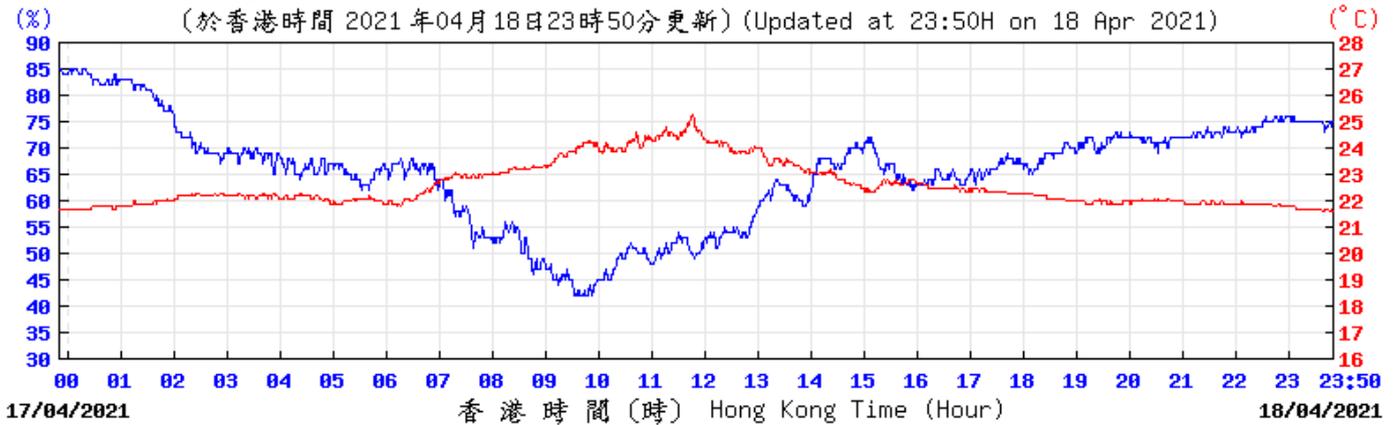
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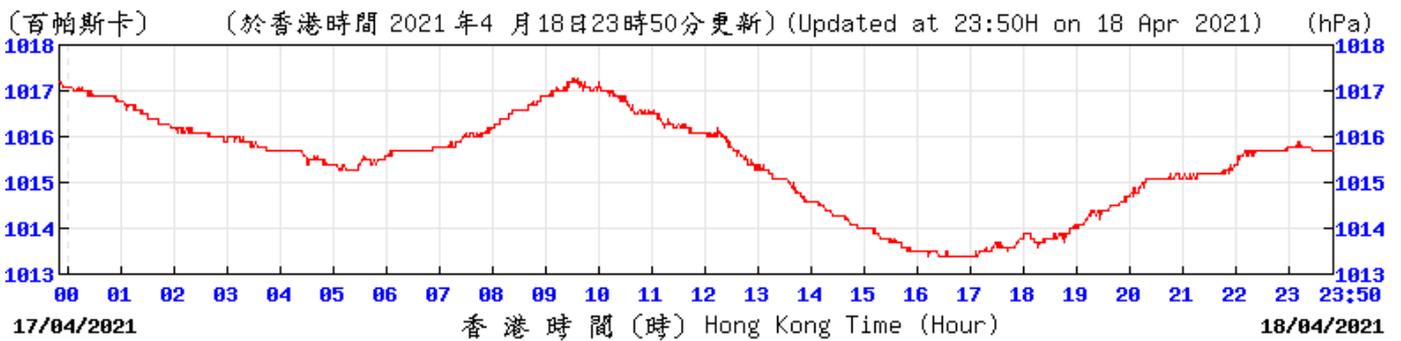
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Temperature/Humidity:



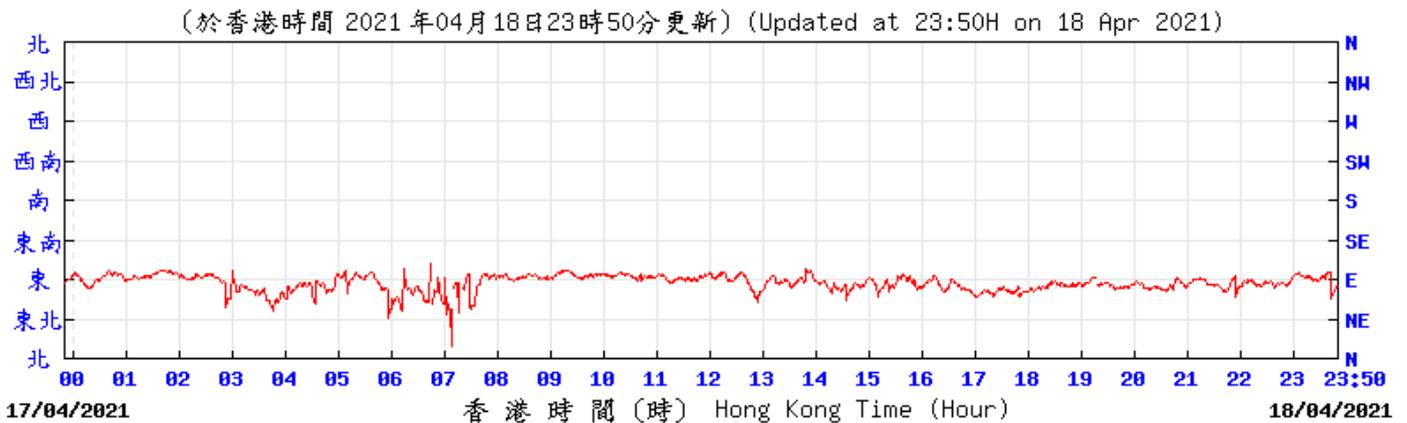
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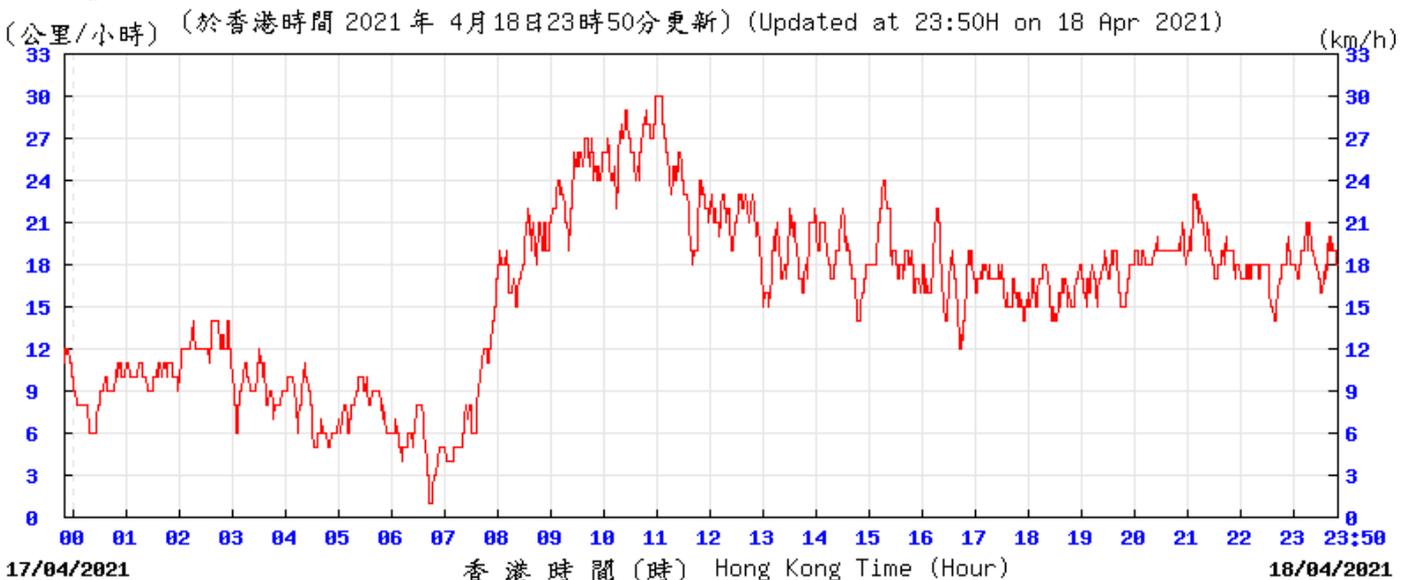
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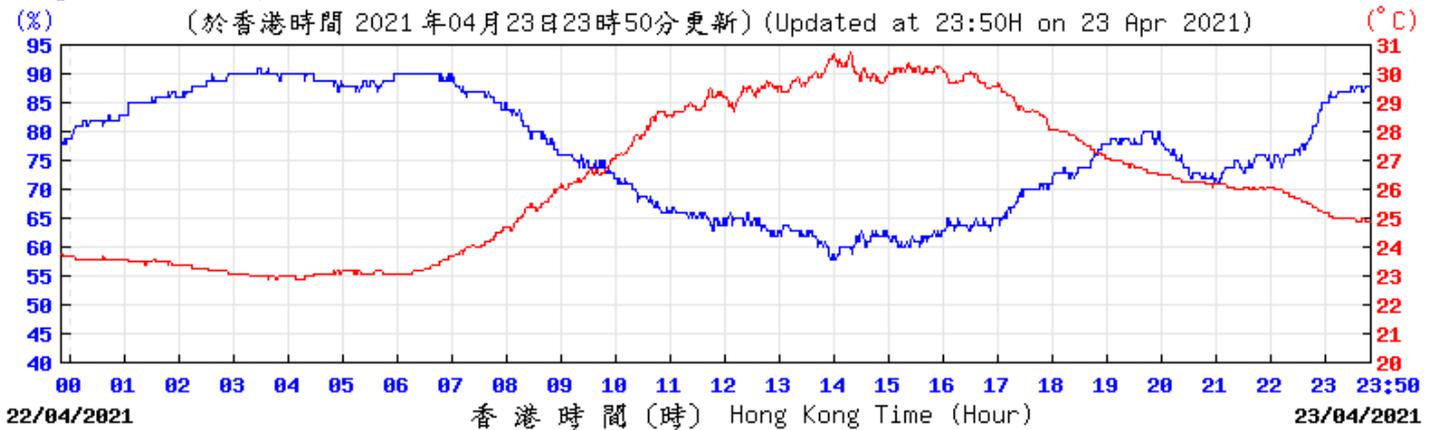
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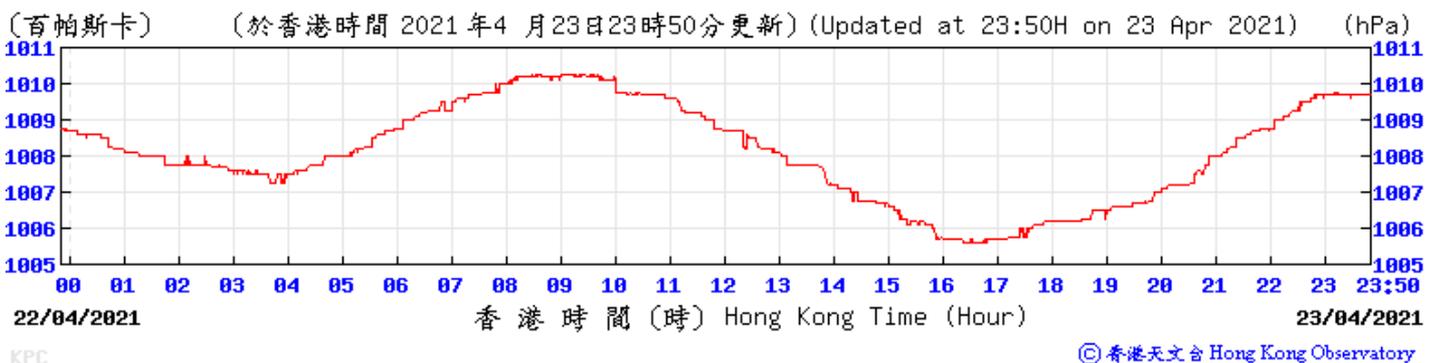


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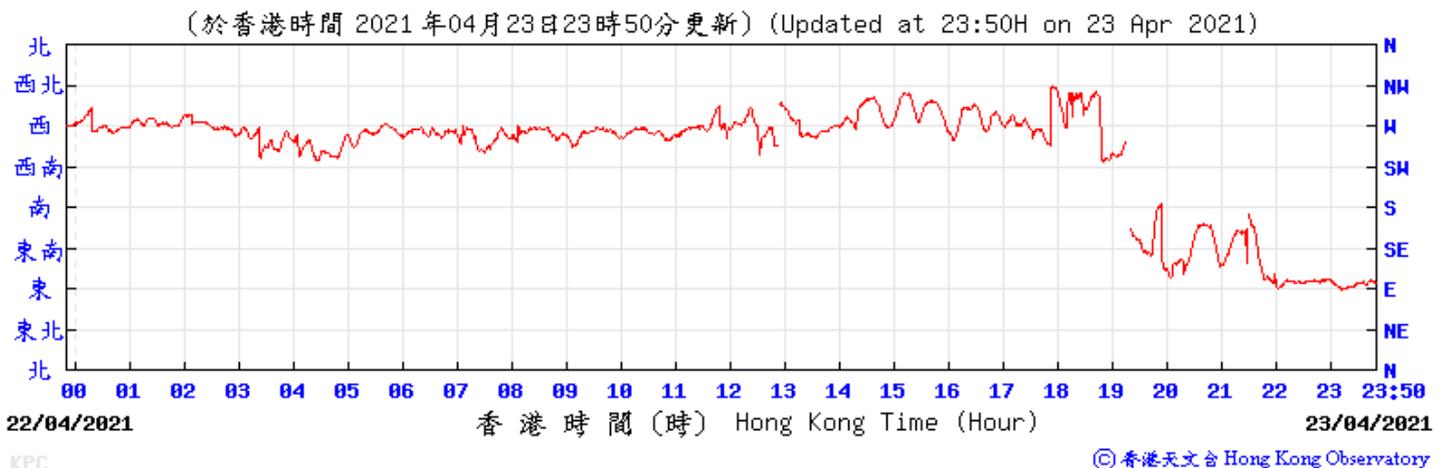
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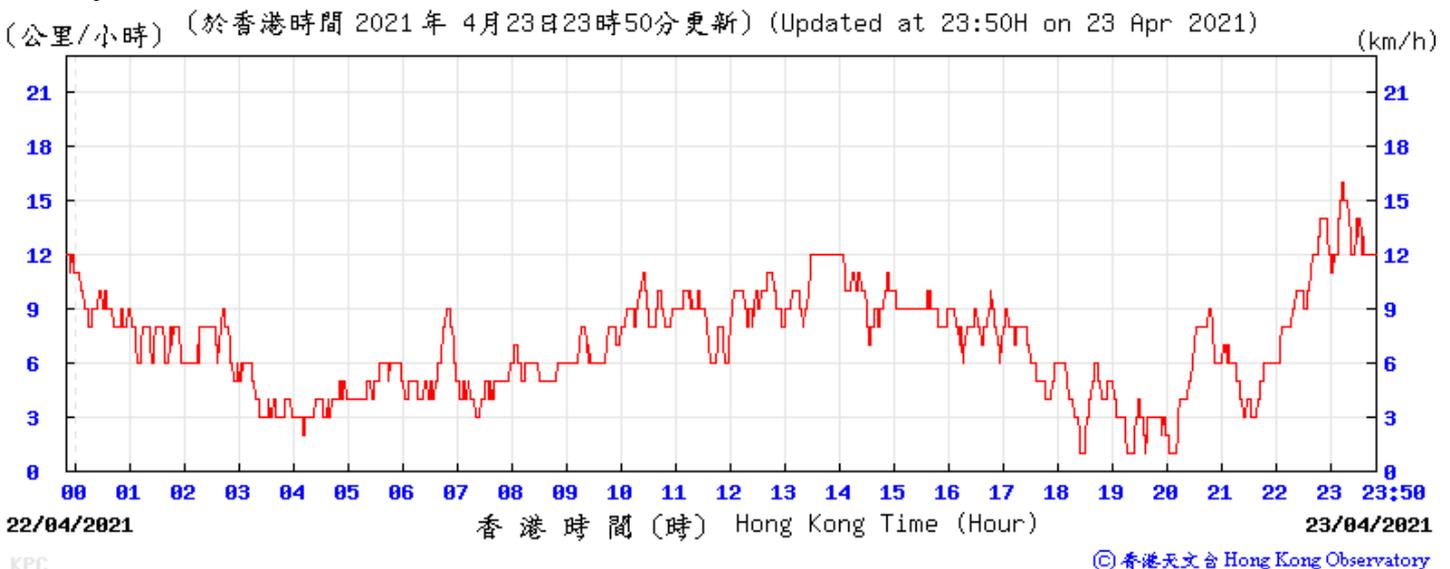
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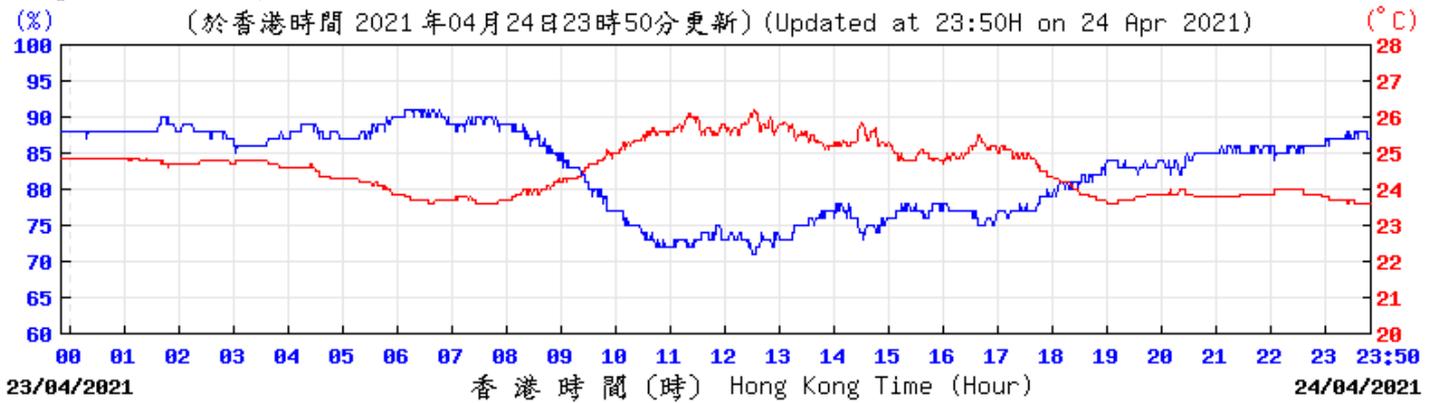
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Wind Speed:



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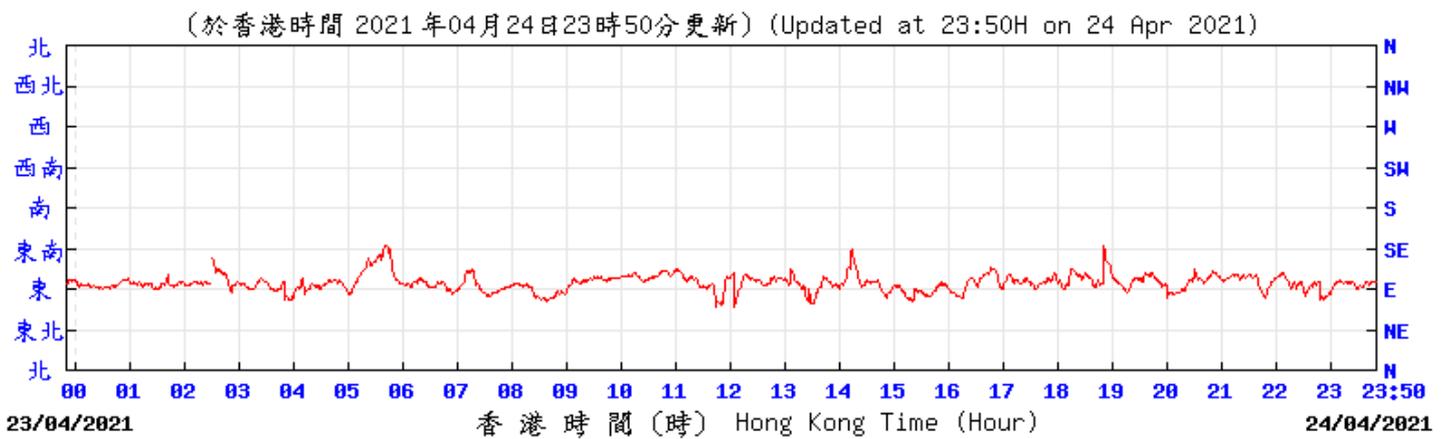
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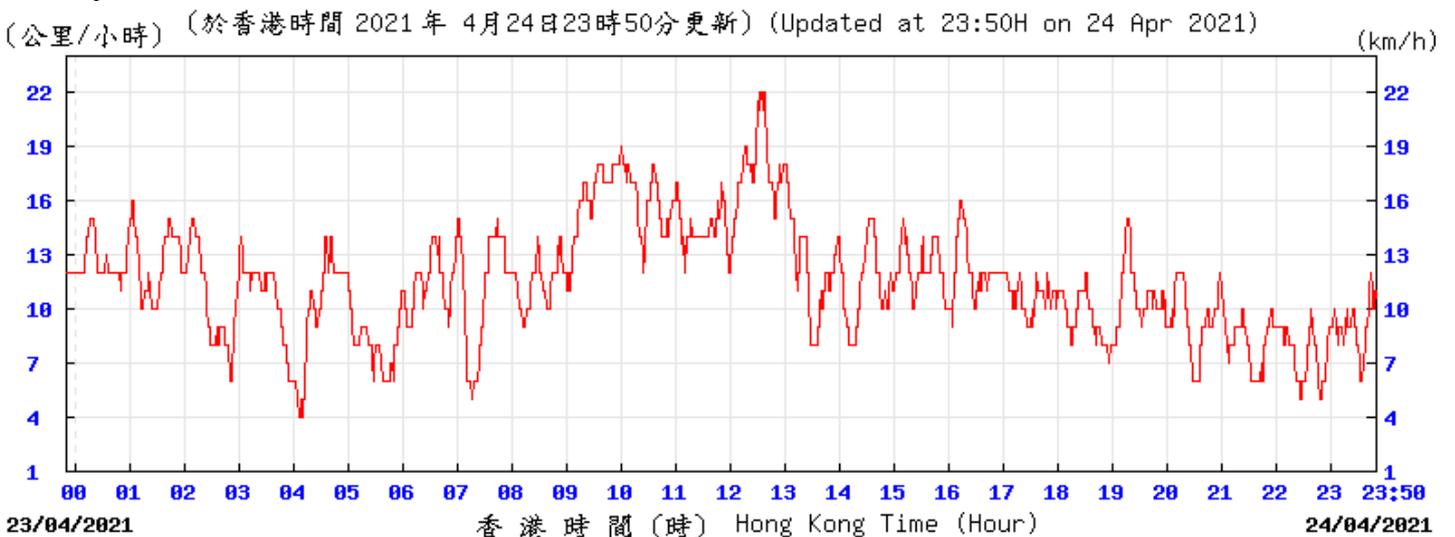
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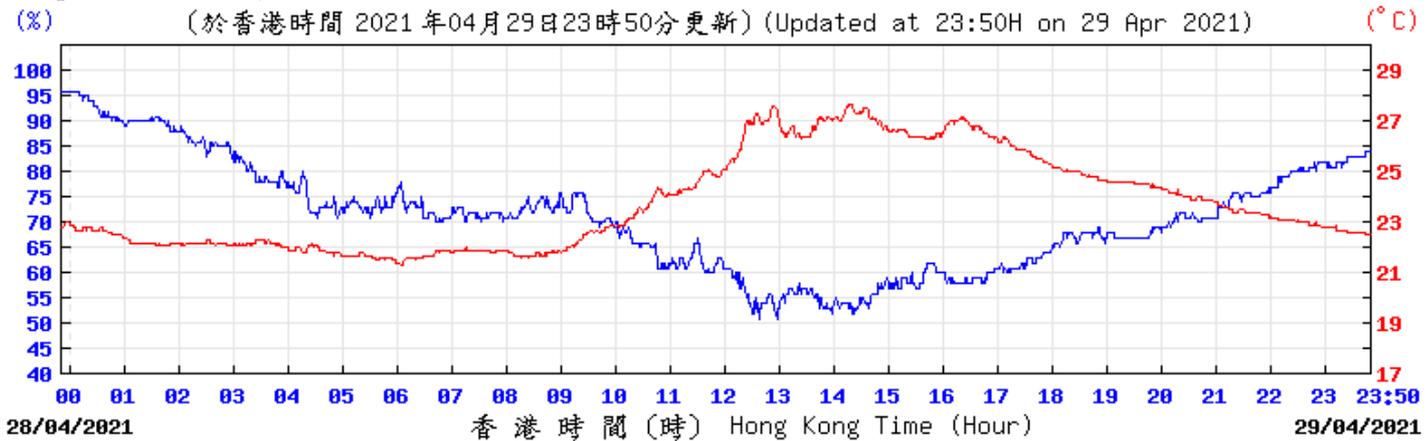
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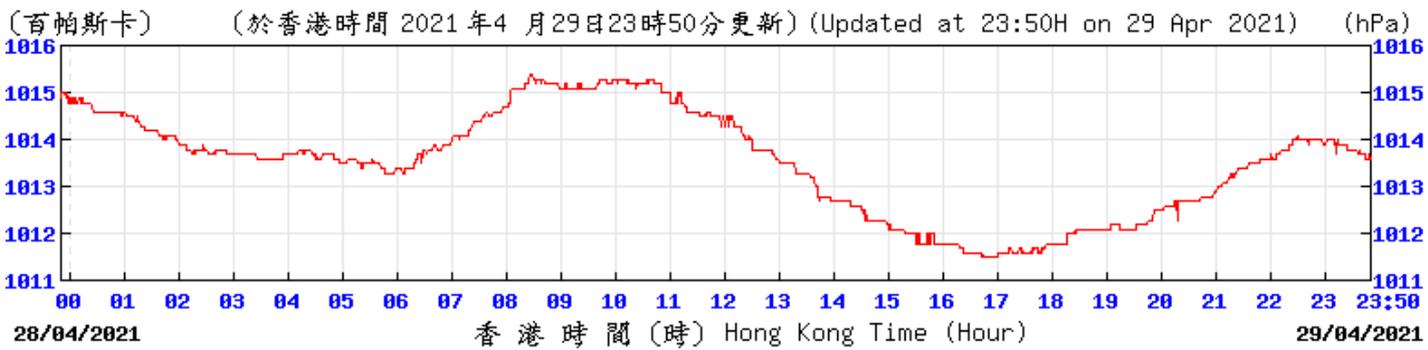
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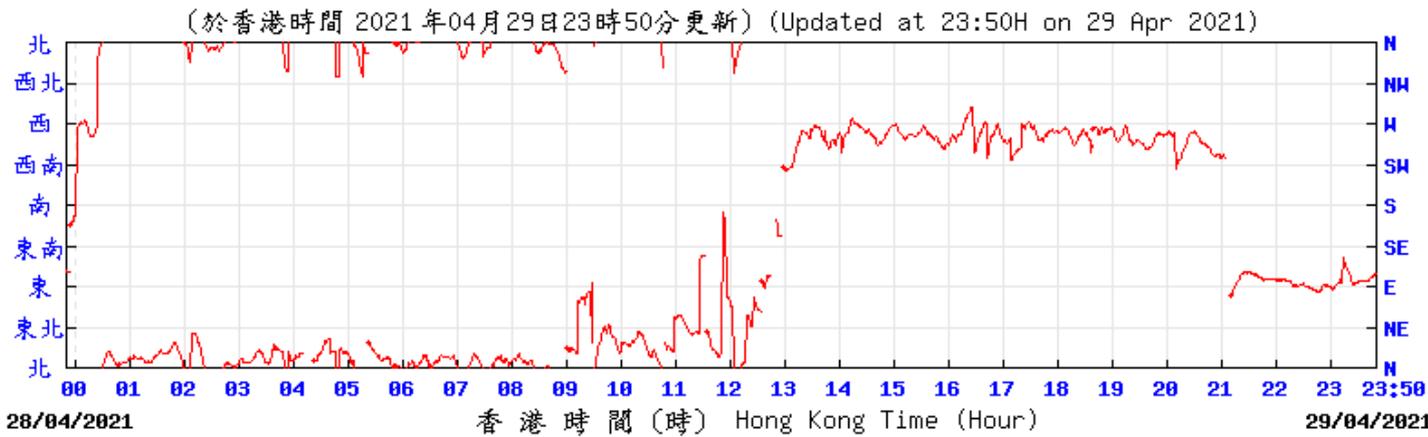
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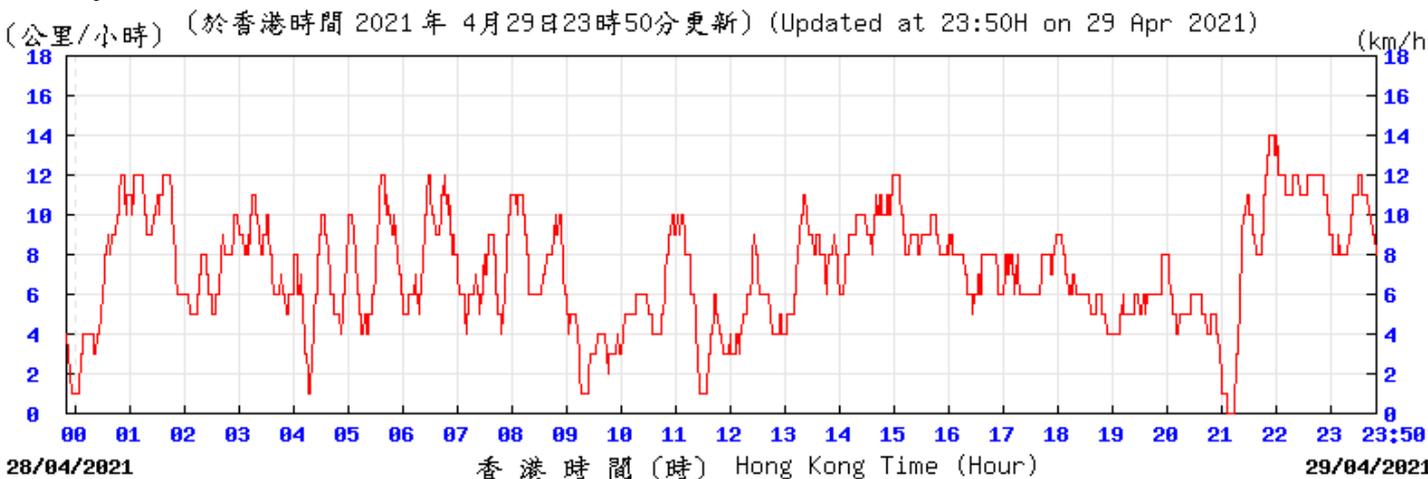
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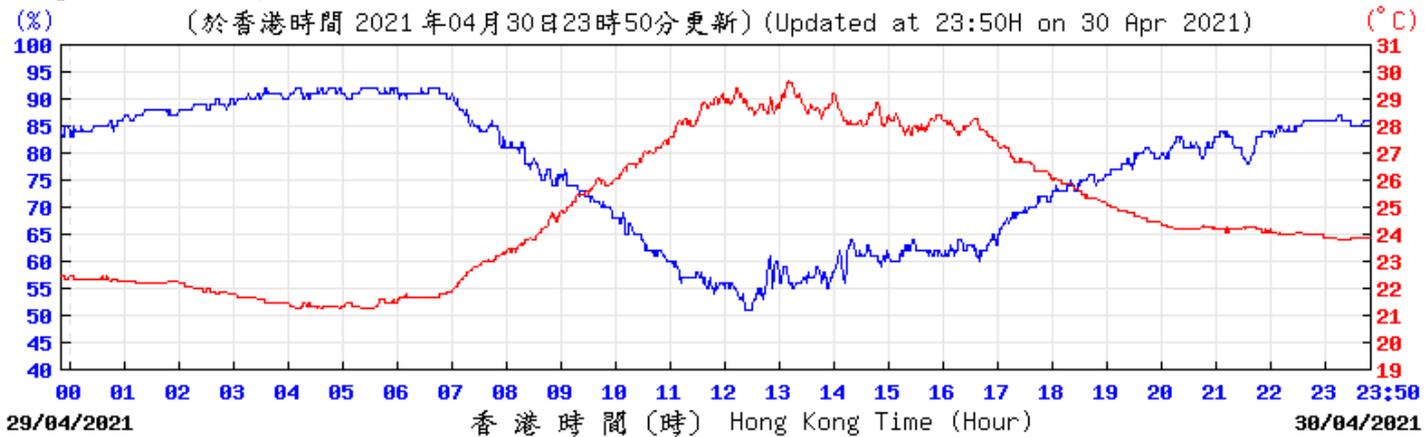
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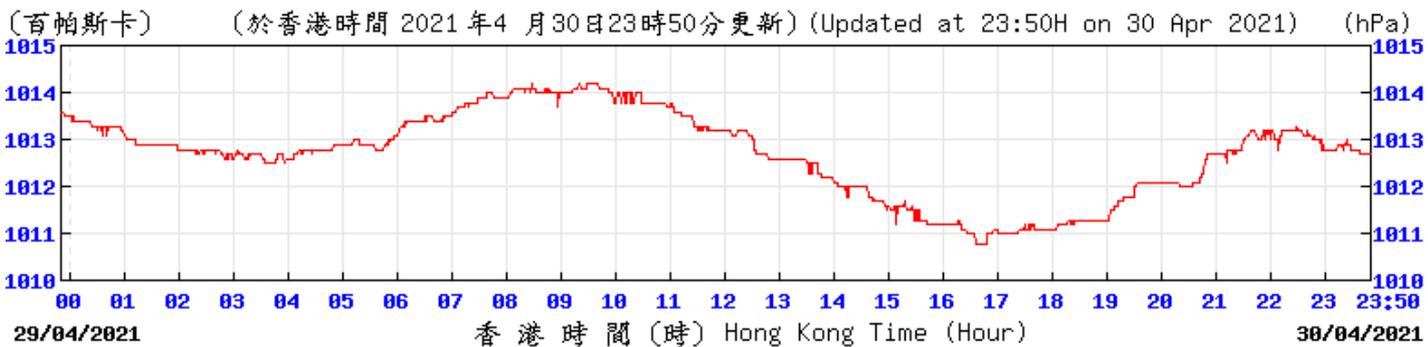
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Temperature/Humidity:



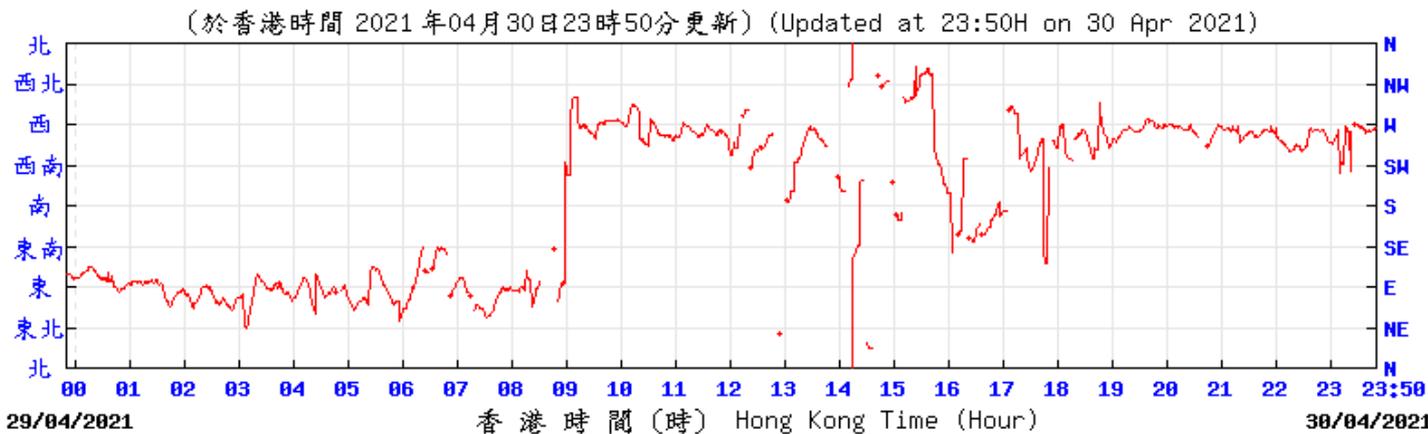
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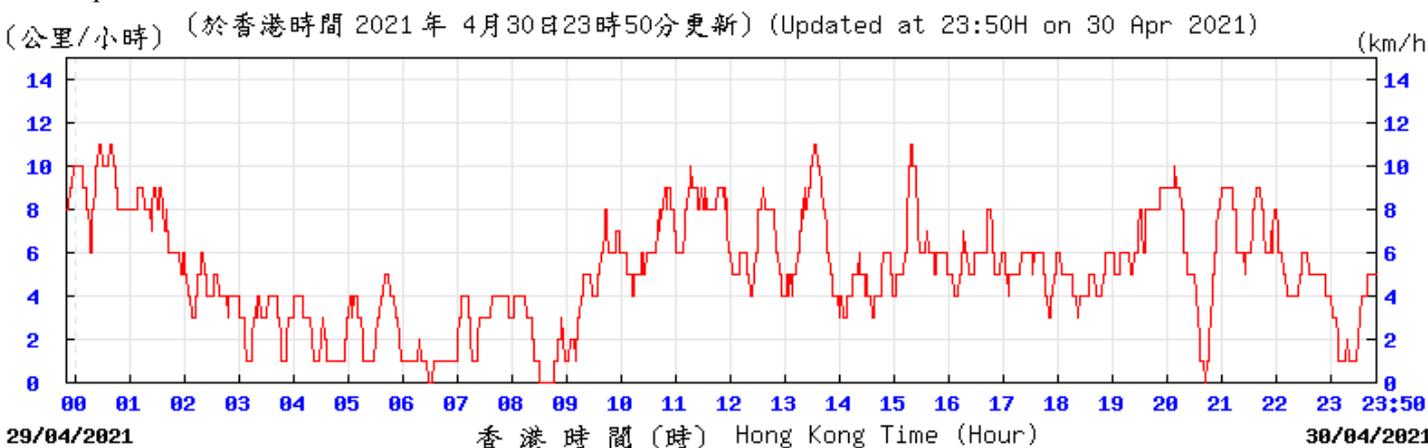
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Wind Direction:



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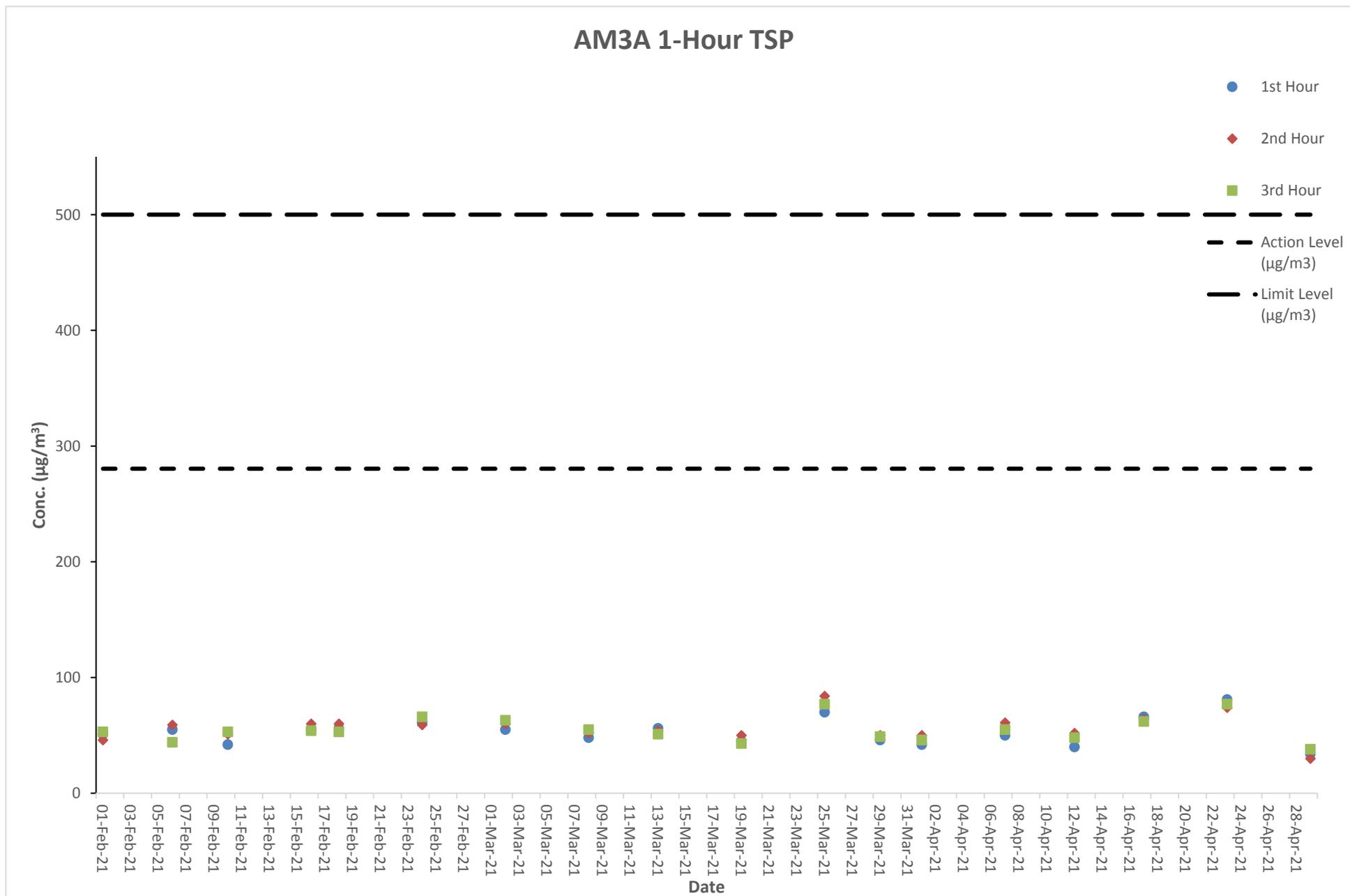
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E. Graphical Plots of the Monitoring Results

Air Quality Monitoring Result at Station AM3A (1-hour TSP)

Date	Weather Condition	Time	Conc. ($\mu\text{g}/\text{m}^3$)			Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
			1 st Hour	2 nd Hour	3 rd Hour		
01-Feb-21	Fine	8:07 - 11:07	51	46	53	280.4	500
06-Feb-21	Fine	14:24 - 17:24	55	59	44	280.4	500
10-Feb-21	Cloudy	8:16 - 11:16	42	51	53	280.4	500
16-Feb-21	Fine	14:20 - 17:20	55	60	54	280.4	500
18-Feb-21	Fine	8:03 - 11:03	56	60	53	280.4	500
24-Feb-21	Cloudy	14:01 - 17:01	61	59	66	280.4	500
02-Mar-21	Cloudy	8:04 - 11:04	55	60	63	280.4	500
08-Mar-21	Cloudy	14:26 - 17:26	48	52	55	280.4	500
13-Mar-21	Cloudy	8:11 - 11:11	56	54	51	280.4	500
19-Mar-21	Cloudy	13:09 - 16:09	45	50	43	280.4	500
25-Mar-21	Fine	8:03 - 11:03	70	84	77	280.4	500
29-Mar-21	Fine	13:01 - 16:01	46	50	49	280.4	500
01-Apr-21	Cloudy	8:11 - 11:11	42	50	46	280.4	500
07-Apr-21	Fine	14:20 - 17:20	50	61	55	280.4	500
12-Apr-21	Cloudy	8:20 - 11:20	40	52	48	280.4	500
17-Apr-21	Cloudy	13:55 - 16:55	66	64	62	280.4	500
23-Apr-21	Fine	8:11 - 11:11	81	74	77	280.4	500
29-Apr-21	Cloudy	14:13 - 17:13	34	30	38	280.4	500

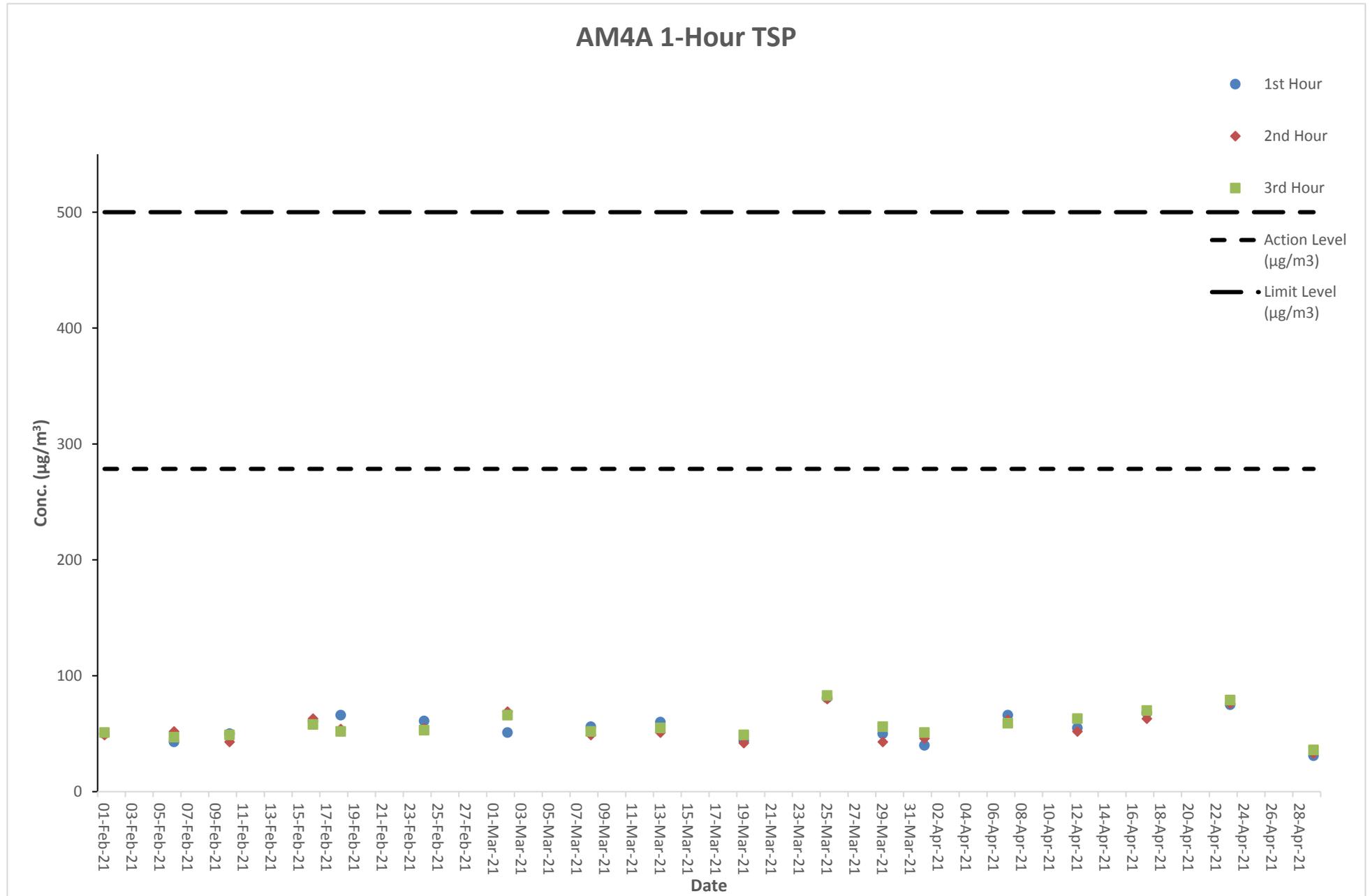
Graphical Presentation of Air Quality Monitoring Result at Station AM3A (1-hour TSP)



Air Quality Monitoring Result at Station AM4A (1-hour TSP)

Date	Weather Condition	Time	Conc. ($\mu\text{g}/\text{m}^3$)			Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
			1 st Hour	2 nd Hour	3 rd Hour		
01-Feb-21	Fine	8:15 - 11:15	50	49	51	278.5	500
06-Feb-21	Fine	14:32 - 17:32	43	52	47	278.5	500
10-Feb-21	Cloudy	8:24 - 11:24	50	43	49	278.5	500
16-Feb-21	Fine	14:28 - 17:28	61	63	58	278.5	500
18-Feb-21	Fine	8:11 - 11:11	66	54	52	278.5	500
24-Feb-21	Cloudy	14:09 - 17:09	61	55	53	278.5	500
02-Mar-21	Cloudy	8:12 - 11:12	51	69	66	278.5	500
08-Mar-21	Cloudy	14:34 - 17:34	56	49	52	278.5	500
13-Mar-21	Cloudy	8:19 - 11:19	60	51	55	278.5	500
19-Mar-21	Cloudy	13:17 - 16:17	44	42	49	278.5	500
25-Mar-21	Fine	8:11 - 11:11	81	80	83	278.5	500
29-Mar-21	Fine	13:09 - 16:09	50	43	56	278.5	500
01-Apr-21	Cloudy	8:19 - 11:19	40	46	51	278.5	500
07-Apr-21	Fine	14:28 - 17:28	66	62	59	278.5	500
12-Apr-21	Cloudy	8:28 - 11:28	55	52	63	278.5	500
17-Apr-21	Cloudy	14:03 - 17:03	68	63	70	278.5	500
23-Apr-21	Fine	8:19 - 11:19	75	76	79	278.5	500
29-Apr-21	Cloudy	14:21 - 17:21	31	33	36	278.5	500

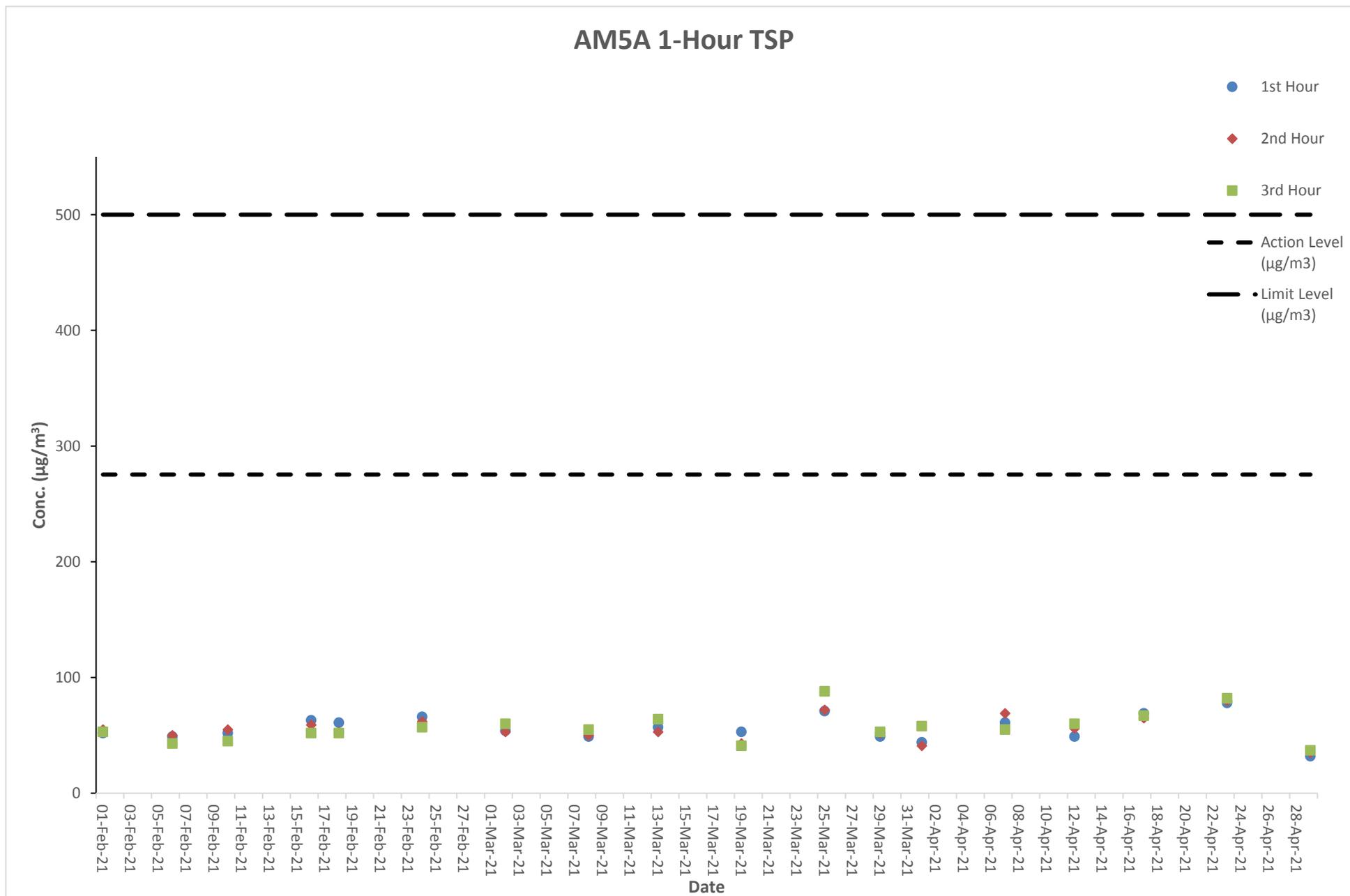
Graphical Presentation of Air Quality Monitoring Result at Station AM4A (1-hour TSP)



Air Quality Monitoring Result at Station AM5A (1-hour TSP)

Date	Weather Condition	Time	Conc. ($\mu\text{g}/\text{m}^3$)			Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
			1 st Hour	2 nd Hour	3 rd Hour		
01-Feb-21	Fine	8:30 - 11:30	52	55	53	275.4	500
06-Feb-21	Fine	14:49 - 17:49	49	50	43	275.4	500
10-Feb-21	Cloudy	8:39 - 11:39	52	55	45	275.4	500
16-Feb-21	Fine	14:45 - 17:45	63	59	52	275.4	500
18-Feb-21	Fine	8:26 - 11:26	61	53	52	275.4	500
24-Feb-21	Cloudy	14:17 - 17:17	66	62	57	275.4	500
02-Mar-21	Cloudy	8:27 - 11:27	54	53	60	275.4	500
08-Mar-21	Cloudy	14:51 - 17:51	49	50	55	275.4	500
13-Mar-21	Cloudy	8:34 - 11:34	57	53	64	275.4	500
19-Mar-21	Cloudy	13:34 - 16:34	53	43	41	275.4	500
25-Mar-21	Fine	8:26 - 11:26	71	72	88	275.4	500
29-Mar-21	Fine	13:17 - 16:17	49	52	53	275.4	500
01-Apr-21	Cloudy	8:34 - 11:34	44	41	58	275.4	500
07-Apr-21	Fine	14:45 - 17:45	61	69	55	275.4	500
12-Apr-21	Cloudy	8:43 - 11:43	49	56	60	275.4	500
17-Apr-21	Cloudy	14:20 - 17:20	69	65	67	275.4	500
23-Apr-21	Fine	8:34 - 11:34	78	80	82	275.4	500
29-Apr-21	Cloudy	14:29 - 17:29	32	35	37	275.4	500

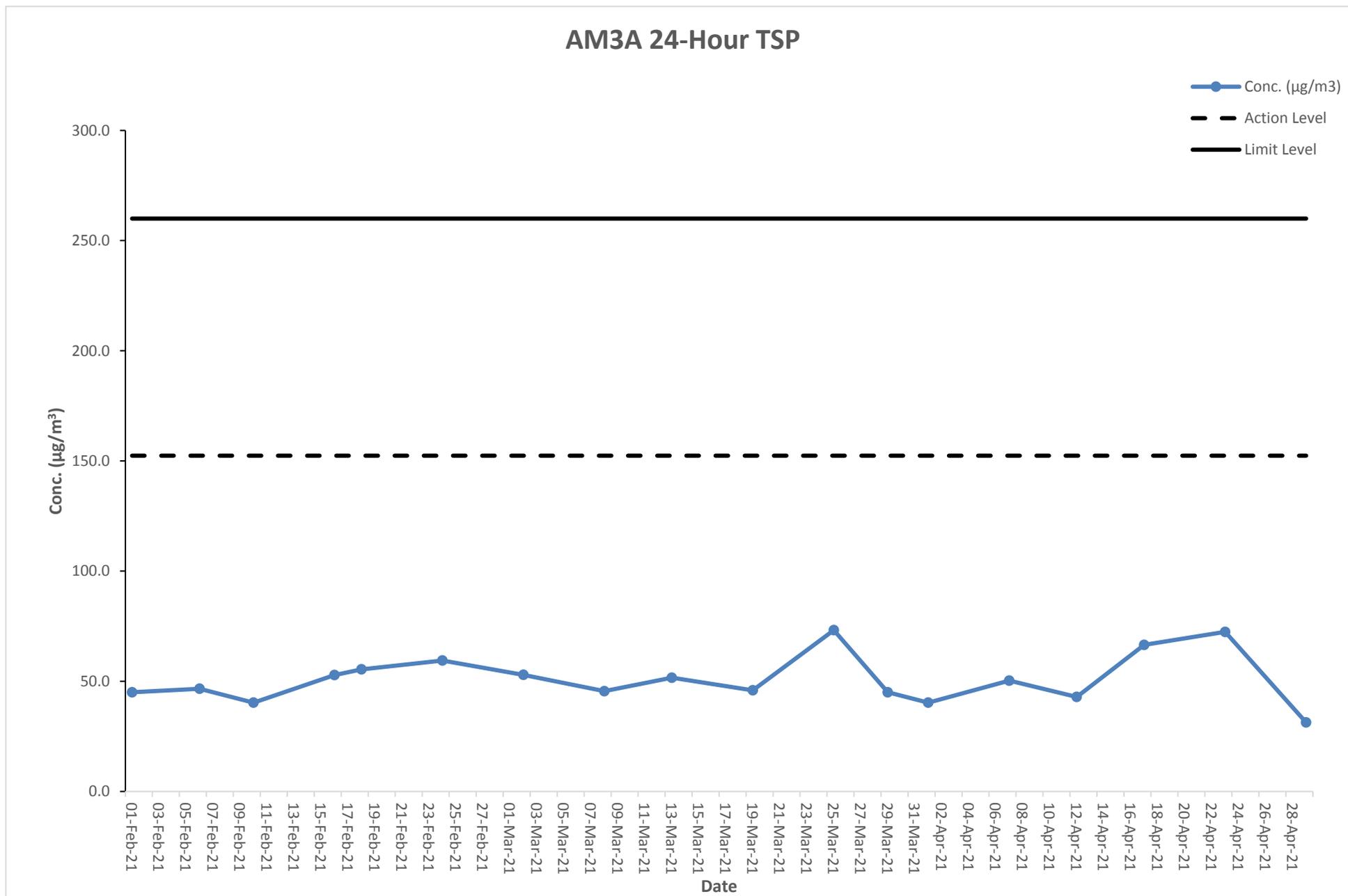
Graphical Presentation of Air Quality Monitoring Result at Station AM5A (1-hour TSP)



Air Quality Monitoring Result at Station AM3A (24-hour TSP)

Start		Finish		Filter Weight (g)		Elapsed Time Reading		Sampling Time (hrs)	Flow Rate (m ³ /min)			Conc. (µg/m ³)	Weather Condition	Action Level	Limit Level
Date	Time	Date	Time	Initial	Final	Initial	Final		Initial	Final	Average				
01-Feb-21	10:00	02-Feb-21	10:00	2.8016	2.8741	1507.8	1531.8	24	1.12	1.12	1.12	45.0	Fine	152.4	260
06-Feb-21	10:00	07-Feb-21	10:00	2.8072	2.8821	1531.8	1555.8	24	1.12	1.12	1.12	46.6	Sunny	152.4	260
10-Feb-21	10:00	11-Feb-21	10:00	2.8038	2.8687	1555.8	1579.8	24	1.12	1.12	1.12	40.3	Rainy	152.4	260
16-Feb-21	10:00	17-Feb-21	10:00	2.8071	2.8921	1579.8	1603.8	24	1.12	1.12	1.12	52.8	Fine	152.4	260
18-Feb-21	10:00	19-Feb-21	10:00	2.8022	2.8913	1603.8	1627.8	24	1.12	1.12	1.12	55.4	Sunny	152.4	260
24-Feb-21	10:00	25-Feb-21	10:00	2.8061	2.9017	1627.8	1651.8	24	1.12	1.12	1.12	59.4	Fine	152.4	260
02-Mar-21	10:00	03-Mar-21	10:00	2.8080	2.8932	1652.8	1676.8	24	1.12	1.12	1.12	52.9	Cloudy	152.4	260
08-Mar-21	10:00	09-Mar-21	10:00	2.8081	2.8814	1676.8	1700.8	24	1.12	1.12	1.12	45.5	Cloudy	152.4	260
13-Mar-21	10:00	14-Mar-21	10:00	2.8041	2.8871	1700.8	1724.8	24	1.12	1.12	1.12	51.6	Fine	152.4	260
19-Mar-21	10:00	20-Mar-21	10:00	2.8015	2.8754	1724.8	1748.8	24	1.12	1.12	1.12	45.9	Fine	152.4	260
25-Mar-21	10:00	26-Mar-21	10:00	2.8024	2.9201	1748.8	1772.8	24	1.12	1.12	1.12	73.2	Fine	152.4	260
29-Mar-21	10:00	30-Mar-21	10:00	2.8083	2.8807	1772.8	1796.8	24	1.12	1.12	1.12	45.0	Fine	152.4	260
01-Apr-21	10:00	02-Apr-21	10:00	2.8048	2.8697	1796.8	1820.8	24	1.12	1.12	1.12	40.3	Fine	152.4	260
07-Apr-21	10:00	08-Apr-21	10:00	2.8069	2.8879	1820.8	1844.8	24	1.12	1.12	1.12	50.3	Fine	152.4	260
12-Apr-21	10:00	13-Apr-21	10:00	2.8058	2.8749	1844.8	1868.8	24	1.12	1.12	1.12	42.9	Fine	152.4	260
17-Apr-21	10:00	18-Apr-21	10:00	2.8049	2.9119	1868.8	1892.8	24	1.12	1.12	1.12	66.5	Rainy	152.4	260
23-Apr-21	10:00	24-Apr-21	10:00	2.8016	2.9181	1892.8	1916.8	24	1.12	1.12	1.12	72.4	Fine	152.4	260
29-Apr-21	10:00	30-Apr-21	10:00	2.8044	2.8547	1916.8	1940.8	24	1.12	1.12	1.12	31.3	Cloudy	152.4	260

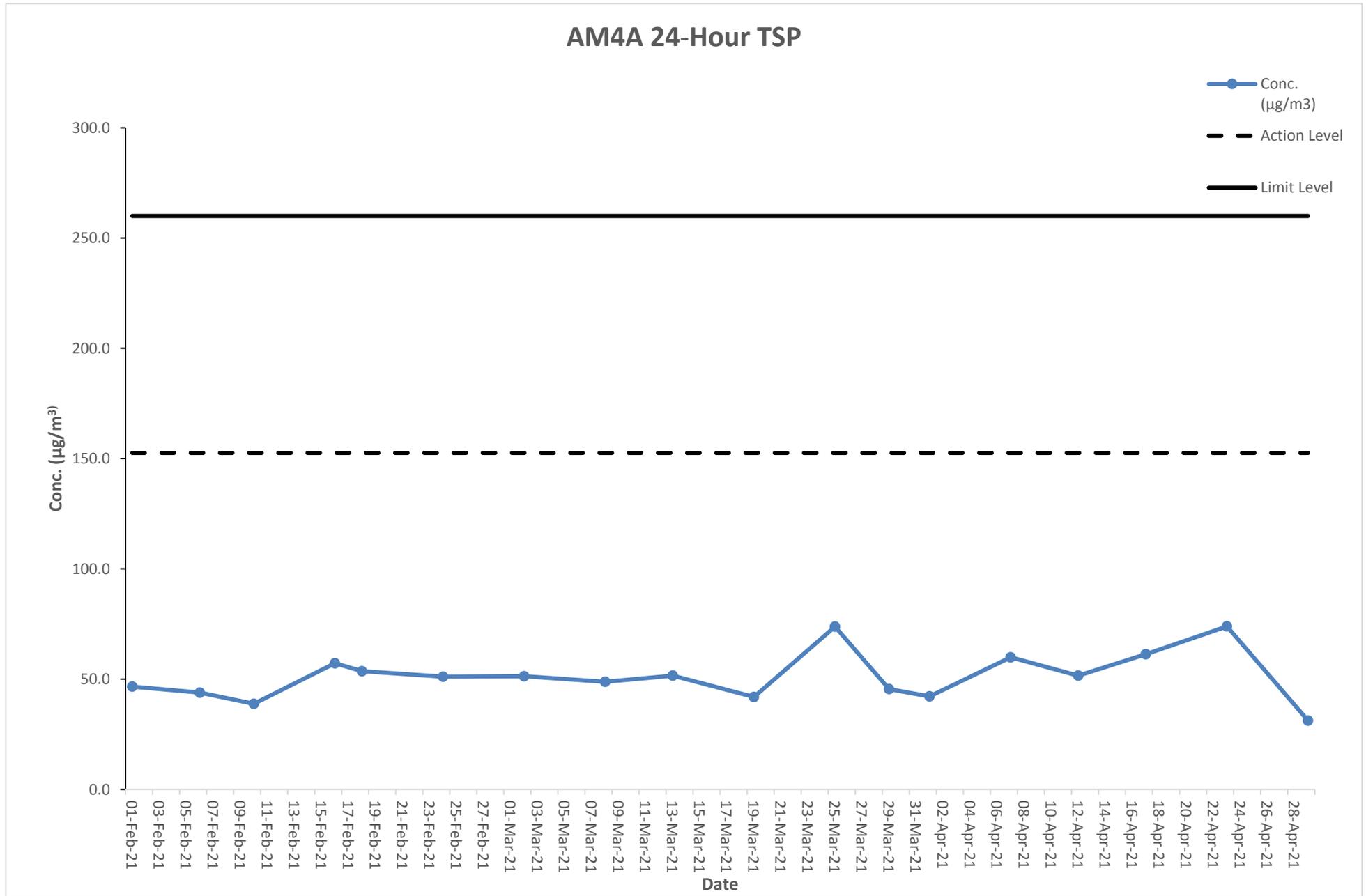
Graphical Presentation of Air Quality Monitoring Result at Station AM3A (24-hour TSP)



Air Quality Monitoring Result at Station AM4A (24-hour TSP)

Start		Finish		Filter Weight (g)		Elapsed Time Reading		Sampling Time (hrs)	Flow Rate (m ³ /min)			Conc. (µg/m ³)	Weather Condition	Action Level	Limit Level
Date	Time	Date	Time	Initial	Final	Initial	Final		Initial	Final	Average				
01-Feb-21	10:00	02-Feb-21	10:00	2.8067	2.8817	1927.4	1951.4	24	1.12	1.12	1.12	46.6	Fine	152.6	260
06-Feb-21	10:00	07-Feb-21	10:00	2.8088	2.8794	1951.4	1975.4	24	1.12	1.12	1.12	43.9	Sunny	152.6	260
10-Feb-21	10:00	11-Feb-21	10:00	2.8042	2.8666	1975.4	1999.4	24	1.12	1.12	1.12	38.8	Rainy	152.6	260
16-Feb-21	10:00	17-Feb-21	10:00	2.8028	2.8949	1999.4	2023.4	24	1.12	1.12	1.12	57.2	Fine	152.6	260
18-Feb-21	10:00	19-Feb-21	10:00	2.8023	2.8886	2023.4	2047.4	24	1.12	1.12	1.12	53.6	Sunny	152.6	260
24-Feb-21	10:00	25-Feb-21	10:00	2.8061	2.8884	2047.4	2071.4	24	1.12	1.12	1.12	51.1	Fine	152.6	260
02-Mar-21	10:00	03-Mar-21	10:00	2.8049	2.8874	2072.4	2096.4	24	1.12	1.12	1.12	51.3	Cloudy	152.6	260
08-Mar-21	10:00	09-Mar-21	10:00	2.8055	2.8841	2096.4	2120.4	24	1.12	1.12	1.12	48.8	Cloudy	152.6	260
13-Mar-21	10:00	14-Mar-21	10:00	2.8071	2.8901	2120.4	2144.4	24	1.12	1.12	1.12	51.6	Fine	152.6	260
19-Mar-21	10:00	20-Mar-21	10:00	2.8033	2.8708	2144.4	2168.4	24	1.12	1.12	1.12	41.9	Fine	152.6	260
25-Mar-21	10:00	26-Mar-21	10:00	2.8079	2.9266	2168.4	2192.4	24	1.12	1.12	1.12	73.8	Fine	152.6	260
29-Mar-21	10:00	30-Mar-21	10:00	2.8025	2.8758	2192.4	2216.4	24	1.12	1.12	1.12	45.5	Fine	152.6	260
01-Apr-21	10:00	02-Apr-21	10:00	2.8055	2.8735	2216.4	2240.4	24	1.12	1.12	1.12	42.2	Fine	152.6	260
07-Apr-21	10:00	08-Apr-21	10:00	2.8038	2.9002	2240.4	2264.4	24	1.12	1.12	1.12	59.9	Fine	152.6	260
12-Apr-21	10:00	13-Apr-21	10:00	2.8029	2.8860	2264.4	2288.4	24	1.12	1.12	1.12	51.6	Fine	152.6	260
17-Apr-21	10:00	18-Apr-21	10:00	2.8022	2.9008	2288.4	2312.4	24	1.12	1.12	1.12	61.3	Rainy	152.6	260
23-Apr-21	10:00	24-Apr-21	10:00	2.8086	2.9276	2312.4	2336.4	24	1.12	1.12	1.12	73.9	Fine	152.6	260
29-Apr-21	10:00	30-Apr-21	10:00	2.8027	2.8529	2336.4	2360.4	24	1.12	1.12	1.12	31.2	Cloudy	152.6	260

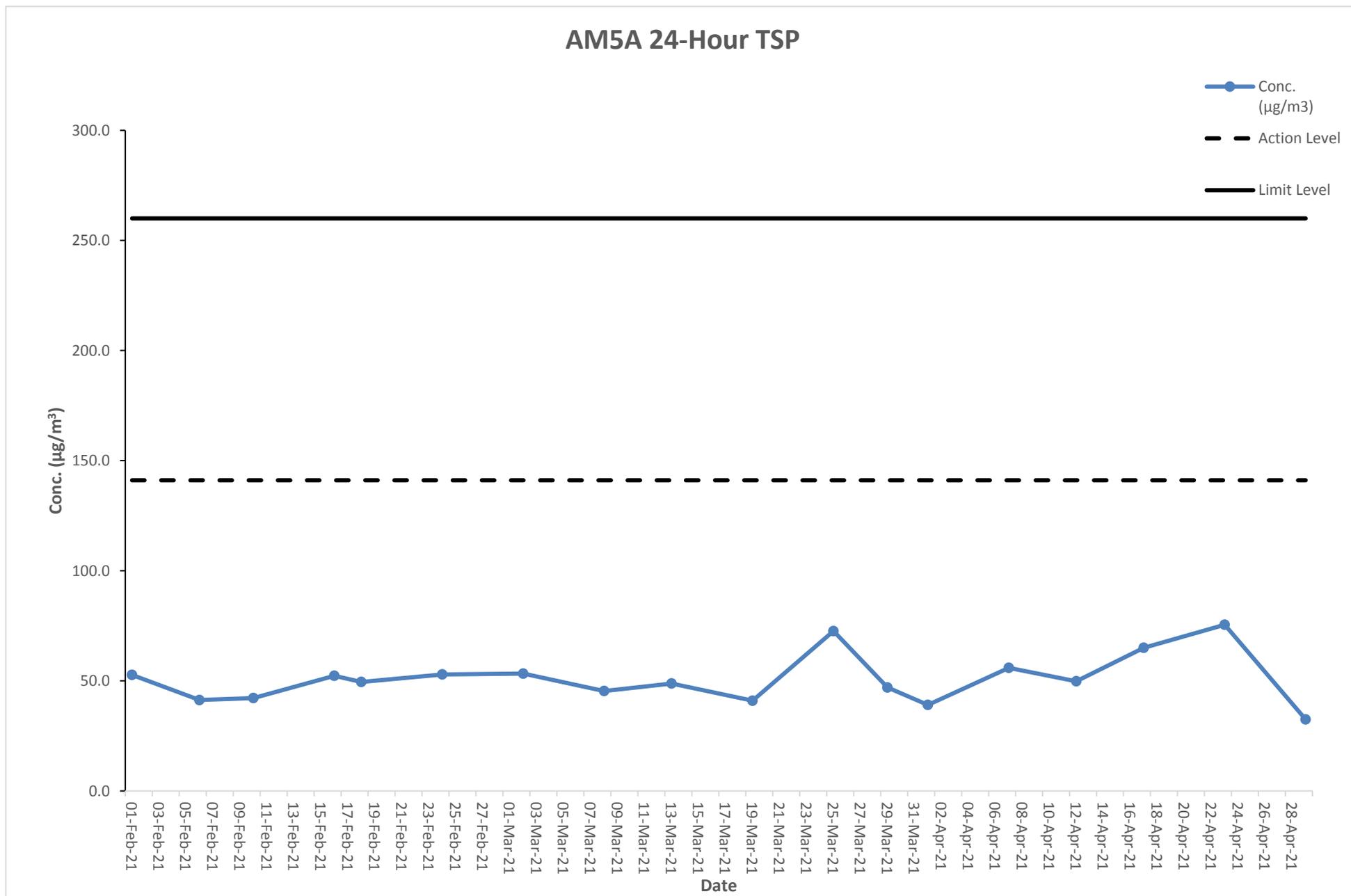
Graphical Presentation of Air Quality Monitoring Result at Station AM4A (24-hour TSP)



Air Quality Monitoring Result at Station AM5A (24-hour TSP)

Start		Finish		Filter Weight (g)		Elapsed Time Reading		Sampling Time (hrs)	Flow Rate (m ³ /min)			Conc. (µg/m ³)	Weather Condition	Action Level	Limit Level
Date	Time	Date	Time	Initial	Final	Initial	Final		Initial	Final	Average				
01-Feb-21	10:00	02-Feb-21	10:00	2.8078	2.8925	2067.6	2091.6	24	1.12	1.12	1.12	52.7	Fine	141.1	260
06-Feb-21	10:00	07-Feb-21	10:00	2.8044	2.8709	2091.6	2115.6	24	1.12	1.12	1.12	41.3	Sunny	141.1	260
10-Feb-21	10:00	11-Feb-21	10:00	2.8017	2.8697	2115.6	2139.6	24	1.12	1.12	1.12	42.2	Rainy	141.1	260
16-Feb-21	10:00	17-Feb-21	10:00	2.8066	2.8907	2139.6	2163.6	24	1.12	1.12	1.12	52.3	Fine	141.1	260
18-Feb-21	10:00	19-Feb-21	10:00	2.8064	2.8861	2163.6	2187.6	24	1.12	1.12	1.12	49.5	Sunny	141.1	260
24-Feb-21	10:00	25-Feb-21	10:00	2.8083	2.8935	2187.6	2211.6	24	1.12	1.12	1.12	52.9	Fine	141.1	260
02-Mar-21	10:00	03-Mar-21	10:00	2.8081	2.8940	2212.6	2236.6	24	1.12	1.12	1.12	53.3	Cloudy	141.1	260
08-Mar-21	10:00	09-Mar-21	10:00	2.8083	2.8813	2236.6	2260.6	24	1.12	1.12	1.12	45.4	Cloudy	141.1	260
13-Mar-21	10:00	14-Mar-21	10:00	2.8083	2.8867	2260.6	2284.6	24	1.12	1.12	1.12	48.8	Fine	141.1	260
19-Mar-21	10:00	20-Mar-21	10:00	2.8040	2.8699	2284.6	2308.6	24	1.12	1.12	1.12	41.0	Fine	141.1	260
25-Mar-21	10:00	26-Mar-21	10:00	2.8045	2.9213	2308.6	2332.6	24	1.12	1.12	1.12	72.6	Fine	141.1	260
29-Mar-21	10:00	30-Mar-21	10:00	2.8034	2.8790	2332.6	2356.6	24	1.12	1.12	1.12	47.0	Fine	141.1	260
01-Apr-21	10:00	02-Apr-21	10:00	2.8024	2.8653	2356.6	2380.6	24	1.12	1.12	1.12	39.1	Fine	141.1	260
07-Apr-21	10:00	08-Apr-21	10:00	2.8052	2.8951	2380.6	2404.6	24	1.12	1.12	1.12	55.9	Fine	141.1	260
12-Apr-21	10:00	13-Apr-21	10:00	2.8015	2.8816	2404.6	2428.6	24	1.12	1.12	1.12	49.8	Fine	141.1	260
17-Apr-21	10:00	18-Apr-21	10:00	2.8068	2.9114	2428.6	2452.6	24	1.12	1.12	1.12	65.0	Rainy	141.1	260
23-Apr-21	10:00	24-Apr-21	10:00	2.8023	2.9239	2452.6	2476.6	24	1.12	1.12	1.12	75.5	Fine	141.1	260
29-Apr-21	10:00	30-Apr-21	10:00	2.8027	2.8550	2476.6	2500.6	24	1.12	1.12	1.12	32.5	Cloudy	141.1	260

Graphical Presentation of Air Quality Monitoring Result at Station AM5A (24-hour TSP)



Noise Monitoring Result at Station NM2A

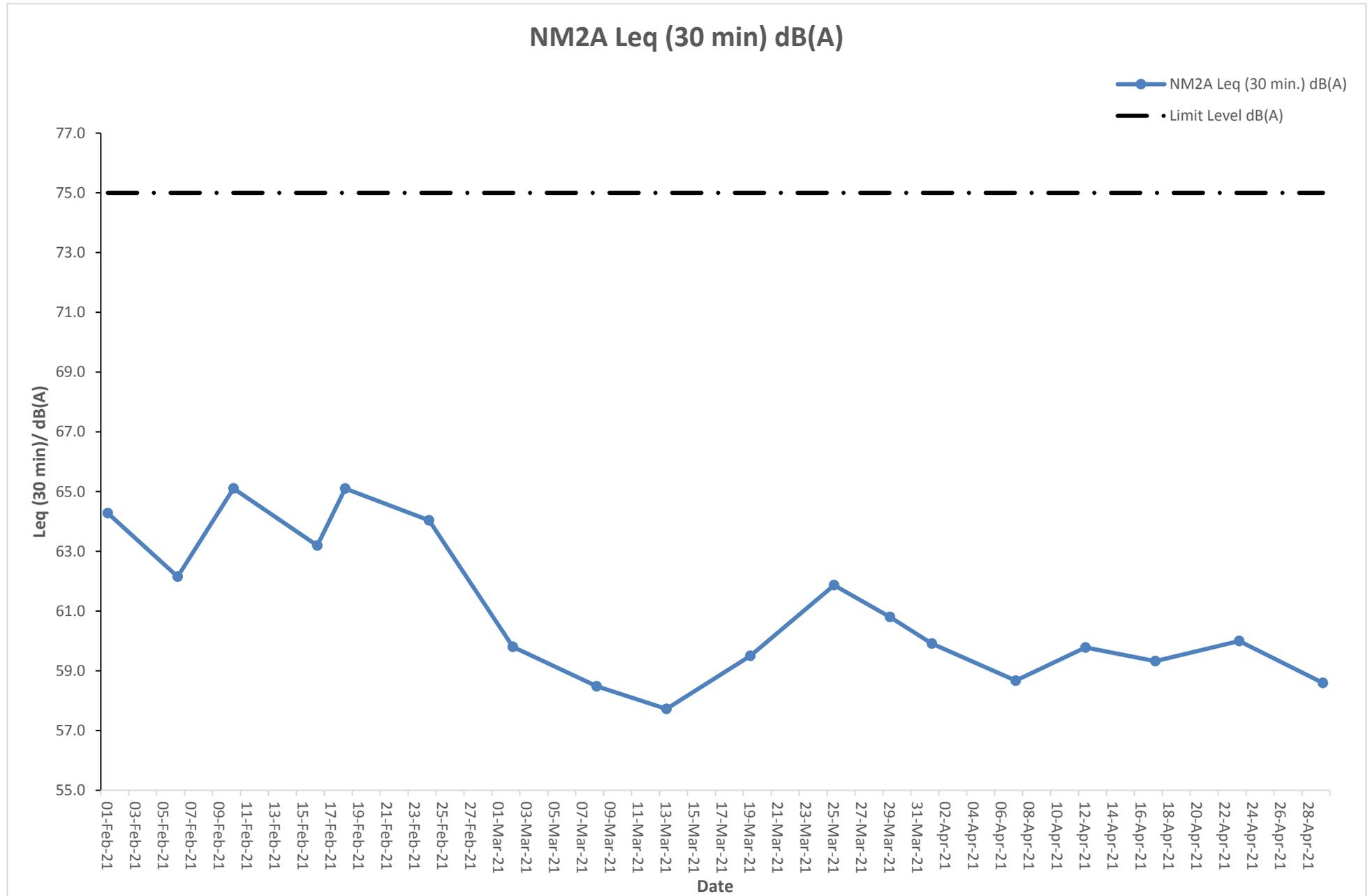
Date	Time	Measured L10 dB(A)	Measured L90 dB(A)	Leq (30 min.) dB(A)
01-Feb-21	8:07	64.1	55.5	64.3
01-Feb-21	8:12	65.3	57.5	
01-Feb-21	8:17	65.8	57.8	
01-Feb-21	8:22	64.2	55.5	
01-Feb-21	8:27	66.6	59.5	
01-Feb-21	8:32	65.5	57.3	
06-Feb-21	14:24	62.3	53.5	62.2
06-Feb-21	14:29	64.6	55.3	
06-Feb-21	14:34	64.3	54.3	
06-Feb-21	14:39	64.3	54.3	
06-Feb-21	14:44	62.4	53.5	
06-Feb-21	14:49	62.6	53.6	
10-Feb-21	8:16	66.3	59.5	65.1
10-Feb-21	8:21	67.3	60.5	
10-Feb-21	8:26	65.3	57.6	
10-Feb-21	8:31	67.2	60.5	
10-Feb-21	8:36	64.4	55.8	
10-Feb-21	8:41	64.3	55.2	
16-Feb-21	14:20	64.1	55.1	63.2
16-Feb-21	14:25	64.7	55.6	
16-Feb-21	14:30	64.5	54.2	
16-Feb-21	14:35	64.1	54.5	
16-Feb-21	14:40	64.8	54.5	
16-Feb-21	14:45	65.5	57.2	
18-Feb-21	8:03	65.2	57.3	65.1
18-Feb-21	8:08	66.6	59.4	
18-Feb-21	8:13	65.2	57.3	
18-Feb-21	8:18	65.5	57.3	
18-Feb-21	8:23	66.7	59.4	
18-Feb-21	8:28	66.2	59.3	
24-Feb-21	14:01	66.3	59.5	64.0
24-Feb-21	14:06	64.2	55.3	
24-Feb-21	14:11	65.2	57.2	
24-Feb-21	14:16	64.6	54.1	
24-Feb-21	14:21	64.1	55.3	
24-Feb-21	14:26	65.3	57.6	
02-Mar-21	8:04	64.6	58.5	59.8
02-Mar-21	8:09	61.1	56.4	
02-Mar-21	8:14	61.5	56.5	
02-Mar-21	8:19	64.9	58.5	
02-Mar-21	8:24	64.6	58.6	
02-Mar-21	8:29	62.3	57.5	
08-Mar-21	14:26	59.6	55.5	58.5
08-Mar-21	14:31	61.2	56.5	
08-Mar-21	14:36	61.7	56.5	
08-Mar-21	14:41	61.3	56.8	
08-Mar-21	14:46	62.6	57.5	
08-Mar-21	14:51	61.5	56.5	
13-Mar-21	8:11	59.5	55.5	57.7
13-Mar-21	8:16	61.2	56.5	
13-Mar-21	8:21	59.3	55.2	
13-Mar-21	8:26	59.7	55.8	
13-Mar-21	8:31	61.1	56.6	
13-Mar-21	8:36	59.4	55.2	
19-Mar-21	13:09	61.4	57.5	59.5
19-Mar-21	13:14	61.2	56.6	
19-Mar-21	13:19	63.6	58.5	
19-Mar-21	13:24	61.5	57.5	
19-Mar-21	13:29	61.3	57.4	
19-Mar-21	13:34	61.8	57.6	

25-Mar-21	8:03	63.8	56.4	61.9
25-Mar-21	8:08	62.1	56.1	
25-Mar-21	8:13	65.3	57.5	
25-Mar-21	8:18	63.7	56.8	
25-Mar-21	8:23	66.3	57.6	
25-Mar-21	8:28	63.6	56.4	
29-Mar-21	13:01	62.6	56.5	60.8
29-Mar-21	13:06	63.4	56.6	
29-Mar-21	13:11	63.5	56.6	
29-Mar-21	13:16	62.4	56.1	
29-Mar-21	13:21	62.5	56.3	
29-Mar-21	13:26	62.4	56.5	
01-Apr-21	8:11	66.8	59.6	59.9
01-Apr-21	8:16	64.9	58.4	
01-Apr-21	8:21	62.3	57.5	
01-Apr-21	8:26	66.3	59.1	
01-Apr-21	8:31	66.5	59.2	
01-Apr-21	8:36	64.5	58.3	
07-Apr-21	14:20	62.8	57.4	58.7
07-Apr-21	14:25	64.2	58.5	
07-Apr-21	14:30	62.9	57.4	
07-Apr-21	14:35	64.6	58.4	
07-Apr-21	14:40	62.4	57.6	
07-Apr-21	14:45	62.0	57.2	
12-Apr-21	8:20	61.3	58.0	59.8
12-Apr-21	8:25	65.3	58.6	
12-Apr-21	8:30	63.3	57.6	
12-Apr-21	8:35	62.4	57.3	
12-Apr-21	8:40	64.6	58.1	
12-Apr-21	8:45	65.5	57.3	
17-Apr-21	13:55	64.9	57.6	59.3
17-Apr-21	14:00	65.8	56.4	
17-Apr-21	14:05	63.5	55.4	
17-Apr-21	14:10	64.7	56.7	
17-Apr-21	14:15	65.0	53.2	
17-Apr-21	14:20	64.4	54.9	
23-Apr-21	8:11	64.7	54.3	60.0
23-Apr-21	8:16	63.8	54.8	
23-Apr-21	8:21	65.2	55.9	
23-Apr-21	8:26	64.9	56.7	
23-Apr-21	8:31	63.3	54.6	
23-Apr-21	8:36	64.5	55.5	
29-Apr-21	14:13	66.9	56.9	58.6
29-Apr-21	14:18	67.5	55.6	
29-Apr-21	14:23	65.2	55.6	
29-Apr-21	14:28	65.3	55.1	
29-Apr-21	14:33	64.0	55.3	
29-Apr-21	14:38	64.1	55.0	



The station set-up of a façade measurement at station NM2A.

Graphical Presentation of Noise Monitoring Result at Station NM2A



Noise Monitoring Result at Station NM3A

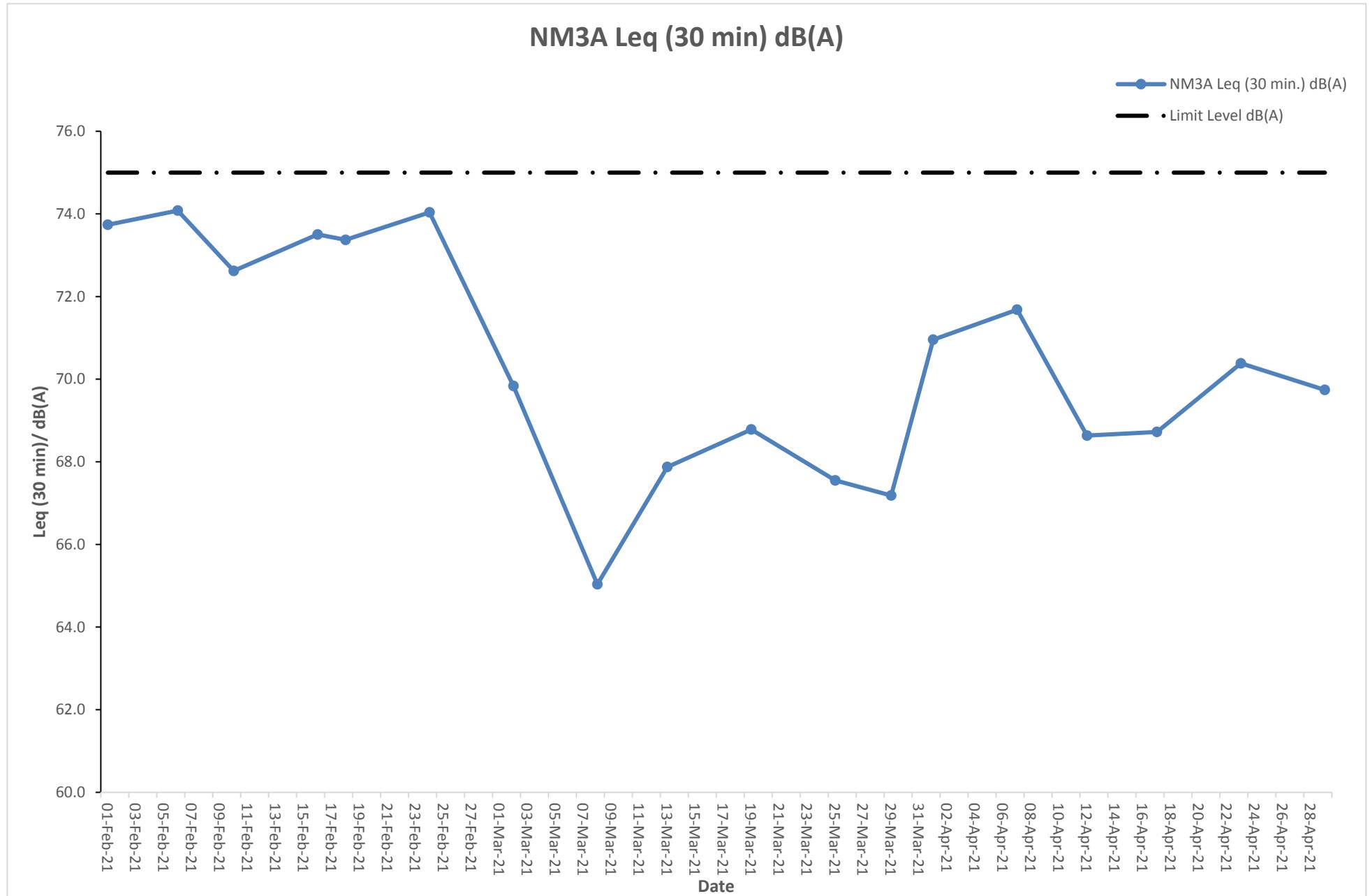
Date	Time	Measured L10 dB(A)	Measured L90 dB(A)	Leq (30 min.) dB(A)
01-Feb-21	9:37	74.1	69.5	73.7
01-Feb-21	9:42	75.2	71.3	
01-Feb-21	9:47	74.2	67.5	
01-Feb-21	9:52	75.5	71.5	
01-Feb-21	9:57	74.2	69.4	
01-Feb-21	10:02	74.6	69.8	
06-Feb-21	15:57	74.1	69.4	74.1
06-Feb-21	16:02	75.9	71.5	
06-Feb-21	16:07	75.3	71.5	
06-Feb-21	16:12	75.2	71.3	
06-Feb-21	16:17	74.3	67.4	
06-Feb-21	16:22	75.6	71.4	
10-Feb-21	9:46	73.5	66.5	72.6
10-Feb-21	9:51	74.5	67.5	
10-Feb-21	9:56	74.8	67.8	
10-Feb-21	10:01	74.3	69.3	
10-Feb-21	10:06	74.3	67.3	
10-Feb-21	10:11	74.8	67.4	
16-Feb-21	15:53	74.9	67.5	73.5
16-Feb-21	15:58	74.4	69.2	
16-Feb-21	16:03	74.2	69.3	
16-Feb-21	16:08	75.3	71.5	
16-Feb-21	16:13	74.8	69.4	
16-Feb-21	16:18	74.5	69.5	
18-Feb-21	9:33	74.5	69.2	73.4
18-Feb-21	9:38	75.2	71.2	
18-Feb-21	9:43	74.1	67.3	
18-Feb-21	9:48	75.3	71.2	
18-Feb-21	9:53	74.2	69.4	
18-Feb-21	9:58	74.2	67.5	
24-Feb-21	15:43	75.5	71.5	74.0
24-Feb-21	15:48	74.1	69.5	
24-Feb-21	15:53	75.3	71.2	
24-Feb-21	15:58	74.5	69.4	
24-Feb-21	16:03	75.3	71.2	
24-Feb-21	16:08	75.1	71.3	
02-Mar-21	9:34	72.1	63.5	69.8
02-Mar-21	9:39	74.3	64.5	
02-Mar-21	9:44	73.6	64.5	
02-Mar-21	9:49	74.6	65.5	
02-Mar-21	9:54	74.3	64.5	
02-Mar-21	9:59	72.5	63.5	
08-Mar-21	15:59	69.6	62.5	65.0
08-Mar-21	16:04	68.5	61.5	
08-Mar-21	16:09	66.6	60.8	
08-Mar-21	16:14	67.3	61.3	
08-Mar-21	16:19	67.2	61.5	
08-Mar-21	16:24	67.9	61.7	
13-Mar-21	9:41	71.4	63.5	67.9
13-Mar-21	9:46	69.5	62.4	
13-Mar-21	9:51	72.5	63.5	
13-Mar-21	9:56	73.3	64.5	
13-Mar-21	10:01	71.2	63.3	
13-Mar-21	10:06	71.6	63.5	
19-Mar-21	14:42	71.5	65.8	68.8
19-Mar-21	14:47	73.5	67.5	
19-Mar-21	14:52	73.6	66.6	
19-Mar-21	14:57	71.9	65.6	
19-Mar-21	15:02	71.8	65.8	
19-Mar-21	15:07	71.2	63.5	

25-Mar-21	9:33	68.4	64.2	67.5
25-Mar-21	9:38	70.9	63.2	
25-Mar-21	9:43	68.6	64.3	
25-Mar-21	9:48	68.2	64.2	
25-Mar-21	9:53	68.7	64.8	
25-Mar-21	9:58	68.6	64.5	
29-Mar-21	14:43	70.4	63.5	67.2
29-Mar-21	14:48	68.4	64.6	
29-Mar-21	14:53	70.2	63.5	
29-Mar-21	14:58	68.3	64.1	
29-Mar-21	15:03	68.2	64.5	
29-Mar-21	15:08	70.7	63.2	
01-Apr-21	9:41	75.6	70.5	71.0
01-Apr-21	9:46	77.4	69.5	
01-Apr-21	9:51	75.2	70.5	
01-Apr-21	9:56	77.3	69.2	
01-Apr-21	10:01	77.8	69.2	
01-Apr-21	10:06	75.6	70.4	
07-Apr-21	15:53	78.5	69.5	71.7
07-Apr-21	15:58	75.9	70.6	
07-Apr-21	16:03	75.6	70.4	
07-Apr-21	16:08	75.2	70.2	
07-Apr-21	16:13	75.2	70.6	
07-Apr-21	16:18	75.8	70.4	
12-Apr-21	9:50	69.7	66.2	68.6
12-Apr-21	9:55	68.2	65.5	
12-Apr-21	10:00	70.3	66.1	
12-Apr-21	10:05	69.9	66.9	
12-Apr-21	10:10	68.9	67.1	
12-Apr-21	10:15	70.1	68.6	
17-Apr-21	15:28	71.2	64.2	68.7
17-Apr-21	15:33	70.8	63.9	
17-Apr-21	15:38	71.9	62.5	
17-Apr-21	15:43	72.0	63.7	
17-Apr-21	15:48	70.1	64.0	
17-Apr-21	15:53	72.3	62.8	
23-Apr-21	9:41	72.8	63.5	70.4
23-Apr-21	9:46	71.3	64.7	
23-Apr-21	9:51	71.5	63.8	
23-Apr-21	9:56	72.0	64.2	
23-Apr-21	10:01	71.1	65.0	
23-Apr-21	10:06	72.6	65.9	
29-Apr-21	15:55	74.4	66.8	69.7
29-Apr-21	16:00	72.7	67.8	
29-Apr-21	16:05	71.7	65.9	
29-Apr-21	16:10	72.1	67.5	
29-Apr-21	16:15	74.0	64.4	
29-Apr-21	16:20	72.5	66.6	



The station set-up of a façade measurement at station NM3A.

Graphical Presentation of Noise Monitoring Result at Station NM3A



Noise Monitoring Result at Station NM4A

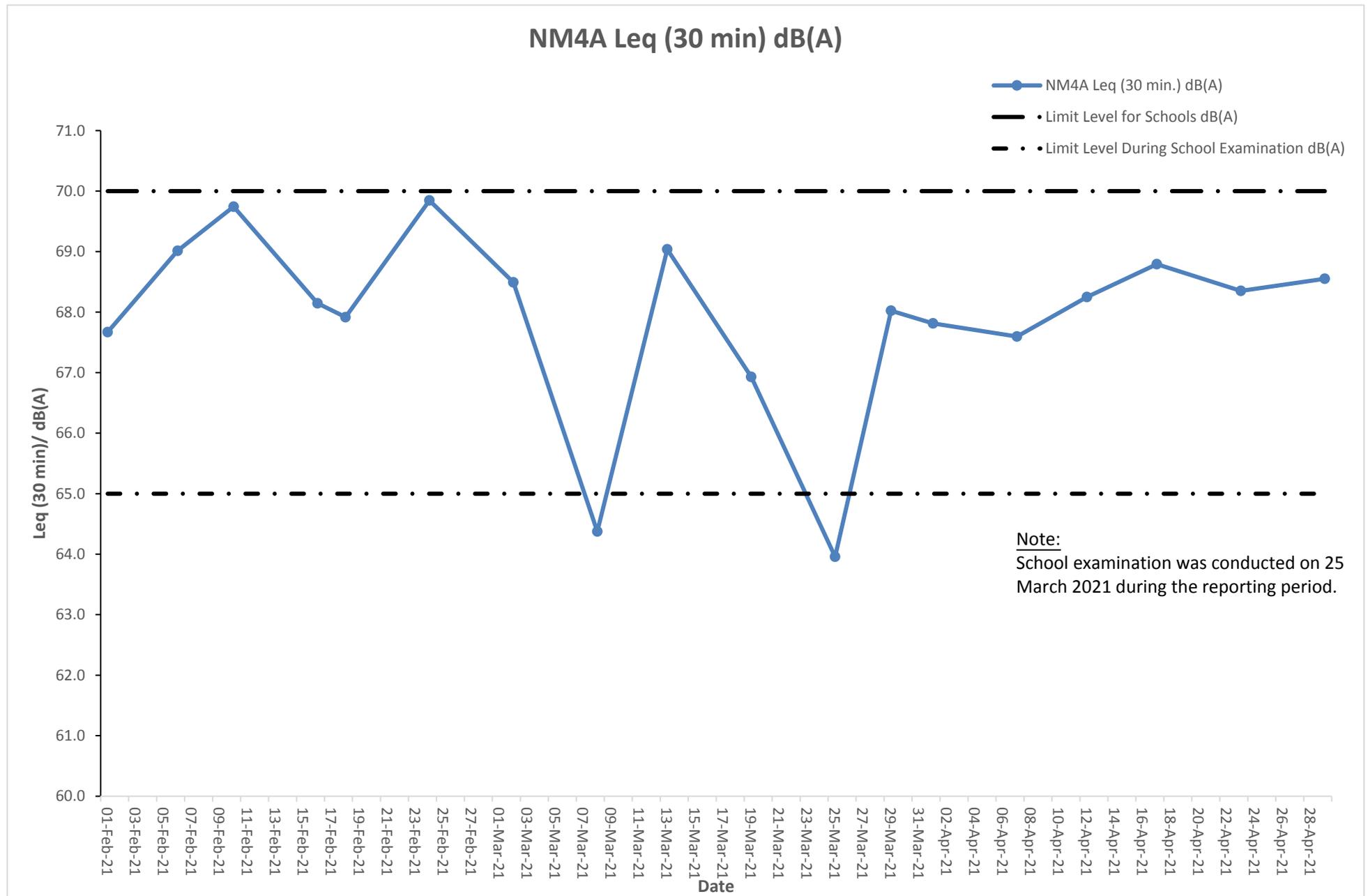
Date	Time	Measured L10 dB(A)	Measured L90 dB(A)	Leq (30 min.) dB(A)
01-Feb-21	10:12	70.4	66.5	67.7
01-Feb-21	10:17	67.3	64.5	
01-Feb-21	10:22	68.3	65.5	
01-Feb-21	10:27	68.7	65.5	
01-Feb-21	10:32	68.2	65.3	
01-Feb-21	10:37	70.1	66.5	
06-Feb-21	16:32	72.3	67.4	69.0
06-Feb-21	16:37	70.3	66.3	
06-Feb-21	16:42	72.2	67.5	
06-Feb-21	16:47	70.5	66.4	
06-Feb-21	16:52	70.8	66.6	
06-Feb-21	16:57	72.2	67.5	
10-Feb-21	10:21	72.1	68.4	69.7
10-Feb-21	10:26	72.6	67.3	
10-Feb-21	10:31	72.4	67.4	
10-Feb-21	10:36	72.6	67.6	
10-Feb-21	10:41	72.4	68.5	
10-Feb-21	10:46	72.3	67.4	
16-Feb-21	16:28	70.4	66.5	68.1
16-Feb-21	16:33	68.3	65.3	
16-Feb-21	16:38	70.5	66.6	
16-Feb-21	16:43	70.3	66.4	
16-Feb-21	16:48	68.4	65.3	
16-Feb-21	16:53	70.4	66.4	
18-Feb-21	10:08	68.2	65.5	67.9
18-Feb-21	10:13	70.1	66.2	
18-Feb-21	10:18	70.6	66.2	
18-Feb-21	10:23	68.4	65.2	
18-Feb-21	10:28	70.2	66.3	
18-Feb-21	10:33	70.1	66.4	
24-Feb-21	16:18	72.3	67.5	69.8
24-Feb-21	16:23	72.4	68.2	
24-Feb-21	16:28	72.2	67.5	
24-Feb-21	16:33	72.1	68.4	
24-Feb-21	16:38	72.5	67.3	
24-Feb-21	16:43	72.3	68.4	
02-Mar-21	10:09	70.6	66.5	68.5
02-Mar-21	10:14	72.1	67.6	
02-Mar-21	10:19	69.6	65.5	
02-Mar-21	10:24	70.2	66.5	
02-Mar-21	10:29	70.4	66.4	
02-Mar-21	10:34	71.3	67.5	
08-Mar-21	16:34	65.5	60.5	64.4
08-Mar-21	16:39	66.3	61.5	
08-Mar-21	16:44	64.6	59.6	
08-Mar-21	16:49	66.9	61.8	
08-Mar-21	16:54	68.6	62.5	
08-Mar-21	16:59	66.6	61.2	
13-Mar-21	10:16	72.5	67.5	69.0
13-Mar-21	10:21	70.1	66.5	
13-Mar-21	10:26	70.3	66.2	
13-Mar-21	10:31	72.6	67.6	
13-Mar-21	10:36	72.8	67.4	
13-Mar-21	10:41	69.2	65.6	
19-Mar-21	15:17	68.1	63.4	66.9
19-Mar-21	15:22	69.6	64.6	
19-Mar-21	15:27	69.5	64.5	
19-Mar-21	15:32	68.9	63.8	
19-Mar-21	15:37	66.6	62.5	
19-Mar-21	15:42	68.5	63.5	

25-Mar-21	10:08	65.6	60.5	64.0
25-Mar-21	10:13	65.1	59.6	
25-Mar-21	10:18	66.0	61.5	
25-Mar-21	10:23	66.9	61.6	
25-Mar-21	10:28	65.6	60.1	
25-Mar-21	10:33	66.5	61.5	
29-Mar-21	15:18	70.1	65.5	68.0
29-Mar-21	15:23	69.6	64.3	
29-Mar-21	15:28	69.8	64.5	
29-Mar-21	15:33	70.3	65.5	
29-Mar-21	15:38	69.9	64.2	
29-Mar-21	15:43	70.1	65.3	
01-Apr-21	10:16	69.9	66.6	67.8
01-Apr-21	10:21	68.6	64.5	
01-Apr-21	10:26	69.2	65.6	
01-Apr-21	10:31	68.3	65.4	
01-Apr-21	10:36	69.2	65.2	
01-Apr-21	10:41	68.4	64.2	
07-Apr-21	16:28	69.3	66.4	67.6
07-Apr-21	16:33	69.4	66.3	
07-Apr-21	16:38	67.2	65.3	
07-Apr-21	16:43	68.5	65.5	
07-Apr-21	16:48	67.8	65.5	
07-Apr-21	16:53	69.4	66.5	
12-Apr-21	10:25	69.0	64.4	68.2
12-Apr-21	10:30	69.4	66.5	
12-Apr-21	10:35	69.9	65.9	
12-Apr-21	10:40	68.6	64.7	
12-Apr-21	10:45	69.2	66.8	
12-Apr-21	10:50	68.9	64.3	
17-Apr-21	16:03	69.9	65.7	68.8
17-Apr-21	16:08	69.6	66.8	
17-Apr-21	16:13	69.4	65.2	
17-Apr-21	16:18	68.5	66.1	
17-Apr-21	16:23	69.5	67.3	
17-Apr-21	16:28	69.8	65.5	
23-Apr-21	10:16	68.9	64.5	68.4
23-Apr-21	10:21	69.4	65.6	
23-Apr-21	10:26	68.8	64.8	
23-Apr-21	10:31	68.9	67.2	
23-Apr-21	10:36	69.2	66.3	
23-Apr-21	10:41	69.5	65.5	
29-Apr-21	16:30	69.5	65.6	68.6
29-Apr-21	16:35	68.4	64.3	
29-Apr-21	16:40	69.6	66.2	
29-Apr-21	16:45	69.3	64.8	
29-Apr-21	16:50	68.1	65.7	
29-Apr-21	16:55	69.2	65.2	



The station set-up of a façade measurement at station NM4A.

Graphical Presentation of Noise Monitoring Result at Station NM4A



Noise Monitoring Result at Station NM5A

Date	Time	Measured L10 dB(A)	Measured L90 dB(A)	Leq (30 min.) dB(A)	Leq (30 min.) +3 dB(A)
01-Feb-21	8:57	63.2	55.5	60.9	63.9
01-Feb-21	9:02	64.2	56.5		
01-Feb-21	9:07	64.1	57.6		
01-Feb-21	9:12	63.2	55.6		
01-Feb-21	9:17	62.1	54.5		
01-Feb-21	9:22	63.2	55.4		
06-Feb-21	15:16	61.4	53.2	59.9	62.9
06-Feb-21	15:21	62.3	54.5		
06-Feb-21	15:26	62.4	54.3		
06-Feb-21	15:31	63.2	55.2		
06-Feb-21	15:36	63.3	55.6		
06-Feb-21	15:41	64.3	56.5		
10-Feb-21	9:06	63.4	55.4	62.8	65.8
10-Feb-21	9:11	64.1	57.5		
10-Feb-21	9:16	64.4	56.5		
10-Feb-21	9:21	66.3	58.5		
10-Feb-21	9:26	66.4	58.6		
10-Feb-21	9:31	66.4	59.3		
16-Feb-21	15:12	64.3	57.6	61.8	64.8
16-Feb-21	15:17	66.3	58.4		
16-Feb-21	15:22	64.7	56.7		
16-Feb-21	15:27	64.1	57.5		
16-Feb-21	15:32	63.3	55.3		
16-Feb-21	15:37	63.4	55.2		
18-Feb-21	8:53	64.2	56.5	60.9	63.9
18-Feb-21	8:58	63.2	55.5		
18-Feb-21	9:03	63.1	55.1		
18-Feb-21	9:08	63.3	55.5		
18-Feb-21	9:13	64.2	56.3		
18-Feb-21	9:18	63.9	55.2		
24-Feb-21	15:02	64.3	57.1	62.2	65.2
24-Feb-21	15:07	64.1	56.3		
24-Feb-21	15:12	64.5	56.8		
24-Feb-21	15:17	64.3	57.4		
24-Feb-21	15:22	64.2	56.3		
24-Feb-21	15:27	66.3	58.1		
02-Mar-21	8:54	63.3	55.5	60.9	63.9
02-Mar-21	8:59	64.7	56.5		
02-Mar-21	9:04	64.3	56.7		
02-Mar-21	9:09	62.5	54.5		
02-Mar-21	9:14	64.7	56.6		
02-Mar-21	9:19	62.4	54.3		
08-Mar-21	15:18	63.5	55.5	61.9	64.9
08-Mar-21	15:23	63.6	55.4		
08-Mar-21	15:28	67.3	57.5		
08-Mar-21	15:33	66.4	57.4		
08-Mar-21	15:38	67.6	57.5		
08-Mar-21	15:43	63.6	55.5		
13-Mar-21	9:01	64.4	56.5	61.8	64.8
13-Mar-21	9:06	66.9	57.6		
13-Mar-21	9:11	64.3	56.5		
13-Mar-21	9:16	64.9	56.7		
13-Mar-21	9:21	64.4	56.3		
13-Mar-21	9:26	64.8	56.8		
19-Mar-21	14:01	64.5	60.3	62.6	65.6
19-Mar-21	14:06	63.6	58.5		
19-Mar-21	14:11	65.6	61.5		
19-Mar-21	14:16	64.7	60.8		
19-Mar-21	14:21	64.6	60.6		
19-Mar-21	14:26	64.3	60.2		

25-Mar-21	8:53	63.8	60.2	61.9	64.9
25-Mar-21	8:58	65.3	61.2		
25-Mar-21	9:03	63.9	60.5		
25-Mar-21	9:08	63.4	60.3		
25-Mar-21	9:13	65.6	61.2		
25-Mar-21	9:18	63.3	60.4	62.4	65.4
29-Mar-21	14:02	65.8	61.4		
29-Mar-21	14:07	63.5	60.3		
29-Mar-21	14:12	65.2	61.1		
29-Mar-21	14:17	65.9	61.5		
29-Mar-21	14:22	65.3	61.1		
29-Mar-21	14:27	65.4	61.3	63.8	66.8
01-Apr-21	9:01	65.8	60.2		
01-Apr-21	9:06	64.1	59.6		
01-Apr-21	9:11	67.3	61.5		
01-Apr-21	9:16	67.8	61.8		
01-Apr-21	9:21	65.7	60.8		
01-Apr-21	9:26	65.3	60.4	62.5	65.5
07-Apr-21	15:12	64.4	59.5		
07-Apr-21	15:17	65.3	60.3		
07-Apr-21	15:22	64.9	59.6		
07-Apr-21	15:27	64.6	59.2		
07-Apr-21	15:32	64.5	59.4		
07-Apr-21	15:37	64.2	59.2	63.3	66.3
12-Apr-21	9:10	63.7	61.1		
12-Apr-21	9:15	64.4	59.8		
12-Apr-21	9:20	64.9	59.5		
12-Apr-21	9:25	63.9	61.2		
12-Apr-21	9:30	66.2	61.9		
12-Apr-21	9:35	65.8	60.6	62.1	65.1
17-Apr-21	14:47	66.9	60.4		
17-Apr-21	14:52	65.8	59.1		
17-Apr-21	14:57	67.1	60.8		
17-Apr-21	15:02	66.3	59.5		
17-Apr-21	15:07	65.5	58.3		
17-Apr-21	15:12	66.7	60.0	63.9	66.9
23-Apr-21	9:01	69.3	55.5		
23-Apr-21	9:06	70.2	56.4		
23-Apr-21	9:11	69.5	54.3		
23-Apr-21	9:16	68.8	56.2		
23-Apr-21	9:21	68.2	55.8		
23-Apr-21	9:26	67.8	56.1	62.8	65.8
29-Apr-21	15:14	65.9	59.3		
29-Apr-21	15:19	69.3	58.1		
29-Apr-21	15:24	68.2	57.4		
29-Apr-21	15:29	69.3	58.4		
29-Apr-21	15:34	66.2	56.9		
29-Apr-21	15:39	65.9	58.2		

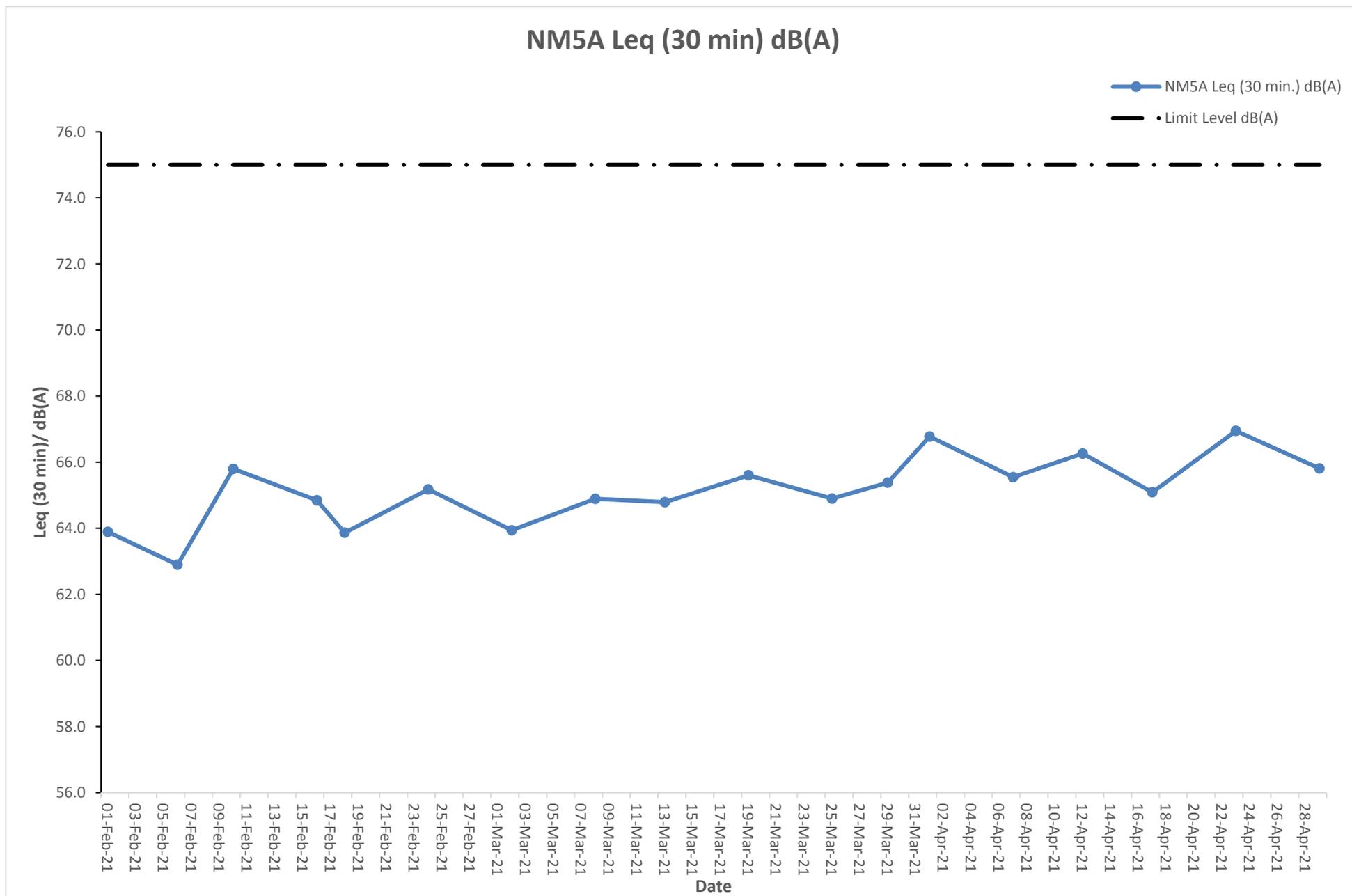
Remarks:

+3dB(A) correction was applied to free-field measurement.



The station set-up of a free-field measurement at station NM5A.

Graphical Presentation of Noise Monitoring Result at Station NM5A



F. Waste Flow table

Table F-1: Monthly Waste Flow Table for Zone 2A

Month	Actual Quantities of Inert C&D Materials Generated Monthly							Actual Quantities of C&D Materials Generated Monthly					
	Total Quantity Generated	Hard Rocks and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Disposed to Srotting Facility	Imported Fill	Metals	Paper/ Cardboard Packaging	Plastics	Wood/ Timber	Chemical Waste	Others, e.g. General Refuse
	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)
2020													
Oct	2623.48	0.00	0.00	0.00	2623.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.94
Nov	8838.69	0.00	685.23	1198.56	6954.90	0.00	1194.93	0.00	0.00	0.00	0.00	0.00	17.49
Dec	8890.70	0.00	510.59	1675.21	6704.90	0.00	51.51	0.00	0.00	0.00	0.00	0.00	11.75
Sub-total (2020)	20352.87	0.00	1195.82	2873.77	16283.28	0.00	1246.44	0.00	0.00	0.00	0.00	0.00	51.18
2021													
Jan	6849.66	0.00	52.90	0.00	6796.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.94
Feb	4591.95	0.00	0.00	0.00	4591.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.11
Mar	7318.44	0.00	0.00	339.94	6978.50	0.00	0.00	75.57	0.00	0.00	0.00	0.20	15.79
Apr	7208.22	0.00	0.00	1109.51	6098.71	0.00	0.00	0.00	0.00	0.00	0.00	0.40	19.29
Sub-total (2021)	25968.27	0.00	52.90	1449.45	24465.92	0.00	0.00	75.57	0.00	0.00	0.00	0.60	71.13
Total	47567.58	0.00	1248.72	4323.22	40749.20	0.00	1246.44	75.57	0.00	0.00	0.00	0.60	122.31

Note:

- 411.28 tonnes, 17257.88 tonnes of inert C&D material were disposed of as public fill to Tseung Kwan O Area 137 Public Fill, and Tuen Mun Area 38 respectively in the reporting quarter.

- For inert C&D materials reused in other projects, the projects refer to (1) EcoPark at Tuen Mun.

G. Cumulative Statistics on Complaints, Notifications of Summons and Successful Prosecutions

Cumulative statistics for complaints, notifications of summons and successful prosecutions for the Project account for period starting from the date of commencement of construction works (i.e. 3 October 2020 for Zone 2A Foundation, Excavation and Lateral Support Works) to the end of the reporting quarter and are summarized in the **Table G-1** below respectively.

Table G-1: Statistics for complaints, notifications of summons and successful prosecutions for Zone 2A Foundation, Excavation and Lateral Support Works

Reporting Period	Cumulative Statistics		
	Complaints	Notifications of summons	Successful prosecutions
This reporting quarter (Feb 21 – Apr 21)	3	0	0
From 03 October 2020 to end of the reporting quarter	6	0	0

END OF THE REPORT