

# **Development at West Kowloon Cultural District**

**Quarterly Environmental Monitoring and Audit (EM&A) Report  
(August-October 2020)**

**November 2020**

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:**



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**CK Wu**

Environmental Team Leader (ETL)  
West Kowloon Cultural District Authority

Date

01 DECEMBER 2020

**Verified by:**



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**Claudine Lee**

Independent Environmental Checker (IEC)  
Meinhardt Infrastructure & Environment Ltd

Date

1 DEC 2020

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

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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 August 2020 to 31 October 2020.

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**

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

## **Implementation of Mitigation Measures**

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

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

## **Record of Complaints**

Two 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 August 2020 to 31 October 2020. 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:

- Structure works completed
- M+
  - FSD & BD inspection
  - Defects rectification (Builders, E&M)
  - E&M works (BLT, LV) installation & rectification
  - Finishing patching & installation (mainly 2/F & towers)
  - G/F, 1/F, 2/F, 3/F podium planting
  - Timber finishes works
  - Make good
  - Cleaning works
- MEP
  - BEL, BLT, ELV, BFS, BPD, BME works from G/F to 15/F of RDE
  - MEP works at CSF building majority finished
  - T&C for M+ / CSF
- ABWF
  - M+ B2F – 3/F Basement & Podium, finishing & Paving works, toilets / sanitary fitment installation, make good & finishes works
  - M+ Tower – paint/sealer, plaster, toilets / sanitary fitment installation, make good & finishes works
- CSF
  - Majority ABWF works at CSF accomplished, make good & defect rectification
  - Timber finishes works
  - Cleaning works
  - Landscaping works at G/F (planting)
- RDE
  - E&M works (BLT, LTE, HVAC, LV, PD) installation
  - Finishing works, drywall installation, patching up
  - G/F paving works, G/F window/door installation
  - MEP installation works
  - T&C
  - ABWF works & make good
  - RDE up to 15MF – blockwall, plastering, False ceiling sub-frame installation, paving & flooring works
  - Hand-over to WKCDA for their onward ABWF works
- Others
  - M+ G/F - Paving works, landscaping works (soil mix)
  - M+ 3F Podium Roof - landscaping works (soil mix, planting), drainage mat / cable installation
  - Paving works at M+ 1/F, G/F finished

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
    - Waterproofing work
    - Construct B1 and B2 zones
    - 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
  - Connection of DCS pipes
  - Construction of valve chamber, thrust blocks etc.
  - Back fill and removal of struts
- Modification to Existing Pump Cell
  - Hoarding to Site Boundary
  - Re-provision of Steel Plate Cover
  - ABWF works
- Extended Basement
  - ABWF works
  - BS installation
- Vibration Isolation Spring System Installation
  - Install Isolation Spring on B2
  - 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

### 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 <sup>3</sup>	260 µg/m <sup>3</sup>
	1-Hour TSP	AM1 - International Commerce Centre	At least 3 times every 6 days	273.7 µg/m <sup>3</sup>	500 µg/m <sup>3</sup>
	24-Hour TSP	AM2 - The Harbourside Tower 1	At least once every 6 days	151.1 µg/m <sup>3</sup>	260 µg/m <sup>3</sup>
	1-Hour TSP	AM2 - The Harbourside Tower 1	At least 3 times every 6 days	274.2 µg/m <sup>3</sup>	500 µg/m <sup>3</sup>
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. 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.

On the other hand, 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 for screening the construction activities. In short, 2 air quality monitoring stations and 1 noise impact monitoring station were confirmed for the impact monitoring M+ Museum and the Lyric Complex.

## 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 Monitoring 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
<b>Air Quality</b>				
1 hour TSP	AM1	18	68	33
1 hour TSP	AM2B	25	79	49
24 hour TSP	AM1	8	49	21
24 hour TSP	AM2B	24	85	42
<b>Construction Noise</b>				
Leq(30min)	NM1A	67	69	68

### 3.2 Monitoring Exceedances

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

**Table 3.2: Summary of Exceedances**

Monitoring Station	Parameter	No. of Exceedance		Action Taken
		Action Level	Limit Level	
<b>Air Quality</b>				
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
<b>Construction Noise</b>				
NM1A	Leq(30min)	0	0	N/A

#### 3.2.1 1-hour TSP Monitoring

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

#### 3.2.2 24-hour TSP Monitoring

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

### 3.2.4 Landscape and Visual Monitoring

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

## 4 Waste Management

### 4.1 M+ Museum

As advised by the Contractor, 7.44 tonnes, 31.62 tonnes and 403.51 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 606.0 tonnes of general refuse were disposed of at SENT landfill. 337.7 tonnes of metals, 1.2 tonnes of paper/cardboard packaging, 0.0 tonne of plastic and 0.0 tonne of timber were collected by recycling contractors in the reporting quarter. 0.0 tonne of inert C&D materials was reused on site. 0.0 tonne of inert C&D materials was reused in other projects and 13.7 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), 2035.04 tonnes, 1319.39 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 930.3 tonnes of general refuse were disposed of at SENT and WENT landfill. 1809.4 tonnes of metals, 0.2 tonnes of paper/cardboard packaging, 0.0 tonne of plastic and 0.0 tonne of timber were collected by recycling contractors in the reporting quarter. 0.0 tonne of inert C&D materials was reused on site. 0.0 tonne of fill materials was imported for use at site and 0.0 tonne of inert C&D materials was reused in other projects. 0.0 tonne of inert C&D materials was disposed to sorting facility and 0.0 tonne of chemical wastes was collected by licensed contractors in the reporting quarter.

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

## 5 Environmental Non-conformance

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

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

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 and noise limits were recorded.

### 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.

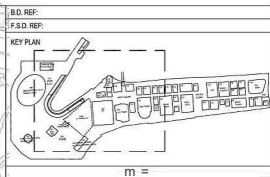
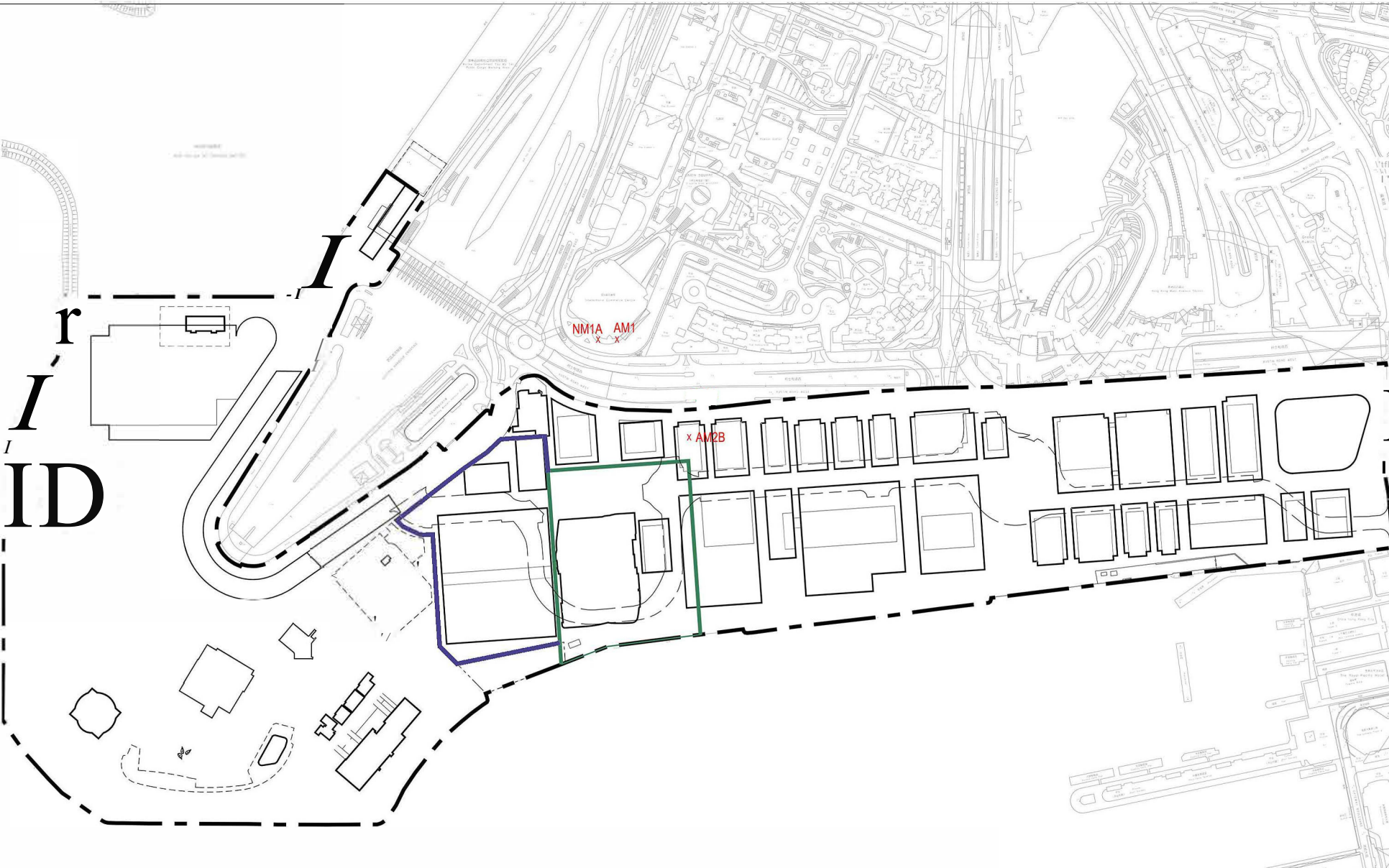
Monitoring of air quality and noise with respect to the Project is underway. In particular, the 1-hour TSP, 24-hour TSP, noise level (as Leq, 30 minutes) under monitoring have been checked against established Action and Limit levels. No exceedance of Action Level for Air Quality was recorded. There was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

Two 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
  - - - - MUSEUM BOUNDARY
  - · - · - LYRIC THEATRE BOUNDARY
  - BOUNDARY OF UNDERPASS ROAD SERVING THE PLANNED WKCO
  - X CONSTRUCTION AIR/NOISE 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.

REV	DATE	DESCRIPTION	INITIAL

**OMTE DEVELOPMENT AT WEST KOWLOON CULTURAL DISTRICT**

**CRWG** SITE LAYOUT PLAN AND MONITORING STATIONS

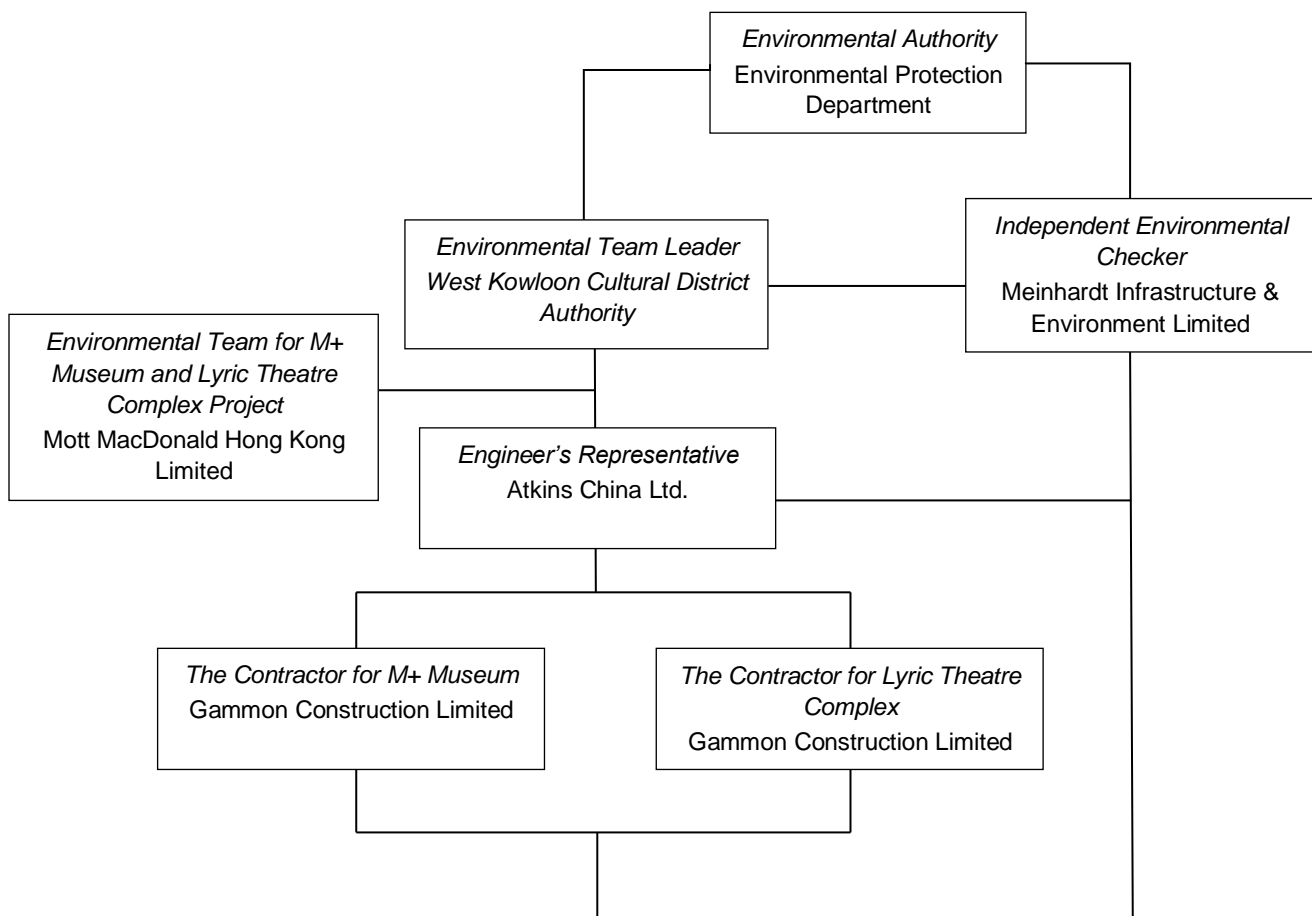
SCALE:	1:50	PRINTED:	A3
CHECKED:	DATE:	APPROVED:	DATE:
DRAWN:	TY:	DATE:	18-10-2015
CONTRACT NO.			
DRAWING NO.	FIGURE 1		REV. XX
CAD REF NAME: D:\X\X\A11\1w_2			
AUTHORITY			



# 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						
									Qtr 3			Qtr 4			
									Jul	Aug	Sep	Oct	Nov	Dec	
CMWP - M+ Project Remaining Works @ 10 Sep 2018 Approved Target CMWP (Rev. 0_18 UPD_DD_31 Jul 20)															
<b>GENERAL &amp; PRELIMINARIES (Remaining Works @ 10 SEP 2018)</b>															
<b>PROJECT KEY COMPLETION DATES</b>															
<b>Completion Obligations (*constrained dates for critical paths)</b>															
OP1	Podium, M+ Tower & CSF - Obtain OP for the Whole of M+	0		31-Mar-20		14-Sep-20*	-167	-166							
OP2	RDE - Obtain OP for H'over to Employer	0		31-May-20		12-Oct-20*	-134	-135							
PC2	RDE - Obtain PC for H'over to Employer	0		30-Jun-20		12-Nov-20*	-135	-135							
PC1	Podium, M+ Tower - Obtain PC for H'over to Employer	0		30-Jun-20		07-Dec-20*	-160	-160							
<b>LEVEL 1 SUMMARY CONSTRUCTION PROGRAM</b>															
<b>Basement &amp; Podium</b>															
1769	[LoE] POD - MEP Works to Completion of Final Terminations	9	12-Oct-18	04-Dec-19	11-Oct-18 A	10-Aug-20	-201	-124							
1766	[LoE] POD - ABWF Works (Excl. Timber Finishes & Post DP & OP works)	79	12-Oct-18	31-Mar-20	15-Apr-19 A	03-Nov-20	-179	-134							
9816	[LoE] POD - MC's T&C for FSD Inspection	0	11-Oct-19	19-Dec-19	28-Sep-19 A	04-Jul-20 A	-156								
1768	[LoE] POD - ABWF (Timber Finishes and other Post DP and OP Works)	108	18-Nov-19	30-Apr-20	09-Mar-20 A	07-Dec-20	-183	-133							
1767	[LoE] POD - Drying Period	13	18-Sep-19	16-Nov-19	18-Apr-20 A	14-Aug-20	-220	-102							
<b>M+ Tower</b>															
9793	[LoE] TW - MEP Works to Completion of Final Terminations	2	24-Nov-18	30-Sep-19	15-Oct-18 A	01-Aug-20	-248	-131							
9790	[LoE] TW - ABWF Works (Excl. Timber Finishes & Post DP & OP works)	6	05-Nov-18	14-Dec-19	30-Oct-18 A	06-Aug-20	-189	-131							
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	31-Jul-20	-270	-131							
9791	[LoE] TW - Drying Period to 12/F	0	16-Mar-19	18-May-19	15-Apr-20 A	07-Jul-20 A	-338								
9792	[LoE] TW - ABWF (Timber Finishes and other Post DP and OP Works)	108	18-May-19	28-Oct-19	20-Apr-20 A	07-Dec-20	-332	-133							
<b>CSF Building</b>															
9828	[LoE] CSF - MEP Works to Completion of Final Terminations	0	20-Oct-18	27-Nov-19	08-Apr-19 A	31-Jul-20	-198	-131							
111129	[LoE] CSF - ABWF Works (Timber Finishes & other Post OP Works)	64			14-May-20 A	15-Oct-20		-28							
<b>RDE Tower</b>															
9839	[LoE] RDE - ABWF Works	37	10-Nov-18	13-Feb-20	10-Nov-18 A	11-Sep-20	-177	-108							
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-Aug-20	-243	-99							
9836	[LoE] RDE - MEP Works to Completion of Final Terminations (L4 to 15MF)	35	23-Nov-18	06-Feb-20	07-Jan-19 A	09-Sep-20	-181	-94							
9840	[LoE] RDE - MC's T&C for FSD Inspection	51	29-Nov-19	27-Feb-20	21-Nov-19 A	28-Sep-20	-179	-108							
9841	[LoE] RDE - MEP Works @ 15MF (BoH Plant Rooms)	27	29-Oct-19	06-Feb-20	22-Feb-20 A	31-Aug-20	-173	-98							
9855	[LoE] RDE - Roof W'proof/Screed/Drains & Concrete Panels	0	10-Sep-19	27-Dec-19	26-Mar-20 A	10-Jul-20 A	-155								
9794	[LoE] RDE - Post OP Miscellaneous Works	31			13-Oct-20	12-Nov-20		-135							
<b>External Works</b>															
9814	[LoE] EXT - Along Building Boundaries	9	20-Oct-18	15-Jan-20	20-Oct-18 A	10-Aug-20	-167	-112							
<b>COMPLETION STATUTORY INSPECTIONS &amp; APPROVALS</b>															
<b>Basement, Podium, M+ Tower &amp; CSF Building</b>															
<b>FSD &amp; BD</b>															
FSD2	FSD - FSD MAIN Inspection/Re-Inspection/Remedial Works - BASEMENT & PODIUM	20	20-Dec-19	23-Mar-20	21-May-20 A	31-Aug-20	-134	-138							
FSD2b	FSD - FSD MAIN Inspection/Re-Inspection/Remedial Works - M+ TOWER	20	03-Jan-20	23-Jan-20	21-May-20 A	31-Aug-20	-178	-138							
BD	BD - Inspection/Re-Inspection	7	25-Feb-20	23-Mar-20	31-Aug-20	07-Sep-20	-140	-138							
1189	BD - Obtain OP for Basement/Podium/M+/CSF	6	24-Mar-20	30-Mar-20	08-Sep-20	14-Sep-20	-140	-138							
<b>RDE Building</b>															
<b>FSD &amp; BD</b>															
7484	RDE_FSD - Submit Form 314 & Form 501	0		20-Feb-20		18-Sep-20*	-177	-111							
RDE_FSD	RDE_FSD - FSD Inspection/Re-Inspection/Remedial Works (layouts & systems)	11	28-Feb-20	24-Apr-20	19-Sep-20	03-Oct-20	-134	-111							
RDE_BD	RDE_BD - Inspection/Re-Inspection	6	25-Apr-20	23-May-20	22-Sep-20	28-Sep-20	-107	-111							
7490	RDE_BD - Obtain OP for RDE	10	25-May-20	30-May-20	29-Sep-20	12-Oct-20	-111	-111							



	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\_18 - Level 1 Summary Bar Chart (18th Update DD: 31 Jul 20)**

Date	Revision	Checked	Approved
01-Feb-19	CMWP Rev. 0 - Approved Master Programme	NS	BG
03-Aug-20	CMWP Rev.0_18 - 18th Update (dd: 31 Jul 20)	MG	BG



ID	Activity	RD	BL Start	BL Finish	Fcast / Actual Start	Fcast / Actual Finish	BL Finish Var	TF	2020					
									Qtr 3		Qtr 4			
									Aug	Sep	Oct	Nov	Dec	
CMWP - M+ Project Remaining Works @ 10 Sep 2018 Approved Target CMWP (Rev. 0_19 UPD_DD_31 Aug 20)														
<b>GENERAL &amp; PRELIMINARIES (Remaining Works @ 10 SEP 2018)</b>														
<b>PROJECT KEY COMPLETION DATES</b>														
<b>Completion Obligations (*constrained dates for critical paths)</b>														
OP1	Podium, M+ Tower & CSF - Obtain OP for the Whole of M+	0		31-Mar-20		26-Sep-20*	-179	-178						
OP2	RDE - Obtain OP for Hover to Employer	0		31-May-20		02-Nov-20*	-155	-156						
PC2	RDE - Obtain PC for Hover to Employer	0		30-Jun-20		03-Dec-20*	-156	-156						
PC1	Podium, M+ Tower - Obtain PC for Hover to Employer	0		30-Jun-20		04-Dec-20*	-157	-157						
<b>LEVEL 1 SUMMARY CONSTRUCTION PROGRAM</b>														
<b>Basement &amp; Podium</b>														
1769	[LoE] POD - MEP Works to Completion of Final Terminations	9	12-Oct-18	04-Dec-19	11-Oct-18 A	09-Sep-20	-227	-60						
1766	[LoE] POD - ABWF Works (Excl. Timber Finishes & Post DP & OP works)	78	12-Oct-18	31-Mar-20	15-Apr-19 A	02-Dec-20	-204	-142						
1768	[LoE] POD - ABWF (Timber Finishes and other Post DP and OP Works)	80	18-Nov-19	30-Apr-20	09-Mar-20 A	04-Dec-20	-181	-146						
1767	[LoE] POD - Drying Period	13	18-Sep-19	16-Nov-19	18-Apr-20 A	14-Sep-20	-246	-127						
<b>M+ Tower</b>														
9793	[LoE] TW - MEP Works to Completion of Final Terminations	2	24-Nov-18	30-Sep-19	15-Oct-18 A	01-Sep-20	-274	-142						
9790	[LoE] TW - ABWF Works (Excl. Timber Finishes & Post DP & OP works)	6	05-Nov-18	14-Dec-19	30-Oct-18 A	05-Sep-20	-215	-142						
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	31-Aug-20	-296	-141						
9792	[LoE] TW - ABWF (Timber Finishes and other Post DP and OP Works)	80	18-May-19	28-Oct-19	20-Apr-20 A	04-Dec-20	-330	-101						
<b>CSF Building</b>														
9828	[LoE] CSF - MEP Works to Completion of Final Terminations	0	20-Oct-18	27-Nov-19	08-Apr-19 A	31-Aug-20	-224	-141						
111129	[LoE] CSF - ABWF Works (Timber Finishes & other Post OP Works)	48			14-May-20 A	28-Oct-20		-54						
<b>RDE Tower</b>														
9839	[LoE] RDE - ABWF Works	30	10-Nov-18	13-Feb-20	10-Nov-18 A	06-Oct-20	-196	-120						
9838	[LoE] RDE - EWS Facade Works to Weather Tight Stage (incl. Roof & UF)	11	27-Dec-18	18-Oct-19	27-Dec-18 A	11-Sep-20	-269	-117						
9836	[LoE] RDE - MEP Works to Completion of Final Terminations (L4 to 15MF)	27	23-Nov-18	06-Feb-20	07-Jan-19 A	30-Sep-20	-199	-113						
9840	[LoE] RDE - MC's T&C for FSD Inspection	45	29-Nov-19	27-Feb-20	21-Nov-19 A	23-Oct-20	-199	36						
9841	[LoE] RDE - MEP Works @ 15MF (BoH Plant Rooms)	24	29-Oct-19	06-Feb-20	22-Feb-20 A	26-Sep-20	-196	-114						
9794	[LoE] RDE - Post OP Miscellaneous Works	31			03-Nov-20	03-Dec-20		-156						
<b>External Works</b>														
9814	[LoE] EXT - Along Building Boundaries	9	20-Oct-18	15-Jan-20	20-Oct-18 A	09-Sep-20	-193	-126						
<b>COMPLETION STATUTORY INSPECTIONS &amp; APPROVALS</b>														
<b>Basement, Podium, M+ Tower &amp; CSF Building</b>														
<b>FSD &amp; BD</b>														
FSD2	FSD - FSD MAIN Inspection/Re-Inspection/Remedial Works - BASEMENT & PODIL	6	20-Dec-19	23-Mar-20	21-May-20 A	10-Sep-20	-143	-145						
FSD2b	FSD - FSD MAIN Inspection/Re-Inspection/Remedial Works - M+ TOWER	6	03-Jan-20	23-Jan-20	21-May-20 A	10-Sep-20	-187	-145						
1189	BD - Obtain OP for Basement/Podium/M+/CSF	6	24-Mar-20	30-Mar-20	21-Sep-20	26-Sep-20	-151	-149						
<b>RDE Building</b>														
<b>FSD &amp; BD</b>														
RDE_FSD	RDE_FSD - FSD Inspection/Re-Inspection/Remedial Works (layouts & systems)	11	28-Feb-20	24-Apr-20	18-Sep-20	30-Sep-20	-133	-110						
7484	RDE_FSD - Submit Form 314 & Form 501	0		20-Feb-20		25-Sep-20*	-183	-117						
RDE_BD	RDE_BD - Inspection/Re-Inspection	6	25-Apr-20	23-May-20	14-Oct-20	20-Oct-20	-124	-128						
7490	RDE_BD - Obtain OP for RDE	10	25-May-20	30-May-20	21-Oct-20	02-Nov-20	-128	-128						



	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\_19 - Level 1 Summary Bar Chart (19th Update DD: 31 Aug 20)**

Date	Revision	Checked	Approved
01-Feb-19	CMWP Rev. 0 - Approved Master Programme	NS	BG
11-Sep-20	CMWP Rev.0_19 - 19th Update (dd: 31 Aug 20)	MG	BG



ID	Activity	RD	BL Start	BL Finish	Fcast / Actual Start	Fcast / Actual Finish	BL Finish Var	TF	2020				2021							
									Qtr 4				Qtr 1							
									Sep	Oct	Nov	Dec	Jan	Feb	Mar					
CMWP - M+ Project Remaining Works @ 10 Sep 2018 Approved Target CMWP (Rev_0_20 UPD_DD_30 Sep 20)																				
<b>GENERAL &amp; PRELIMINARIES (Remaining Works @ 10 SEP 2018)</b>																				
<b>PROJECT KEY COMPLETION DATES</b>																				
<b>Completion Obligations (*constrained dates for critical paths)</b>																				
OP1	Podium, M+ Tower & CSF - Obtain OP for the Whole of M+	0		14-Dec-20		14-Dec-20*	0	-257												
OP2	RDE - Obtain OP for Hover to Employer	0		14-Jan-21		14-Jan-21*	0	-229												
PC1	Podium, M+ Tower - Obtain PC for Hover to Employer	0		14-Feb-21		14-Feb-21*	0	-229												
PC2	RDE - Obtain PC for Hover to Employer	0		14-Feb-21		14-Feb-21*	0	-229												
<b>LEVEL 1 SUMMARY CONSTRUCTION PROGRAM</b>																				
<b>Basement &amp; Podium</b>																				
1769	[LoE] POD - MEP Works to Completion of Final Terminations	9	01-Apr-19	05-May-20	11-Oct-18 A	12-Oct-20	-134	-86												
1766	[LoE] POD - ABWF Works (Excl. Timber Finishes & Post DP & OP works)	78	15-Nov-19	11-Jun-20	15-Apr-19 A	02-Jan-21	-170	-210												
1768	[LoE] POD - ABWF (Timber Finishes and other Post DP and OP Works)	114	09-Apr-20	19-Oct-20	09-Mar-20 A	13-Feb-21	-99	-172												
1767	[LoE] POD - Drying Period	11	04-May-20	02-Jul-20	18-Apr-20 A	14-Oct-20	-87	-152												
<b>M+ Tower</b>																				
9793	[LoE] TW - MEP Works to Completion of Final Terminations	2	13-Apr-19	04-Dec-19	15-Oct-18 A	03-Oct-20	-246	-168												
9790	[LoE] TW - ABWF Works (Excl. Timber Finishes & Post DP & OP works)	6	23-Mar-19	18-Jan-20	30-Oct-18 A	08-Oct-20	-213	-168												
9834	[LoE] TW - Shop Front Glazing Podium L3 to M+ Tower 4/F Slab	0	01-Jun-19	02-Sep-19	27-May-19 A	30-Sep-20	-321	-209												
9792	[LoE] TW - ABWF (Timber Finishes and other Post DP and OP Works)	114	05-May-20	28-Oct-20	20-Apr-20 A	13-Feb-21	-92	-117												
<b>CSF Building</b>																				
9828	[LoE] CSF - MEP Works to Completion of Final Terminations	0	02-May-19	08-Nov-19	08-Apr-19 A	30-Sep-20	-266	-209												
111129	[LoE] CSF - ABWF Works (Timber Finishes & other Post OP Works)	87	01-Jun-20	12-Sep-20	14-May-20 A	13-Jan-21	-101	-80												
<b>RDE Tower</b>																				
9839	[LoE] RDE - ABWF Works	30	29-Mar-19	06-Apr-20	10-Nov-18 A	06-Nov-20	-178	-146												
9838	[LoE] RDE - EWS Facade Works to Weather Tight Stage (incl. Roof & UF)	11	29-Mar-19	31-Dec-19	27-Dec-18 A	14-Oct-20	-233	-175												
9836	[LoE] RDE - MEP Works to Completion of Final Terminations (L4 to 15MF)	24	01-Mar-19	30-Mar-20	07-Jan-19 A	30-Oct-20	-177	-139												
9840	[LoE] RDE - MC's T&C for FSD Inspection	36	04-Mar-20	26-May-20	21-Nov-19 A	13-Nov-20	-142	78												
9841	[LoE] RDE - MEP Works @ 15MF (BoH Plant Rooms)	24	21-Mar-20	18-Jun-20	22-Feb-20 A	30-Oct-20	-110	-140												
9794	[LoE] RDE - Post OP Miscellaneous Works	31	15-Jan-21	14-Feb-21	15-Jan-21	14-Feb-21	0	-229												
<b>External Works</b>																				
9814	[LoE] EXT - Along Building Boundaries	9	01-Mar-19	06-Apr-20	20-Oct-18 A	12-Oct-20	-157	-152												
<b>COMPLETION STATUTORY INSPECTIONS &amp; APPROVALS</b>																				
<b>Basement, Podium, M+ Tower &amp; CSF Building</b>																				
<b>FSD &amp; BD</b>																				
FSD2	FSD - FSD MAIN Inspection/Re-Inspection/Remedial Works - BASEMENT	48	17-Jun-20	14-Aug-20	21-May-20 A	02-Dec-20	-91	-213												
FSD2b	FSD - FSD MAIN Inspection/Re-Inspection/Remedial Works - M+ TOWER	6	21-May-20	18-Jul-20	21-May-20 A	02-Dec-20	-114	-213												
1189	BD - Obtain OP for Basement/Podium/M+/CSF	6	08-Dec-20	14-Dec-20	08-Dec-20	14-Dec-20	0	-213												
<b>RDE Building</b>																				
<b>FSD &amp; BD</b>																				
RDE_FSD	RDE_FSD - FSD Inspection/Re-Inspection/Remedial Works (layouts & sys)	11	03-Nov-20	14-Nov-20	03-Nov-20	14-Nov-20	0	-146												
7484	RDE_FSD - Submit Form 314 & Form 501	0		12-Nov-20		12-Nov-20*	0	-155												
RDE_BD	RDE_BD - Inspection/Re-Inspection	6	28-Dec-20	02-Jan-21	28-Dec-20	02-Jan-21	0	-190												
7490	RDE_BD - Obtain OP for RDE	10	04-Jan-21	14-Jan-21	04-Jan-21	14-Jan-21	0	-190												



	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\_20 - Level 1 Summary Bar Chart (20th Update DD: 30Sep20)**

Date	Revision	Checked	Approved
01-Feb-19	CMWP Rev. 0 - Approved Master Programme	NS	BG
10-Oct-20	CMWP Rev.0_20 - 20th Update (dd: 30 Sep 20)	AB	BG

**L1**

Activity ID	Activity Name	Start Date	Finish Date	2020			
				Aug 32	Sep 33	Oct 34	Nov 35
<b>L1 Contract for Lyric Theatre Complex (3MRP)</b>							
<b>Cost Centre C - Basement</b>							
<b>Cost Centre C1 - Essential Basement Structure (Excl. AET Protection &amp; Box Culvert)</b>							
SU10000	South Basement - Central Area	30-Apr-19 A	09-Nov-20				
SU11000	South Basement - South / West Area	14-Dec-19 A	09-Nov-20				
SU12000	South Basement - East Area	27-Feb-20 A	13-Nov-20				
SU13000	North Basement - North Area	12-Jun-19 A	05-Jan-21				
SU14000	North Basement - Area 6	01-Jun-19 A	28-Nov-20				
<b>Cost Centre C3 - AET Protection</b>							
SU20000	Wall Beam WF	27-Mar-20 A	21-Sep-20				
SU21000	Wall Beam WE	08-Jun-20 A	10-Oct-20				
SU22000	Wall Beam W2	18-Apr-20 A	19-Sep-20				
SU23000	Wall Beam W1	18-Apr-20 A	17-Oct-20				
SU24000	Wall Beam WB	18-May-20 A	29-Oct-20				
SU25000	Wall Beam WC	06-May-20 A	13-Nov-20				
SU26000	Wall Beam WD	23-May-20 A	18-Nov-20				
SU27000	Structure between Wall Beam	19-Aug-20 A	02-Jan-21				
<b>Cost Centre C4 - Box Culvert</b>							
SU30000	South Section	01-Sep-20*	05-Nov-20				
SU31000	North Section	22-Jun-20 A	30-Nov-20				
SU32000	Austin Road	29-Jun-20 A	21-May-21				

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

Project ID: L13MRP-20200831-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 Aug 2020**


































Activity ID	Activity Name	Start Date	Finish Date	2020			
				Aug 32	Sep 33	Oct 34	Nov 35
<b>Cost Centre D - Public Infrastructure Works (PIW)</b>							
SU40000	Drainage Works	20-Mar-18 A	19-Sep-20				
SU41000	Utilities & Road Works	04-Oct-18 A	01-Feb-21				
SU42000	Box Culvert Outfall	26-Sep-20	16-Jul-21				
<b>Cost Centre E - Miscellaneous Works</b>							
SU50000	Drainage & Sewerage Works	19-Nov-19 A	05-Feb-21				
SU51000	Water Works	01-Sep-20*	03-Feb-21				
SU52000	DCS Outfall	26-Sep-20	16-Jul-21				

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

Project ID: L13MRP-20200831-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 Aug 2020**



Activity ID	Activity Name	Start Date	Finish Date	2020			
				Sep 33	Oct 34	Nov 35	Dec 36
<b>L1 Contract for Lyric Theatre Complex (3MRP)</b>							
<b>Cost Centre C - Basement</b>							
<b>Cost Centre C1 - Essential Basement Structure (Excl. AET Protection &amp; Box Culvert)</b>							
SU10000	South Basement - Central Area	30-Apr-19 A	11-Nov-20				
SU11000	South Basement - South / West Area	14-Dec-19 A	13-Nov-20				
SU12000	South Basement - East Area	27-Feb-20 A	19-Nov-20				
SU13000	North Basement - North Area	12-Jun-19 A	12-Jan-21				
SU14000	North Basement - Area 6	01-Jun-19 A	14-Dec-20				
<b>Cost Centre C3 - AET Protection</b>							
SU20000	Wall Beam WF	27-Mar-20 A	17-Oct-20				
SU21000	Wall Beam WE	08-Jun-20 A	09-Nov-20				
SU22000	Wall Beam W2	18-Apr-20 A	23-Oct-20				
SU23000	Wall Beam W1	18-Apr-20 A	27-Oct-20				
SU24000	Wall Beam WB	18-May-20 A	29-Oct-20				
SU25000	Wall Beam WC	06-May-20 A	12-Dec-20				
SU26000	Wall Beam WD	23-May-20 A	12-Dec-20				
SU27000	Structure between Wall Beam	19-Aug-20 A	06-Jan-21				
<b>Cost Centre C4 - Box Culvert</b>							
SU30000	South Section	03-Oct-20*	29-Dec-20				
SU31000	North Section	22-Jun-20 A	30-Nov-20				
SU32000	Austin Road	29-Jun-20 A	21-May-21				

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

Project ID: L13MRP-20200930-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 30 Sep 2020**



Activity ID	Activity Name	Start Date	Finish Date	2020			
				Sep 33	Oct 34	Nov 35	Dec 36
<b>Cost Centre D - Public Infrastructure Works (PIW)</b>							
SU40000	Drainage Works	20-Mar-18 A	20-Oct-20				
SU41000	Utilities & Road Works	04-Oct-18 A	03-Feb-21				
SU42000	Box Culvert Outfall	05-Oct-20	22-Jul-21				
<b>Cost Centre E - Miscellaneous Works</b>							
SU50000	Drainage & Sewerage Works	19-Nov-19 A	05-Feb-21				
SU51000	Water Works	03-Oct-20*	09-Mar-21				
SU52000	DCS Outfall	05-Oct-20	22-Jul-21				

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

Project ID: L13MRP-20200930-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 Sep 2020**



Activity ID	Activity Name	Start Date	Finish Date	2020			2021
				Oct	Nov	Dec	Jan
				34	35	36	37
<b>L1 Contract for Lyric Theatre Complex (3MRP)</b>							
<b>Cost Centre C - Basement</b>							
<b>Cost Centre C1 - Essential Basement Structure (Excl. AET Protection &amp; Box Culvert)</b>							
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	02-Mar-21				
<b>Cost Centre C3 - AET Protection</b>							
SU20000	Wall Beam WF	27-Mar-20 A	13-Nov-20				
SU21000	Wall Beam WE	08-Jun-20 A	05-Dec-20				
SU22000	Wall Beam W2	18-Apr-20 A	18-Nov-20				
SU23000	Wall Beam W1	18-Apr-20 A	25-Nov-20				
SU24000	Wall Beam WB	18-May-20 A	14-Nov-20				
SU25000	Wall Beam WC	06-May-20 A	23-Dec-20				
SU26000	Wall Beam WD	23-May-20 A	23-Dec-20				
SU27000	Structure between Wal Beam	19-Aug-20 A	17-Feb-21				

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

Project ID: L13MRP-20201031-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 Oct 2020**



Activity ID	Activity Name	Start Date	Finish Date	2020			2021
				Oct	Nov	Dec	Jan
				34	35	36	37
<b>Cost Centre C4 - Box Culvert</b>							
SU30000	South Section	21-Nov-20*	19-Feb-21				
SU31000	North Section	22-Jun-20 A	17-Feb-21				
SU32000	Austin Road	29-Jun-20 A	31-Jul-21				
<b>Cost Centre D - Public Infrastructure Works (PIW)</b>							
SU40000	Drainage Works	20-Mar-18 A	05-Dec-20				
SU41000	Utilities & Road Works	04-Oct-18 A	01-Apr-21				
SU42000	Box Culvert Outfall	26-Nov-20	31-Aug-21				
<b>Cost Centre E - Miscellaneous Works</b>							
SU50000	Drainage & Sewerage Works	19-Nov-19 A	27-May-21				
SU52000	DCS Outfall	26-Nov-20	31-Aug-21				

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

Project ID: L13MRP-20201031-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 Oct 2020**





**L2**

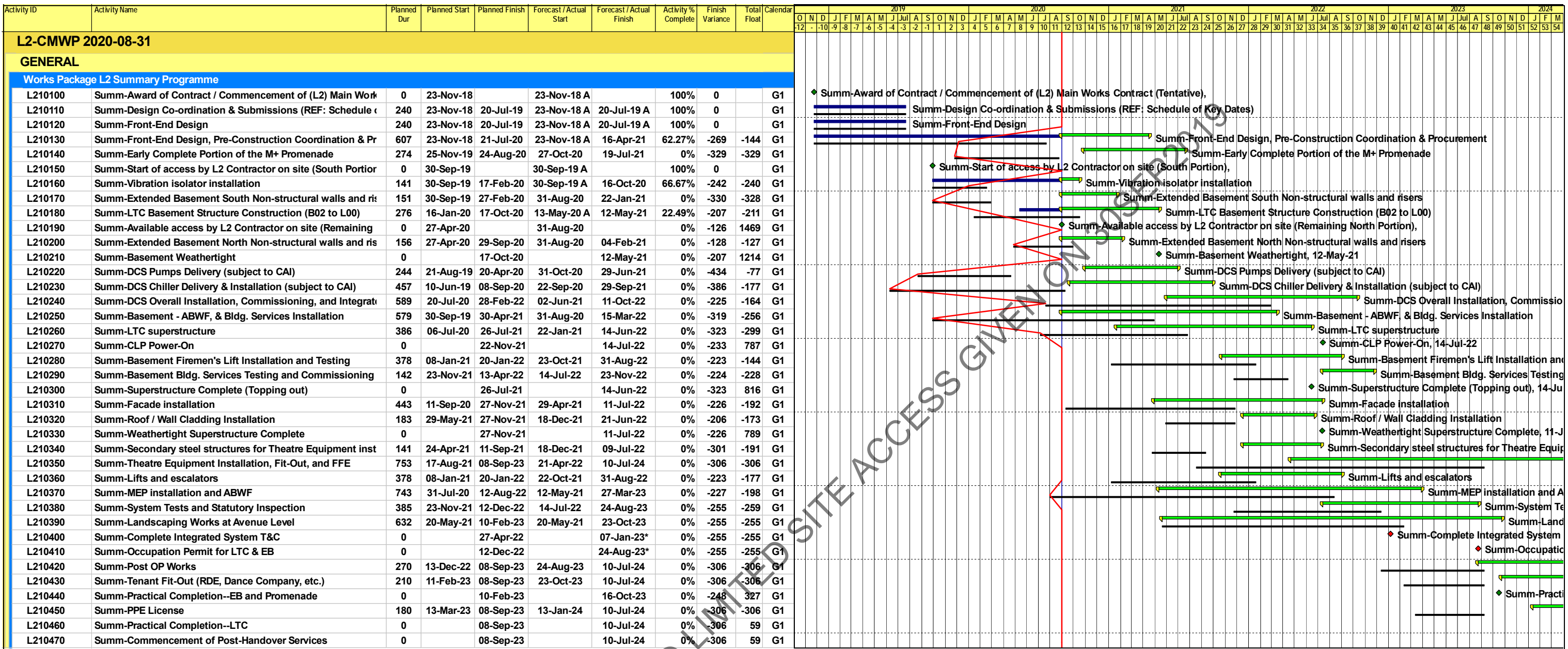
Activity ID	Activity Name	Planned Dur	Planned Start	Planned Finish	Forecast / Actual Start	Forecast / Actual Finish	Activity % Complete	Finish Variance	Total Float	Calendar	2019-2024																															
											2019	2020	2021	2022	2023	2024																										
<b>L2-CSWP 2020-07-31</b>																																										
<b>GENERAL</b>																																										
<b>Works Package L2 Summary Programme</b>																																										
L210100	Summ-Award of Contract / Commencement of (L2) Main Work	0	23-Nov-18	23-Nov-18 A			100%	0	G1		◆ Summ-Award of Contract / Commencement of (L2) Main Works Contract (Tentative),																															
L210110	Summ-Design Co-ordination & Submissions (REF: Schedule of	240	23-Nov-18	20-Jul-19	23-Nov-18 A	20-Jul-19 A	100%	0	G1		◆ Summ-Design Co-ordination & Submissions (REF: Schedule of Key Dates)																															
L210120	Summ-Front-End Design	240	23-Nov-18	20-Jul-19	23-Nov-18 A	20-Jul-19 A	100%	0	G1		◆ Summ-Front-End Design																															
L210130	Summ-Front-End Design, Pre-Construction Coordination & Pr	607	23-Nov-18	21-Jul-20	23-Nov-18 A	16-Mar-21	62.27%	-238	-113	G1		◆ Summ-Front-End Design, Pre-Construction Coordination & Procurement																														
L210140	Summ-Early Complete Portion of the M+ Promenade	274	25-Nov-19	24-Aug-20	26-Sep-20	19-Jun-21	0%	-299	-299	G1		◆ Summ-Early Complete Portion of the M+ Promenade																														
L210150	Summ-Start of access by L2 Contractor on site (South Portior	0	30-Sep-19		30-Sep-19 A		100%	0	G1		◆ Summ-Start of access by L2 Contractor on site (South Portion),																															
L210160	Summ-Vibration isolator installation	141	30-Sep-19	17-Feb-20	30-Sep-19 A	16-Sep-20	65.96%	-212	-210	G1		◆ Summ-Vibration isolator installation																														
L210170	Summ-Extended Basement South Non-structural walls and ris	151	30-Sep-19	27-Feb-20	31-Jul-20	19-Dec-20	0%	-296	-294	G1		◆ Summ-Extended Basement South Non-structural walls and risers																														
L210180	Summ-LTC Basement Structure Construction (B02 to L00)	276	16-Jan-20	17-Oct-20	13-May-20 A	10-Jul-21	0%	-266	-270	G1		◆ Summ-LTC Basement Structure Construction (B02 to L00)																														
L210190	Summ-Available access by L2 Contractor on site (Remaining	0	27-Apr-20		31-Jul-20		0%	-95	1500	G1		◆ Summ-Available access by L2 Contractor on site (Remaining North Portion),																														
L210200	Summ-Extended Basement North Non-structural walls and ris	156	27-Apr-20	29-Sep-20	31-Jul-20	05-Jan-21	0%	-98	-97	G1		◆ Summ-Extended Basement North Non-structural walls and risers																														
L210210	Summ-Basement Weathertight	0		17-Oct-20		10-Jul-21	0%	-266	1155	G1		◆ Summ-Basement Weathertight, 10-Jul-21																														
L210220	Summ-DCS Pumps Delivery (subject to CAI)	244	21-Aug-19	20-Apr-20	28-Sep-20	28-May-21	0%	-402	-45	G1		◆ Summ-DCS Pumps Delivery (subject to CAI)																														
L210230	Summ-DCS Chiller Delivery & Installation (subject to CAI)	457	10-Jun-19	08-Sep-20	22-Aug-20	29-Aug-21	0%	-355	-146	G1		◆ Summ-DCS Chiller Delivery & Installation (subject to CAI)																														
L210240	Summ-DCS Overall Installation, Commissioning, and Integrati	589	20-Jul-20	28-Feb-22	30-Apr-21	24-Nov-22	0%	-269	-208	G1		◆ Summ-DCS Overall Installation, Commis																														
L210250	Summ-Basement - ABWF, & Bldg. Services Installation	579	30-Sep-19	30-Apr-21	31-Jul-20	12-Feb-22	0%	-288	-225	G1		◆ Summ-Basement - ABWF, & Bldg. Services Installation																														
L210260	Summ-LTC superstructure	386	06-Jul-20	26-Jul-21	20-Jan-21	19-Mar-22	0%	-236	-236	G1		◆ Summ-LTC superstructure																														
L210270	Summ-CLP Power-On	0		22-Nov-21		27-Aug-22	0%	-277	743	G1		◆ Summ-CLP Power-On, 27-Aug-22																														
L210280	Summ-Basement Firemen's Lift Installation and Testing	378	08-Jan-21	20-Jan-22	28-Sep-21	06-Oct-22	0%	-259	-180	G1		◆ Summ-Basement Firemen's Lift Installation																														
L210290	Summ-Basement Bldg. Services Testing and Commissioning	142	23-Nov-21	13-Apr-22	27-Aug-22	10-Jan-23	0%	-272	-276	G1		◆ Summ-Basement Bldg. Services Tes																														
L210300	Summ-Superstructure Complete (Topping out)	0		26-Jul-21		19-Mar-22	0%	-236	903	G1		◆ Summ-Superstructure Complete (Topping out), 19-Mar-22																														
L210310	Summ-Facade installation	443	11-Sep-20	27-Nov-21	13-Apr-21	06-Jul-22	0%	-221	-187	G1		◆ Summ-Facade installation																														
L210320	Summ-Roof / Wall Cladding Installation	183	29-May-21	27-Nov-21	16-Dec-21	16-Jun-22	0%	-201	-168	G1		◆ Summ-Roof / Wall Cladding Installation																														
L210330	Summ-Weathertight Superstructure Complete	0		27-Nov-21		06-Jul-22	0%	-221	794	G1		◆ Summ-Weathertight Superstructure Complete, 06-Jul																														
L210340	Summ-Secondary steel structures for Theatre Equipment inst	141	24-Apr-21	11-Sep-21	23-Nov-21	17-Jun-22	0%	-279	-169	G1		◆ Summ-Secondary steel structures for Theatre Equipm																														
L210350	Summ-Theatre Equipment Installation, Fit-Out, and FFE	753	17-Aug-21	08-Sep-23	25-Mar-22	10-Jun-24	0%	-276	-276	G1		◆ Summ-Theatre Equipment Installation, Fit-Out, and FFE																														
L210360	Summ-Lifts and escalators	378	08-Jan-21	20-Jan-22	28-Sep-21	30-Sep-22	0%	-253	-207	G1		◆ Summ-Lifts and escalators																														
L210370	Summ-MEP installation and ABWF	743	31-Jul-20	12-Aug-22	10-Apr-21	02-Mar-23	0%	-202	-173	G1		◆ Summ-MEP installation and ABW																														
L210380	Summ-System Tests and Statutory Inspection	385	23-Nov-21	12-Dec-22	27-Aug-22	12-Sep-23	0%	-274	-278	G1		◆ Summ-System Tests and Statutory Inspection																														
L210390	Summ-Landscaping Works at Avenue Level	632	20-May-21	10-Feb-23	20-May-21	11-Nov-23	0%	-274	-274	G1		◆ Summ-Landscaping Works at Avenue Level																														
L210400	Summ-Complete Integrated System T&C	0		27-Apr-22		26-Jan-23*	0%	-274	-274	G1		◆ Summ-Complete Integrated System T&C																														
L210410	Summ-Occupation Permit for LTC & EB	0		12-Dec-22		12-Sep-23*	0%	-274	-274	G1		◆ Summ-Occupation Permit for LTC & EB																														
L210420	Summ-Post OP Works	270	13-Dec-22	08-Sep-23	12-Sep-23	10-Jun-24	0%	-276	-276	G1		◆ Summ-Post OP Works																														
L210430	Summ-Tenant Fit-Out (RDE, Dance Company, etc.)	210	11-Feb-23	08-Sep-23	11-Nov-23	10-Jun-24	0%	-276	-276	G1		◆ Summ-Tenant Fit-Out (RDE, Dance Company, etc.)																														
L210440	Summ-Practical Completion--EB and Promenade	0		10-Feb-23		04-Nov-23	0%	-267	308	G1		◆ Summ-Practical Completion--EB and Promenade																														
L210450	Summ-PPE License	180	13-Mar-23	08-Sep-23	14-Dec-23	10-Jun-24	0%	-276	-276	G1		◆ Summ-PPE License																														
L210460	Summ-Practical Completion--LTC	0		08-Sep-23		10-Jun-24	0%	-276	89	G1		◆ Summ-Practical Completion--LTC																														
L210470	Summ-Commencement of Post-Handover Services	0		08-Sep-23		10-Jun-24	0%	-276	89	G1		◆ Summ-Commencement of Post-Handover Services																														

SUBJECT TO REVIEW DUE TO LIMITED SITE ACCESS GIVEN ON 27-SEP-2019

**L2 CONTRACT FOR LYRIC THEATRE COMPLEX AND EXTENDED BASEMENT PROJECT FOR THE WEST**  
**KOWLOON CULTURAL DISTRICT**  
**PROGRAMME UPDATE OF CSWP REV 0 - AS OF 31-Jul-20 (Page 1 of 1)**



Date	Revision	Checked	Approved
31-Jul-20	CSWP Update	JL / DP	BC



SUBJECT TO REVIEW DUE TO LIMITED SITE ACCESS GIVEN ON 31-AUG-20



**L2 CONTRACT FOR LYRIC THEATRE COMPLEX AND EXTENDED BASEMENT PROJECT FOR THE WEST  
KOWLOON CULTURAL DISTRICT  
PROGRAMME UPDATE OF CSWP REV 0 - AS OF 31-Aug-20 (Page 1 of 1)**

Date	Revision	Checked	Approved
31-Aug-20	CSWP Update	JL / DP	BC



## **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		
		Aug 2020	Sep 2020	Oct 2020	Aug 2020	Sep 2020	Oct 2020	Aug 2020	Sep 2020	Oct 2020
<b>Air Quality Impact (Construction)</b>										
2.1 & 10.3.1	<b>General Dust Control Measures</b> 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)	✓	✓	✓	Obs	Rem	Rem	✓	✓	✓
2.1 & 10.3.1	<b>Best Practice For Dust Control</b> 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"> <li>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.</li> </ul> <i>Disturbed Parts of the Roads</i> <ul style="list-style-type: none"> <li>Each and every main temporary access should be paved with concrete, bituminous hardcore materials or metal plates and kept clear of dusty materials; or</li> <li>Unpaved parts of the road should be sprayed with water or a dust suppression chemical so as to keep the entire road surface wet.</li> </ul> <i>Exposed Earth</i> <ul style="list-style-type: none"> <li>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.</li> </ul> <i>Loading, Unloading or Transfer of Dusty Materials</i>	Obs	✓	Rem	✓	✓	✓	✓	✓	✓
		✓	✓	✓	✓	✓	✓	✓	✓	✓
		✓	✓	✓	✓	✓	✓	✓	✓	✓
		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		
		Aug 2020	Sep 2020	Oct 2020	Aug 2020	Sep 2020	Oct 2020	Aug 2020	Sep 2020	Oct 2020
	<ul style="list-style-type: none"> <li>All dusty materials should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet.</li> </ul>	✓	✓	✓	✓	✓	✓	✓	✓	✓
	<i>Debris Handling</i>									
	<ul style="list-style-type: none"> <li>Any debris should be covered entirely by impervious sheeting or stored in a debris collection area sheltered on the top and the three sides.</li> </ul>	✓	✓	✓	✓	✓	✓	✓	✓	✓
	<ul style="list-style-type: none"> <li>Before debris is dumped into a chute, water should be sprayed so that it remains wet when it is dumped.</li> </ul>	✓	✓	✓	✓	✓	✓	✓	✓	✓
	<i>Transport of Dusty Materials</i>									
	<ul style="list-style-type: none"> <li>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.</li> </ul>	✓	✓	✓	✓	✓	✓	✓	✓	✓
	<i>Wheel washing</i>									
	<ul style="list-style-type: none"> <li>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.</li> </ul>	✓	✓	✓	✓	✓	✓	✓	✓	✓
	<i>Use of vehicles</i>									
	<ul style="list-style-type: none"> <li>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.</li> </ul>	✓	✓	✓	✓	✓	✓	✓	✓	✓
	<ul style="list-style-type: none"> <li>Immediately before leaving the construction site, every vehicle should be washed to remove any dusty materials from its body and wheels.</li> </ul>	✓	✓	✓	✓	✓	✓	✓	✓	✓
	<ul style="list-style-type: none"> <li>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.</li> </ul>	✓	✓	✓	✓	✓	✓	✓	✓	✓
	<i>Site hoarding</i>									
	<ul style="list-style-type: none"> <li>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.</li> </ul>	✓	✓	✓	✓	✓	✓	✓	✓	✓
2.1 & 10.3.1	<p><b>Best Practicable Means for Cement Works (Concrete Batching Plant)</b></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		
		Aug 2020	Sep 2020	Oct 2020	Aug 2020	Sep 2020	Oct 2020	Aug 2020	Sep 2020	Oct 2020
	<ul style="list-style-type: none"> <li>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</li> </ul>	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"> <li>All emissions to air, other than steam or water vapour, shall be colourless and free from persistent mist or smoke</li> </ul>	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"> <li>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</li> </ul>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<p><b>Non-Road Mobile Machinery (NRMM):</b> All NRMMs operating on-site which are subject to emission control of Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation are approved/exempted (as the case may be) and affixed with the requisite approval/exemption labels.</p>	Obs	✓	✓	✓	✓	✓	✓	✓	✓
	<p><b>Noise Impact (Construction)</b></p>									
3.1 & 10.4.1	<p><b>Good Site Practice</b> 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"> <li>only well-maintained plant to be operated on-site and plant should be serviced regularly during the construction works;</li> <li>machines and plant that may be in intermittent use to be shut down between work periods or should be throttled down to a minimum</li> <li>plant known to emit noise strongly in one direction, should, where possible, be orientated to direct noise away from the NSRs;</li> <li>mobile plant should be sited as far away from NSRs as possible; and</li> <li>material stockpiles and other structures to be effectively utilised, where practicable, to screen noise from on-site construction activities.</li> </ul>	✓	✓	✓	✓	✓	✓	✓	✓	✓
3.1 &	<p><b>Adoption of Quieter PME</b></p>									



EM&A Ref.	Recommendation Measures	Implementation Stage								
		M+ Museum			L1			L2		
		Aug 2020	Sep 2020	Oct 2020	Aug 2020	Sep 2020	Oct 2020	Aug 2020	Sep 2020	Oct 2020
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 <b>Table 4.26</b> 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	<b>Use of Movable Noise Barriers</b> 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	<b>Use of Noise Enclosure/ Acoustic Shed</b> 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	<b>Use of Noise Insulating Fabric</b> 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	<b>Scheduling of Construction Works outside School Examination Periods</b> 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
<b>Water Quality Impact (Construction)</b>										
4.1 & 10.5.1	<b>Construction site runoff and drainage</b> 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		
		Aug 2020	Sep 2020	Oct 2020	Aug 2020	Sep 2020	Oct 2020	Aug 2020	Sep 2020	Oct 2020
	<ul style="list-style-type: none"> <li>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;</li> <li>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.</li> <li>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.</li> <li>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.</li> <li>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.</li> <li>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.</li> </ul>	✓	Rem	✓	✓	✓	✓	✓	✓	✓
		✓	✓	✓	✓	✓	✓	✓	✓	✓
		✓	✓	✓	✓	Rem	✓	Rem	✓	✓
		✓	✓	✓	✓	✓	✓	✓	✓	✓
		✓	✓	✓	✓	✓	✓	✓	✓	✓
		✓	✓	✓	✓	✓	✓	✓	✓	✓

EM&A Ref.	Recommendation Measures	Implementation Stage								
		M+ Museum			L1			L2		
		Aug 2020	Sep 2020	Oct 2020	Aug 2020	Sep 2020	Oct 2020	Aug 2020	Sep 2020	Oct 2020
	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>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.</li> </ul>	✓	Obs	Rem Obs	✓	✓	✓	✓	✓	✓
	<ul style="list-style-type: none"> <li>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.</li> </ul>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<p><b>Barging facilities and activities</b></p> <p>Recommendations for good site practices during operation of the proposed barging point include:</p> <ul style="list-style-type: none"> <li>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;</li> <li>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;</li> <li>All hopper barges should be fitted with tight fitting seals to their bottom openings to prevent leakage of material; and</li> <li>Construction activities should not cause foam, oil, grease, scum, litter or other objectionable matter to be present on the water within the site.</li> </ul>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<ul style="list-style-type: none"> <li>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;</li> </ul>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<ul style="list-style-type: none"> <li>All hopper barges should be fitted with tight fitting seals to their bottom openings to prevent leakage of material; and</li> </ul>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<ul style="list-style-type: none"> <li>Construction activities should not cause foam, oil, grease, scum, litter or other objectionable matter to be present on the water within the site.</li> </ul>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4.1 & 10.5.1	<p><b>Sewage effluent from construction workforce</b></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>	✓	✓	Obs	✓	✓	✓	✓	✓	✓
4.1 &	<p><b>General construction activities</b></p>									

EM&A Ref.	Recommendation Measures	Implementation Stage								
		M+ Museum			L1			L2		
		Aug 2020	Sep 2020	Oct 2020	Aug 2020	Sep 2020	Oct 2020	Aug 2020	Sep 2020	Oct 2020
10.5.1	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>Waste Management Implications (Construction)</b>										
6.1 & 10.7.1	<p><b>Good Site Practices</b> Recommendations for good site practices during the construction activities include:</p> <ul style="list-style-type: none"> <li>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</li> <li>Training of site personnel in proper waste management and chemical handling procedures</li> <li>Provision of sufficient waste disposal points and regular collection of waste</li> <li>Appropriate measures to minimise windblown litter and dust/odour during transportation of waste by either covering trucks or by transporting wastes in enclosed containers</li> <li>Provision of wheel washing facilities before the trucks leaving the works area so as to minimise dust introduction to public roads</li> <li>Well planned delivery programme for offsite disposal such that adverse environmental impact from transporting the inert or non-inert C&amp;D materials is not anticipated</li> </ul>	✓	✓	✓	✓	✓	✓	✓	✓	✓
6.1 & 10.7.1	<p><b>Waste Reduction Measures</b> Recommendations to achieve waste reduction include:</p> <ul style="list-style-type: none"> <li>Sort inert C&amp;D material to recover any recyclable portions such as metals</li> <li>Segregation and storage of different types of waste in different containers or skips to enhance reuse or recycling of materials and their proper disposal</li> <li>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</li> </ul>	✓	✓	✓	✓	✓	✓	✓	✓	✓

EM&A Ref.	Recommendation Measures	Implementation Stage								
		M+ Museum			L1			L2		
		Aug 2020	Sep 2020	Oct 2020	Aug 2020	Sep 2020	Oct 2020	Aug 2020	Sep 2020	Oct 2020
	<ul style="list-style-type: none"> <li>Proper site practices to minimise the potential for damage or contamination of inert C&amp;D materials</li> <li>Plan the use of construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of wastes</li> </ul>	✓	✓	✓	✓	✓	✓	✓	✓	✓
6.1 & 10.7.1	<p><b>Inert and Non-inert C&amp;D Materials</b></p> <p>In order to minimise impacts resulting from collection and transportation of inert C&amp;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&amp;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"> <li>The surplus inert C&amp;D material will be disposed of at the Government's PFRFs for beneficial use by other projects in Hong Kong.</li> <li>Liaison with the CEDD Public Fill Committee (PFC) on the allocation of space for disposal of the inert C&amp;D materials at PFRF is underway. No construction work is allowed to proceed until all issues on management of inert C&amp;D materials have been resolved and all relevant arrangements have been endorsed by the relevant authorities including PFC and EPD.</li> <li>The C&amp;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.</li> <li>In order to monitor the disposal of inert and non-inert C&amp;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 &amp; 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.</li> </ul>	✓	✓	✓	✓	✓	✓	✓	✓	✓

EM&A Ref.	Recommendation Measures	Implementation Stage								
		M+ Museum			L1			L2		
		Aug 2020	Sep 2020	Oct 2020	Aug 2020	Sep 2020	Oct 2020	Aug 2020	Sep 2020	Oct 2020
6.1 & 10.7.1	<p><b>Chemical Waste</b></p> <ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>	✓	✓	✓	✓	✓	✓	✓	✓	✓
6.1 & 10.7.1	<p><b>General Refuse</b></p> <p>General refuse should be stored in enclosed bins or compaction units separated from inert C&amp;D materials. A reputable waste collector should be employed by the Contractor to remove general refuse from the site, separately from inert C&amp;D materials. Preferably an enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material.</p>	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>Land Contamination (Construction)</b>										
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		
		Aug 2020	Sep 2020	Oct 2020	Aug 2020	Sep 2020	Oct 2020	Aug 2020	Sep 2020	Oct 2020
	<ul style="list-style-type: none"> <li>To minimize the chance for construction workers to come into contact with any contaminated materials, bulk earth-moving excavation equipment should be employed;</li> <li>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;</li> <li>Stockpiling of contaminated excavated materials on site should be avoided as far as possible;</li> <li>The use of contaminated soil for landscaping purpose should be avoided unless pre-treatment was carried out;</li> <li>Vehicles containing any contaminated excavated materials should be suitably covered to reduce dust emissions and/or release of contaminated wastewater;</li> <li>Truck bodies and tailgates should be sealed to stop any discharge;</li> <li>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;</li> <li>Speed control for trucks carrying contaminated materials should be exercised;</li> <li>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</li> <li>Maintain records of waste generation and disposal quantities and disposal arrangements.</li> </ul>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Ecological Impact (Construction)</b>										
No mitigation measure is required.										
<b>Landscape and Visual Impact (Construction)</b>										
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		
		Aug 2020	Sep 2020	Oct 2020	Aug 2020	Sep 2020	Oct 2020	Aug 2020	Sep 2020	Oct 2020
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	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	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	✓	✓	✓	✓	✓	✓	✓	✓	✓



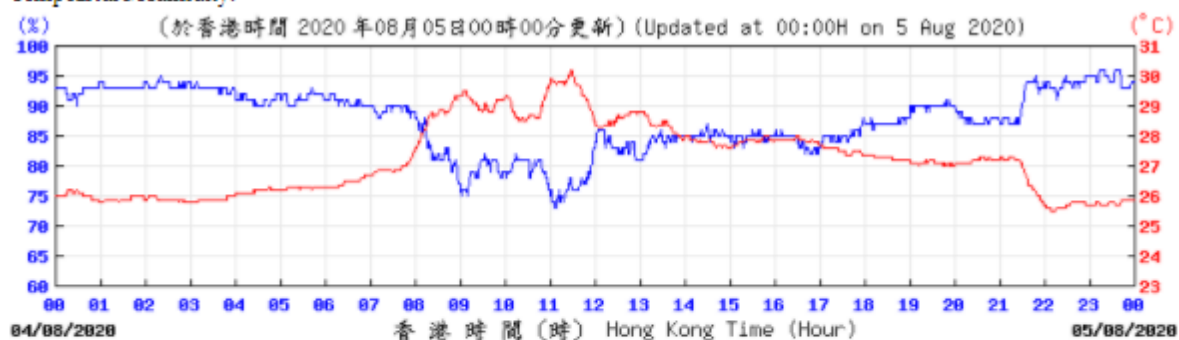
EM&A Ref.	Recommendation Measures	Implementation Stage								
		M+ Museum			L1			L2		
		Aug 2020	Sep 2020	Oct 2020	Aug 2020	Sep 2020	Oct 2020	Aug 2020	Sep 2020	Oct 2020
Table 9.2 & 10.9 (MCP5)	Use of greenery such as grass cover for the temporary open areas will help achieve the visual balance and soften 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**

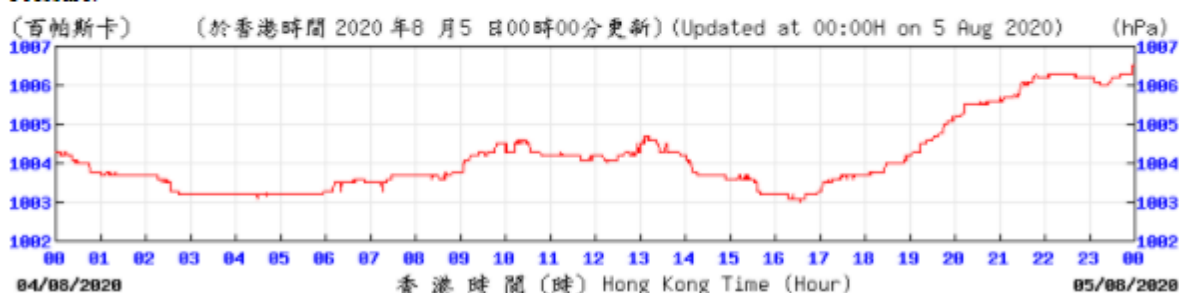
**Table D-1: Extract of Meteorological Observations for King's Park Automatic Weather Station in the reporting quarter**

Temperature/Humidity:



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Pressure:



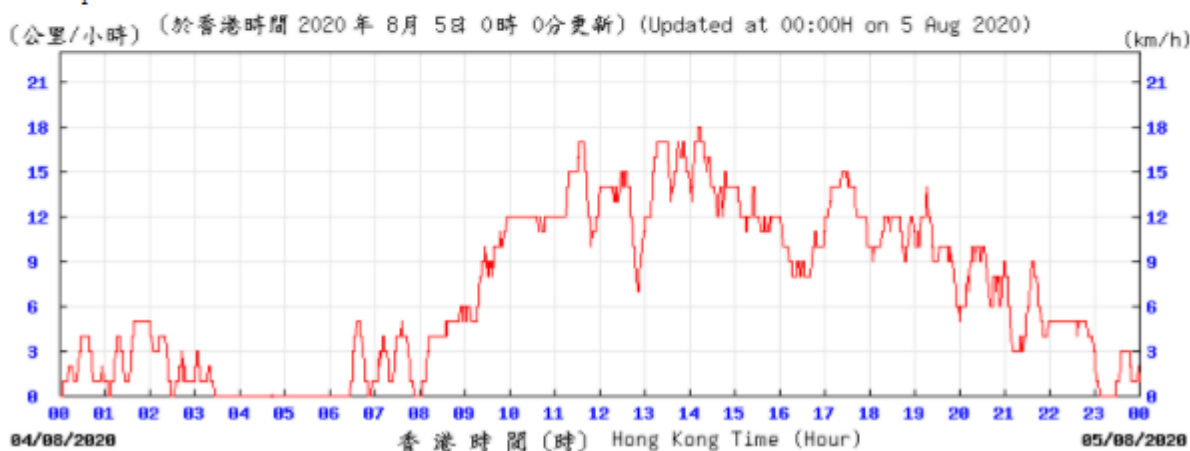
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Wind Direction:



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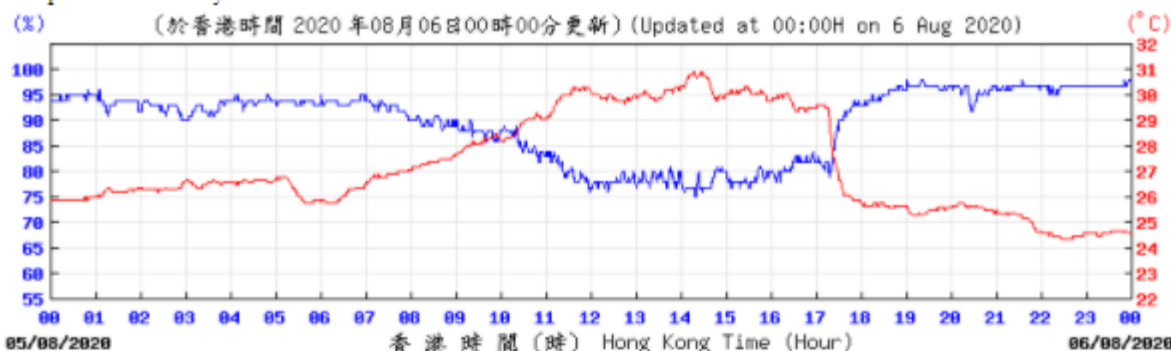
Wind Speed:



KPC

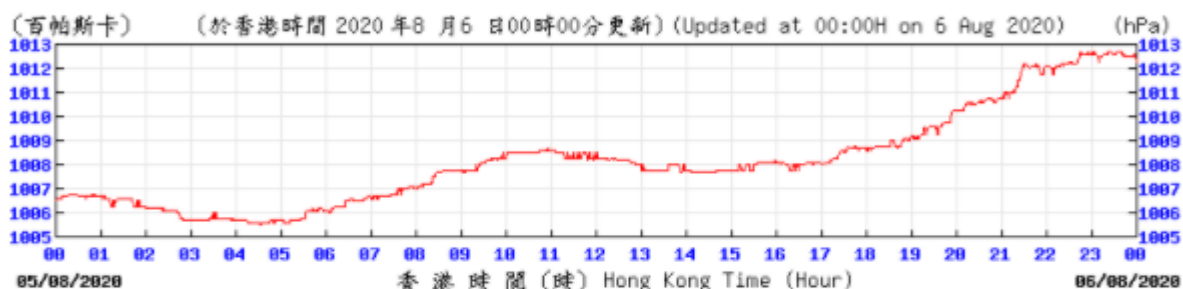
© 香港天文台 Hong Kong Observatory

Temperature/Humidity:



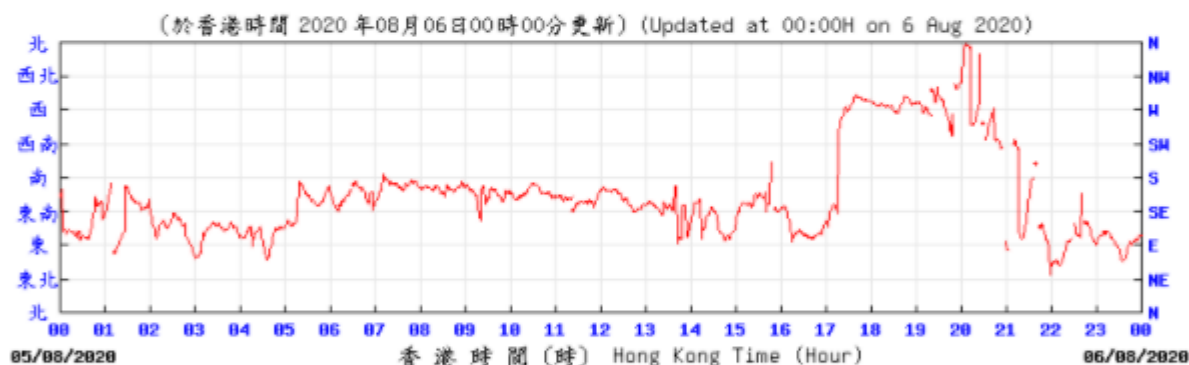
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Pressure:



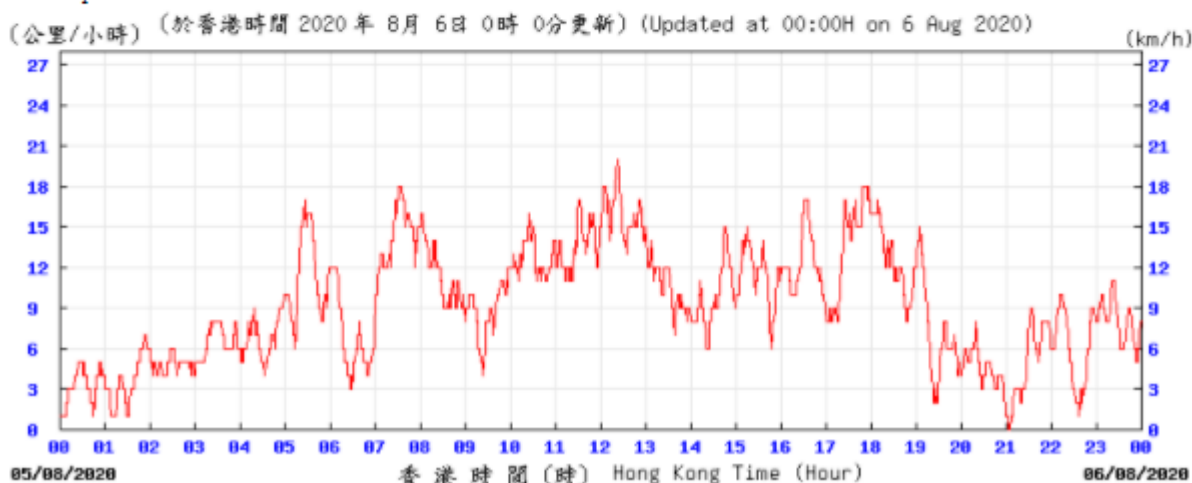
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Wind Direction:



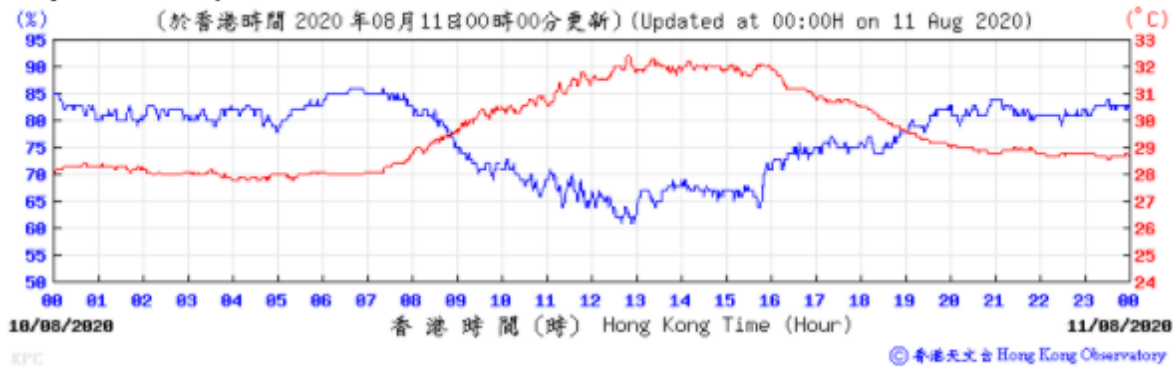
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Wind Speed:



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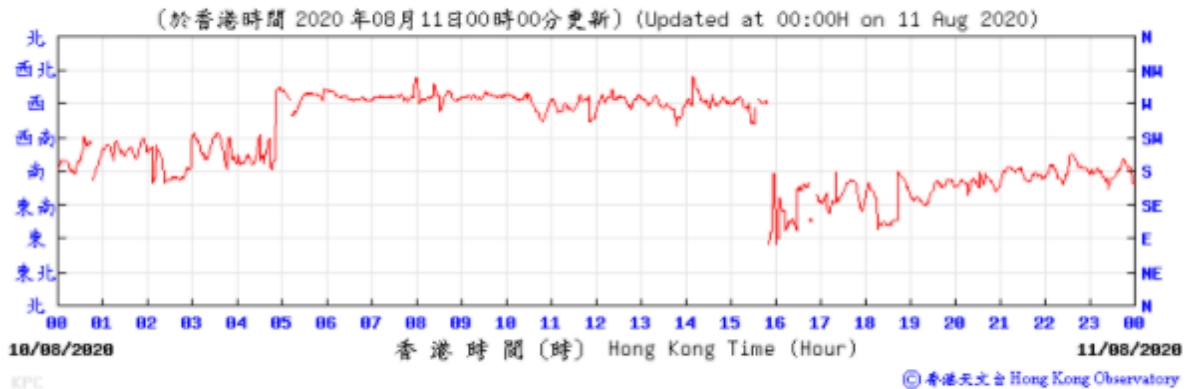
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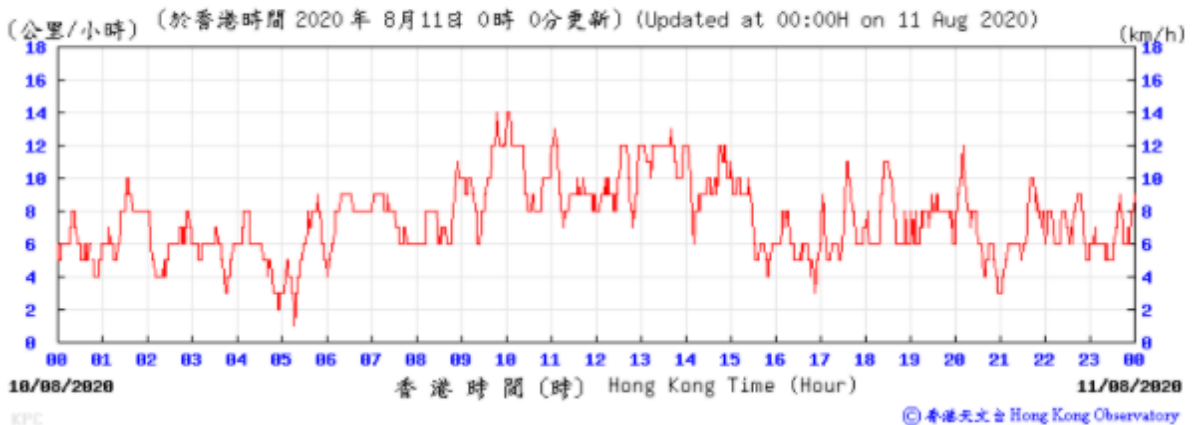
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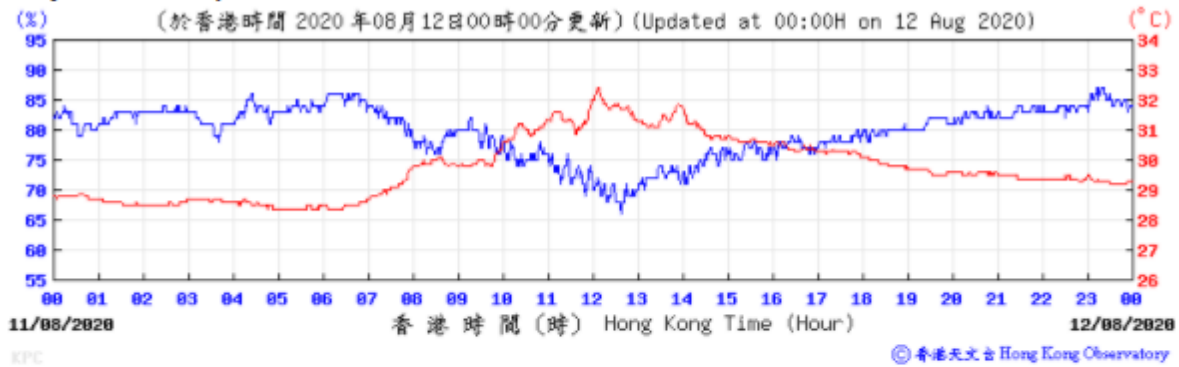
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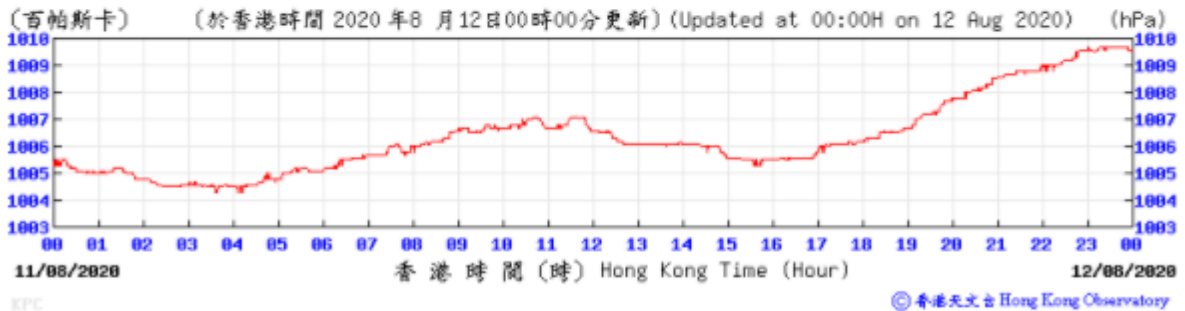
Wind Speed:



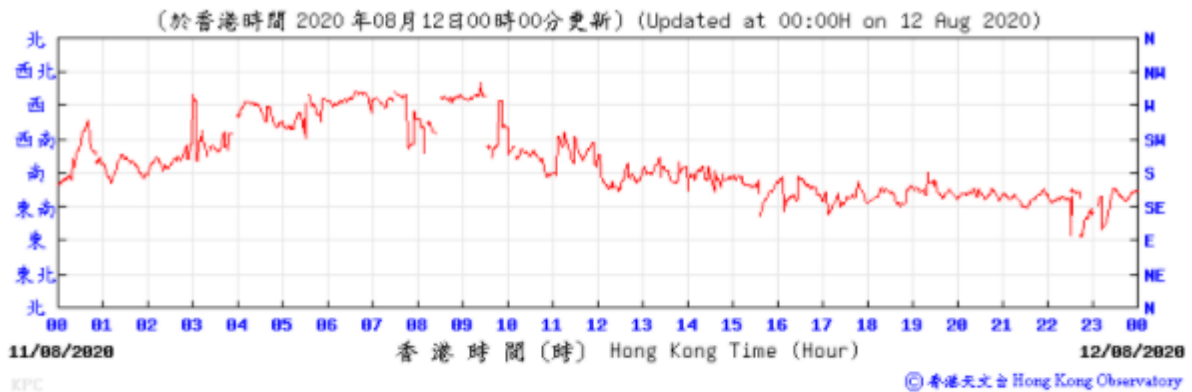
Temperature/Humidity:



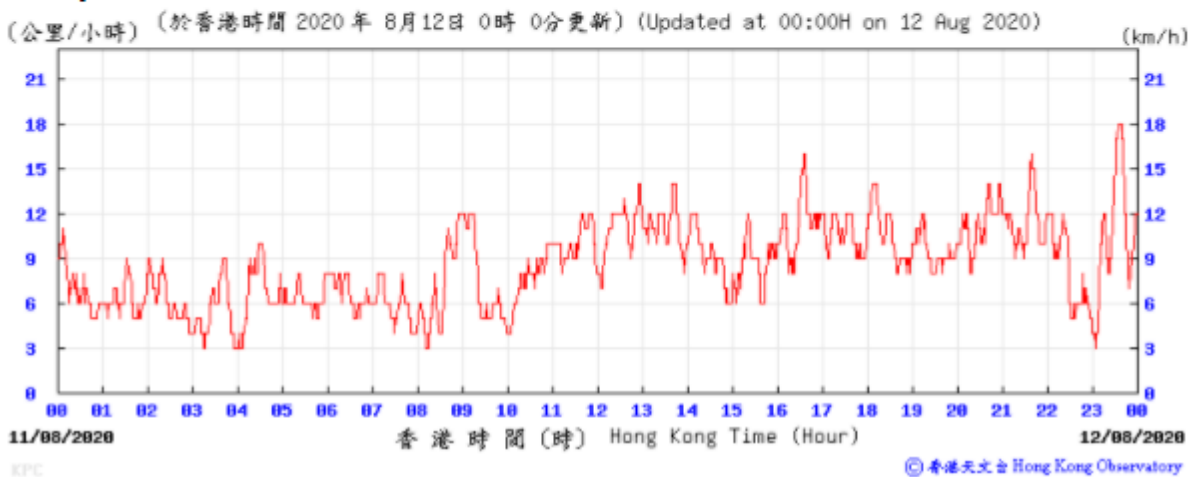
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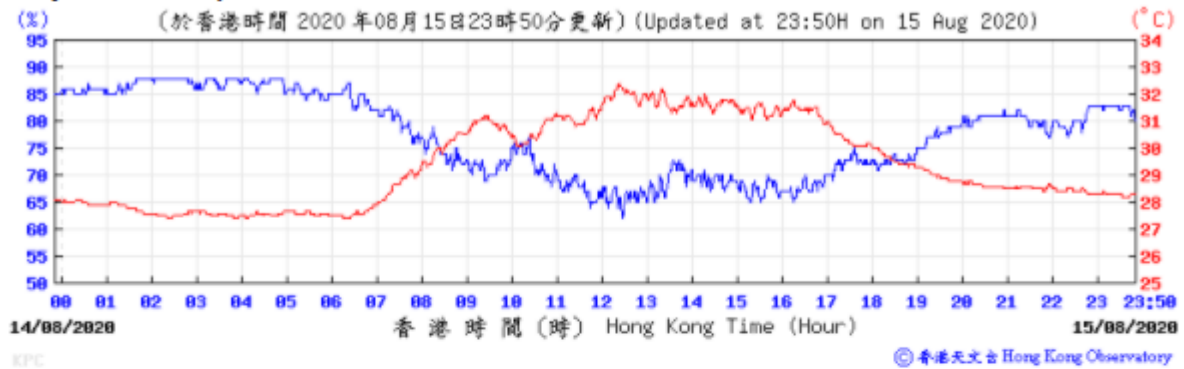
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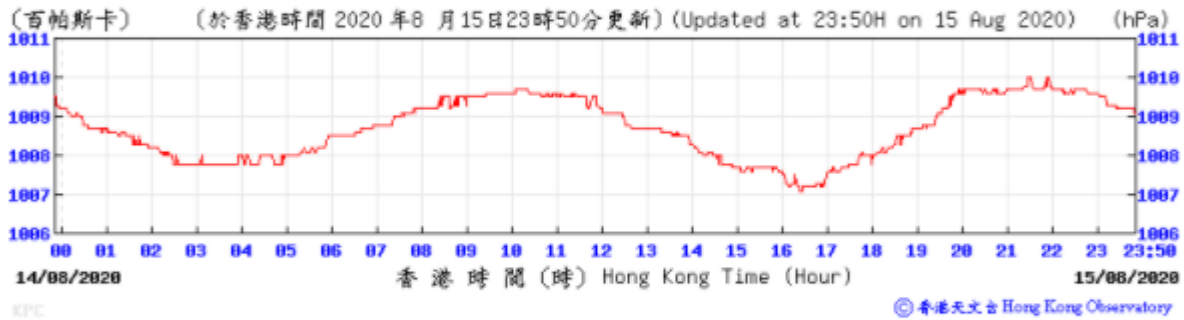
Wind Speed:



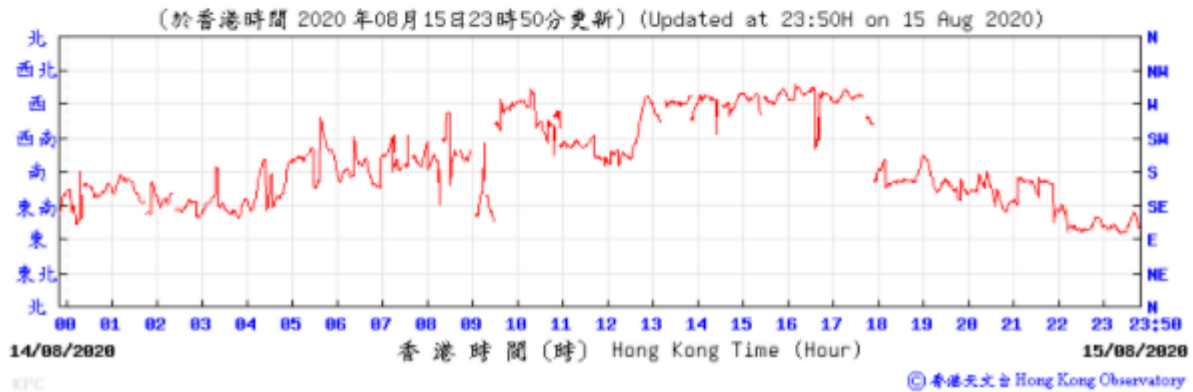
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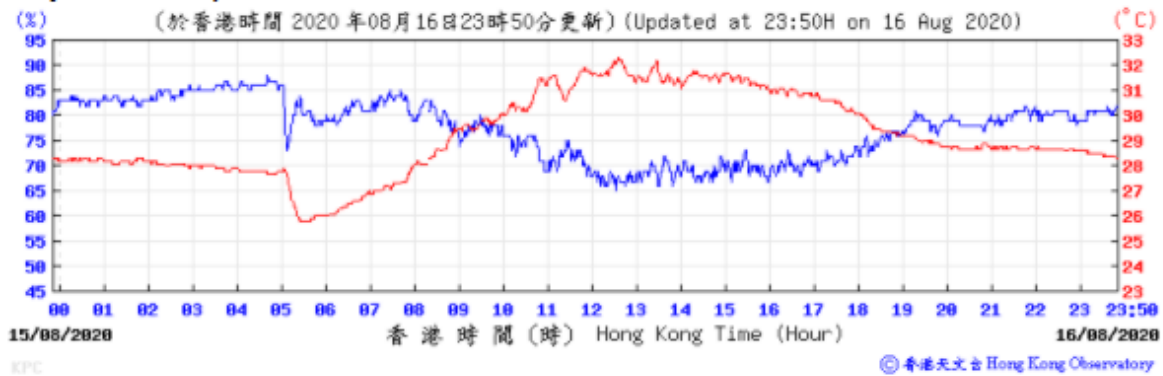
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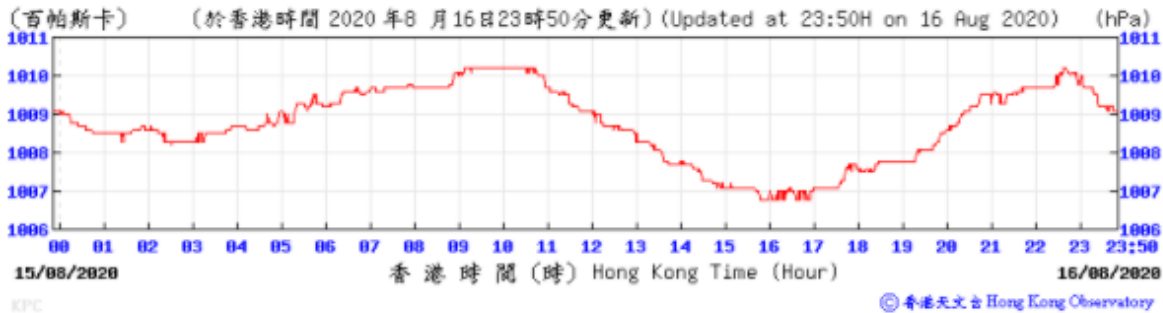
Wind Direction:



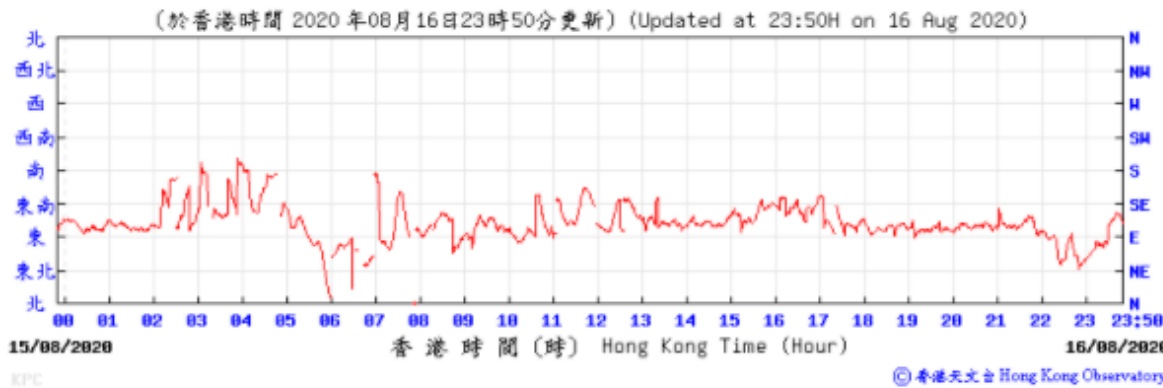
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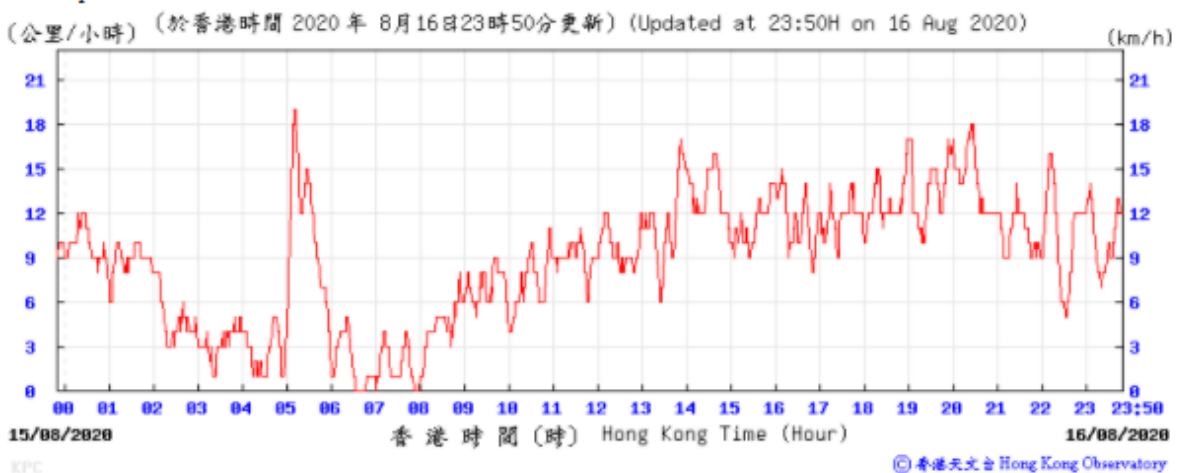
Pressure:



Wind Direction:

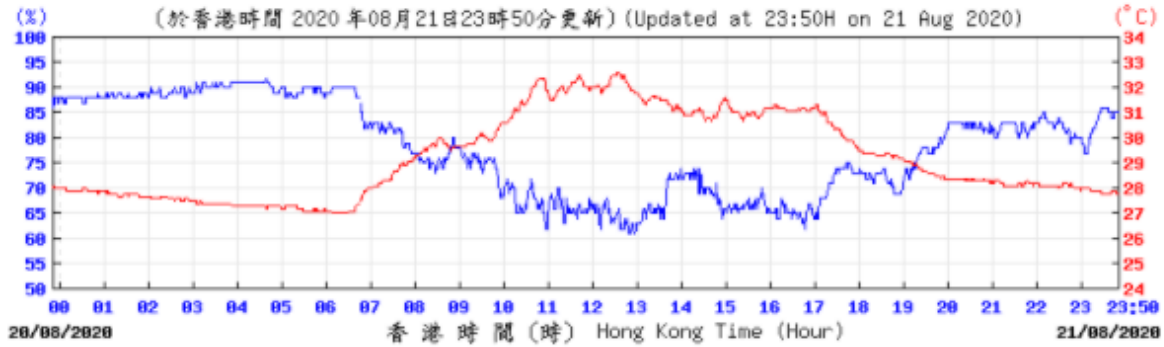


Wind Speed:





Temperature/Humidity:



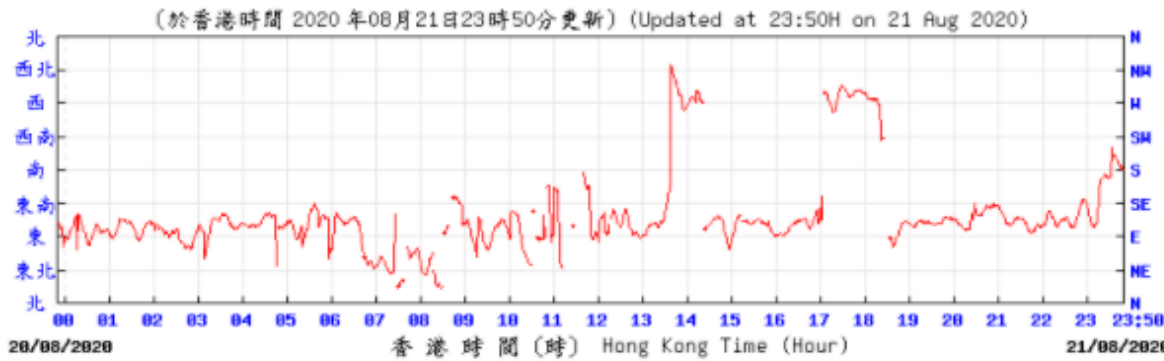
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Pressure:



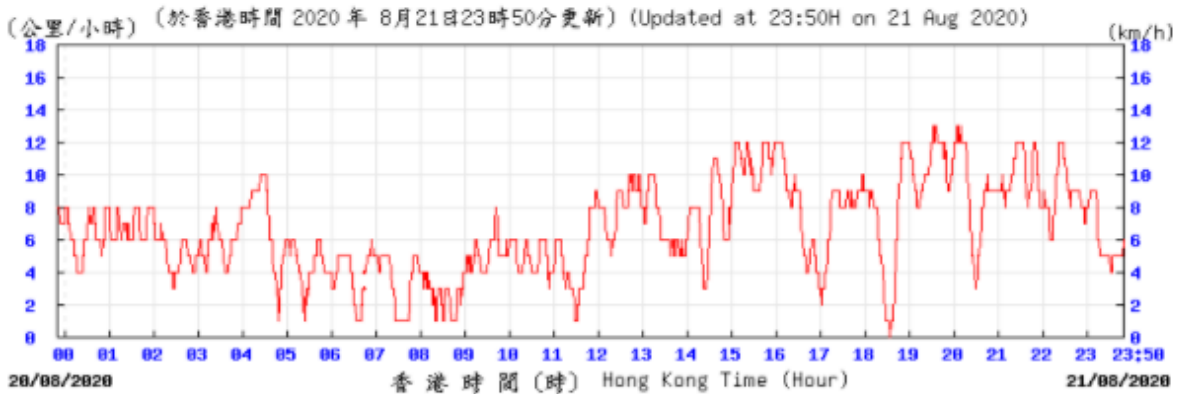
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Wind Direction:



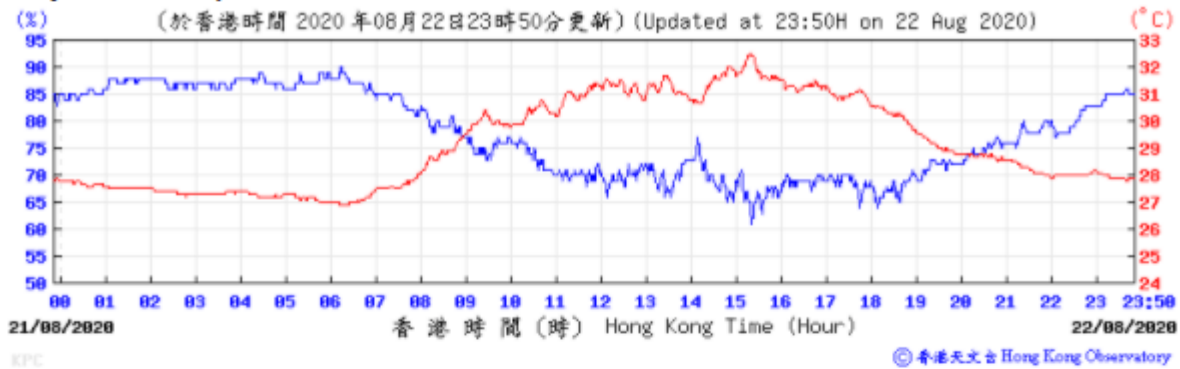
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Wind Speed:

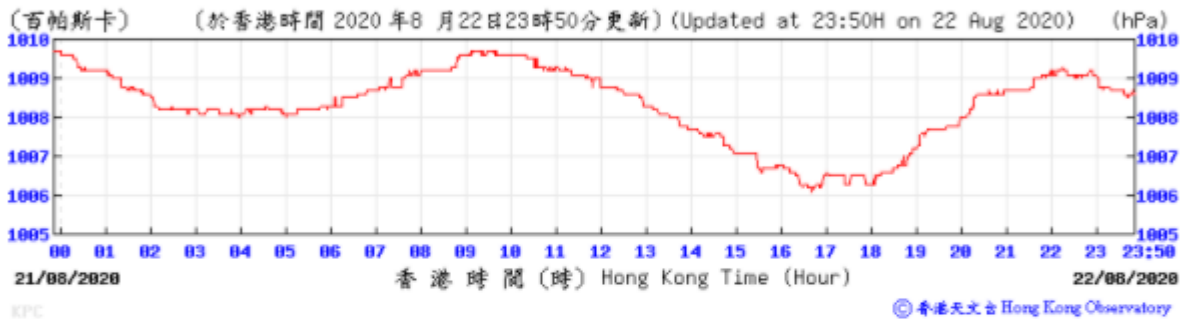


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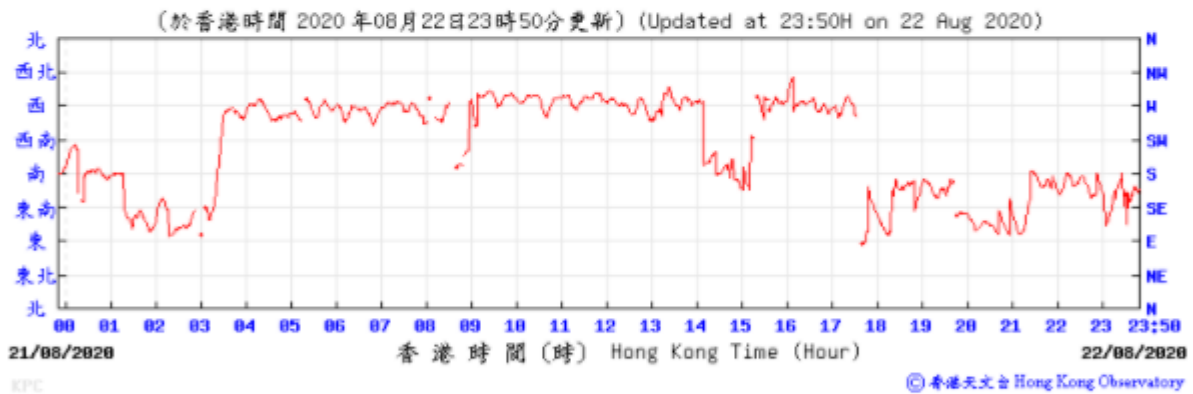
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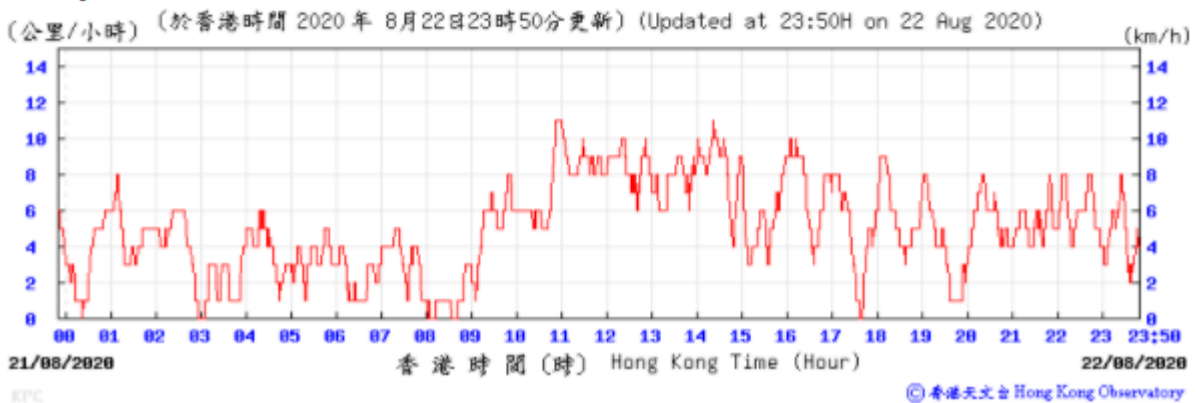
Pressure:



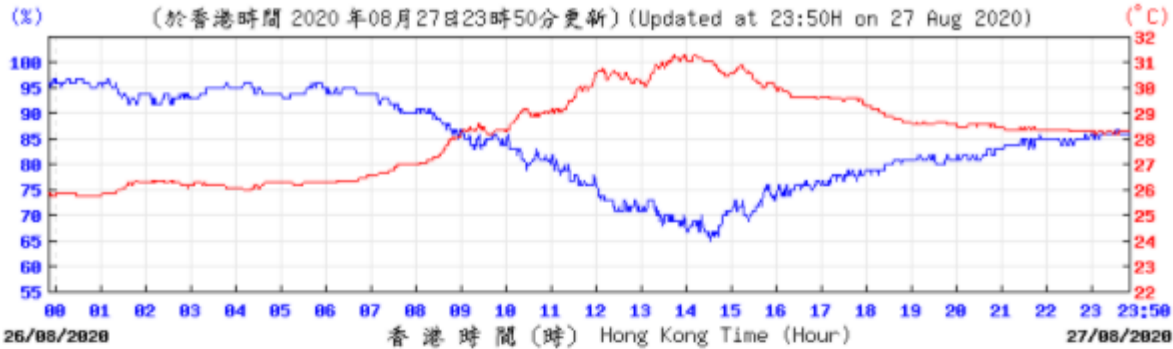
Wind Direction:



Wind Speed:



Temperature/Humidity:



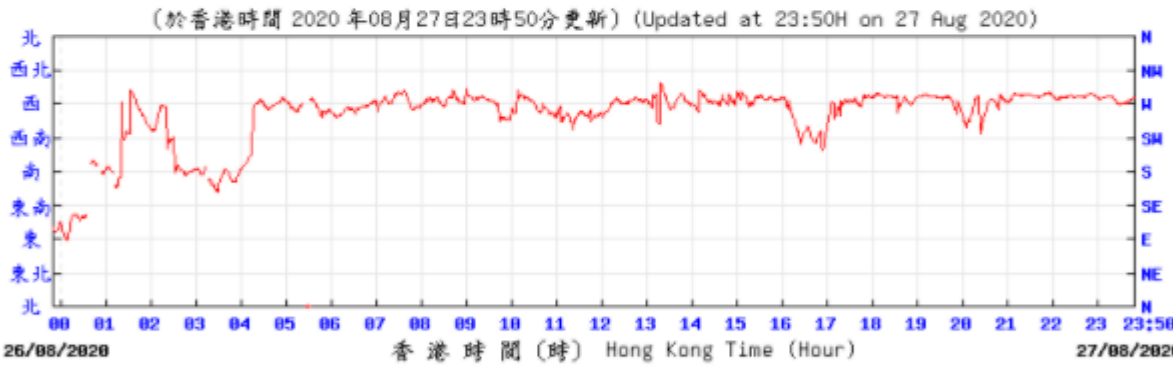
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Pressure:



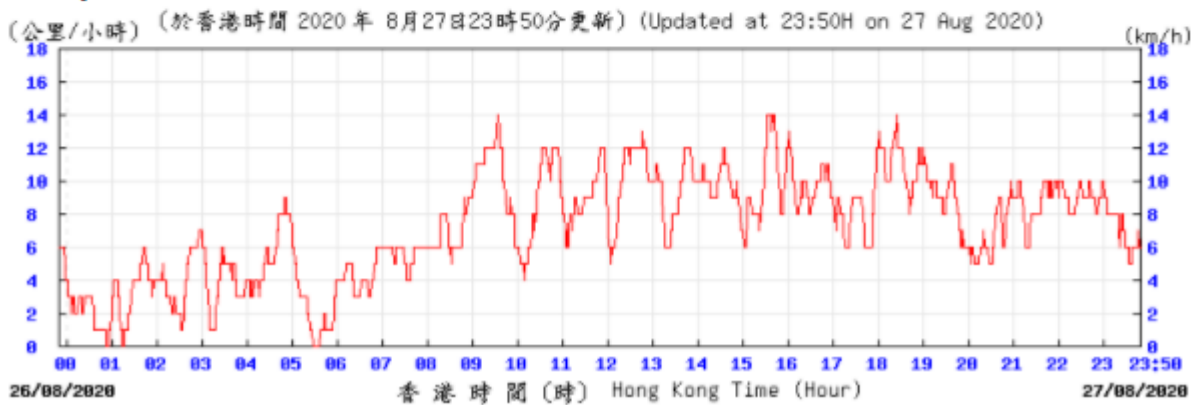
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Wind Direction:



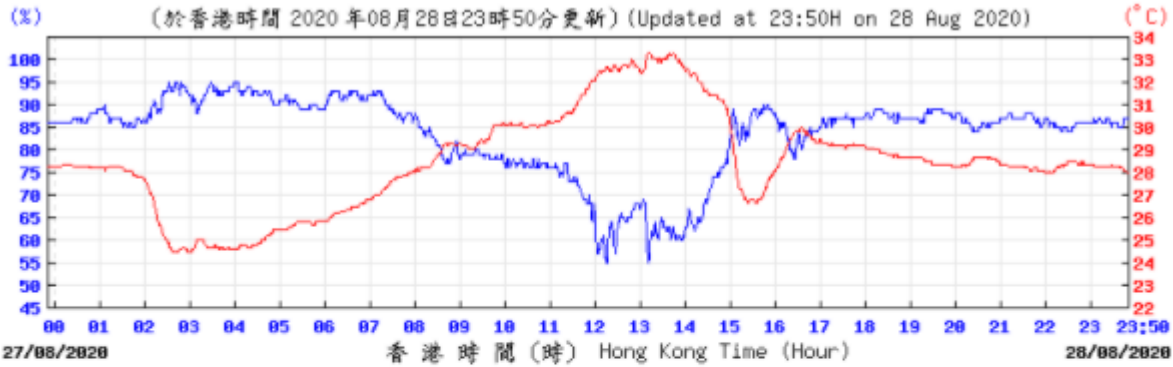
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Wind Speed:



EPC ©香港天文台 Hong Kong Observatory

Temperature Humidity:



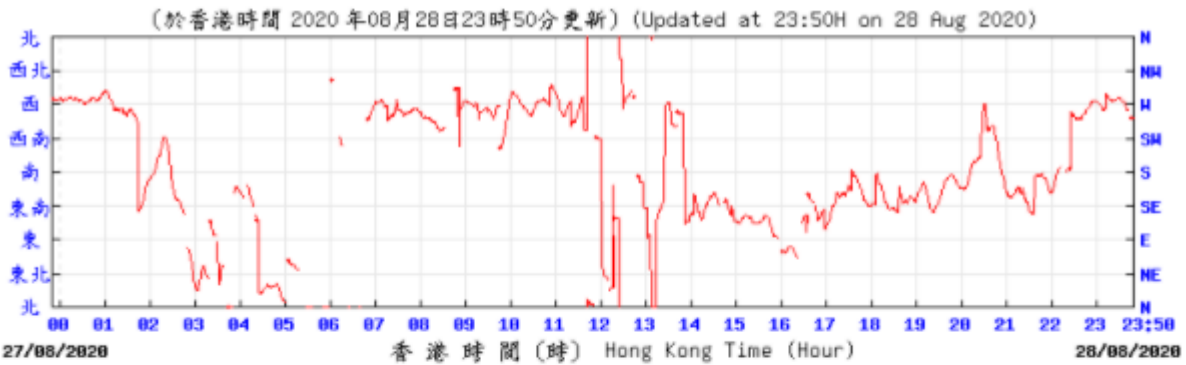
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Pressure:



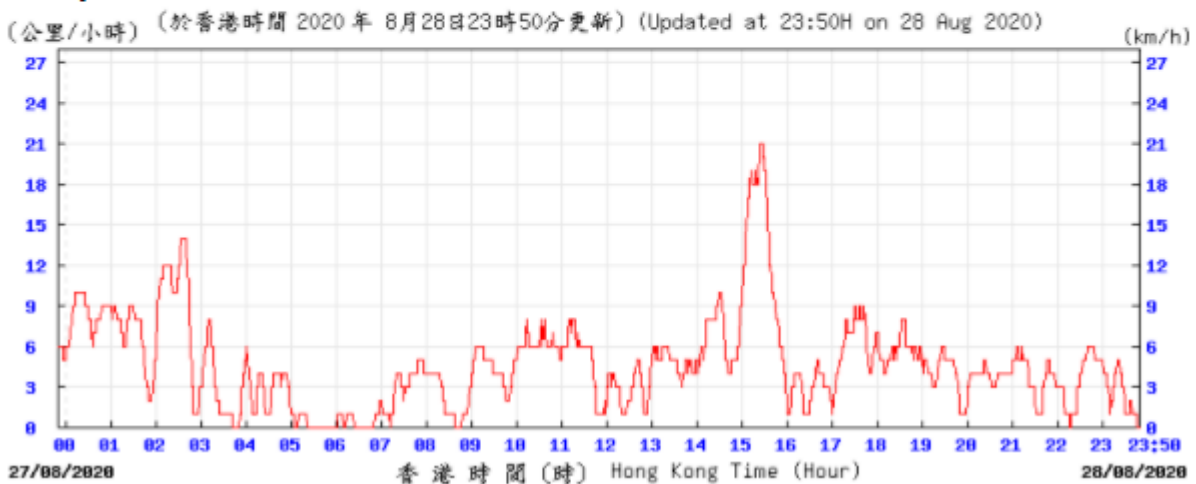
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Wind Direction:



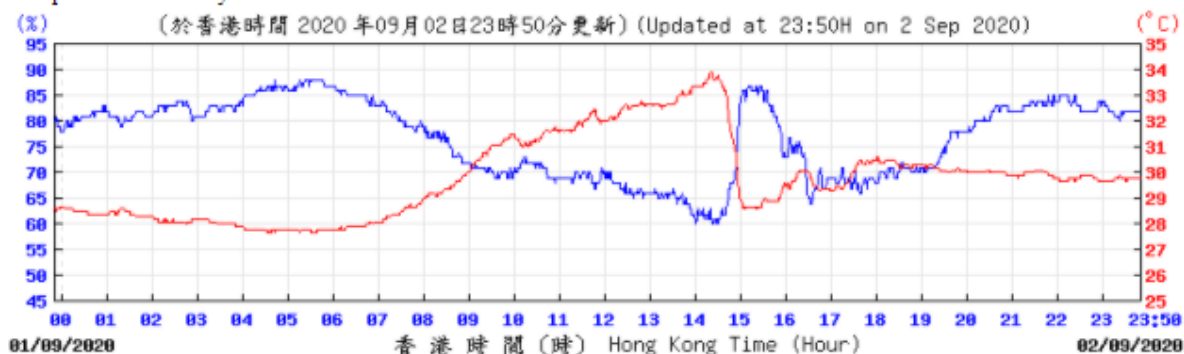
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Wind Speed:

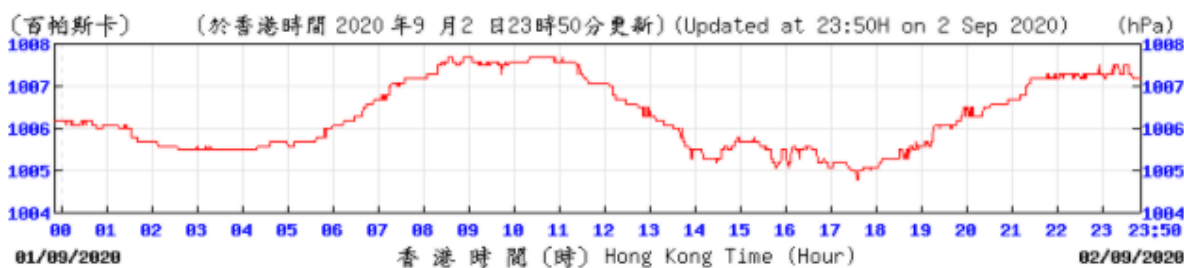


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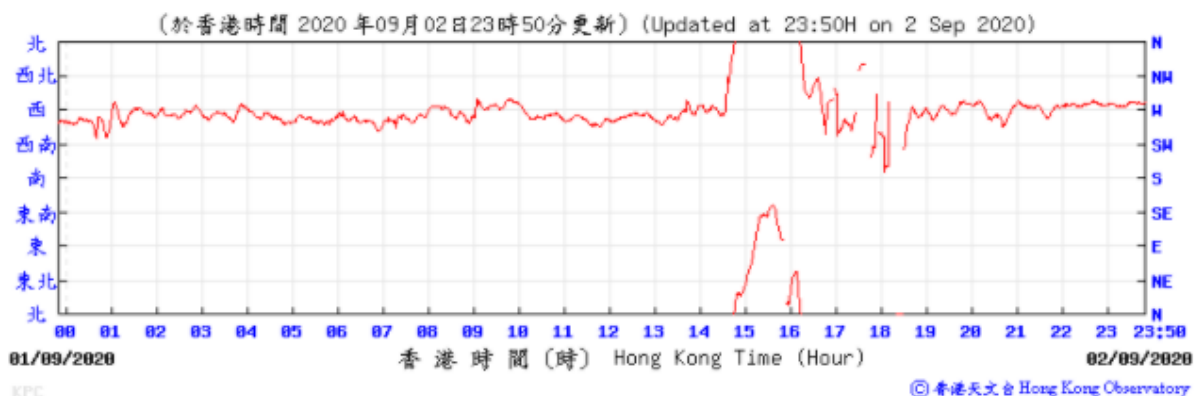
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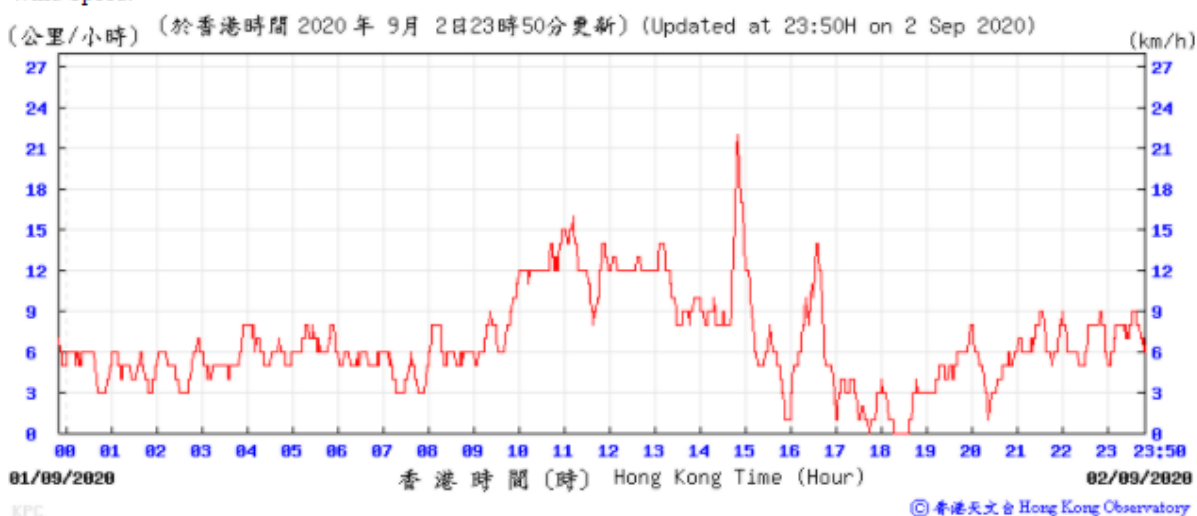
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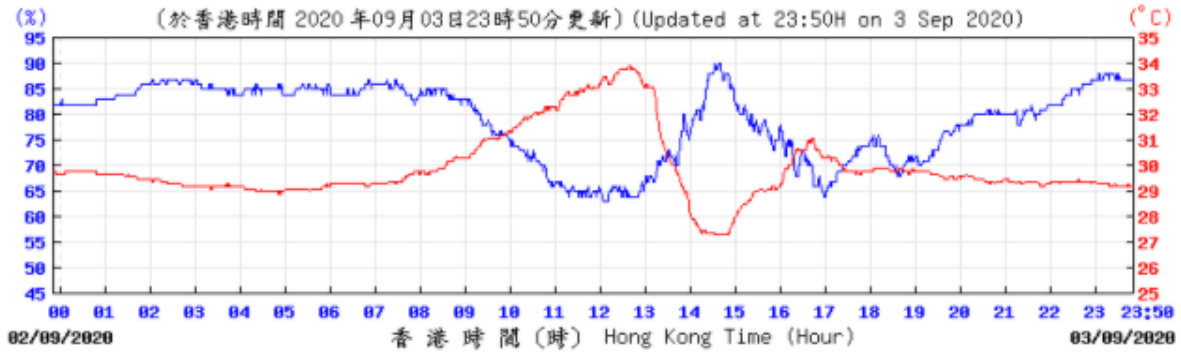
Wind Direction:



Wind Speed:



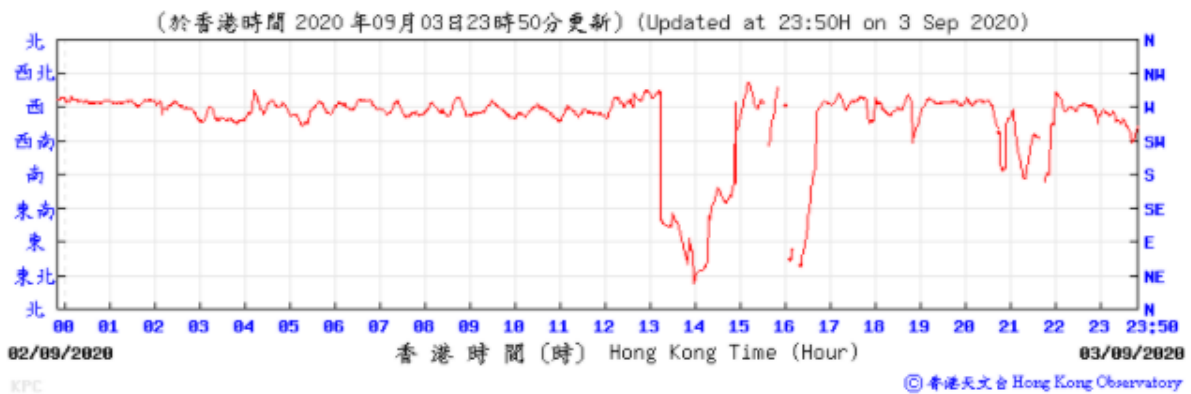
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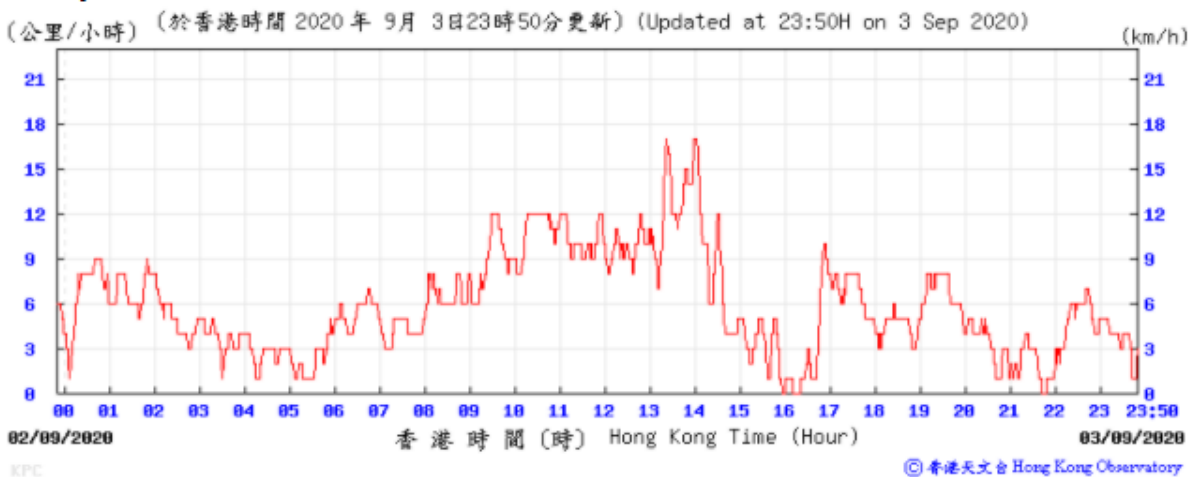
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Wind Direction:

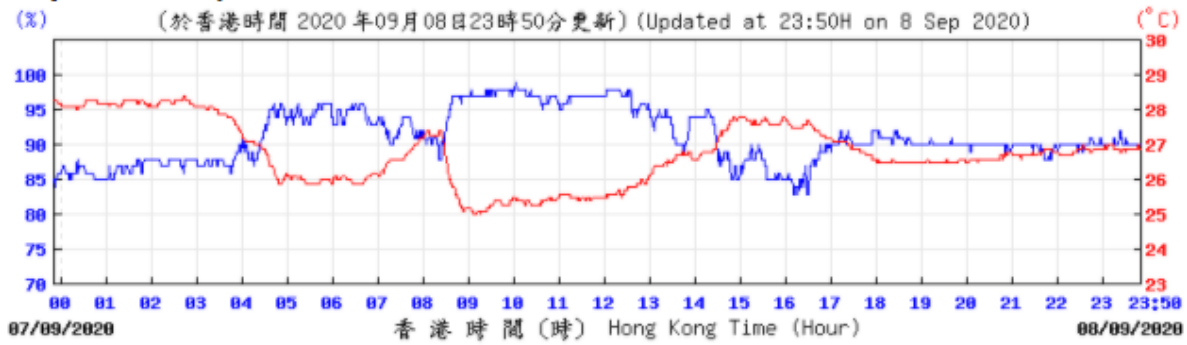


Wind Speed:





Temperature/Humidity:



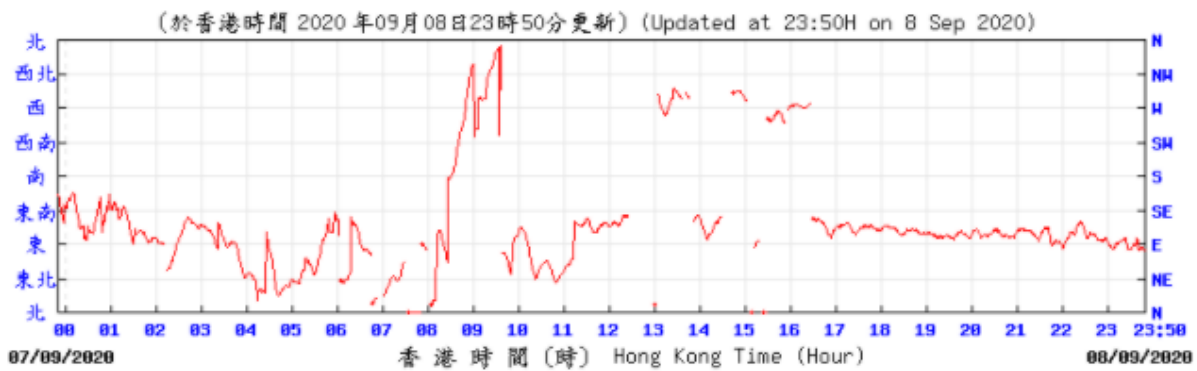
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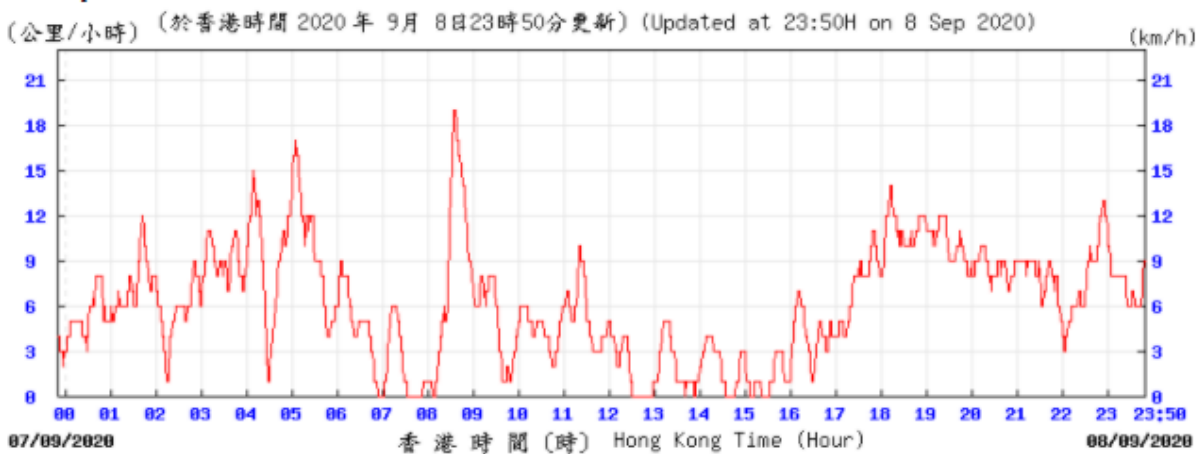
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Wind Direction:



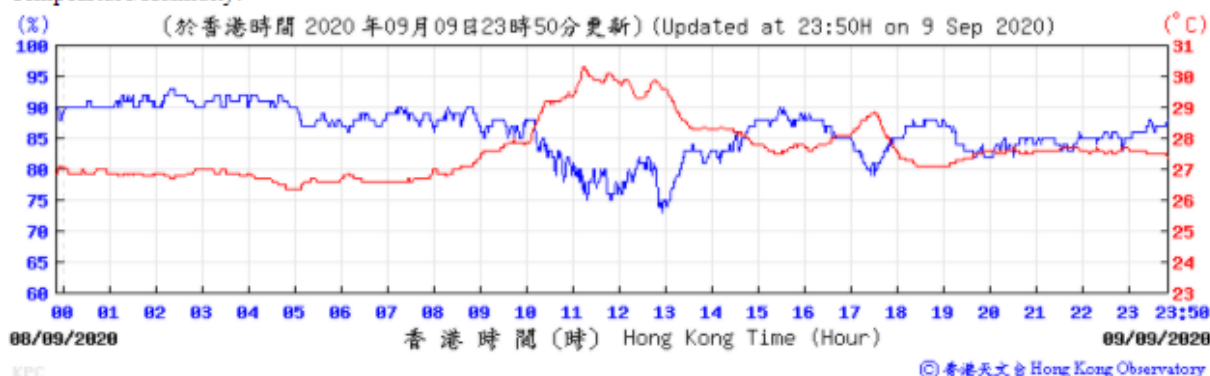
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Wind Speed:

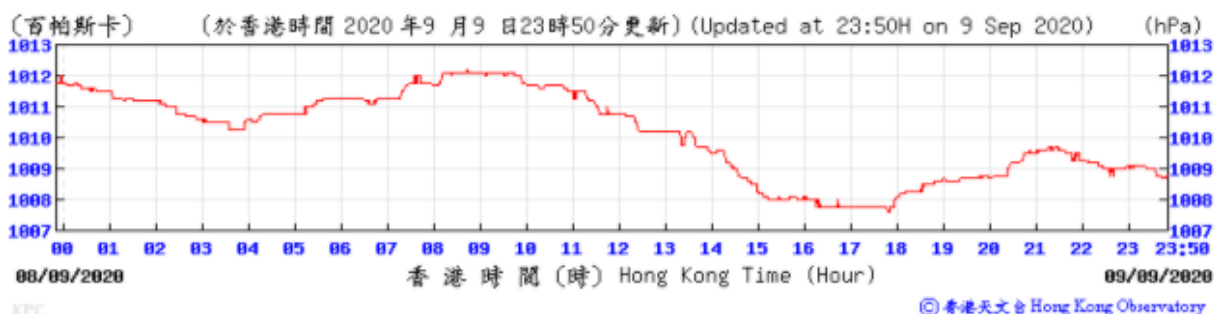


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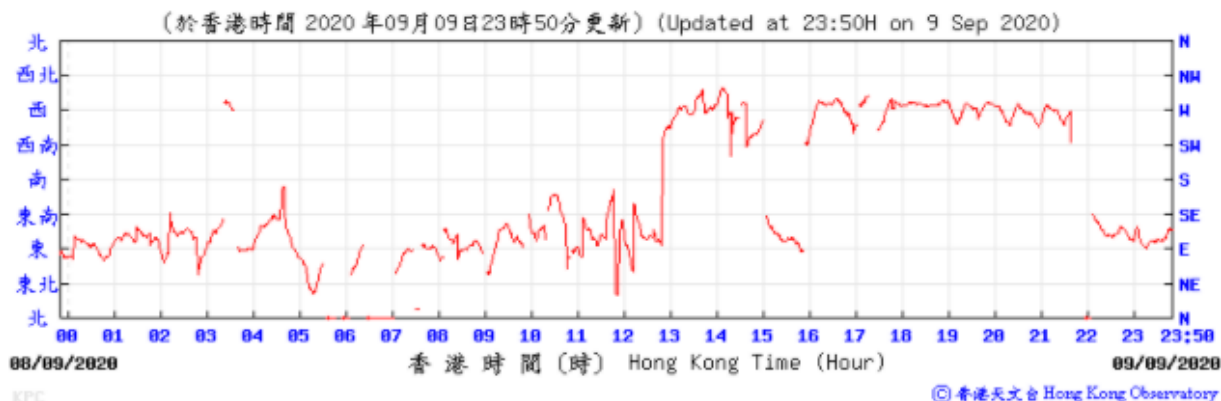
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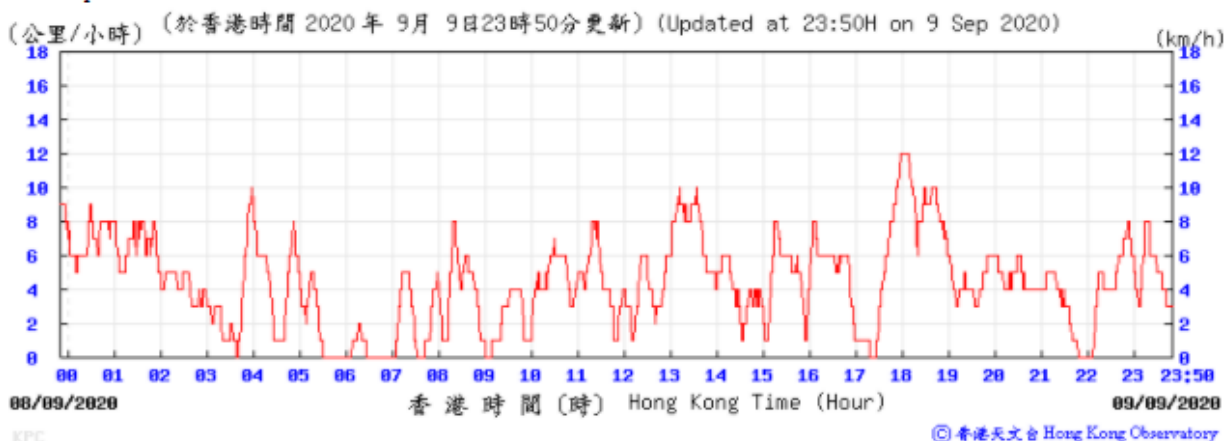
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Wind Direction:

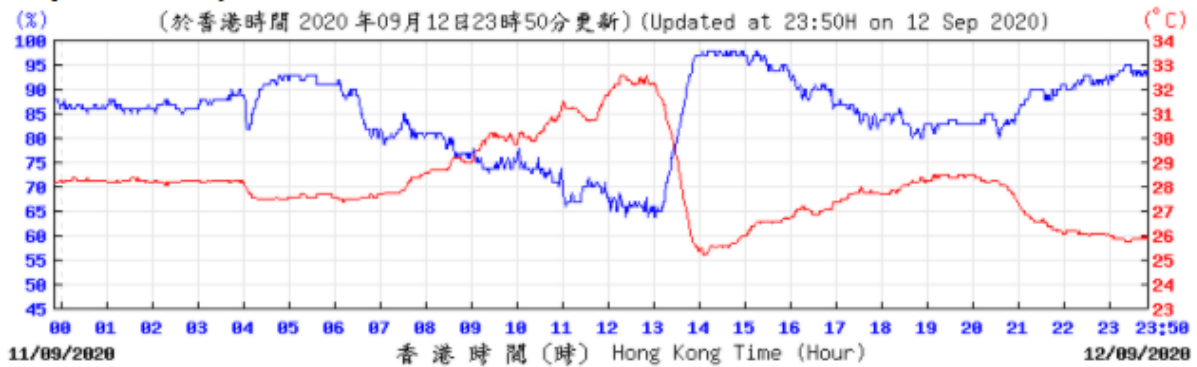


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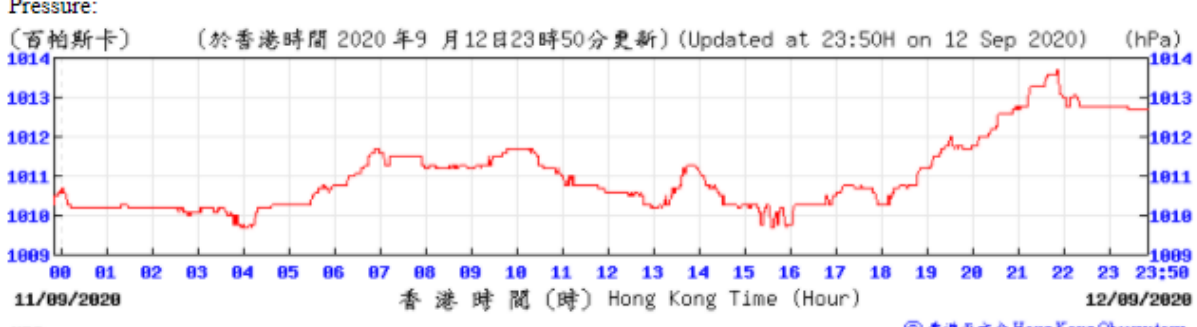




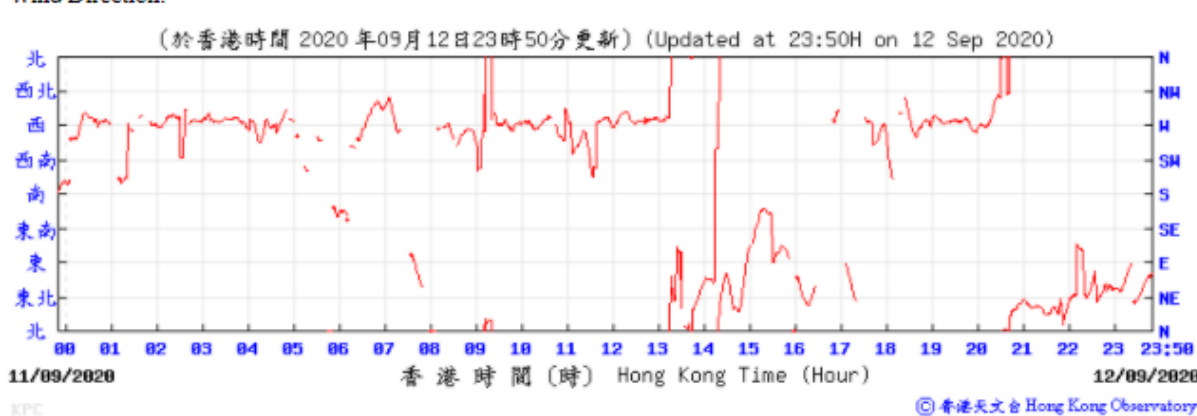
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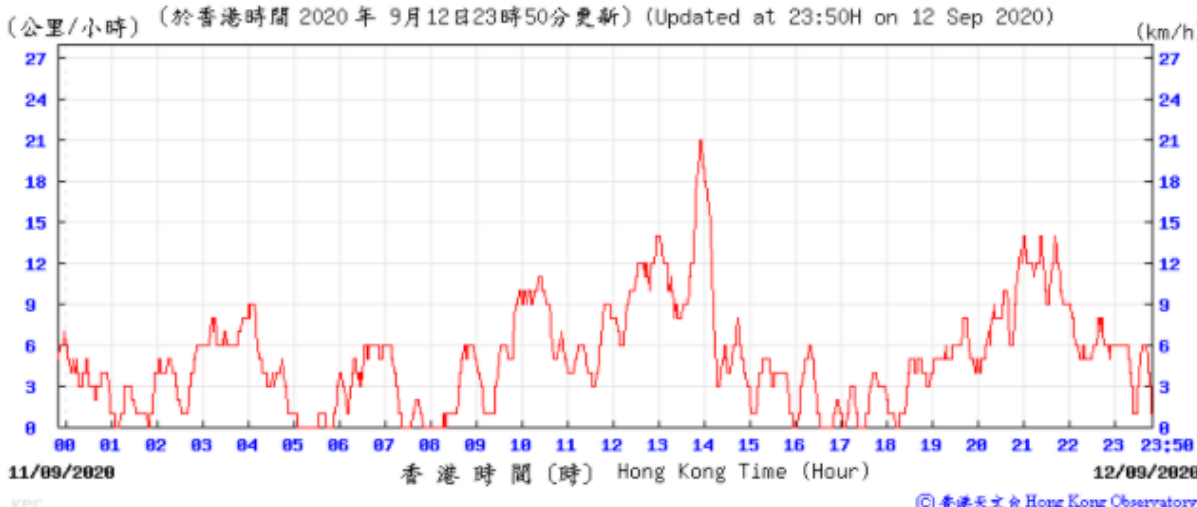
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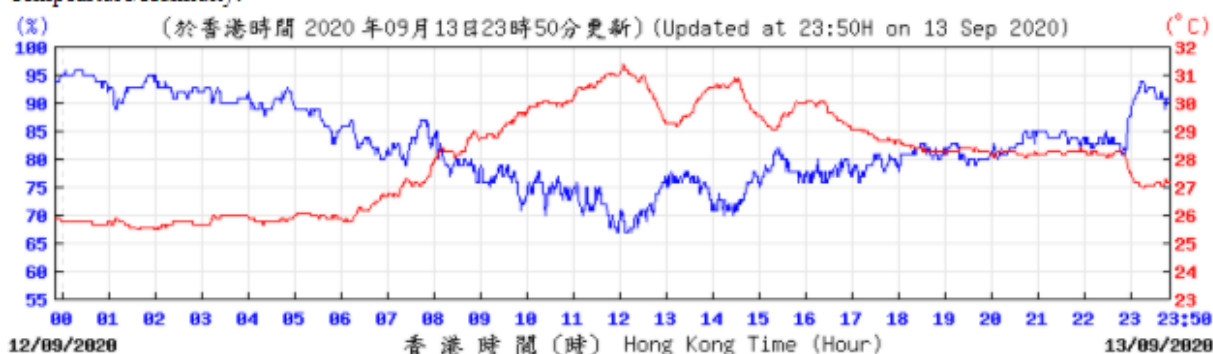
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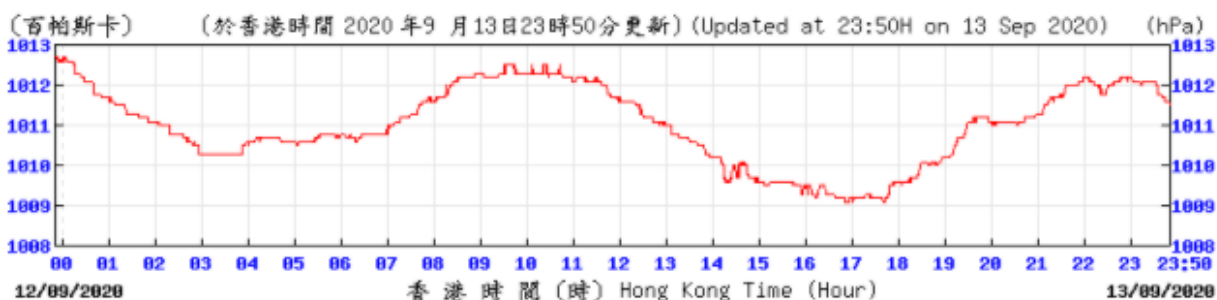


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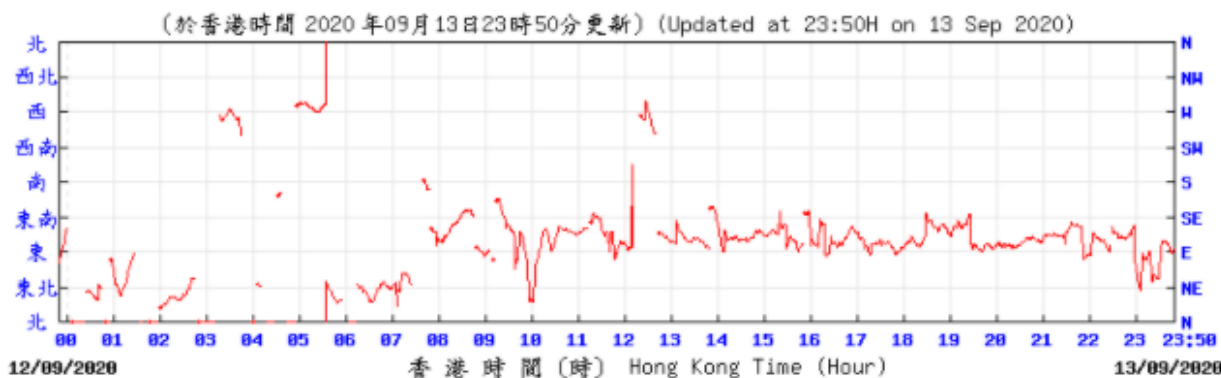
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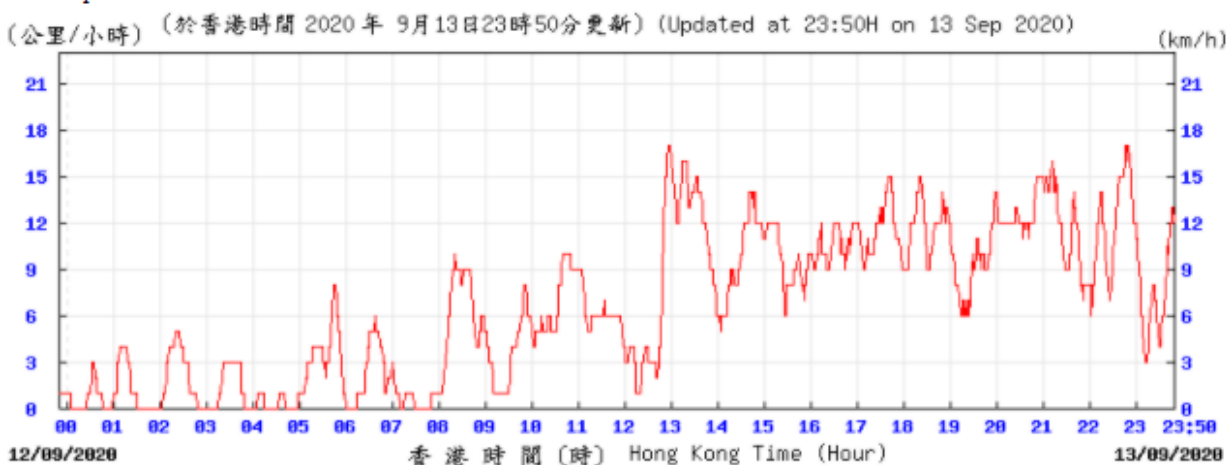
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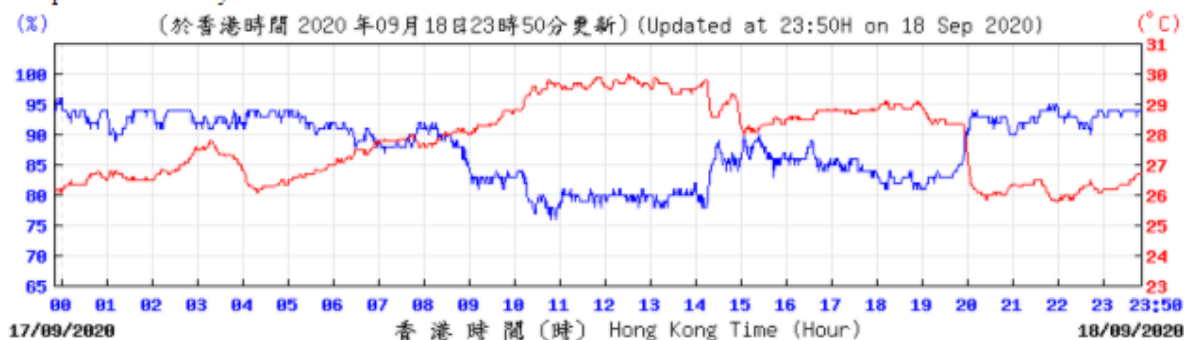
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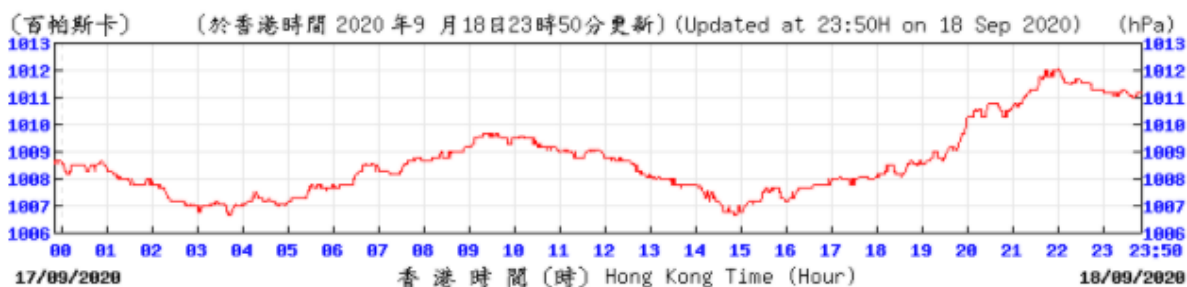
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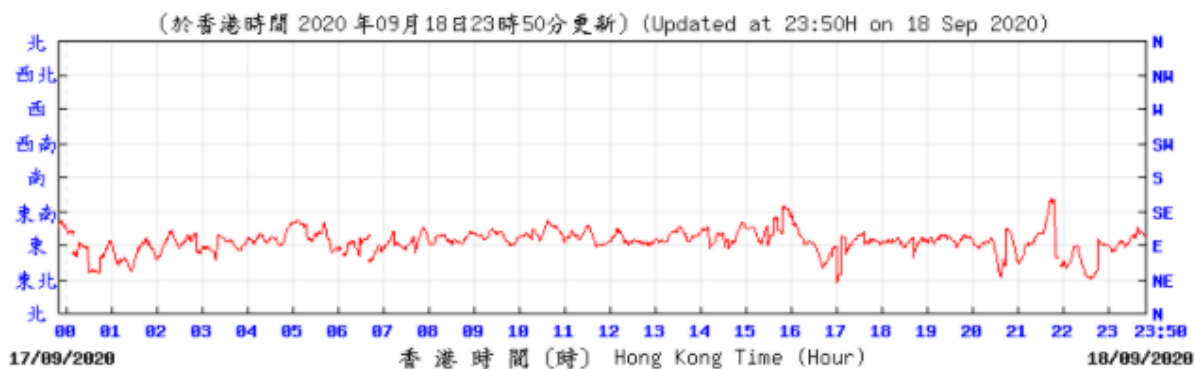
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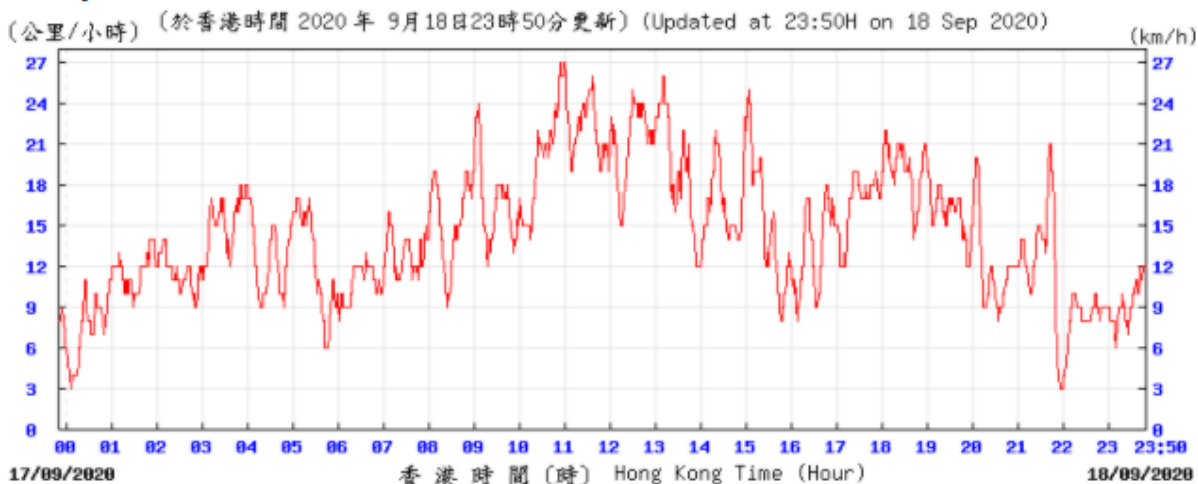
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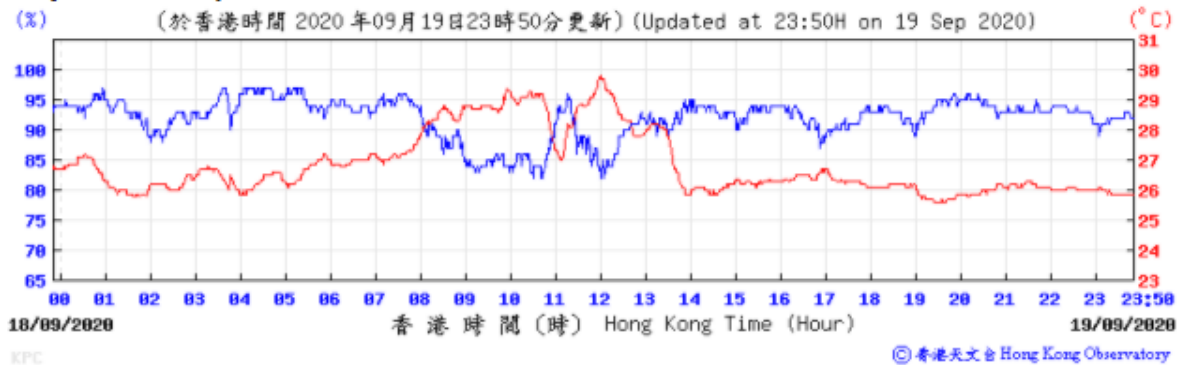
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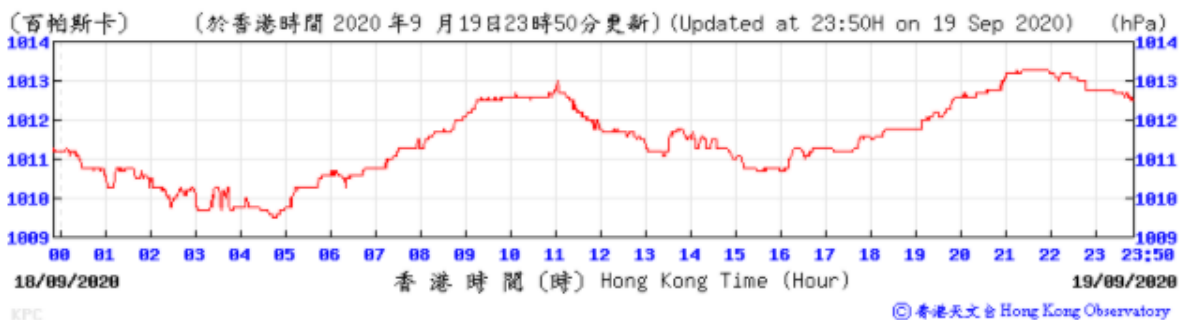


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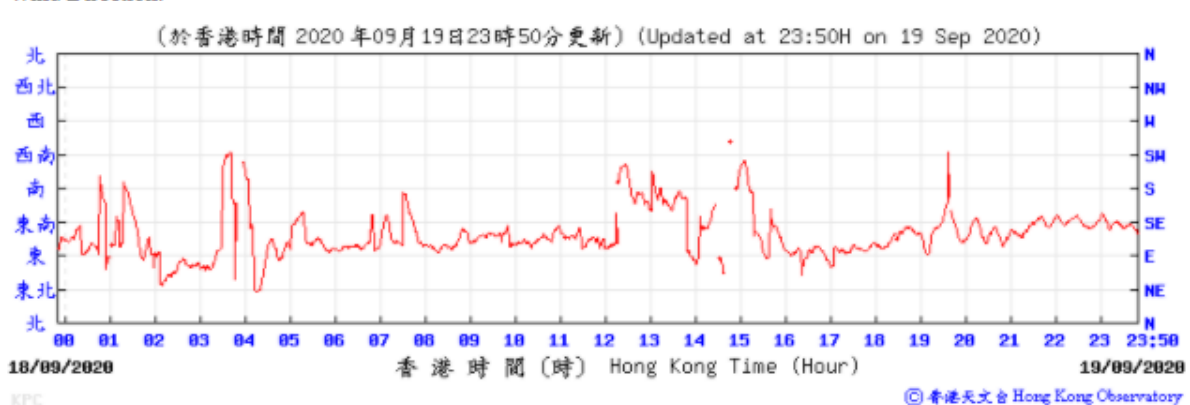
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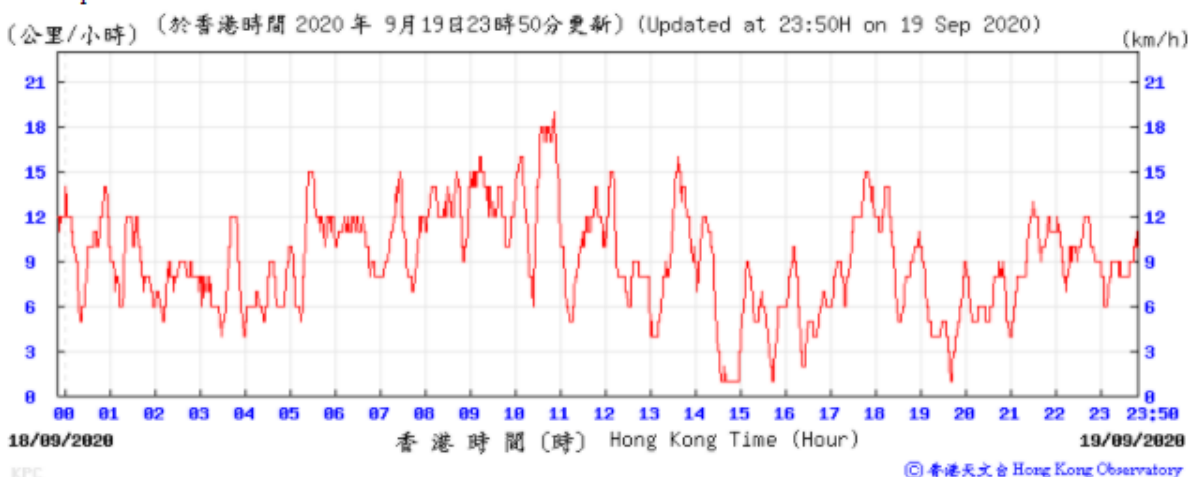
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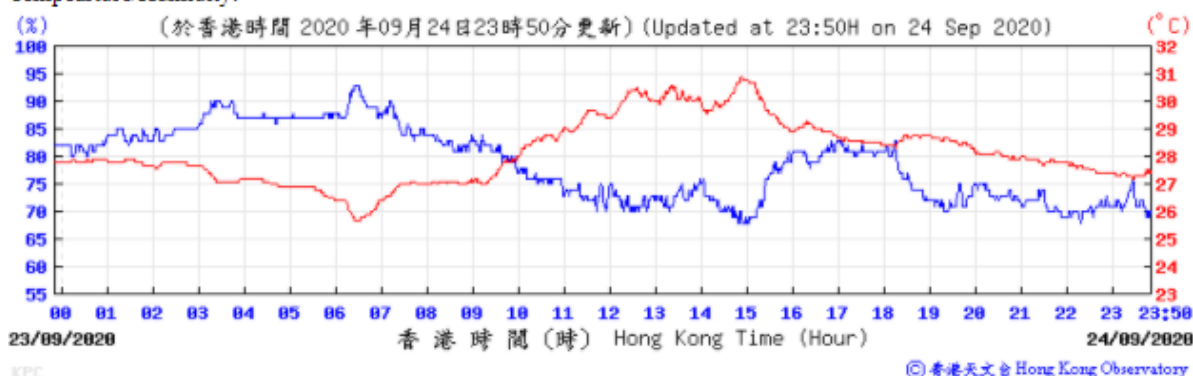
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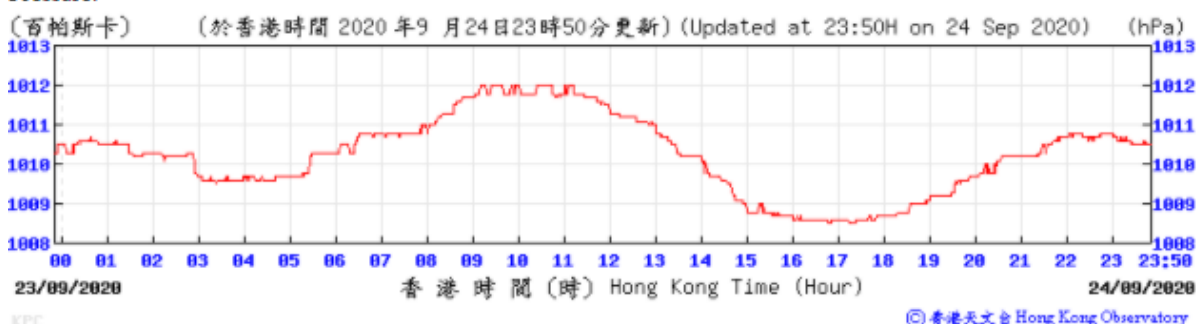
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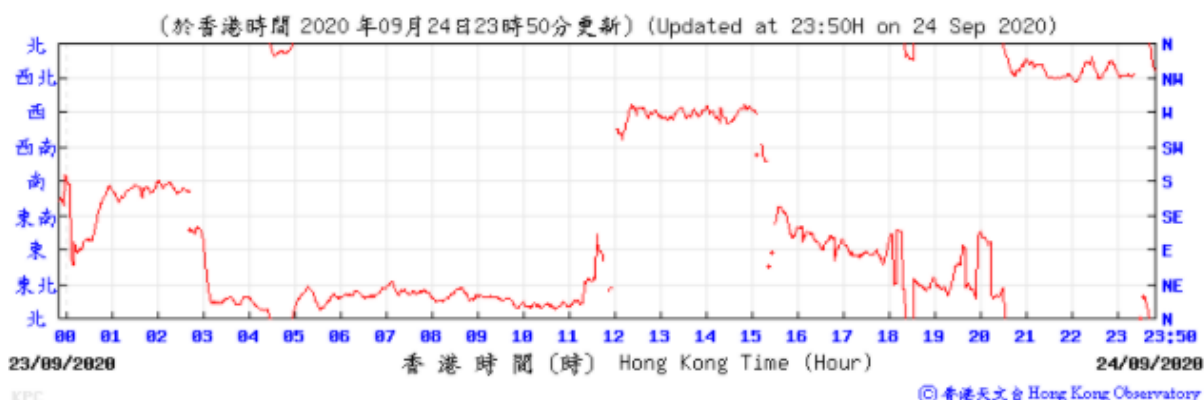
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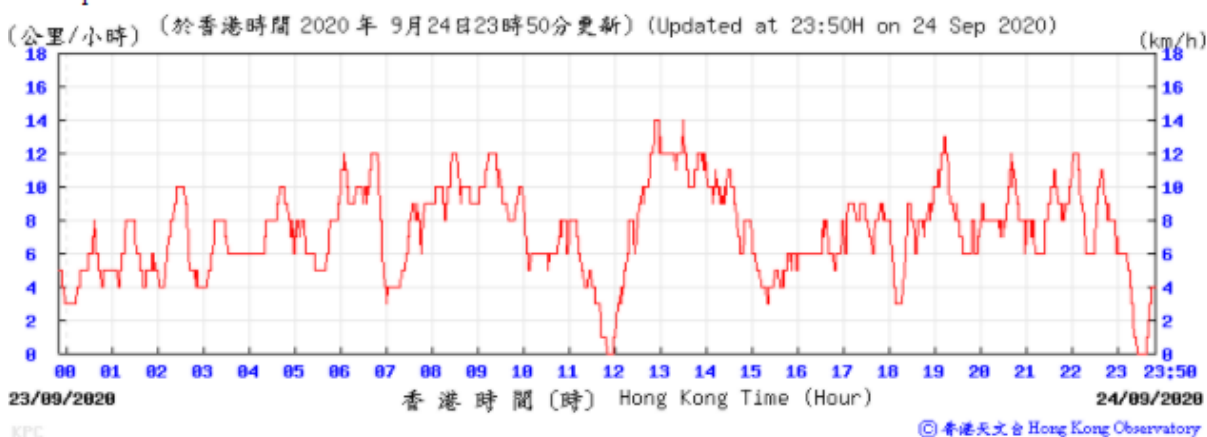
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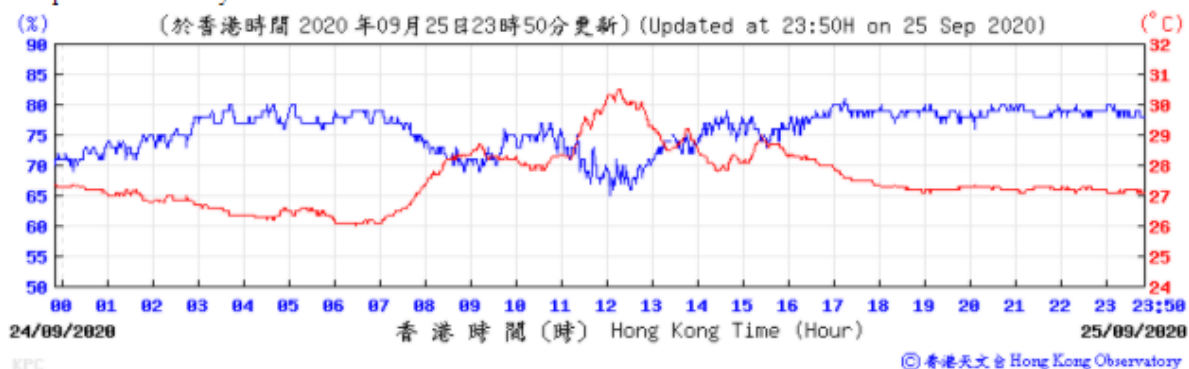
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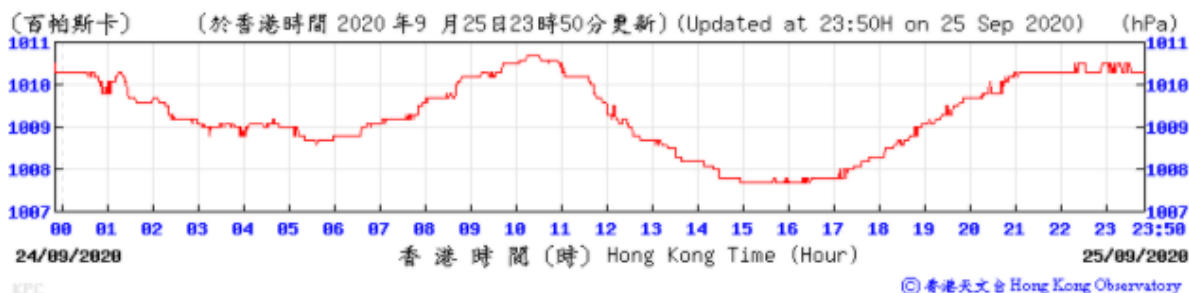
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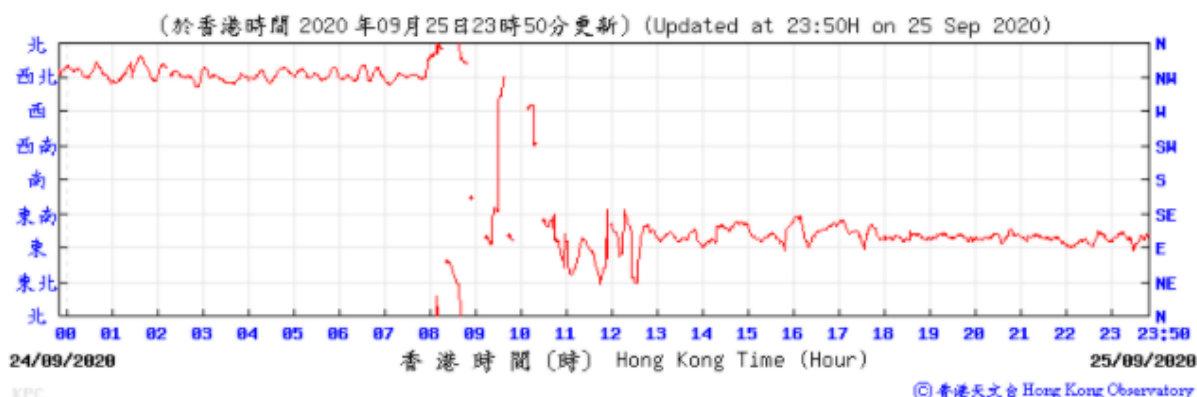
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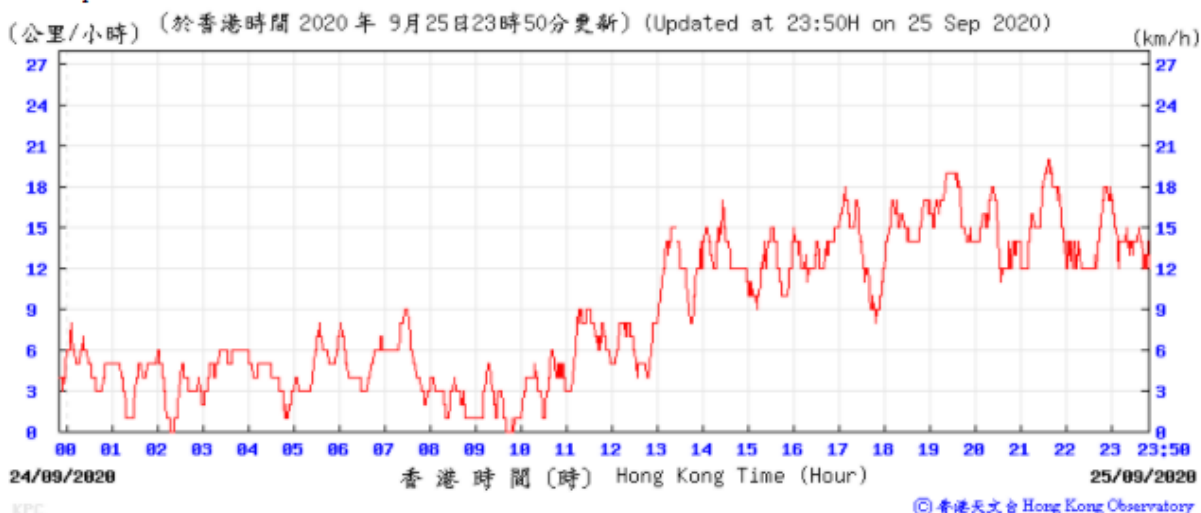
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Wind Direction:

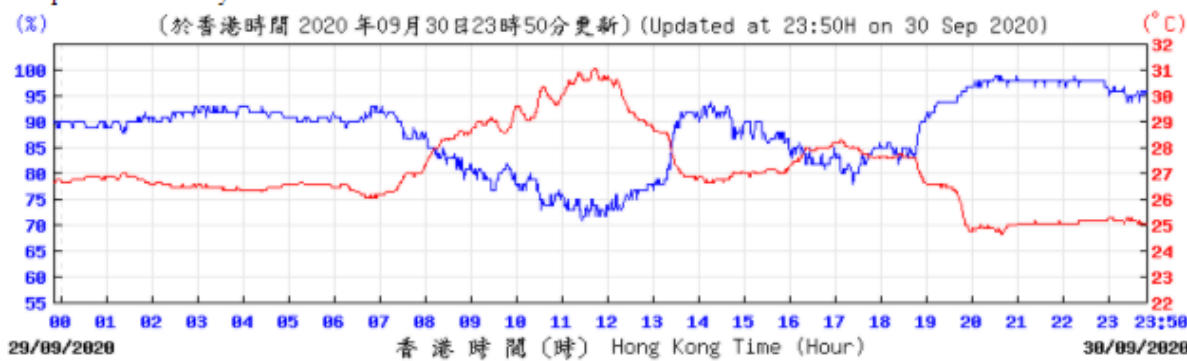


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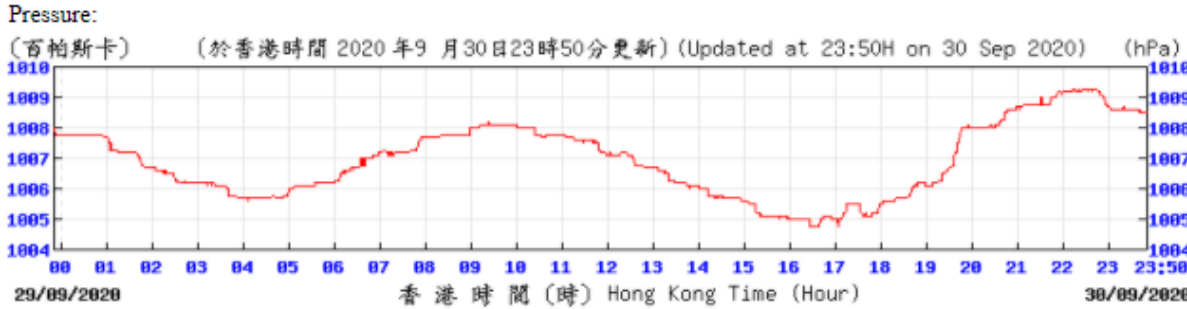




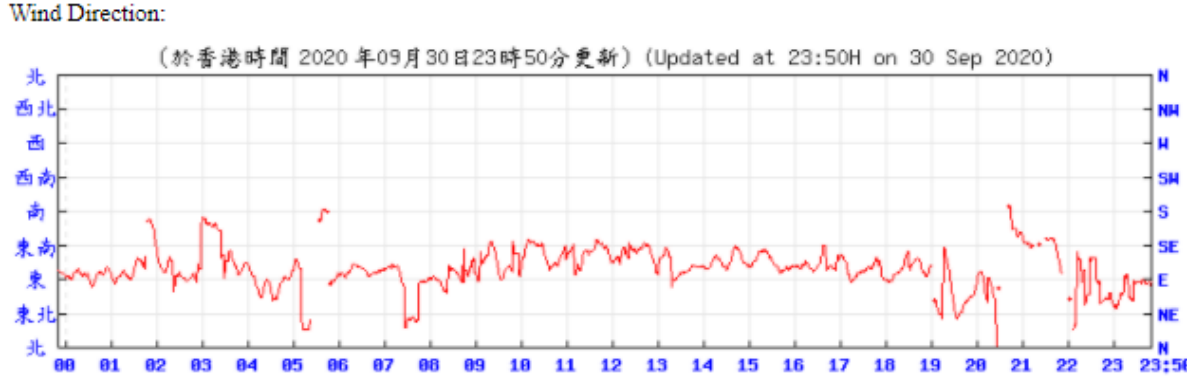
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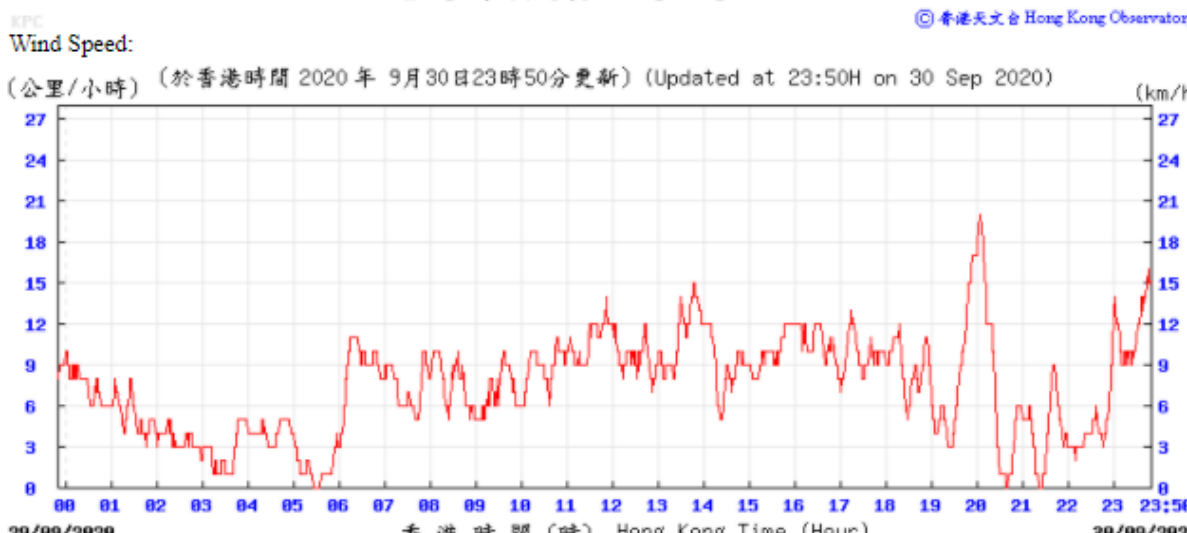
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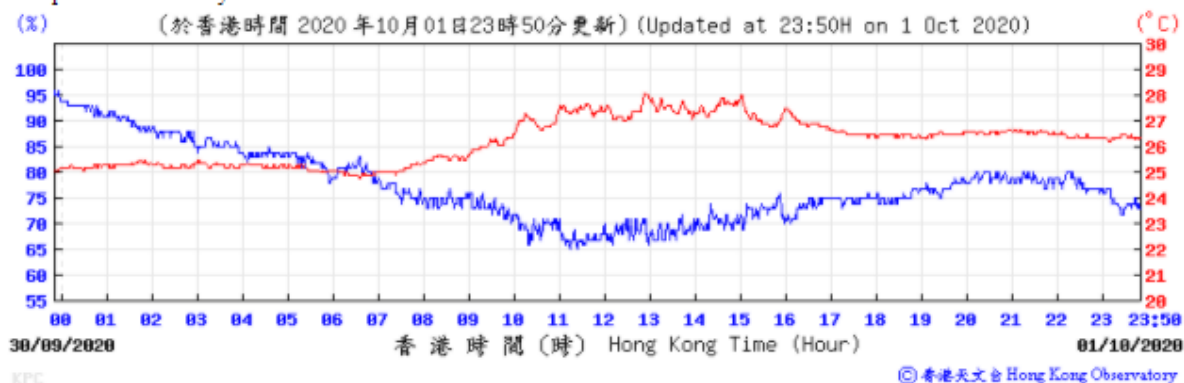
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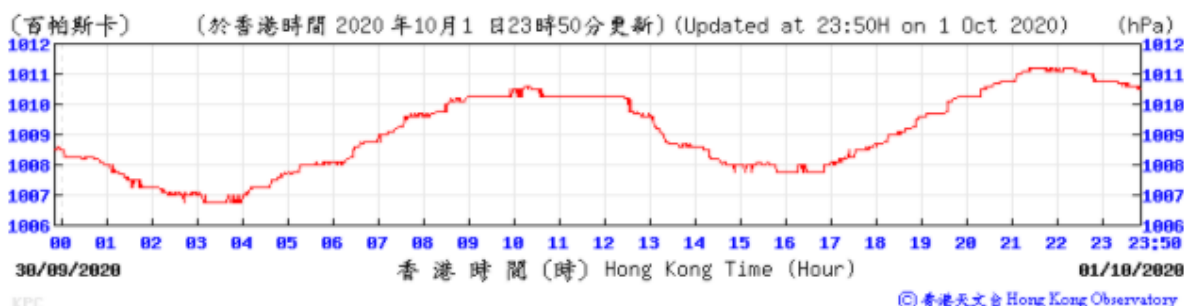
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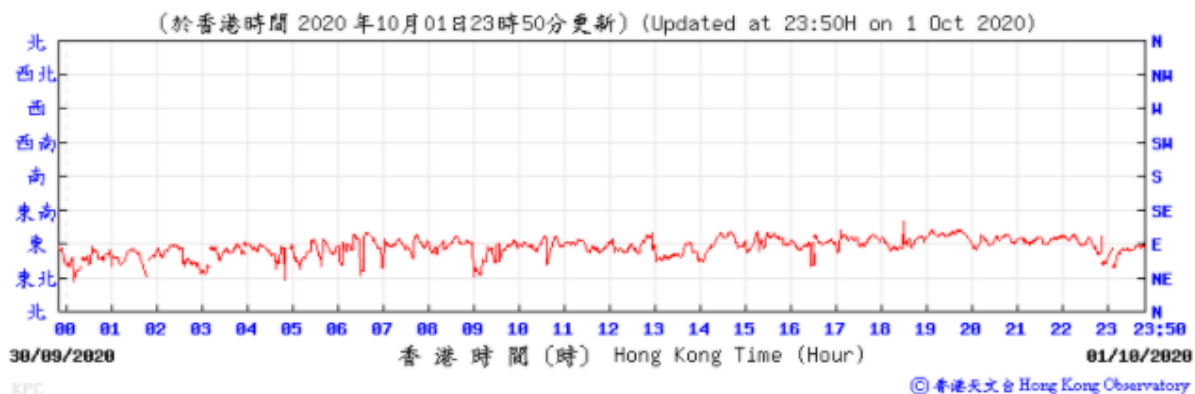
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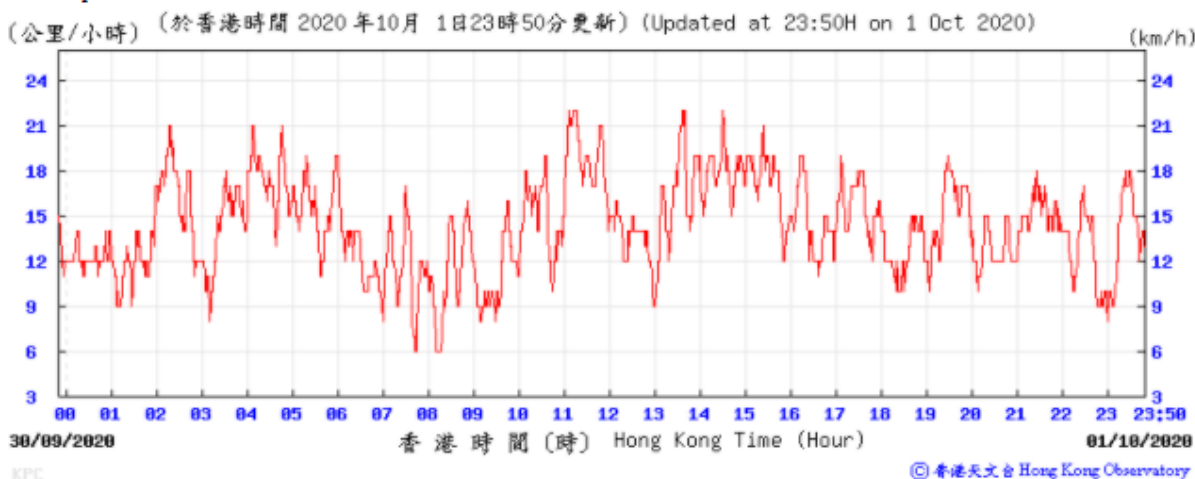
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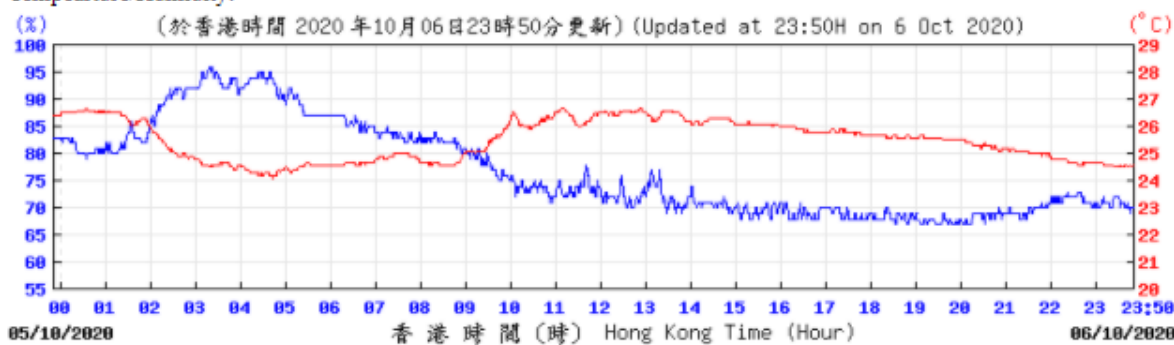


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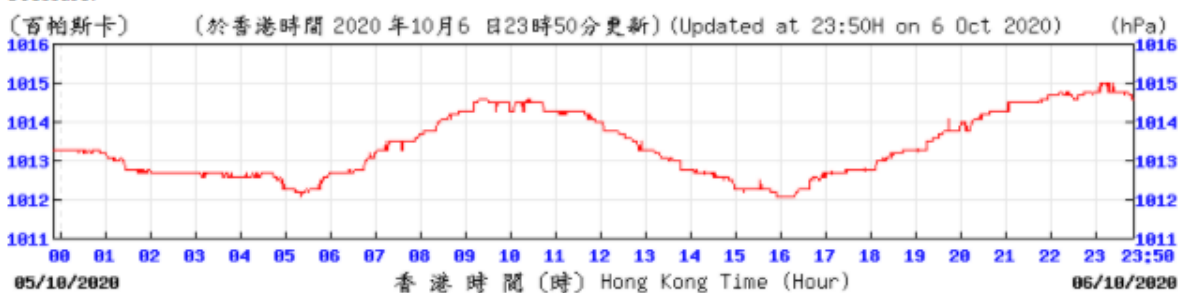




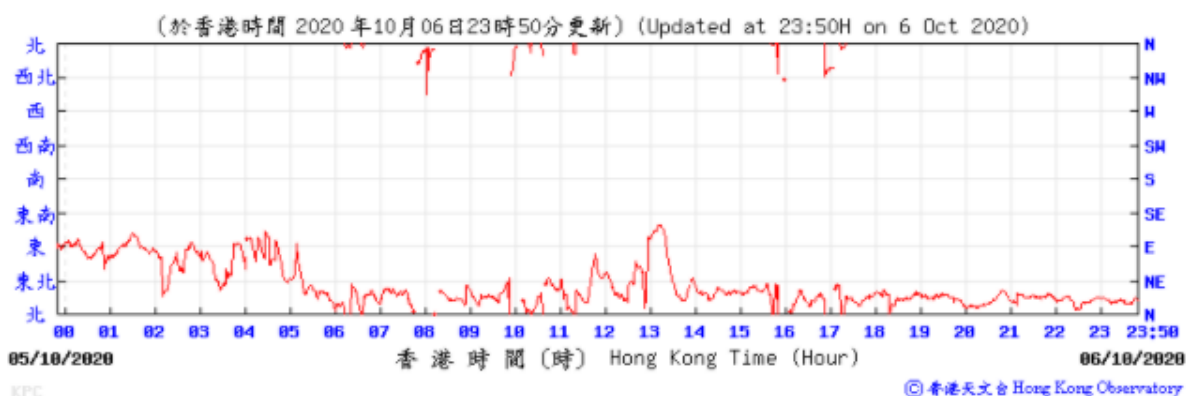
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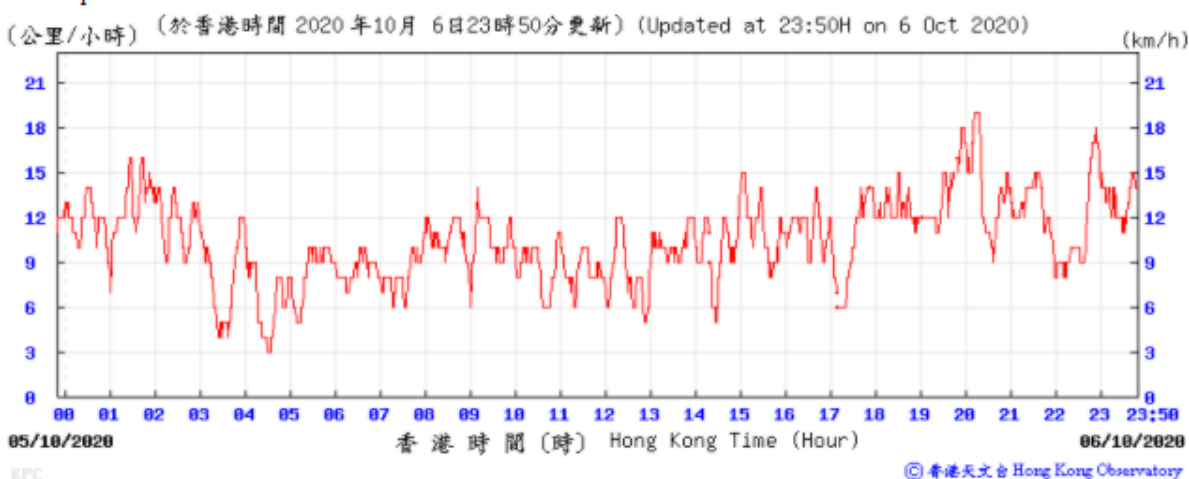
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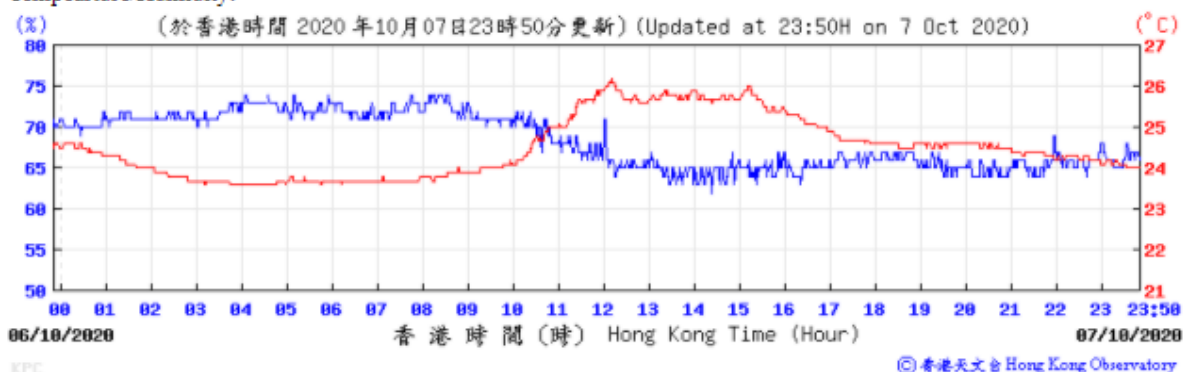
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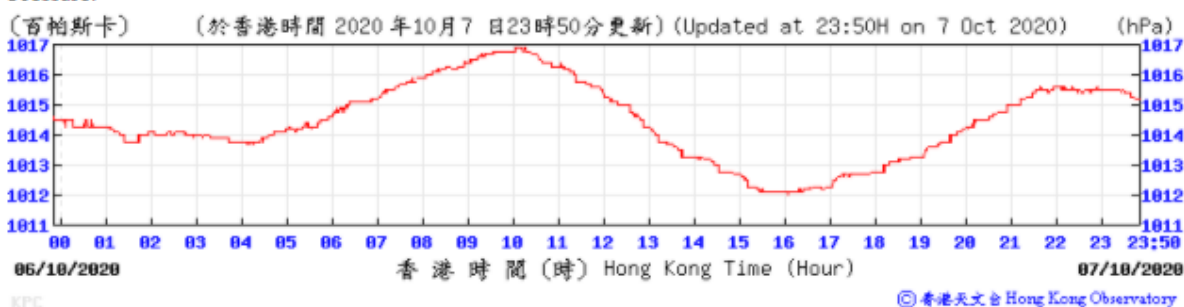
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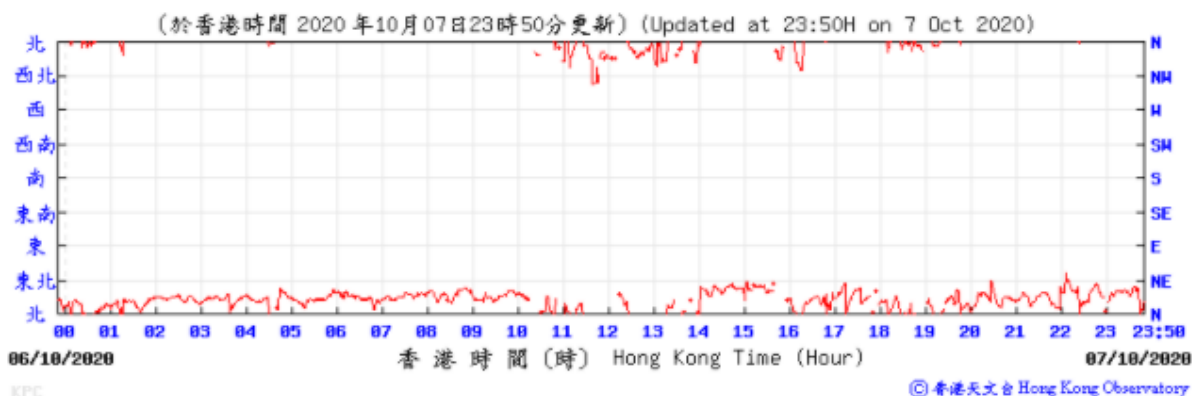
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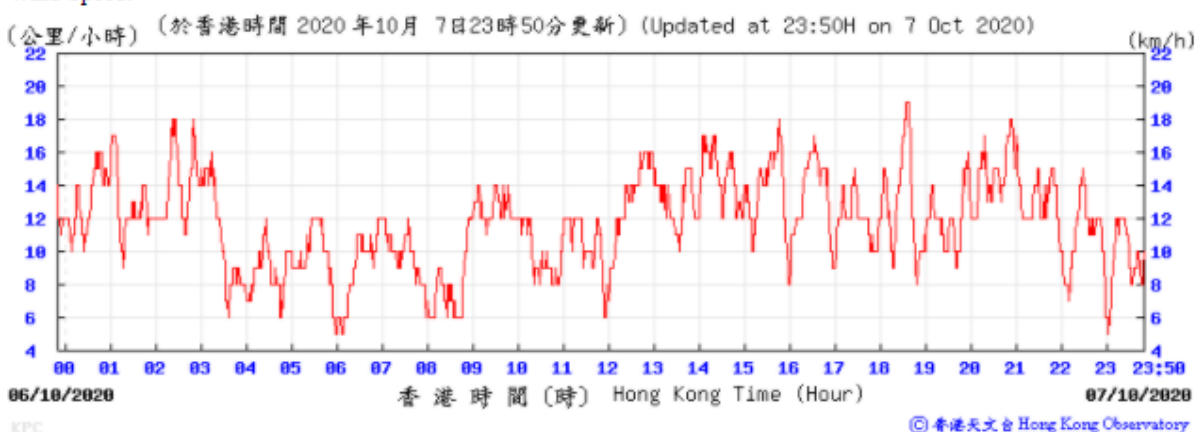
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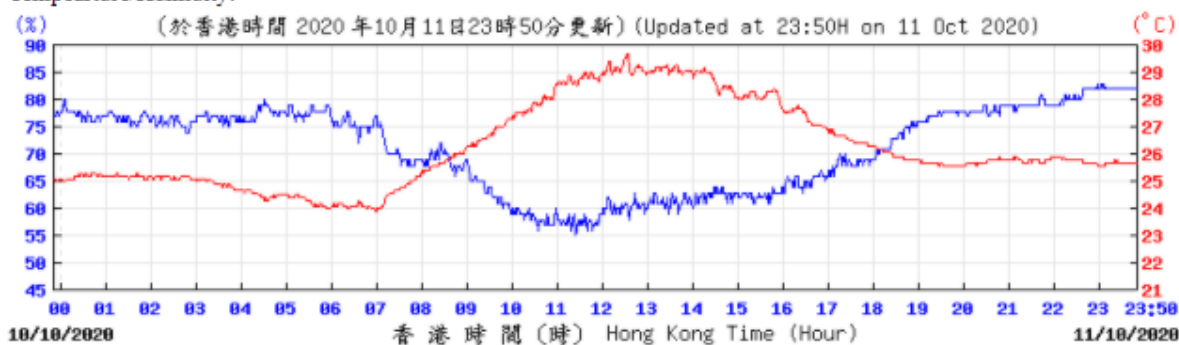
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Wind Speed:

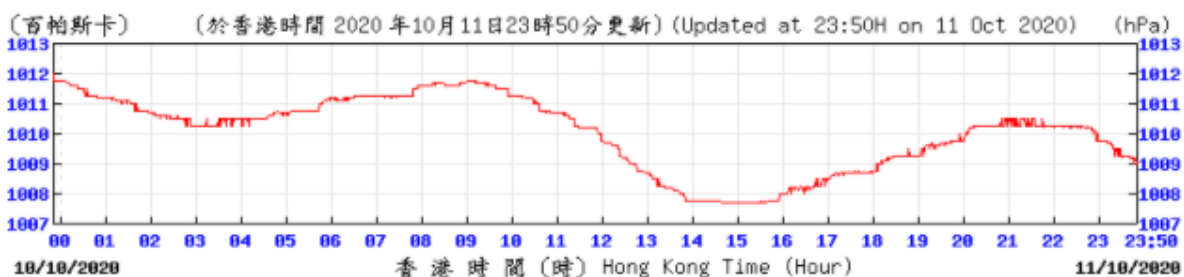


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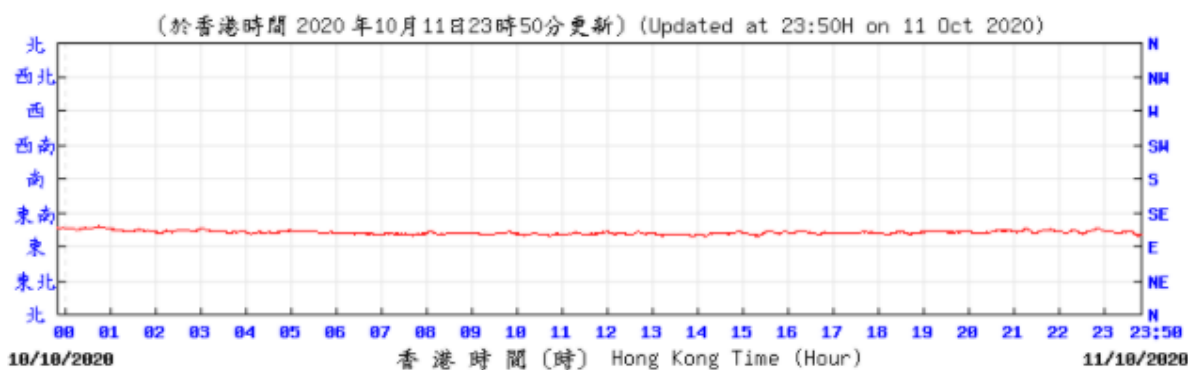
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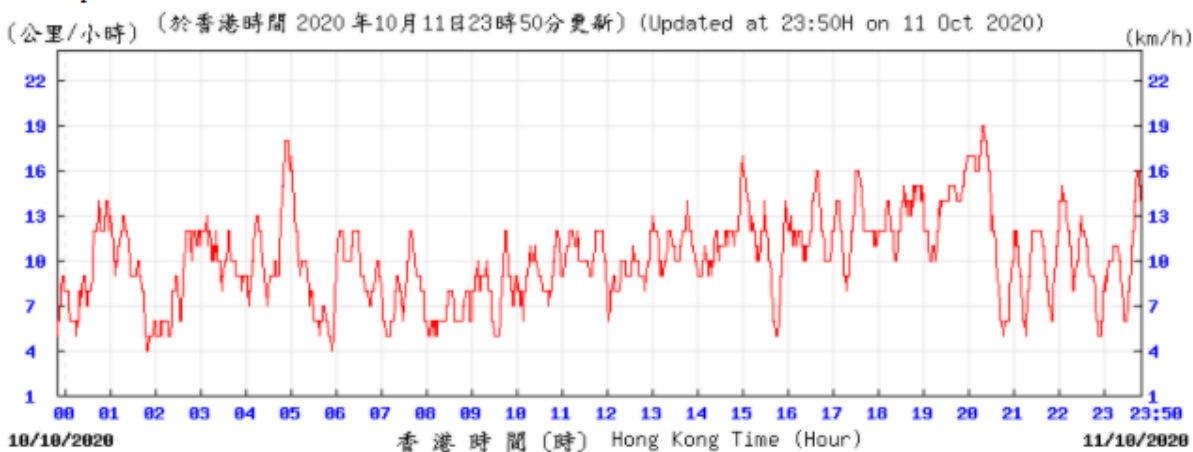
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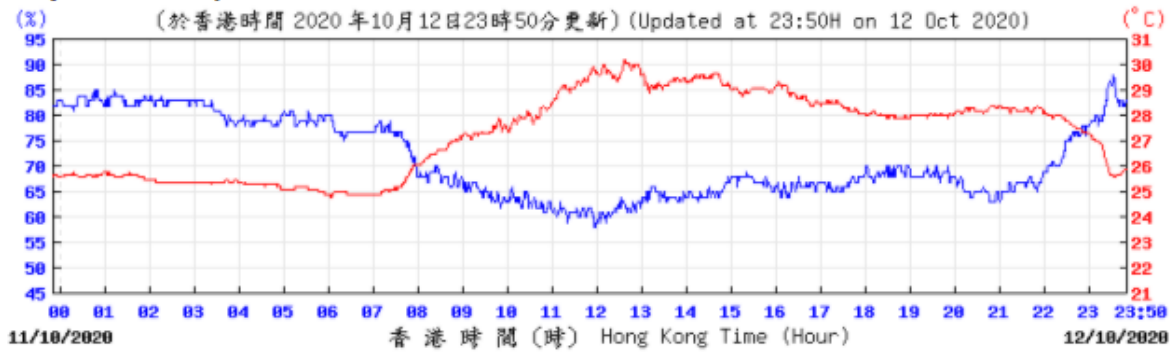
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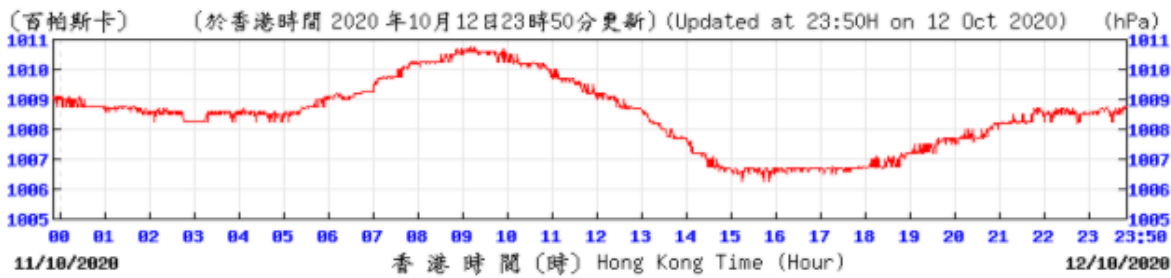
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Temperature/Humidity:



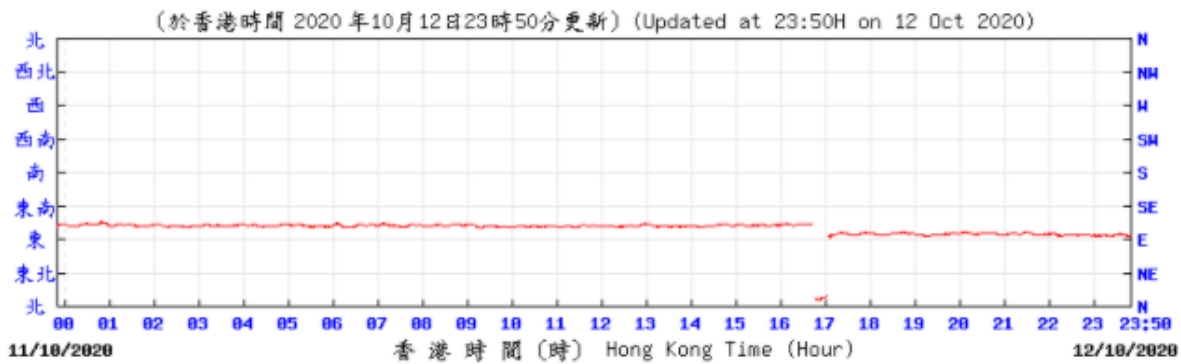
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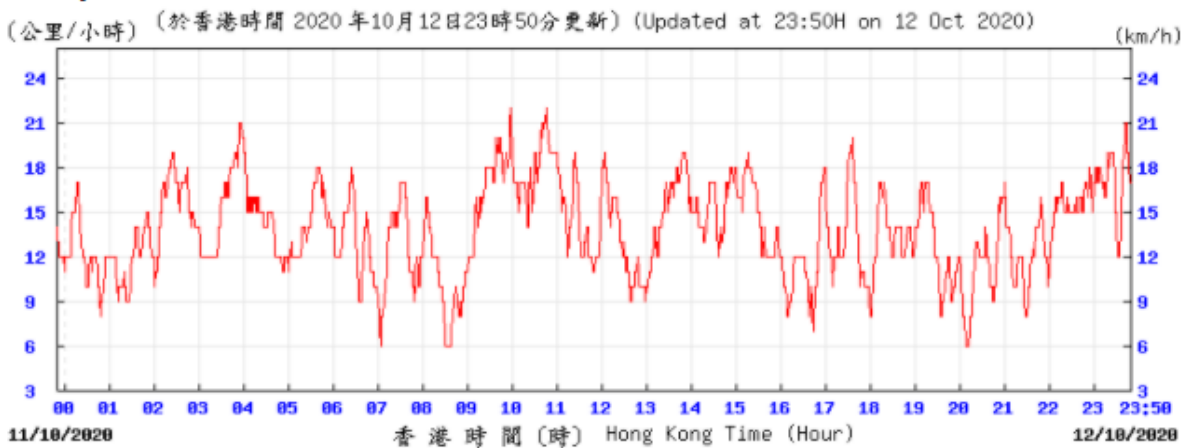
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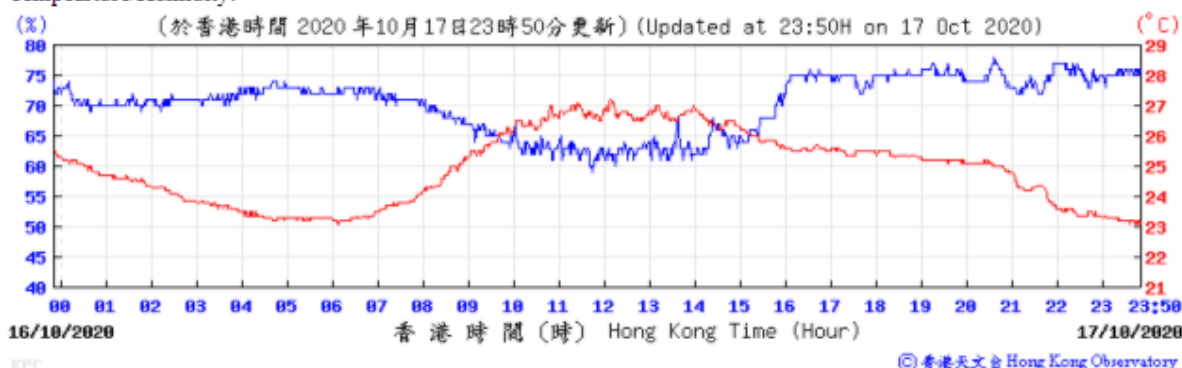
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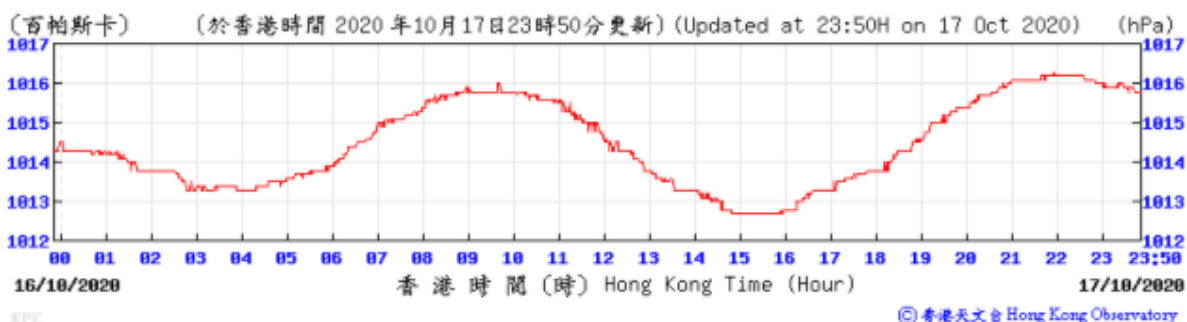


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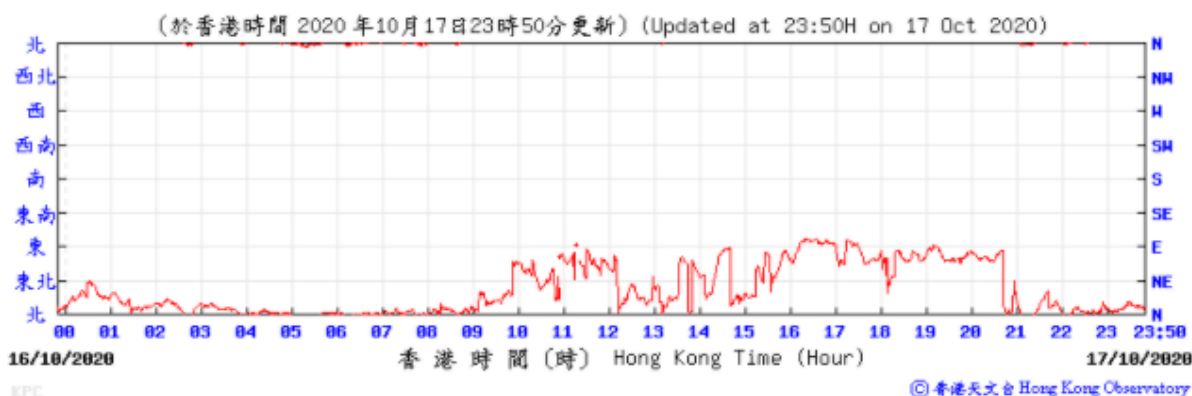
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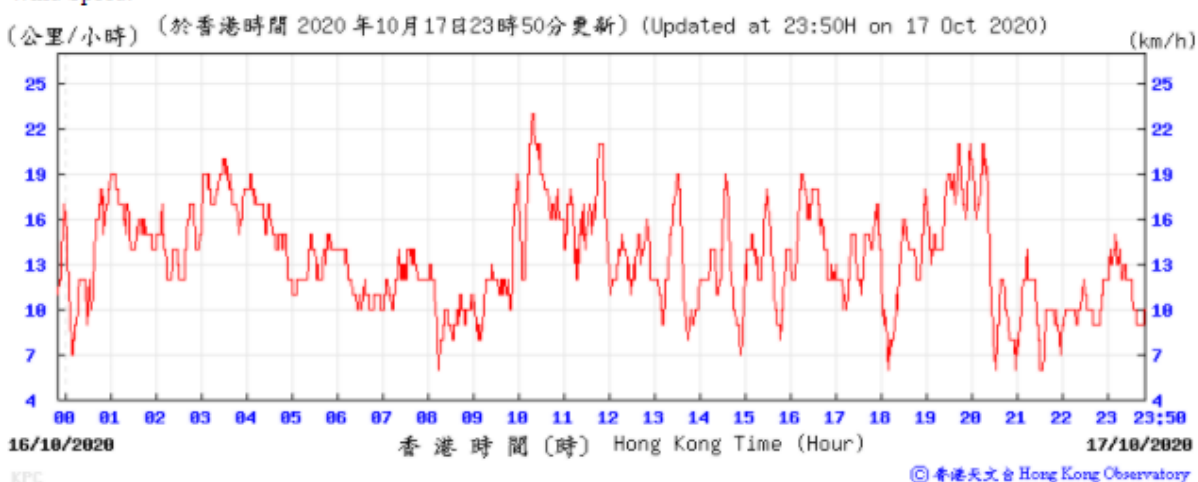
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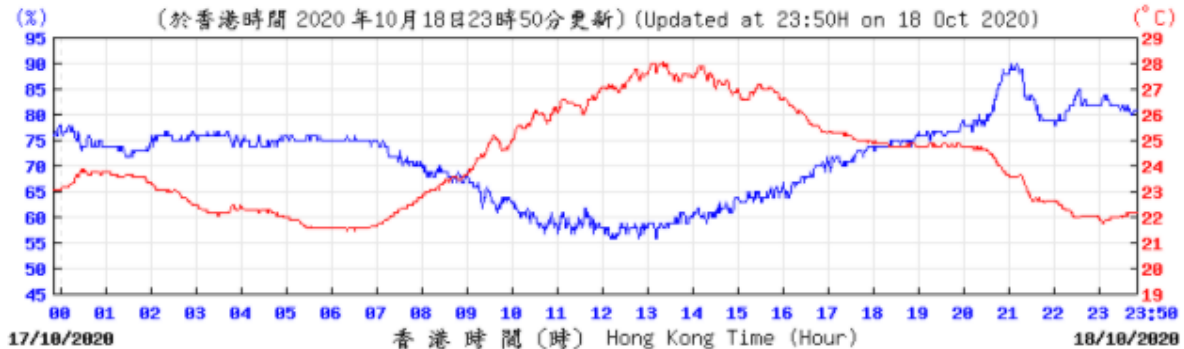
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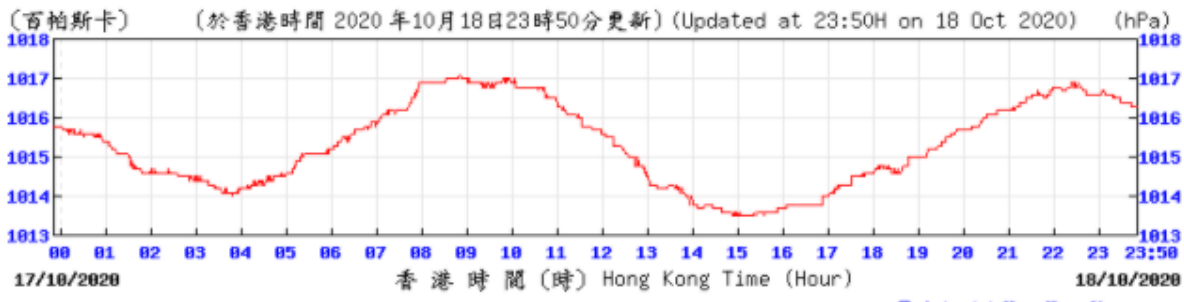


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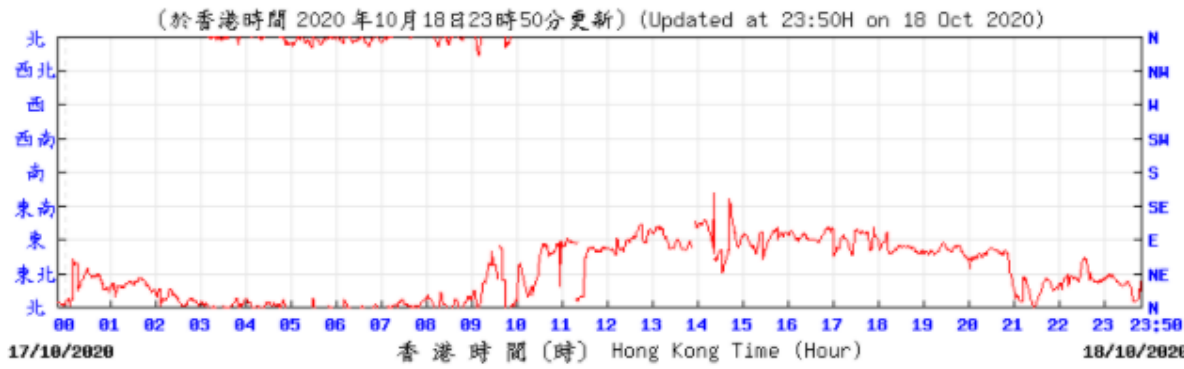
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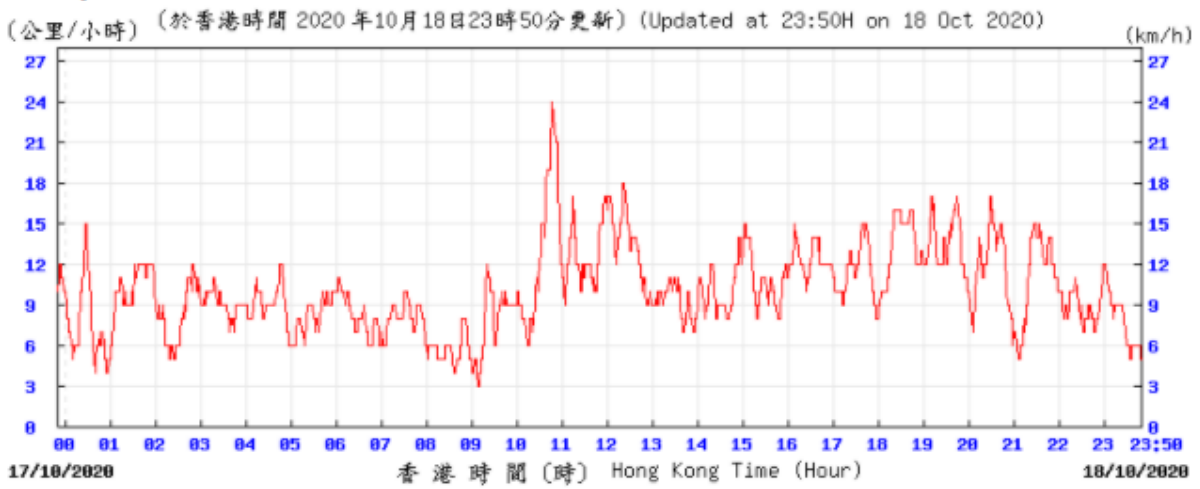
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Wind Direction:



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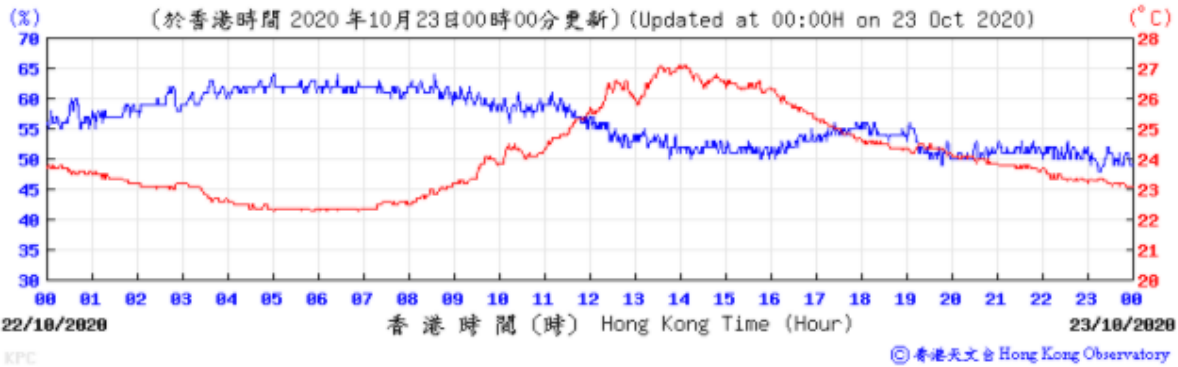
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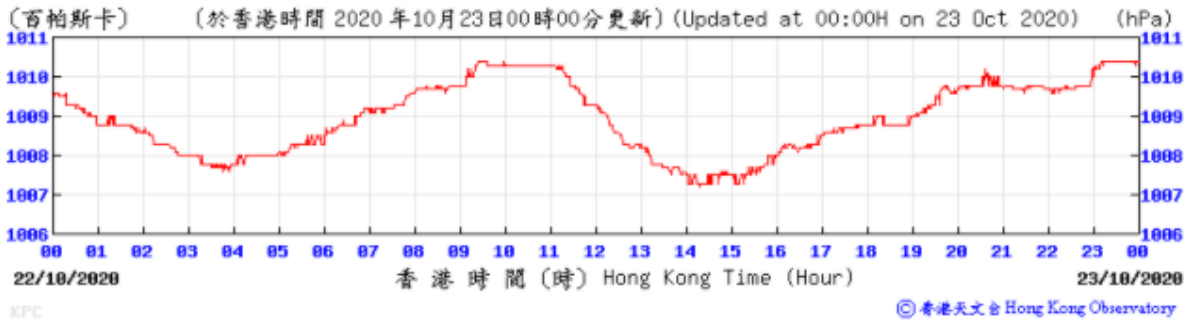
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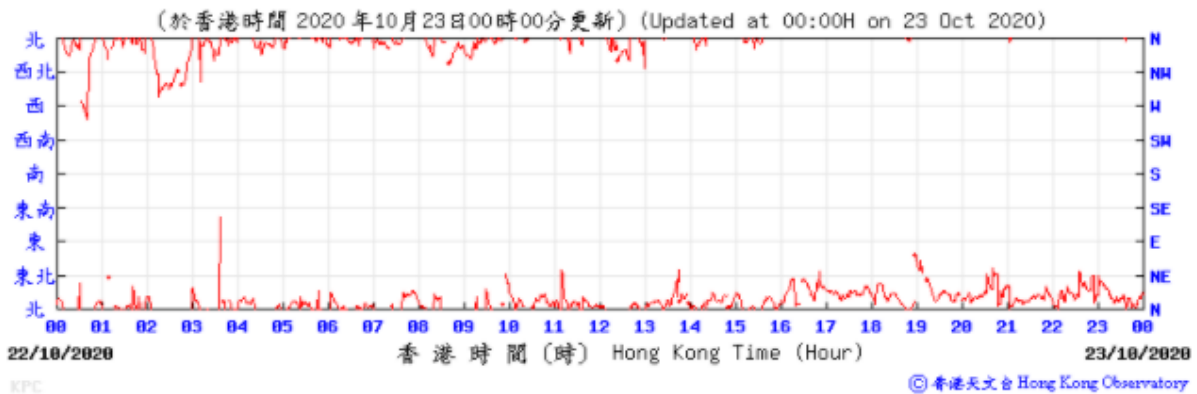
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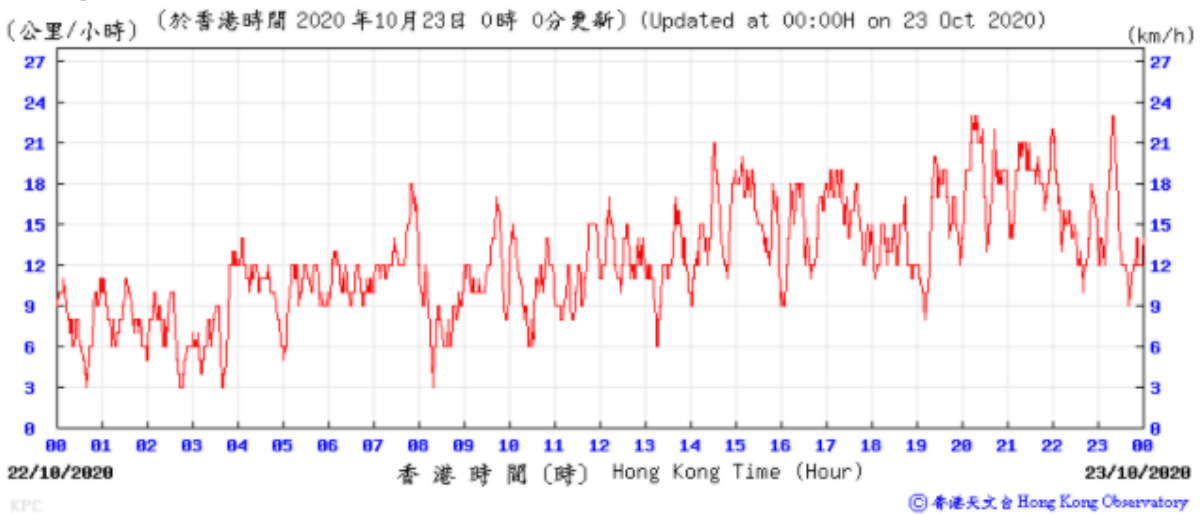
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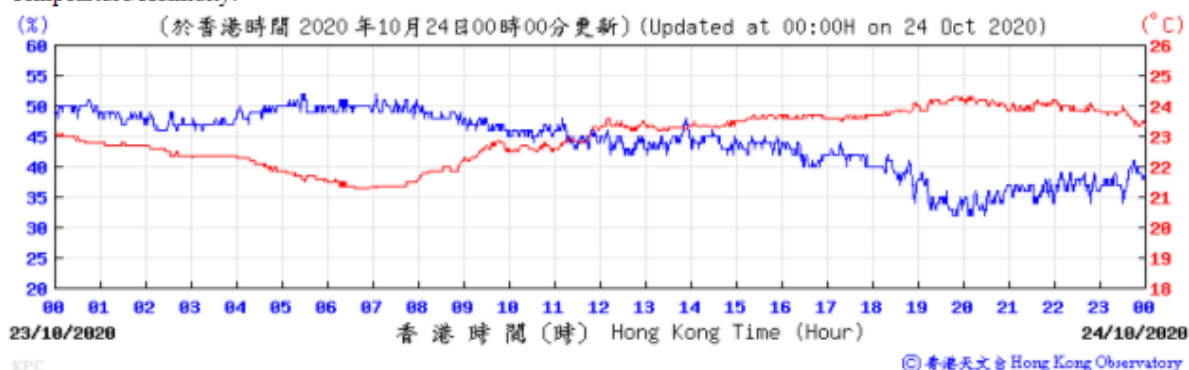
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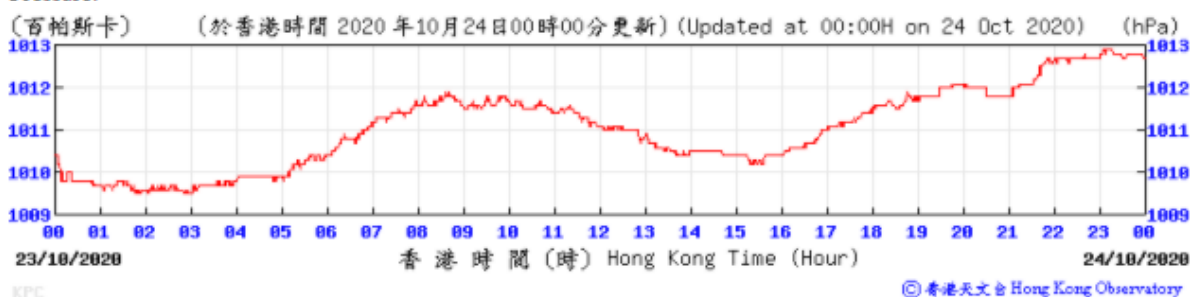
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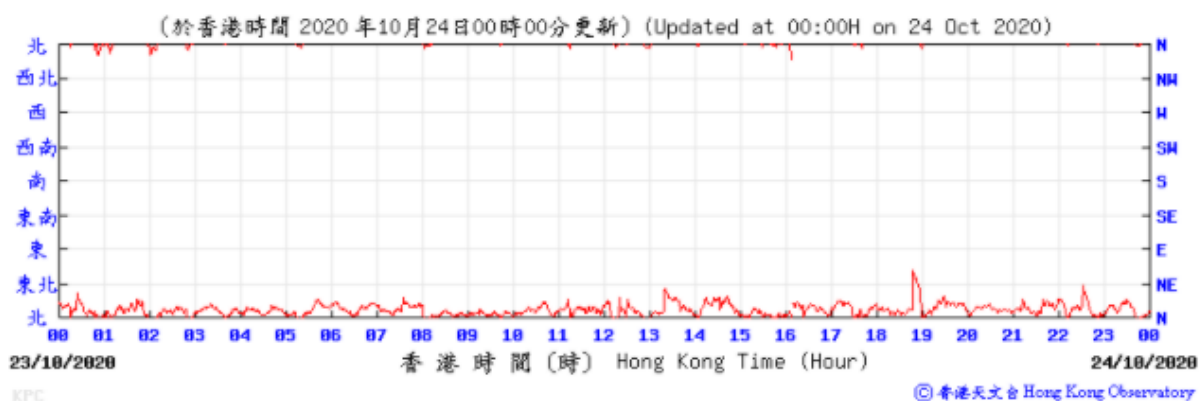
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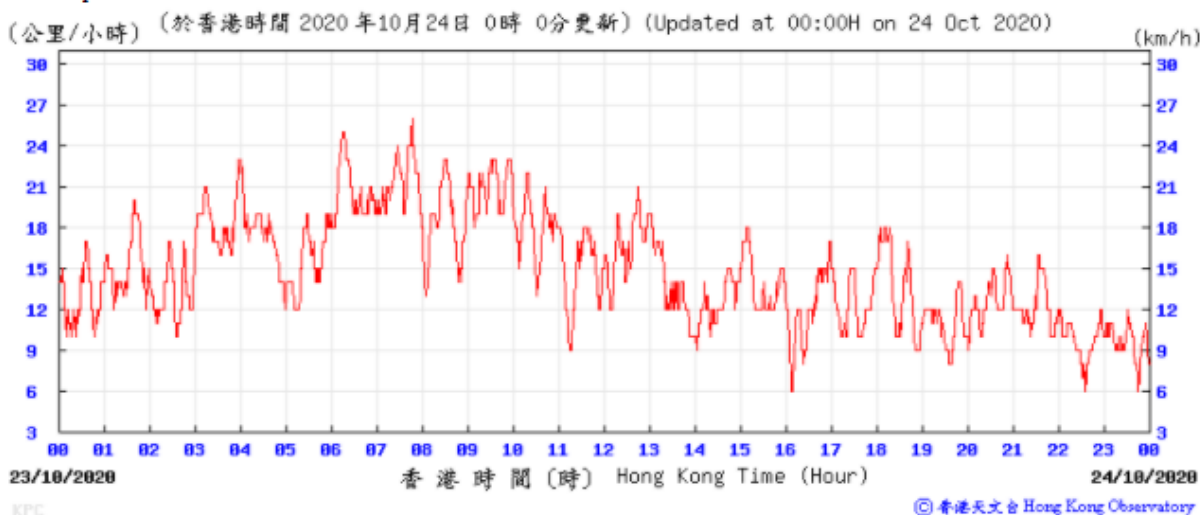
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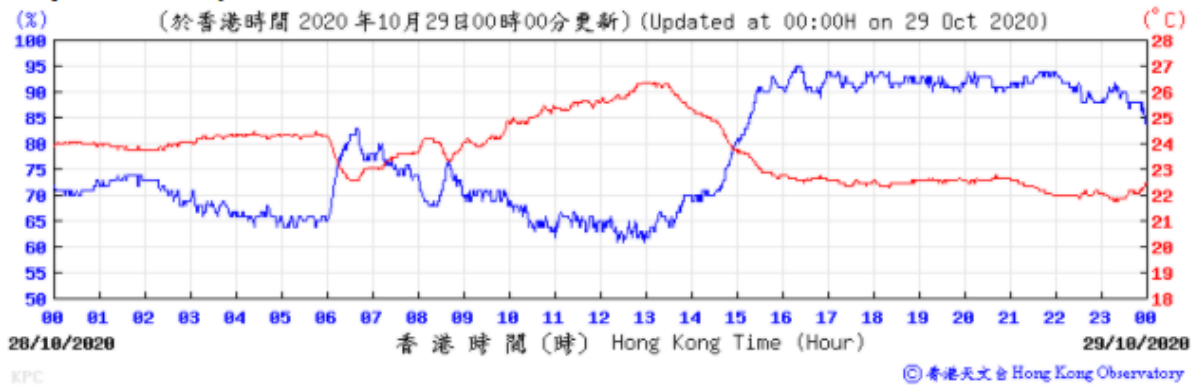


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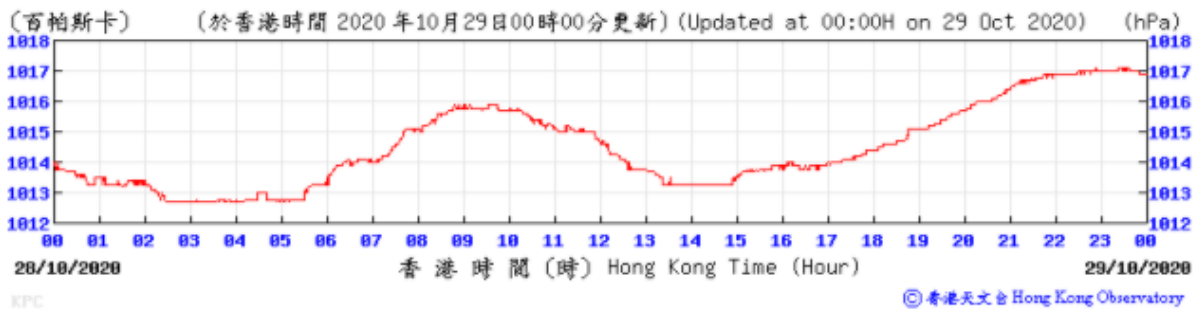




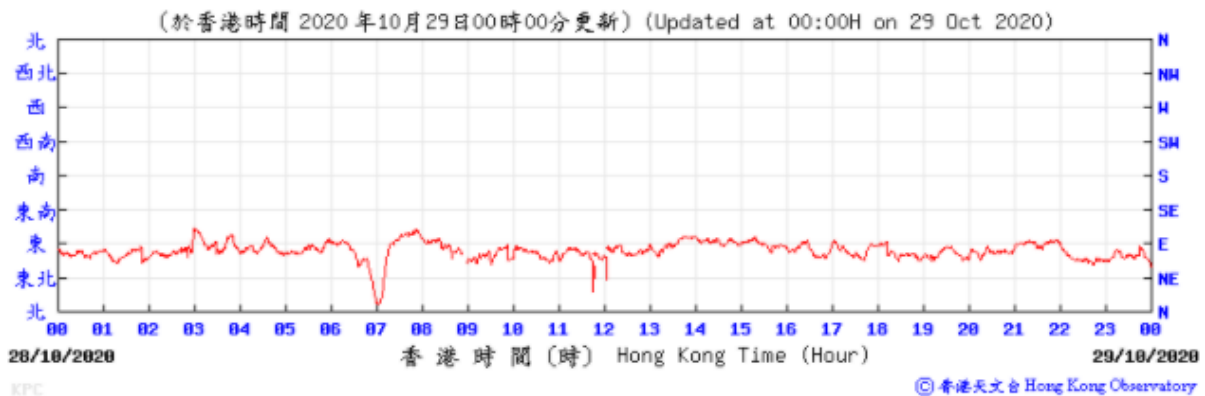
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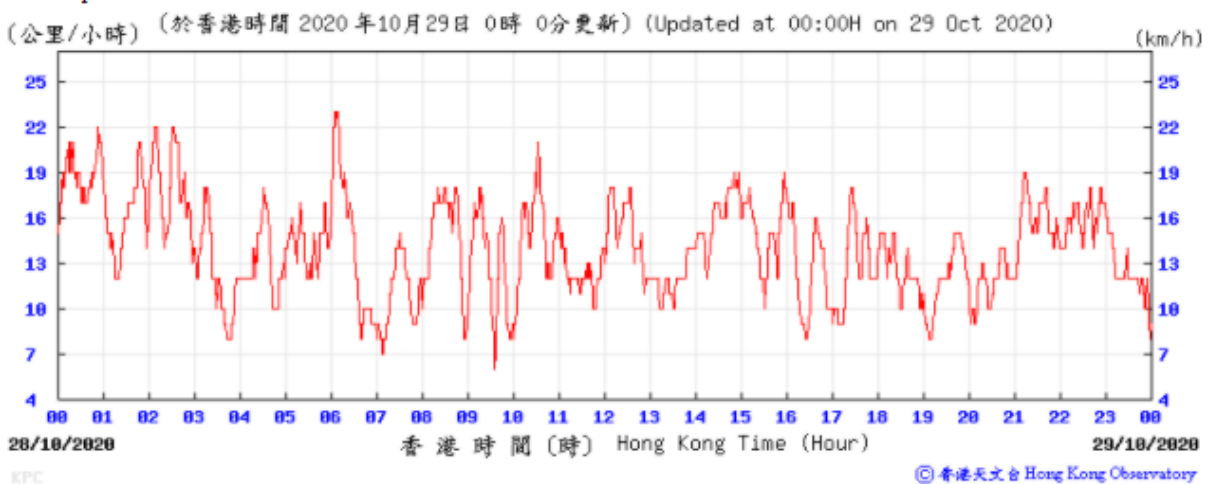
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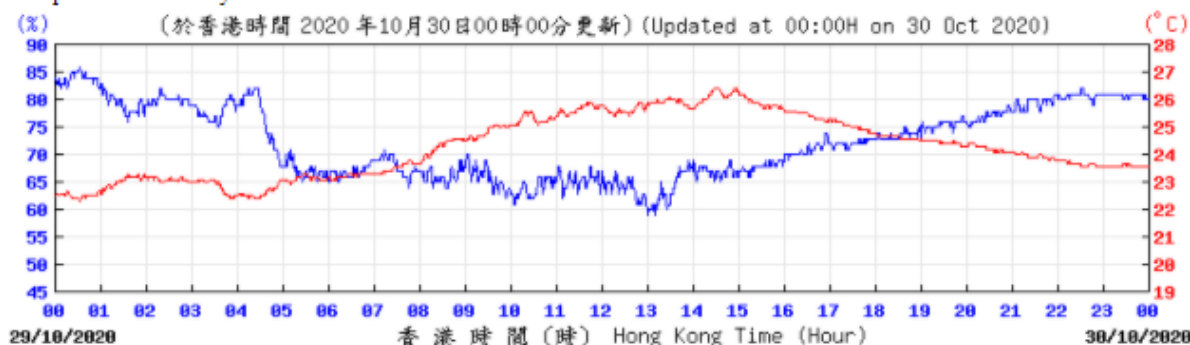
Wind Direction:



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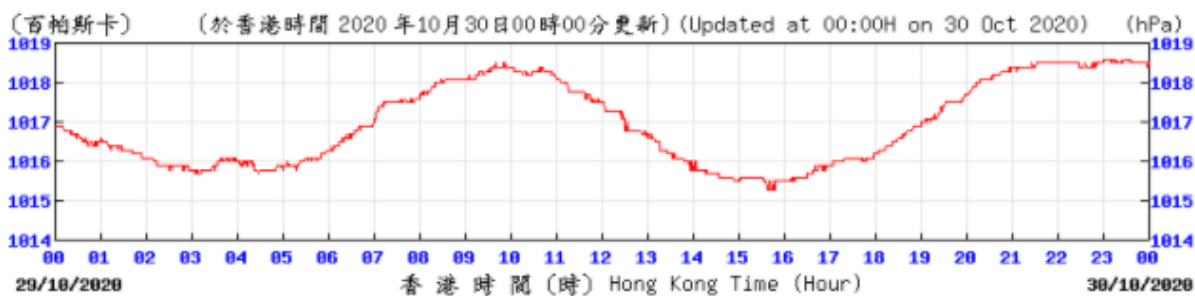


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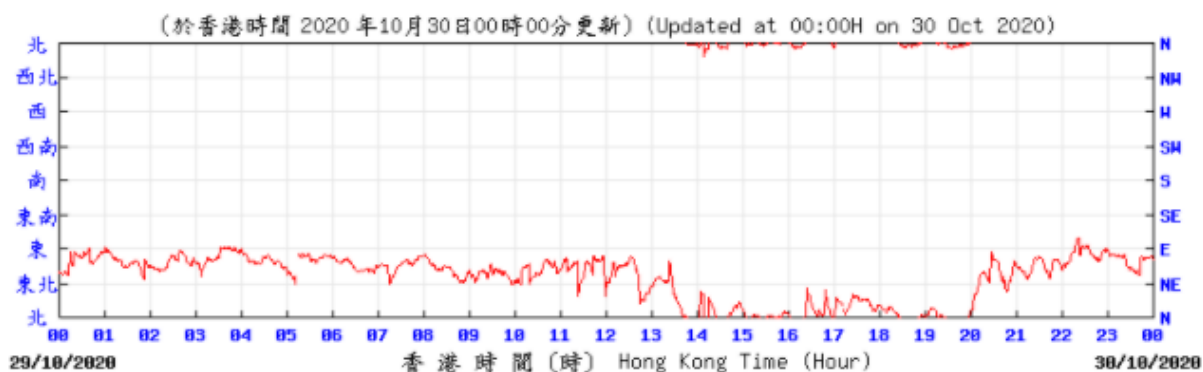
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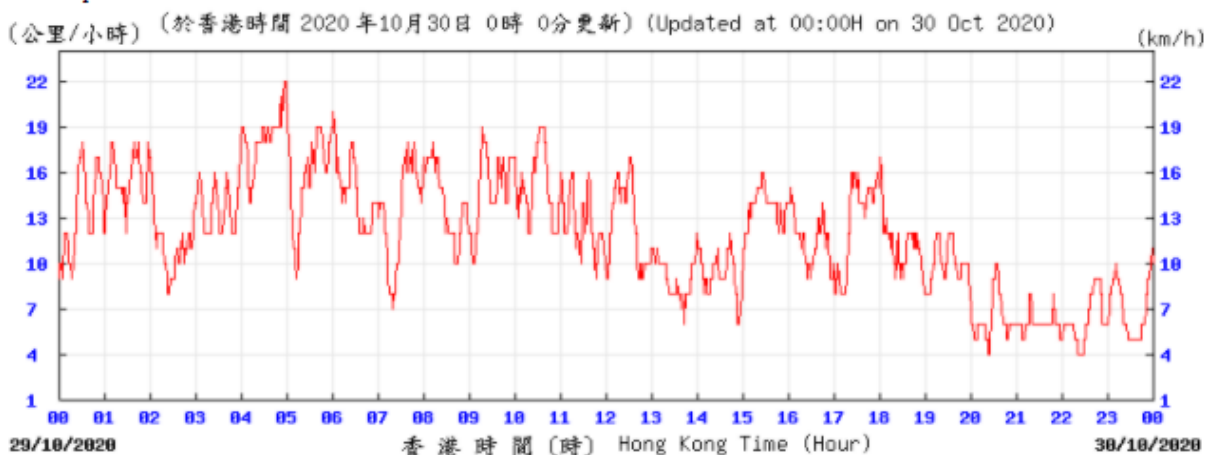
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Wind Direction:



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Wind Speed:



KPC

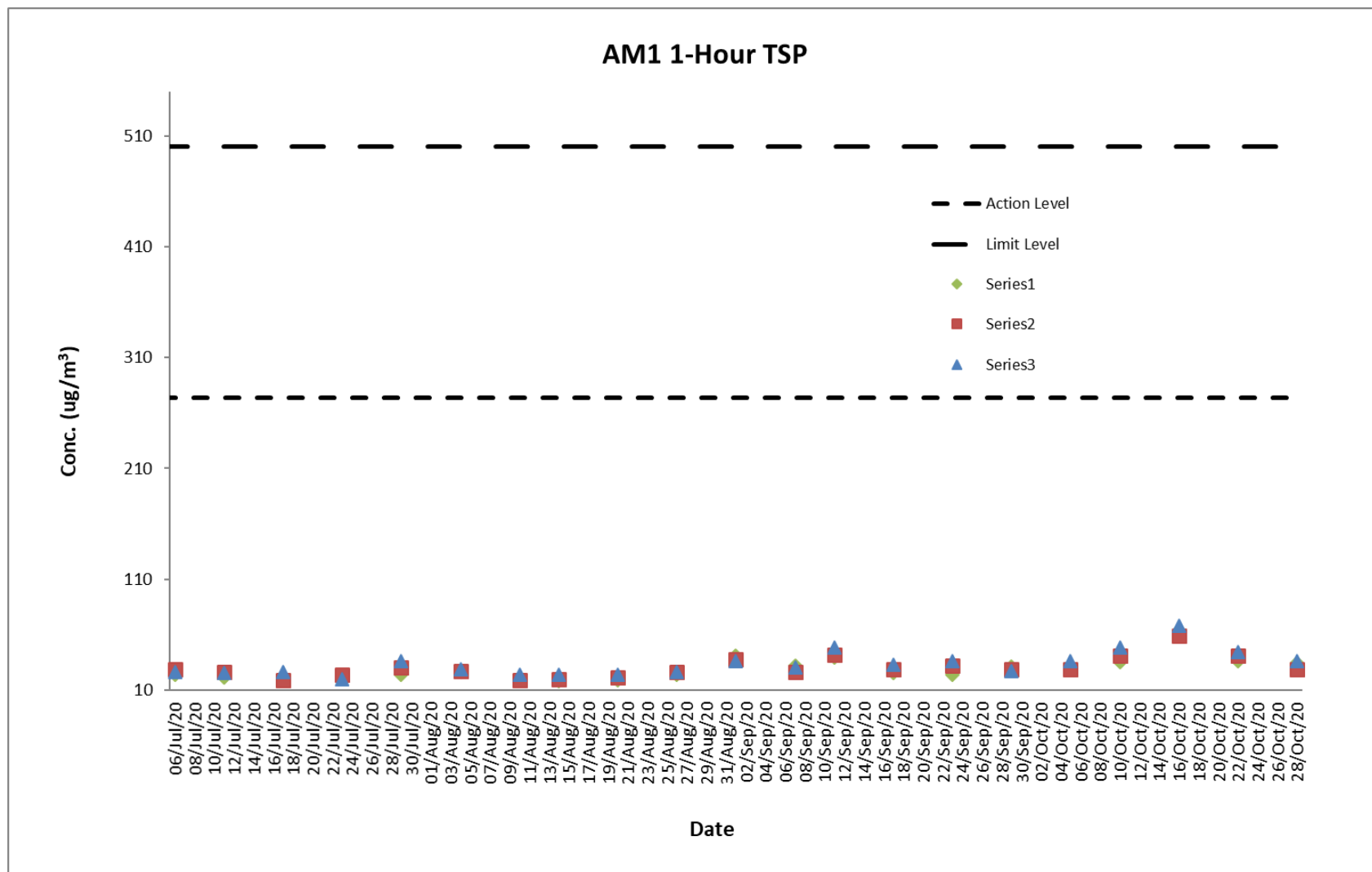
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## **E. Graphical Plots of the Monitoring Results**

**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 <sup>st</sup> Hour	2 <sup>nd</sup> Hour	3 <sup>rd</sup> Hour		
04-Aug-20	Fine	8:12 - 11:12	26	27	29	273.7	500
10-Aug-20	Sunny	13:20 - 16:20	21	19	24	273.7	500
14-Aug-20	Fine	13:22 - 16:22	18	20	24	273.7	500
20-Aug-20	Cloudy	8:17 - 11:17	19	21	24	273.7	500
26-Aug-20	Sunny	8:14 - 11:14	24	26	26	273.7	500
01-Sep-20	Sunny	8:14 - 11:14	41	38	36	273.7	500
07-Sep-20	Cloudy	8:20 - 11:20	32	26	30	273.7	500
11-Sep-20	Fine	13:22 - 16:22	39	42	48	273.7	500
17-Sep-20	Cloudy	8:20 - 11:20	25	29	33	273.7	500
23-Sep-20	Sunny	13:17 - 16:17	24	32	36	273.7	500
29-Sep-20	Cloudy	8:14 - 11:14	31	29	27	273.7	500
05-Oct-20	Cloudy	13:02 - 16:02	32	29	36	273.7	500
10-Oct-20	Sunny	8:22 - 11:22	35	41	48	273.7	500
16-Oct-20	Sunny	13:15 - 16:15	64	59	68	273.7	500
22-Oct-20	Fine	13:02 - 16:02	36	41	44	273.7	500
28-Oct-20	Cloudy	8:20 - 11:20	34	29	36	273.7	500

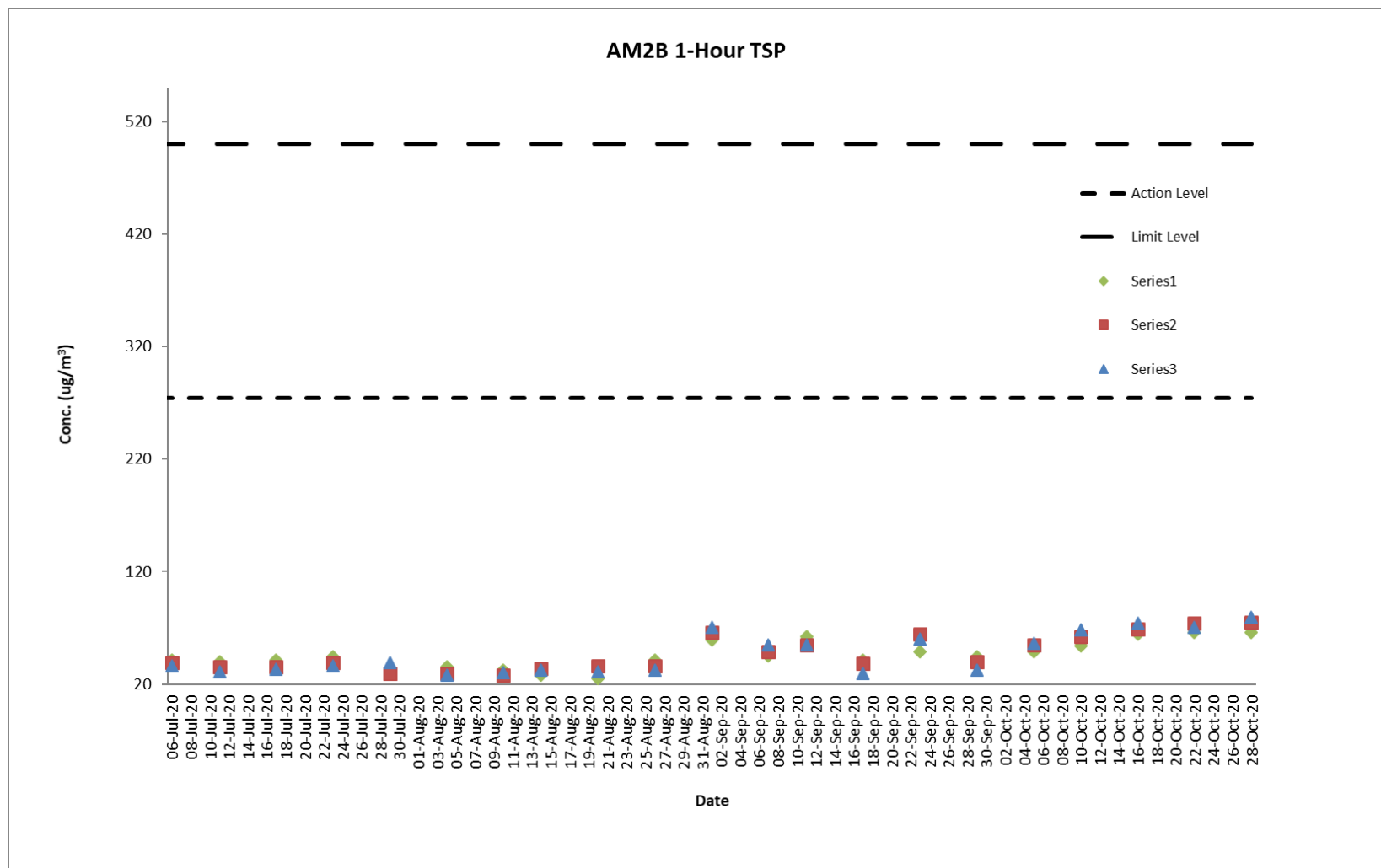
### Graphical Presentation of Air Quality Monitoring Result at Station AM1 (1-hour TSP)



**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 <sup>st</sup> Hour	2 <sup>nd</sup> Hour	3 <sup>rd</sup> Hour		
04-Aug-20	Fine	8:27 - 11:27	35	29	28	274.2	500
10-Aug-20	Sunny	13:34 - 16:34	32	28	30	274.2	500
14-Aug-20	Fine	13:37 - 16:37	28	34	32	274.2	500
20-Aug-20	Cloudy	8:32 - 11:32	25	36	31	274.2	500
26-Aug-20	Sunny	8:30 - 11:30	41	36	32	274.2	500
01-Sep-20	Sunny	8:29 - 11:29	59	66	70	274.2	500
07-Sep-20	Cloudy	8:37 - 11:37	45	49	55	274.2	500
11-Sep-20	Fine	13:36 - 16:36	62	55	55	274.2	500
17-Sep-20	Cloudy	8:35 - 11:35	41	38	29	274.2	500
23-Sep-20	Sunny	13:32 - 16:32	49	64	60	274.2	500
29-Sep-20	Cloudy	8:28 - 11:28	44	40	32	274.2	500
05-Oct-20	Cloudy	13:16 - 16:16	49	55	56	274.2	500
10-Oct-20	Sunny	8:37 - 11:37	54	62	68	274.2	500
16-Oct-20	Sunny	13:30 - 16:30	64	69	74	274.2	500
22-Oct-20	Fine	13:16 - 16:16	66	74	70	274.2	500
28-Oct-20	Cloudy	8:37 - 11:37	66	75	79	274.2	500

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

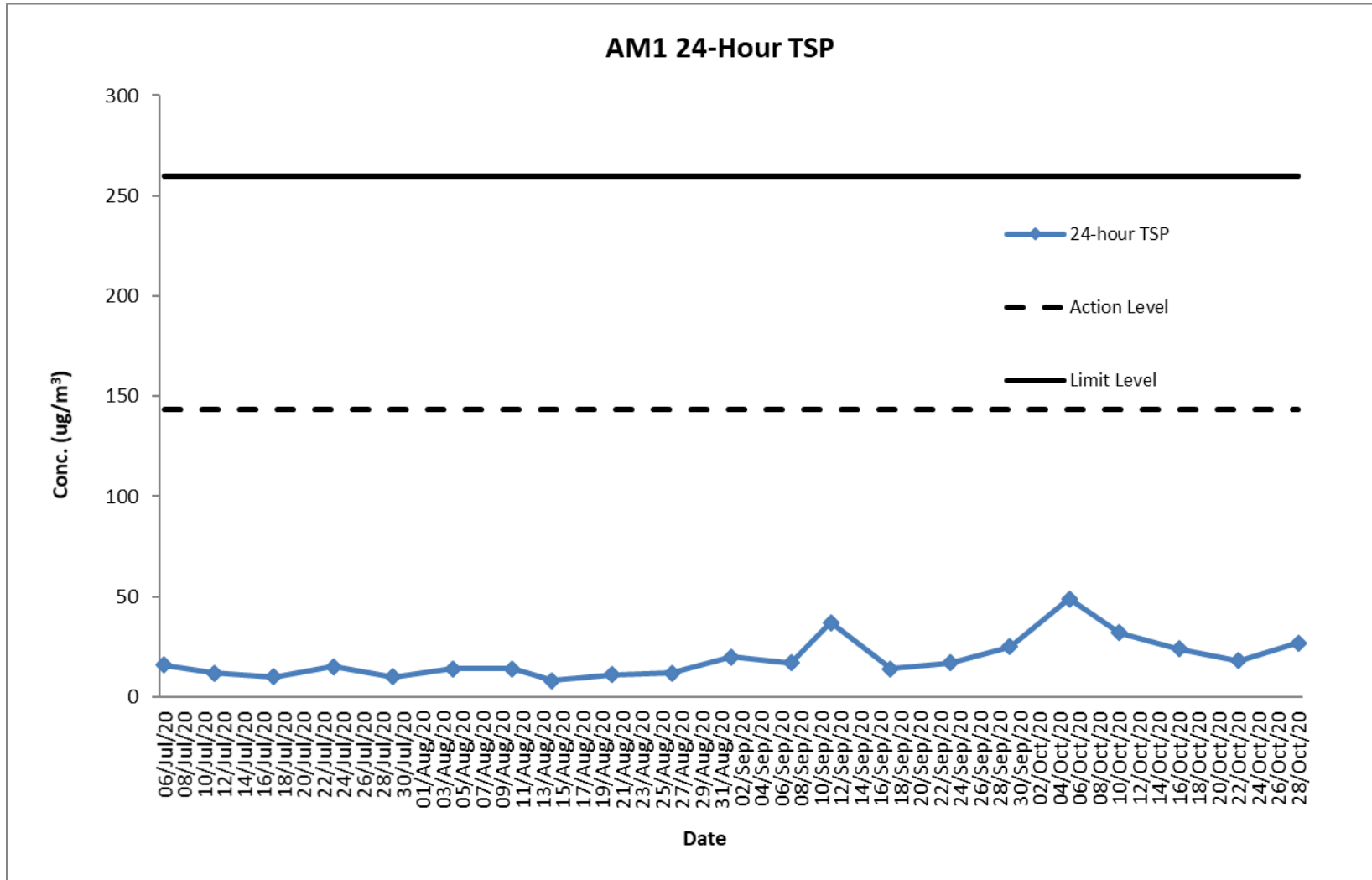


### Air Quality Monitoring Result at Station AM1 (24-hour TSP)

Start		Finish		Filter Weight (g)		Reading		Sampling Time (hrs)	Flow Rate (m <sup>3</sup> /min)			Conc. (µg/m <sup>3</sup> )	Weather Condition	Action Level	Limit Level
Date	Time	Date	Time	Initial	Final	Initial	Final		Initial	Final	Average				
04-Aug-20	08:10	05-Aug-20	08:10	2.6773	2.7023	22136.38	22160.38	24	1.27	1.27	1.27	14	Fine	143.6	260
10-Aug-20	08:18	11-Aug-20	08:18	2.6831	2.708	22160.38	22184.38	24	1.27	1.27	1.27	14	Sunny	143.6	260
14-Aug-20	08:20	15-Aug-20	08:20	2.6878	2.7024	22184.38	22208.38	24	1.27	1.27	1.27	8	Fine	143.6	260
20-Aug-20	08:15	21-Aug-20	08:15	2.6958	2.7168	22208.38	22232.38	24	1.27	1.27	1.27	11	Cloudy	143.6	260
26-Aug-20	08:12	27-Aug-20	08:12	2.6477	2.6691	22232.38	22256.38	24	1.27	1.27	1.27	12	Sunny	143.6	260
01-Sep-20	08:12	02-Sep-20	08:12	2.6716	2.7082	22256.38	22280.38	24	1.27	1.27	1.27	20	Sunny	143.6	260
07-Sep-20	08:18	08-Sep-20	08:18	2.6778	2.7082	22280.38	22304.38	24	1.27	1.27	1.27	17	Cloudy	143.6	260
11-Sep-20	08:20	12-Sep-20	08:20	2.6802	2.7480	22304.38	22328.38	24	1.27	1.27	1.27	37	Fine	143.6	260
17-Sep-20	08:18	18-Sep-20	08:18	2.6887	2.7148	22328.38	22352.38	24	1.27	1.27	1.27	14	Cloudy	143.6	260
23-Sep-20	08:15	24-Sep-20	08:15	2.7080	2.7385	22352.38	22376.38	24	1.22	1.22	1.22	17	Cloudy	143.6	260
29-Sep-20	08:12	30-Sep-20	08:12	2.6959	2.7394	22376.38	22400.38	24	1.22	1.22	1.22	25	Cloudy	143.6	260
05-Oct-20	09:00	06-Oct-20	09:00	2.6969	2.7837	22400.38	22424.38	24	1.22	1.22	1.22	49	Cloudy	143.6	260
10-Oct-20	08:20	11-Oct-20	08:20	2.7182	2.7744	22424.38	22448.38	24	1.22	1.22	1.22	32	Sunny	143.6	260
16-Oct-20	08:13	17-Oct-20	08:13	2.6765	2.7189	22448.38	22472.38	24	1.22	1.22	1.22	24	Sunny	143.6	260
22-Oct-20	08:20	23-Oct-20	08:20	2.6907	2.7227	22472.38	22496.38	24	1.22	1.22	1.22	18	Fine	143.6	260
28-Oct-20	08:18	29-Oct-20	08:18	2.6832	2.7300	22496.38	22520.38	24	1.22	1.22	1.22	27	Cloudy	143.6	260



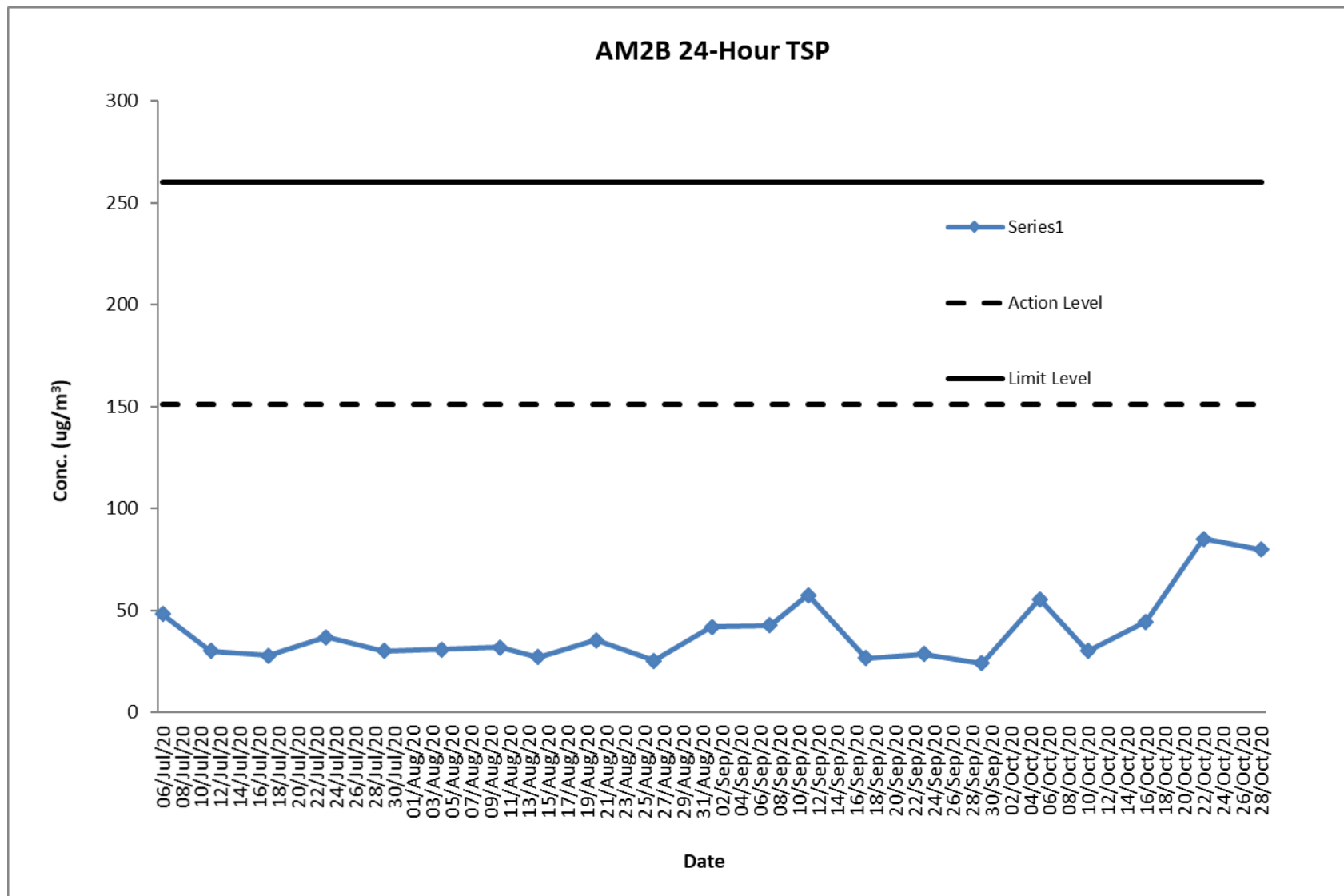
Graphical Presentation of Air Quality Monitoring Result at Station AM1 (24-hour TSP)



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

Start		Finish		Filter Weight (g)		Reading		Sampling Time (hrs)	Flow Rate (m <sup>3</sup> /min)			Conc. (µg/m <sup>3</sup> )	Weather Condition	Action Level	Limit Level
Date	Time	Date	Time	Initial	Final	Initial	Final		Initial	Final	Average				
04-Aug-20	08:25	05-Aug-20	08:25	2.6790	2.7347	21691.05	21715.05	24	1.26	1.26	1.26	31	Fine	151.1	260
10-Aug-20	08:32	11-Aug-20	08:32	2.6900	2.7478	21715.05	21739.05	24	1.26	1.26	1.26	32	Sunny	151.1	260
14-Aug-20	08:35	15-Aug-20	08:35	2.6892	2.7384	21739.05	21763.05	24	1.26	1.26	1.26	27	Fine	151.1	260
20-Aug-20	08:30	21-Aug-20	08:30	2.6702	2.7345	21763.05	21787.05	24	1.26	1.26	1.26	35	Cloudy	151.1	260
26-Aug-20	08:27	27-Aug-20	08:27	2.6656	2.7114	21787.05	21811.05	24	1.26	1.26	1.26	25	Sunny	151.1	260
01-Sep-20	08:27	02-Sep-20	08:27	2.6803	2.7563	21811.05	21835.05	24	1.26	1.26	1.26	42	Sunny	151.1	260
07-Sep-20	08:35	08-Sep-20	08:35	2.6982	2.7755	21835.05	21859.05	24	1.26	1.26	1.26	43	Cloudy	151.1	260
11-Sep-20	08:34	12-Sep-20	08:34	2.6870	2.7913	21859.05	21883.05	24	1.26	1.26	1.26	57	Fine	151.1	260
17-Sep-20	08:33	18-Sep-20	08:33	2.6976	2.7458	21883.05	21907.05	24	1.26	1.26	1.26	27	Cloudy	151.1	260
23-Sep-20	08:30	24-Sep-20	08:30	2.7084	2.7597	21907.05	21931.05	24	1.25	1.25	1.25	28	Sunny	151.1	260
29-Sep-20	08:26	30-Sep-20	08:26	2.7031	2.7472	21931.05	21955.05	24	1.25	1.25	1.25	24	Cloudy	151.1	260
05-Oct-20	09:14	06-Oct-20	09:14	2.6895	2.7895	21955.05	21979.05	24	1.25	1.25	1.25	56	Cloudy	151.1	260
10-Oct-20	08:35	11-Oct-20	08:35	2.6990	2.7532	21979.05	22003.05	24	1.25	1.25	1.25	30	Sunny	151.1	260
16-Oct-20	08:28	17-Oct-20	08:28	2.6772	2.7572	22003.05	22027.05	24	1.25	1.25	1.25	44	Sunny	151.1	260
22-Oct-20	08:34	23-Oct-20	08:34	2.6798	2.8329	22027.05	22051.05	24	1.25	1.25	1.25	85	Fine	151.1	260
28-Oct-20	08:35	29-Oct-20	08:35	2.6734	2.8170	22051.05	22075.05	24	1.25	1.25	1.25	80	Cloudy	151.1	260

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



### Noise Monitoring Result at Station NM1A

Date	Time	Measured L10 dB(A)	Measured L90 dB(A)	Leq (30 min.) dB(A)
04-Aug-20	10:35	66.3	62.1	69
04-Aug-20	10:40	68.1	64.3	
04-Aug-20	10:45	67.6	63.3	
04-Aug-20	10:50	68.5	64.1	
04-Aug-20	10:55	67.3	63.7	
04-Aug-20	11:00	66.0	62.2	
10-Aug-20	10:40	66.0	62.3	68
10-Aug-20	10:45	67.3	63.1	
10-Aug-20	10:50	67.1	63.4	
10-Aug-20	10:55	68.4	64.6	
10-Aug-20	11:00	66.8	62.7	
10-Aug-20	11:05	67.5	63.9	
20-Aug-20	10:39	68.0	64.5	68
20-Aug-20	10:44	66.6	62.1	
20-Aug-20	10:49	66.8	62.6	
20-Aug-20	10:54	67.3	63.4	
20-Aug-20	10:59	67.6	63.5	
20-Aug-20	11:04	66.5	62.7	
26-Aug-20	10:37	68.5	64.1	69
26-Aug-20	10:42	67.6	63.4	
26-Aug-20	10:47	68.1	64.3	
26-Aug-20	10:52	68.4	64.2	
26-Aug-20	10:57	66.0	62.7	
26-Aug-20	11:02	67.3	63.0	
01-Sep-20	10:38	66.5	62.6	69
01-Sep-20	10:43	67.2	63.0	
01-Sep-20	10:48	68.1	64.7	
01-Sep-20	10:53	66.8	62.1	
01-Sep-20	10:58	67.3	63.4	
01-Sep-20	11:03	68.4	64.2	
07-Sep-20	10:45	68.3	64.5	69
07-Sep-20	10:50	66.8	62.7	
07-Sep-20	10:55	67.6	63.5	
07-Sep-20	11:00	68.2	64.1	
07-Sep-20	11:05	67.4	67.3	
07-Sep-20	11:10	68.5	64.6	
17-Sep-20	10:41	68.3	64.5	68
17-Sep-20	10:46	67.5	63.6	
17-Sep-20	10:51	66.8	62.6	
17-Sep-20	10:56	67.6	63.3	
17-Sep-20	11:01	68.0	64.1	
17-Sep-20	11:06	66.7	62.5	
23-Sep-20	10:39	66.3	62.5	69
23-Sep-20	10:44	67.5	63.1	
23-Sep-20	10:49	68.2	64.4	
23-Sep-20	10:54	68.6	64.3	
23-Sep-20	10:59	67.0	63.1	
23-Sep-20	11:04	66.4	62.9	

29-Sep-20	10:35	68.0	64.1	69
29-Sep-20	10:40	67.3	63.5	
29-Sep-20	10:45	67.8	63.7	
29-Sep-20	10:50	66.6	62.8	
29-Sep-20	10:55	68.1	64.0	
29-Sep-20	11:00	68.5	64.3	
05-Oct-20	11:20	66.0	62.3	68
05-Oct-20	11:25	67.9	63.5	
05-Oct-20	11:30	67.8	63.4	
05-Oct-20	11:35	66.6	62.7	
05-Oct-20	11:40	67.3	63.4	
05-Oct-20	11:45	66.4	62.1	
16-Oct-20	10:38	66.5	62.7	68
16-Oct-20	10:43	67.4	63.1	
16-Oct-20	10:48	67.5	63.3	
16-Oct-20	10:53	68.6	64.0	
16-Oct-20	10:58	66.8	62.7	
16-Oct-20	11:03	67.3	63.5	
22-Oct-20	10:42	67.0	63.1	67
22-Oct-20	10:47	66.5	62.1	
22-Oct-20	10:52	66.6	62.5	
22-Oct-20	10:57	65.3	61.5	
22-Oct-20	11:02	65.5	61.7	
22-Oct-20	11:07	66.8	62.3	
28-Oct-20	10:44	66.2	62.3	68
28-Oct-20	10:49	67.6	63.5	
28-Oct-20	10:54	67.5	63.1	
28-Oct-20	10:59	65.7	61.8	
28-Oct-20	11:04	66.3	62.5	
28-Oct-20	11:09	65.4	61.6	

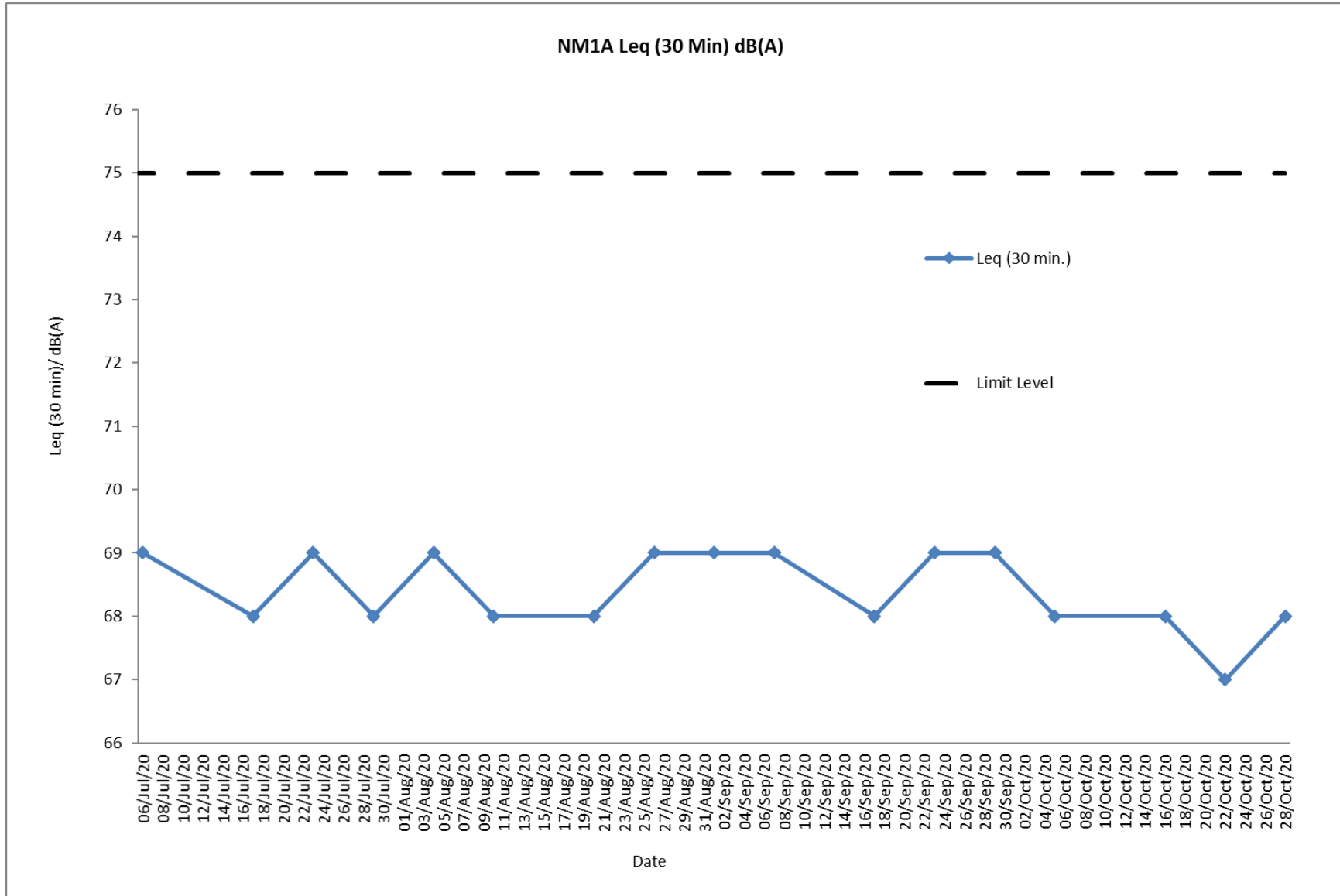
**Remarks:**

+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)
<b>2015</b>													
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
<b>2016</b>													
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
<b>2017</b>													
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

**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)
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
<b>2018</b>													
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
<b>2019</b>													
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)
<b>2020</b>													
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	100.0	0.4	0.0	0.0	0.0	189.3
Oct	76.1	0.0	0.0	0.0	76.1	0.0	0.0	100.0	0.4	0.0	0.0	0.0	227.3
Nov													
Dec													
Sub-total (2020)	4125.9	0.0	0.0	288.0	3660.0	177.9	0.0	1722.6	6.7	2.4	755.0	0.0	3162.3
<b>Total</b>	<b>251563.6</b>	<b>0.0</b>	<b>25232.0</b>	<b>142604.1</b>	<b>72410.9</b>	<b>11316.6</b>	<b>0.0</b>	<b>11864.7</b>	<b>35.0</b>	<b>5.1</b>	<b>7356.2</b>	<b>3.2</b>	<b>14829.0</b>

Note:

- 7.44 tonnes, 31.62 tonnes and 403.51 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

# **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)
<b>2016</b>													
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
<b>2017</b>													
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)
<b>2018</b>													
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
<b>2019</b>													
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	64.5	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	788.8	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)
<b>2020</b>													
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	0.0	0.0	0.0	0.0	400.1
Nov													
Dec													
Sub-total (2020)	42342.6	0.0	0.0	2068.1	40274.5	0.0	332.5	4366.8	3.1	1.4	0.0	0.0	1933.2
<b>Total</b>	<b>984458.6</b>	<b>0.0</b>	<b>0.0</b>	<b>543635.2</b>	<b>440395.8</b>	<b>427.5</b>	<b>1825.3</b>	<b>6346.8</b>	<b>5.2</b>	<b>10.0</b>	<b>0.0</b>	<b>12.5</b>	<b>4164.8</b>

Note:

- 2035.04, 1319.39 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 (Aug 20 – Oct 20)	2	0	0
From 31 October 2015 to end of the reporting quarter	10	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 (Aug 20 – Oct 20)	1	0	0
From 1 March 2016 to end of the reporting quarter	13	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

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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

The EM&A activities started with the construction works at Zone 2A on 3 October 2020, thus, this Quarterly EM&A Report presents the monitoring works at Zone 2A conducted from 3 October to 31 October 2020 only.

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**

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

## **Implementation of Mitigation Measures**

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

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

## **Record of Complaints**

No complaint was 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. The EM&A activities started with the construction works at Zone 2A on 3 October 2020. Thus, this Quarterly EM&A Report presents the monitoring works at Zone 2A from 3 to 31 October 2020 only. 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 the Construction Works in the Reporting Period

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

- Preliminaries Works
- Grouting Curtain Works (Trial 1 & Trial 2)
- Bored Pile Works
  - Bored Pile Works (Pre-drilling)
  - Bored Pile Construction
- ELS (Stage 1)
  - Grouting Works

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

### 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 <sup>3</sup>	260 µg/m <sup>3</sup>
	1-Hour TSP	AM3 - The Victoria Towers Tower 1	At least 3 times every 6 days	280.4 µg/m <sup>3</sup>	500 µg/m <sup>3</sup>
	24-Hour TSP	AM4 - Canton Road Government Primary School	At least once every 6 days	152.6 µg/m <sup>3</sup>	260 µg/m <sup>3</sup>
	1-Hour TSP	AM4 - Canton Road Government Primary School	At least 3 times every 6 days	278.5 µg/m <sup>3</sup>	500 µg/m <sup>3</sup>
	24-Hour TSP	AM5 - Topside Developments at West Kowloon Terminus Site	At least once every 6 days	141.1 µg/m <sup>3</sup>	260 µg/m <sup>3</sup>
	1-Hour TSP	AM5 - Topside Developments at West Kowloon Terminus Site	At least 3 times every 6 days	275.4 µg/m <sup>3</sup>	500 µg/m <sup>3</sup>
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	75 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	70/65 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 requires 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 Monitoring 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
<b>Air Quality</b>				
1 hour TSP	AM3A	42	77	59
1 hour TSP	AM4A	43	73	58
1 hour TSP	AM5A	42	76	59
24 hour TSP	AM3A	41	65	54
24 hour TSP	AM4A	43	62	52
24 hour TSP	AM5A	41	61	52
<b>Construction Noise</b>				
Leq(30min)	NM2A	62	64	63
Leq(30min)	NM3A	73	74	74
Leq(30min)	NM4A	66	68	67
Leq(30min)	NM5A	64	65	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	
<b>Air Quality</b>				
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
<b>Construction Noise</b>				
NM2A	Leq(30min)	0	0	N/A
NM3A	Leq(30min)	0	0	N/A
NM4A	Leq(30min)	0	0	N/A
NM5A	Leq(30min)	0	0	N/A

### **3.2.1 1-hour TSP Monitoring**

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

### **3.2.2 24-hour TSP Monitoring**

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

### **3.2.4 Landscape and Visual Monitoring**

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

## 4 Waste Management

As advised by the Contractor, 18.79 tonnes, 93.03 tonnes, 2511.66 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. 21.94 tonnes of general refuse were disposed of at SENT landfill.

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 and Action or Limit Levels for Noise monitoring in the reporting quarter.

No complaint, notifications of summons and successful prosecutions were received in the reporting quarter.

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 and noise limits were recorded.

### 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.

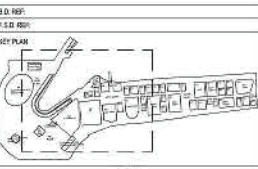
Monitoring of air quality and noise with respect to the Project is underway. In particular, the 1-hour TSP, 24-hour TSP, noise level (as Leq, 30 minutes) under monitoring have been checked against established Action and Limit levels. No exceedance of Action Level for Air Quality was recorded. There was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

No complaint, 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

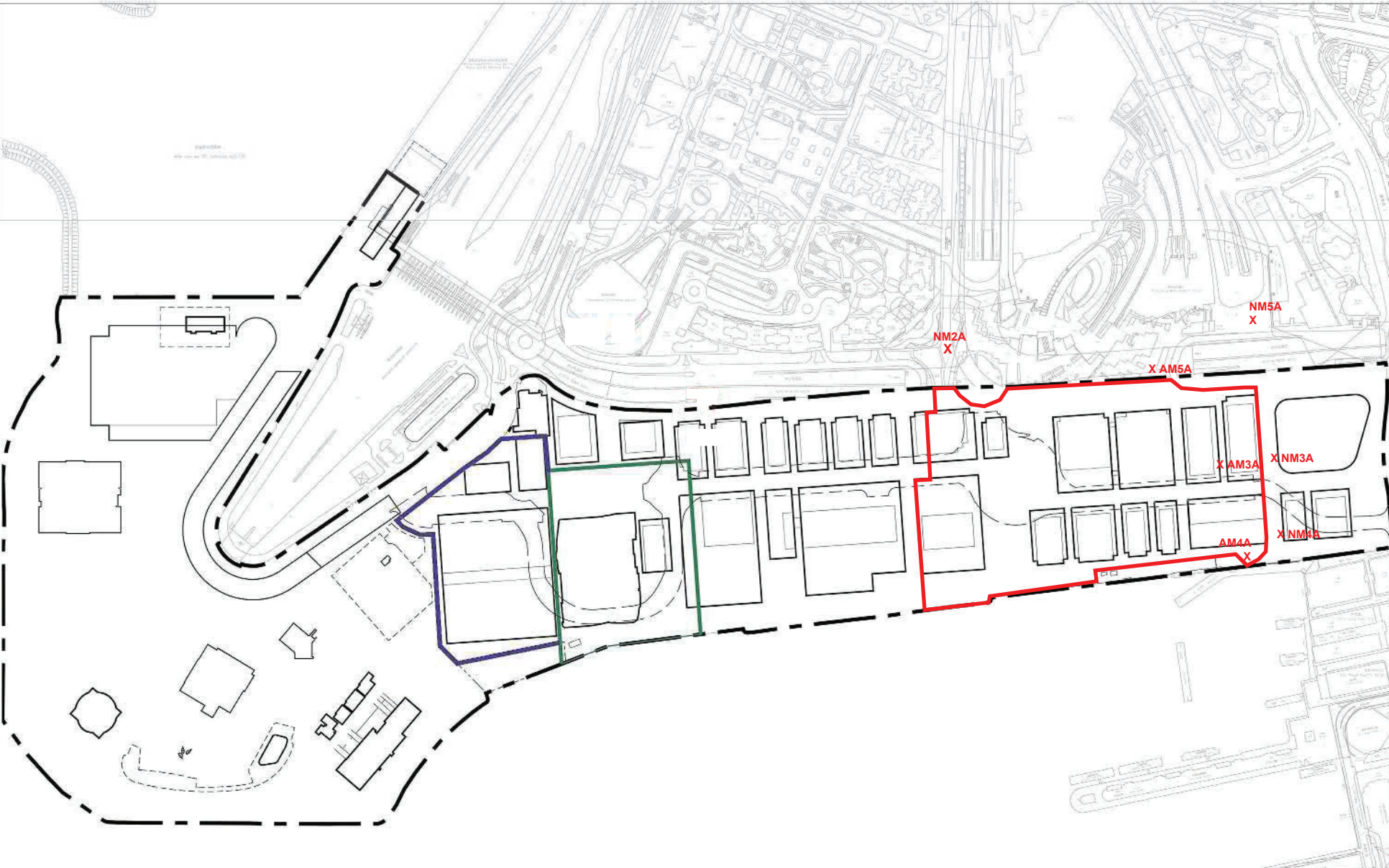




- NOTES**
- WKCD BOUNDARY
  - M+ MUSEUM BOUNDARY
  - LYRIC THEATRE BOUNDARY
  - BOUNDARY OF UNDERPASS ROAD SERVING THE PLANNED WKCD
  - CONSTRUCTION AIR/NOISE MONITORING STATION

**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	1:50	PRINTED	A1
CHECKED:		DATE	
APPROVED:		DATE	
DRAWN	TY	DATE	15-10-2015

CONTRACT NO.: -

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

CAD REF NAME: XXXX\GIT\PLNS\DWG PROJ\2010\000-000.dwg

AUTHORITY

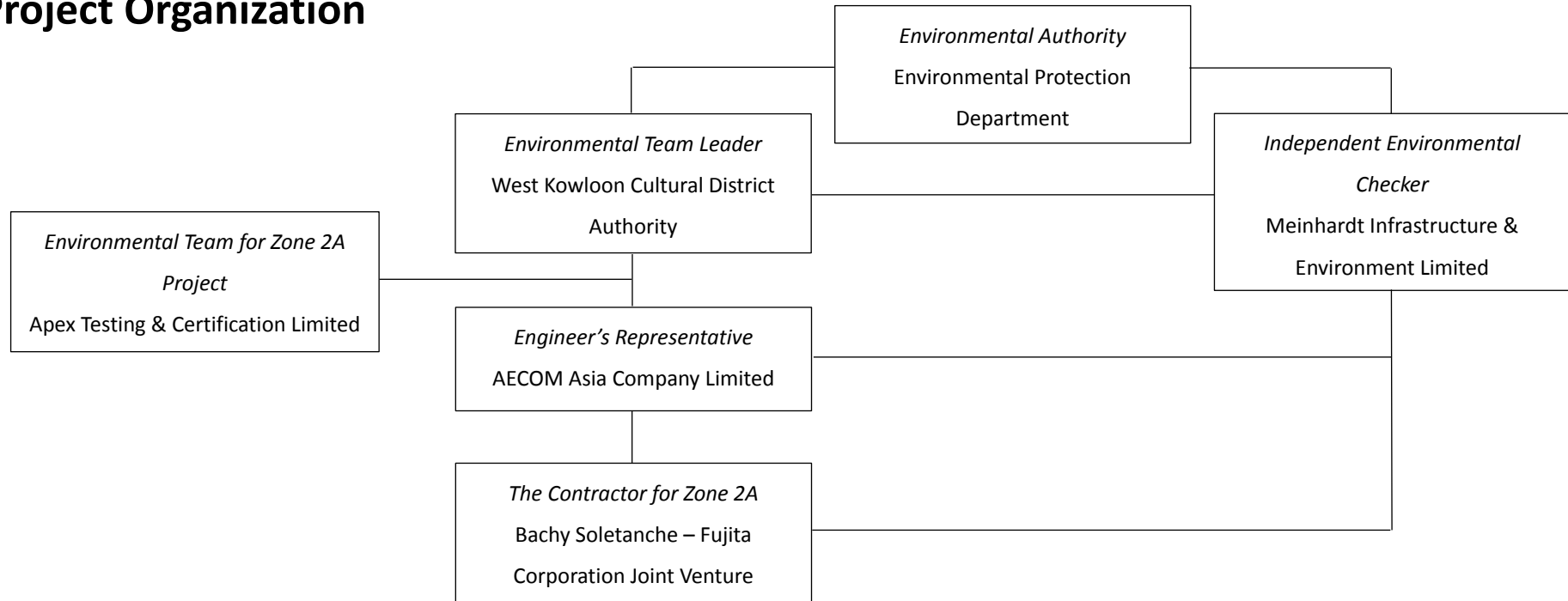
**westKowloon**  
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# Appendices

- 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						
				Oct				Nov				Dec				Jan						
				9	16	23	30	6	13	20	27	4	11	18	25	1	8	15	22	29		
				W22	W23	W24	W25	W26	W27	W28	W29	W30	W31	W32	W33	W34	W35	W36	W37	W38		
<b>Preliminaries Works</b>																						
Water, Power and Discharge Point Installation	174	8-May-20	28-Oct-20																			
<b>Grouting Curtain Works (Trial 1 &amp; Trial 2)</b>																						
Pipe Pile Construction (Trial 1 and 2) (11/40 Nos. Completed)	32	7-Oct-20	7-Nov-20																			
Trial Grouting (Trial 1 and 2) - Stage 2 grouting (0/48 Nos. Completed)	32	21-Oct-20	21-Nov-20																			
Pumping Test (Trial 1 and 2)	29	14-Nov-20	12-Dec-20																			
<b>Bored Pile Works</b>																						
<b>Bored Pile Works (Predrilling)</b>																						
Predrill (21/42 Completed)	138	03-Oct-20	13-Nov-20																			
<b>Bored Pile Construction (Total 32 Nos. 2-4 Workfront)</b>																						
BP34G, BP34E, BP35E1, BP32E, BP33F, BP33G, BP32P, BP33M, BP33P (0/32 Completed)	144	27-Oct-20	19-Mar-21																			
<b>ELS (Stage 1)</b>																						
<b>Grouting Works</b>																						
Stage 1a & 1b grouting (5/1054 Completed)	180	12-Oct-20	9-Apr-21																			
Pipe Pile Construction (0/523 Nos Completed)	235	31-Oct-20	22-Jun-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		
		Aug 2020	Sep 2020	Oct 2020
<b>Air Quality Impact (Construction)</b>				
2.1	<p><b>General Dust Control Measures</b> 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>	N/A	N/A	✓
2.1	<p><b>Best Practice For Dust Control</b> 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"> <li>• 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.</li> </ul> <p><i>Disturbed Parts of the Roads</i></p> <ul style="list-style-type: none"> <li>• Each and every main temporary access should be paved with concrete, bituminous hardcore materials or metal plates and kept clear of dusty materials; or</li> <li>• Unpaved parts of the road should be sprayed with water or a dust suppression chemical so as to keep the entire road surface wet.</li> </ul> <p><i>Exposed Earth</i></p> <ul style="list-style-type: none"> <li>• Exposed earth should be properly treated by compaction, hydroseeding, vegetation planting or seating 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.</li> </ul>	N/A	N/A	Obs
		N/A	N/A	✓
		N/A	N/A	✓
		N/A	N/A	N/A



EM& A Ref.	Recommendation Measures	Implementation Stage		
		Aug 2020	Sep 2020	Oct 2020
	<i>Loading, Unloading or Transfer of Dusty Materials</i>	N/A	N/A	✓
	<ul style="list-style-type: none"> <li>All dusty materials should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet.</li> </ul>			
	<i>Debris Handling</i>	N/A	N/A	✓
	<ul style="list-style-type: none"> <li>Any debris should be covered entirely by impervious sheeting or stored in a debris collection area sheltered on the top and the three sides.</li> <li>Before debris is dumped into a chute, water should be sprayed so that it remains wet when it is dumped.</li> </ul>	N/A	N/A	N/A
	<i>Transport of Dusty Materials</i>	N/A	N/A	✓
	<ul style="list-style-type: none"> <li>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.</li> </ul>			
	<i>Wheel washing</i>	N/A	N/A	✓
	<ul style="list-style-type: none"> <li>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.</li> </ul>			
	<i>Use of vehicles</i>	N/A	N/A	✓
	<ul style="list-style-type: none"> <li>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.</li> <li>Immediately before leaving the construction site, every vehicle should be washed to remove any dusty materials from its body and wheels.</li> <li>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.</li> </ul>	N/A	N/A	✓
	<i>Site hoarding</i>	N/A	N/A	✓
	<ul style="list-style-type: none"> <li>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.</li> </ul>			

EM& A Ref.	Recommendation Measures	Implementation Stage		
		Aug 2020	Sep 2020	Oct 2020
2.1	<p><b>Best Practicable Means for Cement Works (Concrete Batching Plant)</b></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"> <li>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</li> </ul> <p><i>Emission Limits</i></p> <ul style="list-style-type: none"> <li>All emissions to air, other than steam or water vapour, shall be colourless and free from persistent mist or smoke</li> </ul> <p><i>Engineering Design/Technical Requirements</i></p> <ul style="list-style-type: none"> <li>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</li> </ul>	N/A	N/A	N/A
	<p><b>Non-Road Mobile Machinery (NRMM):</b></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>	N/A	N/A	✓
<b>Noise Impact (Construction)</b>				
3.1	<p><b>Good Site Practice</b></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"> <li>only well-maintained plant to be operated on-site and plant should be serviced regularly during the construction works;</li> <li>machines and plant that may be in intermittent use to be shut down between work periods or should be throttled down to a minimum</li> </ul>	N/A	N/A	✓
		N/A	N/A	✓

EM& A Ref.	Recommendation Measures	Implementation Stage		
		Aug 2020	Sep 2020	Oct 2020
	<ul style="list-style-type: none"> <li>plant known to emit noise strongly in one direction, should, where possible, be orientated to direct noise away from the NSRs;</li> <li>mobile plant should be sited as far away from NSRs as possible; and</li> <li>material stockpiles and other structures to be effectively utilised, where practicable, to screen noise from on-site construction activities.</li> </ul>	N/A	N/A	✓
3.1	<p><b>Adoption of Quieter PME</b></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 <b>Table 4.26</b> in the EIA report. It should be noted that the silenced PME selected for assessment can be found in Hong Kong.</p>	N/A	N/A	✓
3.1	<p><b>Use of Movable Noise Barriers</b></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>	N/A	N/A	Rem
3.1	<p><b>Use of Noise Enclosure/ Acoustic Shed</b></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>	N/A	N/A	✓
3.1	<p><b>Use of Noise Insulating Fabric</b></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>	N/A	N/A	✓
3.1	<p><b>Scheduling of Construction Works outside School Examination Periods</b></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>	N/A	N/A	✓
<b>Water Quality Impact (Construction)</b>				

EM& A Ref.	Recommendation Measures	Implementation Stage		
		Aug 2020	Sep 2020	Oct 2020
4.1	<p><b>Construction site runoff and drainage</b></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"> <li>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;</li> <li>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.</li> <li>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.</li> <li>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.</li> </ul>	N/A	N/A	✓
		N/A	N/A	✓
		N/A	N/A	Obs
		N/A	N/A	✓

EM& A Ref.	Recommendation Measures	Implementation Stage		
		Aug 2020	Sep 2020	Oct 2020
	<ul style="list-style-type: none"> <li>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.</li> </ul>	N/A	N/A	✓
	<ul style="list-style-type: none"> <li>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.</li> </ul>	N/A	N/A	Obs
	<ul style="list-style-type: none"> <li>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.</li> </ul>	N/A	N/A	✓
	<ul style="list-style-type: none"> <li>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.</li> </ul>	N/A	N/A	Obs
	<ul style="list-style-type: none"> <li>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.</li> </ul>	N/A	N/A	N/A
4.1	<p><b>Barging facilities and activities</b></p> <p>Recommendations for good site practices during operation of the proposed barging point include:</p> <ul style="list-style-type: none"> <li>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;</li> </ul>	N/A	N/A	N/A

EM& A Ref.	Recommendation Measures	Implementation Stage		
		Aug 2020	Sep 2020	Oct 2020
	<ul style="list-style-type: none"> <li>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;</li> <li>All hopper barges should be fitted with tight fitting seals to their bottom openings to prevent leakage of material; and</li> <li>Construction activities should not cause foam, oil, grease, scum, litter or other objectionable matter to be present on the water within the site.</li> </ul>	N/A	N/A	N/A
4.1	<p><b>Sewage effluent from construction workforce</b></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>	N/A	N/A	✓
4.1	<p><b>General construction activities</b></p> <ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>	N/A	N/A	Obs
		N/A	N/A	Obs
<b>Waste (Construction)</b>	<b>Management Implications</b>			
6.1	<p><b>Good Site Practices</b></p> <p>Recommendations for good site practices during the construction activities include:</p> <ul style="list-style-type: none"> <li>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</li> <li>Training of site personnel in proper waste management and chemical handling procedures</li> <li>Provision of sufficient waste disposal points and regular collection of waste</li> </ul>	N/A	N/A	✓
		N/A	N/A	✓
		N/A	N/A	✓

EM& A Ref.	Recommendation Measures	Implementation Stage		
		Aug 2020	Sep 2020	Oct 2020
	<ul style="list-style-type: none"> <li>Appropriate measures to minimise windblown litter and dust/odour during transportation of waste by either covering trucks or by transporting wastes in enclosed containers</li> </ul>	N/A	N/A	✓
	<ul style="list-style-type: none"> <li>Provision of wheel washing facilities before the trucks leaving the works area so as to minimise dust introduction to public roads</li> </ul>	N/A	N/A	✓
	<ul style="list-style-type: none"> <li>Well planned delivery programme for offsite disposal such that adverse environmental impact from transporting the inert or non-inert C&amp;D materials is not anticipated</li> </ul>	N/A	N/A	✓
6.1	<p><b>Waste Reduction Measures</b></p> <p>Recommendations to achieve waste reduction include:</p> <ul style="list-style-type: none"> <li>Sort inert C&amp;D material to recover any recyclable portions such as metals</li> <li>Segregation and storage of different types of waste in different containers or skips to enhance reuse or recycling of materials and their proper disposal</li> <li>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</li> <li>Proper site practices to minimise the potential for damage or contamination of inert C&amp;D materials</li> <li>Plan the use of construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of wastes</li> </ul>	N/A	N/A	✓
		N/A	N/A	✓
		N/A	N/A	✓
		N/A	N/A	✓
		N/A	N/A	✓
6.1	<p><b>Inert and Non-inert C&amp;D Materials</b></p> <p>In order to minimise impacts resulting from collection and transportation of inert C&amp;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&amp;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"> <li>The surplus inert C&amp;D material will be disposed of at the Government's PFRFs for beneficial use by other projects in Hong Kong.</li> <li>Liaison with the CEDD Public Fill Committee (PFC) on the allocation of space for disposal of the inert C&amp;D materials at PFRF is underway. No construction work is allowed to proceed until all issues on management of inert C&amp;D materials have been resolved and all relevant arrangements have been endorsed by the relevant authorities including PFC and EPD.</li> </ul>	N/A	N/A	✓
		N/A	N/A	✓

EM& A Ref.	Recommendation Measures	Implementation Stage		
		Aug 2020	Sep 2020	Oct 2020
	<ul style="list-style-type: none"> <li>The C&amp;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.</li> <li>In order to monitor the disposal of inert and non-inert C&amp;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 &amp; 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.</li> </ul>	N/A	N/A	✓
6.1	<p><b>Chemical Waste</b></p> <ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>	N/A	N/A	✓
6.1	<p><b>General Refuse</b></p> <p>General refuse should be stored in enclosed bins or compaction units separated from inert C&amp;D materials. A reputable waste collector should be employed by the Contractor to remove general refuse from the site, separately from inert C&amp;D materials. Preferably an enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material.</p>	N/A	N/A	✓



EM& A Ref.	Recommendation Measures	Implementation Stage		
		Aug 2020	Sep 2020	Oct 2020
<b>Land Contamination (Construction)</b>				
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> <ul style="list-style-type: none"> <li>To minimize the chance for construction workers to come into contact with any contaminated materials, bulk earth-moving excavation equipment should be employed;</li> <li>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;</li> <li>Stockpiling of contaminated excavated materials on site should be avoided as far as possible;</li> <li>The use of contaminated soil for landscaping purpose should be avoided unless pre-treatment was carried out;</li> <li>Vehicles containing any contaminated excavated materials should be suitably covered to reduce dust emissions and/or release of contaminated wastewater;</li> <li>Truck bodies and tailgates should be sealed to stop any discharge;</li> <li>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;</li> <li>Speed control for trucks carrying contaminated materials should be exercised;</li> <li>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</li> <li>Maintain records of waste generation and disposal quantities and disposal arrangements.</li> </ul>	N/A	N/A	N/A
<b>Ecological Impact (Construction)</b>				
	No mitigation measure is required.			

EM& A Ref.	Recommendation Measures	Implementation Stage		
		Aug 2020	Sep 2020	Oct 2020
<b>Landscape and Visual Impact (Construction)</b>				
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.	N/A	N/A	✓
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	N/A	N/A	✓
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

EM& A Ref.	Recommendation Measures	Implementation Stage		
		Aug 2020	Sep 2020	Oct 2020
Table 9.2 (MCP4)	Control of night time lighting	N/A	N/A	✓
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

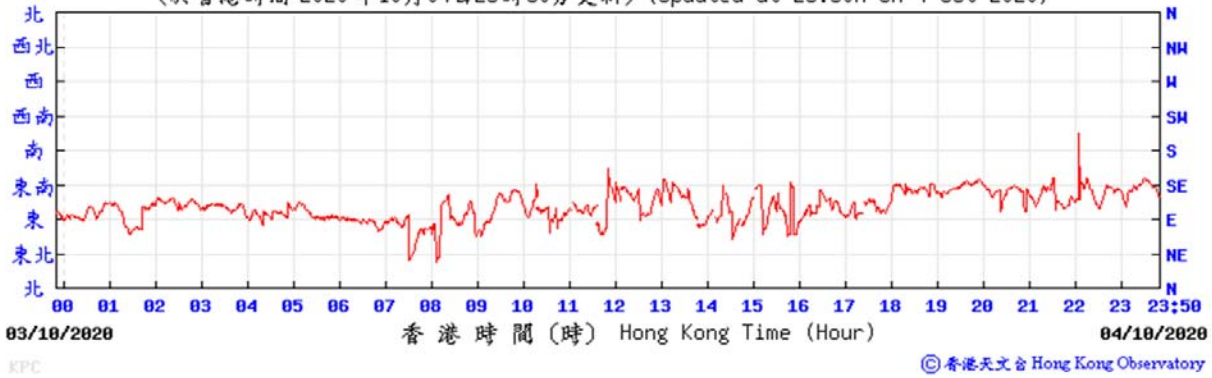
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Rem - Reminder

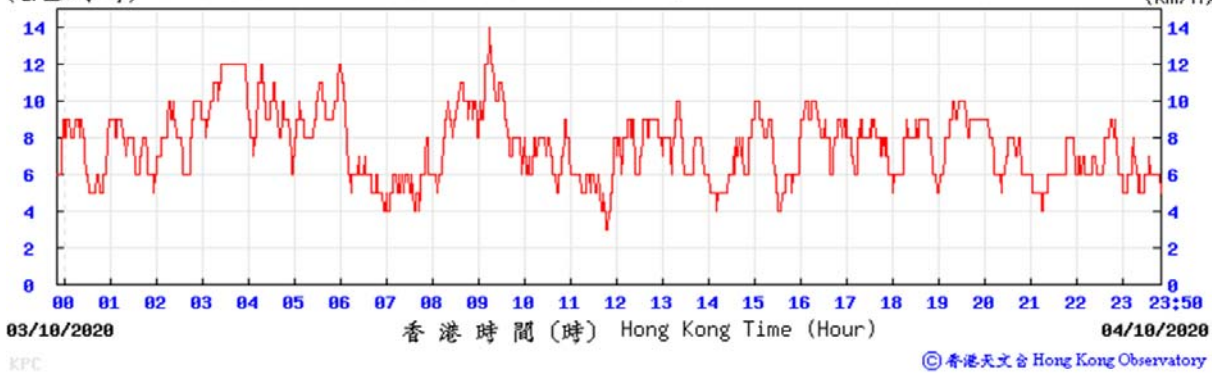
## **D. Meteorological Data Extracted from Hong Kong Observatory**

## Extract of Meteorological Observations for King's Park Automatic Weather Station, October 2020

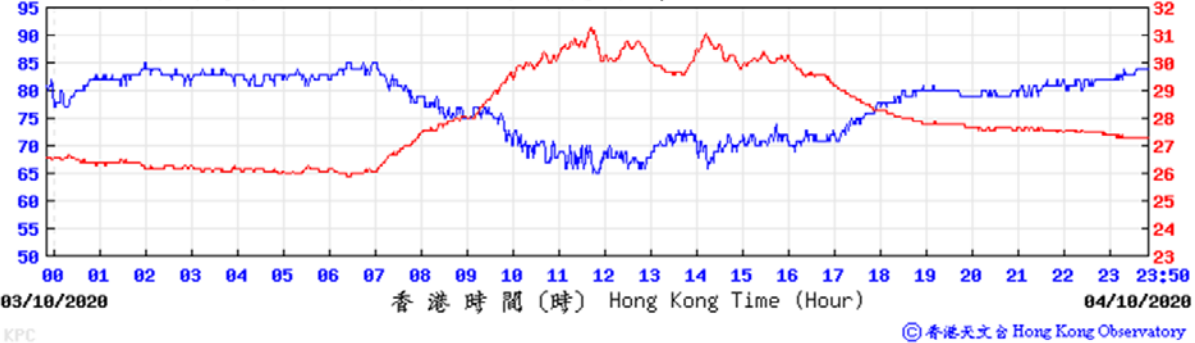
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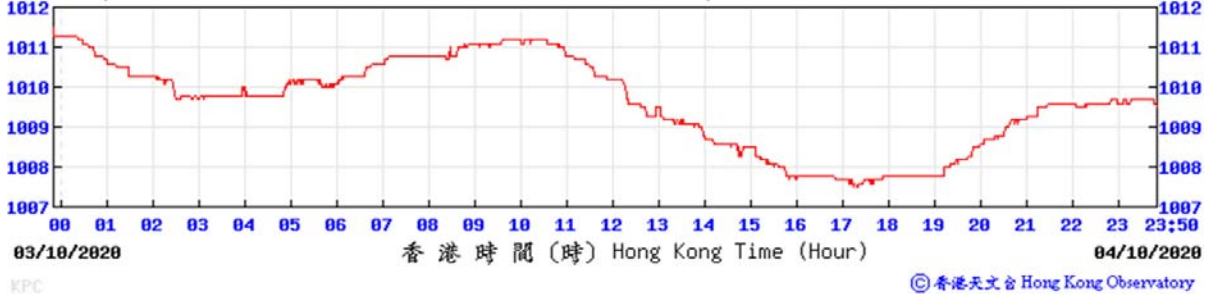
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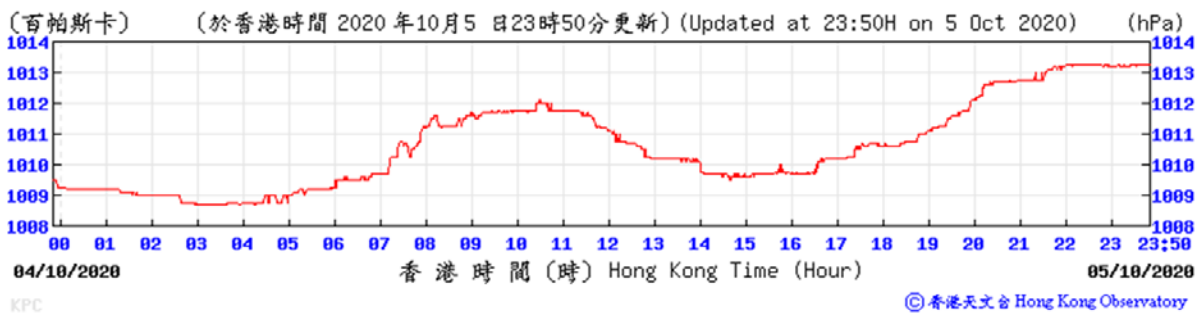
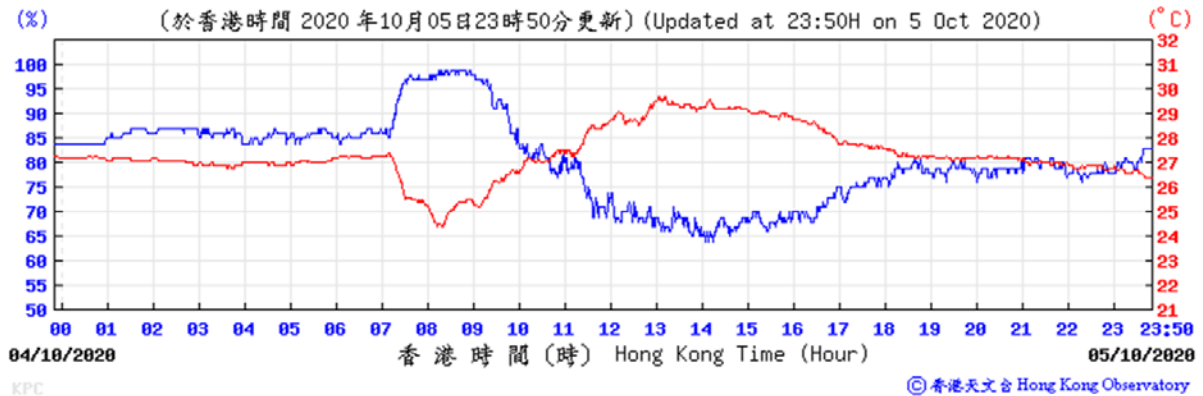
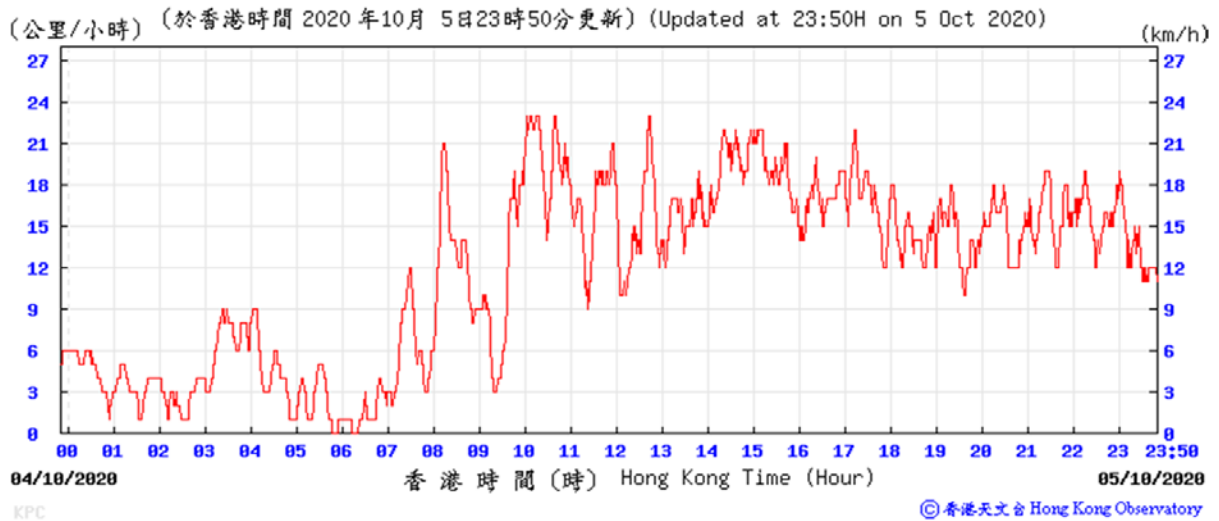
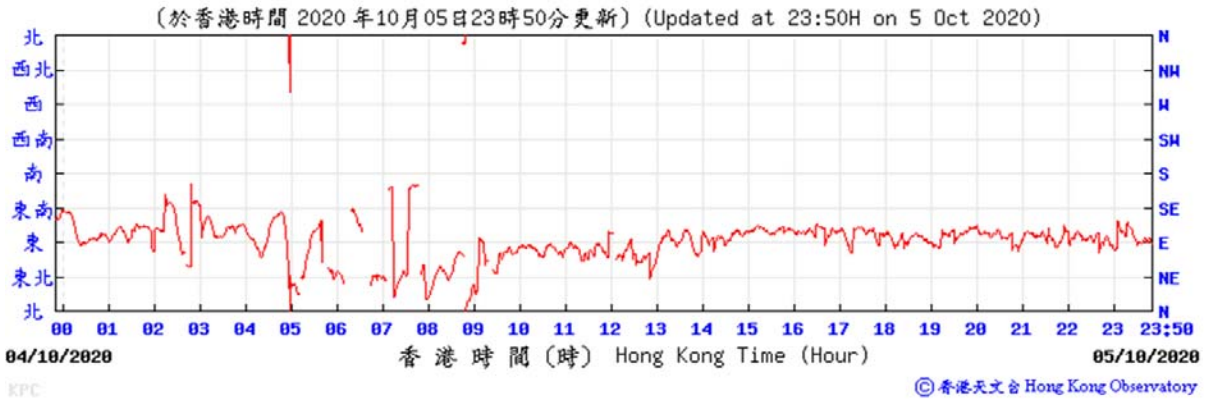
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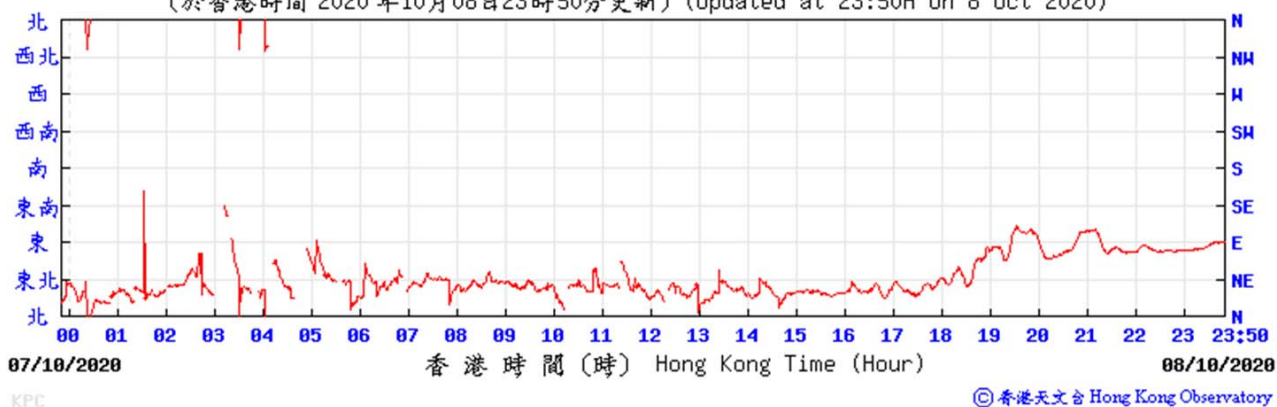


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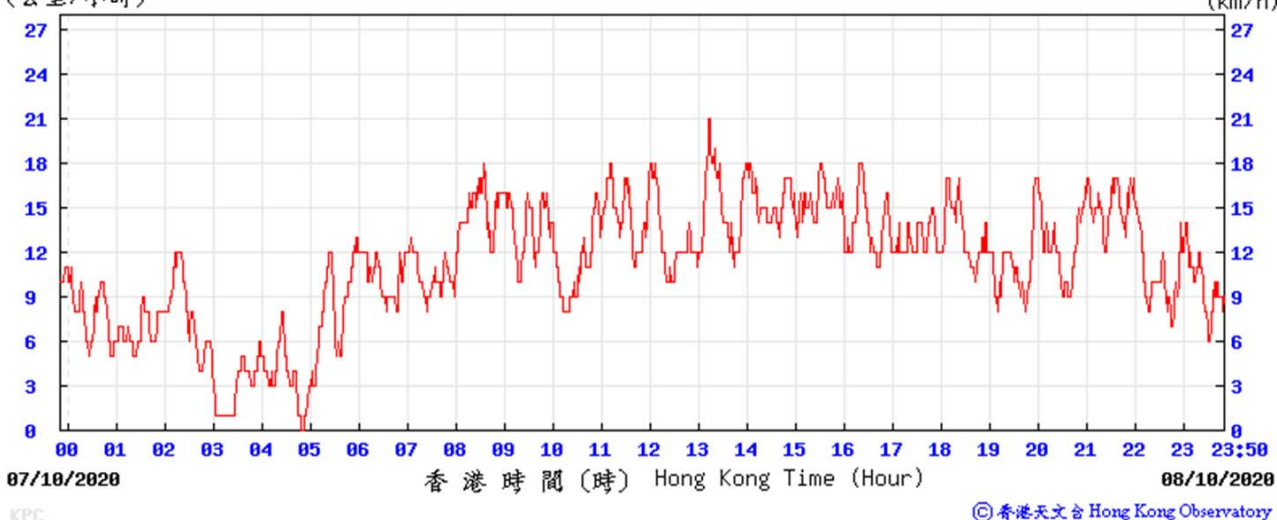


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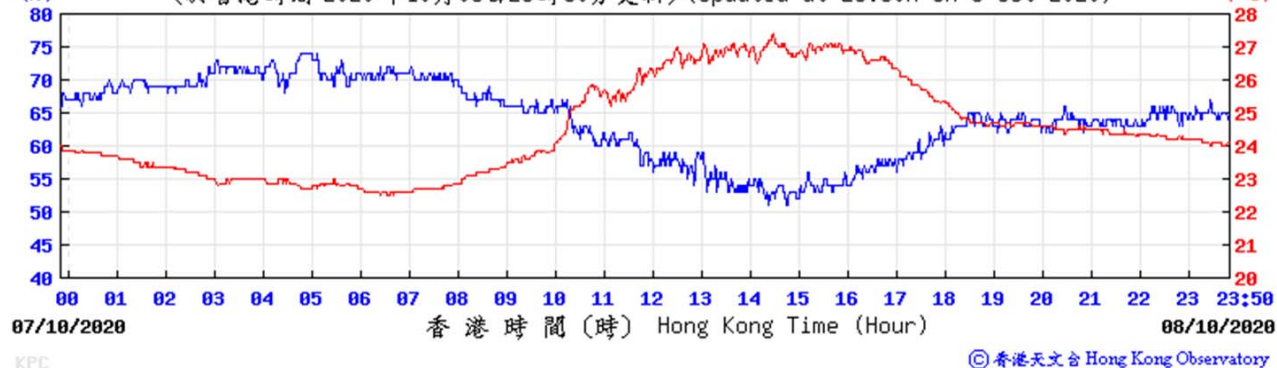
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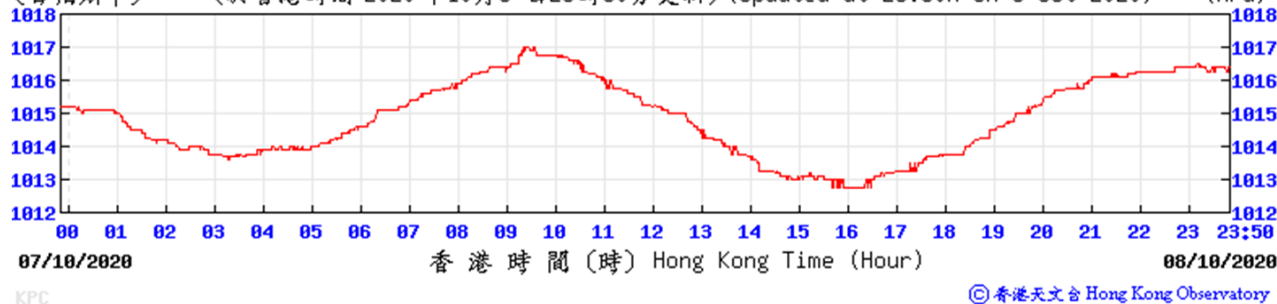
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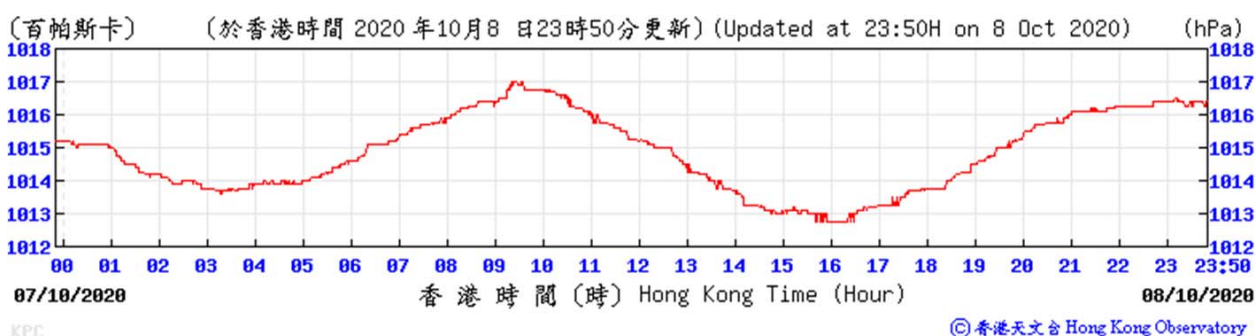
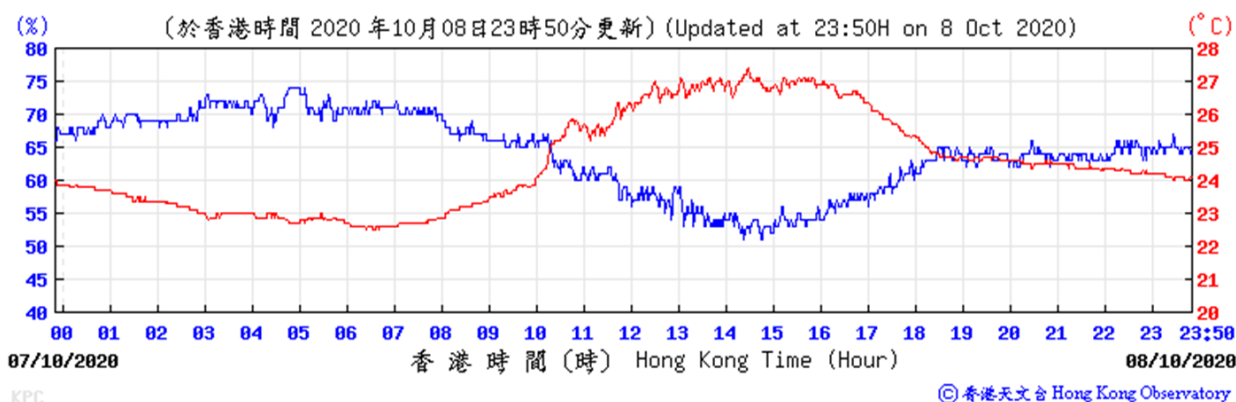
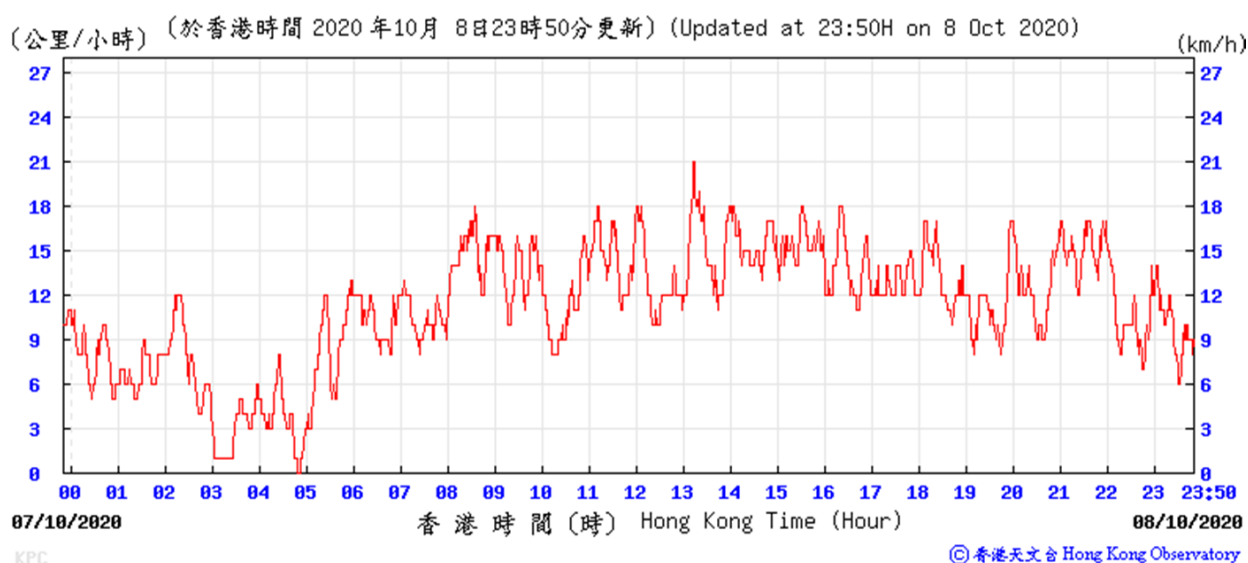
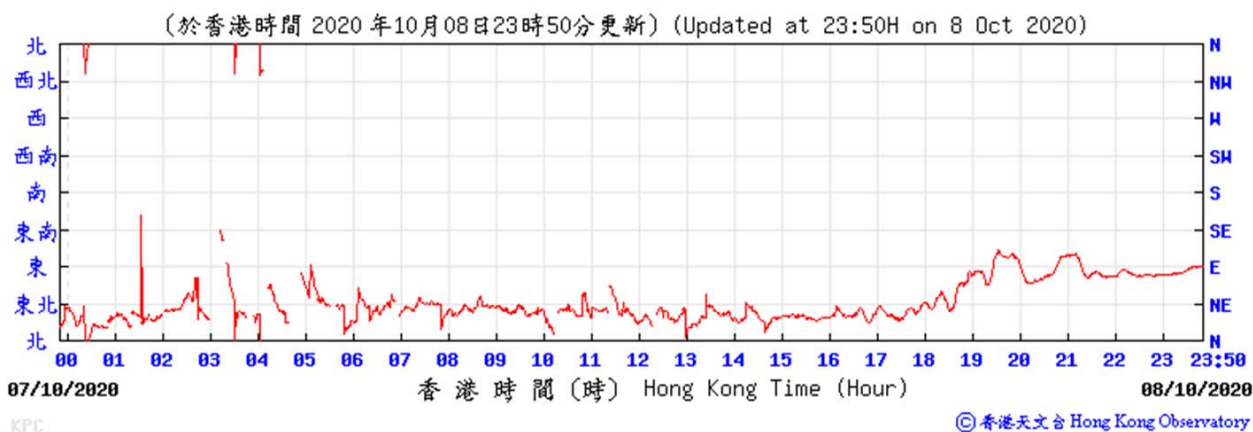


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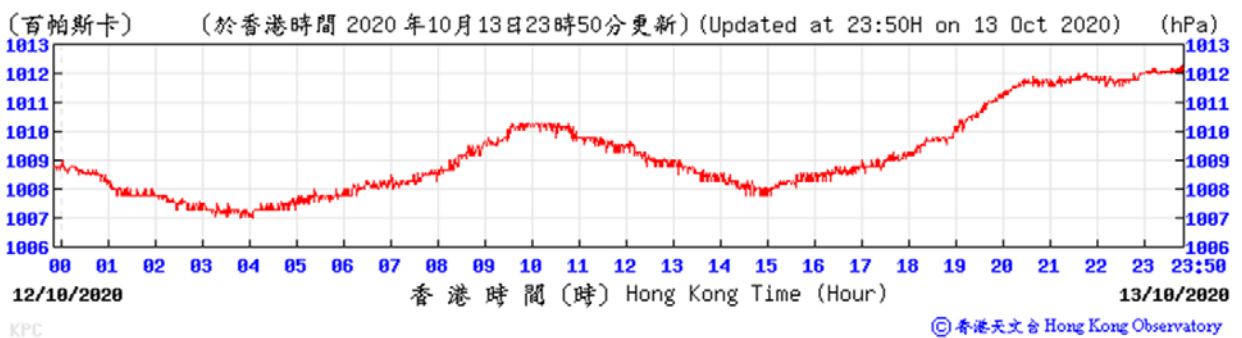
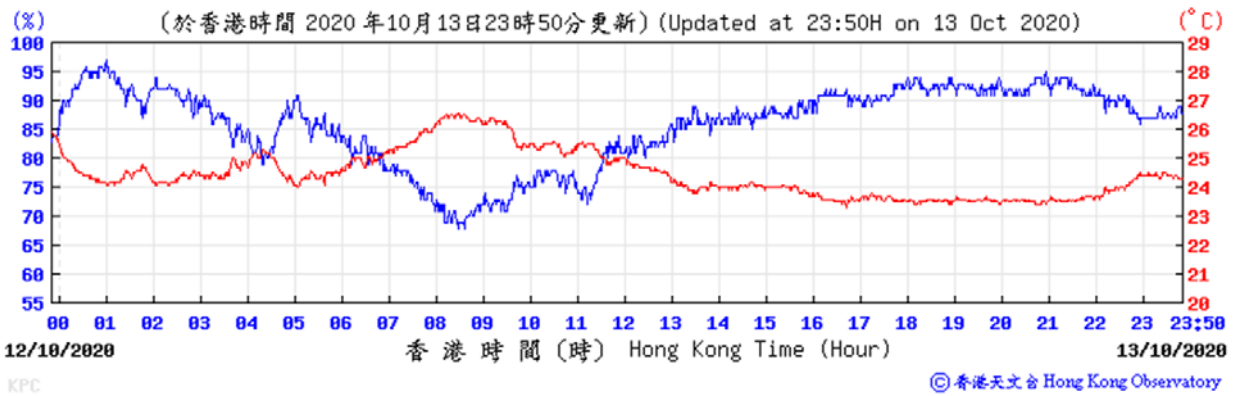
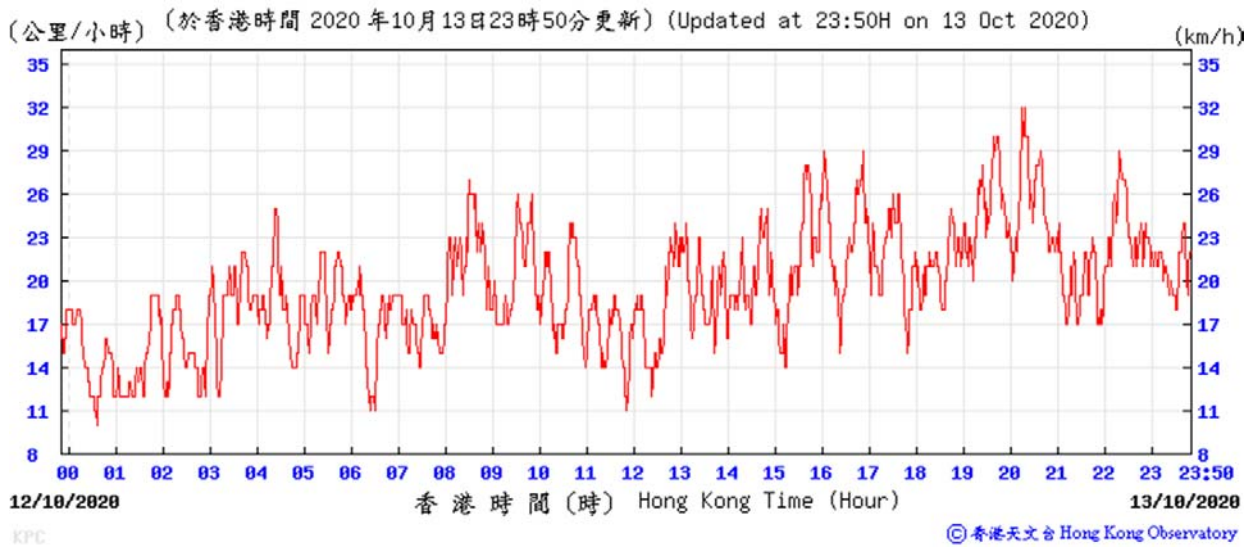
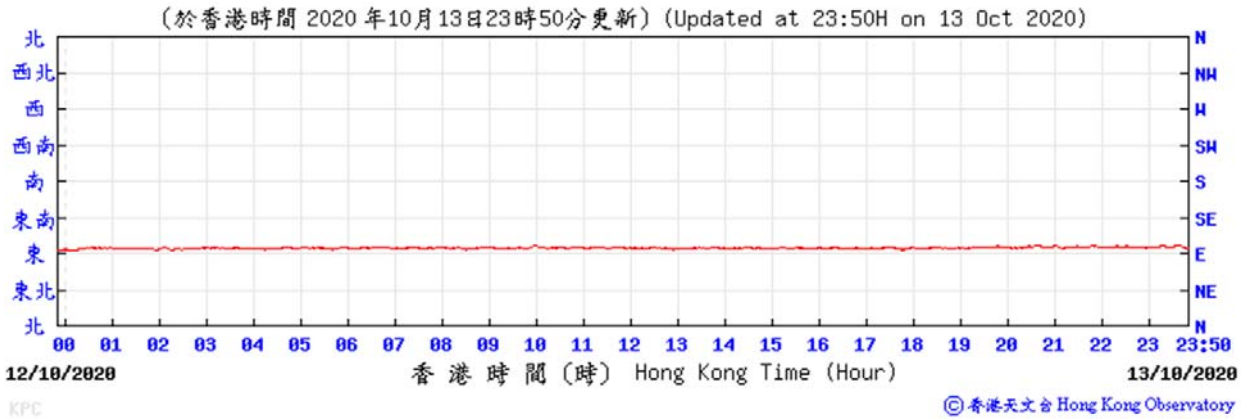


## Extract of Meteorological Observations for King's Park Automatic Weather Station, October 2020

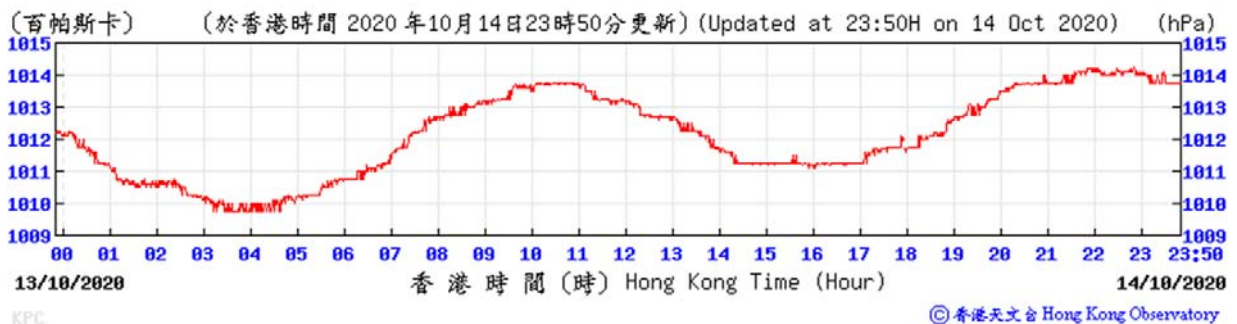
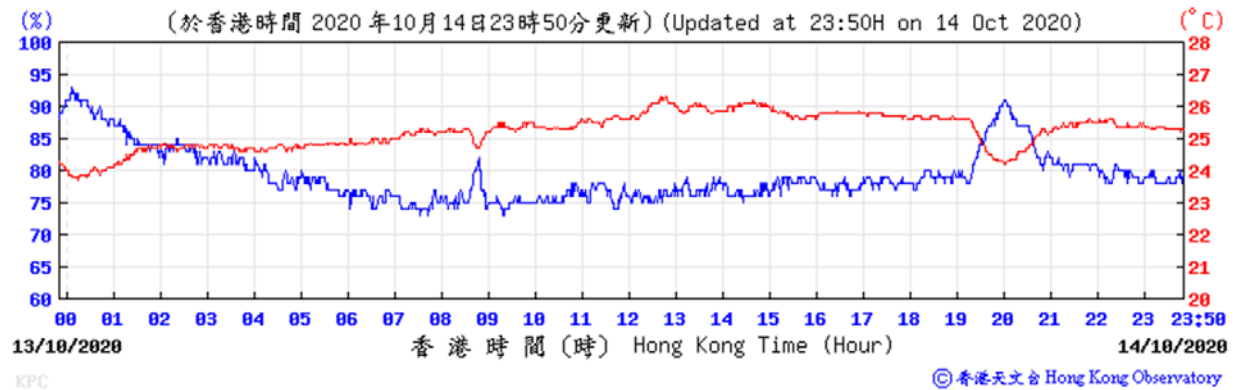
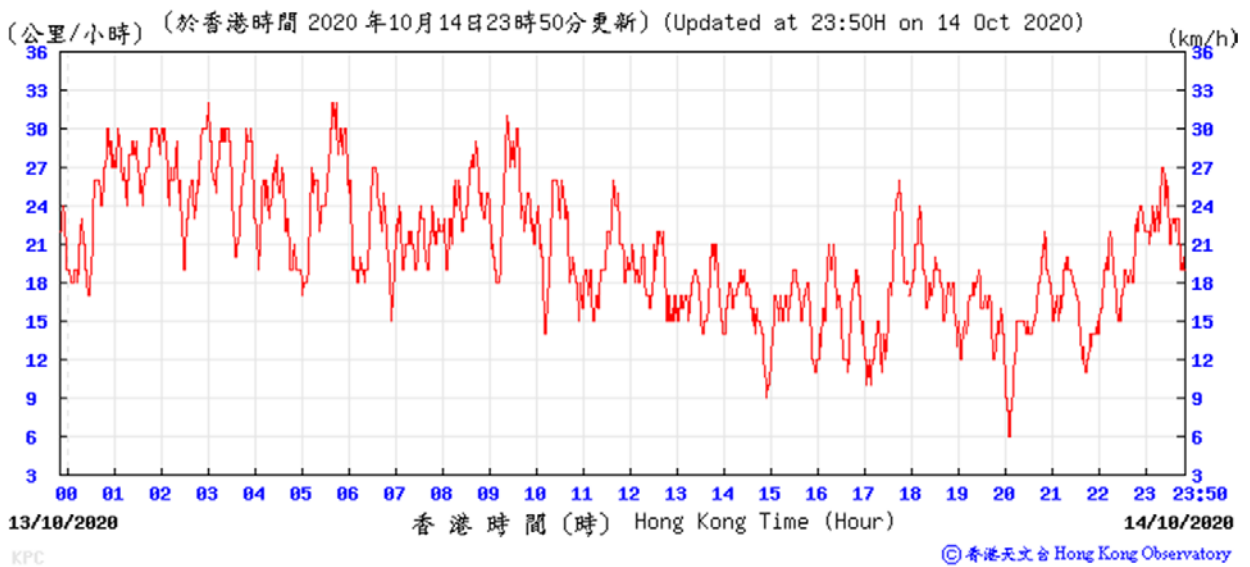
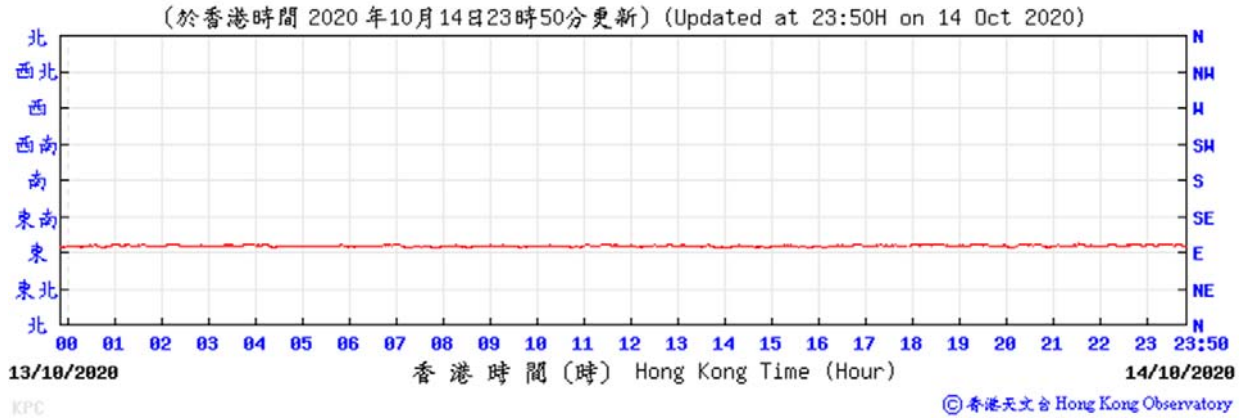




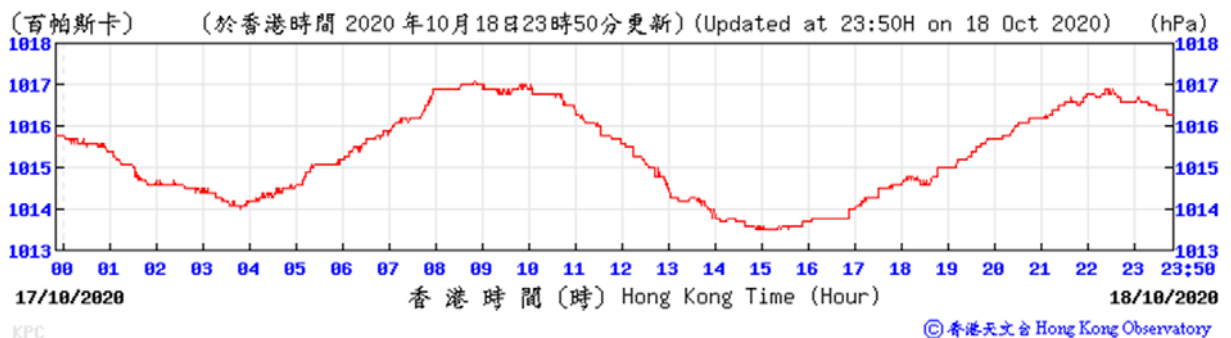
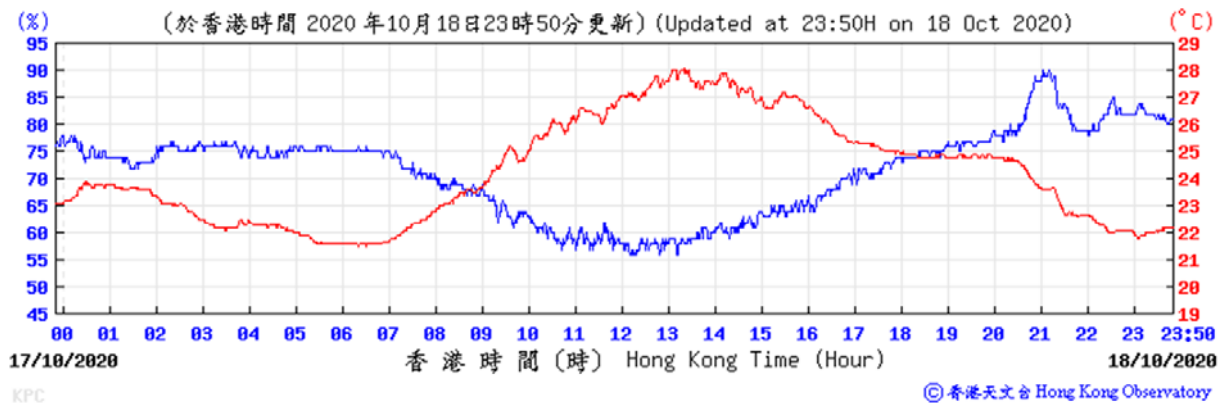
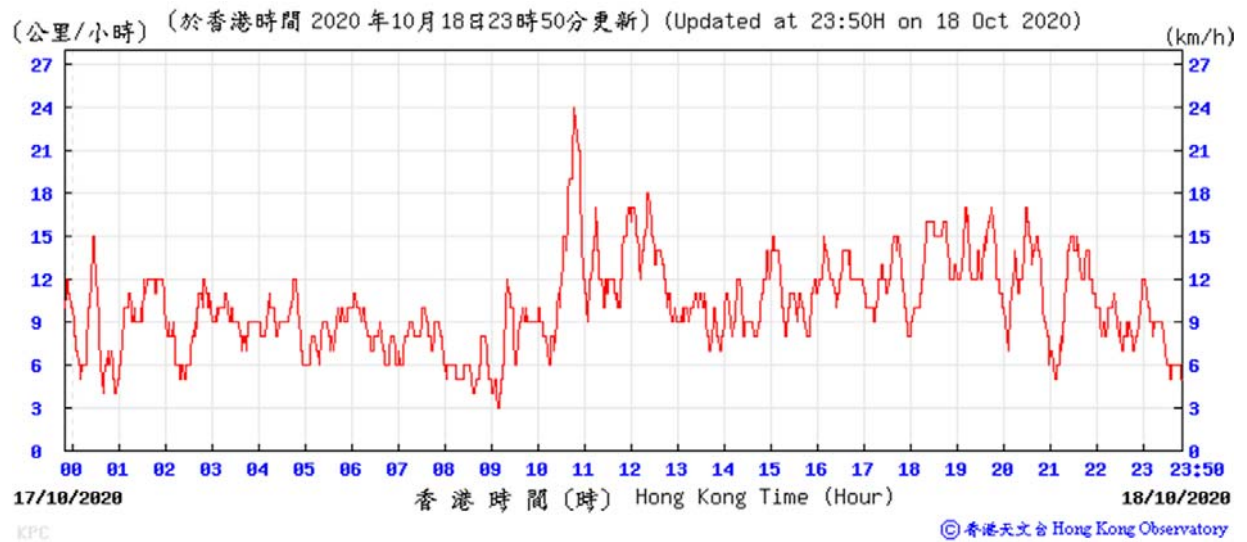
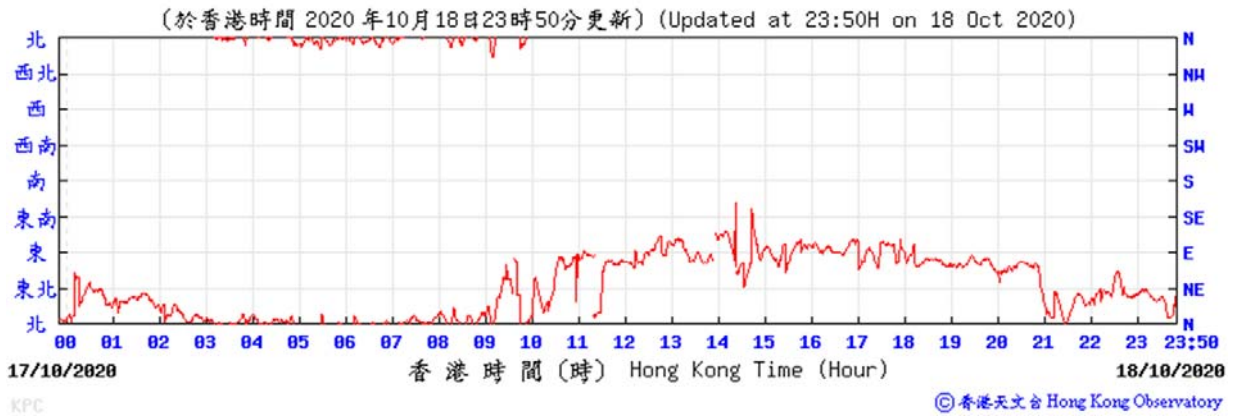
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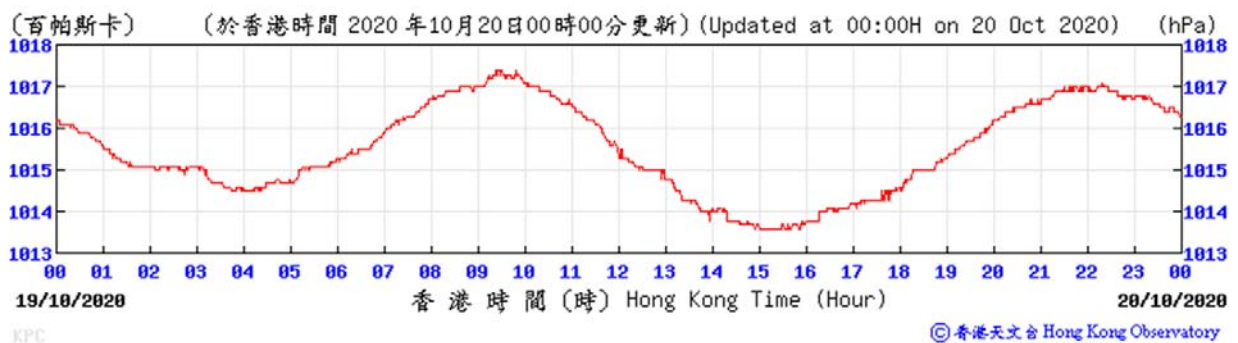
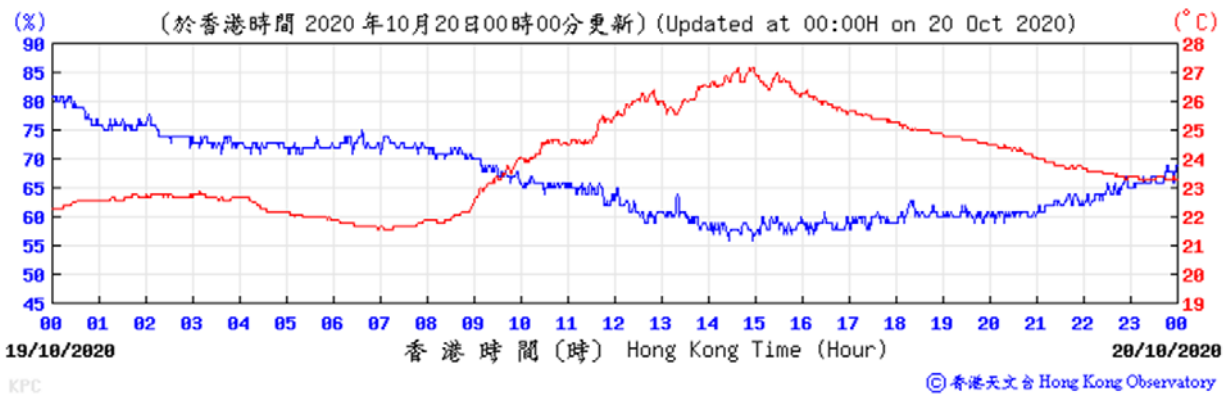
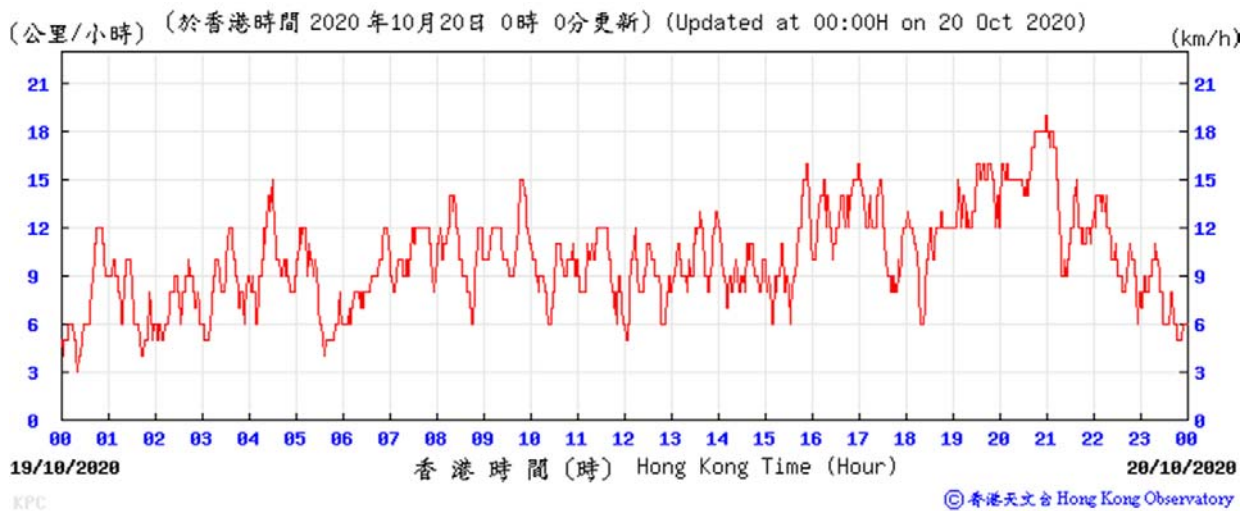
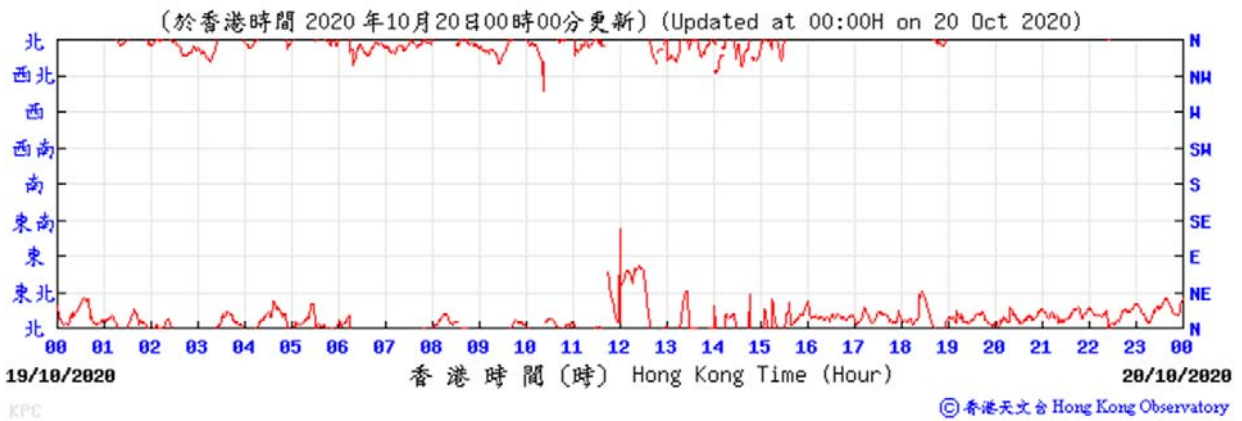
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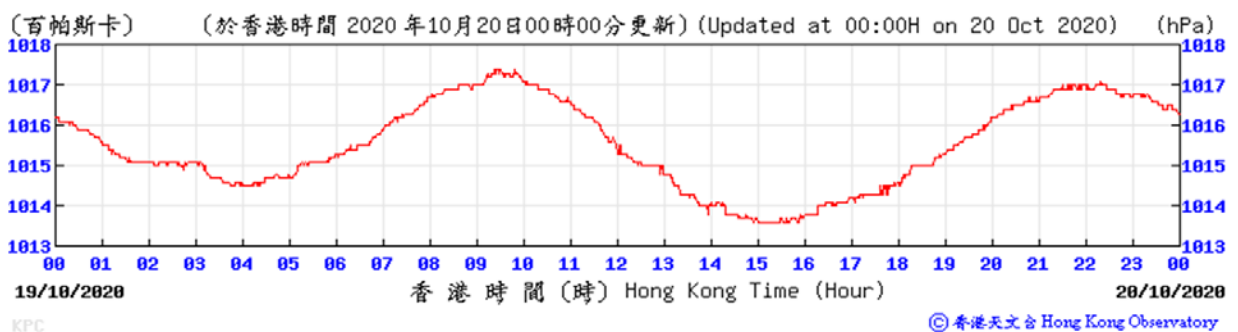
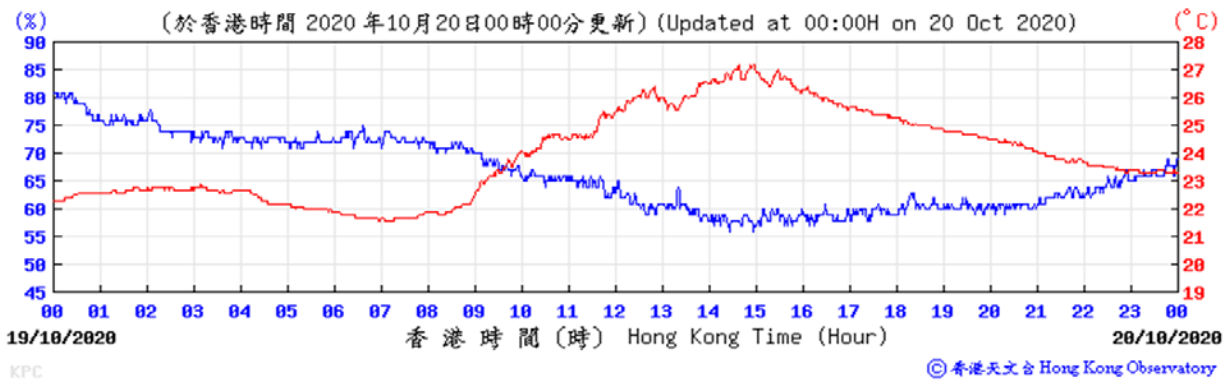
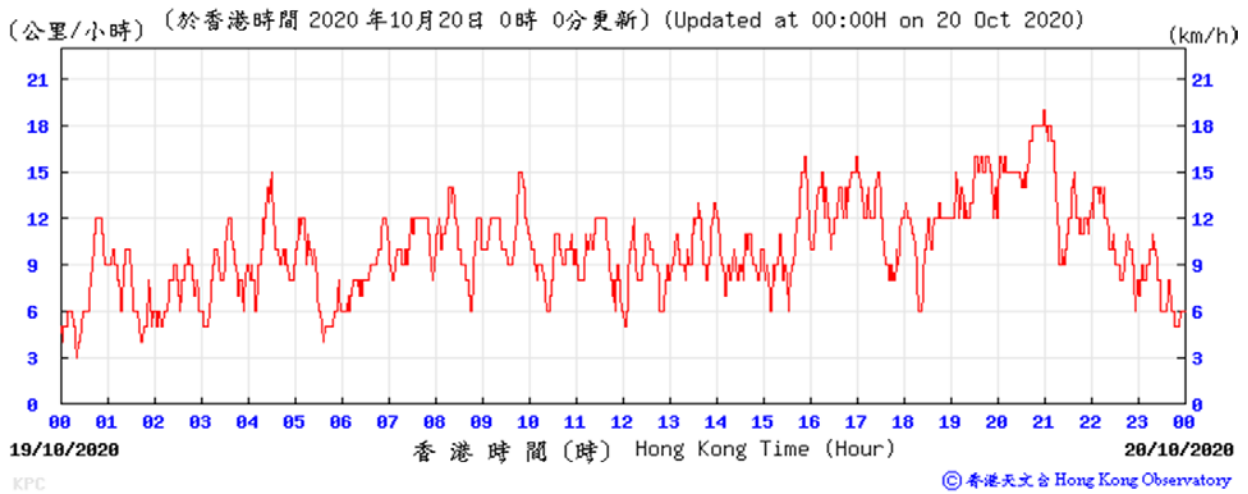
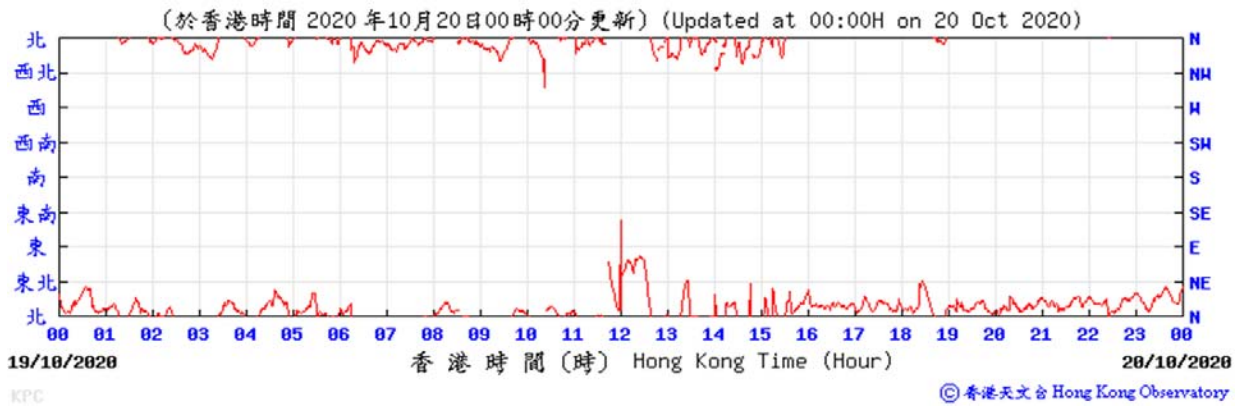


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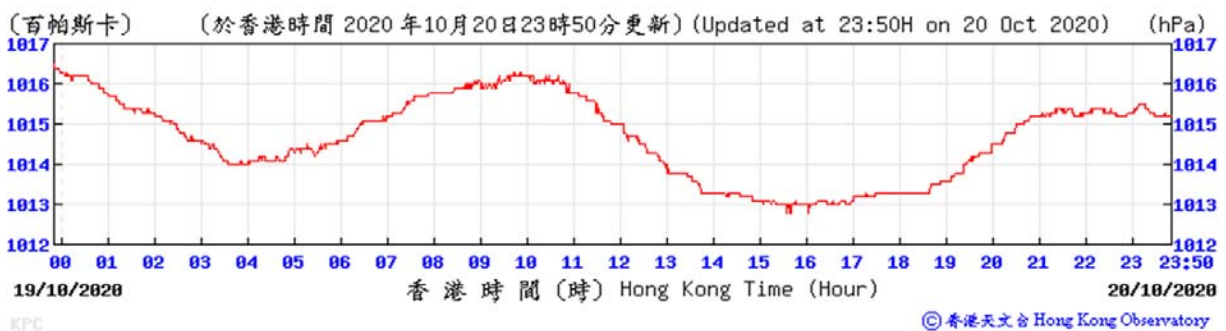
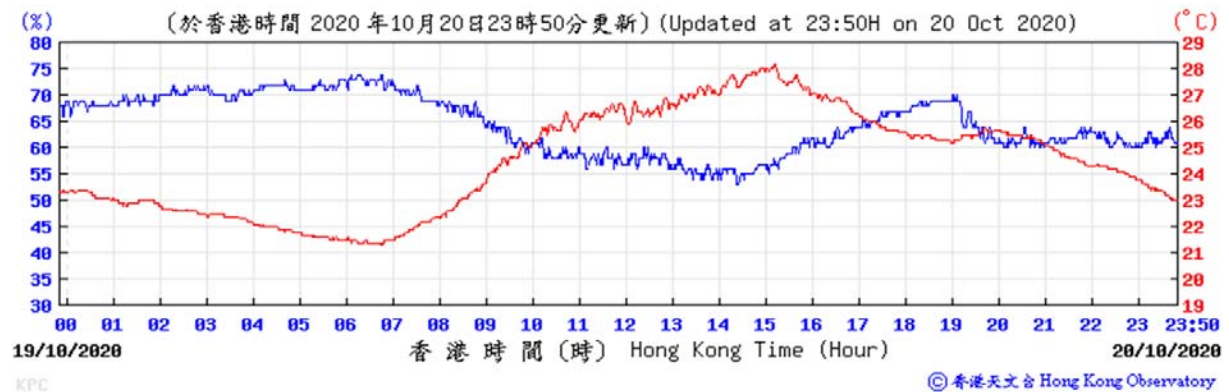
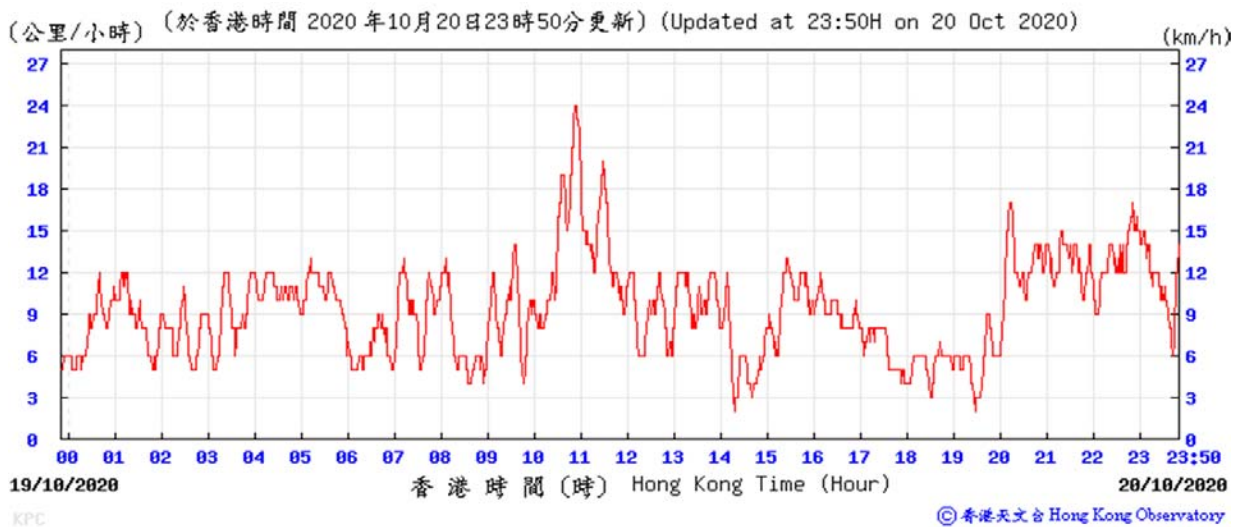
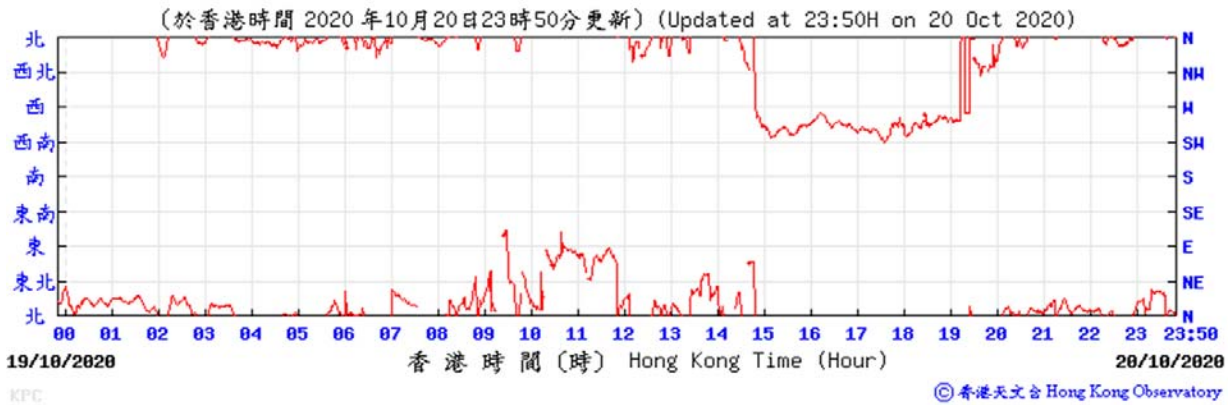




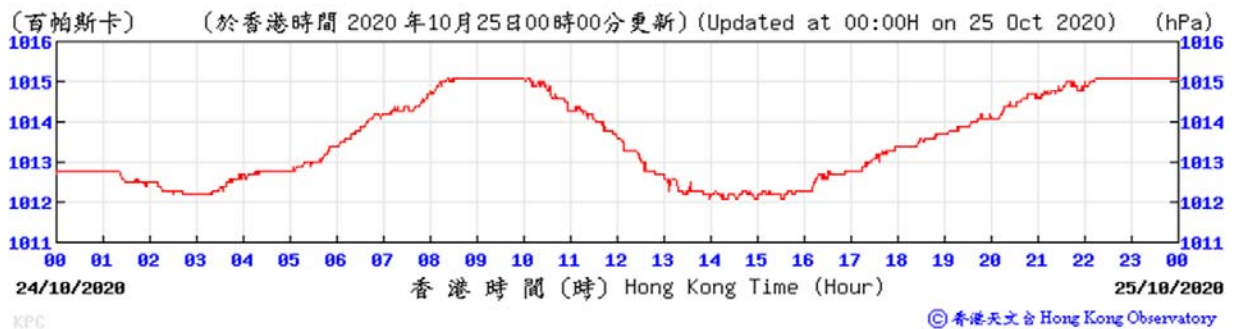
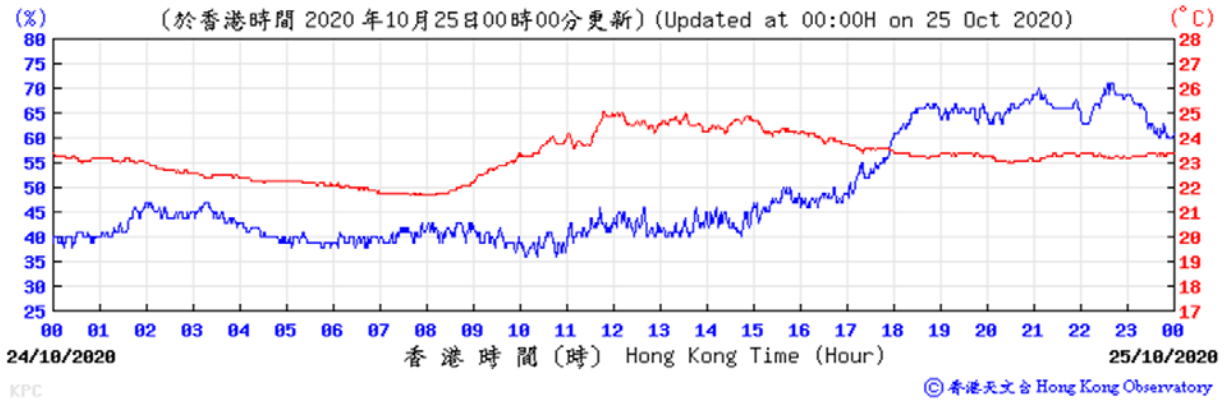
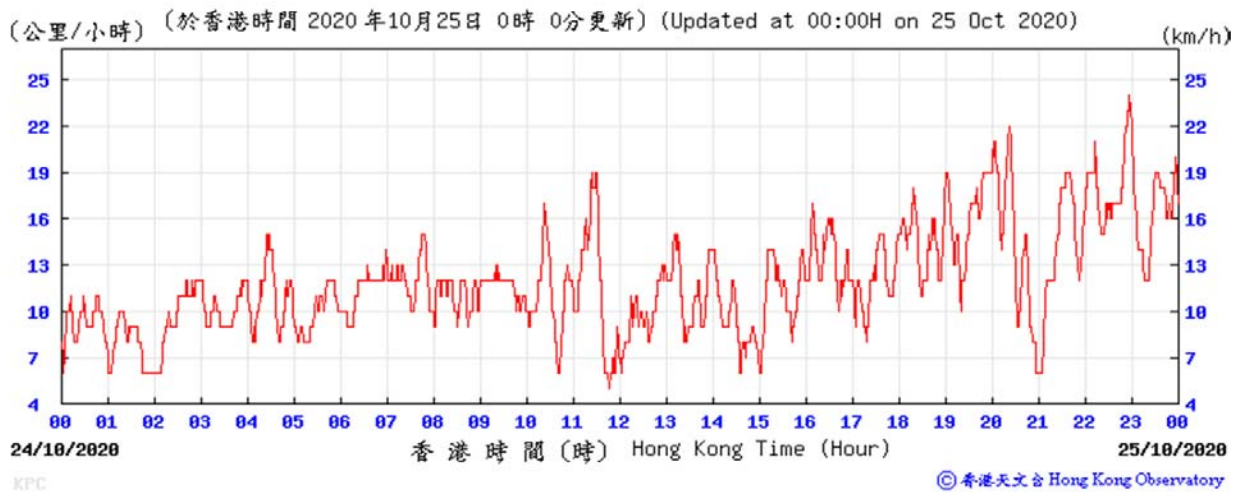
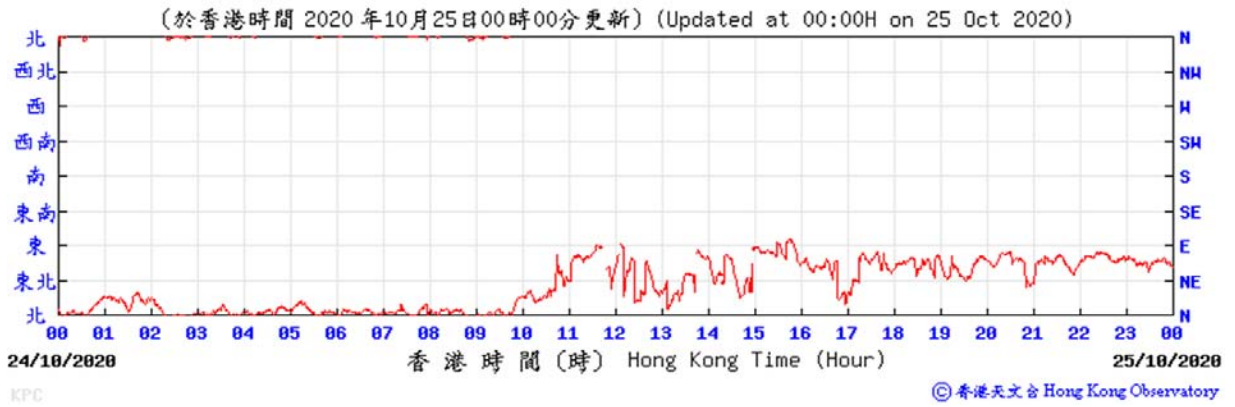
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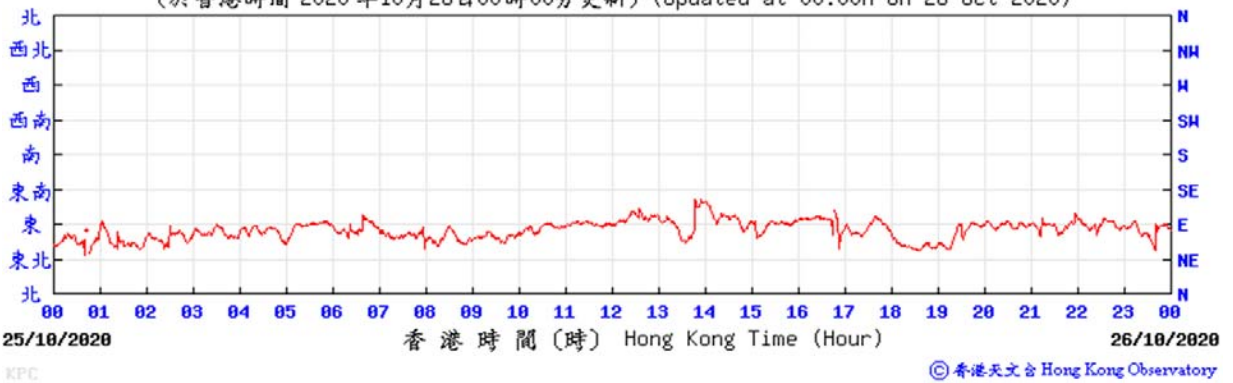
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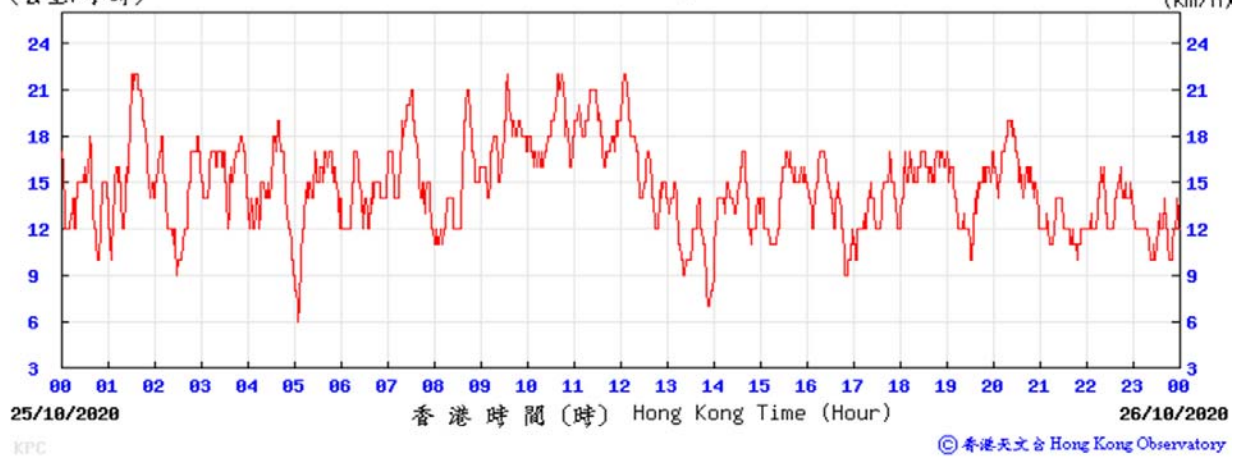


# Extract of Meteorological Observations for King's Park Automatic Weather Station, October 2020

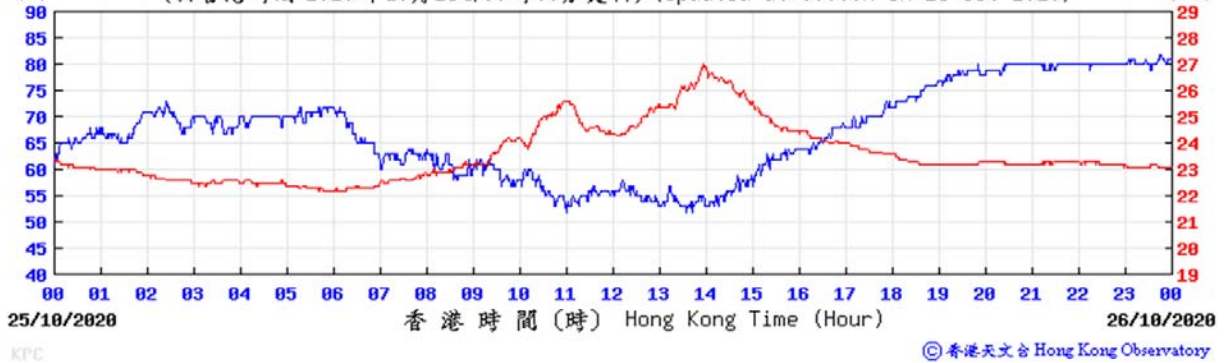
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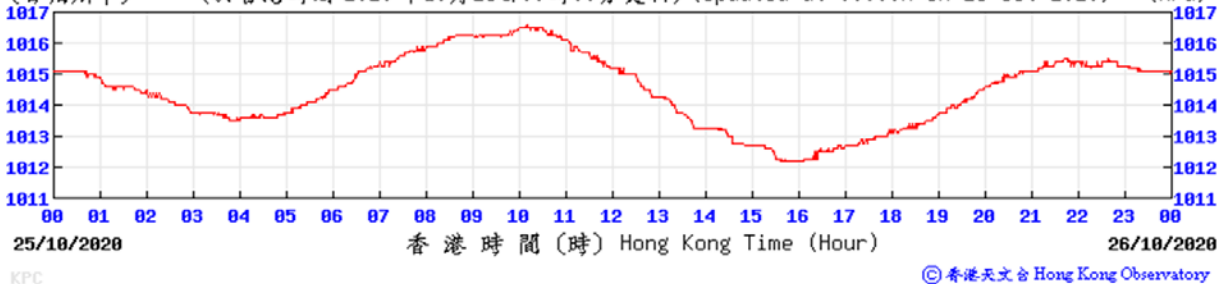
(公里/小時) (於香港時間 2020 年10月26日 0時 0分更新) (Updated at 00:00H on 26 Oct 2020) (km/h)



(%) (於香港時間 2020 年10月26日00時00分更新) (Updated at 00:00H on 26 Oct 2020) (°C)

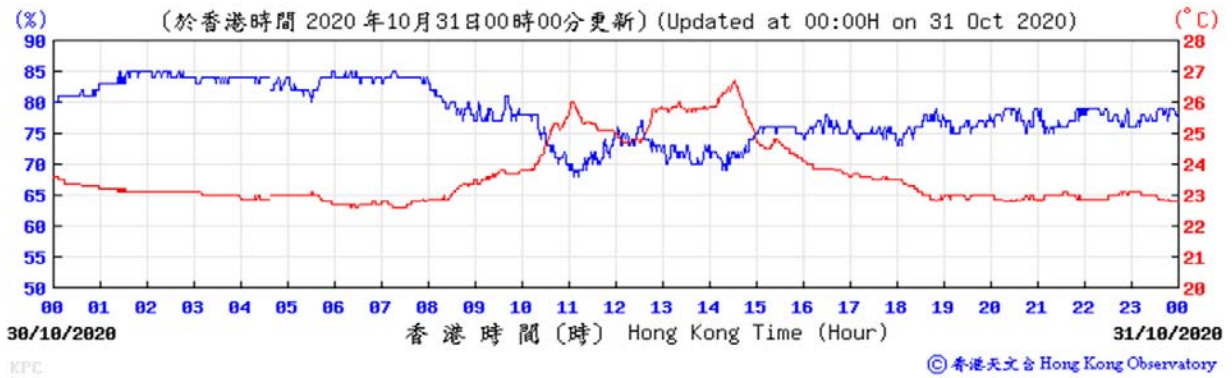
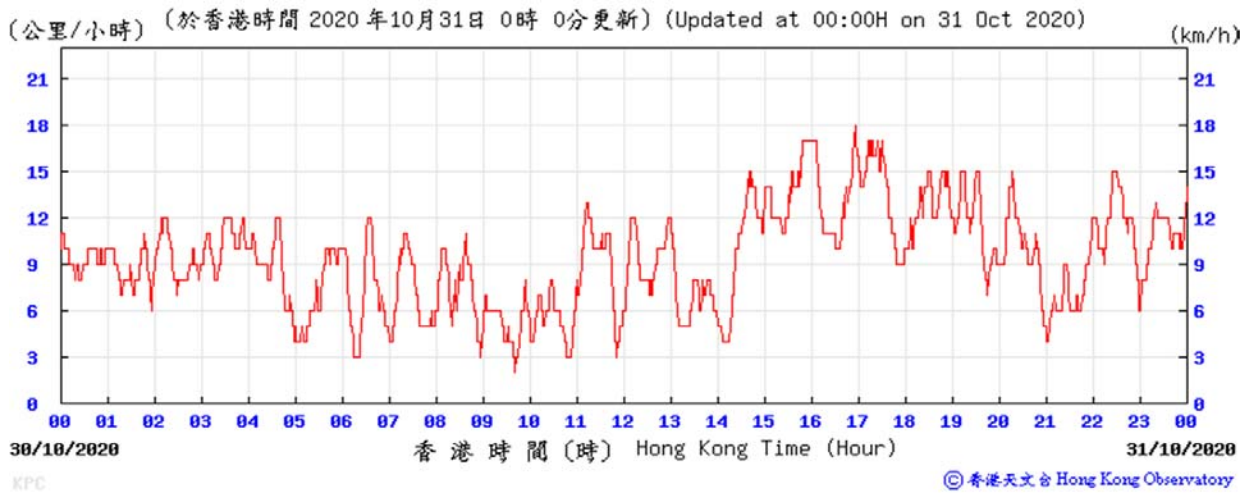
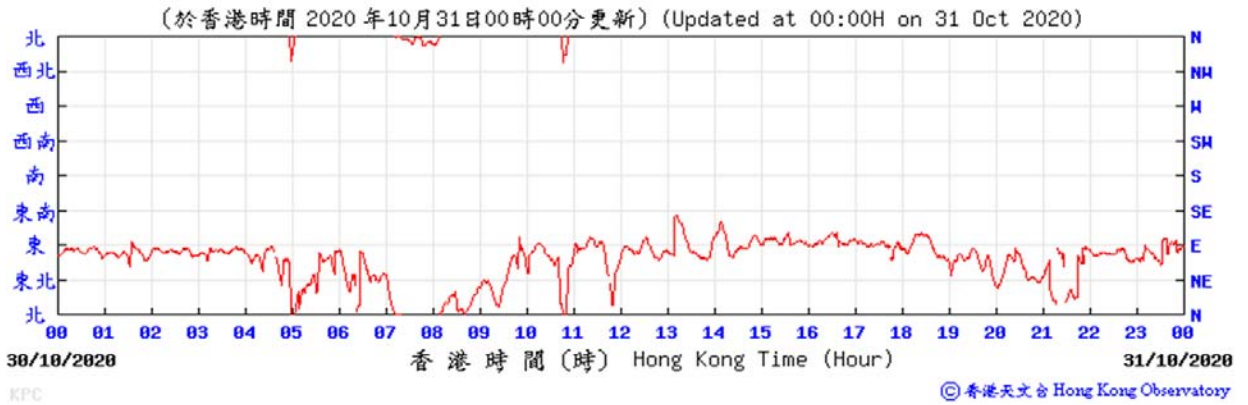


(百帕斯卡) (於香港時間 2020 年10月26日00時00分更新) (Updated at 00:00H on 26 Oct 2020) (hPa)

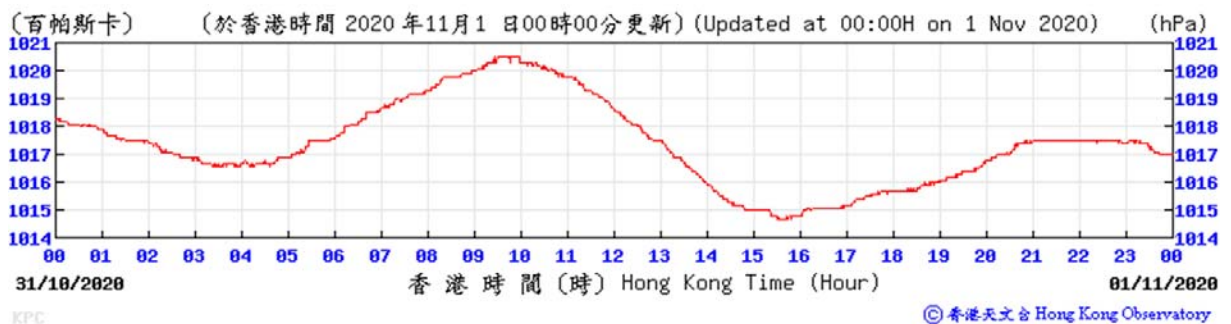
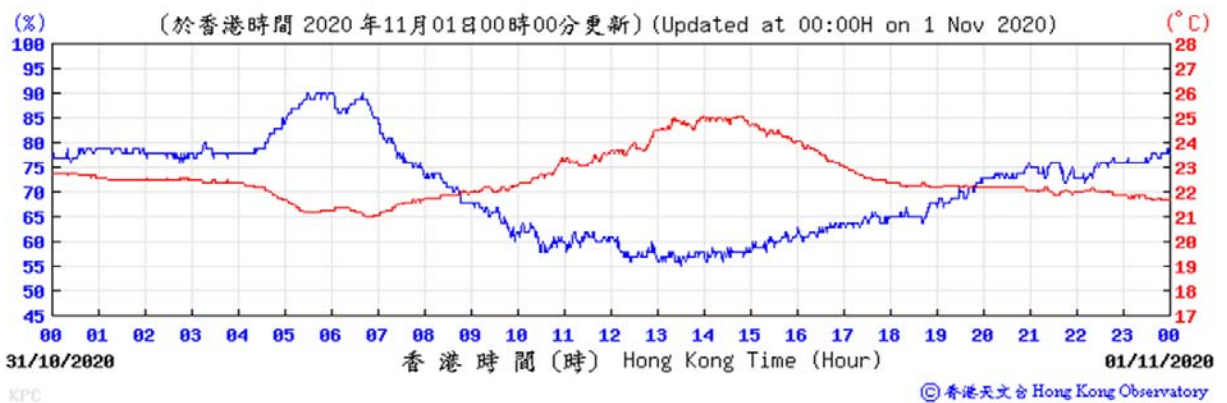
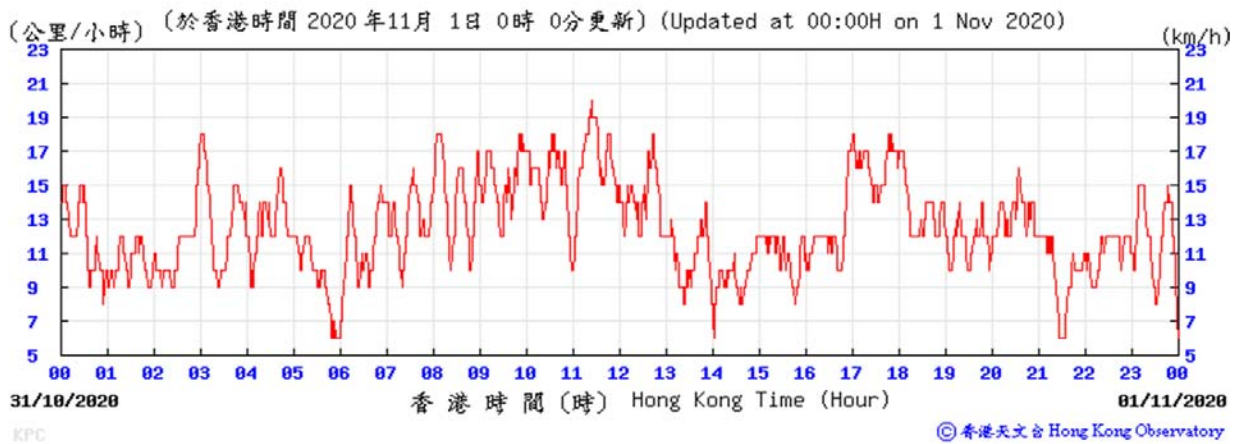
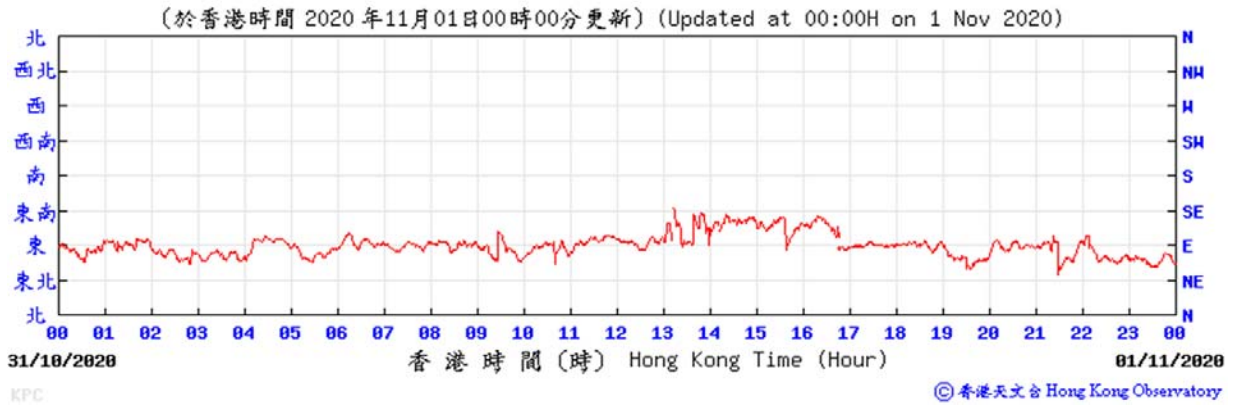




## Extract of Meteorological Observations for King's Park Automatic Weather Station, October 2020



Extract of Meteorological Observations for King's Park Automatic Weather Station, October 2020

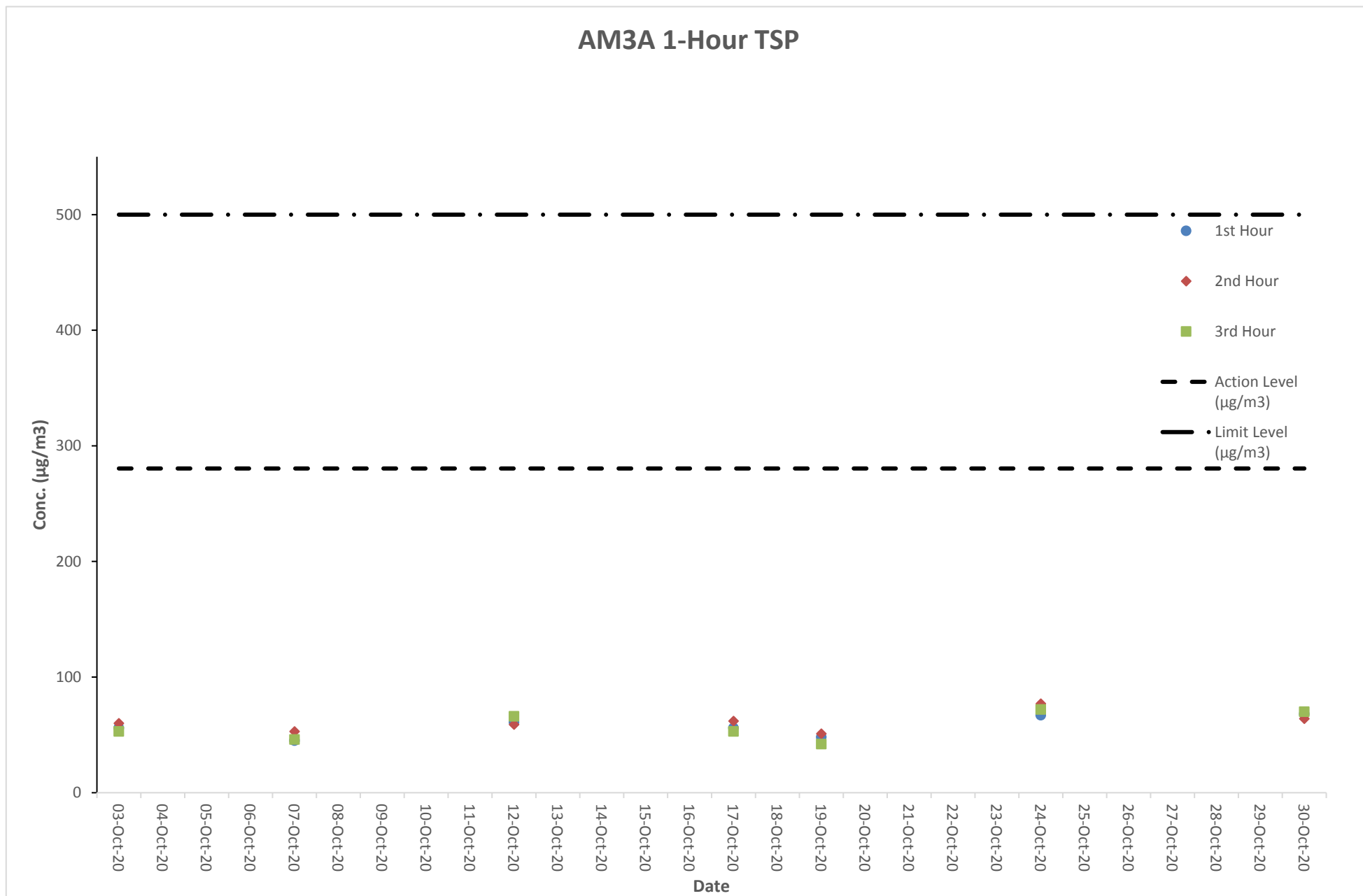


## **E. Graphical Plots of the Monitoring Results**

**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 ( $\mu\text{g}/\text{m}^3$ )
		Start	Finish	1 <sup>st</sup> Hour	2 <sup>nd</sup> Hour	3 <sup>rd</sup> Hour		
03-Oct-20	Fine	8:06	11:06	56	60	53	280.4	500
07-Oct-20	Fine	14:09	17:09	45	53	46	280.4	500
12-Oct-20	Cloudy	8:13	11:13	61	59	66	280.4	500
17-Oct-20	Cloudy	14:17	17:17	56	62	53	280.4	500
19-Oct-20	Fine	8:04	11:04	48	51	42	280.4	500
24-Oct-20	Cloudy	14:12	17:12	67	77	72	280.4	500
30-Oct-20	Cloudy	8:18	11:18	68	64	70	280.4	500

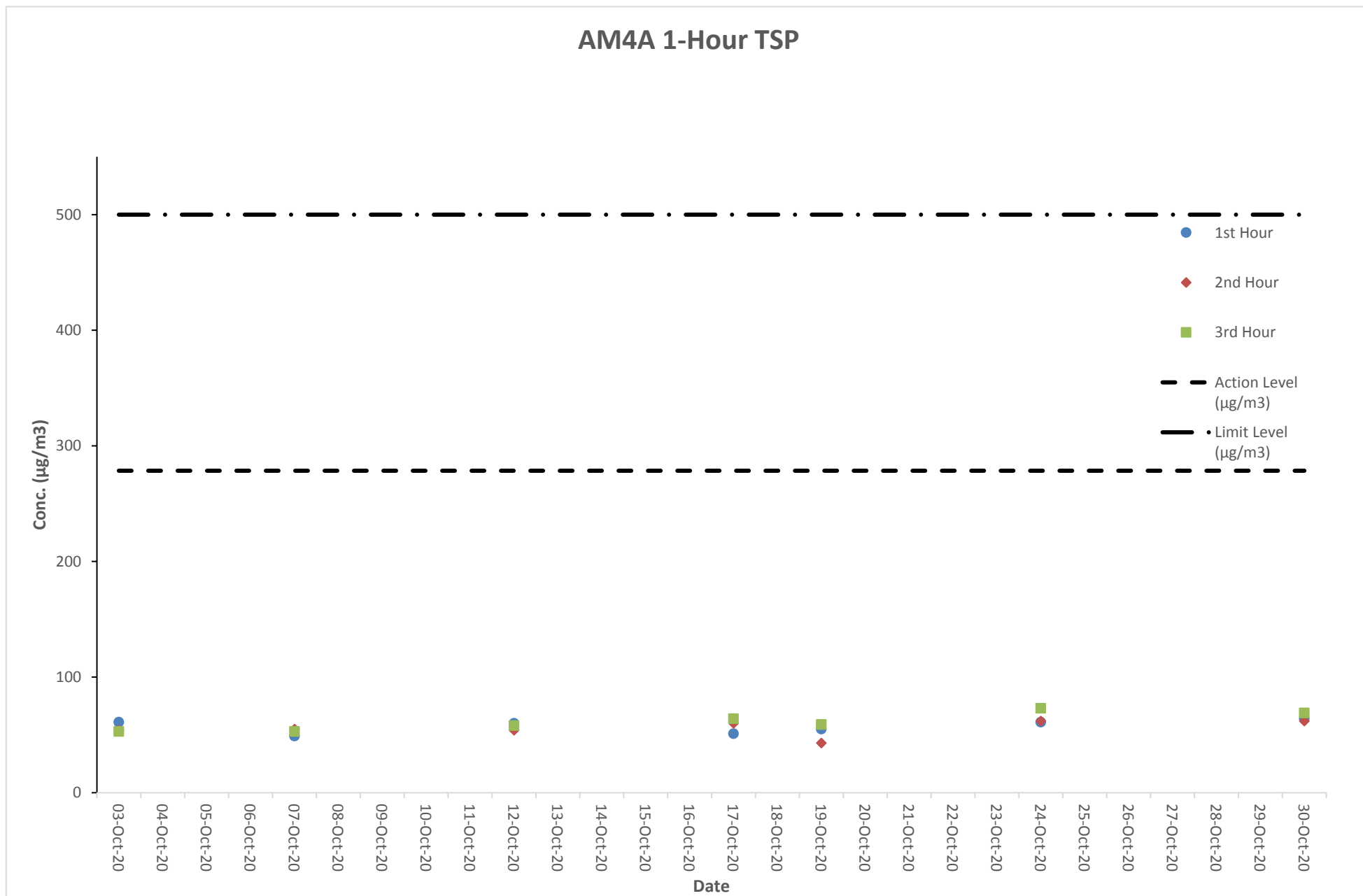
# Graphical Presentation of Air Quality Monitoring Result at Station AM3A (1-hour TSP)



**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 ( $\mu\text{g}/\text{m}^3$ )
		Start	Finish	1 <sup>st</sup> Hour	2 <sup>nd</sup> Hour	3 <sup>rd</sup> Hour		
03-Oct-20	Fine	8:14	11:14	61	54	53	278.5	500
07-Oct-20	Fine	14:17	17:17	49	55	53	278.5	500
12-Oct-20	Cloudy	8:21	11:21	60	54	58	278.5	500
17-Oct-20	Cloudy	14:25	17:25	51	60	64	278.5	500
19-Oct-20	Fine	8:12	11:12	55	43	59	278.5	500
24-Oct-20	Cloudy	14:20	17:20	61	62	73	278.5	500
30-Oct-20	Cloudy	8:26	11:26	64	62	69	278.5	500

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

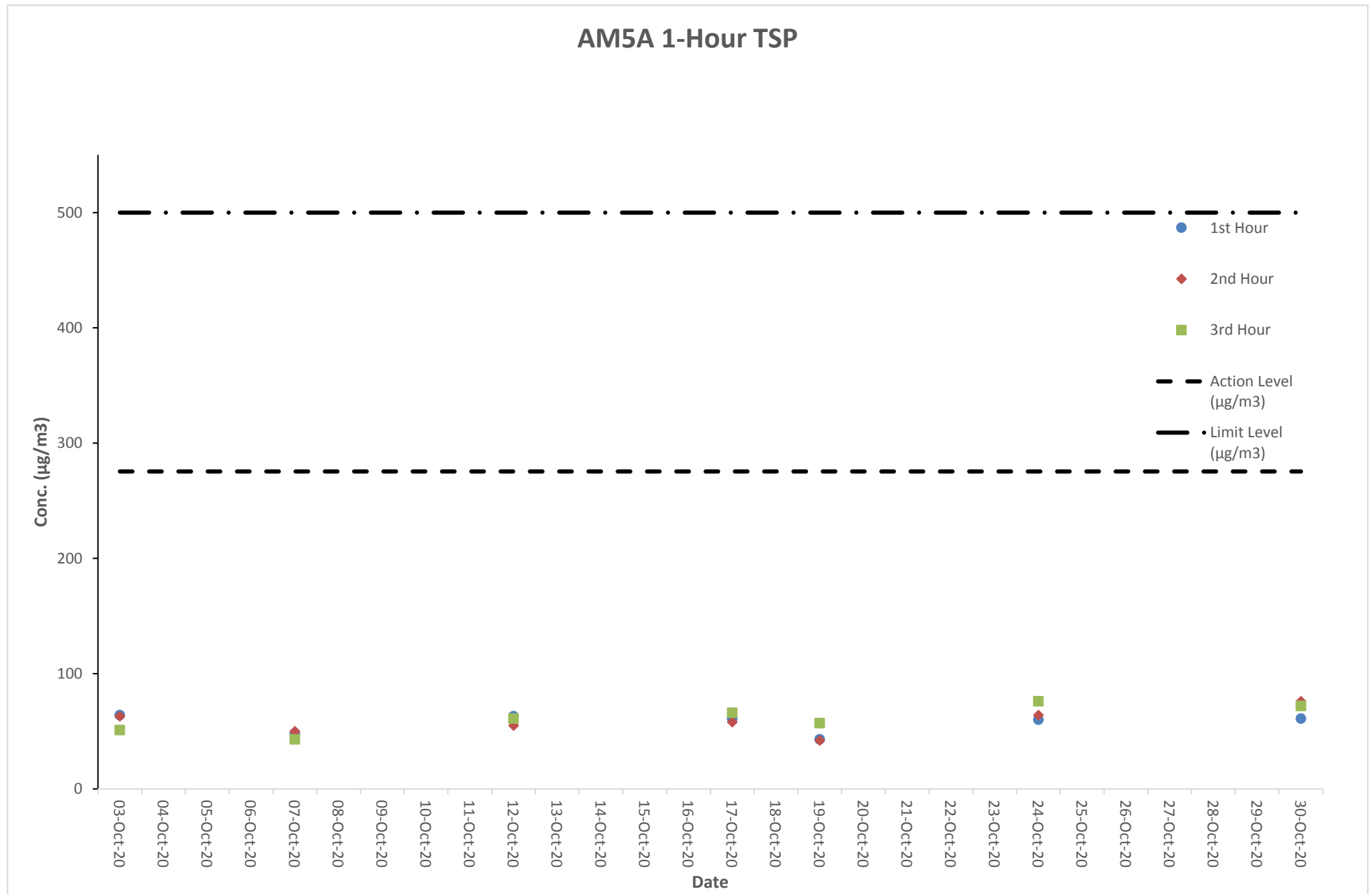


**Air Quality Monitoring Result at Station AM5A (1-hour TSP)**

Date	Weather Condition	Time		Conc. ( $\mu\text{g}/\text{m}^3$ )			Action Level ( $\mu\text{g}/\text{m}^3$ )	Limit Level ( $\mu\text{g}/\text{m}^3$ )
		Start	Finish	1 <sup>st</sup> Hour	2 <sup>nd</sup> Hour	3 <sup>rd</sup> Hour		
03-Oct-20	Fine	8:29	11:29	64	63	51	275.4	500
07-Oct-20	Fine	14:34	17:34	48	50	43	275.4	500
12-Oct-20	Cloudy	8:36	11:36	63	55	61	275.4	500
17-Oct-20	Cloudy	14:42	17:42	61	58	66	275.4	500
19-Oct-20	Fine	8:27	11:27	43	42	57	275.4	500
24-Oct-20	Cloudy	14:37	17:37	60	64	76	275.4	500
30-Oct-20	Cloudy	8:41	11:41	61	76	72	275.4	500



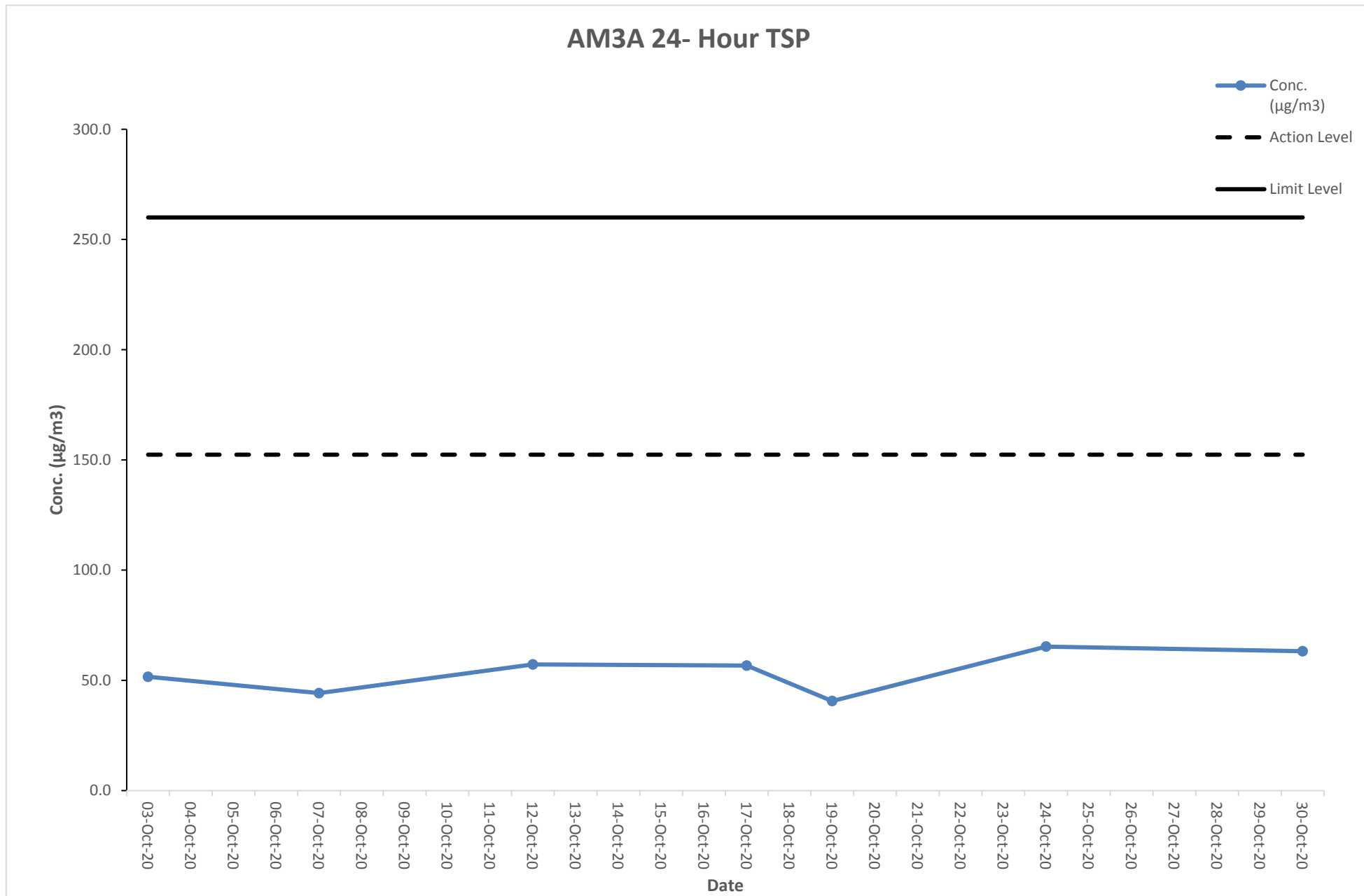
# Graphical Presentation of Air Quality Monitoring Result at Station AM5A (1-hour TSP)



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

Start		Finish		Filter Weight (g)		Elapsed Time Reading		Sampling Time (hrs)	Flow Rate (m <sup>3</sup> /min)			Conc. (µg/m <sup>3</sup> )	Weather Condition	Action Level	Limit Level
Date	Time	Date	Time	Initial	Final	Initial	Final		Initial	Final	Average				
03-Oct-20	10:00	04-Oct-20	10:00	2.8030	2.8860	1179.8	1203.8	24	1.12	1.12	1.12	51.6	Fine	152.4	260
07-Oct-20	10:00	08-Oct-20	10:00	2.8011	2.8722	1203.8	1227.8	24	1.12	1.12	1.12	44.2	Fine	152.4	260
12-Oct-20	10:00	13-Oct-20	10:00	2.8059	2.8980	1227.8	1251.8	24	1.12	1.12	1.12	57.2	Fine	152.4	260
17-Oct-20	10:00	18-Oct-20	10:00	2.8043	2.8956	1251.8	1275.8	24	1.12	1.12	1.12	56.7	Cloudy	152.4	260
19-Oct-20	10:00	20-Oct-20	10:00	2.8070	2.8724	1275.8	1299.8	24	1.12	1.12	1.12	40.6	Fine	152.4	260
24-Oct-20	10:00	25-Oct-20	10:00	2.8077	2.9127	1299.8	1323.8	24	1.12	1.12	1.12	65.3	Fine	152.4	260
30-Oct-20	10:00	31-Oct-20	10:00	2.8047	2.9064	1323.8	1347.8	24	1.12	1.12	1.12	63.2	Fine	152.4	260

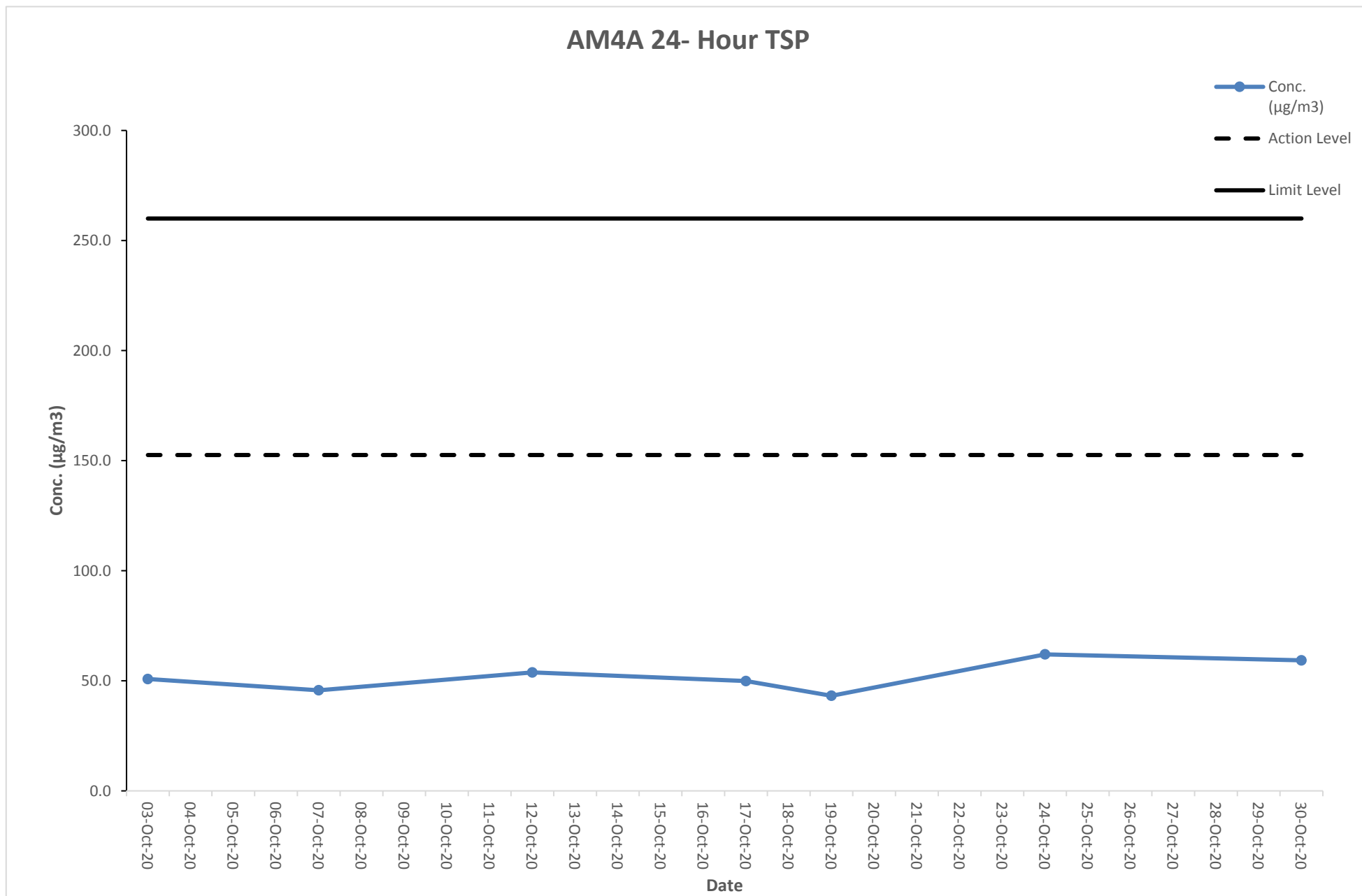
# Graphical Presentation of Air Quality Monitoring Result at Station AM3A (24-hour TSP)



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

Start		Finish		Filter Weight (g)		Elapsed Time Reading		Sampling Time (hrs)	Flow Rate (m <sup>3</sup> /min)			Conc. (µg/m <sup>3</sup> )	Weather Condition	Action Level	Limit Level
Date	Time	Date	Time	Initial	Final	Initial	Final		Initial	Final	Average				
03-Oct-20	10:00	04-Oct-20	10:00	2.8088	2.8905	1399.4	1423.4	24	1.12	1.12	1.12	50.8	Fine	152.6	260
07-Oct-20	10:00	08-Oct-20	10:00	2.8031	2.8767	1423.4	1447.4	24	1.12	1.12	1.12	45.7	Fine	152.6	260
12-Oct-20	10:00	13-Oct-20	10:00	2.8027	2.8892	1447.4	1471.4	24	1.12	1.12	1.12	53.8	Fine	152.6	260
17-Oct-20	10:00	18-Oct-20	10:00	2.8039	2.8843	1471.4	1495.4	24	1.12	1.12	1.12	49.9	Cloudy	152.6	260
19-Oct-20	10:00	20-Oct-20	10:00	2.8066	2.8761	1495.4	1519.4	24	1.12	1.12	1.12	43.2	Fine	152.6	260
24-Oct-20	10:00	25-Oct-20	10:00	2.8062	2.9061	1519.4	1543.4	24	1.12	1.12	1.12	62.0	Fine	152.6	260
30-Oct-20	10:00	31-Oct-20	10:00	2.8035	2.8990	1543.4	1567.4	24	1.12	1.12	1.12	59.3	Fine	152.6	260

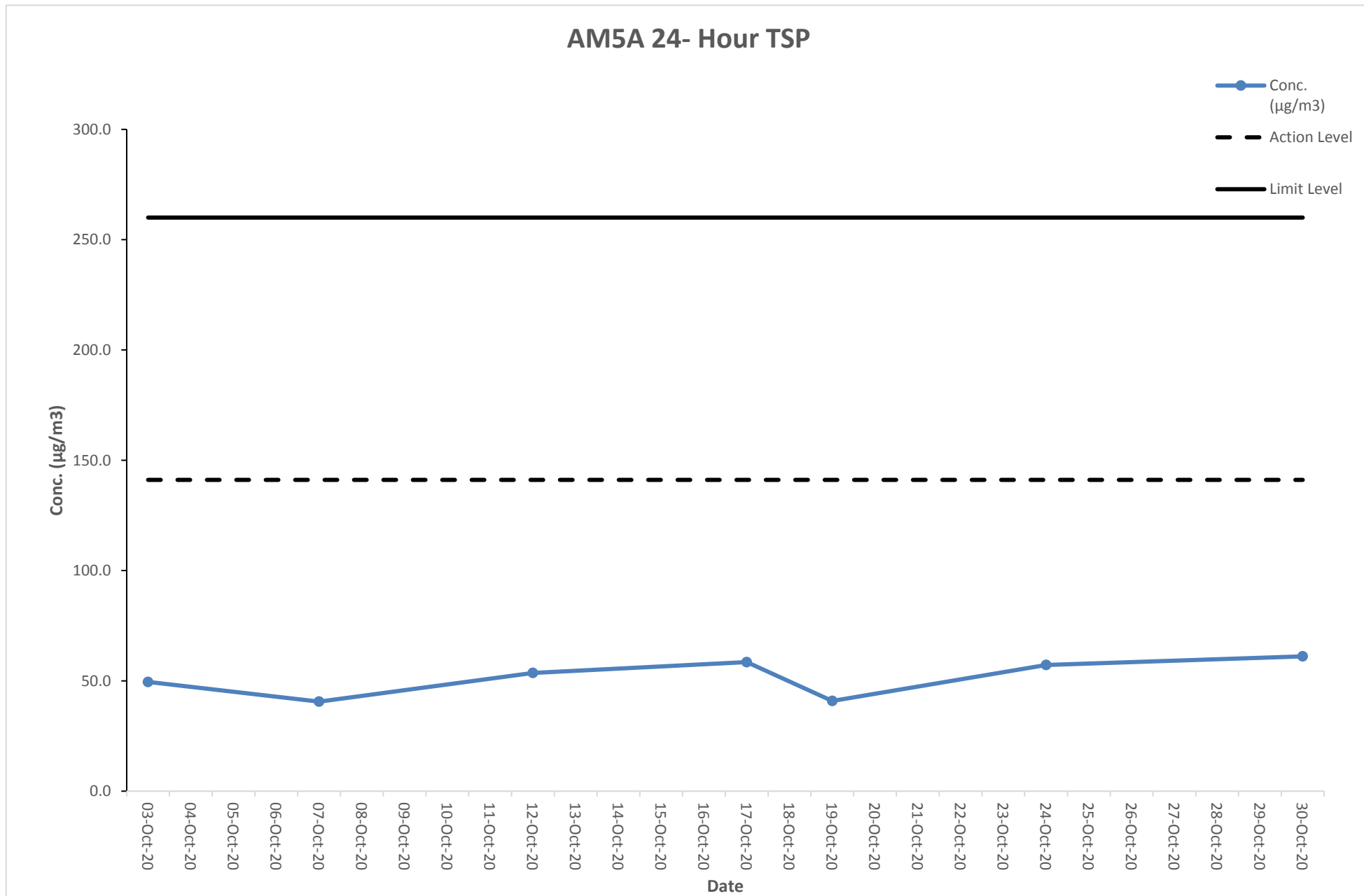
# Graphical Presentation of Air Quality Monitoring Result at Station AM4A (24-hour TSP)



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

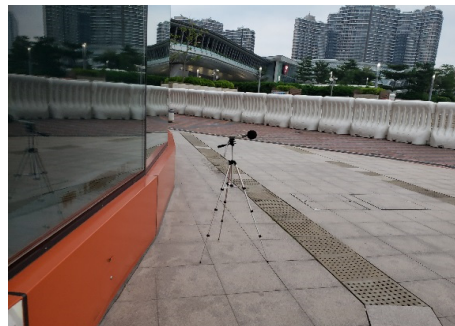
Start		Finish		Filter Weight (g)		Elapsed Time Reading		Sampling Time (hrs)	Flow Rate (m <sup>3</sup> /min)			Conc. (µg/m <sup>3</sup> )	Weather Condition	Action Level	Limit Level
Date	Time	Date	Time	Initial	Final	Initial	Final		Initial	Final	Average				
03-Oct-20	10:00	04-Oct-20	10:00	2.8068	2.8865	1539.6	1563.6	24	1.12	1.12	1.12	49.5	Fine	141.1	260
07-Oct-20	10:00	08-Oct-20	10:00	2.8048	2.8702	1563.6	1587.6	24	1.12	1.12	1.12	40.6	Fine	141.1	260
12-Oct-20	10:00	13-Oct-20	10:00	2.8082	2.8945	1587.6	1611.6	24	1.12	1.12	1.12	53.6	Fine	141.1	260
17-Oct-20	10:00	18-Oct-20	10:00	2.8035	2.8977	1611.6	1635.6	24	1.12	1.12	1.12	58.5	Cloudy	141.1	260
19-Oct-20	10:00	20-Oct-20	10:00	2.8020	2.8679	1635.6	1659.6	24	1.12	1.12	1.12	40.9	Fine	141.1	260
24-Oct-20	10:00	25-Oct-20	10:00	2.8030	2.8950	1659.6	1683.6	24	1.12	1.12	1.12	57.2	Fine	141.1	260
30-Oct-20	10:00	31-Oct-20	10:00	2.8041	2.9024	1683.6	1707.6	24	1.12	1.12	1.12	61.1	Fine	141.1	260

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



**Noise Monitoring Result at Station NM2A**

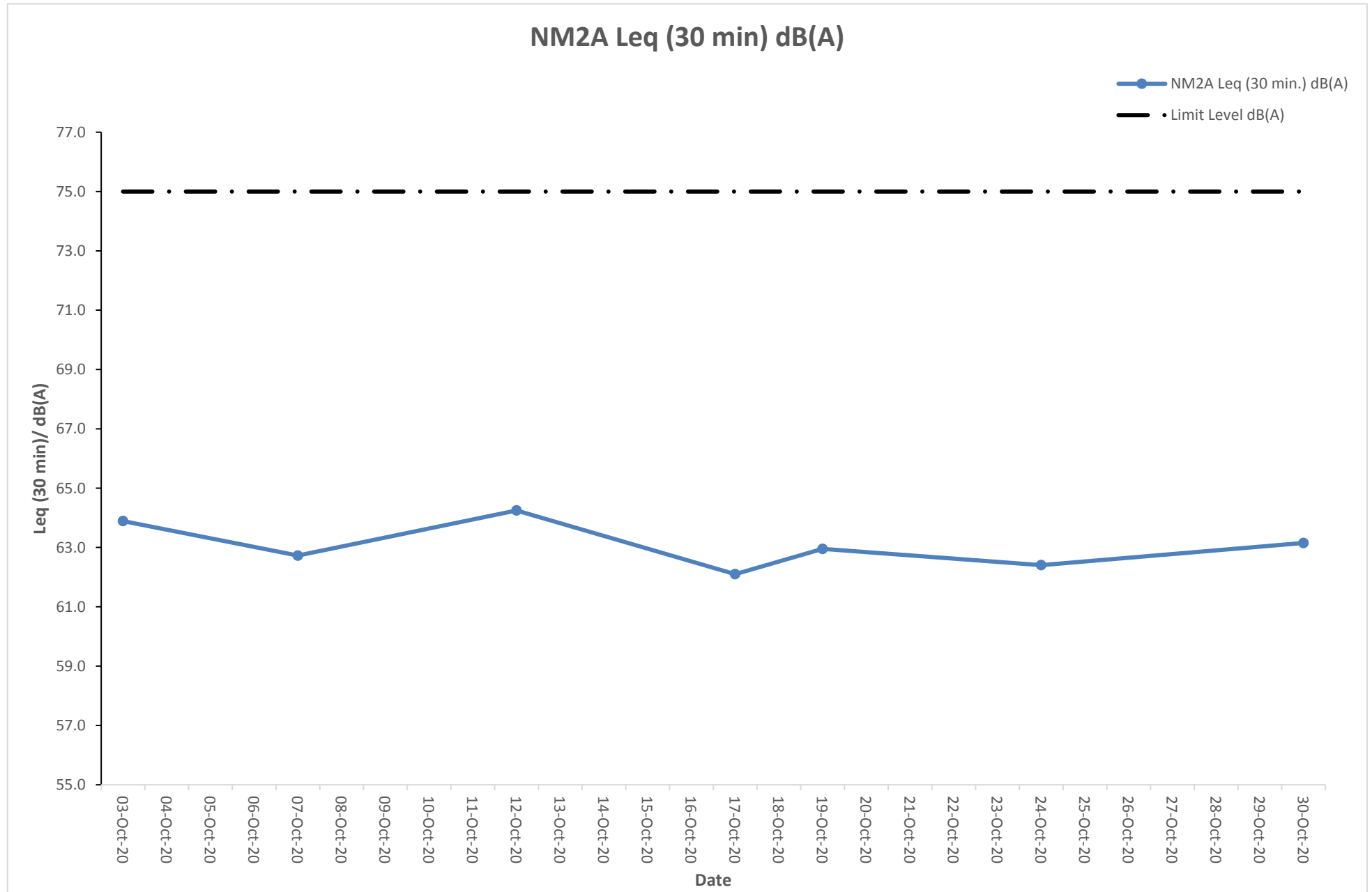
Date	Time	Measured L10 dB(A)	Measured L90 dB(A)	Leq (30 min.) dB(A)
03-Oct-20	8:06	65.4	62.5	63.9
03-Oct-20	8:11	65.4	60.2	
03-Oct-20	8:16	64.2	57.6	
03-Oct-20	8:21	65.6	62.4	
03-Oct-20	8:26	65.6	62.3	
03-Oct-20	8:31	65.3	62.4	
07-Oct-20	14:09	65.6	60.1	62.7
07-Oct-20	14:14	64.3	57.6	
07-Oct-20	14:19	64.5	57.4	
07-Oct-20	14:24	64.3	57.5	
07-Oct-20	14:29	65.6	60.5	
07-Oct-20	14:34	64.6	57.5	
12-Oct-20	8:13	64.3	59.3	64.2
12-Oct-20	8:18	65.7	61.4	
12-Oct-20	8:23	65.1	58.6	
12-Oct-20	8:28	64.9	60.1	
12-Oct-20	8:33	65.5	62.5	
12-Oct-20	8:38	65.9	61.6	
17-Oct-20	14:17	63.5	58.2	62.1
17-Oct-20	14:22	65.2	57.6	
17-Oct-20	14:27	64.4	58.5	
17-Oct-20	14:32	64.7	59.3	
17-Oct-20	14:37	63.9	59.7	
17-Oct-20	14:42	63.6	59.9	
19-Oct-20	8:04	65.7	60.2	63.0
19-Oct-20	8:09	65.5	58.4	
19-Oct-20	8:14	64.1	59.1	
19-Oct-20	8:19	64.9	59.8	
19-Oct-20	8:24	64.6	58.6	
19-Oct-20	8:29	65.2	58.4	
24-Oct-20	14:12	63.9	58.2	62.4
24-Oct-20	14:17	64.6	59.7	
24-Oct-20	14:22	65.3	57.5	
24-Oct-20	14:27	64.9	57.8	
24-Oct-20	14:32	64.4	58.6	
24-Oct-20	14:37	64.1	60.3	
30-Oct-20	8:18	65.8	59.9	63.2
30-Oct-20	8:23	65.3	59.6	
30-Oct-20	8:28	66.4	58.1	
30-Oct-20	8:33	65.6	58.7	
30-Oct-20	8:38	64.5	60.1	
30-Oct-20	8:43	64.2	59.4	



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

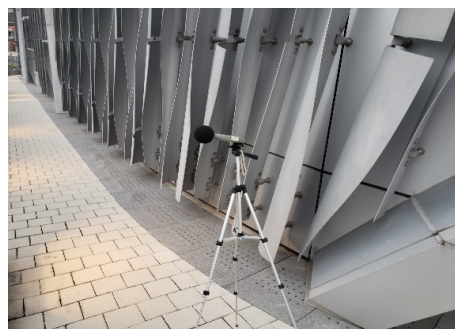
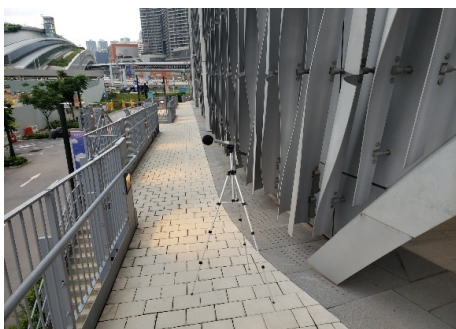


# Graphical Presentation of Noise Monitoring Result at Station NM2A



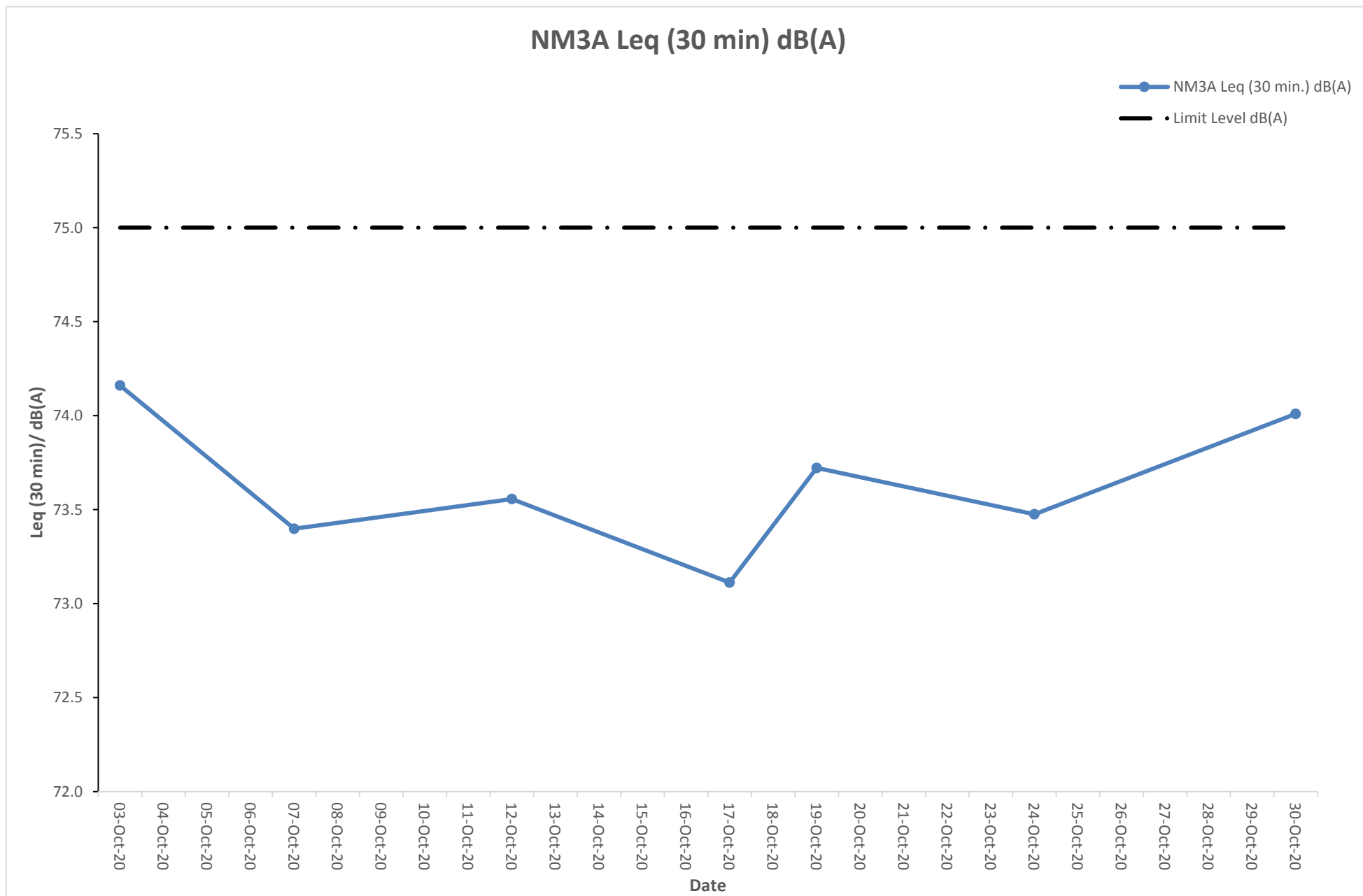
**Noise Monitoring Result at Station NM3A**

Date	Time	Measured L10 dB(A)	Measured L90 dB(A)	Leq (30 min.) dB(A)
03-Oct-20	9:45	75.6	68.4	74.2
03-Oct-20	9:50	76.2	69.5	
03-Oct-20	9:55	75.4	68.9	
03-Oct-20	10:00	76.4	69.6	
03-Oct-20	10:05	76.3	69.2	
03-Oct-20	10:10	76.6	69.5	
07-Oct-20	15:51	74.5	67.4	73.4
07-Oct-20	15:56	75.2	68.2	
07-Oct-20	16:01	76.5	69.2	
07-Oct-20	16:06	74.5	67.5	
07-Oct-20	16:11	75.6	68.4	
07-Oct-20	16:16	76.3	69.2	
12-Oct-20	9:52	76.7	68.6	73.6
12-Oct-20	9:57	74.6	67.3	
12-Oct-20	10:02	74.9	67.1	
12-Oct-20	10:07	76.3	67.7	
12-Oct-20	10:12	75.1	69.2	
12-Oct-20	10:17	75.6	69.6	
17-Oct-20	15:59	73.9	67.3	73.1
17-Oct-20	16:04	74.7	68.1	
17-Oct-20	16:09	74.3	67.7	
17-Oct-20	16:14	76.1	69.2	
17-Oct-20	16:19	76.4	69.6	
17-Oct-20	16:24	75.6	69.9	
19-Oct-20	9:43	75.3	68.6	73.7
19-Oct-20	9:48	74.9	68.1	
19-Oct-20	9:53	74.4	66.9	
19-Oct-20	9:58	74.7	67.4	
19-Oct-20	10:03	75.9	67.8	
19-Oct-20	10:08	76.3	68.4	
24-Oct-20	15:54	74.8	69.3	73.5
24-Oct-20	15:59	76.6	68.1	
24-Oct-20	16:04	76.2	68.5	
24-Oct-20	16:09	74.7	68.8	
24-Oct-20	16:14	75.4	69.7	
24-Oct-20	16:19	75.9	69.1	
30-Oct-20	10:00	76.6	68.9	74.0
30-Oct-20	10:05	76.2	68.6	
30-Oct-20	10:10	75.1	67.8	
30-Oct-20	10:15	75.7	69.5	
30-Oct-20	10:20	74.9	68.3	
30-Oct-20	10:25	76.4	67.4	



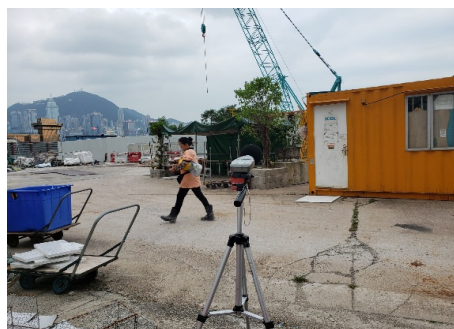
The station set-up of a façade measurement at station NM3A.

# Graphical Presentation of Noise Monitoring Result at Station NM3A



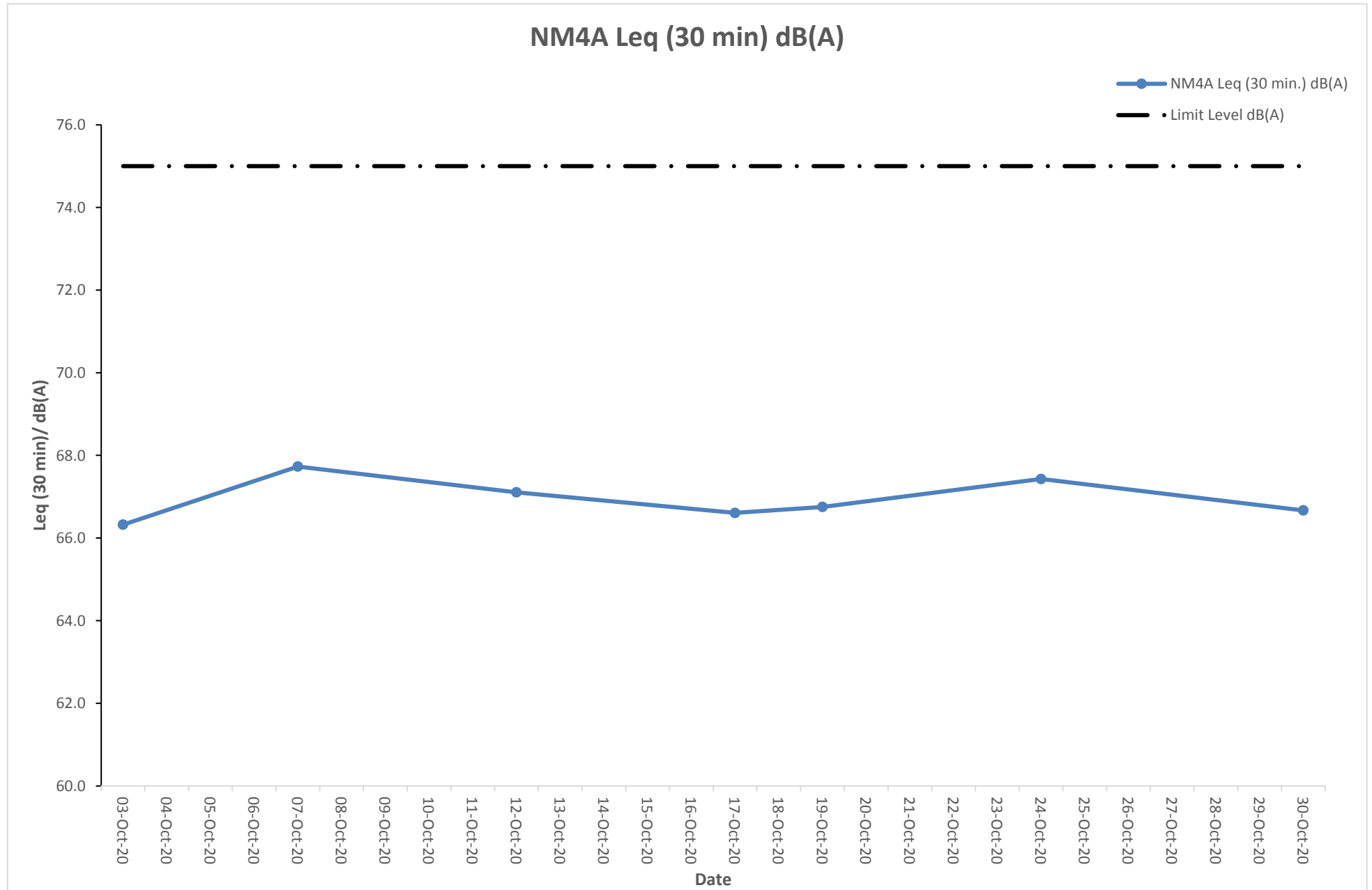
**Noise Monitoring Result at Station NM4A**

Date	Time	Measured L10 dB(A)	Measured L90 dB(A)	Leq (30 min.) dB(A)
03-Oct-20	10:20	68.4	66.3	66.3
03-Oct-20	10:25	67.4	64.5	
03-Oct-20	10:30	66.2	59.5	
03-Oct-20	10:35	67.3	64.5	
03-Oct-20	10:40	66.1	59.4	
03-Oct-20	10:45	67.1	64.2	
07-Oct-20	16:26	68.4	66.5	67.7
07-Oct-20	16:31	68.2	66.3	
07-Oct-20	16:36	69.4	67.5	
07-Oct-20	16:41	68.4	66.5	
07-Oct-20	16:46	68.3	66.3	
07-Oct-20	16:51	68.7	66.5	
12-Oct-20	10:27	69.1	64.6	67.1
12-Oct-20	10:32	67.7	62.3	
12-Oct-20	10:37	67.9	60.5	
12-Oct-20	10:42	68.6	63.8	
12-Oct-20	10:47	69.4	62.9	
12-Oct-20	10:52	68.3	61.4	
17-Oct-20	16:34	67.8	62.5	66.6
17-Oct-20	16:39	69.3	60.7	
17-Oct-20	16:44	69.6	61.1	
17-Oct-20	16:49	68.9	63.4	
17-Oct-20	16:54	68.2	62.8	
17-Oct-20	16:59	68.5	62.2	
19-Oct-20	10:18	68.4	61.9	66.8
19-Oct-20	10:23	68.9	61.4	
19-Oct-20	10:28	69.1	62.2	
19-Oct-20	10:33	69.7	62.7	
19-Oct-20	10:38	68.6	61.6	
19-Oct-20	10:43	68.8	61.1	
24-Oct-20	16:29	69.6	64.1	67.4
24-Oct-20	16:34	69.8	63.3	
24-Oct-20	16:39	68.7	63.8	
24-Oct-20	16:44	69.1	62.6	
24-Oct-20	16:49	69.5	61.7	
24-Oct-20	16:54	68.9	62.2	
30-Oct-20	10:35	68.8	62.7	66.7
30-Oct-20	10:40	68.2	62.3	
30-Oct-20	10:45	67.4	63.4	
30-Oct-20	10:50	69.1	63.9	
30-Oct-20	10:55	69.8	63.1	
30-Oct-20	11:00	69.3	62.5	



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)
03-Oct-20	9:05	61.4	55.5	61.3	64.3
03-Oct-20	9:10	63.2	60.4		
03-Oct-20	9:15	62.4	58.5		
03-Oct-20	9:20	61.2	55.3		
03-Oct-20	9:25	64.1	60.5		
03-Oct-20	9:30	65.6	61.5		
07-Oct-20	15:10	64.3	60.2	62.2	65.2
07-Oct-20	15:15	63.3	60.2		
07-Oct-20	15:20	63.4	60.5		
07-Oct-20	15:25	62.3	58.4		
07-Oct-20	15:30	65.3	61.1		
07-Oct-20	15:35	65.4	61.2		
12-Oct-20	9:12	63.4	57.8	61.1	64.1
12-Oct-20	9:17	64.5	60.4		
12-Oct-20	9:22	61.9	58.6		
12-Oct-20	9:27	62.6	55.9		
12-Oct-20	9:32	63.8	56.3		
12-Oct-20	9:37	63.1	57.5		
17-Oct-20	15:18	62.7	58.6	61.7	64.7
17-Oct-20	15:23	63.6	58.1		
17-Oct-20	15:28	63.2	59.4		
17-Oct-20	15:33	63.8	59.7		
17-Oct-20	15:38	64.7	58.5		
17-Oct-20	15:43	64.4	57.3		
19-Oct-20	9:03	63.9	57.4	62.3	65.3
19-Oct-20	9:08	63.2	57.7		
19-Oct-20	9:13	64.5	58.6		
19-Oct-20	9:18	65.7	58.1		
19-Oct-20	9:23	65.1	58.8		
19-Oct-20	9:28	64.8	59.4		
24-Oct-20	15:13	64.4	59.1	61.9	64.9
24-Oct-20	15:18	64.9	60.1		
24-Oct-20	15:23	63.7	58.8		
24-Oct-20	15:28	62.8	59.6		
24-Oct-20	15:33	63.3	57.9		
24-Oct-20	15:38	64.1	58.3		
30-Oct-20	9:19	63.6	58.4	62.1	65.1
30-Oct-20	9:24	65.2	58.1		
30-Oct-20	9:29	64.7	57.3		
30-Oct-20	9:34	64.4	57.8		
30-Oct-20	9:39	64.9	58.9		
30-Oct-20	9:44	63.3	58.5		

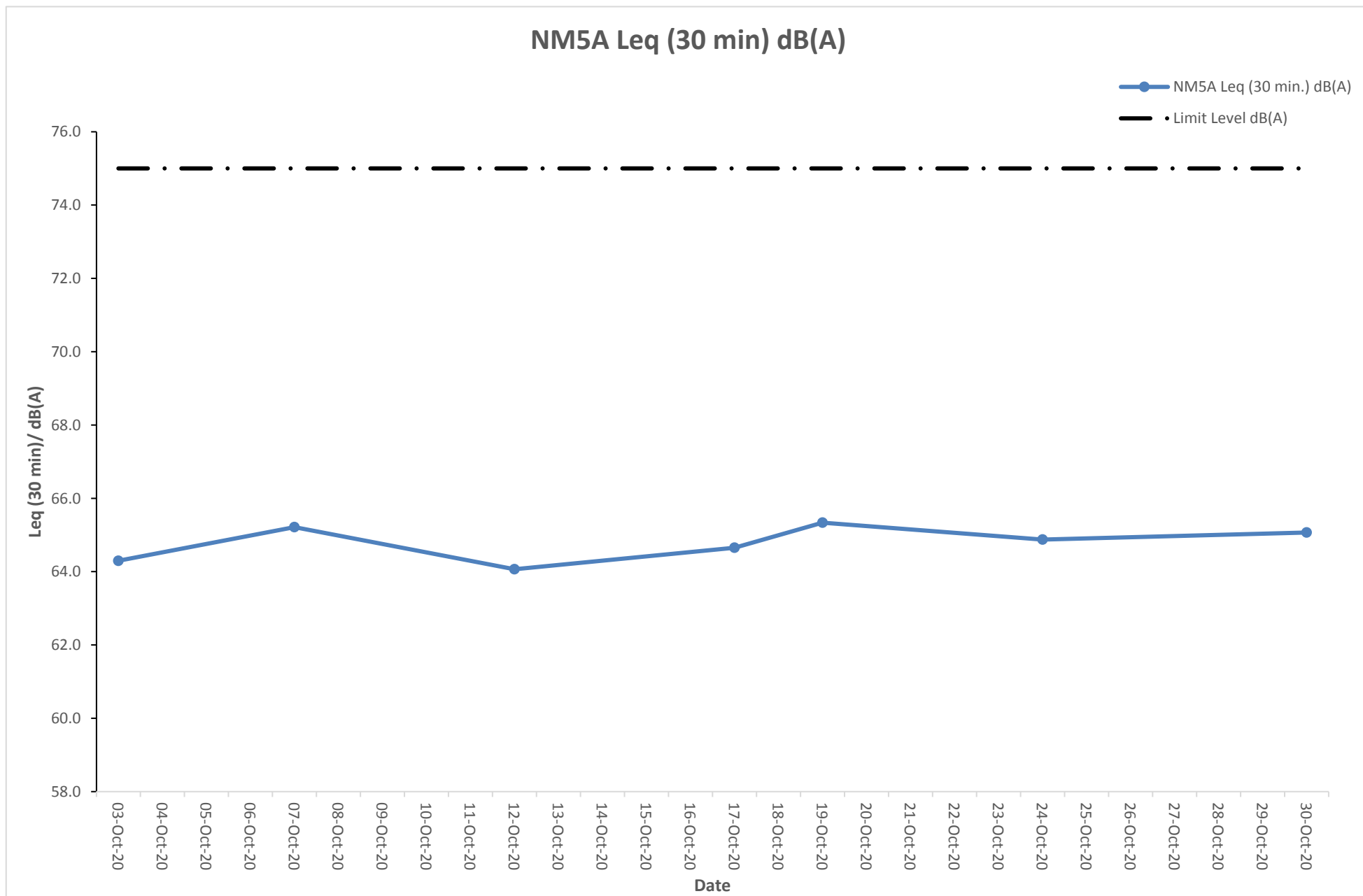
**Remarks:**

+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 Srotng 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)
<b>2020</b>													
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													
Dec													
Sub-total (2020)	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
<b>Total</b>	<b>2623.48</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2623.48</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>21.94</b>

Note:

- 18.79 tonnes, 93.03 tonnes, 2511.66 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.

## **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 (Aug 20 – Oct 20)	0	0	0
From 03 October 2020 to end of the reporting quarter	0	0	0

**END OF THE REPORT**