

Development at West Kowloon Cultural District

**Quarterly Environmental Monitoring and Audit (EM&A) Report
(November 2020 - January 2021)**

February 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 February 2021

Verified by:



Claudine Lee
Independent Environmental Checker (IEC)
Meinhardt Infrastructure & Environment Ltd

Date

1 Mar 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 and a trapezoid pointing downwards, meeting at a horizontal line.

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 November 2020 to 31 January 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

One Action Level exceedance (due to noise related environmental complaint) with no Limit Level exceedance of construction noise was recorded in the reporting quarter. There was no breach of Action and Limit levels for Air Quality (1-hour TSP and 24-hour TSP) 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 abovementioned 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 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 and Lyric Theatre Complex commenced on 31 October 2015 and 1 March 2016 respectively. 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 November 2020 to 31 January 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+
 - Timber finishes works
 - Make good
 - T&C (MEP)
 - Landscaping works at 3/F (planting)
 - Cleaning works
 - FSD inspection
 - Defects Works (Timber finishes/ furniture installation, make good, landscaping works at G/F & 3/F (planting), cleaning works, hand-over)
- CSF
 - Make good
 - Cleaning works
 - Hand-over
 - FSD inspection
 - Defects Works (make good, furniture installation, cleaning works, hand-over)
- RDE
 - MEP installation works
 - T&C, ABWF works & make good
 - G/F paving works
 - FSD & BD inspection

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

- Excavation and Lateral Support works
- Extended basement structure construction
- Box culvert outfall to Victoria Harbour (PIW 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:

- Visual Mock Up
 - VMU interior work
- LTC construction
 - Structure
 - Install and erection tower crane
 - Falsework and Formwork Erection
 - Reinforcement work
 - Concrete work
 - BS Installation
- ASDA and Lyric Theatre Promenade
 - Structure works

- Remaining Works for M+ Promenade South
 - Site Clearance
 - Construct concrete slats deck
- DSC Cofferdam (Cofferdam A)
 - Remedial work to Existing Puddle Flange in pump cell
 - Connection of DCS pipes
 - Lay Pipe bedding
 - Install DCS pipes/valve/fitting
 - Construction of valve chamber, thrust blocks etc.
 - Back fill and removal of struts
- Modification to Existing Pump Cell
 - ABWF works
- Extended Basement
 - AWBF works
 - BS installation
- Vibration Isolation Spring System Installation
 - Install Remaining Spring
- Underpass and Associated Area
 - ABWF works
 - BS Installation
- M+ Day 2 Works
 - Demolish ex carriageway
 - Conc. duct- Excavate to formation level
 - Conc. duct - form openings in ex structure
- Water Main at Promenade Installation

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	26	88	55
1 hour TSP	AM2B	49	91	75
24 hour TSP	AM1	16	62	36
24 hour TSP	AM2B	40	143	75
Construction Noise				
Leq(30min)	NM1A	68	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)	1	0	The Contractor had strengthened the implementation of noise mitigation measures

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. One Action Level exceedance (due to noise related environmental complaint) with no Limit Level exceedance of construction 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

4.1 M+ Museum

As advised by the Contractor, 0 tonne, 0 tonne and 46.71 tonnes 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, while 526.4 tonnes of general refuse were disposed of at SENT landfill. 183.2 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. 59.5 tonnes of inert C&D materials were reused in other projects and 57.6 tonnes of inert C&D materials were 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), 2399.23 tonnes, 713.36 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 1310.6 tonnes of general refuse were disposed of at SENT and WENT landfill. 1787.1 tonnes of metals, 0.4 tonnes of paper/cardboard packaging, 0.5 tonnes 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. 475.8 tonnes of fill materials were imported for use at site and 0.0 tonne of inert C&D materials was reused in other projects. 6.7 tonnes of inert C&D materials were 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

One Action Level exceedance (due to noise related environmental complaints) with no Limit Level exceedance of construction noise was recorded in the reporting quarter. There was no breach of Action or Limit Levels for Air Quality monitoring in the reporting quarter.

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

The first complaint was a letter from the District Council Member Mr Derek Hung dated 11 Nov 2020 mentioned that he received a complaint from The Harbourside regarding noise nuisance (e.g pilling) starting from 7a.m. from WKCD projects. Therefore, he requested the noisy construction works to be undertaken after 9a.m. to reduce nuisance to nearby residents.

Investigation at M+ Museum and Lyric Theatre Complex construction sites revealed that no noisy works including pilling works were conducted during 7a.m. - 9a.m during the concerned period, therefore, the complaint was not related to M+ Museum and Lyric Theatre Complex.

The second complaint was referred by EPD in relation to WKCD construction activities. On 10 December 2020, EPD sent a photo taken by the public complainant showing the drilling machine installed at WKCD site area. EPD officer requested to advise the type of Powered Mechanical Equipment (PME) adopted and any noise mitigation measure was adopted in the photo.

After the investigation, it was concluded that the complaint was not related to M+ Museum and Lyric Theatre Complex.

The third complaint was received on 27 January 2021. WKCD has received an inquiry from the office of Mr. Derek Hung (YTMDC member) about the noise from WKCD site. A resident from The Harbourside, who has reflected the noise problem since March 2020, expressed that he/she has been affected by the construction noise around 7:15 am on 27 January 2021. The resident understood that the working hours permitted by government is 7am-7pm, except public holidays. However, he/she would like to seek if we could reduce noise disturbance, especially before 9am.

The investigation revealed that the construction noise could be attributable to the Lyric Theatre Complex (L2 Contract) which involved the use of breaker at around 7:10 a.m. on 27 January 2021. Subsequently, specific mitigation measures have been devised and implemented in addition to the existing regular noise mitigation measures.

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 were recorded. One Action Level exceedance (due to noise related environmental complaints) with no Limit Level exceedance of construction 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 M+ Museum main works commenced on 31 October 2015, 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. One Action Level exceedance (due to noise related environmental complaint) with no Limit Level exceedance was recorded in the reporting period. There was no breach of Action and Limit levels for Air Quality (1-hour TSP and 24-hour TSP) 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

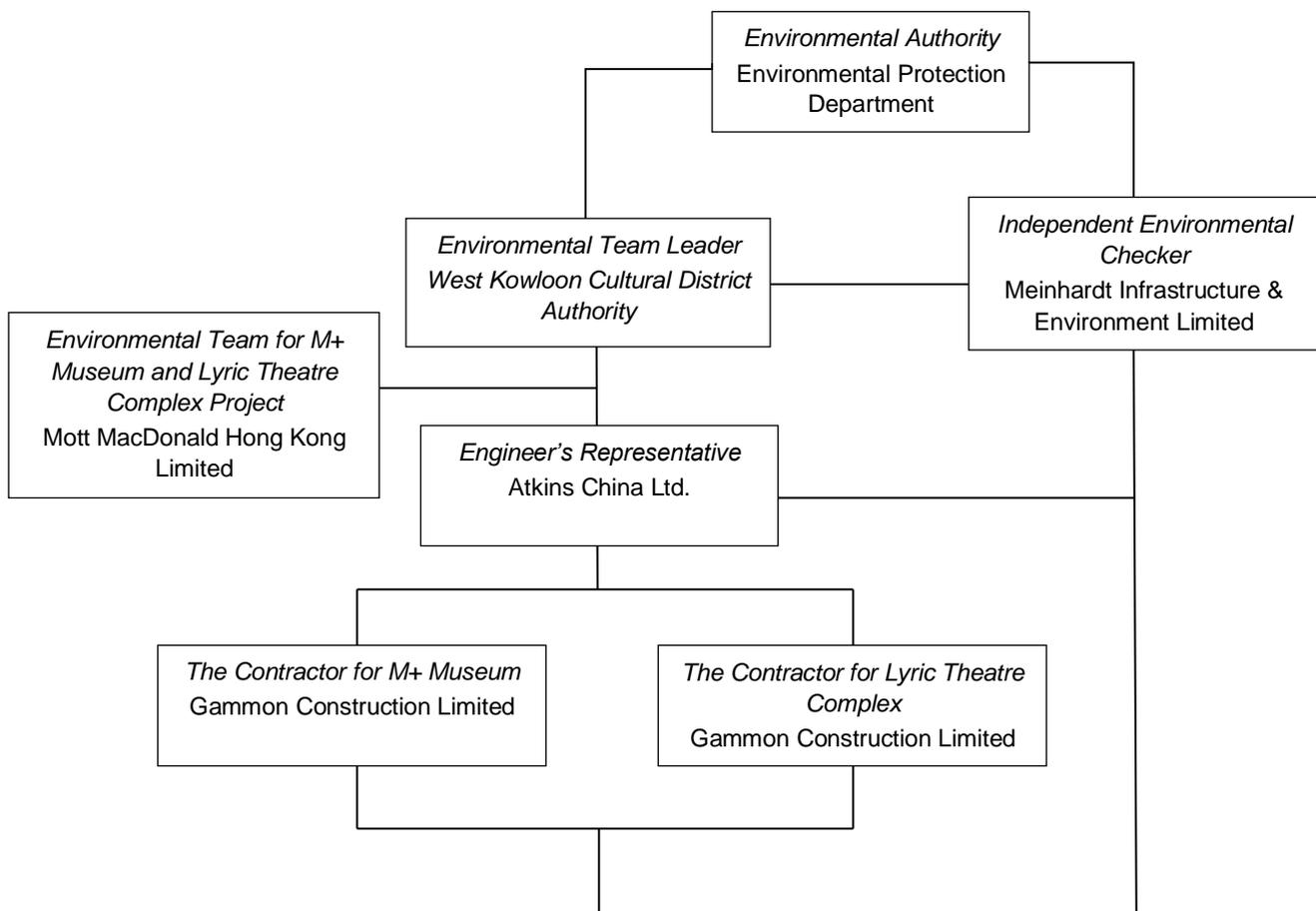


Table A-1: Contact information

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

ID	Activity	RD	BL Start	BL Finish	F'cast / Actual Start	F'cast / Actual Finish	BL Finish Var	TF	2020			2021					
									Qtr 4			Qtr 1			Qtr 2		
									Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	
GENERAL & PRELIMINARIES (Remaining Works @ 10 SEP 2018)																	
PROJECT KEY COMPLETION DATES																	
Completion Obligations (*constrained dates for critical paths)																	
OP1	Podium, M+ Tower & CSF - Obtain OP for the Whole of M+	0		31-Mar-20		05-Dec-20*	-249	-248									
OP2	RDE - Obtain OP for H'over to Employer	0		30-May-20		19-Dec-20*	-203	-203									
PC2	RDE - Obtain PC for H'over to Employer	0		31-Mar-20		19-Jan-21*	-294	-203									
PC1	Podium, M+ Tower - Obtain PC for H'over to Employer	0		30-Jun-20		05-Feb-21*	-220	-220									
LEVEL 1 SUMMARY CONSTRUCTION PROGRAM																	
Basement & Podium																	
1769	[LoE] POD - MEP Works to Completion of Final Terminations	8	12-Oct-18	04-Dec-19	11-Oct-18 A	10-Nov-20	-277	-110									
1766	[LoE] POD - ABWF Works (Excl. Timber Finishes & Post DP & OP works)	78	12-Oct-18	31-Mar-20	15-Apr-19 A	01-Feb-21	-255	-203									
1768	[LoE] POD - ABWF (Timber Finishes and other Post DP and OP Works)	82	18-Nov-19	30-Apr-20	09-Mar-20 A	05-Feb-21	-234	-197									
1767	[LoE] POD - Drying Period	13	18-Sep-19	16-Nov-19	18-Apr-20 A	16-Nov-20	-297	-181									
M+ Tower																	
9793	[LoE] TW - MEP Works to Completion of Final Terminations	2	24-Nov-18	30-Sep-19	15-Oct-18 A	03-Nov-20	-325	-194									
9790	[LoE] TW - ABWF Works (Excl. Timber Finishes & Post DP & OP works)	6	05-Nov-18	14-Dec-19	30-Oct-18 A	07-Nov-20	-266	-194									
9834	[LoE] TW - Shop Front Glazing Podium L3 to M+ Tower 4/F Slab	0	31-May-19	02-Sep-19	27-May-19 A	02-Nov-20	-347	-202									
9792	[LoE] TW - ABWF (Timber Finishes and other Post DP and OP Works)	82	18-May-19	28-Oct-19	20-Apr-20 A	05-Feb-21	-383	-102									
CSF Building																	
9828	[LoE] CSF - MEP Works to Completion of Final Terminations	0	20-Oct-18	27-Nov-19	08-Apr-19 A	02-Nov-20	-275	-202									
111129	[LoE] CSF - ABWF Works (Timber Finishes & other Post OP Works)	54			14-May-20 A	04-Jan-21		-127									
RDE Tower																	
9839	[LoE] RDE - ABWF Works	30	10-Nov-18	13-Feb-20	10-Nov-18 A	05-Dec-20	-247	-161									
9838	[LoE] RDE - EWS Facade Works to Weather Tight Stage (incl. Roof & UF)	11	27-Dec-18	18-Oct-19	27-Dec-18 A	13-Nov-20	-320	-164									
9836	[LoE] RDE - MEP Works to Completion of Final Terminations (L4 to 15MF)	24	23-Nov-18	06-Feb-20	07-Jan-19 A	28-Nov-20	-247	-151									
9840	[LoE] RDE - MC's T&C for FSD Inspection	36	29-Nov-19	27-Feb-20	21-Nov-19 A	12-Dec-20	-241	46									
9841	[LoE] RDE - MEP Works @ 15MF (BoH Plant Rooms)	24	29-Oct-19	06-Feb-20	22-Feb-20 A	28-Nov-20	-247	-161									
9794	[LoE] RDE - Post OP Miscellaneous Works	31			20-Dec-20	19-Jan-21		-203									
External Works																	
9814	[LoE] EXT - Along Building Boundaries	8	20-Oct-18	15-Jan-20	20-Oct-18 A	10-Nov-20	-243	-177									
COMPLETION STATUTORY INSPECTIONS & APPROVALS																	
Basement, Podium, M+ Tower & CSF Building																	
FSD & BD																	
FSD2	FSD - FSD MAIN Inspection/Re-Inspection/Remedial Works - BASEMENT	15	20-Dec-19	23-Mar-20	21-May-20 A	23-Nov-20	-203	-206									
FSD2b	FSD - FSD MAIN Inspection/Re-Inspection/Remedial Works - M+ TOWER	6	03-Jan-20	23-Jan-20	21-May-20 A	23-Nov-20	-247	-206									
1189	BD - Obtain OP for Basement/Podium/M+/CSF	6	24-Mar-20	30-Mar-20	26-Nov-20	02-Dec-20	-205	-206									
RDE Building																	
FSD & BD																	
7484	RDE_FSD - Submit Form 314 & Form 501	0		20-Feb-20		02-Dec-20*	-238	-169									
RDE_FSD	RDE_FSD - FSD Inspection/Re-Inspection/Remedial Works (layouts & sys)	3	28-Feb-20	24-Apr-20	05-Dec-20	08-Dec-20	-189	-169									
7490	RDE_BD - Obtain OP for RDE	10	25-May-20	30-May-20	05-Dec-20	16-Dec-20	-166	-169									
RDE_BD	RDE_BD - Inspection/Re-Inspection	1	25-Apr-20	23-May-20	09-Dec-20	09-Dec-20	-166	-169									



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

CMWP Rev. 0_21 - Level 1 Summary Bar Chart (21st Update DD: 31Oct20)

Date	Revision	Checked	Approved
01-Feb-19	CMWP Rev. 0 - Approved Master Programme	NS	BG
31-Oct-20	CMWP Rev.0_21 - 21st Update (dd: 31 Oct 20)	AB	BG

ID	Activity	RD	BL Start	BL Finish	Fcast / Actual Start	Fcast / Actual Finish	BL Finish Var	TF	2020		2021								
									Qtr 4		Qtr 1			Qtr 2					
									Nov	Dec	Jan	Feb	Mar	Apr	May	Jun			
CMWP - M+ Project Remaining Works @ 10 Sep 2018 Approved Target CMWP (Rev_0_22 UPD_DD_30 Nov 20)																			
GENERAL & PRELIMINARIES (Remaining Works @ 10 SEP 2018)																			
PROJECT KEY COMPLETION DATES																			
Completion Obligations (*constrained dates for critical paths)																			
OP1	Podium, M+ Tower & CSF - Obtain OP for the Whole of M+	0		31-Mar-20		31-Dec-20*	-275	-274											
OP2	RDE - Obtain OP for Hover to Employer	0		30-May-20		19-Jan-21*	-234	-234											
PC2	RDE - Obtain PC for Hover to Employer	0		31-Mar-20		19-Feb-21*	-325	-234											
PC1	Podium, M+ Tower - Obtain PC for Hover to Employer	0		30-Jun-20		28-Feb-21*	-243	0											
LEVEL 1 SUMMARY CONSTRUCTION PROGRAM																			
Basement & Podium																			
1769	[LoE] POD - MEP Works to Completion of Final Terminations	9	12-Oct-18	04-Dec-19	11-Oct-18 A	10-Dec-20	-303	67											
1766	[LoE] POD - ABWF Works (Excl. Timber Finishes & Post DP & OP works)	53	12-Oct-18	31-Mar-20	15-Apr-19 A	01-Feb-21	-255	-224											
1768	[LoE] POD - ABWF (Timber Finishes and other Post DP and OP Works)	79	18-Nov-19	30-Apr-20	09-Mar-20 A	03-Mar-21	-256	-222											
1767	[LoE] POD - Drying Period	13	18-Sep-19	16-Nov-19	18-Apr-20 A	15-Dec-20	-322	5											
M+ Tower																			
9793	[LoE] TW - MEP Works to Completion of Final Terminations	2	24-Nov-18	30-Sep-19	15-Oct-18 A	02-Dec-20	-350	-218											
9790	[LoE] TW - ABWF Works (Excl. Timber Finishes & Post DP & OP works)	6	05-Nov-18	14-Dec-19	30-Oct-18 A	07-Dec-20	-291	-218											
9834	[LoE] TW - Shop Front Glazing Podium L3 to M+ Tower 4/F Slab	0	31-May-19	02-Sep-19	27-May-19 A	01-Dec-20 A	-372												
9792	[LoE] TW - ABWF (Timber Finishes and other Post DP and OP Works)	79	18-May-19	28-Oct-19	20-Apr-20 A	03-Mar-21	-405	1											
CSF Building																			
9828	[LoE] CSF - MEP Works to Completion of Final Terminations	0	20-Oct-18	27-Nov-19	08-Apr-19 A	01-Dec-20 A	-300												
111129	[LoE] CSF - ABWF Works (Timber Finishes & other Post OP Works)	52			14-May-20 A	30-Jan-21		28											
RDE Tower																			
9839	[LoE] RDE - ABWF Works	30	10-Nov-18	13-Feb-20	10-Nov-18 A	05-Jan-21	-272	-189											
9838	[LoE] RDE - EWS Facade Works to Weather Tight Stage (incl. Roof & UF)	11	27-Dec-18	18-Oct-19	27-Dec-18 A	12-Dec-20	-345	-189											
9836	[LoE] RDE - MEP Works to Completion of Final Terminations (L4 to 15MF)	24	23-Nov-18	06-Feb-20	07-Jan-19 A	29-Dec-20	-272	-170											
9840	[LoE] RDE - MC's T&C for FSD Inspection	36	29-Nov-19	27-Feb-20	21-Nov-19 A	12-Jan-21	-266	44											
9841	[LoE] RDE - MEP Works @ 15MF (BoH Plant Rooms)	24	29-Oct-19	06-Feb-20	22-Feb-20 A	29-Dec-20	-272	-180											
9794	[LoE] RDE - Post OP Miscellaneous Works	31			20-Jan-21	19-Feb-21		-234											
External Works																			
9814	[LoE] EXT - Along Building Boundaries	9	20-Oct-18	15-Jan-20	20-Oct-18 A	10-Dec-20	-269	67											
COMPLETION STATUTORY INSPECTIONS & APPROVALS																			
Basement, Podium, M+ Tower & CSF Building																			
FSD & BD																			
FSD2	FSD - FSD MAIN Inspection/Re-Inspection/Remedial Works - BASEMENT	12	20-Dec-19	23-Mar-20	21-May-20 A	18-Dec-20	-225	-227											
FSD2b	FSD - FSD MAIN Inspection/Re-Inspection/Remedial Works - M+ TOWER	6	03-Jan-20	23-Jan-20	21-May-20 A	18-Dec-20	-269	-227											
1189	BD - Obtain OP for Basement/Podium/M+/CSF	6	24-Mar-20	30-Mar-20	23-Dec-20	30-Dec-20	-228	-226											
RDE Building																			
FSD & BD																			
RDE_FSD	RDE_FSD - FSD Inspection/Re-Inspection/Remedial Works (layouts & sys)	11	28-Feb-20	24-Apr-20	24-Dec-20	06-Jan-21	-213	-194											
7484	RDE_FSD - Submit Form 314 & Form 501	0		20-Feb-20		04-Jan-21*	-265	-194											
RDE_BD	RDE_BD - Inspection/Re-Inspection	6	25-Apr-20	23-May-20	07-Jan-21	13-Jan-21	-195	-189											
7490	RDE_BD - Obtain OP for RDE	10	25-May-20	30-May-20	08-Jan-21	19-Jan-21	-194	-194											



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

CMWP Rev. 0_22 - Level 1 Summary Bar Chart (22nd Update DD: 30Nov20)

Date	Revision	Checked	Approved
01-Feb-19	CMWP Rev. 0 - Approved Master Programme	NS	BG
07-Dec-20	CMWP Rev.0_22 - 22nd Update (dd: 30 Nov ...	AB	BG

ID	Activity	RD	BL Start	BL Finish	F'cast / Actual Start	F'cast / Actual Finish	BL Finish Var	TF	2020		2021		
									Dec	Jan	Qtr 1		Feb
CMWP - M+ Project Remaining Works @ 10 Sep 2018 Approved Target CMWP (Rev_0_22 UPD_DD_31 Dec 20)													
GENERAL & PRELIMINARIES (Remaining Works @ 10 SEP 2018)													
PROJECT KEY COMPLETION DATES													
Completion Obligations (*constrained dates for critical paths)													
OP1	Podium, M+ Tower & CSF - Obtain OP for the Whole of M+	0		31-Mar-20		24-Dec-20 A	-267			▼			
OP2	RDE - Obtain OP for H'over to Employer	0		30-May-20		19-Jan-21*	-234	-233		▼			
PC2	RDE - Obtain PC for H'over to Employer	0		31-Mar-20		19-Feb-21*	-325	-234			▼		
PC1	Podium, M+ Tower - Obtain PC for H'over to Employer	0		30-Jun-20		24-Feb-21*	-239	-234				▼	
LEVEL 1 SUMMARY CONSTRUCTION PROGRAM													
Basement & Podium													
1769	[LoE] POD - MEP Works to Completion of Final Terminations	10	12-Oct-18	04-Dec-19	11-Oct-18 A	12-Jan-21	-330	37					
1766	[LoE] POD - ABWF Works (Excl. Timber Finishes & Post DP & OP works)	27	12-Oct-18	31-Mar-20	15-Apr-19 A	01-Feb-21	-255	-163					
1768	[LoE] POD - ABWF (Timber Finishes and other Post DP and OP Works)	58	18-Nov-19	30-Apr-20	09-Mar-20 A	09-Mar-21	-261	-248					
M+ Tower													
9793	[LoE] TW - MEP Works to Completion of Final Terminations	2	24-Nov-18	30-Sep-19	15-Oct-18 A	02-Jan-21	-376	-154					
9790	[LoE] TW - ABWF Works (Excl. Timber Finishes & Post DP & OP works)	6	05-Nov-18	14-Dec-19	30-Oct-18 A	07-Jan-21	-317	-154					
9834	[LoE] TW - Shop Front Glazing Podium L3 to M+ Tower 4/F Slab	0	31-May-19	02-Sep-19	27-May-19 A	01-Dec-20 A	-372						
9792	[LoE] TW - ABWF (Timber Finishes and other Post DP and OP Works)	58	18-May-19	28-Oct-19	20-Apr-20 A	09-Mar-21	-410	18					
CSF Building													
9828	[LoE] CSF - MEP Works to Completion of Final Terminations	0	20-Oct-18	27-Nov-19	08-Apr-19 A	01-Dec-20 A	-300						
111129	[LoE] CSF - ABWF Works (Timber Finishes & other Post OP Works)	47			14-May-20 A	24-Feb-21		29					
RDE Tower													
9839	[LoE] RDE - ABWF Works	17	10-Nov-18	13-Feb-20	10-Nov-18 A	20-Jan-21	-285	-173					
9838	[LoE] RDE - EWS Facade Works to Weather Tight Stage (incl. Roof & UF)	0	27-Dec-18	18-Oct-19	27-Dec-18 A	24-Dec-20 A	-354						
9836	[LoE] RDE - MEP Works to Completion of Final Terminations (L4 to 15MF)	24	23-Nov-18	06-Feb-20	07-Jan-19 A	28-Jan-21	-298	-176					
9840	[LoE] RDE - MC's T&C for FSD Inspection	36	29-Nov-19	27-Feb-20	21-Nov-19 A	11-Feb-21	-292	40					
9841	[LoE] RDE - MEP Works @ 15MF (BoH Plant Rooms)	24	29-Oct-19	06-Feb-20	22-Feb-20 A	28-Jan-21	-298	-186					
9794	[LoE] RDE - Post OP Miscellaneous Works	31			20-Jan-21	19-Feb-21		0					
External Works													
9814	[LoE] EXT - Along Building Boundaries	4	20-Oct-18	15-Jan-20	20-Oct-18 A	05-Jan-21	-290	43					
COMPLETION STATUTORY INSPECTIONS & APPROVALS													
Basement, Podium, M+ Tower & CSF Building													
FSD & BD													
FSD2	FSD - FSD MAIN Inspection/Re-Inspection/Remedial Works - BASEMENT	12	20-Dec-19	23-Mar-20	21-May-20 A	19-Jan-21	-251	-163					
FSD2b	FSD - FSD MAIN Inspection/Re-Inspection/Remedial Works - M+ TOWER	6	03-Jan-20	23-Jan-20	21-May-20 A	19-Jan-21	-295	-163					
1189	BD - Obtain OP for Basement/Podium/M+/CSF	0	24-Mar-20	30-Mar-20	18-Dec-20 A	24-Dec-20 A	-224						
RDE Building													
FSD & BD													
7484	RDE_FSD - Submit Form 314 & Form 501	0		20-Feb-20		28-Dec-20 A	-258			▼			
RDE_FSD	RDE_FSD - FSD Inspection/Re-Inspection/Remedial Works (layouts & sys)	4	28-Feb-20	24-Apr-20	08-Jan-21*	12-Jan-21	-218	-192					
RDE_BD	RDE_BD - Inspection/Re-Inspection	6	25-Apr-20	23-May-20	04-Jan-21*	09-Jan-21	-192	-192					
7490	RDE_BD - Obtain OP for RDE	10	25-May-20	30-May-20	08-Jan-21	19-Jan-21	-194	-194					



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

CMWP Rev. 0_23 - Level 1 Summary Bar Chart (23rd Update DD: 31Dec20)

Date	Revision	Checked	Approved
01-Feb-19	CMWP Rev. 0 - Approved Master Programme	NS	BG
11-Jan-21	CMWP Rev.0_23 - 23rd Update (dd: 31 Dec 20)	AB	BG

L1

Activity ID	Activity Name	Start Date	Finish Date	2020		2021	
				Nov	Dec	Jan	Feb
				35	36	37	38
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	27-Feb-21				
SU11000	South Basement - South / West Area	14-Dec-19 A	10-Feb-21				
SU12000	South Basement - East Area	27-Feb-20 A	04-Mar-21				
SU13000	North Basement - North Area	12-Jun-19 A	30-Mar-21				
SU14000	North Basement - Area 6	01-Jun-19 A	31-Dec-20				
Cost Centre C3 - AET Protection							
SU20000	Wall Beam WF	27-Mar-20 A	05-Dec-20				
SU21000	Wall Beam WE	08-Jun-20 A	12-Dec-20				
SU22000	Wall Beam W2	18-Apr-20 A	09-Dec-20				
SU23000	Wall Beam W1	18-Apr-20 A	09-Dec-20				
SU24000	Wall Beam WB	18-May-20 A	14-Dec-20				
SU25000	Wall Beam WC	06-May-20 A	17-Dec-20				
SU26000	Wall Beam WD	23-May-20 A	22-Dec-20				
SU27000	Structure between Wall Beam	19-Aug-20 A	31-Dec-20				

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

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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 30 Nov 2020



Activity ID	Activity Name	Start Date	Finish Date	2020		2021	
				Nov	Dec	Jan	Feb
				35	36	37	38
Cost Centre C4 - Box Culvert							
SU30000	South Section	01-Dec-20*	01-Mar-21		[Green bar from Dec 36 to Mar 21]		
SU31000	North Section	22-Jun-20 A	17-Feb-21	[Blue bar from Nov 35 to Dec 36]	[Green bar from Dec 36 to Feb 38]		
SU32000	Austin Road	29-Jun-20 A	31-Jul-21	[Blue bar from Nov 35 to Dec 36]	[Green bar from Dec 36 to Jul 21]		
Cost Centre D - Public Infrastructure Works (PIW)							
SU40000	Drainage Works	20-Mar-18 A	12-Dec-20	[Blue bar from Nov 35 to Dec 36]	[Green bar from Dec 36 to Dec 20]		
SU41000	Utilities & Road Works	04-Oct-18 A	01-Apr-21	[Blue bar from Nov 35 to Dec 36]	[Green bar from Dec 36 to Apr 21]		
SU42000	Box Culvert Outfall	26-Nov-20 A	31-Aug-21		[Blue bar from Nov 35 to Nov 30]	[Green bar from Dec 36 to Aug 21]	
Cost Centre E - Miscellaneous Works							
SU50000	Drainage & Sewerage Works	19-Nov-19 A	27-May-21	[Blue bar from Nov 35 to Dec 36]	[Green bar from Dec 36 to May 21]		
SU52000	DCS Outfall	26-Nov-20 A	31-Aug-21		[Blue bar from Nov 35 to Nov 30]	[Green bar from Dec 36 to Aug 21]	

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

Project ID: L13MRP-20201130-ENV
Layout: L1-3MRP (Env)
Page: 2 of 2

West Kowloon Cultural District Authority
L1 Contract for Lyric Theatre Complex & Extended Basement
Three Month Rolling Programme (3MRP) - Status as of 30 Nov 2020



Activity ID	Activity Name	Start Date	Finish Date	2020				2021											
				Dec				Jan				Feb				Mar			
				36				37				38				39			
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	27-Feb-21	[Actual Work]				[Remaining Work]											
SU11000	South Basement - South / West Area	14-Dec-19 A	10-Feb-21	[Actual Work]				[Remaining Work]											
SU12000	South Basement - East Area	27-Feb-20 A	04-Mar-21	[Actual Work]				[Remaining Work]											
SU13000	North Basement - North Area	12-Jun-19 A	30-Mar-21	[Actual Work]				[Remaining Work]											
SU14000	North Basement - Area 6	01-Jun-19 A	15-Jan-21	[Actual Work]				[Remaining Work]											
Cost Centre C3 - AET Protection																			
SU21000	Wall Beam WE	08-Jun-20 A	09-Jan-21	[Actual Work]				[Remaining Work]											
SU25000	Wall Beam WC	06-May-20 A	16-Jan-21	[Actual Work]				[Remaining Work]											
SU26000	Wall Beam WD	23-May-20 A	29-Dec-20 A	[Actual Work]				[Remaining Work]											
SU27000	Structure between Wall Beam	19-Aug-20 A	16-Jan-21	[Actual Work]				[Remaining Work]											
Cost Centre C4 - Box Culvert																			
SU30000	South Section	30-Dec-20 A	23-Mar-21	[Actual Work]				[Remaining Work]											
SU31000	North Section	22-Jun-20 A	17-Mar-21	[Actual Work]				[Remaining Work]											
SU32000	Austin Road	29-Jun-20 A	31-Jul-21	[Actual Work]				[Remaining Work]											
Cost Centre D - Public Infrastructure Works (PIW)																			
SU40000	Drainage Works	20-Mar-18 A	09-Jan-21	[Actual Work]				[Remaining Work]											
SU41000	Utilities & Road Works	04-Oct-18 A	01-Apr-21	[Actual Work]				[Remaining Work]											
SU42000	Box Culvert Outfall	24-Nov-20 A	31-Aug-21	[Actual Work]				[Remaining Work]											
Cost Centre E - Miscellaneous Works																			
SU50000	Drainage & Sewerage Works	19-Nov-19 A	27-May-21	[Actual Work]				[Remaining Work]											
SU52000	DCS Outfall	24-Nov-20 A	31-Aug-21	[Actual Work]				[Remaining Work]											

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

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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 Dec 2020



Activity ID	Activity Name	Start Date	Finish Date	2021			
				Jan 37	Feb 38	Mar 39	Apr 40
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	19-Feb-21				
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	11-Feb-21				
Cost Centre C3 - AET Protection							
SU21000	Wall Beam WE	08-Jun-20 A	09-Jan-21 A				
SU25000	Wall Beam WC	06-May-20 A	08-Jan-21 A				
SU27000	Structure between Wall Beam	19-Aug-20 A	12-Jan-21 A				
SU28000	On-grade Slab between Wall Beam	25-Jan-21 A	27-Feb-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	08-Feb-21				
SU41000	Utilities & Road Works	04-Oct-18 A	06-May-21				
SU42000	Box Culvert Outfall	24-Nov-20 A	06-Sep-21				
Cost Centre E - Miscellaneous Works							
SU50000	Drainage & Sewerage Works	19-Nov-19 A	31-May-21				
SU52000	DCS Outfall	24-Nov-20 A	06-Sep-21				

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

Project ID: L13MRP-20210131-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 Jan 2021



L2

ID	Activity	Start	Finish	BL VAR	LM VAR	2020				2021				2022				2023				2024															
						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	Qtr 1	Qtr 2															
						M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
<i>L2 CMWP_R01_02 Approved 29Sep20 - 2nd Update DD=31Oct20</i>						20-Jul-19 A	13-Apr-24	-56	-11																												
GENERAL & PRELIMINARIES						20-Jul-19 A	13-Apr-24	-56	-11																												
Contract Significant Dates						20-Jul-19 A	13-Apr-24	-77	-17																												
Commencement & Completion Dates						20-Jul-19 A	13-Apr-24	-77	-17																												
Section Keydates						18-Nov-21	13-Apr-24	-77	-17																												
KD05	PC for HO of the Remaining Works for M+ Promenade South		18-Nov-21*	-58	-58																																
KD05A	Complete Required Pedestrian Access Corridor and Floor Finishes at AURW		13-May-22*	0	0																																
KD05B	Complete Required Pedestrian Access Corridor & associated top slab at Avenue Level [if instructed]		13-May-22*	0	0																																
KD05C	PC for HO of Landscape Area at Avenue & Pedestrian level between P31 & P34 [if instructed]		13-May-22*	0	0																																
KD08	PC for HO Loc ICT/Risers Rms to APC for ICT Sys Instn Wrks		06-Jan-24*	-68	-16																																
KD10	PC for HO of ASDA, Lyric Theatre Promenade South to Authority		06-Jan-24*	-68	-16																																
KD09	PC for HO of RDE areas for Tenancy Fit-out Wrks		06-Jan-24*	-68	-16																																
KD11	PC for HO of Extended Basement for HO to Authority & HO of Carriageway to Relevant Govt Authority		13-Mar-24*	-74	-13																																
KD07	PRACTICAL COMPLETION for CWay 3A (M+ Day 2 Works)		13-Apr-24*	-77	-17																																
KD13	PRACTICAL COMPLETION for Lyric Theatre, Extended Basement & CWay 3B		13-Apr-24*	-77	-17																																
Stage Keydates						20-Jul-19 A	09-Mar-24	-73	-12																												
KD01	Compl Dsgn Coord/Subm and obtn NNO for L1 Contr Bsmt constn wrks		20-Jul-19 A	0	0																																
KD06	PC for Fountain Related Plantroom(s)		30-Apr-22*	0	0																																
KD03	OBTAIN OP for Lyric Theatre & Extended Basement		06-Jan-24*	-68	-16																																
KD14	Complete U/G road and the associated plantrooms at Zone 3A&3B Integrated Basement		22-Jan-24*	-69	-13																																
KD02	Obtain BA14 Acknowledge from BD for M+ Day2 A&A Works		09-Mar-24*	-73	-12																																
Summary Program - Level 1						06-May-20 A	13-Apr-24	-56	-11																												
SUM10	[LoE] CC_B Lyric Theatre - Substructure RC Structural Concrete	06-May-20 A	06-Aug-21	-53	-12																																
SUM14	[LoE] CC_B Lyric Theatre - ABWF Work Including Theatres (Excl. Punch List Works)	19-Feb-21	09-Jan-24	-56	-11																																
SUM15	[LoE] CC_B Lyric Theatre - MEP 1st to Final Fix (Excl. TH SYS, TH Non-FSD in Walls, etc.)	22-Apr-21	19-Aug-23	-68	-21																																
SUM11	[LoE] CC_B Lyric Theatre - Superstructure RC Structural Concrete	13-May-21	10-Oct-22	-53	-15																																
SUM41	[LoE] CC_B Lyric Theatre - Structural Steel by CSD	19-Jul-21	12-Jan-23	-59	-17																																
SUM12	[LoE] CC_B Lyric Theatre - EWS Weather Tight Type	03-Nov-21	30-Nov-22	-48	-15																																
SUM17	[LoE] CC_B Lyric Theatre - Theatre Specialist Systems Incl. T&C, Precom. & Commissioning	08-Jan-22	13-Apr-24	-56	-11																																
SUM13	[LoE] CC_B Lyric Theatre - EWS Non-Weather Tight Type 4.1 & 4.3	22-Jun-22	29-Jun-23	-43	-17																																
SUM16	[LoE] CC_B Lyric Theatre - T&C (Excluding Non-FSD ELV & Electrical)	17-Mar-23	07-Sep-23	-56	-11																																
SUM18	[LoE] CC_B Lyric Theatre, EB, CWay 3B - Stat. Insp. & Approval (from Form 314/501 to BD OP)	08-Sep-23	06-Jan-24	-56	-11																																
SUM21	[LoE] CC_C - LT EVA1 & EVA2	05-Mar-21	06-Dec-23	-48	-17																																
SUM23	[LoE] CC_C - Artist SQ. Bridge (ASB_1/2/3; ASB_3; P31_2; P34_2; AS_1/2; ASB-6/P31 EVA)	31-Mar-21	08-Dec-23	-36	-14																																
SUM20	[LoE] CC_C - LT Promenade & Pocket Square Bridge	07-Aug-21	16-Aug-23	-7	-1																																
SUM22	[LoE] CC_C - HoR Development (P32-1, P29-1, P31-EVA)	30-Dec-22	27-Oct-23	0	32																																
SUM24	[LoE] CC_D - Remaining Works for M+ Promenade South	06-Jan-21	18-Nov-21	-44	-44																																
SUM25	[LoE] CC_E - DCS Cofferdam A Works & Obtain BA14	23-Jun-20 A	21-Jun-22	-40	-40																																
SUM42	[LoE] CC_E - DCS Outside of Cofferdam A Works (Connect DIA1,600 & Remove Temp O'fall)	09-Jul-22	18-Oct-22	-7	-1																																
SUM26	[LoE] CC_F - Mods to Existing Pump Cell Civil & MEP Works (Excl. Options 2 Add. Pumps)	30-Nov-20	16-Oct-21	-32	0																																
SUM27	[LoE] CC_G Extended Basement - ABWF Works (Incl. Deferred Areas Under Deck)	02-Apr-21	16-May-23	-46	-14																																
SUM28	[LoE] CC_G Extended Basement - MEP 1st Fix to Final Fix (Incl. Deferred Areas Under Deck)	03-May-21	24-Apr-23	-46	-14																																
SUM29	[LoE] CC_G Extended Basement - T&C	30-Jun-22	16-May-23	-46	-14																																
SUM30	[LoE] CC_H - Vibration Isolation Spring System Remaining as of 30Apr2020 (AS=30Sep19)	09-May-20 A	08-Feb-21	-34	-13																																
SUM31	[LoE] CC_I Carriageway 3B - ABWF Works	02-Apr-21	05-Nov-22	-8	-20																																
SUM32	[LoE] CC_I Carriageway 3B - MEP Works (1st Fix to Final Fix)	26-Jun-21	10-Sep-22	-7	-7																																
SUM33	[LoE] CC_I Underpass 3B & Associated Area - T&C	16-Jul-22	07-Dec-22	-21	-5																																
SUM35	[LoE] CC_J - M+ Day 2 Works (excl. connections to M+ and SZ_1 FS Changeover)	31-Mar-21	29-Sep-23	-49	-19																																
SUM38	[LoE] CC_J - M+ Day 2 FS Changeover in 3A SZ_1, Connections to M+, Integrated T&C	22-Sep-23	22-Jan-24	-56	-11																																
SUM34	[LoE] CC_J Carriageway 3A - Stat. Insp. & Approvals (from Form 314A to BA14)	28-Dec-23	09-Mar-24	-56	-11																																
SUM39	[LoE] CC_K - Water Main at Promenade	22-Jun-22	20-Jan-23	-7	-1																																
SUM40	[LoE] CC_N Lifts & Escalators	23-Aug-21	20-May-23	-18	32																																



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

L2 CMWP_R01_02 Approved 29Sep20 - 2nd Update DD=31Oct20

Date	Revision	Checked	Approved
05-Nov-20	CMWP Rev_1_02 - Update DD = 31 Oct 20	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		
		Nov 2020	Dec 2020	Jan 2021	Nov 2020	Dec 2020	Jan 2021	Nov 2020	Dec 2020	Jan 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	✓	✓	✓	✓	✓
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. 	✓	Rem	Rem	✓	Obs	✓	✓	Rem	Obs
	<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. 	✓	✓	✓	✓	✓	✓	✓	Obs	✓
	<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. 	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Loading, Unloading or Transfer of Dusty Materials</i>									

EM&A Ref.	Recommendation Measures	Implementation Stage								
		M+ Museum			L1			L2		
		Nov 2020	Dec 2020	Jan 2021	Nov 2020	Dec 2020	Jan 2021	Nov 2020	Dec 2020	Jan 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. 	✓	✓	✓	✓	Rem	✓	✓	✓	✓
	<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. 	✓	✓	✓	✓	✓	✓	✓	✓	✓
	<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. 	✓	✓	✓	✓	✓	✓	✓	Obs	✓
	<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		
		Nov 2020	Dec 2020	Jan 2021	Nov 2020	Dec 2020	Jan 2021	Nov 2020	Dec 2020	Jan 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	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	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	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>	✓	✓	✓	✓	✓	✓	✓	✓	✓
	<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		
		Nov 2020	Dec 2020	Jan 2021	Nov 2020	Dec 2020	Jan 2021	Nov 2020	Dec 2020	Jan 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.	✓	✓	✓	✓	✓	✓	✓	✓	✓
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.	✓	✓	✓	✓	✓	✓	✓	✓	✓
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.	✓	✓	✓	✓	✓	✓	✓	✓	✓
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	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		
		Nov 2020	Dec 2020	Jan 2021	Nov 2020	Dec 2020	Jan 2021	Nov 2020	Dec 2020	Jan 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
	<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. 	✓	Rem	✓	✓	✓	✓	✓	✓	✓
	<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. 	✓	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. 	✓	✓	✓	✓	✓	✓	✓	✓	✓
	<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		
		Nov 2020	Dec 2020	Jan 2021	Nov 2020	Dec 2020	Jan 2021	Nov 2020	Dec 2020	Jan 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. 	✓	✓	Rem	✓	✓	✓	✓	✓	✓
	<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. 	✓	✓	✓	✓	✓	✓	✓	✓	✓
	<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>	✓	✓	✓	✓	✓	✓	✓	✓	✓
	<p>General construction activities</p>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4.1 & 10.5.1		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4.1 &		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		N/A	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		
		Nov 2020	Dec 2020	Jan 2021	Nov 2020	Dec 2020	Jan 2021	Nov 2020	Dec 2020	Jan 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	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 	✓	✓	✓	✓	✓	✓	✓	✓	✓
		✓	✓	✓	✓	✓	✓	✓	Obs	✓
		✓	✓	✓	✓	✓	✓	✓	✓	✓
		✓	✓	✓	✓	✓	✓	✓	✓	✓
		✓	✓	✓	✓	✓	✓	✓	✓	✓
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		
		Nov 2020	Dec 2020	Jan 2021	Nov 2020	Dec 2020	Jan 2021	Nov 2020	Dec 2020	Jan 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. 	✓	✓	✓	✓	✓	✓	✓	✓	✓

EM&A Ref.	Recommendation Measures	Implementation Stage								
		M+ Museum			L1			L2		
		Nov 2020	Dec 2020	Jan 2021	Nov 2020	Dec 2020	Jan 2021	Nov 2020	Dec 2020	Jan 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		
		Nov 2020	Dec 2020	Jan 2021	Nov 2020	Dec 2020	Jan 2021	Nov 2020	Dec 2020	Jan 2021
	<ul style="list-style-type: none"> To minimize the chance for construction workers to come into contact with any contaminated materials, bulk earth-moving excavation equipment should be employed; Contact with contaminated materials can be minimised by wearing appropriate clothing and personal protective equipment such as gloves and masks (especially when interacting directly with contaminated material), provision of washing facilities and prohibition of smoking and eating on site; Stockpiling of contaminated excavated materials on site should be avoided as far as possible; The use of contaminated soil for landscaping purpose should be avoided unless pre-treatment was carried out; Vehicles containing any contaminated excavated materials should be suitably covered to reduce dust emissions and/or release of contaminated wastewater; Truck bodies and tailgates should be sealed to stop any discharge; Only licensed waste haulers should be used to collect and transport contaminated material to treatment/disposal site and should be equipped with tracking system to avoid fly tipping; Speed control for trucks carrying contaminated materials should be exercised; Observe all relevant regulations in relation to waste handling, such as Waste Disposal Ordinance (Cap. 354), Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354) and obtain all necessary permits where required; and Maintain records of waste generation and disposal quantities and disposal arrangements. 	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ecological Impact (Construction)										
No mitigation measure is required.										
Landscape and Visual Impact (Construction)										
Table 9.1 & 10.8 (CM1)	Trees should be retained in situ on site as far as possible. Should tree removal be unavoidable due to construction impacts, trees will be transplanted or felled with reference to the stated criteria in the Tree Removal Applications to be submitted to relevant government departments for approval in accordance to ETWB TCW No. 29/2004 and 3/2006.	✓	✓	✓	✓	✓	✓	✓	✓	✓

EM&A Ref.	Recommendation Measures	Implementation Stage								
		M+ Museum			L1			L2		
		Nov 2020	Dec 2020	Jan 2021	Nov 2020	Dec 2020	Jan 2021	Nov 2020	Dec 2020	Jan 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	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	N/A	N/A
Table 9.2 & 10.9 (MCP4)	Control of night time lighting	✓	✓	✓	✓	✓	✓	✓	✓	✓

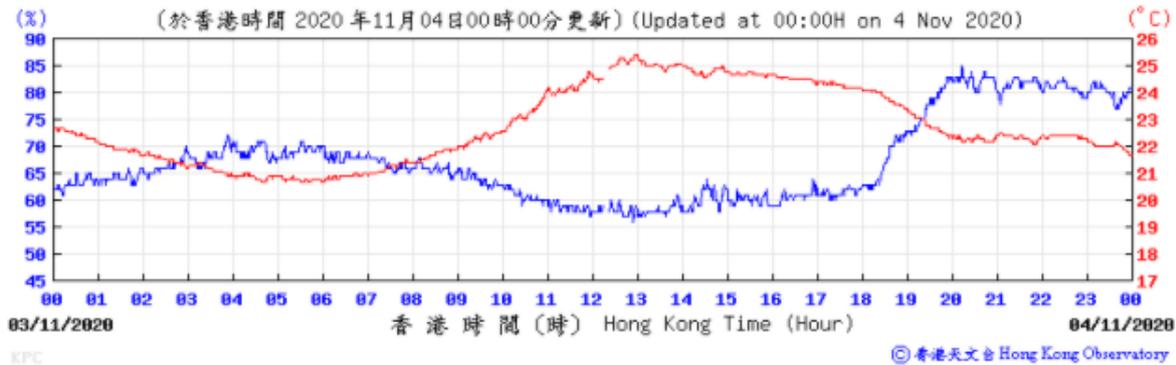
EM&A Ref.	Recommendation Measures	Implementation Stage								
		M+ Museum			L1			L2		
		Nov 2020	Dec 2020	Jan 2021	Nov 2020	Dec 2020	Jan 2021	Nov 2020	Dec 2020	Jan 2021
Table 9.2 & 10.9 (MCP5)	Use of greenery such as grass cover for the temporary open areas will help achieve the visual balance and soften the hard edges of the structures.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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

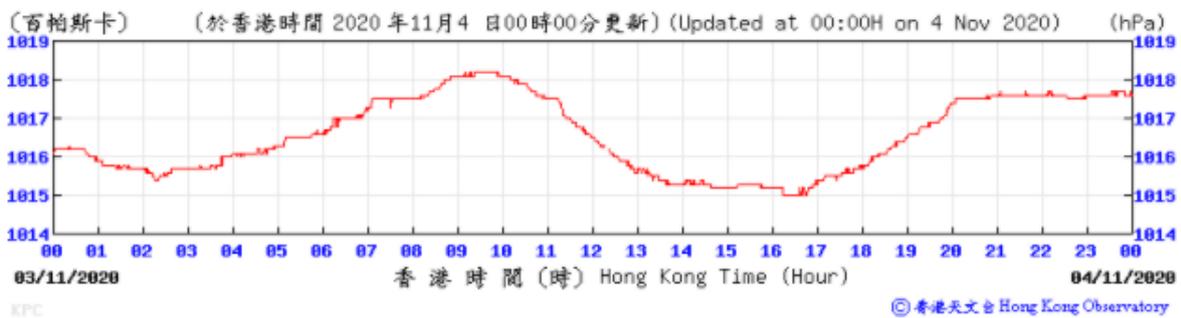
D. Meteorological Data Extracted from Hong Kong Observatory

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

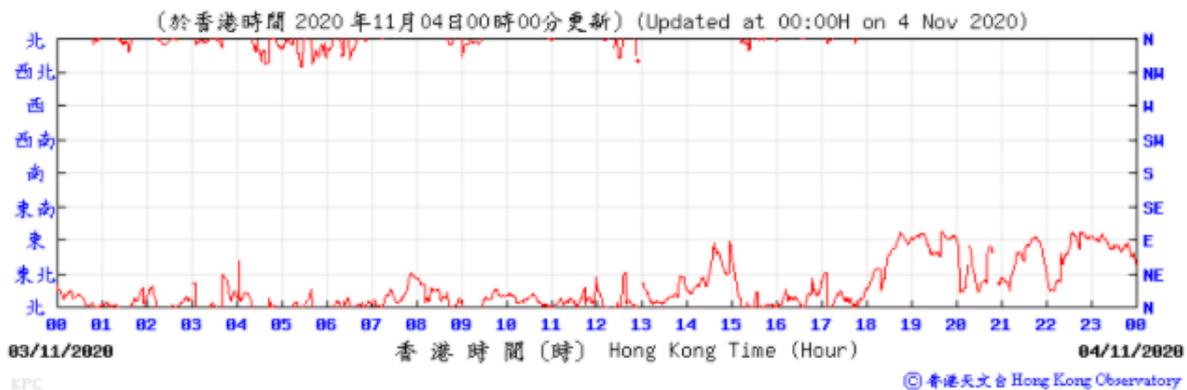
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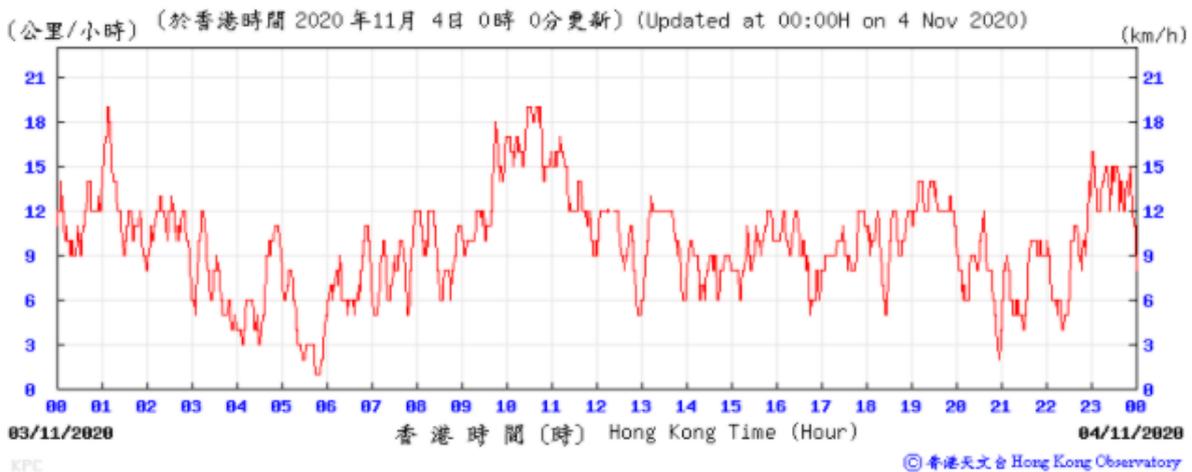
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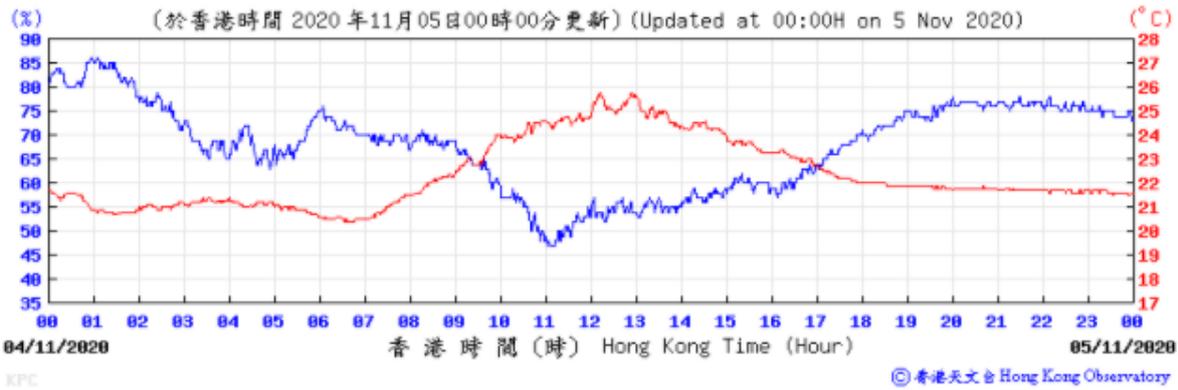
Wind Direction:



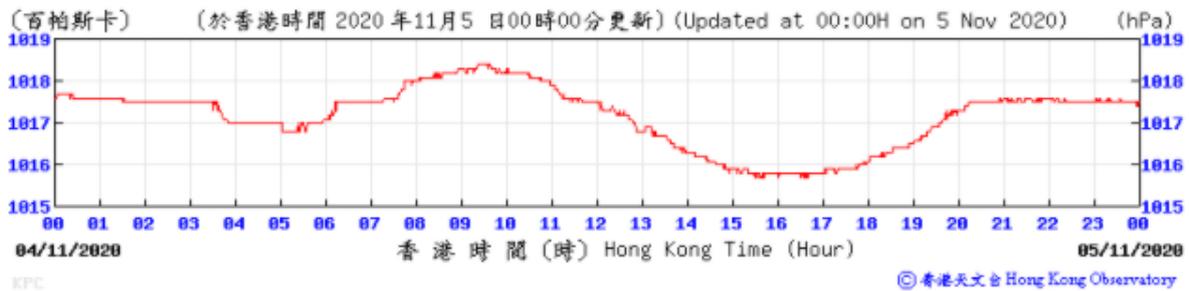
Wind Speed:



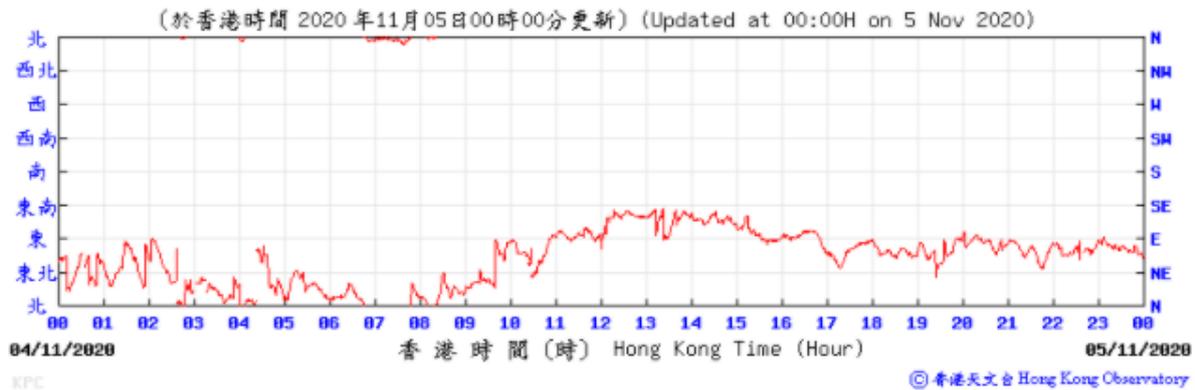
Temperature/Humidity:



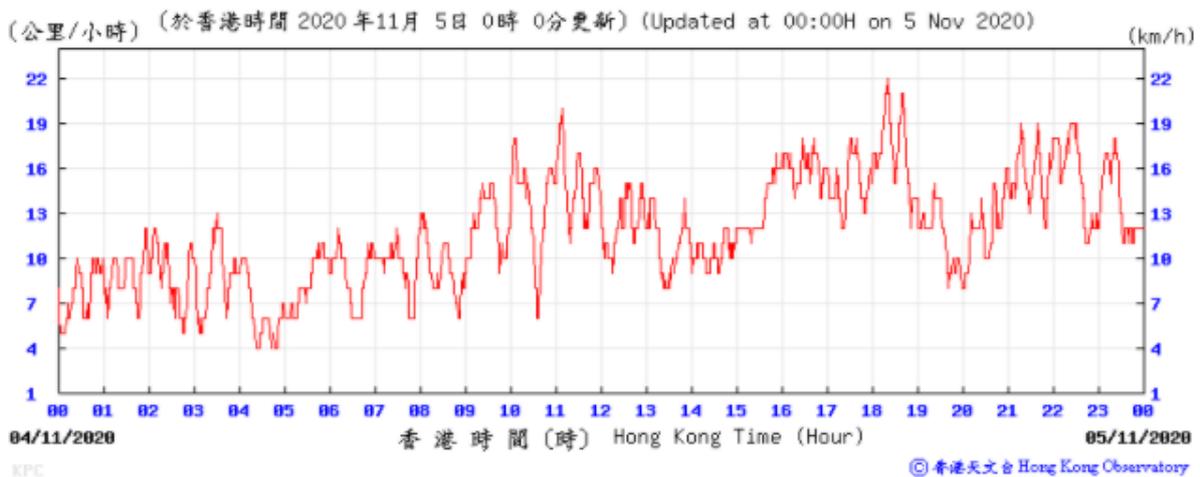
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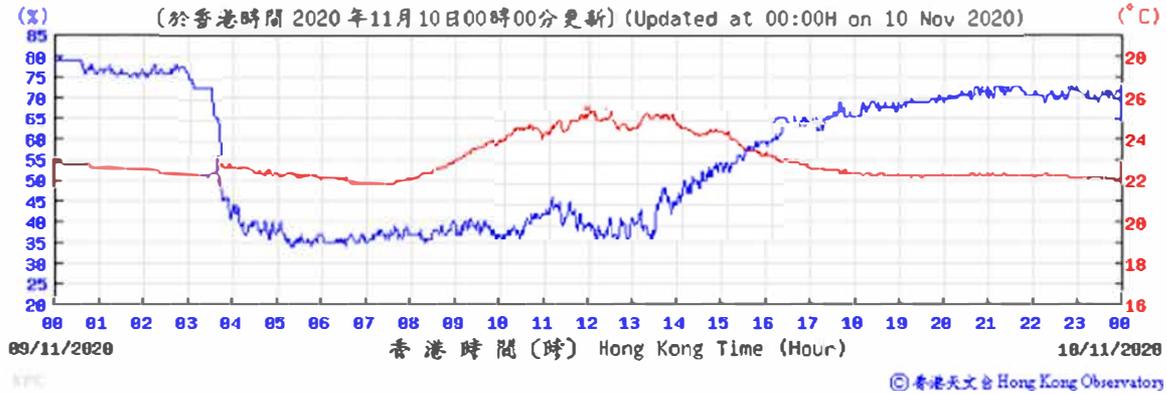
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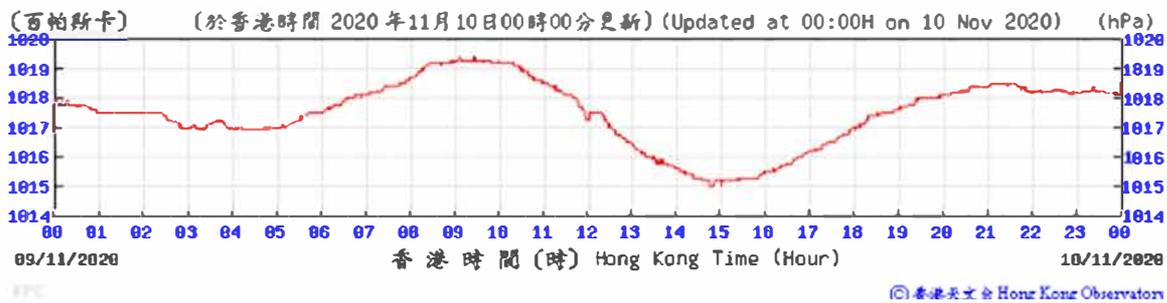
Wind Speed:



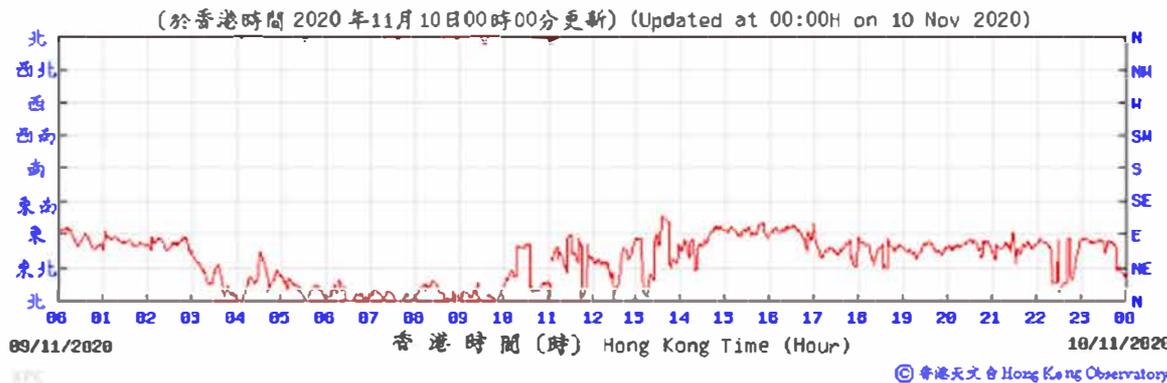
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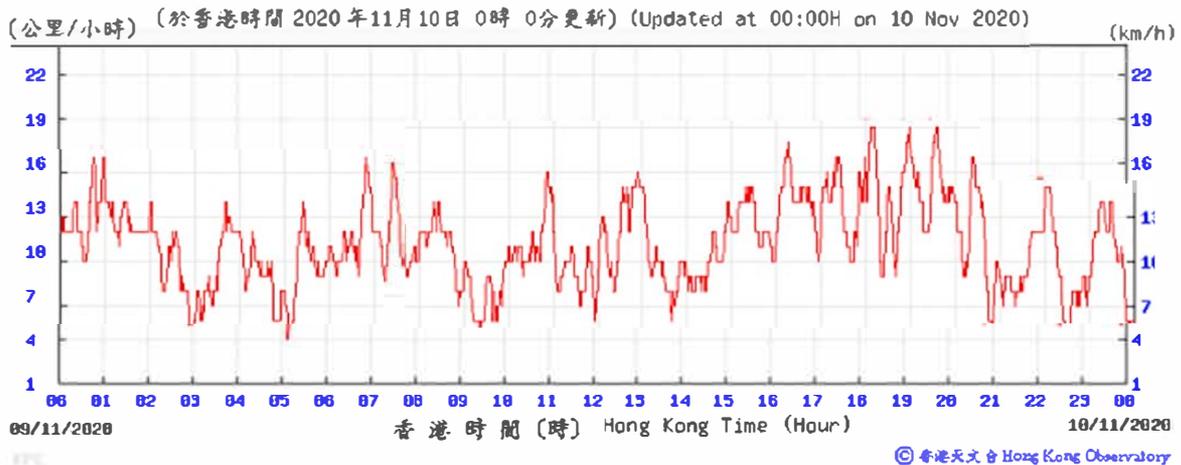
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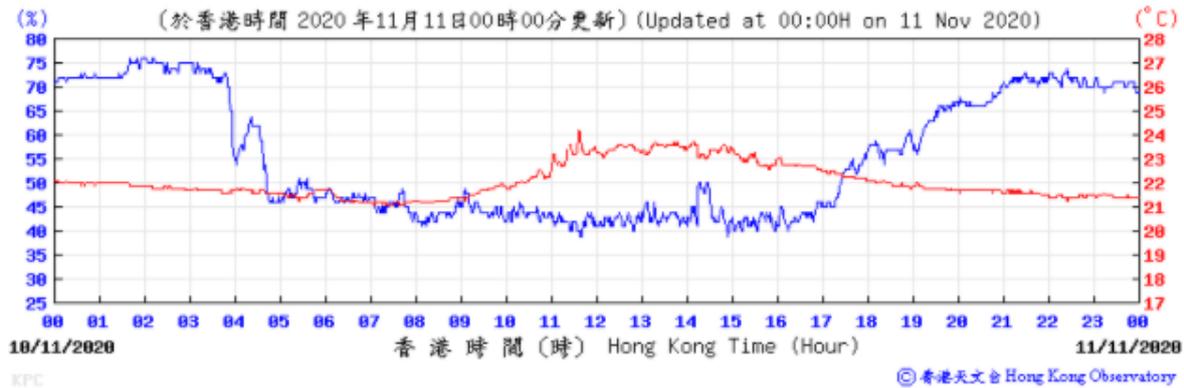
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Wind Speed:



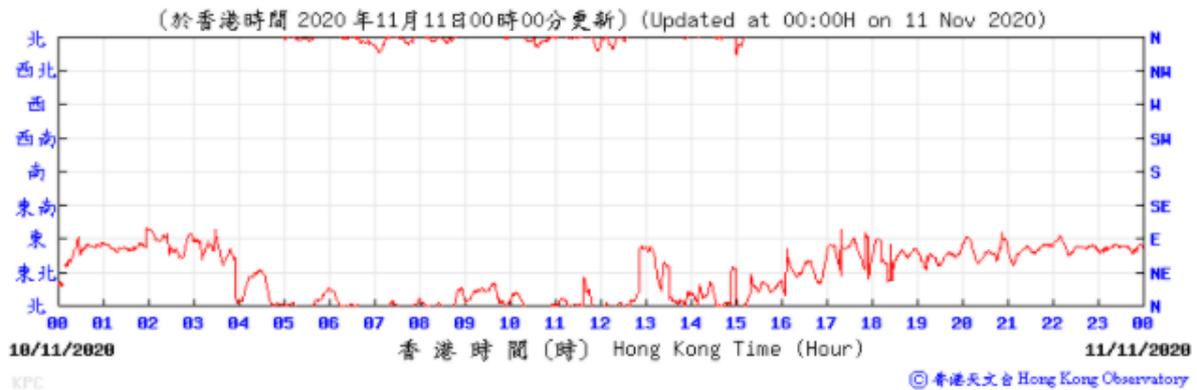
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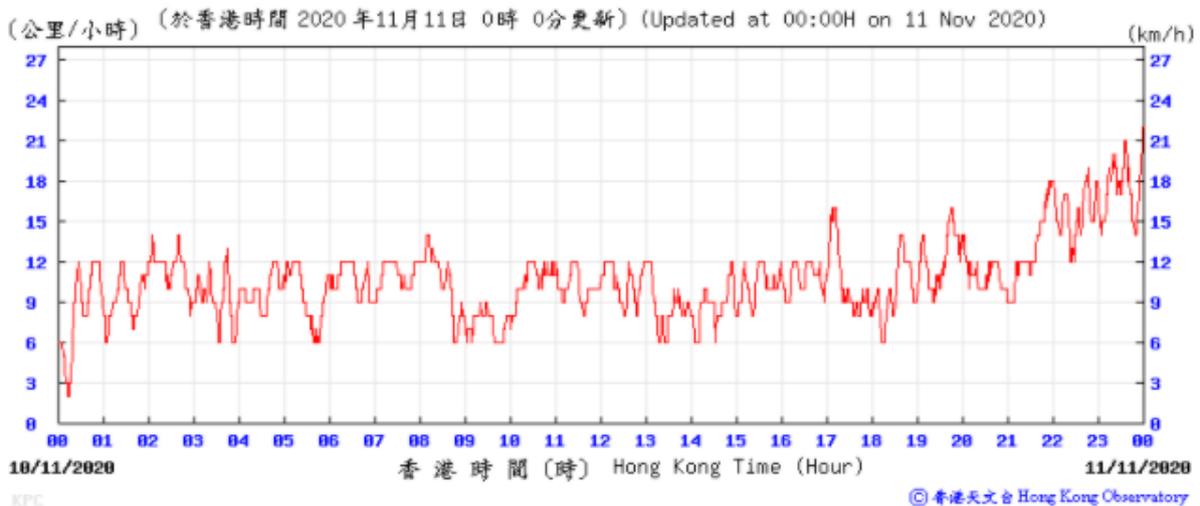
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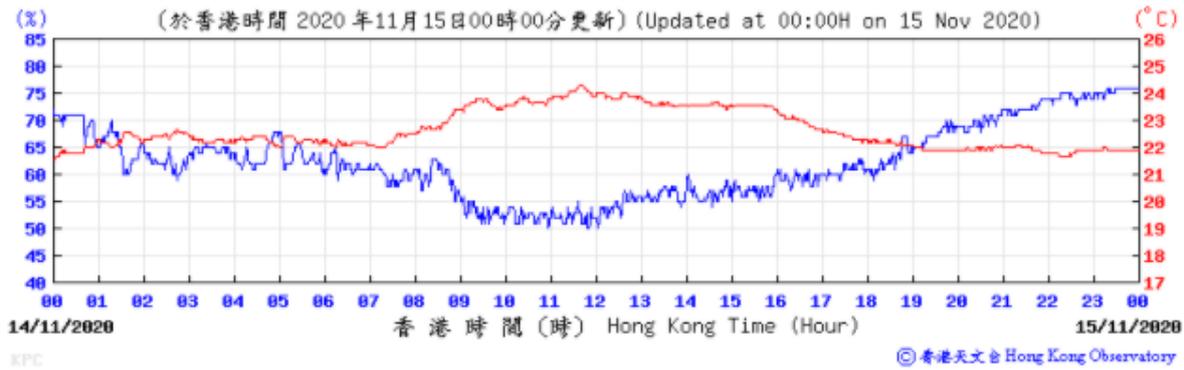
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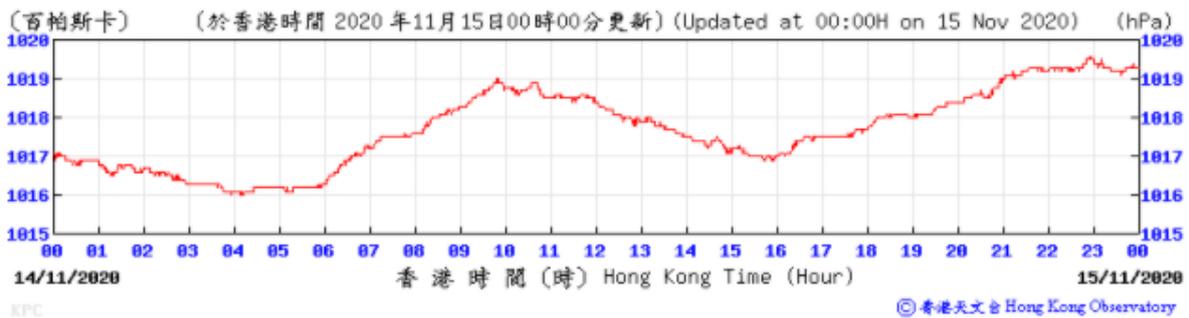
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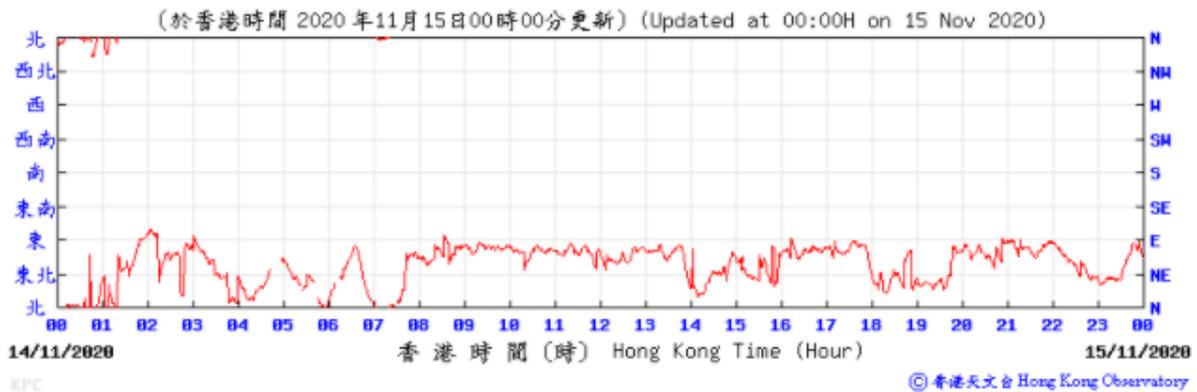
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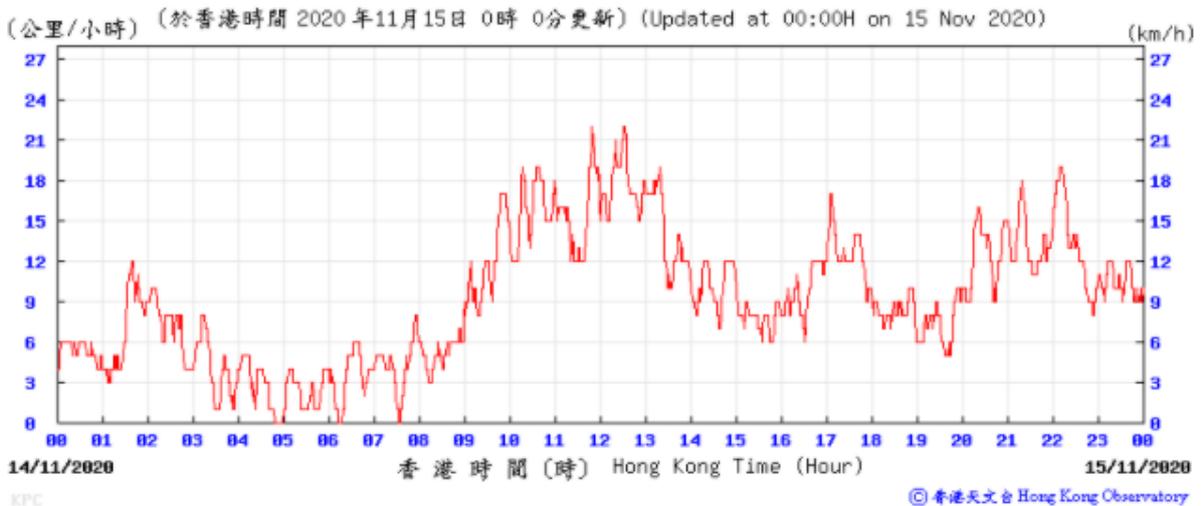
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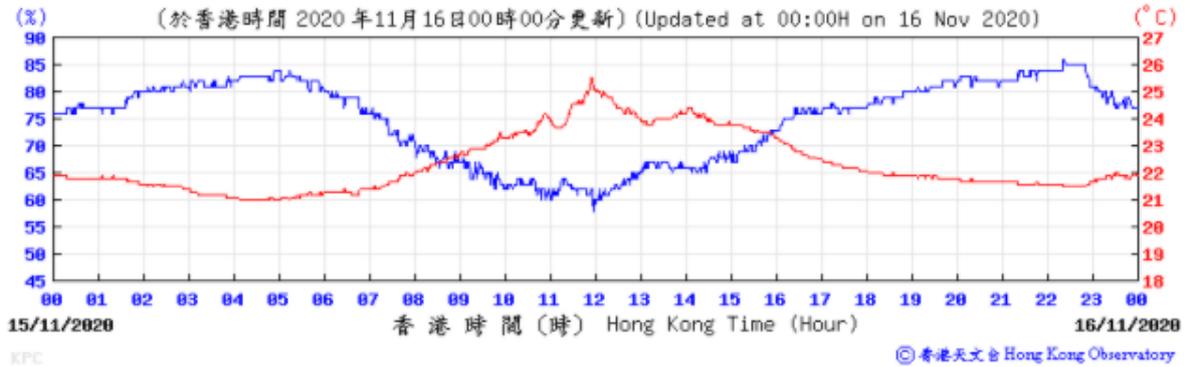
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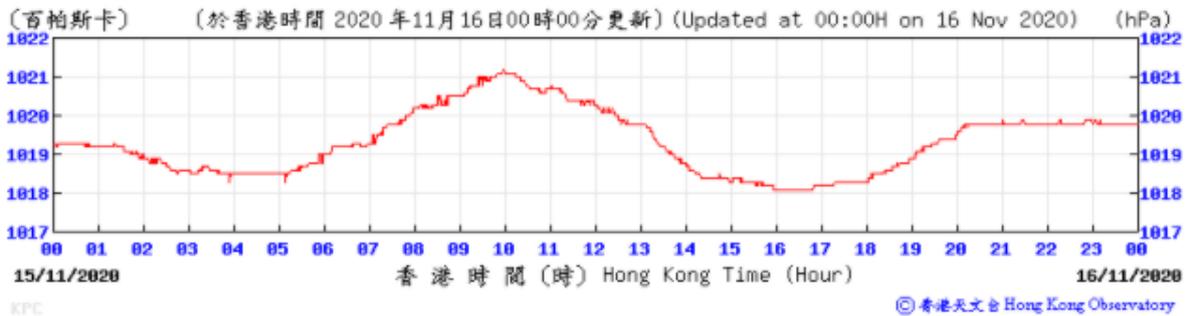
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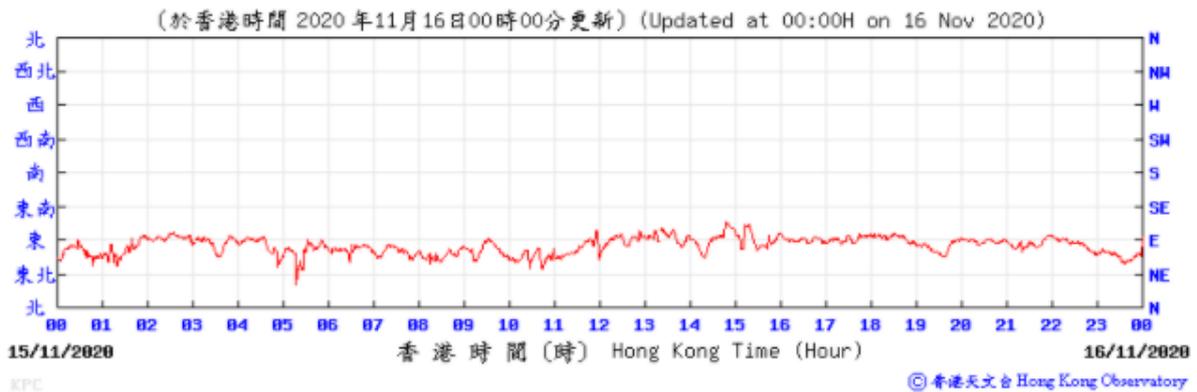
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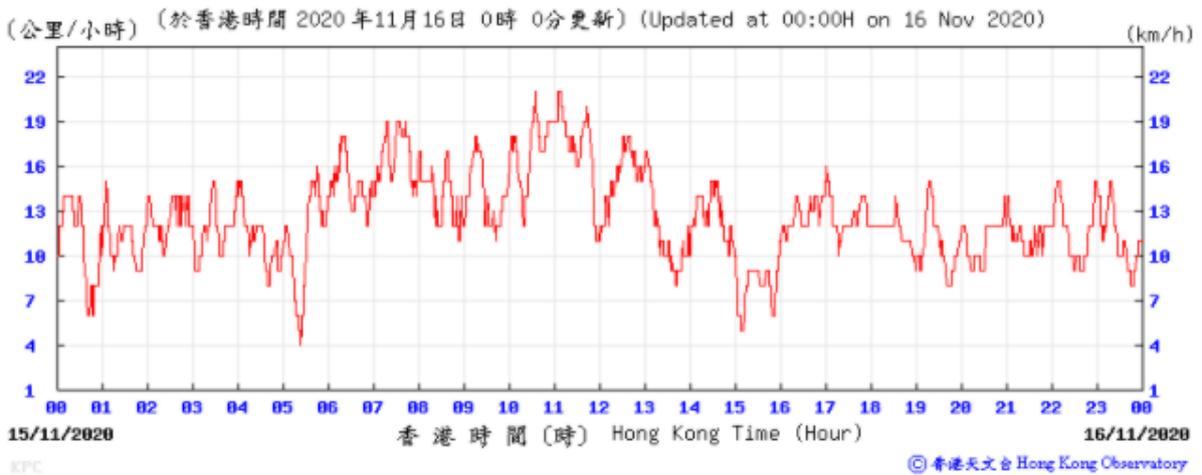
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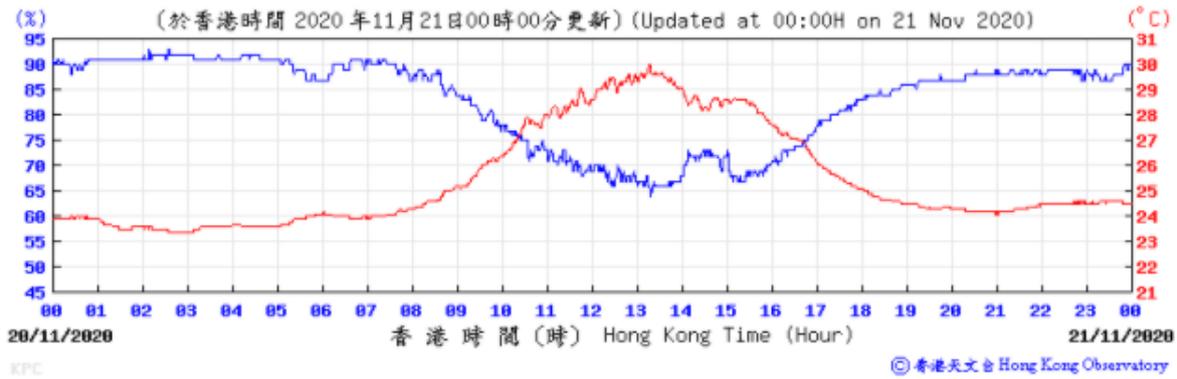
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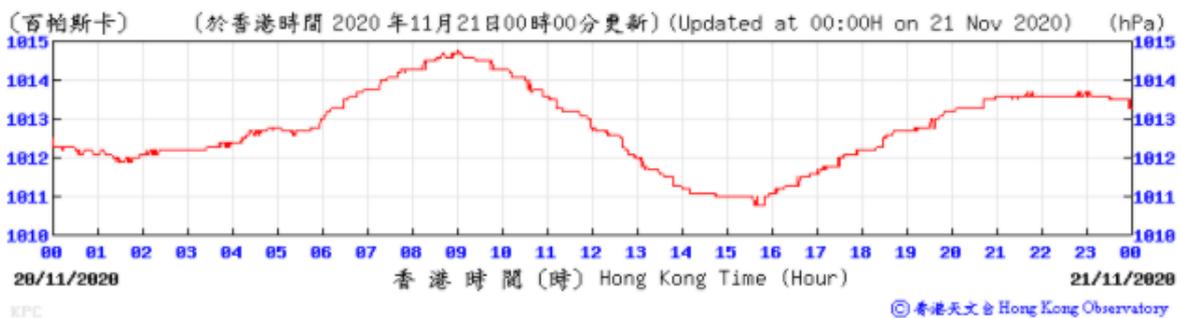
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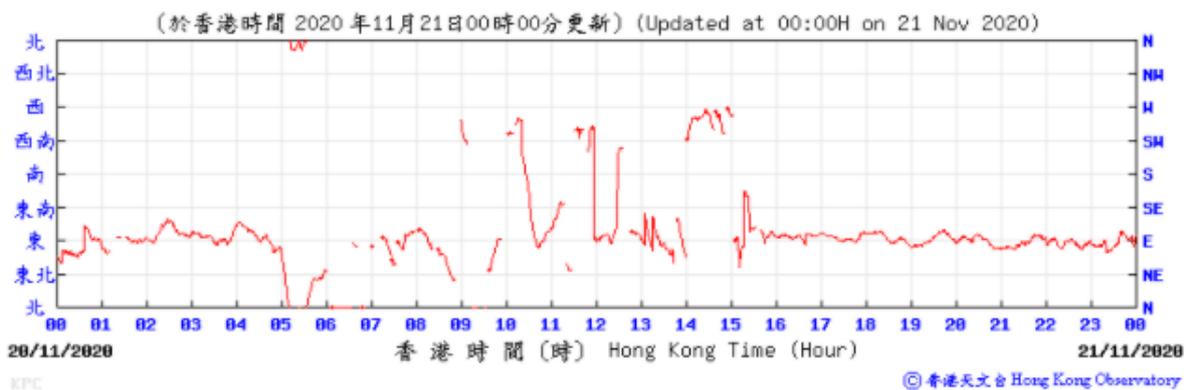
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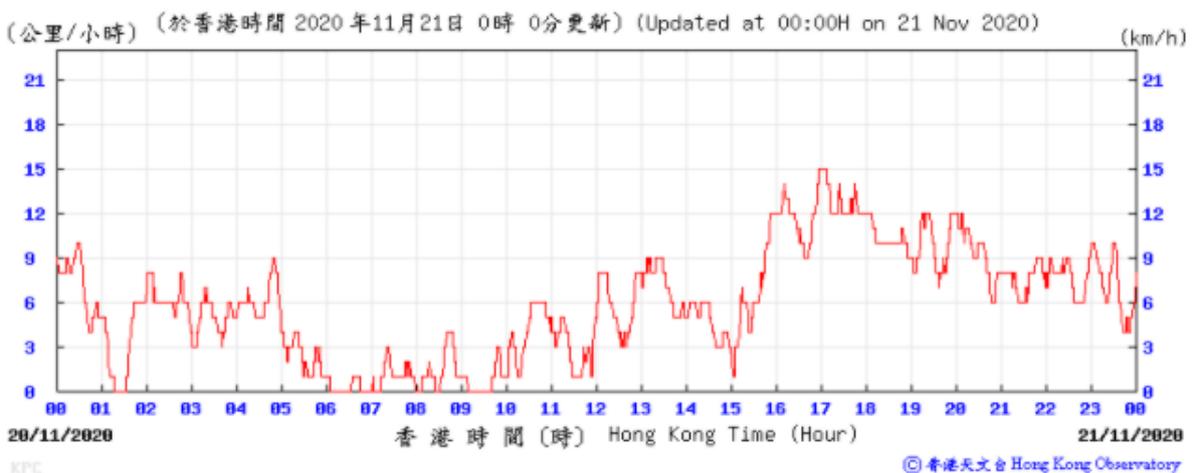
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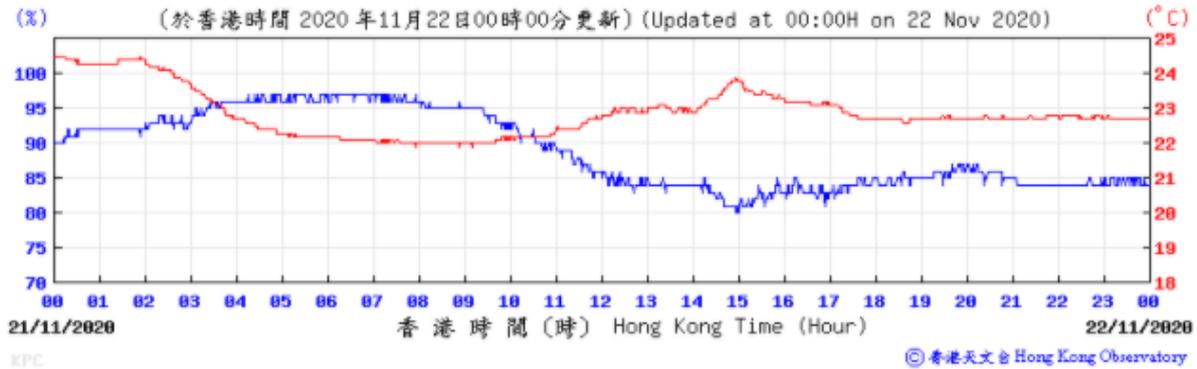
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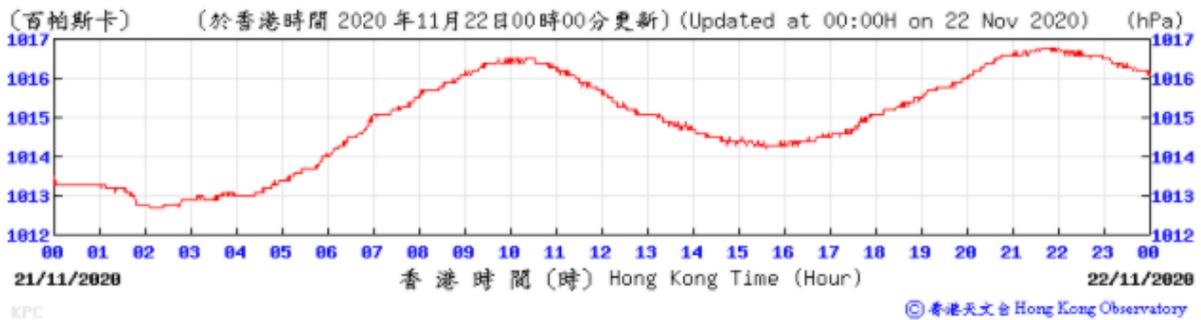
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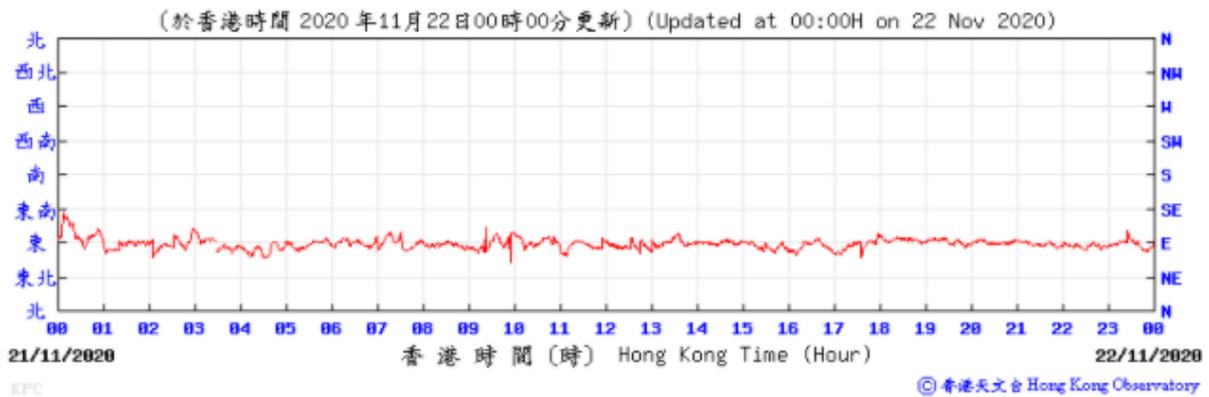
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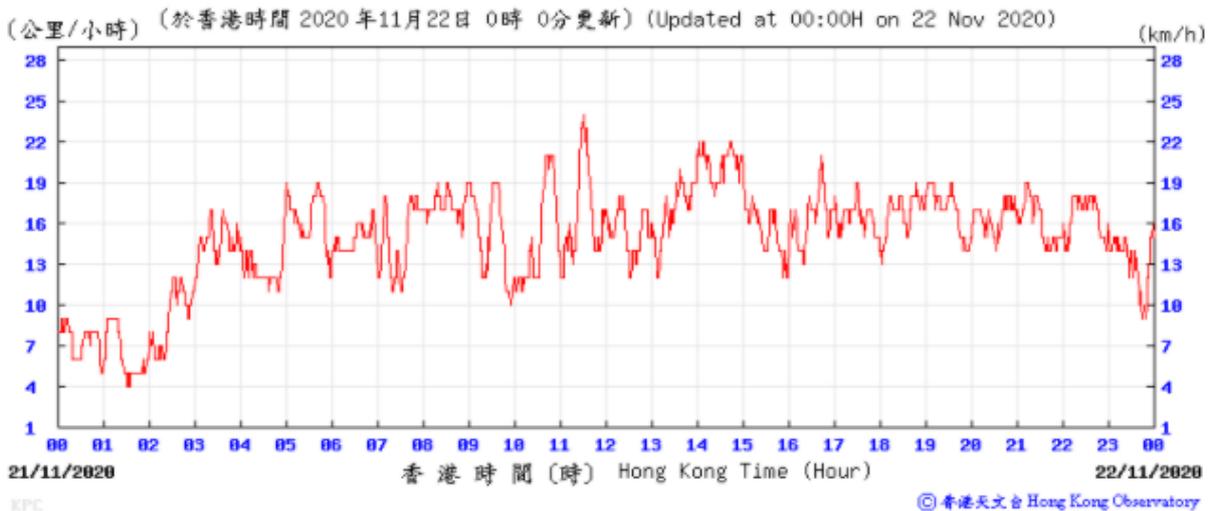
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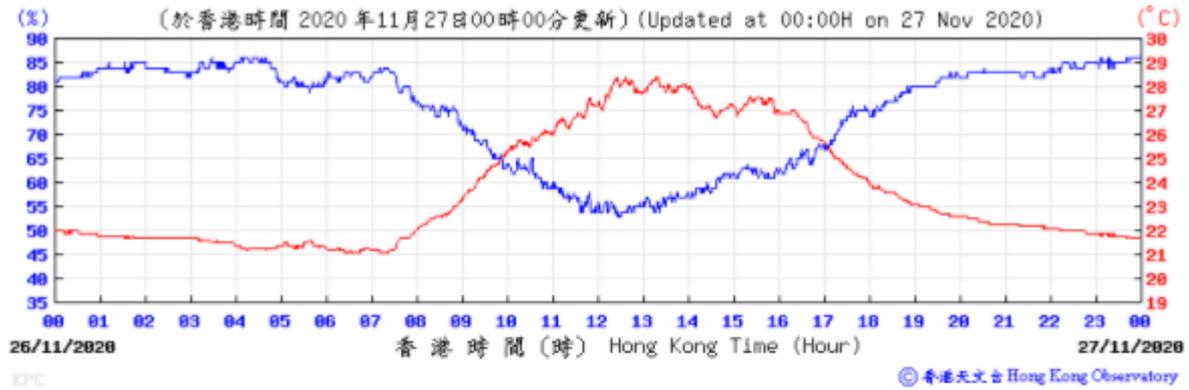
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Wind Speed:



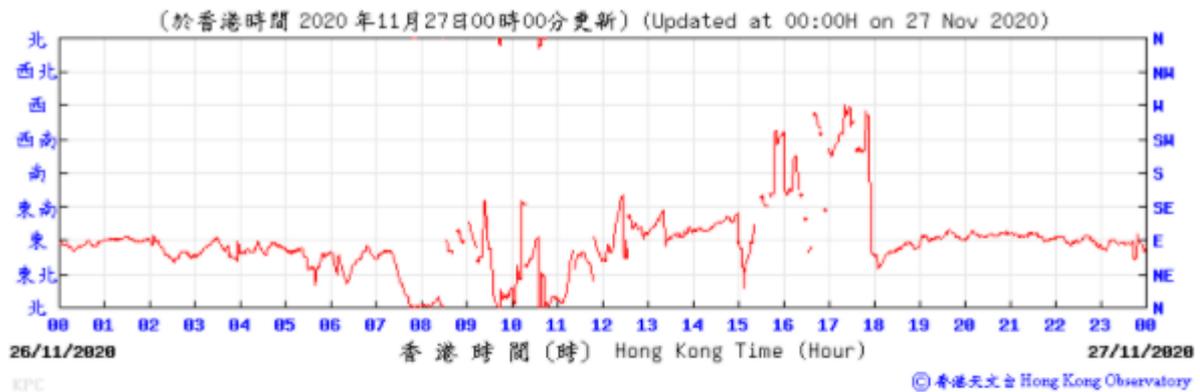
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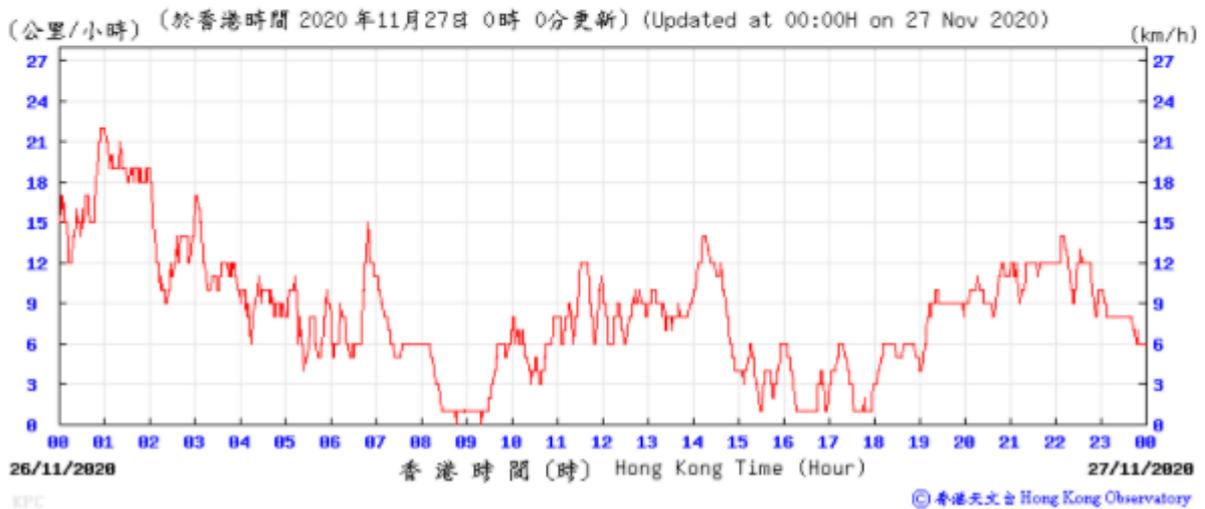
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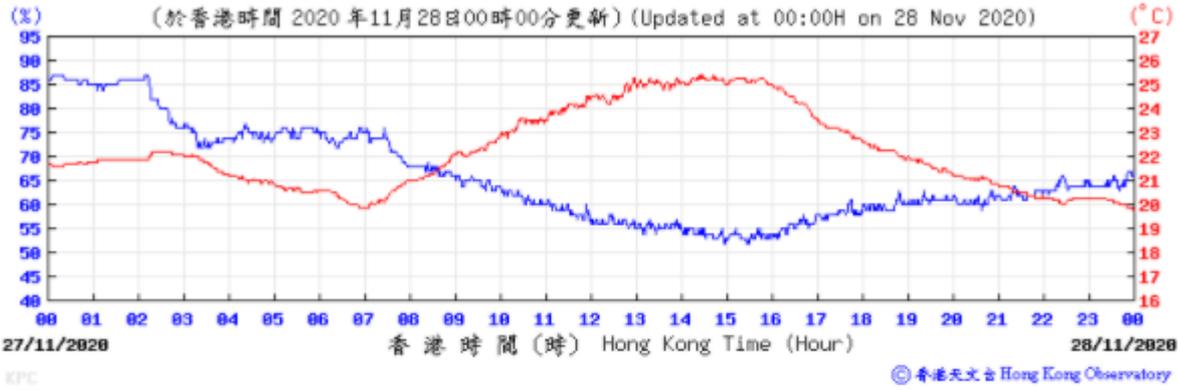
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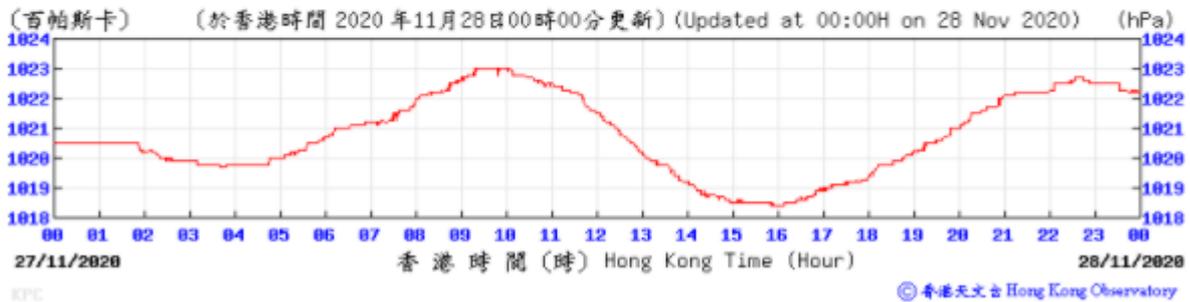
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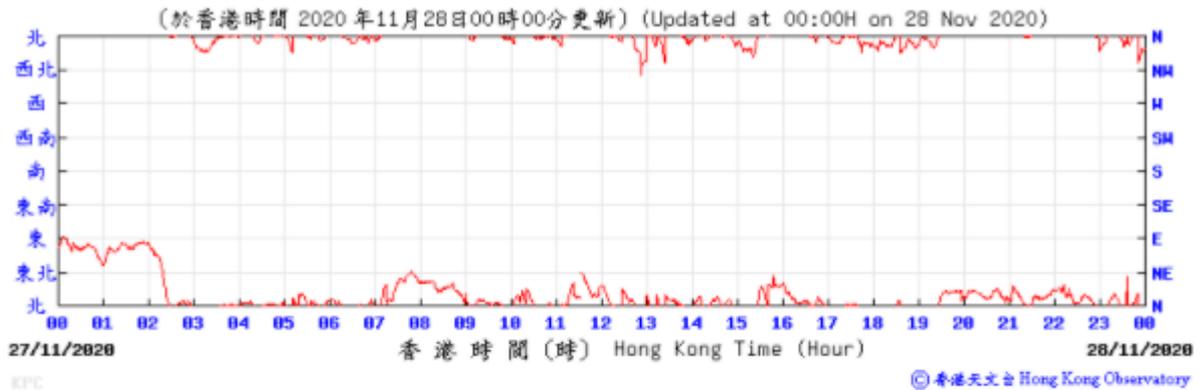
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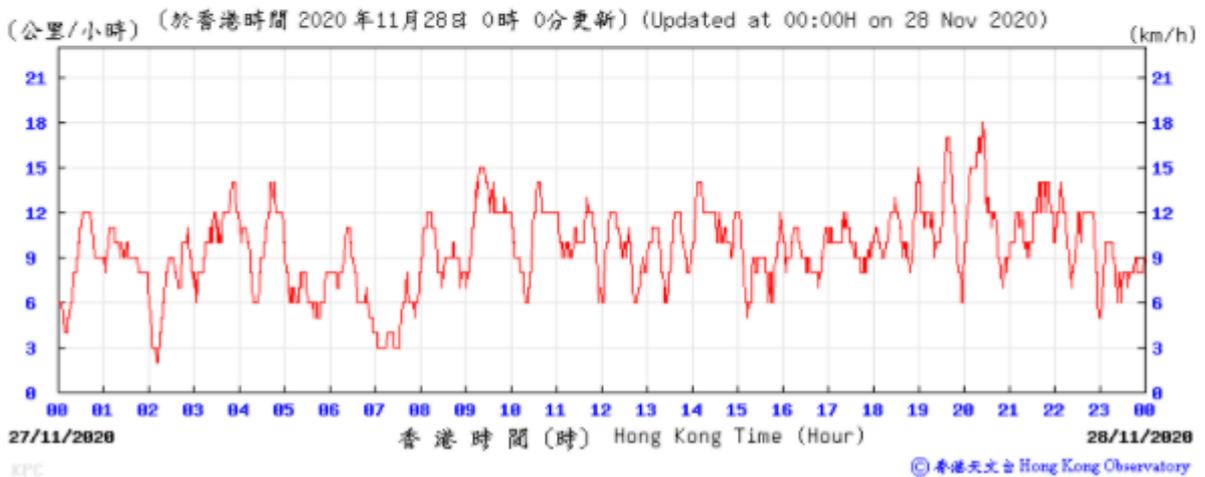
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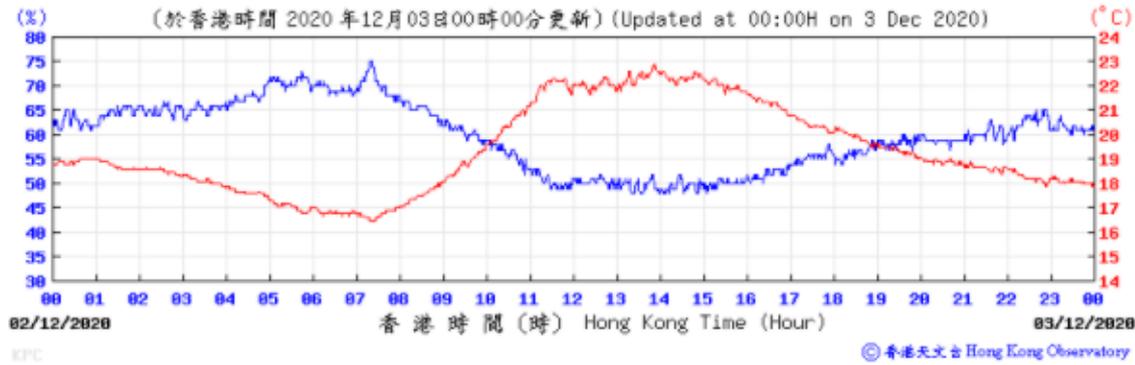
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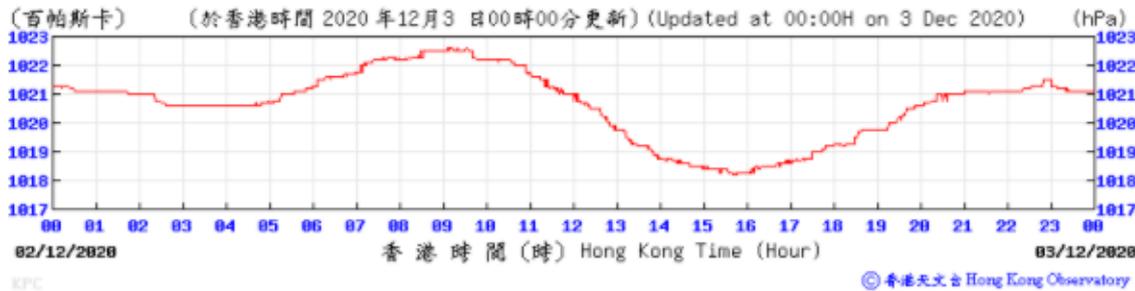
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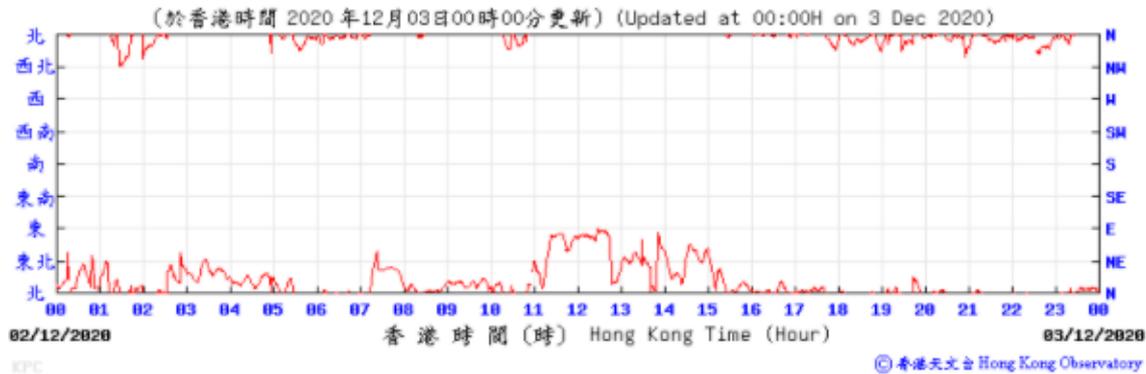
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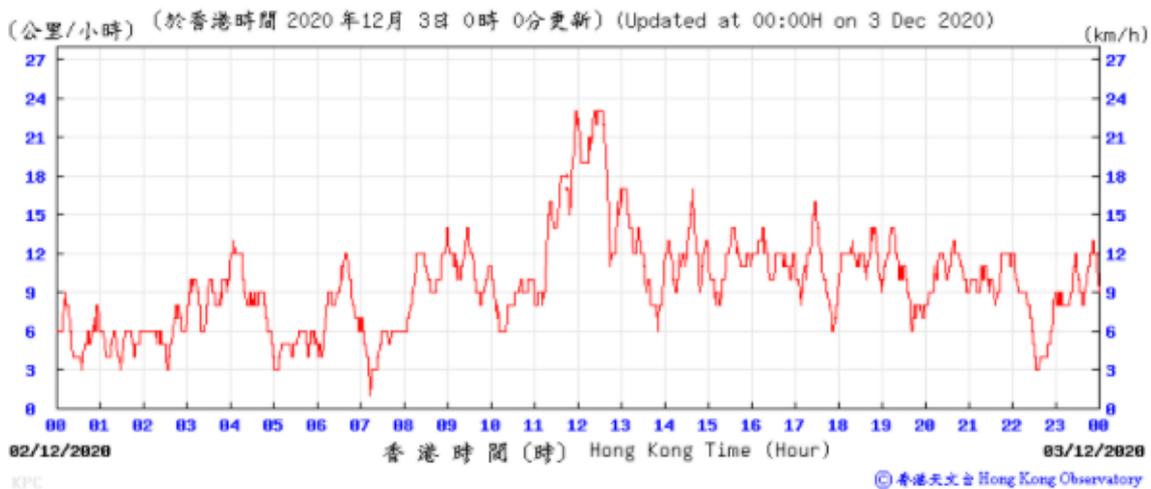
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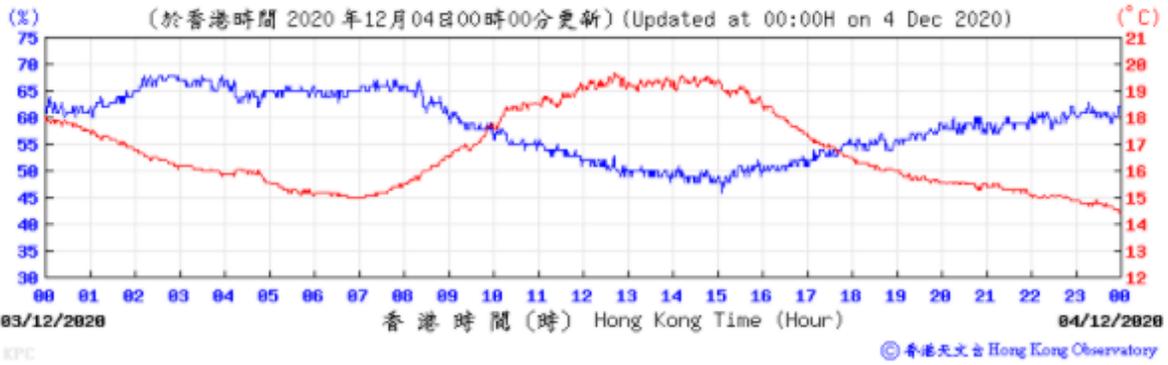
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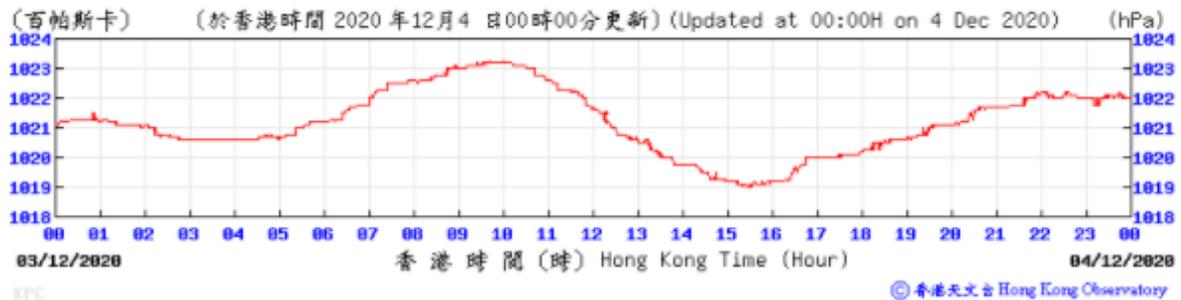
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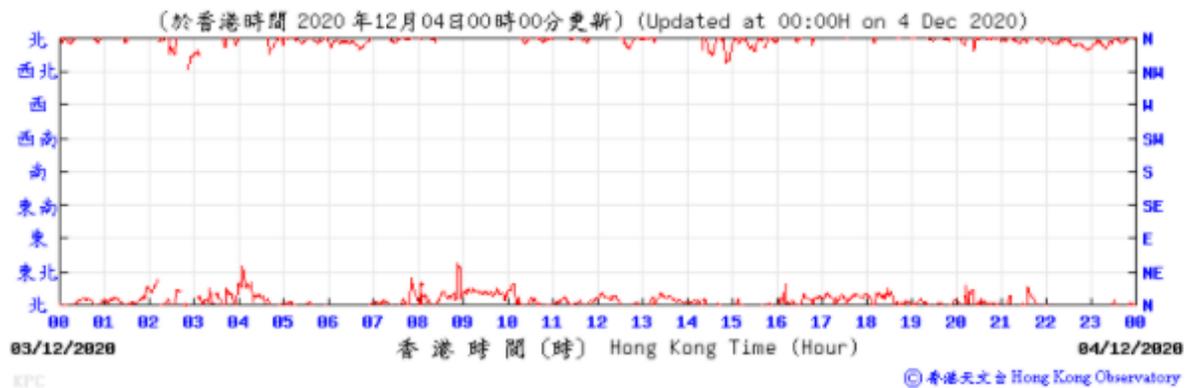
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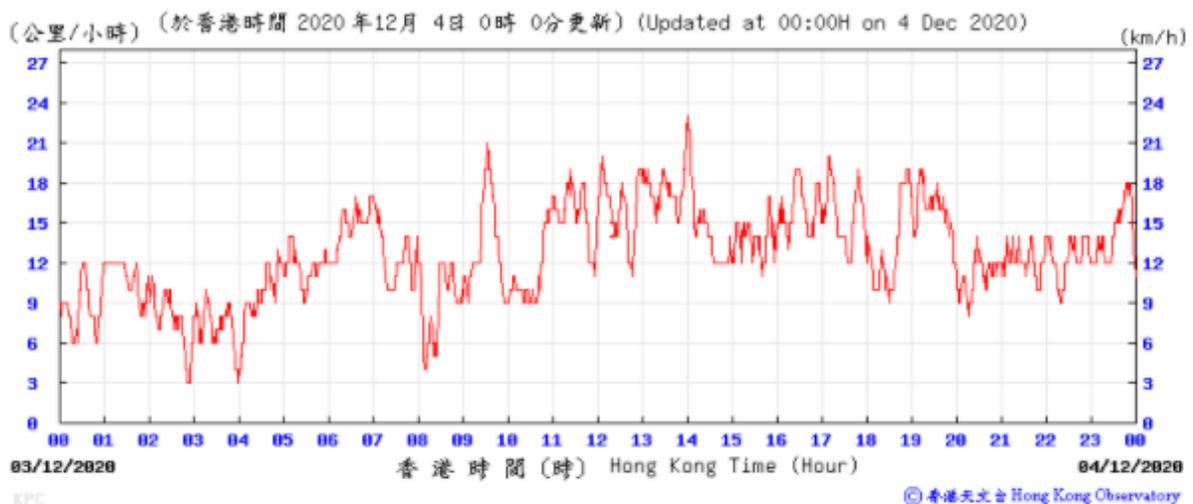
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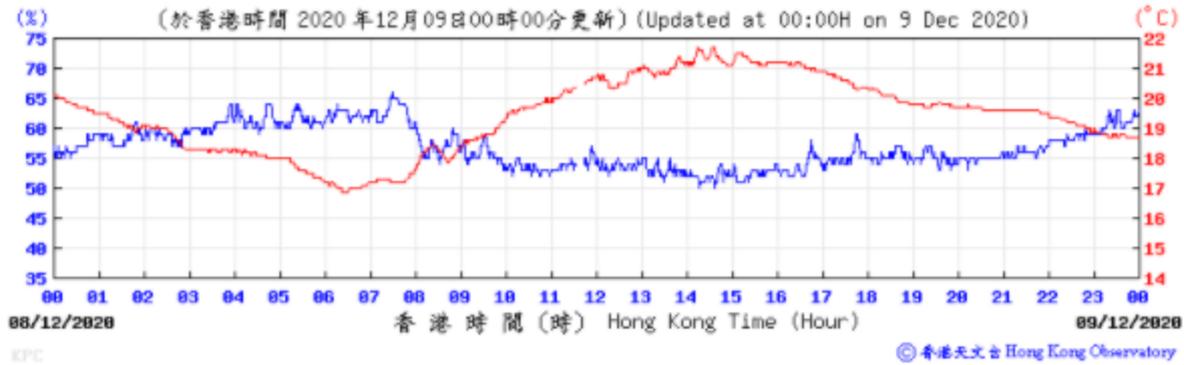
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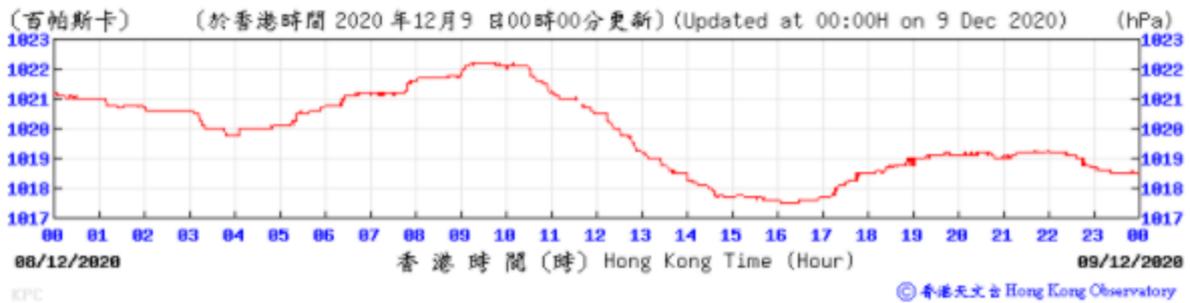
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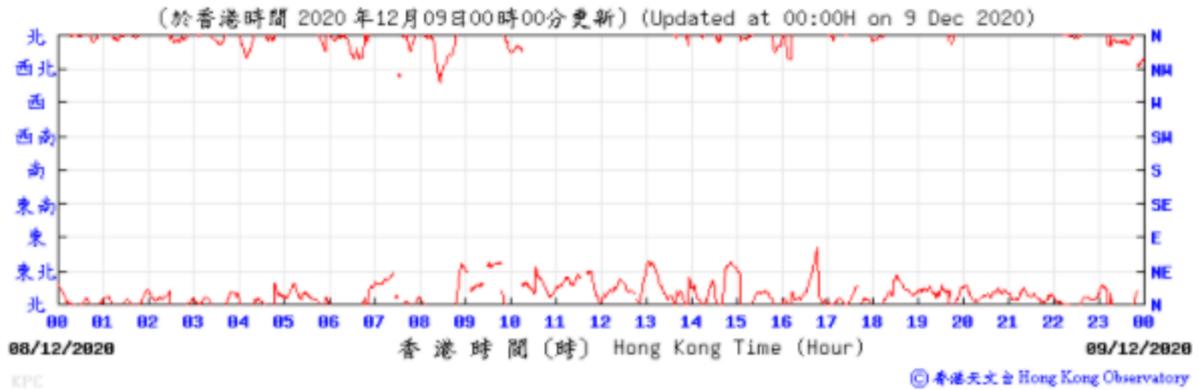
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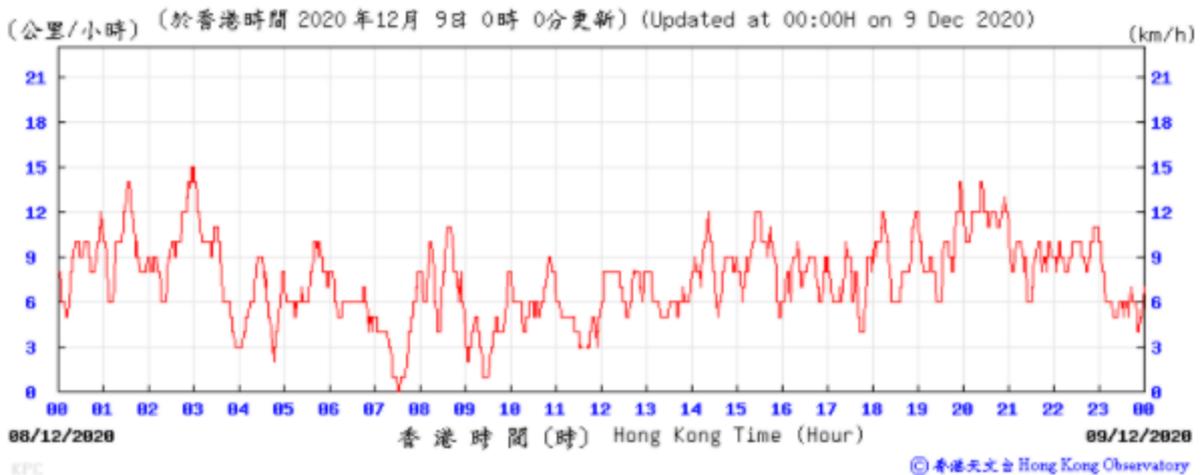
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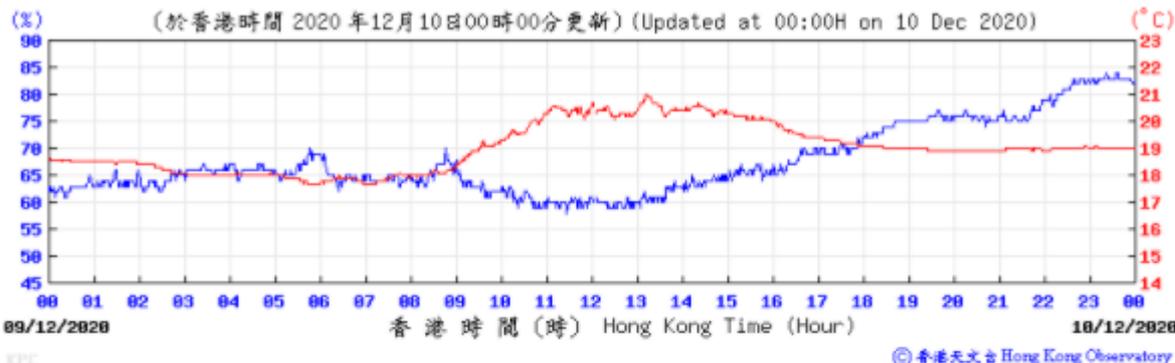
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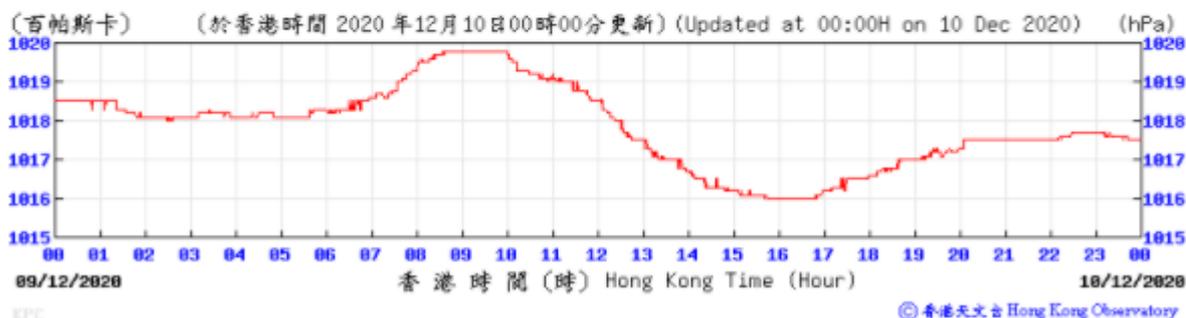
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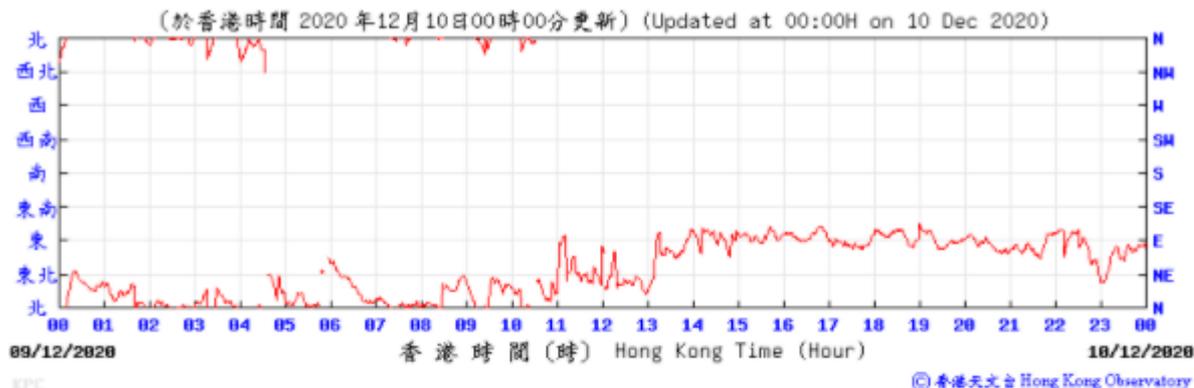
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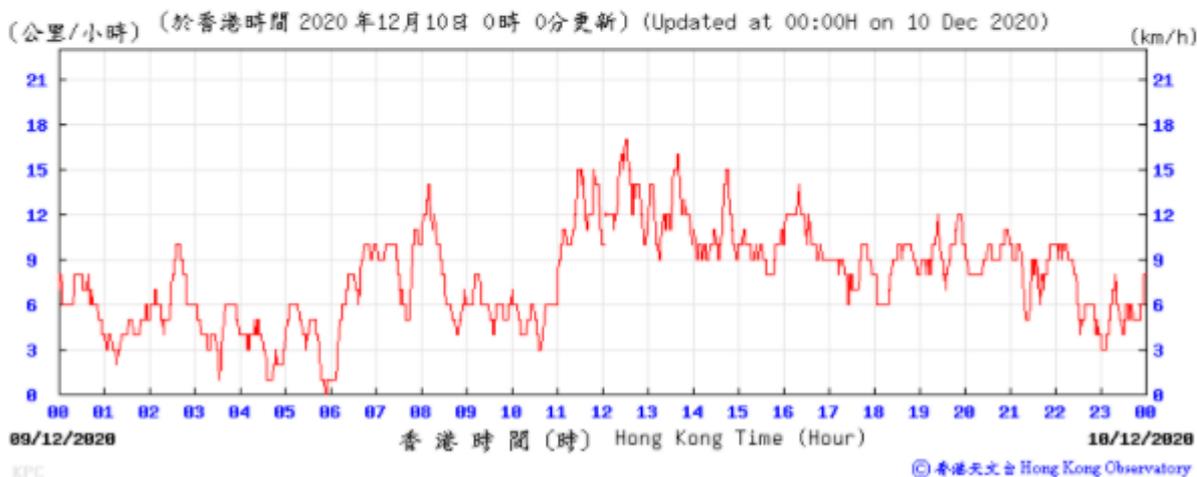
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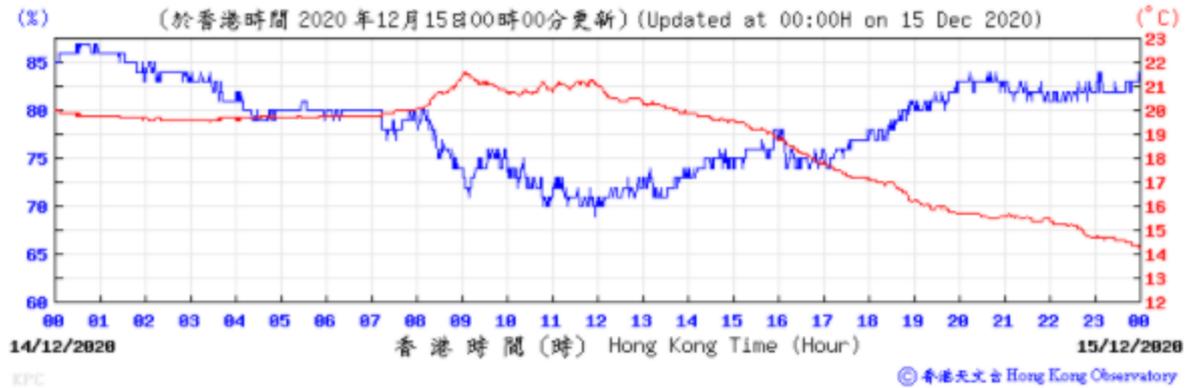
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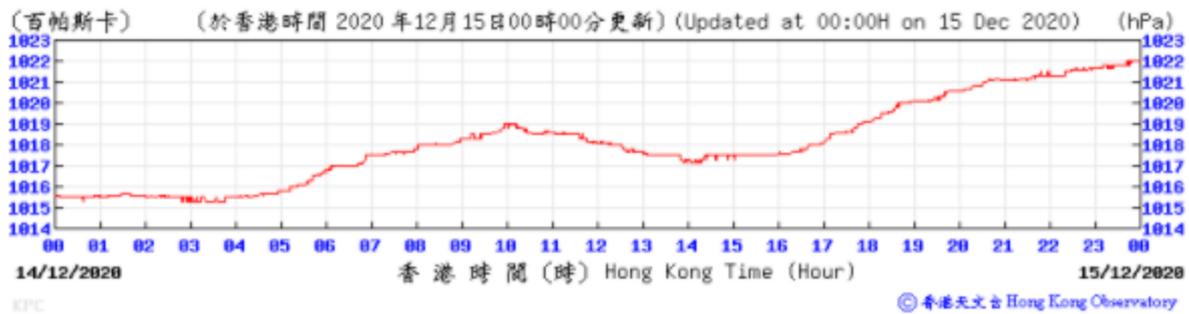
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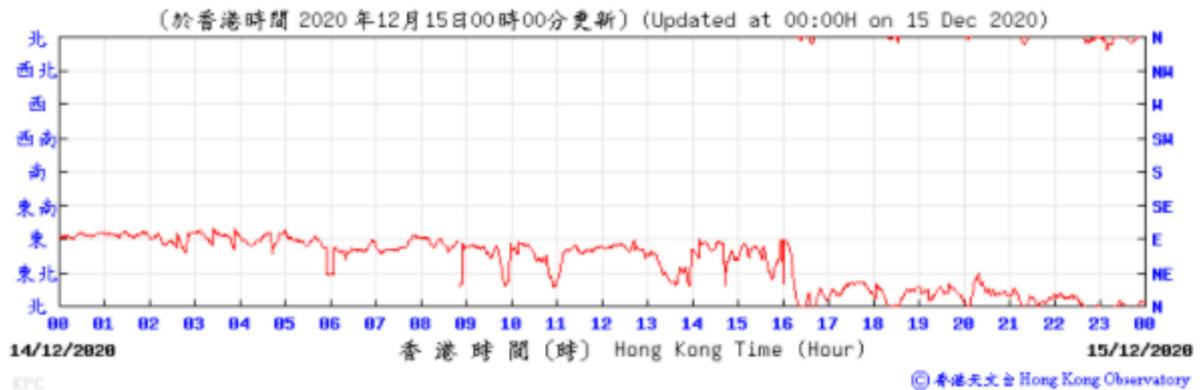
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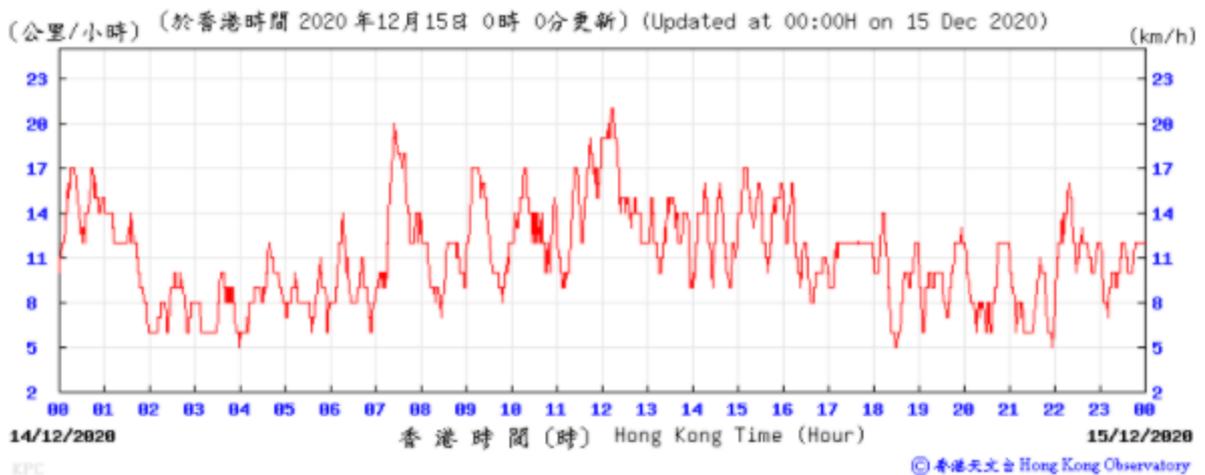
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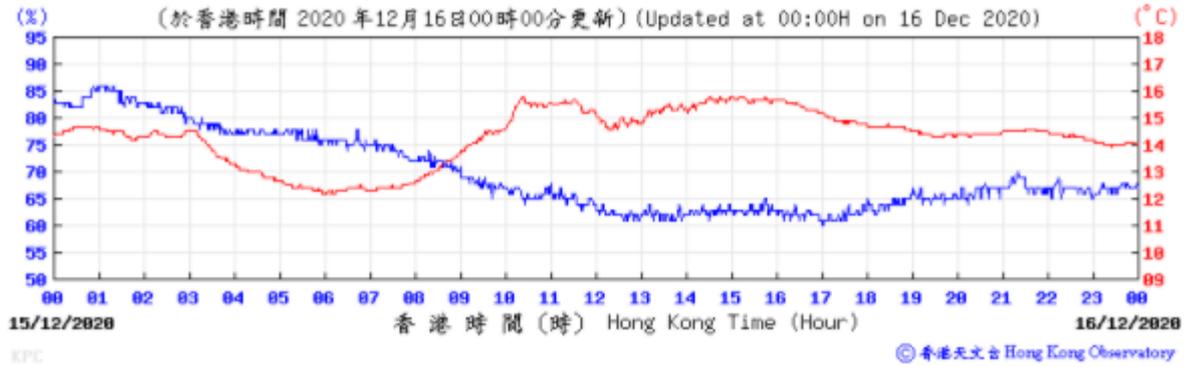
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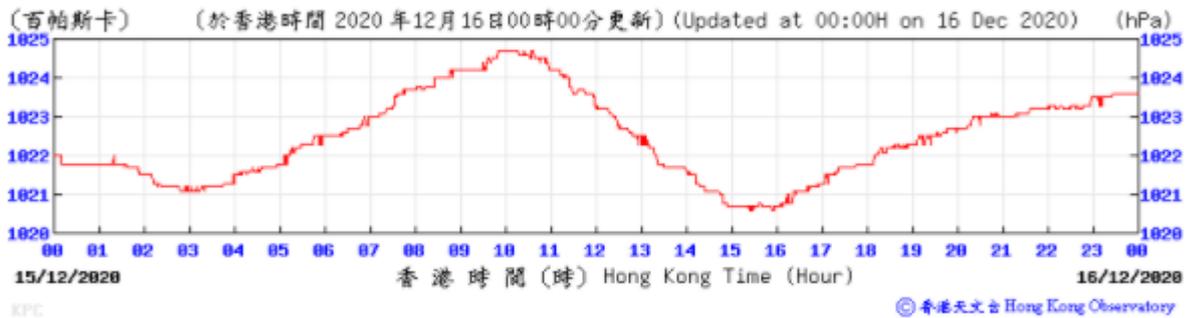
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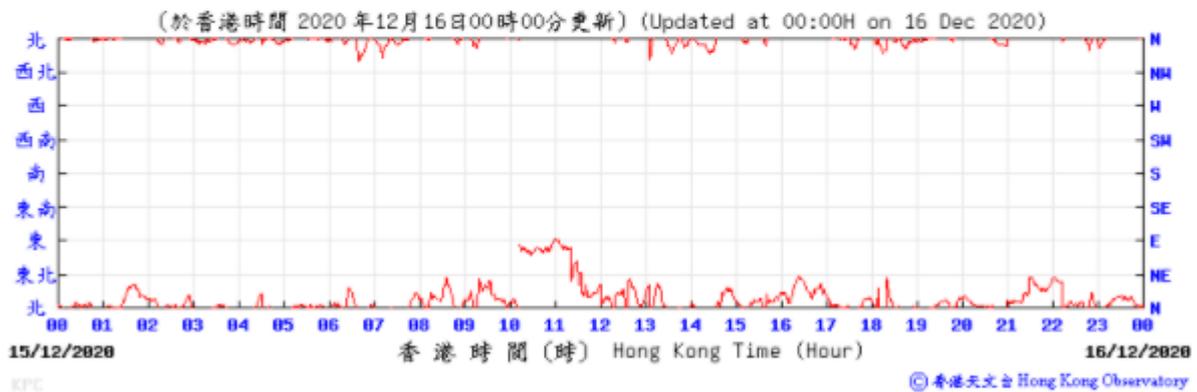
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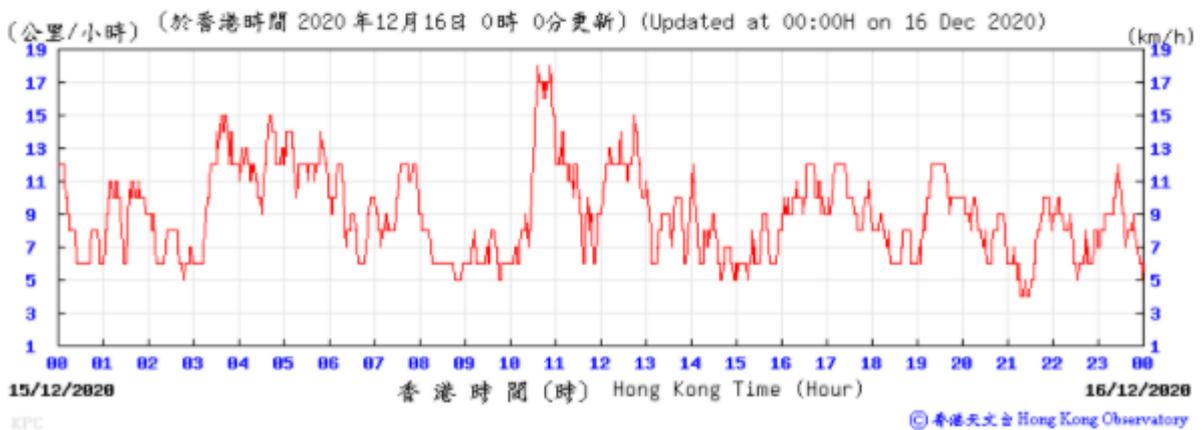
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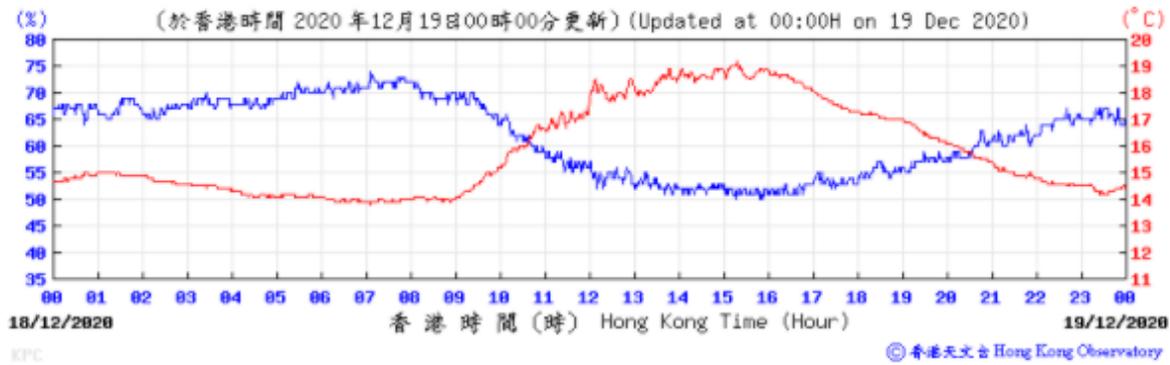
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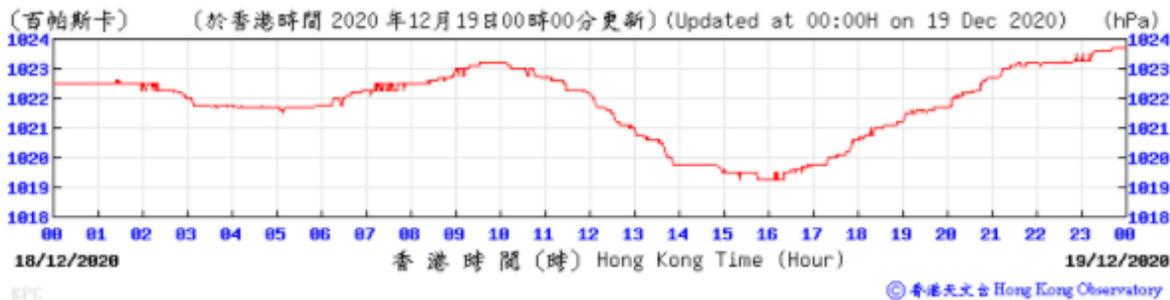
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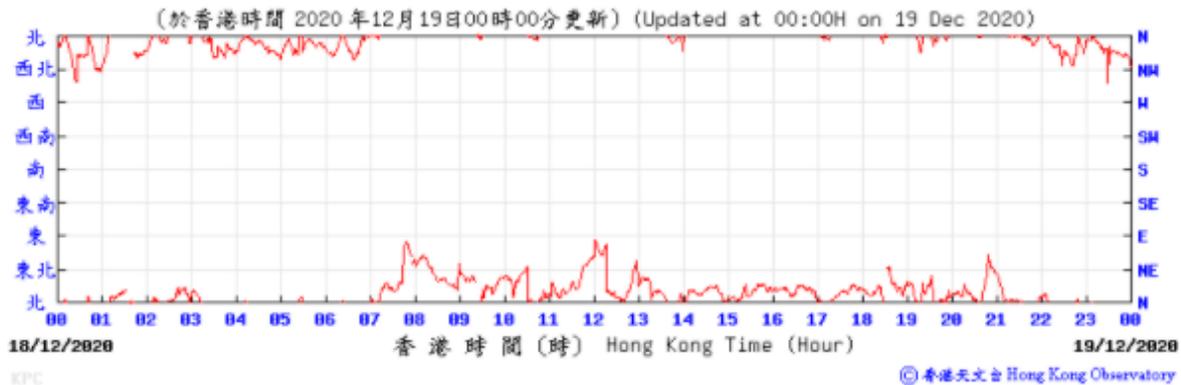
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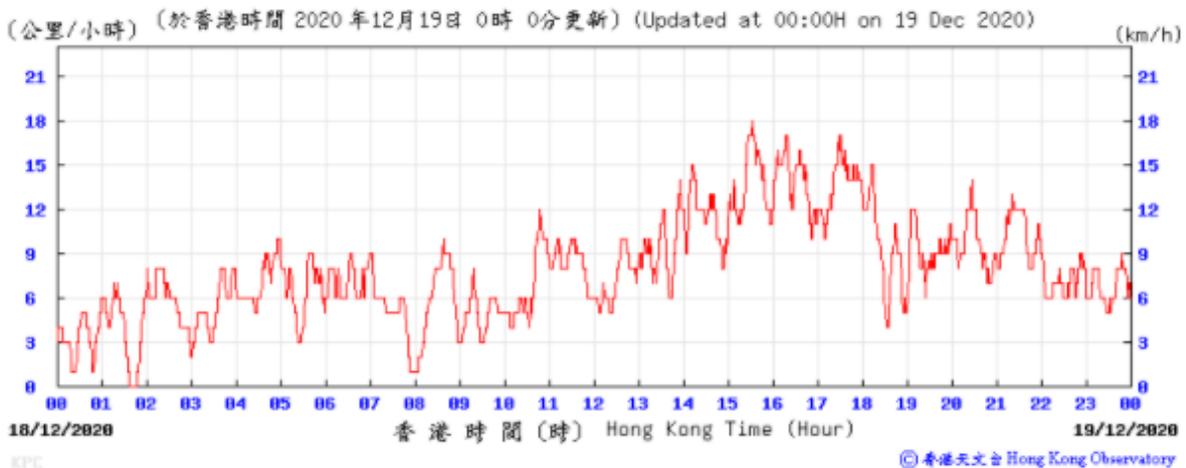
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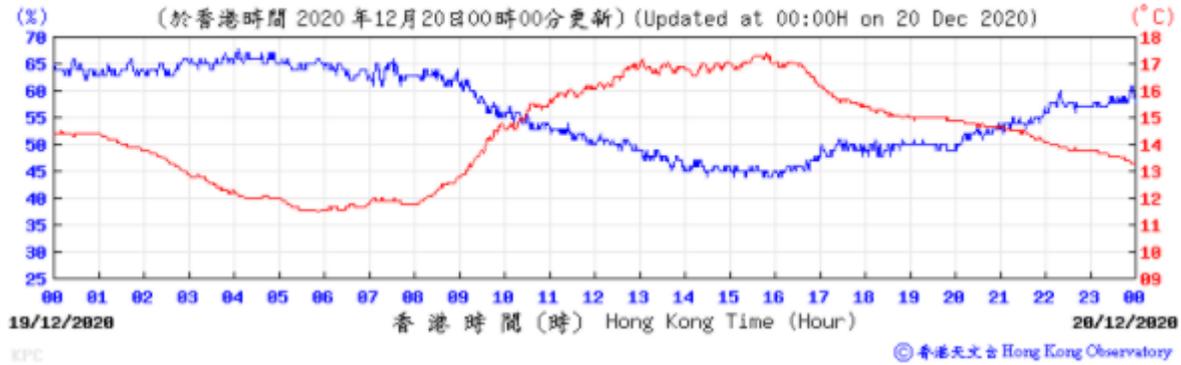
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Wind Speed:



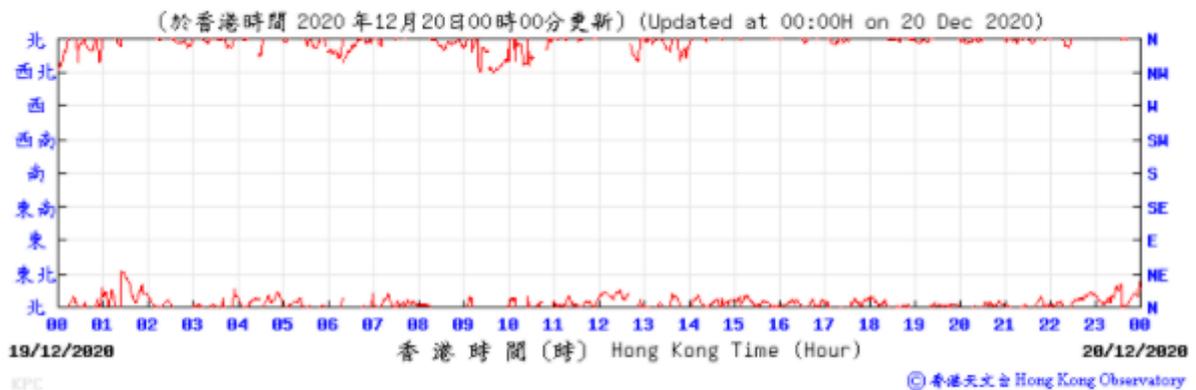
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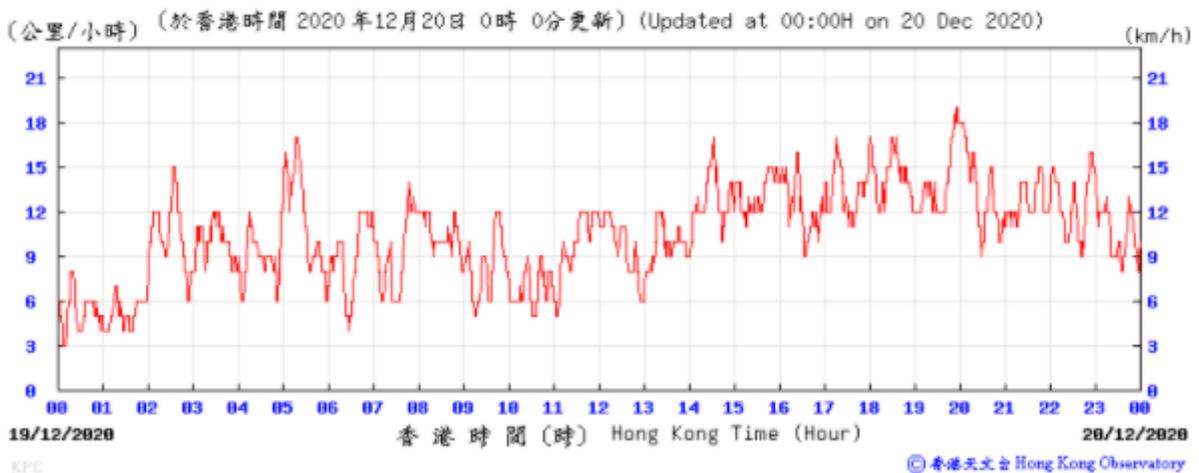
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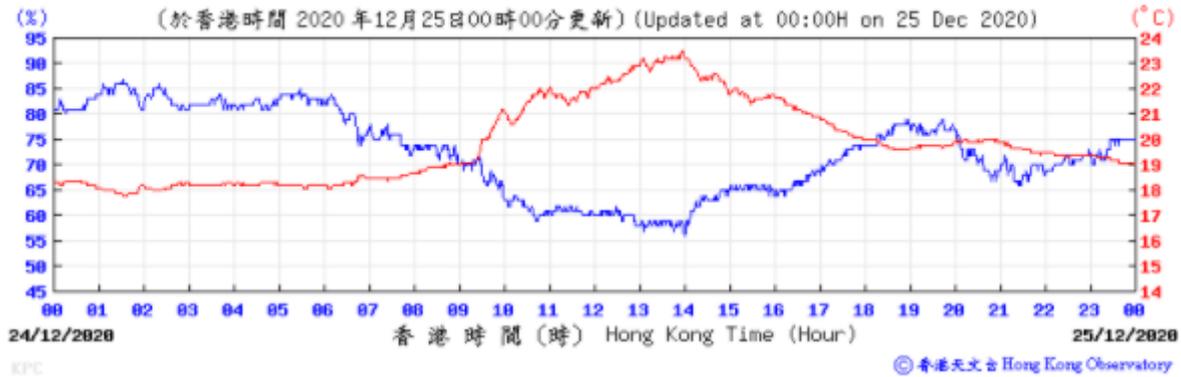
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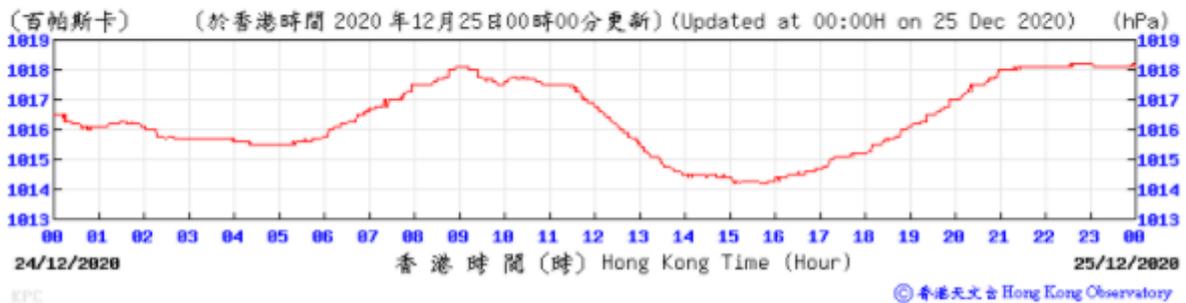
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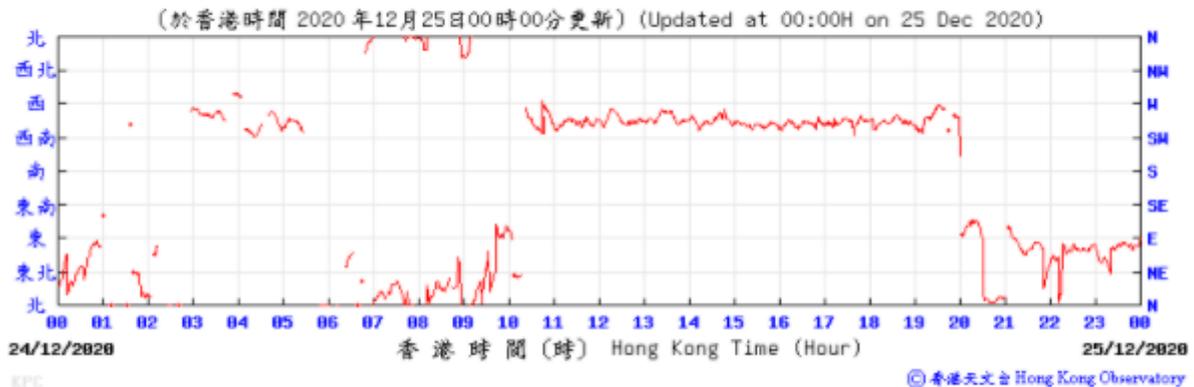
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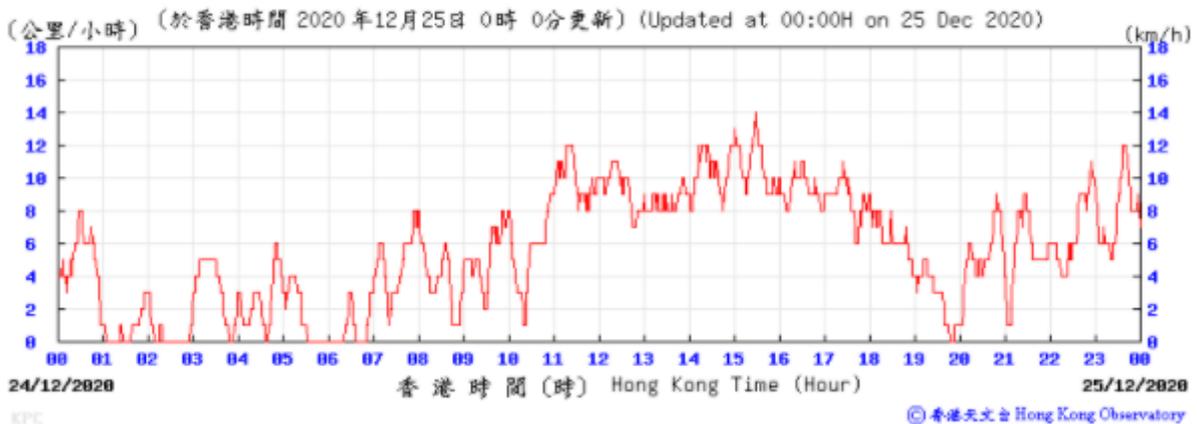
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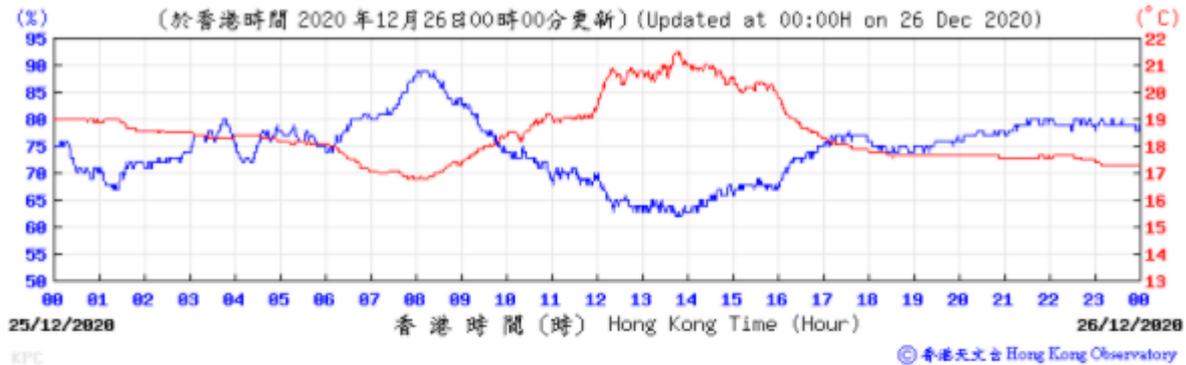
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Wind Speed:



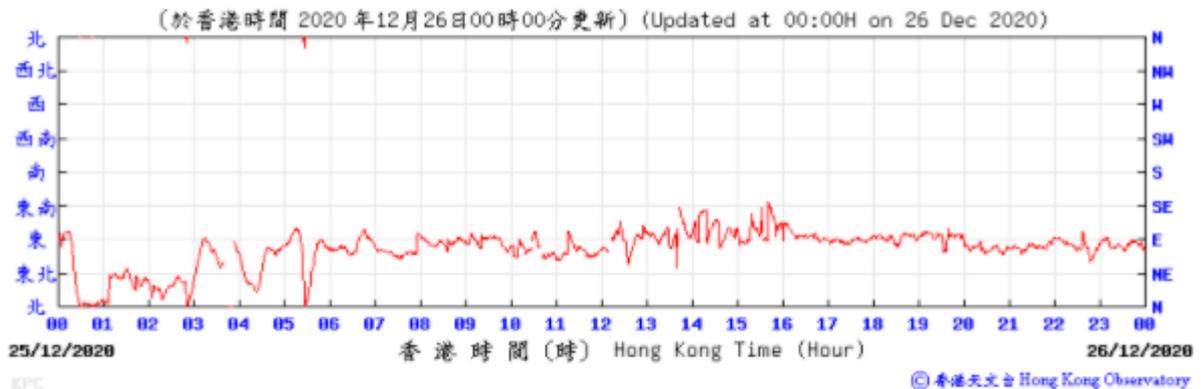
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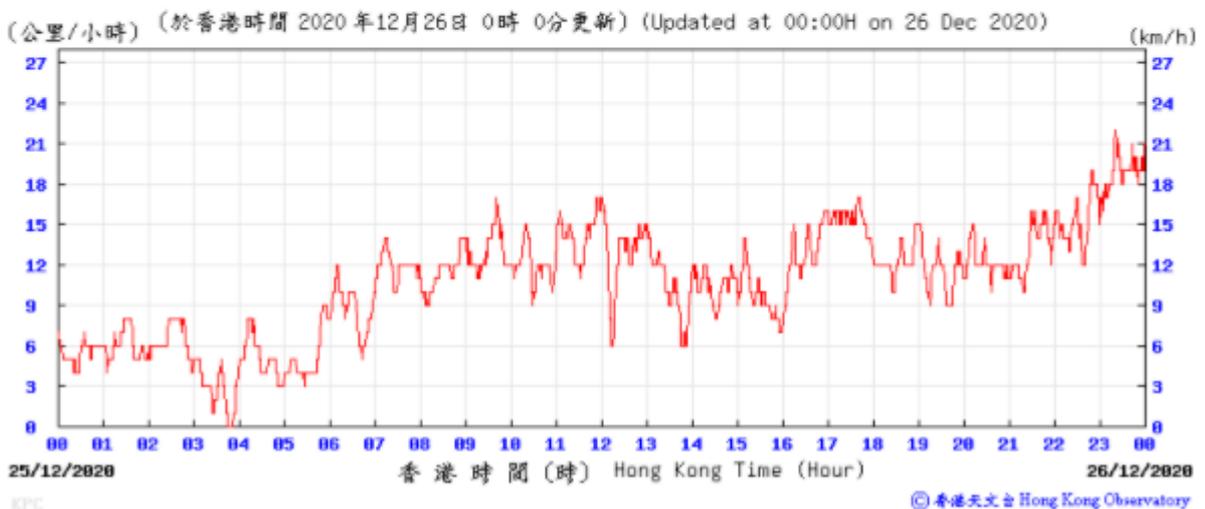
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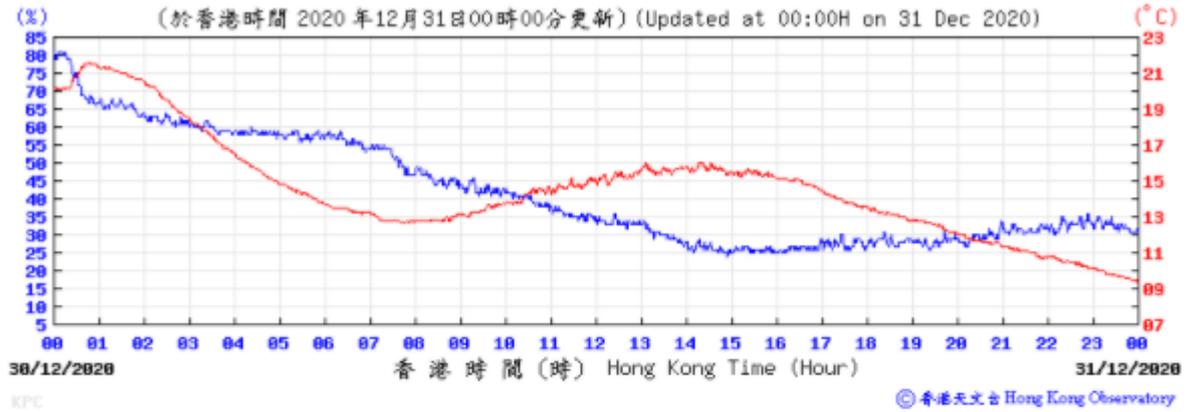
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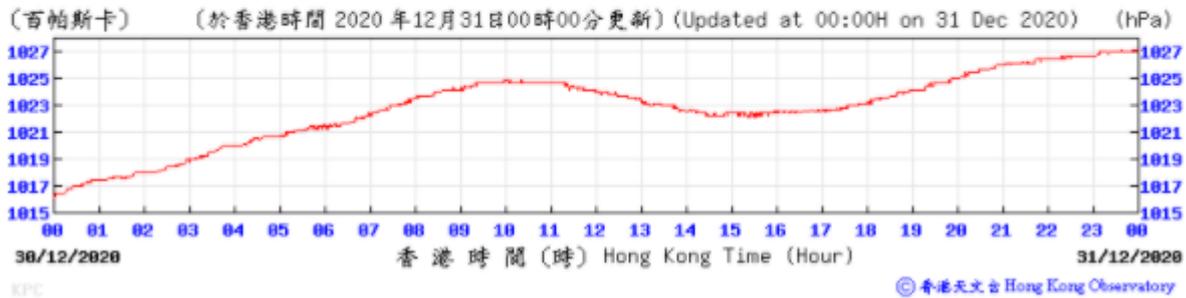
Wind Speed:



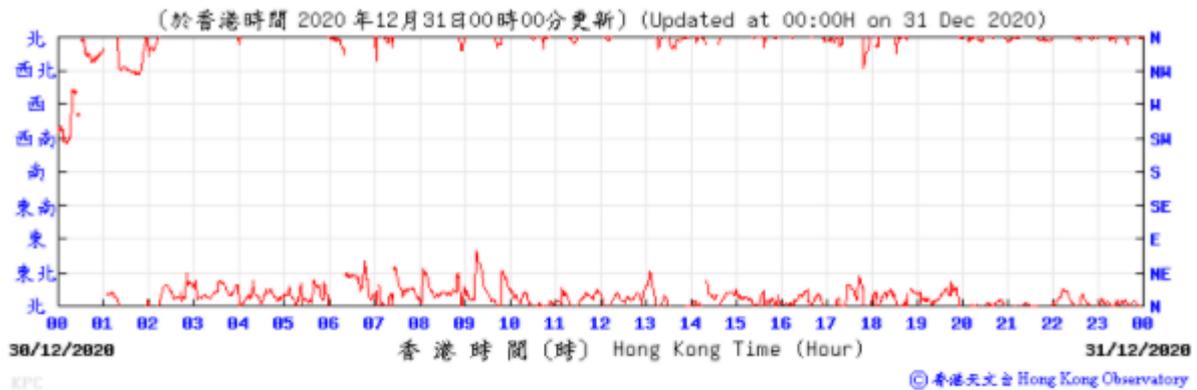
Temperature/Humidity:



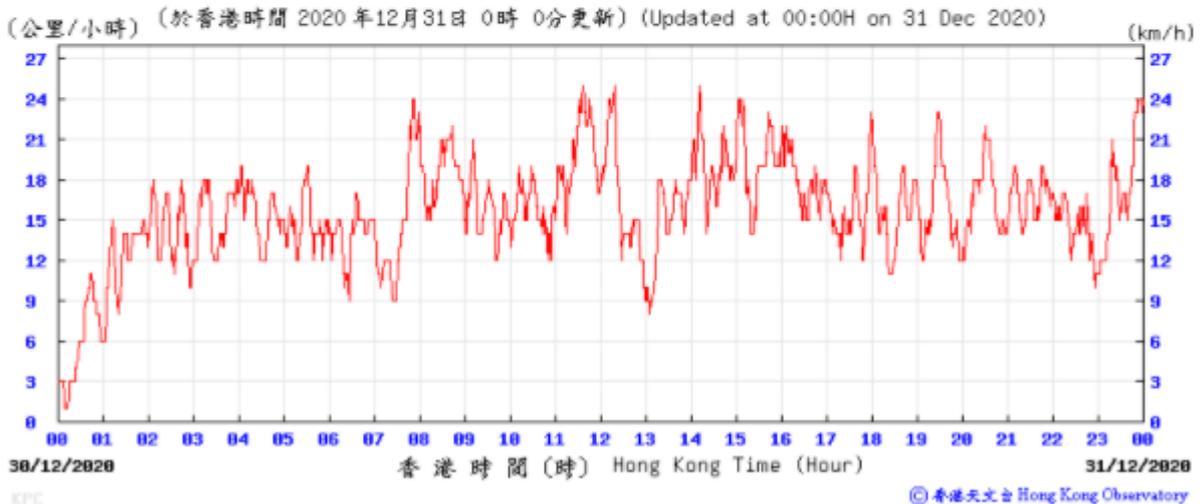
Pressure:



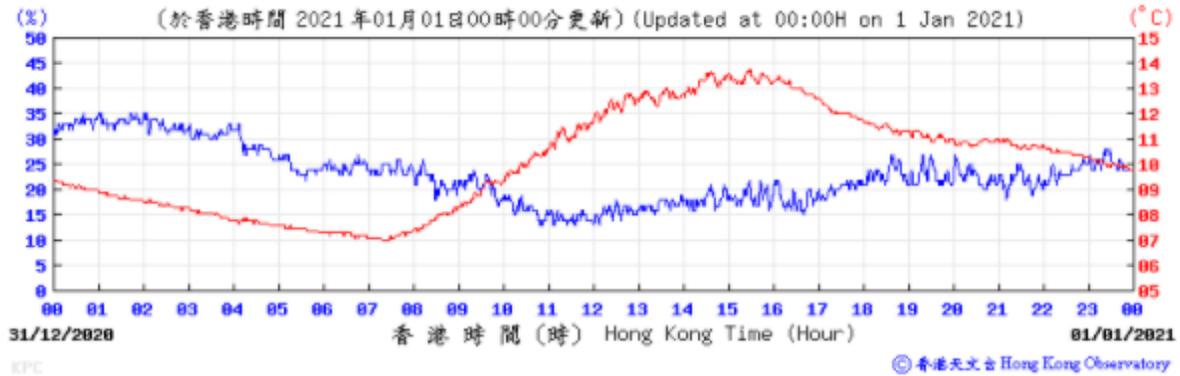
Wind Direction:



Wind Speed:



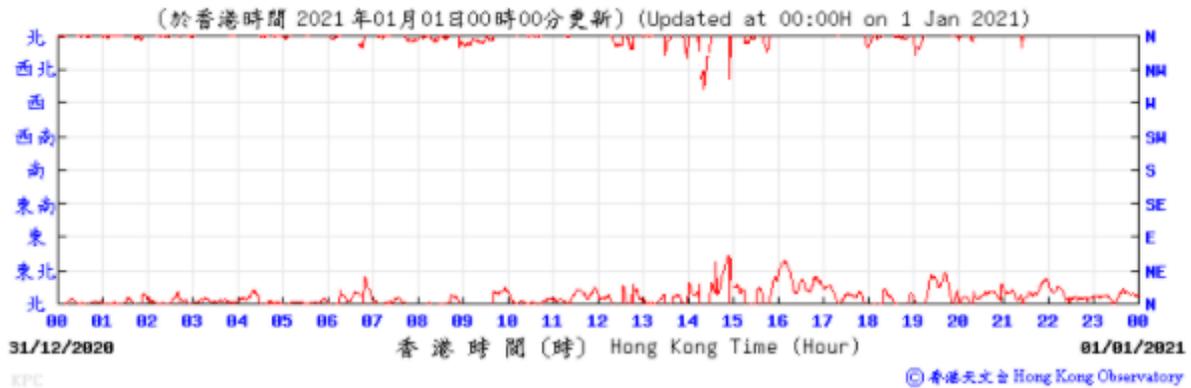
Temperature/Humidity:



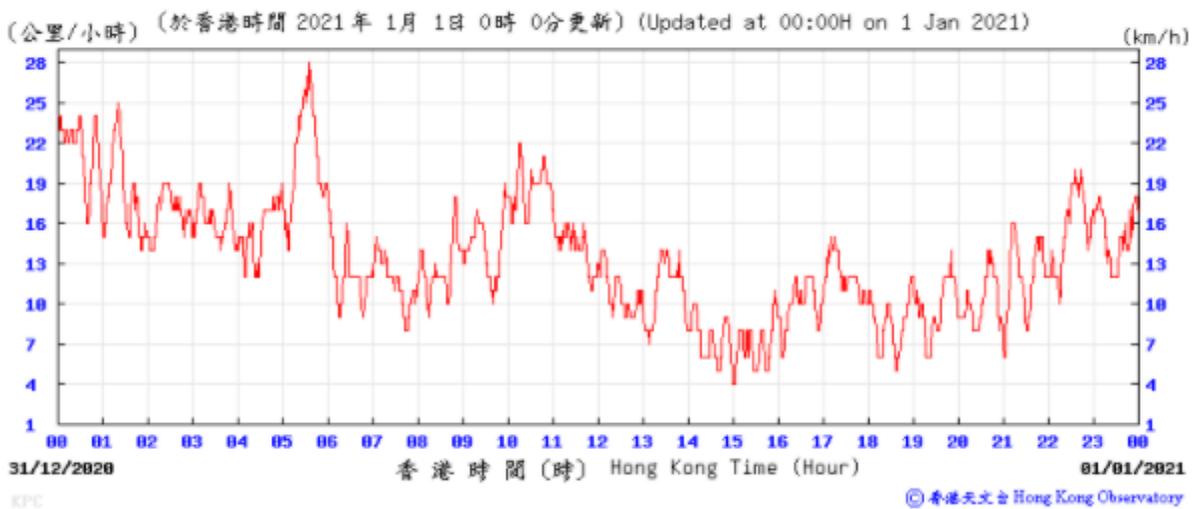
Pressure:



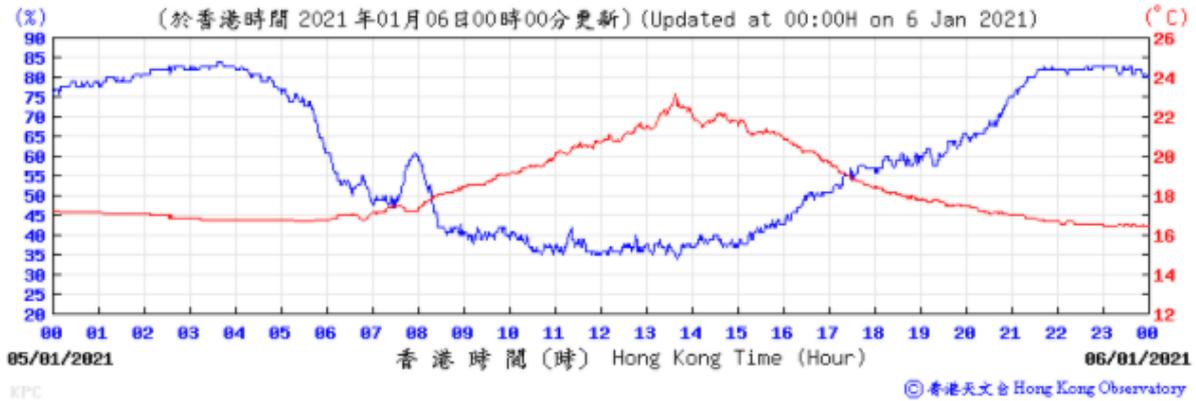
Wind Direction:



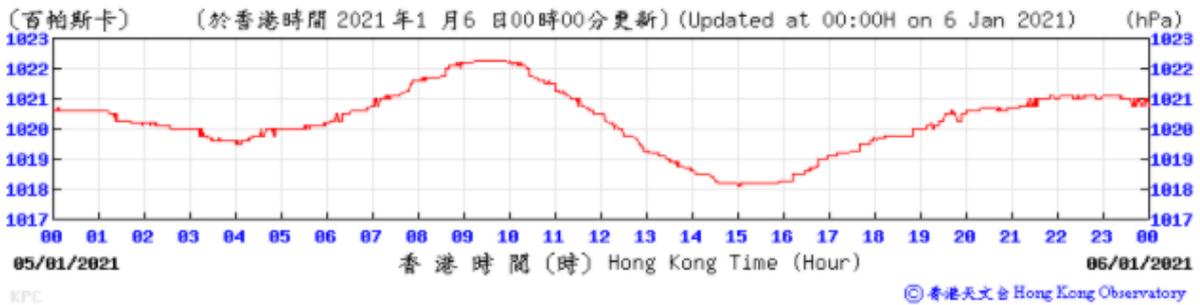
Wind Speed:



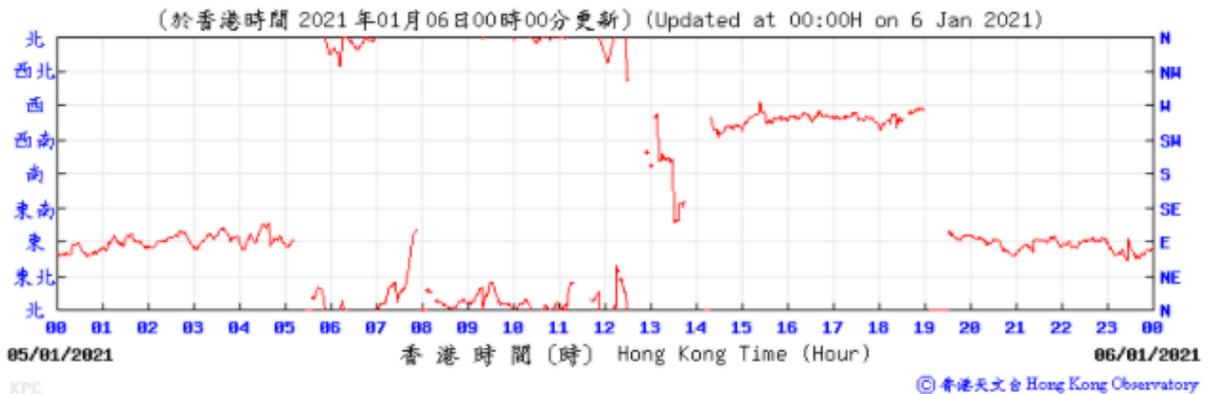
Temperature/Humidity:



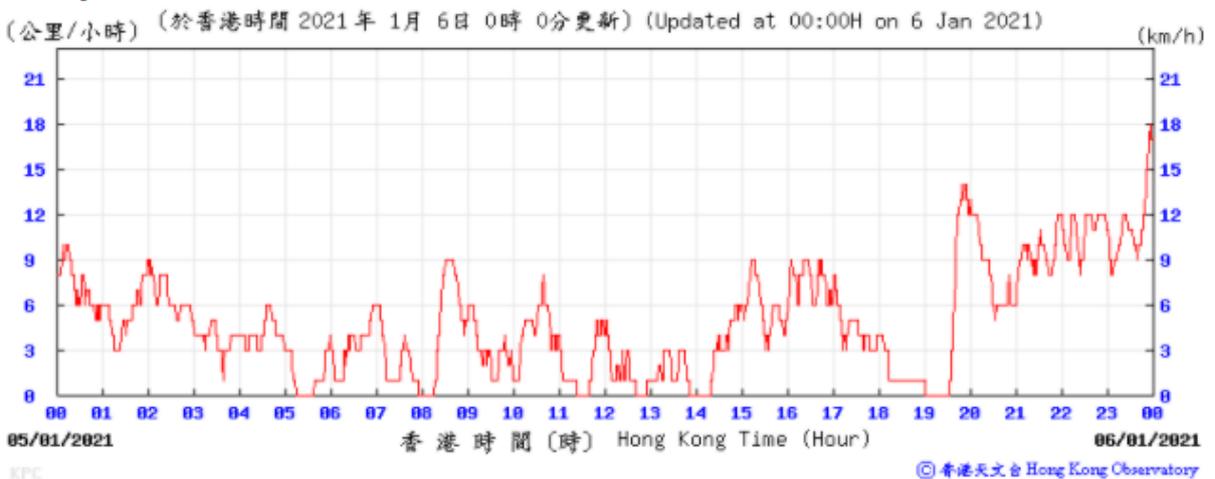
Pressure:



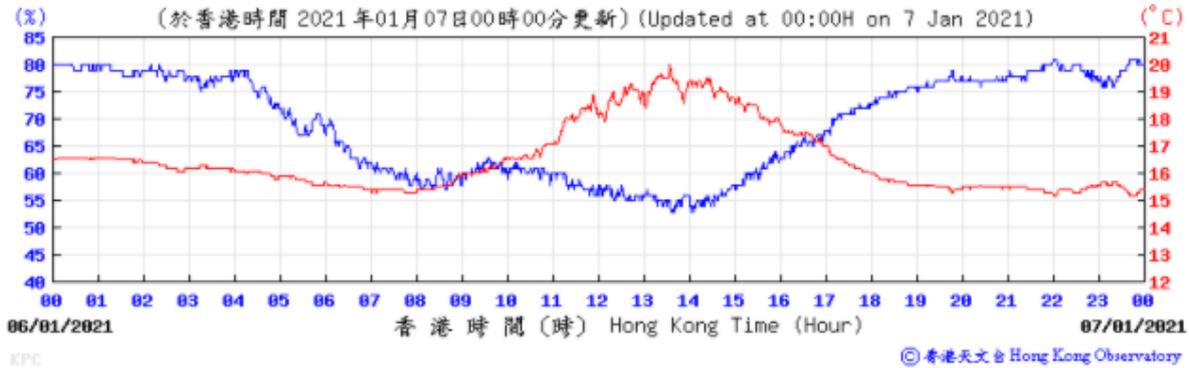
Wind Direction:



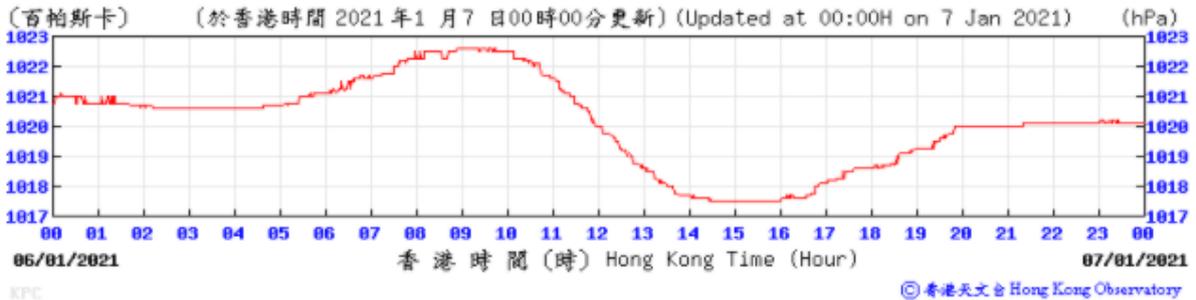
Wind Speed:



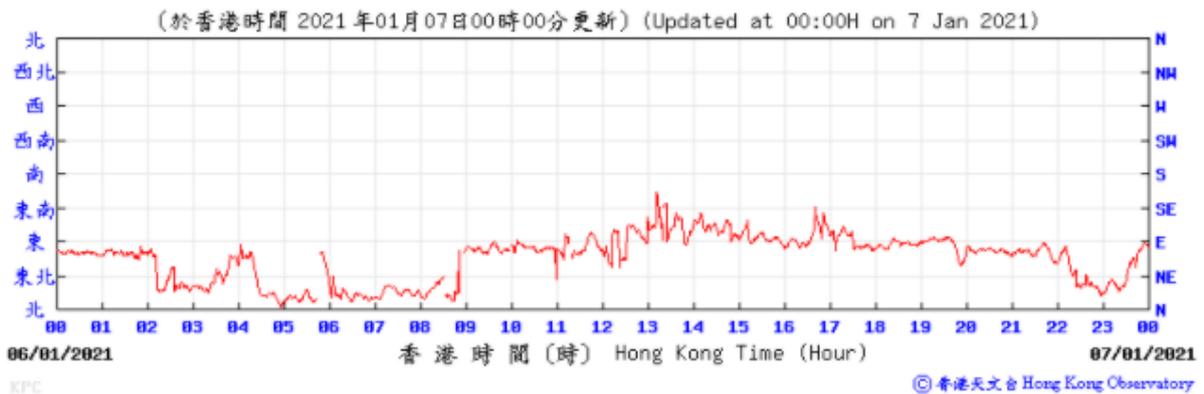
Temperature/Humidity:



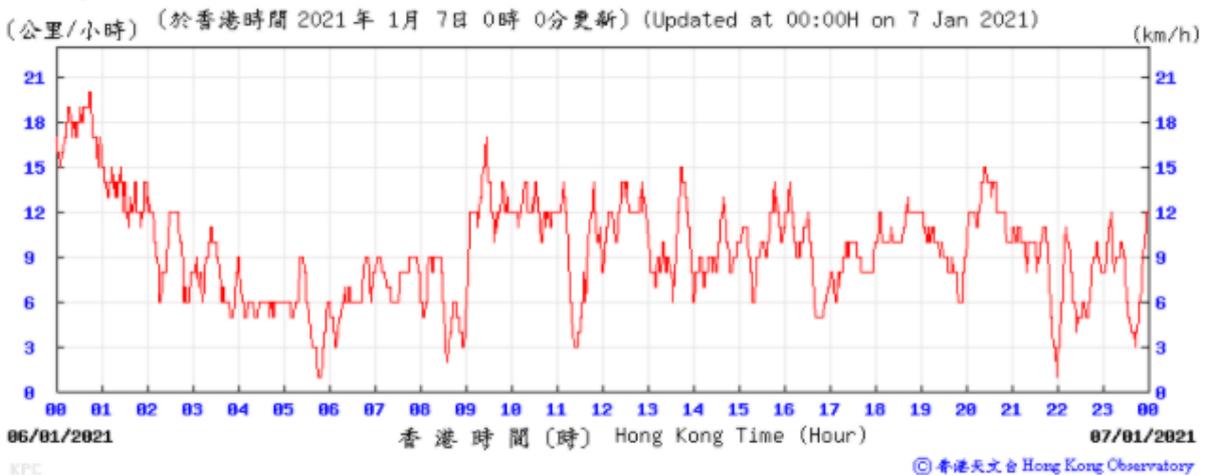
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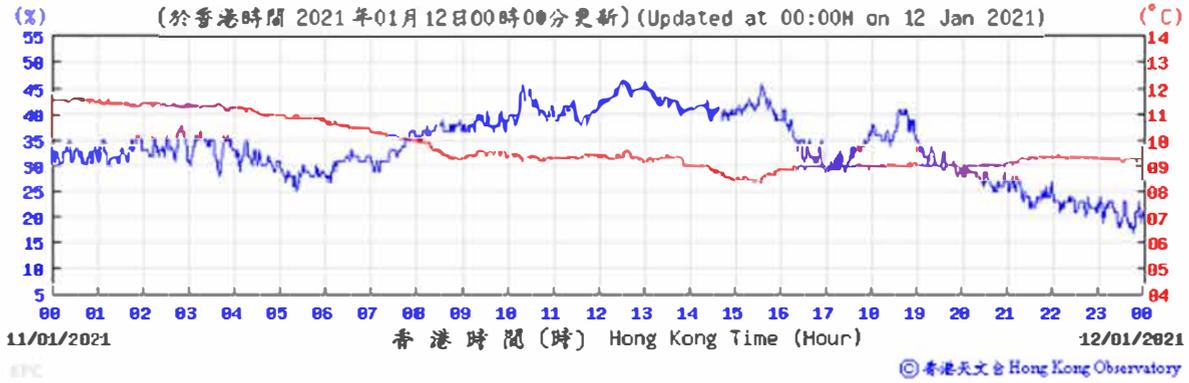
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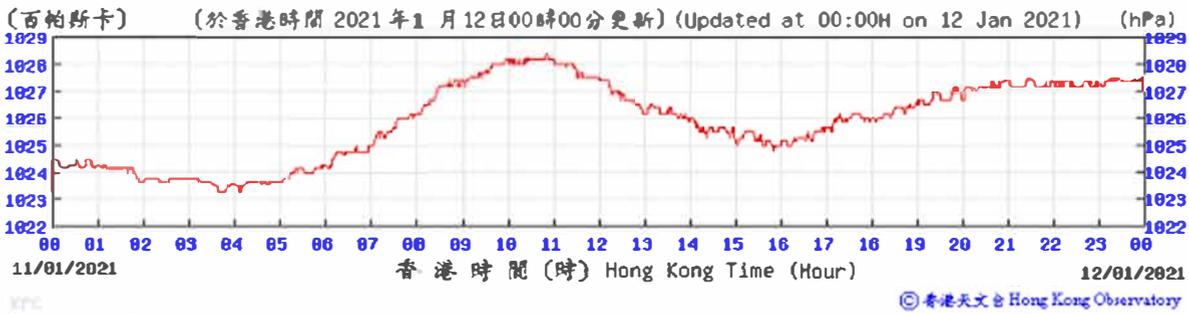
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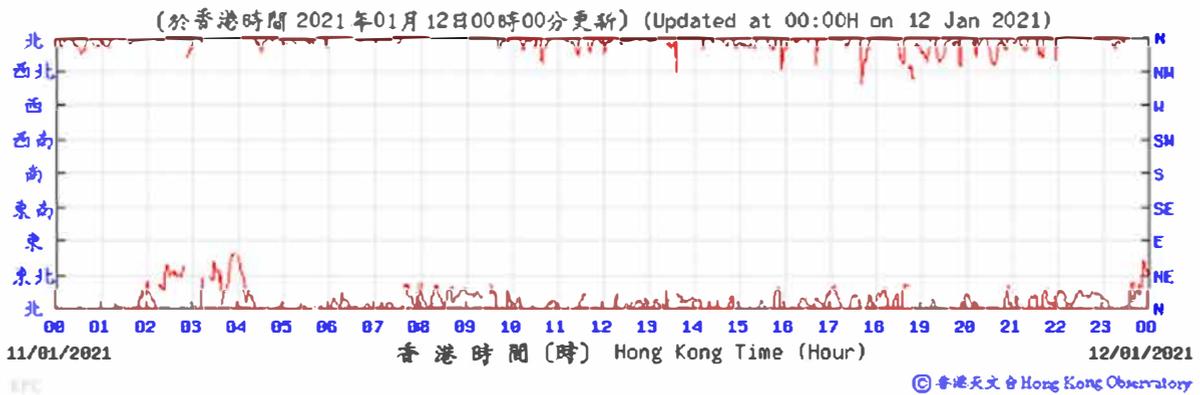
Temperature-Humidity:



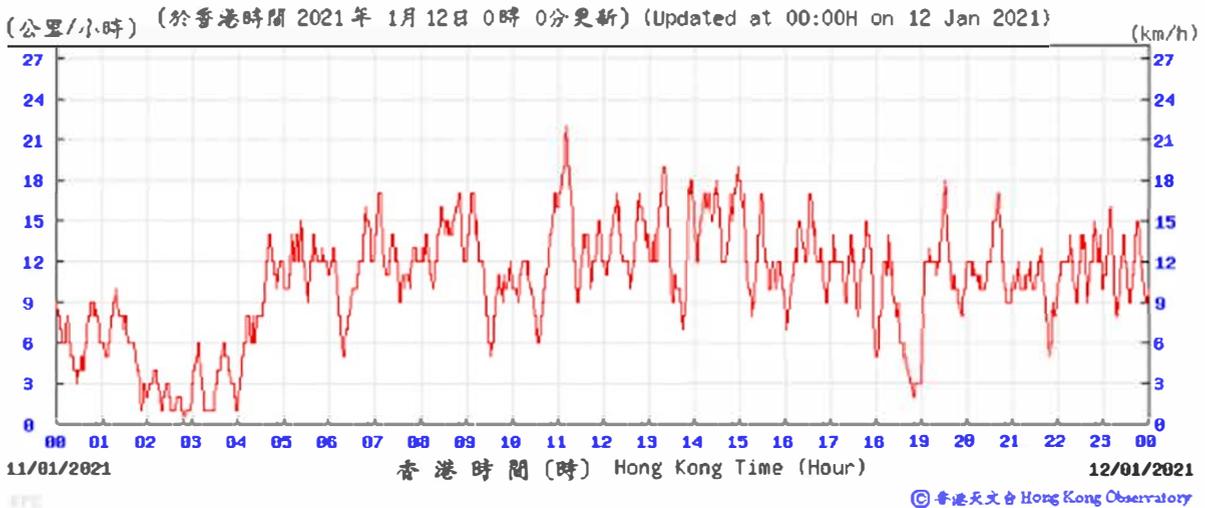
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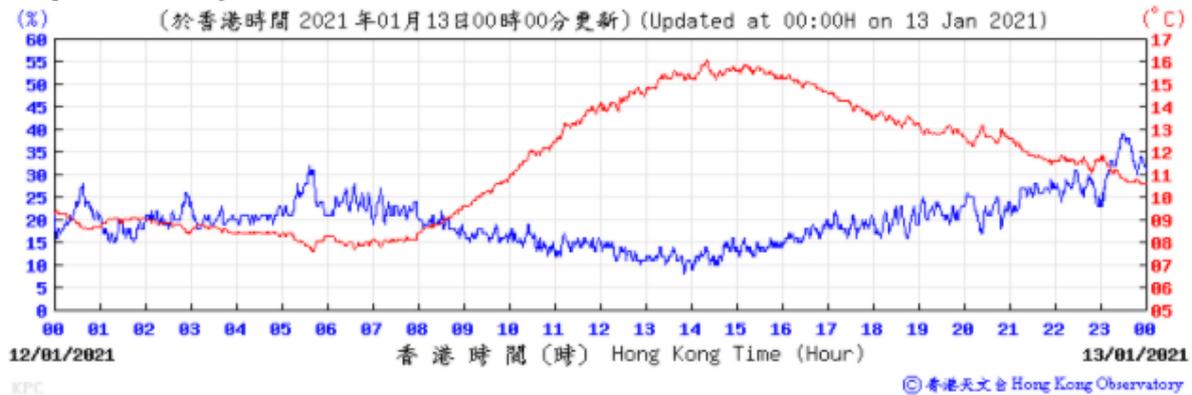
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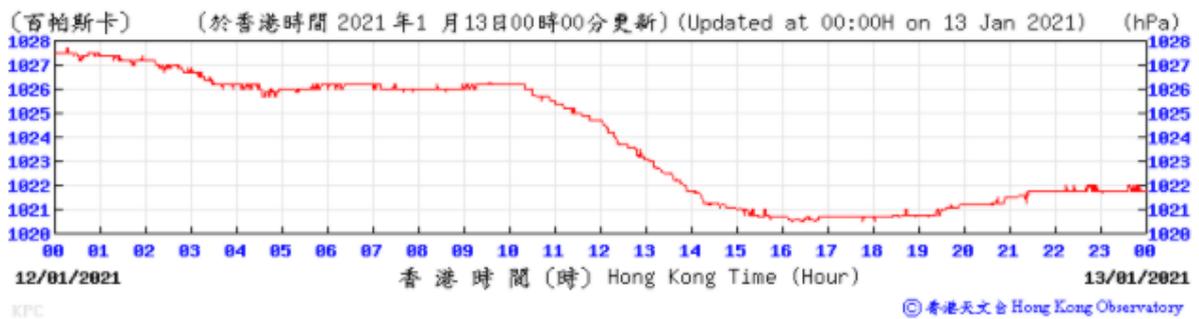
Wind Speed:



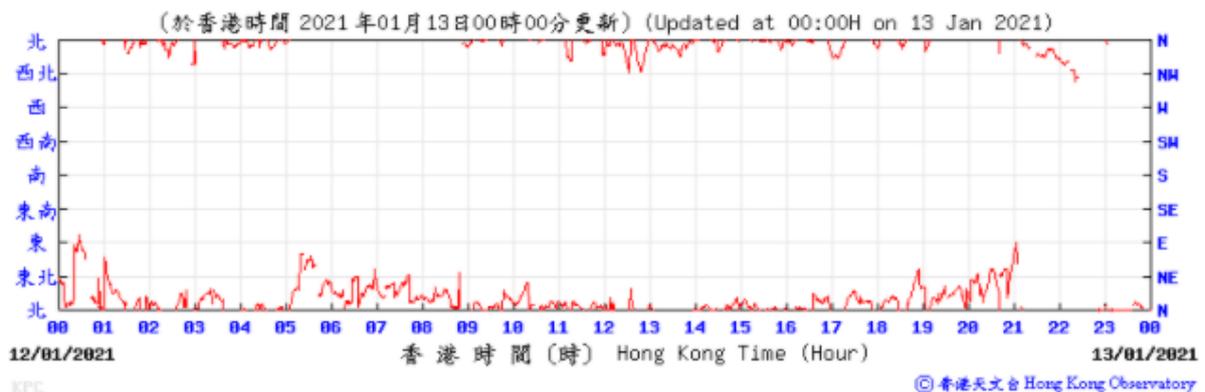
Temperature/Humidity:



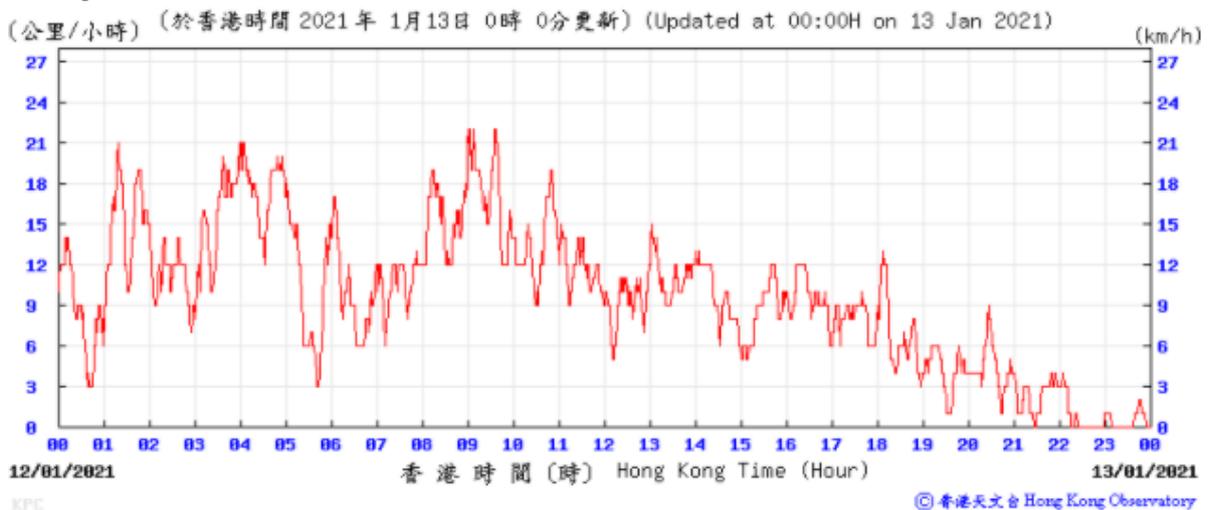
Pressure:



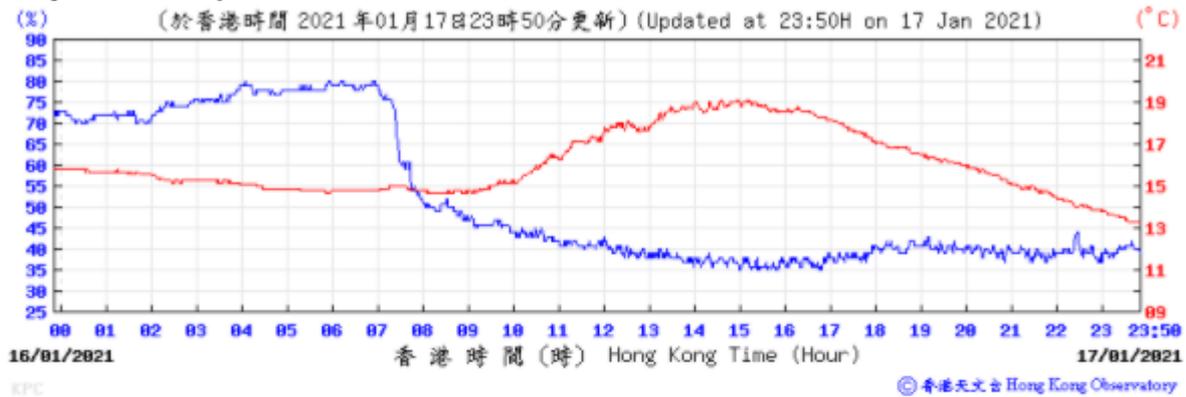
Wind Direction:



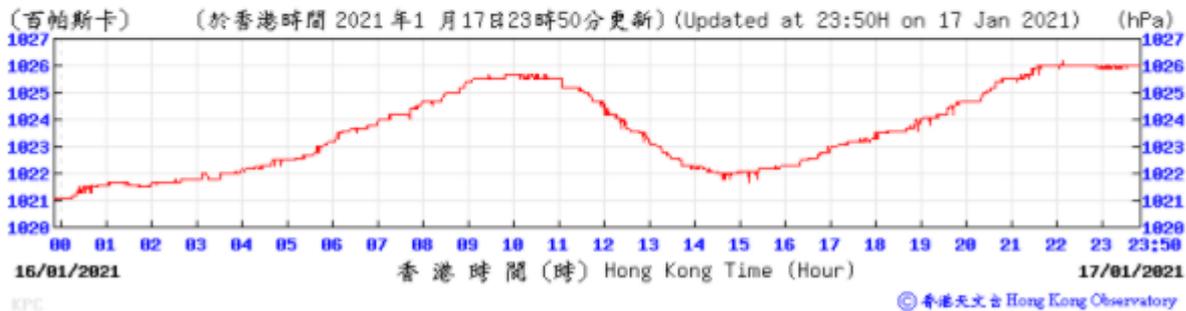
Wind Speed:



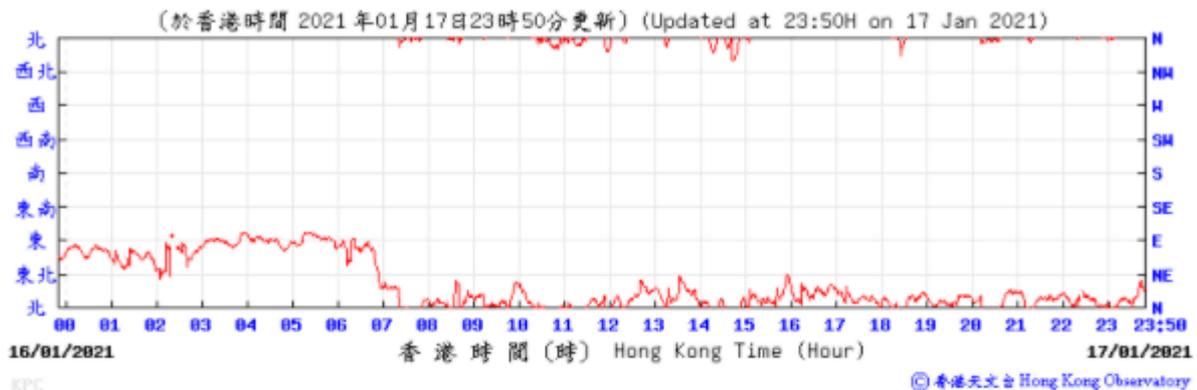
Temperature/Humidity:



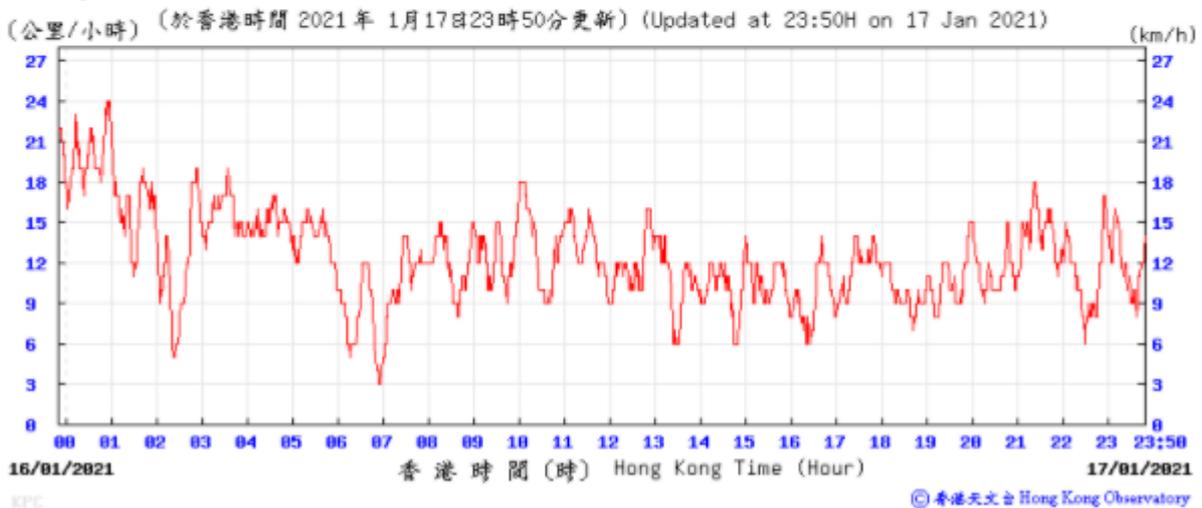
Pressure:



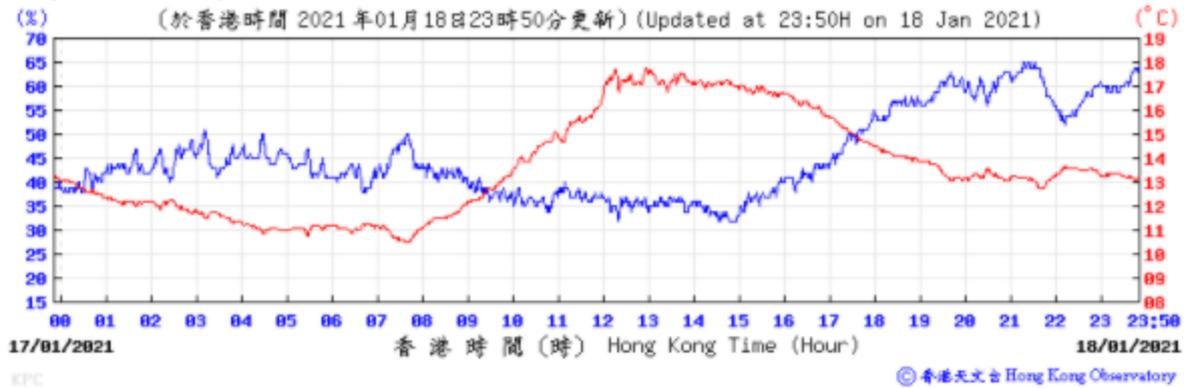
Wind Direction:



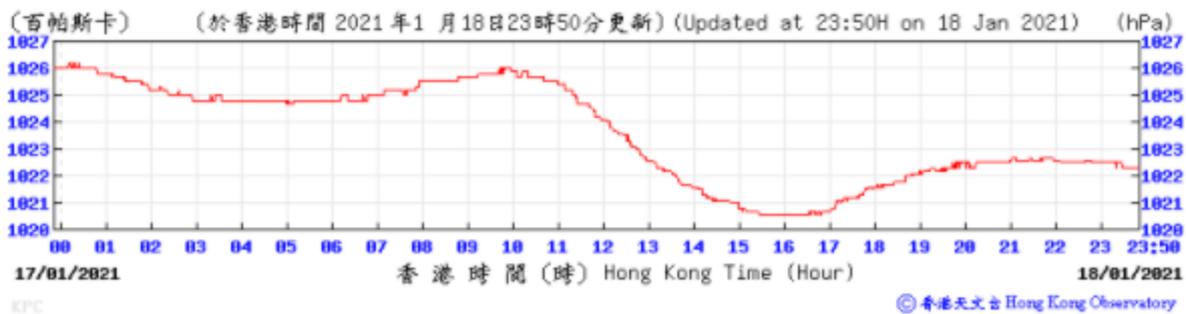
Wind Speed:



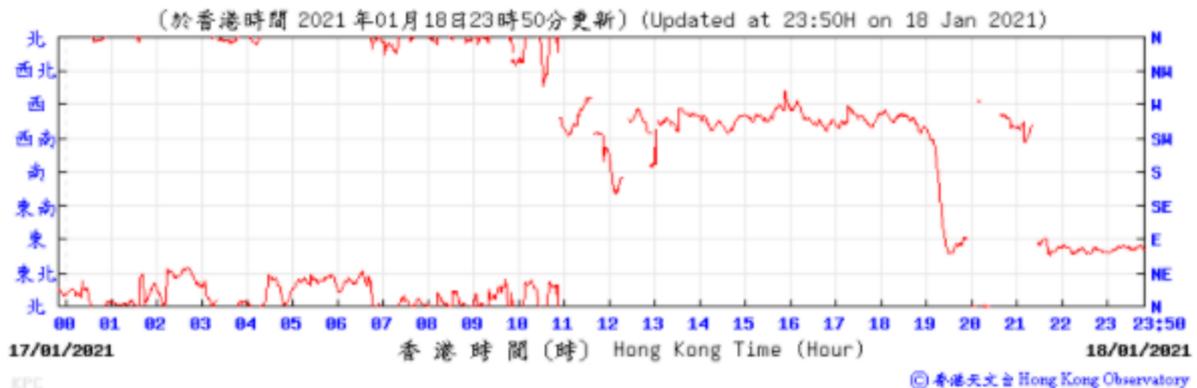
Temperature/Humidity:



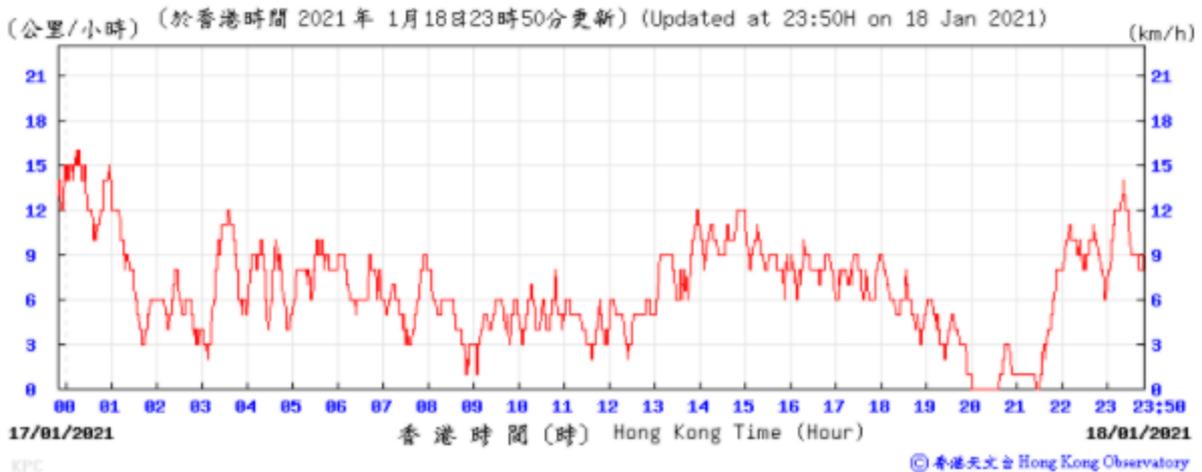
Pressure:



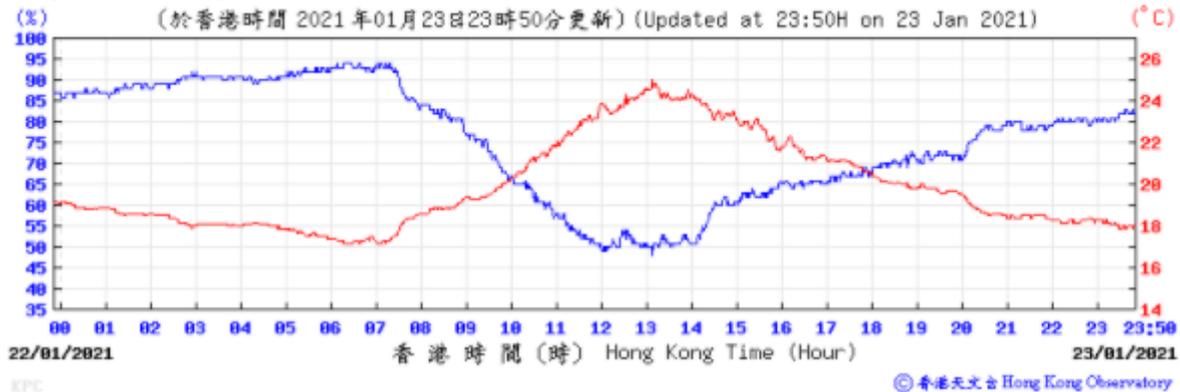
Wind Direction:



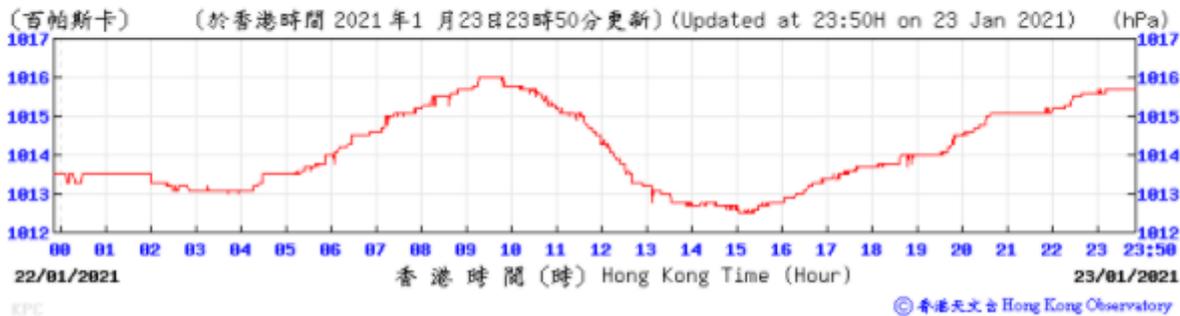
Wind Speed:



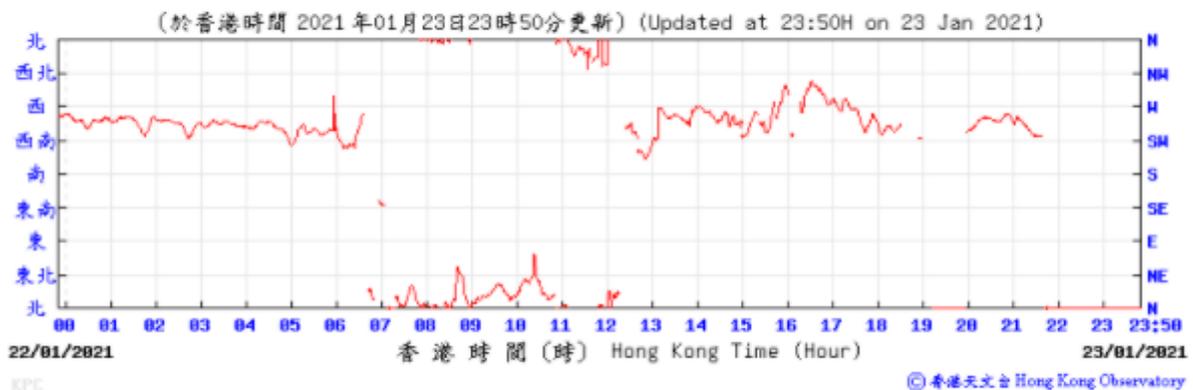
Temperature/Humidity:



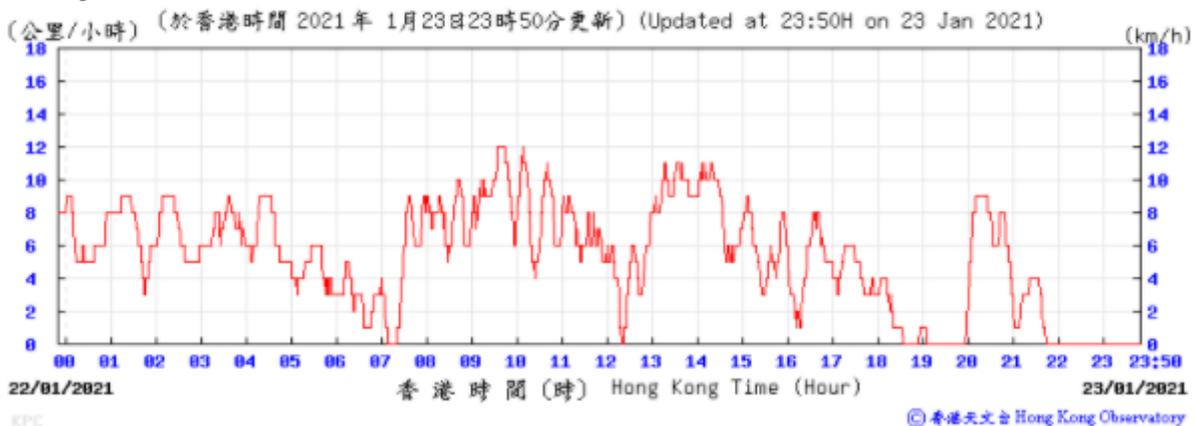
Pressure:



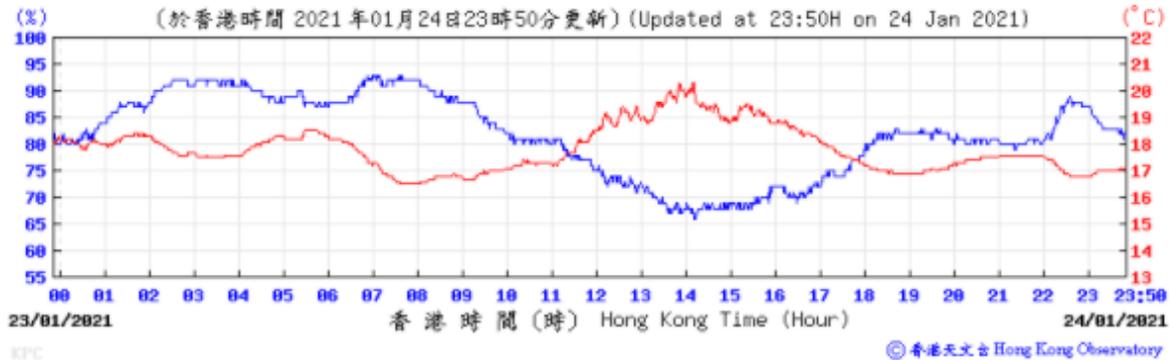
Wind Direction:



Wind Speed:



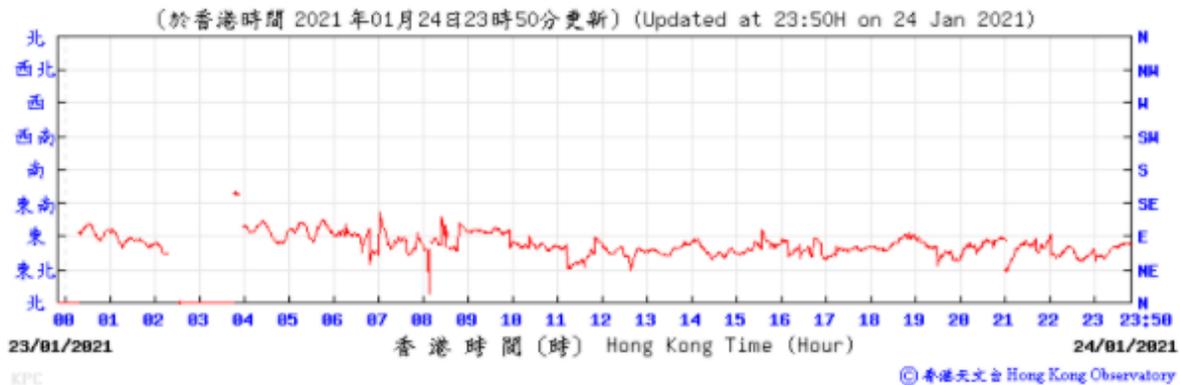
Temperature/Humidity:



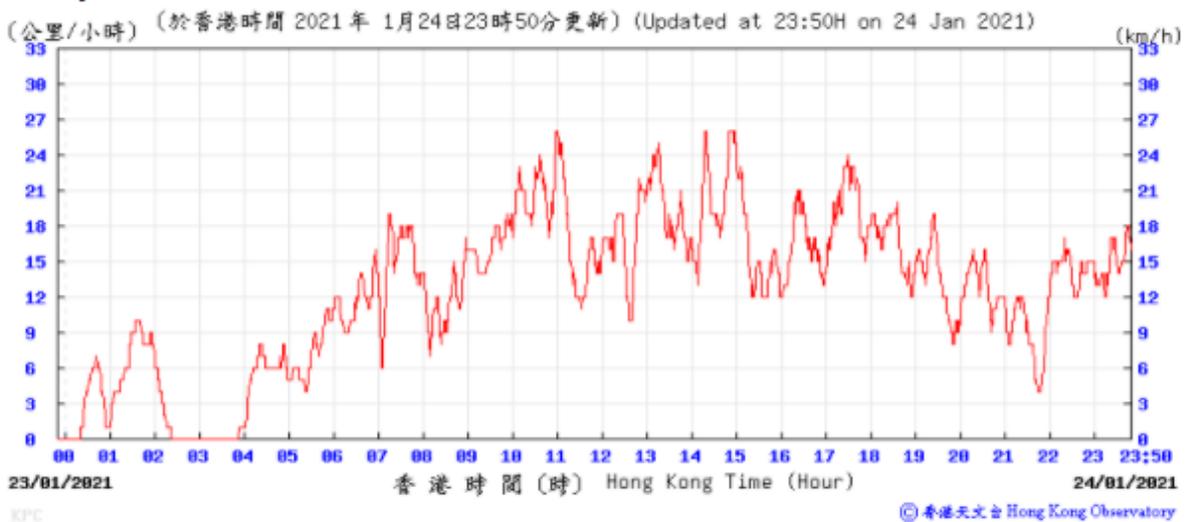
Pressure:



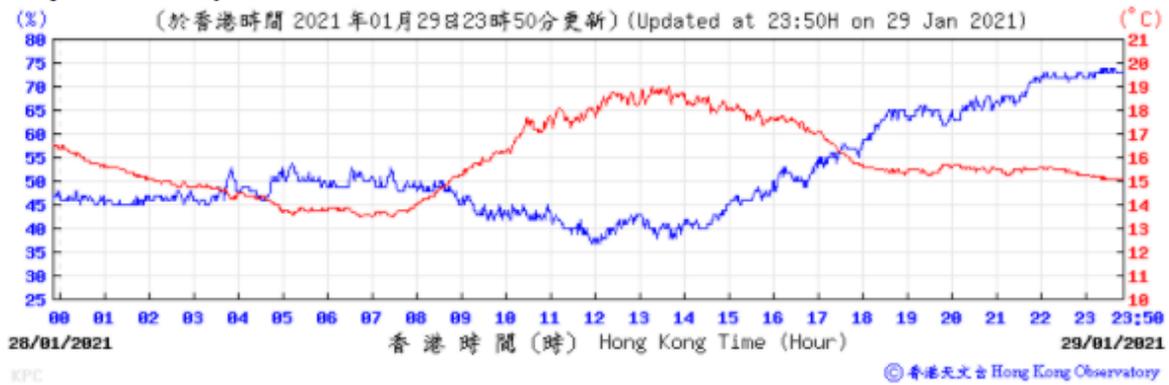
Wind Direction:



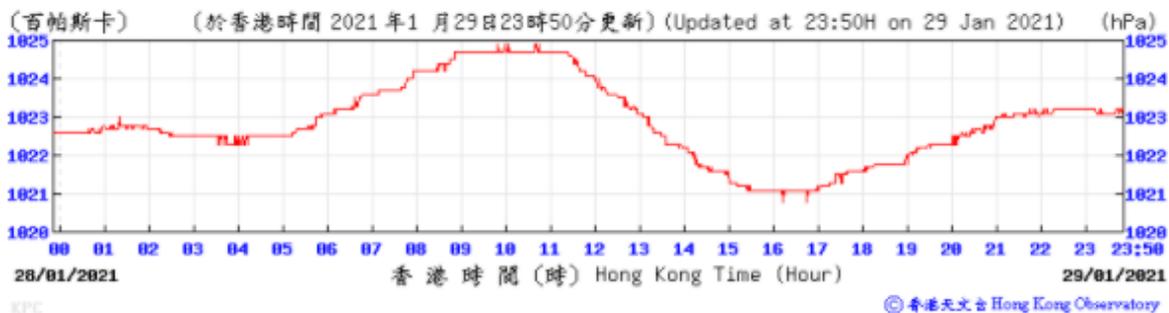
Wind Speed:



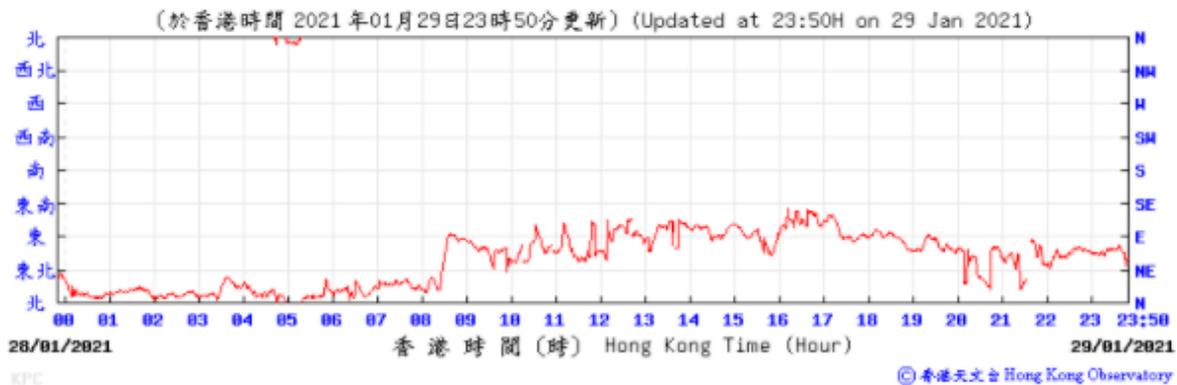
Temperature/Humidity:



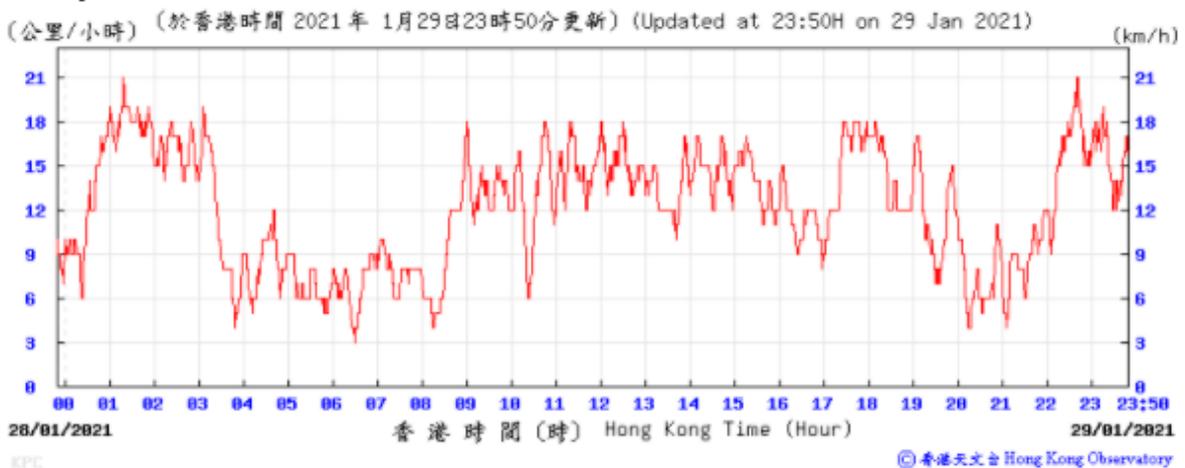
Pressure:



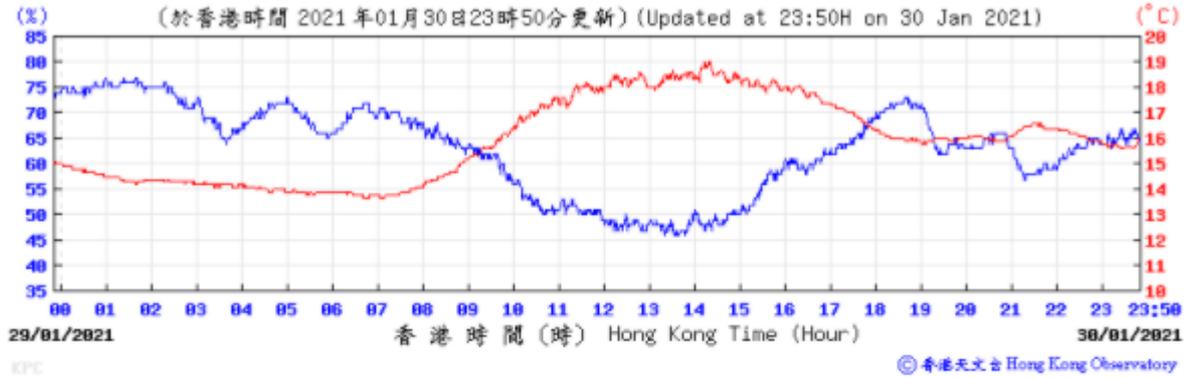
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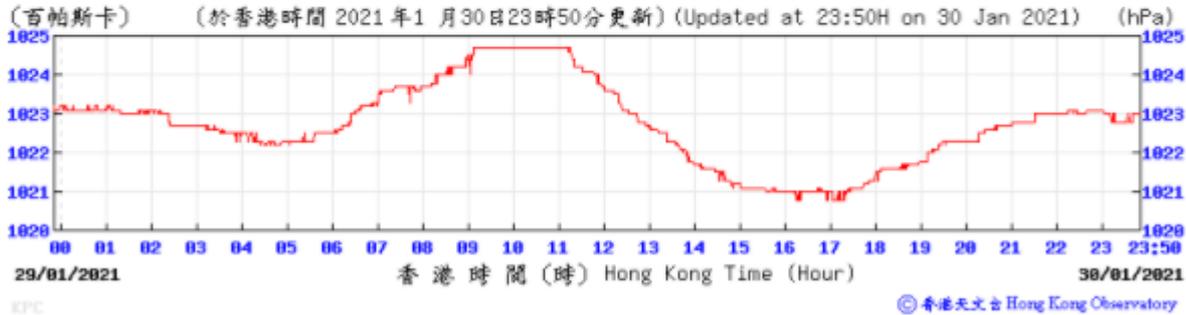
Wind Speed:



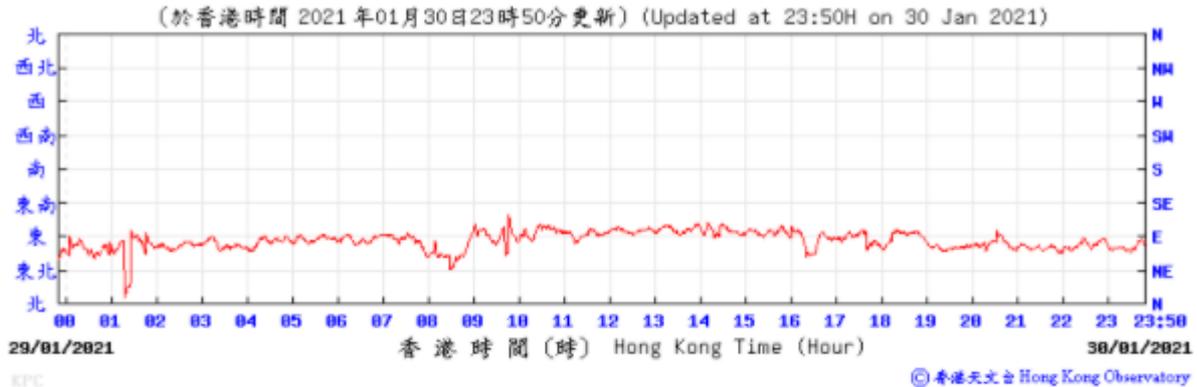
Temperature/Humidity:



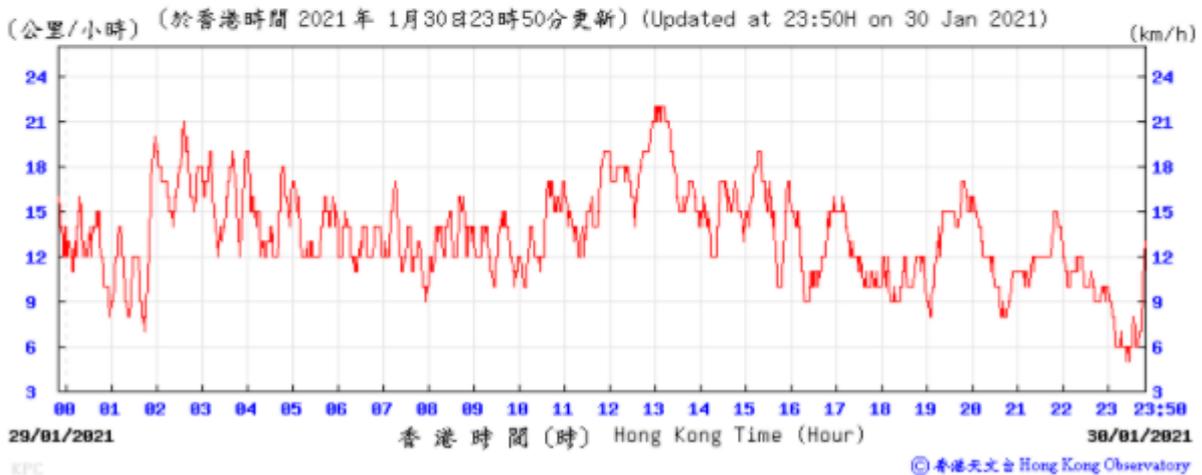
Pressure:



Wind Direction:



Wind Speed:

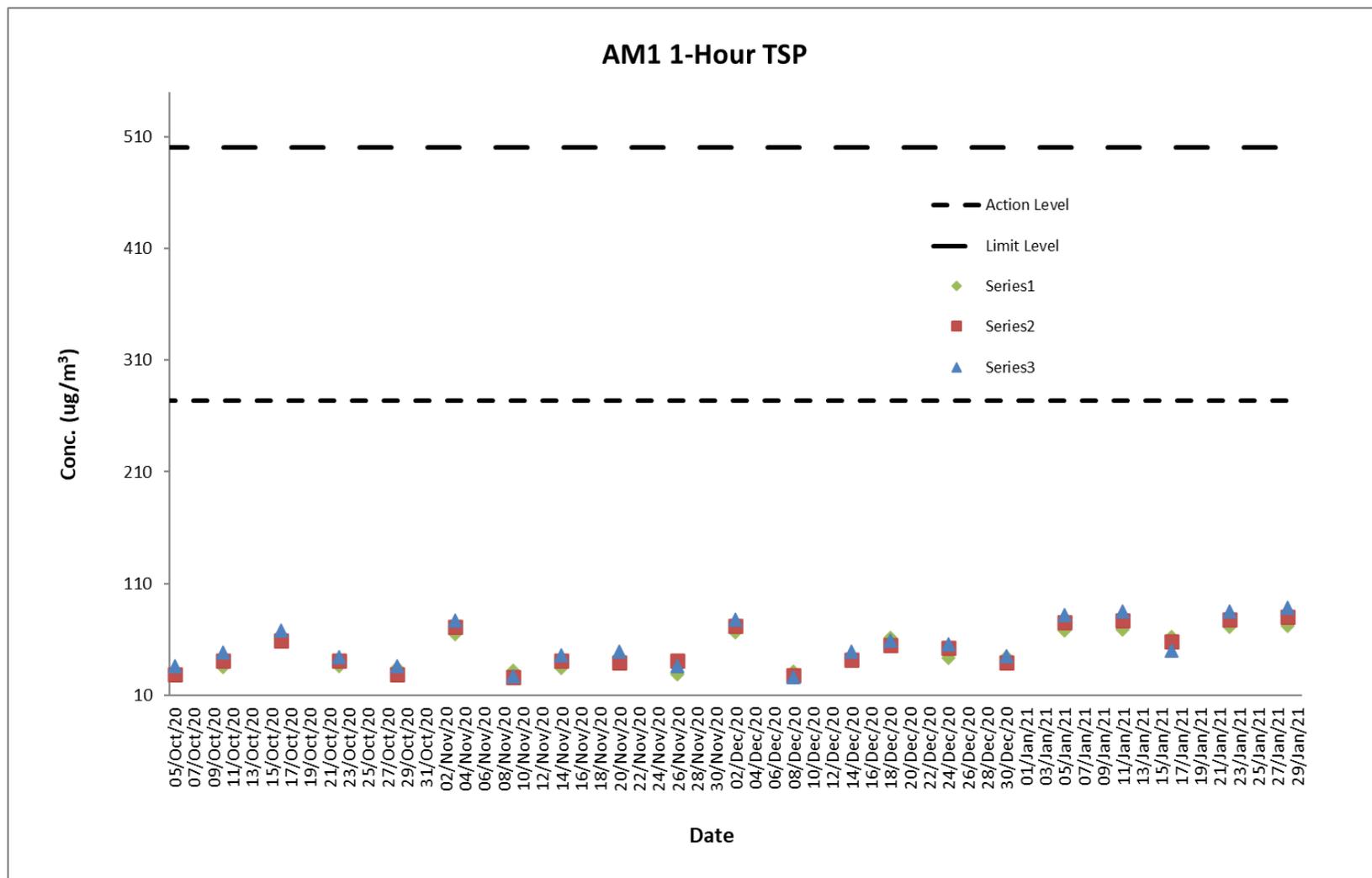


E. Graphical Plots of the Monitoring Results

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-Nov-20	Fine	8:20 - 11:20	65	71	77	273.7	500
09-Nov-20	Sunny	8:20 - 11:20	32	26	27	273.7	500
14-Nov-20	Cloudy	13:22 - 16:22	34	41	46	273.7	500
20-Nov-20	Cloudy	13:19 - 16:19	40	39	49	273.7	500
26-Nov-20	Sunny	8:20 - 11:20	29	41	36	273.7	500
02-Dec-20	Sunny	13:02 - 16:02	66	72	78	273.7	500
08-Dec-20	Sunny	13:20 - 16:20	31	28	26	273.7	500
14-Dec-20	Fine	8:22 - 11:22	44	42	49	273.7	500
18-Dec-20	Sunny	8:22 - 11:22	61	55	59	273.7	500
24-Dec-20	Cloudy	8:24 - 11:24	43	52	56	273.7	500
30-Dec-20	Sunny	8:24 - 11:24	44	39	45	273.7	500
05-Jan-21	Cloudy	8:22 - 11:22	68	75	82	273.7	500
11-Jan-21	Cloudy	8:22 - 11:22	69	77	85	273.7	500
16-Jan-21	Sunny	8:32 - 11:32	62	58	50	273.7	500
22-Jan-21	Fine	8:27 - 11:27	71	78	85	273.7	500
28-Jan-21	Sunny	8:33 - 11:33	72	80	88	273.7	500

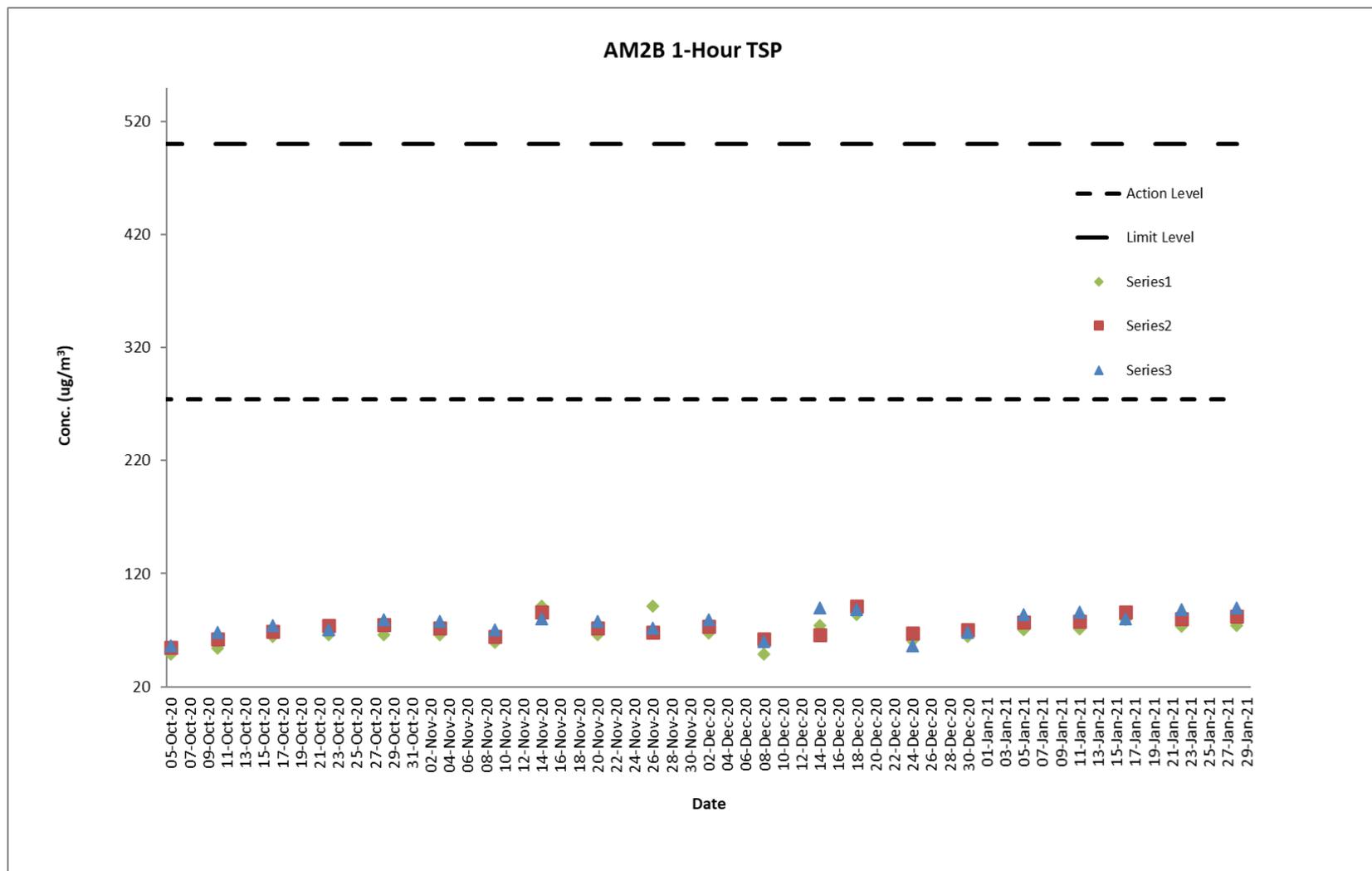
Graphical Presentation of Air Quality Monitoring Result at Station AM1 (1-hour TSP)



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-Nov-20	Fine	8:36 - 11:36	66	72	78	274.2	500
09-Nov-20	Sunny	8:34 - 11:34	59	64	70	274.2	500
14-Nov-20	Cloudy	13:06 - 16:06	91	86	80	274.2	500
20-Nov-20	Cloudy	13:05 - 16:05	66	72	78	274.2	500
26-Nov-20	Sunny	8:35 - 11:35	91	68	72	274.2	500
02-Dec-20	Sunny	13:17 - 16:17	67	73	79	274.2	500
08-Dec-20	Sunny	13:05 - 16:05	49	62	60	274.2	500
14-Dec-20	Fine	8:36 - 11:36	74	66	90	274.2	500
18-Dec-20	Sunny	8:36 - 11:36	84	91	88	274.2	500
24-Dec-20	Cloudy	8:38 - 11:38	61	67	56	274.2	500
30-Dec-20	Sunny	8:38 - 11:38	64	70	68	274.2	500
05-Jan-21	Cloudy	8:38 - 11:38	70	77	84	274.2	500
11-Jan-21	Cloudy	8:36 - 11:36	71	78	86	274.2	500
16-Jan-21	Sunny	8:48 - 11:48	79	86	80	274.2	500
22-Jan-21	Fine	8:43 - 11:43	73	80	88	274.2	500
28-Jan-21	Sunny	8:47 - 11:47	74	82	90	274.2	500

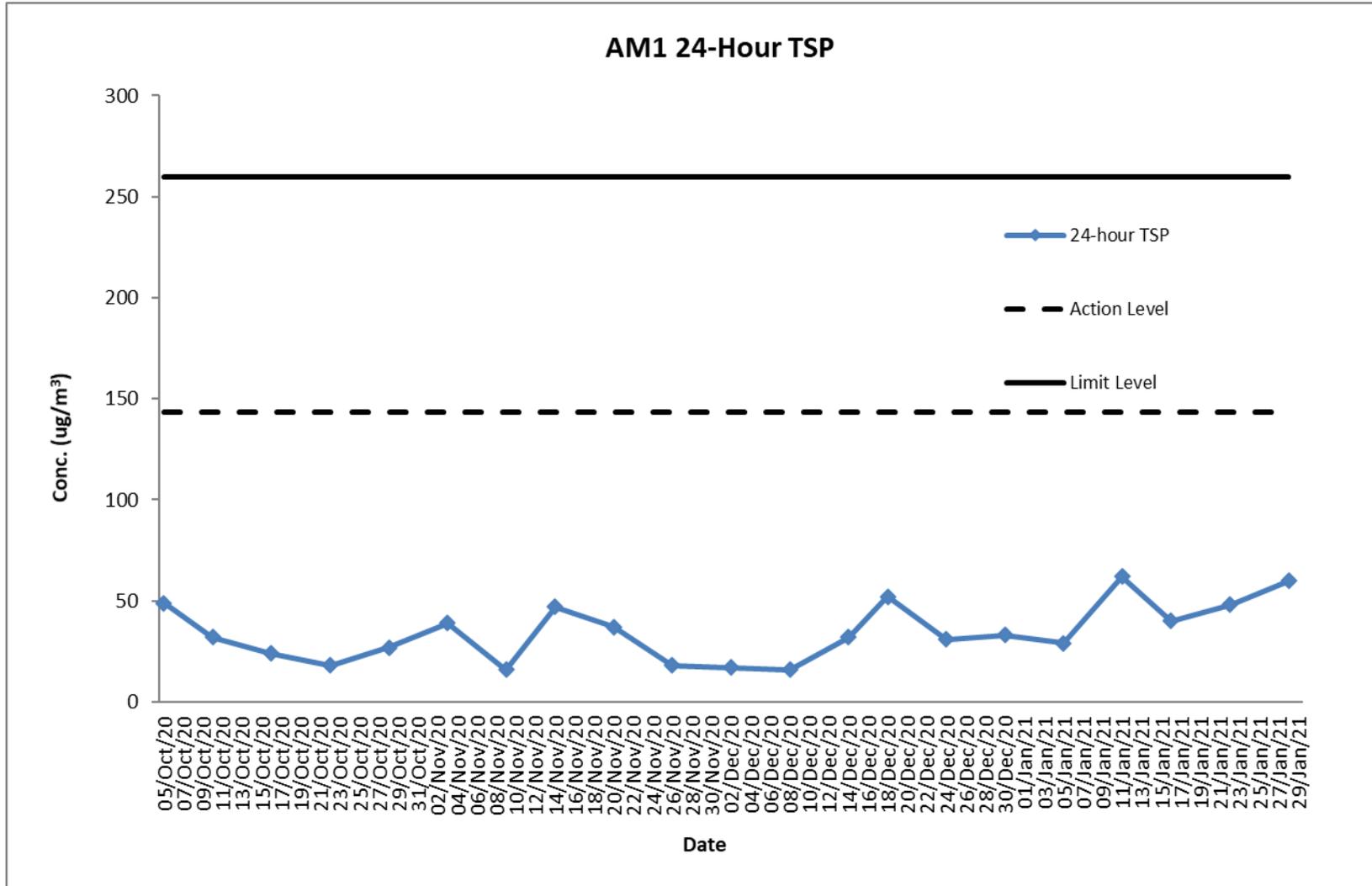
Graphical Presentation of Air Quality Monitoring Result at Station AM2B (1-hour TSP)



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-Nov-20	08:18	04-Nov-20	08:18	2.6942	2.762	22520.38	22544.38	24	1.22	1.22	1.22	39	Fine	143.6	260
09-Nov-20	08:18	10-Nov-20	08:18	2.7009	2.7294	22544.38	22568.38	24	1.22	1.22	1.22	16	Sunny	143.6	260
14-Nov-20	08:20	15-Nov-20	08:20	2.6844	2.7677	22568.38	22592.38	24	1.22	1.22	1.22	47	Cloudy	143.6	260
20-Nov-20	08:17	21-Nov-20	08:17	2.681	2.7495	22592.38	22616.38	24	1.29	1.29	1.29	37	Cloudy	143.6	260
26-Nov-20	08:18	27-Nov-20	08:18	2.6956	2.7283	22616.38	22640.38	24	1.29	1.29	1.29	18	Sunny	143.6	260
02-Dec-20	08:20	03-Dec-20	08:20	2.6819	2.7134	22640.38	22664.38	24	1.29	1.29	1.29	17	Sunny	143.6	260
08-Dec-20	08:18	09-Dec-20	08:18	2.6917	2.7215	22664.38	22688.38	24	1.29	1.29	1.29	16	Sunny	143.6	260
14-Dec-20	08:20	15-Dec-20	08:20	2.6925	2.7523	22688.38	22712.38	24	1.29	1.29	1.29	32	Fine	143.6	260
18-Dec-20	08:20	19-Dec-20	08:20	2.6809	2.7770	22712.38	22736.38	24	1.29	1.29	1.29	52	Sunny	143.6	260
24-Dec-20	08:22	25-Dec-20	08:22	2.6831	2.7399	22736.38	22760.38	24	1.29	1.29	1.29	31	Cloudy	143.6	260
30-Dec-20	08:22	31-Dec-20	08:22	2.6888	2.7508	22760.38	22784.38	24	1.29	1.29	1.29	33	Sunny	143.6	260
05-Jan-21	08:20	06-Jan-21	08:20	2.6819	2.7364	22784.38	22808.38	24	1.29	1.29	1.29	29	Cloudy	143.6	260
11-Jan-21	10:20	12-Jan-21	10:20	2.6881	2.803	22808.38	22832.38	24	1.29	1.29	1.29	62	Cloudy	143.6	260
16-Jan-21	08:30	17-Jan-21	08:30	2.6861	2.7596	22832.38	22856.38	24	1.29	1.29	1.29	40	Sunny	143.6	260
22-Jan-21	08:25	23-Jan-21	08:25	2.6906	2.7778	22856.38	22880.38	24	1.26	1.26	1.26	48	Fine	143.6	260
28-Jan-21	08:30	29-Jan-21	08:30	2.7286	2.8375	22880.38	22904.38	24	1.26	1.26	1.26	60	Sunny	143.6	260

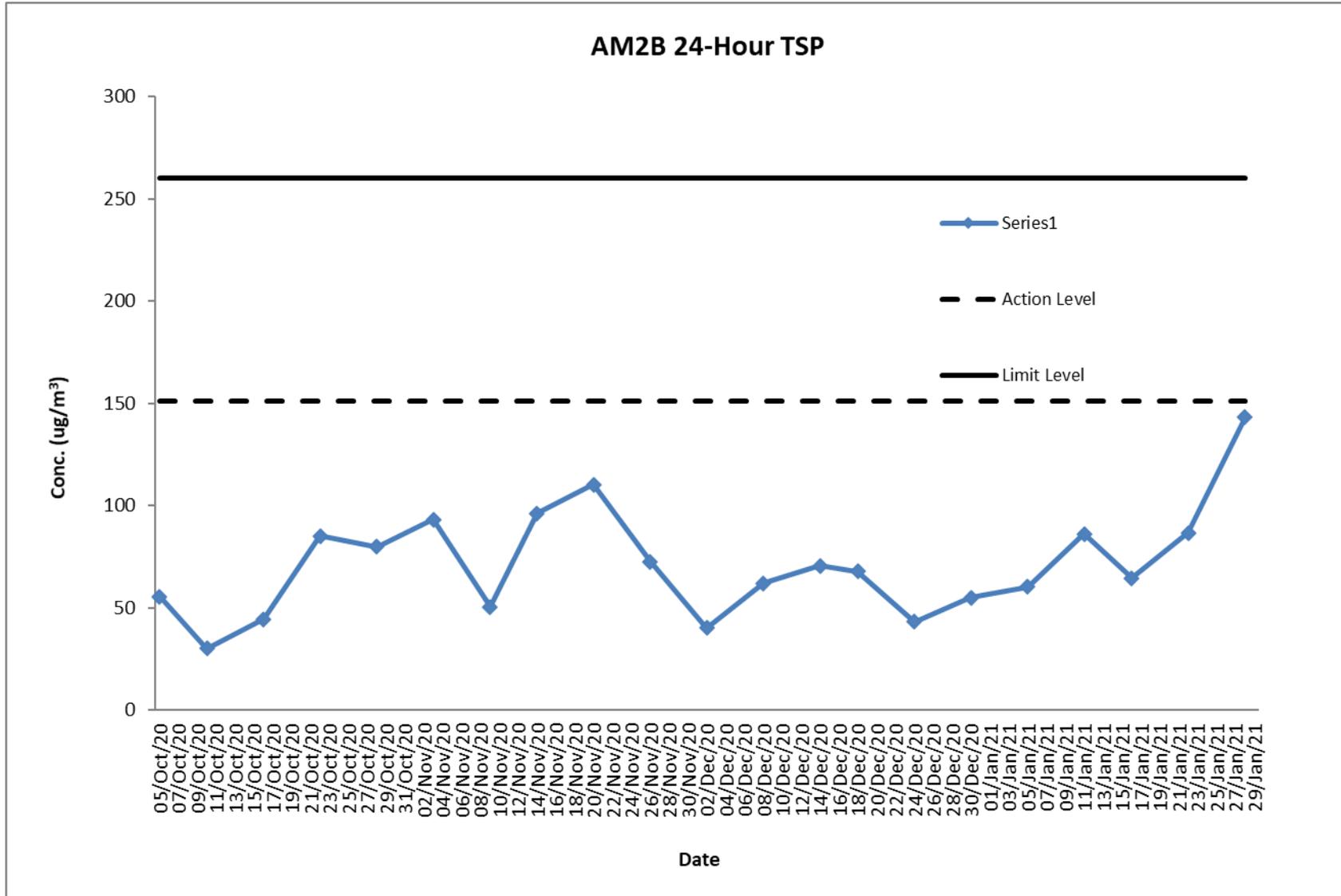
Graphical Presentation of Air Quality Monitoring Result at Station AM1 (24-hour TSP)



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-Nov-20	08:34	04-Nov-20	08:34	2.6878	2.8556	22075.05	22099.05	24	1.25	1.25	1.25	93	Fine	151.1	260
09-Nov-20	08:32	10-Nov-20	08:32	2.6908	2.7816	22099.05	22123.05	24	1.25	1.25	1.25	50	Sunny	151.1	260
14-Nov-20	08:34	15-Nov-20	08:34	2.6890	2.8620	22123.05	22147.05	24	1.25	1.25	1.25	96	Cloudy	151.1	260
20-Nov-20	08:33	21-Nov-20	08:33	2.6884	2.9012	22147.05	22171.05	24	1.34	1.34	1.34	110	Cloudy	151.1	260
26-Nov-20	08:33	27-Nov-20	08:33	2.6729	2.8130	22171.05	22195.05	24	1.34	1.34	1.34	73	Sunny	151.1	260
02-Dec-20	08:35	03-Dec-20	08:35	2.6906	2.7682	22195.05	22219.05	24	1.34	1.34	1.34	40	Sunny	151.1	260
08-Dec-20	08:33	09-Dec-20	08:33	2.6921	2.8116	22219.05	22243.05	24	1.34	1.34	1.34	62	Sunny	151.1	260
14-Dec-20	08:34	15-Dec-20	08:34	2.6893	2.8254	22243.05	22267.05	24	1.34	1.34	1.34	71	Fine	151.1	260
18-Dec-20	08:34	19-Dec-20	08:34	2.6819	2.8126	22267.05	22291.05	24	1.34	1.34	1.34	68	Sunny	151.1	260
24-Dec-20	08:36	25-Dec-20	08:36	2.6833	2.7664	22291.05	22315.05	24	1.34	1.34	1.34	43	Cloudy	151.1	260
30-Dec-20	08:36	31-Dec-20	08:36	2.6675	2.7736	22315.05	22339.05	24	1.34	1.34	1.34	55	Sunny	151.1	260
05-Jan-21	08:36	06-Jan-21	08:36	2.6815	2.7977	22339.05	22363.05	24	1.34	1.34	1.34	60	Cloudy	151.1	260
11-Jan-21	08:34	12-Jan-21	08:34	2.6823	2.8487	22363.05	22387.05	24	1.34	1.34	1.34	86	Cloudy	151.1	260
16-Jan-21	08:46	17-Jan-21	08:46	2.6845	2.8088	22387.05	22411.05	24	1.34	1.34	1.34	64	Sunny	151.1	260
22-Jan-21	08:40	23-Jan-21	08:40	2.6823	2.8343	22411.05	22435.05	24	1.22	1.22	1.22	87	Fine	151.1	260
28-Jan-21	08:45	29-Jan-21	08:45	2.6676	2.9193	22435.05	22459.05	24	1.22	1.22	1.22	143	Sunny	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-Nov-20	10:43	65.6	61.1	68
03-Nov-20	10:48	66.5	62.3	
03-Nov-20	10:53	67.7	63.0	
03-Nov-20	10:58	66.8	62.7	
03-Nov-20	11:03	66.3	62.1	
03-Nov-20	11:08	67.9	63.3	
09-Nov-20	10:45	67.5	63.2	69
09-Nov-20	10:50	68.6	64.5	
09-Nov-20	10:55	66.9	62.7	
09-Nov-20	11:00	67.6	63.1	
09-Nov-20	11:05	67.4	63.4	
09-Nov-20	11:10	68.1	64.4	
20-Nov-20	10:41	66.1	62.3	68
20-Nov-20	10:46	67.8	63.6	
20-Nov-20	10:51	68.9	64.4	
20-Nov-20	10:56	66.6	62.5	
20-Nov-20	11:01	67.5	63.6	
20-Nov-20	11:06	67.4	63.1	
26-Nov-20	10:41	66.8	62.6	68
26-Nov-20	10:46	67.0	63.1	
26-Nov-20	10:51	68.3	64.1	
26-Nov-20	10:56	66.1	62.8	
26-Nov-20	11:01	66.2	62.5	
26-Nov-20	11:06	67.5	63.4	
02-Dec-20	10:43	67.3	63.1	68
02-Dec-20	10:48	68.7	64.6	
02-Dec-20	10:53	66.5	62.1	
02-Dec-20	10:58	66.4	62.6	
02-Dec-20	11:03	67.1	63.3	
02-Dec-20	11:08	66.9	62.8	
08-Dec-20	10:43	66.3	62.7	68
08-Dec-20	10:48	67.4	63.1	
08-Dec-20	10:53	68.1	64.5	
08-Dec-20	10:58	66.7	62.8	
08-Dec-20	11:03	66.5	62.7	
08-Dec-20	11:08	67.0	63.2	
14-Dec-20	10:41	66.6	62.3	68
14-Dec-20	10:46	66.8	62.4	
14-Dec-20	10:51	67.7	63.5	
14-Dec-20	10:56	66.5	62.6	
14-Dec-20	11:01	67.4	63.3	
14-Dec-20	11:06	68.1	64.2	
24-Dec-20	10:47	66.4	62.3	68
24-Dec-20	10:52	67.9	63.8	
24-Dec-20	10:57	66.5	62.4	
24-Dec-20	11:02	67.8	63.7	
24-Dec-20	11:07	68.3	64.5	
24-Dec-20	11:12	66.1	62.1	

30-Dec-20	10:45	66.1	62.3	68
30-Dec-20	10:50	67.4	63.1	
30-Dec-20	10:55	68.9	64.7	
30-Dec-20	11:00	66.5	62.2	
30-Dec-20	11:05	66.4	62.7	
30-Dec-20	11:10	67.0	63.1	
05-Jan-21	09:24	66.5	62.7	68
05-Jan-21	09:29	65.4	61.5	
05-Jan-21	09:34	65.3	61.7	
05-Jan-21	09:39	66.7	62.0	
05-Jan-21	09:44	67.2	63.3	
05-Jan-21	09:49	67.0	63.9	
11-Jan-21	09:05	67.0	63.7	68
11-Jan-21	09:10	66.4	62.3	
11-Jan-21	09:15	66.4	62.2	
11-Jan-21	09:20	68.5	64.1	
11-Jan-21	09:25	67.5	63.8	
11-Jan-21	09:30	66.2	62.6	
22-Jan-21	09:30	66.2	62.6	68
22-Jan-21	09:35	67.4	63.1	
22-Jan-21	09:40	68.6	64.5	
22-Jan-21	09:45	66.3	62.5	
22-Jan-21	09:50	66.8	62.6	
22-Jan-21	09:55	67.0	63.3	
28-Jan-21	09:36	66.0	62.1	68
28-Jan-21	09:41	67.3	63.9	
28-Jan-21	09:46	68.4	64.5	
28-Jan-21	09:51	66.1	62.3	
28-Jan-21	09:56	66.4	62.6	
28-Jan-21	10:01	67.7	63.9	

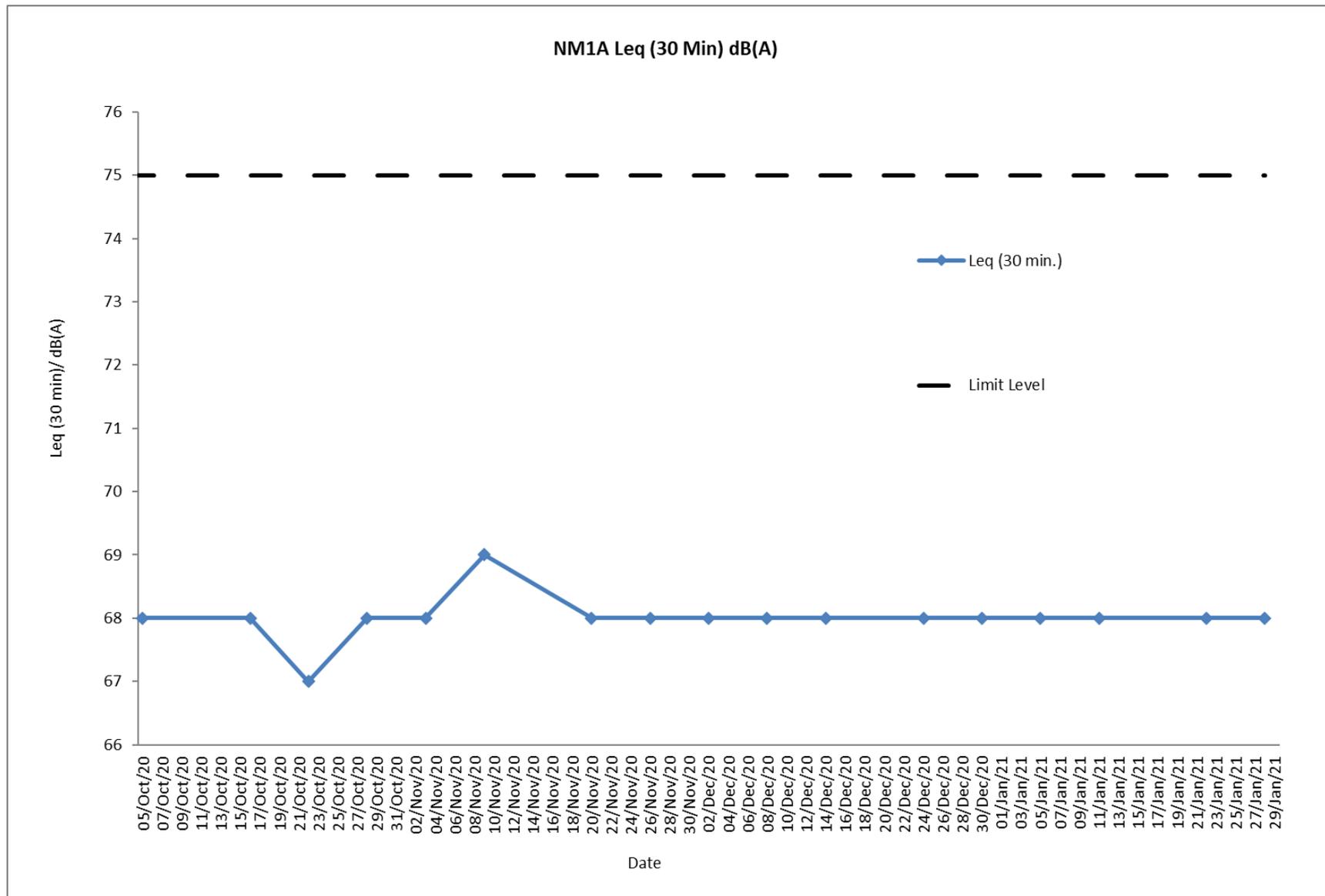
Remarks:

+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
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

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)
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
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

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)
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
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												
Mar	0.0												
Apr	0.0												
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)	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
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	15355.4

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)

Note:

- 0 tonne, 0 tonne and 46.71 tonnes 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

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	0.0	0.0	0.0	0.0	497.0
Feb	0.0												
Mar	0.0												
Apr	0.0												
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)	881.4	0.0	0.0	0.0	881.4	0.0	0.0	835.1	0.0	0.0	0.0	0.0	497.0

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)
Total	987578.0	0.0	0.0	543635.2	443508.5	434.3	2301.1	8130.8	5.8	10.5	0.0	12.5	5475.4

Note:

- 2399.23, 713.36 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 for M+ Museum main works and 1 March 2016 for Lyric Theatre Complex) to the end of the reporting quarter and are summarized in the in the **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 (Nov 20 – Jan 21)	3	0	0
From 31 October 2015 to end of the reporting quarter	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 (Nov 20 – Jan 21)	3	0	0
From 1 March 2016 to end of the reporting quarter	16	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 November 2020 to 31 January 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.

One Action Level exceedance (due to noise related environmental complaint) with no Limit Level exceedance of construction noise was 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 site inspection was conducted on 8 December 2020. General site condition was inspected. No adverse comment was made.

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 November 2020 to 31 January 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 Zone 2A undertaken include:

- Grouting Curtain Works (Trial 1 & Trial 2)
 - Pipe Pile Construction
 - Trial Grouting
- Bored Pile Works
 - Bored Pile Works (Predrilling)
 - Bored Pile Construction
- ELS (Stage 1)
 - Grouting Works

- Pipe Pile Construction

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 station 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	38	95	57
1 hour TSP	AM4A	38	97	57
1 hour TSP	AM5A	39	97	58
24 hour TSP	AM3A	35	85	54
24 hour TSP	AM4A	38	82	54
24 hour TSP	AM5A	38	84	54
Construction Noise				
Leq(30min)	NM2A	63	65	64
Leq(30min)	NM3A	71	74	73
Leq(30min)	NM4A	63	69	67
Leq(30min)	NM5A	63	66	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)	1 exceedance due to one complaint	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. One Action Level exceedance due to one complaint 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, 63.84 tonnes, 829.53 tonnes, 19563.19 tonnes of inert C&D material were disposed of as public fill to Chai Wan Public Fill Barging Point, Tseung Kwan O Area 137 Public Fill, and Tuen Mun Area 38 respectively in the reporting quarter, while 49.18 tonnes of general refuse were disposed of at SENT and WENT landfill. 0.0 tonne 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. 1248.72 tonnes of inert C&D materials were reused on site. 1246.44 tonnes of fill materials were imported for use at site and 2873.77 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 0.0 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 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.

One Action Level exceedance (due to noise relate environmental complaint) 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 in the reporting quarter.

The first complaint was a letter dated 11 November 2020 from the office of District Council Member Mr. Derek Hung. The letter mentioned that they had received complaint from the Harbourside's resident about the construction noise generated from the WKCD construction site, occurring often as early as 7:00 am recently and the noise disturbance sometimes happens 6 consecutive days in a week. Investigation result revealed that no noisy works including drilling / piling works were conducted during 7:00 – 8:30 am during the concerned period at Zone 2A site. The complaint could not be therefore attributable to Zone 2A site.

The second environmental complaint was referred by EPD. On 10 December 2020, EPD sent a photo taken by the public complainant showing the drilling machine installed at WKCD site area. EPD officer requested to advise the type of Powered Mechanical Equipment (PME) adopted and any noise mitigation measure was adopted in the photo. After investigation, it is noticed that the PME shown on attached photo to the complaint was a drilling machine located at WKCD-Zone 2A site. As recommended in Appendices 4.10a to 4.10i, and Table 14.4.15 of the EIA Report (Register No.: AEIAR-178/2013), the drilling rig has been set with noise insulating fabric as noise mitigation measure to screen noise. In addition, the drilling rig is set and operated with an enclosure for both dust and noise reduction. In this regard, the noise mitigation measures have been implemented to minimize construction noise impact in accordance with the Section 2.7 of the Environmental Permit (EP-453/2013/B). The Contractor has also displayed QPME labels for generators and air compressors to show the commitment to the noise reduction on site. In addition, noise barriers are implemented to enhance the noise reduction during construction activities. The Contractor is however recommended to strengthen the implementation of the noise mitigation measures to reduce impacts to the nearby residents.

The third environmental complaint was received on 27 January 2021. WKCD has received an inquiry from the office of District Council Member Mr. Derek Hung about the noise from WKCD site. A resident from The Harbourside, who has reflected the noise problem since March 2020, expressed that he/she has been affected by the construction noise around 7:15 am on 27 January 2021. Investigation result revealed that no construction works were formally carried out in Zone 2A site in the morning over 7:00-7:30 am. Thus, the complaint could not be attributable to Zone 2A site. Nevertheless, the Contractor is recommended to enhance the site management and maintain on-site noise control measures in order to minimize disturbance to site neighbors.

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, one action level exceedance due to one complaint 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

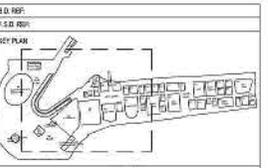
The EM&A programme as recommended in the EM&A Manual has been undertaken since the construction works of Zone 2A commenced on 3 October 2020.

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. One Action Level exceedance due to one complaint 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.

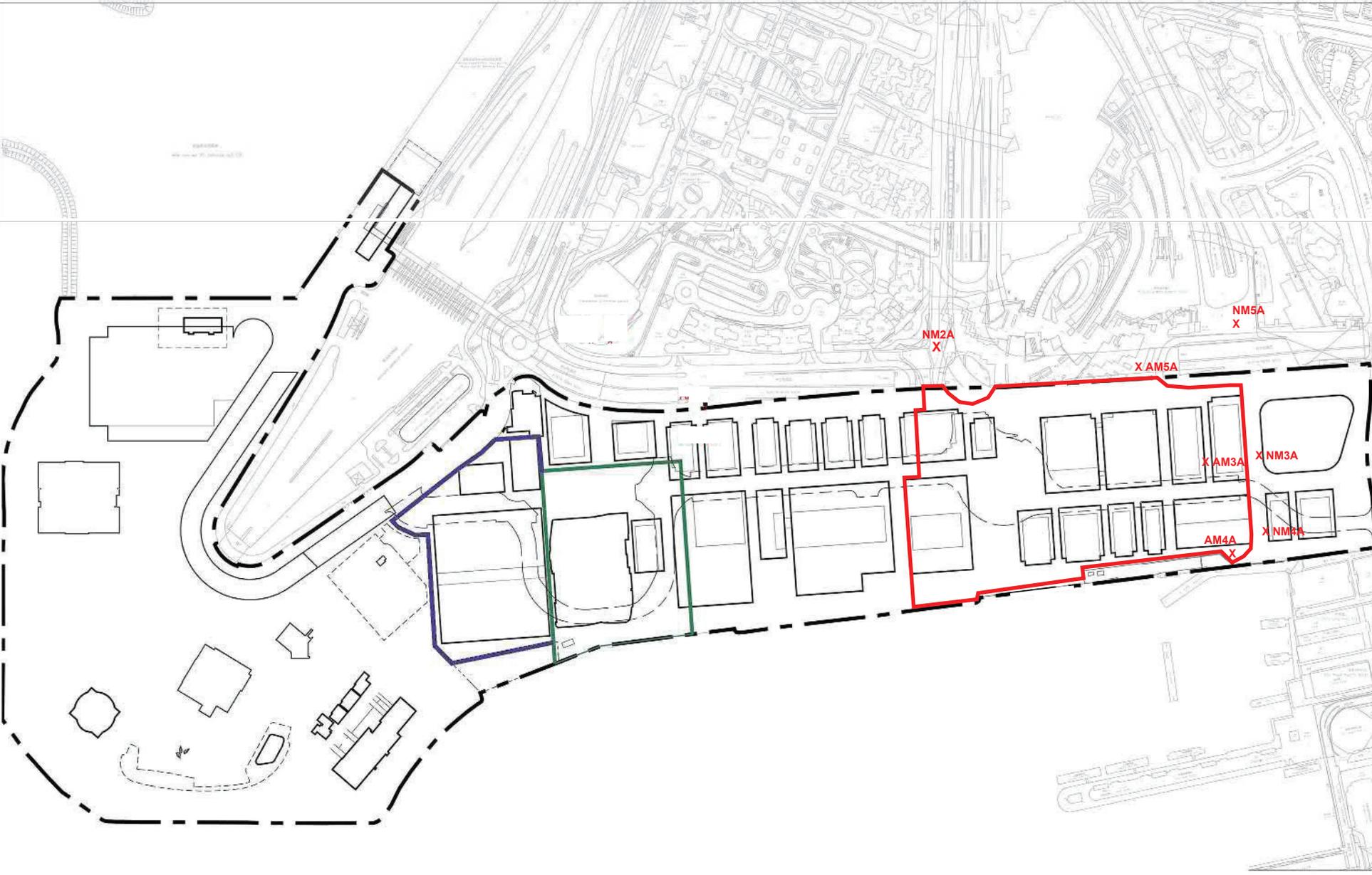
Figure 1 Site Layout Plan and Monitoring Stations



- NOTES**
- WKCD BOUNDARY
 - M+ MUSEUM BOUNDARY
 - LYRIC THEATRE BOUNDARY
 - - - BOUNDARY OF UNDERPASS ROAD SERVING THE PLANNED WKCD
 - X CONSTRUCTION AIRNOISE MONITORING STATION

REMARKS:
 THE AIR MONITORING STATION AM2A HAS BEEN RELOCATED TO THE ALTERNATIVE MONITORING STATION AM2B AT 1ST FLOOR OF GAMMON'S SITE OFFICE ON 26 FEBRUARY 2019.

— Zone 2A Boundary



REV.	DATE	DESCRIPTION	INITIAL

JOB TITLE: DEVELOPMENT AT WEST KOWLOON CULTURAL DISTRICT

DRAWING TITLE: SITE LAYOUT PLAN AND MONITORING STATIONS

SCALE:	1:100	PRINTED:	A1
CHECKED:	DATE	APPROVED:	DATE
DRAWN:	TY	DATE:	18-10-2015

CONTRACT NO.:
 DRAWING NO.: **FIGURE 1** REV.: XX

CAD REF NAME: XXXXX\AUT\PLNS\DWG PROJ\020\0200\000.dwg

AUTHORITY:

Development at West Kowloon Cultural District
 Quarterly Environmental Monitoring and Audit (EM&A) Report (November 2020 – January 2021)

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

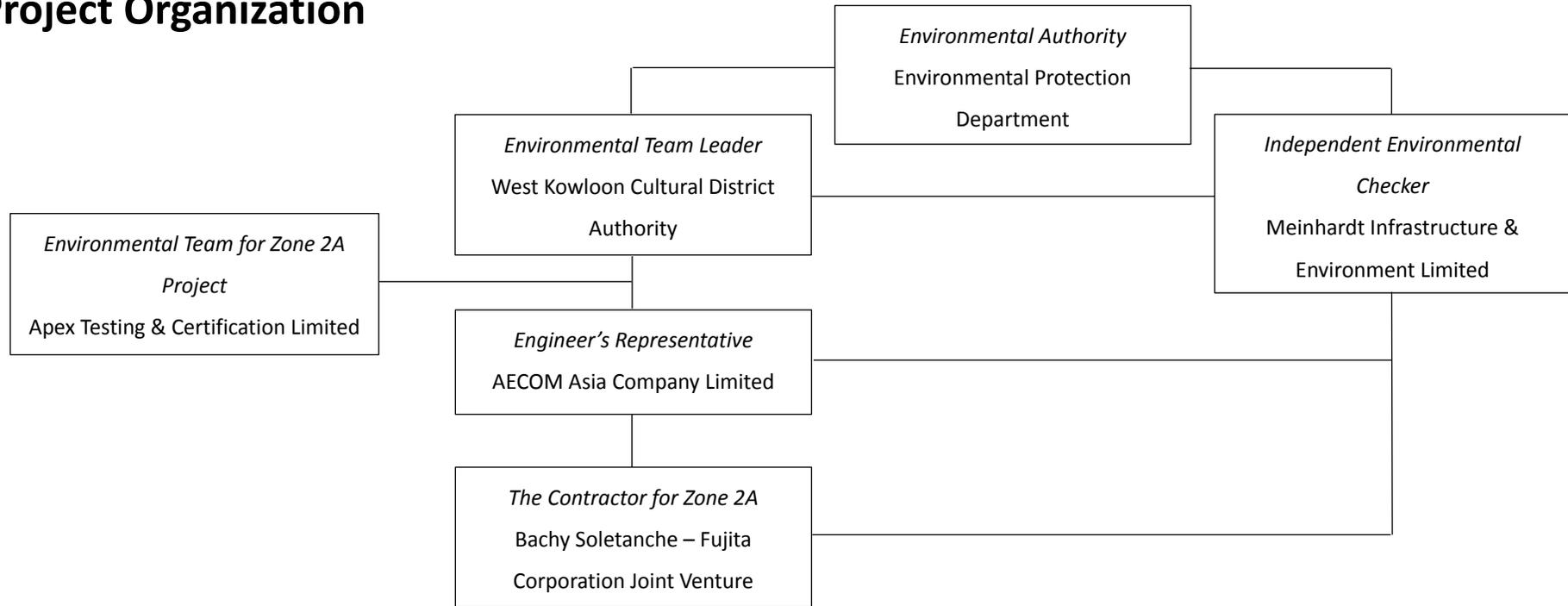


Table A-1: Contract Information

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.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	2020								2021								
				Nov				Dec				Jan				Feb				
				6	13	20	27	4	11	18	25	1	8	15	22	29	5	12	19	26
				W26	W27	W28	W29	W30	W31	W32	W33	W34	W35	W36	W37	W38	W39	W40	W41	W42
Preliminaries Works																				
Water, Power and Discharge Point Installation	174	8-May-20	28-Oct-20																	
Grouting Works (Trial 1 & Trial 2)																				
Pipe Pile Construction (Trial 1 and 2) (40/40 Nos Completed)	36	7-Oct-20	11-Nov-20	█																
Trial Grouting (Trial 1 and 2) - Stage 2 grouting (0/48 Nos Completed)	24	15-Dec-20	7-Jan-21																	
ELS (Stage 1) - Grouting / Pipe Pile Works																				
King Post (0/65 Nos Completed)	115	15-Dec-20	8-Apr-21																	
Bored Pile Works																				
Bored Pile Works (Predrilling)																				
Predrill (40/42 Nos Completed)	153	03-Oct-20	28-Nov-20	█																
Bored Pile Construction (Total 32 Nos. 2~4 Workfront)																				
BP31L, BP33L, BP34G, BP34E, BP35E1, BP32E, BP33F, BP33G, BP32P, BP33M, BP33P (0/32 Nos Completed)	172	9-Nov-20	29-Apr-21																	
ELS (Stage 1) - Grouting / Pipe Pile Works																				
Stage 1a & 1b grouting (155/1054 Nos Completed)	161	22-Oct-20	31-Mar-21	█																
Pipe Pile Construction (1/523 Nos Completed)	201	17-Nov-20	5-Jun-21																	

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

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 ID	Activity Description	Duration (Cal. Day)	Start Date	Finish Date	2021															
					Jan					Feb				Mar						
					1	8	15	22	29	5	12	19	26	5	12	19	26			
W34	W35	W36	W37	W38	W39	W40	W41	W42	W43	W44	W45	W46								
	Preliminaries Works																			
PRE. 10010	Water, Power and Discharge Point Installation	174	8-May-20	28-Oct-20																
	Grouting Works (Trial 1 & Trial 2)																			
	Pipe Pile Construction (Trial 1 and 2) (40/40 Nos Completed)	36	7-Oct-20	11-Nov-20																
	Trial Grouting (Trial 1 and 2) - Stage 2 grouting (24/48 Nos Completed)	54	19-Dec-20	10-Feb-21																
	ELS (Stage 1) - Grouting / Pipe Pile Works																			
2A1. 10290	King Post (0/65 Nos Completed)	59	1-Apr-21	29-May-21																
	Bored Pile Works																			
	Bored Pile Construction (Total 32 Nos. 2~4 Workfront)																			
2A1. 10040 & 2A1. 10050	BP31L, BP33L, BP34I1, BP34G, BP31P, BP36F1, BP31R, BP33G (6 Nos. Cast; 1 Nos. completed RCD; 1 Nos. RCD in progress)	198	9-Nov-20	25-May-21																
	ELS (Stage 1) - Grouting / Pipe Pile Works																			
2A2. 10210	Stage 1a & 1b grouting (155/1054 Nos Completed)	404	22-Oct-20	29-Nov-21																
2A2. 10180	Pipe Pile Construction (1/523 Nos Completed)	408	17-Nov-20	29-Dec-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		
		Nov 2020	Dec 2020	Jan 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>	✓	Rem	✓
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	Obs

EM& A Ref.	Recommendation Measures	Implementation Stage		
		Nov 2020	Dec 2020	Jan 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. 			
	<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	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. 			
	<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. 	✓	✓	✓

EM& A Ref.	Recommendation Measures	Implementation Stage		
		Nov 2020	Dec 2020	Jan 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		
		Nov 2020	Dec 2020	Jan 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	Rem
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		
		Nov 2020	Dec 2020	Jan 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>	Rem	✓	✓
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. 	✓	✓	✓
		✓	✓	✓

EM& A Ref.	Recommendation Measures	Implementation Stage		
		Nov 2020	Dec 2020	Jan 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
	<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		
		Nov 2020	Dec 2020	Jan 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	✓

EM& A Ref.	Recommendation Measures	Implementation Stage		
		Nov 2020	Dec 2020	Jan 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. 	✓	✓	✓
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		
		Nov 2020	Dec 2020	Jan 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		
		Nov 2020	Dec 2020	Jan 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		
		Nov 2020	Dec 2020	Jan 2021
	<ul style="list-style-type: none"> To minimize the chance for construction workers to come into contact with any contaminated materials, bulk earth-moving excavation equipment should be employed; Contact with contaminated materials can be minimised by wearing appropriate clothing and personal protective equipment such as gloves and masks (especially when interacting directly with contaminated material), provision of washing facilities and prohibition of smoking and eating on site; Stockpiling of contaminated excavated materials on site should be avoided as far as possible; The use of contaminated soil for landscaping purpose should be avoided unless pre-treatment was carried out; Vehicles containing any contaminated excavated materials should be suitably covered to reduce dust emissions and/or release of contaminated wastewater; Truck bodies and tailgates should be sealed to stop any discharge; Only licensed waste haulers should be used to collect and transport contaminated material to treatment/disposal site and should be equipped with tracking system to avoid fly tipping; Speed control for trucks carrying contaminated materials should be exercised; Observe all relevant regulations in relation to waste handling, such as Waste Disposal Ordinance (Cap. 354), Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354) and obtain all necessary permits where required; and Maintain records of waste generation and disposal quantities and disposal arrangements. 	N/A	N/A	N/A
Ecological Impact (Construction)				
No mitigation measure is required.				
Landscape and Visual Impact (Construction)				
Table 9.1 (CM1)	Trees should be retained in situ on site as far as possible. Should tree removal be unavoidable due to construction impacts, trees will be transplanted or felled with reference to the stated criteria in the Tree Removal Applications to be submitted to relevant government departments for approval in accordance to ETWB TCW No. 29/2004 and 3/2006.	✓	✓	✓

EM& A Ref.	Recommendation Measures	Implementation Stage		
		Nov 2020	Dec 2020	Jan 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		
		Nov 2020	Dec 2020	Jan 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

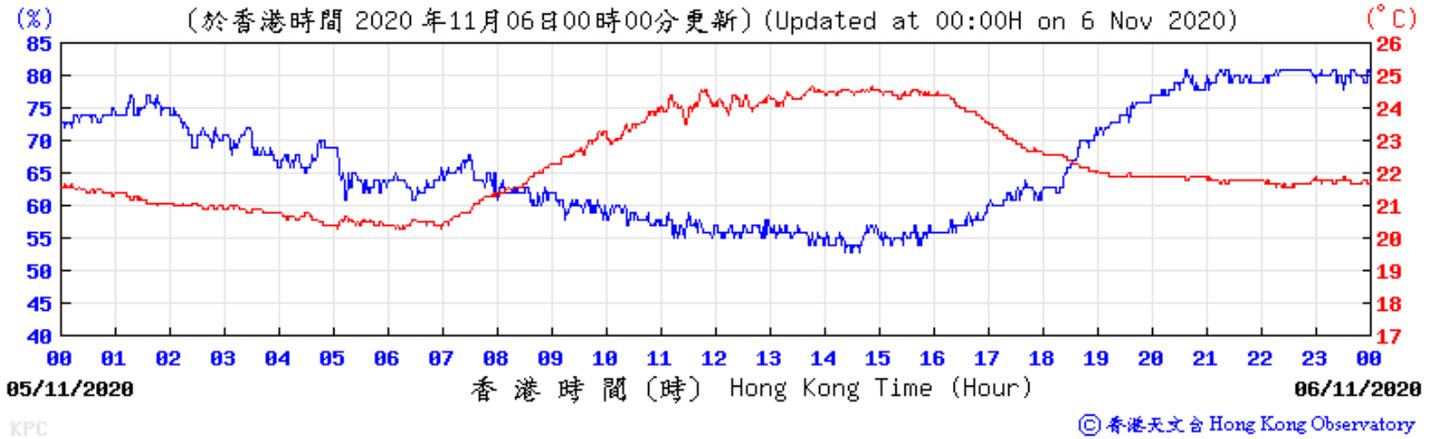
Obs - Observed

Rem - Reminder

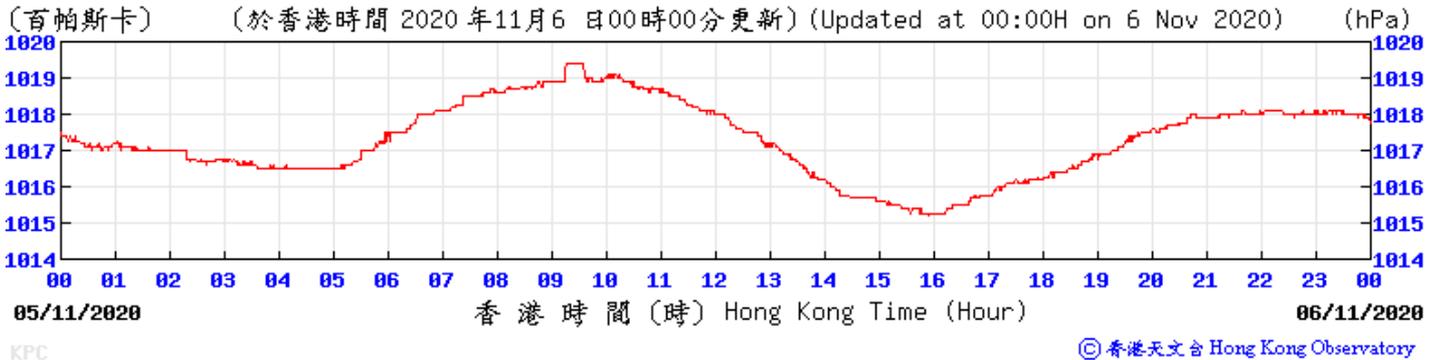
D. Meteorological Data Extracted from Hong Kong Observatory

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

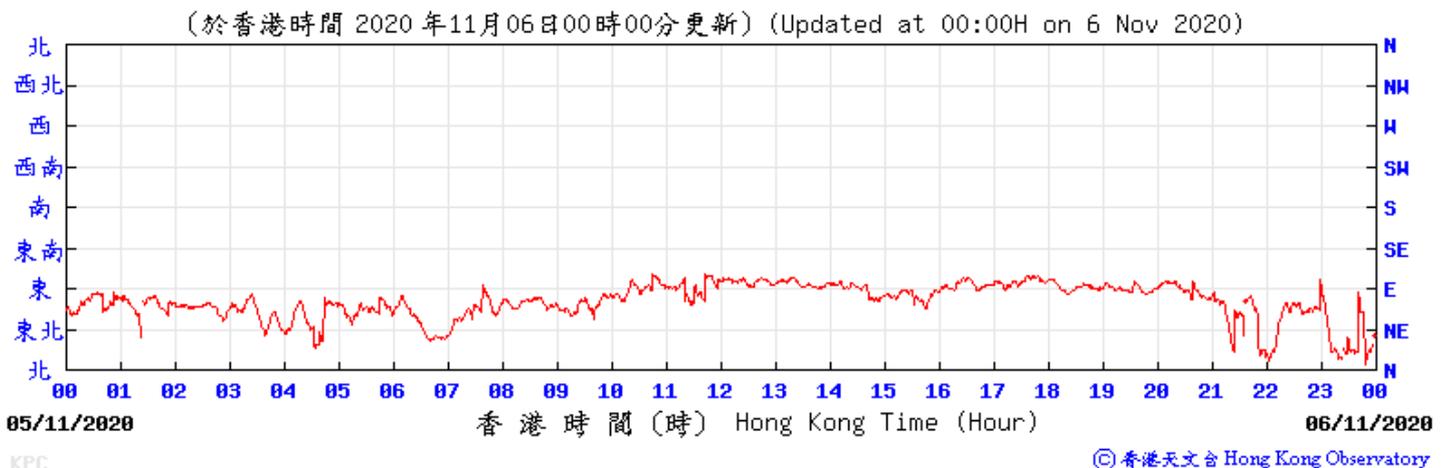
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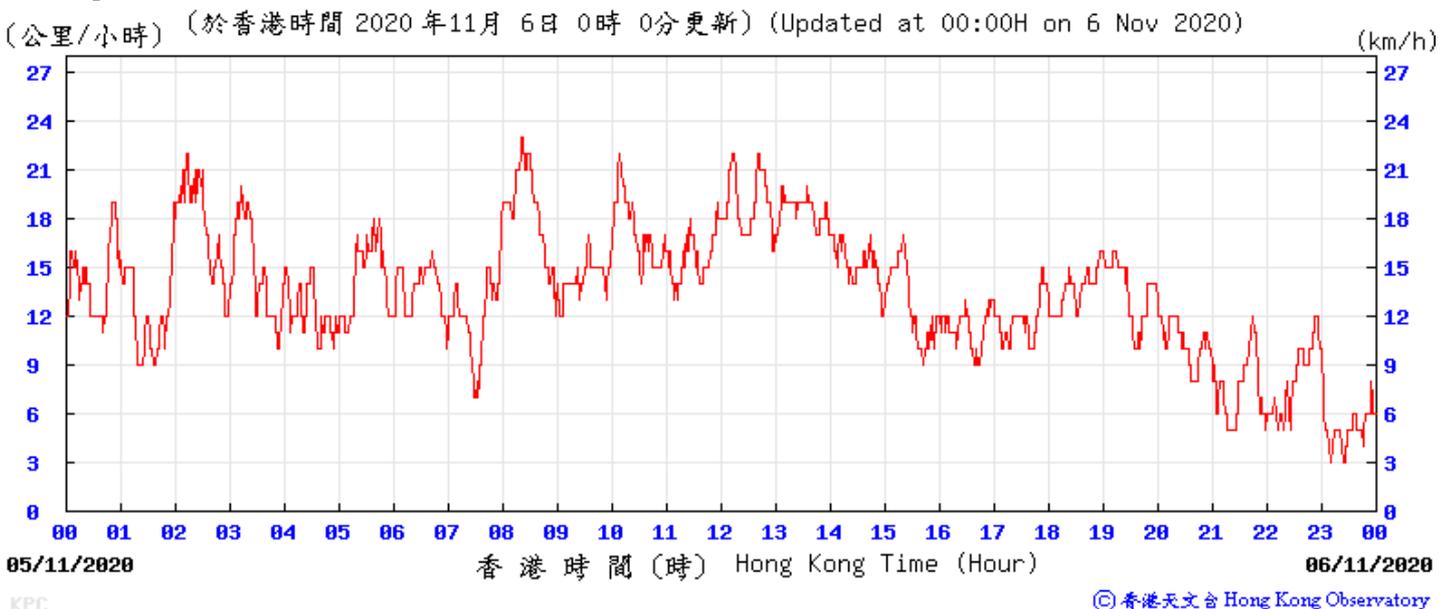
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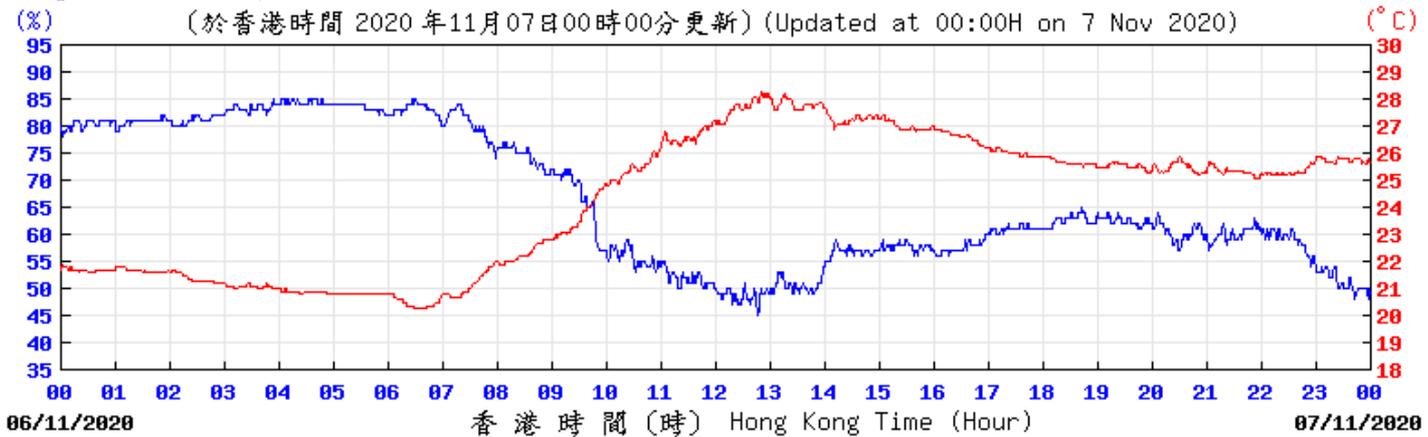
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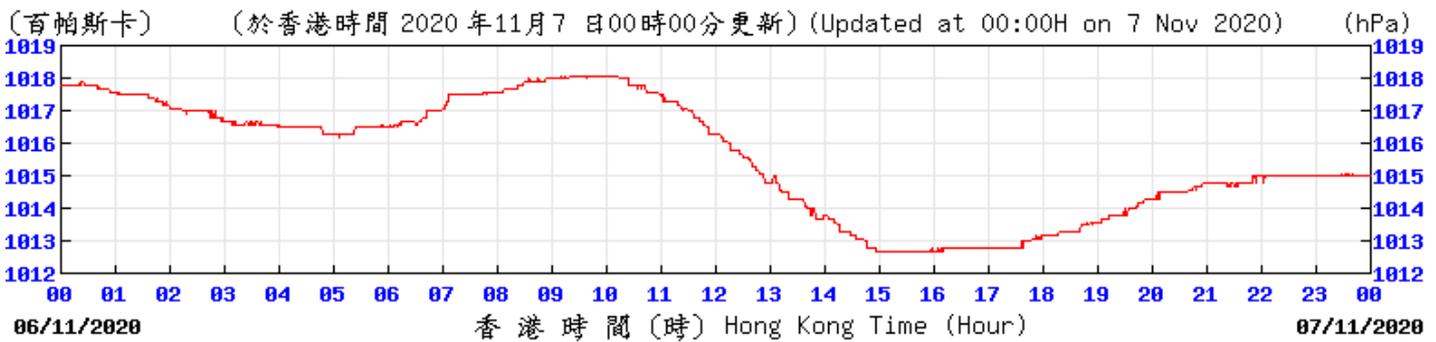


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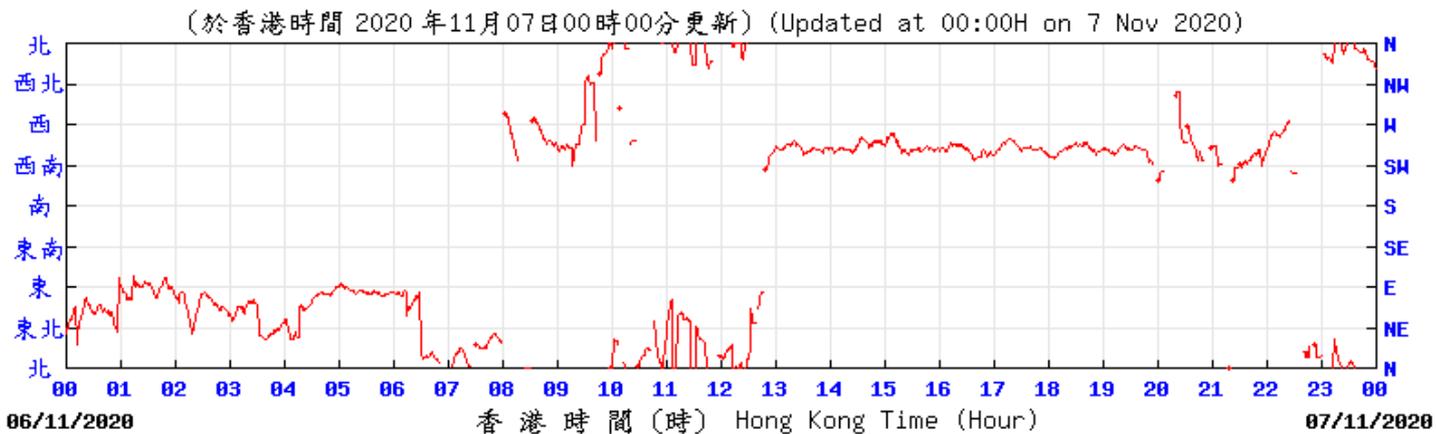
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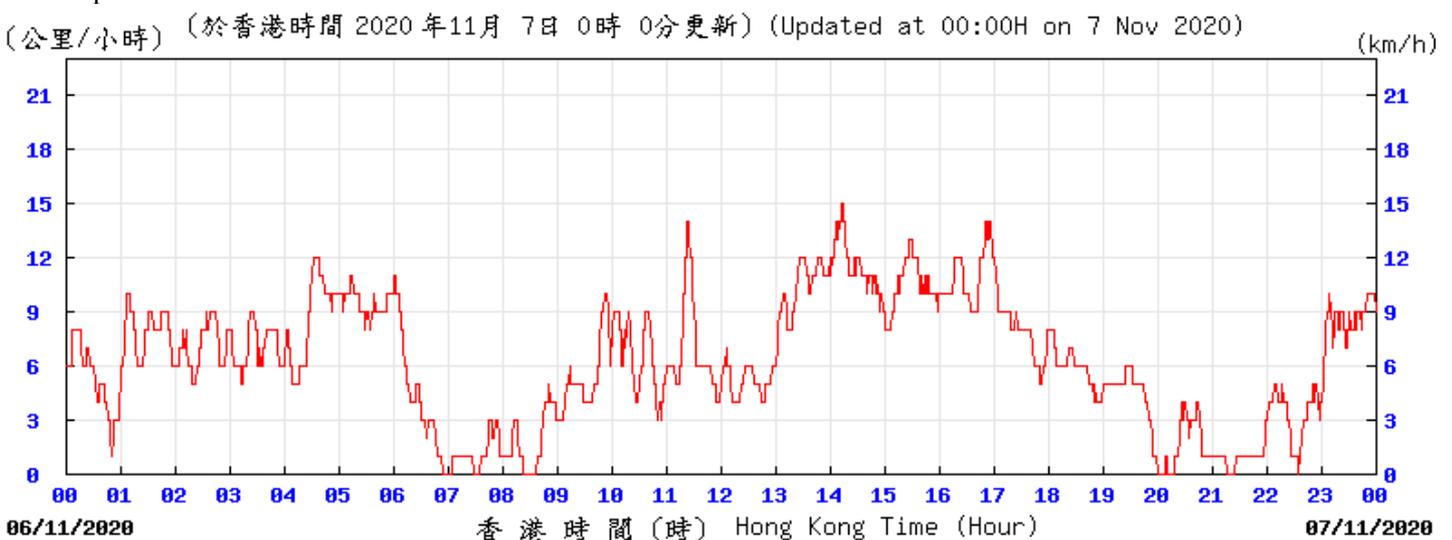
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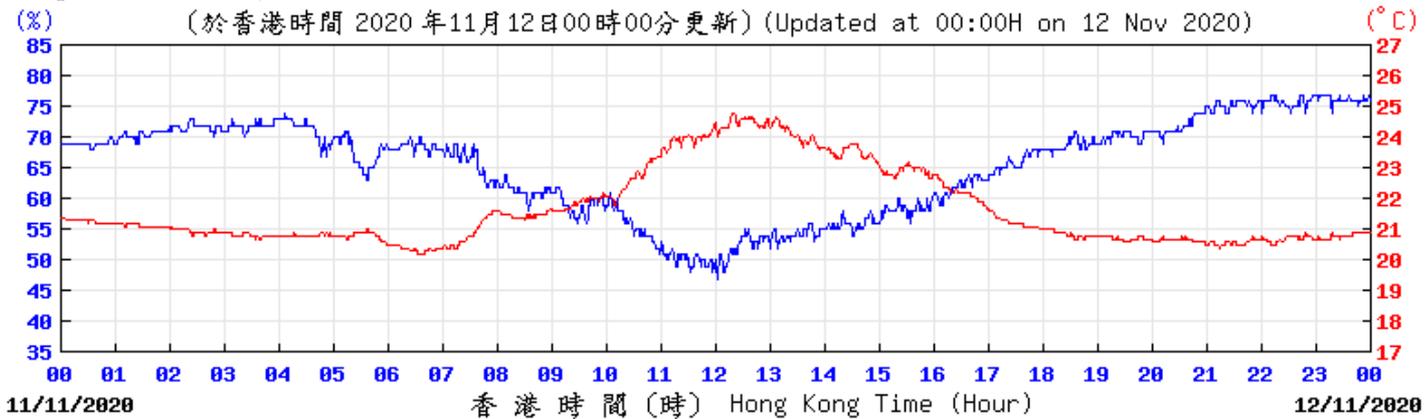
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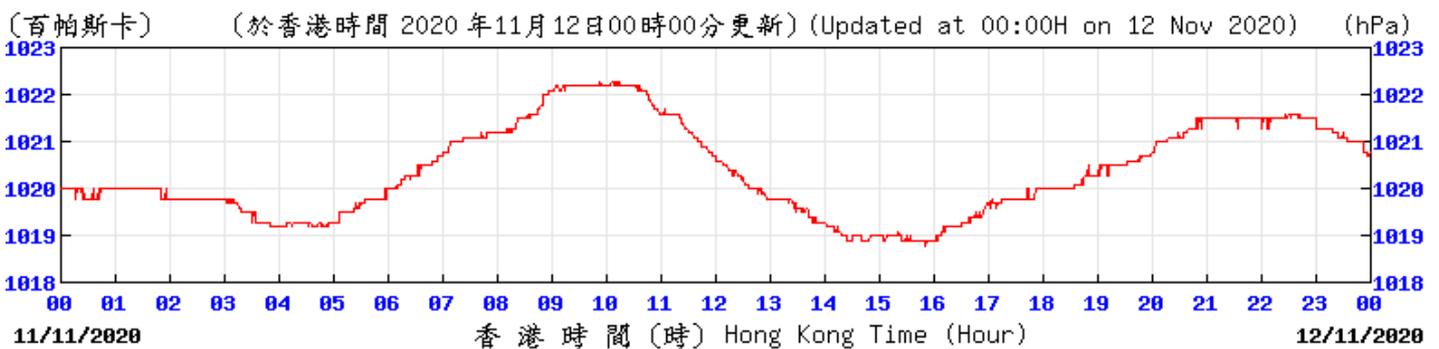
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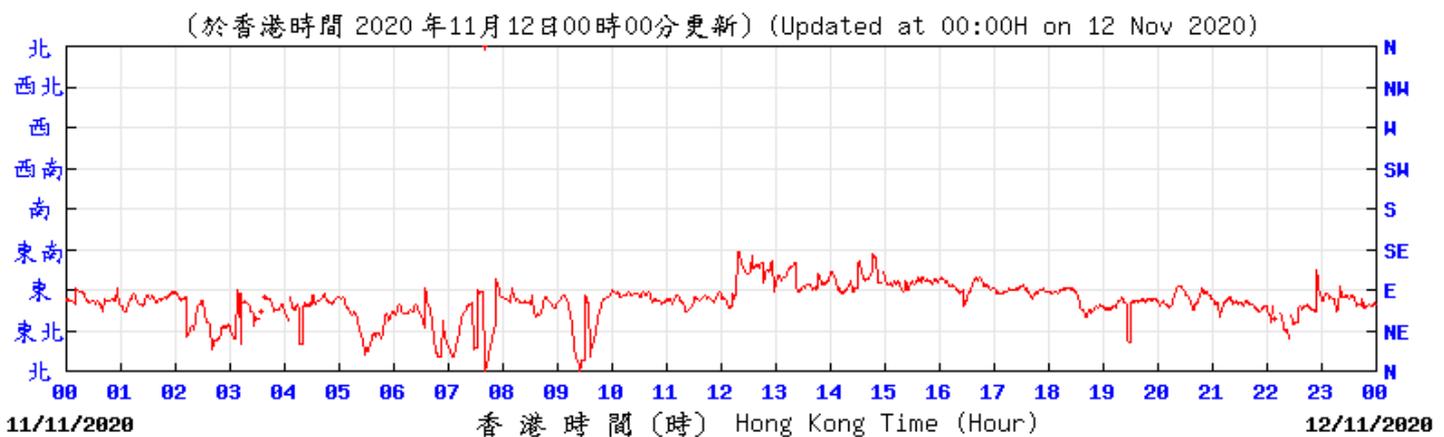
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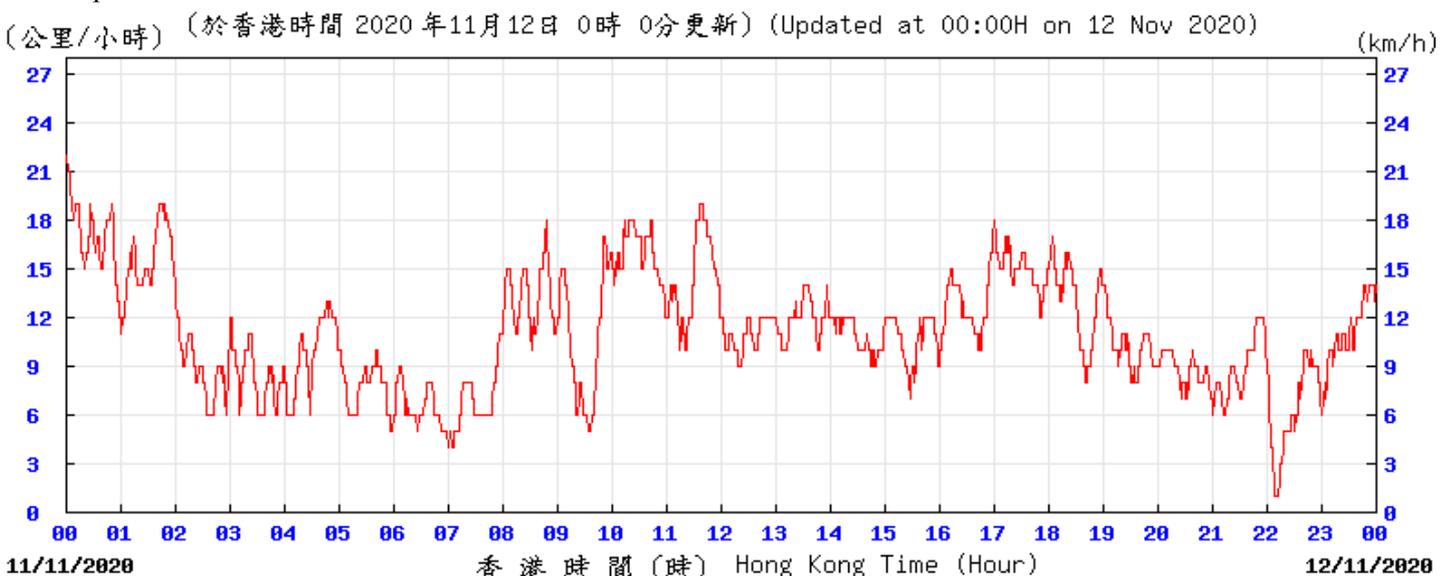
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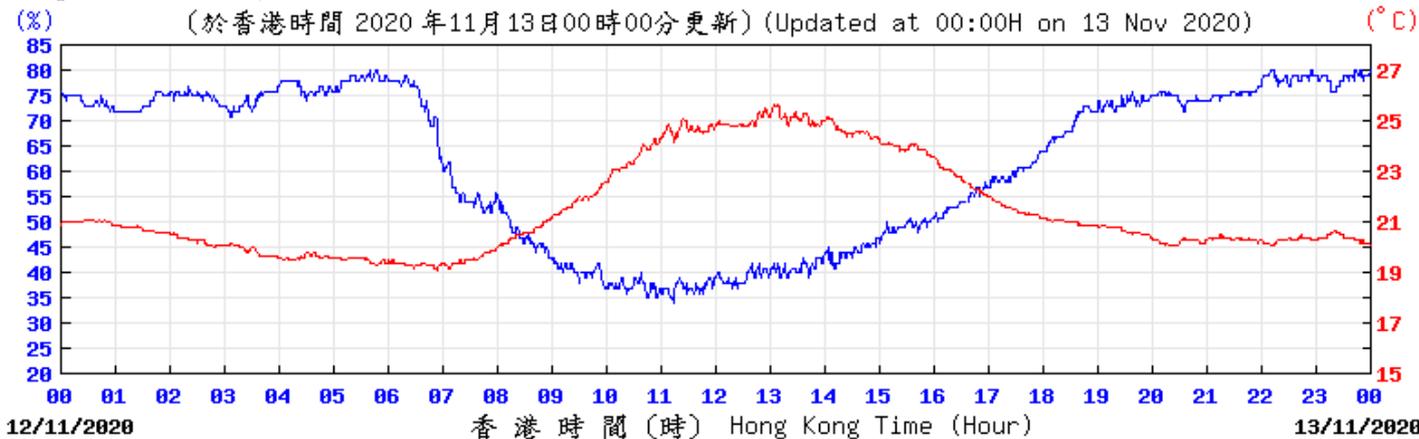
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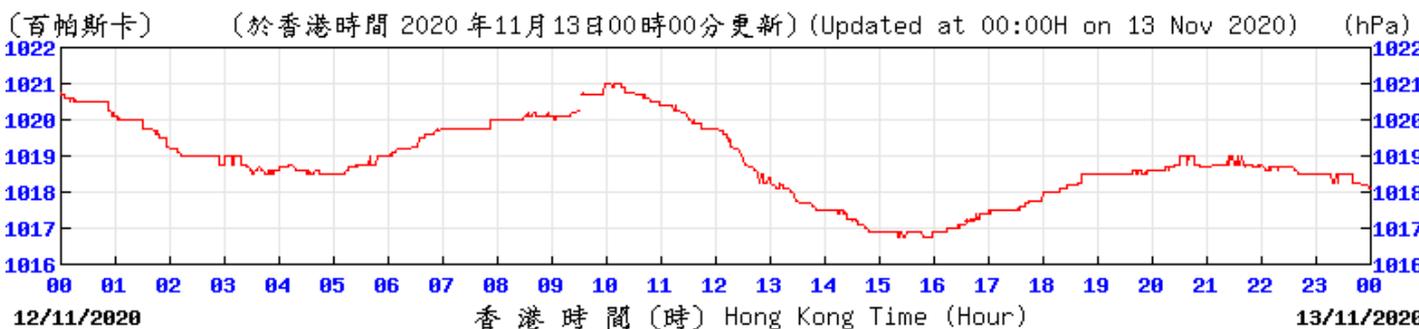
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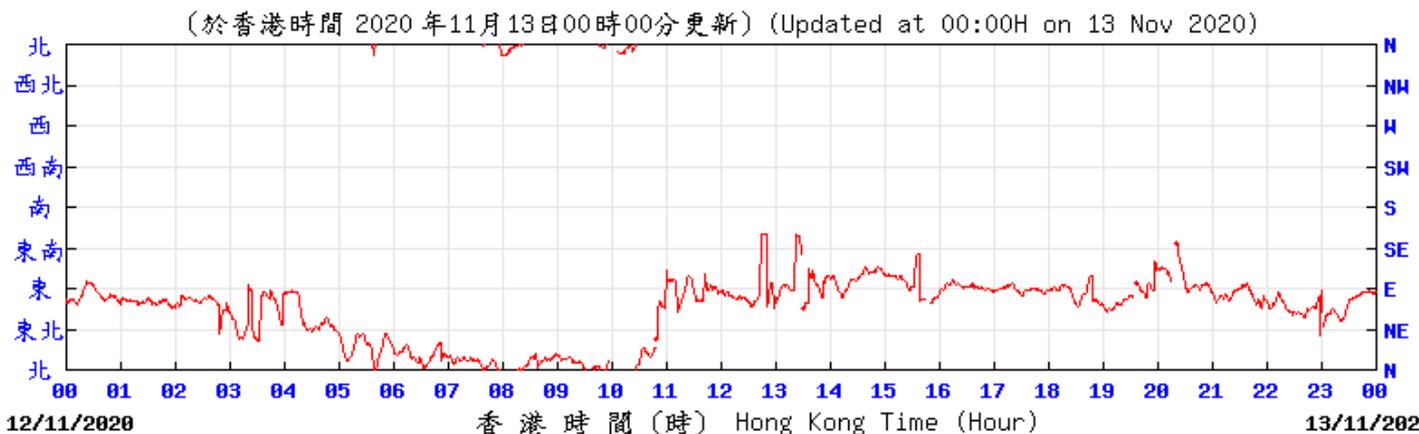
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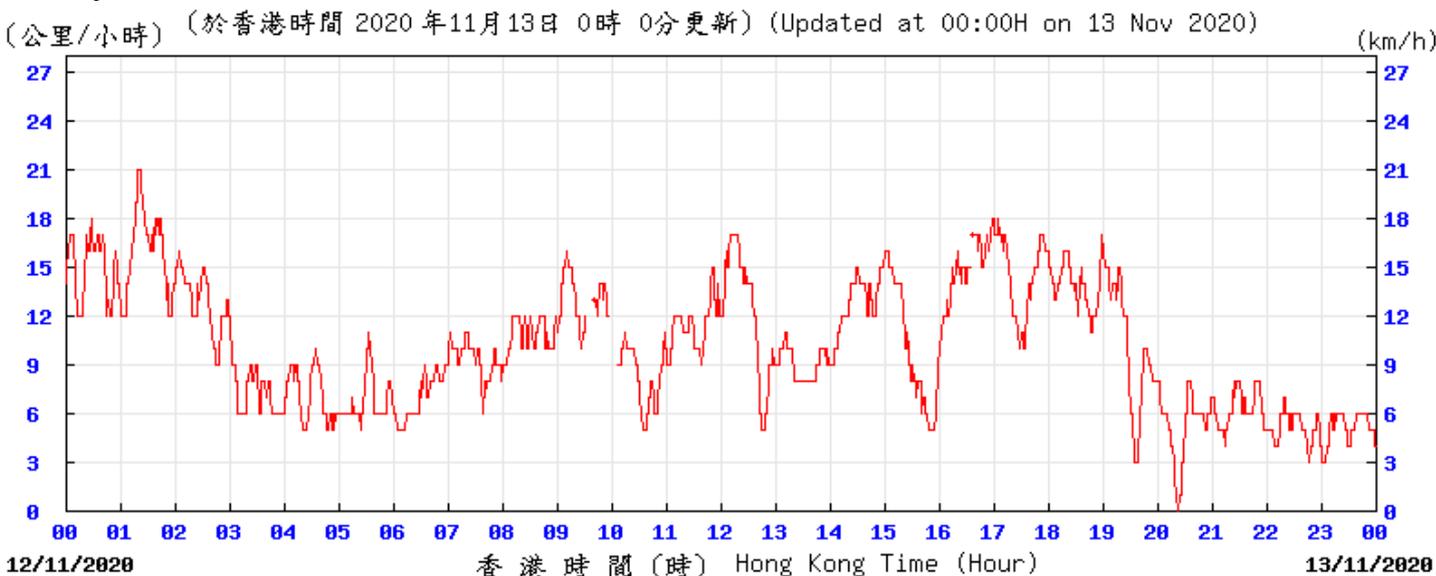
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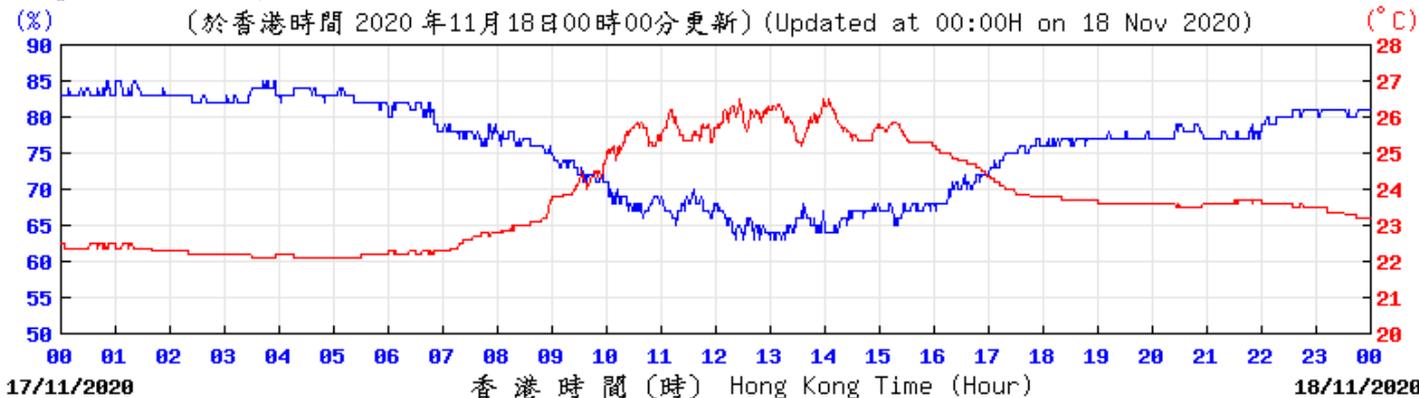
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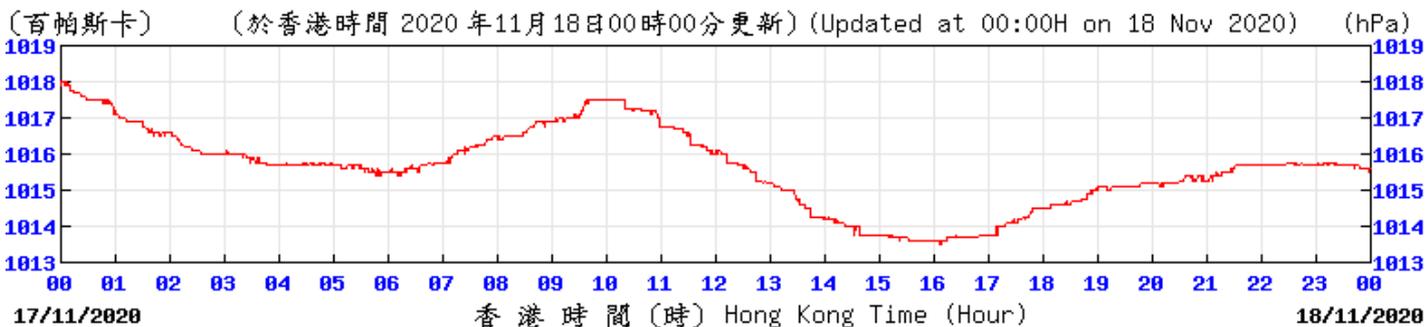
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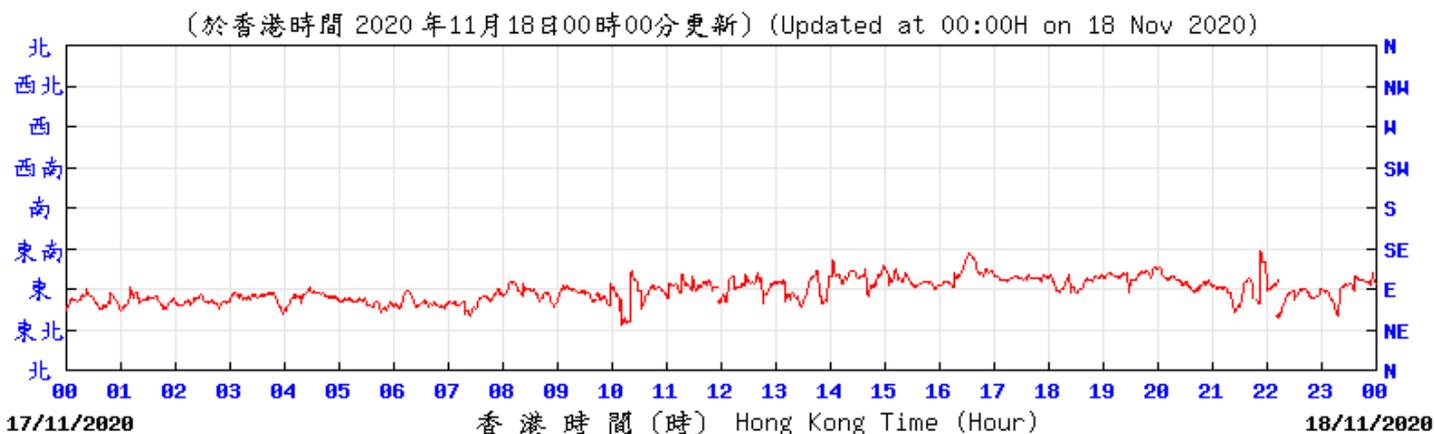
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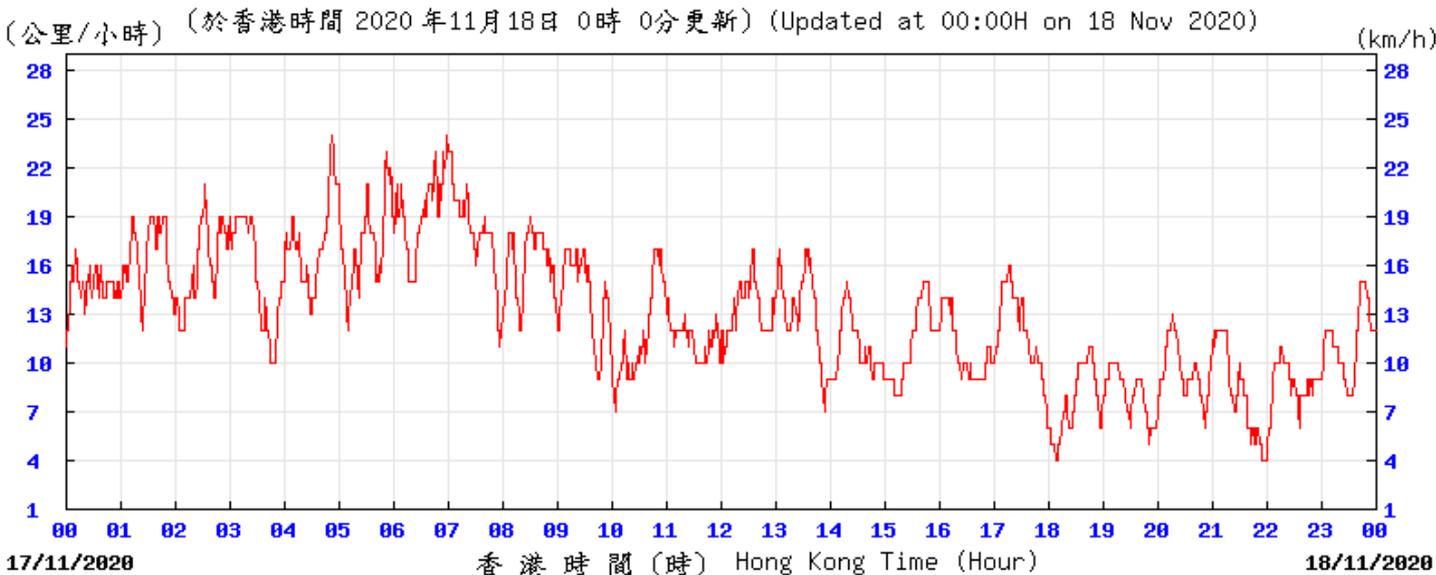
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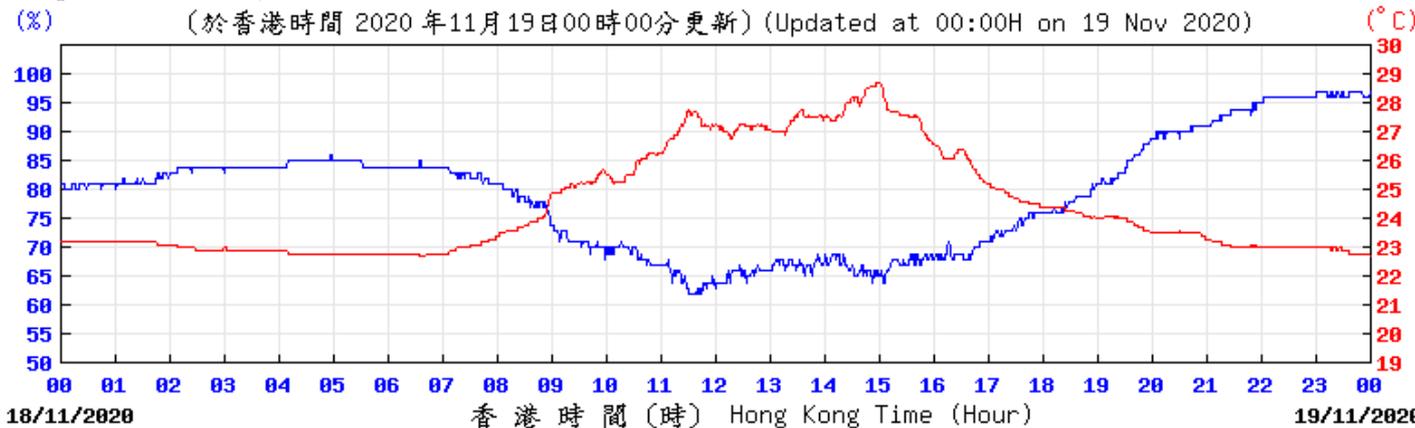
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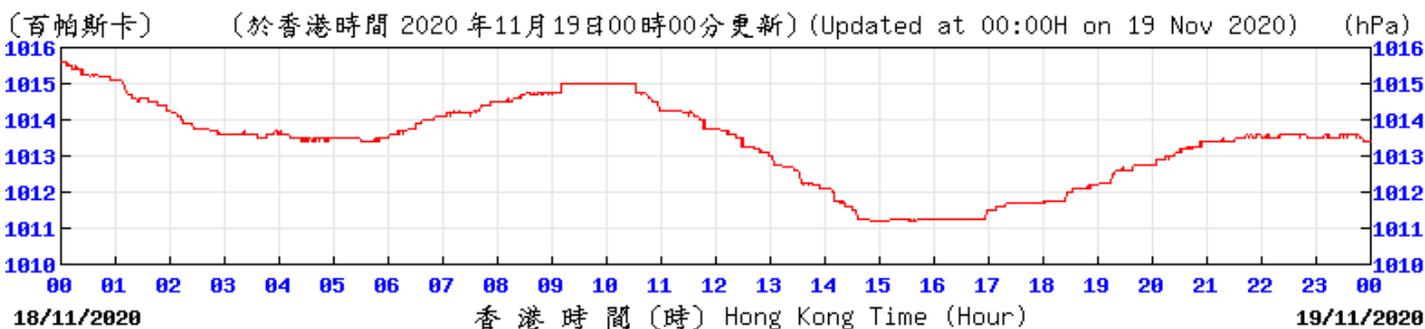
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Temperature/Humidity:



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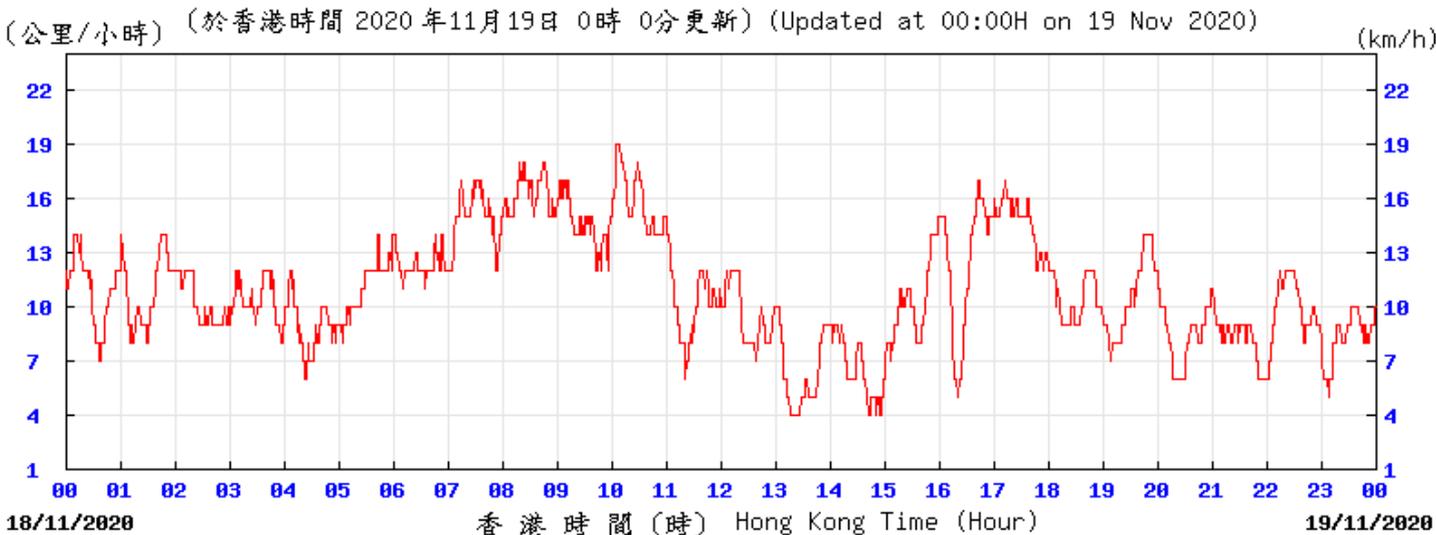
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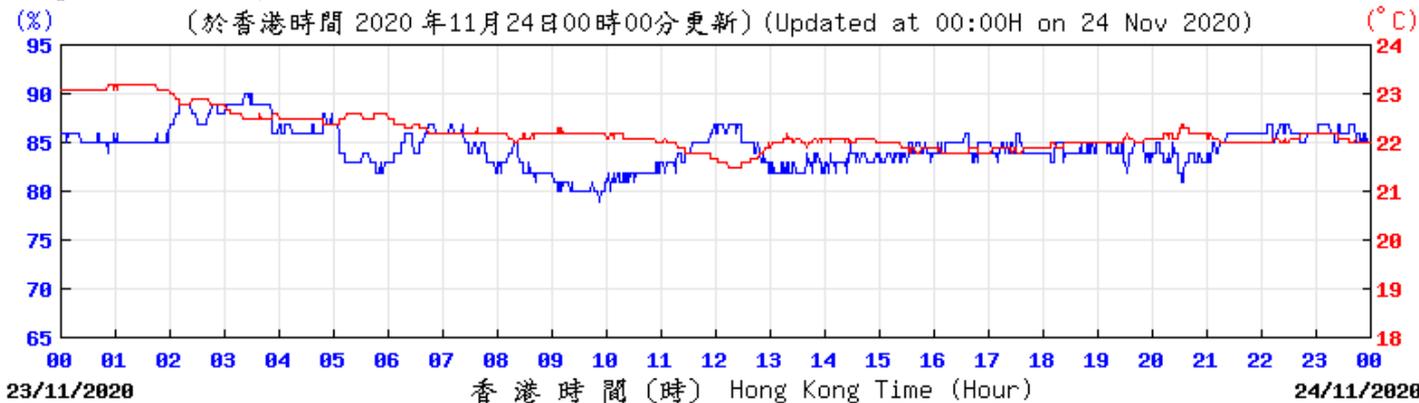
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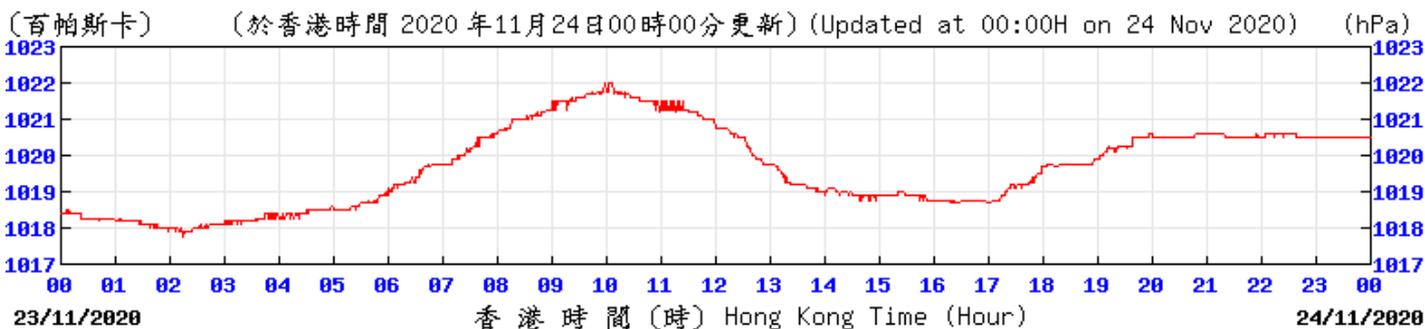
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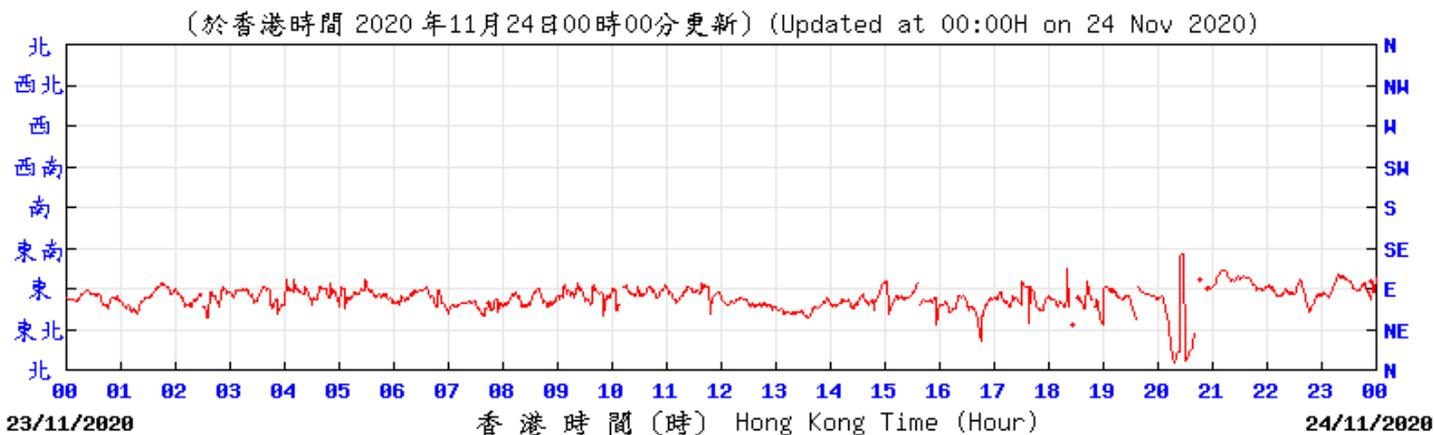
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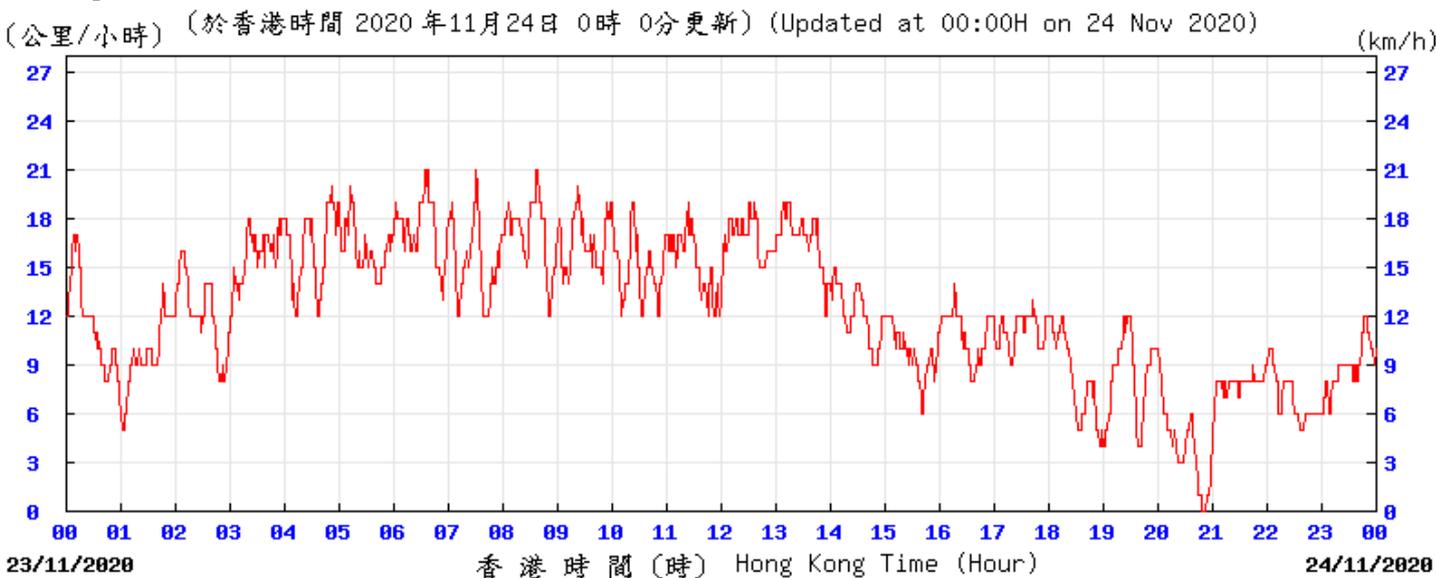
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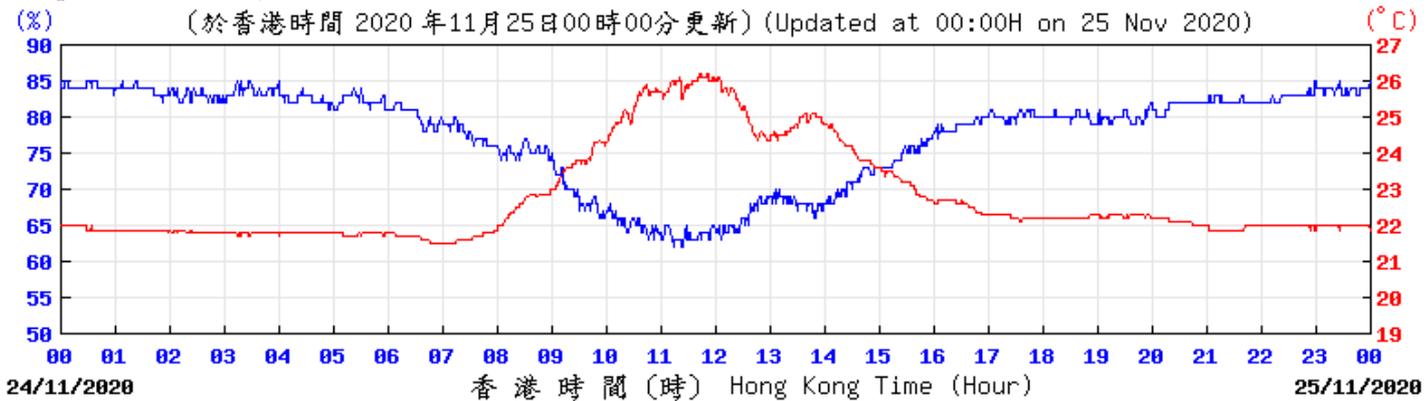
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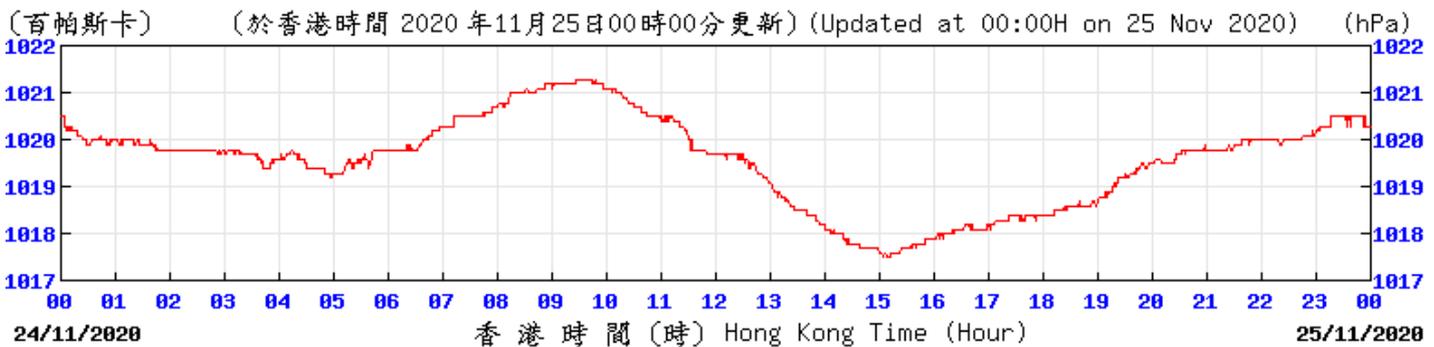
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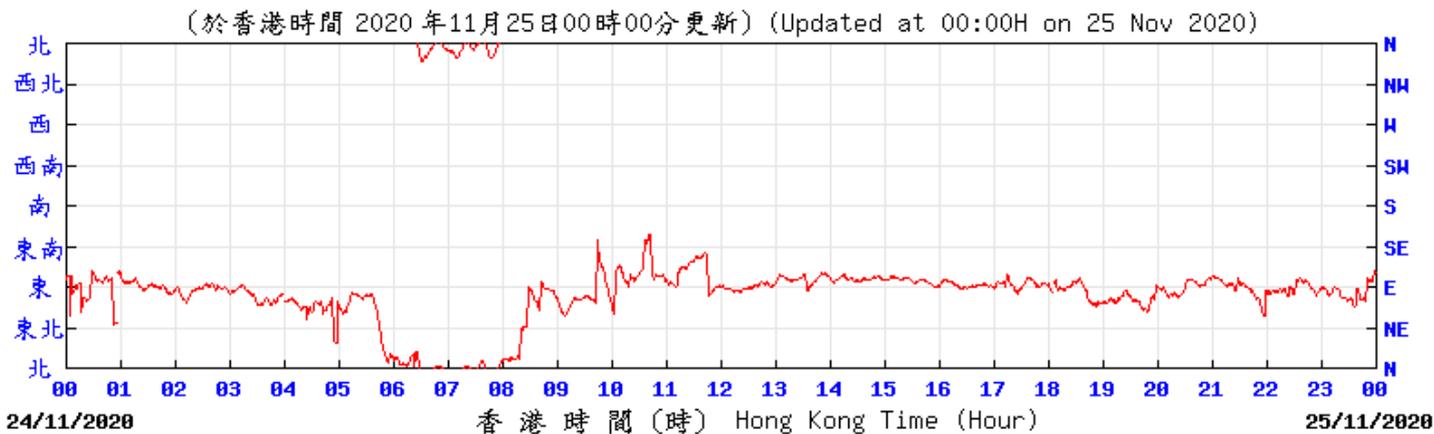
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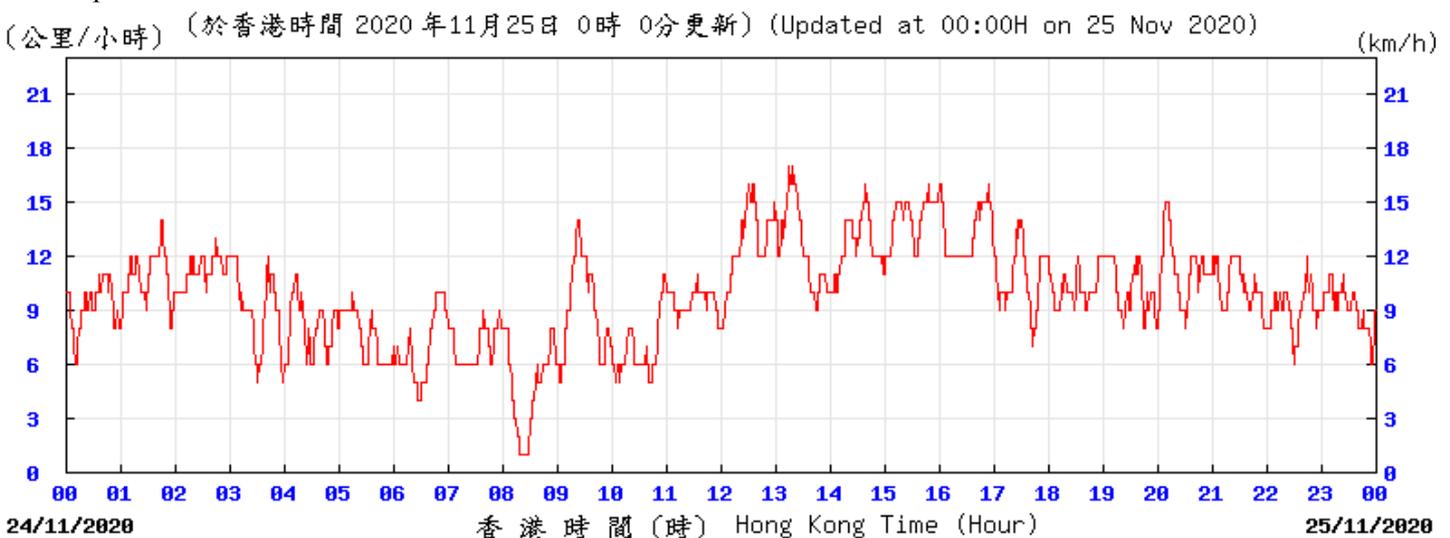
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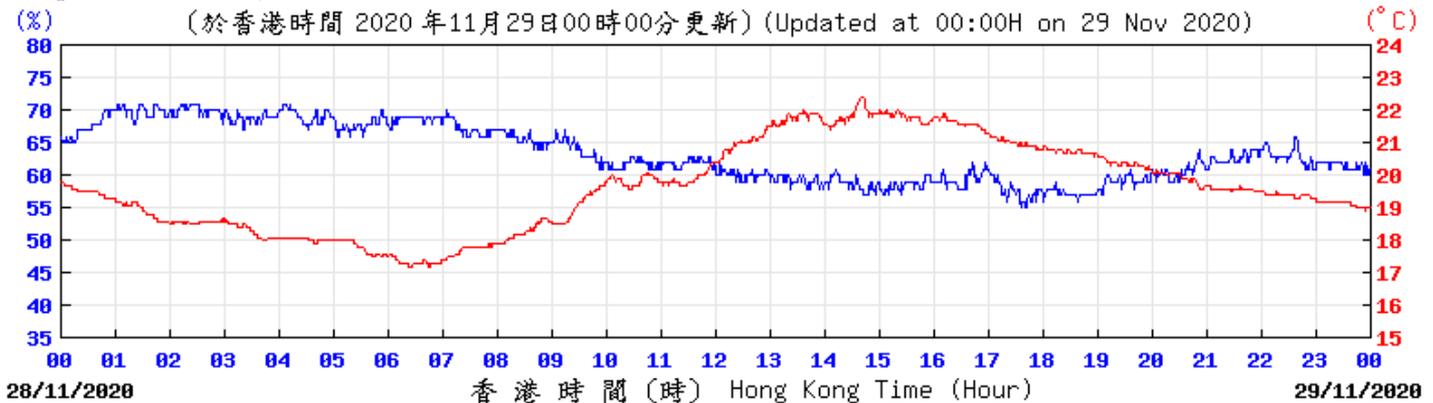
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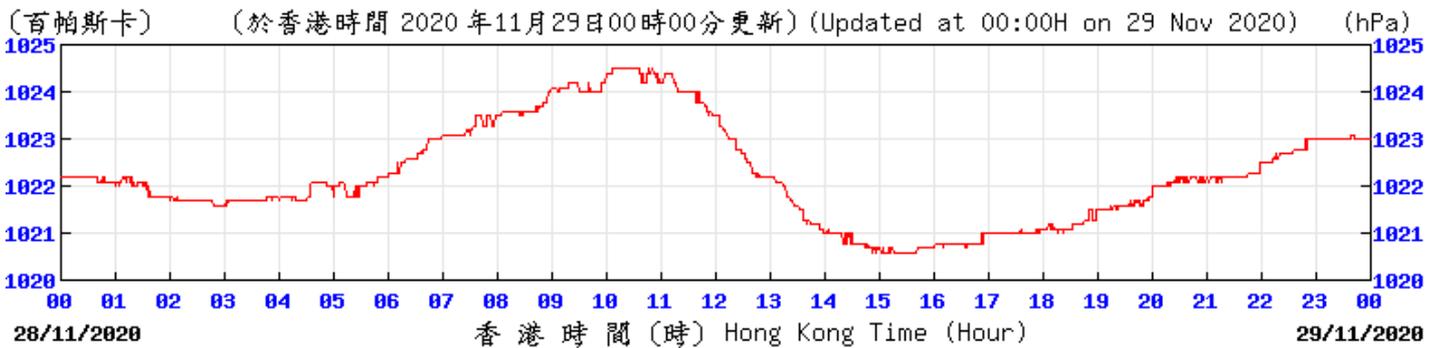
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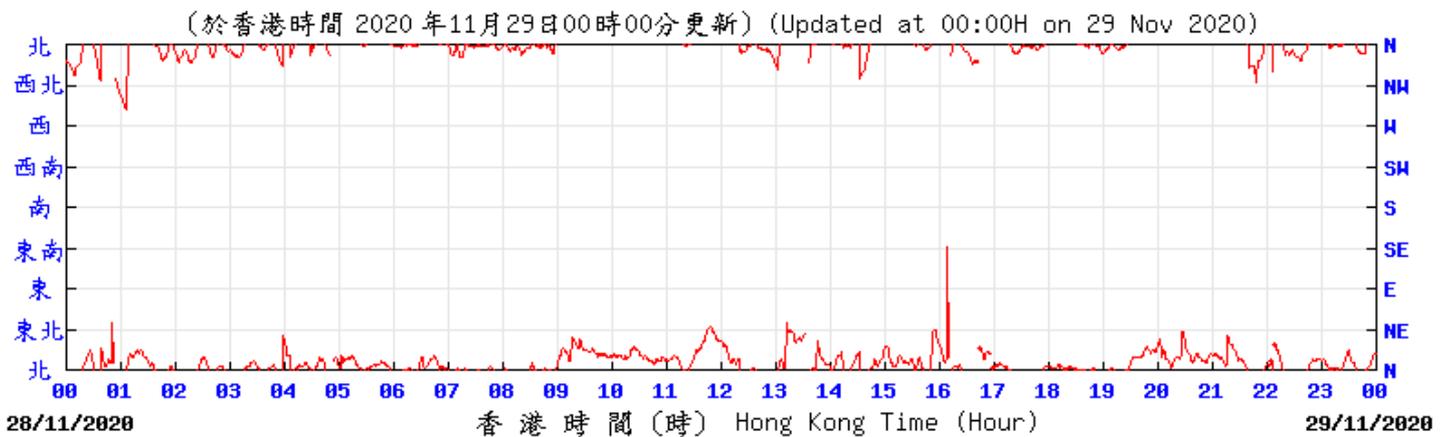
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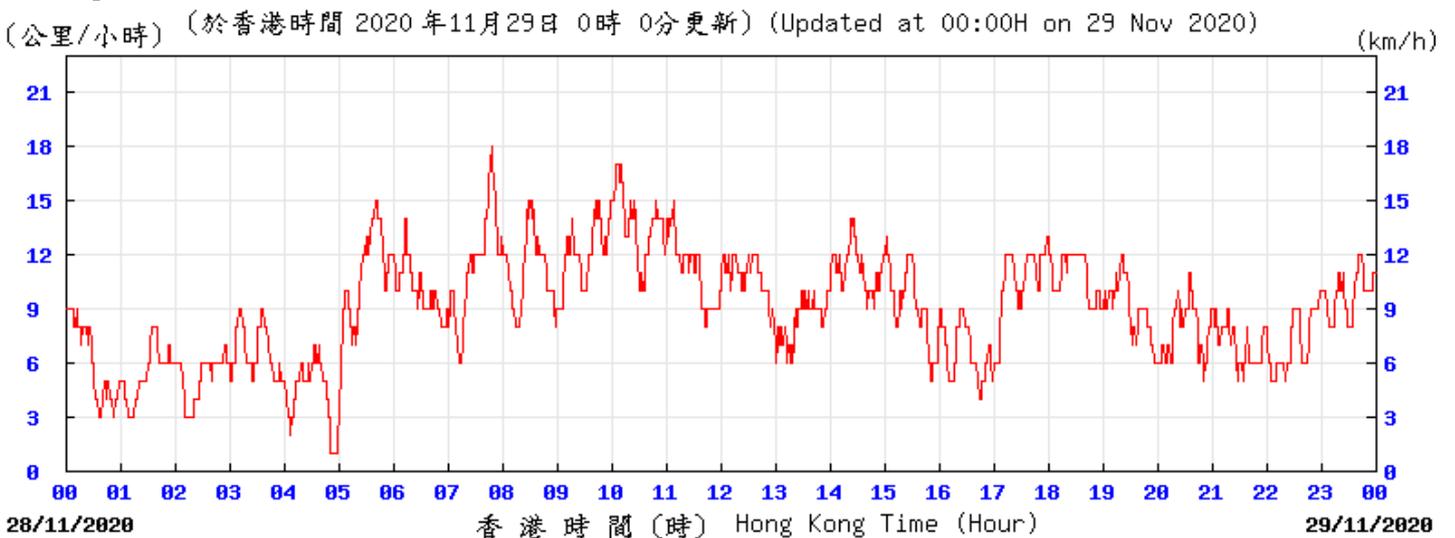
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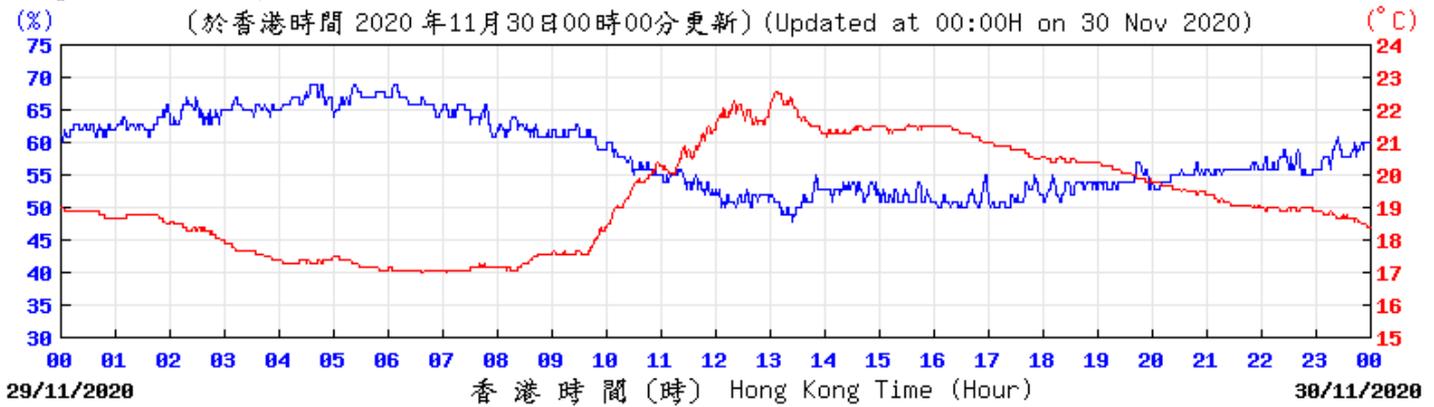
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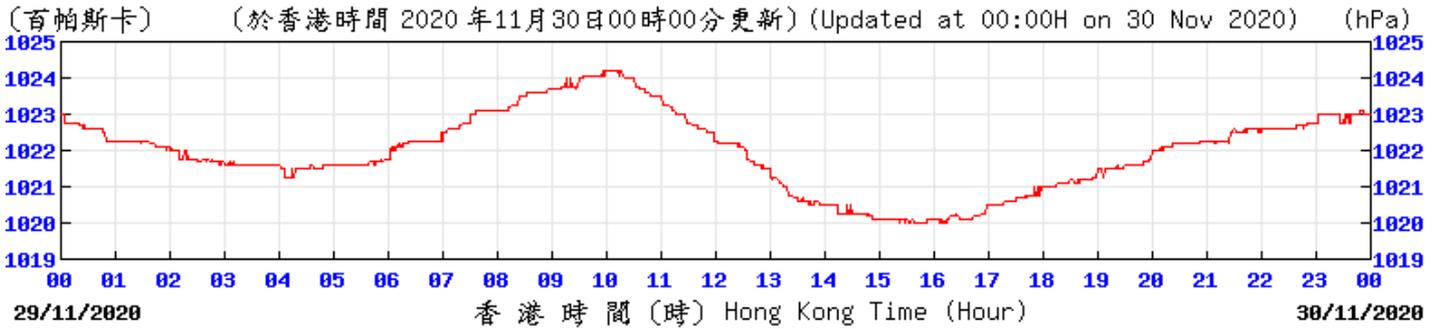
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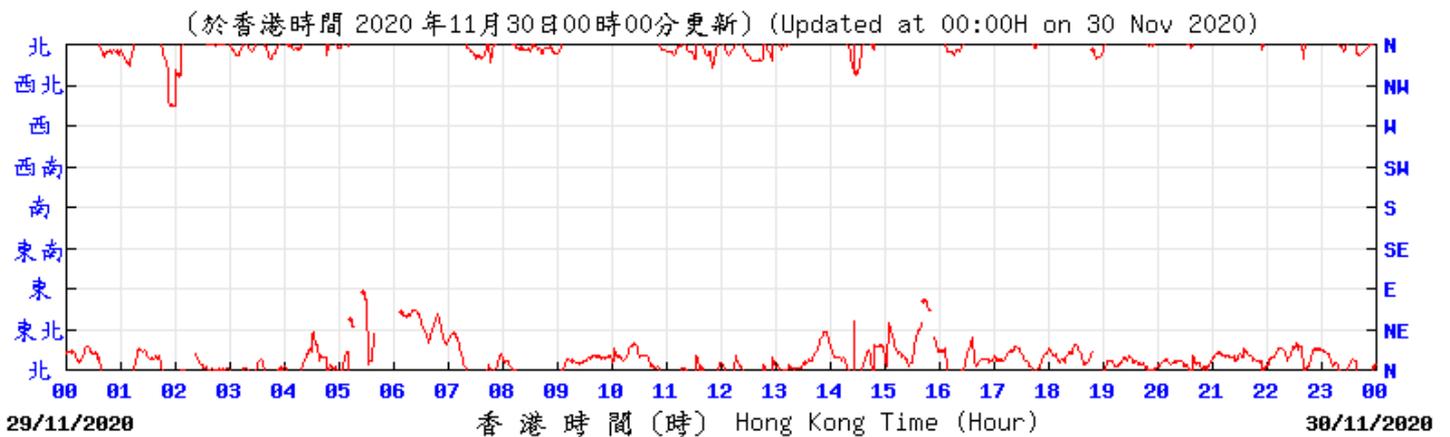
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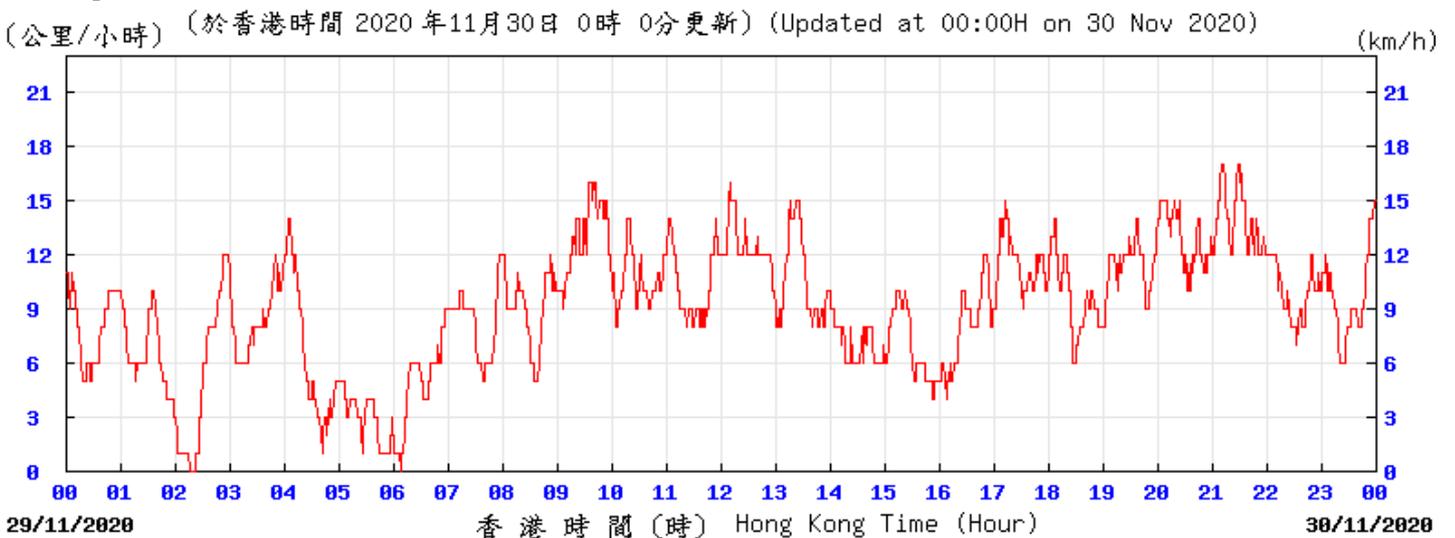
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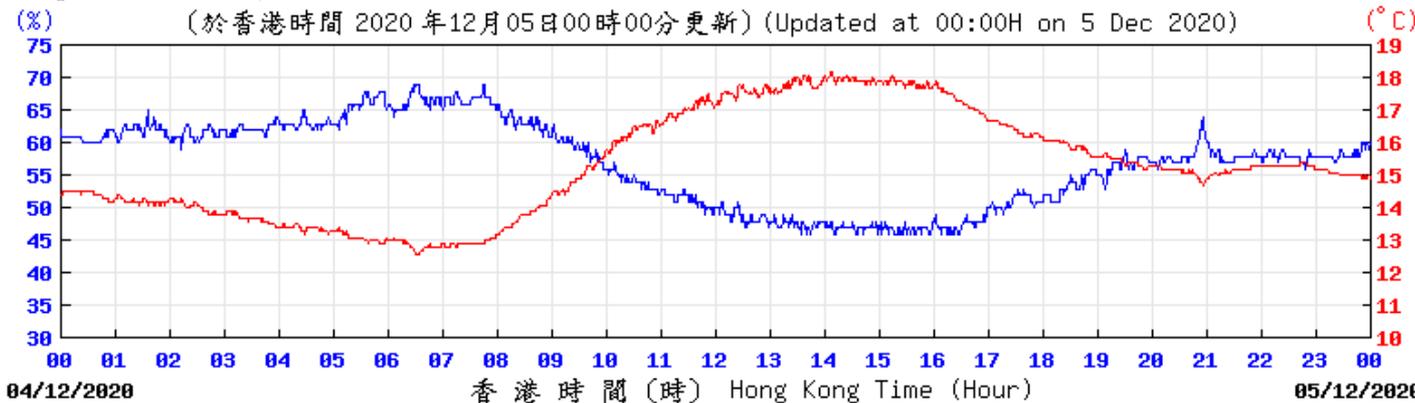
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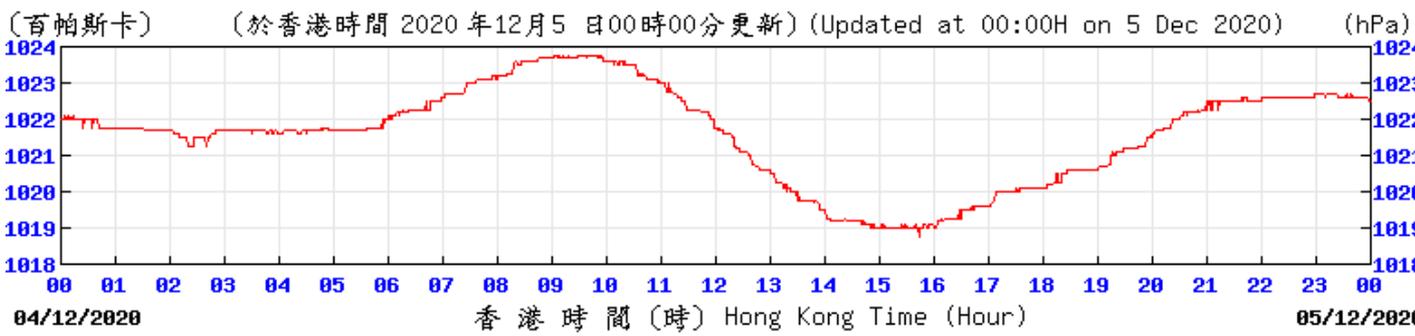
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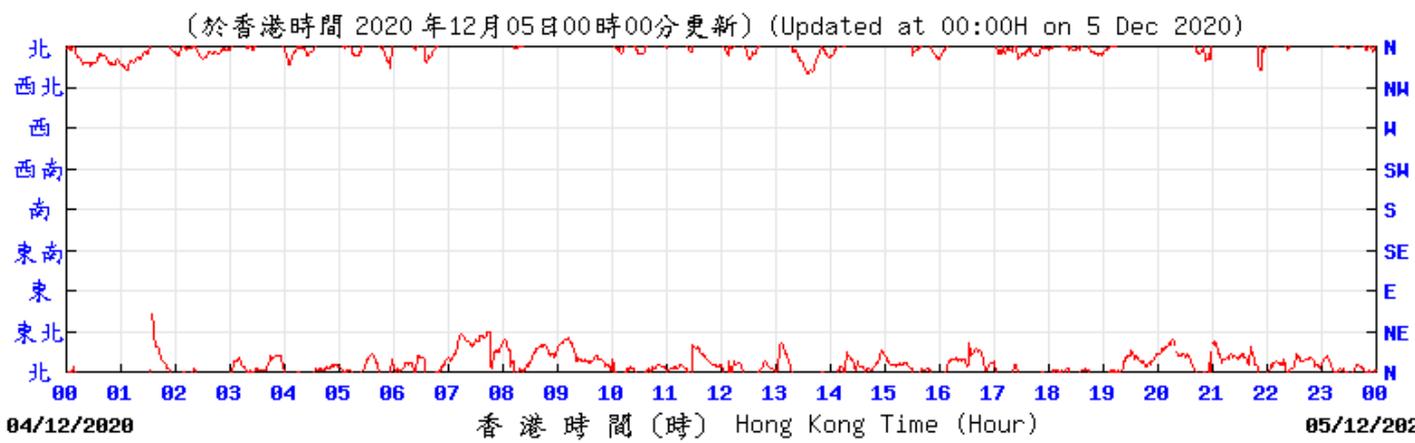
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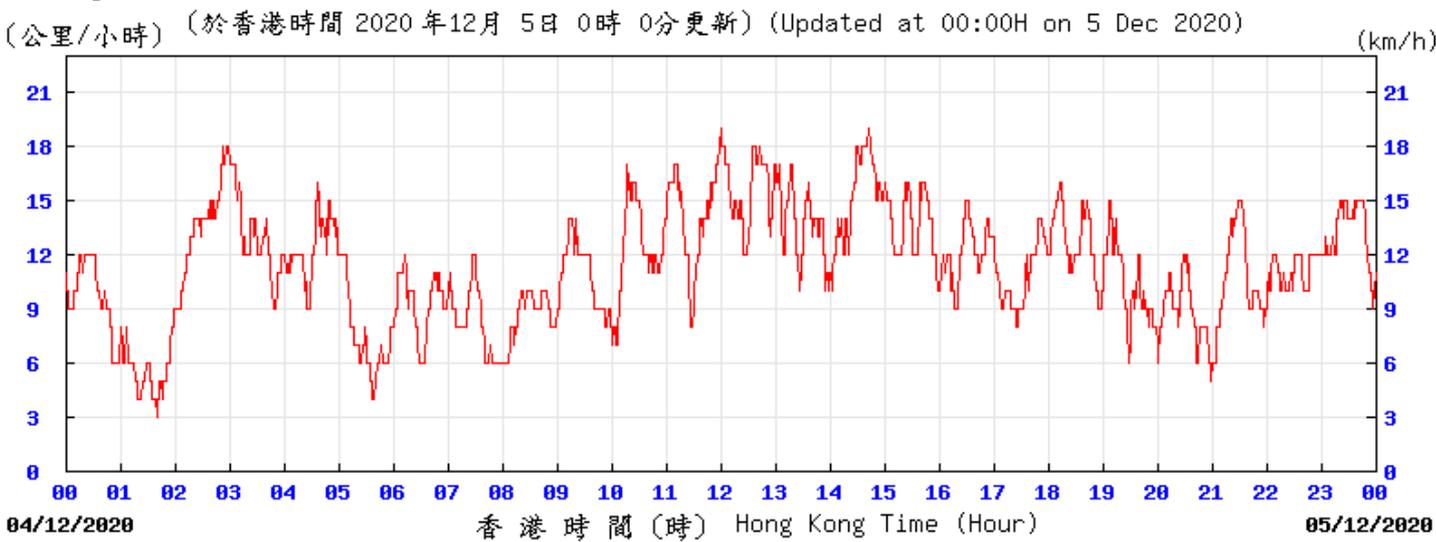
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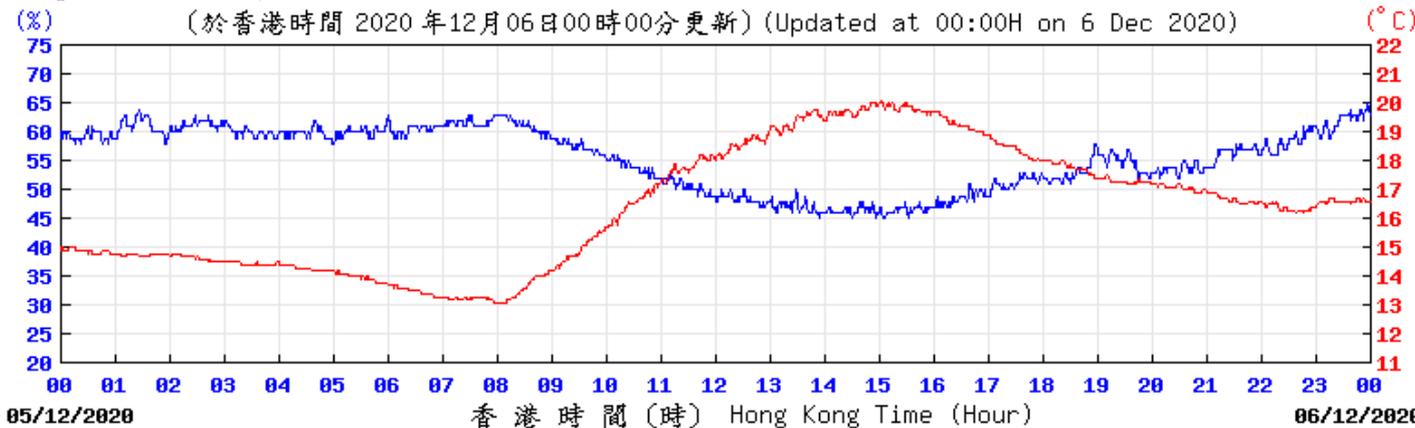
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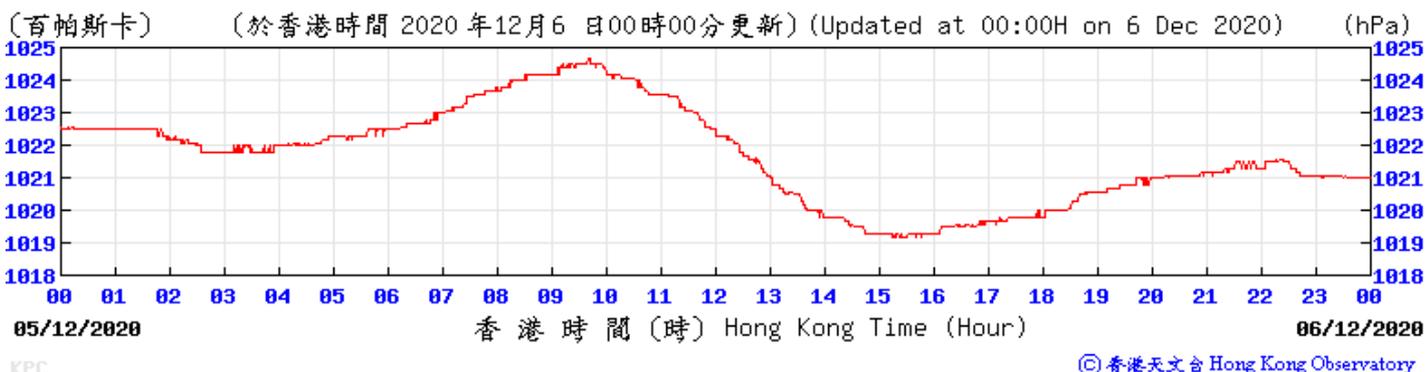


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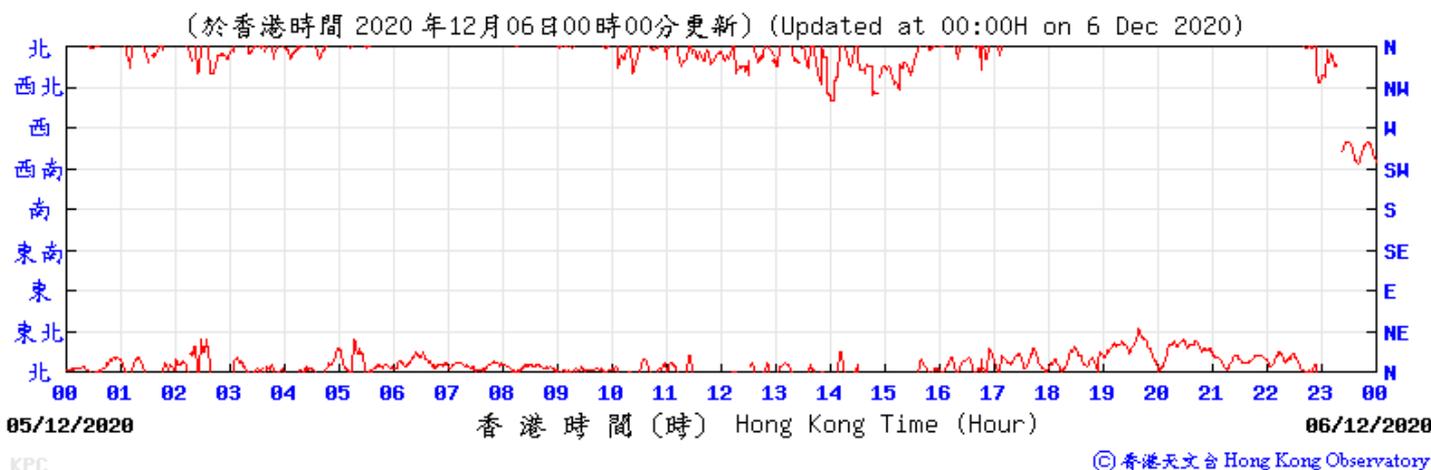
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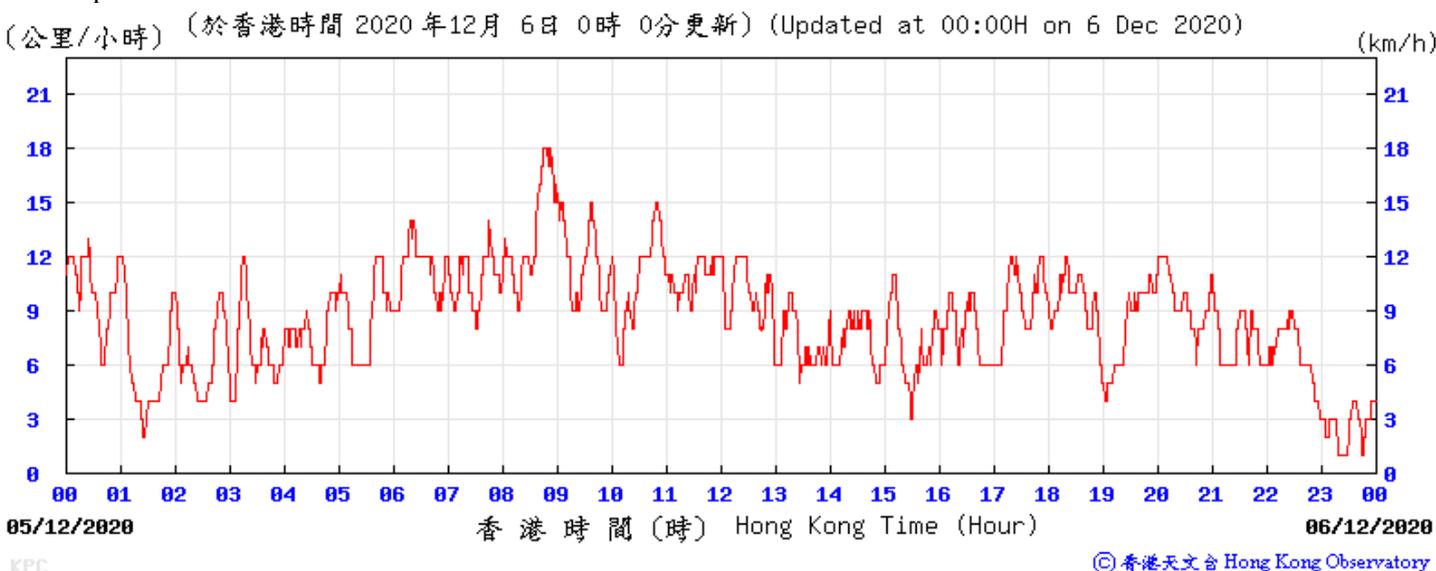
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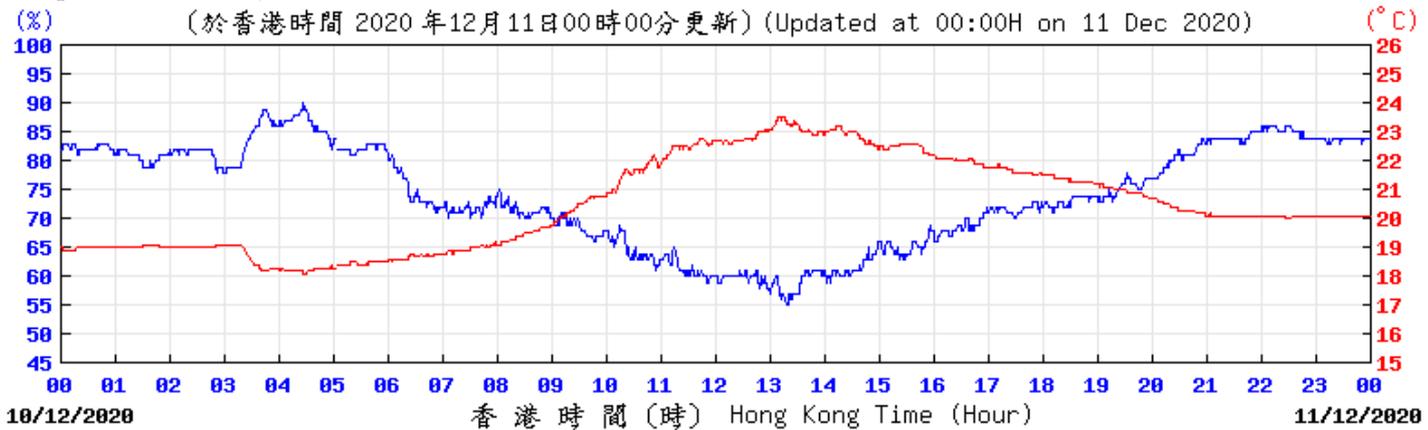
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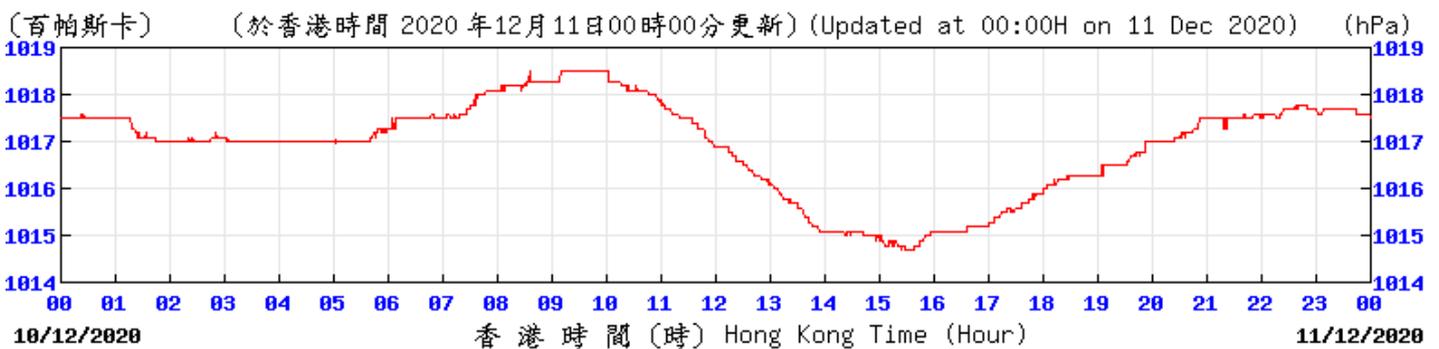


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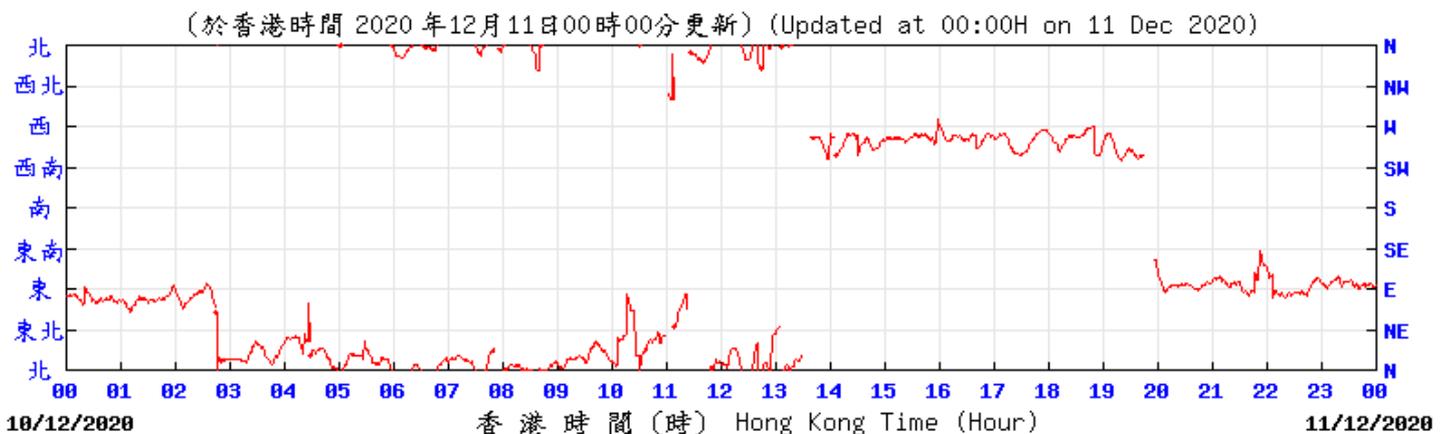
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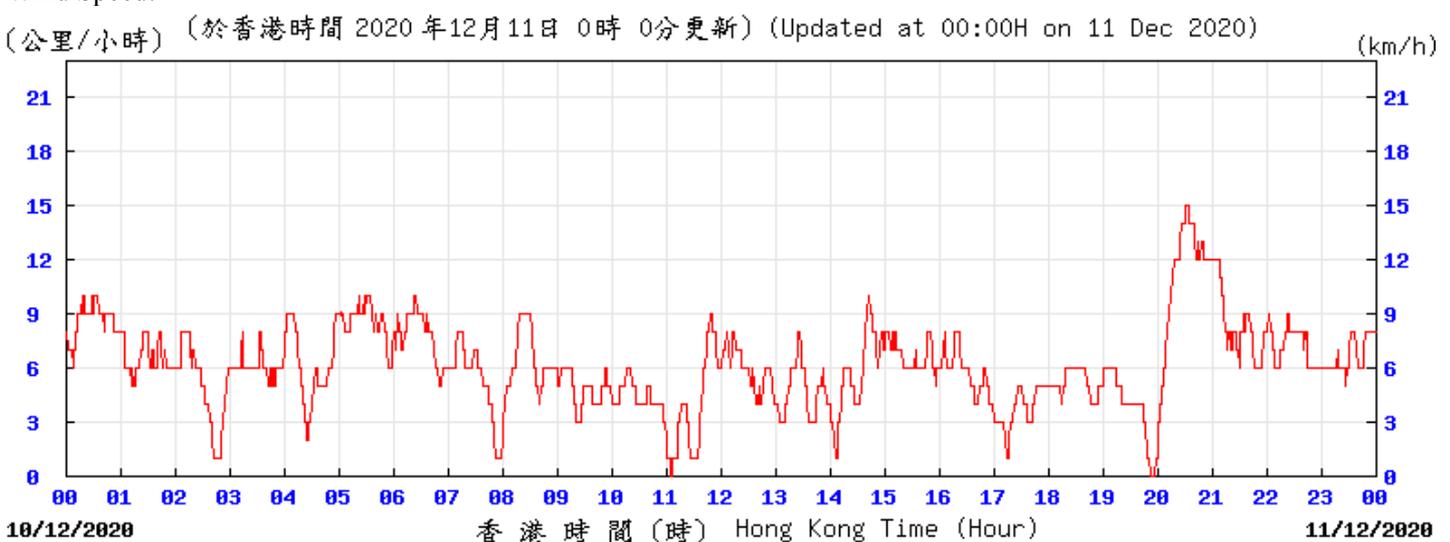
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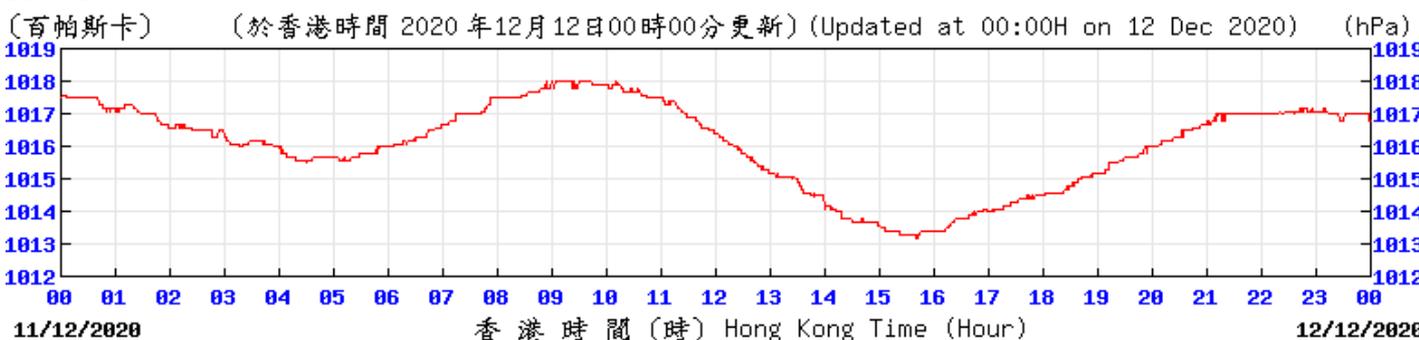
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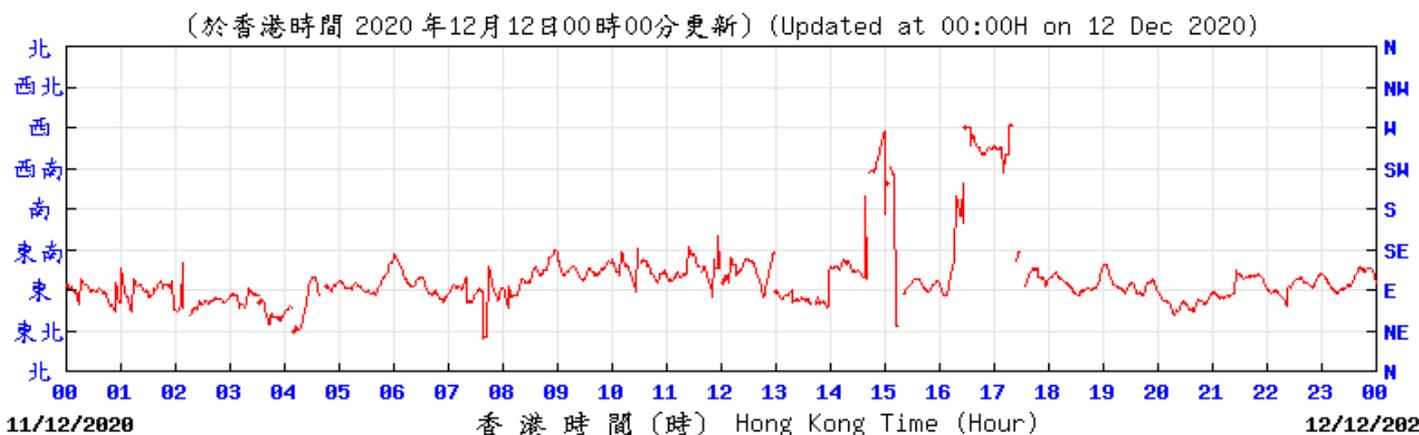
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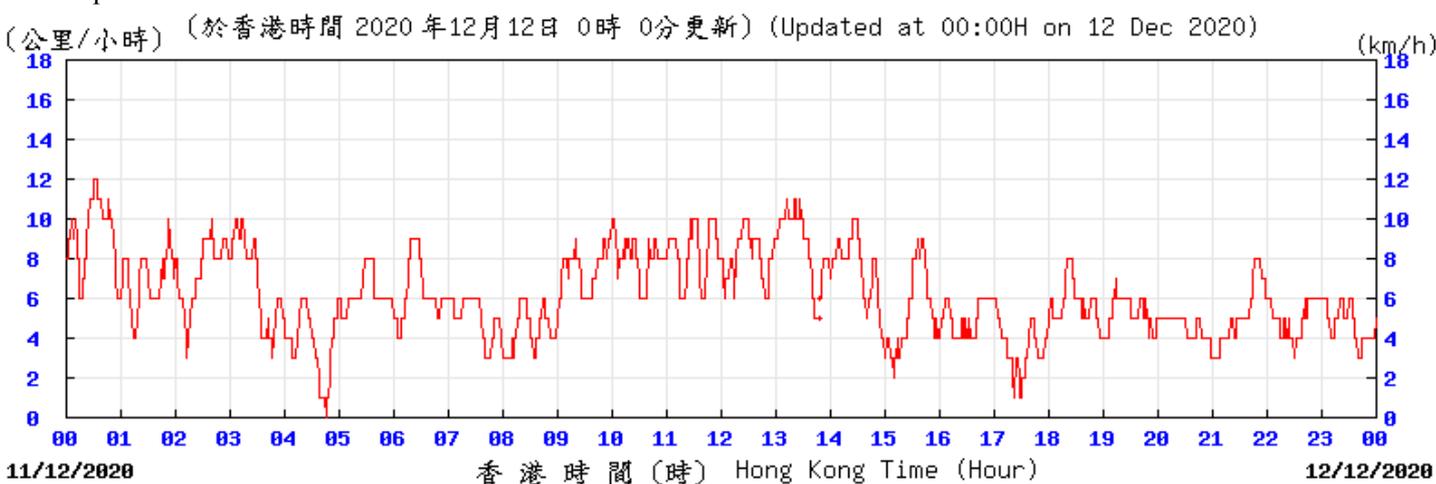
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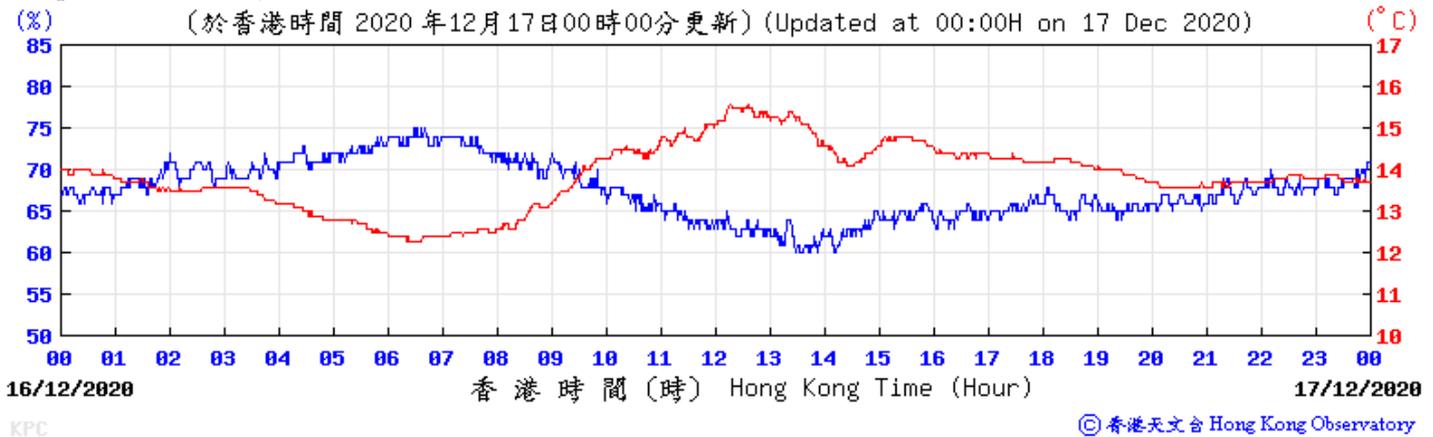
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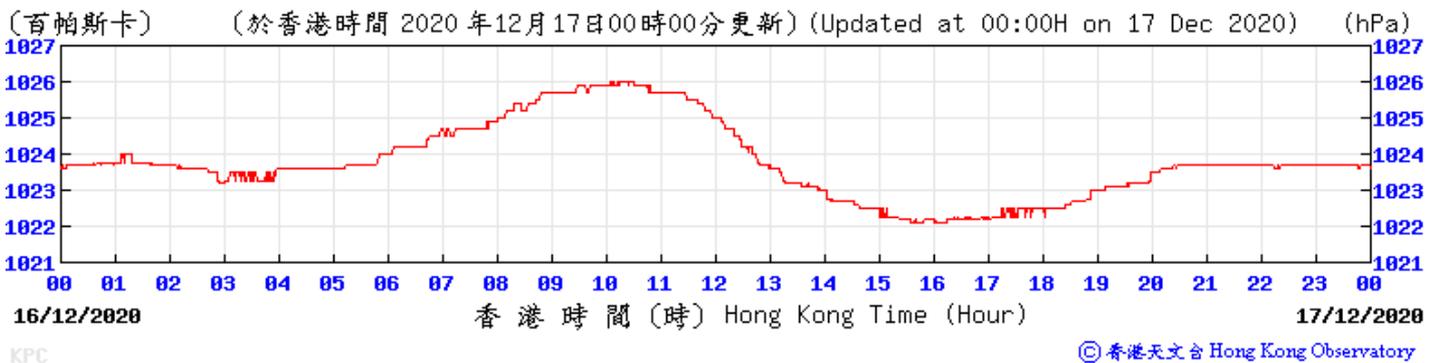


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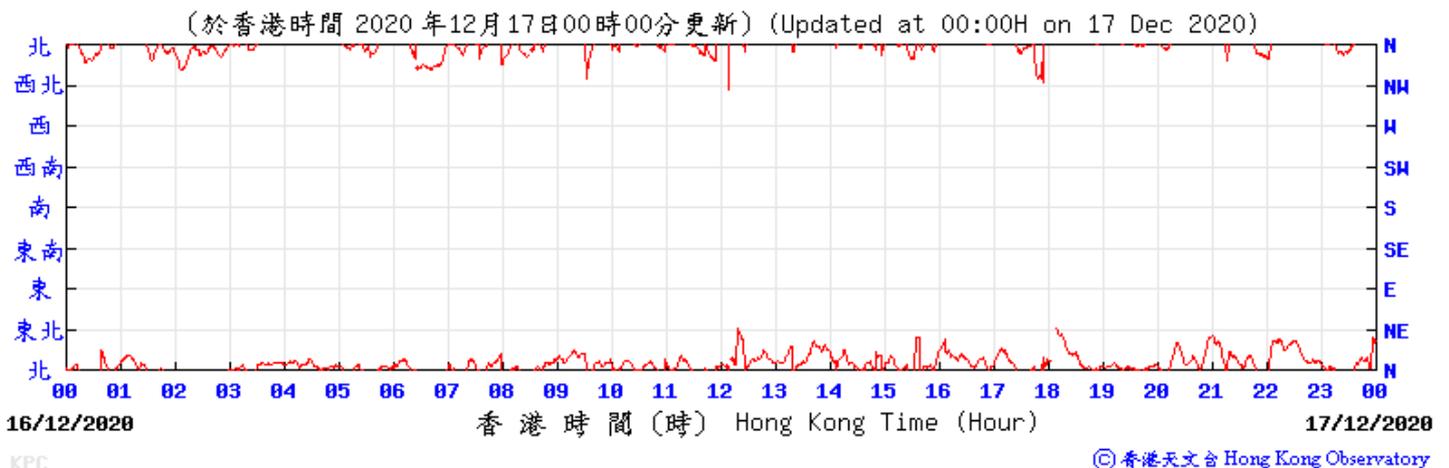
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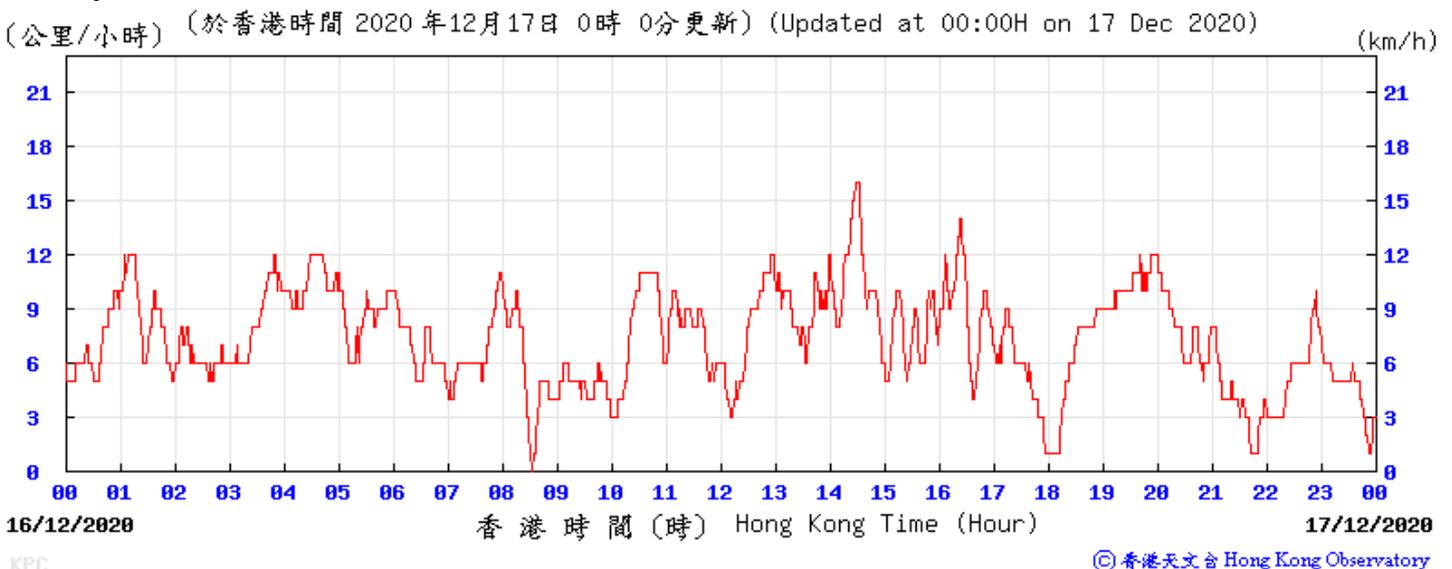
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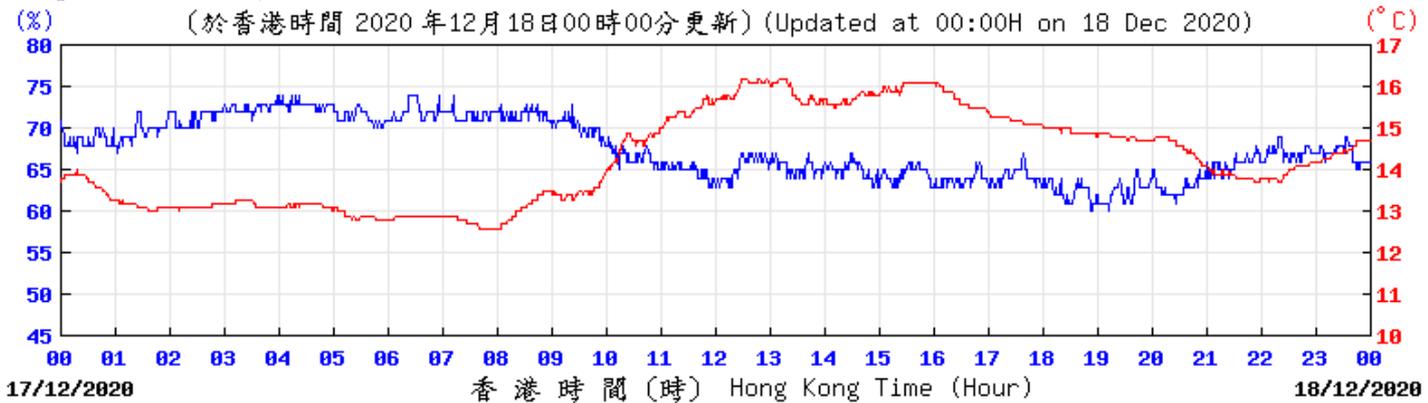
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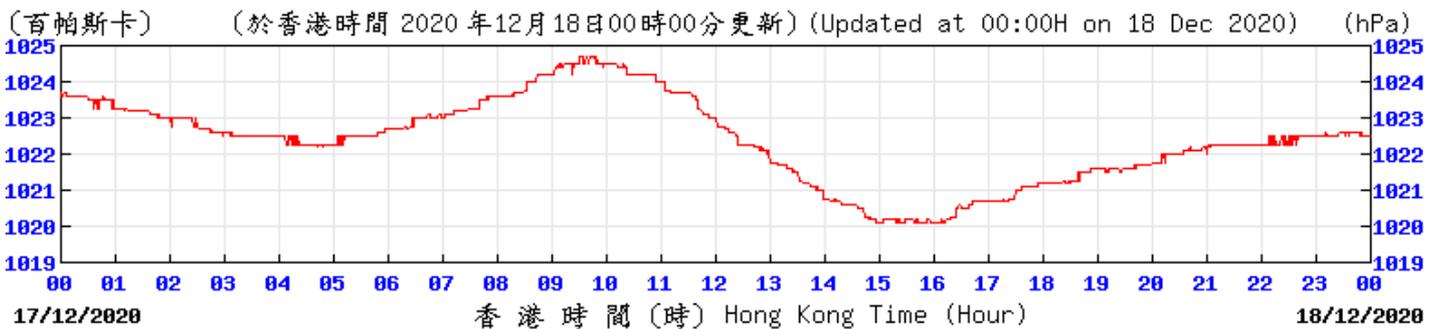


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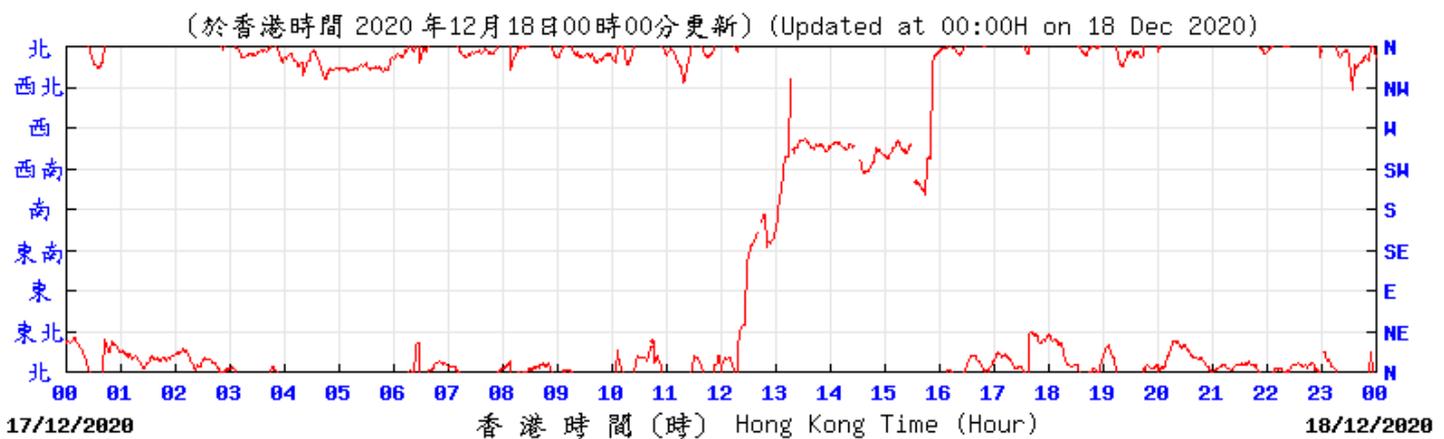
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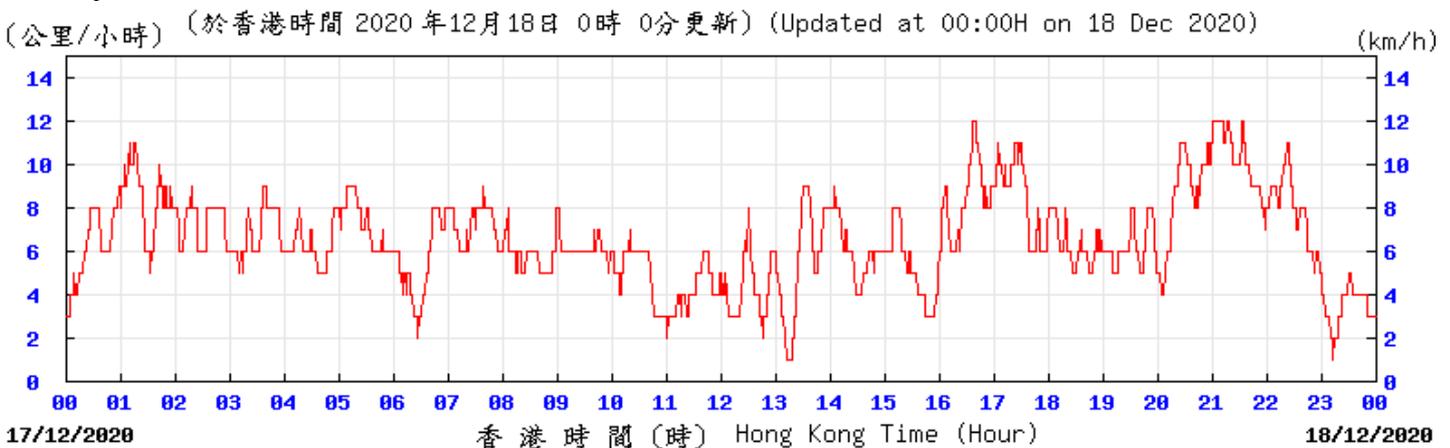
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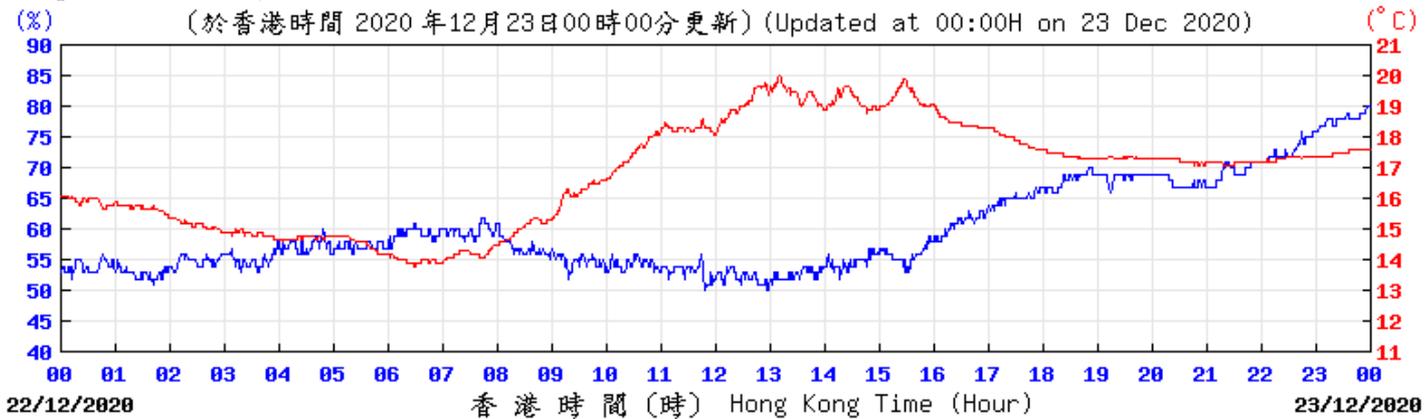
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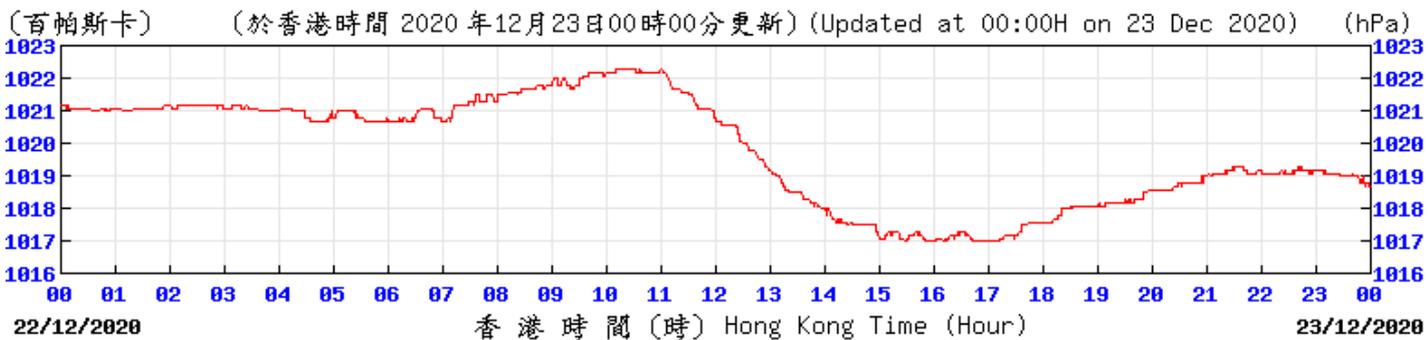
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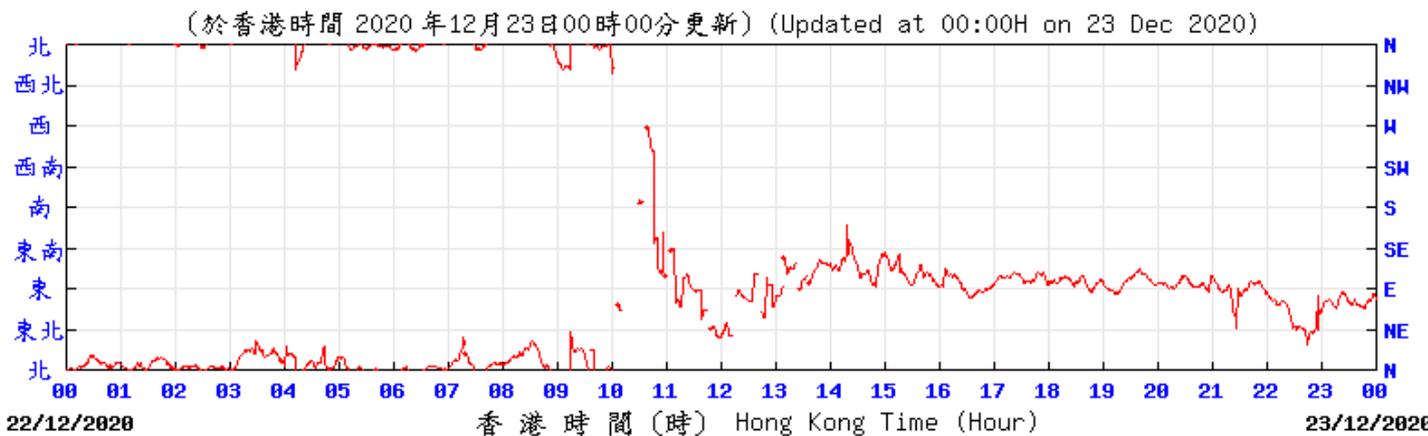
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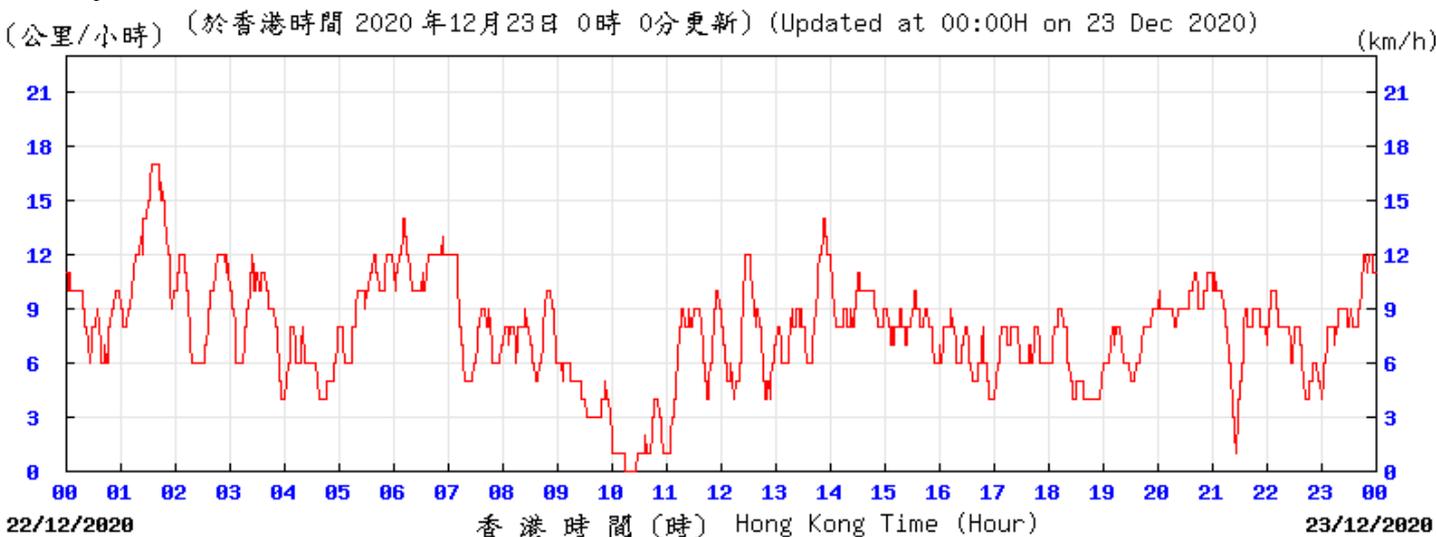
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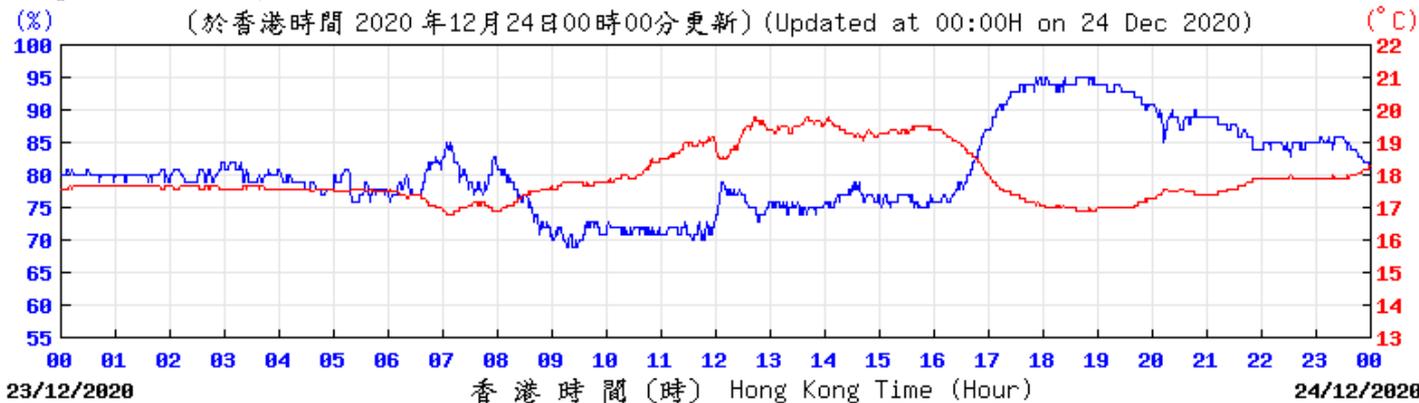
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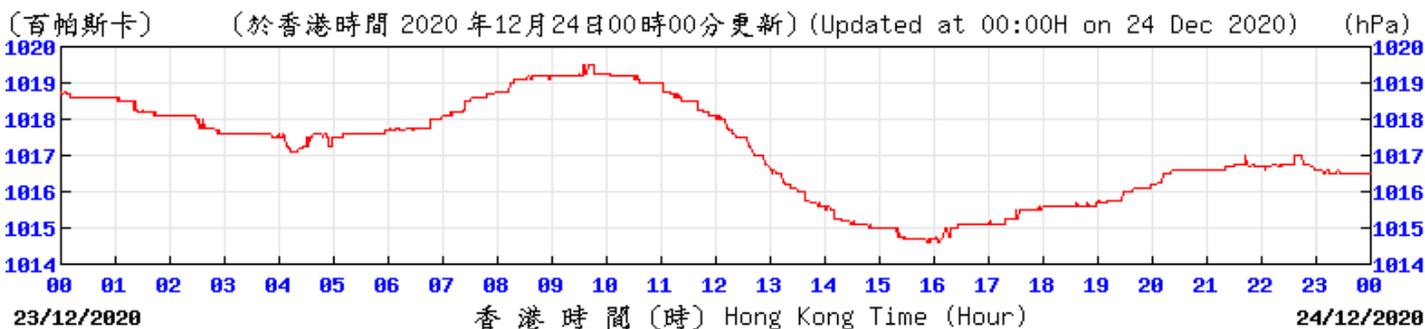
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KPC

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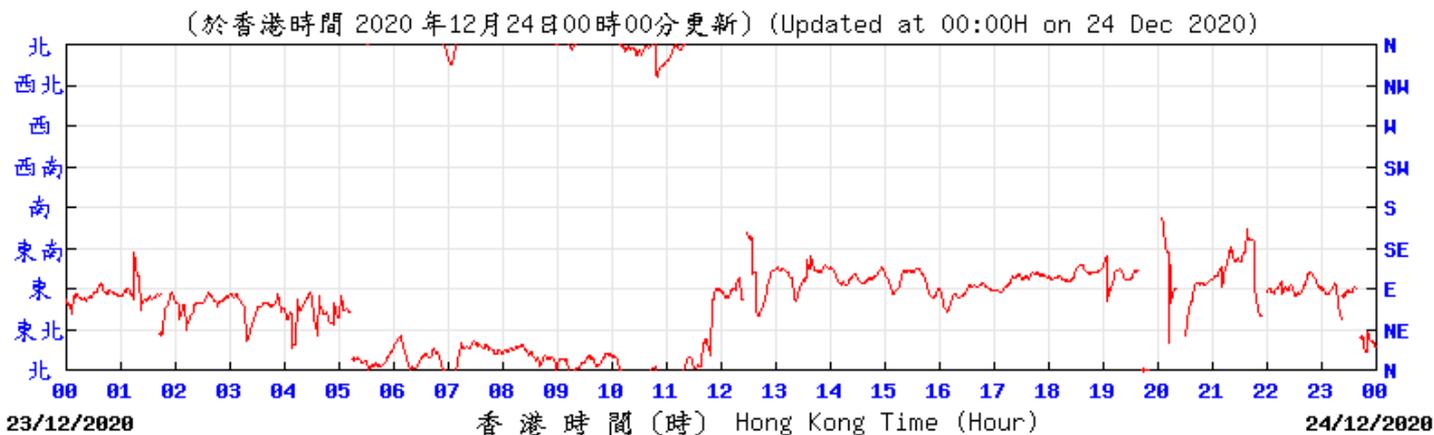
Pressure:



KPC

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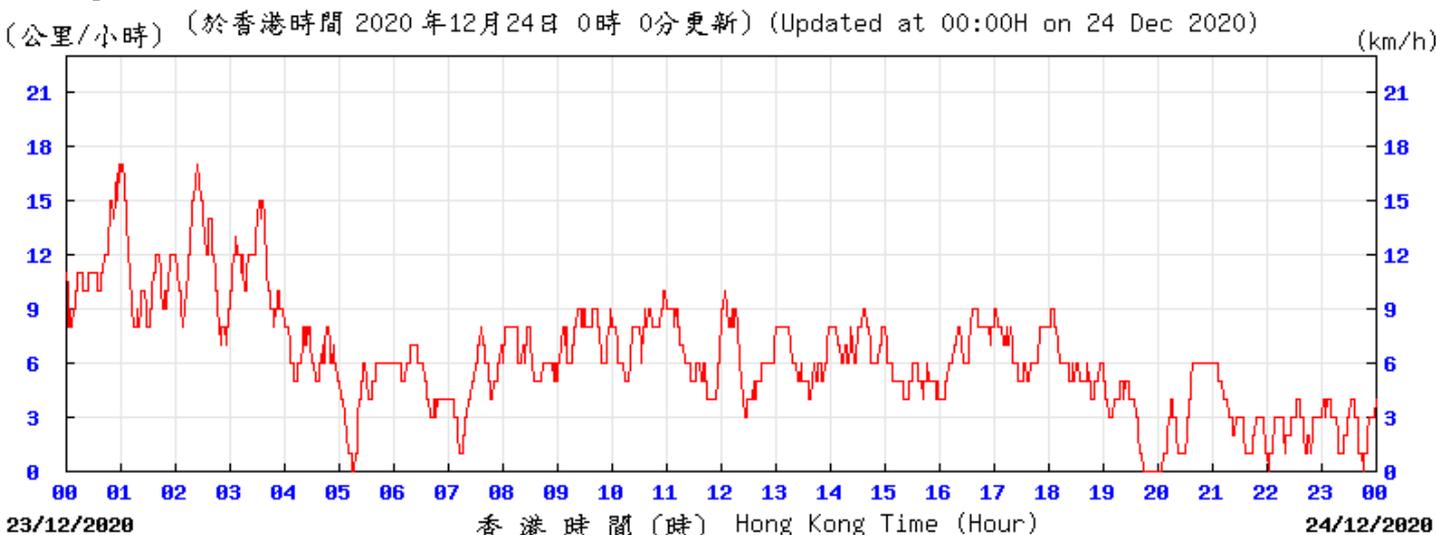
Wind Direction:



KPC

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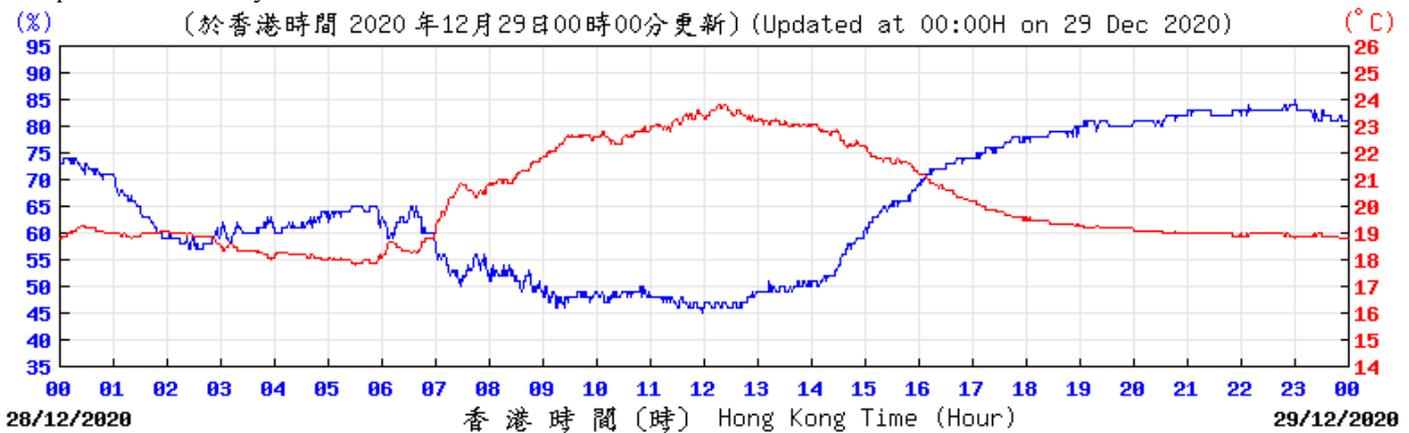
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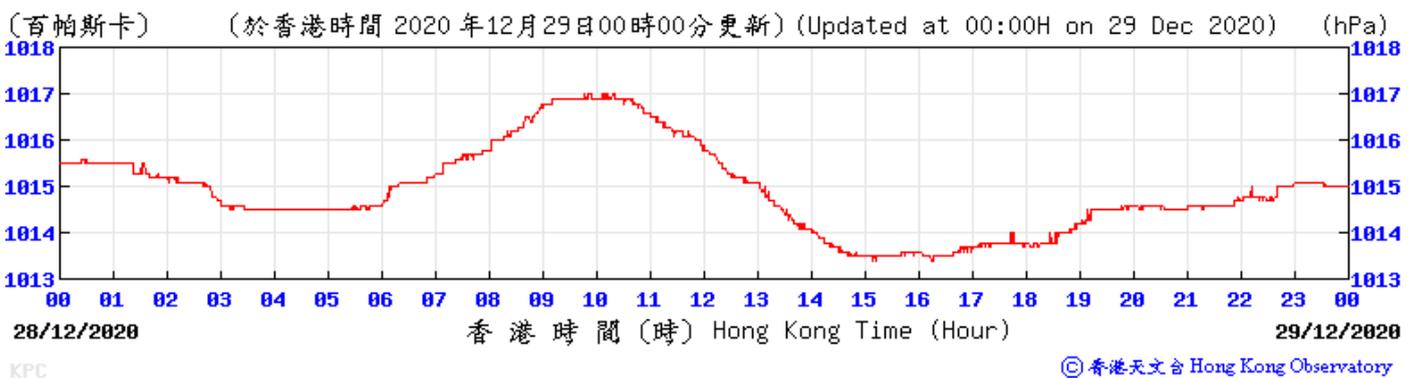
KPC

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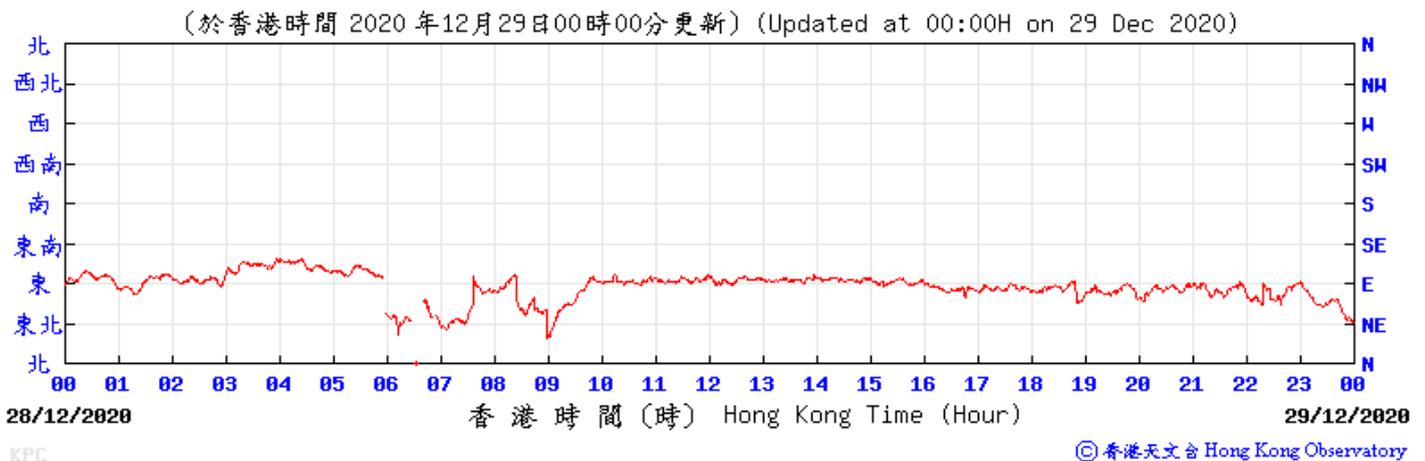
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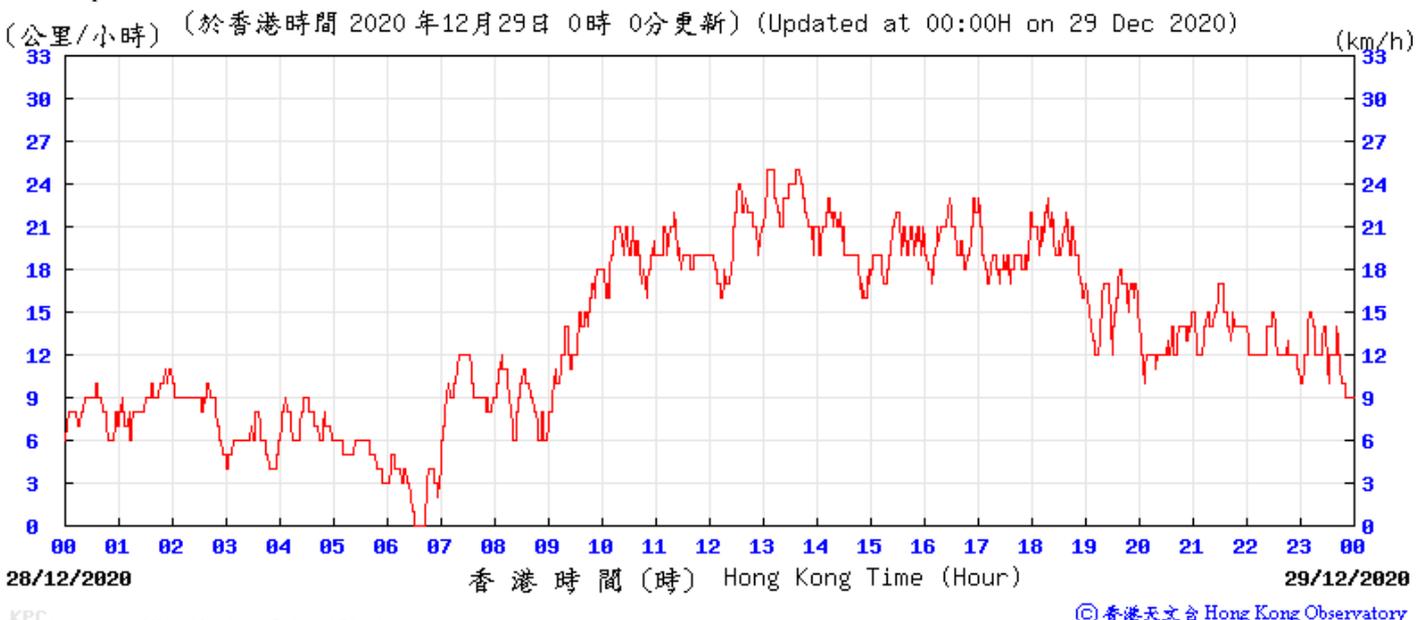
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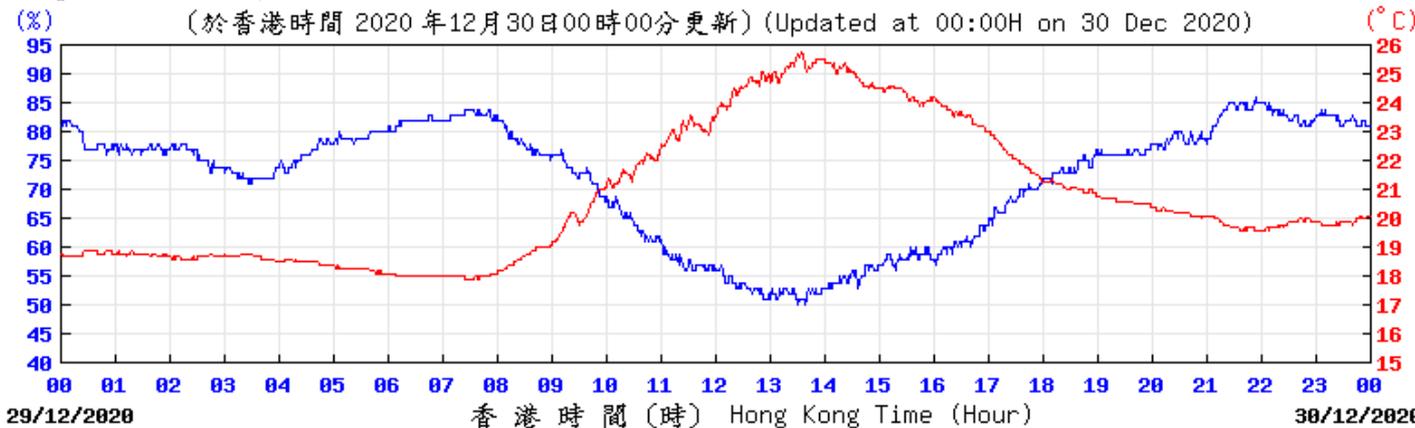
Wind Direction:



Wind Speed:

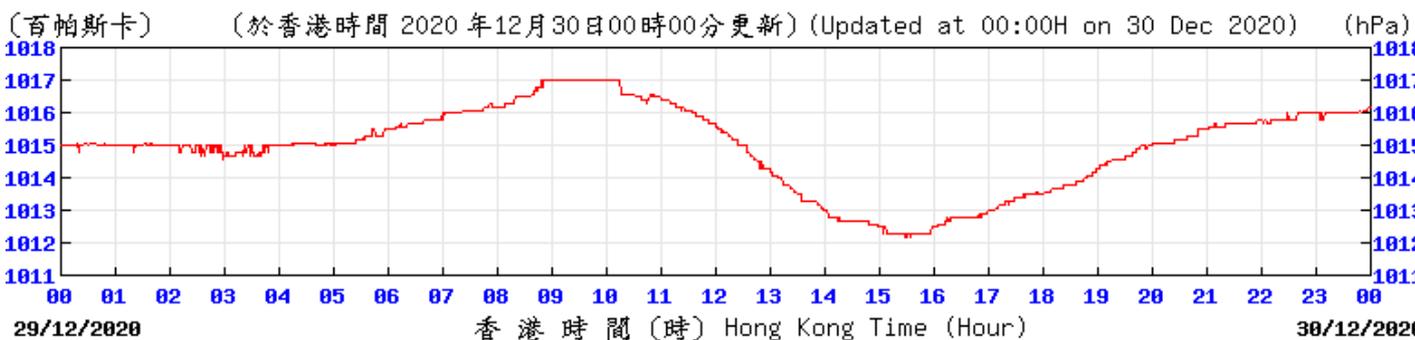


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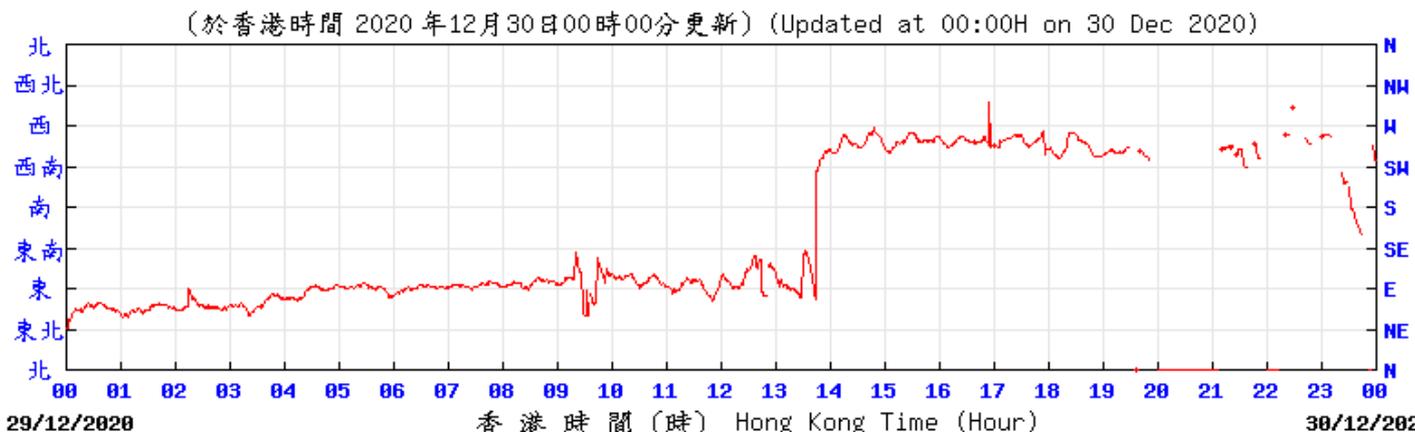
© 香港天文台 Hong Kong Observatory

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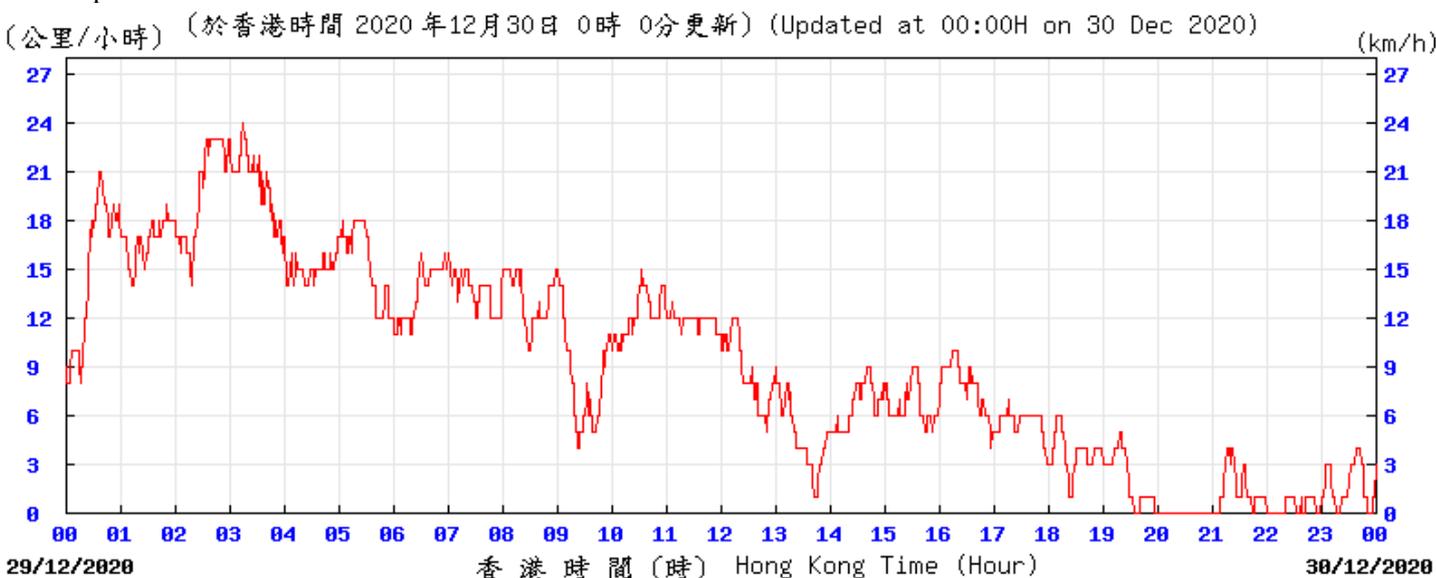
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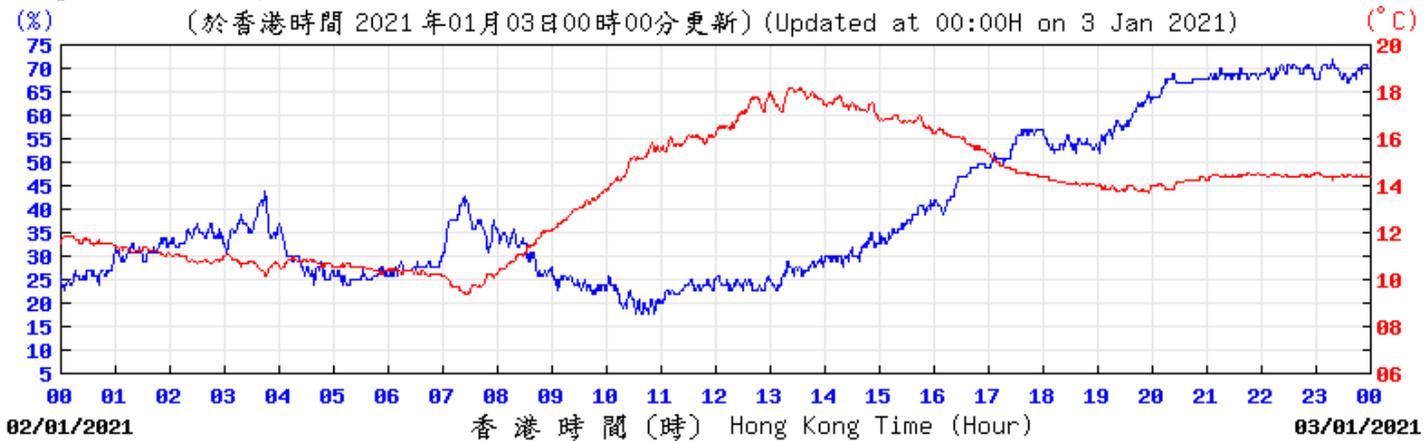
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Wind Speed:



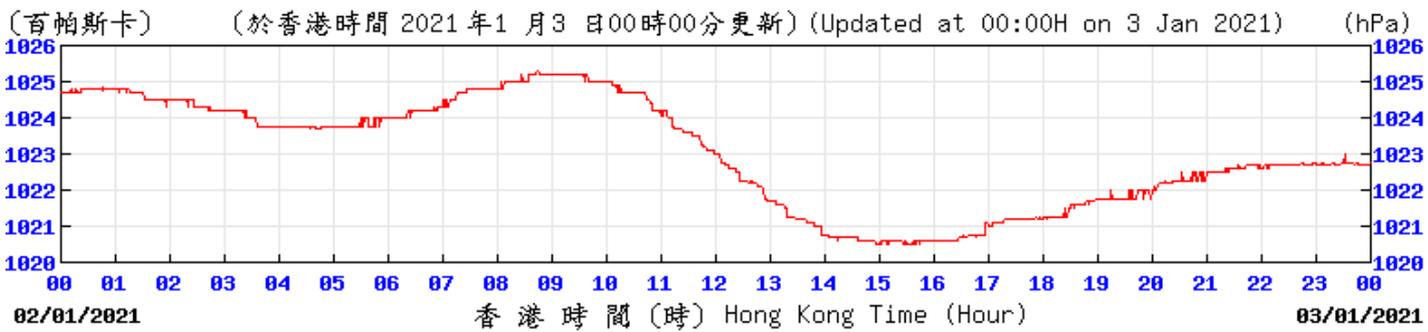
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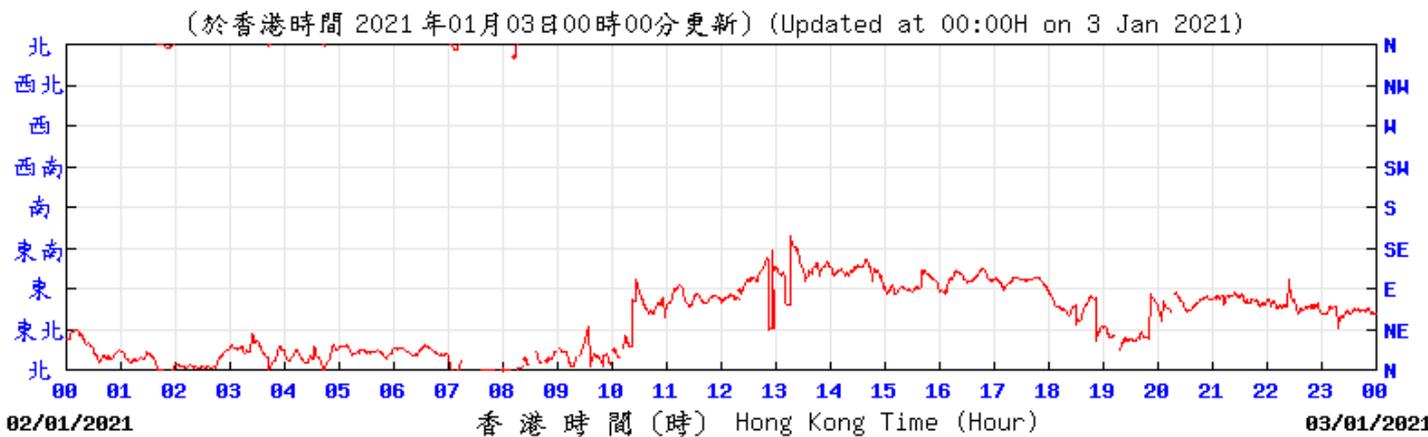
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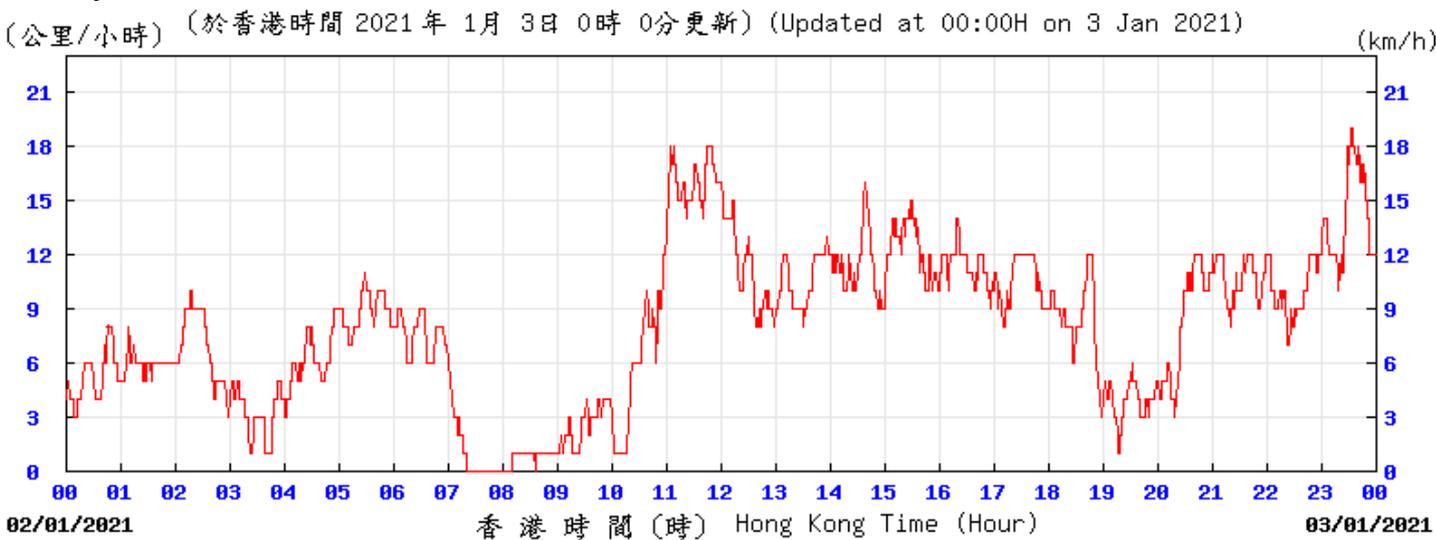
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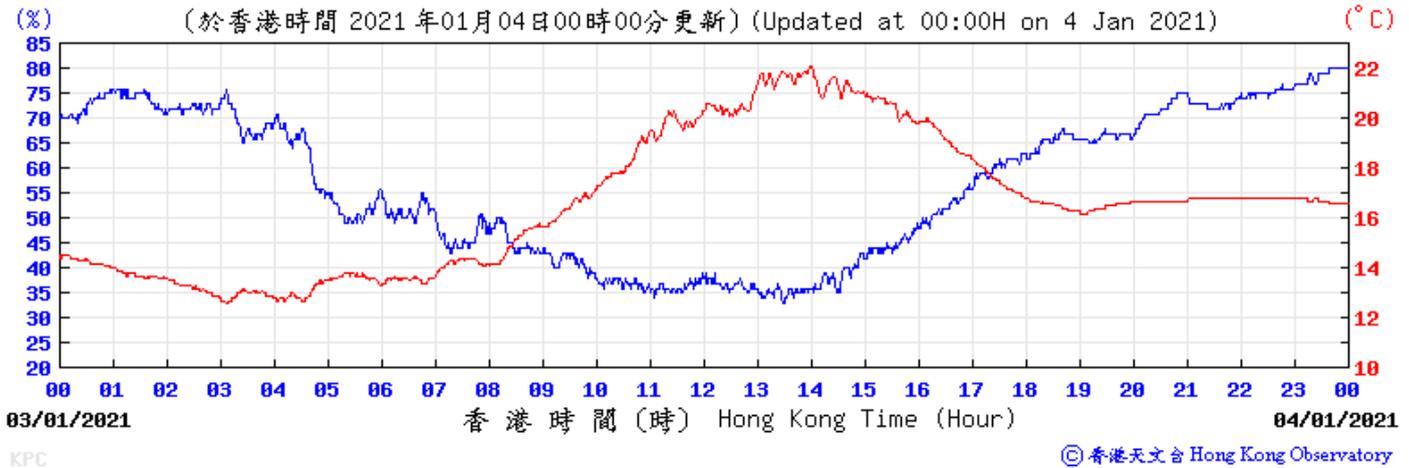
KPC © 香港天文台 Hong Kong Observatory

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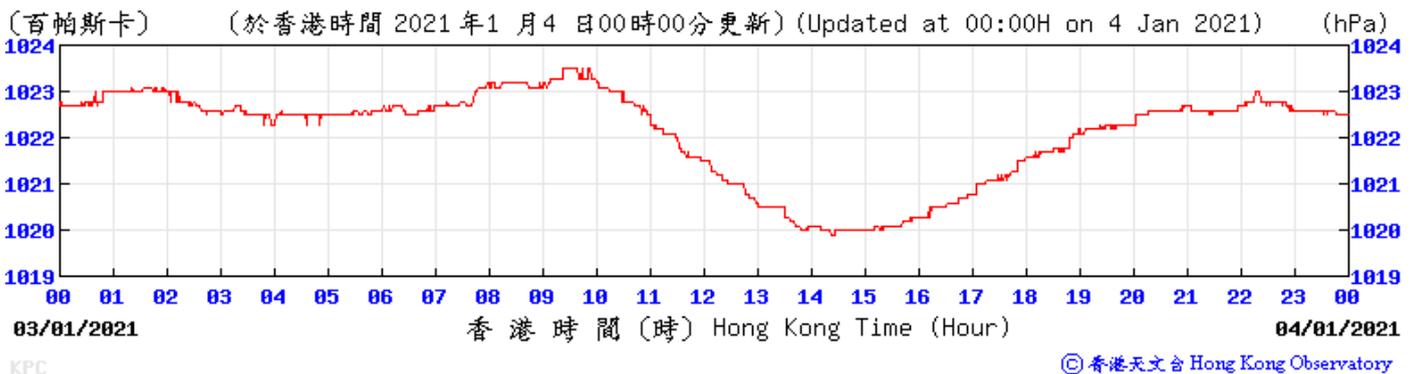


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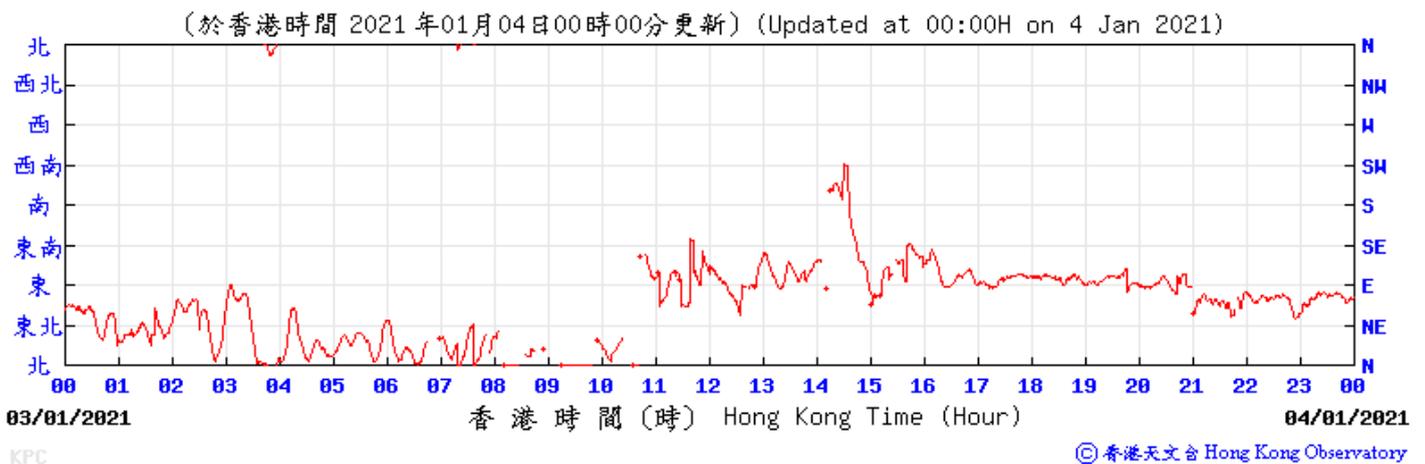
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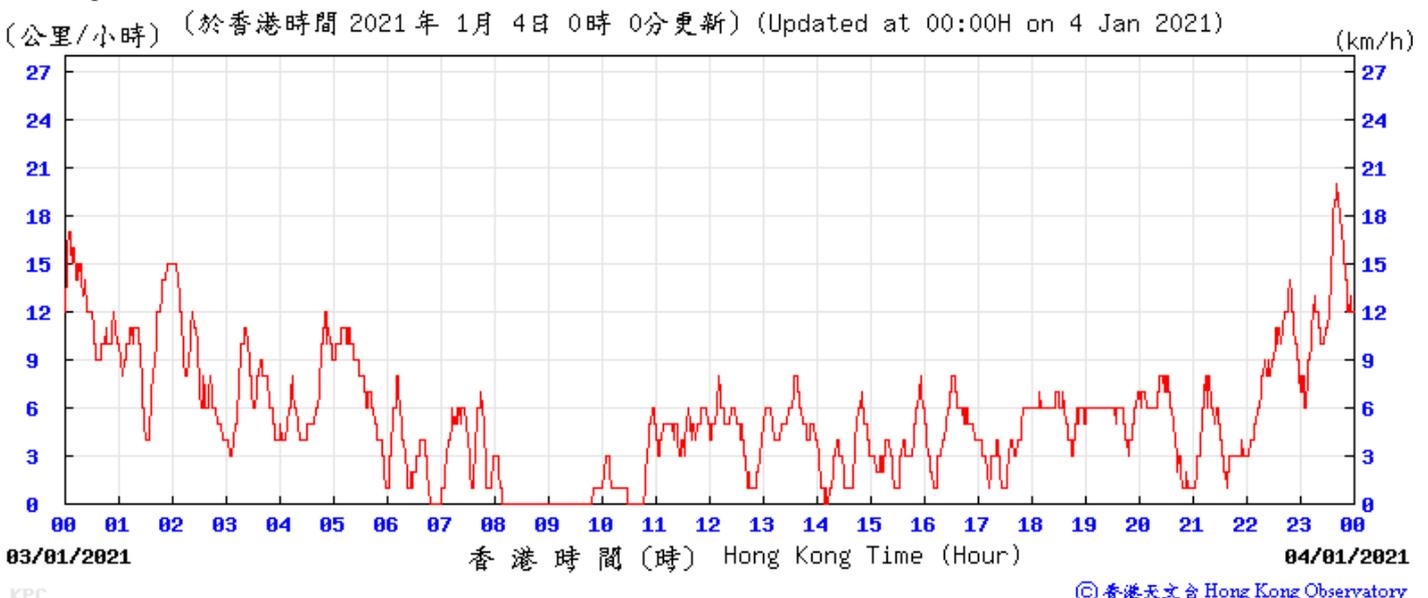
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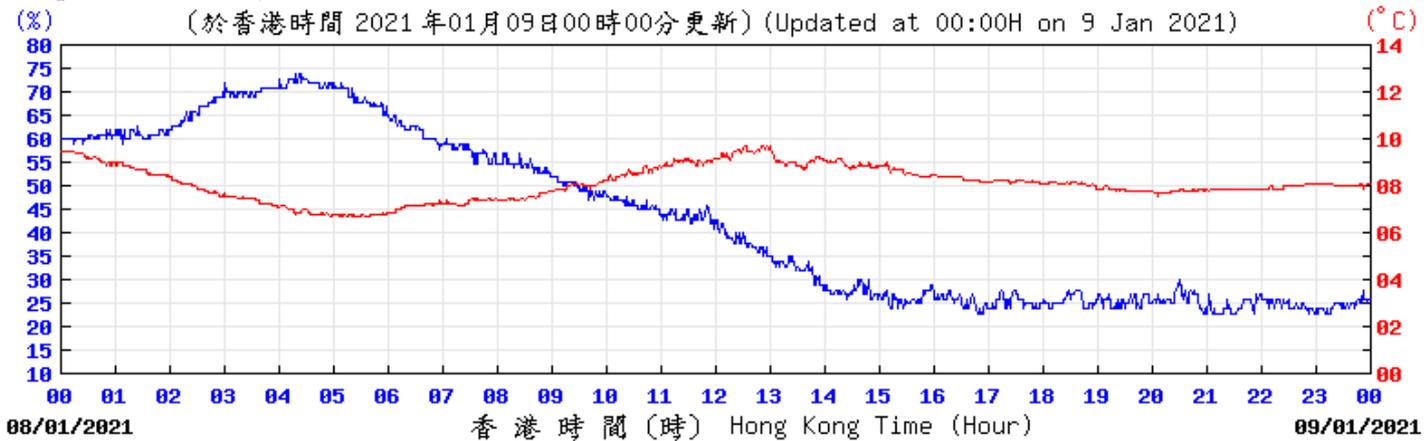
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Wind Speed:

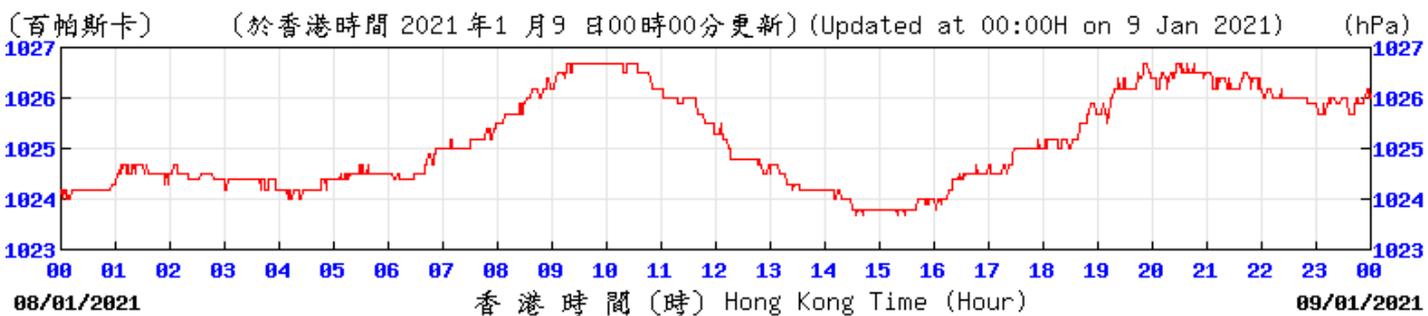


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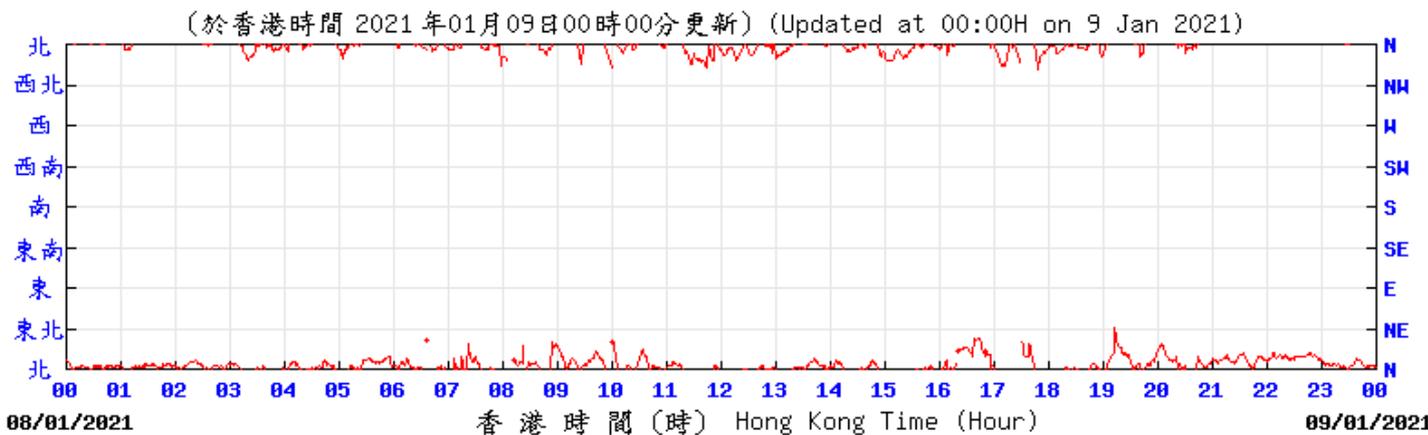
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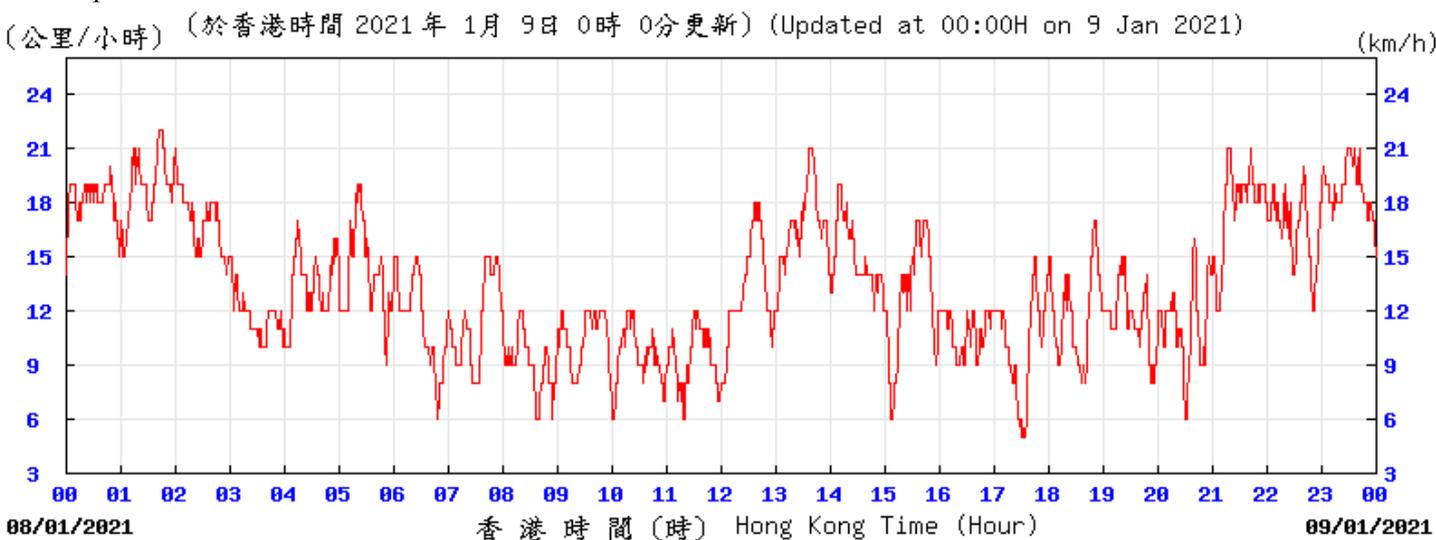
KPC © 香港天文台 Hong Kong Observatory

Wind Direction:



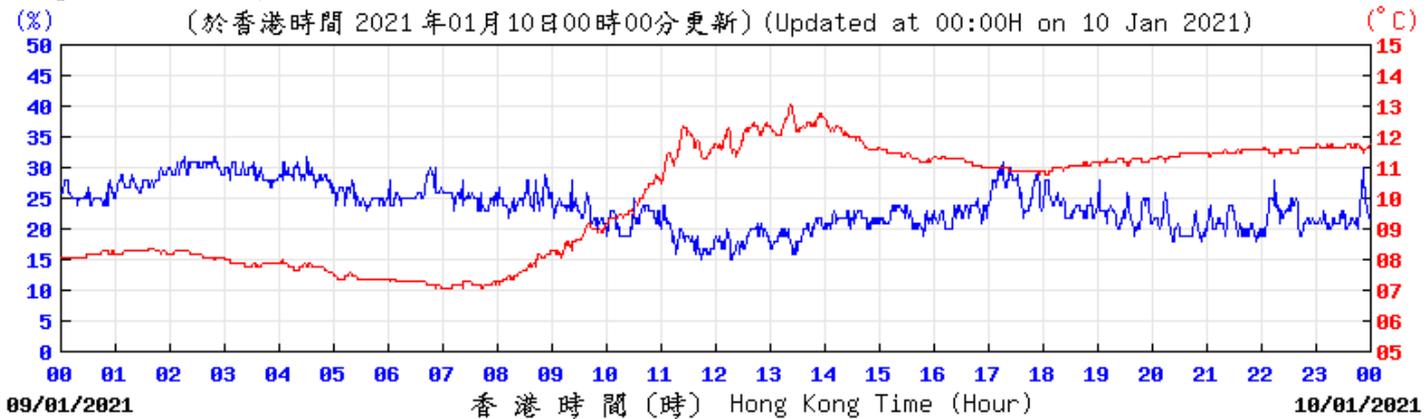
KPC © 香港天文台 Hong Kong Observatory

Wind Speed:



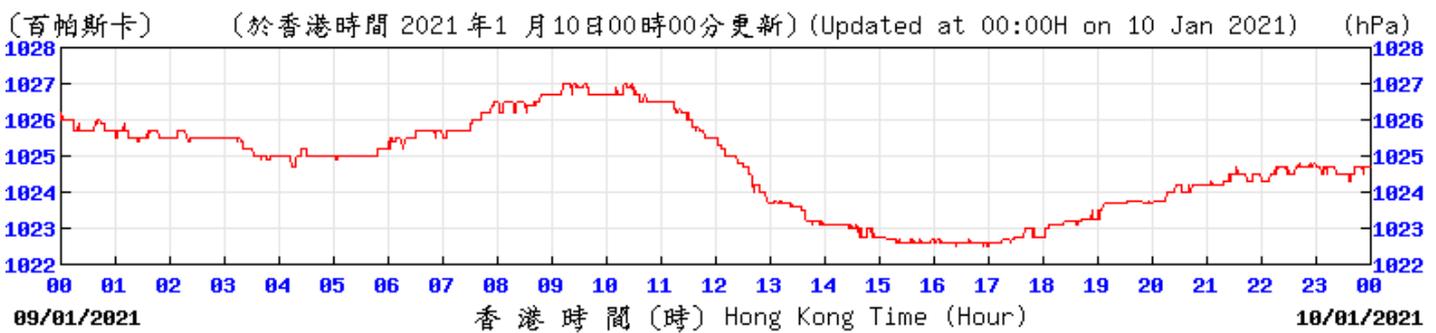
KPC © 香港天文台 Hong Kong Observatory

Temperature/Humidity:



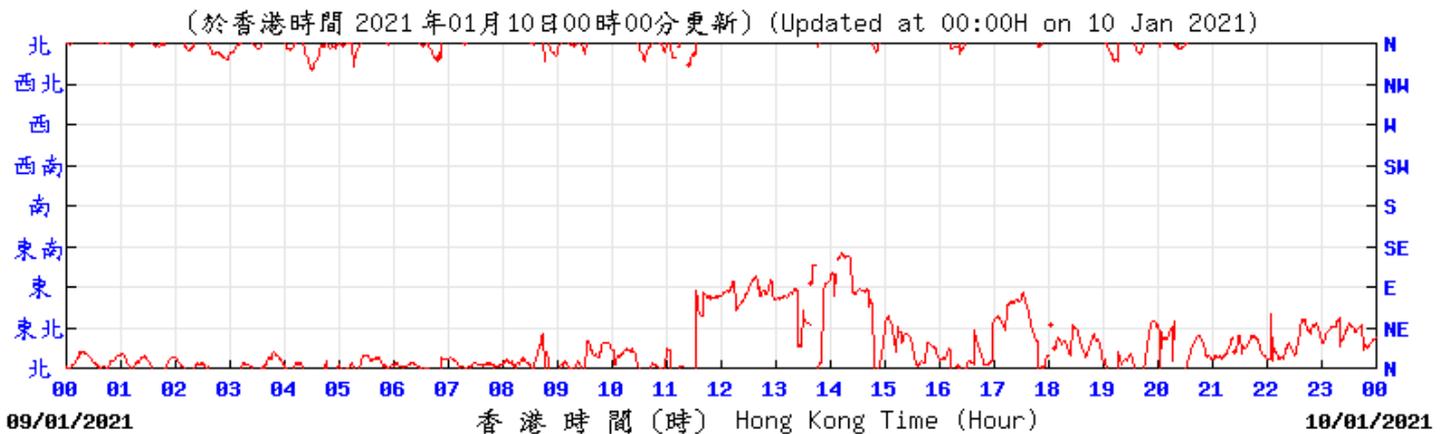
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Pressure:



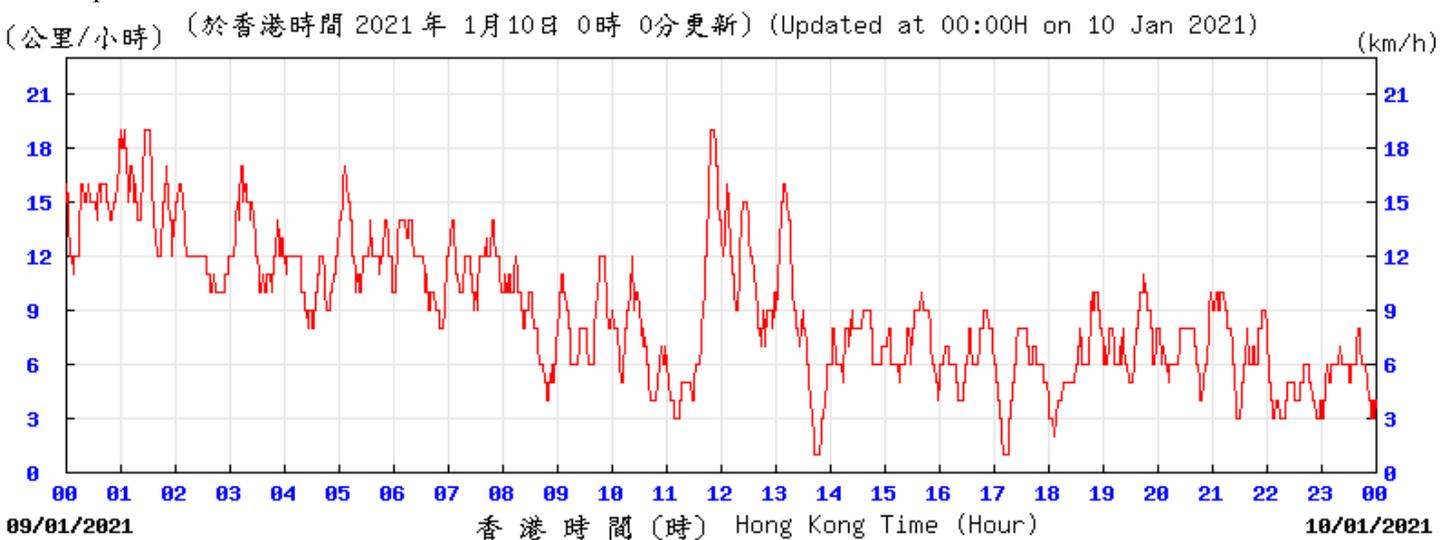
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Wind Direction:



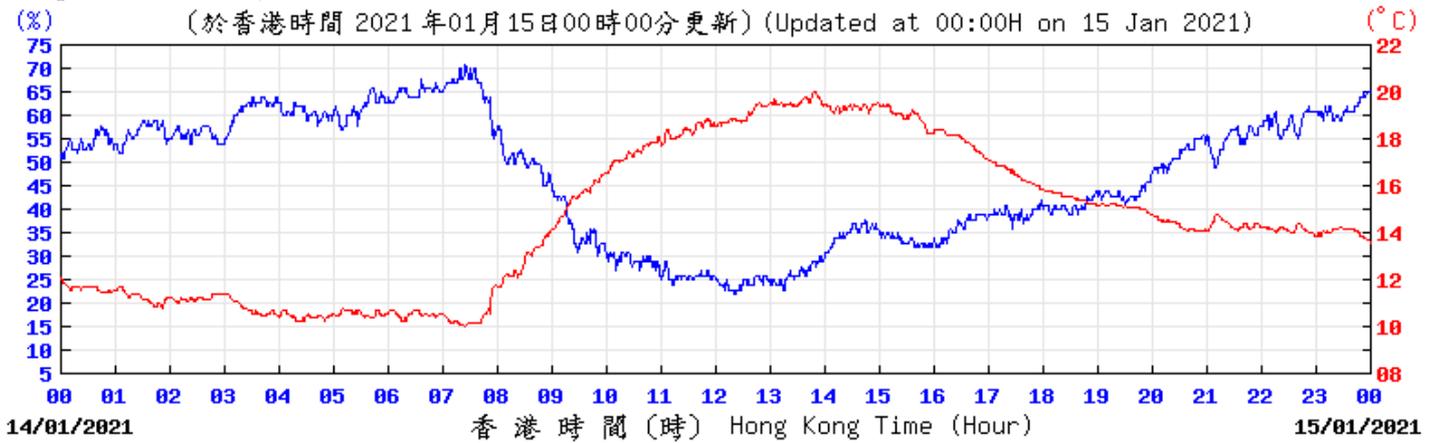
© 香港天文台 Hong Kong Observatory

Wind Speed:



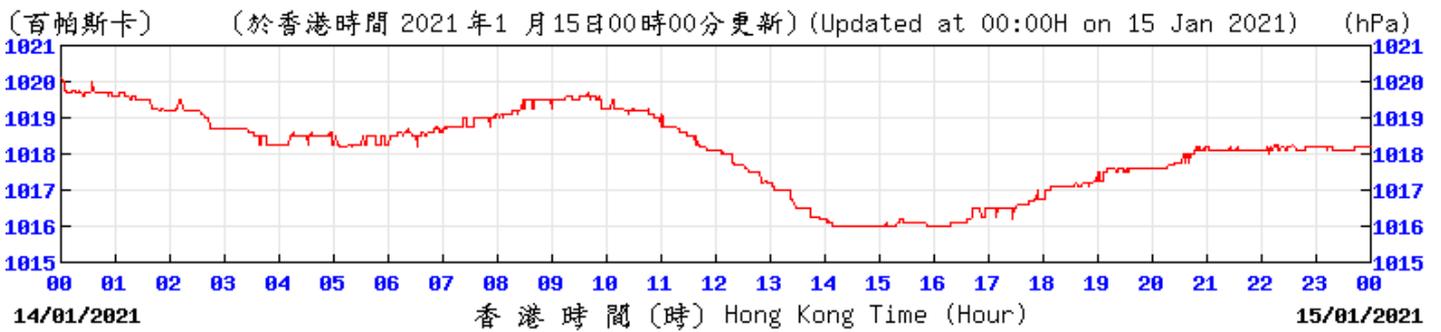
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Temperature/Humidity:



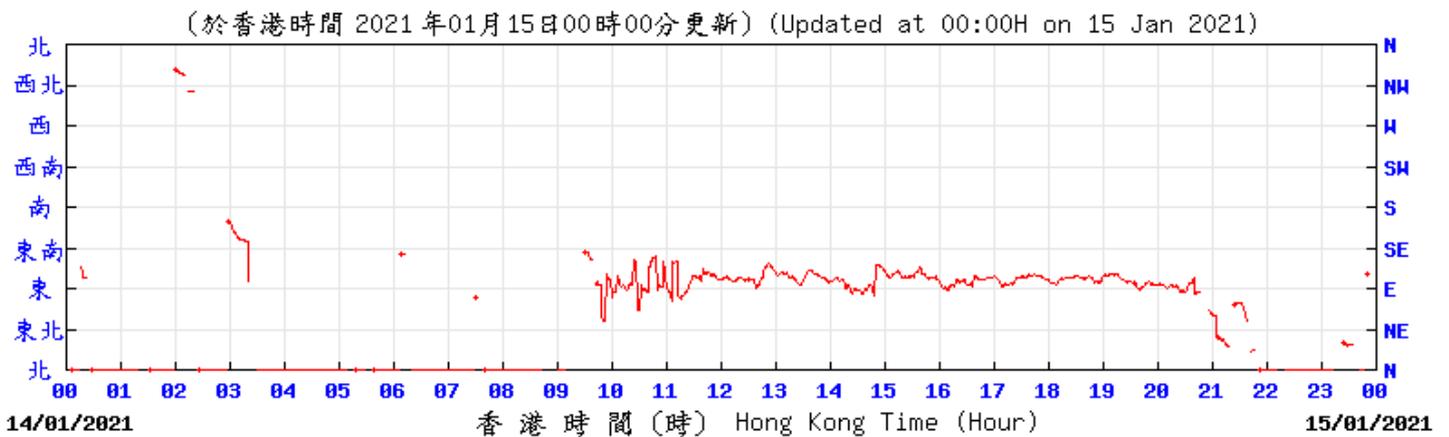
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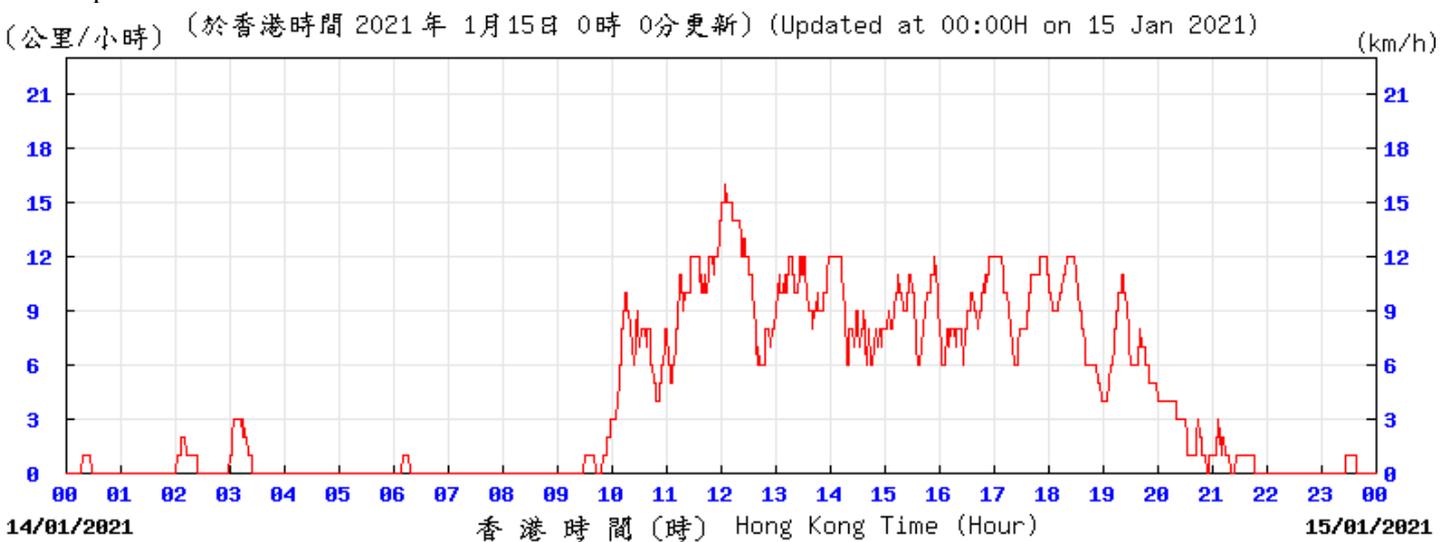
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Wind Direction:



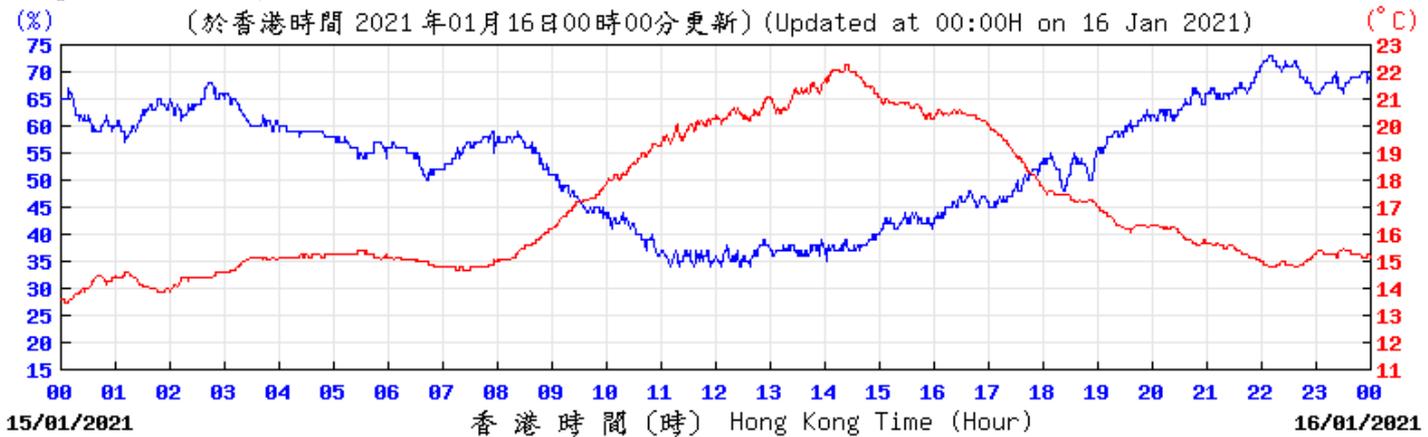
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Wind Speed:



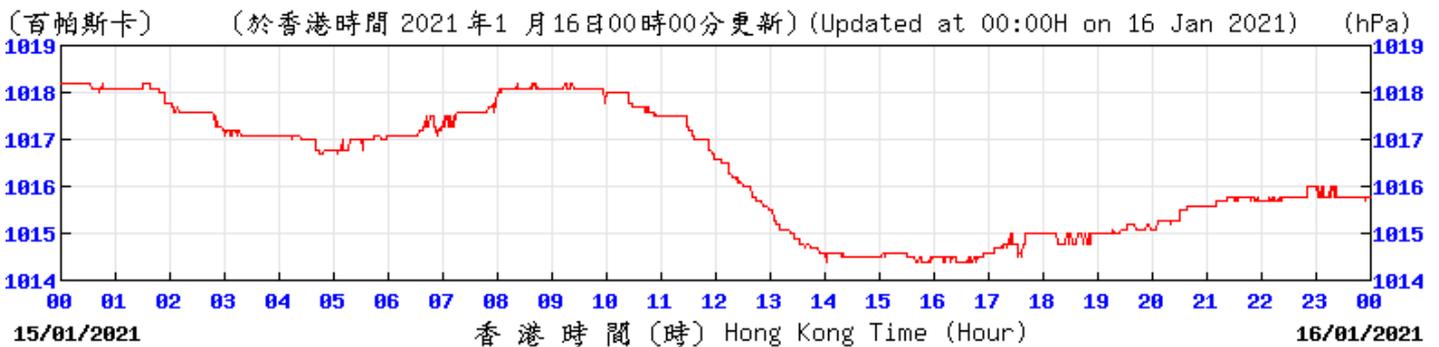
KPC © 香港天文台 Hong Kong Observatory

Temperature/Humidity:



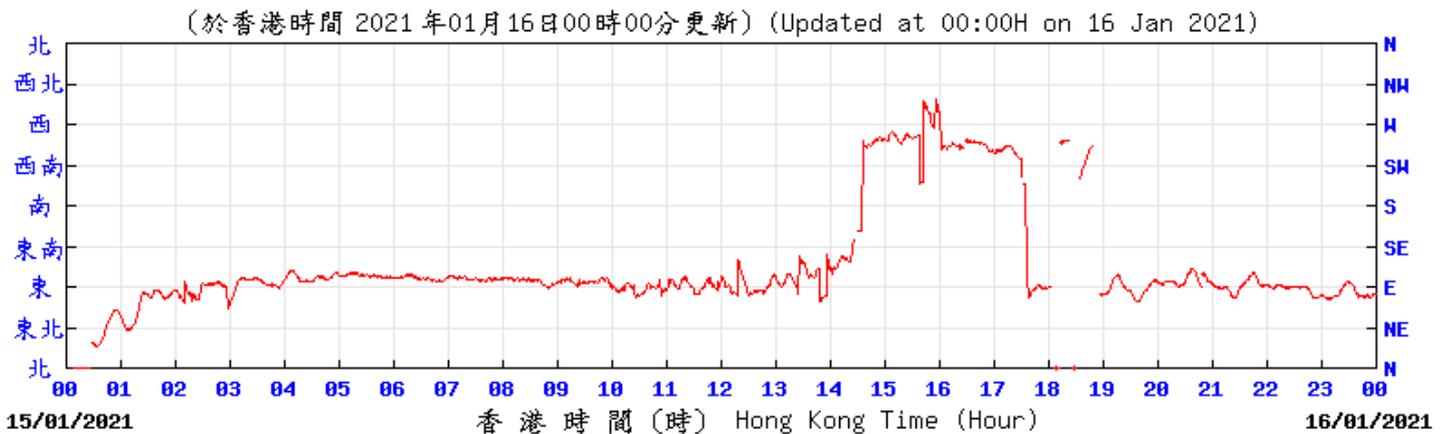
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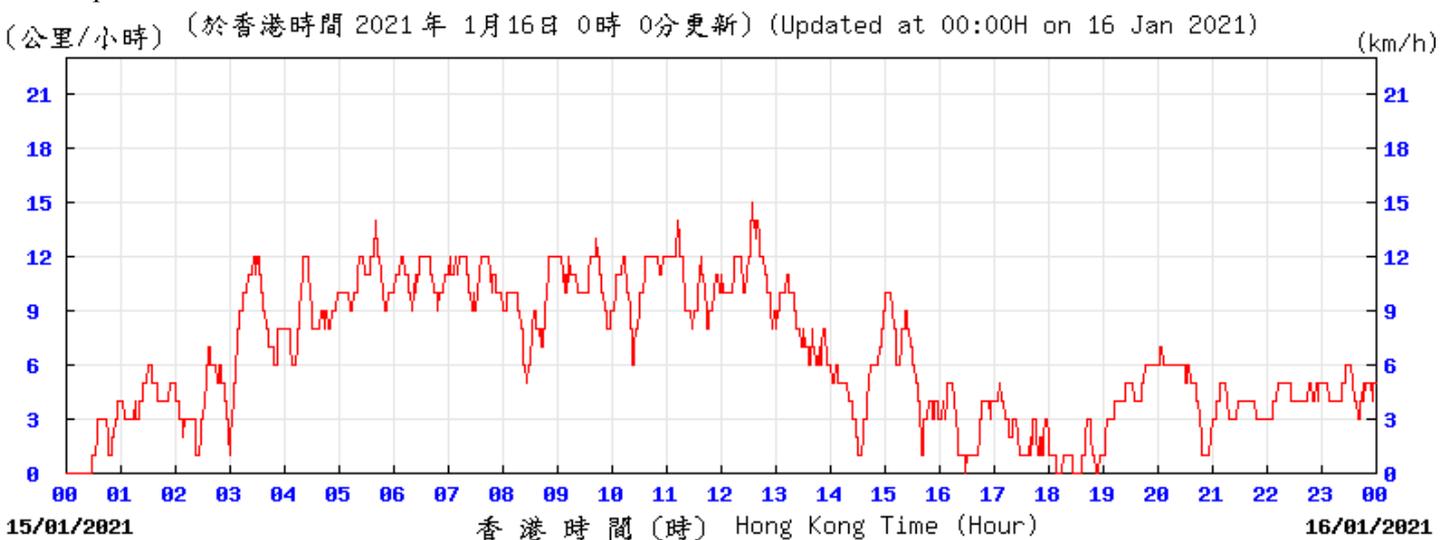
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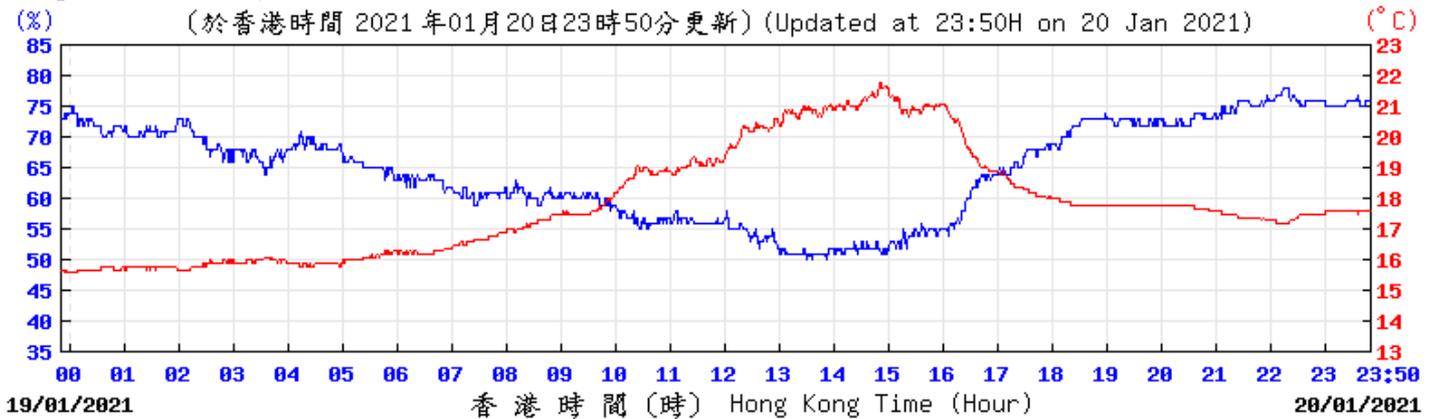
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Wind Speed:



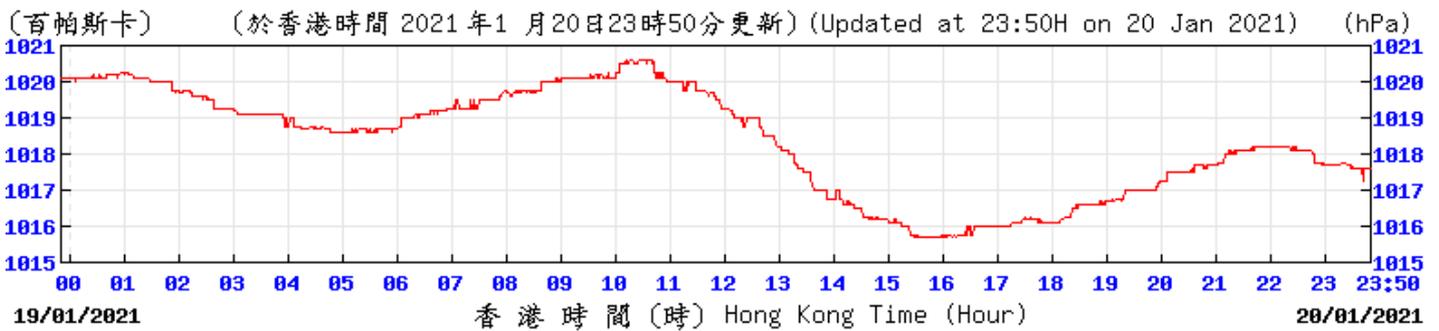
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Temperature/Humidity:



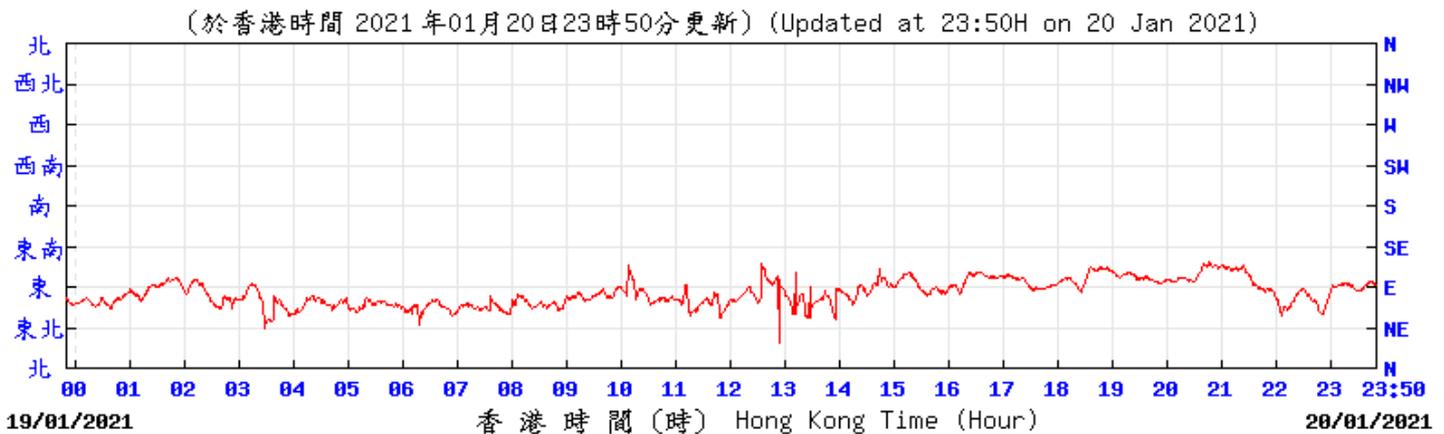
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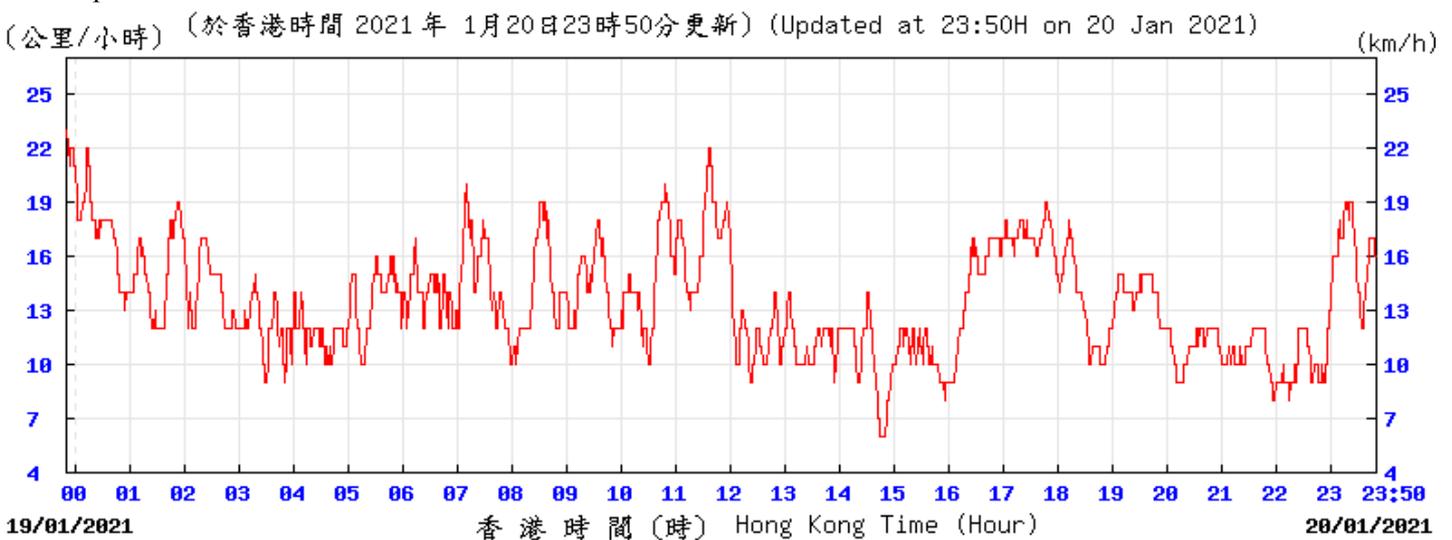
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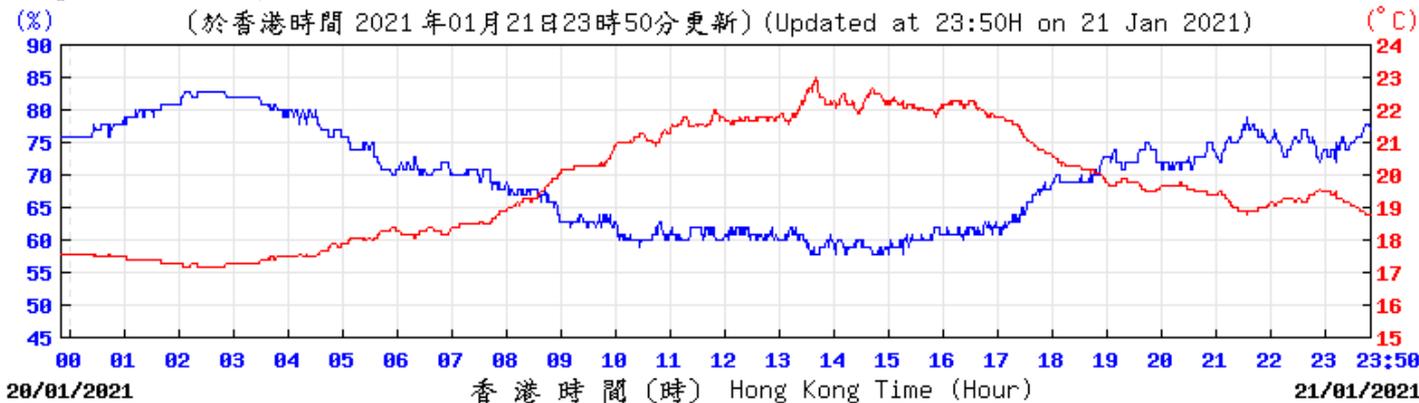
© 香港天文台 Hong Kong Observatory

Wind Speed:



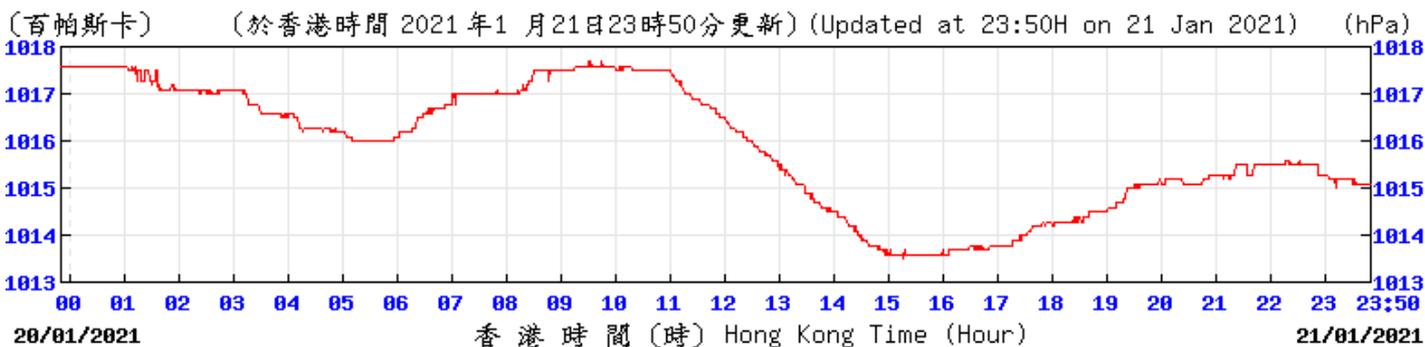
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Temperature/Humidity:



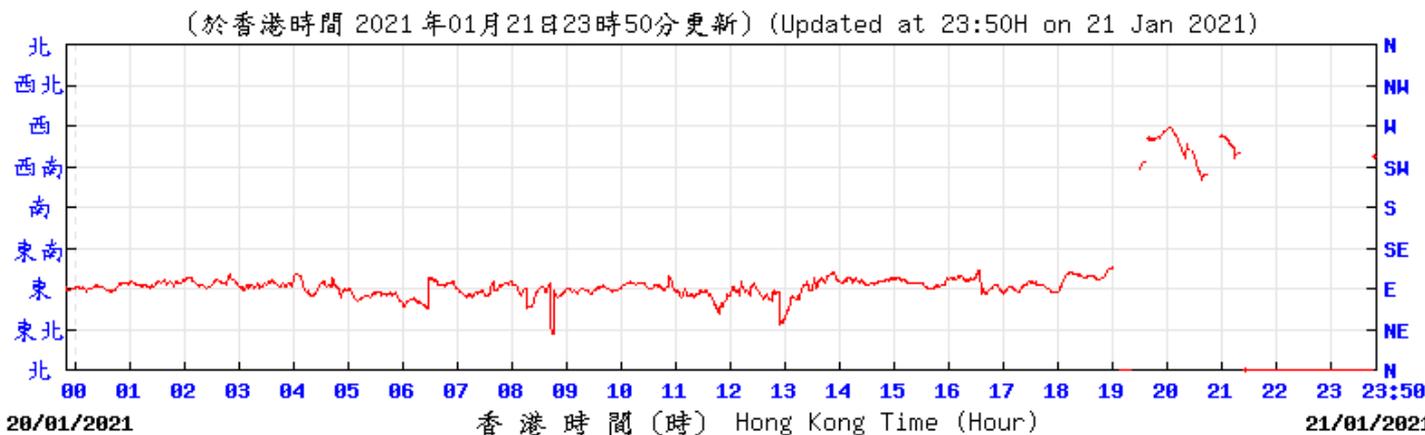
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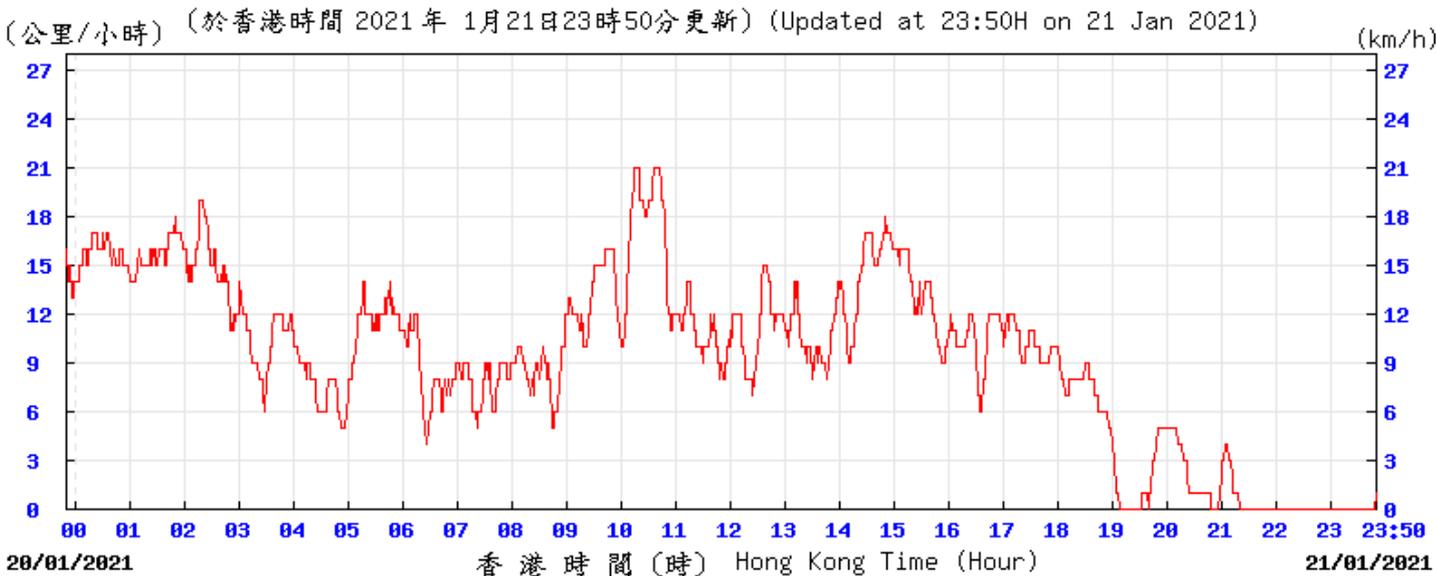
© 香港天文台 Hong Kong Observatory

Wind Direction:



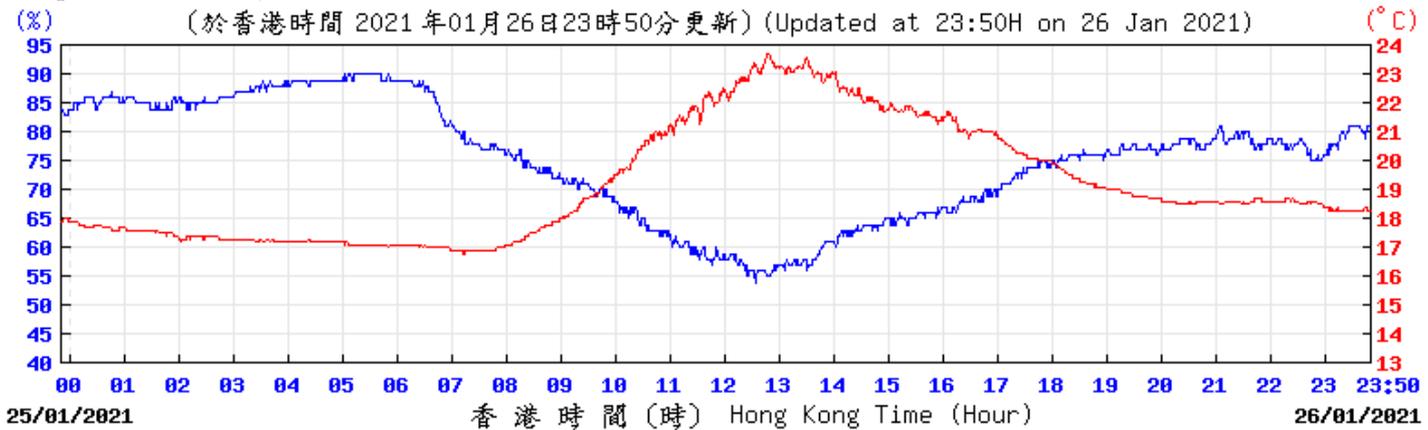
© 香港天文台 Hong Kong Observatory

Wind Speed:



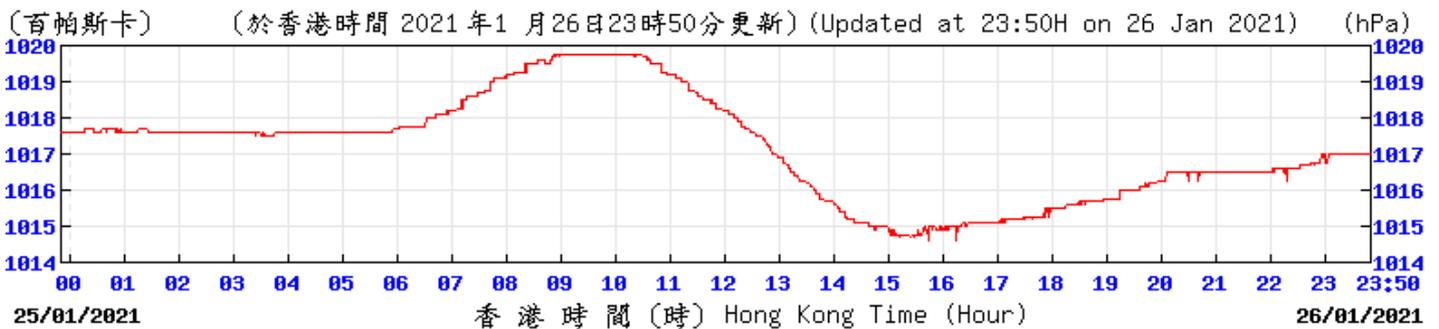
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Temperature/Humidity:



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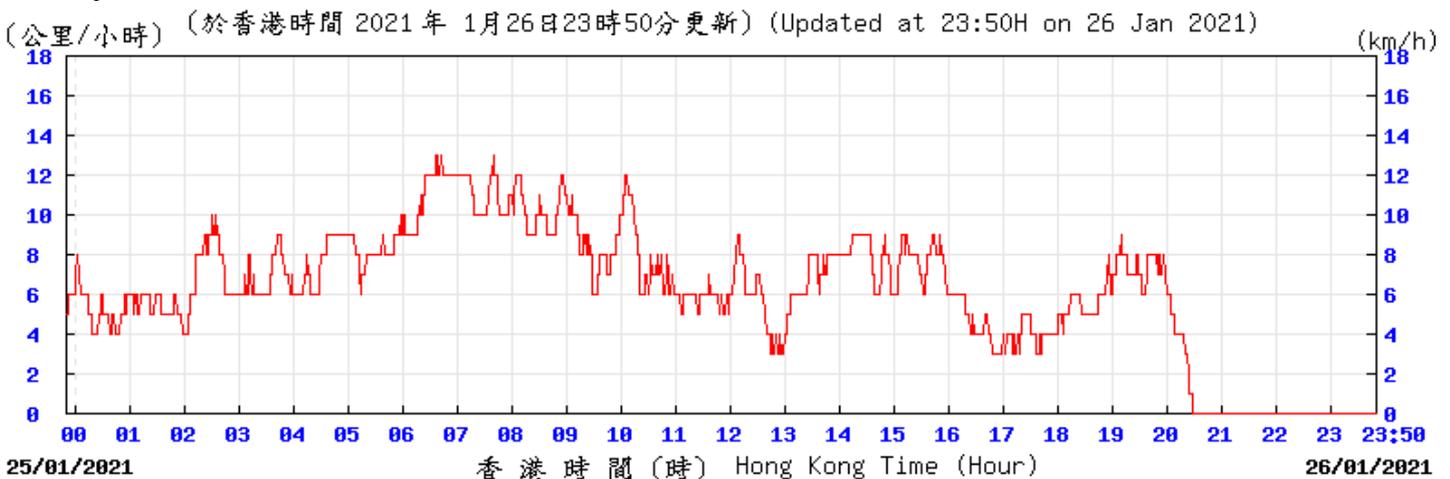
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Wind Direction:



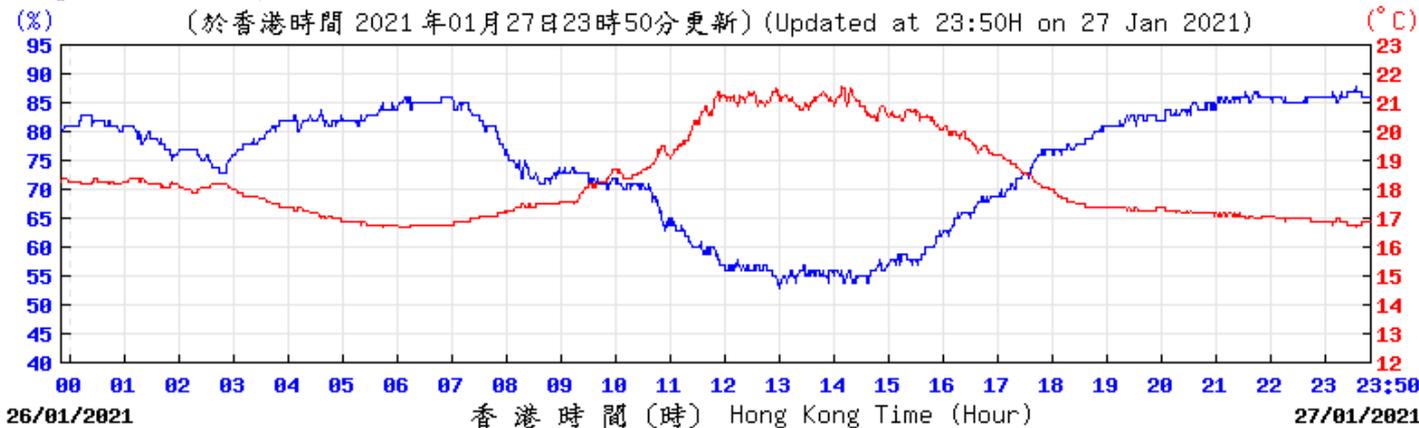
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Wind Speed:



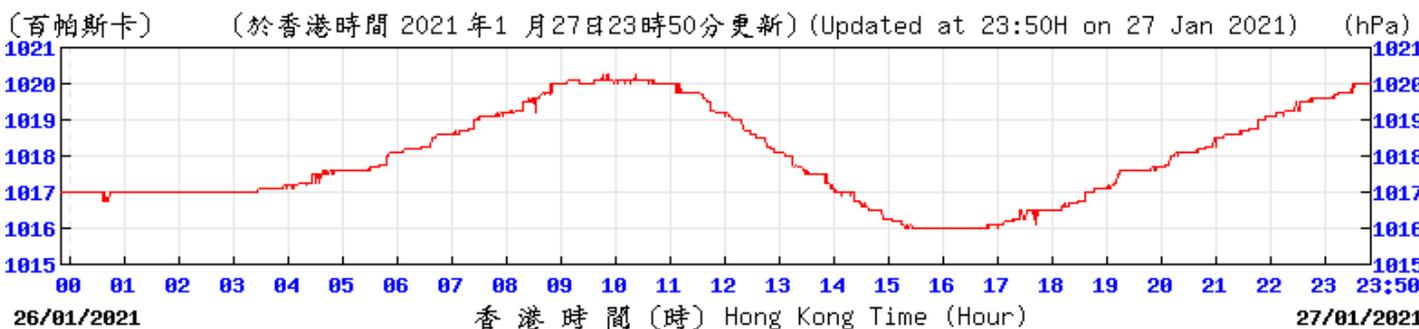
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Temperature/Humidity:



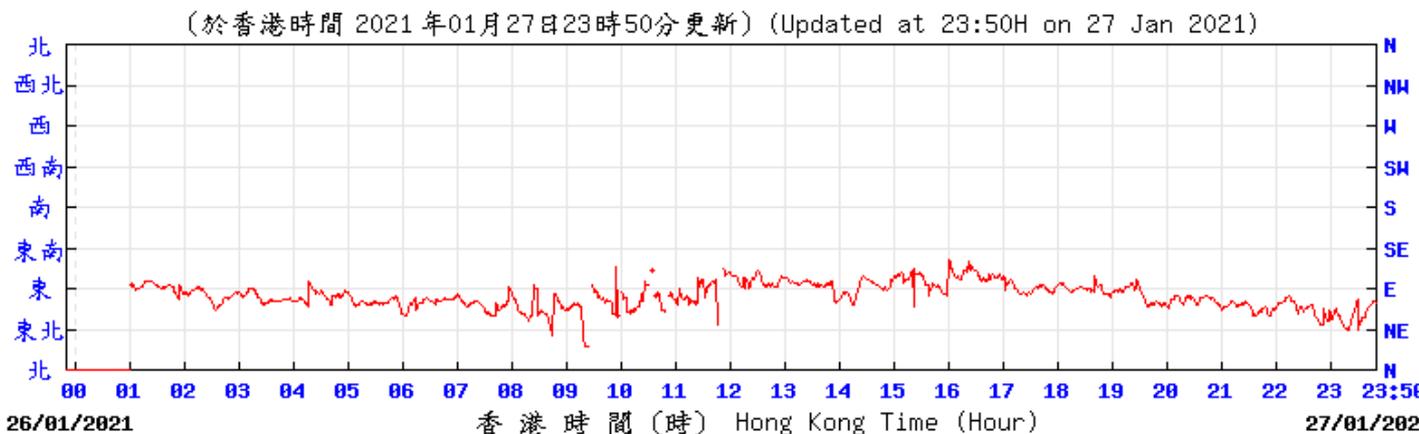
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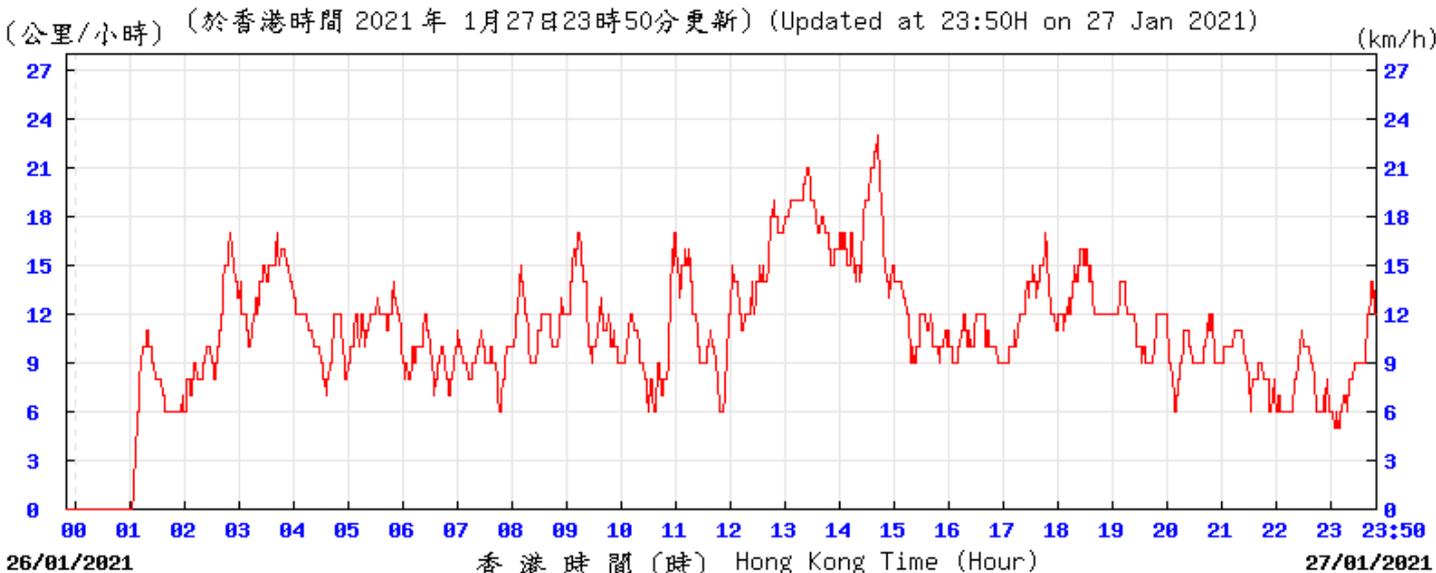
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Wind Direction:



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Wind Speed:



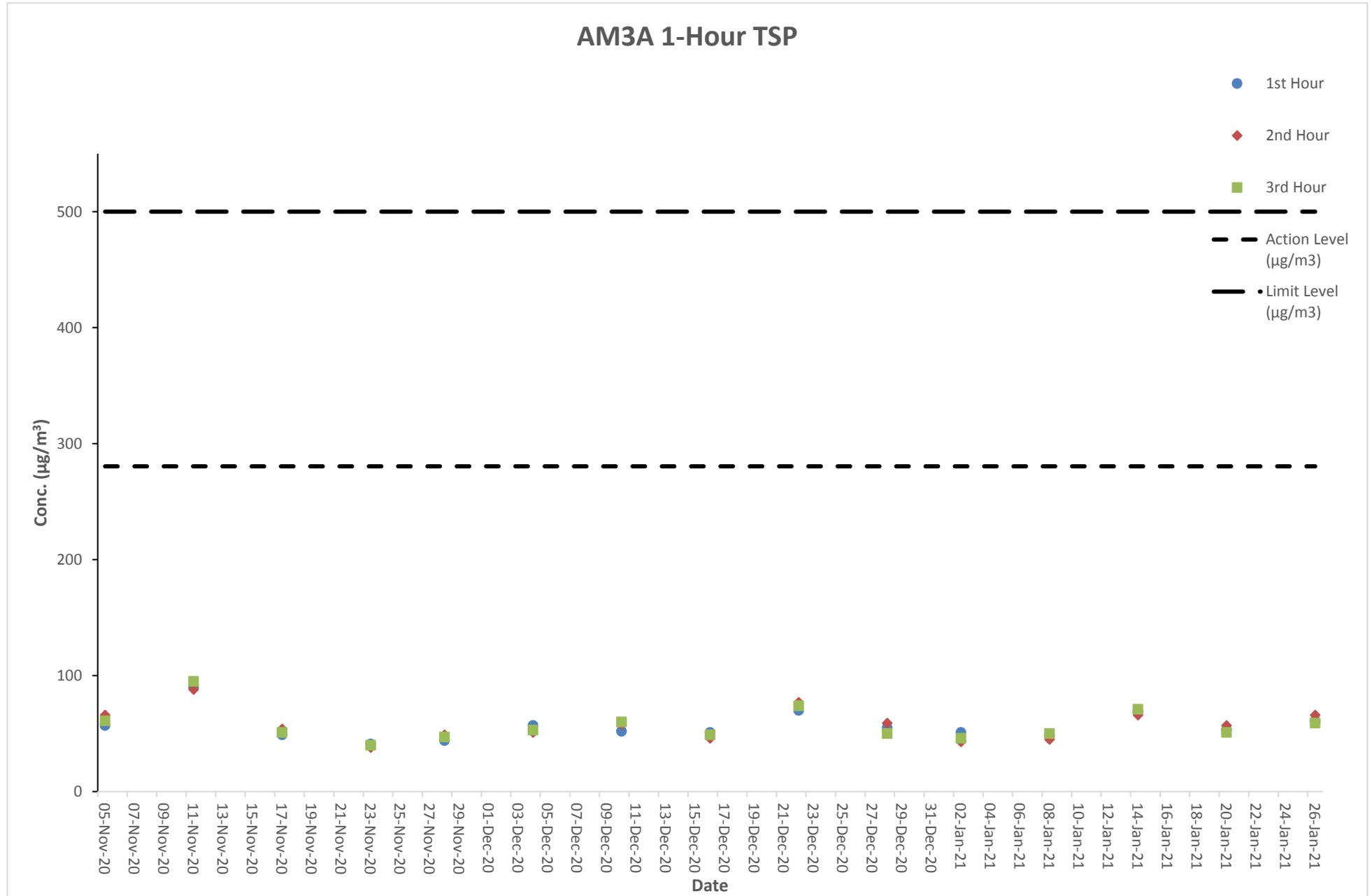
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E. Graphical Plots of the Monitoring Results

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		
05-Nov-20	Fine	8:33 - 11:33	57	66	61	280.4	500
11-Nov-20	Fine	14:04 - 17:04	90	88	95	280.4	500
17-Nov-20	Cloudy	8:38 - 11:38	49	54	51	280.4	500
23-Nov-20	Cloudy	14:10 - 17:10	41	38	40	280.4	500
28-Nov-20	Fine	8:19 - 11:19	44	49	47	280.4	500
04-Dec-20	Fine	8:27 - 11:27	57	51	53	280.4	500
10-Dec-20	Fine	14:13 - 17:13	52	58	60	280.4	500
16-Dec-20	Cloudy	8:31 - 11:31	51	46	49	280.4	500
22-Dec-20	Cloudy	14:14 - 17:14	70	77	74	280.4	500
28-Dec-20	Fine	8:23 - 11:23	55	59	50	280.4	500
02-Jan-21	Fine	8:31 - 11:31	51	43	46	280.4	500
08-Jan-21	Cloudy	14:22 - 17:22	48	45	50	280.4	500
14-Jan-21	Fine	8:27 - 11:27	69	66	71	280.4	500
20-Jan-21	Fine	14:08 - 17:08	53	57	51	280.4	500
26-Jan-21	Fine	8:20 - 11:20	61	66	59	280.4	500

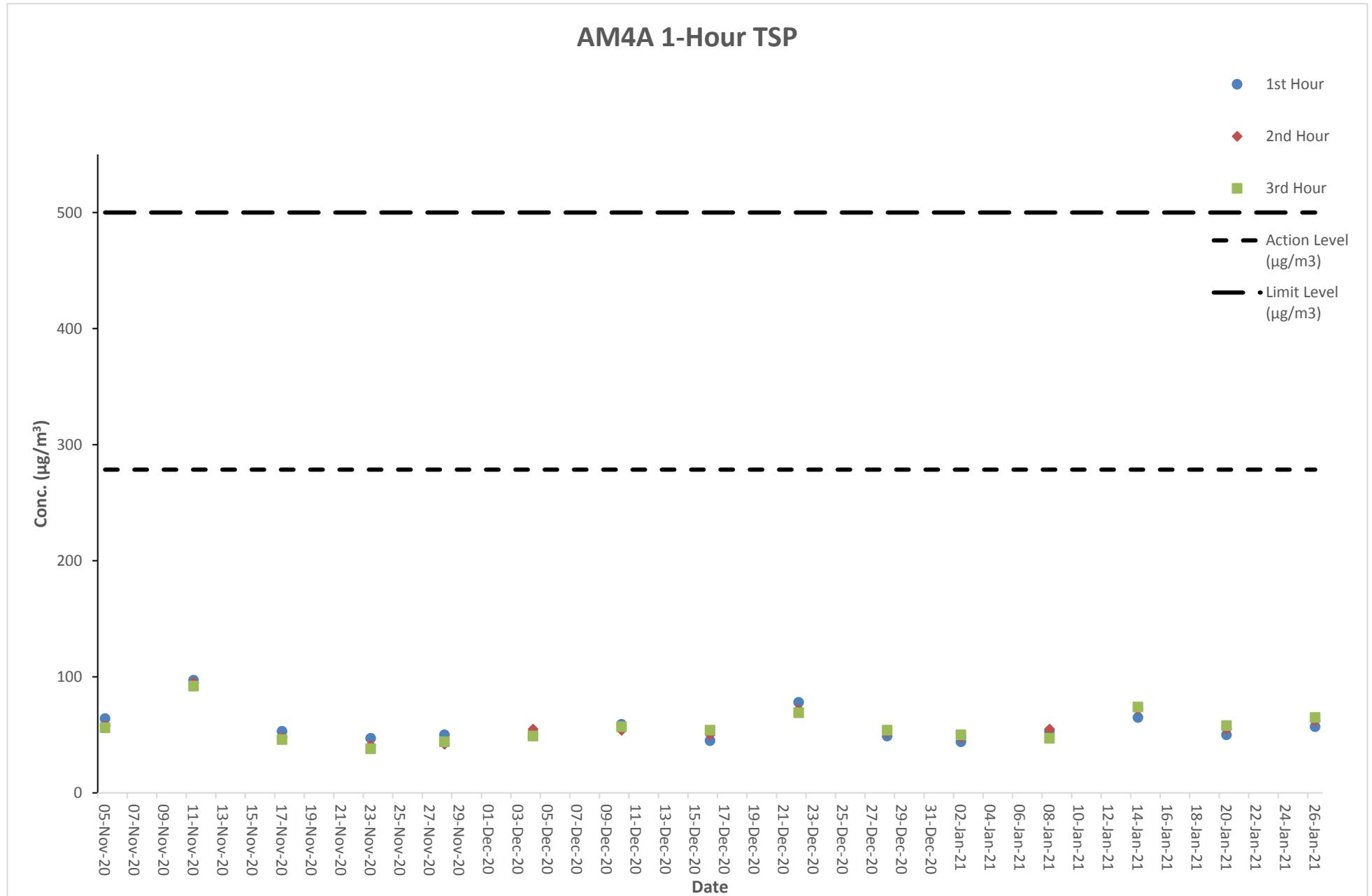
Graphical Presentation of Air Quality Monitoring Result at Station AM3A (1-hour TSP)



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		
05-Nov-20	Fine	8:41 - 11:41	64	58	56	278.5	500
11-Nov-20	Fine	14:12 - 17:12	97	95	92	278.5	500
17-Nov-20	Cloudy	8:46 - 11:46	53	48	46	278.5	500
23-Nov-20	Cloudy	14:18 - 17:18	47	41	38	278.5	500
28-Nov-20	Fine	8:27 - 11:27	50	42	44	278.5	500
04-Dec-20	Fine	8:35 - 11:35	52	55	49	278.5	500
10-Dec-20	Fine	14:21 - 17:21	59	54	57	278.5	500
16-Dec-20	Cloudy	8:39 - 11:39	45	50	54	278.5	500
22-Dec-20	Cloudy	14:22 - 17:22	78	72	69	278.5	500
28-Dec-20	Fine	8:31 - 11:31	49	52	54	278.5	500
02-Jan-21	Fine	8:39 - 11:39	44	48	50	278.5	500
08-Jan-21	Cloudy	14:30 - 17:30	53	55	47	278.5	500
14-Jan-21	Fine	8:35 - 11:35	65	72	74	278.5	500
20-Jan-21	Fine	14:16 - 17:16	50	55	58	278.5	500
26-Jan-21	Fine	8:28 - 11:28	57	62	65	278.5	500

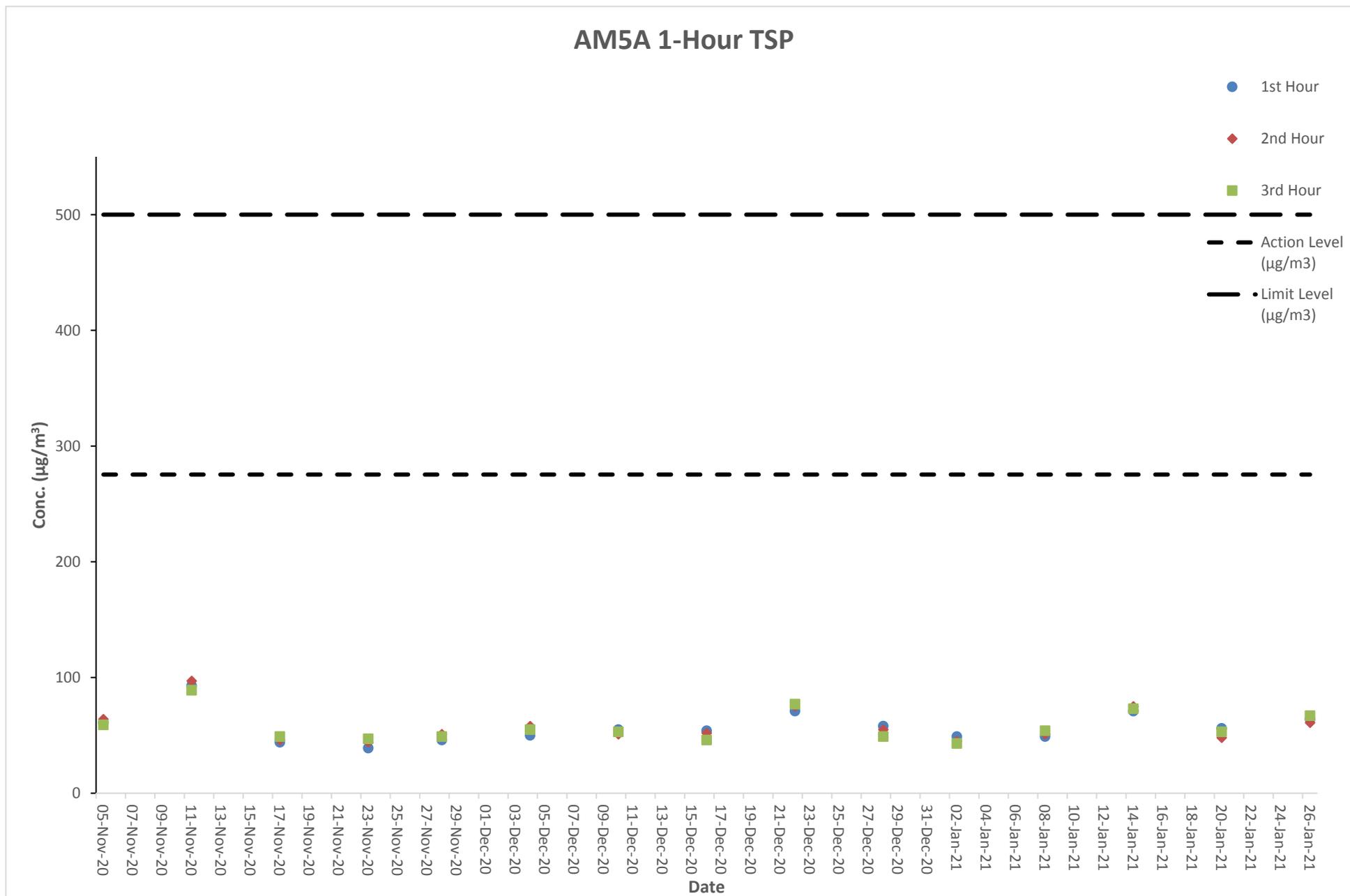
Graphical Presentation of Air Quality Monitoring Result at Station AM4A (1-hour TSP)



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		
05-Nov-20	Fine	8:56 - 11:56	61	64	59	275.4	500
11-Nov-20	Fine	14:29 - 17:29	93	97	89	275.4	500
17-Nov-20	Cloudy	9:01 - 12:01	44	46	49	275.4	500
23-Nov-20	Cloudy	14:35 - 17:35	39	44	47	275.4	500
28-Nov-20	Fine	8:42 - 11:42	46	51	49	275.4	500
04-Dec-20	Fine	8:50 - 11:50	50	58	55	275.4	500
10-Dec-20	Fine	14:38 - 17:38	55	51	53	275.4	500
16-Dec-20	Cloudy	8:54 - 11:54	54	52	46	275.4	500
22-Dec-20	Cloudy	14:39 - 17:39	71	75	77	275.4	500
28-Dec-20	Fine	8:46 - 11:46	58	55	49	275.4	500
02-Jan-21	Fine	8:54 - 11:54	49	45	43	275.4	500
08-Jan-21	Cloudy	14:47 - 17:47	49	51	54	275.4	500
14-Jan-21	Fine	8:50 - 11:50	71	75	73	275.4	500
20-Jan-21	Fine	14:33 - 17:33	56	48	53	275.4	500
26-Jan-21	Fine	8:43 - 11:43	64	61	67	275.4	500

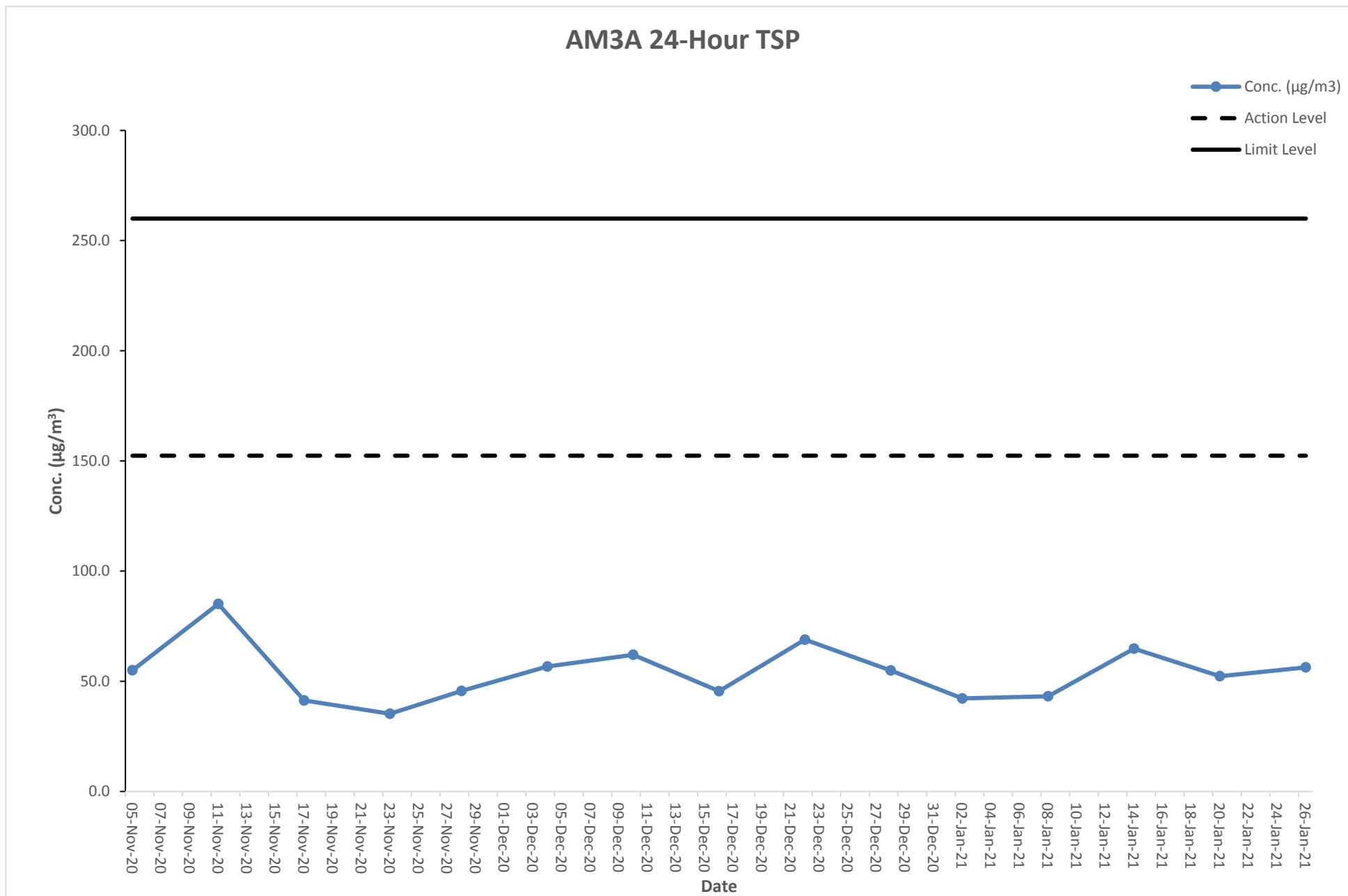
Graphical Presentation of Air Quality Monitoring Result at Station AM5A (1-hour TSP)



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				
05-Nov-20	10:00	06-Nov-20	10:00	2.8016	2.8902	1147.8	1171.8	24	1.12	1.12	1.12	55.0	Sunny	152.4	260
11-Nov-20	10:00	12-Nov-20	10:00	2.8074	2.9445	1171.8	1195.8	24	1.12	1.12	1.12	85.1	Fine	152.4	260
17-Nov-20	10:00	18-Nov-20	10:00	2.8012	2.8676	1195.8	1219.8	24	1.12	1.12	1.12	41.3	Fine	152.4	260
23-Nov-20	10:00	24-Nov-20	10:00	2.8077	2.8645	1219.8	1243.8	24	1.12	1.12	1.12	35.3	Cloudy	152.4	260
28-Nov-20	10:00	29-Nov-20	10:00	2.8059	2.8792	1243.8	1267.8	24	1.12	1.12	1.12	45.6	Fine	152.4	260
04-Dec-20	10:00	05-Dec-20	10:00	2.8077	2.8990	1267.8	1291.8	24	1.12	1.12	1.12	56.7	Sunny	152.4	260
10-Dec-20	10:00	11-Dec-20	10:00	2.8013	2.9011	1291.8	1315.8	24	1.12	1.12	1.12	62.0	Fine	152.4	260
16-Dec-20	10:00	17-Dec-20	10:00	2.8022	2.8755	1315.8	1339.8	24	1.12	1.12	1.12	45.5	Fine	152.4	260
22-Dec-20	10:00	23-Dec-20	10:00	2.8074	2.9183	1339.8	1363.8	24	1.12	1.12	1.12	68.9	Sunny	152.4	260
28-Dec-20	10:00	29-Dec-20	10:00	2.8076	2.8961	1363.8	1387.8	24	1.12	1.12	1.12	54.9	Fine	152.4	260
02-Jan-21	10:00	03-Jan-21	10:00	2.8074	2.8754	1387.8	1411.8	24	1.12	1.12	1.12	42.2	Fine	152.4	260
08-Jan-21	10:00	09-Jan-21	10:00	2.8025	2.8720	1411.8	1435.8	24	1.12	1.12	1.12	43.2	Fine	152.4	260
14-Jan-21	10:00	15-Jan-21	10:00	2.8029	2.9071	1435.8	1459.8	24	1.12	1.12	1.12	64.8	Sunny	152.4	260
20-Jan-21	10:00	21-Jan-21	10:00	2.8013	2.8854	1459.8	1483.8	24	1.12	1.12	1.12	52.3	Fine	152.4	260
26-Jan-21	10:00	27-Jan-21	10:00	2.8086	2.8993	1483.8	1507.8	24	1.12	1.12	1.12	56.3	Sunny	152.4	260

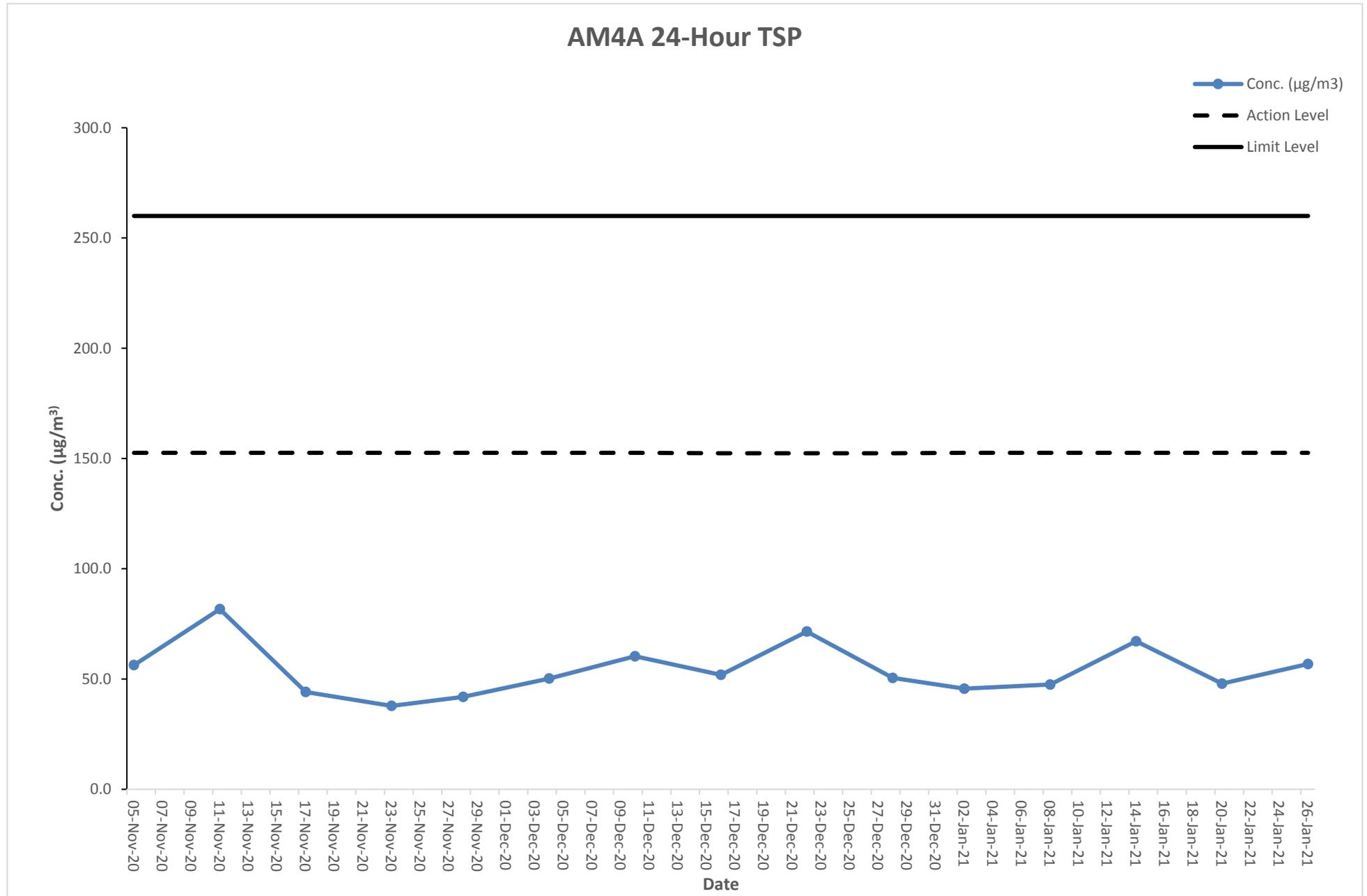
Graphical Presentation of Air Quality Monitoring Result at Station AM3A (24-hour TSP)



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				
05-Nov-20	10:00	06-Nov-20	10:00	2.8050	2.8956	1567.4	1591.4	24	1.12	1.12	1.12	56.3	Sunny	152.6	260
11-Nov-20	10:00	12-Nov-20	10:00	2.8032	2.9348	1591.4	1615.4	24	1.12	1.12	1.12	81.7	Fine	152.6	260
17-Nov-20	10:00	18-Nov-20	10:00	2.8031	2.8741	1615.4	1639.4	24	1.12	1.12	1.12	44.1	Fine	152.6	260
23-Nov-20	10:00	24-Nov-20	10:00	2.8023	2.8632	1639.4	1663.4	24	1.12	1.12	1.12	37.8	Cloudy	152.6	260
28-Nov-20	10:00	29-Nov-20	10:00	2.8014	2.8689	1663.4	1687.4	24	1.12	1.12	1.12	41.9	Fine	152.6	260
04-Dec-20	10:00	05-Dec-20	10:00	2.8031	2.8839	1687.4	1711.4	24	1.12	1.12	1.12	50.2	Sunny	152.6	260
10-Dec-20	10:00	11-Dec-20	10:00	2.8071	2.9042	1711.4	1735.4	24	1.12	1.12	1.12	60.3	Fine	152.6	260
16-Dec-20	10:00	17-Dec-20	10:00	2.8044	2.8879	1735.4	1759.4	24	1.12	1.12	1.12	51.9	Fine	152.6	260
22-Dec-20	10:00	23-Dec-20	10:00	2.8038	2.9189	1759.4	1783.4	24	1.12	1.12	1.12	71.5	Cloudy	152.6	260
28-Dec-20	10:00	29-Dec-20	10:00	2.8023	2.8837	1783.4	1807.4	24	1.12	1.12	1.12	50.5	Fine	152.6	260
02-Jan-21	10:00	03-Jan-21	10:00	2.8076	2.8809	1807.4	1831.4	24	1.12	1.12	1.12	45.6	Fine	152.6	260
08-Jan-21	10:00	09-Jan-21	10:00	2.8065	2.8830	1831.4	1855.4	24	1.12	1.12	1.12	47.5	Fine	152.6	260
14-Jan-21	10:00	15-Jan-21	10:00	2.8041	2.9121	1855.4	1879.4	24	1.12	1.12	1.12	67.1	Sunny	152.6	260
20-Jan-21	10:00	21-Jan-21	10:00	2.8045	2.8816	1879.4	1903.4	24	1.12	1.12	1.12	47.9	Fine	152.6	260
26-Jan-21	10:00	27-Jan-21	10:00	2.8013	2.8927	1903.4	1927.4	24	1.12	1.12	1.12	56.8	Sunny	152.6	260

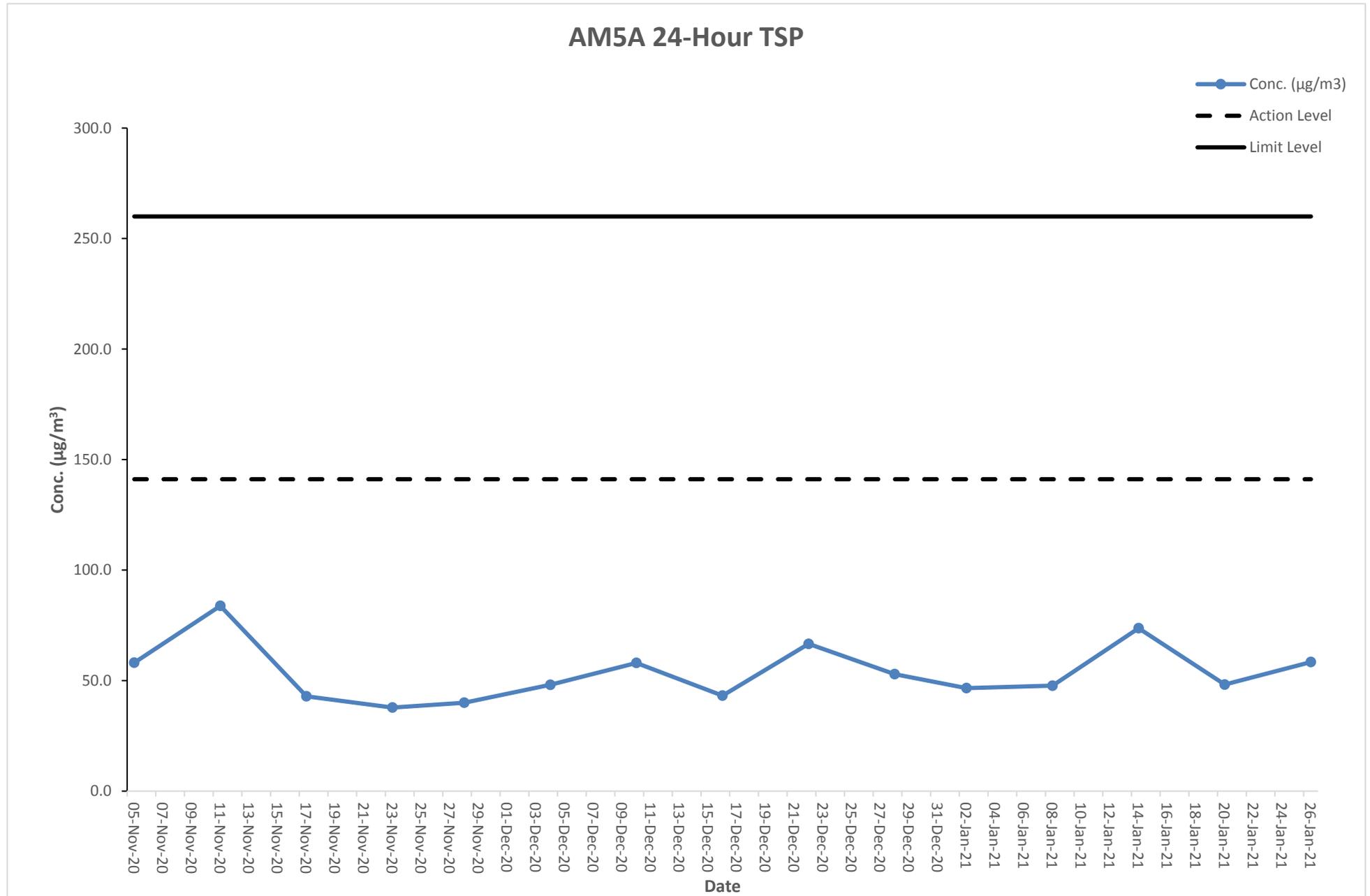
Graphical Presentation of Air Quality Monitoring Result at Station AM4A (24-hour TSP)



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				
05-Nov-20	10:00	06-Nov-20	10:00	2.8075	2.9009	1707.6	1731.6	24	1.12	1.12	1.12	58.1	Sunny	141.1	260
11-Nov-20	10:00	12-Nov-20	10:00	2.8054	2.9403	1731.6	1755.6	24	1.12	1.12	1.12	83.8	Fine	141.1	260
17-Nov-20	10:00	18-Nov-20	10:00	2.8028	2.8719	1755.6	1779.6	24	1.12	1.12	1.12	42.9	Fine	141.1	260
23-Nov-20	10:00	24-Nov-20	10:00	2.8038	2.8647	1779.6	1803.6	24	1.12	1.12	1.12	37.8	Cloudy	141.1	260
28-Nov-20	10:00	29-Nov-20	10:00	2.8070	2.8714	1803.6	1827.6	24	1.12	1.12	1.12	40.0	Fine	141.1	260
04-Dec-20	10:00	05-Dec-20	10:00	2.8044	2.8818	1827.6	1851.6	24	1.12	1.12	1.12	48.1	Sunny	141.1	260
10-Dec-20	10:00	11-Dec-20	10:00	2.8074	2.9007	1851.6	1875.6	24	1.12	1.12	1.12	58.0	Fine	141.1	260
16-Dec-20	10:00	17-Dec-20	10:00	2.8083	2.8778	1875.6	1899.6	24	1.12	1.12	1.12	43.2	Fine	141.1	260
22-Dec-20	10:00	23-Dec-20	10:00	2.8074	2.9145	1899.6	1923.6	24	1.12	1.12	1.12	66.6	Sunny	141.1	260
28-Dec-20	10:00	29-Dec-20	10:00	2.8048	2.8900	1923.6	1947.6	24	1.12	1.12	1.12	52.9	Fine	141.1	260
02-Jan-21	10:00	03-Jan-21	10:00	2.8064	2.8813	1947.6	1971.6	24	1.12	1.12	1.12	46.6	Fine	141.1	260
08-Jan-21	10:00	09-Jan-21	10:00	2.8075	2.8844	1971.6	1995.6	24	1.12	1.12	1.12	47.7	Fine	141.1	260
14-Jan-21	10:00	15-Jan-21	10:00	2.8071	2.9257	1995.6	2019.6	24	1.12	1.12	1.12	73.7	Sunny	141.1	260
20-Jan-21	10:00	21-Jan-21	10:00	2.8048	2.8824	2019.6	2043.6	24	1.12	1.12	1.12	48.2	Fine	141.1	260
26-Jan-21	10:00	27-Jan-21	10:00	2.8014	2.8954	2043.6	2067.6	24	1.12	1.12	1.12	58.4	Sunny	141.1	260

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



Noise Monitoring Result at Station NM2A

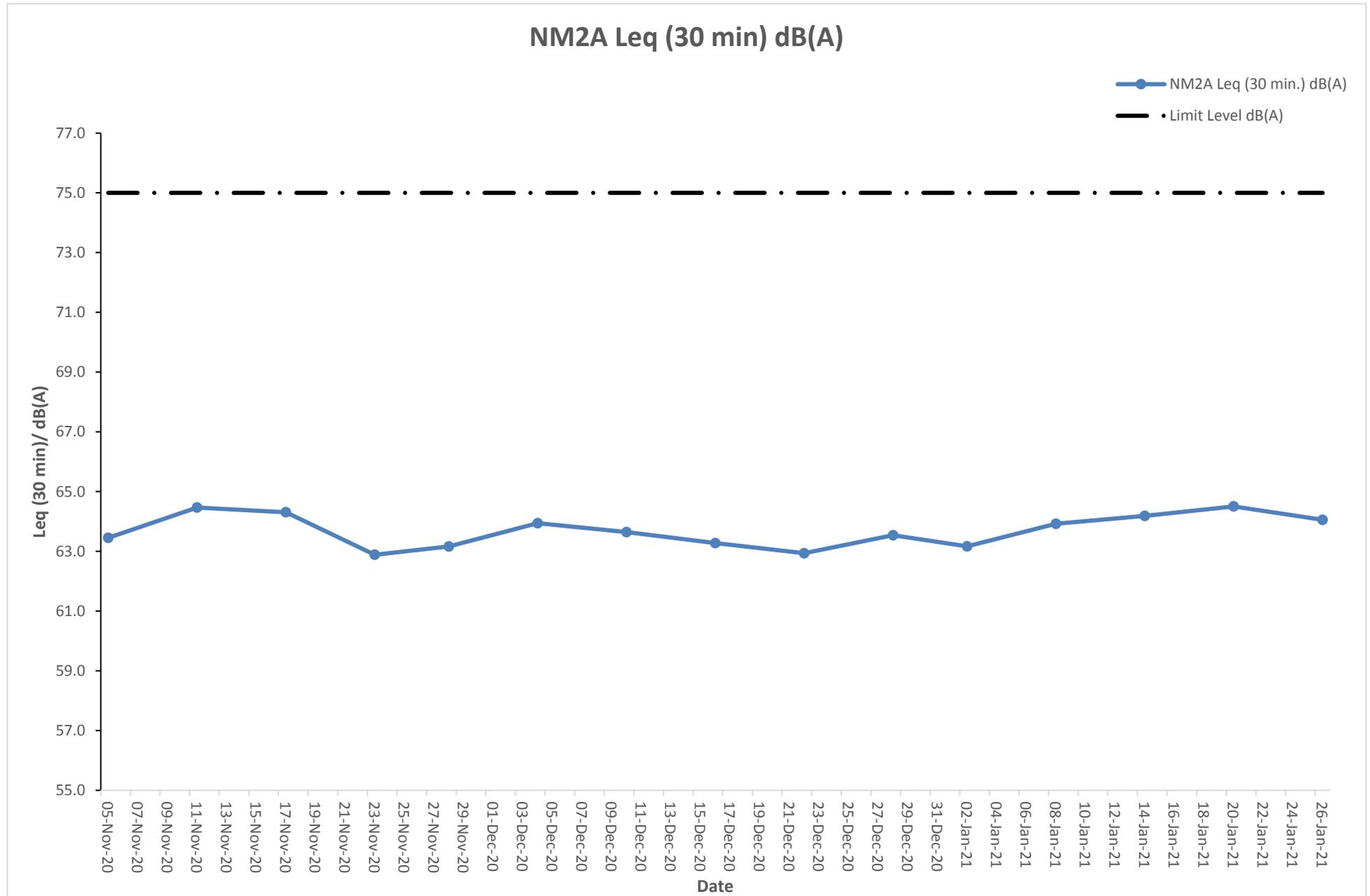
Date	Time	Measured L10 dB(A)	Measured L90 dB(A)	Leq (30 min.) dB(A)
05-Nov-20	8:33	63.8	62.5	63.5
05-Nov-20	8:38	64.6	60.2	
05-Nov-20	8:43	66.1	57.6	
05-Nov-20	8:48	65.4	62.4	
05-Nov-20	8:53	64.2	62.3	
05-Nov-20	8:58	64.9	62.4	
11-Nov-20	14:04	64.7	60.1	64.5
11-Nov-20	14:09	65.3	57.6	
11-Nov-20	14:14	65.8	57.4	
11-Nov-20	14:19	65.5	57.5	
11-Nov-20	14:24	64.4	60.5	
11-Nov-20	14:29	66.7	57.5	
17-Nov-20	8:38	66.1	61.6	64.3
17-Nov-20	8:43	65.3	61.3	
17-Nov-20	8:48	65.7	62.4	
17-Nov-20	8:53	64.9	63.1	
17-Nov-20	8:58	65.5	62.8	
17-Nov-20	9:03	65.1	61.9	
23-Nov-20	14:10	65.6	62.6	62.9
23-Nov-20	14:15	63.4	59.7	
23-Nov-20	14:20	63.9	60.3	
23-Nov-20	14:25	64.7	61.8	
23-Nov-20	14:30	66.2	61.2	
23-Nov-20	14:35	65.4	60.6	
28-Nov-20	8:19	63.5	59.7	63.2
28-Nov-20	8:24	64.1	59.9	
28-Nov-20	8:29	64.8	58.4	
28-Nov-20	8:34	66.3	60.3	
28-Nov-20	8:39	65.7	61.6	
28-Nov-20	8:44	64.4	59.2	
04-Dec-20	8:27	65.9	61.3	63.9
04-Dec-20	8:32	66.6	58.8	
04-Dec-20	8:37	65.5	57.2	
04-Dec-20	8:42	64.7	59.7	
04-Dec-20	8:47	64.4	60.8	
04-Dec-20	8:52	65.1	62.3	
10-Dec-20	14:13	64.5	59.2	63.6
10-Dec-20	14:18	65.1	60.6	
10-Dec-20	14:23	66.6	60.1	
10-Dec-20	14:28	65.8	57.7	
10-Dec-20	14:33	65.2	59.9	
10-Dec-20	14:38	63.7	59.1	
16-Dec-20	8:31	65.1	58.2	63.3
16-Dec-20	8:36	64.2	59.4	
16-Dec-20	8:41	65.8	58.8	
16-Dec-20	8:46	66.9	56.7	
16-Dec-20	8:51	66.3	58.1	
16-Dec-20	8:56	64.7	58.6	
22-Dec-20	14:14	64.3	57.9	62.9
22-Dec-20	14:19	65.2	58.5	
22-Dec-20	14:24	65.8	58.8	
22-Dec-20	14:29	66.3	56.9	
22-Dec-20	14:34	64.8	57.4	
22-Dec-20	14:39	65.5	59.2	
28-Dec-20	8:23	66.3	58.8	63.5
28-Dec-20	8:28	65.4	58.1	
28-Dec-20	8:33	65.7	58.5	
28-Dec-20	8:38	64.3	59.2	
28-Dec-20	8:43	64.8	57.9	
28-Dec-20	8:48	65.1	60.2	

02-Jan-21	8:31	63.4	58.3	63.2
02-Jan-21	8:36	64.9	57.6	
02-Jan-21	8:41	65.5	60.2	
02-Jan-21	8:46	66.1	59.4	
02-Jan-21	8:51	64.4	58.1	
02-Jan-21	8:56	64.7	58.8	
08-Jan-21	14:22	65.5	57.1	63.9
08-Jan-21	14:27	66.4	58.5	
08-Jan-21	14:32	66.2	58.8	
08-Jan-21	14:37	64.6	60.3	
08-Jan-21	14:42	65.3	60.1	
08-Jan-21	14:47	65.9	59.6	
14-Jan-21	8:27	65.8	60.3	64.2
14-Jan-21	8:32	66.1	59.6	
14-Jan-21	8:37	65.3	59.1	
14-Jan-21	8:42	65.2	58.2	
14-Jan-21	8:47	64.7	58.8	
14-Jan-21	8:52	65.5	59.4	
20-Jan-21	14:08	66.7	59.3	64.5
20-Jan-21	14:13	66.1	58.4	
20-Jan-21	14:18	65.4	58.9	
20-Jan-21	14:23	67.3	60.2	
20-Jan-21	14:28	66.5	59.5	
20-Jan-21	14:33	64.8	59.1	
26-Jan-21	8:20	65.1	58.4	64.1
26-Jan-21	8:25	64.3	59.1	
26-Jan-21	8:30	64.8	59.9	
26-Jan-21	8:35	65.6	59.5	
26-Jan-21	8:40	66.7	60.7	
26-Jan-21	8:45	66.2	58.8	



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

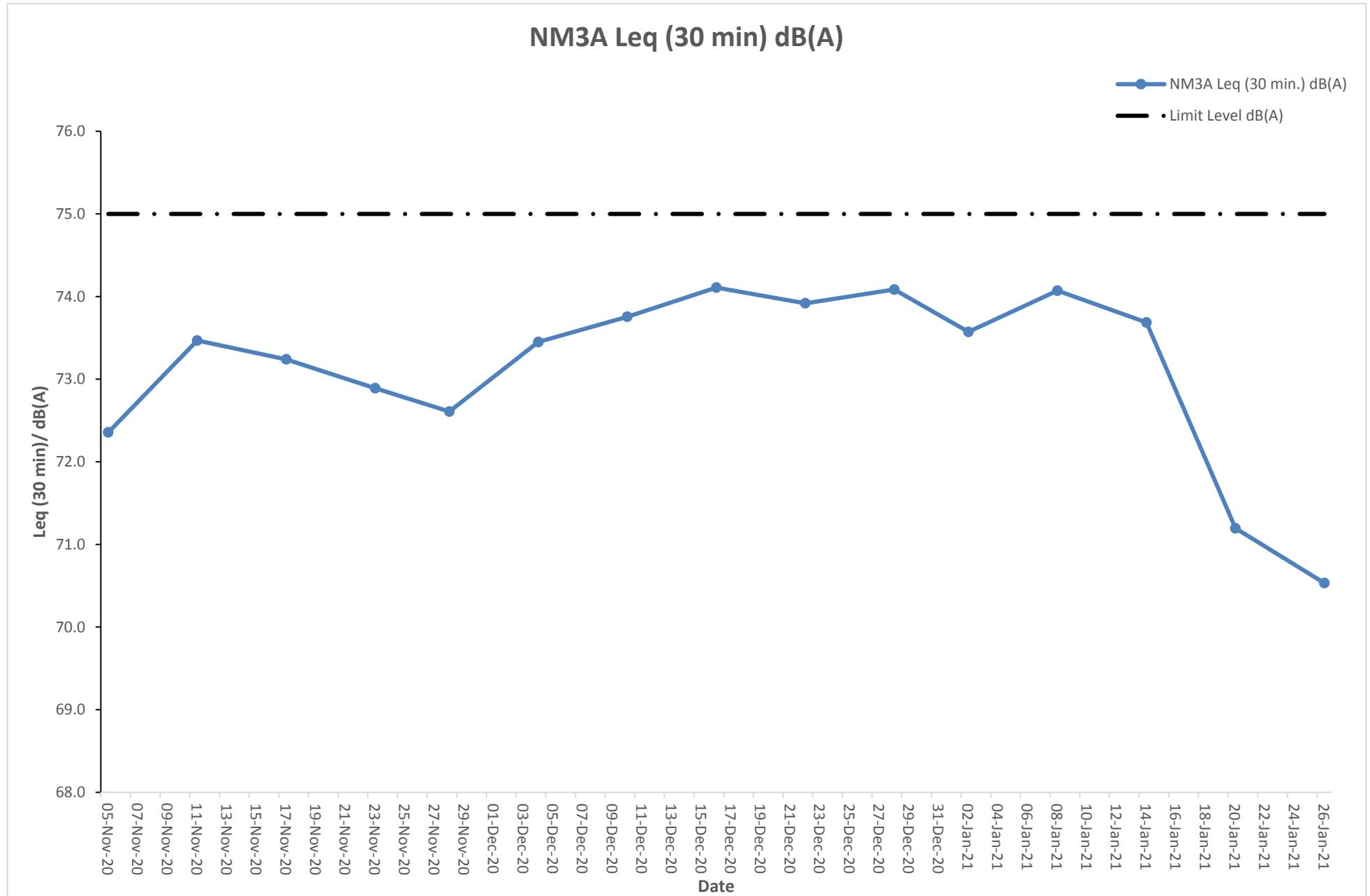
Date	Time	Measured L10 dB(A)	Measured L90 dB(A)	Leq (30 min.) dB(A)
05-Nov-20	10:03	74.3	67.7	72.4
05-Nov-20	10:08	75.6	66.9	
05-Nov-20	10:13	75.1	68.3	
05-Nov-20	10:18	74.9	69.1	
05-Nov-20	10:23	73.2	68.6	
05-Nov-20	10:28	73.7	68.8	
11-Nov-20	15:37	75.6	69.1	73.5
11-Nov-20	15:42	76.3	69.9	
11-Nov-20	15:47	76.8	67.6	
11-Nov-20	15:52	74.1	68.5	
11-Nov-20	15:57	74.5	67.9	
11-Nov-20	16:02	75.2	66.6	
17-Nov-20	10:08	75.1	68.2	73.2
17-Nov-20	10:13	73.9	69.4	
17-Nov-20	10:18	74.4	69.8	
17-Nov-20	10:23	75.7	69.3	
17-Nov-20	10:28	76.2	66.7	
17-Nov-20	10:33	76.5	67.4	
23-Nov-20	15:43	74.7	66.2	72.9
23-Nov-20	15:48	73.5	67.7	
23-Nov-20	15:53	74.2	67.1	
23-Nov-20	15:58	76.4	68.4	
23-Nov-20	16:03	76.1	69.2	
23-Nov-20	16:08	75.8	67.8	
28-Nov-20	9:49	75.5	68.6	72.6
28-Nov-20	9:54	73.6	69.3	
28-Nov-20	9:59	74.7	68.4	
28-Nov-20	10:04	74.1	67.0	
28-Nov-20	10:09	75.2	67.5	
28-Nov-20	10:14	75.8	68.1	
04-Dec-20	9:57	73.2	68.2	73.4
04-Dec-20	10:02	72.6	67.7	
04-Dec-20	10:07	74.1	67.1	
04-Dec-20	10:12	73.9	69.6	
04-Dec-20	10:17	75.5	68.4	
04-Dec-20	10:22	76.3	67.6	
10-Dec-20	15:46	75.1	69.4	73.8
10-Dec-20	15:51	74.4	69.2	
10-Dec-20	15:56	74.7	66.7	
10-Dec-20	16:01	75.9	67.6	
10-Dec-20	16:06	76.6	68.1	
10-Dec-20	16:11	75.5	69.9	
16-Dec-20	10:01	75.8	69.2	74.1
16-Dec-20	10:06	75.1	70.4	
16-Dec-20	10:11	76.3	69.6	
16-Dec-20	10:16	74.7	68.2	
16-Dec-20	10:21	75.5	67.4	
16-Dec-20	10:26	76.6	69.1	
22-Dec-20	15:47	76.6	68.4	73.9
22-Dec-20	15:52	75.8	68.9	
22-Dec-20	15:57	75.1	69.7	
22-Dec-20	16:02	75.4	69.2	
22-Dec-20	16:07	76.3	67.7	
22-Dec-20	16:12	76.9	67.3	
28-Dec-20	9:53	75.5	69.1	74.1
28-Dec-20	9:58	76.1	68.4	
28-Dec-20	10:03	76.7	68.8	
28-Dec-20	10:08	76.3	70.3	
28-Dec-20	10:13	75.8	69.6	
28-Dec-20	10:18	75.2	69.4	

02-Jan-21	10:01	75.1	67.8	73.6
02-Jan-21	10:06	74.6	69.5	
02-Jan-21	10:11	75.5	70.1	
02-Jan-21	10:16	76.3	69.3	
02-Jan-21	10:21	74.8	68.4	
02-Jan-21	10:26	75.6	67.7	
08-Jan-21	15:55	76.4	68.3	74.1
08-Jan-21	16:00	76.7	67.7	
08-Jan-21	16:05	75.9	69.1	
08-Jan-21	16:10	74.8	69.8	
08-Jan-21	16:15	75.1	70.2	
08-Jan-21	16:20	76.2	69.4	
14-Jan-21	9:57	75.8	68.5	73.7
14-Jan-21	10:02	75.1	67.1	
14-Jan-21	10:07	74.3	67.7	
14-Jan-21	10:12	73.7	68.2	
14-Jan-21	10:17	74.6	69.4	
14-Jan-21	10:22	75.3	68.7	
20-Jan-21	15:41	72.1	65.5	71.2
20-Jan-21	15:46	72.3	64.3	
20-Jan-21	15:51	73.3	66.3	
20-Jan-21	15:56	72.1	65.4	
20-Jan-21	16:01	73.4	68.5	
20-Jan-21	16:06	73.1	68.4	
26-Jan-21	9:50	72.2	65.1	70.5
26-Jan-21	9:55	71.3	65.3	
26-Jan-21	10:00	72.6	64.5	
26-Jan-21	10:05	72.4	65.2	
26-Jan-21	10:10	72.9	65.4	
26-Jan-21	10:15	73.3	68.2	



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

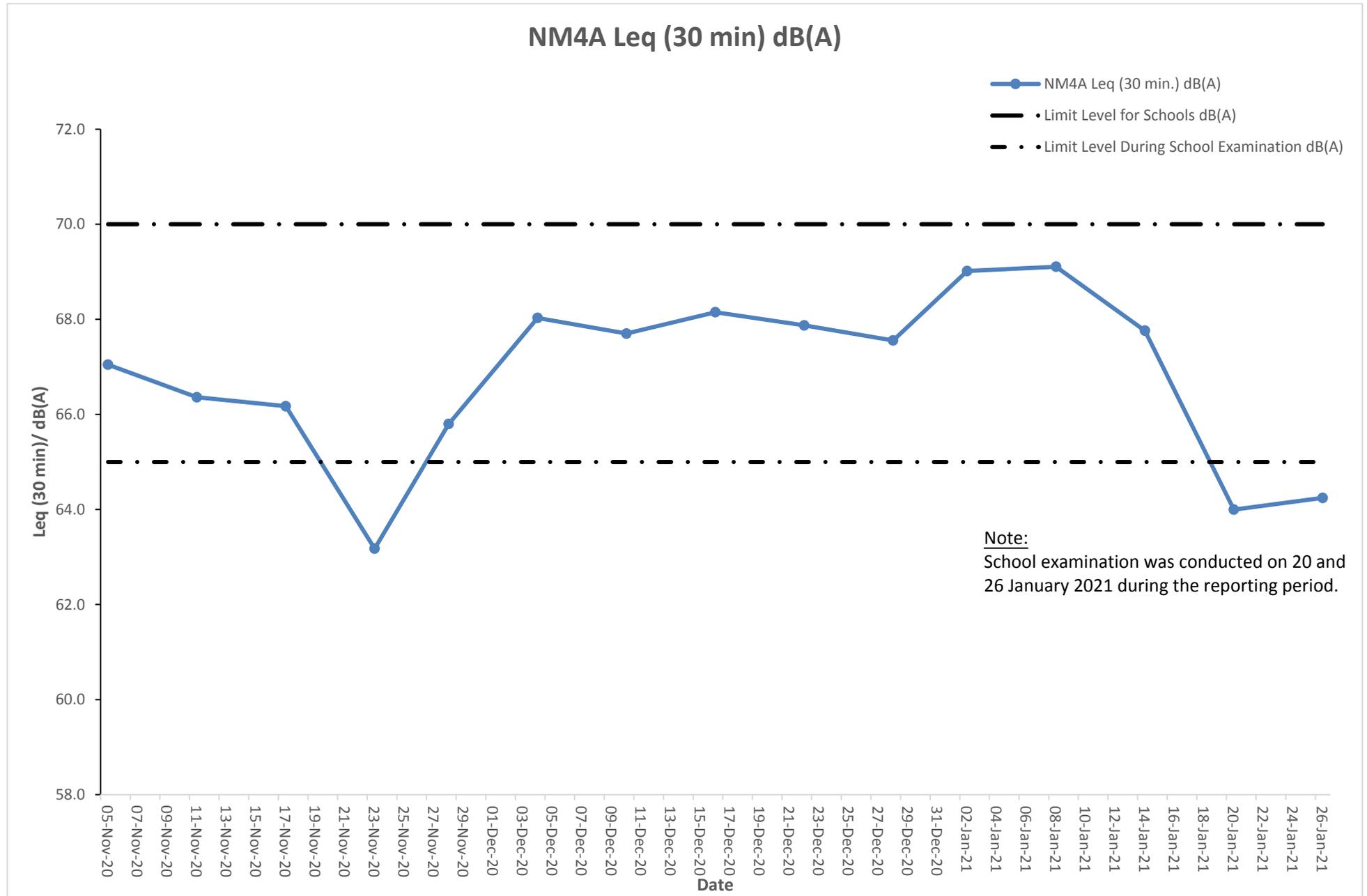
Date	Time	Measured L10 dB(A)	Measured L90 dB(A)	Leq (30 min.) dB(A)
05-Nov-20	10:38	67.3	64.3	67.0
05-Nov-20	10:43	68.8	64.1	
05-Nov-20	10:48	69.1	62.5	
05-Nov-20	10:53	67.9	63.3	
05-Nov-20	10:58	68.4	62.7	
05-Nov-20	11:03	67.7	64.5	
11-Nov-20	16:12	68.5	65.8	66.4
11-Nov-20	16:17	69.2	65.1	
11-Nov-20	16:22	69.7	64.4	
11-Nov-20	16:27	67.4	62.6	
11-Nov-20	16:32	67.1	65.1	
11-Nov-20	16:37	68.2	63.9	
17-Nov-20	10:43	66.3	62.4	66.2
17-Nov-20	10:48	67.1	64.1	
17-Nov-20	10:53	68.5	64.8	
17-Nov-20	10:58	67.9	65.3	
17-Nov-20	11:03	67.4	63.6	
17-Nov-20	11:08	66.8	61.2	
23-Nov-20	16:18	65.2	60.2	63.2
23-Nov-20	16:23	66.6	60.8	
23-Nov-20	16:28	64.9	59.7	
23-Nov-20	16:33	64.4	60.1	
23-Nov-20	16:38	65.3	61.3	
23-Nov-20	16:43	65.5	60.6	
28-Nov-20	10:24	66.9	61.7	65.8
28-Nov-20	10:29	68.3	64.5	
28-Nov-20	10:34	69.6	62.2	
28-Nov-20	10:39	67.4	62.6	
28-Nov-20	10:44	67.9	63.7	
28-Nov-20	10:49	66.6	62.1	
04-Dec-20	10:32	69.2	62.4	68.0
04-Dec-20	10:37	68.5	65.1	
04-Dec-20	10:42	67.3	63.3	
04-Dec-20	10:47	69.9	63.8	
04-Dec-20	10:52	69.1	64.4	
04-Dec-20	10:57	69.5	62.1	
10-Dec-20	16:21	69.7	63.8	67.7
10-Dec-20	16:26	69.3	64.1	
10-Dec-20	16:31	66.7	63.3	
10-Dec-20	16:36	67.7	63.7	
10-Dec-20	16:41	68.6	65.2	
10-Dec-20	16:46	68.2	64.9	
16-Dec-20	10:36	69.4	61.8	68.1
16-Dec-20	10:41	68.7	62.5	
16-Dec-20	10:46	69.6	63.3	
16-Dec-20	10:51	69.2	62.9	
16-Dec-20	10:56	68.5	61.4	
16-Dec-20	11:01	68.8	62.3	
22-Dec-20	16:22	68.1	60.3	67.9
22-Dec-20	16:27	68.8	62.8	
22-Dec-20	16:32	69.7	63.4	
22-Dec-20	16:37	69.3	61.1	
22-Dec-20	16:42	68.6	61.5	
22-Dec-20	16:47	67.9	62.6	
28-Dec-20	10:28	69.4	61.4	67.6
28-Dec-20	10:33	68.1	63.2	
28-Dec-20	10:38	67.5	64.1	
28-Dec-20	10:43	68.8	62.8	
28-Dec-20	10:48	68.3	61.6	
28-Dec-20	10:53	69.7	62.3	

02-Jan-21	10:36	71.6	67.5	69.0
02-Jan-21	10:41	68.6	65.2	
02-Jan-21	10:46	70.3	66.2	
02-Jan-21	10:51	71.1	67.5	
02-Jan-21	10:56	70.5	66.5	
02-Jan-21	11:01	71.1	67.5	
08-Jan-21	16:30	71.3	67.5	69.1
08-Jan-21	16:35	71.2	67.3	
08-Jan-21	16:40	71.5	67.4	
08-Jan-21	16:45	71.1	67.5	
08-Jan-21	16:50	71.6	67.3	
08-Jan-21	16:55	68.3	65.4	
14-Jan-21	10:32	67.5	63.2	67.8
14-Jan-21	10:37	70.3	66.2	
14-Jan-21	10:42	68.1	65.5	
14-Jan-21	10:47	70.3	66.2	
14-Jan-21	10:52	68.6	65.9	
14-Jan-21	10:57	70.2	66.3	
20-Jan-21	16:16	66.5	61.5	64.0
20-Jan-21	16:21	66.5	61.4	
20-Jan-21	16:26	65.4	58.5	
20-Jan-21	16:31	65.3	58.1	
20-Jan-21	16:36	66.9	61.3	
20-Jan-21	16:41	66.4	61.2	
26-Jan-21	10:25	66.5	61.8	64.2
26-Jan-21	10:30	65.3	60.2	
26-Jan-21	10:35	66.3	61.4	
26-Jan-21	10:40	66.3	61.3	
26-Jan-21	10:45	66.1	61.2	
26-Jan-21	10:50	65.3	60.4	



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

Graphical Presentation of Noise Monitoring Result at Station NM4A



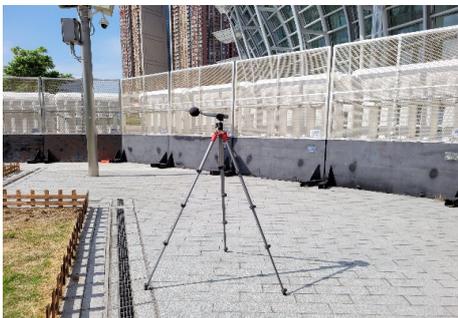
Noise Monitoring Result at Station NM5A

Date	Time	Measured L10 dB(A)	Measured L90 dB(A)	Leq (30 min.) dB(A)	Leq (30 min.) +3 dB(A)
05-Nov-20	9:23	62.6	57.8	60.2	63.2
05-Nov-20	9:28	61.3	56.9		
05-Nov-20	9:33	61.8	56.6		
05-Nov-20	9:38	63.1	57.1		
05-Nov-20	9:43	62.2	58.4		
05-Nov-20	9:48	62.5	59.2		
11-Nov-20	14:56	61.9	58.4	60.7	63.7
11-Nov-20	15:01	62.5	58.8		
11-Nov-20	15:06	62.2	58.1		
11-Nov-20	15:11	62.7	56.5		
11-Nov-20	15:16	64.5	57.7		
11-Nov-20	15:21	63.3	58.3	62.2	65.2
17-Nov-20	9:28	64.1	60.1		
17-Nov-20	9:33	63.3	59.6		
17-Nov-20	9:38	63.8	58.8		
17-Nov-20	9:43	65.2	60.4		
17-Nov-20	9:48	64.6	59.2		
17-Nov-20	9:53	64.9	59.7	61.3	64.3
23-Nov-20	15:02	61.6	58.6		
23-Nov-20	15:07	64.2	60.4		
23-Nov-20	15:12	62.7	60.1		
23-Nov-20	15:17	62.3	59.3		
23-Nov-20	15:22	63.5	59.9		
23-Nov-20	15:27	63.8	58.2	61.8	64.8
28-Nov-20	9:09	64.5	59.7		
28-Nov-20	9:14	63.3	61.1		
28-Nov-20	9:19	63.9	60.2		
28-Nov-20	9:24	65.1	60.5		
28-Nov-20	9:29	64.6	61.6		
28-Nov-20	9:34	62.7	59.4	61.2	64.2
04-Dec-20	9:17	63.8	55.7		
04-Dec-20	9:22	62.6	57.4		
04-Dec-20	9:27	62.9	58.5		
04-Dec-20	9:32	61.4	56.6		
04-Dec-20	9:37	62.1	56.1		
04-Dec-20	9:42	63.4	57.2	61.9	64.9
10-Dec-20	15:05	62.2	55.1		
10-Dec-20	15:10	64.5	55.8		
10-Dec-20	15:15	63.9	57.7		
10-Dec-20	15:20	63.1	59.4		
10-Dec-20	15:25	62.8	58.6		
10-Dec-20	15:30	63.7	56.3	60.5	63.5
16-Dec-20	9:21	61.4	55.4		
16-Dec-20	9:26	63.6	56		
16-Dec-20	9:31	62.9	56.6		
16-Dec-20	9:36	62.1	58.8		
16-Dec-20	9:41	62.5	58.2		
16-Dec-20	9:46	61.8	57.6	61.3	64.3
22-Dec-20	15:06	63.6	55.9		
22-Dec-20	15:11	64.4	56.1		
22-Dec-20	15:16	62.9	55.4		
22-Dec-20	15:21	61.6	54.3		
22-Dec-20	15:26	62.1	54.7		
22-Dec-20	15:31	62.7	55.5	62.3	65.3
28-Dec-20	9:13	64.5	54.8		
28-Dec-20	9:18	65.1	55.2		
28-Dec-20	9:23	63.8	55.9		
28-Dec-20	9:28	64.3	55.6		
28-Dec-20	9:33	64.9	57.1		
28-Dec-20	9:38	65.6	57.4		

02-Jan-21	9:21	64.3	54.9	62.2	65.2
02-Jan-21	9:26	65.1	55.6		
02-Jan-21	9:31	64.8	57.1		
02-Jan-21	9:36	63.3	56.4		
02-Jan-21	9:41	63.7	56.9		
02-Jan-21	9:46	64.4	57.7		
08-Jan-21	15:14	63.8	56.1	61.6	64.6
08-Jan-21	15:19	63.5	54.4		
08-Jan-21	15:24	62.7	55.5		
08-Jan-21	15:29	64.1	55.2		
08-Jan-21	15:34	63.3	56.6		
08-Jan-21	15:39	62.9	56.3		
14-Jan-21	9:17	65.5	55.5	62.7	65.7
14-Jan-21	9:22	64.8	55.8		
14-Jan-21	9:27	64.3	57.1		
14-Jan-21	9:32	64.9	56.3		
14-Jan-21	9:37	63.7	54.9		
14-Jan-21	9:42	65.2	54.4		
20-Jan-21	15:00	64.7	54.2	62.0	65.0
20-Jan-21	15:05	65.1	55.5		
20-Jan-21	15:10	63.6	55.8		
20-Jan-21	15:15	64.5	54.9		
20-Jan-21	15:20	64.2	53.8		
20-Jan-21	15:25	63.3	54.5		
26-Jan-21	9:10	62.8	55.8	61.5	64.5
26-Jan-21	9:15	63.5	55.1		
26-Jan-21	9:20	64.3	56.3		
26-Jan-21	9:25	63.1	54.4		
26-Jan-21	9:30	63.4	53.8		
26-Jan-21	9:35	64.6	55.5		

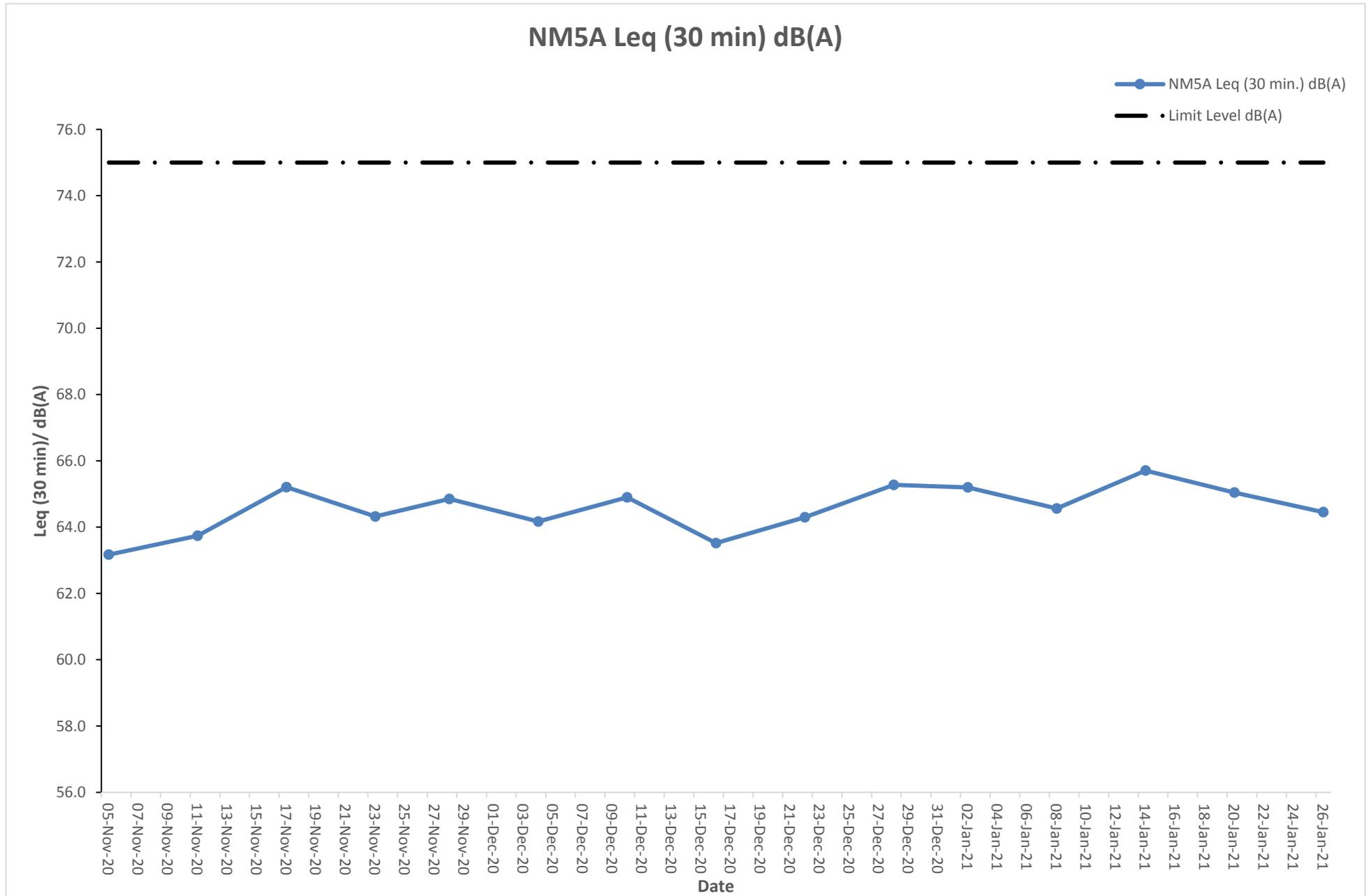
Remarks:

+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
Sub-total (2021)	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
Total	28448.97	0.00	1248.72	2873.77	23080.04	0.00	1246.44	0.00	0.00	0.00	0.00	0.00	71.12

Note:

- 63.84 tonnes, 829.53 tonnes, 19563.19 tonnes of inert C&D material were disposed of as public fill to Chai Wan Public Fill Barging Point, 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) Tai Po Town, (2) EcoPark at Tuen Mun and (3) Lung Kwu Sheung Tan.

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 (Nov 20 – Jan 21)	3	0	0
From 03 October 2020 to end of the reporting quarter	3	0	0