

Development at West Kowloon Cultural District

Quarterly Environmental Monitoring and Audit (EM&A)
Report (August 2024 – October 2024)

November 2024

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:



Max Lee

Environmental Team Leader (ETL)

West Kowloon Cultural District Authority

Date

29 November 2024

Verified by:



Claudine Lee

Independent Environmental Checker (IEC)

Meinhardt Infrastructure & Environment Ltd

Date

29 November 2024

This Report Consists of:

Part-1: EM&A at Lyric Theatre Complex

and

**Part-2: EM&A for ELS Works for The
Integrated Basement and
Underground Road in Zones 2A, 2B
& 2C**

Part-1: EM&A at Lyric Theatre Complex



Development at West Kowloon Cultural District

Quarterly Environmental Monitoring and Audit
(EM&A) Report (August 2024 - October 2024)

November 2024

Contents

Executive summary	1
1 Introduction	2
1.1 Background	2
1.2 Project Organisation	2
1.3 Status of Construction Works in the Reporting Period	3
2 Summary of EM&A Requirements and Mitigation Measures	4
2.1 Monitoring Requirements	4
2.2 Environmental Mitigation Measures	5
3 Summary of EM&A Results	6
3.1 Monitoring Data	6
3.2 Monitoring Exceedances	6
3.2.1 1-hour TSP Monitoring	6
3.2.2 24-hour TSP Monitoring	6
3.2.3 Construction Noise Monitoring	6
3.2.4 Landscape and Visual Monitoring	7
4 Waste Management	8
4.1 Lyric Theatre Complex	8
5 Environmental Non-conformance	9
6 Comments, Recommendations and Conclusion	10
6.1 Comments	10
6.2 Recommendations	10
6.3 Conclusion	10

Figure 1 Site Layout Plan and Monitoring Stations

Appendices

A. Project Organisation

B. Construction Programme

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

Executive summary

This Quarterly EM&A Report presents the monitoring works at Lyric Theatre Complex conducted from 1 August 2024 to 31 October 2024. The construction works and EM&A programme for M+ Museum was commenced on 31 October 2015 and completed on 28 February 2021; while the construction works and EM&A programme for Lyric Theatre Complex (L1 and L2 Contracts) was commenced on 1 March 2016, and the EM&A programme for L1 Contract was completed on 30 June 2021.

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

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

Exceedance of Action and Limit Levels

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

Implementation of Mitigation Measures

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

Landscape and visual impact inspections were conducted as part of the 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

Mott MacDonald Hong Kong Limited (MMHK) was commissioned to undertake the Environmental Team (ET) services (including environmental monitoring and audit (EM&A)) for the construction of M+ Museum Main Works (Contract No.: CC/2015/3A/022) and Lyric Theatre Complex including the Foundation Works (Contract No.: CC/2015/3A/014), L1 Contract (Contract No. CC/2017/3A/030) and L2 Contract (Contract No. CC/2017/3A/031) at West Kowloon Cultural District (WKCD) (The Project) as part of the WKCD development. The Project Proponent is the West Kowloon Cultural District Authority (WKCDA). The construction works and EM&A programme for M+ Museum was commenced on 31 October 2015 and completed on 28 February 2021; while the construction works and EM&A programme for Lyric Theatre Complex (L1 and L2 Contracts) was commenced on 1 March 2016, and the EM&A programme for L1 Contract was completed on 30 June 2021.

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 2024 to 31 October 2024. 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 L2 undertaken include:

- LTC construction
 - ABWF & MEP work
 - Façade work
 - Scaffolding installation
 - Steel work installation
- ASDA and Lyric Theatre Promenade
 - Defects rectification
 - Hoarding installation
 - Fan room construction
- DCS cofferdam
 - Backfilling
 - Construction of Valve chamber
 - Construction of thrust block
 - Construction of open trap gully and manholes
 - Excavation work for drainage work and UU services
- Extended basement
 - ABWF & MEP works
 - Power cabling

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

2 Summary of EM&A Requirements and Mitigation Measures

2.1 Monitoring Requirements

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

Table 2.1: Summary of Impact EM&A Requirements

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

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

The Harbourside management office formally rejected our proposal of setting up air quality and noise monitoring equipment on its premises at the podium level of Tower 1 (AM2/NM1) on 10 November 2015. Nevertheless, a suitable air quality monitoring location at AM2 was identified on the ground floor in front of The Harbourside Tower 1, which is at the same location as that of baseline monitoring for consistency. No management approval is required on the ground floor for conducting the air monitoring. However, the electricity supply at AM2 was suspended from 31 August 2016. 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 the 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. In view of the upcoming construction works to be undertaken at the air monitoring station AM2B, AM2B was no longer available for conducting the impact air quality monitoring. Hence, an alternative air monitoring location was identified on the ground floor in front of The Harbourside Tower 1 (AM2) which is at the same location as the baseline monitoring and this previously approved monitoring location had also been used for the EM&A Programme from November 2015 to August 2016, the relocation was approved by EPD on 27 May 2021.

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

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

2.2 Environmental Mitigation Measures

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

3 Summary of EM&A Results

3.1 Monitoring Data

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 is presented in **Table 3.1**.

Table 3.1: Summary of Monitoring Data

Parameter	Monitoring Location	Minimum	Maximum	Average
Air Quality				
1 hour TSP	AM1	19	47	27
	AM2	21	60	36
24 hour TSP	AM1	8	36	16
	AM2	13	46	25
Construction Noise				
Leq(30min)	NM1A	63	65	64

3.2 Monitoring Exceedances

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

Table 3.2: Summary of Exceedances

Monitoring Station	Parameter	No. of Exceedance		Action Taken
		Action Level	Limit Level	
Air Quality				
AM1	1 hour TSP	0	0	N/A
	24 hour TSP	0	0	N/A
AM2	1 hour TSP	0	0	N/A
	24 hour TSP	0	0	N/A
Construction Noise				
NM1A	Leq(30min)	0	0	N/A

3.2.1 1-hour TSP Monitoring

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

3.2.2 24-hour TSP Monitoring

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

3.2.3 Construction Noise Monitoring

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

3.2.4 Landscape and Visual Monitoring

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

4 Waste Management

4.1 Lyric Theatre Complex

As advised by the Contractor (L2 Contract), 1,596.1 tonnes, 172.8 tonnes and 0.0 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 1,258.2 tonnes of general refuse were disposed of at SENT and WENT landfill. 102.0 tonnes of metals, 0.7 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 were disposed to sorting facility and 0.0 tonne of chemical waste were collected by licensed contractors in the reporting quarter.

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

5 Environmental Non-conformance

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

No complaint was 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, landscape inspections, and construction dust and noise monitoring results, no non-compliances and exceedances of air quality and noise were recorded in the reporting quarter.

6.2 Recommendations

Reviewing the implementation of the recommended mitigation measures in the EM&A Manual, it was observed that they were effective and efficient in controlling the potential impacts due to construction of the project during the reporting period. Review of the effectiveness and efficiency of the EM&A programme will continue, and recommendations will be provided to remediate any potential impacts due to the project and to improve the EM&A programme if deficiencies of the existing EM&A programme are identified.

6.3 Conclusion

The EM&A programme as recommended in the EM&A Manual has been undertaken. The construction works and EM&A programme for M+ Museum was commenced on 31 October 2015 and completed on 28 February 2021; while the construction works and EM&A programme for Lyric Theatre Complex (L1 and L2 Contracts) was commenced on 1 March 2016, and the EM&A programme for L1 Contract was completed on 30 June 2021.

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

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

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

Figure 1 Site Layout Plan and Monitoring Stations

Appendices

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

A. Project Organisation

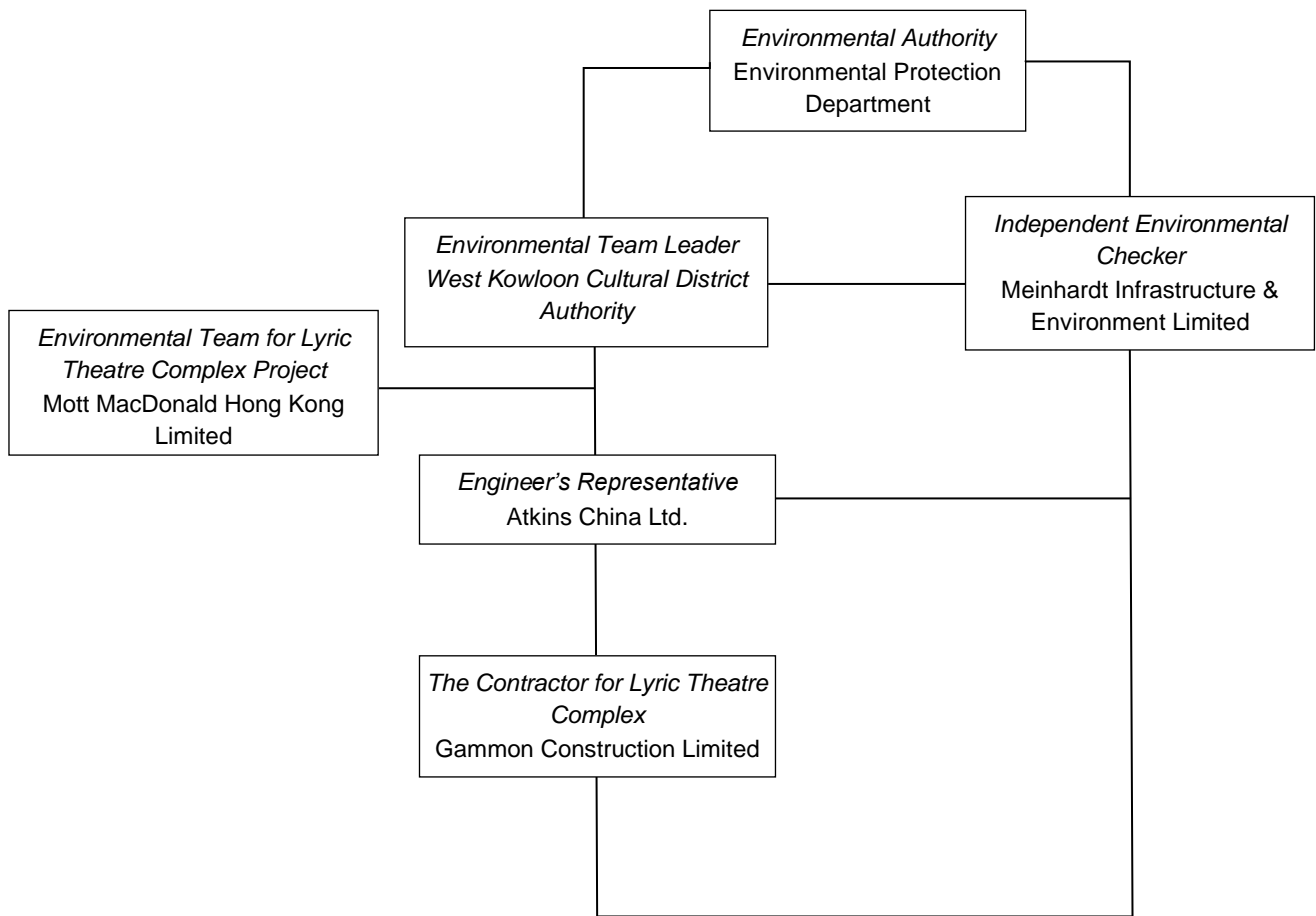



Table A-1: Contact information

Company Name	Role	Name	Telephone	Email
Atkins China Ltd.	Project Manager	Mr. Simha LytheRao	2204 8259	Simha.Lytherao@atkinglobal.com
Meinhardt Infrastructure & Environment Limited	Independent Environmental Checker	Ms. Claudine Lee	2859 5409	claudinelee@meinhardt.com.hk
Gammon Construction Limited (L2)	Environmental Manager	Ms. Fiona Law	9156 7654	fiona.cm.law@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	Project Manager (Health, Safety and Environment)	Mr. Max Lee	2200 0782	max.sl.lee@wkcd.a.hk

B. Construction Programme

ID	Activity	RD	EOT #1 Finish	Rev_3B START	Rev_3B FINISH	Current START	Current FINISH	EOT#1 VAR	R_3B VAR.	LM VAR	SUMM TF (approx)	2020			2021			2022			2023			2024			2025			2026		
												Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Q	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2
L2 CMWP_R_3_B - Rev_3B_06 2nd DRAFT [DD=31Jul24] ***L I V E***																																
GENERAL & PRELIMINARIES																																
Contract Significant Dates																																
Commencement & Completion Dates - CMWP_Rev_01																																
Section Keydates																																
KD05A	Complete Pedestrian Access Corr. & Floor Finishes at AURW	0	28-Feb-21		12-Nov-21		12-Nov-21 A	-256	0	0																						
KD05B	Complete Required Pedestrian Access Corridor & associated top slab at Avenue Level [if instructed]	0	14-Feb-21		12-Nov-21		12-Nov-21 A	-270	0	0																						
KD05	PC for HO of the Remaining Works for M+ Promenade South	0	24-Aug-20		11-Sep-24		26-Nov-24*	-1479	-76	-24	-76																					
KD08	PC for HO Local ICT/Riser/SCR/TBE/MNO Rooms	0	09-Aug-23		07-Jan-26		04-Mar-26*	-890	-56	-14	-56																					
KD10	PC for HO of ASDA, Lyric Theatre Promenade South to Authority	0	09-Aug-23		07-Jan-26		04-Mar-26*	-890	-56	-14	-56																					
KD09	PC for HO of RDE areas for Tenancy Fit-out Wrks	0	09-Aug-23		07-Jan-26		04-Mar-26*	-890	-56	-14	-56																					
KD11	PC for HO of Extended Basement for HO to Authority & HO of CW to Relev. Gov Authority	0	09-Aug-23		07-Jan-26		04-Mar-26*	-890	-56	-14	-56																					
KD07	PRACTICAL COMPLETION for M+ Day 2 Works to the Authority	0	09-Aug-23		06-Feb-26		04-Apr-26*	-920	-57	-11	-57																					
KD13	PRACTICAL COMPLETION for LT, EB & C'Way 3B (Including PPE)	0	06-Mar-24		07-Aug-26		02-Oct-26*	-892	-56	-14	-56																					
Stage Keydates																																
KD03	OBTAIN OP for Lyric Theatre & Extended Basement	0	10-Jun-23		07-Nov-25		02-Jan-26*	-889	-56	-14	-56																					
KD01	Compl Dsgn Coor/Subm and obtn NNO for L1 Contr Bsmt constrn wrks	0	20-Jul-19		20-Jul-19		20-Jul-19 A	0	0	0																						
KD06	PC for Fountain Related Plantroom(s) (allow access to Project Contractor)	0	01-Apr-21		22-Sep-22		22-Sep-22 A	-538	0	0																						
KD14	Complete all Necessary Works Incl. Integ_T&C along CW Z3a/Z3b for Rel_Authority Pre-Insp.	0	31-Jan-23		22-Nov-25		17-Jan-26*	-1035	-56	-10	-56																					
KD02	Obtain BA14 Acknowledge from BD for M+ Day2 A&A Works	0	10-Jun-23		06-Jan-26		04-Mar-26*	-949	-57	-11	-57																					
CMWP - Summary Program - RSS																																
SUM100	[LoE] CC_B - Lyric Theatre	474		02-May-20	22-Jan-26	02-May-20 A	20-Mar-26	-45	-9	160																						
SUM101	[LoE] CC_C - ASDA and Lyric Theatre Promenade	460		12-Apr-21	07-Jan-26	12-Apr-21 A	04-Mar-26	-44	-10	174																						
SUM102	[LoE] CC_D - Remaining Works for M+ Promenade South	88		26-May-22	11-Sep-24	26-May-22 A	26-Nov-24	-57	-20	-57																						
SUM103	[LoE] CC_E - DCS Cofferdam	37		07-Aug-20	04-Jul-24	07-Aug-20 A	20-Sep-24	-56	-3	32																						
SUM104	[LoE] CC_F - Modification to Existing Pump Cell	151		12-Oct-22	04-Dec-24	12-Oct-22 A	15-Feb-25	-56	-3	32																						
SUM105	[LoE] CC_G - Extended Basement	265		15-May-21	28-May-25	15-May-21 A	25-Jun-25	-23	-22	161																						
SUM106	[LoE] CC_H - Vibration Isolation Spring System Remaining as of 30Apr2020	0		14-Apr-20	06-Feb-21	14-Apr-20 A	06-Feb-21 A	0	0																							
SUM107	[LoE] CC_I - Underpass and Associated Area	274		24-Feb-21	09-Jun-25	24-Feb-21 A	07-Jul-25	-23	-22	116																						
SUM108	[LoE] CC_J - M+ Day 2 Works	444		03-Jun-21	03-Dec-25	03-Jun-21 A	28-Jan-26	-45	-9	-19																						
SUM109	[LoE] CC_K - Water Main at Promenade	221		23-Apr-22	10-Jan-25	23-Apr-22 A	15-May-25	-97	-55	28																						
SUM110	[LoE] CC_N - Lifts & Escalators	321		16-Aug-21	30-Aug-25	16-Aug-21 A	30-Aug-25	0	0	0																						
SUM111	[LoE] P32 Interim Development	160		17-May-21	14-Feb-25	17-May-21 A	14-Feb-25	0	0	266																						
SUM112	[LoE] Project Wide Stat. Inspections & Approval [LTC&EB FSD & BD Summary LTC/EB_3B & 3A]	146		14-Jul-25	06-Jan-26	04-Sep-25	04-Mar-26	-45	-9	-45																						



Base Line ACT
 EOT#1 CD
 Base Line MS
 Milestone
 Current - Other Works
 Current - Struct Works
 Current - MEP Works

Legend:
 RD = Remaining Duration; BL = Base Line; LoE = Level of Effort Activity Type; LM = Last Month; SUMM = Summary; TF = Total Float; VAR = Variance

L2 CMWP_R_3_B - Rev_3B_06 2nd DRAFT
[DD=31Jul24] *L I V E*****

Date	Revision	Checked	Approved
12-Aug-24	CMWP Rev_3_B Jul24 Update	NS	IH

C. Environmental Mitigation Measures – Implementation Status

Table C-1: Environmental Mitigation Measures Implementation Status

EM&A Ref.	Recommendation Measures	Implementation Stage		
		Aug 2024	L2 Sep 2024	Oct 2024
Air Quality Impact (Construction)				
2.1 & 10.3.1	General Dust Control Measures Frequent water spraying for active construction areas (12 times a day or once every one hour), including Heavy construction activities such as construction of buildings or roads, drilling, ground excavation, cut and fill operations (i.e., earth moving)	Rem	✓	✓
2.1 & 10.3.1	Best Practice For Dust Control The relevant best practices for dust control as stipulated in the Air Pollution Control (construction Dust) Regulation should be adopted to further reduce the construction dust impacts from the Project. These best practices include: <i>Good Site Management</i> <ul style="list-style-type: none"> • Good site management is important to help reducing potential air quality impact down to an acceptable level. As a general guide, the Contractor should maintain high standard of housekeeping to prevent emission of fugitive dust. Loading, unloading, handling and storage of raw materials, wastes or by-products should be carried out in a manner so as to minimise the release of visible dust emission. Any piles of materials accumulated on or around the work areas should be cleaned up regularly. Cleaning, repair and maintenance of all plant facilities within the work areas should be carried out in a manner minimising generation of fugitive dust emissions. The material should be handled properly to prevent fugitive dust emission before cleaning. <i>Disturbed Parts of the Roads</i> <ul style="list-style-type: none"> • Each and every main temporary access should be paved with concrete, bituminous hardcore materials or metal plates and kept clear of dusty materials; or • Unpaved parts of the road should be sprayed with water or a dust suppression chemical so as to keep the entire road surface wet. <i>Exposed Earth</i> <ul style="list-style-type: none"> • Exposed earth should be properly treated by compaction, hydroseeding, vegetation planting or 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. <i>Loading, Unloading or Transfer of Dusty Materials</i>	✓	Obs	Obs, Rem
		✓	✓	✓
		✓	✓	✓
		N/A	N/A	N/A

EM&A Ref.	Recommendation Measures	Implementation Stage		
		Aug 2024	L2 Sep 2024	Oct 2024
	<ul style="list-style-type: none"> All dusty materials should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet. 	✓	✓	✓
	<i>Debris Handling</i>			
	<ul style="list-style-type: none"> Any debris should be covered entirely by impervious sheeting or stored in a debris collection area sheltered on the top and the three sides. 	✓	✓	✓
	<ul style="list-style-type: none"> Before debris is dumped into a chute, water should be sprayed so that it remains wet when it is dumped. 	✓	✓	✓
	<i>Transport of Dusty Materials</i>			
	<ul style="list-style-type: none"> Vehicle used for transporting dusty materials/spoils should be covered with tarpaulin or similar material. The cover should extend over the edges of the sides and tailboards. 	✓	✓	✓
	<i>Wheel washing</i>			
	<ul style="list-style-type: none"> Vehicle wheel washing facilities should be provided at each construction site exit. Immediately before leaving the construction site, every vehicle should be washed to remove any dusty materials from its body and wheels. 	✓	✓	✓
	<i>Use of vehicles</i>			
	<ul style="list-style-type: none"> The speed of the trucks within the site should be controlled to about 10km/hour in order to reduce adverse dust impacts and secure the safe movement around the site. 	✓	✓	✓
	<ul style="list-style-type: none"> Immediately before leaving the construction site, every vehicle should be washed to remove any dusty materials from its body and wheels. 	✓	✓	✓
	<ul style="list-style-type: none"> Where a vehicle leaving the construction site is carrying a load of dusty materials, the load should be covered entirely by clean impervious sheeting to ensure that the dusty materials do not leak from the vehicle. 	✓	✓	✓
	<i>Site hoarding</i>			
	<ul style="list-style-type: none"> Where a site boundary adjoins a road, street, service lane or other area accessible to the public, hoarding of not less than 2.4m high from ground level should be provided along the entire length of that portion of the site boundary except for a site entrance or exit. 	✓	✓	✓
2.1 & 10.3.1	<p>Best Practicable Means for Cement Works (Concrete Batching Plant)</p> <p>The relevant best practices for dust control as stipulated in the Guidance Note on the Best Practicable Means for Cement Works (Concrete Batching Plant) BPM 3/2(93) should be followed and implemented to further reduce the construction dust impacts of the Project. These best practices include: Exhaust from Dust Arrestment Plant</p>			

EM&A Ref.	Recommendation Measures	Implementation Stage		
		Aug 2024	L2 Sep 2024	Oct 2024
	<ul style="list-style-type: none"> Wherever possible the final discharge point from particulate matter arrestment plant, where is not necessary to achieve dispersion from residual pollutants, should be at low level to minimise the effect on the local community in the case of abnormal emissions and to facilitate maintenance and inspection 	N/A	N/A	N/A
	<p>Emission Limits</p> <ul style="list-style-type: none"> All emissions to air, other than steam or water vapour, shall be colourless and free from persistent mist or smoke 	N/A	N/A	N/A
	<p>Engineering Design/Technical Requirements</p> <ul style="list-style-type: none"> As a general guidance, the loading, unloading, handling and storage of fuel, raw materials, products, wastes or by-products should be carried out in a manner so as to prevent the release of visible dust and/or other noxious or offensive emissions 	N/A	N/A	N/A
	<p>Non-Road Mobile Machinery (NRMM): All NRMMs operating on-site which are subject to emission control of Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation are approved/exempted (as the case may be) and affixed with the requisite approval/exemption labels.</p>	✓	✓	Rem
Noise Impact (Construction)				
3.1 & 10.4.1	<p>Good Site Practice</p> <p>Good site practice and noise management can significantly reduce the impact of construction site activities on nearby NSRs. The following package of measures should be followed during each phase of construction:</p> <ul style="list-style-type: none"> only well-maintained plant to be operated on-site and plant should be serviced regularly during the construction works; machines and plant that may be in intermittent use to be shut down between work periods or should be throttled down to a minimum plant known to emit noise strongly in one direction, should, where possible, be orientated to direct noise away from the NSRs; mobile plant should be sited as far away from NSRs as possible; and material stockpiles and other structures to be effectively utilised, where practicable, to screen noise from on-site construction activities. 	✓	✓	✓
	<p>Adoption of Quieter PME</p>	✓	✓	✓

EM&A Ref.	Recommendation Measures	Implementation Stage		
		Aug 2024	L2 Sep 2024	Oct 2024
3.1 & 10.4.1	The recommended quieter PME adopted in the assessment were taken from the EPD's QPME Inventory and "Sound Power Levels of Other Commonly Used PME" are presented in Table 4.26 in the EIA report. It should be noted that the silenced PME selected for assessment can be found in Hong Kong.	✓	✓	✓
3.1 & 10.4.1	Use of Movable Noise Barriers Movable noise barriers can be very effective in screening noise from particular items of plant when constructing the Project. Noise barriers located along the active works area close to the noise generating component of a PME could produce at least 10 dB(A) screening for stationary plant and 5 dB(A) for mobile plant provided the direct line of sight between the PME and the NSRs is blocked.	✓	✓	✓
3.1 & 10.4.1	Use of Noise Enclosure/ Acoustic Shed The use of noise enclosure or acoustic shed is to cover stationary PME such as air compressor and concrete pump. With the adoption of the noise enclosure, the PME could be completely screened, and noise reduction of 15 dB(A) can be achieved according to the EIAO Guidance Note No. 9/2010.	✓	✓	✓
3.1 & 10.4.1	Use of Noise Insulating Fabric Noise insulating fabric can also be adopted for certain PME (e.g. drill rig, piling machine etc). The fabric should be lapped such that there are no openings or gaps on the joints. According to the approved Tsim Sha Tsui Station Northern Subway EIA report (AEIAR-127/2008), a noise reduction of 10 dB(A) can be achieved for the PME lapped with the noise insulating fabric.	✓	✓	✓
3.1 & 10.4.1	Scheduling of Construction Works outside School Examination Periods During construction phase, the contractor should liaise with the educational institutions (including NSRs LCS and CRGPS) to obtain the examination schedule and avoid the noisy construction activities during school examination periods.	N/A	N/A	N/A

EM&A Ref.	Recommendation Measures	Implementation Stage		
		Aug 2024	L2 Sep 2024	Oct 2024
Water Quality Impact (Construction)				
4.1 & 10.5.1	<p>Construction site runoff and drainage</p> <p>The site practices outlined in ProPECC Note PN 1/94 should be followed as far as practicable in order to minimise surface runoff and the chance of erosion. The following measures are recommended to protect water quality and sensitive uses of the coastal area, and when properly implemented should be sufficient to adequately control site discharges so as to avoid water quality impacts:</p> <ul style="list-style-type: none"> At the start of site establishment, perimeter cut-off drains to direct off-site water around the site should be constructed with internal drainage works and erosion and sedimentation control facilities implemented. Channels, earth bunds or sand bag barriers should be provided on site to direct storm water to silt removal facilities. The design of the temporary on-site drainage system should be undertaken by the WKCDA's Contractor prior to the commencement of construction; Sand/silt removal facilities such as sand/silt traps and sediment basins should be provided to remove sand/silt particles from runoff to meet the requirements of the TM standards under the WPCO. The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC Note PN 1/94. Sizes may vary depending upon the flow rate. The detailed design of the sand/silt traps should be undertaken by the WKCDA's Contractor prior to the commencement of construction. 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. 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. 	✓	✓	✓
		✓	✓	✓
		Rem	✓	Obs
		✓	✓	✓

EM&A Ref.	Recommendation Measures	Implementation Stage		
		Aug 2024	L2 Sep 2024	Oct 2024
	<ul style="list-style-type: none"> All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and sited wheel washing facility should be provided at construction site exit where practicable. Wash-water should have sand and silt settled out and removed regularly to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains. 	✓	✓	✓
	<ul style="list-style-type: none"> Open stockpiles of construction materials or construction wastes on-site should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system. 	✓	✓	✓
	<ul style="list-style-type: none"> Manholes (including newly constructed ones) should be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and stormwater runoff being directed into foul sewers. 	✓	✓	✓
	<ul style="list-style-type: none"> Precautions should be taken at any time of the year when rainstorms are likely. Actions should be taken when a rainstorm is imminent or forecasted and actions to be taken during or after rainstorms are summarized in Appendix A2 of ProPECC Note PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events, especially for areas located near steep slopes. 	✓	✓	✓
	<ul style="list-style-type: none"> Bentonite slurries used in piling or slurry walling should be reconditioned and reused wherever practicable. Temporary enclosed storage locations should be provided on-site for any unused bentonite that needs to be transported away after all the related construction activities are completed. The requirements in ProPECC Note PN 1/94 should be adhered to in the handling and disposal of bentonite slurries. 	N/A	N/A	N/A
	<p>Barging facilities and activities</p> <p>Recommendations for good site practices during operation of the proposed barging point include:</p>			
	<ul style="list-style-type: none"> All vessels should be sized so that adequate clearance is maintained between vessels and the seabed in all tide conditions, to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash; 	N/A	N/A	N/A

EM&A Ref.	Recommendation Measures	Implementation Stage		
		Aug 2024	L2 Sep 2024	Oct 2024
	<ul style="list-style-type: none"> Loading of barges and hoppers should be controlled to prevent splashing of material into the surrounding water. Barges or hoppers should not be filled to a level that will cause the overflow of materials or polluted water during loading or transportation; All hopper barges should be fitted with tight fitting seals to their bottom openings to prevent leakage of material; and Construction activities should not cause foam, oil, grease, scum, litter or other objectionable matter to be present on the water within the site. 	N/A	N/A	N/A
4.1 & 10.5.1	Sewage effluent from construction workforce 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.	✓	✓	✓
4.1 & 10.5.1	General construction activities <ul style="list-style-type: none"> Construction solid waste, debris and refuse generated on-site should be collected, handled and disposed of properly to avoid entering any nearby storm water drain. Stockpiles of cement and other construction materials should be kept covered when not being used. Oils and fuels should only be stored in designated areas which have pollution prevention facilities. To prevent spillage of fuels and solvents to any nearby storm water drain, all fuel tanks and storage areas should be provided with locks and be sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank. The bund should be drained of rainwater after a rain event. 	✓	✓	✓
		Obs	Obs	Obs
Waste Management Implications (Construction)				
6.1 & 10.7.1	Good Site Practices Recommendations for good site practices during the construction activities include:			
	<ul style="list-style-type: none"> Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site Training of site personnel in proper waste management and chemical handling procedures 	✓	✓	✓
		✓	✓	✓

EM&A Ref.	Recommendation Measures	Implementation Stage		
		Aug 2024	L2 Sep 2024	Oct 2024
	<ul style="list-style-type: none"> Provision of sufficient waste disposal points and regular collection of waste Appropriate measures to minimise windblown litter and dust/odour during transportation of waste by either covering trucks or by transporting wastes in enclosed containers Provision of wheel washing facilities before the trucks leaving the works area so as to minimise dust introduction to public roads Well planned delivery programme for offsite disposal such that adverse environmental impact from transporting the inert or non-inert C&D materials is not anticipated 	✓	Obs	✓
6.1 & 10.7.1	<p>Waste Reduction Measures</p> <p>Recommendations to achieve waste reduction include:</p> <ul style="list-style-type: none"> Sort inert C&D material to recover any recyclable portions such as metals Segregation and storage of different types of waste in different containers or skips to enhance reuse or recycling of materials and their proper disposal Encourage collection of recyclable waste such as waste paper and aluminium cans by providing separate labelled bins to enable such waste to be segregated from other general refuse generated by the work force Proper site practices to minimise the potential for damage or contamination of inert C&D materials Plan the use of construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of wastes 	✓	✓	✓
6.1 & 10.7.1	<p>Inert and Non-inert C&D Materials</p> <p>In order to minimise impacts resulting from collection and transportation of inert C&D material for off-site disposal, the excavated materials should be reused on-site as fill material as far as practicable. In addition, inert C&D material generated from excavation works could be reused as fill materials in local projects that require public fill for reclamation.</p> <ul style="list-style-type: none"> The surplus inert C&D material will be disposed of at the Government's PFRFs for beneficial use by other projects in Hong Kong. Liaison with the CEDD Public Fill Committee (PFC) on the allocation of space for disposal of the inert C&D materials at PFRF is underway. No construction work is allowed to proceed until all issues on management of inert C&D materials have been resolved and all relevant arrangements have been endorsed by the relevant authorities including PFC and EPD. 	✓	✓	✓

EM&A Ref.	Recommendation Measures	Implementation Stage		
		Aug 2024	L2 Sep 2024	Oct 2024
	<ul style="list-style-type: none"> The C&D materials generated from general site clearance should be sorted on site to segregate any inert materials for reuse or disposal of at PFRFs whereas the non-inert materials will be disposed of at the designated landfill site. In order to monitor the disposal of inert and non-inert C&D materials at respectively PFRFs and the designated landfill site, and to control fly-tipping, it is recommended that the Contractor should follow the Technical Circular (Works) No. 6/2010 for Trip Ticket System for Disposal of Construction & Demolition Materials issued by Development Bureau. In addition, it is also recommended that the Contractor should prepare and implement a Waste Management Plan detailing their various waste arising and waste management practices in accordance with the relevant requirements of the Technical Circular (Works) No. 19/2005 Environmental Management on Construction Site. 	✓	✓	✓
6.1 & 10.7.1	<p>Chemical Waste</p> <ul style="list-style-type: none"> If chemical wastes are produced at the construction site, the Contractor will be required to register with the EPD as a chemical waste producer and to follow the guidelines stated in the "Code of Practice on the Packaging Labelling and Storage of Chemical Wastes". Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. The Contractor should use a licensed collector to transport and dispose of the chemical wastes at the approved Chemical Waste Treatment Centre or other licensed recycling facilities, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation. Potential environmental impacts arising from the handling activities (including storage, collection, transportation and disposal of chemical waste) are expected to be minimal with the implementation of appropriate mitigation measures as recommended. 	✓	✓	✓
6.1 & 10.7.1	<p>General Refuse</p> <p>General refuse should be stored in enclosed bins or compaction units separated from inert C&D materials. A reputable waste collector should be employed by the Contractor to remove general refuse from the site, separately from inert C&D materials. Preferably an enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material.</p>	Obs	Obs	Obs

EM&A Ref.	Recommendation Measures	Implementation Stage		
		Aug 2024	L2 Sep 2024	Oct 2024
Land Contamination (Construction)				
7.1 & 10.8.1	<p>The potential for land contamination issues at the TST Fire Station due to its future relocation will be confirmed by site investigation after land acquisition. Where necessary, mitigation measures for minimising potential exposure to contaminated materials (if any) or remediation measures will be identified. If contaminated land is identified (e.g., during decommissioning of fuel oil storage tanks) after the commencement of works, mitigation measures are proposed in order to minimise the potentially adverse effects on the health and safety of construction workers and impacts arising from the disposal of potentially contaminated materials.</p> <p>The following measures are proposed for excavation and transportation of contaminated material:</p> <ul style="list-style-type: none"> To minimize the chance for construction workers to come into contact with any contaminated materials, bulk earth-moving excavation equipment should be employed; Contact with contaminated materials can be minimised by wearing appropriate clothing and personal protective equipment such as gloves and masks (especially when interacting directly with contaminated material), provision of washing facilities and prohibition of smoking and eating on site; Stockpiling of contaminated excavated materials on site should be avoided as far as possible; The use of contaminated soil for landscaping purpose should be avoided unless pre-treatment was carried out; Vehicles containing any contaminated excavated materials should be suitably covered to reduce dust emissions and/or release of contaminated wastewater; Truck bodies and tailgates should be sealed to stop any discharge; Only licensed waste haulers should be used to collect and transport contaminated material to treatment/disposal site and should be equipped with tracking system to avoid fly tipping; Speed control for trucks carrying contaminated materials should be exercised; Observe all relevant regulations in relation to waste handling, such as Waste Disposal Ordinance (Cap. 354), Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354) and obtain all necessary permits where required; and 	N/A	N/A	N/A
		N/A	N/A	N/A
		N/A	N/A	N/A
		N/A	N/A	N/A
		N/A	N/A	N/A
		N/A	N/A	N/A
		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		
		Aug 2024	L2 Sep 2024	Oct 2024
	<ul style="list-style-type: none"> Maintain records of waste generation and disposal quantities and disposal arrangements. 	N/A	N/A	N/A
Ecological Impact (Construction)				
No mitigation measure is required.				
Landscape and Visual Impact (Construction)				
Table 9.1 & 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.	N/A	N/A	N/A
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
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
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
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
Table 9.1 & 10.8 (CM6)	Sensitive streetscape design should be incorporated along all new roads and streets.	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
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
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

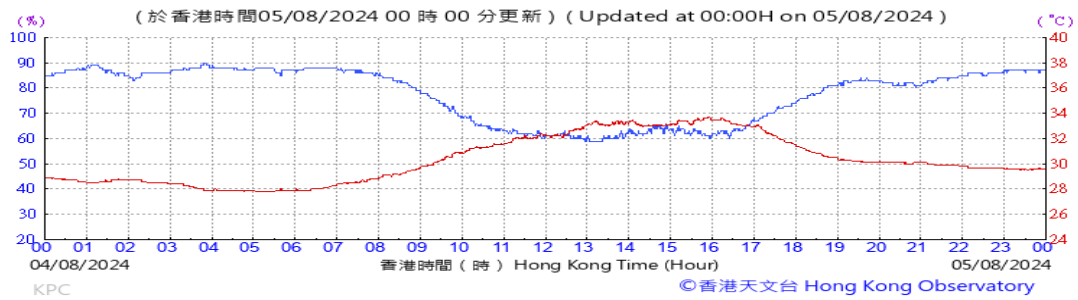
EM&A Ref.	Recommendation Measures	Implementation Stage		
		Aug 2024	L2 Sep 2024	Oct 2024
Table 9.2 & 10.9 (MCP1)	Use of decorative screen hoarding/boards	✓	✓	✓
Table 9.2 & 10.9 (MCP2)	Early introduction of landscape treatments	N/A	N/A	N/A
Table 9.2 & 10.9 (MCP3)	Adoption of light colour for the temporary ventilation shafts for the basement during the transition period.	N/A	N/A	N/A
Table 9.2 & 10.9 (MCP4)	Control of night time lighting	N/A	N/A	N/A
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	-	Not Applicable
✓	-	Implemented
Obs	-	Observed
Rem	-	Reminder

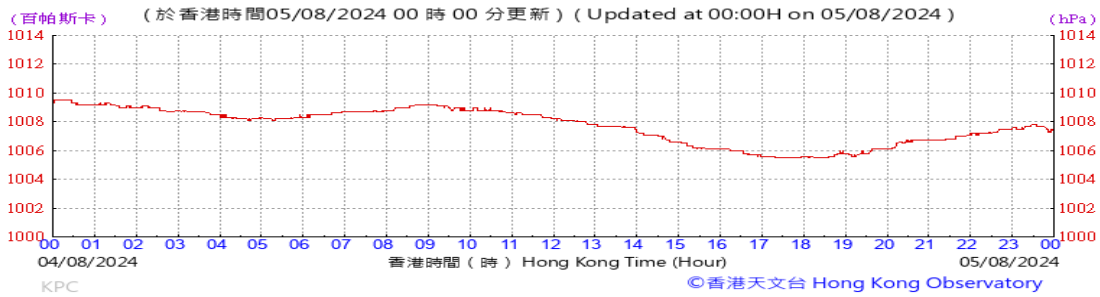
D. Meteorological Data Extracted from Hong Kong Observatory

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

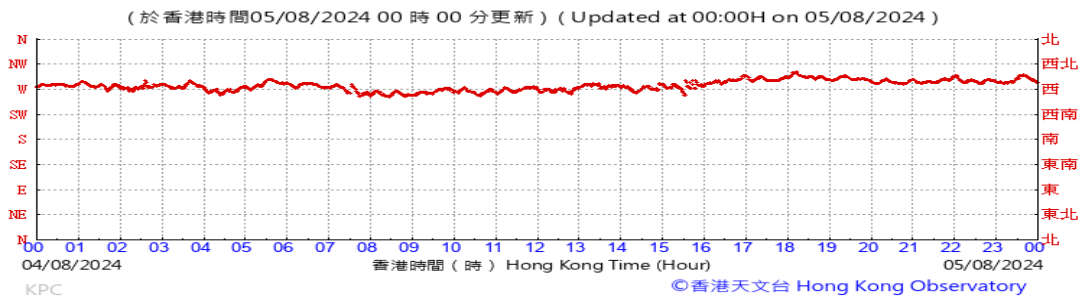
Temperature/Humidity:



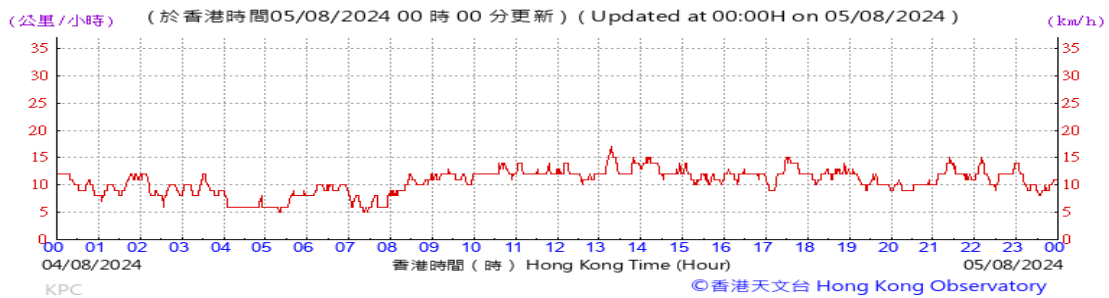
Pressure:



Wind Direction:



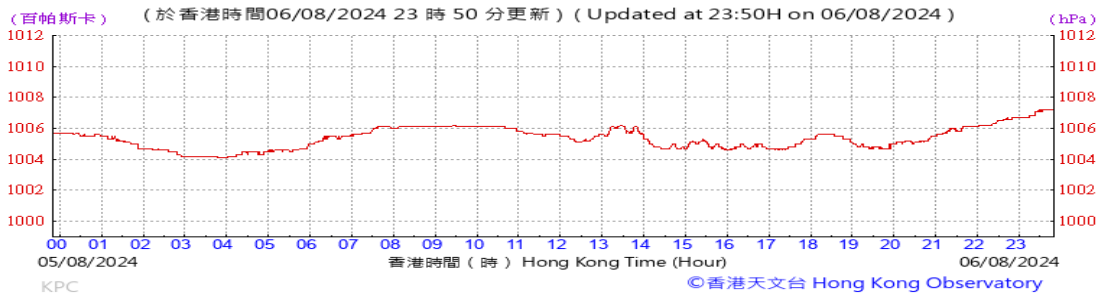
Wind Speed:



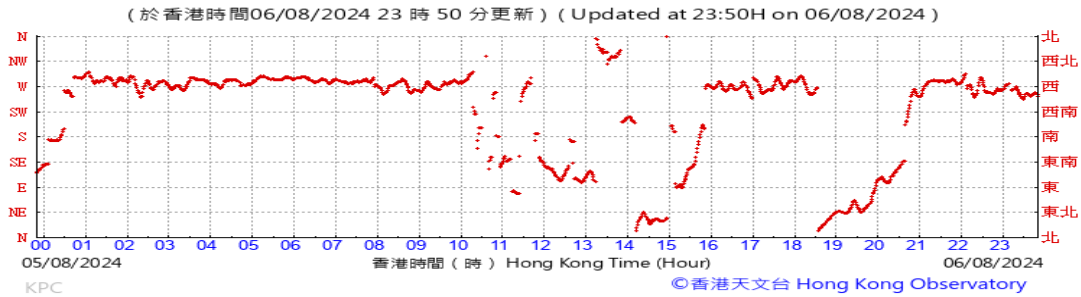
Temperature/Humidity:



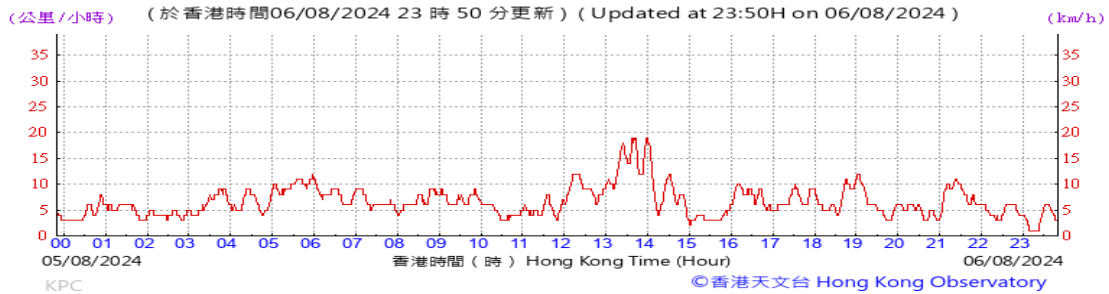
Pressure:



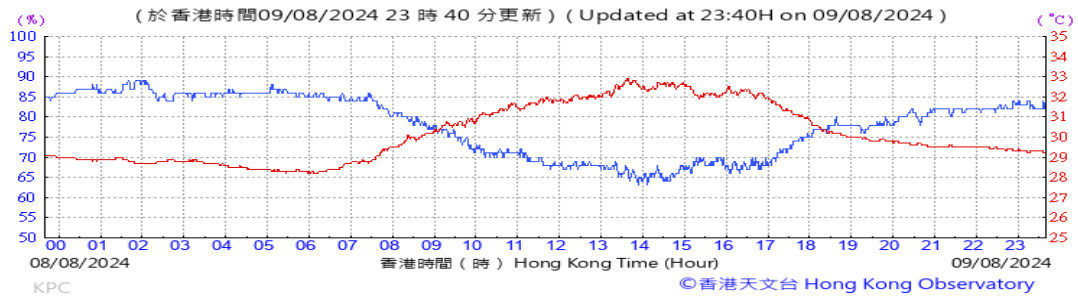
Wind Direction:



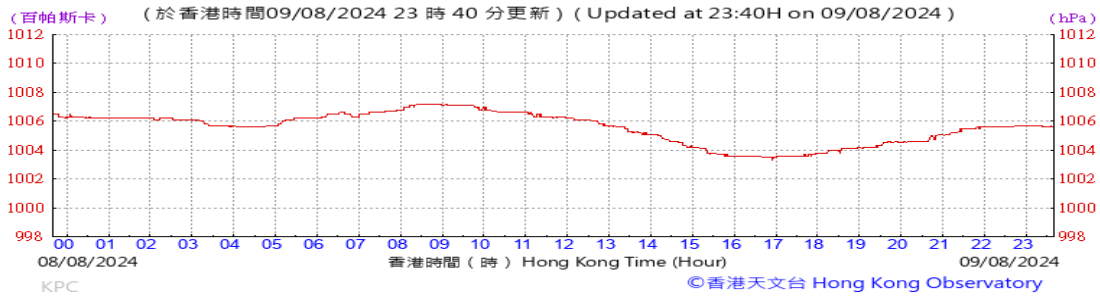
Wind Speed:



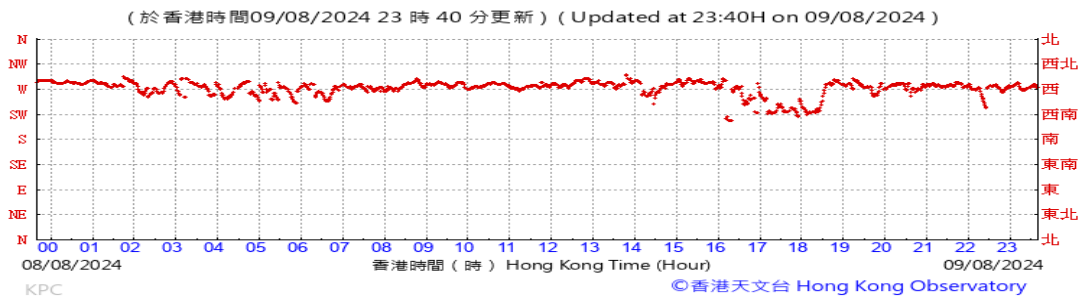
Temperature/Humidity:



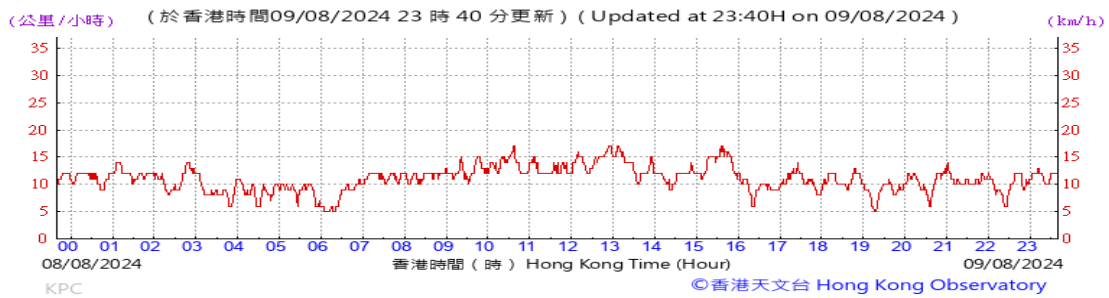
Pressure:



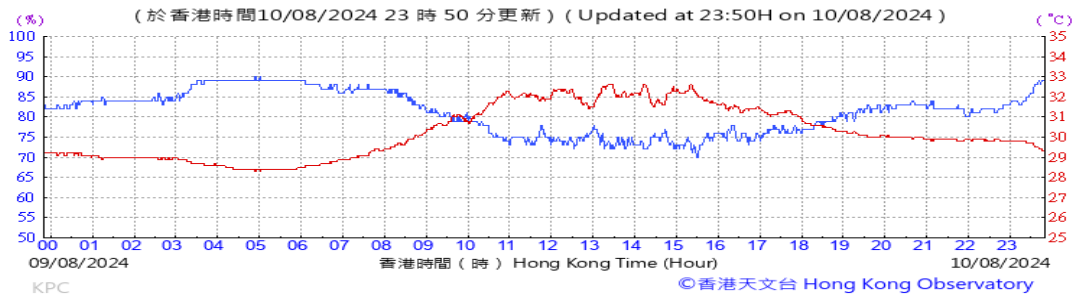
Wind Direction:



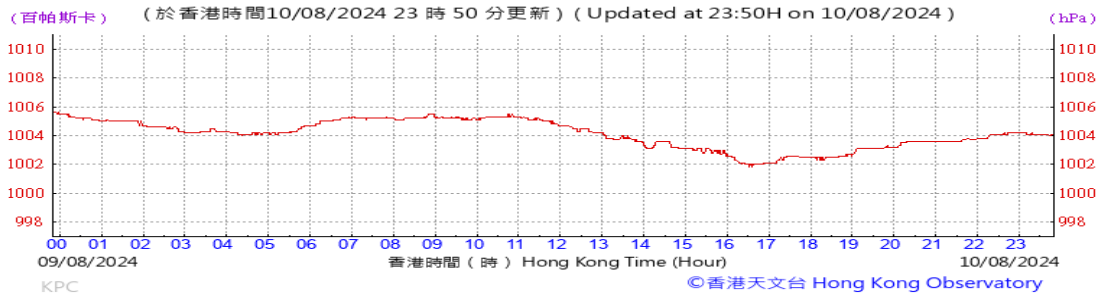
Wind Speed:



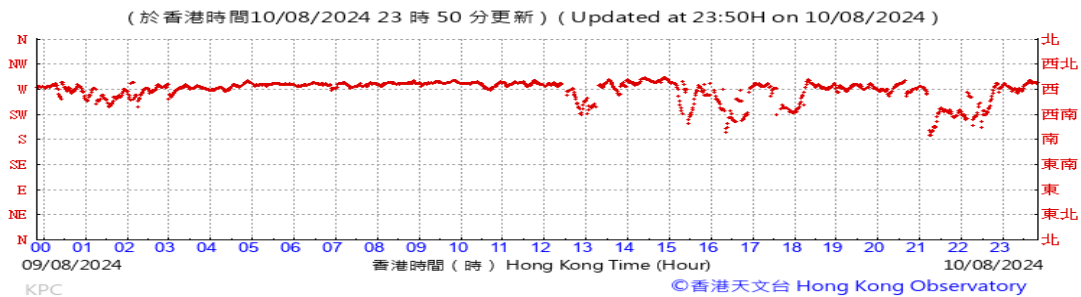
Temperature/Humidity:



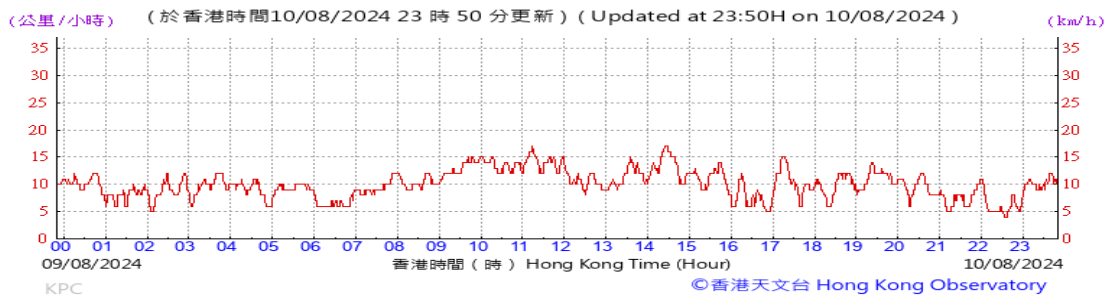
Pressure:



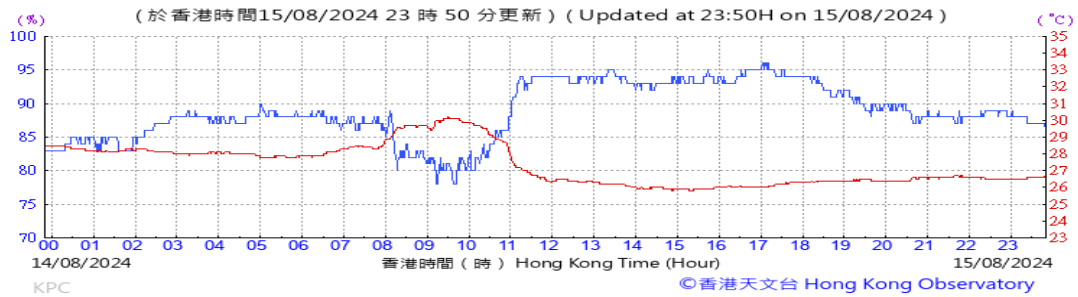
Wind Direction:



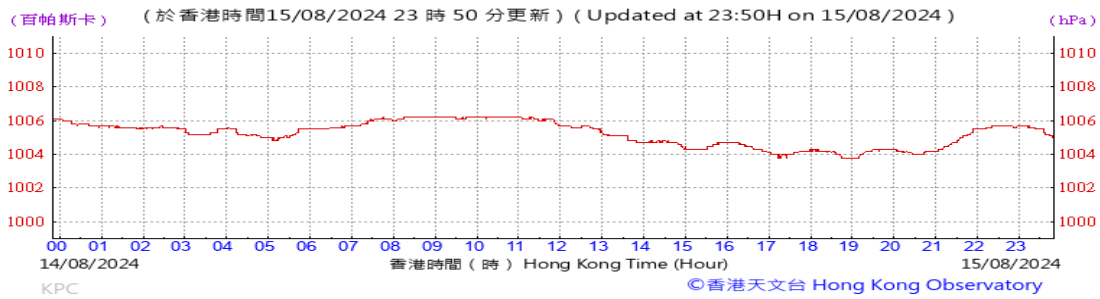
Wind Speed:



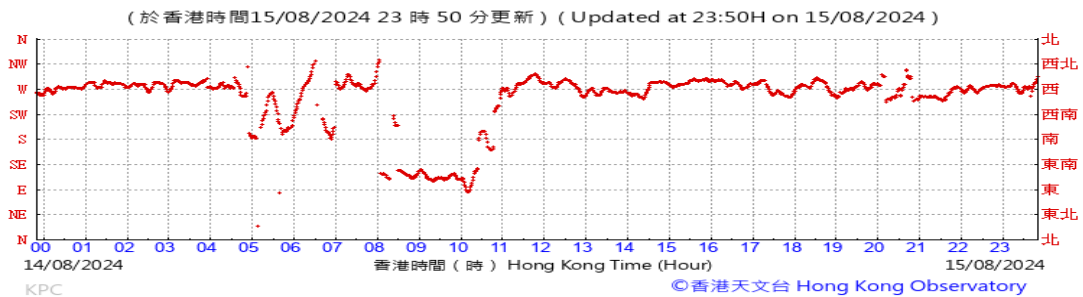
Temperature/Humidity:



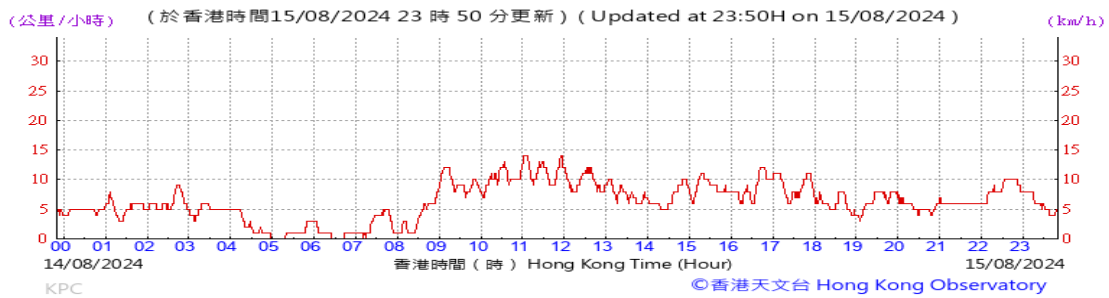
Pressure:



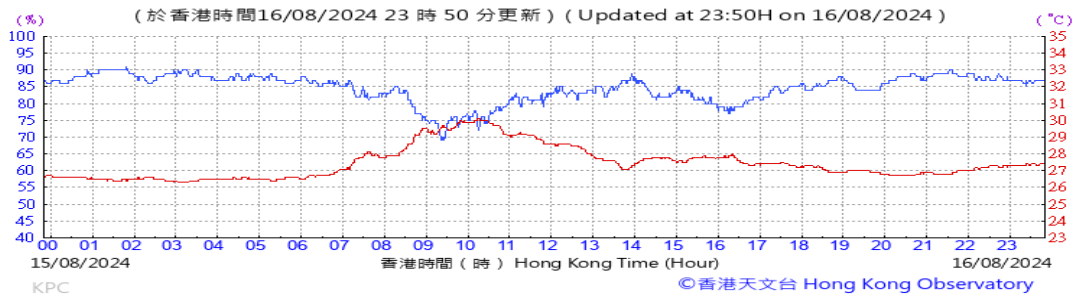
Wind Direction:



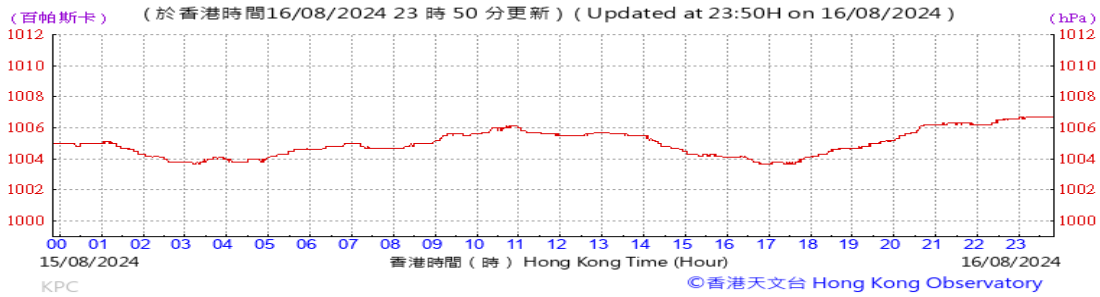
Wind Speed:



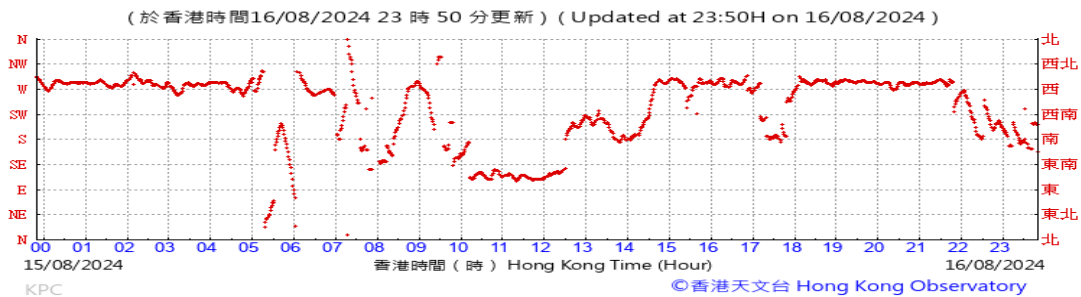
Temperature/Humidity:



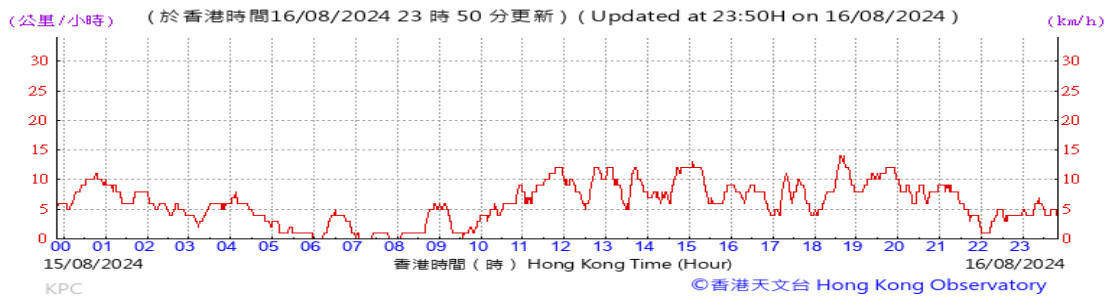
Pressure:



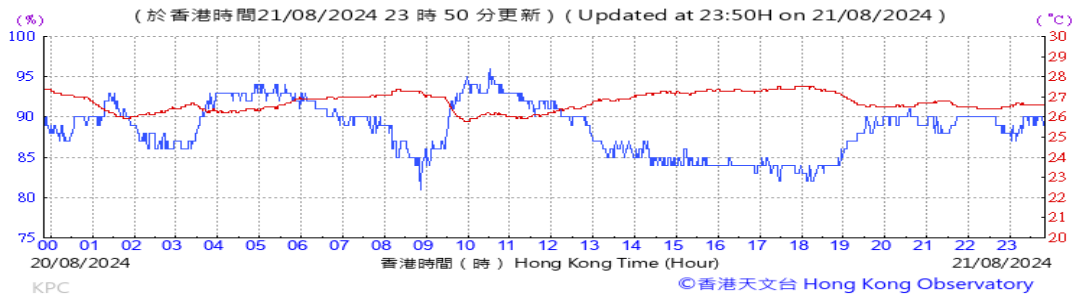
Wind Direction:



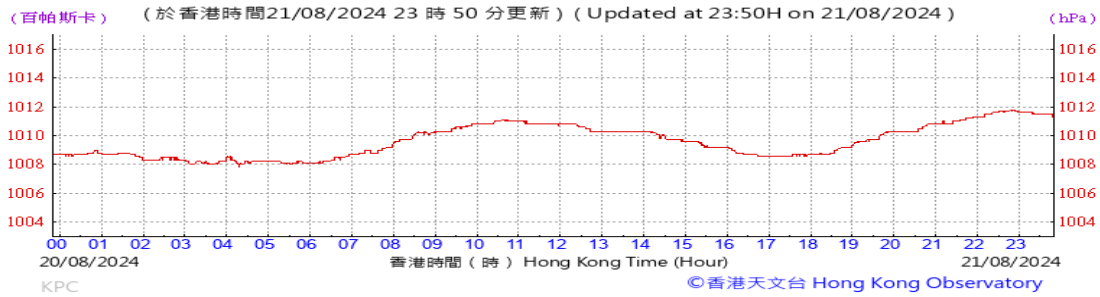
Wind Speed:



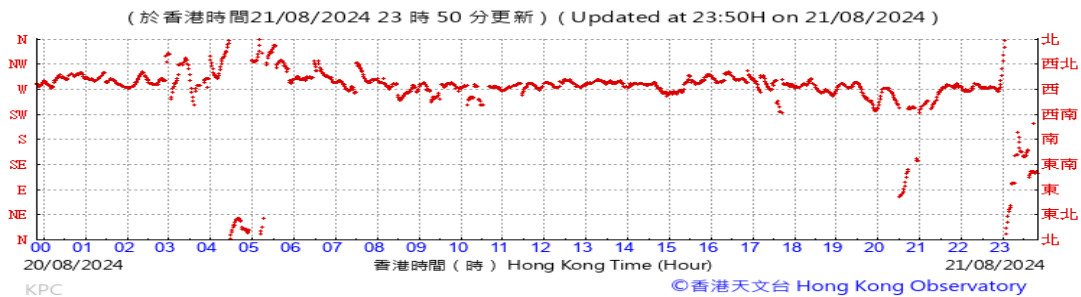
Temperature/Humidity:



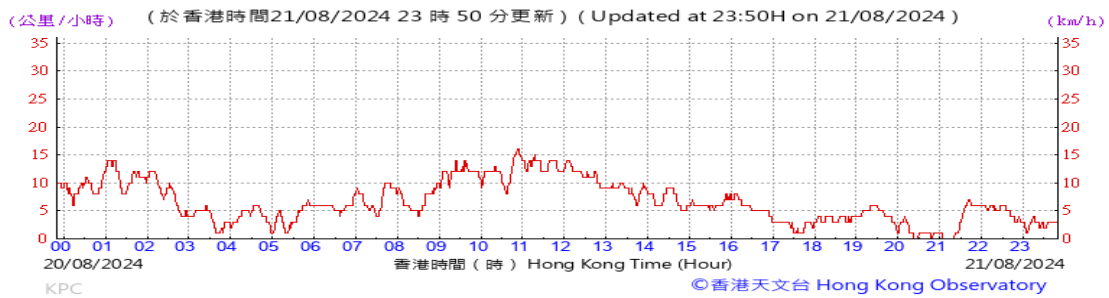
Pressure:



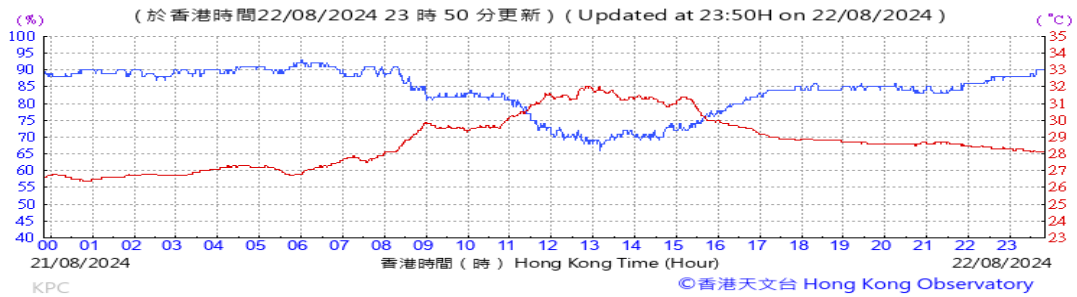
Wind Direction:



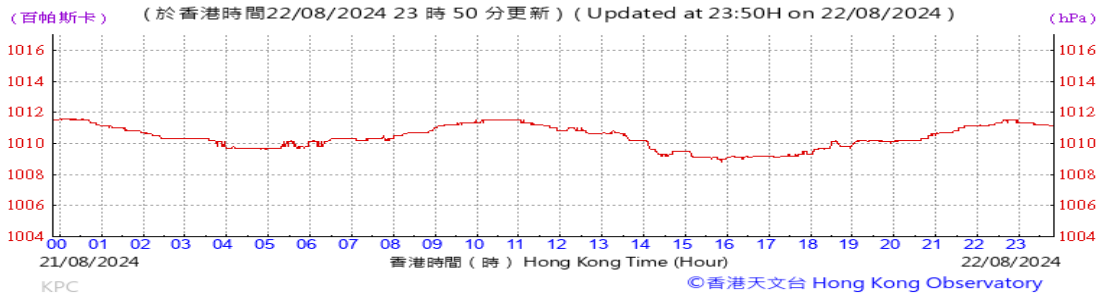
Wind Speed:



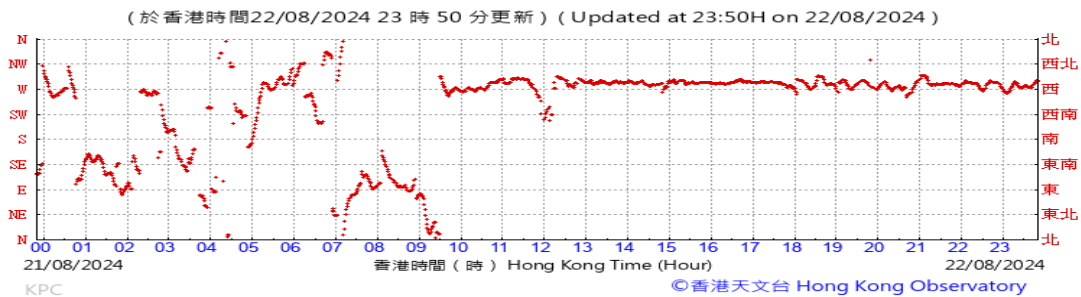
Temperature/Humidity:



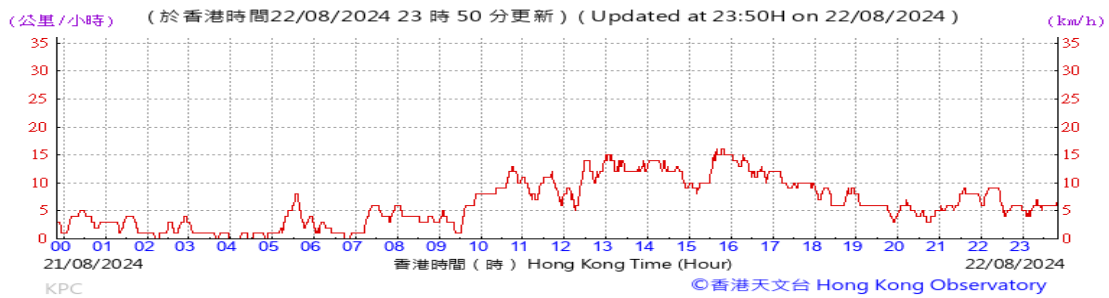
Pressure:



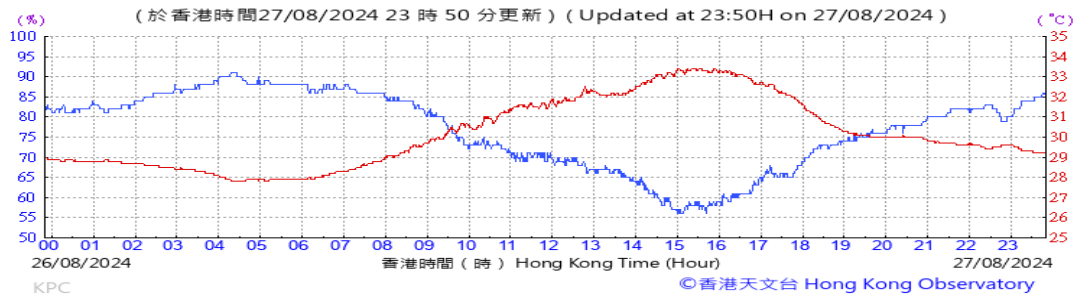
Wind Direction:



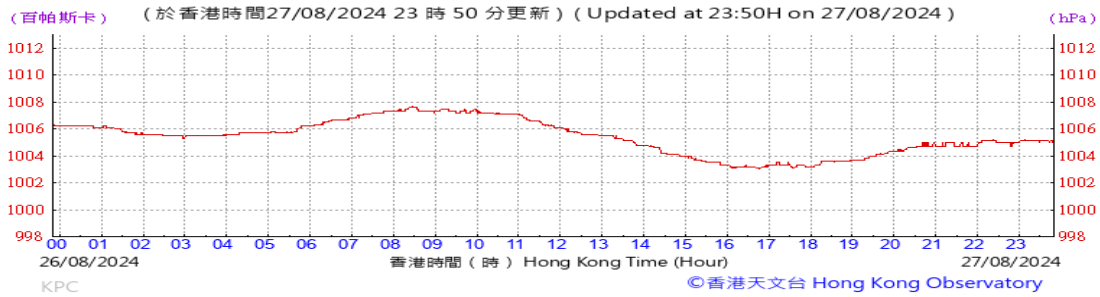
Wind Speed:



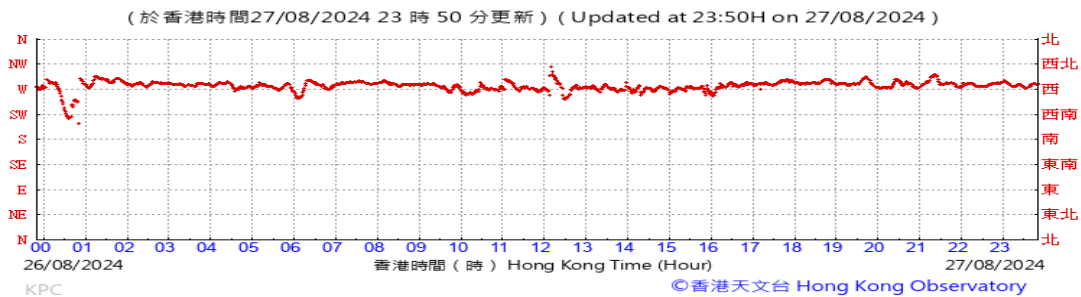
Temperature/Humidity:



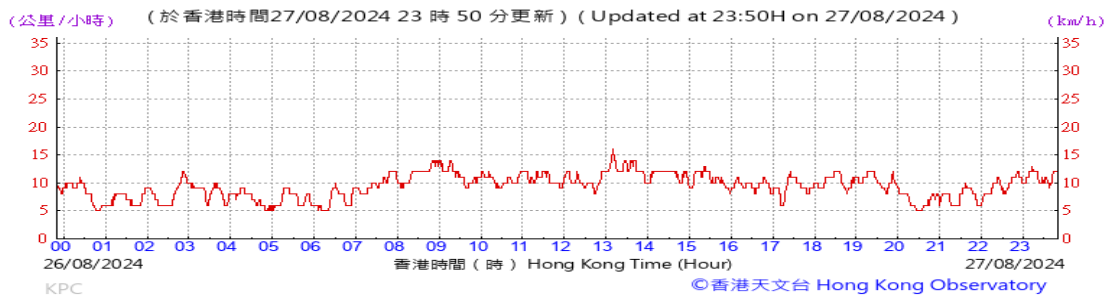
Pressure:



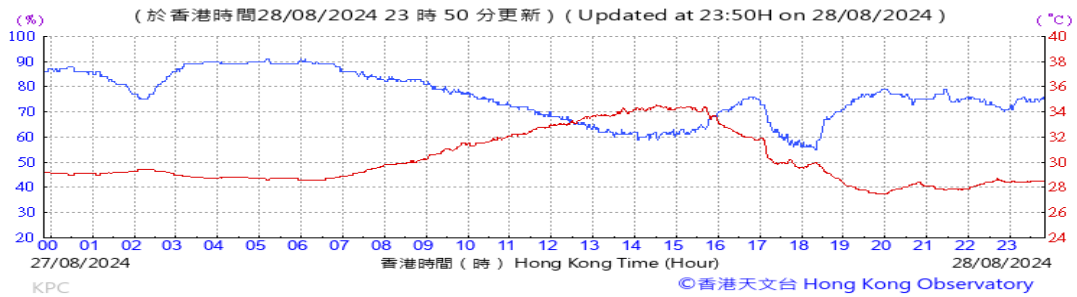
Wind Direction:



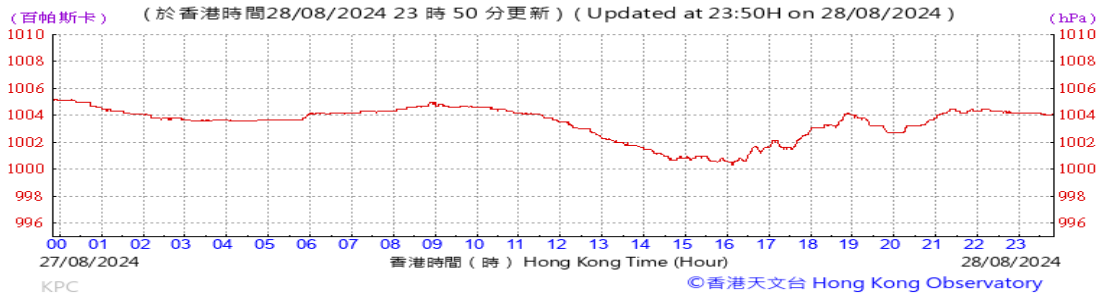
Wind Speed:



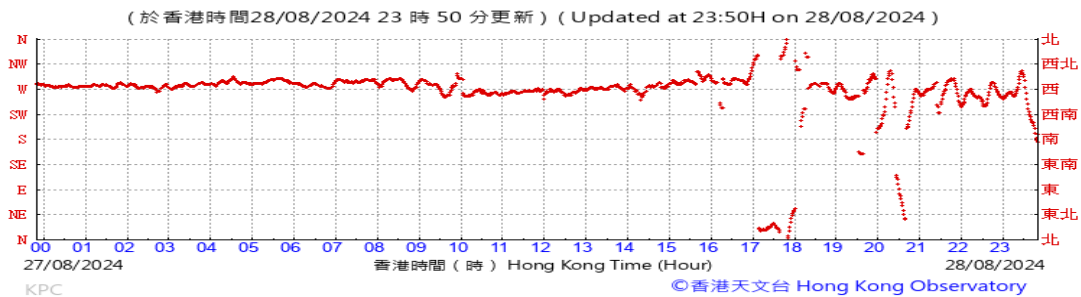
Temperature/Humidity:



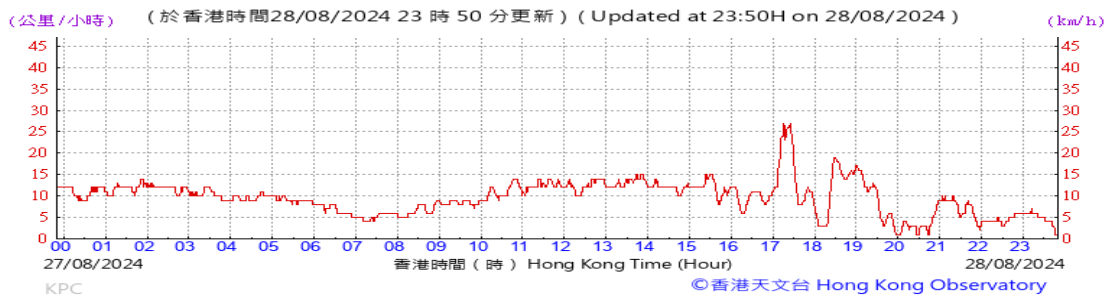
Pressure:



Wind Direction:



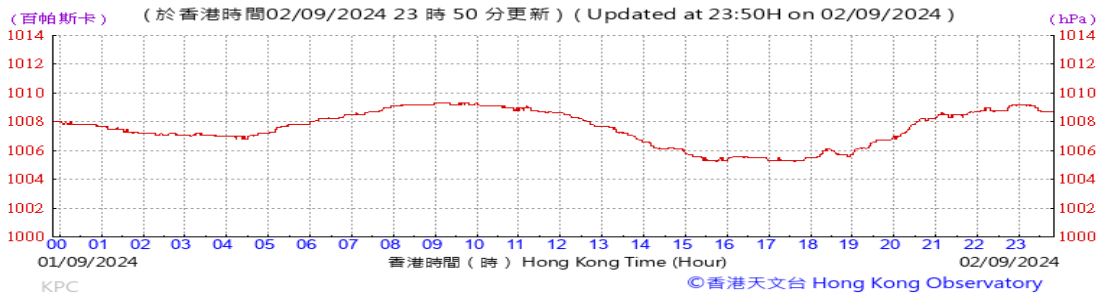
Wind Speed:



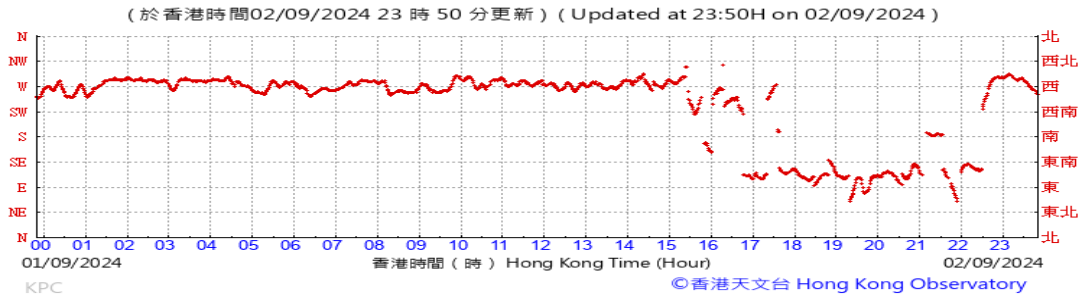
Temperature/Humidity:



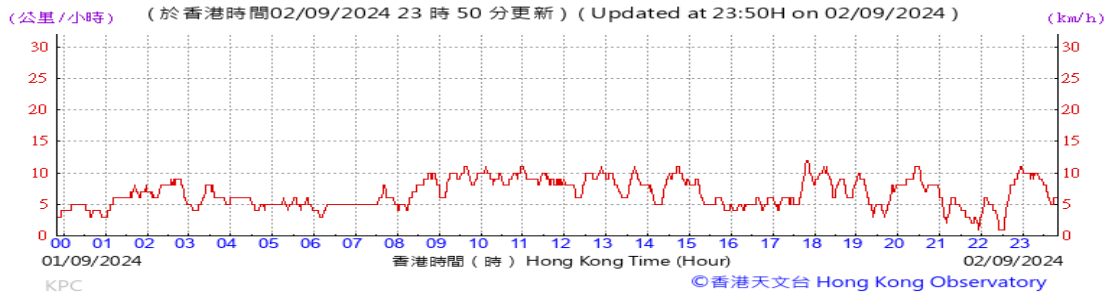
Pressure:



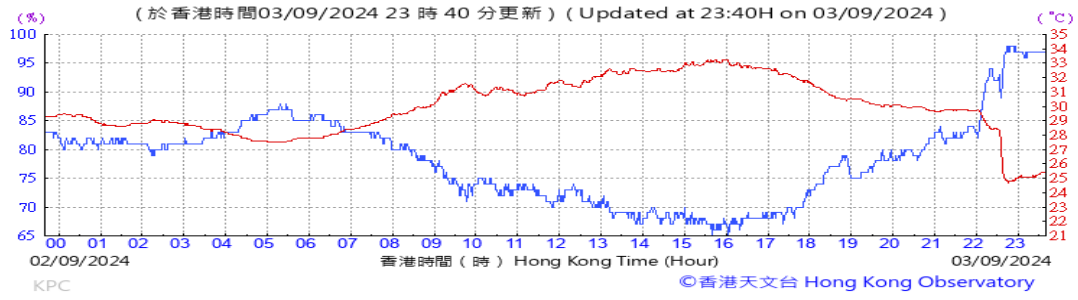
Wind Direction:



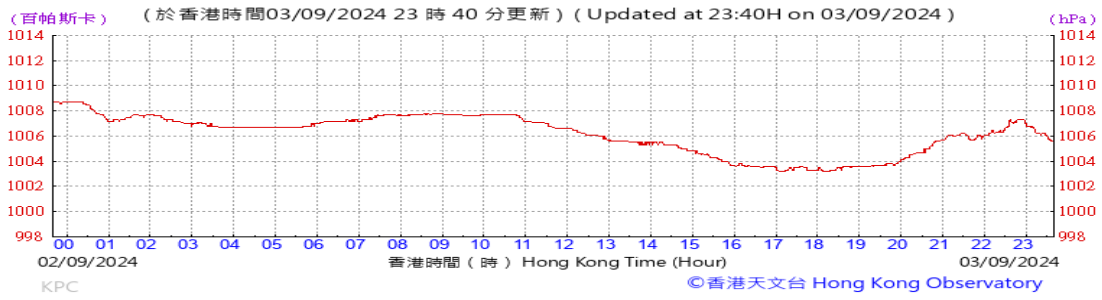
Wind Speed:



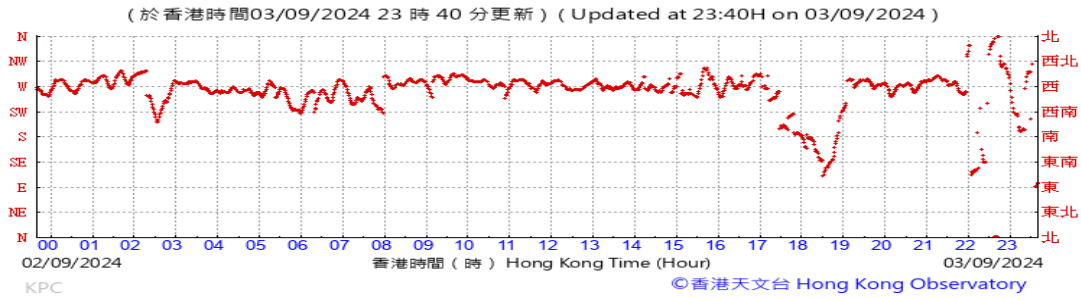
Temperature/Humidity:



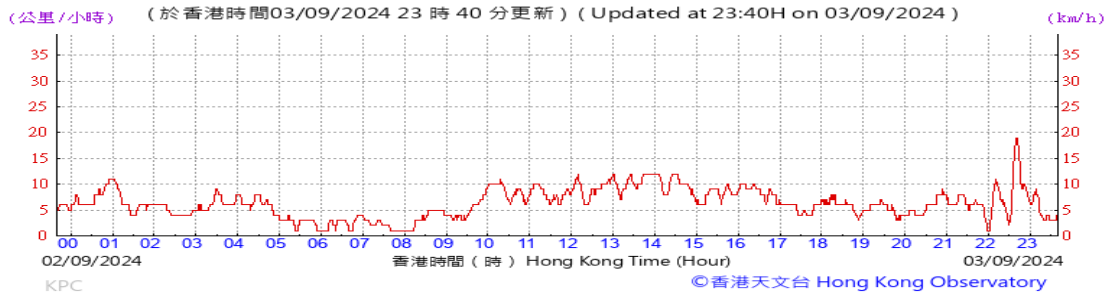
Pressure:



Wind Direction:



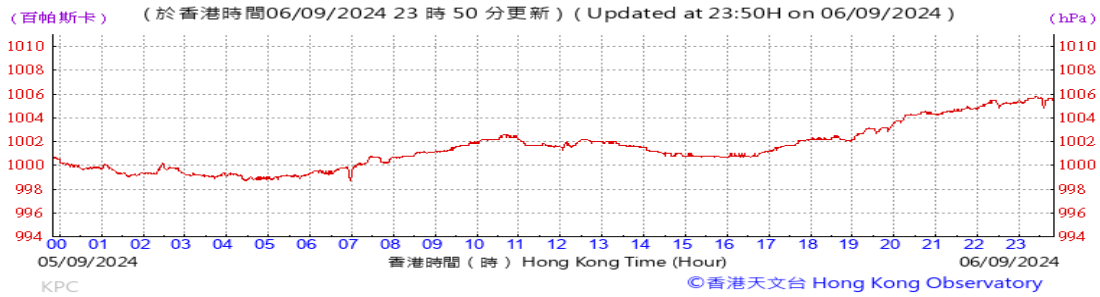
Wind Speed:



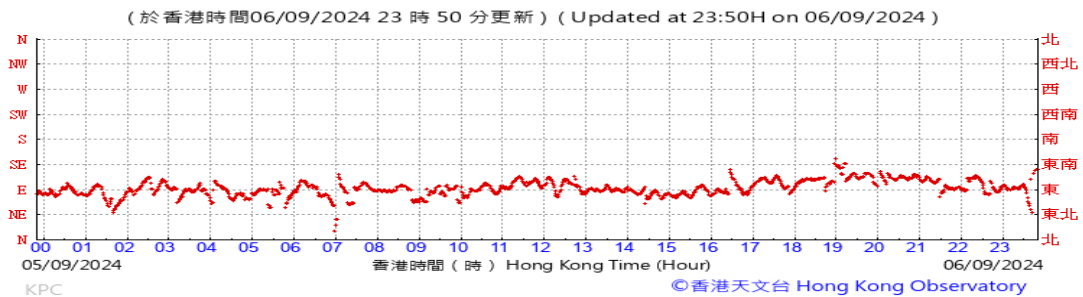
Temperature/Humidity:



Pressure:



Wind Direction:



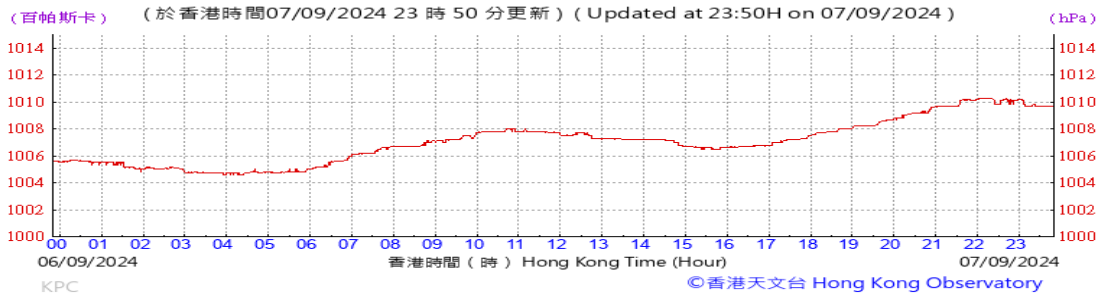
Wind Speed:



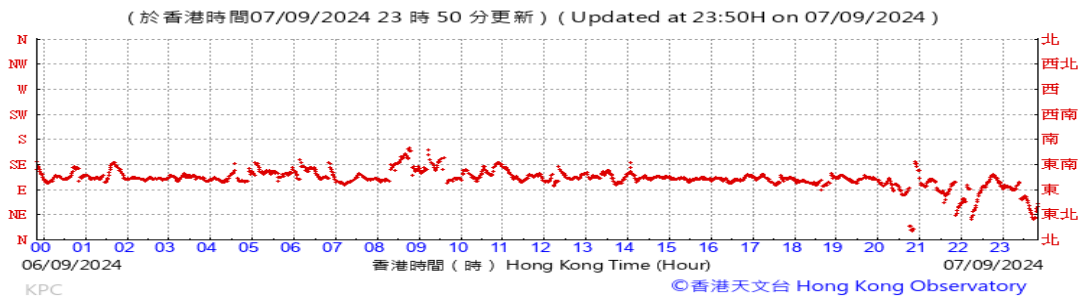
Temperature/Humidity:



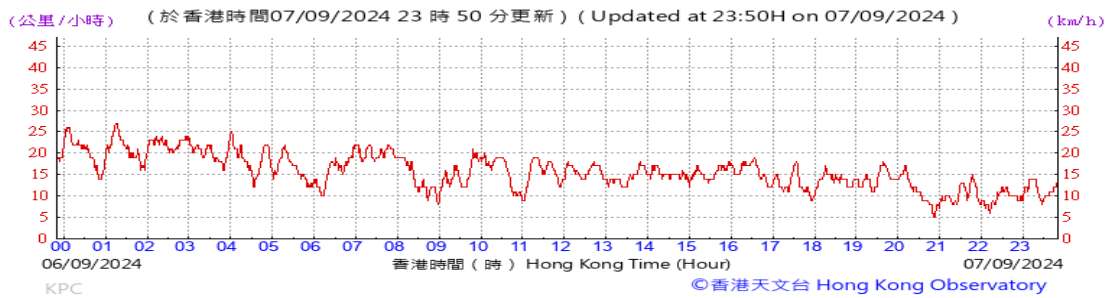
Pressure:



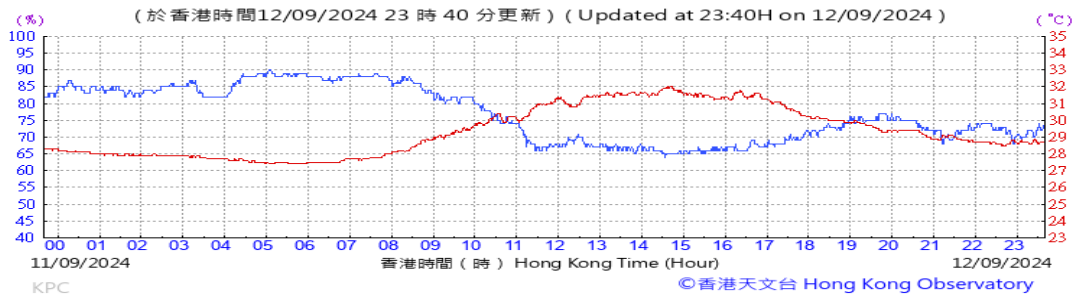
Wind Direction:



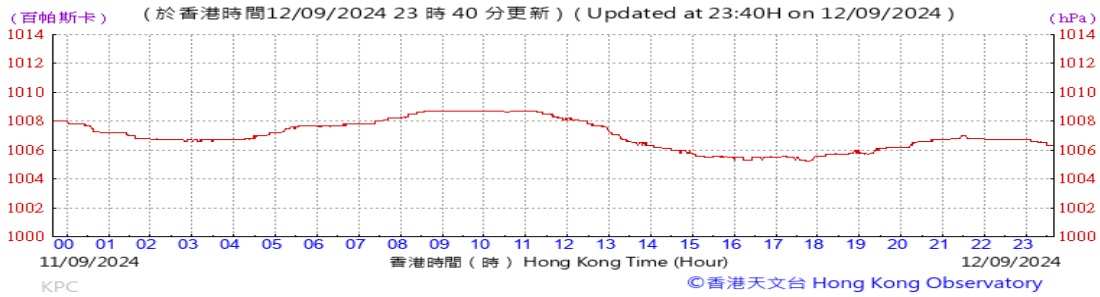
Wind Speed:



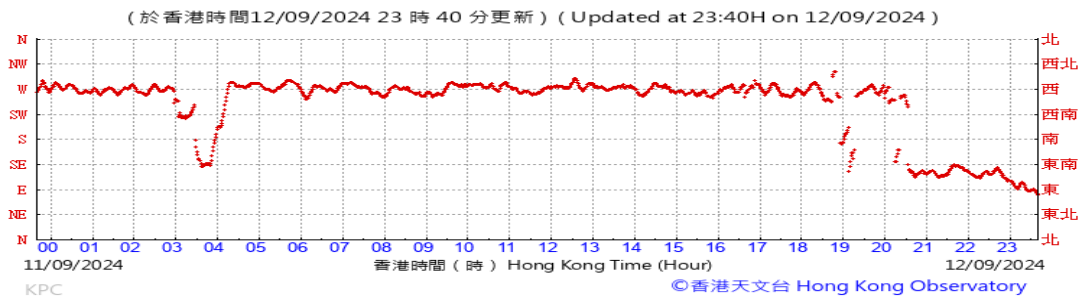
Temperature/Humidity:



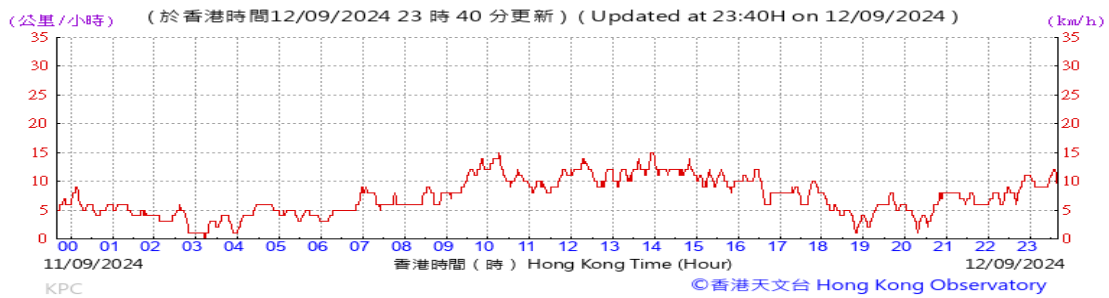
Pressure:



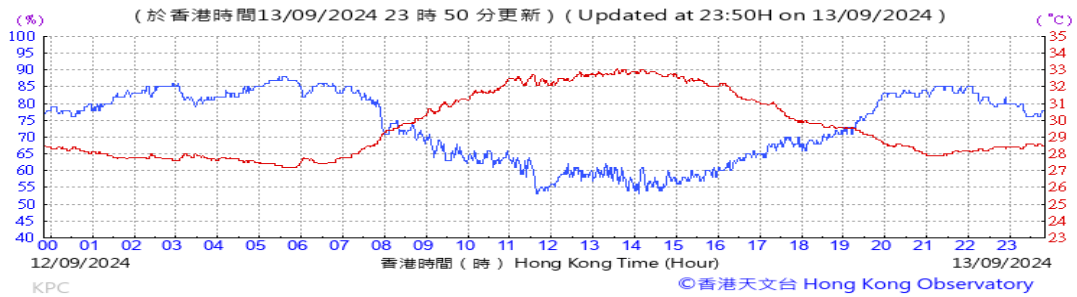
Wind Direction:



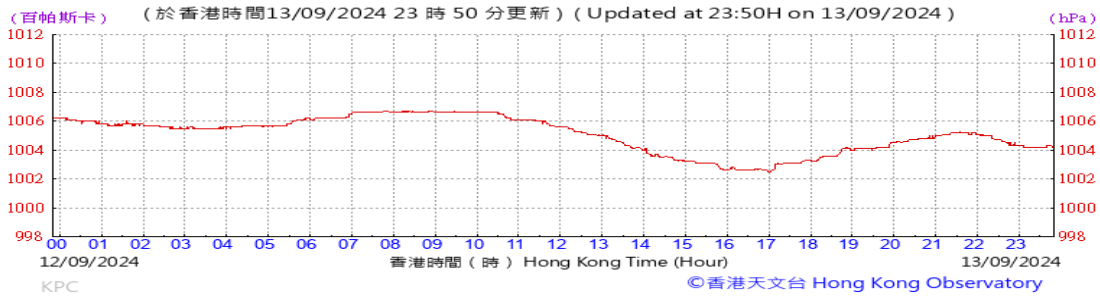
Wind Speed:



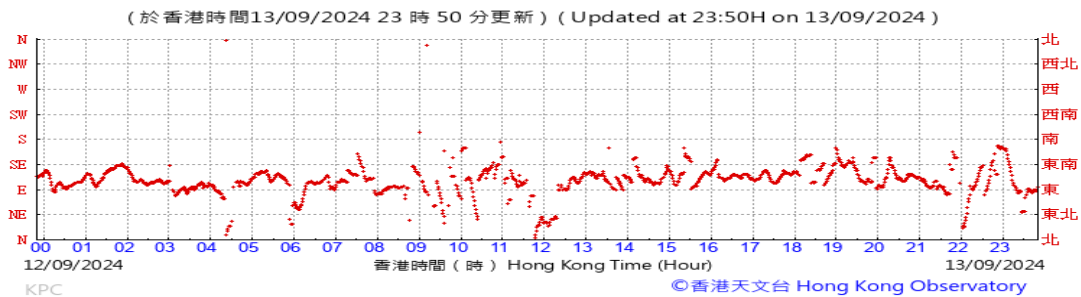
Temperature/Humidity:



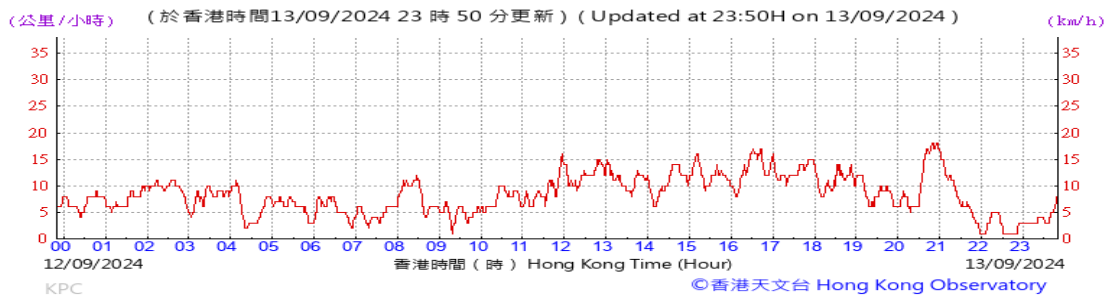
Pressure:



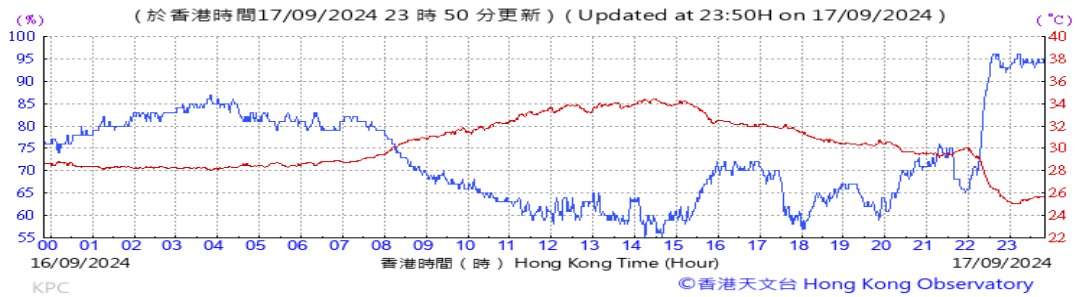
Wind Direction:



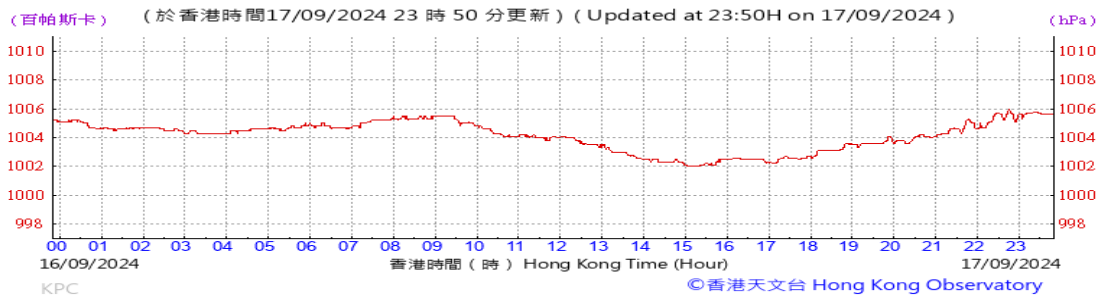
Wind Speed:



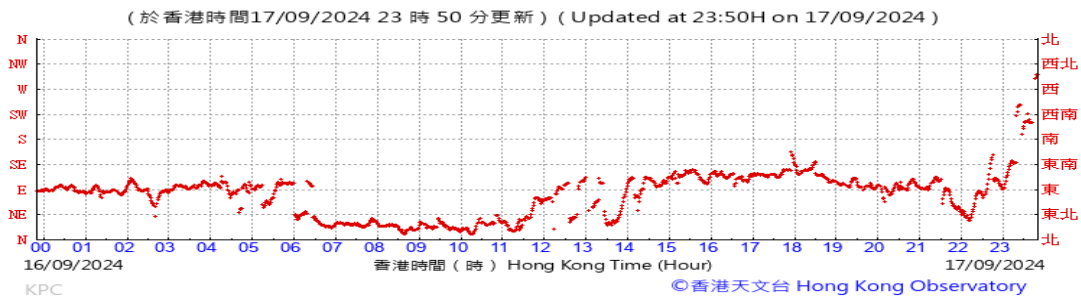
Temperature/Humidity:



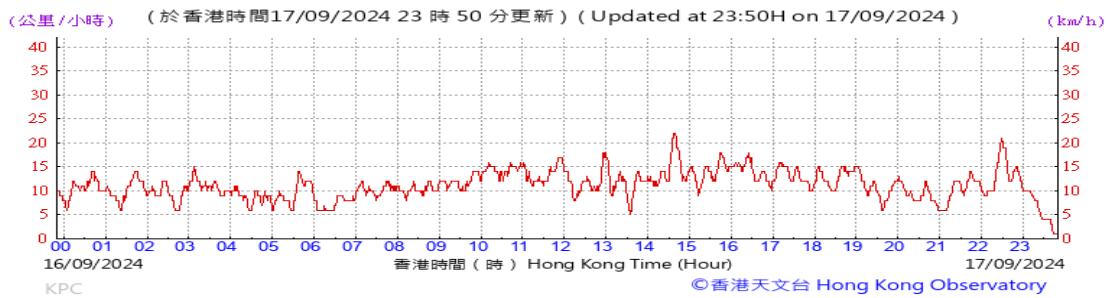
Pressure:



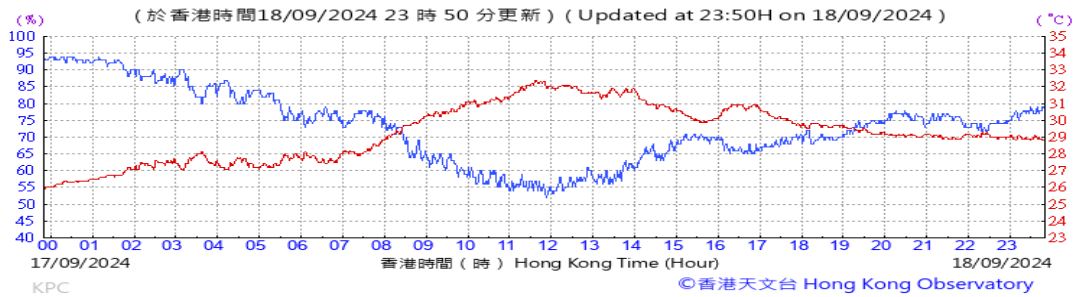
Wind Direction:



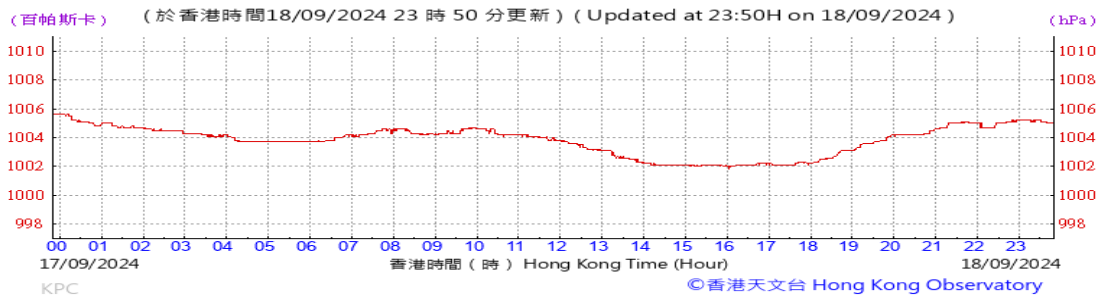
Wind Speed:



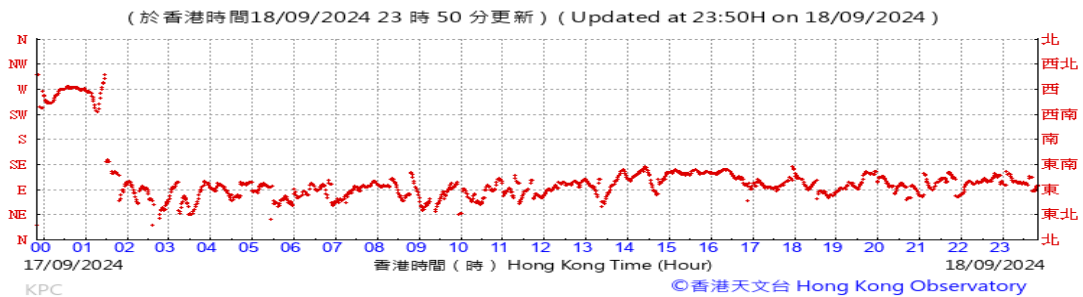
Temperature/Humidity:



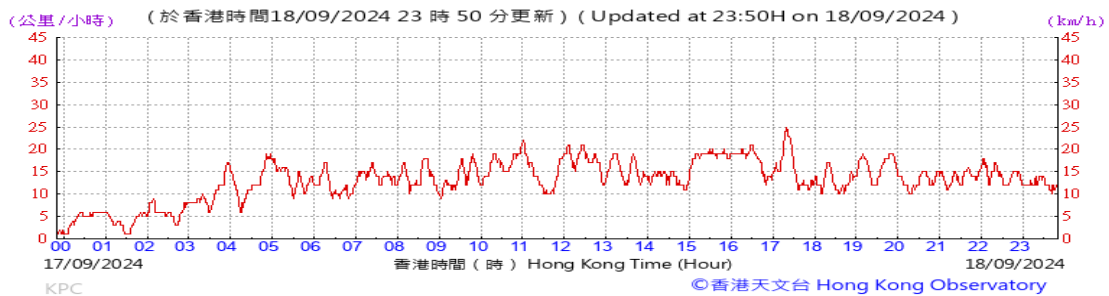
Pressure:



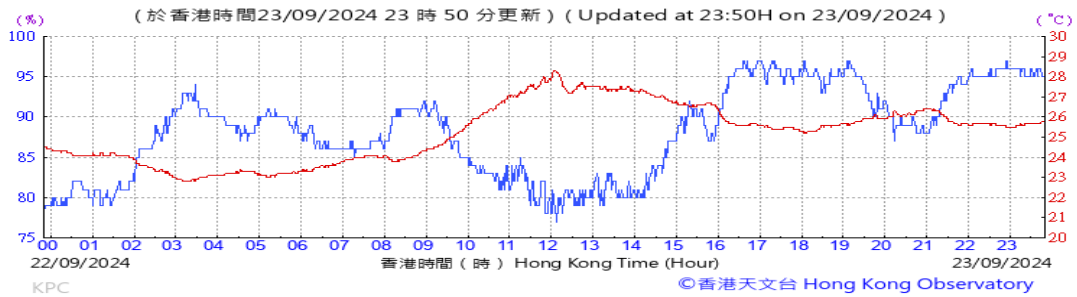
Wind Direction:



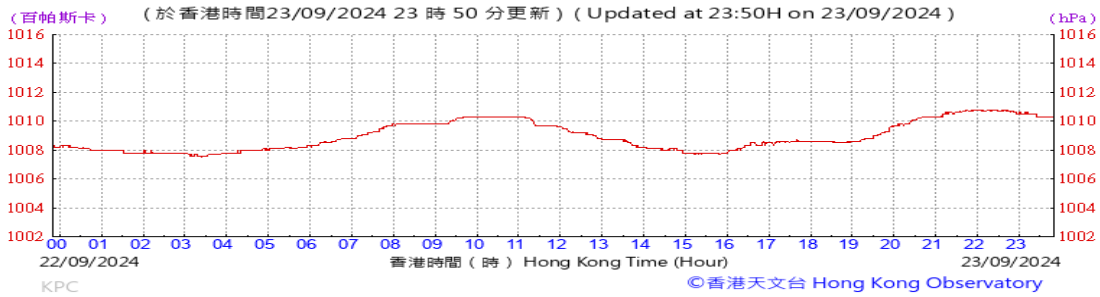
Wind Speed:



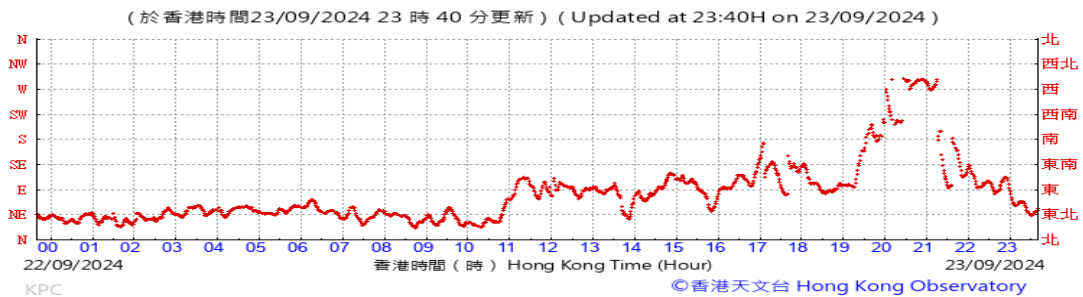
Temperature/Humidity:



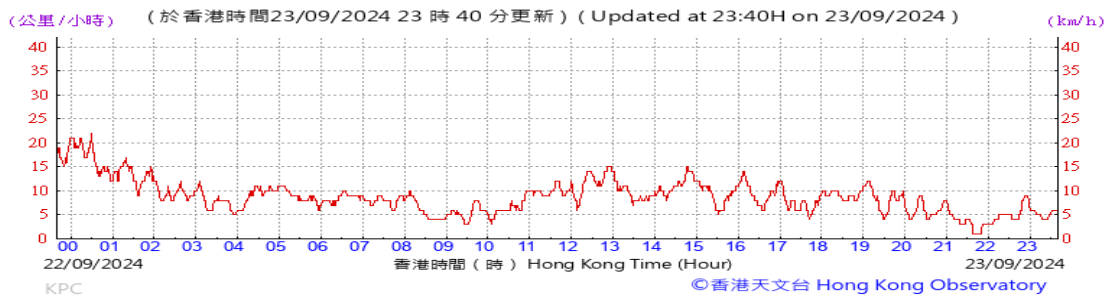
Pressure:



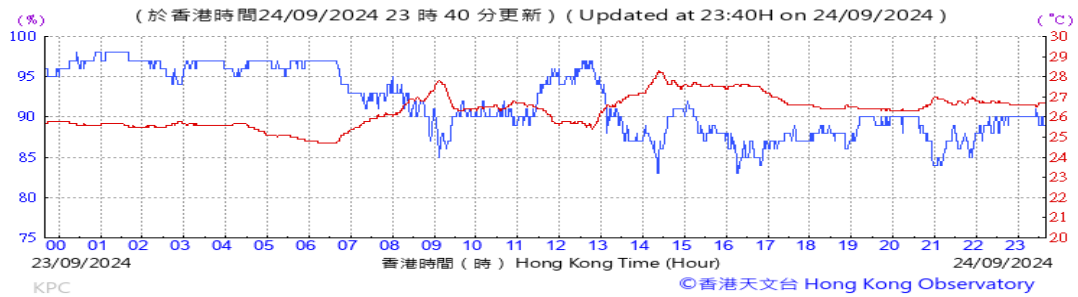
Wind Direction:



Wind Speed:



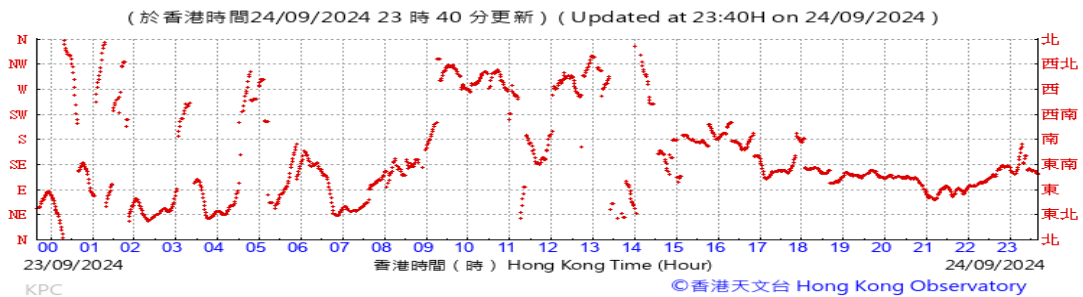
Temperature/Humidity:



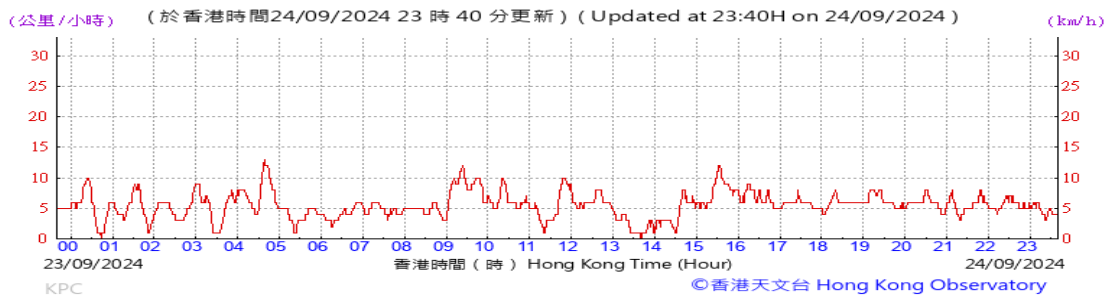
Pressure:



Wind Direction:



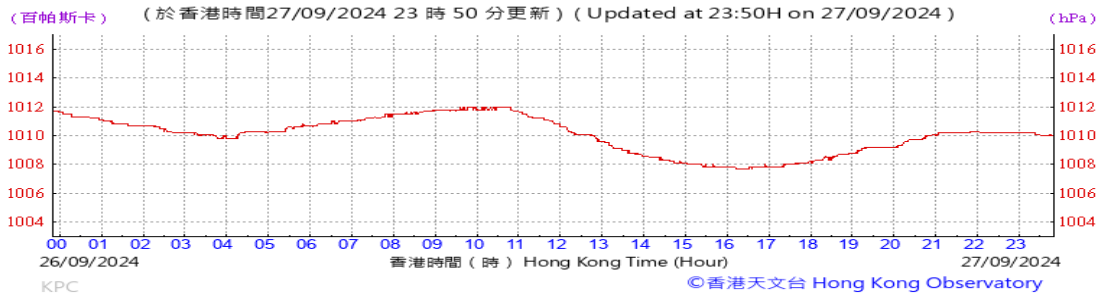
Wind Speed:



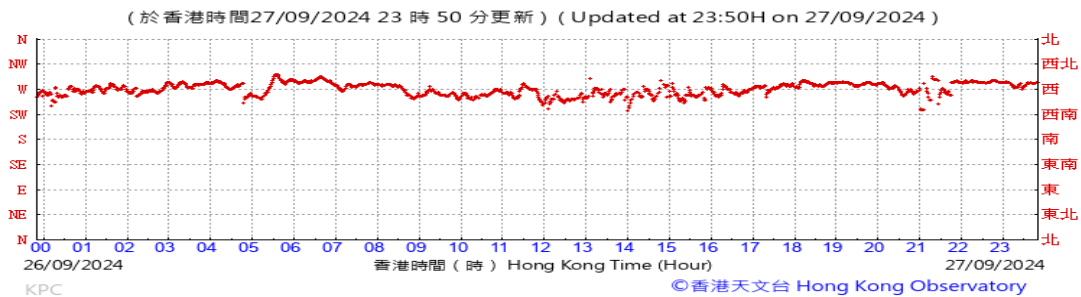
Temperature/Humidity:



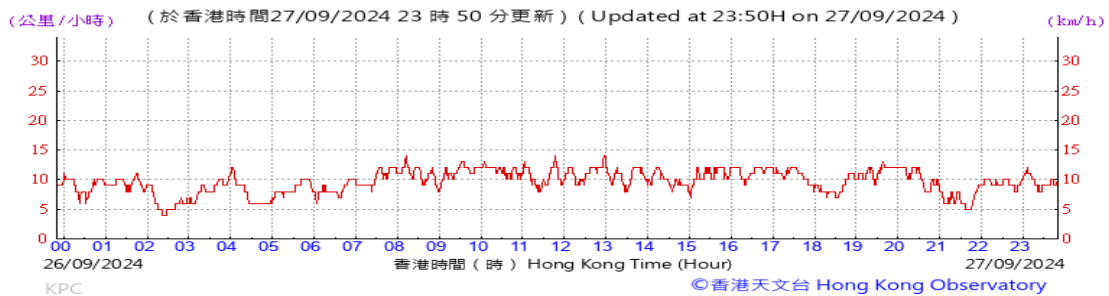
Pressure:



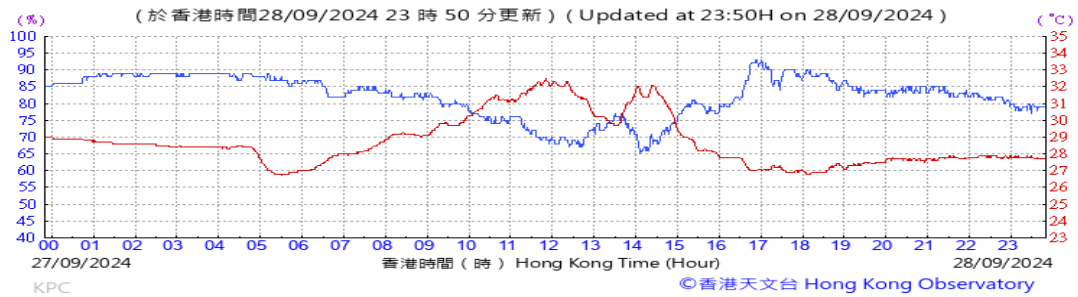
Wind Direction:



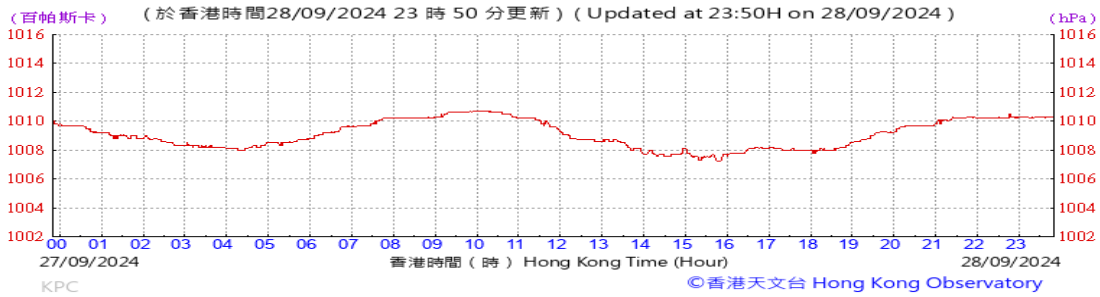
Wind Speed:



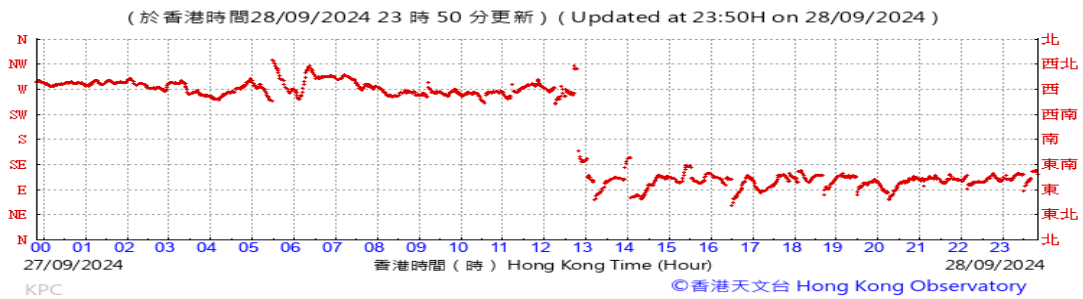
Temperature/Humidity:



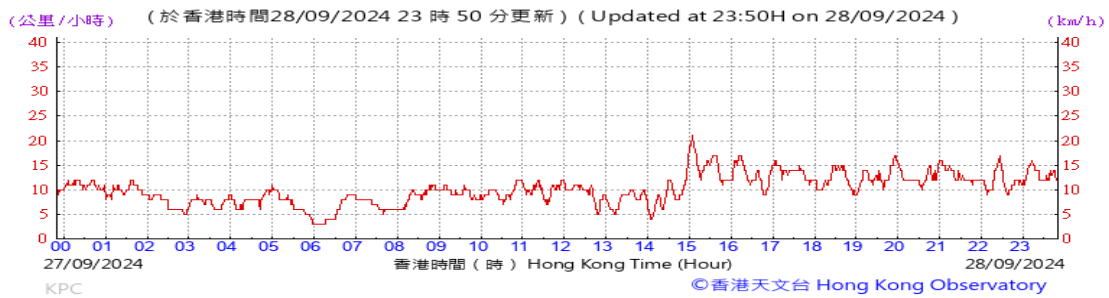
Pressure:



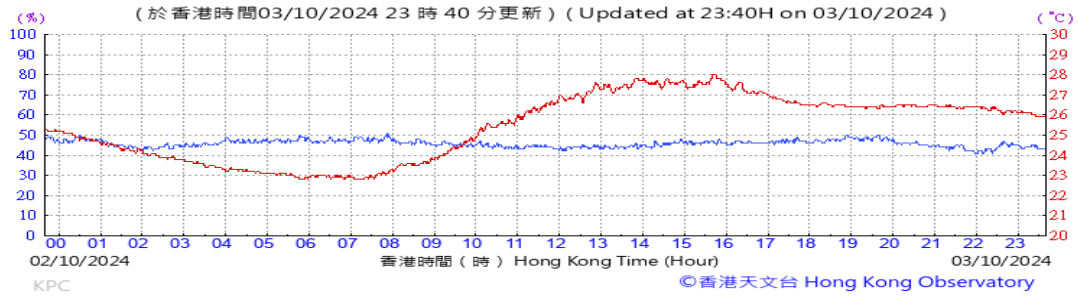
Wind Direction:



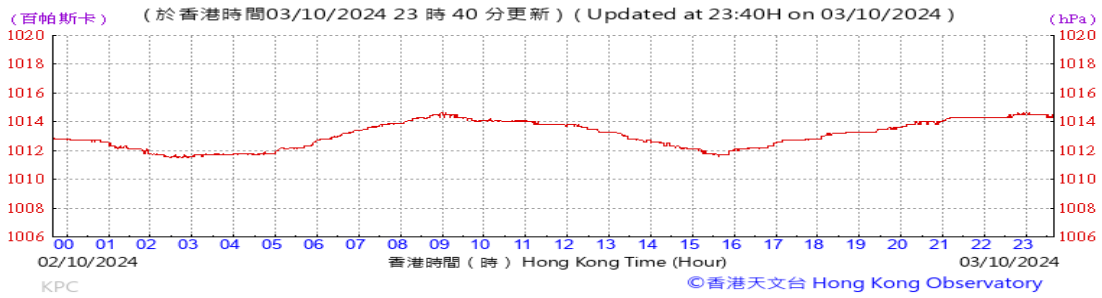
Wind Speed:



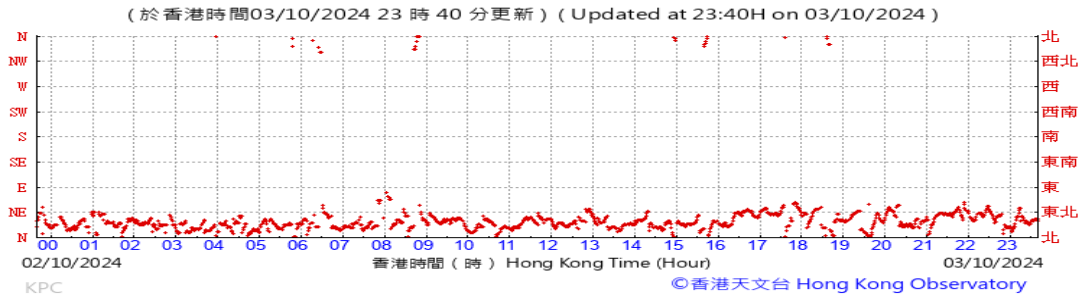
Temperature/Humidity:



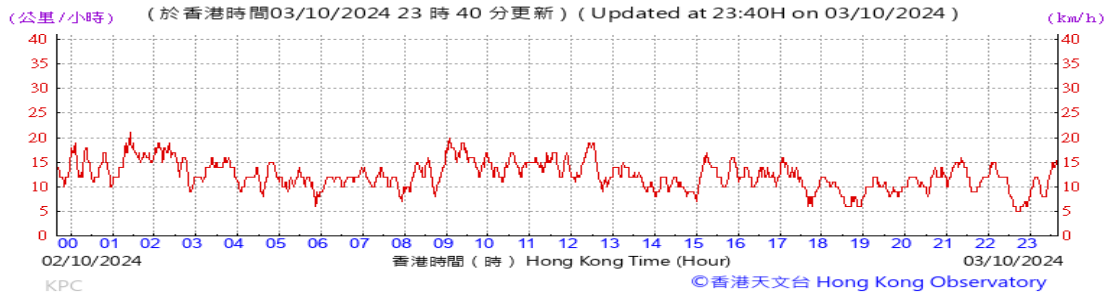
Pressure:



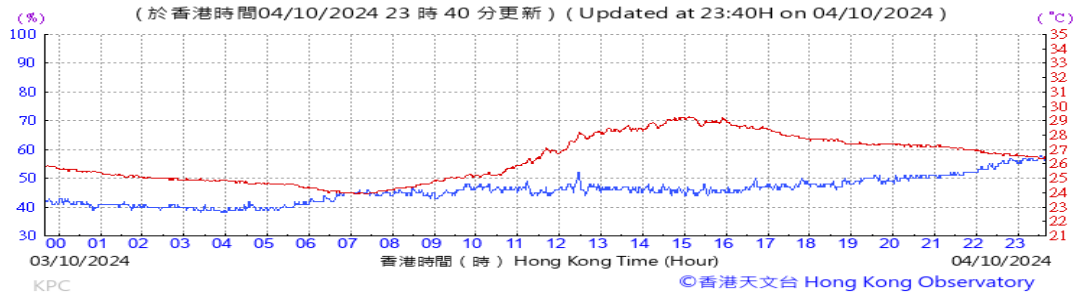
Wind Direction:



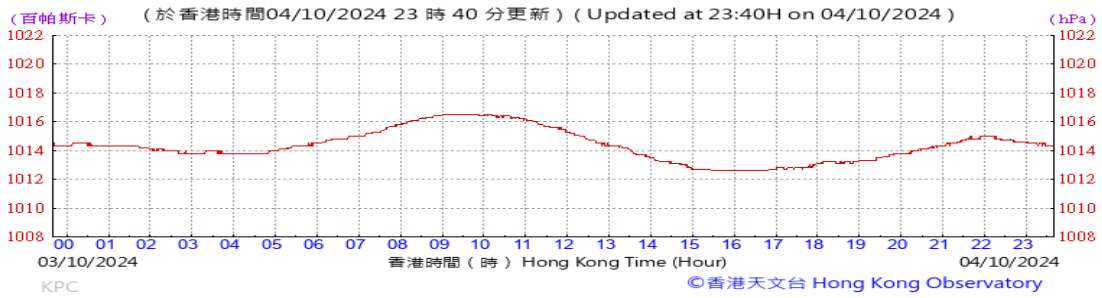
Wind Speed:



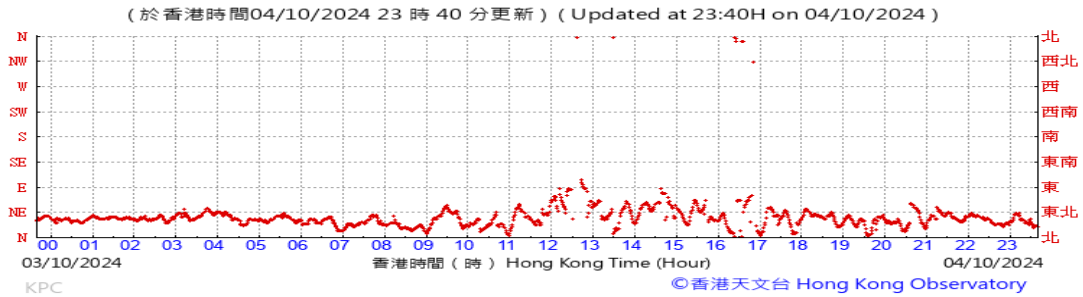
Temperature/Humidity:



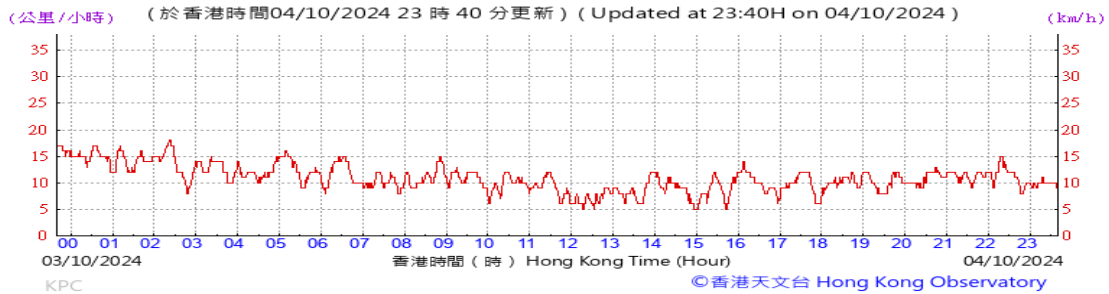
Pressure:



Wind Direction:



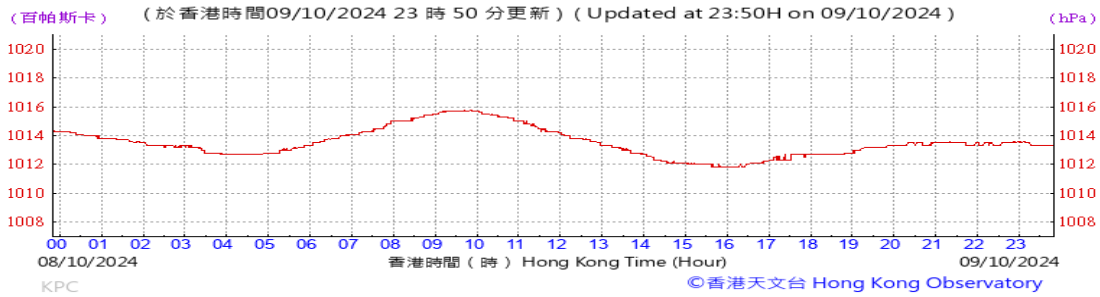
Wind Speed:



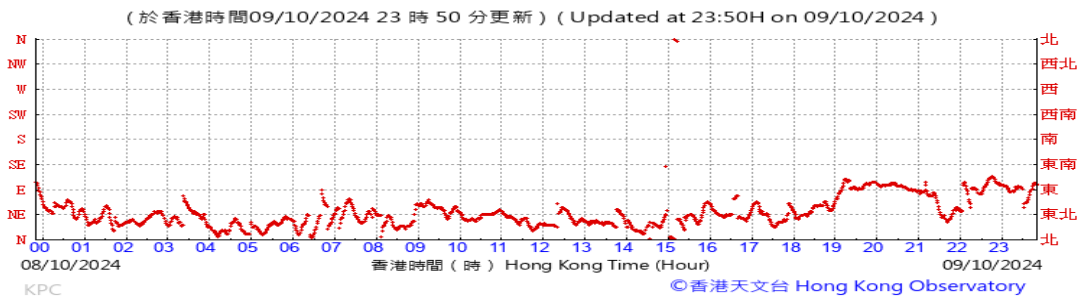
Temperature/Humidity:



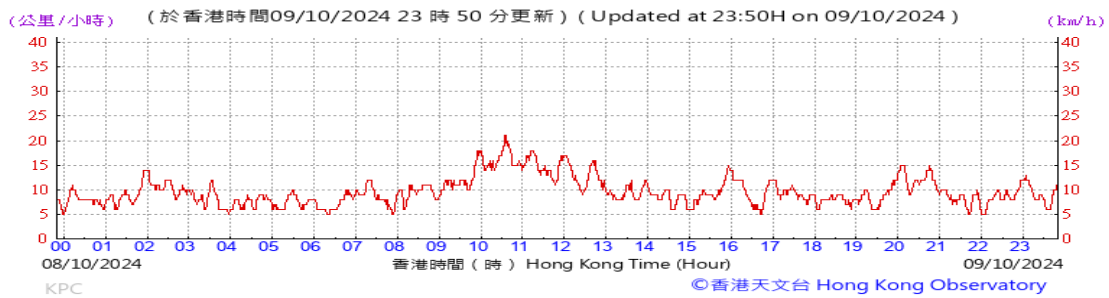
Pressure:



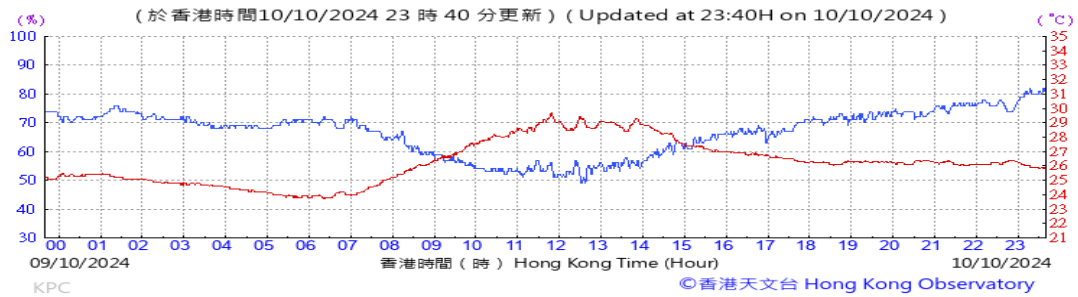
Wind Direction:



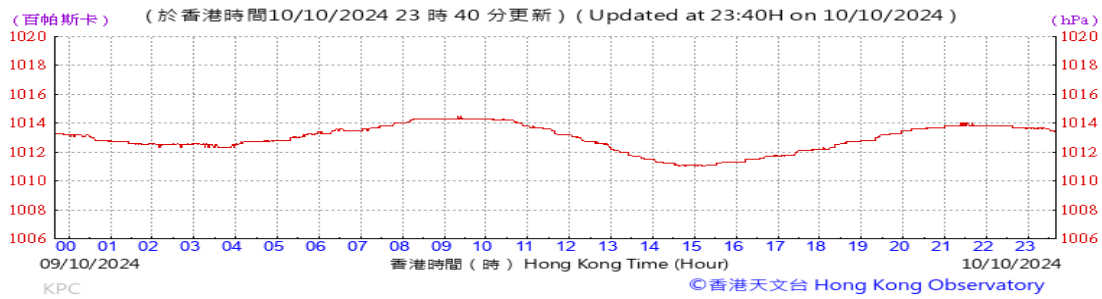
Wind Speed:



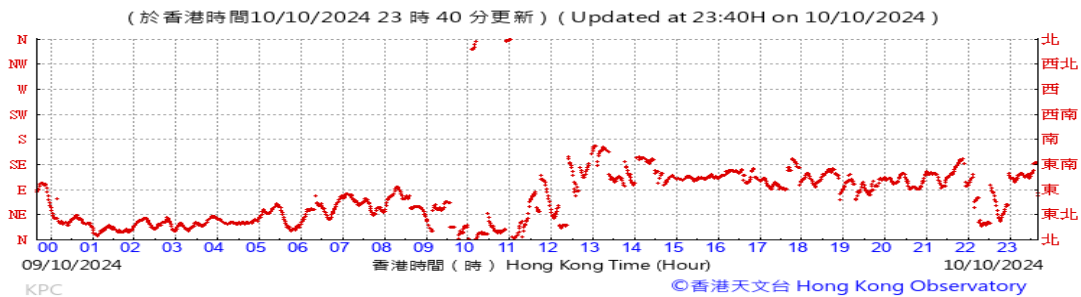
Temperature/Humidity:



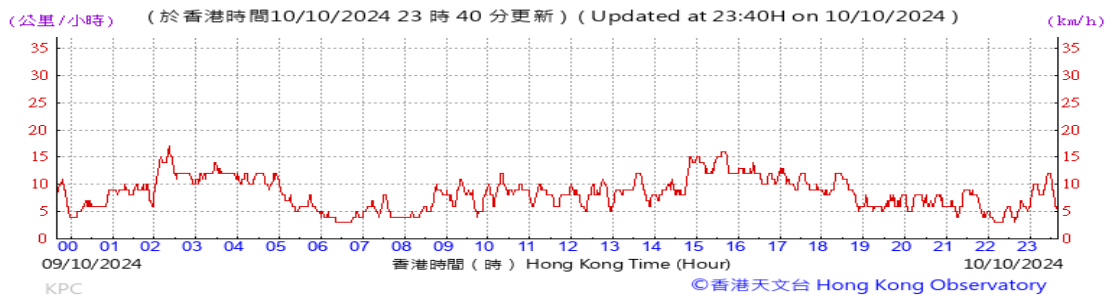
Pressure:



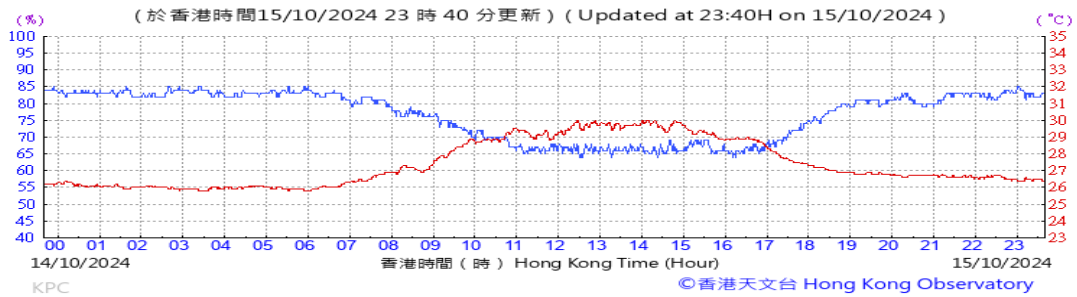
Wind Direction:



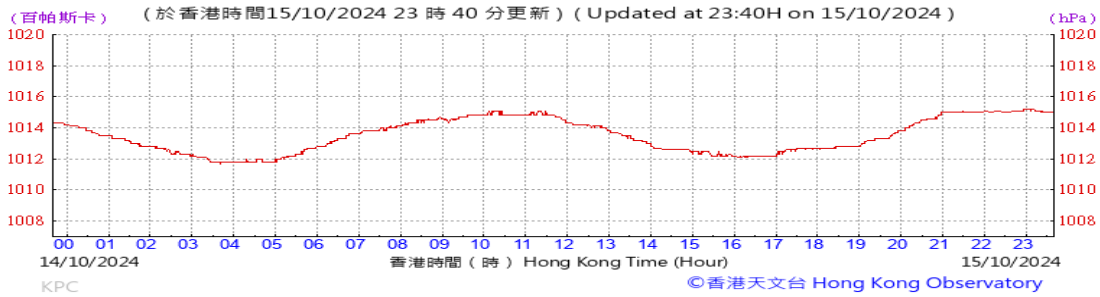
Wind Speed:



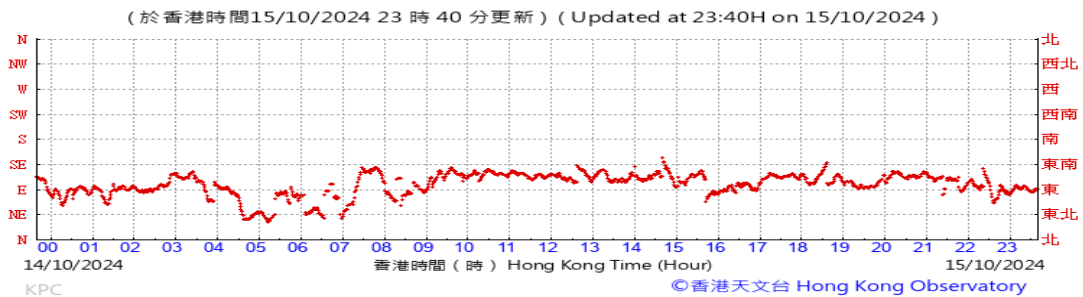
Temperature/Humidity:



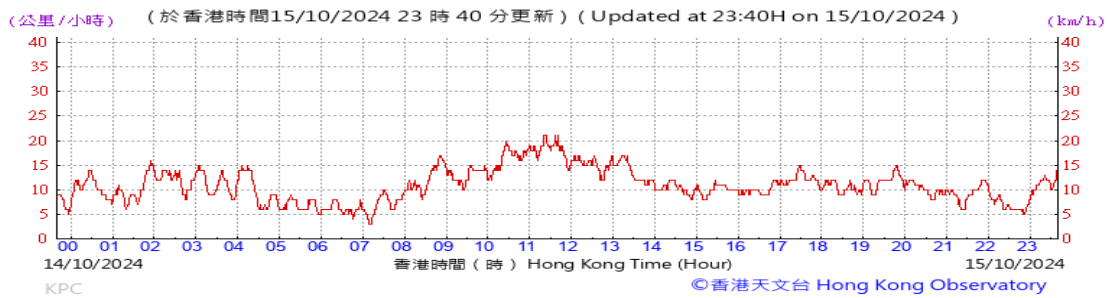
Pressure:



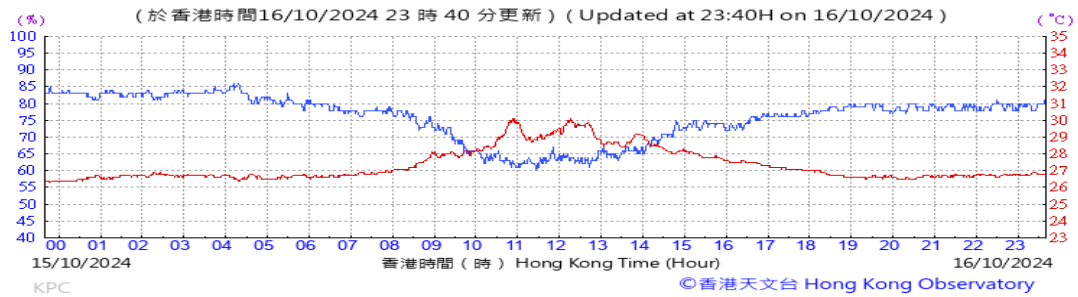
Wind Direction:



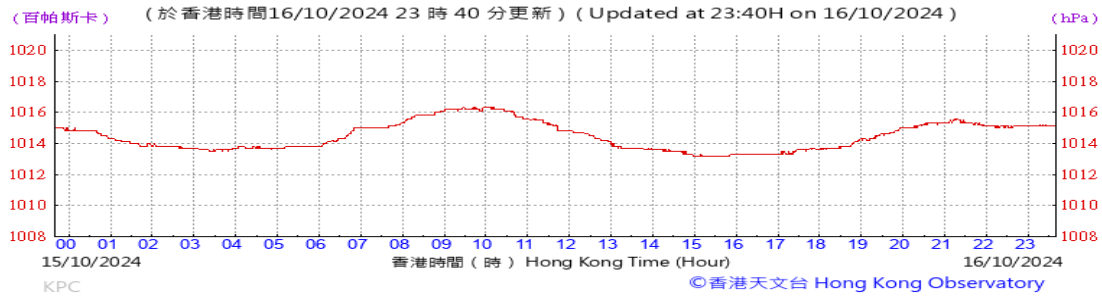
Wind Speed:



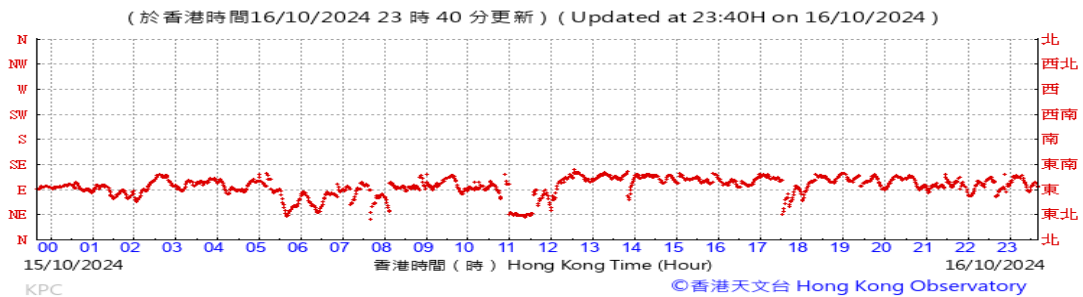
Temperature/Humidity:



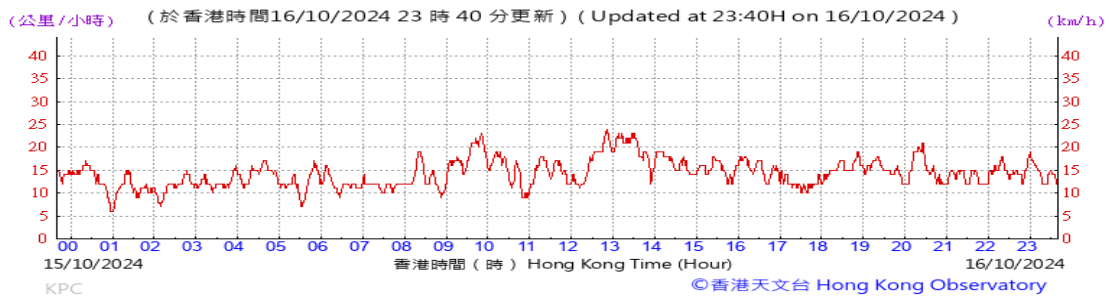
Pressure:



Wind Direction:



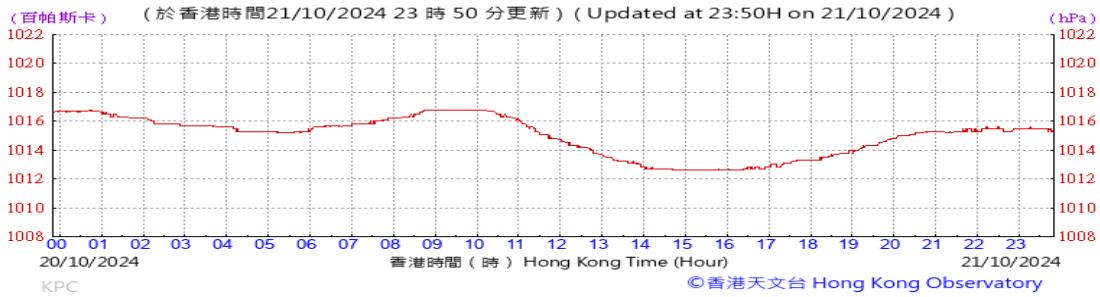
Wind Speed:



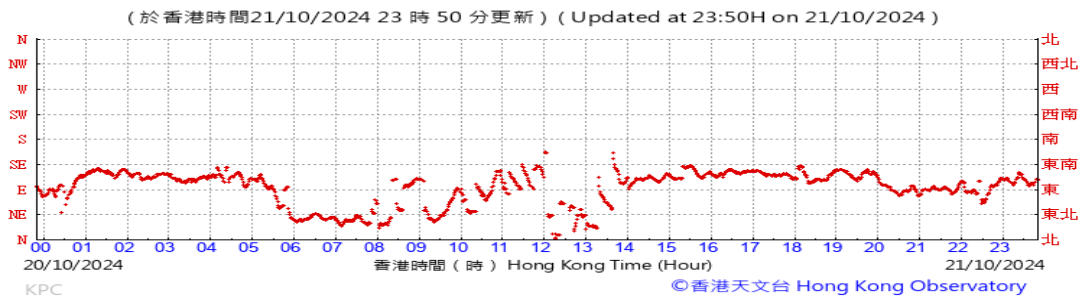
Temperature/Humidity:



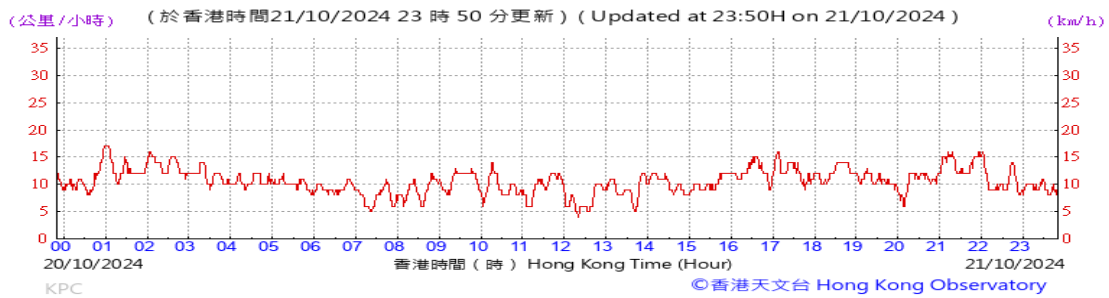
Pressure:



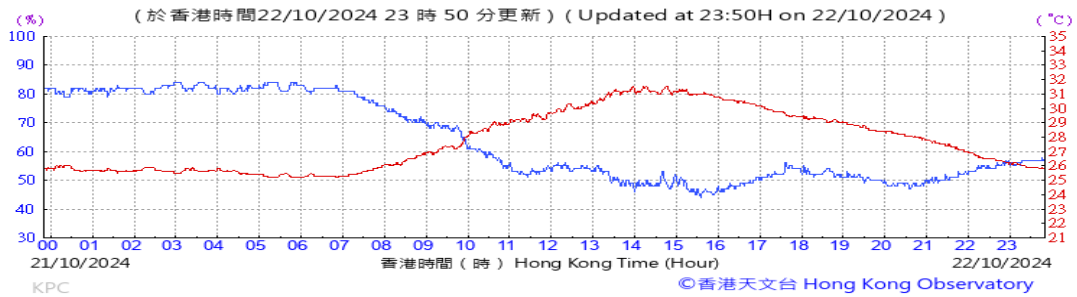
Wind Direction:



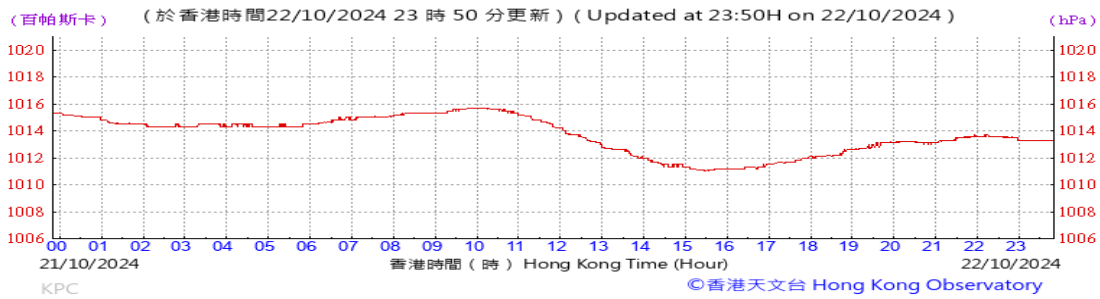
Wind Speed:



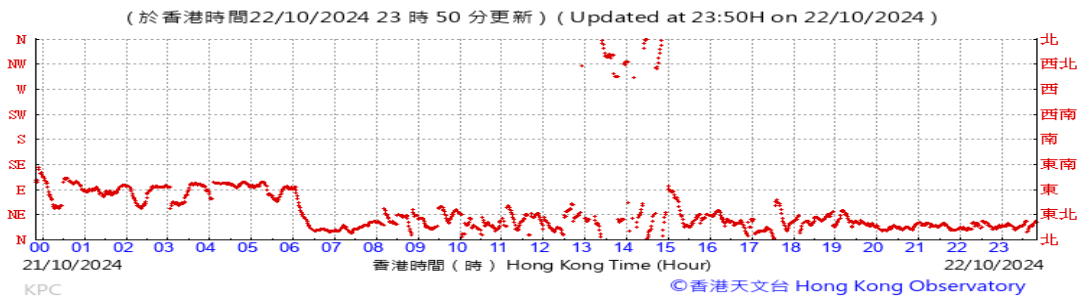
Temperature/Humidity:



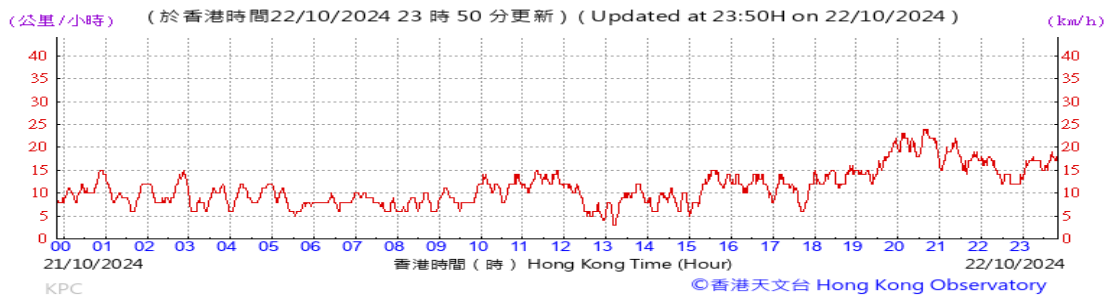
Pressure:



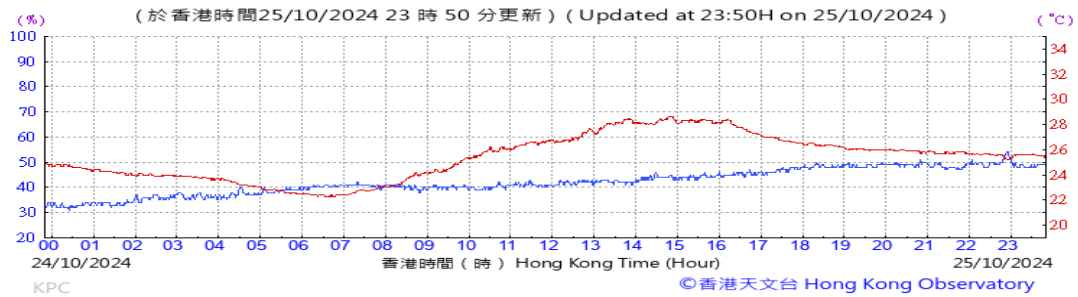
Wind Direction:



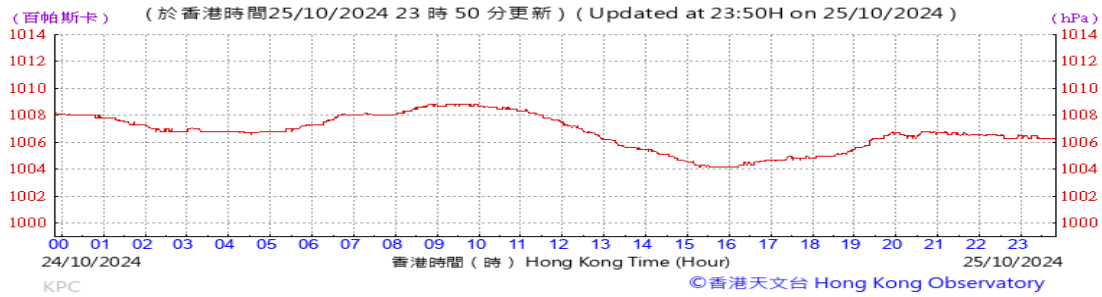
Wind Speed:



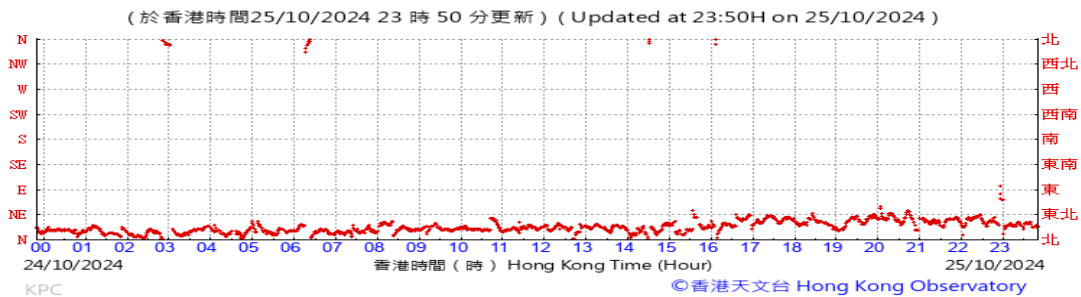
Temperature/Humidity:



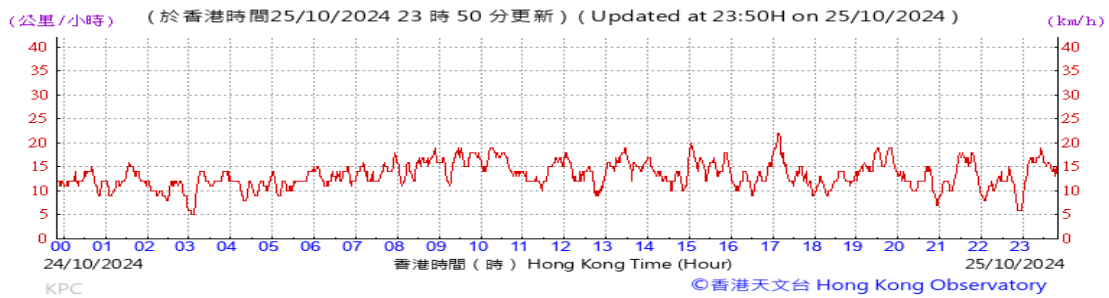
Pressure:



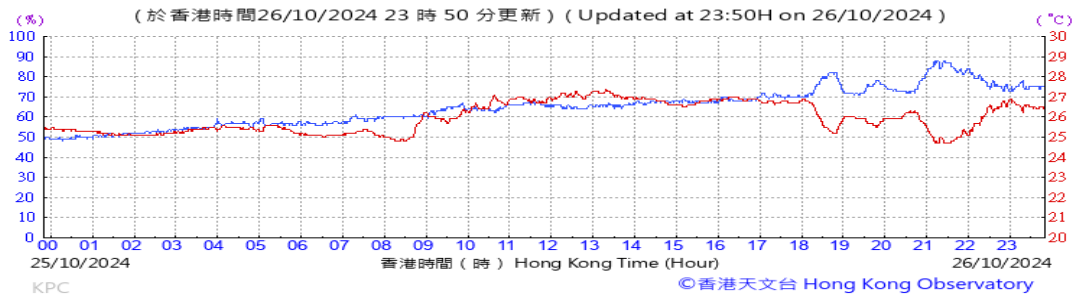
Wind Direction:



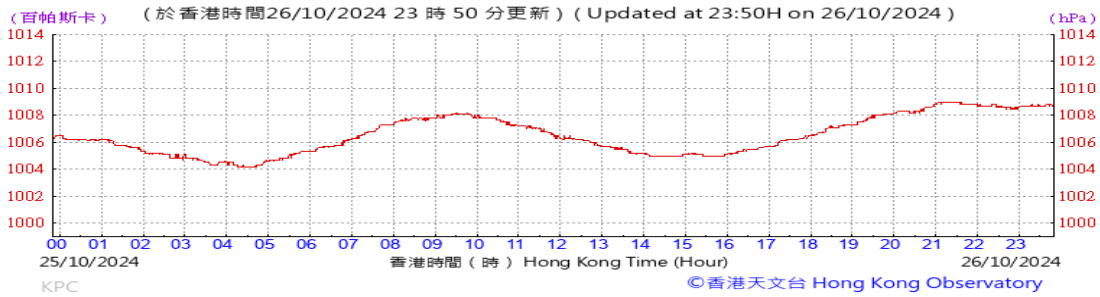
Wind Speed:



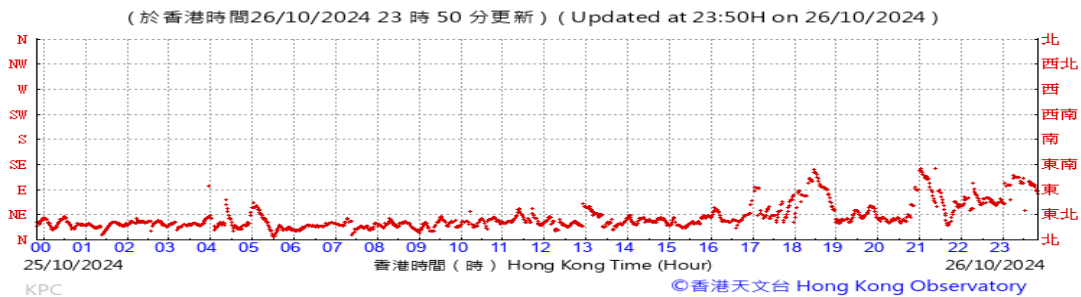
Temperature/Humidity:



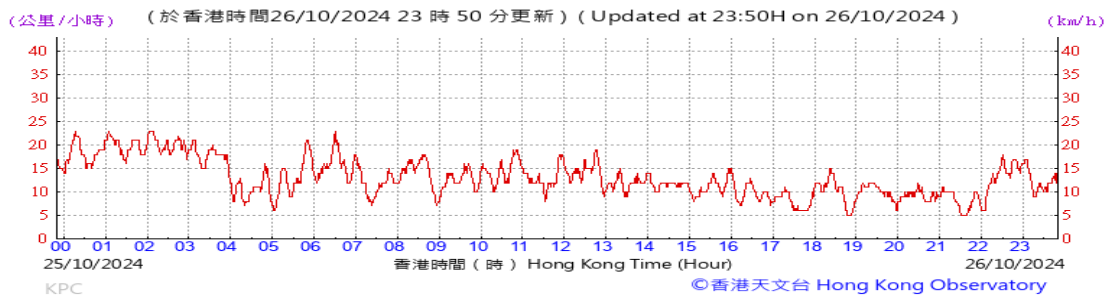
Pressure:



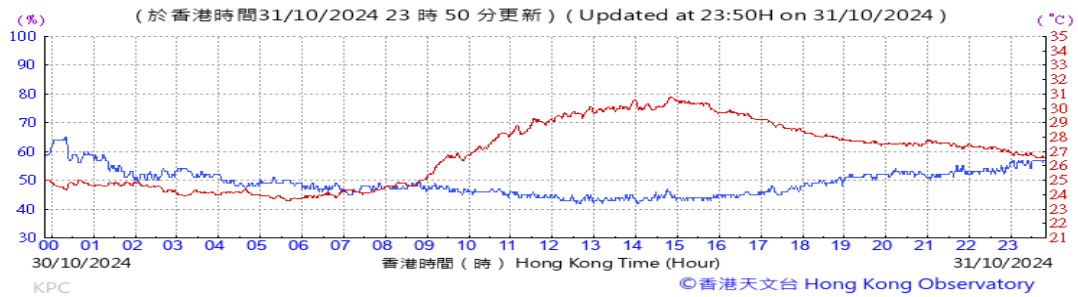
Wind Direction:



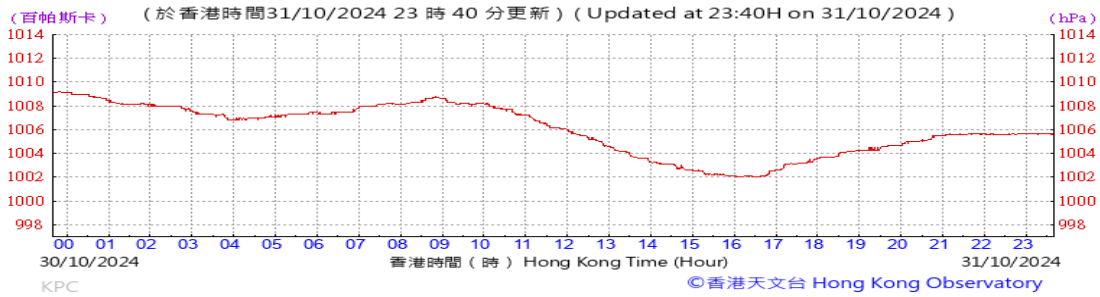
Wind Speed:



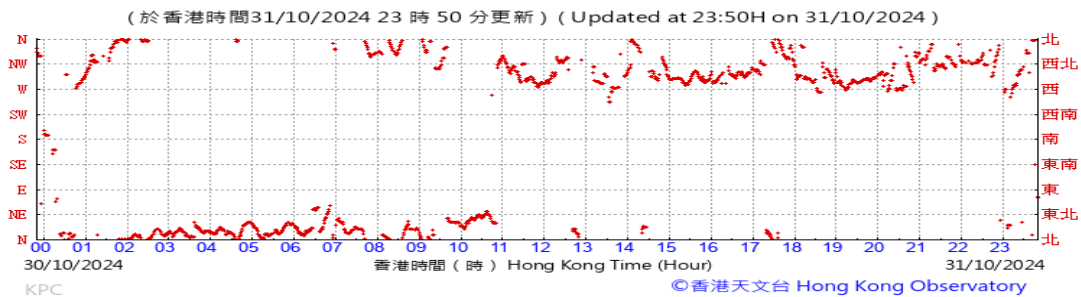
Temperature/Humidity:



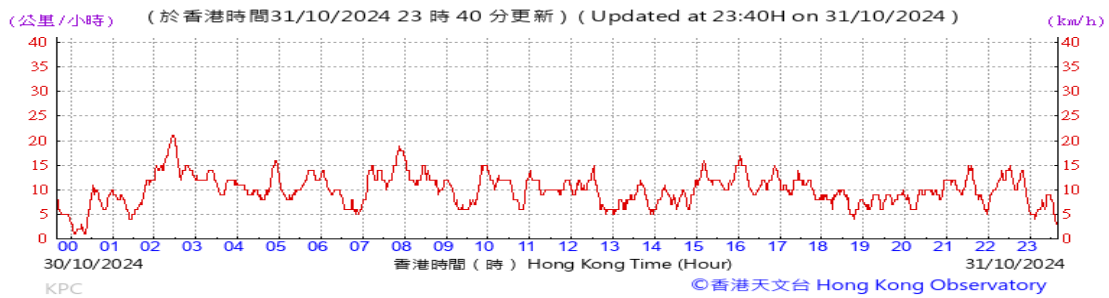
Pressure:



Wind Direction:



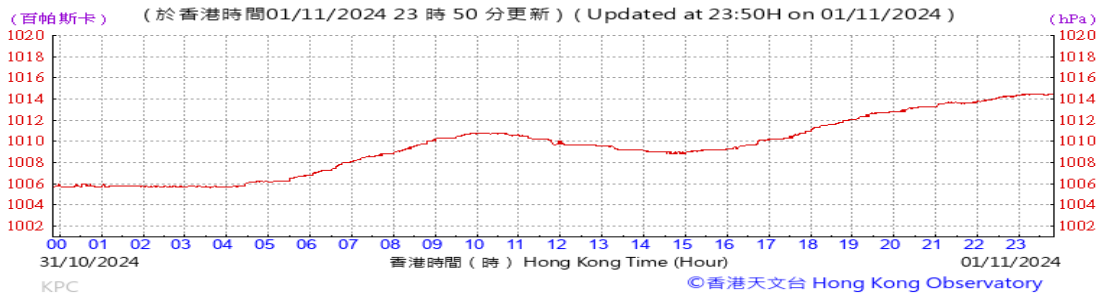
Wind Speed:



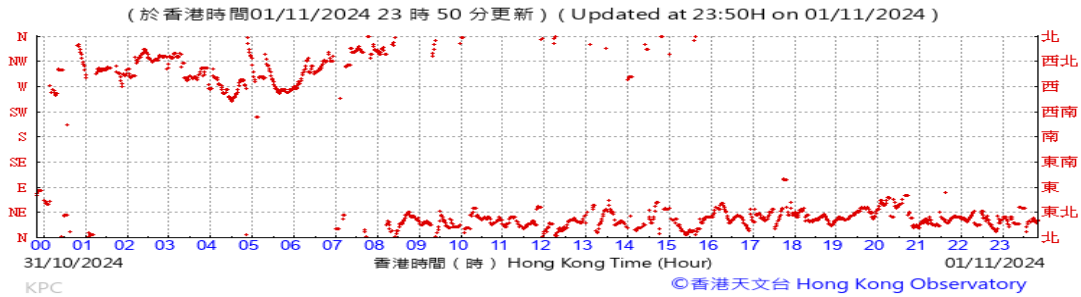
Temperature/Humidity:



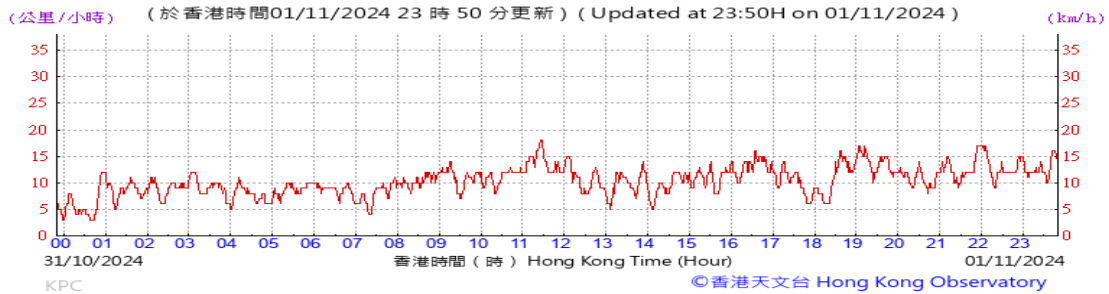
Pressure:



Wind Direction:



Wind Speed:

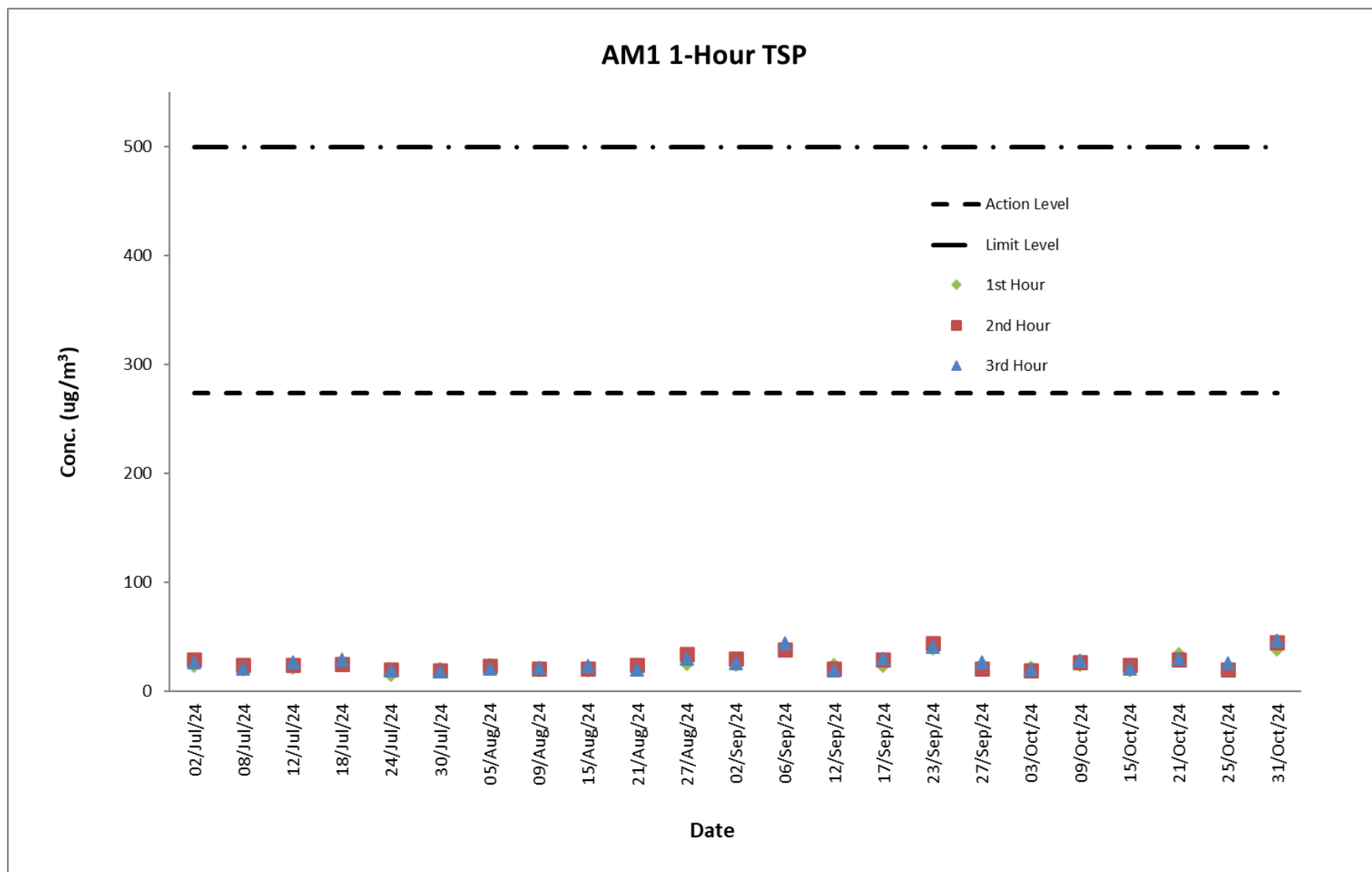


E. Graphical Plots of the Monitoring Results

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

Date	Weather Condition	Time	Conc. ($\mu\text{g}/\text{m}^3$)			Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
			1 st Hour	2 nd Hour	3 rd Hour		
5-Aug-24	Sunny	8:24 - 11:24	24	23	21	273.7	500
9-Aug-24	Sunny	8:28 - 11:28	19	21	22	273.7	500
15-Aug-24	Fine	8:24 - 11:24	19	21	23	273.7	500
21-Aug-24	Cloudy	8:28 - 11:28	21	24	20	273.7	500
27-Aug-24	Fine	8:28 - 11:28	25	34	30	273.7	500
2-Sep-24	Sunny	8:23 - 11:23	24	30	26	273.7	500
6-Sep-24	Cloudy	14:07 - 17:07	41	38	44	273.7	500
12-Sep-24	Sunny	8:24 - 11:24	24	21	19	273.7	500
17-Sep-24	Fine	8:28 - 11:28	23	29	30	273.7	500
23-Sep-24	Cloudy	8:31 - 11:31	39	44	41	273.7	500
27-Sep-24	Fine	8:33 - 11:33	24	21	27	273.7	500
3-Oct-24	Sunny	8:24 - 11:24	22	19	20	273.7	500
9-Oct-24	Cloudy	8:31 - 11:31	24	27	28	273.7	500
15-Oct-24	Cloudy	8:28 - 11:28	19	24	21	273.7	500
21-Oct-24	Cloudy	8:33 - 11:33	34	29	30	273.7	500
25-Oct-24	Fine	8:33 - 11:33	21	20	26	273.7	500
31-Oct-24	Fine	8:32 - 11:32	38	45	47	273.7	500

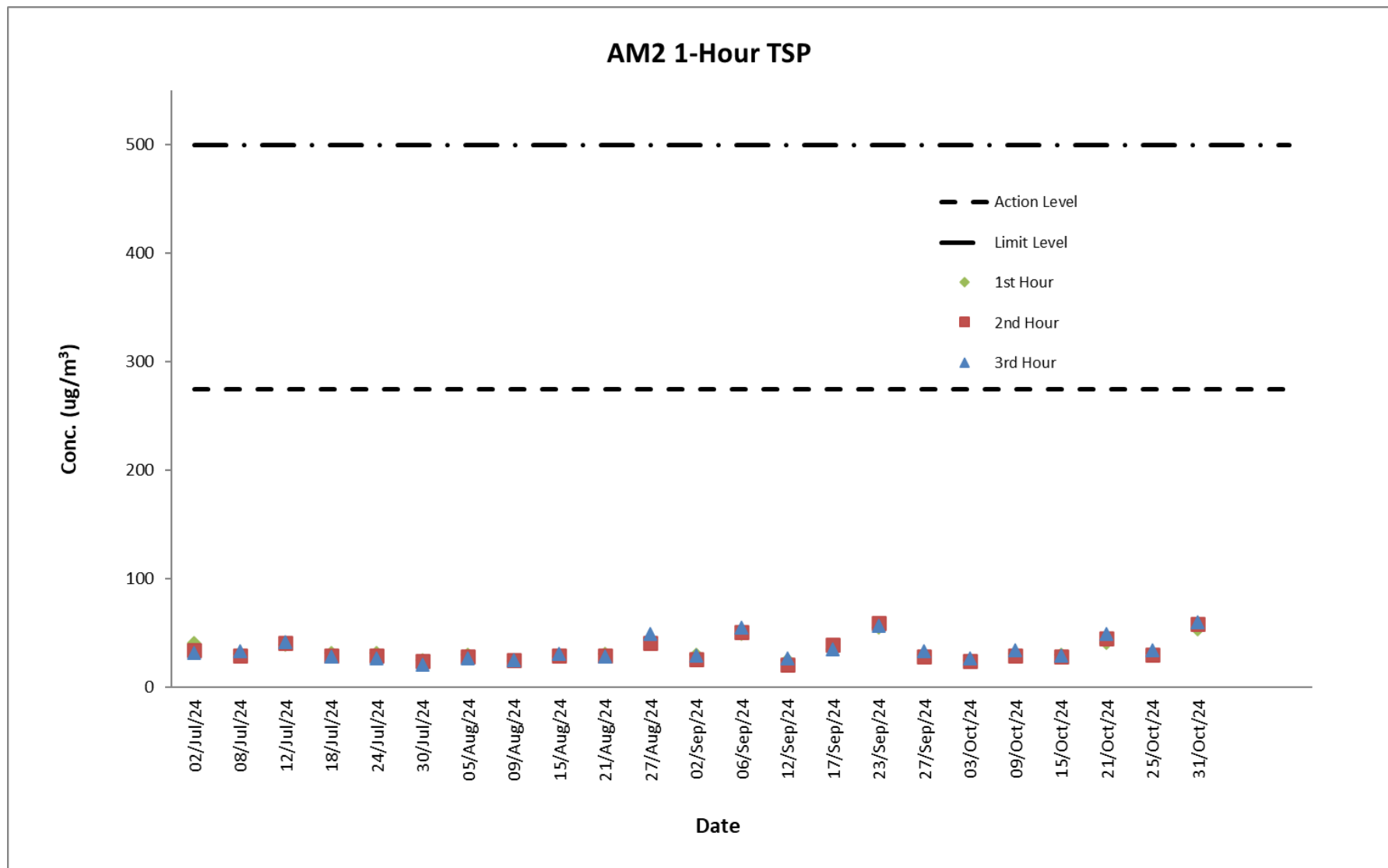
Graphical Presentation of Air Quality Monitoring Result at Station AM1 (1-hour TSP)



Air Quality Monitoring Result at Station AM2 (1-hour TSP)

Date	Weather Condition	Time	Conc. ($\mu\text{g}/\text{m}^3$)			Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
			1 st Hour	2 nd Hour	3 rd Hour		
5-Aug-24	Sunny	8:39 - 11:39	30	28	27	274.2	500
9-Aug-24	Sunny	8:43 - 11:43	24	25	25	274.2	500
15-Aug-24	Fine	8:39 - 11:39	28	29	31	274.2	500
21-Aug-24	Cloudy	8:42 - 11:42	31	29	28	274.2	500
27-Aug-24	Fine	8:43 - 11:43	45	41	49	274.2	500
2-Sep-24	Sunny	8:37 - 11:37	30	26	29	274.2	500
6-Sep-24	Cloudy	14:22 - 17:22	49	51	55	274.2	500
12-Sep-24	Sunny	8:40 - 11:40	25	21	27	274.2	500
17-Sep-24	Fine	8:43 - 11:43	35	39	35	274.2	500
23-Sep-24	Cloudy	8:47 - 11:47	55	59	57	274.2	500
27-Sep-24	Fine	8:47 - 11:47	30	28	33	274.2	500
3-Oct-24	Sunny	8:41 - 11:41	25	24	27	274.2	500
9-Oct-24	Cloudy	8:47 - 11:47	31	29	34	274.2	500
15-Oct-24	Cloudy	8:43 - 11:43	30	28	29	274.2	500
21-Oct-24	Cloudy	8:48 - 11:48	41	45	49	274.2	500
25-Oct-24	Fine	8:48 - 11:48	32	30	34	274.2	500
31-Oct-24	Fine	8:47 - 11:47	53	58	60	274.2	500

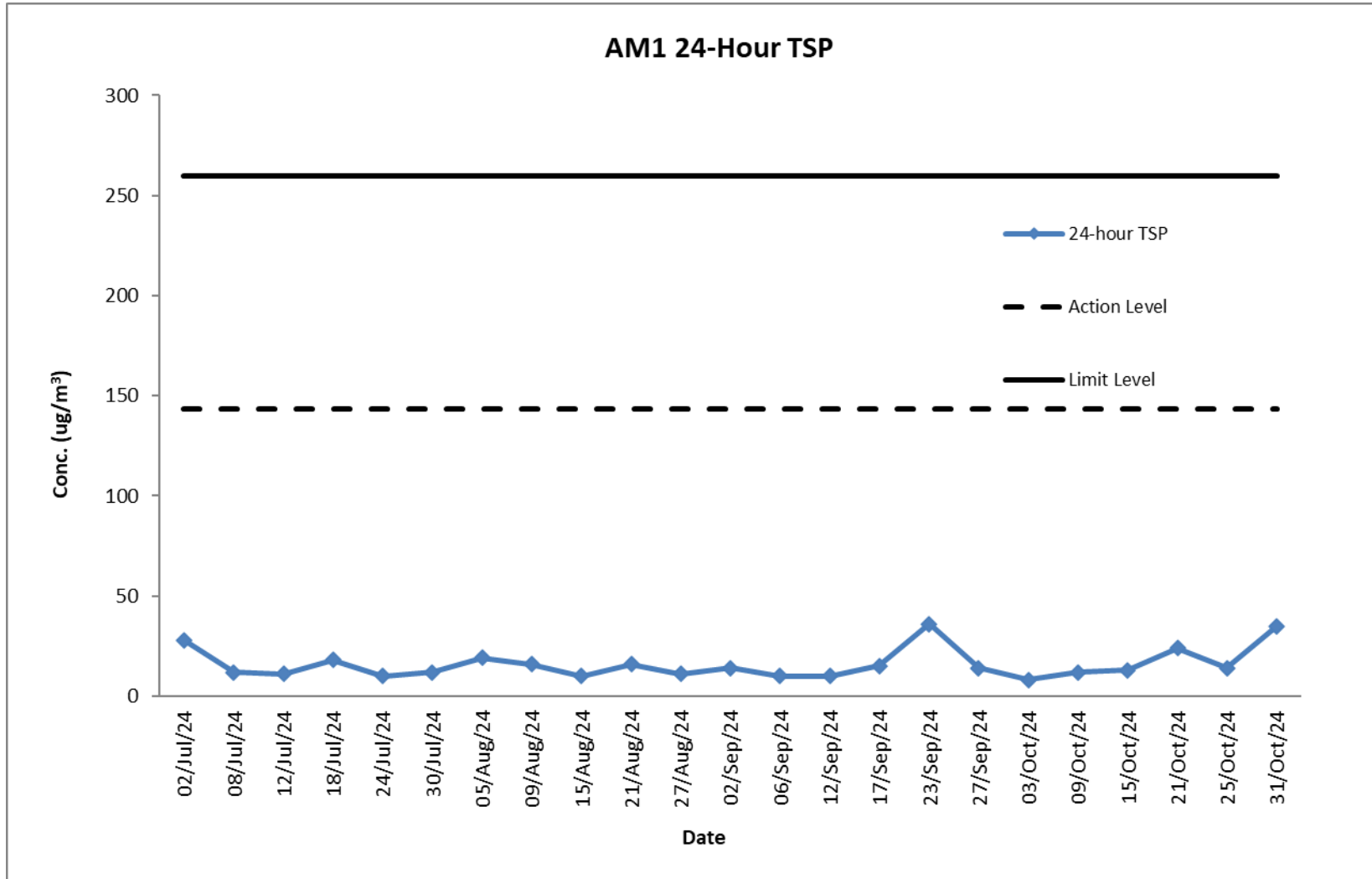
Graphical Presentation of Air Quality Monitoring Result at Station AM2 (1-hour TSP)



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

Start		Finish		Filter Weight (g)		Reading		Sampling Time (hrs)	Flow Rate (m ³ /min)			Conc. (µg/m ³)	Weather Condition	Action Level	Limit Level
Date	Time	Date	Time	Initial	Final	Initial	Final		Initial	Final	Average				
5-Aug-24	8:21	6-Aug-24	8:21	2.7989	2.8337	28468.38	28492.38	24	1.27	1.27	1.27	19	Sunny	143.6	260
9-Aug-24	8:25	10-Aug-24	8:25	2.8004	2.829	28492.38	28516.38	24	1.27	1.27	1.27	16	Sunny	143.6	260
15-Aug-24	8:21	16-Aug-24	8:21	2.8066	2.824	28516.38	28540.38	24	1.27	1.27	1.27	10	Fine	143.6	260
21-Aug-24	8:25	22-Aug-24	8:25	2.8059	2.8353	28540.38	28564.38	24	1.27	1.27	1.27	16	Cloudy	143.6	260
27-Aug-24	8:25	28-Aug-24	8:25	2.8045	2.8252	28564.38	28588.38	24	1.27	1.27	1.27	11	Fine	143.6	260
2-Sep-24	8:21	3-Sep-24	8:21	2.7994	2.8249	28588.38	28612.38	24	1.27	1.27	1.27	14	Sunny	143.6	260
6-Sep-24	14:00	7-Sep-24	14:00	2.7957	2.8137	28612.38	28636.38	24	1.27	1.27	1.27	10	Cloudy	143.6	260
12-Sep-24	8:21	13-Sep-24	8:21	2.7872	2.8054	28636.38	28660.38	24	1.23	1.23	1.23	10	Sunny	143.6	260
17-Sep-24	8:25	18-Sep-24	8:25	2.8002	2.8268	28660.38	28684.38	24	1.23	1.23	1.23	15	Fine	143.6	260
23-Sep-24	8:28	24-Sep-24	8:28	2.7547	2.8187	28684.38	28708.38	24	1.23	1.23	1.23	36	Cloudy	143.6	260
27-Sep-24	8:30	28-Sep-24	8:30	2.8002	2.8243	28708.38	28732.38	24	1.23	1.23	1.23	14	Fine	143.6	260
3-Oct-24	8:21	4-Oct-24	8:21	2.7958	2.8095	28732.38	28756.38	24	1.23	1.23	1.23	8	Sunny	143.6	260
9-Oct-24	8:28	10-Oct-24	8:28	2.8047	2.8252	28756.38	28780.38	24	1.23	1.23	1.23	12	Cloudy	143.6	260
15-Oct-24	8:25	16-Oct-24	8:25	2.8005	2.8241	28780.38	28804.38	24	1.23	1.23	1.23	13	Cloudy	143.6	260
21-Oct-24	8:30	22-Oct-24	8:30	2.8016	2.8437	28804.38	28828.38	24	1.23	1.23	1.23	24	Cloudy	143.6	260
25-Oct-24	8:30	26-Oct-24	8:30	2.7879	2.8120	28828.38	28852.38	24	1.23	1.23	1.23	14	Fine	143.6	260
31-Oct-24	8:29	1-Nov-24	8:29	2.7918	2.8530	28852.38	28876.38	24	1.23	1.23	1.23	35	Fine	143.6	260

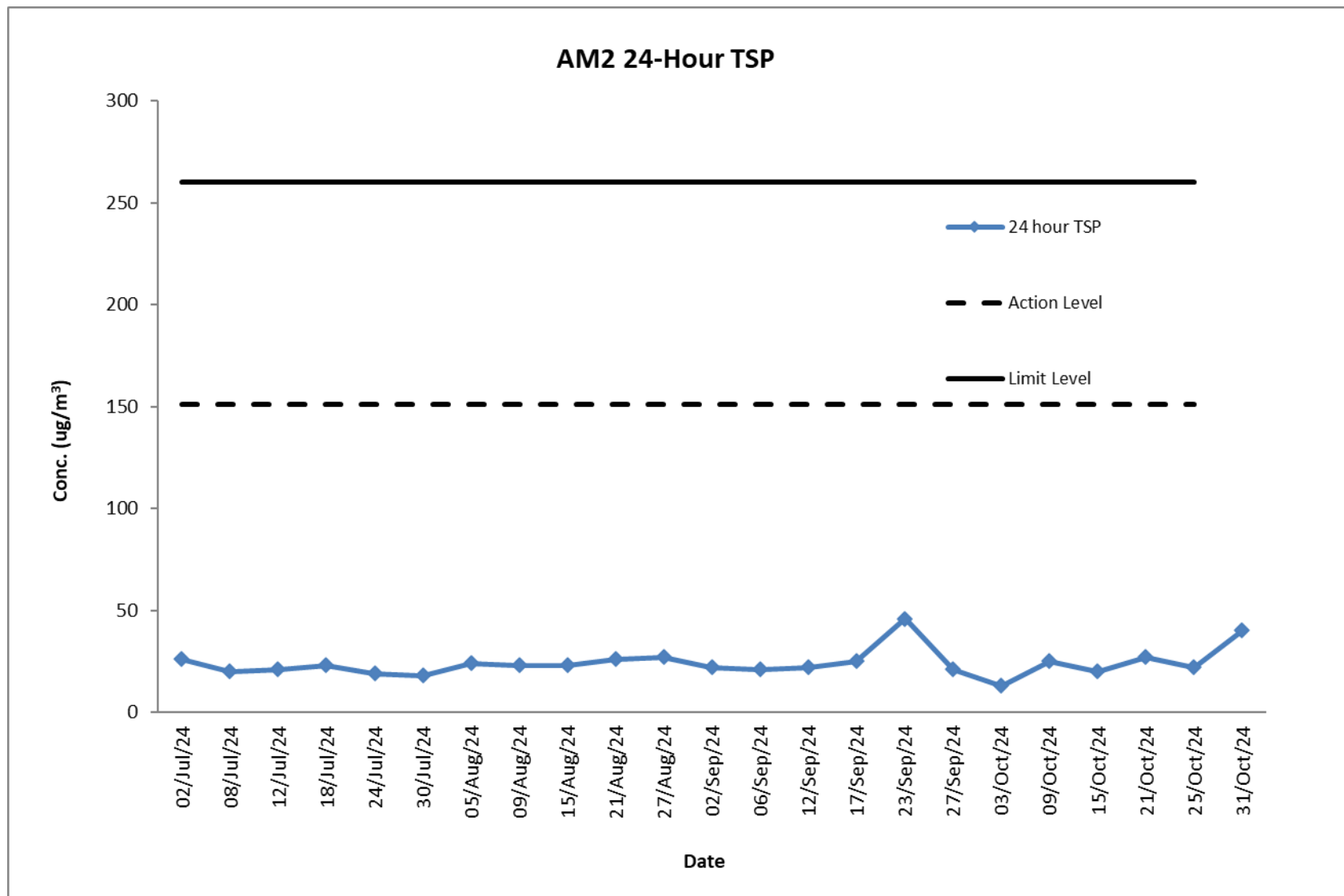
Graphical Presentation of Air Quality Monitoring Result at Station AM1 (24-hour TSP)



Air Quality Monitoring Result at Station AM2 (24-hour TSP)

Start		Finish		Sampling Time (hrs)	Conc. ($\mu\text{g}/\text{m}^3$)	Weather Condition	Action Level	Limit Level
Date	Time	Date	Time					
5-Aug-24	8:36	6-Aug-24	8:36	24	24	Sunny	151.1	260
9-Aug-24	8:40	10-Aug-24	8:40	24	23	Sunny	151.1	260
15-Aug-24	8:36	16-Aug-24	8:36	24	23	Fine	151.1	260
21-Aug-24	8:40	22-Aug-24	8:40	24	26	Cloudy	151.1	260
27-Aug-24	8:40	28-Aug-24	8:40	24	27	Fine	151.1	260
2-Sep-24	8:35	3-Sep-24	8:35	24	22	Sunny	151.1	260
6-Sep-24	14:20	7-Sep-24	14:20	24	21	Cloudy	151.1	260
12-Sep-24	8:37	13-Sep-24	8:37	24	22	Sunny	151.1	260
17-Sep-24	8:40	18-Sep-24	8:40	24	25	Fine	151.1	260
23-Sep-24	8:44	24-Sep-24	8:44	24	46	Cloudy	151.1	260
27-Sep-24	8:45	28-Sep-24	8:45	24	21	Fine	151.1	260
3-Oct-24	8:39	4-Oct-24	8:39	24	13	Sunny	151.1	260
9-Oct-24	8:44	10-Oct-24	8:44	24	25	Cloudy	151.1	260
15-Oct-24	8:40	16-Oct-24	8:40	24	20	Cloudy	151.1	260
21-Oct-24	8:45	22-Oct-24	8:45	24	27	Cloudy	151.1	260
25-Oct-24	8:45	26-Oct-24	8:45	24	22	Fine	151.1	260
31-Oct-24	8:45	1-Nov-24	8:45	24	40	Fine	151.1	260

Graphical Presentation of Air Quality Monitoring Result at Station AM2 (24-hour TSP)



Noise Monitoring Result at Station NM1A

Date	Time	Measured L10 dB(A)	Measured L90 dB(A)	Leq (30 min.) dB(A)
5-Aug-24	9:23	62.9	58.2	64
5-Aug-24	9:28	63.4	59.5	
5-Aug-24	9:33	64.7	60.8	
5-Aug-24	9:38	62.0	58.4	
5-Aug-24	9:43	61.4	57.9	
5-Aug-24	9:48	63.6	59.0	
15-Aug-24	9:23	63.9	59.2	64
15-Aug-24	9:28	62.0	58.7	
15-Aug-24	9:33	64.4	60.5	
15-Aug-24	9:38	64.7	60.8	
15-Aug-24	9:43	63.2	59.6	
15-Aug-24	9:48	61.6	57.0	
21-Aug-24	9:25	61.0	57.2	63
21-Aug-24	9:30	62.1	58.5	
21-Aug-24	9:35	60.4	56.7	
21-Aug-24	9:40	62.8	58.0	
21-Aug-24	9:45	63.7	59.9	
21-Aug-24	9:50	62.6	58.6	
27-Aug-24	9:26	62.0	58.8	64
27-Aug-24	9:31	61.7	57.2	
27-Aug-24	9:36	63.9	59.5	
27-Aug-24	9:41	62.4	58.7	
27-Aug-24	9:46	63.6	59.9	
27-Aug-24	9:51	64.4	60.0	
2-Sep-24	9:21	61.4	57.2	63
2-Sep-24	9:26	60.7	56.7	
2-Sep-24	9:31	63.9	59.5	
2-Sep-24	9:36	62.0	58.8	
2-Sep-24	9:41	63.1	59.6	
2-Sep-24	9:46	61.2	57.0	
12-Sep-24	9:25	64.2	60.0	65
12-Sep-24	9:30	63.8	59.3	
12-Sep-24	9:35	62.7	58.9	
12-Sep-24	9:40	64.5	60.6	
12-Sep-24	9:45	63.0	59.7	
12-Sep-24	9:50	62.6	58.2	
17-Sep-24	9:27	62.7	58.2	64
17-Sep-24	9:32	63.1	59.0	
17-Sep-24	9:37	63.4	59.1	
17-Sep-24	9:42	62.0	58.5	
17-Sep-24	9:47	61.6	57.9	
17-Sep-24	9:52	63.8	59.9	
23-Sep-24	9:32	63.0	59.6	64
23-Sep-24	9:37	62.5	58.7	
23-Sep-24	9:42	61.2	57.3	
23-Sep-24	9:47	61.8	57.0	
23-Sep-24	9:52	62.7	58.9	
23-Sep-24	9:57	64.6	60.2	

3-Oct-24	9:26	64.5	60.6	65
3-Oct-24	9:31	63.0	59.9	
3-Oct-24	9:36	65.8	61.3	
3-Oct-24	9:41	64.1	60.0	
3-Oct-24	9:46	63.7	59.7	
3-Oct-24	9:51	62.5	58.6	
9-Oct-24	9:32	64.2	60.3	65
9-Oct-24	9:37	64.7	61.0	
9-Oct-24	9:42	62.4	58.6	
9-Oct-24	9:47	63.0	59.5	
9-Oct-24	9:52	61.8	57.9	
9-Oct-24	9:57	62.1	58.4	
15-Oct-24	9:28	63.2	59.3	63
15-Oct-24	9:33	62.8	58.0	
15-Oct-24	9:38	62.7	58.6	
15-Oct-24	9:43	61.5	57.9	
15-Oct-24	9:48	62.0	58.8	
15-Oct-24	9:53	61.9	57.2	
21-Oct-24	9:31	62.2	58.4	63
21-Oct-24	9:36	61.5	57.0	
21-Oct-24	9:41	62.7	58.3	
21-Oct-24	9:46	63.8	59.9	
21-Oct-24	9:51	61.0	57.7	
21-Oct-24	9:56	61.6	57.6	
31-Oct-24	9:31	61.2	57.0	63
31-Oct-24	9:36	62.7	58.3	
31-Oct-24	9:41	63.6	59.7	
31-Oct-24	9:46	61.5	57.6	
31-Oct-24	9:51	61.0	57.9	
31-Oct-24	9:56	62.8	58.6	

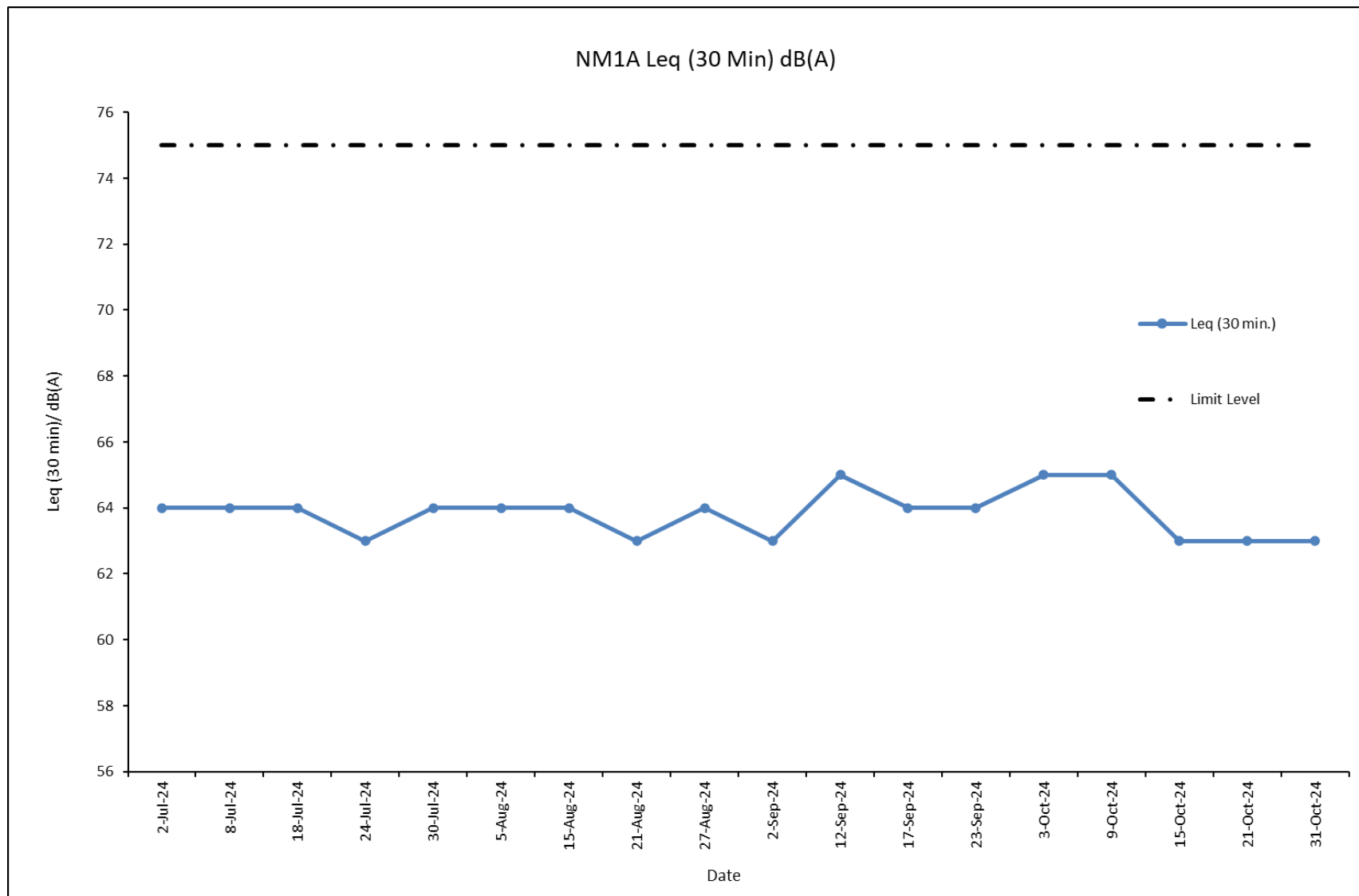
Remarks:

+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

Table F-1: Monthly Waste Flow Table for Lyric Theatre Complex

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

Table F-1: Monthly Waste Flow Table for Lyric Theatre Complex

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

Table F-1: Monthly Waste Flow Table for Lyric Theatre Complex

Month	Actual Quantities of Inert C&D Materials Generated Monthly							Actual Quantities of C&D Wastes Generated Monthly					
	Total Quantity Generated	Hard Rocks and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Disposed to Sorting Facility	Imported Fill	Metals	Paper/ Cardboard Packaging	Plastics	Wood/ Timber	Chemical Waste	Others, e.g. General Refuse
	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)	(in ton)
2020													
Jan	7089.9	0.0	0.0	0.0	7089.9	0.0	0.0	10.6	0.2	0.0	0.0	0.0	65.7
Feb	16822.3	0.0	0.0	0.0	16822.3	0.0	0.0	232.2	0.1	0.0	0.0	0.0	66.3
Mar	6559.0	0.0	0.0	0.0	6559.0	0.0	110.4	63.1	0.0	0.9	0.0	0.0	138.3
Apr	4997.9	0.0	0.0	1615.7	3382.2	0.0	159.2	1123.9	1.9	0.0	0.0	0.0	113.2
May	2236.0	0.0	0.0	452.3	1783.6	0.0	0.0	406.5	0.0	0.0	0.0	0.0	188.8
Jun	1134.3	0.0	0.0	0.0	1134.3	0.0	31.5	262.6	0.2	0.6	0.0	0.0	210.6
Jul	148.8	0.0	0.0	0.0	148.8	0.0	31.5	458.5	0.5	0.0	0.0	0.0	220.0
Aug	540.7	0.0	0.0	0.0	540.7	0.0	0.0	340.8	0.0	0.0	0.0	0.0	238.3
Sep	1432.3	0.0	0.0	0.0	1432.3	0.0	0.0	750.7	0.2	0.0	0.0	0.0	291.9
Oct	1381.5	0.0	0.0	0.0	1381.5	0.0	0.0	717.9	0.2	0.0	0.0	0.0	400.2
Nov	1444.1	0.0	0.0	0.0	1437.4	6.7	475.8	473.6	0.2	0.5	0.0	0.0	377.8
Dec	793.8	0.0	0.0	0.0	793.8	0.0	0.0	478.3	0.2	0.0	0.0	0.0	435.8
Sub-total (2020)	44580.6	0.0	0.0	2068.1	42505.8	6.7	808.3	5318.7	3.7	2.0	0.0	0.0	2746.8
2021													
Jan	881.4	0.0	0.0	0.0	881.4	0.0	0.0	835.1	0.4	0.0	0.0	0.0	497.0
Feb	544.7	0.0	0.0	0.0	544.7	0.0	0.0	100.5	0.3	0.0	0.0	0.0	504.7
Mar	406.1	0.0	0.0	0.0	406.1	0.0	0.0	455.8	0.3	0.0	0.0	0.0	881.7
Apr	633.0	0.0	0.0	0.0	633.0	0.0	0.0	429.9	0.7	0.0	0.0	0.0	613.0
May	1125.8	0.0	0.0	0.0	1125.8	0.0	0.0	355.1	0.2	0.1	0.0	0.0	355.2
Jun	877.3	0.0	0.0	0.0	877.3	0.0	0.0	98.4	0.2	0.0	0.0	0.4	420.3
Jul	8.9	0.0	0.0	0.0	0.0	8.9	0.0	43.9	2.0	0.0	0.0	0.0	278.2
Aug	1296.2	0.0	0.0	0.0	1296.2	0.0	0.0	161.5	0.0	0.0	0.0	0.0	459.1
Sep	1040.5	0.0	0.0	0.0	490.9	549.6	0.0	62.9	0.0	0.0	0.0	0.0	620.8
Oct	311.0	0.0	0.0	0.0	311.0	0.0	0.0	85.9	0.3	0.0	0.0	0.0	485.6
Nov	203.9	0.0	0.0	0.0	203.9	0.0	0.0	65.9	0.0	0.0	0.0	0.0	609.6
Dec	576.6	0.0	0.0	0.0	576.6	0.0	0.0	13.4	0.0	0.0	0.0	0.0	590.6
Sub-total (2021)	7905.3	0.0	0.0	0.0	7346.9	558.5	0.0	2708.2	4.4	0.1	0.0	0.4	6315.9

Table F-1: 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)
2022													
Jan	579.3	0.0	0.0	0.0	579.3	0.0	0.0	23.5	0.4	0.0	0.0	0.0	565.5
Feb	58.9	0.0	0.0	0.0	58.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	172.2
Mar	412.8	0.0	0.0	0.0	412.8	0.0	0.0	12.4	0.3	0.0	0.0	0.0	339.8
Apr	390.2	0.0	0.0	0.0	390.2	0.0	0.0	24.8	0.0	0.0	0.0	0.0	390.9
May	350.1	0.0	0.0	0.0	342.9	7.2	0.0	44.3	0.3	0.1	0.0	0.0	401.9
Jun	200.4	0.0	0.0	0.0	200.4	0.0	0.0	21.1	0.0	0.0	0.0	1.1	447.8
Jul	166.8	0.0	0.0	0.0	166.8	0.0	0.0	6.3	0.3	0.0	0.0	0.7	343.9
Aug	150.9	0.0	0.0	0.0	150.9	0.0	0.0	9.6	0.4	0.2	0.0	0.0	410.6
Sep	437.6	0.0	0.0	0.0	437.6	0.0	0.0	11.5	0.3	0.0	0.0	0.0	348.3
Oct	708.0	0.0	0.0	0.0	708.0	0.0	0.0	13.8	0.0	0.0	0.0	0.0	353.0
Nov	244.1	0.0	0.0	0.0	244.1	0.0	0.0	47.3	0.3	0.0	0.0	0.0	427.4
Dec	337.4	0.0	0.0	0.0	337.4	0.0	0.0	28.1	0.0	0.0	0.0	0.0	385.3
Sub-total (2022)	4036.4	0.0	0.0	0.0	4029.3	7.2	0.0	242.7	2.3	0.3	0.0	1.8	4586.6
2023													
Jan	307.0	0.0	0.0	0.0	307.0	0.0	0.0	44.5	0.0	0.0	0.0	0.0	415.1
Feb	1087.8	0.0	0.0	0.0	1087.8	0.0	0.0	22.9	0.4	0.0	0.0	0.0	411.4
Mar	1944.0	0.0	0.0	0.0	1944.0	0.0	0.0	37.7	0.0	0.0	0.0	0.0	469.6
Apr	819.5	0.0	0.0	0.0	819.5	0.0	0.0	218.7	0.0	0.0	0.0	0.0	320.5
May	842.1	0.0	0.0	0.0	842.1	0.0	0.0	35.6	0.3	0.0	0.0	0.0	439.4
Jun	952.1	0.0	0.0	0.0	952.1	0.0	0.0	22.9	0.2	0.0	0.0	0.0	399.3
Jul	583.1	0.0	0.0	0.0	583.1	0.0	0.0	38.3	0.0	0.0	0.0	0.0	421.6
Aug	778.2	0.0	0.0	0.0	778.2	0.0	0.0	28.5	0.0	0.0	0.0	0.0	427.9
Sep	316.4	0.0	0.0	0.0	316.4	0.0	0.0	14.8	0.1	0.0	0.0	0.0	344.3
Oct	1253.3	0.0	0.0	0.0	1253.3	0.0	0.0	17.9	0.0	0.0	0.0	0.0	353.9
Nov	862.7	0.0	0.0	0.0	862.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	436.4
Dec	337.8	0.0	0.0	0.0	337.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	374.0
Sub-total (2023)	10084.0	0.0	0.0	0.0	10084.0	0.0	0.0	481.8	1.0	0.0	0.0	0.0	4813.3

Table F-1: 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)
2024													
Jan	256.8	0.0	0.0	0.0	256.8	0.0	0.0	11.1	0.6	0.0	0.0	0.0	448.6
Feb	321.4	0.0	0.0	0.0	321.4	0.0	0.0	9.4	0.6	0.0	0.0	0.0	263.4
Mar	1167.4	0.0	0.0	0.0	1167.4	0.0	0.0	445.3	0.2	0.0	0.0	0.0	360.9
Apr	283.5	0.0	0.0	0.0	283.5	0.0	0.0	0.0	0.2	0.0	0.0	0.0	467.1
May	534.3	0.0	0.0	0.0	534.3	0.0	0.0	16.9	0.7	0.0	0.0	0.0	376.3
Jun	175.1	0.0	0.0	0.0	175.1	0.0	0.0	73.5	0.0	0.0	0.0	0.0	339.3
Jul	1171.9	0.0	0.0	0.0	1171.9	0.0	0.0	43.6	0.0	0.0	0.0	0.0	408.4
Aug	1049.7	0.0	0.0	0.0	1049.7	0.0	0.0	0.0	0.2	0.0	0.0	0.0	354.2
Sep	286.0	0.0	0.0	0.0	286.0	0.0	0.0	8.9	0.5	0.0	0.0	0.0	383.6
Oct	433.3	0.0	0.0	0.0	433.3	0.0	0.0	93.1	0.0	0.0	0.0	0.0	520.4
Sub-total (2024)	5679.2	0.0	0.0	0.0	5679.2	0.0	0.0	701.7	2.9	0.0	0.0	0.0	3922.1
Total	1014401.5	0.0	0.0	543635.2	469766.4	999.9	2301.1	11430.0	16.4	10.8	0.0	14.7	24616.3

Note:

(1) 1596.09, 172.84 and 0 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.

(2) The values in the table are rounded off to 1 decimal place.

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 to the end of the reporting quarter are summarized in **Table G-1** below.

Table G-1: 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 24 – Oct 24)	0	0	0
From 1 March 2016 to end of the reporting quarter	61	0	0

END OF PART-1

Part-2: EM&A for ELS Works for The Integrated Basement and Underground Road in Zones 2A, 2B & 2C

Piling Works and ELS Works for The Integrated Basement and Underground Road in Zones 2A, 2B & 2C

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

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

Contents

Executive summary	1
1 Introduction	2
1.1 Background	2
1.2 Project Organisation	2
1.3 Environmental Status in the Reporting Period	3
2 Summary of EM&A Requirements and Mitigation Measures	4
2.1 Monitoring Requirements	4
2.2 Environmental Mitigation Measures	5
3 Summary of EM&A Results	6
3.1 Monitoring Data	6
3.2 Monitoring Exceedances	6
3.2.1 1-hour TSP Monitoring	7
3.2.2 24-hour TSP Monitoring	7
3.2.3 Construction Noise Monitoring	7
3.2.4 Landscape and Visual Monitoring	7
4 Waste Management	8
4.2 Zones 2A, 2B & 2C (Contract No.: CC/2023/2B/095)	8
5 Environmental Non-conformance	9
6 Comments, Recommendations and Conclusion	10
6.1 Comments	10
6.2 Recommendations	10
6.3 Conclusion	10
Figure 1 Site Layout Plan and Monitoring Stations	11
Appendices	12
A. Project Organisation	13
B. Construction Programme	14

C.	Environmental Mitigation Measures – Implementation Status	15
D.	Meteorological Data Extracted from Hong Kong Observatory	16
E.	Graphical Plots of the Monitoring Results	17
F.	Waste Flow table	18
G.	Cumulative Statistics on Complaints, Notifications of Summons and Successful Prosecutions	19

Executive summary

This Quarterly EM&A Report presents the monitoring works conducted at Zones 2A, 2B & 2C from 01 August 2024 to 31 October 2024. The construction works and EM&A programme for Zone 2A (Contract No.: GW/2020/05/073) was commenced on 03 October 2020 and handed over on 31 March 2023; while the construction works and EM&A programme for Zone 2B & 2C (Contract No.: CC/2020/2B/088) was commenced on 30 September 2021 and handed over on 05 July 2024. The construction works and EM&A programme for Zones 2A, 2B & 2C (Contract No.: CC/2023/2B/095) was commenced on 05 July 2024.

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

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

Exceedance of Action and Limit Levels

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

Implementation of Mitigation Measures

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

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

Record of Complaints

No environmental complaints were received during the reporting quarter.

Record of Notifications of Summons and Successful Prosecutions

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

1 Introduction

1.1 Background

Apex Testing & Certification Limited (Apex) was commissioned to undertake the Environmental Team (ET) services (including environmental monitoring and audit (EM&A)) for the construction activities in Zone 2A, consisting of Foundation, Excavation and Lateral Support Works for Integrated Basement and Underground Road (Contract No.: GW/2020/05/073) ; Zone 2B & 2C consisting of Piling Works for Integrated Basement and Underground Road (Contract No.: CC/2020/2B/088); and Zones 2A, 2B & 2C consisting of Excavation and Lateral Support Works (Stages 1 & 2) for The Integrated Basement and Underground Road (Contract No.: CC/2023/2B/095) at WKCD. The construction works and EM&A programme for Zone 2A (Contract No.: GW/2020/05/073) was commenced on 03 October 2020 and handed over on 31 March 2023; while the construction works and EM&A programme for Zone 2B & 2C (Contract No.: CC/2020/2B/088) was commenced on 30 September 2021 and handed over on 05 July 2024. The construction works and EM&A programme for Zones 2A, 2B & 2C (Contract No.: CC/2023/2B/095) was commenced on 05 July 2024.

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 Zones 2A, 2B & 2C is to reserve for Integrated Basement (IB) and Underground Road (UR). The Zone 2A (Contract No.: GW/2020/05/073) construction activities involve the foundation, excavation and lateral support (ELS) works, road works, drainage diversion works, and temporary car parking. The Zone 2B & 2C (Contract No.: CC/2020/2B/088) construction activities involve the piling works. The Zones 2A, 2B & 2C (Contract No.: CC/2023/2B/095) construction activities involve the excavation and lateral support works.

The Quarterly EM&A Report is prepared in accordance with the Clause 3.4 of the Environmental Permit No. EP-453/2013/B. This Quarterly EM&A Report presents the monitoring works at Zones 2A, 2B & 2C from 01 August 2024 to 31 October 2024. The purpose of this report is to summarise the findings in the EM&A of the project over the reporting period.

1.2 Project Organisation

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

1.3 Environmental Status in the Reporting Period

During the reporting period, construction works at Zones 2A, 2B & 2C (Contract No.: CC/2023/2B/095) undertaken include:

- Ground Investigation Works
- Pipe Piling 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 and Mitigation Measures

2.1 Monitoring Requirements

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

Table 2.1: Summary of Impact EM&A Requirements

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

Note:

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

The EM&A programme for the Project require 5 air monitoring stations and 5 noise quality monitoring stations located closest to the Project area. With regard to the monitoring activities at M+ Museum and the Lyric Complex, three monitoring stations had been considered, including AM1, AM2 for air monitoring, and NM1 for noise monitoring. In the context of the construction activities in Zone 2A and Zone 2B & 2C, 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 and Zone 2B & 2C.

2.2 Environmental Mitigation Measures

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

3 Summary of EM&A Results

3.1 Monitoring Data

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

Table 3.1: Summary of Monitoring Data

Parameter	Monitoring Location	Minimum	Maximum	Average
Air Quality				
1 hour TSP	AM3A	34	77	50
1 hour TSP	AM4A	33	73	50
1 hour TSP	AM5A	33	76	49
24 hour TSP	AM3A	34	73	46
24 hour TSP	AM4A	32	71	46
24 hour TSP	AM5A	34	72	47
Construction Noise				
Leq(30min)	NM2A	62	63	63
Leq(30min)	NM3A	60	61	61
Leq(30min)	NM4A	58	59	58
Leq(30min)	NM5A	63	64	64

3.2 Monitoring Exceedances

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

Table 3.2: Summary of Exceedances

Monitoring Station	Parameter	No. of Exceedance		Action Taken
		Action Level	Limit Level	
Air Quality				
AM3A	1 hour TSP	0	0	N/A
	24 hour TSP	0	0	N/A
AM4A	1 hour TSP	0	0	N/A
	24 hour TSP	0	0	N/A
AM5A	1 hour TSP	0	0	N/A
	24 hour TSP	0	0	N/A
Construction Noise				
NM2A	Leq(30min)	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 of 1-hour TSP for Air Quality was recorded.

3.2.2 24-hour TSP Monitoring

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

3.2.3 Construction Noise Monitoring

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

3.2.4 Landscape and Visual Monitoring

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

4 Waste Management

4.1 Zones 2A, 2B & 2C (Contract No.: CC/2023/2B/095)

As advised by the Zones 2A, 2B & 2C Contractor, 362.77 tonne and 0.0 tonne of inert C&D material were disposed of as public fill to Tseung Kwan O Area 137 and Tuen Mun Area 38 respectively in the reporting quarter, while 20.19 tonne of general refuse were disposed of at SENT landfill. 0.0 tonne of metals, 0.0 tonne of paper/cardboard packaging, 0.0 tonne of plastics and 0.0 tonne of timber was collected by recycling contractors in the reporting quarter. 0.0 tonne of inert C&D material were reused on site. 0.0 tonne of inert C&D material was imported for reuse at site and 0.0 tonne of inert C&D material were reused in other projects. 10.18 tonne of inert C&D material was disposed to sorting facility and 0.0 tonne of chemical waste 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 Zones 2A, 2B & 2C in the reporting quarter are shown in **Appendix F**.

5 Environmental Non-conformance

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

No 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 construction noise were recorded in the reporting quarter.

6.2 Recommendations

Reviewing the implementation of the recommended mitigation measures in the EM&A Manual, it was observed that they were effective and efficient in controlling the potential impacts due to construction of the project during the reporting period. Review of the effectiveness and efficiency of the EM&A programme will continue, and recommendations will be provided to remediate any potential impacts due to the project and to improve the EM&A programme if deficiencies of the existing EM&A programme are identified.

6.3 Conclusion

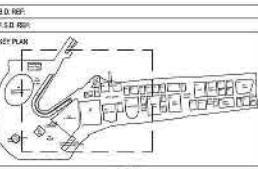
The EM&A programme as recommended in the EM&A Manual has been undertaken. The construction works and EM&A programme for Zone 2A (Contract No.: GW/2020/05/073) was commenced on 03 October 2020 and handed over on 31 March 2023; while the construction works and EM&A programme for Zone 2B & 2C (Contract No.: CC/2020/2B/088) was commenced on 30 September 2021 and handed over on 05 July 2024. The construction works and EM&A programme for Zones 2A, 2B & 2C (Contract No.: CC/2023/2B/095) was commenced on 05 July 2024.

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

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

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

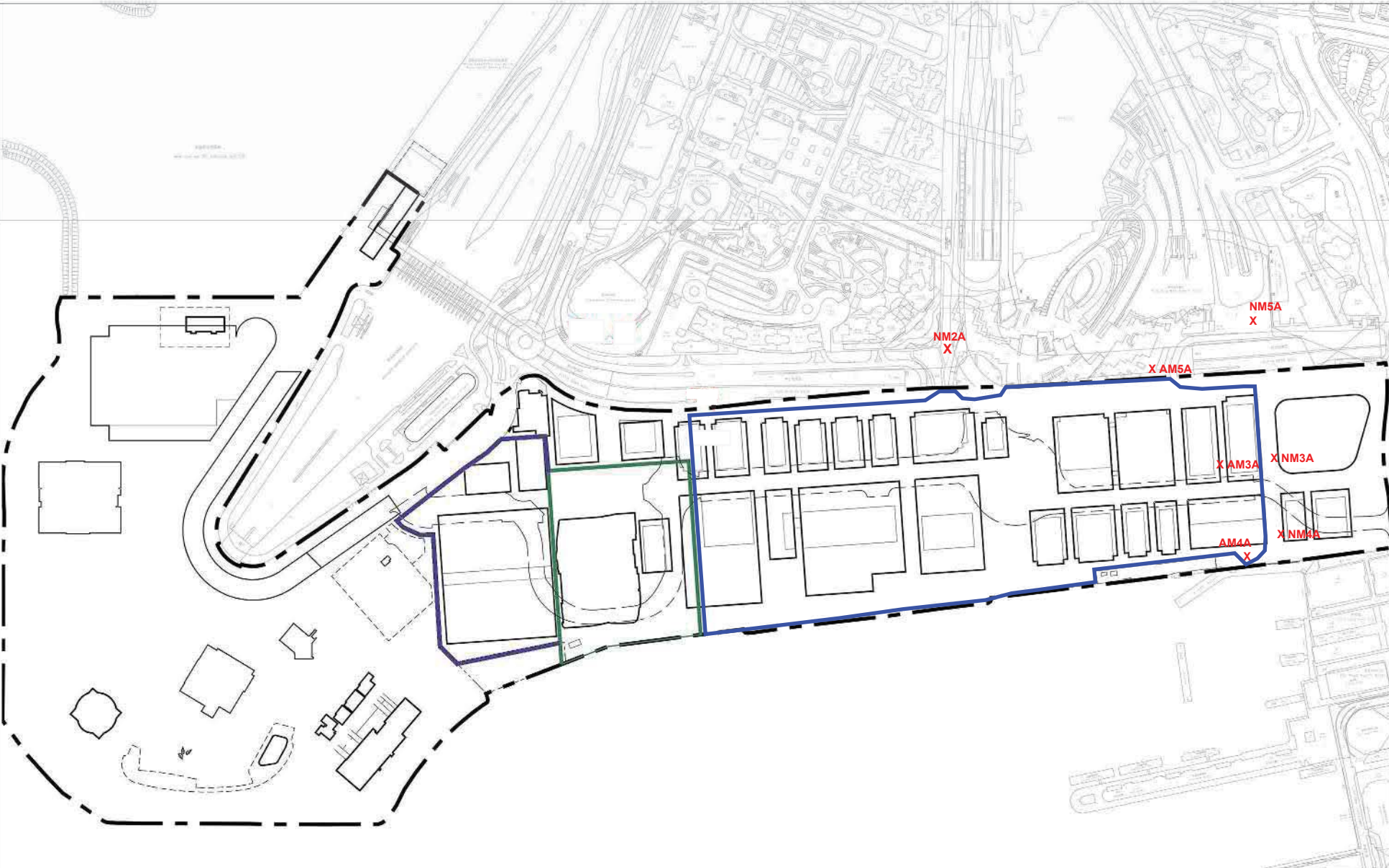
Figure 1 Site Layout Plan and Monitoring Stations



- NOTES
- WKCD BOUNDARY
 - M+ MUSEUM BOUNDARY
 - LYRIC THEATRE BOUNDARY
 - - - BOUNDARY OF UNDERPASS ROAD SERVING THE PLANNED WKCD
 - X CONSTRUCTION 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.

— Zones 2A, 2B & 2C Boundary (Contract No.: CC/2023/2B/095)



REV.	DATE	DESCRIPTION	INITIAL

J2B 1111 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	15-05-2019

CONTRACT NO. -

DRAWING NO.	FIGURE 1	REV.	XX
-------------	----------	------	----

CAD REF NAME: X0000_A1T_PNS_DWG_PROJ_080-0000-000.dwg

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

Project Organization

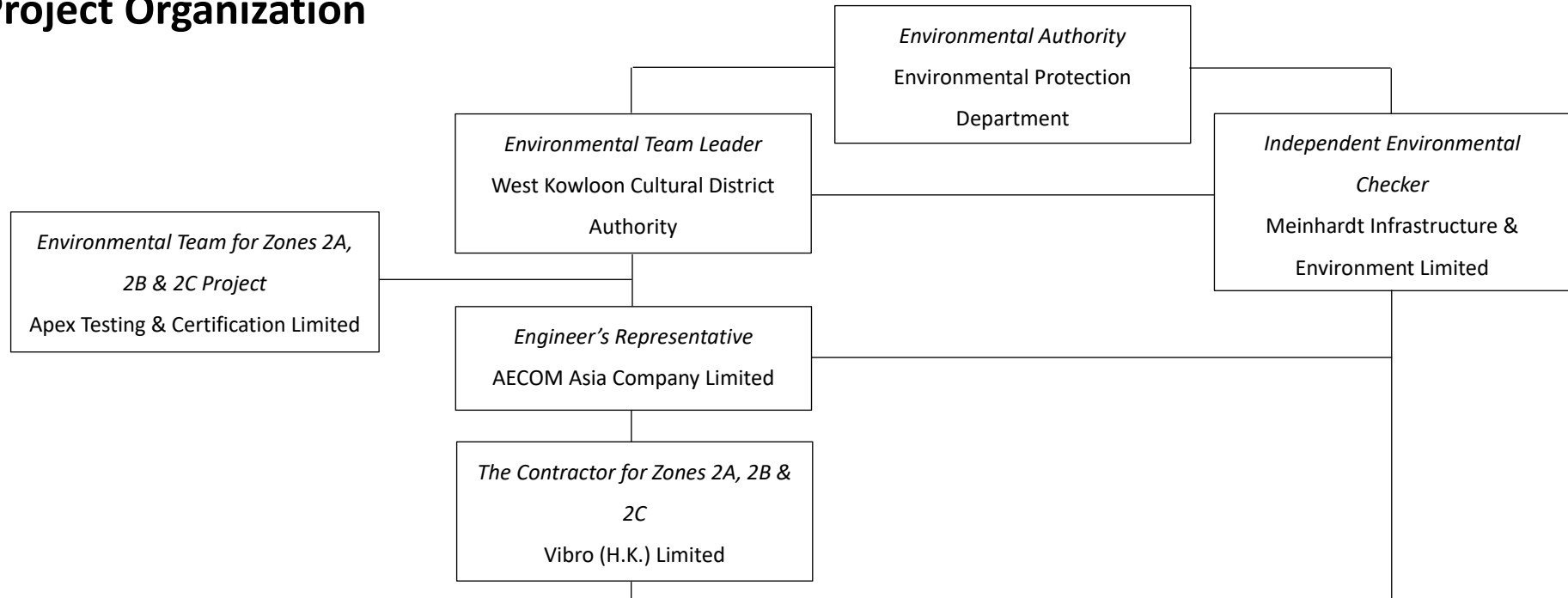


Table A-1: Contract Information

Company Name	Role	Name	Telephone	Email
West Kowloon Cultural District Authority	WKCDA Representative & Project ETL	Mr. Max LEE	2200 0782	max.sl.lee@wkcd.a.hk
Meinhardt Infrastructure & Environment Limited	Independent Environmental Checker	Ms. Claudine LEE	2859 5409	claudinelee@meinhardt.com.hk
AECOM Asia Company Limited	Assistant Resident Engineer (Zones 2A, 2B & 2C)	Mr. Laurence WONG	5791 8711	cheuklunlaurence.wong@aecom.com
Vibro (H.K.) Limited	Environmental Sustainability Manager	Mr. Tony YAM	2137 5586	tony_yam@vibro.com.hk
Apex Testing & Certification Limited	Contractor's Environmental Team Leader	Mr. Calvin LUI	9629 9718	calvinlui@apextestcert.com

B. Construction Programme

ELS Works (Stages 1 & 2) for Integrated Basement and Underground Road in Zones 2A, 2B and 2C of West Kowloon Cultrural District

Activity ID	Activity Name	Original Duration	BL Project Start	BL Project Finish	Start	Finish	% Complete	Total Float	Oct 5	Qtr 4 Nov 6	Dec 7	Qtr 1 Jan 8	Feb 9
ELS Works (Stages 1 & 2) for IBUR in Zones 2A, 2B and 2C of the West Kowloon Cultural District													
Cost Center A & L - Preliminaries, General Requirements and Compliance Review													
General Submission and Procurement													
Submission and Approval													
WKCDA-A-SUB-01060	Review and approve submission of Quality System Documents and Quality Plan	14d	19-Jul-24	01-Aug-24	19-Jul-24 A	02-Oct-24 A	100%						
WKCDA-A-SUB-01140	Review and approve submission of Contingency Management Plan	14d	02-Aug-24	15-Aug-24	02-Aug-24 A	26-Oct-24	95%	-1d					
WKCDA-A-SUB-01320	Prepare and submit relevant Government submission for the Barging Point to the Relevant Authorities	120d	05-Jul-24	01-Nov-24	05-Jul-24 A	01-Nov-24	95%	56d					
WKCDA-A-SUB-01340	Review and approve submission of relevant Government submission for the Barging Point to the Relevant Authorities	28d	02-Nov-24	29-Nov-24	02-Nov-24	29-Nov-24	0%	56d					
WKCDA-A-SUB-01360	Prepare and submit Operation Plan and Marine Traffic Impact Assessment (including marine traffic activity field survey)	120d	05-Jul-24	01-Nov-24	05-Jul-24 A	01-Nov-24	95%	56d					
WKCDA-A-SUB-01380	Review and approve submission of Operation Plan and Marine Traffic Impact Assessment by CA and Relevant Authorities	28d	02-Nov-24	29-Nov-24	02-Nov-24	29-Nov-24	0%	56d					
WKCDA-A-SUB-01440	Application to EPD and obtain permit for marine dumping	90d	02-Nov-24	30-Jan-25	23-Sep-24 A	21-Dec-24	36%	184d					
WKCDA-A-SUB-01460	Prepare and submit Joint Written Guarantee for the water-tightness of ELS for Zones 2A-1 and 2A-2-1	90d	27-Oct-24	24-Jan-25	26-Oct-24	23-Jan-25	0%	137d					
WKCDA-A-SUB-01480	Review and approve submission of Joint Written Guarantee for the water-tightness of ELS for Zones 2A-1 and 2A-2-1	14d	25-Jan-25	07-Feb-25	24-Jan-25	06-Feb-25	0%	137d					
WKCDA-A-SUB-01600	Review and approve submission of TTMS scheme including for drainage diversion works	14d	17-Sep-24	30-Sep-24	27-Aug-24 A	26-Oct-24	95%	-26d					
WKCDA-A-SUB-01620	Coordination and approval of TTMS scheme with TMLG	14d	01-Oct-24	14-Oct-24	27-Oct-24	09-Nov-24	0%	-26d					
WKCDA-A-SUB-01640	Trial run and implementation of TTMS scheme	7d	15-Oct-24	21-Oct-24	10-Nov-24	16-Nov-24	0%	-26d					
Procurement													
WKCDA-A-PRO-1020	Procurement and Delivery of Interlocking Pipe Pile (2nd Batch)	31d	01-Oct-24	31-Oct-24	17-Sep-24 A	26-Sep-24 A	100%						
WKCDA-A-PRO-1040	Procurement and Delivery of Interlocking Pipe Pile (3rd Batch)	30d	01-Nov-24	30-Nov-24	27-Sep-24 A	14-Oct-24 A	100%						
WKCDA-A-PRO-1060	Procurement and Delivery of Interlocking Pipe Pile (4th Batch)	31d	01-Dec-24	31-Dec-24	15-Oct-24 A	23-Oct-24 A	100%						
WKCDA-A-PRO-1080	Procurement and Delivery of Interlocking Pipe Pile (5th Batch)	31d	01-Jan-25	31-Jan-25	26-Oct-24	25-Nov-24	0%	77d					
WKCDA-A-PRO-1100	Procurement and Delivery of Interlocking Pipe Pile (6th Batch)	28d	01-Feb-25	28-Feb-25	26-Nov-24	23-Dec-24	0%	77d					
WKCDA-A-PRO-1120	Procurement and Delivery of Interlocking Pipe Pile (7th Batch)	31d	01-Mar-25	31-Mar-25	24-Dec-24	23-Jan-25	0%	77d					
WKCDA-A-PRO-1140	Procurement and Delivery of Interlocking Pipe Pile (8th Batch)	30d	01-Apr-25	30-Apr-25	24-Jan-25	22-Feb-25	0%	77d					
WKCDA-A-PRO-2000	Procurement of ELS Materials (1st Batch)	120d	29-Oct-24	25-Feb-25	18-Oct-24 A	08-Mar-25	0%	-7d					
Construction													
Preliminaries, Site Accommodation and Facilities													
WKCDA-A-MOB-01080	Hydrographic survey and submission of hydrographic survey report	21d	07-Sep-24	03-Oct-24	07-Sep-24 A	27-Sep-24 A	100%						
WKCDA-A-MOB-01100	Mobilization and construction of CA, RSS and contractor's site office and facilities and T&C	56d	25-Sep-24	30-Nov-24	01-Aug-24 A	05-Nov-24	84%	619d					
WKCDA-A-MOB-01120	CA, RSS and contractor's site office and facilities statutory submission, inspection and ready for operation	30d	01-Dec-24	30-Dec-24	06-Nov-24	05-Dec-24	0%	760d					
WKCDA-A-MOB-01140	Mobilization of plant and equipments for construction of barging point and preparation works	21d	30-Nov-24	24-Dec-24	30-Nov-24	24-Dec-24	0%	45d					
WKCDA-A-MOB-01160	Construction of barging point, inspection and ready for operation	90d	27-Dec-24	16-Apr-25	27-Dec-24	16-Apr-25	0%	45d					
Cost Center B & L - General, Hoarding and Monitoring Works													
General Submission													
Submission and Approval													
WKCDA-B-SUB-01080	Prepare and submit method statement for hoarding, covered walkway and gantries modification	28d	23-Jul-24	19-Aug-24	19-Aug-24 A	26-Oct-24	95%	-68d					
WKCDA-B-SUB-01100	Review and approve submission of method statement for hoarding, covered walkway and gantries modification	14d	20-Aug-24	02-Sep-24	27-Oct-24	09-Nov-24	0%	-68d					
WKCDA-B-SUB-01140	Review and approve submission of method statement for for drainage diversion works at Zone 2A Austin Road West	14d	03-Oct-24	16-Oct-24	11-Sep-24 A	26-Oct-24	95%	83d					
Construction													
General and Monitoring Works													
WKCDA-B-MOB-01100	Site clearance, break up and removal of existing road pavement and light posts, signages	60d	30-Oct-24	10-Jan-25	26-Oct-24	07-Jan-25	0%	51d					

- Baseline
- Actual Work
- Non-critical Activities
- Critical Activities
- Baseline Milestone
- Milestone

Date	Revision	Checked	Approved
07-Aug-24	1st Draft	SN	AL
09-Sep-24	2nd Draft	SN	AL
17-Oct-24	3rd Draft	SN	AL
31-Oct-24	Update	SN	AL

ELS Works (Stages 1 & 2) for Integrated Basement and Underground Road in Zones 2A, 2B and 2C of West Kowloon Cultrural District



- Baseline
- Actual Work
- Non-critical Activities
- Critical Activities
- Baseline Milestone
- Milestone

Date	Revision	Checked	Approved
07-Aug-24	1st Draft	SN	AL
09-Sep-24	2nd Draft	SN	AL
17-Oct-24	3rd Draft	SN	AL
31-Oct-24	Update	SN	AL

ELS Works (Stages 1 & 2) for Integrated Basement and Underground Road in Zones 2A, 2B and 2C of West Kowloon Cultrural District

Activity ID	Activity Name	Original Duration	BL Project Start	BL Project Finish	Start	Finish	% Complete	Total Float	Gantt Chart											
									Oct 5	Nov 6	Dec 7	Jan 8	Feb 9	Mar 10	Apr 11	May 12	Jun 13	Jul 14	Aug 15	Sep 16
WKCDA-C-CON-01062	Carry-out Pre-grout curtain works at Zone 2B(PP-034 to PP-053)(Consent 3)	14d	14-Nov-24	29-Nov-24	11-Dec-24	28-Dec-24	0%	103d	Carry-out Pre-grout curtain works at Zone 2B(PP-034 to PP-053)											
WKCDA-C-CON-01063	Carry-out Pre-grout curtain works at Zone 2B(PP-054 to PP-073)(Consent 3)	14d	07-Dec-24	23-Dec-24	07-Jan-25	22-Jan-25	0%	97d	Carry-out Pre-grout curtain works at Zone 2B(PP-054 to PP-073)											
WKCDA-C-CON-01120	Drilling works grout curtain at Zone 2B(PP-074 to PP-104)(Total=31nos, 1 no/day/rig, 2rigs)(Consent 3)	14d	22-Oct-24	06-Nov-24	28-Dec-24	14-Jan-25	0%	-56d	Drilling works grout curtain at Zone 2B(PP-074 to PP-104)											
WKCDA-C-CON-01121	Drilling works grout curtain at Zone 2B(PP-105 to PP-164)(Total=60nos, 1 no/day/rig, 2rigs)(Consent 3)	30d	07-Nov-24	11-Dec-24	15-Jan-25	21-Feb-25	0%	-56d	Drilling works grout curtain at Zone 2B(PP-105 to PP-164)											
WKCDA-C-CON-01140	Carry-out Pre-grout curtain works at Zone 2B(PP-074 to PP-104)(Consent 3)	14d	07-Nov-24	22-Nov-24	15-Jan-25	03-Feb-25	0%	-56d	Carry-out Pre-grout curtain works at Zone 2B(PP-074 to PP-104)											
WKCDA-C-CON-01220	Drilling works grout curtain at Zone 2B(PP-255 to PP-286)(Total=32nos, 1 no/day/rig, 2rigs)(Consent 6a)	16d	05-Dec-24	23-Dec-24	31-Dec-24	18-Jan-25	0%	-20d	Drilling works grout curtain at Zone 2B(PP-255 to PP-286)											
WKCDA-C-CON-01221	Drilling works grout curtain at Zone 2B(PP-287 to PP-319)(Total=33nos, 1 no/day/rig, 2rigs)(Consent 6a)	17d	24-Dec-24	15-Jan-25	20-Jan-25	11-Feb-25	0%	23d	Drilling works grout curtain at Zone 2B(PP-287 to PP-319)											
WKCDA-C-CON-01240	Carry-out Pre-grout curtain works at Zone 2B(PP-255 to PP-286)(Consent 6a)	14d	24-Dec-24	11-Jan-25	20-Jan-25	07-Feb-25	0%	-20d	Carry-out Pre-grout curtain works at Zone 2B(PP-255 to PP-286)											
WKCDA-C-CON-01300	Drilling works grout curtain at Zone 2B(PPB-076 to PPB-105)(Total=30nos, 1no/day/rig, 2rigs)(Consent 3)	15d	10-Sep-24	27-Sep-24	30-Sep-24 A	30-Sep-24 A	100%		Drilling works grout curtain at Zone 2B(PPB-076 to PPB-105)											
WKCDA-C-CON-01301	Drilling works grout curtain at Zone 2B(PPB-106 to PPB-135)(Total=30nos, 1no/day/rig, 2rigs)(Consent 3)	15d	28-Sep-24	17-Oct-24	30-Sep-24 A	30-Sep-24 A	100%		Drilling works grout curtain at Zone 2B(PPB-106 to PPB-135)											
WKCDA-C-CON-01302	Drilling works grout curtain at Zone 2B(PPB-136 to PPB-165)(Total=30nos, 1no/day/rig, 2rigs)(Consent 3)	15d	18-Oct-24	04-Nov-24	30-Sep-24 A	30-Sep-24 A	100%		Drilling works grout curtain at Zone 2B(PPB-136 to PPB-165)											
WKCDA-C-CON-01303	Drilling works grout curtain at Zone 2B(PPB-166 to PPB-225)(Total=60nos, 1no/day/rig, 2rigs)(Consent 3)	30d	05-Nov-24	09-Dec-24	30-Sep-24 A	30-Sep-24 A	100%		Drilling works grout curtain at Zone 2B(PPB-166 to PPB-225)											
WKCDA-C-CON-01304	Drilling works grout curtain at Zone 2B(PPB-226 to PPB-303)(Total=78nos, 1no/day/rig, 2rigs)(Consent 3)	39d	10-Dec-24	27-Jan-25	30-Sep-24 A	30-Sep-24 A	100%		Drilling works grout curtain at Zone 2B(PPB-226 to PPB-303)											
WKCDA-C-CON-01320	Carry-out Pre-grout curtain works at Zone 2B(PPB-076 to PPB-105)(Consent 3)	14d	28-Sep-24	16-Oct-24	30-Sep-24 A	30-Sep-24 A	100%		Carry-out Pre-grout curtain works at Zone 2B(PPB-076 to PPB-105)											
WKCDA-C-CON-01321	Carry-out Pre-grout curtain works at Zone 2B(PPB-106 to PPB-135)(Consent 3)	14d	18-Oct-24	02-Nov-24	30-Sep-24 A	30-Sep-24 A	100%		Carry-out Pre-grout curtain works at Zone 2B(PPB-106 to PPB-135)											
WKCDA-C-CON-01322	Carry-out Pre-grout curtain works at Zone 2B(PPB-135 to PPB-165)(Consent 3)	14d	05-Nov-24	20-Nov-24	30-Sep-24 A	30-Sep-24 A	100%		Carry-out Pre-grout curtain works at Zone 2B(PPB-135 to PPB-165)											
WKCDA-C-CON-01323	Carry-out Pre-grout curtain works at Zone 2B(PPB-135 to PPB-225)(Consent 3)	28d	10-Dec-24	14-Jan-25	30-Sep-24 A	30-Sep-24 A	100%		Carry-out Pre-grout curtain works at Zone 2B(PPB-135 to PPB-225)											
WKCDA-C-CON-01324	Carry-out Pre-grout curtain works at Zone 2B(PPB-226 to PPB-303)(Consent 3)	28d	28-Jan-25	04-Mar-25	30-Sep-24 A	30-Sep-24 A	100%		Carry-out Pre-grout curtain works at Zone 2B(PPB-226 to PPB-303)											
WKCDA-C-CON-01400	Drilling works grout curtain at Zone 2B(PPB-001 to PPB-037)(Total=37nos, 1 no/day/rig, 1 rig)(Consent 5)	37d	07-Dec-24	22-Jan-25	26-Nov-24	10-Jan-25	0%	10d	Drilling works grout curtain at Zone 2B(PPB-001 to PPB-037)											
WKCDA-C-CON-01401	Drilling works grout curtain at Zone 2B(PPB-038 to PPB-075)(Total=38nos, 1 no/day/rig, 1 rig)(Consent 5)	38d	23-Jan-25	11-Mar-25	11-Jan-25	27-Feb-25	0%	58d	Drilling works grout curtain at Zone 2B(PPB-038 to PPB-075)											
WKCDA-C-CON-01420	Carry-out Pre-grout curtain works at Zone 2B(PPB-001 to PPB-037)(Consent 5)	19d	23-Jan-25	17-Feb-25	11-Jan-25	05-Feb-25	0%	10d	Carry-out Pre-grout curtain works at Zone 2B(PPB-001 to PPB-037)											
Pipe Pile Wall Works																				
WKCDA-C-CON-01080	Installation of PPW at Zone 2B(PP-001 to PP-014)(Total=14nos, 0.6 no/day/rig, 1rig)(Consent 3)	24d	16-Oct-24	12-Nov-24	12-Nov-24	09-Dec-24	0%	74d	Installation of PPW at Zone 2B(PP-001 to PP-014)											
WKCDA-C-CON-01085	Installation of PPW at Zone 2B(PP-015 to PP-033)(Total=19nos, 0.6 no/day/rig, 1rig)(Consent 3)	32d	13-Nov-24	19-Dec-24	10-Dec-24	18-Jan-25	0%	74d	Installation of PPW at Zone 2B(PP-015 to PP-033)											
WKCDA-C-CON-01090	Installation of PPW at Zone 2B(PP-034 to PP-053)(Total=20nos, 0.6 no/day/rig, 1rig)(Consent 3)	34d	20-Dec-24	04-Feb-25	20-Jan-25	03-Mar-25	0%	74d	Installation of PPW at Zone 2B(PP-034 to PP-053)											
WKCDA-C-CON-01340	Installation of PPW at Zone 2B(PPB-076 to PPB-105)(Total=30nos, 0.6 no/day/rig, 1 rig)(Consent 3)	30d	07-Oct-24	11-Nov-24	02-Oct-24 A	08-Nov-24	60%	2d	Installation of PPW at Zone 2B(PPB-076 to PPB-105)											
WKCDA-C-CON-01345	Installation of PPW at Zone 2B(PPB-106 to PPB-135)(Total=30nos, 0.6 no/day/rig, 1 rig)(Consent 3)	30d	12-Nov-24	16-Dec-24	09-Nov-24	13-Dec-24	0%	2d	Installation of PPW at Zone 2B(PPB-106 to PPB-135)											
WKCDA-C-CON-01347	Installation of PPW at Zone 2B(PPB-136 to PPB-165)(Total=30nos, 0.6 no/day/rig, 1 rig)(Consent 3)	30d	17-Dec-24	23-Jan-25	14-Dec-24	21-Jan-25	0%	2d	Installation of PPW at Zone 2B(PPB-136 to PPB-165)											
WKCDA-C-CON-01350	Installation of PPW at Zone 2B(PPB-166 to PPB-195)(Total=30nos, 0.6 no/day/rig, 1 rig)(Consent 3)	30d	24-Jan-25	03-Mar-25	22-Jan-25	28-Feb-25	0%	2d	Installation of PPW at Zone 2B(PPB-166 to PPB-195)											
Post Grout Curtain Works																				
WKCDA-C-CON-01082	Carry-out Post grout curtain works at Zone 2B(PP-001 to PP-014)(Consent 3)	14d	24-Dec-24	11-Jan-25	23-Jan-25	11-Feb-25	0%	97d	Carry-out Post grout curtain works at Zone 2B(PP-001 to PP-014)											
WKCDA-C-CON-01341	Carry-out Post grout curtain works at Zone 2B(PPB-076 to PPB-105)(Consent 3)	14d	05-Mar-25	20-Mar-25	11-Oct-24 A	11-Oct-24 A	100%		Carry-out Post grout curtain works at Zone 2B(PPB-076 to PPB-105)											
WKCDA-C-CON-01346	Carry-out Post grout curtain works at Zone 2B(PPB-106 to PPB-135)(Consent 3)	14d	21-Mar-25	07-Apr-25	11-Oct-24 A	11-Oct-24 A	100%		Carry-out Post grout curtain works at Zone 2B(PPB-106 to PPB-135)											
WKCDA-C-CON-01348	Carry-out Post grout curtain works at Zone 2B(PPB-136 to PPB-165)(Consent 3)	14d	08-Apr-25	26-Apr-25	11-Oct-24 A	11-Oct-24 A	100%		Carry-out Post grout curtain works at Zone 2B(PPB-136 to PPB-165)											

- ▬ Baseline
- ▬ Actual Work
- ▬ Non-critical Activities
- ▬ Critical Activities
- ◆ Baseline Milestone
- ◆ Milestone

Date	Revision	Checked	Approved
07-Aug-24	1st Draft	SN	AL
09-Sep-24	2nd Draft	SN	AL
17-Oct-24	3rd Draft	SN	AL
31-Oct-24	Update	SN	AL

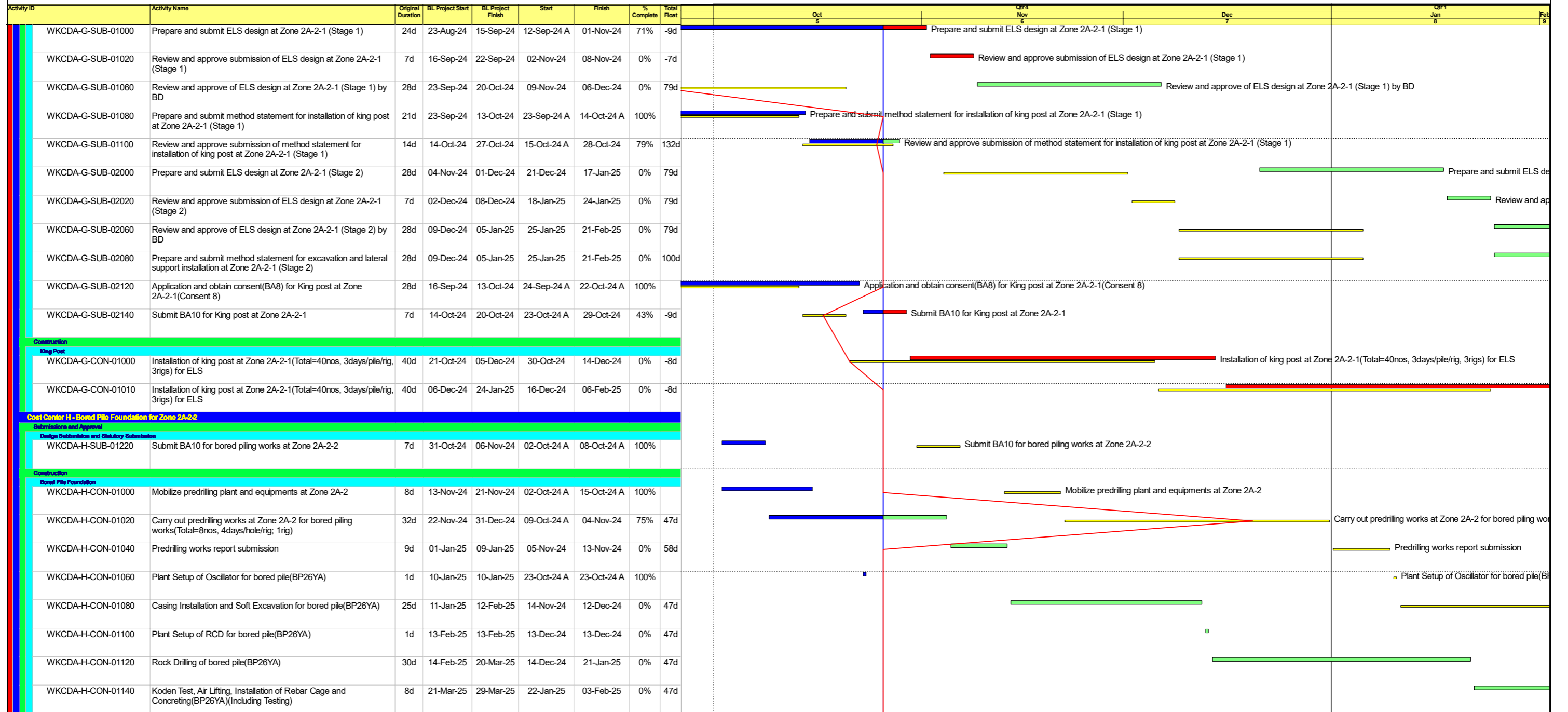
ELS Works (Stages 1 & 2) for Integrated Basement and Underground Road in Zones 2A, 2B and 2C of West Kowloon Cultural District

Activity ID	Activity Name	Original Duration	BL Project Start	BL Project Finish	Start	Finish	% Complete	Total Float	Qtr 4				Qtr 1	Feb
									Oct 5	Nov 6	Dec 7	Jan 8	9	
WKCDA-C-CON-01351	Carry-out Post grout curtain works at Zone 2B(PPB-166 to PPB-195)(Consent 3)	14d	28-Apr-25	15-May-25	11-Oct-24 A	11-Oct-24 A	100%							
WKCDA-C-CON-01353	Carry-out Post grout curtain works at Zone 2B(PPB-196 to PPB-225)(Consent 3)	14d	16-May-25	02-Jun-25	11-Oct-24 A	11-Oct-24 A	100%							
WKCDA-C-CON-01355	Carry-out Post grout curtain works at Zone 2B(PPB-226 to PPB-255)(Consent 3)	14d	03-Jun-25	18-Jun-25	11-Oct-24 A	11-Oct-24 A	100%							
WKCDA-C-CON-01357	Carry-out Post grout curtain works at Zone 2B(PPB-256 to PPB-285)(Consent 3)	14d	25-Jun-25	10-Jul-25	11-Oct-24 A	11-Oct-24 A	100%							
Cost Center D - Excavation and Lateral Support Works for Zone 2C (Stage 1)														
Submissions and Approval														
Design Submission and Statutory Submission														
WKCDA-D-SUB-01100	Review and approve of ELS design at Zone 2C (Stage 1) by BD	28d	13-Aug-24	09-Sep-24	09-Sep-24 A	07-Oct-24 A	100%							
WKCDA-D-SUB-01260	Submit BA14, assessment report and approval from BD for predrilling works at Zone 2C	28d	25-Sep-24	22-Oct-24	07-Oct-24 A	14-Oct-24 A	100%							
WKCDA-D-SUB-01280	Application and obtain consent(BA8) for pipe pile wall and grout curtain at Zone 2C(Consent 6b)	28d	28-Sep-24	25-Oct-24	15-Oct-24 A	11-Nov-24	40%	-24d						
WKCDA-D-SUB-01300	Submit BA10 for pipe pile wall and grout curtain at Zone 2C(Consent 6b)	7d	26-Oct-24	01-Nov-24	12-Nov-24	18-Nov-24	0%	-17d						
Construction														
Pre-drilling, Trial Trench & Fabrication Works														
WKCDA-D-CON-01000	Mobilize piling plant and equipments at Zone 2C	6d	26-Oct-24	01-Nov-24	12-Nov-24	18-Nov-24	0%	-14d						
WKCDA-D-CON-01010	Trial trench before drilling work at Zone 2C(PPA-001 to PPA-397)	20d	09-Oct-24	01-Nov-24	15-Oct-24 A	13-Nov-24	20%	-10d						
WKCDA-D-CON-01020	Gravity casing grout work (PPA 001-397)	60d	02-Nov-24	14-Jan-25	19-Nov-24	03-Feb-25	0%	-14d						
Pre-Grout Curtain Works														
WKCDA-D-CON-01040	Drilling works grout curtain at Zone 2C(PPA-001 to PPA-029)(Total=29nos, 1no/day/rig, 2rigs)(Consent 6b)	14d	12-Nov-24	27-Nov-24	28-Nov-24	13-Dec-24	0%	-14d						
WKCDA-D-CON-01041	Drilling works grout curtain at Zone 2C(PPA-030 to PPA-075)(Total=46nos, 1no/day/rig, 2rigs)(Consent 6b)	16d	28-Nov-24	16-Dec-24	14-Dec-24	04-Jan-25	0%	-14d						
WKCDA-D-CON-01042	Drilling works grout curtain at Zone 2C(PPA-076 to PPA-121)(Total=46nos, 1no/day/rig, 2rigs)(Consent 6b)	23d	17-Dec-24	15-Jan-25	06-Jan-25	04-Feb-25	0%	-14d						
WKCDA-D-CON-01060	Carry-out Pre-grout curtain works at Zone 2C(PPA-001 to PPA-029)(Consent 6b)	6d	28-Nov-24	04-Dec-24	14-Dec-24	20-Dec-24	0%	-13d						
WKCDA-D-CON-01061	Carry-out Pre-grout curtain works at Zone 2C(PPA-029 to PPA-075)(Consent 6b)	6d	17-Dec-24	23-Dec-24	06-Jan-25	11-Jan-25	0%	-13d						
Pipe Pile Wall Works														
WKCDA-D-CON-01080	Installation of pipe pile wall at Zone 2C(PPA-001 to PPA-029)(Total=29nos, 0.7no/day/rig, 2rigs)(Consent 6b)	16d	05-Dec-24	23-Dec-24	21-Dec-24	11-Jan-25	0%	-13d						
WKCDA-D-CON-01120	Installation of pipe pile wall at Zone 2C(PPA-030 to PPA-075)(Total=46nos, 0.7no/day/rig, 2rigs)(Consent 6b)	30d	24-Dec-24	03-Feb-25	13-Jan-25	19-Feb-25	0%	-13d						
Cost Center F - Excavation and Lateral Support Works for Zone 2A-1 (Stage 2)														
Submissions and Approval														
Design Submission and Statutory Submission														
WKCDA-F-SUB-01000	Prepare and submit method statement for installation of king post at Zone 2A-1 (Stage 1)	21d	11-Sep-24	01-Oct-24	13-Sep-24 A	18-Oct-24 A	100%							
WKCDA-F-SUB-01020	Review and approve submission of method statement for installation of king post at Zone 2A-1 (Stage 1)	14d	02-Oct-24	15-Oct-24	26-Oct-24 A	08-Nov-24	0%	-19d						
WKCDA-F-SUB-01040	Prepare and submit ELS design at Zone 2A-1 (Stage 2)	60d	23-Aug-24	21-Oct-24	23-Aug-24 A	01-Nov-24	0%	-19d						
WKCDA-F-SUB-01060	Review and approve submission of ELS design at Zone 2A-1 (Stage 2)	7d	22-Oct-24	28-Oct-24	02-Nov-24	08-Nov-24	0%	6d						
WKCDA-F-SUB-01080	Review and approve submission of ELS design at zone 2B zone 2A-1 (stage 2) by BD	60d	29-Oct-24	27-Dec-24	09-Nov-24	07-Jan-25	0%	6d						
WKCDA-F-SUB-01100	Application and obtain consent(BA8) for King post at Zone 2A-1(Consent 7)	28d	15-Sep-24	12-Oct-24	24-Sep-24 A	28-Oct-24	90%	-15d						
WKCDA-F-SUB-01120	Submit BA10 for King post at Zone 2A-1	7d	13-Oct-24	19-Oct-24	29-Oct-24	04-Nov-24	0%	-15d						
Construction														
King Post														
WKCDA-F-CON-01000	Carry out predrilling work at Zone 2A	10d	02-Sep-24	12-Sep-24	18-Oct-24 A	18-Oct-24 A	100%							
WKCDA-F-CON-01010	Installation of king post at Zone 2A-1(Total=25nos, 3days/pile/rig, 2rigs) For ELS	35d	21-Oct-24	29-Nov-24	09-Nov-24	19-Dec-24	0%	-17d						
WKCDA-F-CON-01015	Installation of king post at Zone 2A-1(Total=25nos, 3days/pile/rig, 2rigs) For ELS	35d	30-Nov-24	13-Jan-25	20-Dec-24	05-Feb-25	0%	-17d						
Cost Center G - Excavation and Lateral Support Works for Zone 2A-24 (Stage 2)														
Submissions and Approval														
Design Submission and Statutory Submission														

— Baseline	◆ Milestone
— Actual Work	
— Non-critical Activities	
— Critical Activities	
◆ Baseline Milestone	

Date	Revision	Checked	Approved
07-Aug-24	1st Draft	SN	AL
09-Sep-24	2nd Draft	SN	AL
17-Oct-24	3rd Draft	SN	AL
31-Oct-24	Update	SN	AL

ELS Works (Stages 1 & 2) for Integrated Basement and Underground Road in Zones 2A, 2B and 2C of West Kowloon Cultrural District



- ▬ Baseline
- ▬ Actual Work
- ▬ Non-critical Activities
- ▬ Critical Activities
- ◆ Milestone
- ◆ Baseline Milestone

Date	Revision	Checked	Approved
07-Aug-24	1st Draft	SN	AL
09-Sep-24	2nd Draft	SN	AL
17-Oct-24	3rd Draft	SN	AL
31-Oct-24	Update	SN	AL

C. Environmental Mitigation Measures – Implementation Status

Table C-1: Environmental Mitigation Measures Implementation Status

		Implementation Stage		
		Zone 2A, 2B & 2C		
EM&A Ref.	Recommendation Measures	August 2024	September 2024	October 2024
Air Quality Impact (Construction)				
2.1	<p>General Dust Control Measures</p> <p>Frequent water spraying for active construction areas (12 times a day or once every one hour), including Heavy construction activities such as construction of buildings or roads, drilling, ground excavation, cut and fill operations (i.e., earth moving)</p>	✓	✓	✓
2.1	<p>Best Practice For Dust Control</p> <p>The relevant best practices for dust control as stipulated in the Air Pollution Control (construction Dust) Regulation should be adopted to further reduce the construction dust impacts from the Project. These best practices include:</p> <p><i>Good Site Management</i></p> <ul style="list-style-type: none"> Good site management is important to help reducing potential air quality impact down to an acceptable level. As a general guide, the Contractor should maintain high standard of housekeeping to prevent emission of fugitive dust. Loading, unloading, handling and storage of raw materials, wastes or by-products should be carried out in a manner so as to minimise the release of visible dust emission. Any piles of materials accumulated on or around the work areas should be cleaned up regularly. Cleaning, repair and maintenance of all plant facilities within the work areas should be carried out in a manner minimising generation of fugitive dust emissions. The material should be handled properly to prevent fugitive dust emission before cleaning. <p><i>Disturbed Parts of the Roads</i></p> <ul style="list-style-type: none"> Each and every main temporary access should be paved with concrete, bituminous hardcore materials or metal plates and kept clear of dusty materials; or 	✓	✓	Obs
		✓	✓	✓

		Implementation Stage		
		Zone 2A, 2B & 2C		
EM&A Ref.	Recommendation Measures	August 2024	September 2024	October 2024
	<ul style="list-style-type: none"> Unpaved parts of the road should be sprayed with water or a dust suppression chemical so as to keep the entire road surface wet. 	Obs	✓	Obs
	<i>Exposed Earth</i>	N/A	N/A	N/A
	<ul style="list-style-type: none"> Exposed earth should be properly treated by compaction, hydroseeding, vegetation planting or seeding with latex, vinyl, bitumen within six months after the last construction activity on the site or part of the site where the exposed earth lies. 			
	<i>Loading, Unloading or Transfer of Dusty Materials</i>	✓	✓	✓
	<ul style="list-style-type: none"> All dusty materials should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet. 			
	<i>Debris Handling</i>	✓	✓	✓
	<ul style="list-style-type: none"> Any debris should be covered entirely by impervious sheeting or stored in a debris collection area sheltered on the top and the three sides. 			
	<ul style="list-style-type: none"> Before debris is dumped into a chute, water should be sprayed so that it remains wet when it is dumped. 	N/A	N/A	N/A
	<i>Transport of Dusty Materials</i>	✓	✓	✓
	<ul style="list-style-type: none"> Vehicle used for transporting dusty materials/spoils should be covered with tarpaulin or similar material. The cover should extend over the edges of the sides and tailboards. 			
	<i>Wheel washing</i>	Obs	✓	✓
	<ul style="list-style-type: none"> Vehicle wheel washing facilities should be provided at each construction site exit. Immediately before leaving the construction site, every vehicle should be washed to remove any dusty materials from its body and wheels. 			
	<i>Use of vehicles</i>	✓	✓	✓
	<ul style="list-style-type: none"> The speed of the trucks within the site should be controlled to about 10km/hour in order to reduce adverse dust impacts and secure the safe movement around the site. 			

		Implementation Stage		
		Zone 2A, 2B & 2C		
EM&A Ref.	Recommendation Measures	August 2024	September 2024	October 2024
	<ul style="list-style-type: none"> Immediately before leaving the construction site, every vehicle should be washed to remove any dusty materials from its body and wheels. 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. 	✓	✓	✓
	<p><i>Site hoarding</i></p> <ul style="list-style-type: none"> Where a site boundary adjoins a road, street, service lane or other area accessible to the public, hoarding of not less than 2.4m high from ground level should be provided along the entire length of that portion of the site boundary except for a site entrance or exit. 	✓	✓	✓
2.1	<p>Best Practicable Means for Cement Works (Concrete Batching Plant)</p> <p>The relevant best practices for dust control as stipulated in the Guidance Note on the Best Practicable Means for Cement Works (Concrete Batching Plant) BPM 3/2(93) should be followed and implemented to further reduce the construction dust impacts of the Project. These best practices include:</p> <p><i>Exhaust from Dust Arrestment Plant</i></p> <ul style="list-style-type: none"> Wherever possible the final discharge point from particulate matter arrestment plant, where is not necessary to achieve dispersion from residual pollutants, should be at low level to minimise the effect on the local community in the case of abnormal emissions and to facilitate maintenance and inspection <p><i>Emission Limits</i></p> <ul style="list-style-type: none"> All emissions to air, other than steam or water vapour, shall be colourless and free from persistent mist or smoke 	N/A	N/A	N/A
		N/A	N/A	N/A

		Implementation Stage		
		Zone 2A, 2B & 2C		
EM&A Ref.	Recommendation Measures	August 2024	September 2024	October 2024
	<i>Engineering Design/Technical Requirements</i>	N/A	N/A	N/A
	<ul style="list-style-type: none"> As a general guidance, the loading, unloading, handling and storage of fuel, raw materials, products, wastes or by-products should be carried out in a manner so as to prevent the release of visible dust and/or other noxious or offensive emissions 			
	<p>Non-Road Mobile Machinery (NRMM):</p> <p>All NRMMs operating on-site which are subject to emission control of Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation are approved/exempted (as the case may be) and affixed with the requisite approval/exemption labels.</p>	✓	✓	✓
Noise Impact (Construction)				
3.1	<p>Good Site Practice</p> <ul style="list-style-type: none"> 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: only well-maintained plant to be operated on-site and plant should be serviced regularly during the construction works; machines and plant that may be in intermittent use to be shut down between work periods or should be throttled down to a minimum plant known to emit noise strongly in one direction, should, where possible, be orientated to direct noise away from the NSRs; mobile plant should be sited as far away from NSRs as possible; and material stockpiles and other structures to be effectively utilised, where practicable, to screen noise from on-site construction activities. 	✓	✓	✓

		Implementation Stage		
		Zone 2A, 2B & 2C		
EM&A Ref.	Recommendation Measures	August 2024	September 2024	October 2024
3.1	<p>Adoption of Quieter PME</p> <p>The recommended quieter PME adopted in the assessment were taken from the EPD's QPME Inventory and "Sound Power Levels of Other Commonly Used PME" are presented in Table 4.26 in the EIA report. It should be noted that the silenced PME selected for assessment can be found in Hong Kong.</p>	✓	✓	✓
3.1	<p>Use of Movable Noise Barriers</p> <p>Movable noise barriers can be very effective in screening noise from particular items of plant when constructing the Project. Noise barriers located along the active works area close to the noise generating component of a PME could produce at least 10 dB(A) screening for stationary plant and 5 dB(A) for mobile plant provided the direct line of sight between the PME and the NSRs is blocked.</p>	✓	✓	✓
3.1	<p>Use of Noise Enclosure/ Acoustic Shed</p> <p>The use of noise enclosure or acoustic shed is to cover stationary PME such as air compressor and concrete pump. With the adoption of the noise enclosure, the PME could be completely screened, and noise reduction of 15 dB(A) can be achieved according to the EIAO Guidance Note No. 9/2010.</p>	✓	✓	✓
3.1	<p>Use of Noise Insulating Fabric</p> <p>Noise insulating fabric can also be adopted for certain PME (e.g. drill rig, pilling machine etc). The fabric should be lapped such that there are no openings or gaps on the joints. According to the approved Tsim Sha Tsui Station Northern Subway EIA report (AEIAR-127/2008), a noise reduction of 10 dB(A) can be achieved for the PME lapped with the noise insulating fabric.</p>	✓	✓	✓
3.1	<p>Scheduling of Construction Works outside School Examination Periods</p> <p>During construction phase, the contractor should liaise with the educational institutions (including NSRs LCS and CRGPS) to obtain the examination schedule and avoid the noisy construction activities during school examination periods.</p>	✓	✓	✓

		Implementation Stage		
		Zone 2A, 2B & 2C		
EM&A Ref.	Recommendation Measures	August 2024	September 2024	October 2024
Water Quality Impact (Construction)				
4.1	<p>Construction site runoff and drainage</p> <p>The site practices outlined in ProPECC Note PN 1/94 should be followed as far as practicable in order to minimise surface runoff and the chance of erosion. The following measures are recommended to protect water quality and sensitive uses of the coastal area, and when properly implemented should be sufficient to adequately control site discharges so as to avoid water quality impacts:</p> <ul style="list-style-type: none"> At the start of site establishment, perimeter cut-off drains to direct off-site water around the site should be constructed with internal drainage works and erosion and sedimentation control facilities implemented. Channels, earth bunds or sand bag barriers should be provided on site to direct storm water to silt removal facilities. The design of the temporary on-site drainage system should be undertaken by the WKCDA's Contractor prior to the commencement of construction; Sand/silt removal facilities such as sand/silt traps and sediment basins should be provided to remove sand/silt particles from runoff to meet the requirements of the TM standards under the WPCO. The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC Note PN 1/94. Sizes may vary depending upon the flow rate. The detailed design of the sand/silt traps should be undertaken by the WKCDA's Contractor prior to the commencement of construction. All drainage facilities and erosion and sediment control structures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly during rainstorms. Deposited silt and grit should be regularly removed, at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times. 	✓	✓	✓
		✓	✓	✓
		✓	Obs	✓

		Implementation Stage		
		Zone 2A, 2B & 2C		
EM&A Ref.	Recommendation Measures	August 2024	September 2024	October 2024
	<ul style="list-style-type: none"> Measures should be taken to minimize the ingress of site drainage into excavations. If excavation of trenches in wet periods is necessary, they should be dug and backfilled in short sections wherever practicable. Water pumped out from foundation excavations should be discharged into storm drains via silt removal facilities. 	✓	✓	✓
	<ul style="list-style-type: none"> All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and sited wheel washing facility should be provided at construction site exit where practicable. Wash-water should have sand and silt settled out and removed regularly to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains. 	✓	✓	✓
	<ul style="list-style-type: none"> Open stockpiles of construction materials or construction wastes onsite should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system. 	✓	✓	✓
	<ul style="list-style-type: none"> Manholes (including newly constructed ones) should be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and stormwater runoff being directed into foul sewers. 	✓	✓	✓
	<ul style="list-style-type: none"> Precautions should be taken at any time of the year when rainstorms are likely. Actions should be taken when a rainstorm is imminent or forecasted and actions to be taken during or after rainstorms are summarized in Appendix A2 of ProPECC Note PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events, especially for areas located near steep slopes. 	✓	✓	✓

		Implementation Stage		
		Zone 2A, 2B & 2C		
EM&A Ref.	Recommendation Measures	August 2024	September 2024	October 2024
	<ul style="list-style-type: none"> Bentonite slurries used in piling or slurry walling should be reconditioned and reused wherever practicable. Temporary enclosed storage locations should be provided on-site for any unused bentonite that needs to be transported away after all the related construction activities are completed. The requirements in ProPECC Note PN 1/94 should be adhered to in the handling and disposal of bentonite slurries. 	N/A	N/A	N/A
4.1	<p>Barging facilities and activities</p> <p>Recommendations for good site practices during operation of the proposed barging point include:</p> <ul style="list-style-type: none"> All vessels should be sized so that adequate clearance is maintained between vessels and the seabed in all tide conditions, to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash; Loading of barges and hoppers should be controlled to prevent splashing of material into the surrounding water. Barges or hoppers should not be filled to a level that will cause the overflow of materials or polluted water during loading or transportation; All hopper barges should be fitted with tight fitting seals to their bottom openings to prevent leakage of material; and Construction activities should not cause foam, oil, grease, scum, litter or other objectionable matter to be present on the water within the site. 	N/A	N/A	N/A
4.1	<p>Sewage effluent from construction workforce</p> <p>Temporary sanitary facilities, such as portable chemical toilets, should be employed on-site where necessary to handle sewage from the workforce. A licensed contractor should be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance.</p>	✓	✓	✓
4.1	<p>General construction activities</p>			

		Implementation Stage		
		Zone 2A, 2B & 2C		
EM&A Ref.	Recommendation Measures	August 2024	September 2024	October 2024
	<ul style="list-style-type: none"> Construction solid waste, debris and refuse generated on-site should be collected, handled and disposed of properly to avoid entering any nearby storm water drain. Stockpiles of cement and other construction materials should be kept covered when not being used. Oils and fuels should only be stored in designated areas which have pollution prevention facilities. To prevent spillage of fuels and solvents to any nearby storm water drain, all fuel tanks and storage areas should be provided with locks and be sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank. The bund should be drained of rainwater after a rain event. 	✓	✓	✓
Waste Management Implications (Construction)				
6.1	Good Site Practices			
	<ul style="list-style-type: none"> Recommendations for good site practices during the construction activities include: Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site Training of site personnel in proper waste management and chemical handling procedures Provision of sufficient waste disposal points and regular collection of waste Appropriate measures to minimise windblown litter and dust/odour during transportation of waste by either covering trucks or by transporting wastes in enclosed containers Provision of wheel washing facilities before the trucks leaving the works area so as to minimise dust introduction to public roads 	Obs	✓	Obs
		✓	✓	✓
		✓	Obs	✓
		✓	✓	✓
		✓	✓	✓

		Implementation Stage		
		Zone 2A, 2B & 2C		
EM&A Ref.	Recommendation Measures	August 2024	September 2024	October 2024
	<ul style="list-style-type: none"> Well planned delivery programme for offsite disposal such that adverse environmental impact from transporting the inert or non-inert C&D materials is not anticipated 	✓	✓	✓
6.1	<p>Waste Reduction Measures</p> <p>Recommendations to achieve waste reduction include:</p> <ul style="list-style-type: none"> Sort inert C&D material to recover any recyclable portions such as metals Segregation and storage of different types of waste in different containers or skips to enhance reuse or recycling of materials and their proper disposal Encourage collection of recyclable waste such as waste paper and aluminium cans by providing separate labelled bins to enable such waste to be segregated from other general refuse generated by the work force Proper site practices to minimise the potential for damage or contamination of inert C&D materials Plan the use of construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of wastes 	✓	✓	✓
6.1	<p>Inert and Non-inert C&D Materials</p> <p>In order to minimise impacts resulting from collection and transportation of inert C&D material for off-site disposal, the excavated materials should be reused on-site as fill material as far as practicable. In addition, inert C&D material generated from excavation works could be reused as fill materials in local projects that require public fill for reclamation.</p> <ul style="list-style-type: none"> The surplus inert C&D material will be disposed of at the Government's PFRFs for beneficial use by other projects in Hong Kong. 	✓	✓	✓

		Implementation Stage		
		Zone 2A, 2B & 2C		
EM&A Ref.	Recommendation Measures	August 2024	September 2024	October 2024
	<ul style="list-style-type: none"> Liaison with the CEDD Public Fill Committee (PFC) on the allocation of space for disposal of the inert C&D materials at PFRF is underway. No construction work is allowed to proceed until all issues on management of inert C&D materials have been resolved and all relevant arrangements have been endorsed by the relevant authorities including PFC and EPD. The C&D materials generated from general site clearance should be sorted on site to segregate any inert materials for reuse or disposal of at PFRFs whereas the non-inert materials will be disposed of at the designated landfill site. In order to monitor the disposal of inert and non-inert C&D materials at respectively PFRFs and the designated landfill site, and to control fly-tipping, it is recommended that the Contractor should follow the Technical Circular (Works) No. 6/2010 for Trip Ticket System for Disposal of Construction & Demolition Materials issued by Development Bureau. In addition, it is also recommended that the Contractor should prepare and implement a Waste Management Plan detailing their various waste arising and waste management practices in accordance with the relevant requirements of the Technical Circular (Works) No. 19/2005 Environmental Management on Construction Site. 	✓	✓	✓

6.1 **Chemical Waste**

		Implementation Stage		
		Zone 2A, 2B & 2C		
EM&A Ref.	Recommendation Measures	August 2024	September 2024	October 2024
	<ul style="list-style-type: none"> If chemical wastes are produced at the construction site, the Contractor will be required to register with the EPD as a chemical waste producer and to follow the guidelines stated in the “Code of Practice on the Packaging Labelling and Storage of Chemical Wastes”. Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. The Contractor should use a licensed collector to transport and dispose of the chemical wastes at the approved Chemical Waste Treatment Centre or other licensed recycling facilities, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation. Potential environmental impacts arising from the handling activities (including storage, collection, transportation and disposal of chemical waste) are expected to be minimal with the implementation of appropriate mitigation measures as recommended. 	✓	✓	✓
6.1	<p>General Refuse</p> <p>General refuse should be stored in enclosed bins or compaction units separated from inert C&D materials. A reputable waste collector should be employed by the Contractor to remove general refuse from the site, separately from inert C&D materials. Preferably an enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material.</p>	✓	✓	✓
Land Contamination (Construction)				

		Implementation Stage		
		Zone 2A, 2B & 2C		
EM&A Ref.	Recommendation Measures	August 2024	September 2024	October 2024
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"> To minimize the chance for construction workers to come into contact with any contaminated materials, bulk earth-moving excavation equipment should be employed; Contact with contaminated materials can be minimised by wearing appropriate clothing and personal protective equipment such as gloves and masks (especially when interacting directly with contaminated material), provision of washing facilities and prohibition of smoking and eating on site; Stockpiling of contaminated excavated materials on site should be avoided as far as possible; The use of contaminated soil for landscaping purpose should be avoided unless pre-treatment was carried out; Vehicles containing any contaminated excavated materials should be suitably covered to reduce dust emissions and/or release of contaminated wastewater; Truck bodies and tailgates should be sealed to stop any discharge; Only licensed waste haulers should be used to collect and transport contaminated material to treatment/disposal site and should be equipped with tracking system to avoid fly tipping; 	N/A	N/A	N/A
		N/A	N/A	N/A
		N/A	N/A	N/A
		N/A	N/A	N/A
		N/A	N/A	N/A
		N/A	N/A	N/A
		N/A	N/A	N/A

		Implementation Stage		
		Zone 2A, 2B & 2C		
EM&A Ref.	Recommendation Measures	August 2024	September 2024	October 2024
	<ul style="list-style-type: none"> Speed control for trucks carrying contaminated materials should be exercised; Observe all relevant regulations in relation to waste handling, such as Waste Disposal Ordinance (Cap. 354), Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354) and obtain all necessary permits where required; and Maintain records of waste generation and disposal quantities and disposal arrangements. 	N/A	N/A	N/A
		N/A	N/A	N/A
		N/A	N/A	N/A
Ecological Impact (Construction)				
No mitigation measure is required.				
Landscape and Visual Impact (Construction)				
Table 9.1 (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.	✓	✓	✓
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

		Implementation Stage		
		Zone 2A, 2B & 2C		
EM&A Ref.	Recommendation Measures	August 2024	September 2024	October 2024
Table 9.1 (CM6)	Sensitive streetscape design should be incorporated along all new roads and streets.	N/A	N/A	N/A
Table 9.1 (CM7)	Structure, ornamental planting shall be provided along amenity strips to enhance the landscape quality.	N/A	N/A	N/A
Table 9.1 (CM8)	Landscape design shall be incorporated to architectural and engineering structures in order to provide aesthetically pleasing designs.	N/A	N/A	N/A
Table 9.1 (CM9)	Minimize the structure of marine facilities to be built on the seabed and foreshore in order to minimize the affected extent to the waterbody	N/A	N/A	N/A
Table 9.2 (MCP1)	Use of decorative screen hoarding/boards	✓	✓	✓
Table 9.2 (MCP2)	Early introduction of landscape treatments	N/A	N/A	N/A
Table 9.2 (MCP3)	Adoption of light colour for the temporary ventilation shafts for the basement during the transition period.	N/A	N/A	N/A
Table 9.2 (MCP4)	Control of night time lighting	✓	✓	✓
Table 9.2 (MCP5)	Use of greenery such as grass cover for the temporary open areas will help achieve the visual balance and soften the hard edges of the structures.	N/A	N/A	N/A

N/A - Not Applicable

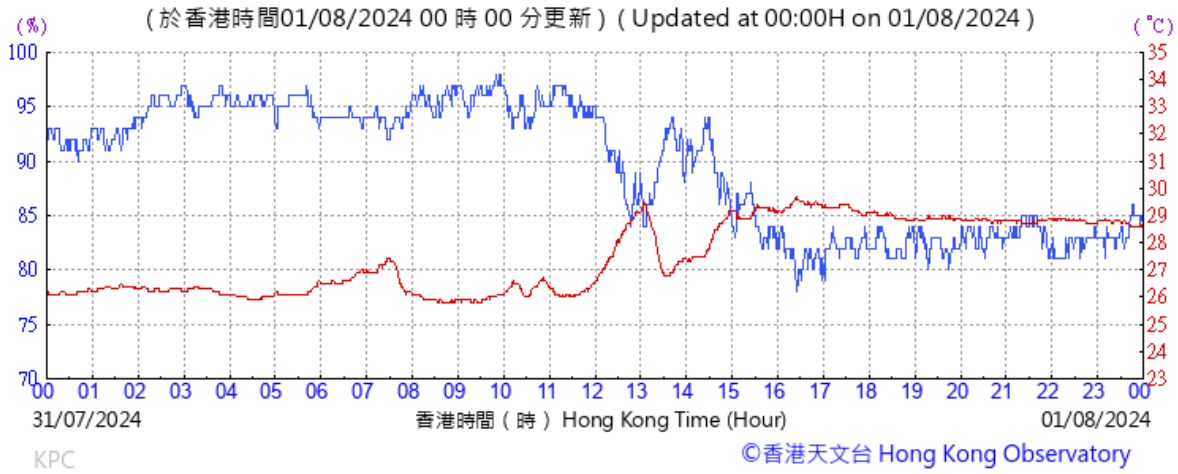
✓ - Implemented

Obs - Observed

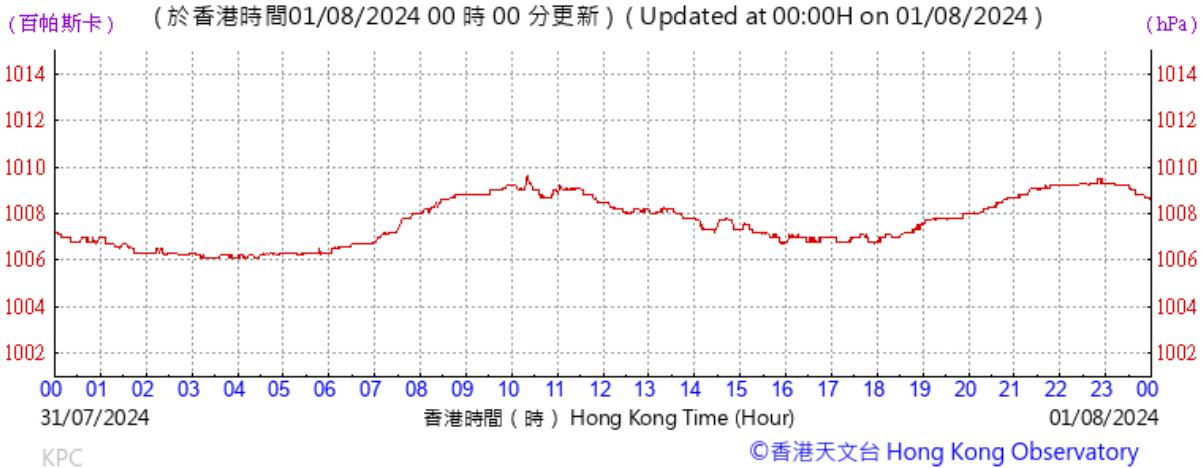
Rem - Reminder

D. Meteorological Data Extracted from Hong Kong Observatory

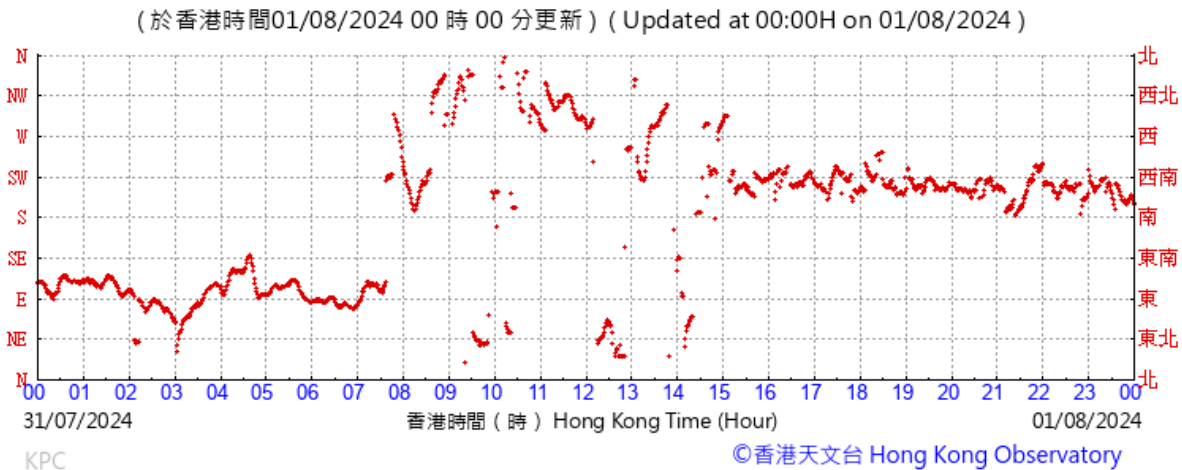
Temperature/Humidity:



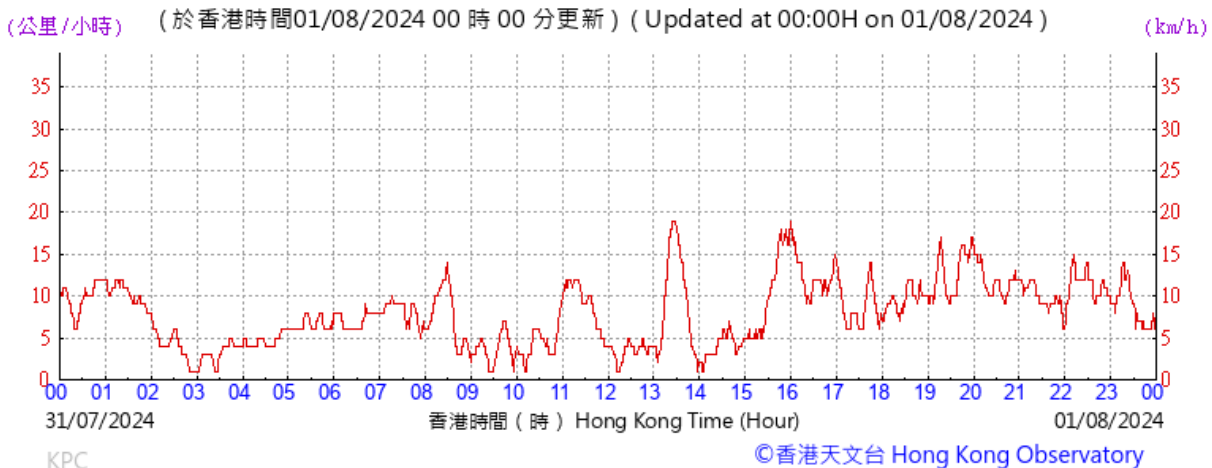
Pressure:



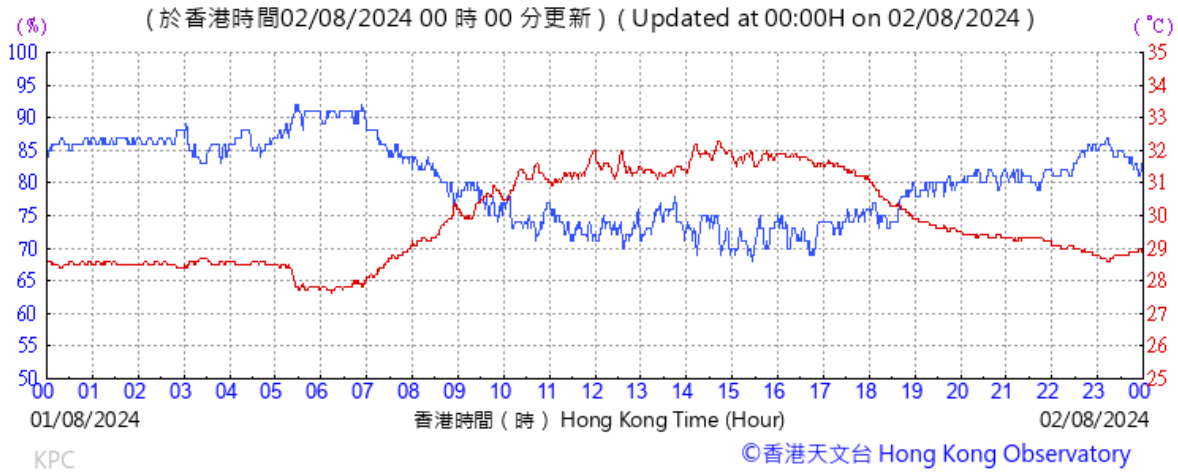
Wind Direction:



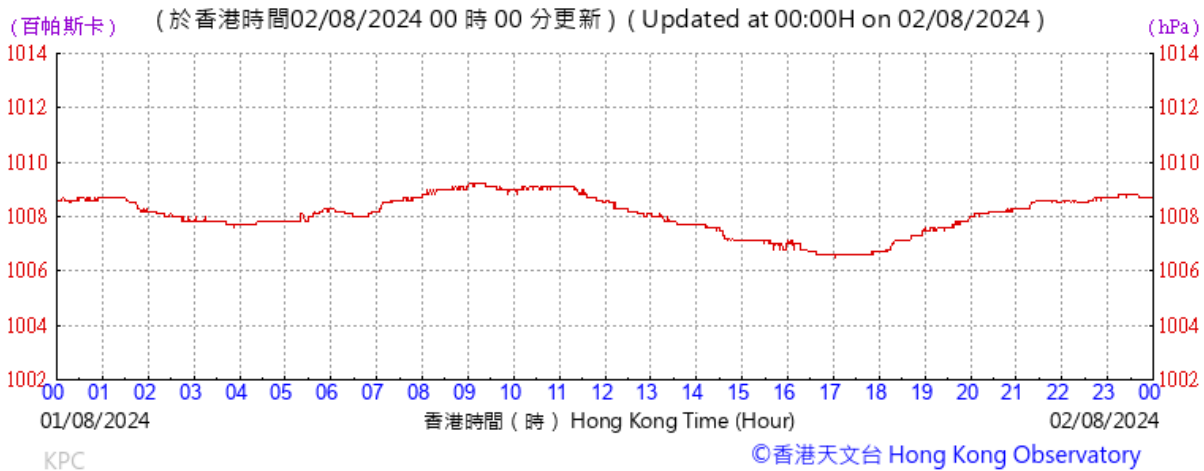
Wind Speed:



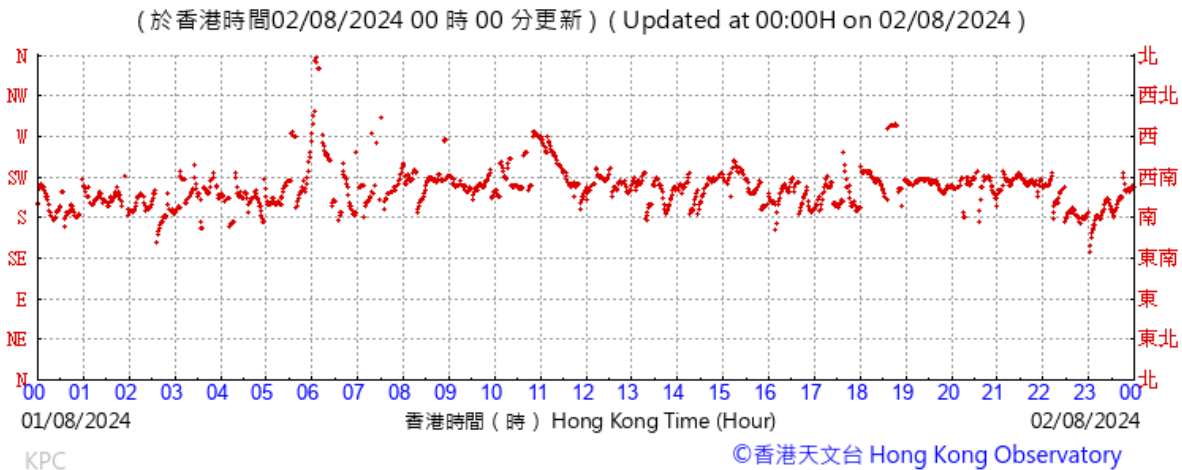
Temperature/Humidity:



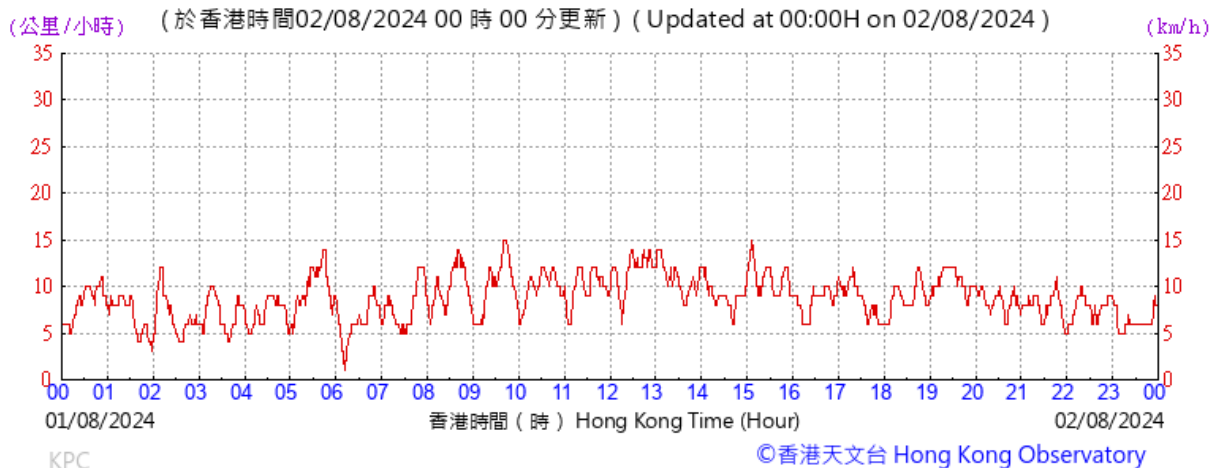
Pressure:



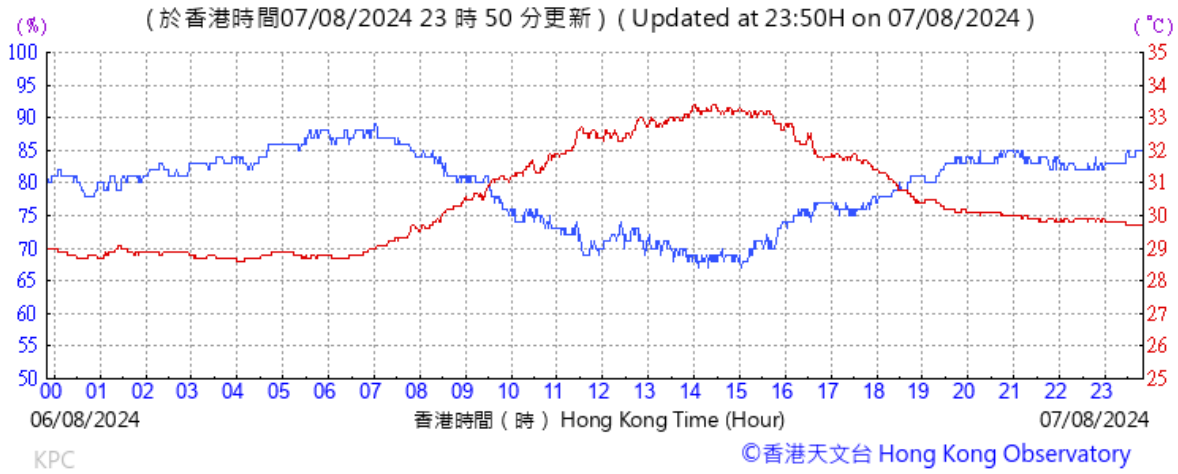
Wind Direction:



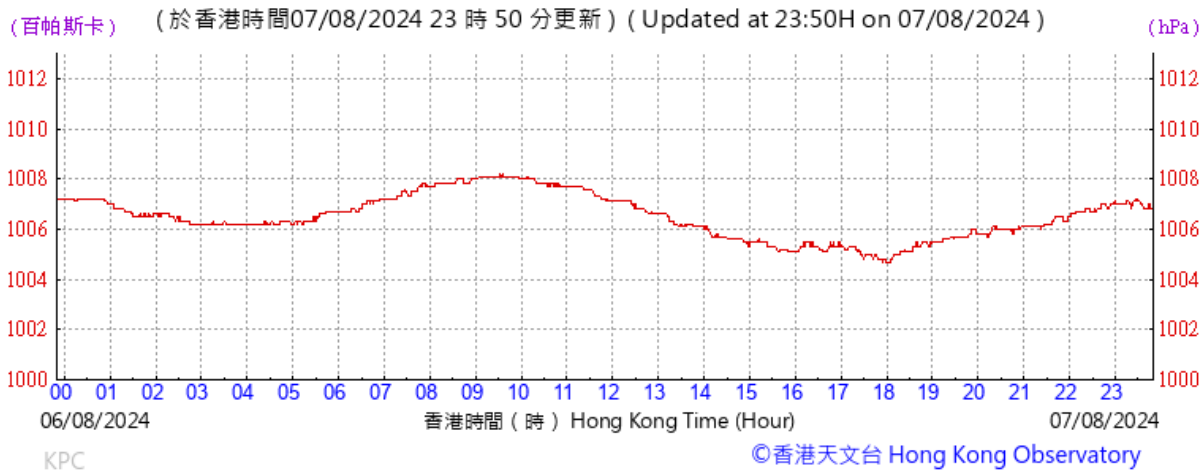
Wind Speed:



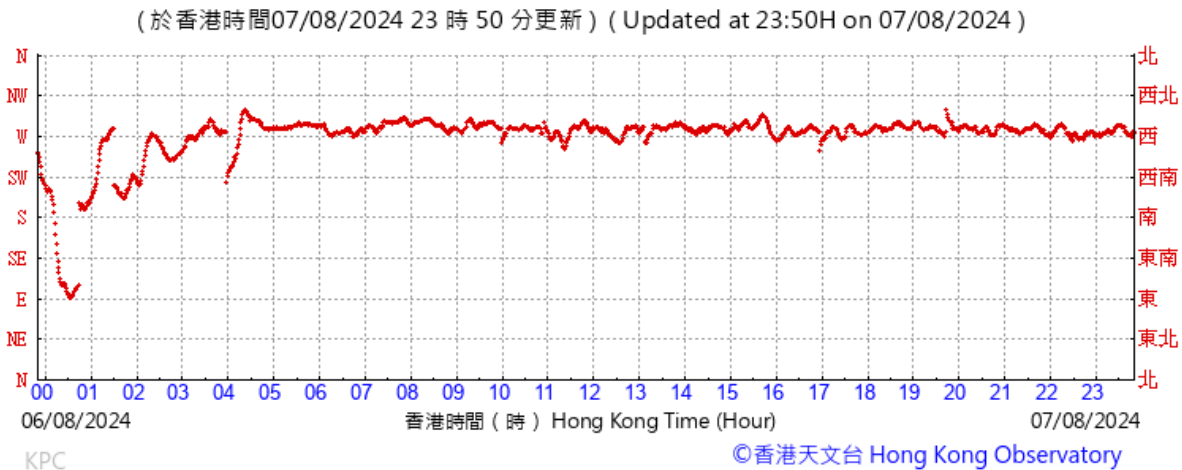
Temperature/Humidity:



Pressure:



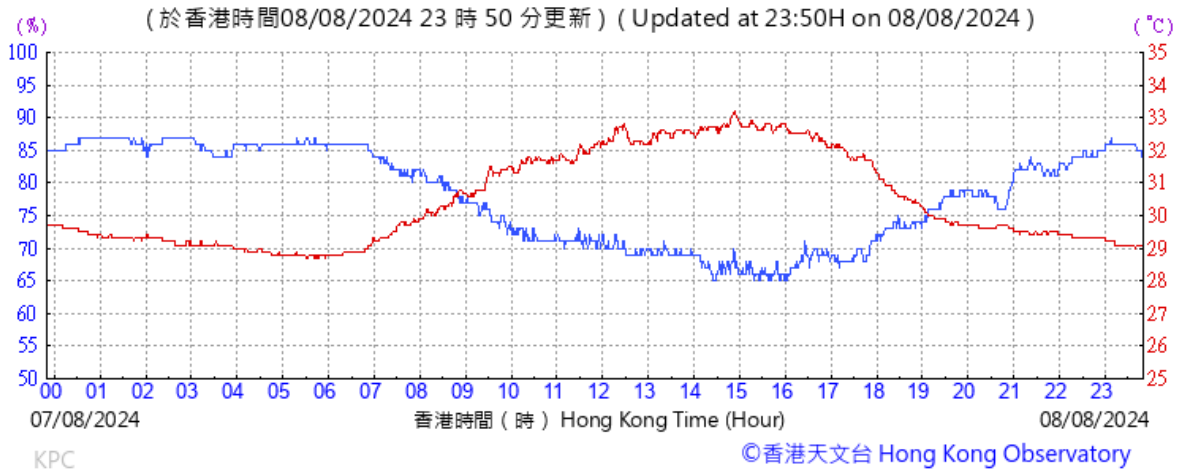
Wind Direction:



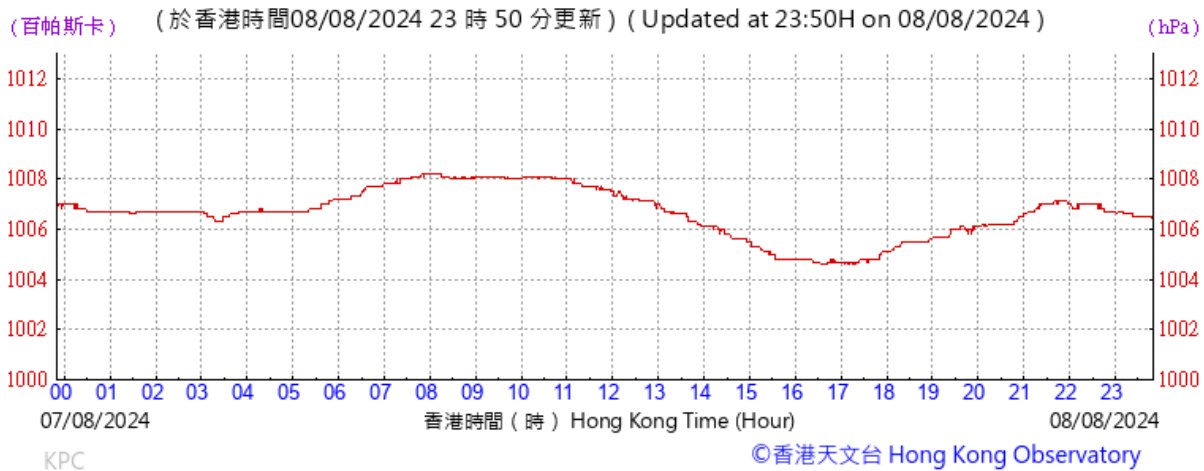
Wind Speed:



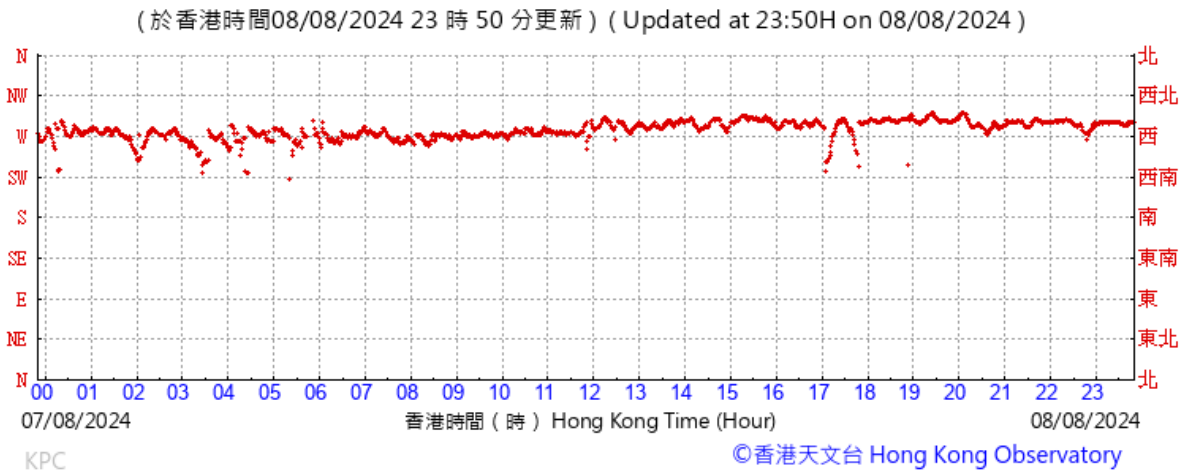
Temperature/Humidity:



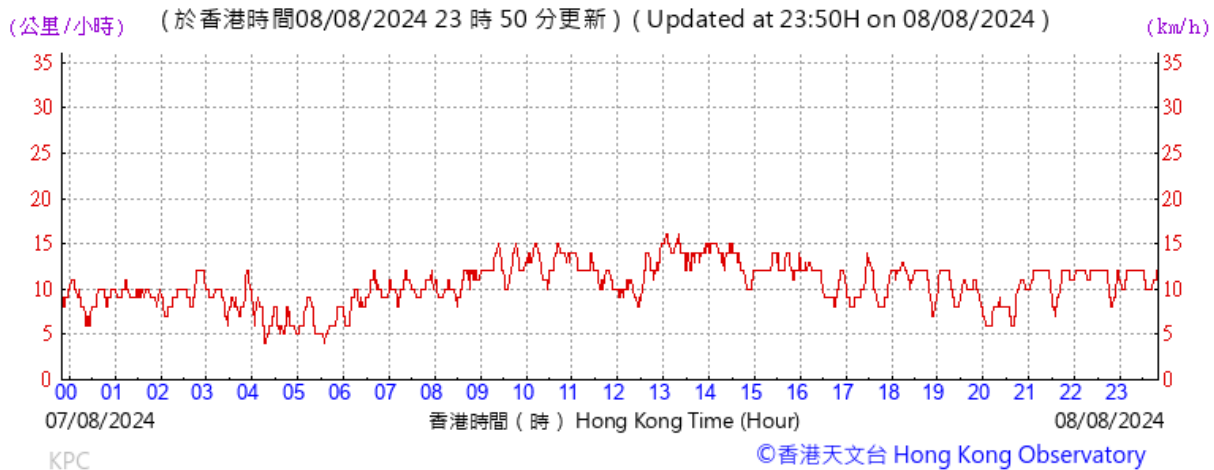
Pressure:



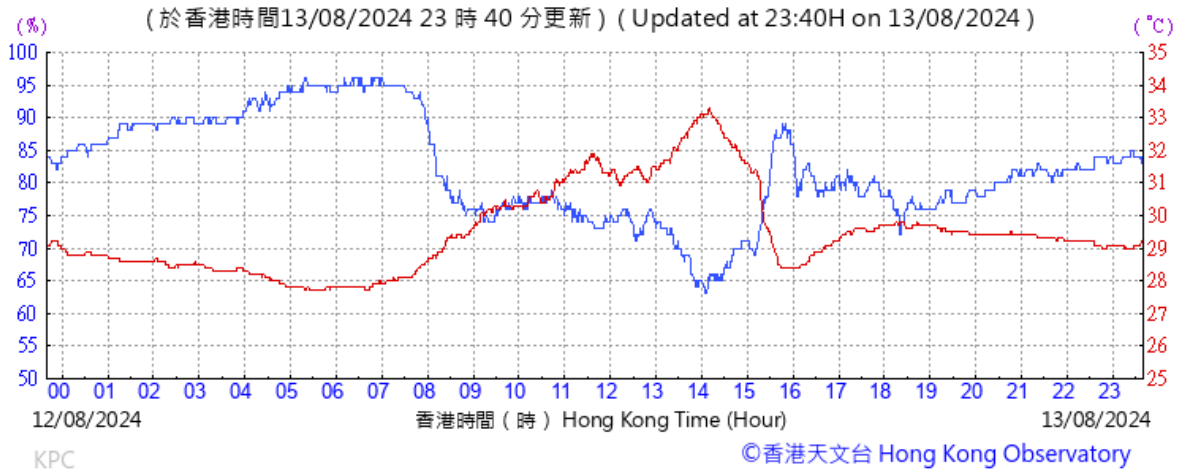
Wind Direction:



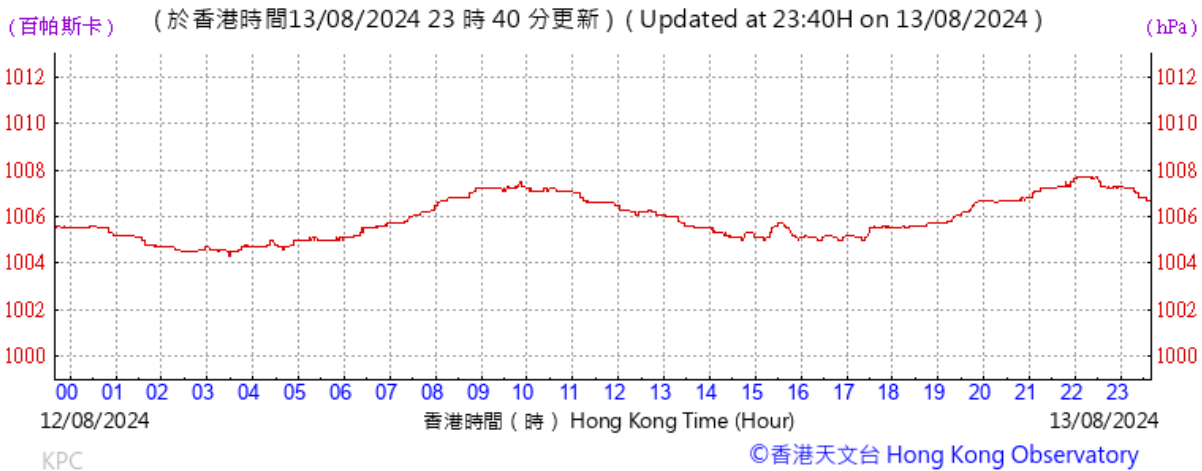
Wind Speed:



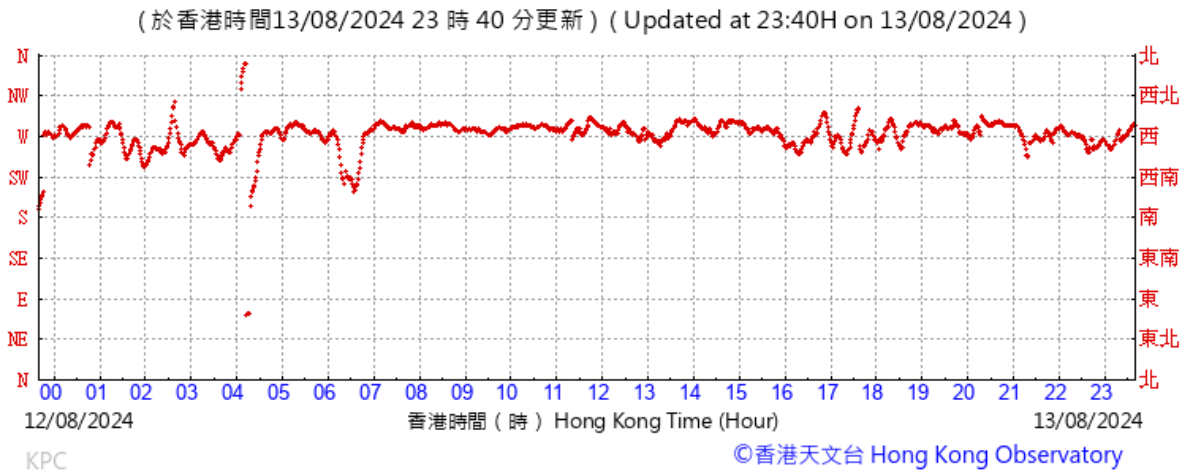
Temperature/Humidity:



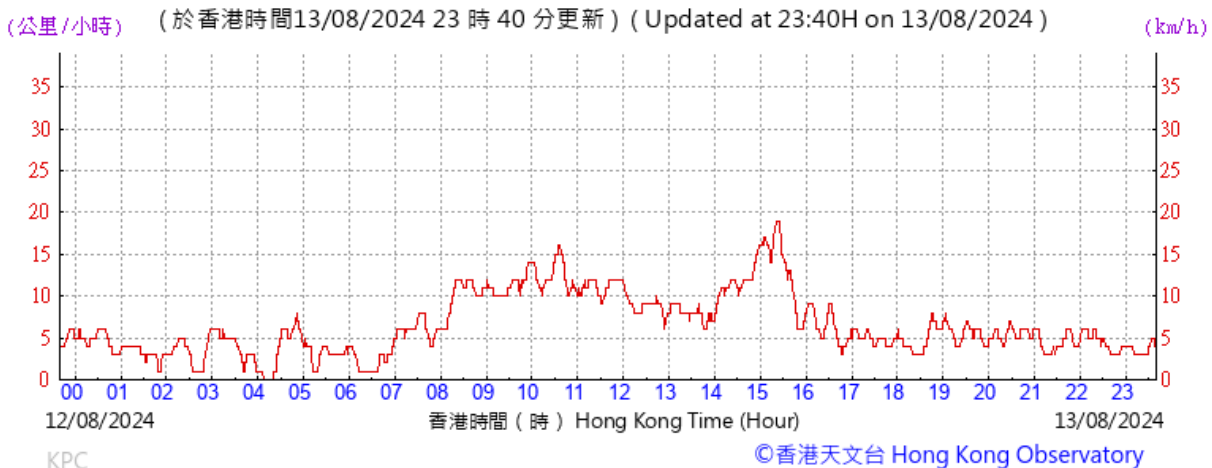
Pressure:



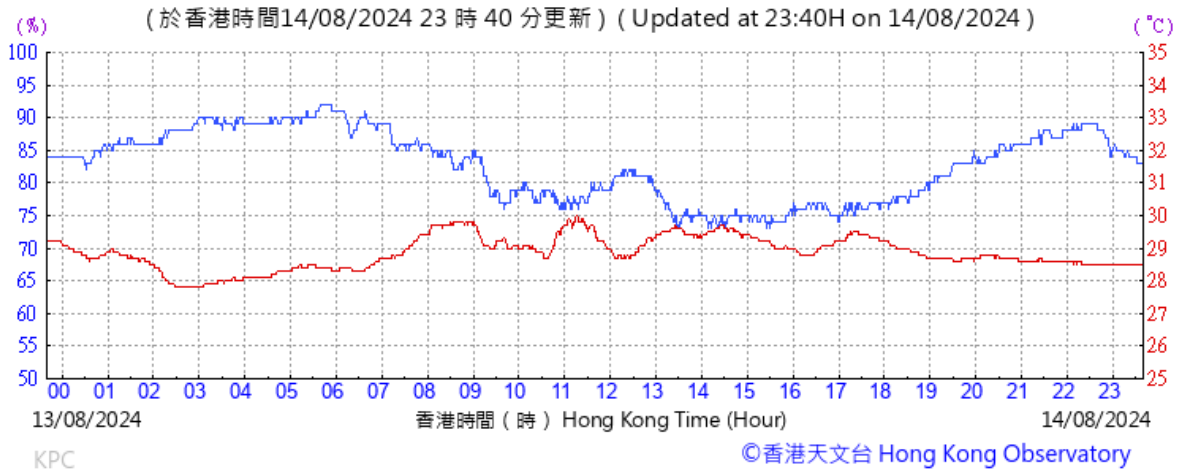
Wind Direction:



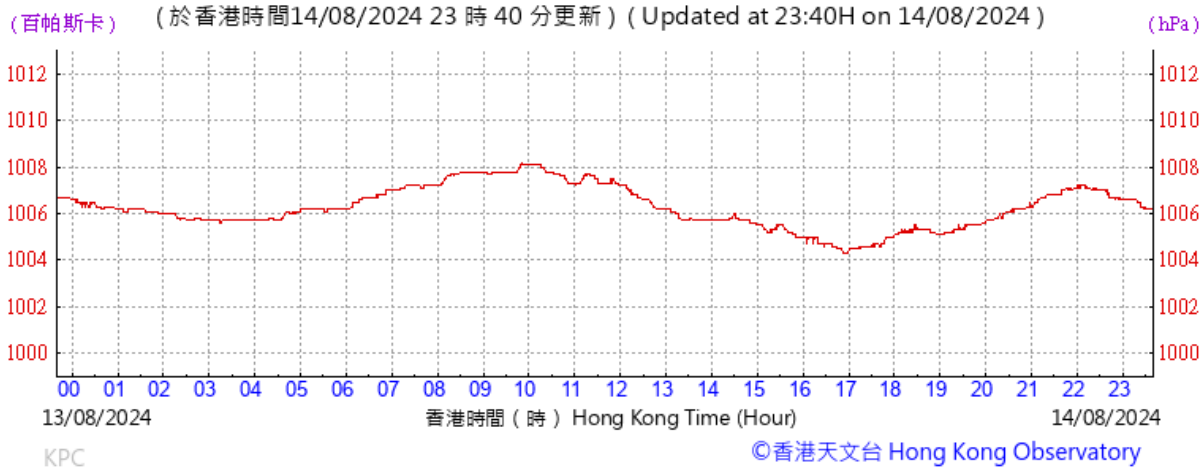
Wind Speed:



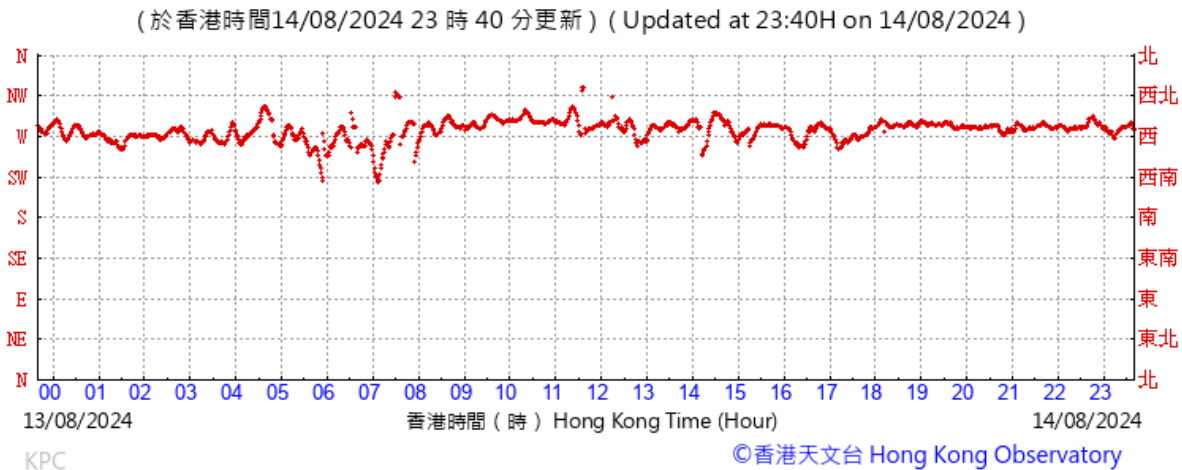
Temperature/Humidity:



Pressure:



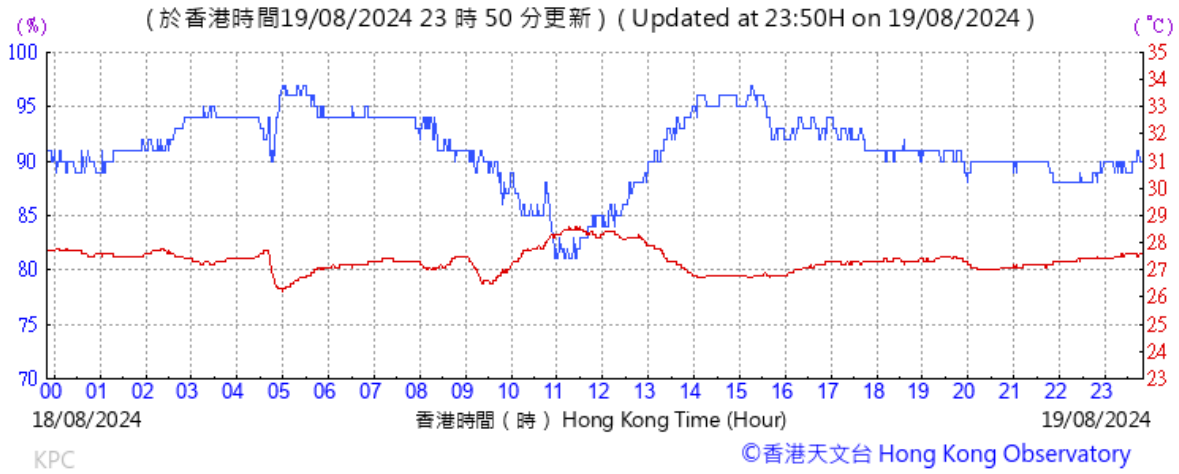
Wind Direction:



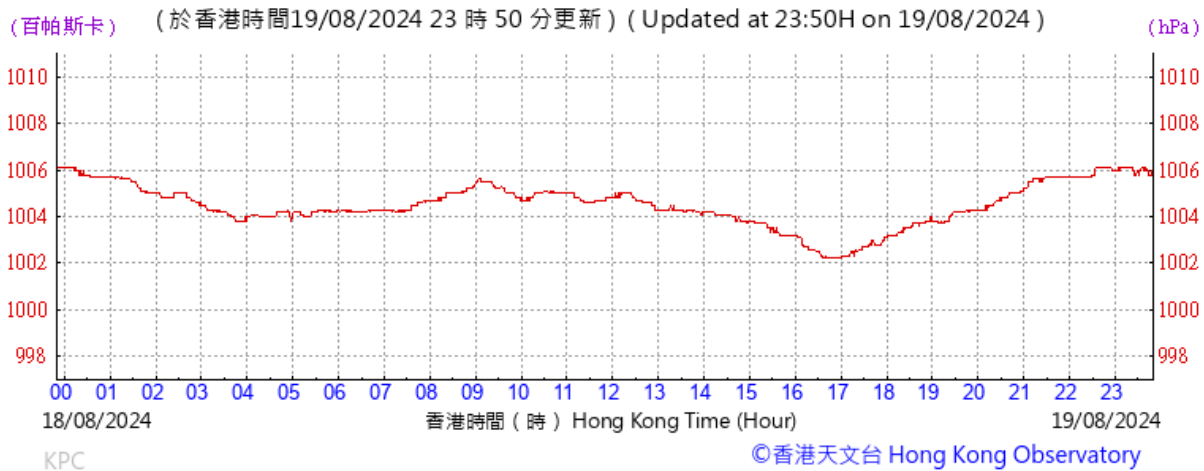
Wind Speed:



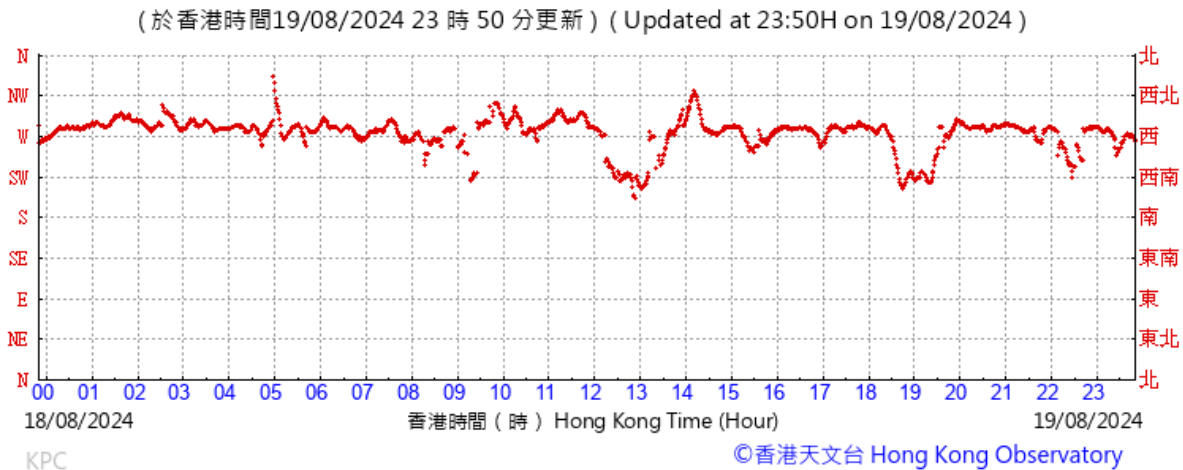
Temperature/Humidity:



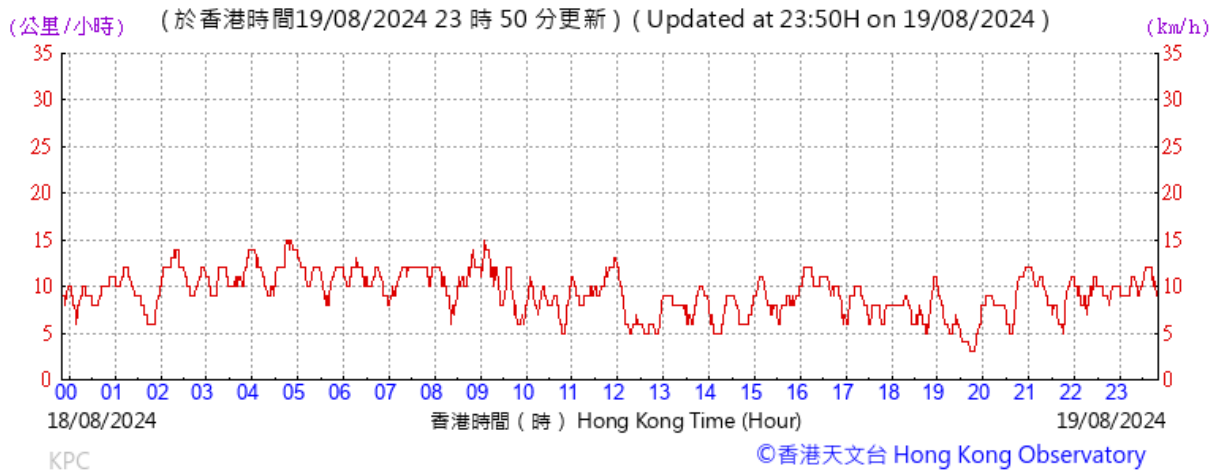
Pressure:



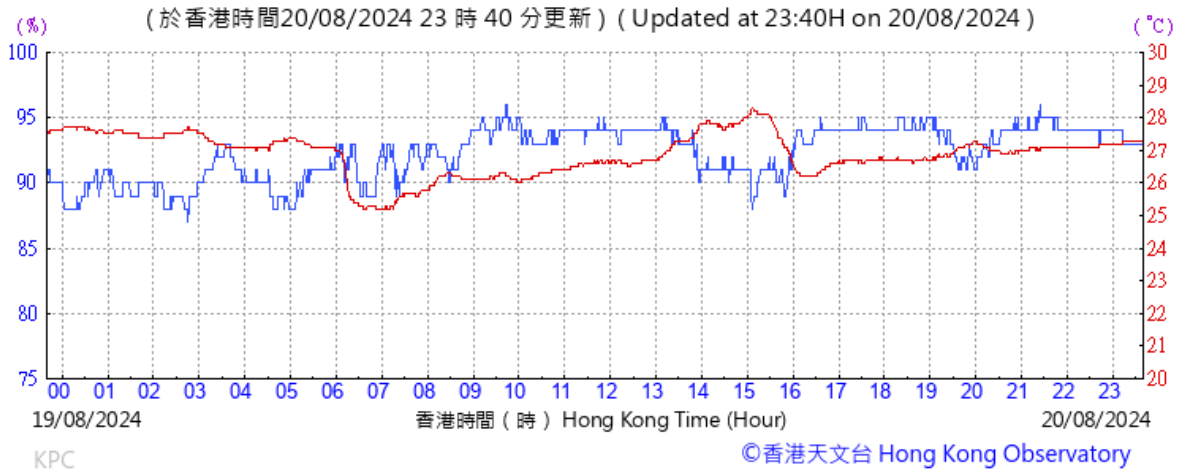
Wind Direction:



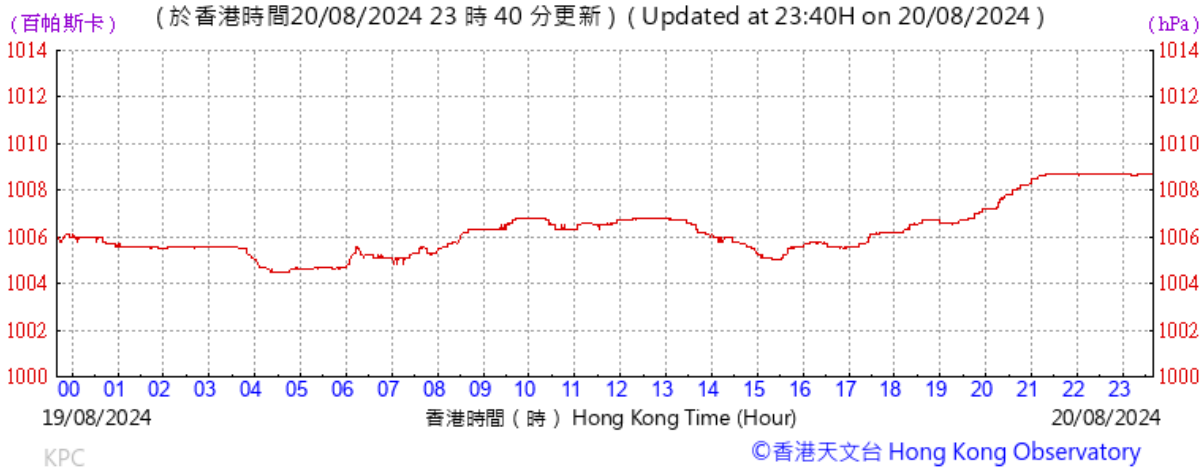
Wind Speed:



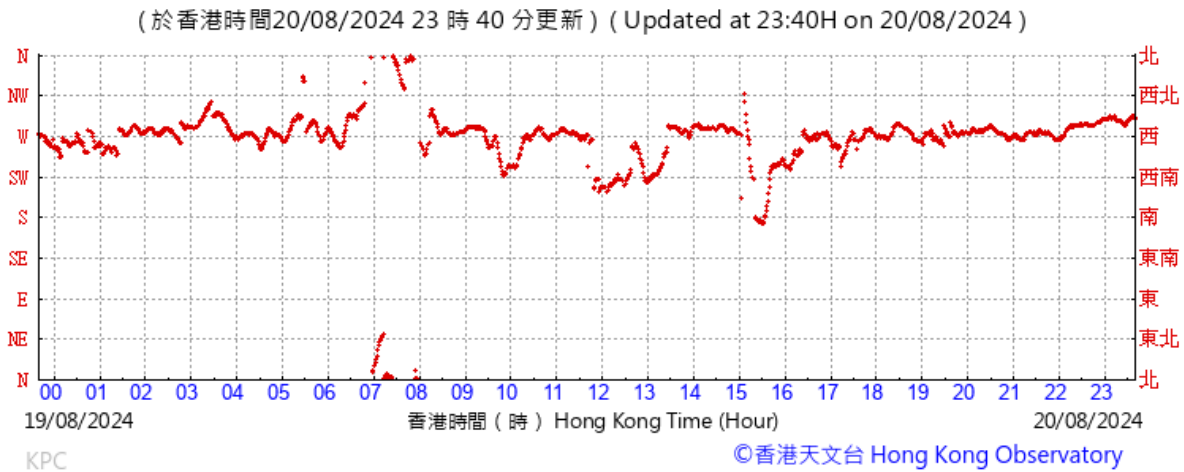
Temperature/Humidity:



Pressure:



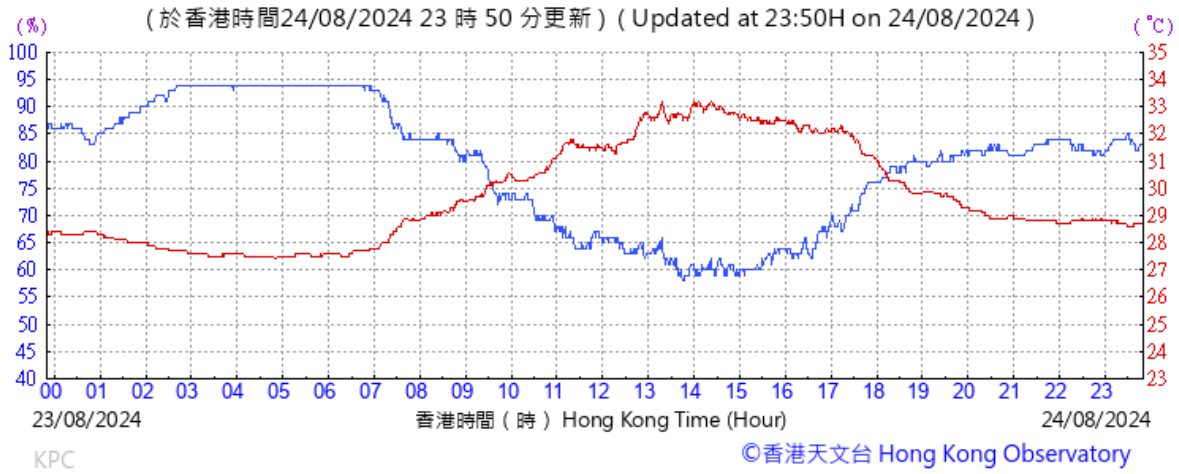
Wind Direction:



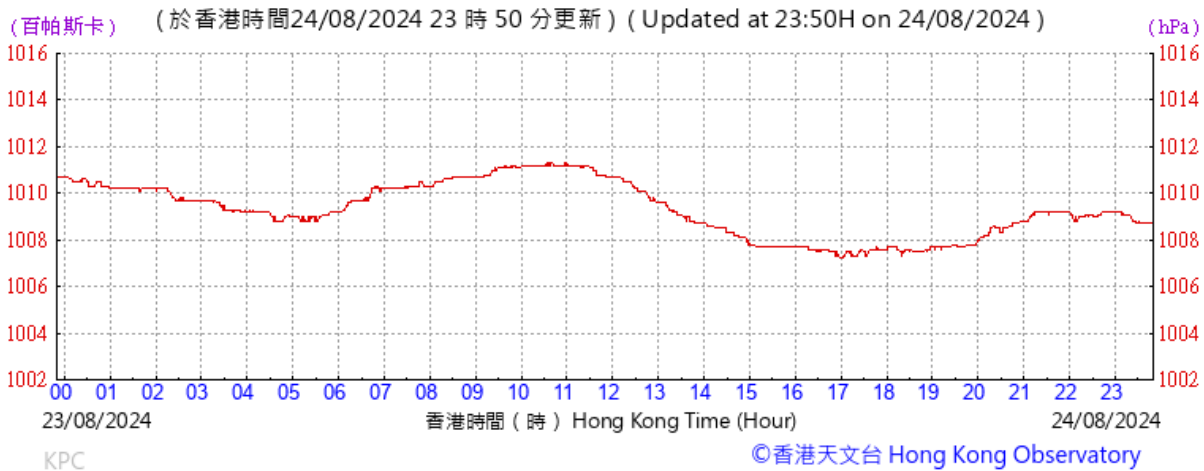
Wind Speed:



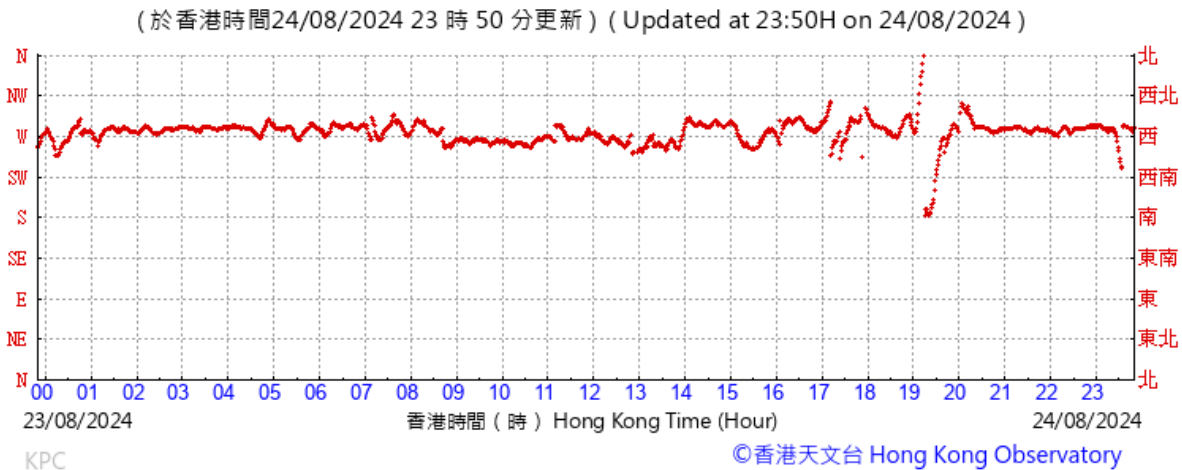
Temperature/Humidity:



Pressure:



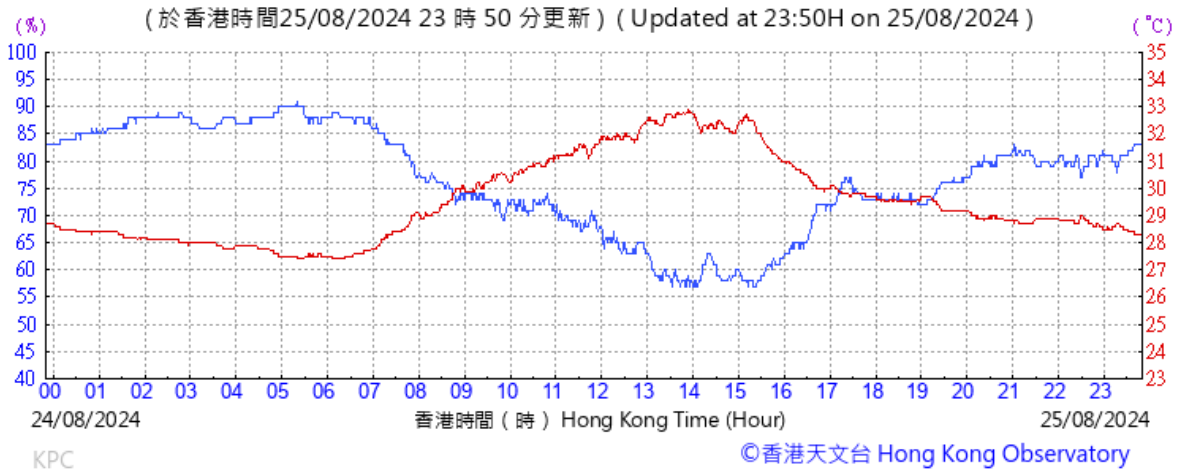
Wind Direction:



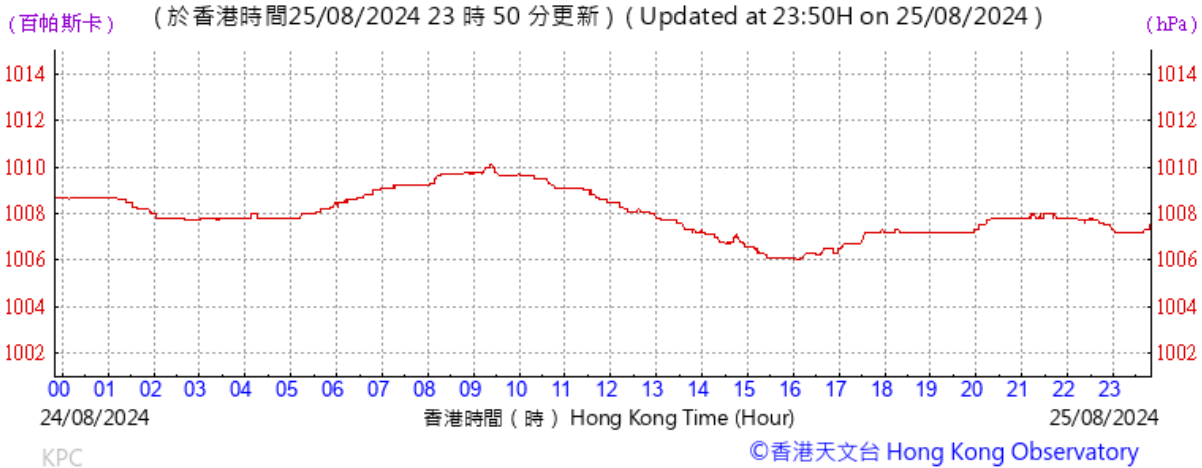
Wind Speed:



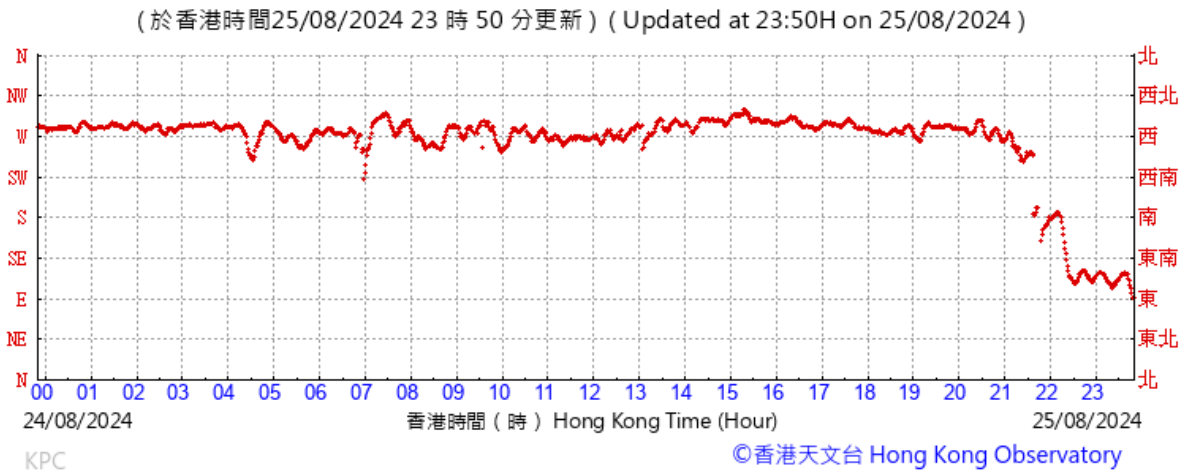
Temperature/Humidity:



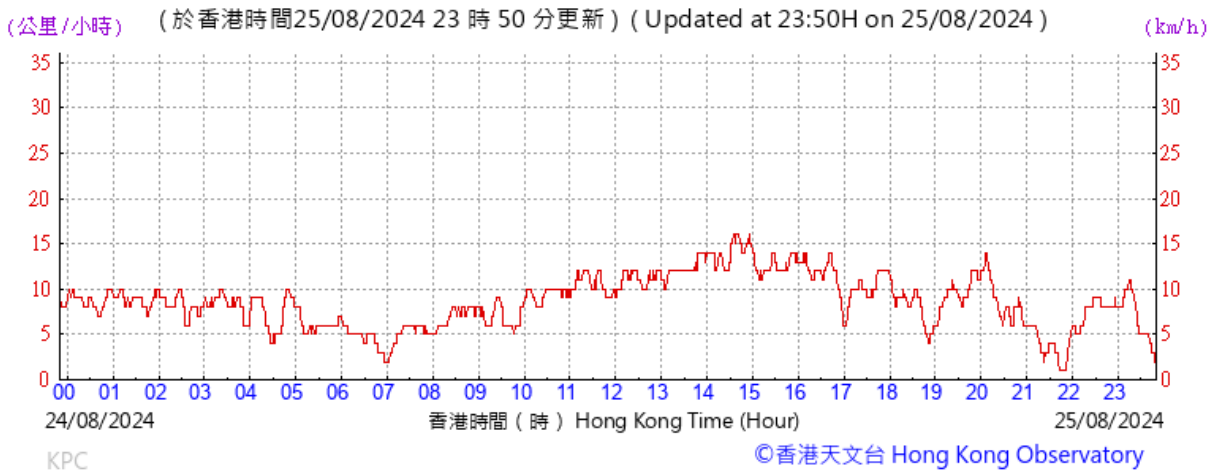
Pressure:



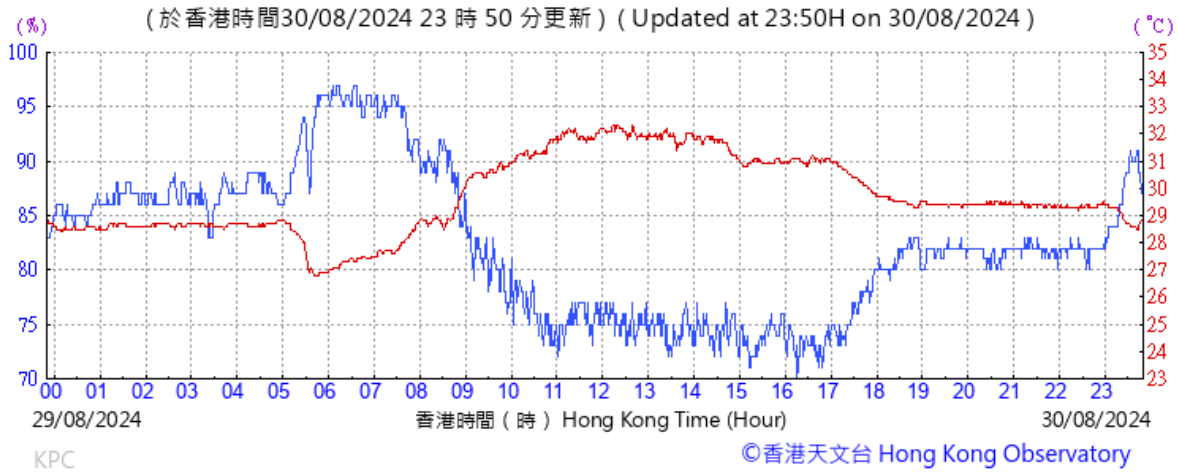
Wind Direction:



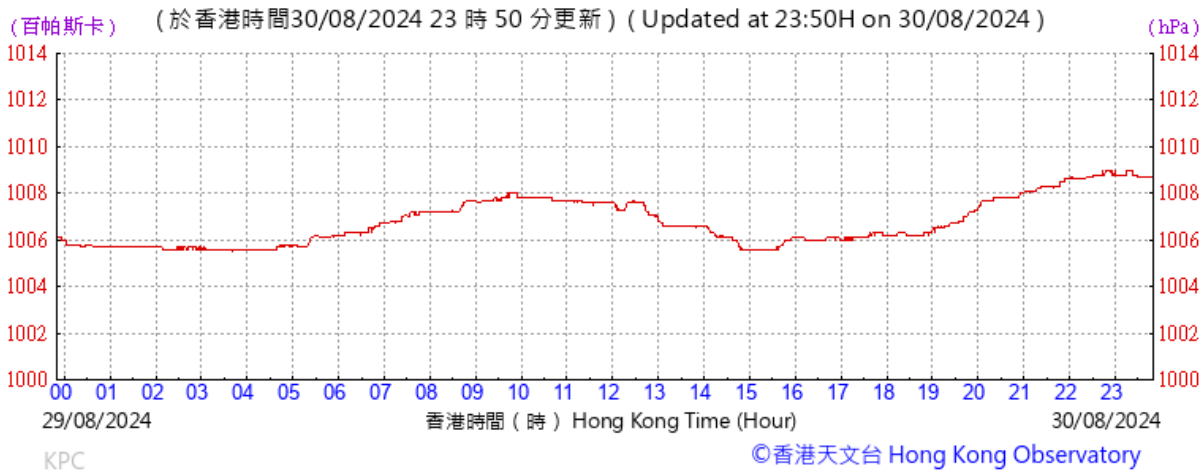
Wind Speed:



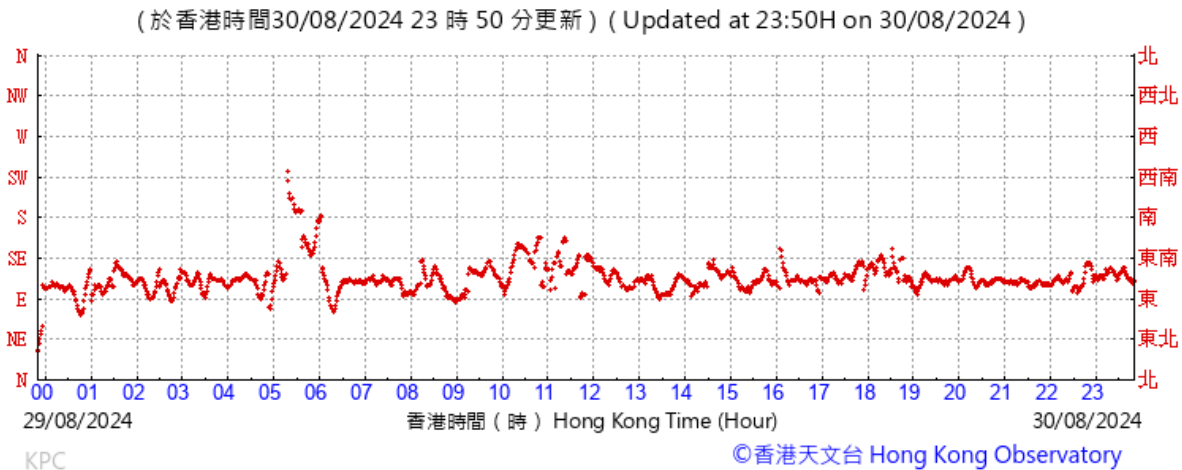
Temperature/Humidity:



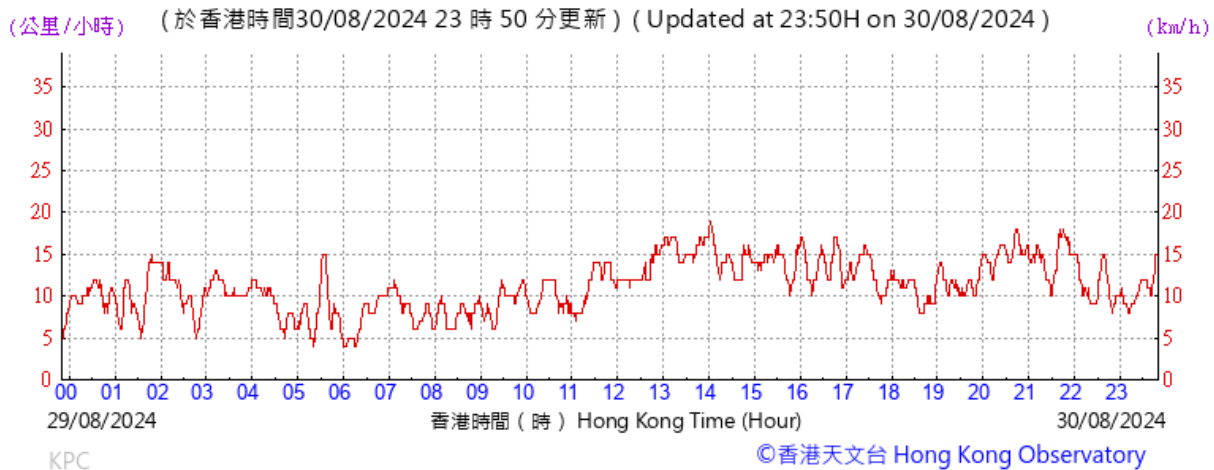
Pressure:



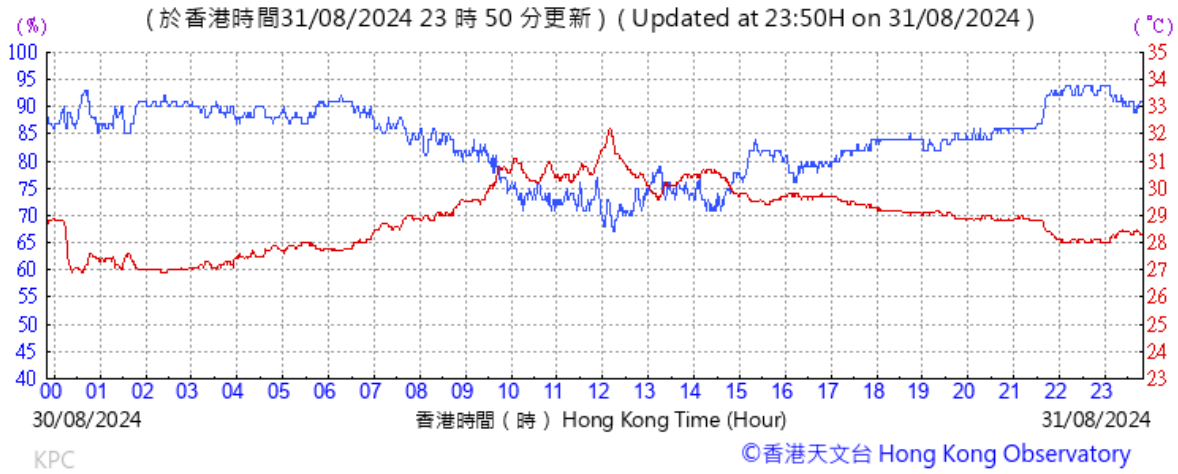
Wind Direction:



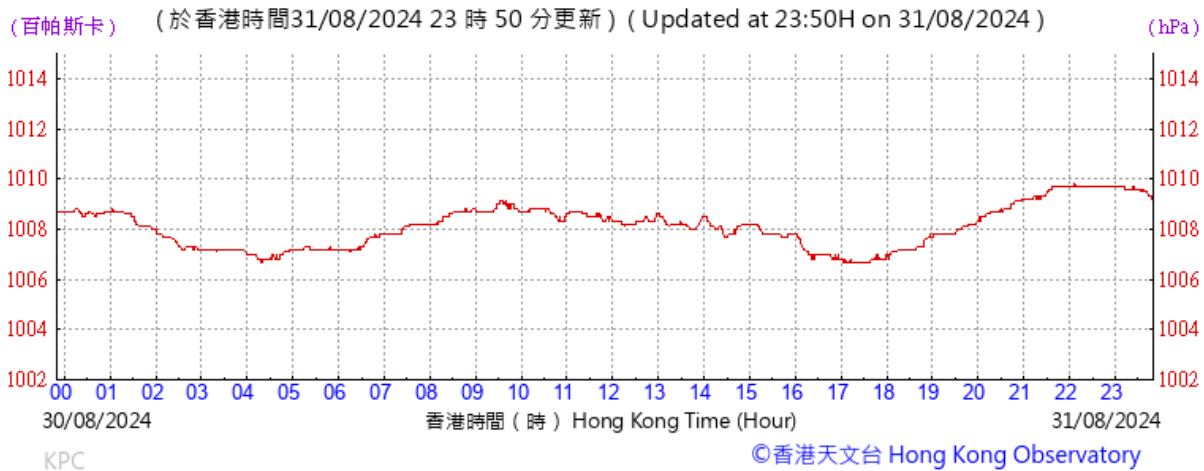
Wind Speed:



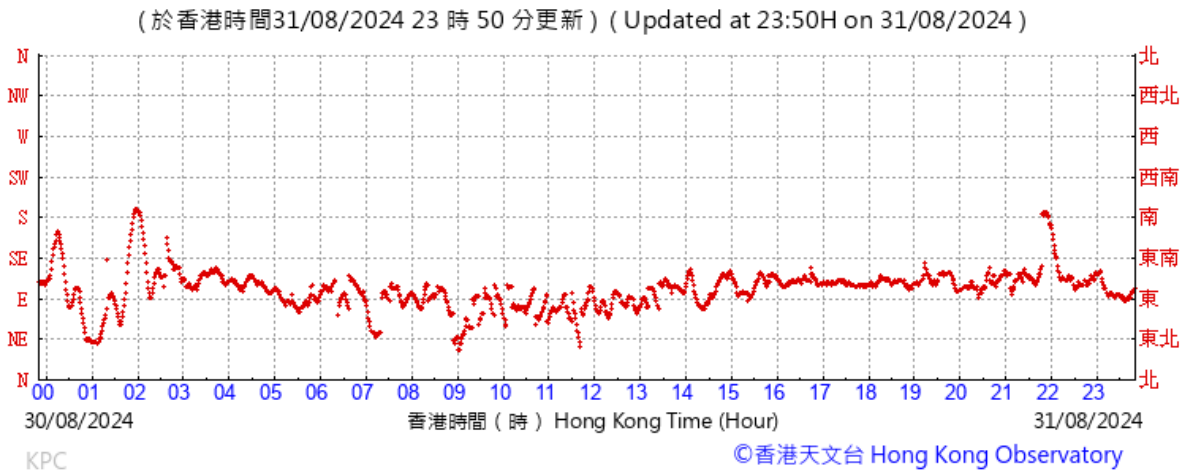
Temperature/Humidity:



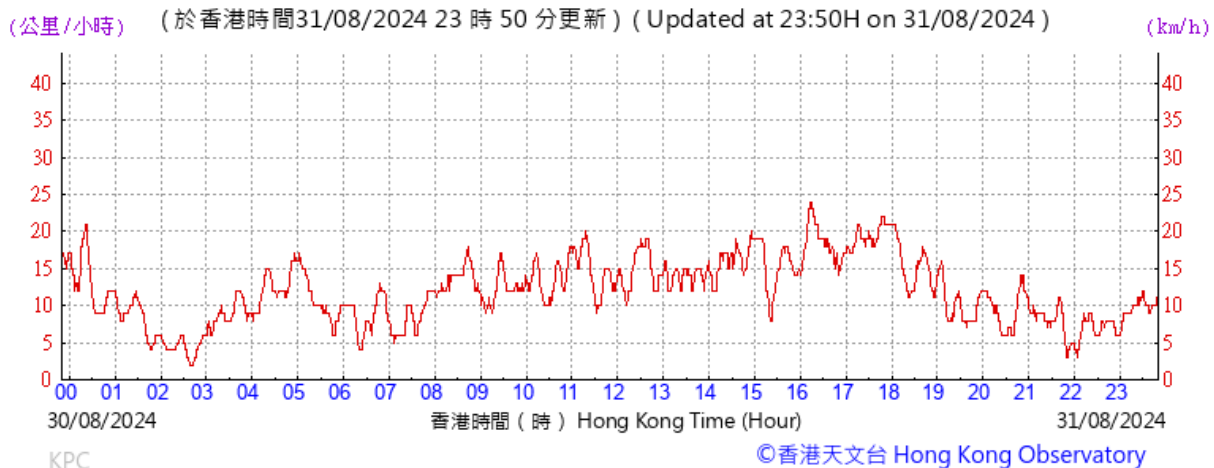
Pressure:



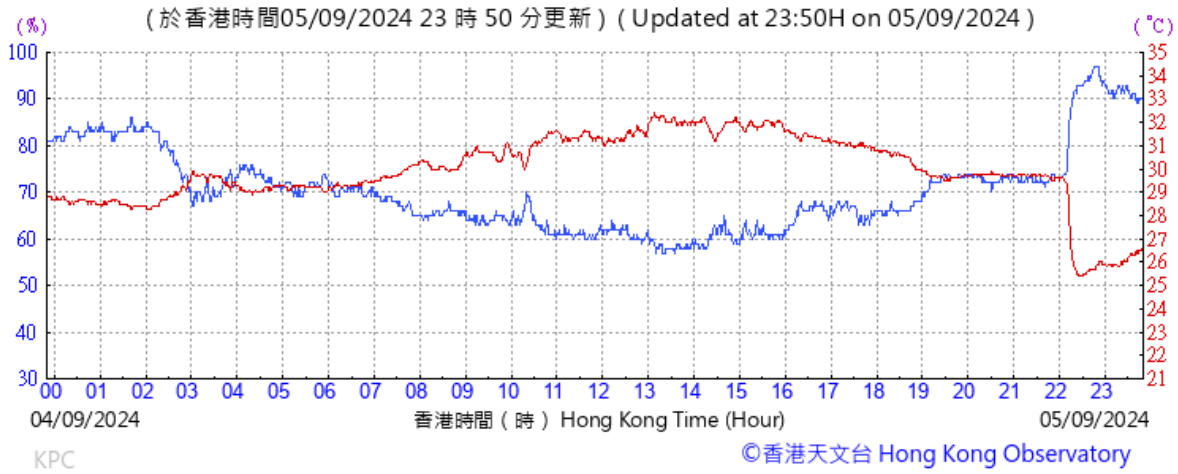
Wind Direction:



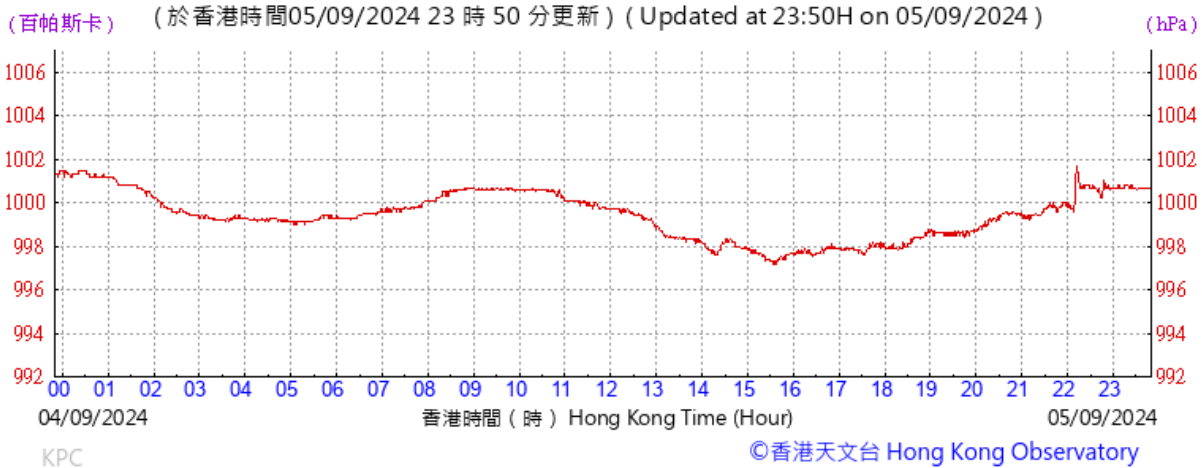
Wind Speed:



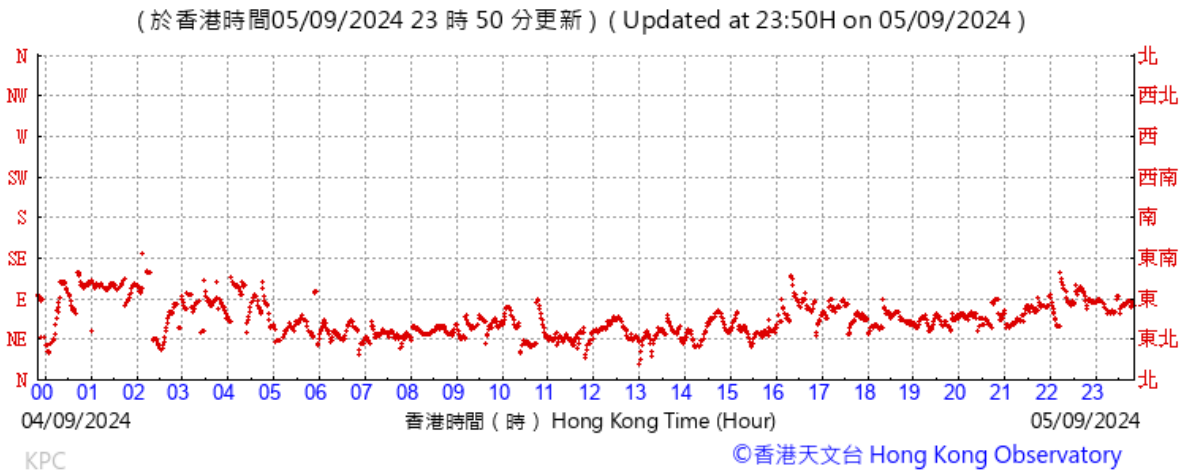
Temperature/Humidity:



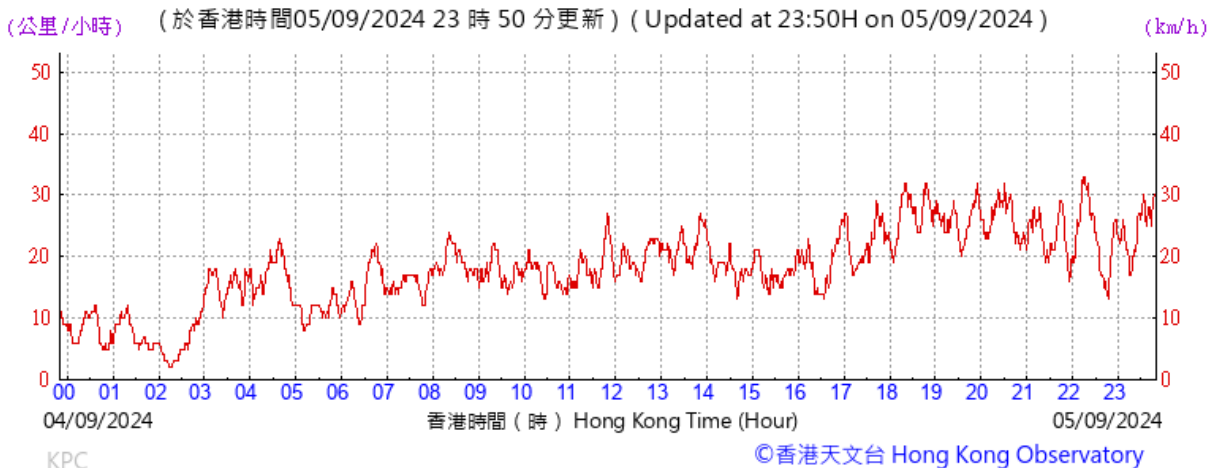
Pressure:



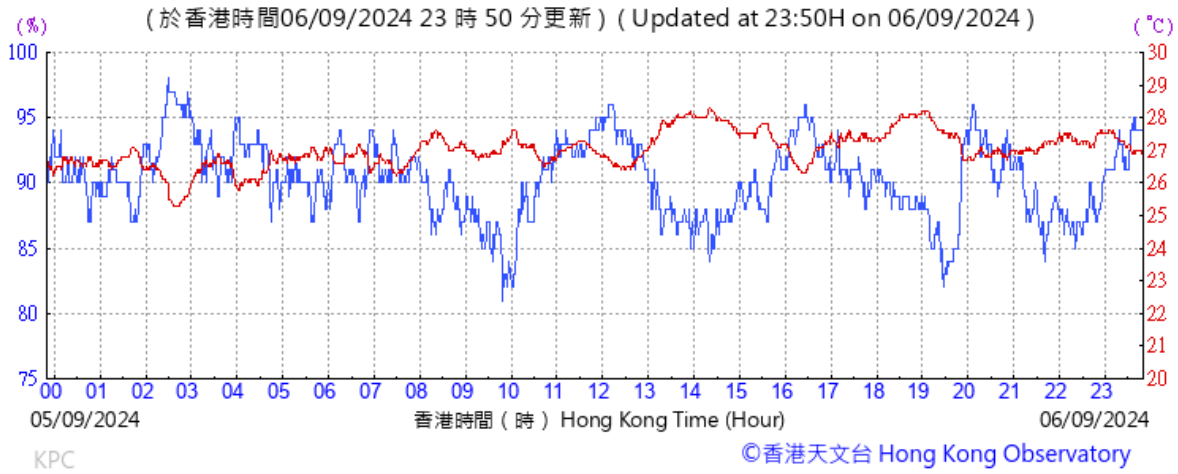
Wind Direction:



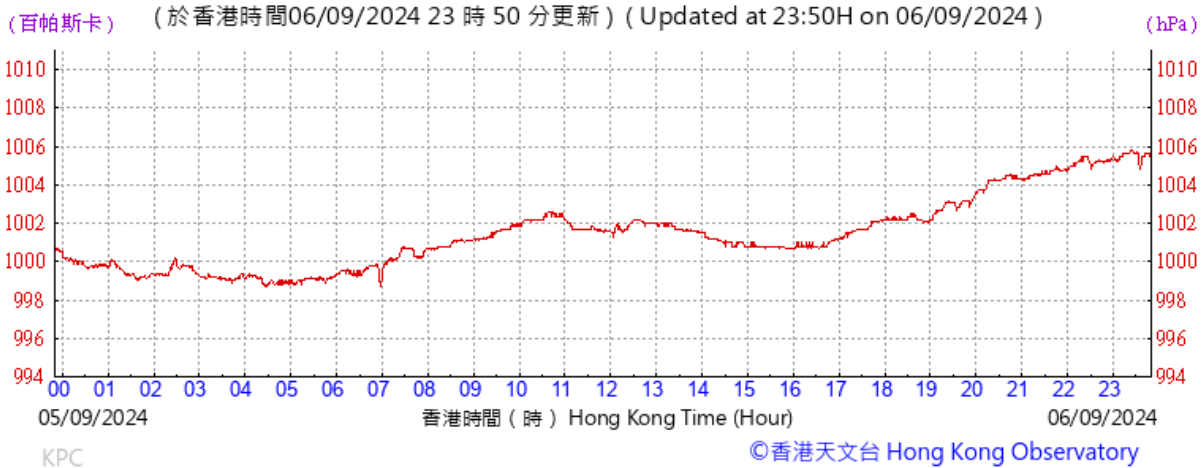
Wind Speed:



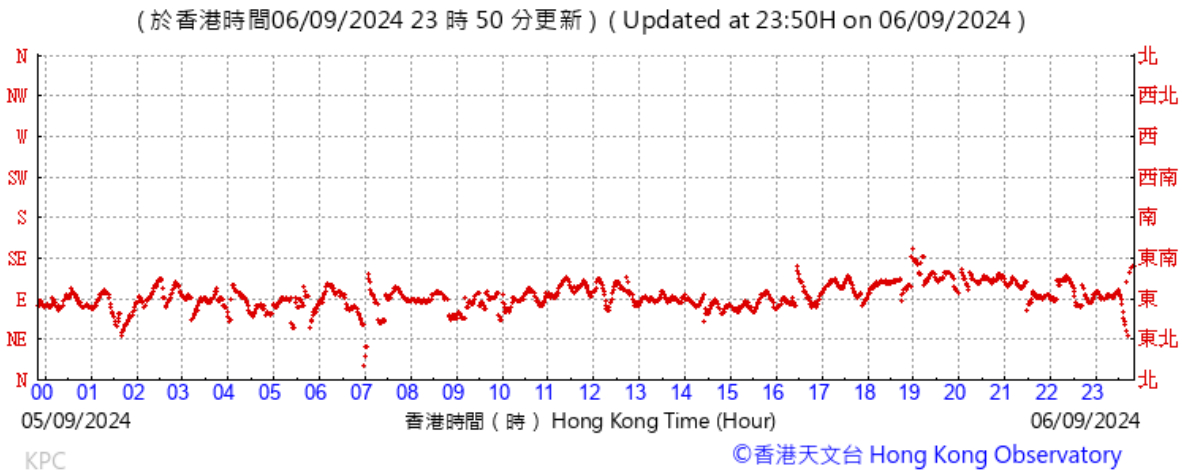
Temperature/Humidity:



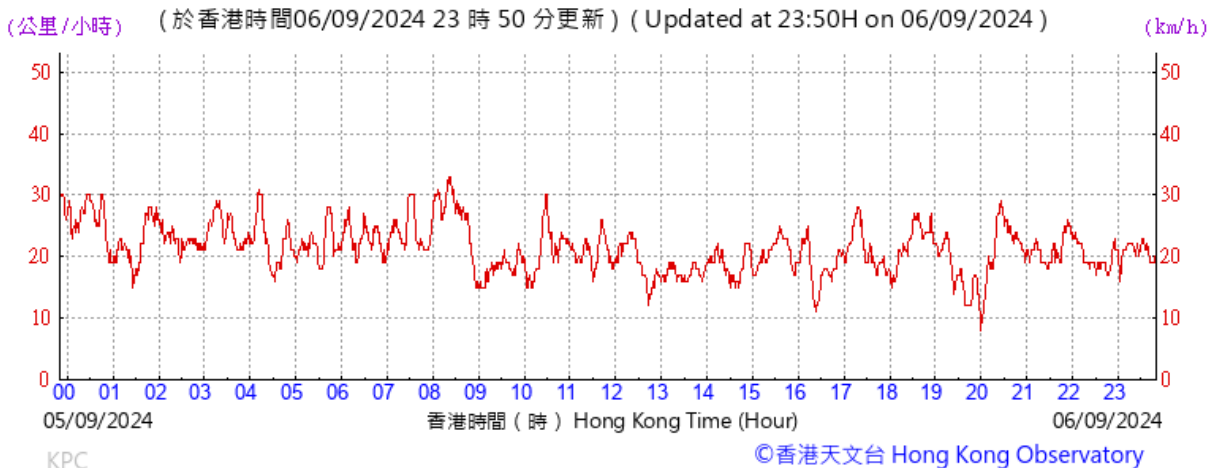
Pressure:



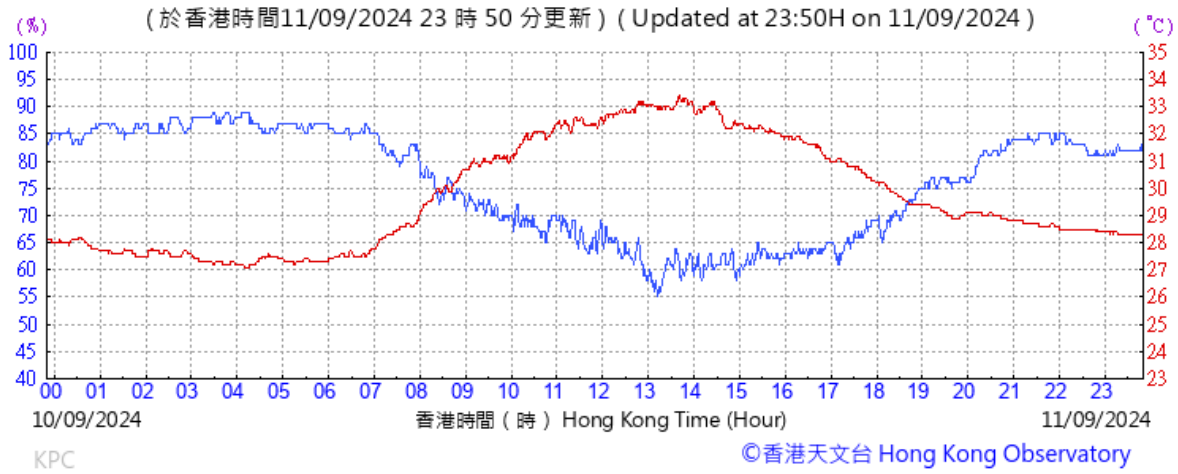
Wind Direction:



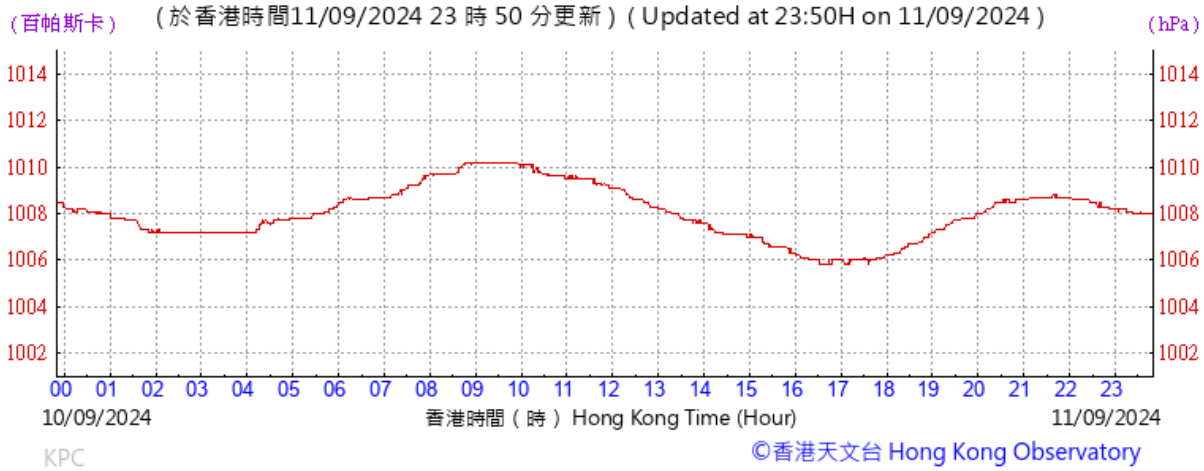
Wind Speed:



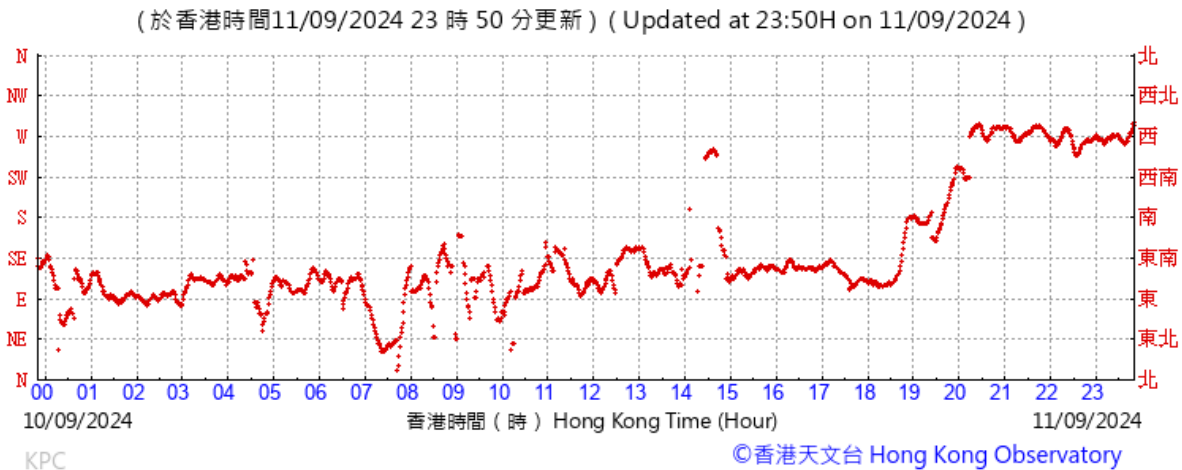
Temperature/Humidity:



Pressure:



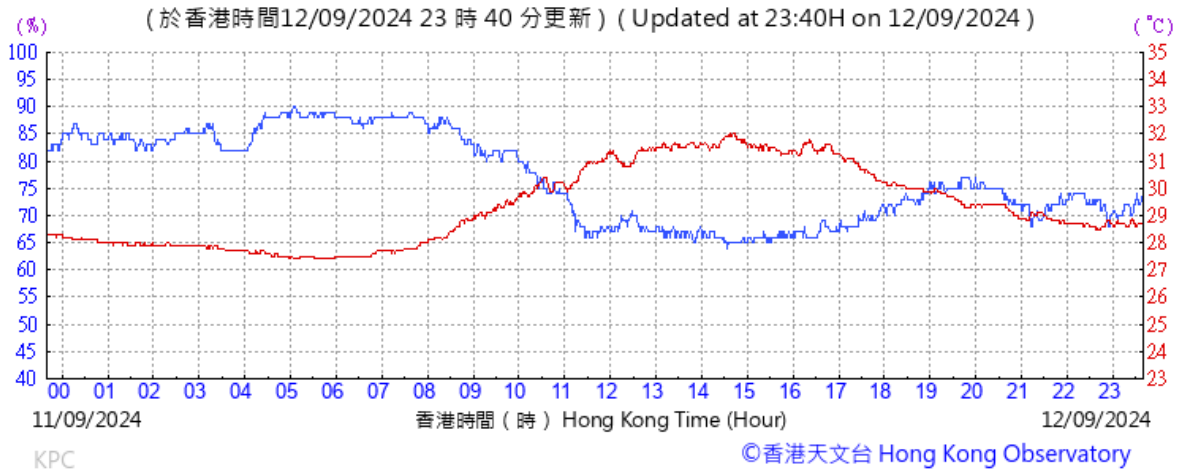
Wind Direction:



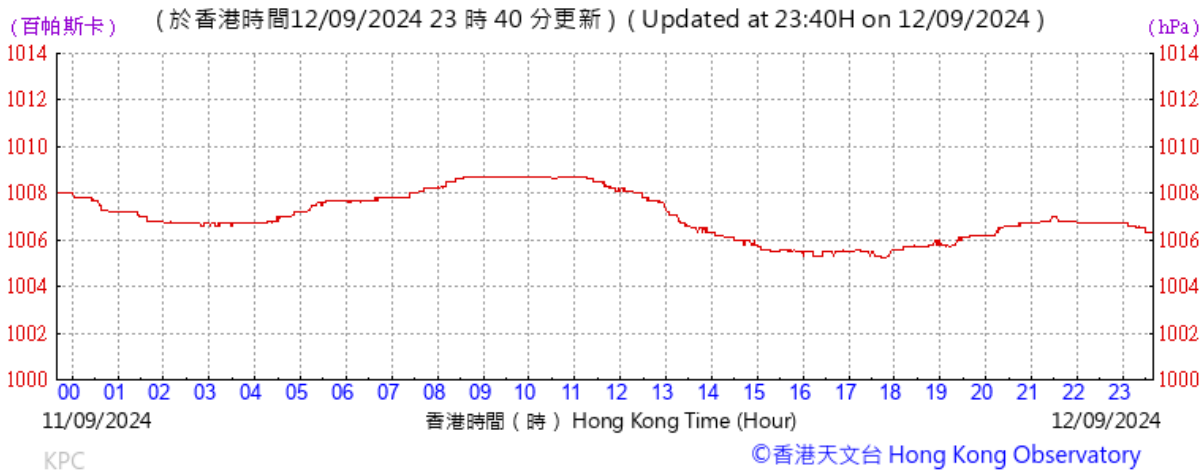
Wind Speed:



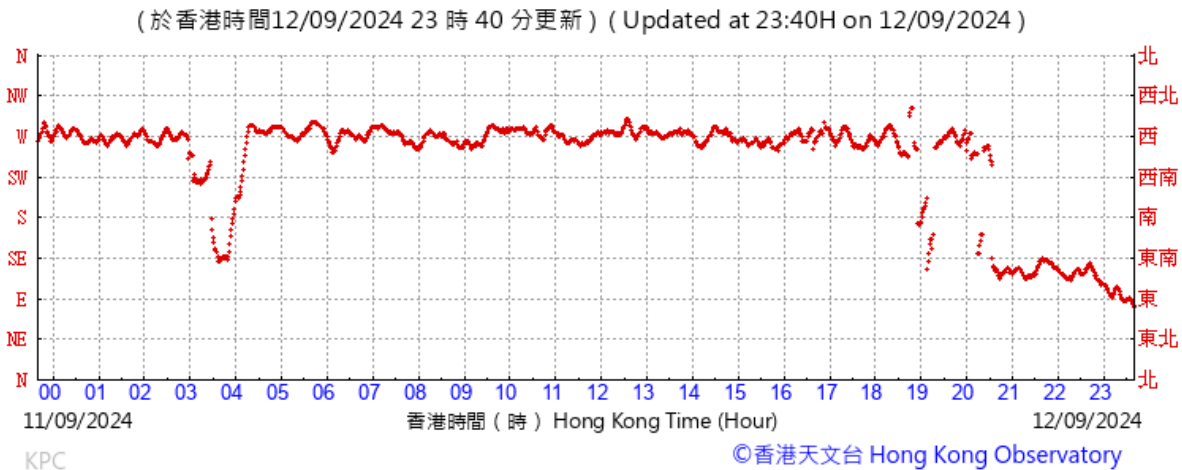
Temperature/Humidity:



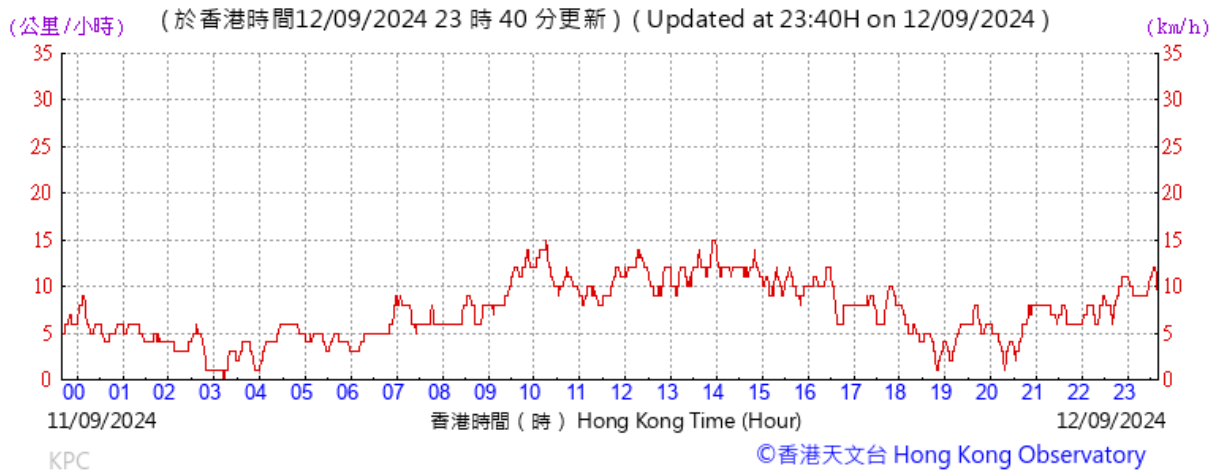
Pressure:



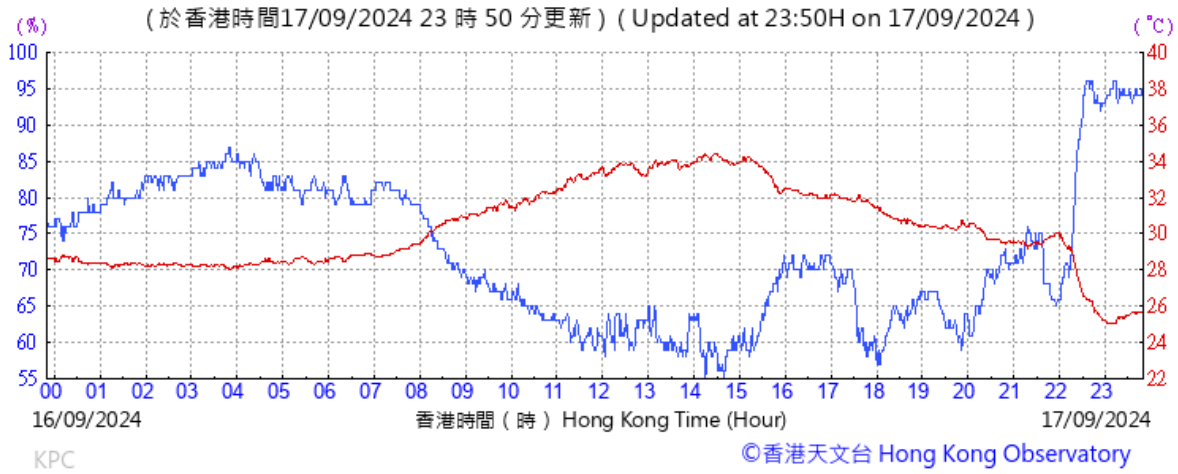
Wind Direction:



Wind Speed:



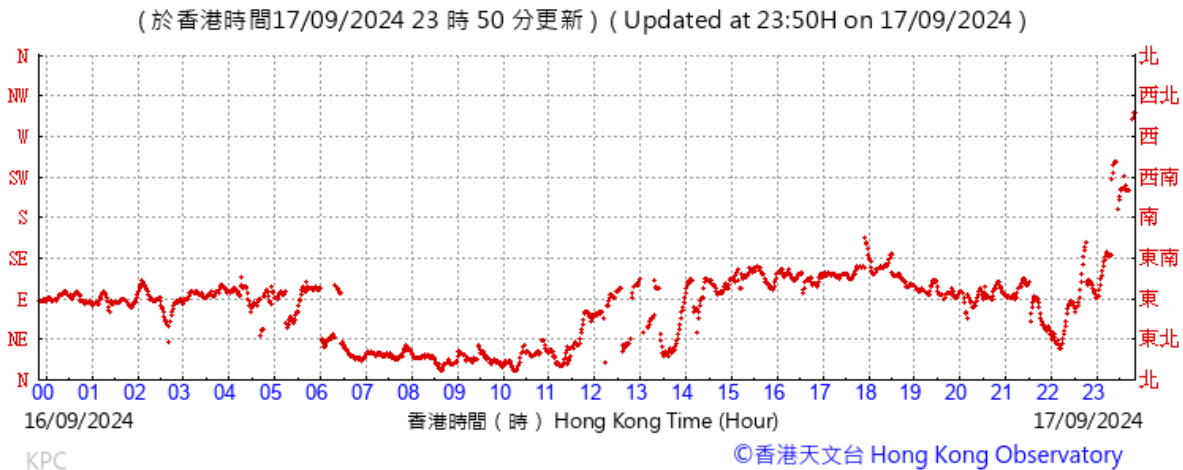
Temperature/Humidity:



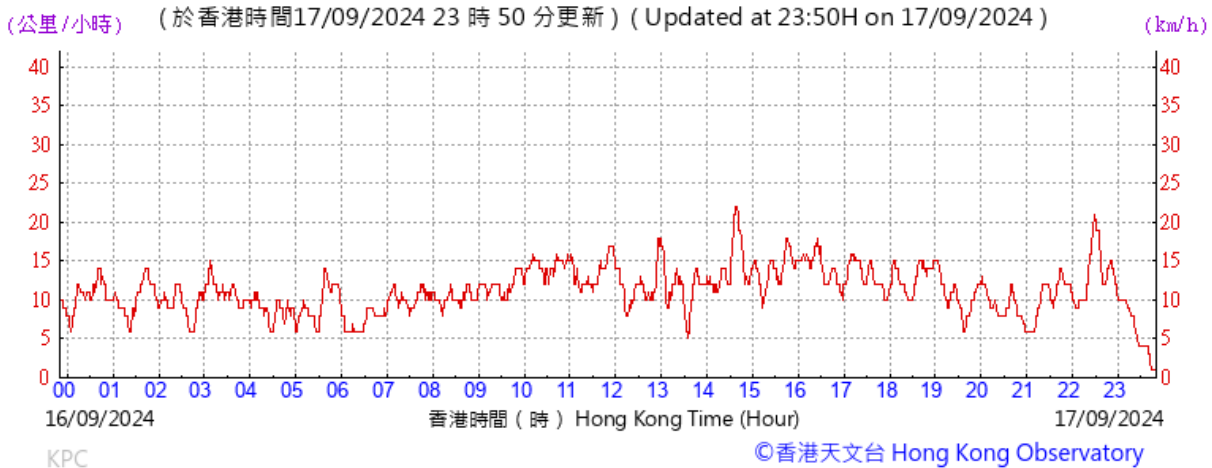
Pressure:



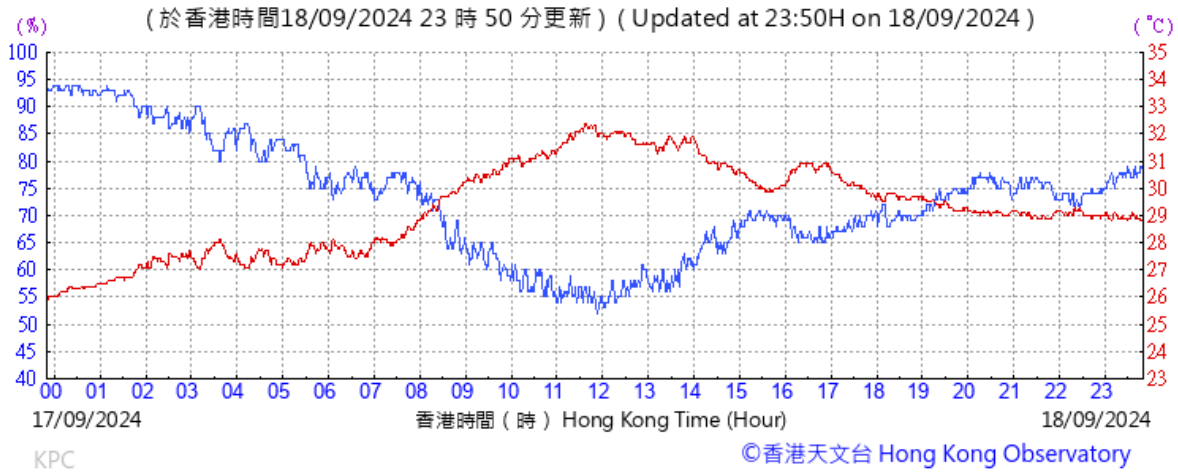
Wind Direction:



Wind Speed:



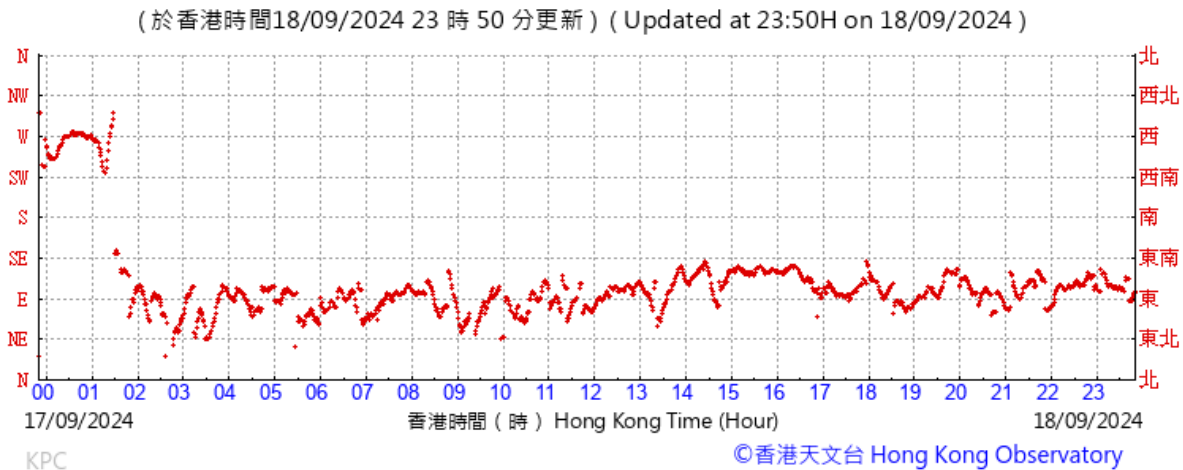
Temperature/Humidity:



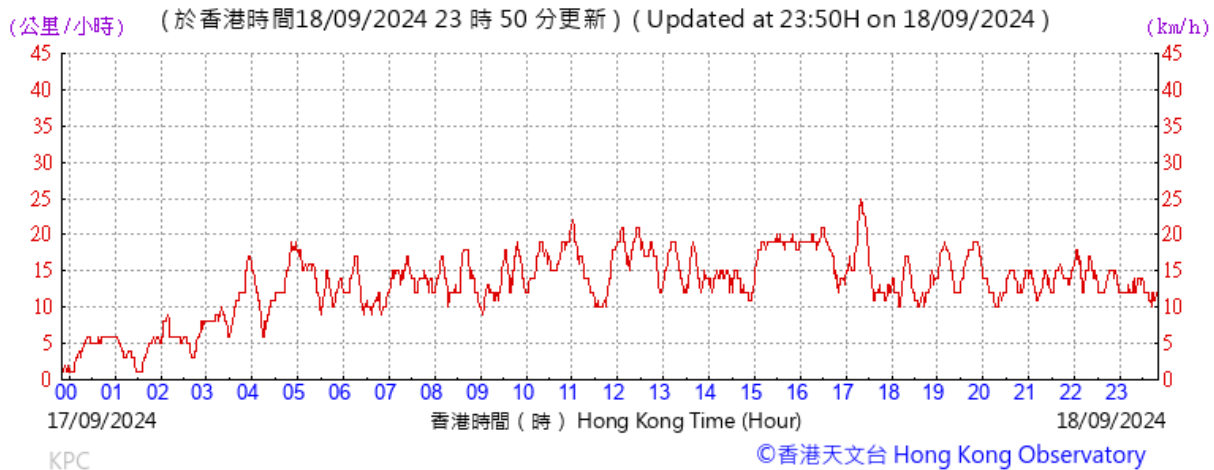
Pressure:



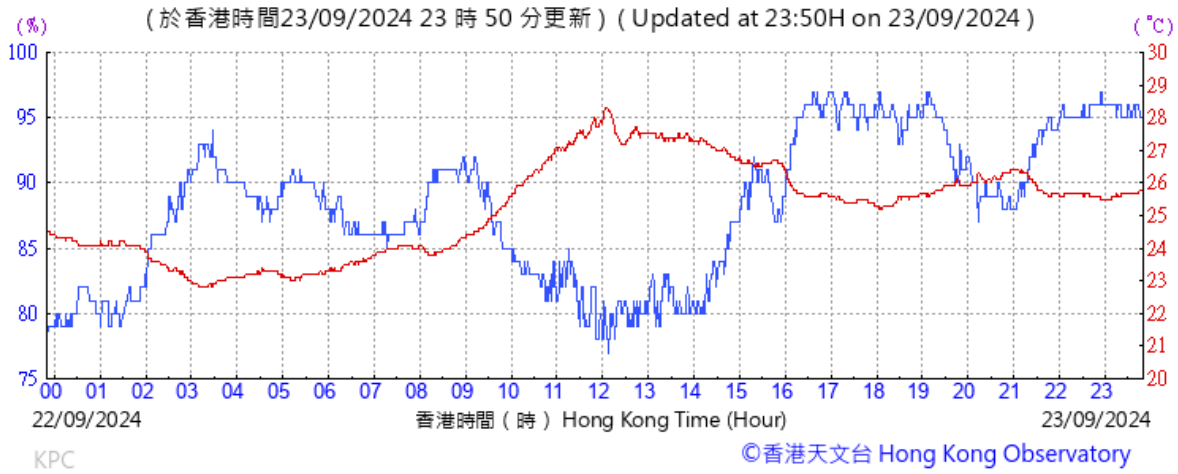
Wind Direction:



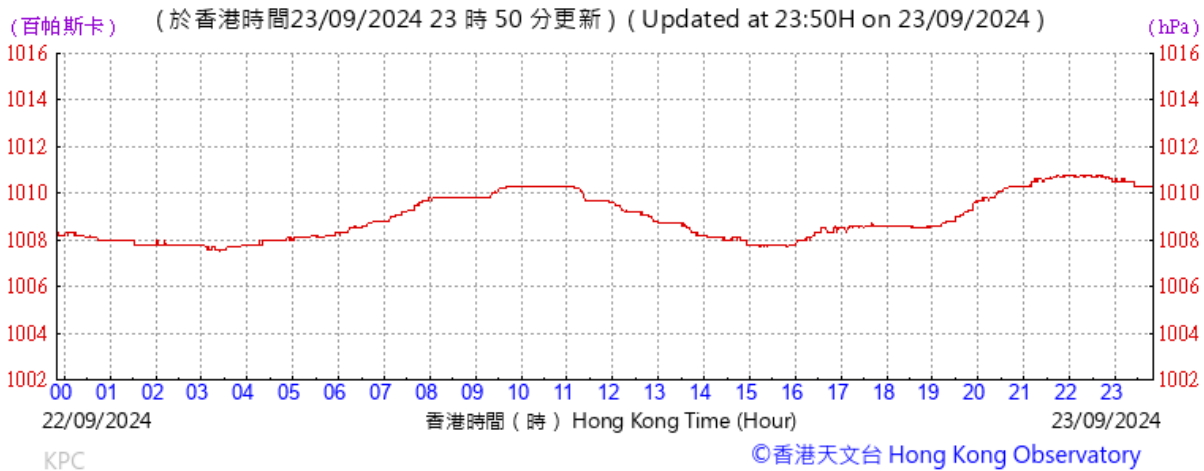
Wind Speed:



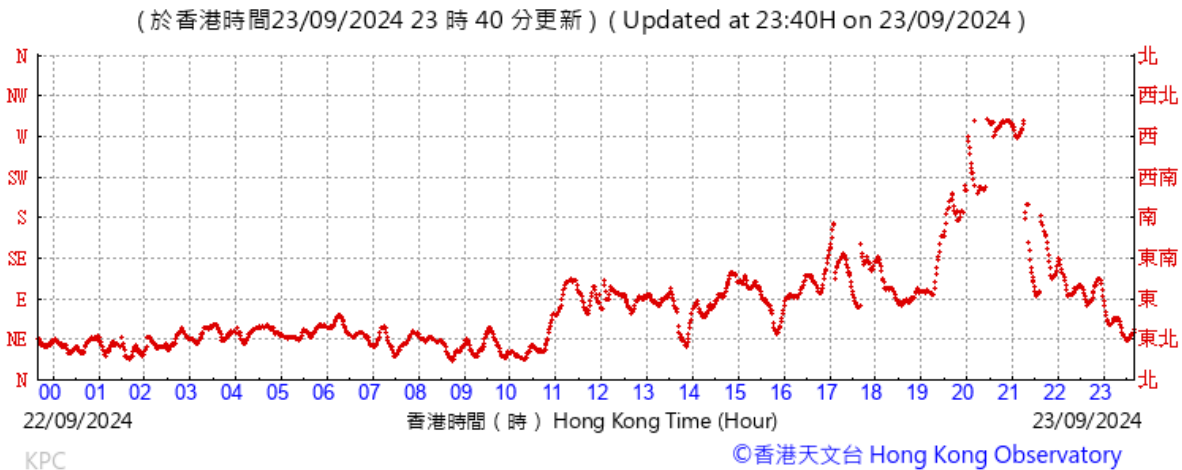
Temperature/Humidity:



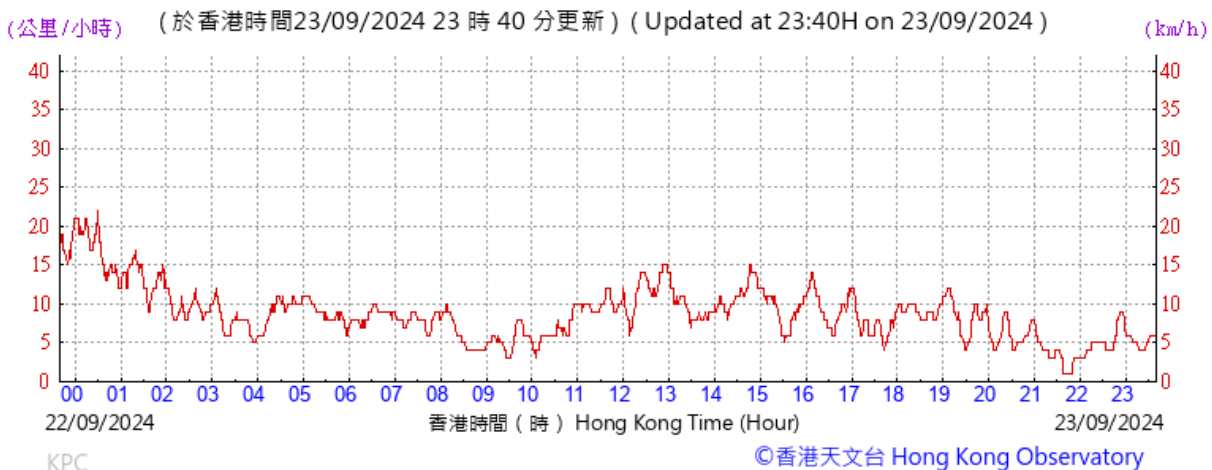
Pressure:



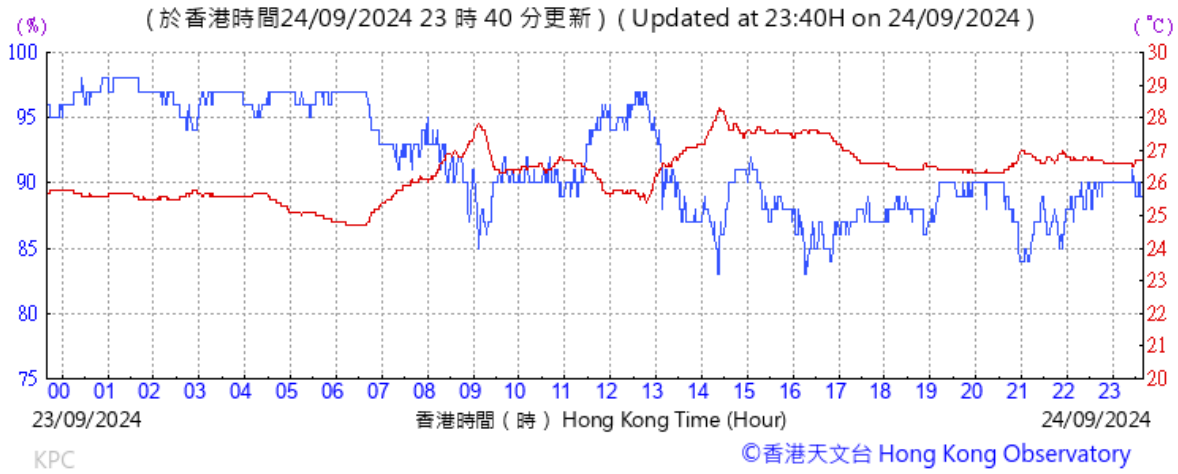
Wind Direction:



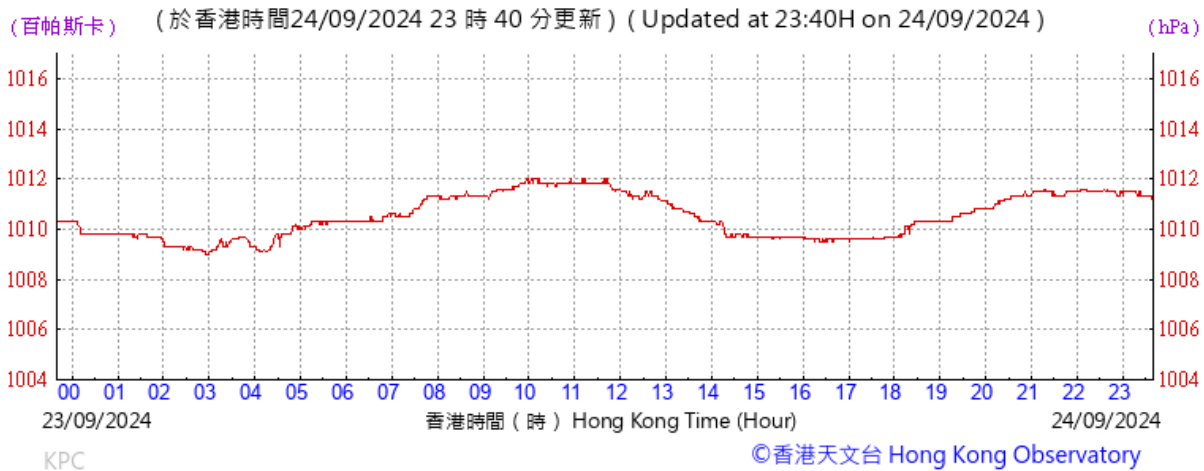
Wind Speed:



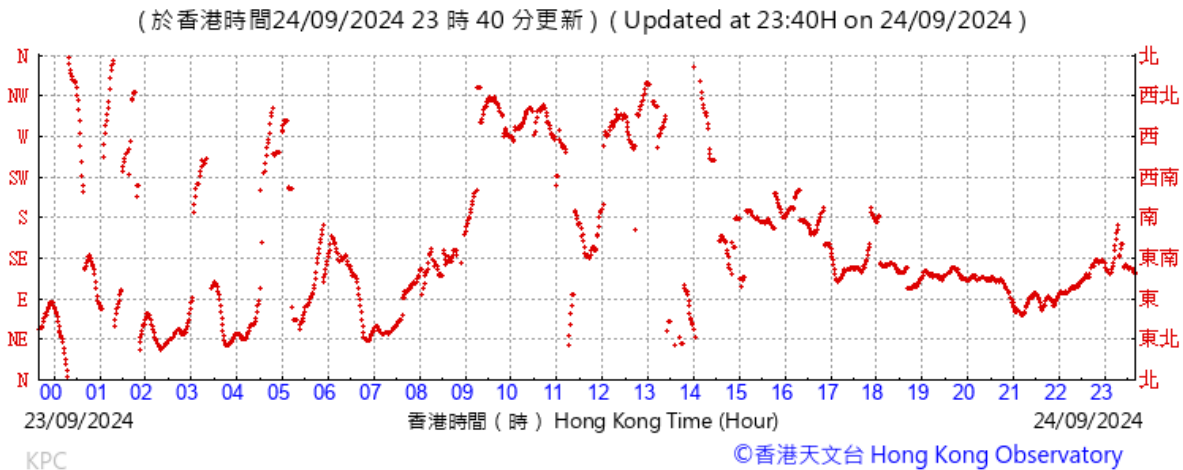
Temperature/Humidity:



Pressure:



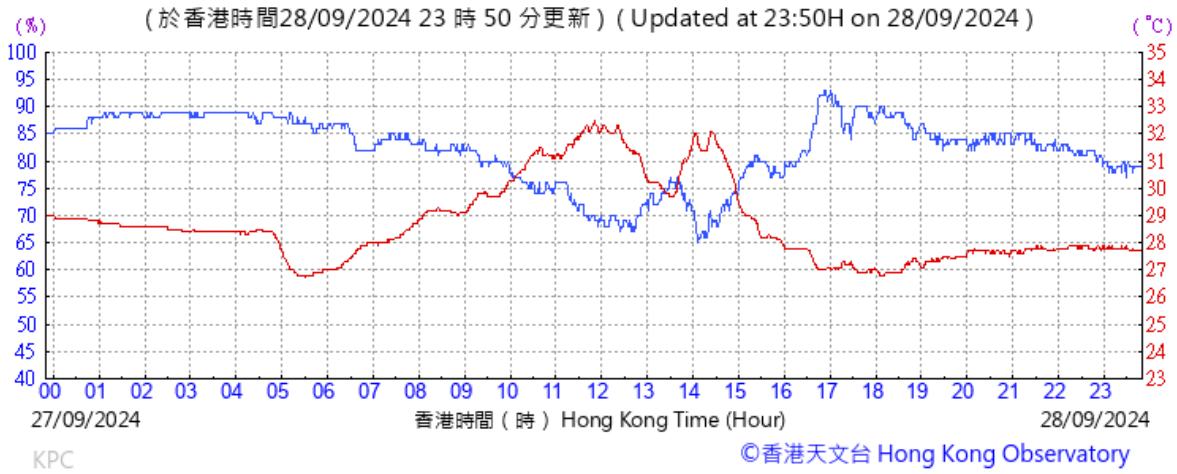
Wind Direction:



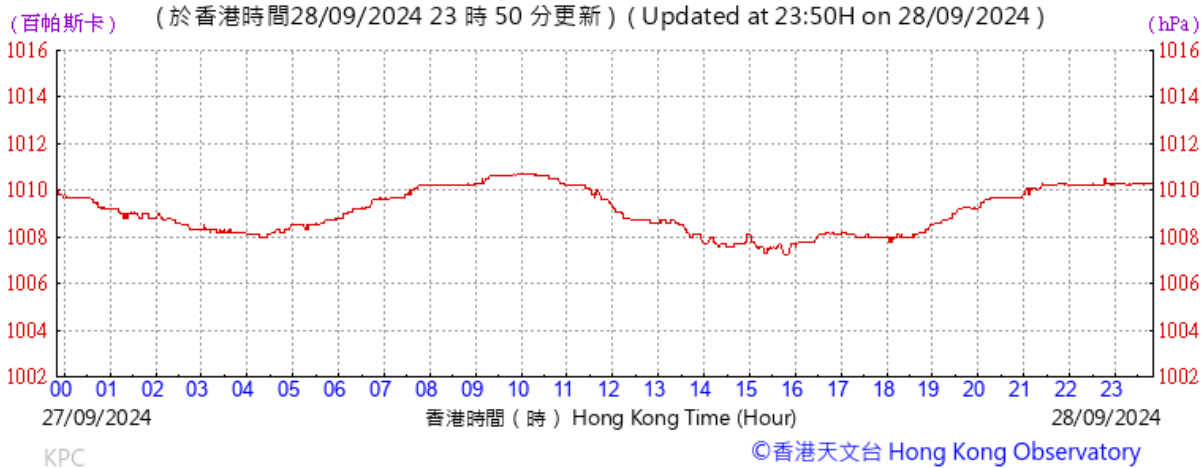
Wind Speed:



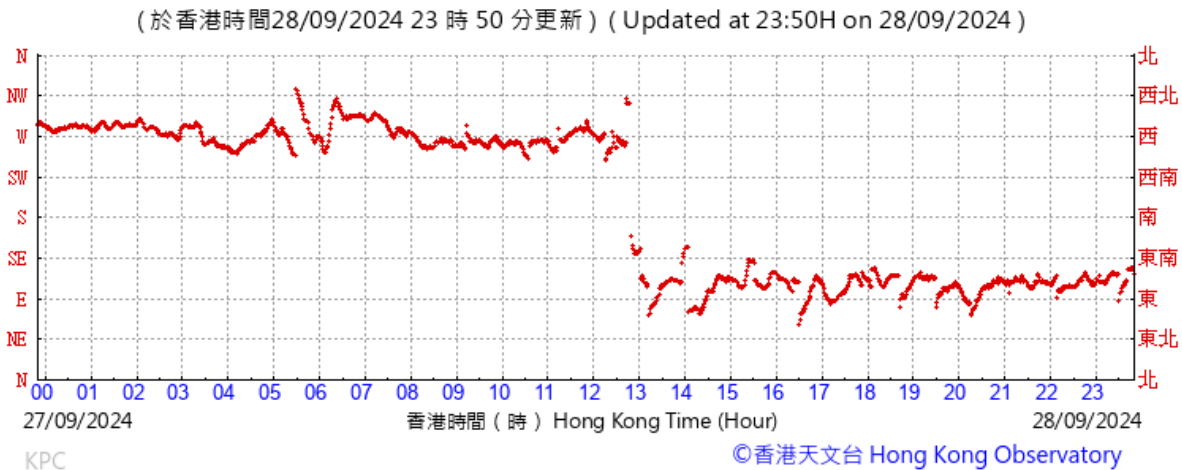
Temperature/Humidity:



Pressure:



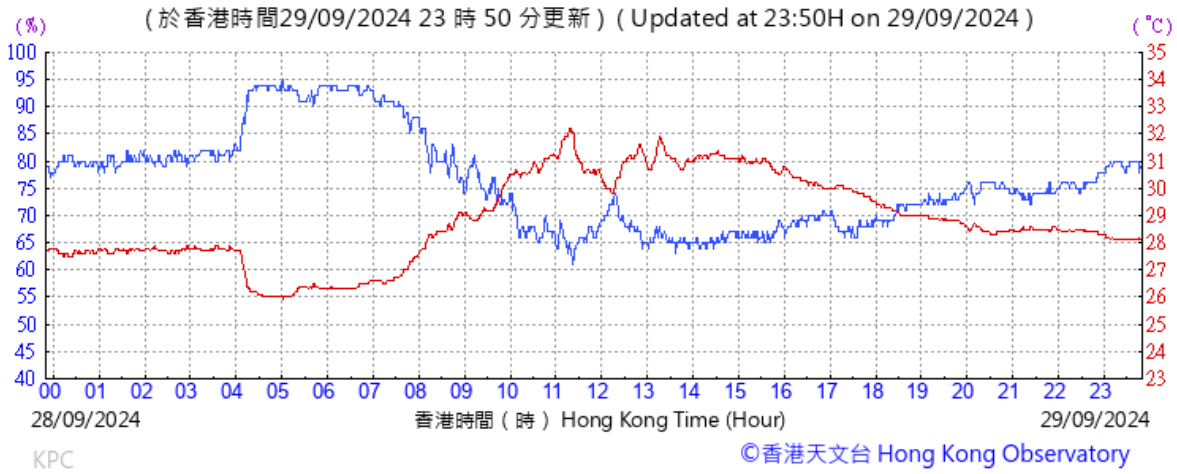
Wind Direction:



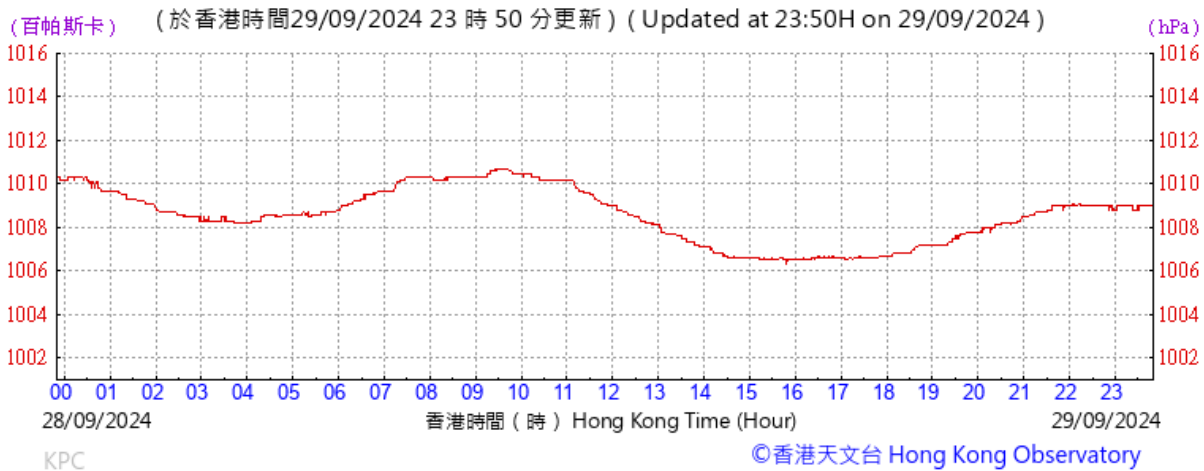
Wind Speed:



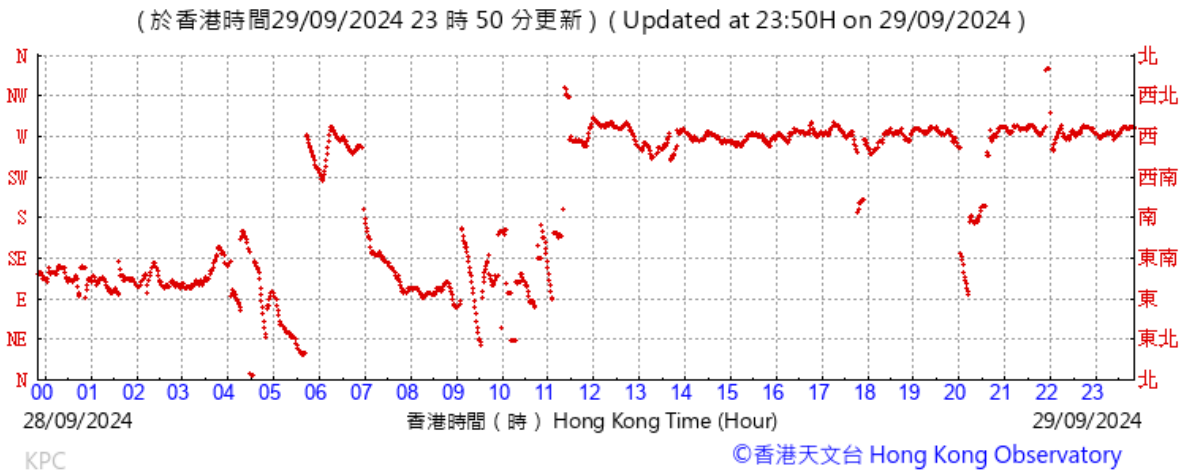
Temperature/Humidity:



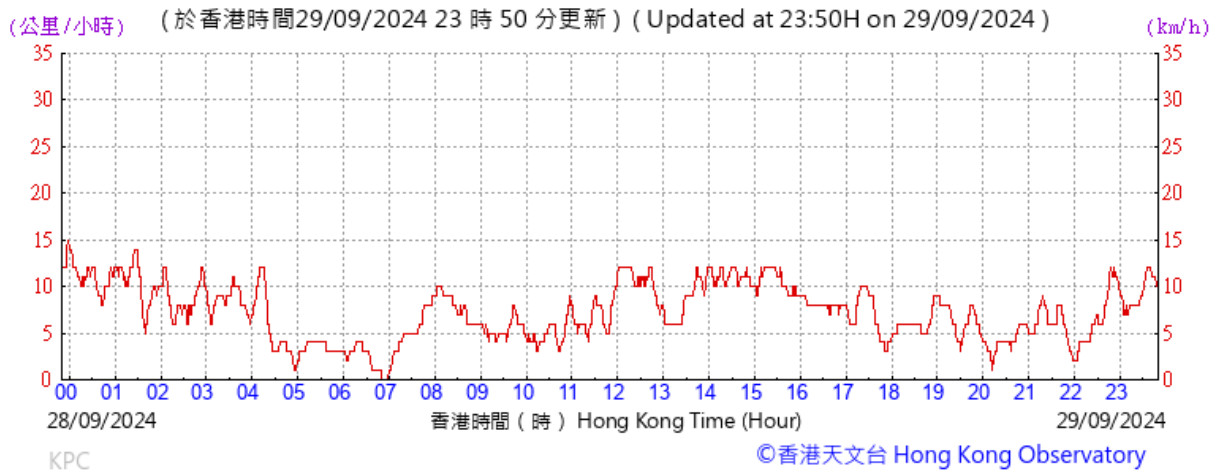
Pressure:



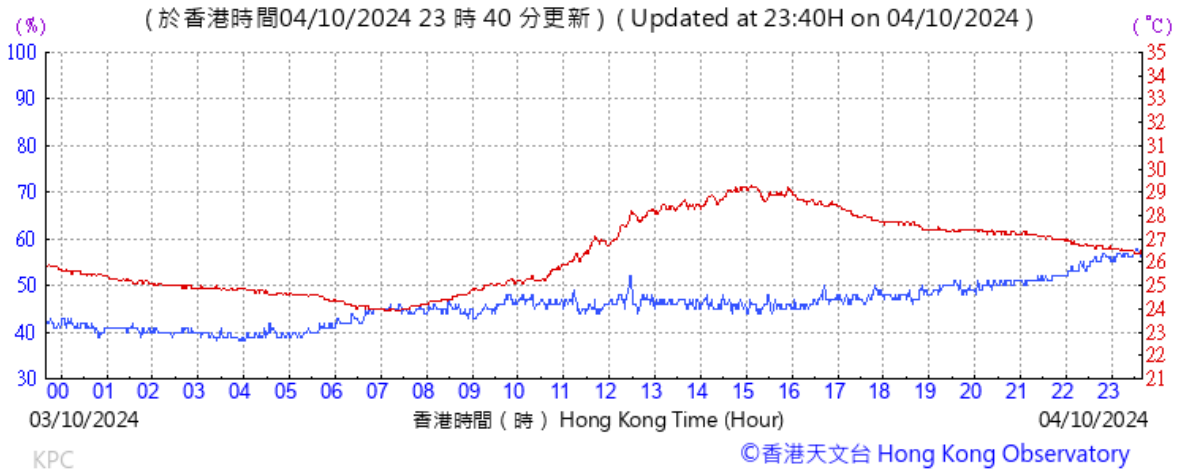
Wind Direction:



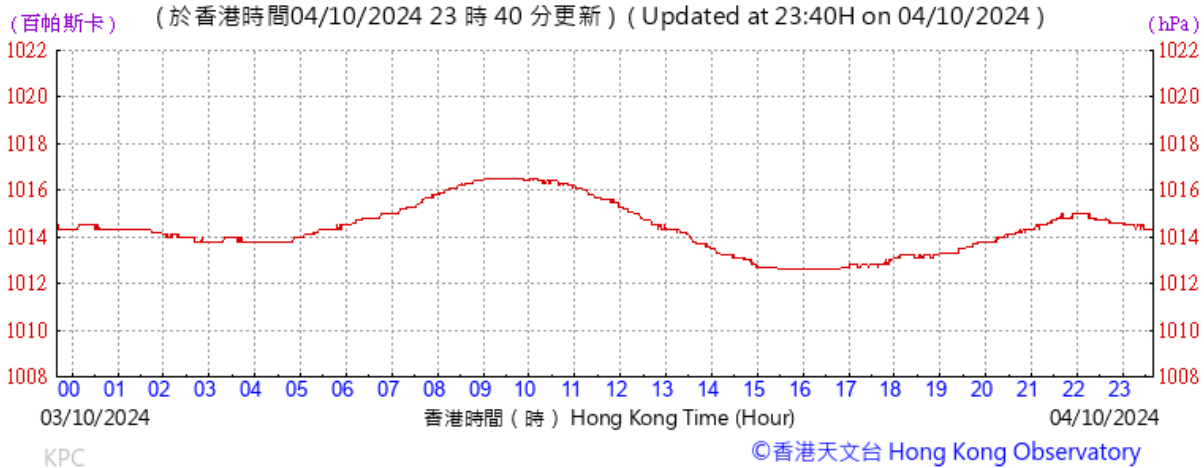
Wind Speed:



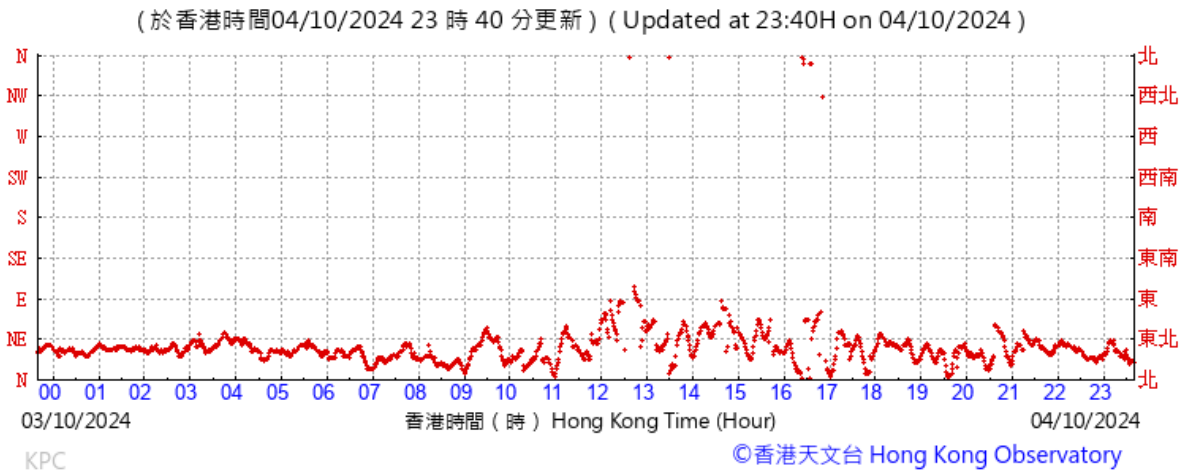
Temperature/Humidity:



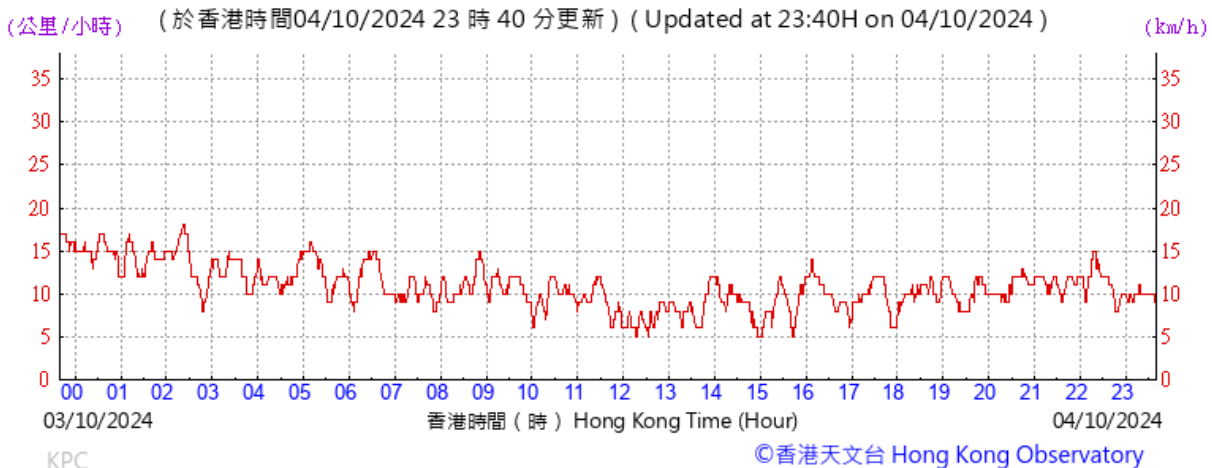
Pressure:



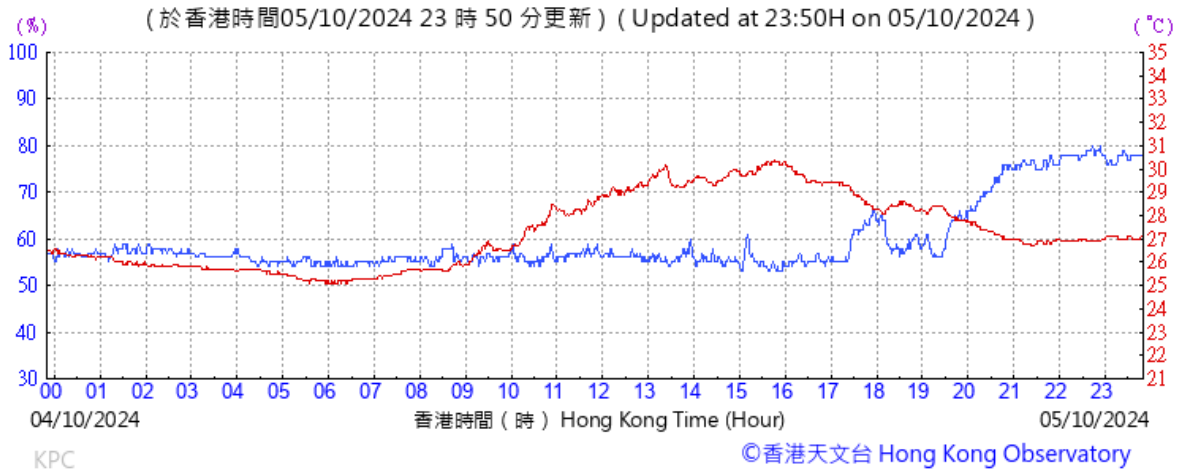
Wind Direction:



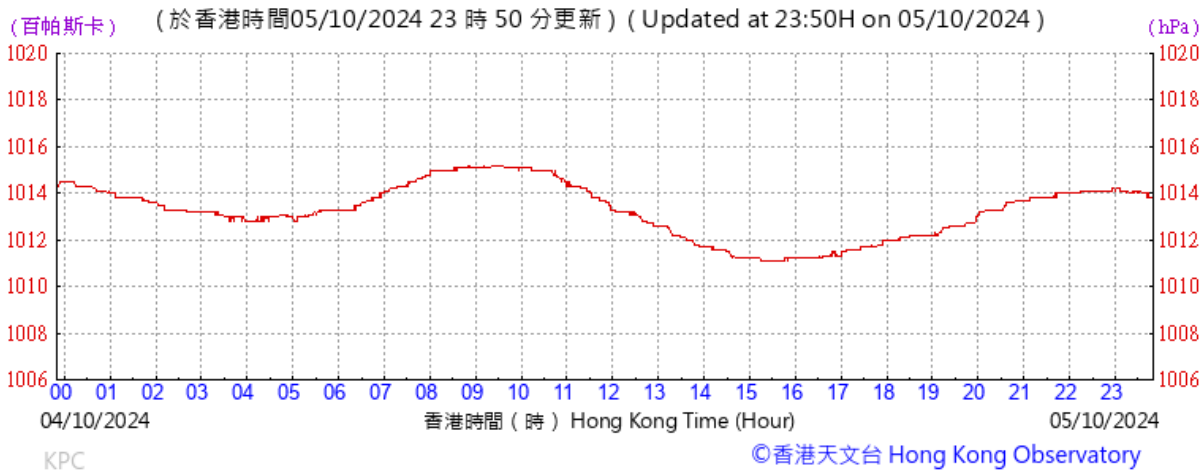
Wind Speed:



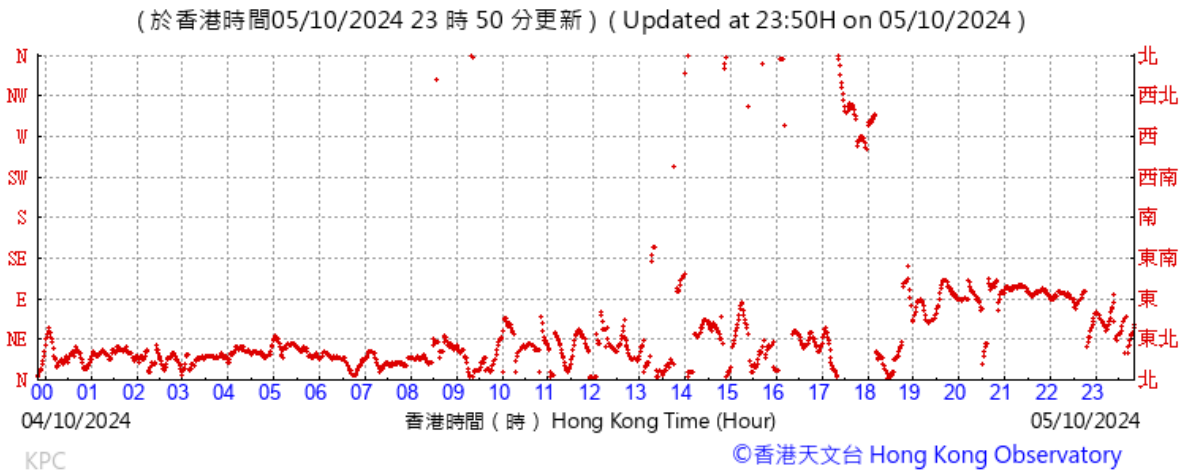
Temperature/Humidity:



Pressure:



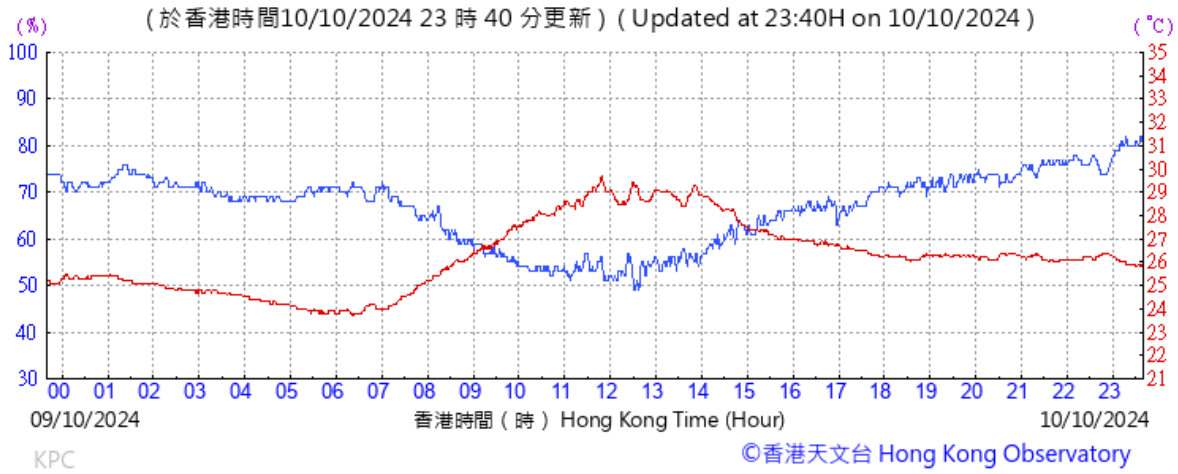
Wind Direction:



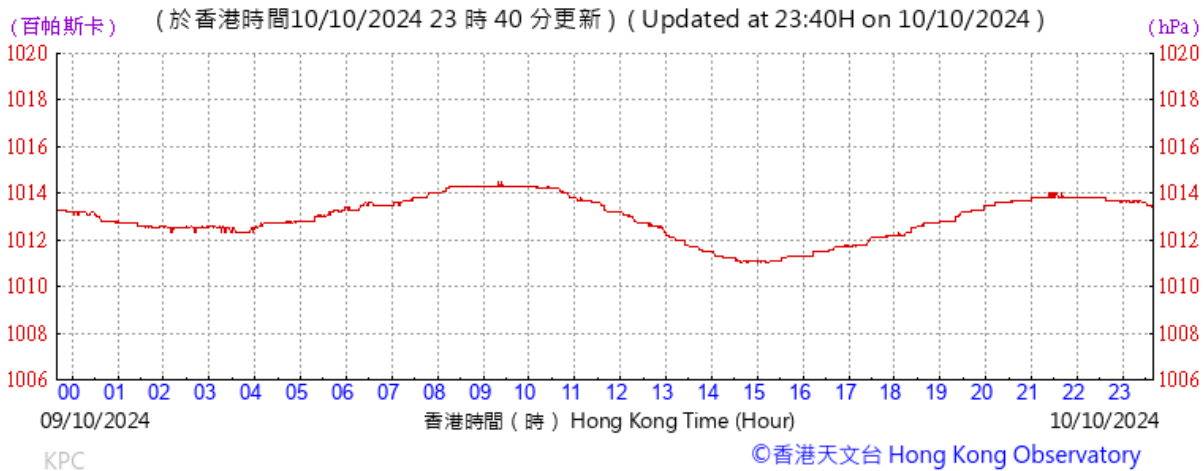
Wind Speed:



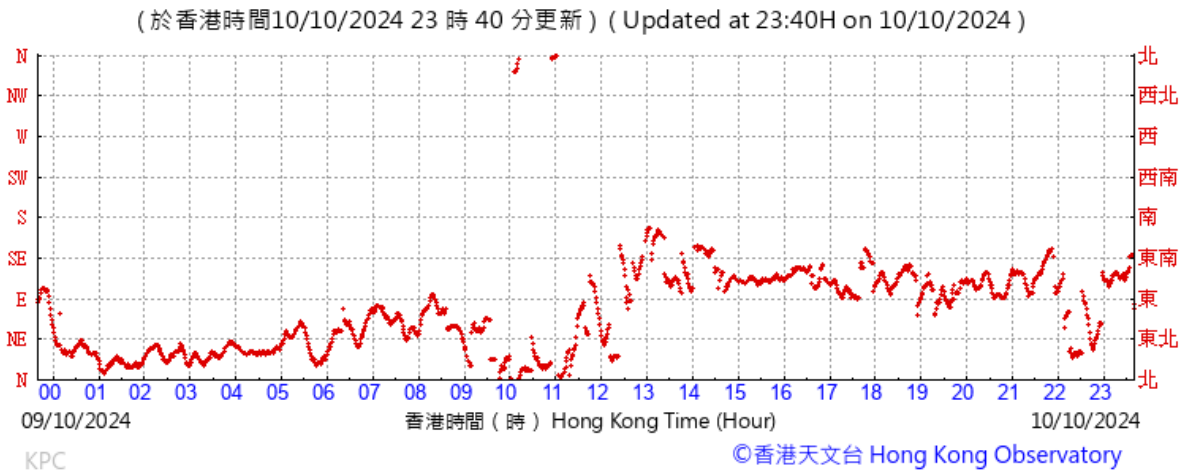
Temperature/Humidity:



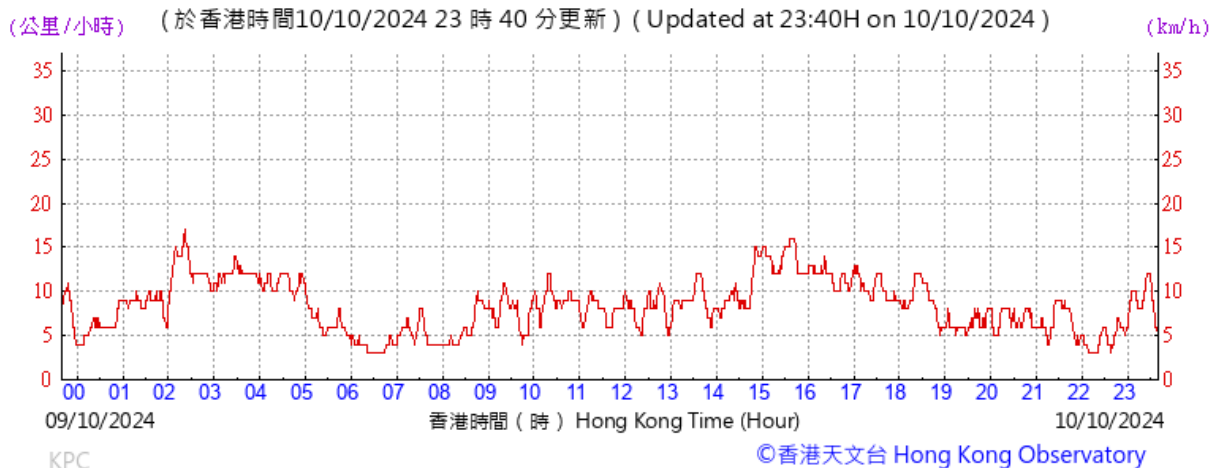
Pressure:



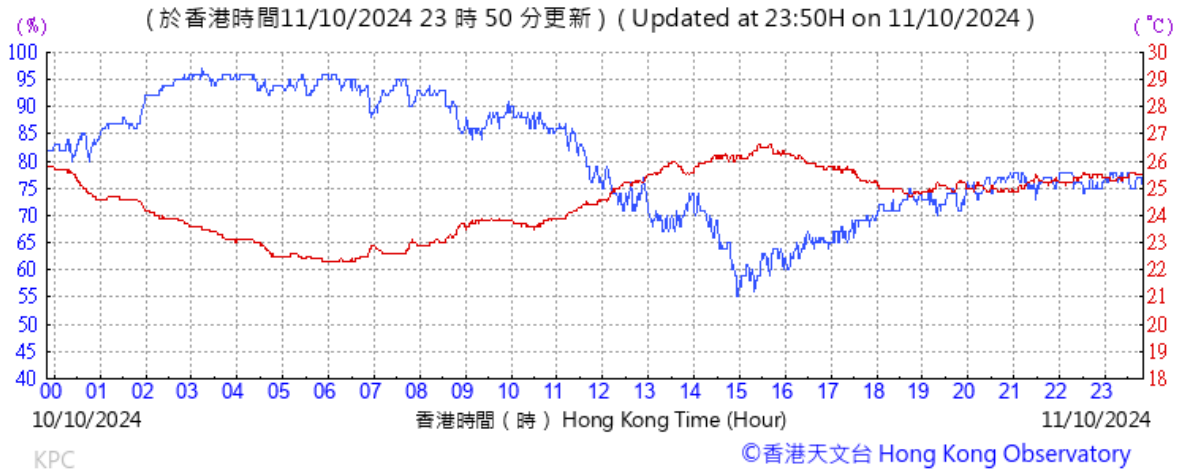
Wind Direction:



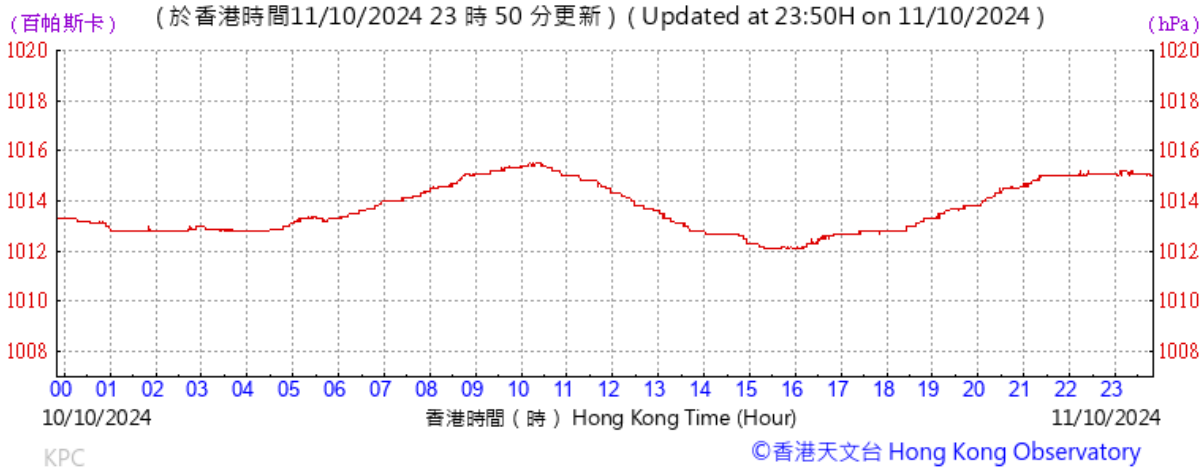
Wind Speed:



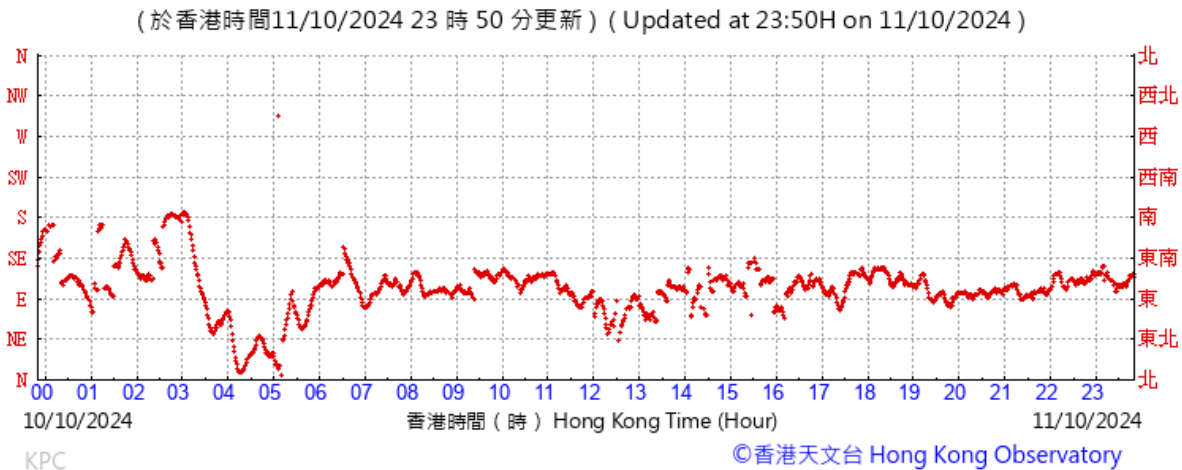
Temperature/Humidity:



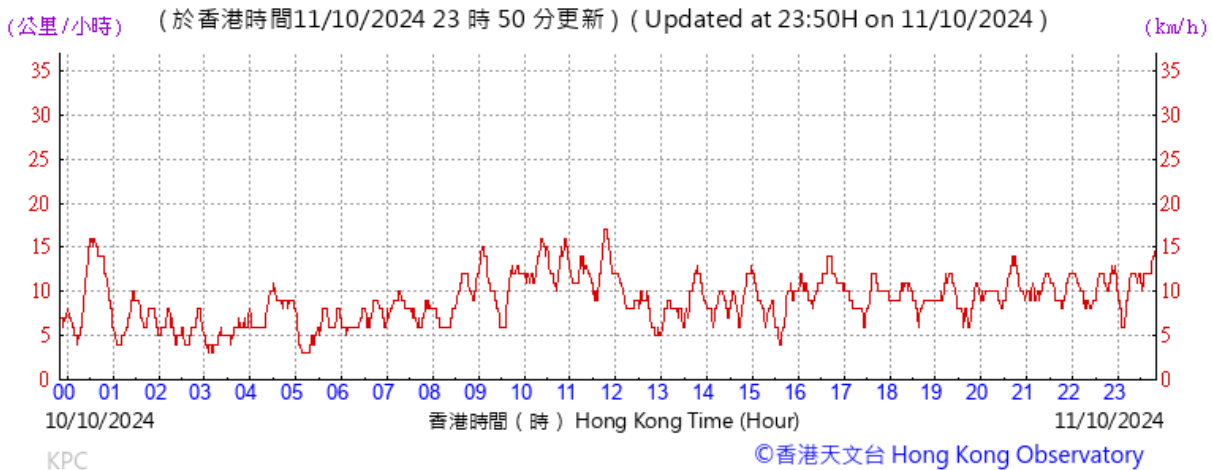
Pressure:



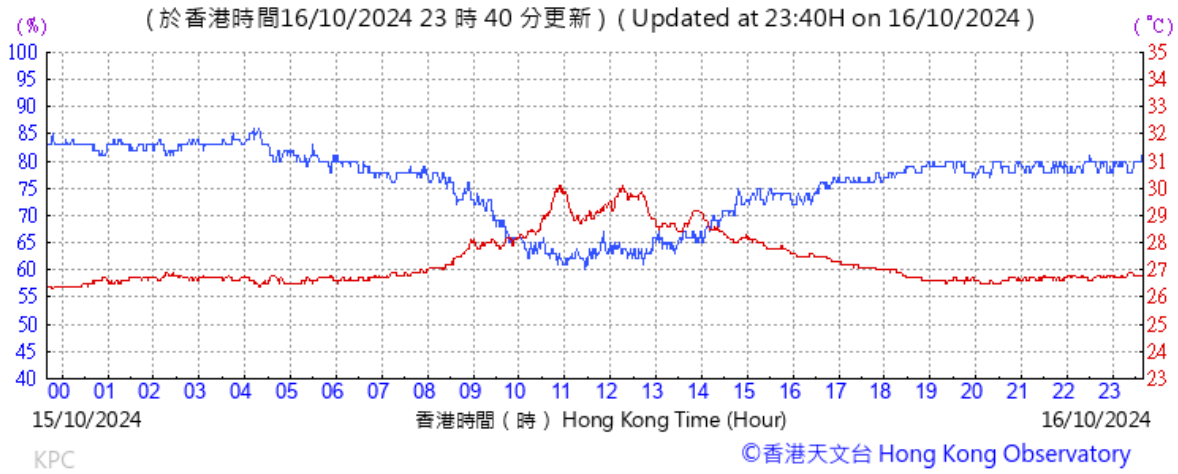
Wind Direction:



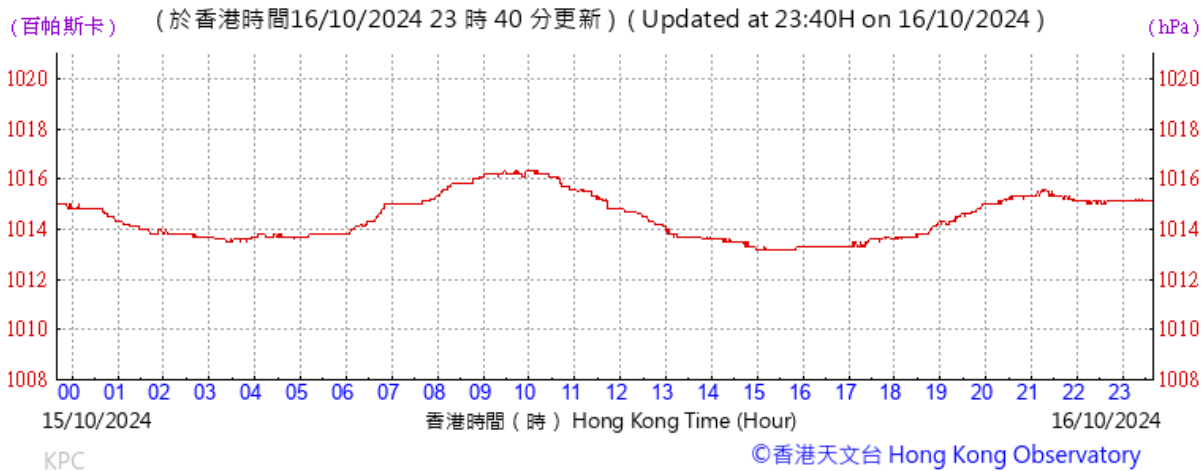
Wind Speed:



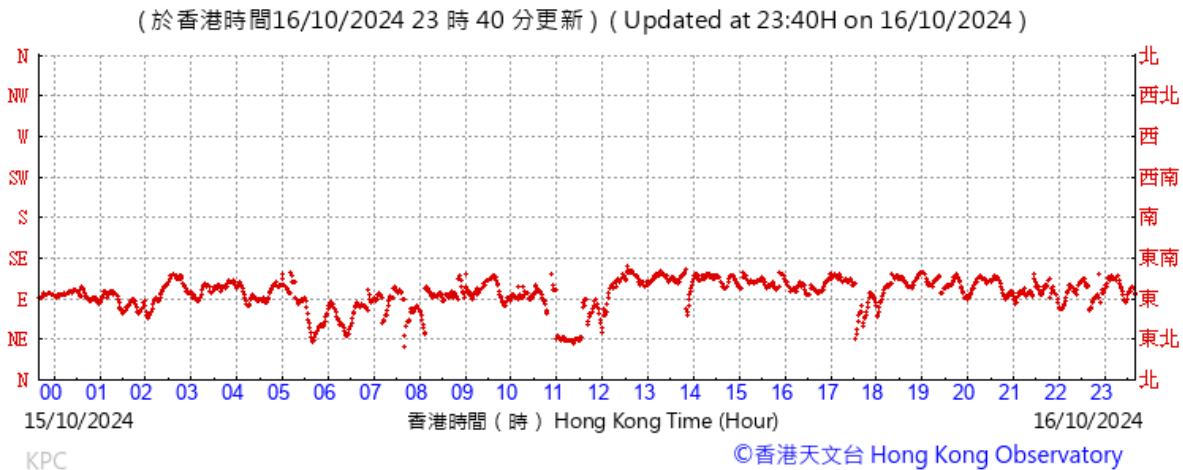
Temperature/Humidity:



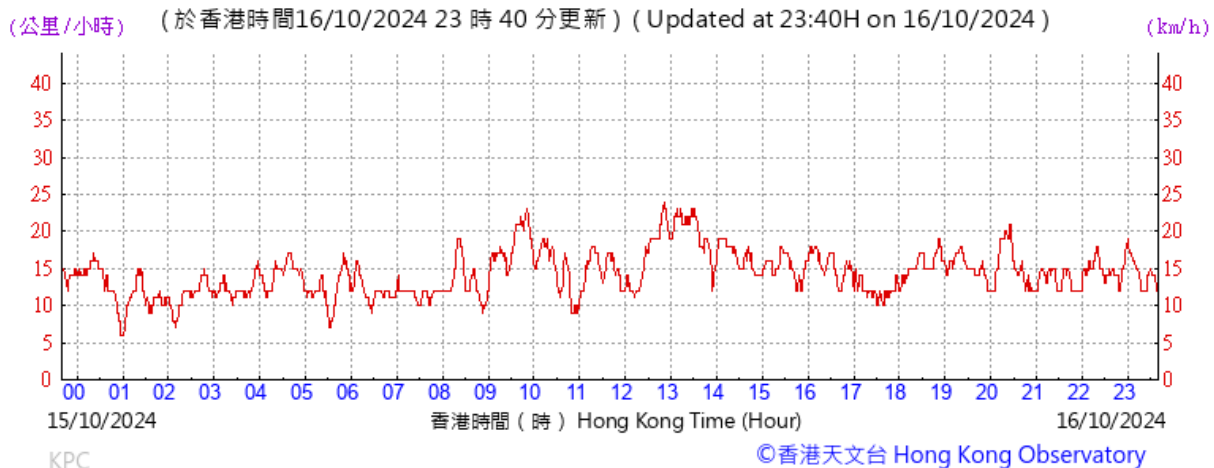
Pressure:



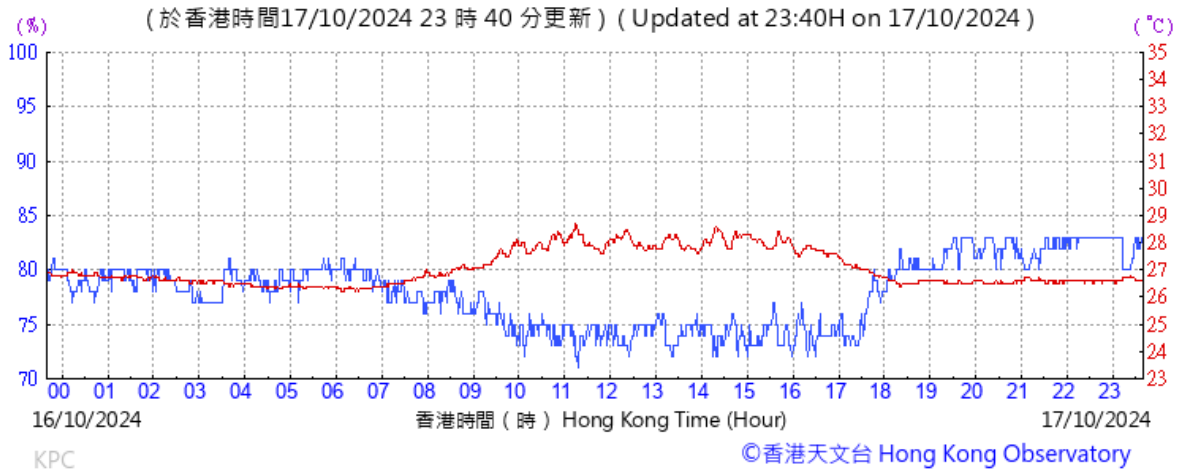
Wind Direction:



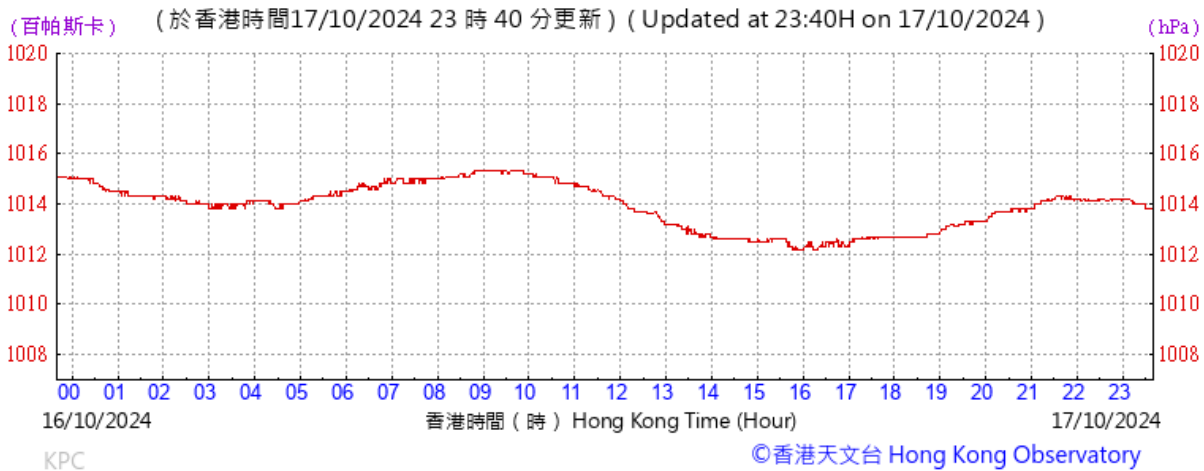
Wind Speed:



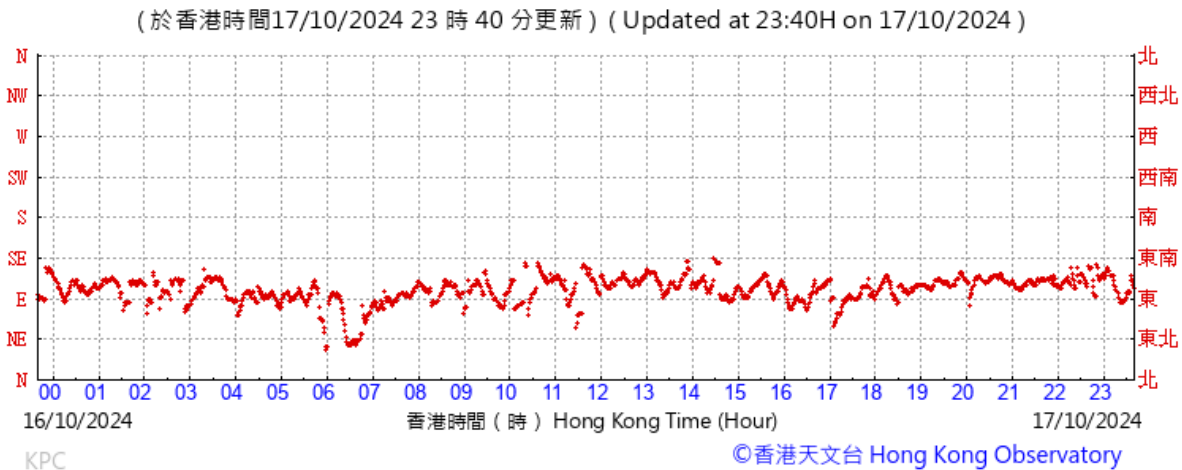
Temperature/Humidity:



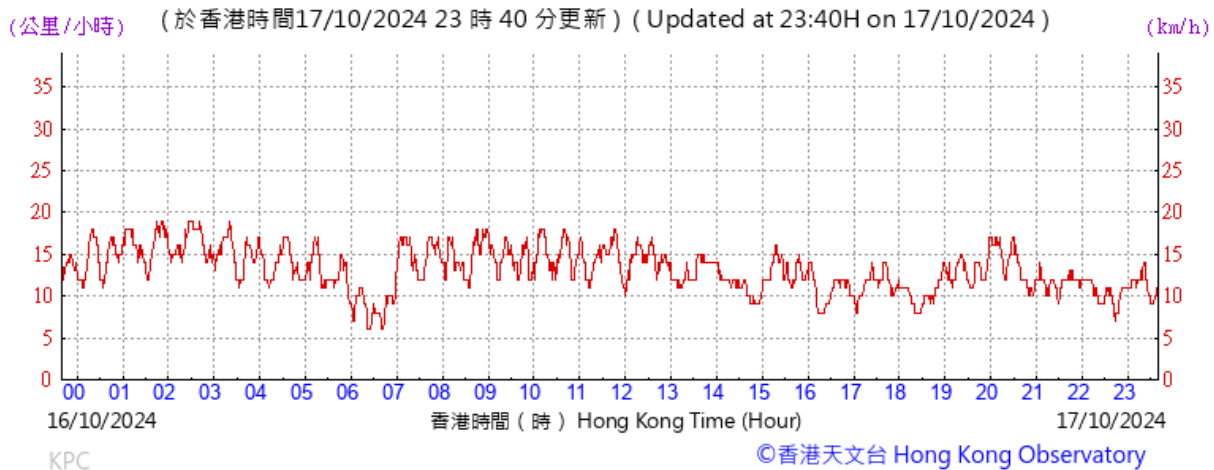
Pressure:



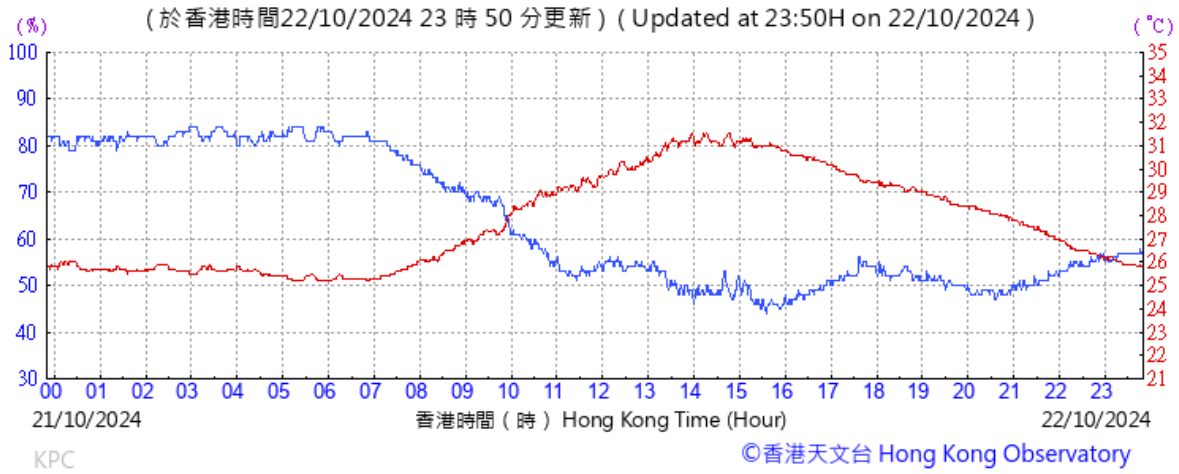
Wind Direction:



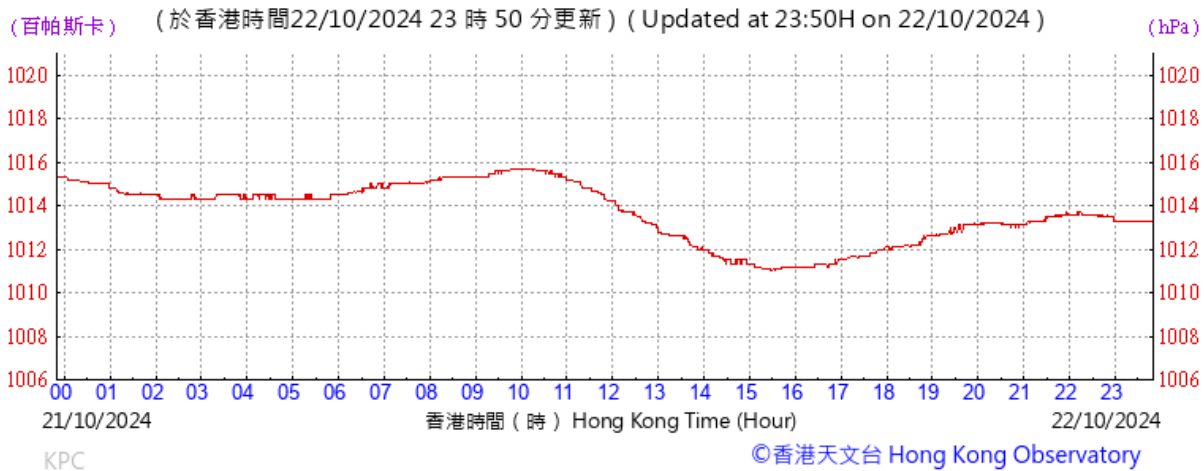
Wind Speed:



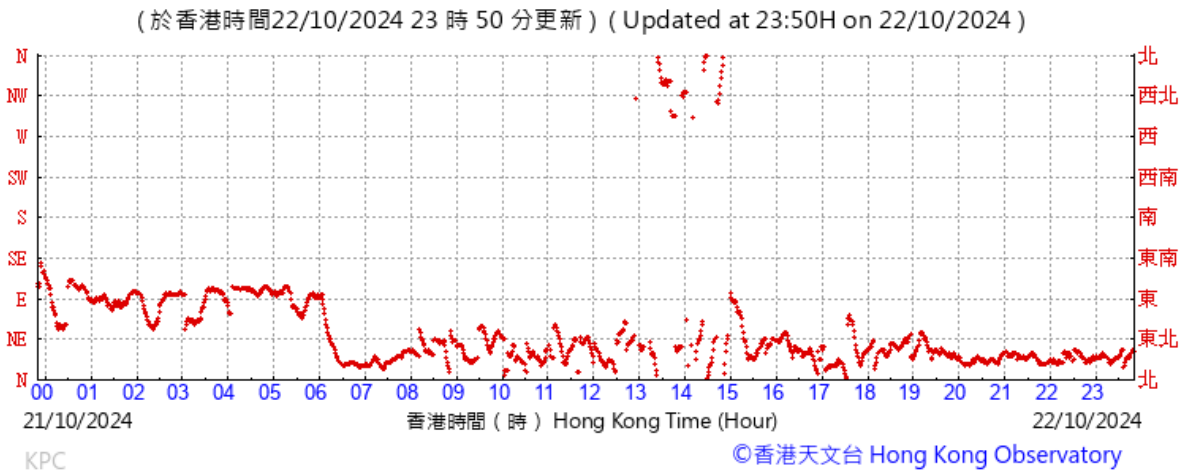
Temperature/Humidity:



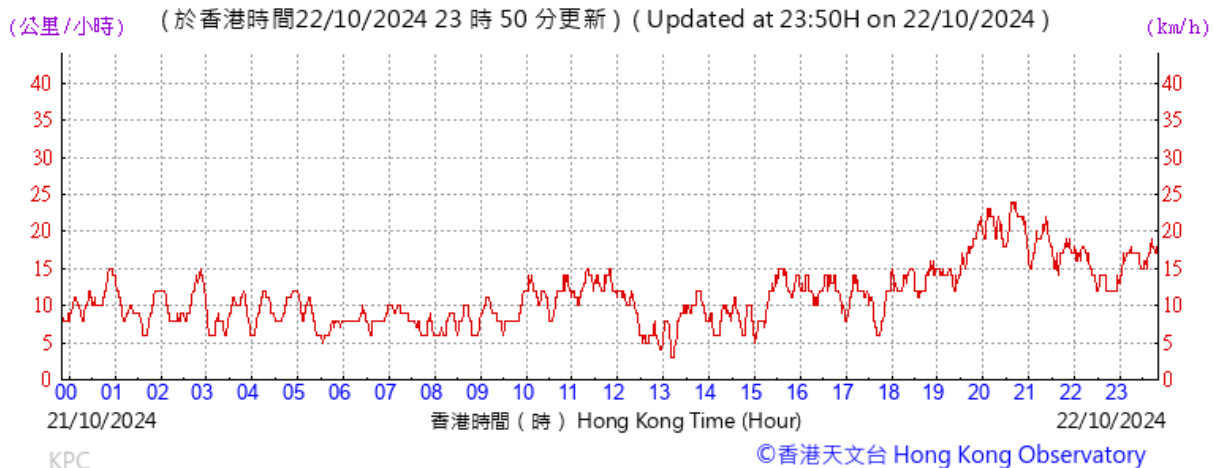
Pressure:



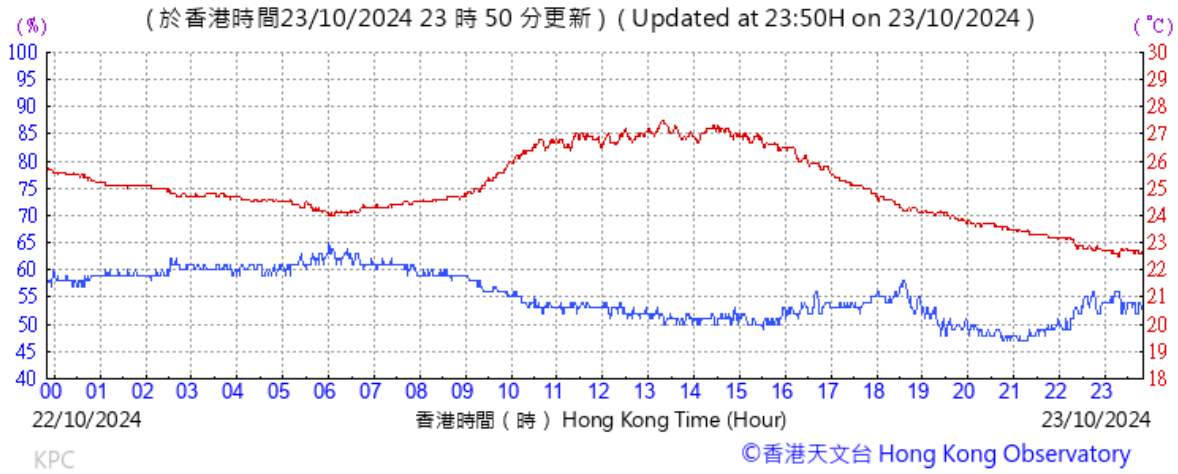
Wind Direction:



Wind Speed:



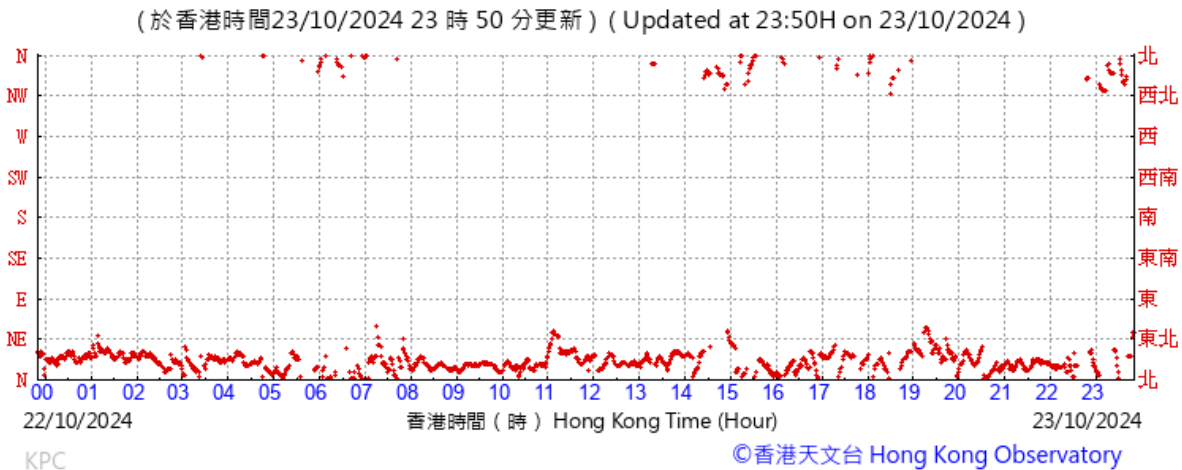
Temperature/Humidity:



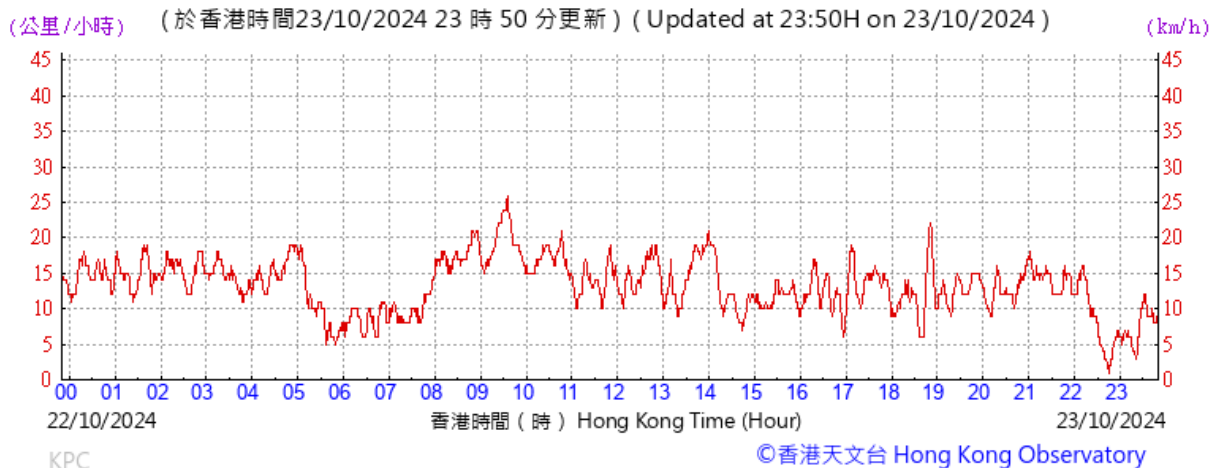
Pressure:



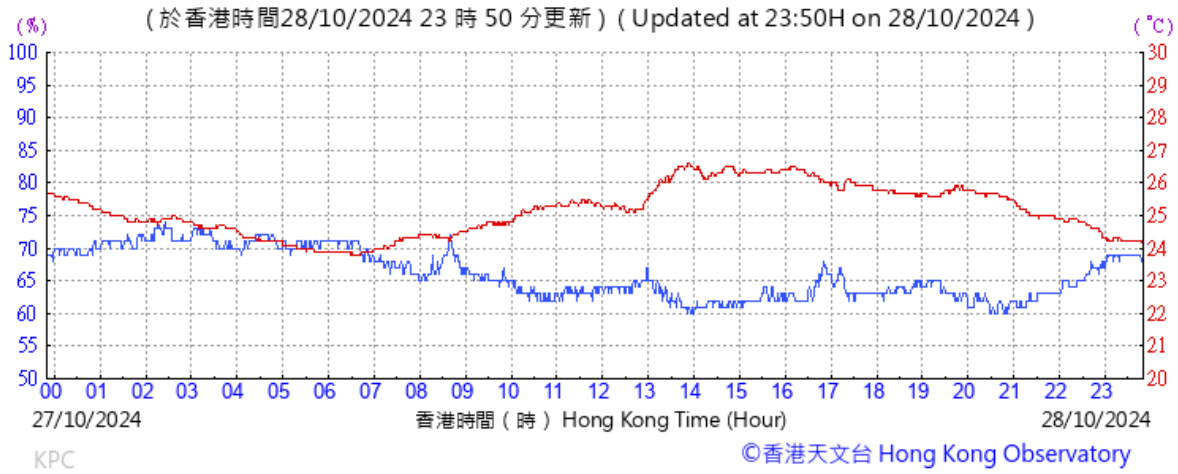
Wind Direction:



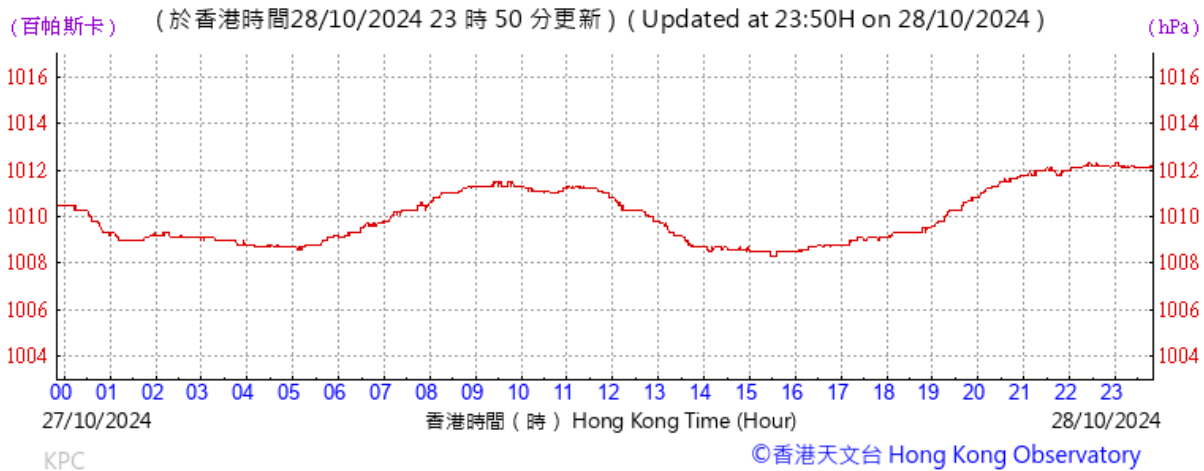
Wind Speed:



Temperature/Humidity:



Pressure:



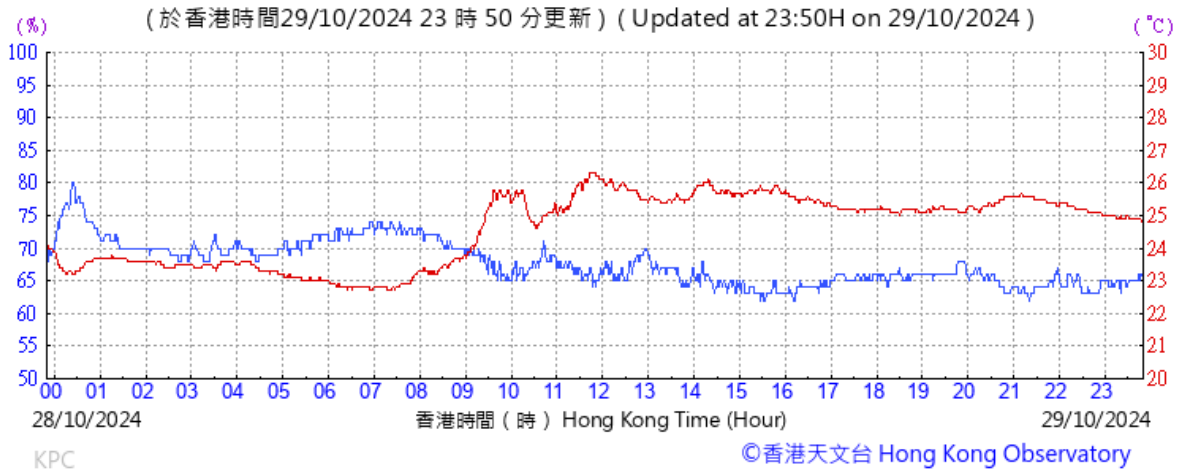
Wind Direction:



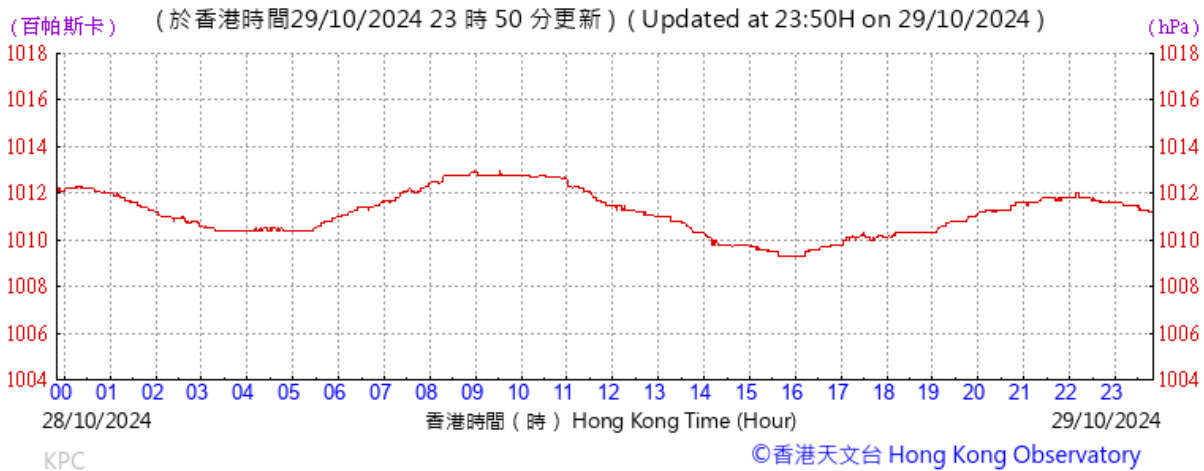
Wind Speed:



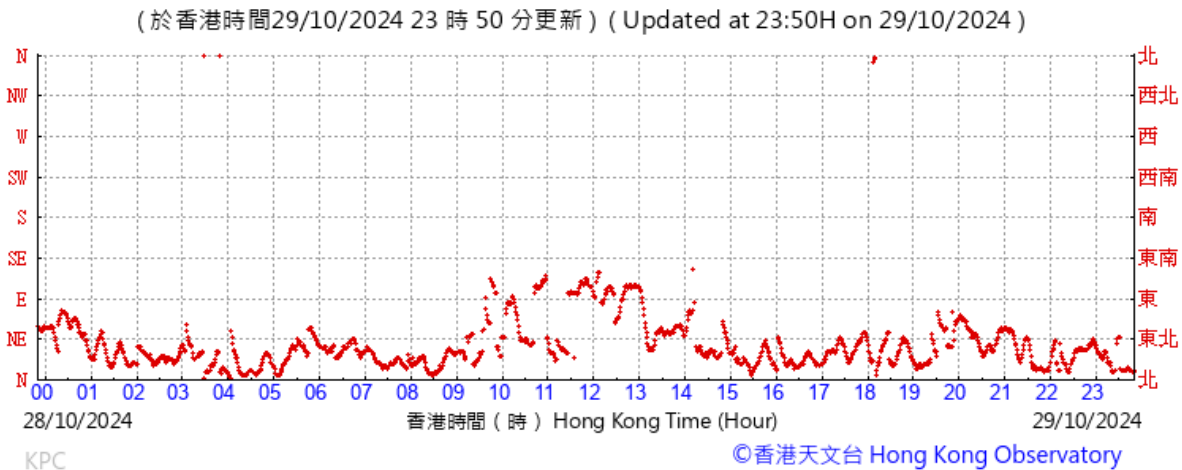
Temperature/Humidity:



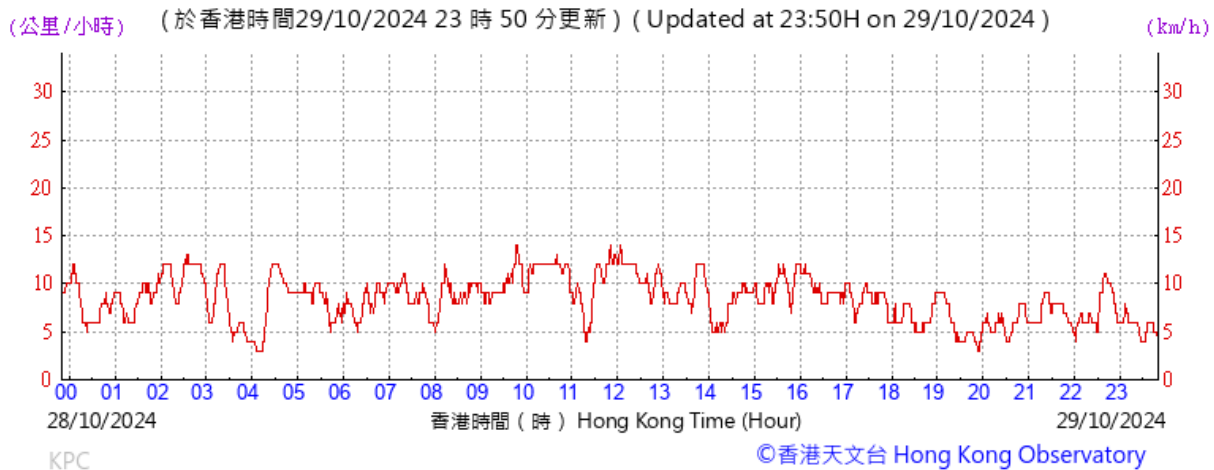
Pressure:



Wind Direction:



Wind Speed:

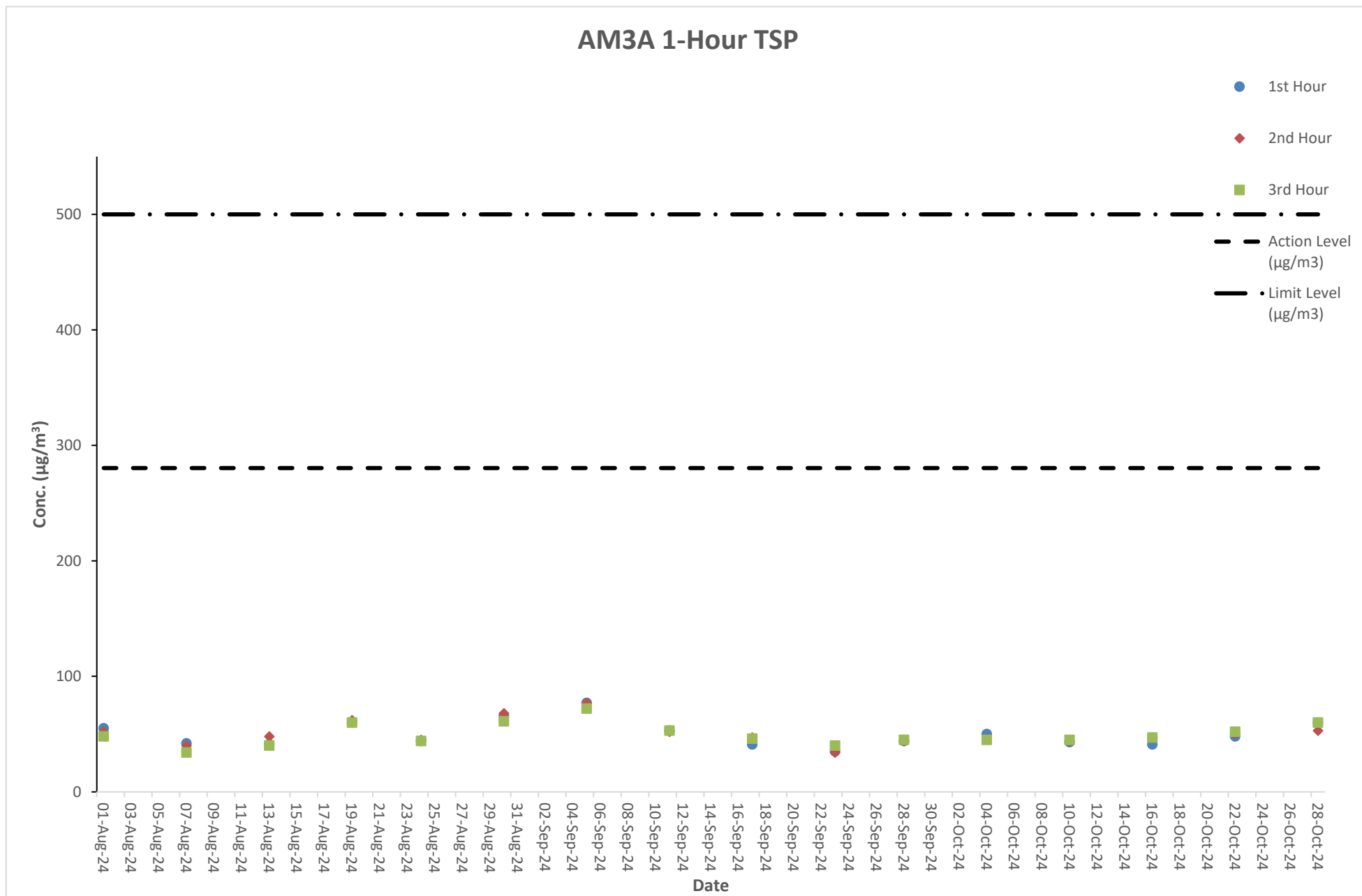


E. Graphical Plots of the Monitoring Results

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

Date	Weather Condition	Time	Conc. ($\mu\text{g}/\text{m}^3$)			Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
			1 st Hour	2 nd Hour	3 rd Hour		
01-Aug-24	Cloudy	14:04 - 17:04	55	52	48	280.4	500
07-Aug-24	Fine	08:09 - 11:09	42	40	34	280.4	500
13-Aug-24	Cloudy	14:05 - 17:05	41	48	40	280.4	500
19-Aug-24	Cloudy	08:01 - 11:01	60	62	60	280.4	500
24-Aug-24	Fine	14:00 - 17:00	44	45	44	280.4	500
30-Aug-24	Fine	08:09 - 11:09	66	68	61	280.4	500
05-Sep-24	Cloudy	08:05 - 11:05	77	77	72	280.4	500
11-Sep-24	Fine	14:03 - 17:03	53	52	53	280.4	500
17-Sep-24	Cloudy	08:07 - 11:07	41	47	46	280.4	500
23-Sep-24	Cloudy	14:09 - 17:09	35	34	40	280.4	500
28-Sep-24	Fine	08:01 - 11:01	44	44	45	280.4	500
04-Oct-24	Fine	14:09 - 17:09	50	46	45	280.4	500
10-Oct-24	Cloudy	08:01 - 11:01	43	44	45	280.4	500
16-Oct-24	Cloudy	14:07 - 17:07	41	47	47	280.4	500
22-Oct-24	Fine	08:08 - 11:08	48	50	52	280.4	500
28-Oct-24	Fine	14:04 - 17:04	60	53	60	280.4	500

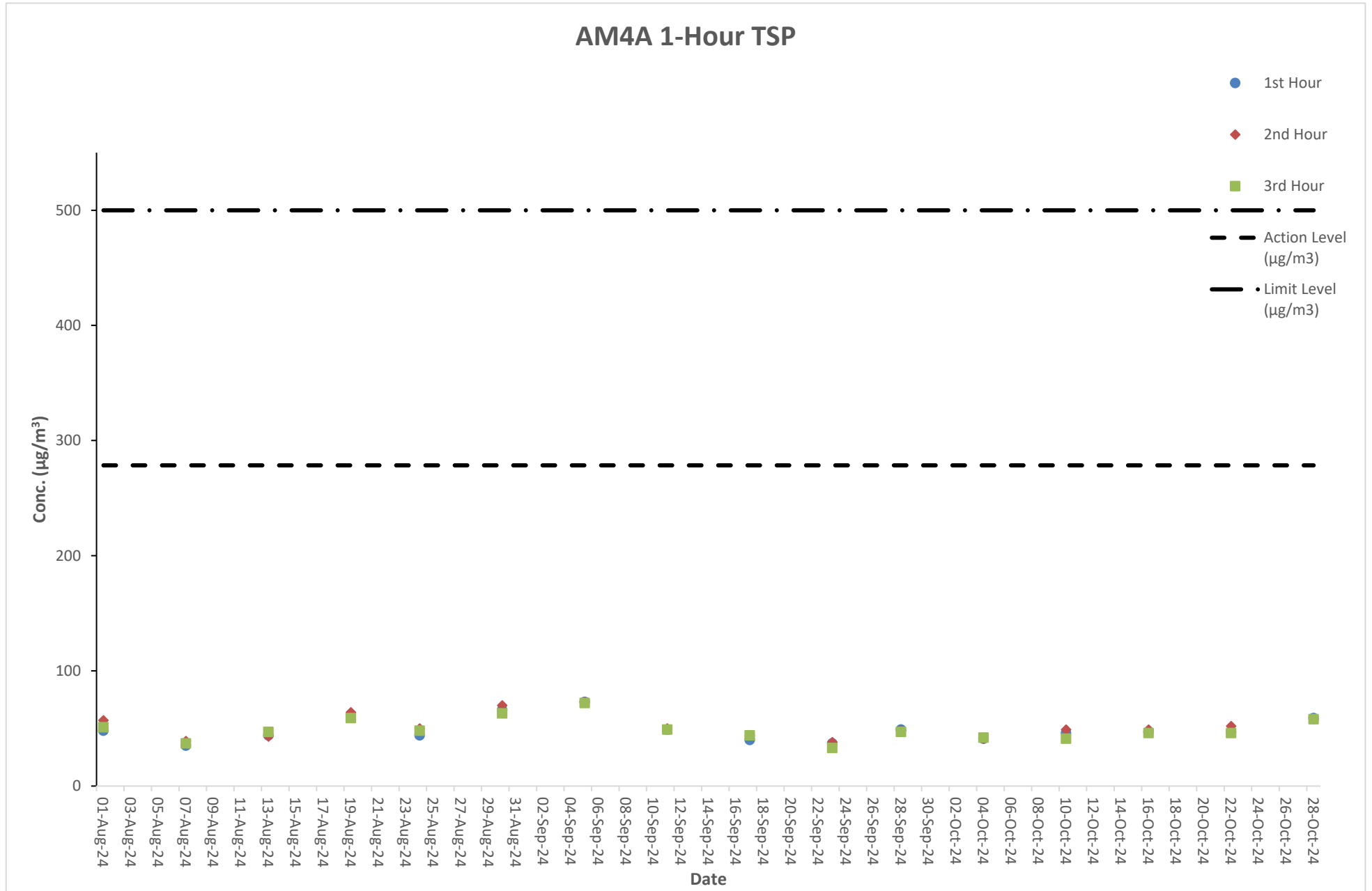
Graphical Presentation of Air Quality Monitoring Result at Station AM3A (1-hour TSP)



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

Date	Weather Condition	Time	Conc. ($\mu\text{g}/\text{m}^3$)			Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
			1 st Hour	2 nd Hour	3 rd Hour		
01-Aug-24	Cloudy	14:12 - 17:12	48	57	51	278.5	500
07-Aug-24	Fine	08:17 - 11:17	35	39	37	278.5	500
13-Aug-24	Cloudy	14:13 - 17:13	44	43	47	278.5	500
19-Aug-24	Cloudy	08:09 - 11:09	62	64	59	278.5	500
24-Aug-24	Fine	14:08 - 17:08	44	50	48	278.5	500
30-Aug-24	Fine	08:17 - 11:17	66	70	63	278.5	500
05-Sep-24	Cloudy	08:13 - 11:13	73	73	72	278.5	500
11-Sep-24	Fine	14:11 - 17:11	49	50	49	278.5	500
17-Sep-24	Cloudy	08:15 - 11:15	40	44	44	278.5	500
23-Sep-24	Cloudy	14:17 - 17:17	37	38	33	278.5	500
28-Sep-24	Fine	08:09 - 11:09	49	48	47	278.5	500
04-Oct-24	Fine	14:17 - 17:17	41	41	42	278.5	500
10-Oct-24	Cloudy	08:09 - 11:09	46	49	41	278.5	500
16-Oct-24	Cloudy	14:15 - 17:15	47	49	46	278.5	500
22-Oct-24	Fine	08:16 - 11:16	47	52	46	278.5	500
28-Oct-24	Fine	14:12 - 17:12	59	58	58	278.5	500

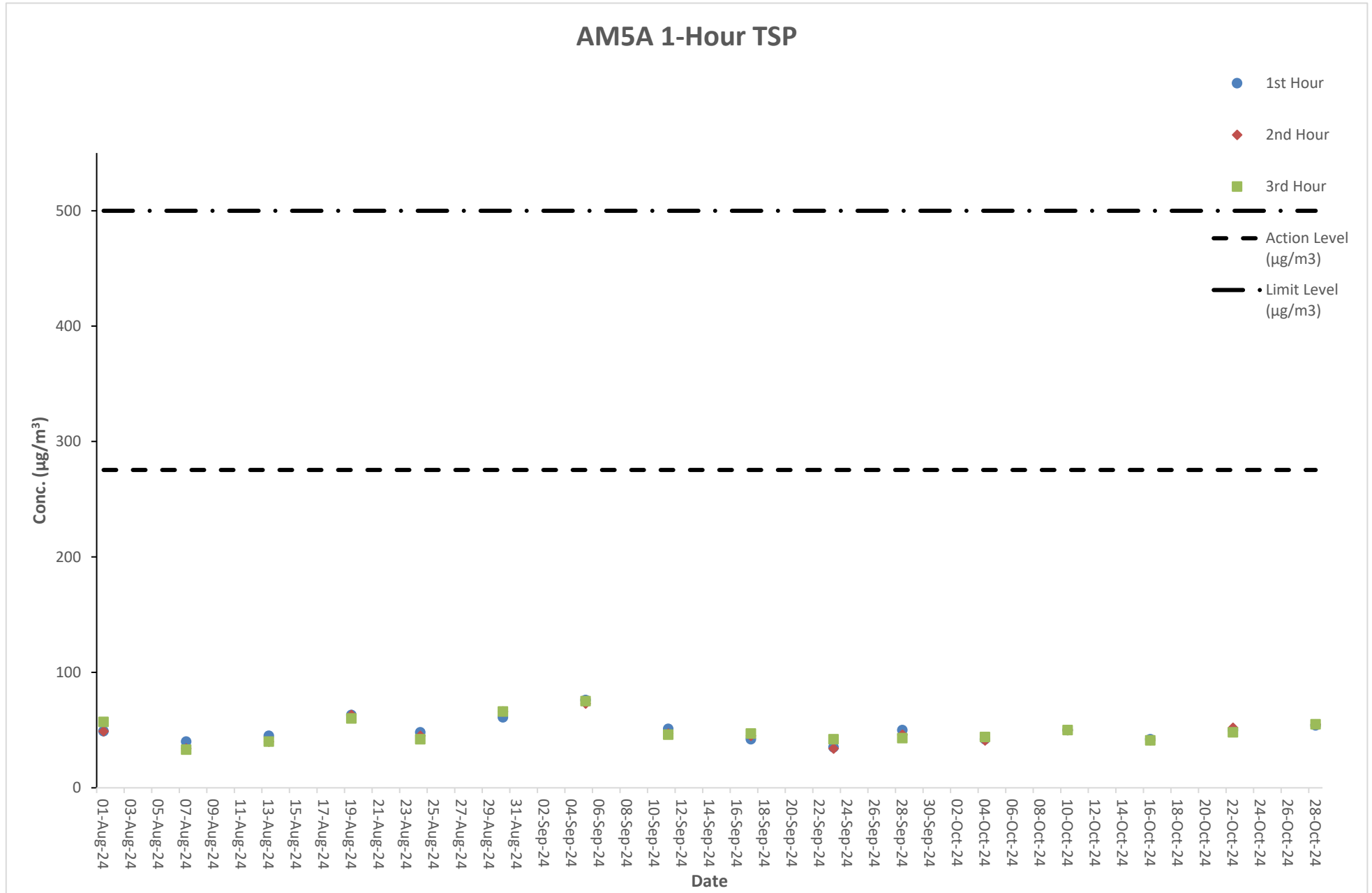
Graphical Presentation of Air Quality Monitoring Result at Station AM4A (1-hour TSP)



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

Date	Weather Condition	Time	Conc. ($\mu\text{g}/\text{m}^3$)			Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
			1 st Hour	2 nd Hour	3 rd Hour		
01-Aug-24	Cloudy	14:27 - 17:27	49	49	57	275.4	500
07-Aug-24	Fine	08:34 - 11:34	40	34	33	275.4	500
13-Aug-24	Cloudy	14:28 - 17:28	45	40	40	275.4	500
19-Aug-24	Cloudy	08:26 - 11:26	63	63	60	275.4	500
24-Aug-24	Fine	14:23 - 17:23	48	45	42	275.4	500
30-Aug-24	Fine	08:34 - 11:34	61	66	66	275.4	500
05-Sep-24	Cloudy	08:28 - 11:28	76	73	75	275.4	500
11-Sep-24	Fine	14:28 - 17:28	51	47	46	275.4	500
17-Sep-24	Cloudy	08:30 - 11:30	42	45	47	275.4	500
23-Sep-24	Cloudy	14:34 - 17:34	35	34	42	275.4	500
28-Sep-24	Fine	08:24 - 11:24	50	46	43	275.4	500
04-Oct-24	Fine	14:32 - 17:32	42	41	44	275.4	500
10-Oct-24	Cloudy	08:26 - 11:26	50	50	50	275.4	500
16-Oct-24	Cloudy	14:30 - 17:30	42	41	41	275.4	500
22-Oct-24	Fine	08:33 - 11:33	50	52	48	275.4	500
28-Oct-24	Fine	14:27 - 17:27	54	55	55	275.4	500

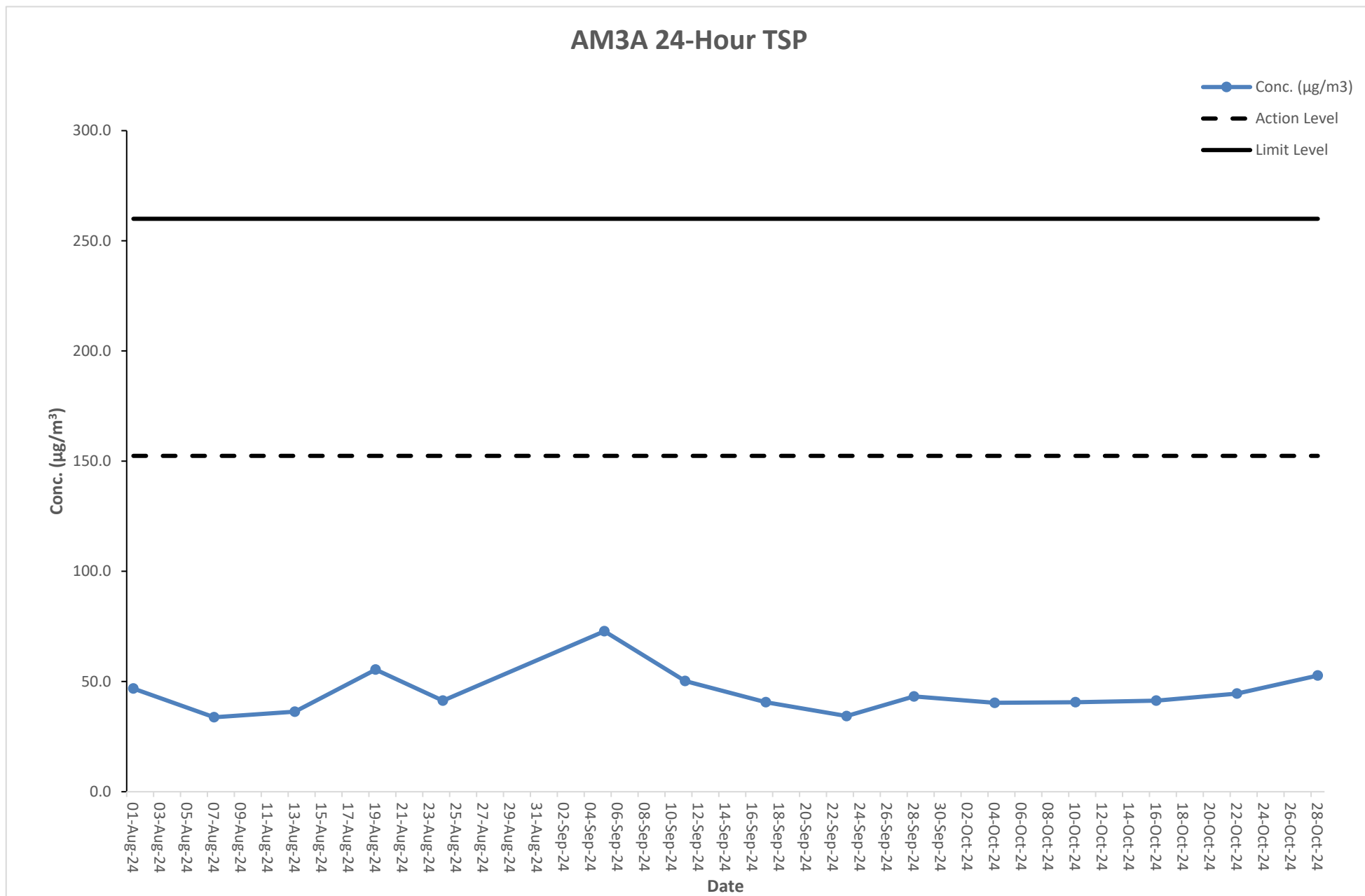
Graphical Presentation of Air Quality Monitoring Result at Station AM5A (1-hour TSP)



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

Start		Finish		Filter Weight (g)		Elapsed Time Reading		Sampling Time (hrs)	Flow Rate (m ³ /min)			Conc. (µg/m ³)	Weather Condition	Action Level	Limit Level
Date	Time	Date	Time	Initial	Final	Initial	Final		Initial	Final	Average				
01-Aug-24	10:00AM	02-Aug-24	10:00AM	2.8065	2.8819	7096.8	7120.8	24	1.12	1.12	1.12	46.8	Rainy	152.4	260
07-Aug-24	10:00AM	08-Aug-24	10:00AM	2.8026	2.8569	7120.8	7144.8	24	1.12	1.12	1.12	33.8	Cloudy	152.4	260
13-Aug-24	10:00AM	14-Aug-24	10:00AM	2.8022	2.8605	7144.8	7168.8	24	1.12	1.12	1.12	36.3	Rainy	152.4	260
19-Aug-24	10:00AM	20-Aug-24	10:00AM	2.8059	2.8952	7168.8	7192.8	24	1.12	1.12	1.12	55.4	Rainy	152.4	260
24-Aug-24	10:00AM	25-Aug-24	10:00AM	2.8045	2.8709	7192.8	7216.8	24	1.12	1.12	1.12	41.3	Sunny	152.4	260
30-Aug-24	10:00AM	31-Aug-24	10:00AM	2.8033	2.8946	7216.8	7240.8	24	1.12	1.12	1.12	56.8	Rainy	152.4	260
05-Sep-24	10:00AM	06-Sep-24	10:00AM	2.8084	2.9256	7240.8	7264.8	24	1.12	1.12	1.12	72.8	Rainy	152.4	260
11-Sep-24	10:00AM	12-Sep-24	10:00AM	2.8019	2.8826	7264.8	7288.8	24	1.12	1.12	1.12	50.2	Cloudy	152.4	260
17-Sep-24	10:00AM	18-Sep-24	10:00AM	2.8086	2.8740	7288.8	7312.8	24	1.12	1.12	1.12	40.6	Rainy	152.4	260
23-Sep-24	10:00AM	24-Sep-24	10:00AM	2.8062	2.8614	7312.8	7336.8	24	1.12	1.12	1.12	34.3	Rainy	152.4	260
28-Sep-24	10:00AM	29-Sep-24	10:00AM	2.8086	2.8782	7336.8	7360.8	24	1.12	1.12	1.12	43.2	Rainy	152.4	260
04-Oct-24	10:00AM	05-Oct-24	10:00AM	2.8012	2.8662	7360.8	7384.8	24	1.12	1.12	1.12	40.3	Sunny	152.4	260
10-Oct-24	10:00AM	11-Oct-24	10:00AM	2.8085	2.8739	7384.8	7408.8	24	1.12	1.12	1.12	40.6	Cloudy	152.4	260
16-Oct-24	10:00AM	17-Oct-24	10:00AM	2.8088	2.8752	7408.8	7432.8	24	1.12	1.12	1.12	41.3	Cloudy	152.4	260
22-Oct-24	10:00AM	23-Oct-24	10:00AM	2.8047	2.8764	7432.8	7456.8	24	1.12	1.12	1.12	44.5	Sunny	152.4	260
28-Oct-24	10:00AM	29-Oct-24	10:00AM	2.8076	2.8924	7456.8	7480.8	24	1.12	1.12	1.12	52.7	Sunny	152.4	260

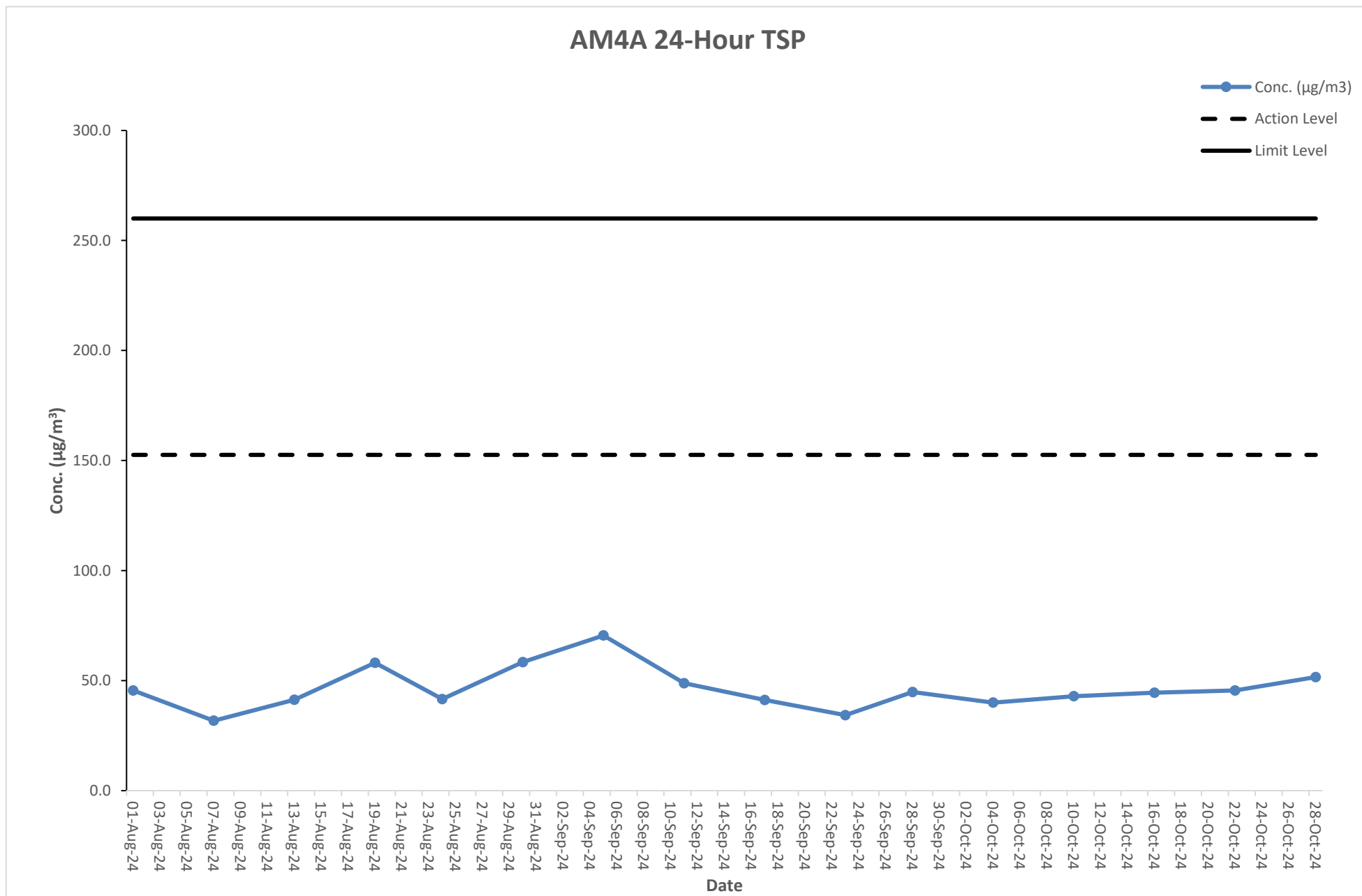
Graphical Presentation of Air Quality Monitoring Result at Station AM3A (24-hour TSP)



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

Start		Finish		Filter Weight (g)		Elapsed Time Reading		Sampling Time (hrs)	Flow Rate (m ³ /min)			Conc. (µg/m ³)	Weather Condition	Action Level	Limit Level
Date	Time	Date	Time	Initial	Final	Initial	Final		Initial	Final	Average				
01-Aug-24	10:00AM	02-Aug-24	10:00AM	2.8057	2.8789	7516.4	7540.4	24	1.12	1.12	1.12	45.5	Rainy	152.6	260
07-Aug-24	10:00AM	08-Aug-24	10:00AM	2.8026	2.8537	7540.4	7564.4	24	1.12	1.12	1.12	31.8	Cloudy	152.6	260
13-Aug-24	10:00AM	14-Aug-24	10:00AM	2.8081	2.8745	7564.4	7588.4	24	1.12	1.12	1.12	41.3	Rainy	152.6	260
19-Aug-24	10:00AM	20-Aug-24	10:00AM	2.8063	2.8997	7588.4	7612.4	24	1.12	1.12	1.12	58.1	Rainy	152.6	260
24-Aug-24	10:00AM	25-Aug-24	10:00AM	2.8040	2.8709	7612.4	7636.4	24	1.12	1.12	1.12	41.6	Sunny	152.6	260
30-Aug-24	10:00AM	31-Aug-24	10:00AM	2.8079	2.9019	7636.4	7660.4	24	1.12	1.12	1.12	58.4	Rainy	152.6	260
05-Sep-24	10:00AM	06-Sep-24	10:00AM	2.8028	2.9163	7660.4	7684.4	24	1.12	1.12	1.12	70.5	Rainy	152.6	260
11-Sep-24	10:00AM	12-Sep-24	10:00AM	2.8088	2.8875	7684.4	7708.4	24	1.12	1.12	1.12	48.8	Cloudy	152.6	260
17-Sep-24	10:00AM	18-Sep-24	10:00AM	2.8075	2.8739	7708.4	7732.4	24	1.12	1.12	1.12	41.2	Rainy	152.6	260
23-Sep-24	10:00AM	24-Sep-24	10:00AM	2.8042	2.8594	7732.4	7756.4	24	1.12	1.12	1.12	34.3	Rainy	152.6	260
28-Sep-24	10:00AM	29-Sep-24	10:00AM	2.8080	2.8801	7756.4	7780.4	24	1.12	1.12	1.12	44.8	Rainy	152.6	260
04-Oct-24	10:00AM	05-Oct-24	10:00AM	2.8026	2.8670	7780.4	7804.4	24	1.12	1.12	1.12	40.0	Sunny	152.6	260
10-Oct-24	10:00AM	11-Oct-24	10:00AM	2.8082	2.8772	7804.4	7828.4	24	1.12	1.12	1.12	42.9	Cloudy	152.6	260
16-Oct-24	10:00AM	17-Oct-24	10:00AM	2.8036	2.8753	7828.4	7852.4	24	1.12	1.12	1.12	44.5	Cloudy	152.6	260
22-Oct-24	10:00AM	23-Oct-24	10:00AM	2.8084	2.8817	7852.4	7876.4	24	1.12	1.12	1.12	45.5	Sunny	152.6	260
28-Oct-24	10:00AM	29-Oct-24	10:00AM	2.8079	2.8909	7876.4	7900.4	24	1.12	1.12	1.12	51.6	Sunny	152.6	260

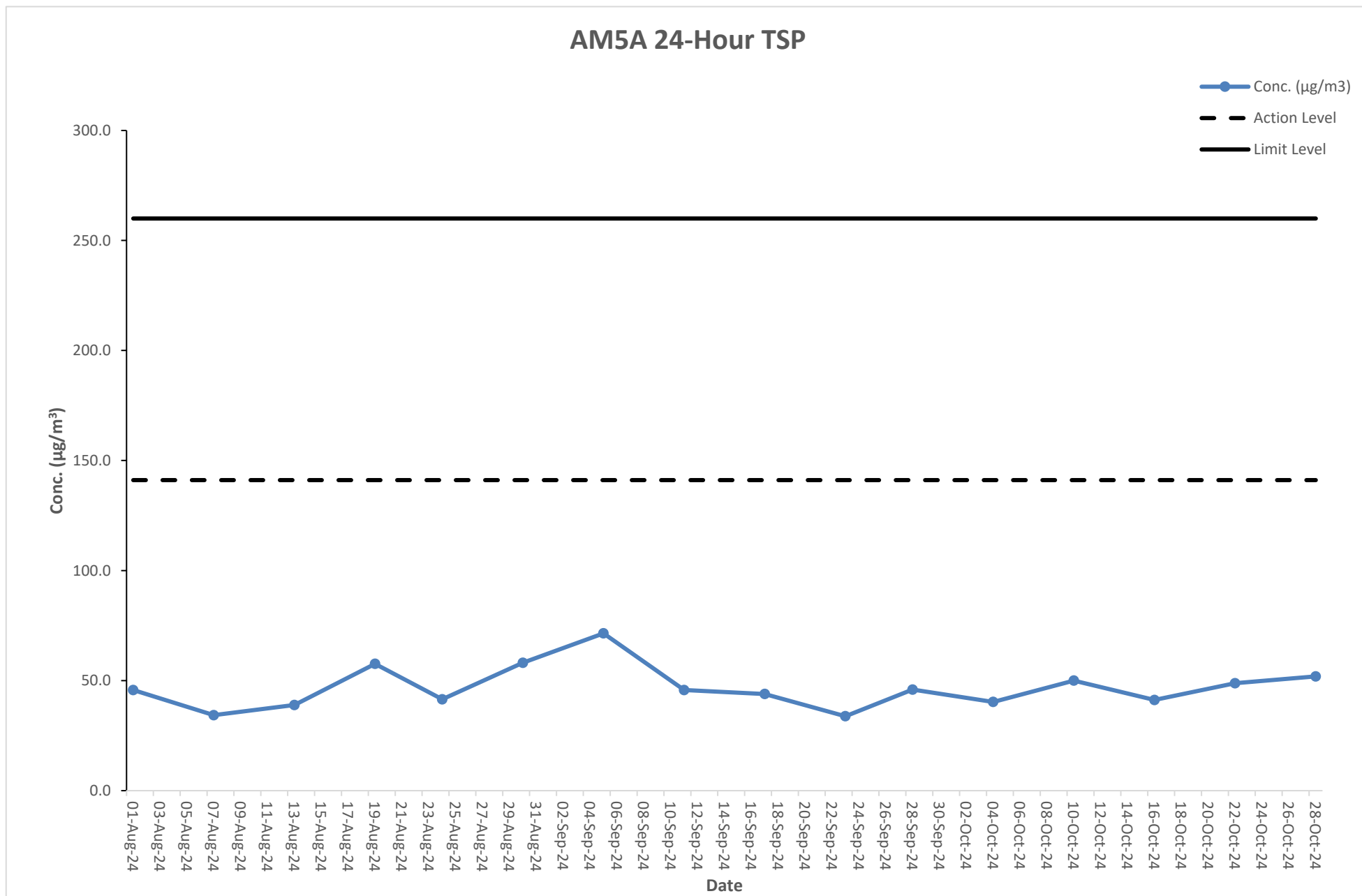
Graphical Presentation of Air Quality Monitoring Result at Station AM4A (24-hour TSP)



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

Start		Finish		Filter Weight (g)		Elapsed Time Reading		Sampling Time (hrs)	Flow Rate (m ³ /min)			Conc. (µg/m ³)	Weather Condition	Action Level	Limit Level
Date	Time	Date	Time	Initial	Final	Initial	Final		Initial	Final	Average				
01-Aug-24	10:00AM	02-Aug-24	10:00AM	2.8012	2.8748	7654.6	7678.6	24	1.12	1.12	1.12	45.7	Rainy	141.1	260
07-Aug-24	10:00AM	08-Aug-24	10:00AM	2.8086	2.8639	7678.6	7702.6	24	1.12	1.12	1.12	34.3	Cloudy	141.1	260
13-Aug-24	10:00AM	14-Aug-24	10:00AM	2.8068	2.8694	7702.6	7726.6	24	1.12	1.12	1.12	38.9	Rainy	141.1	260
19-Aug-24	10:00AM	20-Aug-24	10:00AM	2.8068	2.8996	7726.6	7750.6	24	1.12	1.12	1.12	57.6	Rainy	141.1	260
24-Aug-24	10:00AM	25-Aug-24	10:00AM	2.8018	2.8686	7750.6	7774.6	24	1.12	1.12	1.12	41.5	Sunny	141.1	260
30-Aug-24	10:00AM	31-Aug-24	10:00AM	2.8015	2.8950	7774.6	7798.6	24	1.12	1.12	1.12	58.1	Rainy	141.1	260
05-Sep-24	10:00AM	06-Sep-24	10:00AM	2.8058	2.9208	7798.6	7822.6	24	1.12	1.12	1.12	71.5	Rainy	141.1	260
11-Sep-24	10:00AM	12-Sep-24	10:00AM	2.8086	2.8822	7822.6	7846.6	24	1.12	1.12	1.12	45.7	Cloudy	141.1	260
17-Sep-24	10:00AM	18-Sep-24	10:00AM	2.8072	2.8778	7846.6	7870.6	24	1.12	1.12	1.12	43.9	Rainy	141.1	260
23-Sep-24	10:00AM	24-Sep-24	10:00AM	2.8075	2.8618	7870.6	7894.6	24	1.12	1.12	1.12	33.8	Rainy	141.1	260
28-Sep-24	10:00AM	29-Sep-24	10:00AM	2.8080	2.8818	7894.6	7918.6	24	1.12	1.12	1.12	45.9	Rainy	141.1	260
04-Oct-24	10:00AM	05-Oct-24	10:00AM	2.8067	2.8716	7918.6	7942.6	24	1.12	1.12	1.12	40.3	Sunny	141.1	260
10-Oct-24	10:00AM	11-Oct-24	10:00AM	2.8012	2.8816	7942.6	7966.6	24	1.12	1.12	1.12	50.0	Cloudy	141.1	260
16-Oct-24	10:00AM	17-Oct-24	10:00AM	2.8037	2.8701	7966.6	7990.6	24	1.12	1.12	1.12	41.2	Cloudy	141.1	260
22-Oct-24	10:00AM	23-Oct-24	10:00AM	2.8057	2.8843	7990.6	8014.6	24	1.12	1.12	1.12	48.8	Sunny	141.1	260
28-Oct-24	10:00AM	29-Oct-24	10:00AM	2.8054	2.8889	8014.6	8038.6	24	1.12	1.12	1.12	51.9	Sunny	141.1	260

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



Noise Monitoring Result at Station NM2A

Date	Time	Measured L10 dB(A)	Measured L90 dB(A)	Leq (30 min.) dB(A)
01-Aug-24	14:04	64.5	60.3	62.6
01-Aug-24	14:09	64.3	60.6	
01-Aug-24	14:14	64.5	60.4	
01-Aug-24	14:19	63.7	60.3	
01-Aug-24	14:24	64.4	60.2	
01-Aug-24	14:29	63.6	60.6	
07-Aug-24	8:09	63.9	60.8	62.8
07-Aug-24	8:14	65.0	60.7	
07-Aug-24	8:19	64.2	61.2	
07-Aug-24	8:24	64.3	61.6	
07-Aug-24	8:29	64.9	61.0	
07-Aug-24	8:34	64.7	60.7	
13-Aug-24	14:05	63.6	61.2	63.2
13-Aug-24	14:10	64.7	60.4	
13-Aug-24	14:15	63.6	61.3	
13-Aug-24	14:20	64.9	60.6	
13-Aug-24	14:25	64.7	61.4	
13-Aug-24	14:30	65.0	60.2	
19-Aug-24	8:01	63.9	60.9	62.7
19-Aug-24	8:06	63.6	60.4	
19-Aug-24	8:11	64.7	60.4	
19-Aug-24	8:16	63.8	61.5	
19-Aug-24	8:21	64.8	61.2	
19-Aug-24	8:26	64.0	61.6	
24-Aug-24	14:00	65.0	61.5	62.8
24-Aug-24	14:05	64.8	60.7	
24-Aug-24	14:10	64.0	60.4	
24-Aug-24	14:15	64.9	60.4	
24-Aug-24	14:20	64.1	60.5	
24-Aug-24	14:25	63.7	61.5	
30-Aug-24	8:09	63.8	61.1	62.5
30-Aug-24	8:14	63.8	61.5	
30-Aug-24	8:19	64.9	61.4	
30-Aug-24	8:24	63.7	60.3	
30-Aug-24	8:29	64.9	60.8	
30-Aug-24	8:34	64.5	61.4	
05-Sep-24	8:05	64.4	61.6	62.7
05-Sep-24	8:10	64.2	61.3	
05-Sep-24	8:15	64.7	61.5	
05-Sep-24	8:20	63.9	61.6	
05-Sep-24	8:25	64.0	61.0	
05-Sep-24	8:30	64.7	61.1	
11-Sep-24	14:03	64.7	61.5	62.9
11-Sep-24	14:08	65.0	61.3	
11-Sep-24	14:13	65.0	60.8	
11-Sep-24	14:18	63.9	60.5	
11-Sep-24	14:23	64.0	60.9	
11-Sep-24	14:28	64.8	60.3	
17-Sep-24	8:07	64.3	61.6	63.1
17-Sep-24	8:12	64.9	60.6	
17-Sep-24	8:17	64.9	60.8	
17-Sep-24	8:22	65.0	60.9	
17-Sep-24	8:27	64.9	61.4	
17-Sep-24	8:32	64.9	61.4	
23-Sep-24	14:09	64.6	60.2	62.8
23-Sep-24	14:14	63.8	60.4	
23-Sep-24	14:19	65.0	61.2	
23-Sep-24	14:24	63.8	61.5	
23-Sep-24	14:29	64.0	60.2	
23-Sep-24	14:34	64.6	60.5	

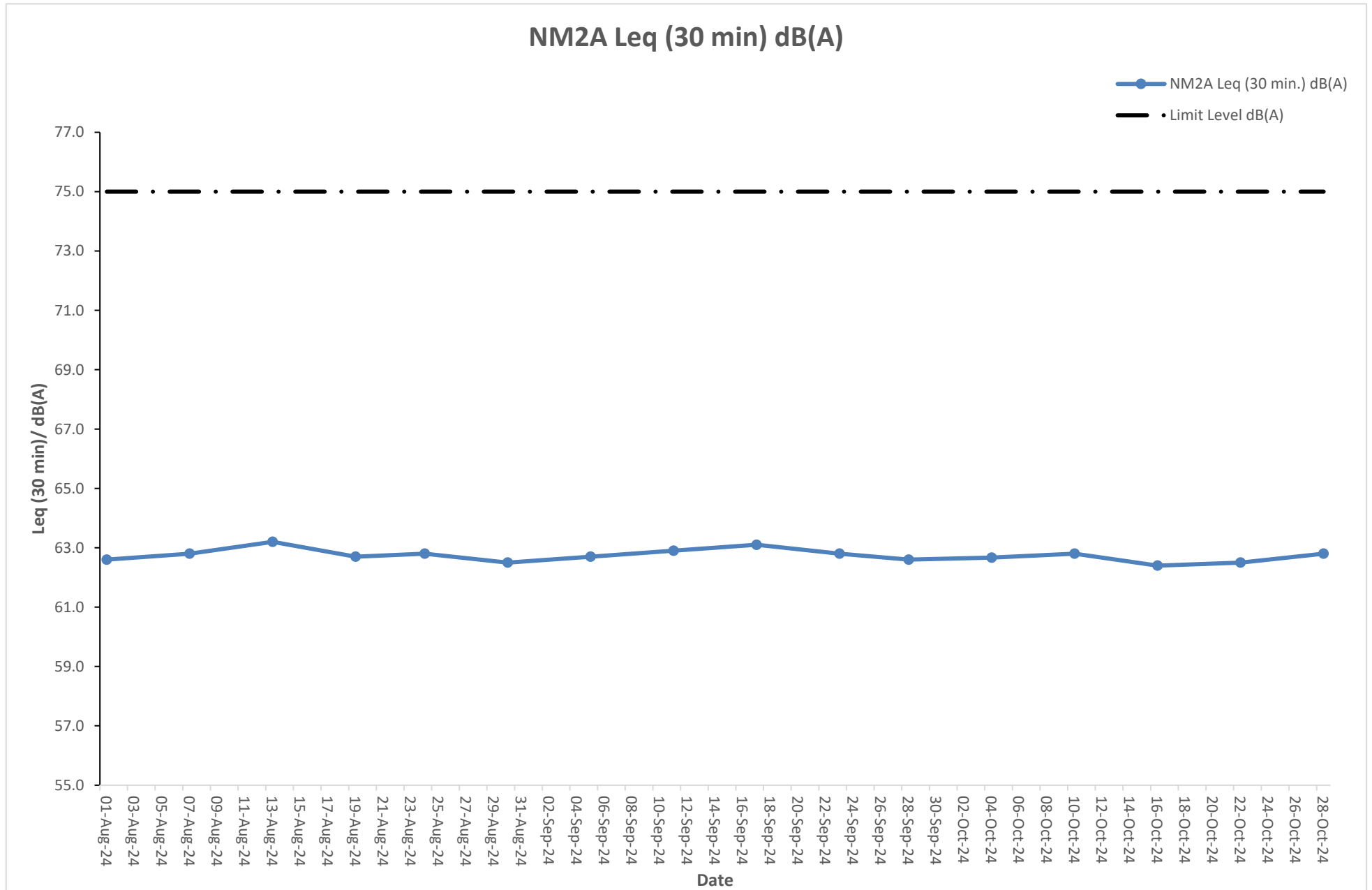
Noise Monitoring Result at Station NM2A

Date	Time	Measured L10 dB(A)	Measured L90 dB(A)	Leq (30 min.) dB(A)
28-Sep-24	8:01	64.2	60.5	62.6
28-Sep-24	8:06	64.7	60.9	
28-Sep-24	8:11	64.4	61.6	
28-Sep-24	8:16	64.3	60.4	
28-Sep-24	8:21	63.7	60.9	
28-Sep-24	8:26	63.8	60.7	
04-Oct-24	14:09	64.6	60.6	62.7
04-Oct-24	14:14	64.3	60.4	
04-Oct-24	14:19	64.8	61.3	
04-Oct-24	14:24	64.6	60.2	
04-Oct-24	14:29	63.6	61.5	
04-Oct-24	14:34	64.5	61.6	
10-Oct-24	8:01	63.8	61.0	62.8
10-Oct-24	8:06	63.8	61.6	
10-Oct-24	8:11	64.3	60.5	
10-Oct-24	8:16	64.6	61.6	
10-Oct-24	8:21	64.5	61.0	
10-Oct-24	8:26	64.8	60.5	
16-Oct-24	14:07	64.5	61.5	62.4
16-Oct-24	14:12	63.9	61.5	
16-Oct-24	14:17	63.8	60.8	
16-Oct-24	14:22	64.2	61.1	
16-Oct-24	14:27	65.0	60.6	
16-Oct-24	14:32	63.6	61.6	
22-Oct-24	8:08	64.7	61.3	62.5
22-Oct-24	8:13	64.7	60.6	
22-Oct-24	8:18	63.8	60.3	
22-Oct-24	8:23	65.0	60.9	
22-Oct-24	8:28	64.1	60.4	
22-Oct-24	8:33	64.8	61.5	
28-Oct-24	14:04	63.7	61.4	62.8
28-Oct-24	14:09	64.0	60.7	
28-Oct-24	14:14	64.6	60.9	
28-Oct-24	14:19	64.8	60.7	
28-Oct-24	14:24	63.7	60.2	
28-Oct-24	14:29	64.4	61.3	



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

Graphical Presentation of Noise Monitoring Result at Station NM2A



Noise Monitoring Result at Station NM3A

Date	Time	Measured L10 dB(A)	Measured L90 dB(A)	Leq (30 min.) dB(A)
01-Aug-24	15:34	63.4	57.8	60.5
01-Aug-24	15:39	63.8	55.9	
01-Aug-24	15:44	62.2	55.9	
01-Aug-24	15:49	63.3	57.6	
01-Aug-24	15:54	62.3	56.6	
01-Aug-24	15:59	63.6	57.8	
07-Aug-24	9:42	62.7	56.9	60.3
07-Aug-24	9:47	63.7	57.7	
07-Aug-24	9:52	63.0	55.9	
07-Aug-24	9:57	63.6	57.6	
07-Aug-24	10:02	62.6	57.8	
07-Aug-24	10:07	62.8	56.7	
13-Aug-24	15:35	62.4	56.9	60.6
13-Aug-24	15:40	62.7	57.8	
13-Aug-24	15:45	62.2	56.1	
13-Aug-24	15:50	63.5	57.3	
13-Aug-24	15:55	62.9	56.2	
13-Aug-24	16:00	63.7	56.3	
19-Aug-24	9:43	63.4	57.3	60.7
19-Aug-24	9:48	62.2	57.2	
19-Aug-24	9:53	62.2	57.3	
19-Aug-24	9:58	61.9	57.7	
19-Aug-24	10:03	62.8	57.6	
19-Aug-24	10:08	61.9	57.1	
24-Aug-24	15:39	63.5	56.3	60.8
24-Aug-24	15:44	63.7	57.4	
24-Aug-24	15:49	63.0	57.1	
24-Aug-24	15:54	62.4	57.1	
24-Aug-24	15:59	62.5	57.1	
24-Aug-24	16:04	63.2	56.0	
30-Aug-24	09:51	63.2	57.1	60.6
30-Aug-24	09:56	63.4	57.0	
30-Aug-24	10:01	62.3	56.6	
30-Aug-24	10:06	63.1	57.7	
30-Aug-24	10:11	63.3	56.8	
30-Aug-24	10:16	62.7	57.7	
05-Sep-24	9:35	62.2	56.5	60.9
05-Sep-24	9:40	63.1	57.8	
05-Sep-24	9:45	61.9	55.9	
05-Sep-24	9:50	62.6	56.1	
05-Sep-24	9:55	63.0	56.1	
05-Sep-24	10:00	62.2	56.3	
11-Sep-24	15:36	61.9	56.6	60.8
11-Sep-24	15:41	63.7	56.5	
11-Sep-24	15:46	63.7	57.5	
11-Sep-24	15:51	63.2	56.7	
11-Sep-24	15:56	63.7	56.8	
11-Sep-24	16:01	62.3	56.7	
17-Sep-24	9:37	63.7	56.3	60.6
17-Sep-24	9:42	63.8	57.1	
17-Sep-24	9:47	63.3	57.8	
17-Sep-24	9:52	63.7	57.3	
17-Sep-24	9:57	62.2	57.5	
17-Sep-24	10:02	62.9	57.2	
23-Sep-24	15:51	62.6	56.2	61.0
23-Sep-24	15:56	63.4	56.2	
23-Sep-24	16:01	62.4	57.2	
23-Sep-24	16:06	62.4	56.4	
23-Sep-24	16:11	63.6	56.3	
23-Sep-24	16:16	62.7	55.9	

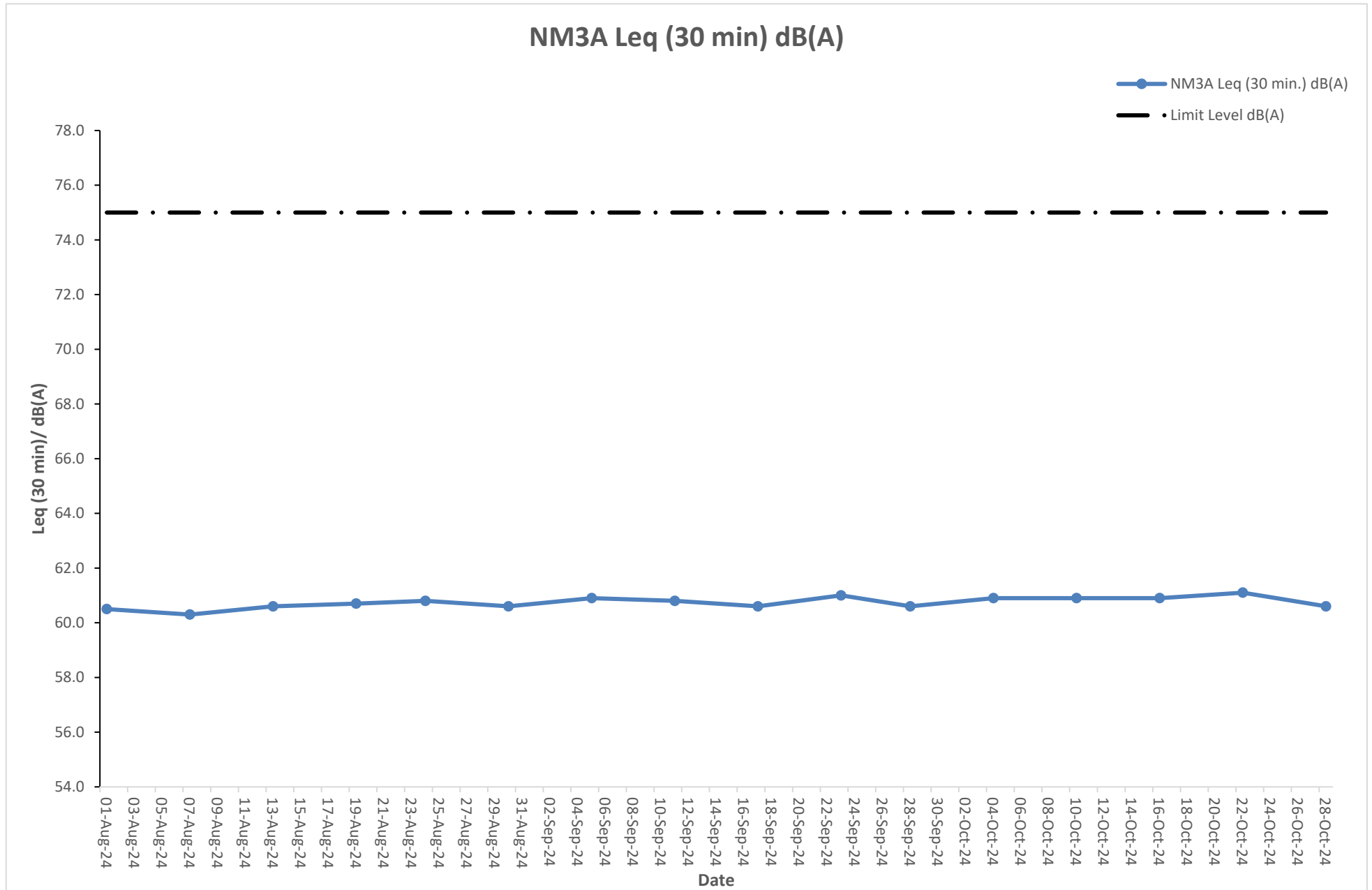
Noise Monitoring Result at Station NM3A

Date	Time	Measured L10 dB(A)	Measured L90 dB(A)	Leq (30 min.) dB(A)
28-Sep-24	9:40	62.9	57.2	60.6
28-Sep-24	9:45	63.3	57.6	
28-Sep-24	9:50	62.2	57.7	
28-Sep-24	9:55	62.4	57.6	
28-Sep-24	10:00	62.5	57.6	
28-Sep-24	10:05	63.6	55.9	
04-Oct-24	15:39	62.7	56.5	60.9
04-Oct-24	15:44	62.2	56.8	
04-Oct-24	15:49	62.7	56.9	
04-Oct-24	15:54	63.4	56.5	
04-Oct-24	15:59	62.3	56.7	
04-Oct-24	16:04	62.8	57.8	
10-Oct-24	9:34	63.1	55.9	60.9
10-Oct-24	9:39	63.3	57.8	
10-Oct-24	9:44	62.7	57.8	
10-Oct-24	9:49	63.8	56.7	
10-Oct-24	9:54	63.7	56.1	
10-Oct-24	9:59	62.9	57.3	
16-Oct-24	15:37	63.8	57.1	60.9
16-Oct-24	15:42	63.1	57.7	
16-Oct-24	15:47	62.6	57.3	
16-Oct-24	15:52	62.0	56.3	
16-Oct-24	15:57	63.4	56.4	
16-Oct-24	16:02	62.9	55.9	
22-Oct-24	9:50	61.9	57.4	61.1
22-Oct-24	9:55	62.1	56.9	
22-Oct-24	10:00	63.4	56.6	
22-Oct-24	10:05	62.0	57.4	
22-Oct-24	10:10	62.3	57.4	
22-Oct-24	10:15	62.5	57.0	
28-Oct-24	15:43	61.9	57.2	60.6
28-Oct-24	15:48	62.1	56.8	
28-Oct-24	15:53	62.0	57.0	
28-Oct-24	15:58	63.0	56.6	
28-Oct-24	16:03	63.4	57.8	
28-Oct-24	16:08	63.4	56.3	



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

Graphical Presentation of Noise Monitoring Result at Station NM3A



Noise Monitoring Result at Station NM4A

Date	Time	Measured L10 dB(A)	Measured L90 dB(A)	Leq (30 min.) dB(A)
01-Aug-24	16:09	59.5	56.1	58.4
01-Aug-24	16:14	59.4	56.2	
01-Aug-24	16:19	59.7	56.4	
01-Aug-24	16:24	59.9	56.3	
01-Aug-24	16:29	59.9	56.8	
01-Aug-24	16:34	60.5	56.7	
07-Aug-24	10:17	59.6	56.6	58.4
07-Aug-24	10:22	59.5	56.8	
07-Aug-24	10:27	59.4	56.7	
07-Aug-24	10:32	60.5	57.1	
07-Aug-24	10:37	59.5	56.5	
07-Aug-24	10:42	59.2	57.1	
13-Aug-24	16:10	60.0	56.5	58.0
13-Aug-24	16:15	60.2	56.4	
13-Aug-24	16:20	59.2	55.8	
13-Aug-24	16:25	60.4	56.2	
13-Aug-24	16:30	59.4	56.9	
13-Aug-24	16:35	59.5	57.0	
19-Aug-24	10:18	59.2	55.7	58.3
19-Aug-24	10:23	60.5	55.7	
19-Aug-24	10:28	60.4	56.0	
19-Aug-24	10:33	60.6	56.1	
19-Aug-24	10:38	59.2	56.7	
19-Aug-24	10:43	60.2	56.5	
24-Aug-24	16:14	59.7	55.7	58.4
24-Aug-24	16:19	60.2	56.4	
24-Aug-24	16:24	60.6	56.2	
24-Aug-24	16:29	59.8	57.0	
24-Aug-24	16:34	59.7	55.9	
24-Aug-24	16:39	60.6	56.0	
30-Aug-24	10:26	60.5	56.6	58.3
30-Aug-24	10:31	59.6	56.9	
30-Aug-24	10:36	60.5	56.5	
30-Aug-24	10:41	60.4	55.9	
30-Aug-24	10:46	59.6	56.7	
30-Aug-24	10:51	60.1	56.3	
05-Sep-24	10:10	60.5	57.1	58.2
05-Sep-24	10:15	59.4	56.8	
05-Sep-24	10:20	59.9	56.8	
05-Sep-24	10:25	59.8	56.3	
05-Sep-24	10:30	59.5	56.6	
05-Sep-24	10:35	59.7	56.2	
11-Sep-24	16:11	59.6	56.2	58.5
11-Sep-24	16:16	59.6	56.2	
11-Sep-24	16:21	60.5	56.7	
11-Sep-24	16:26	60.6	56.9	
11-Sep-24	16:31	59.7	56.2	
11-Sep-24	16:36	59.4	57.0	
17-Sep-24	10:12	60.5	56.7	58.3
17-Sep-24	10:17	59.7	56.4	
17-Sep-24	10:22	59.6	56.7	
17-Sep-24	10:27	60.0	56.6	
17-Sep-24	10:32	59.8	57.1	
17-Sep-24	10:37	60.3	56.6	
23-Sep-24	16:26	60.3	55.8	58.1
23-Sep-24	16:31	59.6	55.8	
23-Sep-24	16:36	60.2	56.3	
23-Sep-24	16:41	59.4	56.5	
23-Sep-24	16:46	59.3	56.7	
23-Sep-24	16:51	59.4	56.7	

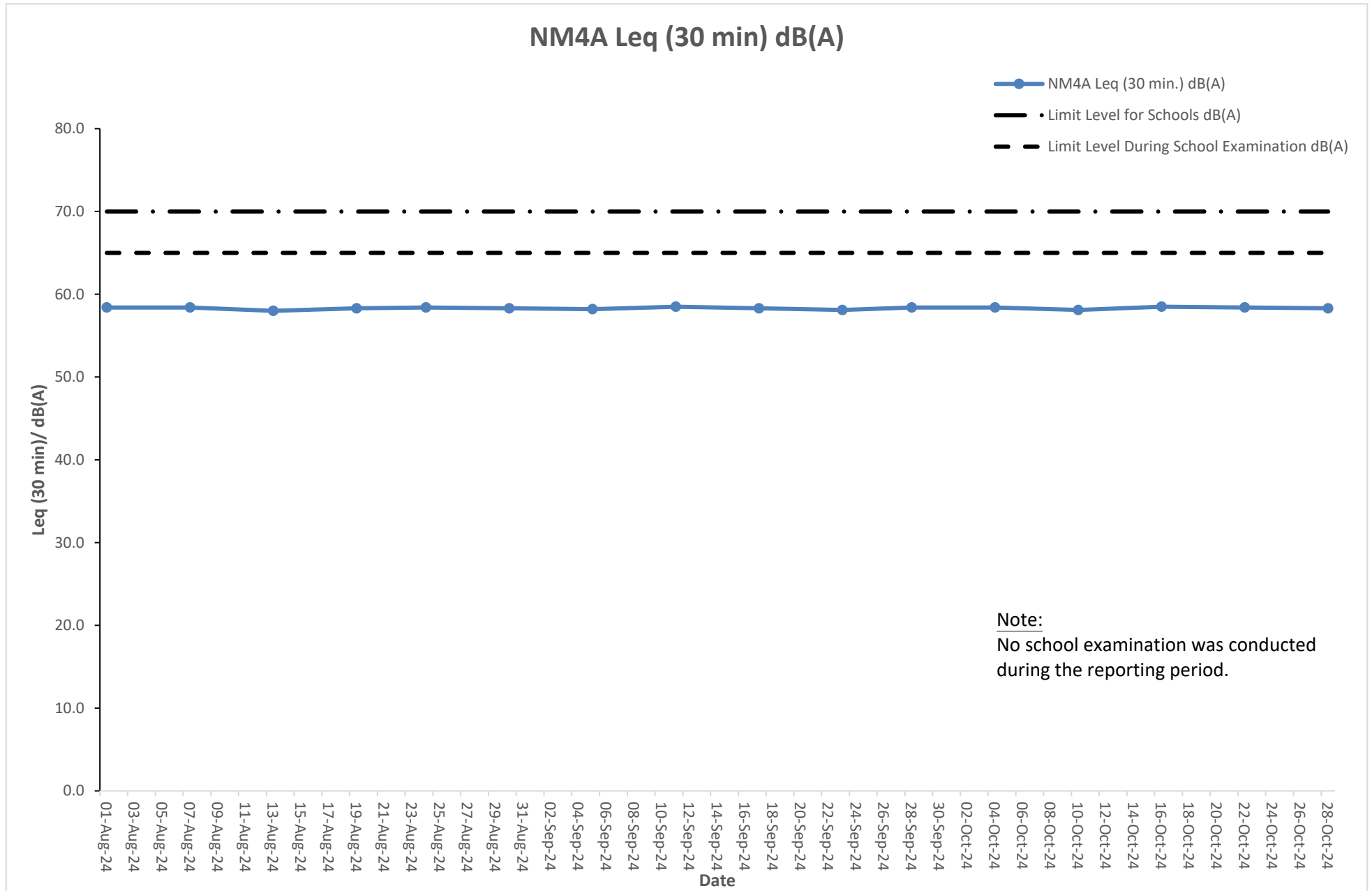
Noise Monitoring Result at Station NM4A

Date	Time	Measured L10 dB(A)	Measured L90 dB(A)	Leq (30 min.) dB(A)
28-Sep-24	10:15	59.4	56.1	58.4
28-Sep-24	10:20	60.1	56.5	
28-Sep-24	10:25	60.0	56.9	
28-Sep-24	10:30	60.4	56.1	
28-Sep-24	10:35	59.5	56.1	
28-Sep-24	10:40	59.4	56.4	
04-Oct-24	16:14	60.4	55.7	58.4
04-Oct-24	16:19	60.1	56.9	
04-Oct-24	16:24	60.0	56.3	
04-Oct-24	16:29	59.9	56.7	
04-Oct-24	16:34	59.3	56.0	
04-Oct-24	16:39	59.3	57.0	
10-Oct-24	10:09	60.0	56.9	58.1
10-Oct-24	10:14	59.7	55.9	
10-Oct-24	10:19	60.2	57.1	
10-Oct-24	10:24	60.1	57.0	
10-Oct-24	10:29	60.1	56.1	
10-Oct-24	10:34	59.9	56.3	
16-Oct-24	16:12	60.4	55.7	58.5
16-Oct-24	16:17	60.3	56.9	
16-Oct-24	16:22	59.5	56.8	
16-Oct-24	16:27	60.6	55.7	
16-Oct-24	16:32	60.3	56.7	
16-Oct-24	16:37	59.8	56.1	
22-Oct-24	10:25	60.4	56.4	58.4
22-Oct-24	10:30	60.5	56.0	
22-Oct-24	10:35	59.4	55.9	
22-Oct-24	10:40	59.7	56.4	
22-Oct-24	10:45	59.7	56.7	
22-Oct-24	10:50	59.2	56.7	
28-Oct-24	16:18	60.2	57.0	58.3
28-Oct-24	16:23	59.5	56.0	
28-Oct-24	16:28	60.0	55.9	
28-Oct-24	16:33	59.7	56.5	
28-Oct-24	16:38	59.8	56.5	
28-Oct-24	16:43	60.4	56.1	



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

Graphical Presentation of Noise Monitoring Result at Station NM4A



Noise Monitoring Result at Station NM5A

Date	Time	Measured L10 dB(A)	Measured L90 dB(A)	Leq (30 min.) dB(A)	Leq (30 min.) +3 dB(A)
01-Aug-24	14:54	62.3	59.0	60.4	63.4
01-Aug-24	14:59	61.7	59.1		
01-Aug-24	15:04	62.2	57.7		
01-Aug-24	15:09	62.3	58.4		
01-Aug-24	15:14	61.9	58.2		
01-Aug-24	15:19	62.2	58.9	60.4	63.4
07-Aug-24	9:01	62.2	57.6		
07-Aug-24	9:06	62.1	58.3		
07-Aug-24	9:11	62.2	57.5		
07-Aug-24	9:16	61.5	58.4		
07-Aug-24	9:21	62.4	58.9	60.6	63.6
07-Aug-24	9:26	62.4	58.9		
13-Aug-24	14:55	61.4	58.6		
13-Aug-24	15:00	61.5	59.3		
13-Aug-24	15:05	62.7	57.6		
13-Aug-24	15:10	61.5	58.3	60.7	63.7
13-Aug-24	15:15	61.9	59.3		
13-Aug-24	15:20	61.4	59.1		
19-Aug-24	8:53	61.8	59.1		
19-Aug-24	9:07	62.4	58.6		
19-Aug-24	9:12	62.4	58.8	60.9	63.9
19-Aug-24	9:17	61.6	59.1		
19-Aug-24	9:22	62.3	57.6		
19-Aug-24	9:27	62.5	58.0		
24-Aug-24	14:50	61.8	58.0		
24-Aug-24	15:04	61.9	58.2	60.9	63.9
24-Aug-24	15:09	62.5	59.2		
24-Aug-24	15:14	62.6	58.9		
24-Aug-24	15:19	62.4	59.3		
24-Aug-24	15:24	62.2	59.2		
30-Aug-24	9:01	62.8	57.5	60.9	63.9
30-Aug-24	9:15	62.2	58.0		
30-Aug-24	9:20	62.0	57.8		
30-Aug-24	9:25	62.4	58.7		
30-Aug-24	9:30	61.8	58.2		
30-Aug-24	9:35	62.4	58.0	60.5	63.5
05-Sep-24	8:55	61.4	58.3		
05-Sep-24	9:00	62.3	57.7		
05-Sep-24	9:05	62.5	59.2		
05-Sep-24	9:10	61.5	58.1		
05-Sep-24	9:15	62.3	59.0	60.4	63.4
05-Sep-24	9:20	62.6	58.6		
11-Sep-24	14:55	62.4	58.8		
11-Sep-24	15:00	62.6	57.7		
11-Sep-24	15:05	62.7	59.3		
11-Sep-24	15:10	61.9	57.6	60.1	63.1
11-Sep-24	15:15	62.2	59.2		
11-Sep-24	15:20	62.7	57.5		
17-Sep-24	8:57	61.6	58.3		
17-Sep-24	9:02	61.9	59.0		
17-Sep-24	9:07	62.4	57.7	60.3	63.5
17-Sep-24	9:12	61.5	59.3		
17-Sep-24	9:17	61.5	58.2		
17-Sep-24	9:22	62.8	58.6		
23-Sep-24	15:01	61.6	58.0		
23-Sep-24	15:15	62.8	57.8	60.3	63.5
23-Sep-24	15:20	62.5	58.1		
23-Sep-24	15:25	62.5	57.5		
23-Sep-24	15:30	62.3	59.1		
23-Sep-24	15:35	61.4	59.3		

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)
28-Sep-24	8:51	62.3	57.5	60.6	63.3
28-Sep-24	9:05	62.0	57.4		
28-Sep-24	9:10	61.4	57.8		
28-Sep-24	9:15	62.8	57.9		
28-Sep-24	9:20	62.3	58.5		
28-Sep-24	9:25	61.4	57.9		
04-Oct-24	14:59	61.4	58.7	60.4	63.4
04-Oct-24	15:04	62.7	58.6		
04-Oct-24	15:09	61.4	57.8		
04-Oct-24	15:14	61.5	57.7		
04-Oct-24	15:19	62.2	58.6		
04-Oct-24	15:24	62.1	58.9		
10-Oct-24	8:53	61.4	58.1	60.5	63.5
10-Oct-24	8:58	62.5	59.2		
10-Oct-24	9:03	61.8	59.1		
10-Oct-24	9:08	62.1	58.4		
10-Oct-24	9:13	61.6	59.2		
10-Oct-24	9:18	62.5	58.5		
16-Oct-24	14:57	61.7	59.0	60.4	63.4
16-Oct-24	15:02	61.9	59.2		
16-Oct-24	15:07	62.0	58.0		
16-Oct-24	15:12	61.6	58.3		
16-Oct-24	15:17	62.2	59.3		
16-Oct-24	15:22	62.6	58.1		
22-Oct-24	9:00	61.8	57.6	60.6	63.6
22-Oct-24	9:14	62.6	57.4		
22-Oct-24	9:19	61.9	58.4		
22-Oct-24	9:24	62.3	58.5		
22-Oct-24	9:29	61.9	58.3		
22-Oct-24	9:34	61.9	58.2		
28-Oct-24	14:54	61.6	58.7	60.6	63.6
28-Oct-24	15:08	61.8	59.2		
28-Oct-24	15:13	62.5	58.7		
28-Oct-24	15:18	62.0	58.7		
28-Oct-24	15:23	62.0	59.1		
28-Oct-24	15:28	61.5	58.4		

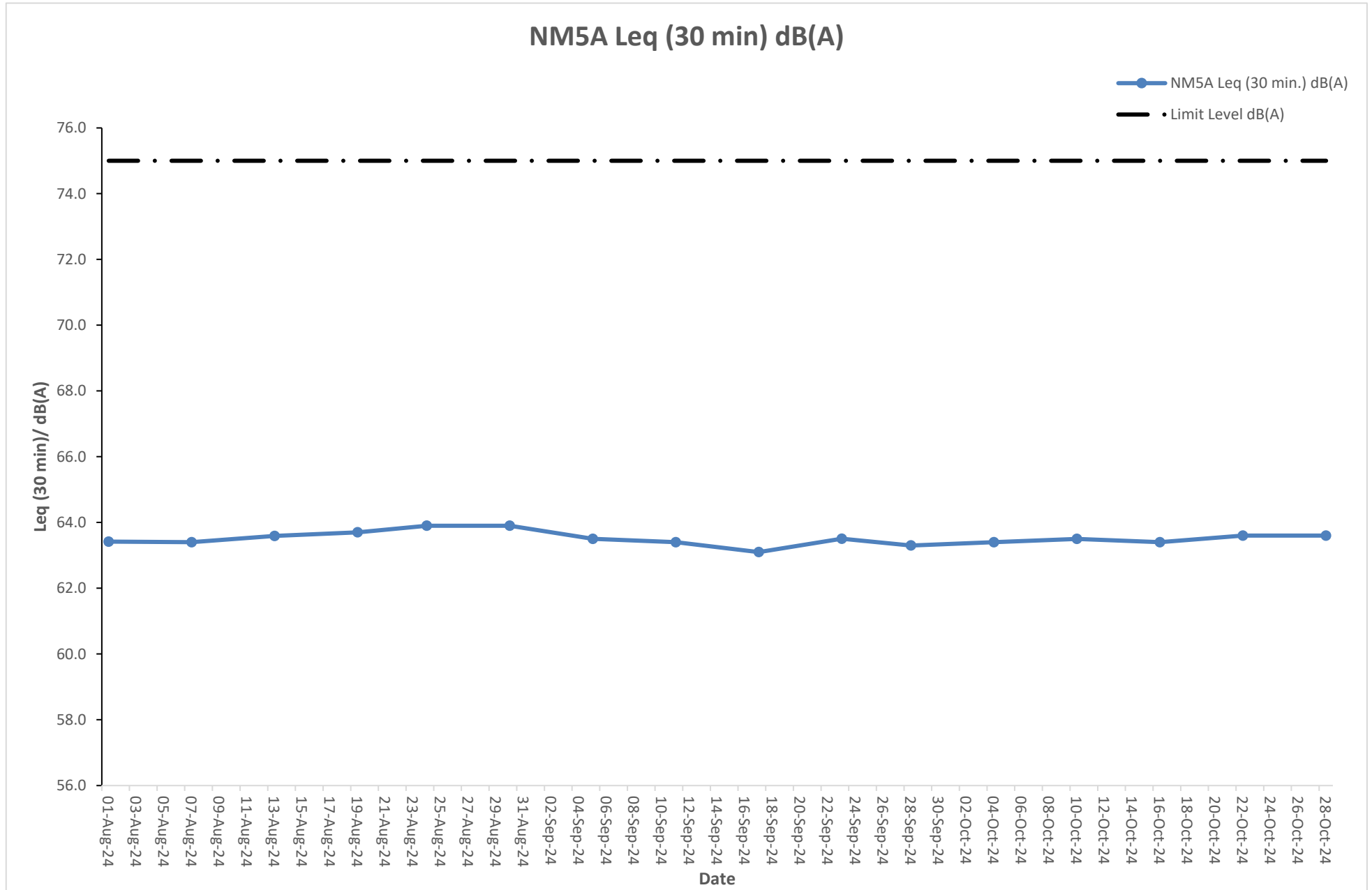
Remarks:

+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 I-1: Monthly Waste Flow Table for Zones 2A, 2B & 2C

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 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)
2024													
Jul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aug	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sep	131.67	0.00	0.00	0.00	131.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.24
Oct	241.28	0.00	0.00	0.00	231.10	10.18	0.00	0.00	0.00	0.00	0.00	0.00	3.95
Nov													
Dec													
Sub-total (2024)	372.95	0.00	0.00	0.00	362.77	10.18	0.00	0.00	0.00	0.00	0.00	0.00	20.19
2025													
Jan													
Feb													
Mar													
Apr													
May													
Jun													
Jul													
Aug													
Sep													
Oct													
Nov													
Dec													
Sub-total (2025)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	372.95	0.00	0.00	0.00	362.77	10.18	0.00	0.00	0.00	0.00	0.00	0.00	20.19

Note:
231.10 tonnes and 0 tonnes of inert C&D material were disposed of as public fill to Tseung Kwan O Area 137 Public Fill and Tuen Mun Area 38 respectively in the reporting month. Disposal record up to 25 October 2024.

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. 30 September 2021 for Zone 2B & 2C (Contract No.: CC/2020/2B/088); 05 July 2024 for Zones 2A, 2B & 2C (Contract No.: CC/2023/2B/095)) to the end of the reporting quarter and are summarized in the **Table G-1** below.

Table G-1: Statistics for complaints, notifications of summons and successful prosecutions for Zones 2A, 2B & 2C (Contract No.: CC/2023/2B/095)

Reporting Period	Cumulative Statistics		
	Complaints	Notifications of summons	Successful prosecutions
This reporting quarter (Aug 24 – Oct 24)	0	0	0
From 05 July 2024 to end of the reporting quarter	1	0	0

END OF THE REPORT