



土木工程拓展署
Civil Engineering and
Development Department

Service Contract No. WD/02/2021

**Environmental Team for Hung Shui Kiu/Ha Tsuen New
Development Area Stage 1 –
Site Formation and Engineering Infrastructure**

Baseline Monitoring Report for Non-Schedule 2 Designated Project

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Date	21 October 2025	21 October 2025



Our ref.: LES/J2021-08/CS/L126
Date : 22 October 2025

By Post and Email

Civil Engineering and Development Department
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Attn: Mr. LEE Chi Ho, Horace, Chief Engineer/ West 4

Dear Mr. LEE,

Agreement No. WD/01/2021
Hung Shui Kiu / Ha Tsuen New Development Area Stage 1 Works – Independent
Environmental Checker
Baseline Monitoring Report for Non-Schedule 2 Designated Project

Reference is made to the Baseline Monitoring Report for Non-Schedule 2 Designated Project (Ref. No. ASCL/210168223/BMR/3, dated 21 October 2025) provided by the Environmental Team (ET) with the ET Leader's certification. We hereby verify the captioned submission in accordance with Clause 15.2.1 of the Updated EM&A Manual.

Yours faithfully,
For and On Behalf Of
Lam Environmental Services Limited

A handwritten signature in blue ink, appearing to read "Ray Dai", with a stylized flourish at the end.

Raymond Dai
Independent Environmental Checker

c.c.: Acuity Sustainability Consulting Limited
Mott MacDonald Hong Kong Limited (Site office)

Mr. F.C. Tsang
Mr. Tom Fan

(By email)
(By email)

Revision History

Rev.	Description of Modification	Date
0.	First issue for comments	24/9/2025
1.	Response to IEC's comments	2/10/2025
2.	Response to IEC's comments	20/10/2025
3.	Response to IEC's comments	21/10/2025

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EXECUTIVE SUMMARY

Baseline monitoring for air quality, noise and water quality for non-Schedule 2 Designated Project (DP) under Hung Shui Kiu/Ha Tsuen New Development Area (HSK/HT NDA) Stage 1 Works were conducted.

A total of 14 air quality monitoring stations was identified for the EM&A programme of non-Schedule 2 DP. Baseline air quality monitoring at AM18, AM19 and AM20 was conducted from 6 August 2025 to 19 August 2025. Baseline air quality monitoring of the other 11 stations (including AM7, AM8a, AM9, AM11, AM12, AM13, AM15, AM21, AM23, AM24 and AM25a) had been carried out before and the monitoring results had been verified. The Action and Limit Levels derived from the Updated EM&A Manual are presented in **Table A1**.

Table A1 Action and Limit Levels of Impact Monitoring of 1-hour Total Suspended Particulates

Monitoring Station(s)	Action Level (µg/m³)	Limit Level (µg/m³)
Site 2-18, Site 2-19, Fung Kong Tsuen Road, Ha Tsuen Road/ Lau Fau Shan Road		
AM18	285	500
AM19	282	
AM20	268	
AM21	275	
Road L51		
AM23	290	500
AM24	290	
AM25a	300	
Sha Chau Lei Tsuen		
AM7	282	500
AM8a	267	
AM9	276	
AM11	276	
AM12	273	
AM13	264	
AM15	271	

A total of 5 noise monitoring stations was identified for the EM&A programme of non-Schedule 2 DP. Baseline noise monitoring at CM6 had been carried out before and the monitoring results had been verified by the IEC of the project of Road Widening Works at Tin Wah Road. Baseline noise monitoring at CM20, CM22, CM26 and CM30 had also been carried out before and the monitoring results had been verified by the IEC of HSK/HT NDA Second Phase Development. The Action and Limit Levels to be adopted are presented in **Table A2**.

Table A2 Action and Limit Levels for Construction Noise Monitoring

Time Period	Action	Limit
07:00 - 19:00 on normal weekdays	When one or more documented complaints are received	75 dB(A)

A total of 10 water quality monitoring stations was identified for the EM&A programme of non-Schedule 2 DP. Baseline water quality monitoring at U1, SW, HT, TKW and TKW1 had been carried out and the monitoring results had been verified by the IEC of HSK/HT NDA Stage 1 Works. Baseline water quality monitoring at TSR1a, LUTa, LFS, D1 and D2a had been carried out and the monitoring results had been verified by the IEC of HSK/HT NDA Second Phase Development. The Action and Limit Levels derived from the Updated EM&A Manual are presented in **Tables A3 to A5**.

Table A3 Action and Limit Levels for Water Quality at SW, HT, TKW1 and TKW (Wet Season)

Parameters	Action Levels	Limit Levels
SW		
DO (mg/L)	3.7	3.5
Turbidity (NTU)	21.4	22.9
SS (mg/L)	9.7	9.9
pH	Less than 6.6 or greater than 8.4	Less than 6.5 or greater than 8.5
HT		
DO (mg/L)	2.4	2.2
Turbidity (NTU)	32.3	32.6
SS (mg/L)	34.0	38.7
pH	Less than 6.6 or greater than 8.4	Less than 6.5 or greater than 8.5
TKW1		
DO (mg/L)	2.8	2.8
Turbidity (NTU)	27.9	29.2
SS (mg/L)	16.0	18.4
pH	Less than 6.6 or greater than 8.4	Less than 6.5 or greater than 8.5
TKW		
DO (mg/L)	2.5	2.4
Turbidity (NTU)	24.2	24.6
SS (mg/L)	19.8	21.6
pH	Less than 6.6 or greater than 8.4	Less than 6.5 or greater than 8.5

Table A4 Action and Limit Levels for Water Quality at SW, HT, TKW1 and TKW (Dry Season)

Parameters	Action Levels	Limit Levels
SW		
DO (mg/L)	2.3	2.1
Turbidity (NTU)	22.0	22.3
SS (mg/L)	8.8	10.5
pH	Less than 6.6 or greater than 8.4	Less than 6.5 or greater than 8.5
HT		
DO (mg/L)	2.2	2.1
Turbidity (NTU)	18.2	20.1
SS (mg/L)	7.2	7.5
pH	Less than 6.6 or greater than 8.4	Less than 6.5 or greater than 8.5
TKW1		
DO (mg/L)	2.1	2.0
Turbidity (NTU)	16.4	17.6
SS (mg/L)	7.1	7.8
pH	Less than 6.6 or greater than 8.4	Less than 6.5 or greater than 8.5
TKW		
DO (mg/L)	2.2	2.2
Turbidity (NTU)	26.0	26.7
SS (mg/L)	7.0	7.1
pH	Less than 6.6 or greater than 8.4	Less than 6.5 or greater than 8.5

Table A5 Action and Limit Levels for Impact Water Quality Monitoring at D2a and D1

Parameters	Action Levels	Limit Levels
D2a		
DO (mg/L)	5.4	4
Turbidity (NTU)	11.6	11.7
SS (mg/L)	14.0	15.6
pH	Less than 6.6 or greater than 8.4	Less than 6.5 or greater than 8.5
D1		
DO (mg/L)	4.2	4
Turbidity (NTU)	23.4	24.5
SS (mg/L)	32.8	36.8
pH	Less than 6.6 or greater than 8.4	Less than 6.5 or greater than 8.5

1 INTRODUCTION

1.1 Project Background

1.1.1 The HSK/HT NDA occupies an area of approximately 714 ha and is located in the north-western part of the New Territories, midway between Tuen Mun and Tin Shui Wai New Towns. It is bounded by Tin Ying Road/ Ping Ha Road/ Kiu Hung Road to the east, Castle Peak Road to the south, Kong Sham Western Highway (“KSWH”) to the west, and Tin Ha Road, Lau Fau Shan Road and hillslopes along Deep Bay Road to the north. In the wider context, the proposed Project is strategically located in close proximity to Shenzhen, particularly Shenzhen Bay Control Point, Qianhai, and Shekou and efficiently linked with the Greater Pearl River Delta (“PRD”) region. The KSWH and the possible highway connecting the Project area with the Tuen Mun - Chek Lap Kok Link, the Hong Kong International Airport, Kwai Tsing Container Terminals, and the Hong Kong-Zhuhai-Macao Bridge and its Boundary Crossing facilities. New strategic highway infrastructure connecting the Project area with the urban area will also be planned to address the long-term development needs of North West New Territories (“NWNT”). The proposed West Rail Hung Shui Kiu Station (“HSK Station”), with its alignment traversing the Project allows convenient and efficient access to and from the Project area.

1.1.2 The works under HSK/HT NDA Stage 1 Works comprises:

Schedule 2 Designated Project

- The construction of interim section of new distributor road (Road D1) connecting Sites 3-6, 3-7 and 3-8 to the existing Ha Tsuen Roundabout of KSWH. Road D1 a designated project (“DP”) defined under item A1 in Schedule 2 of the Environmental Impact Assessment Ordinance) and it is governed under Environmental Permit No. EP-528/2017.

Non-Schedule 2 Designated Project:

- Infrastructure works at Road L51;
- Site formation and infrastructure works at Site 2-18 and 2-19;
- Sewer laying works along Fung Kong Tsuen Road and Ping Ha Road/ Lau Fau Shan Road; and
- Pipe jacking work near Sha Chau Lei Tsuen.

1.1.3 The layout plan for HSK/HT NDA Stage 1 Works is shown in **Figure 1.1**.

1.1.4 The HSK/HT NDA Stage 1 Works would be implemented under a fast-track programme, involving various complex tasks for providing infrastructure and forming the five development sites to be conducted in parallel, so as to tie in with operation of the development MSBs or other land-efficient means and population intake of the village resite house in 2025 tentatively.

- 1.1.5 Acuity Sustainability Consulting Limited (ASCL) is commissioned by Civil Engineering and Development Department (CEDD) to undertake the Environmental Team (ET) services as required and/or implied, both explicitly and implicitly, in the Environmental Permit (EP), Environmental Impact Assessment (EIA) Report (Register No. AEIAR-203/2016) and Environmental Monitoring and Audit (EM&A) Manual for the Project; and to carry out the EM&A programme in fulfillment of the EIA Report's, EM&A requirements under Service Contract No. WD/02/2021.
- 1.1.6 Pursuant to the Environmental Impact Assessment Ordinance (EIAO), the Director of Environmental Protection Department (DEP) granted the Environmental Permits (Nos.: EP-526/2017, EP-527/2017, EP-528/2017, EP-529/2017, EP-530/2017 and EP-531/2017) to the CEDD for the HSK/HT NDA. The HSK/HT NDA Stage 1 Works comprise the interim section of Road D1 that is governed under Environmental Permit No. EP-528/2017. No other Schedule 2 DPs are identified within the scope of HSK/HT NDA Stage 1 Works.

1.2 Purpose of the Report

- 1.2.1 The EM&A requirements for baseline monitoring under Contract No. YL/2020/03 are set out in the Updated EM&A Manual (April 2022) and Contract Specification. Environmental aspects of air quality, construction noise and water quality were identified as the key issues requiring implementation of monitoring programme during the construction phase of the Project. A Baseline Monitoring Report for Schedule 2 DP (i.e. the interim section of Road D1) had been prepared and submitted in August 2023⁽¹⁾ under Condition 3.3 of EP-528/2017.
- 1.2.2 For the concerned areas with ongoing or future construction work for non-Schedule 2 DP under HSK/HT Stage 1 Works, this report presents the baseline air quality, noise and water quality monitoring results at the monitoring stations that are within the buffer distances (500 m for air quality and water quality, and 300 m for noise) from the site boundaries. Action and Limit Levels are also defined for impact monitoring.

1.3 Report Structure

- 1.3.1 This Baseline Monitoring Report comprises the following sections:

- Section 1 introduces the background of the Project and purpose of this Report;
- Section 2 presents the baseline monitoring methodologies, requirements, results, influencing factors, as well as determination of the action and limit levels of air quality;
- Section 3 presents the action and limit levels of construction noise;
- Section 4 presents action and limit levels of water quality; and

(1) Service Contract No. WD/02/2021, Environmental Team for Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works – Site Formation and Engineering Infrastructure, “Baseline Monitoring Report (Environmental Permit No. EP-528/2017)”, August 2023.
(https://hskhtnda-s1.com/upload/HSK%20Baseline%20Monitoring%20Report_R5_signed.pdf?v=1673843881)

Section 5 concludes the findings of baseline monitoring.

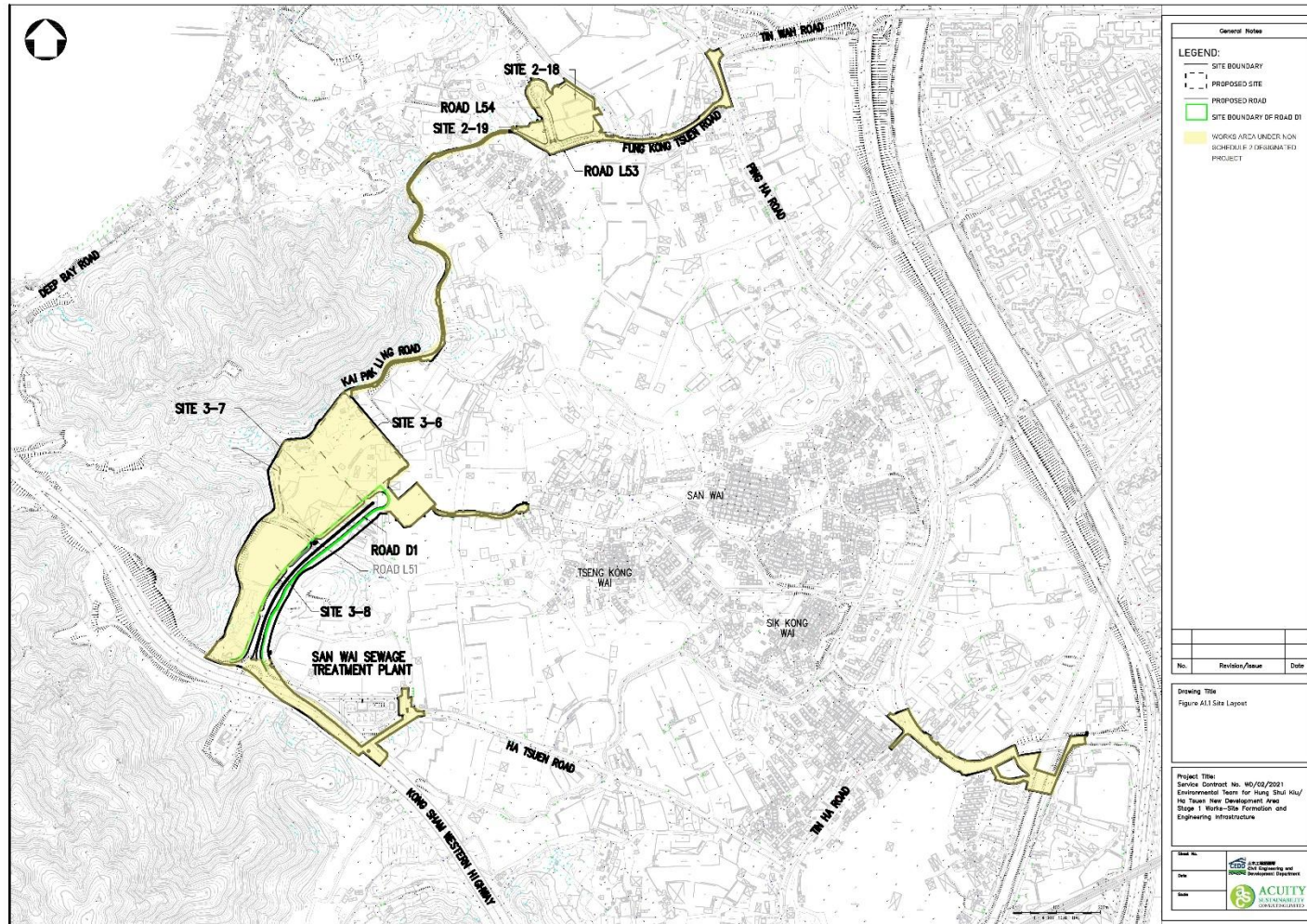


Figure 1.1 Project Layout Plan

2 AIR QUALITY

2.1 Monitoring Requirement

- 2.1.1 Baseline air quality monitoring shall be carried out to determine the ambient 1-hour Total Suspended Particulates (TSP) levels at designated monitoring stations for 14 consecutive days prior to the commissioning of the construction works. 1-hour TSP monitoring should be carried out at least three times per day at each monitoring station when the highest dust impact is expected.

2.2 Monitoring Parameters, Frequency and Duration

- 2.2.1 **Table 2.1** summarizes the monitoring parameters, frequency and duration of baseline air quality monitoring.

Table 2.1 Baseline Air Quality Monitoring Parameters, Frequency and Duration

Parameters	Duration	Frequency
1-hour TSP	Daily for at least 14 consecutive days	3 times per day

2.3 Monitoring Location

- 2.3.1 According to the Updated EM&A Manual⁽²⁾, the designated locations for air quality monitoring of non-schedule 2 DP are listed in **Table 2.2**.

Table 2.2 Air Quality Monitoring Stations for Baseline and Impact Monitoring of Non-Schedule 2 DP under HSK/HT NDA Stage 1 Works

Station(s)	EIA ID	Monitoring Location	Approximate Distance between the Stations and the Nearest Site Boundaries
<i>Site 2-18, Site 2-19, Fung Kong Tsuen Road, Ha Tsuen Road/ Lau Fau Shan Road</i>			
AM18	A1303	Sha Kong Wai Tsai	77 m
AM19	A1305	Ngau Hom Tsuen	389 m
AM20	A1302	Wing Jan School	352 m
AM21 [†]	A1002	Fung Kong Tsuen	86 m
<i>Road L51*</i>			
AM23	P1032	Planned Port Back-up, Storage and Workshop (at Site 3-6)	176 m
AM24	P1501	Planned Port Back-up, Storage and Workshop (at Site 3-8)	288 m

(2) Service Contract No. WD/02/2021, Environmental Team for Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works – Site Formation and Engineering Infrastructure, “Updated EM&A Manual”, April 2022.

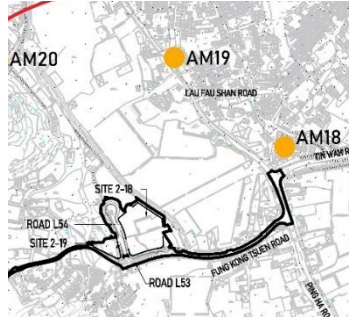
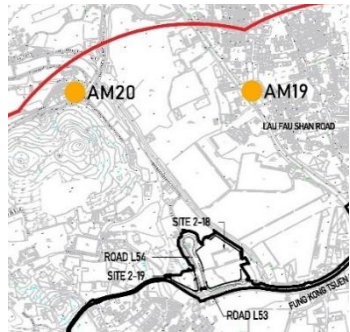
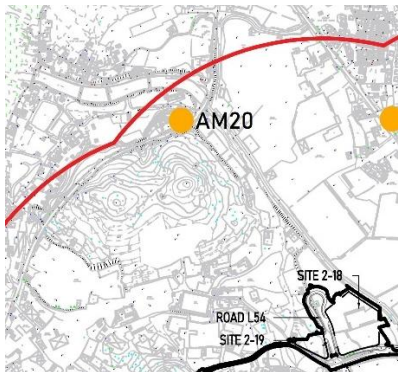
Station(s)	EIA ID	Monitoring Location	Approximate Distance between the Stations and the Nearest Site Boundaries
AM25a	-	San Wai Sewage Treatment Plant near the Planned Port Back-up, Storage and Workshop (at Site 3-14)	304 m
<i>Sha Chau Lei Tsuen</i> †			
AM7	A414	Shek Po Tsuen	487 m
AM8a ‡	A813	Block J, Tin Shing Court	221 m
AM9	A702	San Uk Tsuen	349 m
AM11	A703	Sha Chau Lei Tsuen	28 m
AM12	A704	Ha Tsuen Shi	245 m
AM13	A708	Sik Kong Wai	351 m
AM15	A1101	Lo Uk Tsuen	480 m

Notes:

- * Baseline air quality monitoring at AM23, AM24 and AM25a had been conducted under HSK/HT NDA Stage 1 Works in December 2021. No further baseline monitoring at these stations was conducted.
- † Baseline air quality monitoring at AM7, AM8a, AM9, AM11, AM12, AM13, AM15 and AM21 had been conducted under HSK/HT NDA Second Phase Development. No further baseline monitoring at these stations was conducted.
- ‡ The correct name of the monitoring location had been updated as proposed in the Proposal for Alternative Monitoring Locations (Air Quality, Construction Noise & Water Quality) with agreement from the IEC of HSK/HT NDA Second Phase Development, and the monitoring station ID had been revised from AM8 to AM8a under HSK/HT NDA Second Phase Development.

2.3.2 The locations of all designated air quality monitoring stations for Schedule 2 Designated Project (DP) under HSK/HT NDA Stage 1 Works are shown in **Figure 2.1**. The locations of all designated air quality monitoring stations for non-Schedule 2 Designated Project (DP) under HSK/HT NDA Stage 1 Works are shown in **Figure 2.2**. Besides AM18, AM19 and AM20, baseline monitoring stations had been carried out at the other designated locations. Photos of air quality monitoring stations of AM18, AM19 and AM20 are presented in **Table 2.3**.

Table 2.3 Photos of Air Quality Monitoring Stations (AM18, AM19 and AM20)

ID	Direct Reading Dust Meter Position	Monitoring Direction
AM18		
AM19		
AM20		

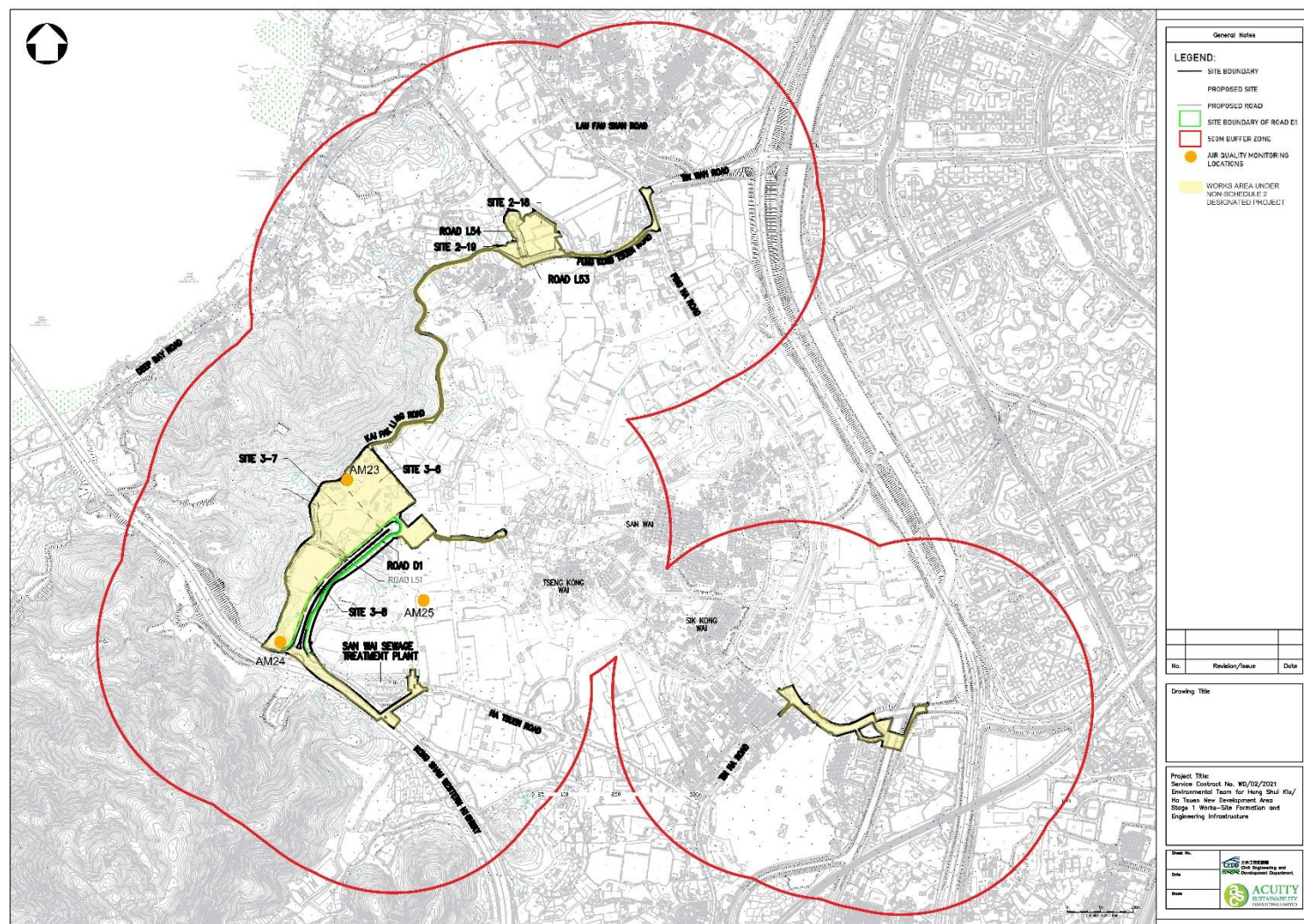


Figure 2.1 Air Quality Monitoring Locations for Schedule 2 Designated Project (DP) under HSK/HT NDA Stage 1 Works

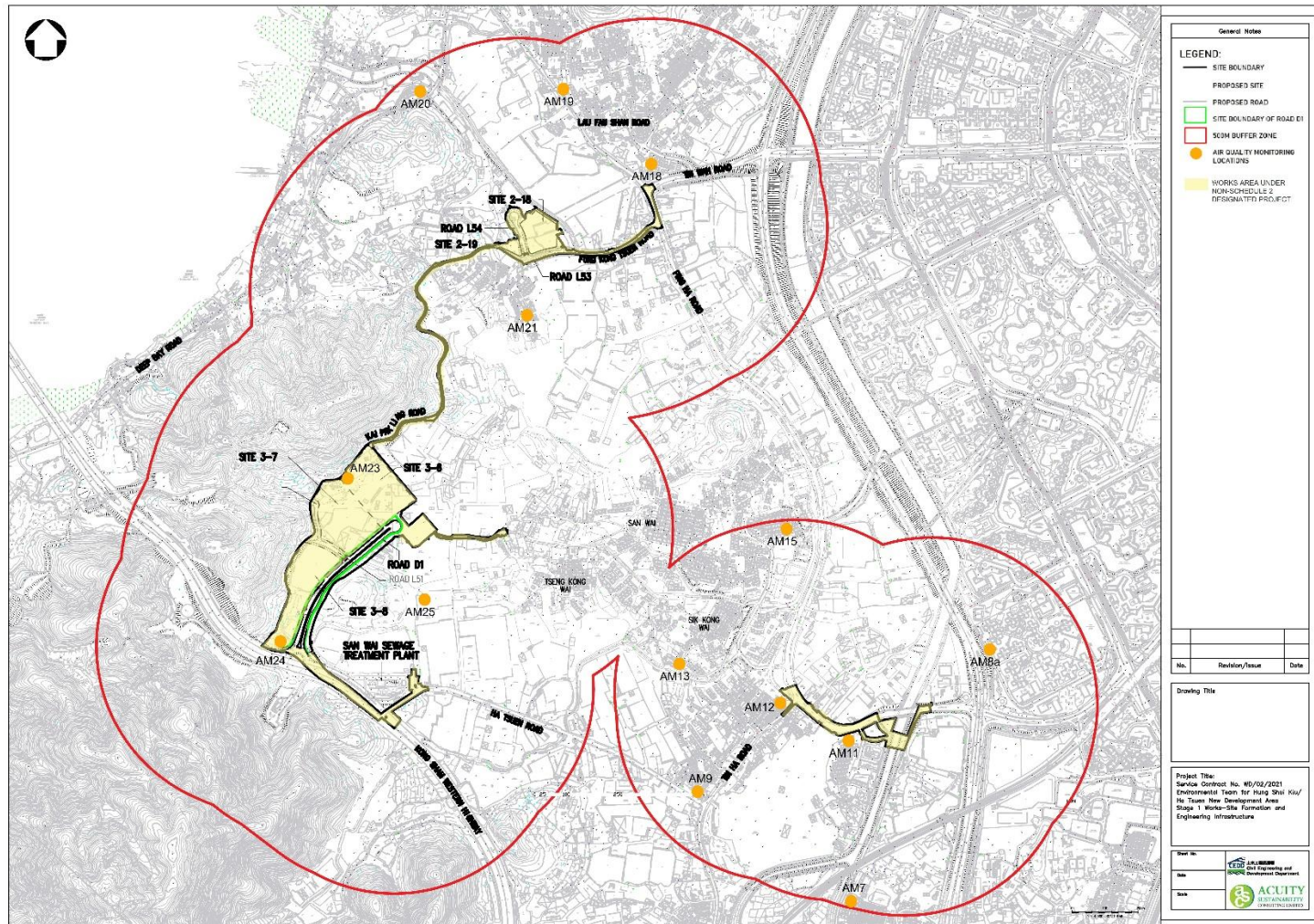


Figure 2.2 Air Quality Monitoring Locations for Non-Schedule 2 Designated Project (DP) under HSK/HT NDA Stage 1 Works

2.4 Monitoring Equipment and Methodology

- 2.4.1 Direct reading dust meters were used for measuring 1-hour TSP levels during the baseline air quality monitoring. According to paragraph 4.3.5 of the Updated EM&A Manual⁽³⁾, the proposed use of direct reading dust meter was submitted to and agreed by the IEC of HSK/HT NDA Stage 1 Works.
- 2.4.2 The direct reading dust meters have been calibrated against high volume samplers (HVSs) annually. A 2-day, three 3-hour measurement results per day from direct reading dust meters were taken to compare with the sampling results from the HVSs. The correlation between the direct reading dust meters and the HVSs were then concluded. By accounting for the correlation factor, the direct reading dust meters are considered to achieve comparable results as that of the HVSs.
- 2.4.3 Sufficient number of monitoring instruments were prepared by the ET for carrying out the baseline monitoring. All equipment and associated instrumentation were clearly labelled.
- 2.4.4 Equipment used in the baseline air quality monitoring for AM18, AM19 and AM20 is summarized in **Table 2.4**. Calibration certificates for the air quality monitoring equipment used in the baseline air quality monitoring for AM18, AM19 and AM20 are presented in **Appendix A**.

Table 2.4 Baseline Air Quality Monitoring Equipment

Equipment	Brand and Model	Serial No.
Direct Reading Dust Meter	Sibata LD-5R	851816
		851820
		992821
		0Z4545

2.5 Results and Observations

- 2.5.1 The baseline air quality monitoring at AM18, AM19 and AM20 was carried out between 6 and 19 August 2025 (**Figure 2.2**). The monitoring results are presented in **Appendix B**. Weather condition of the whole baseline monitoring period was sunny, fine, cloudy and rainy. Extracts of Meteorological Observations for Hong Kong available from the Hong Kong Observatory – Lau Fau Shan, which reflect the weather summary of the baseline air quality monitoring period, are presented in **Appendix D**.
- 2.5.2 **Table 2.5** summarizes the baseline air quality monitoring results of AM18, AM19 and AM20. The IEC of HSK/HT NDA Second Phase Development verified the baseline monitoring results of AM7, AM8a, AM9, AM11, AM12, AM13, AM15, AM21, AM23, AM24 and AM25a are also presented in **Table 2.5**.

(3) Service Contract No. WD/02/2021, Environmental Team for Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works – Site Formation and Engineering Infrastructure, “Updated EM&A Manual”, April 2022.

Contract No. WD/02/2021
Environmental Team for Hung Shui Kiu/ Ha Tsuen New Development Area Stage 1 Works
– Site Formation and Engineering Infrastructure

Baseline Air Quality Monitoring Schedule (Version 1.0)						
August 2025						
Sun	Mon	Tue	Wed	Thur	Fri 1	Sat 2
3	4	5	6 Baseline 1-hour TSP Monitoring at AM18, AM19 & AM20	7 Baseline 1-hour TSP Monitoring at AM18, AM19 & AM20	8 Baseline 1-hour TSP Monitoring at AM18, AM19 & AM20	9 Baseline 1-hour TSP Monitoring at AM18, AM19 & AM20
10 Baseline 1-hour TSP Monitoring at AM18, AM19 & AM20	11 Baseline 1-hour TSP Monitoring at AM18, AM19 & AM20	12 Baseline 1-hour TSP Monitoring at AM18, AM19 & AM20	13 Baseline 1-hour TSP Monitoring at AM18, AM19 & AM20	14 Baseline 1-hour TSP Monitoring at AM18, AM19 & AM20	15 Baseline 1-hour TSP Monitoring at AM18, AM19 & AM20	16 Baseline 1-hour TSP Monitoring at AM18, AM19 & AM20
17 Baseline 1-hour TSP Monitoring at AM18, AM19 & AM20	18 Baseline 1-hour TSP Monitoring at AM18, AM19 & AM20	19 Baseline 1-hour TSP Monitoring at AM18, AM19 & AM20	20	21	22	23
24	25	26	27	28	29	30
31						

Figure 2.2 Baseline Air Quality Monitoring Schedule (AM18, AM19 and AM20)

Table 2.5 Summary of Baseline 1-hour TSP Monitoring Results

Monitoring Stations	TSP Concentration, $\mu\text{g}/\text{m}^3$		
	Average	Minimum	Maximum
<i>Site 2-18, Site 2-19, Fung Kong Tsuen Road, Ha Tsuen Road/ Lau Fau Shan Road</i>			
AM18	54	28	88
AM19	49	23	78
AM20	28	11	45
AM21*	38	24	56
<i>Road L51</i>			
AM23†	62	51	71
AM24†	62	51	70
AM25a†	77	62	98
<i>Sha Chau Lei Tsuen</i>			
AM7*	49	34	67
AM8a*	26	13	54
AM9*	39	20	61
AM11*	39	22	60
AM12*	35	18	58
AM13*	21	11	42
AM15*	32	16	50

References:

- * Service Contract No. WD/03/2023, Hung Shui Kiu/Ha Tsuen New Development Area Second Phase Development – Environmental Team, “Baseline Monitoring Report”, December 2024. ([https://hskhtnda-p2.com/upload/HSK%20NDA%20Second%20Phase_BMR_R2\(full\).pdf?v=1739355176](https://hskhtnda-p2.com/upload/HSK%20NDA%20Second%20Phase_BMR_R2(full).pdf?v=1739355176))
- † Service Contract No. WD/02/2021, Environmental Team for Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works – Site Formation and Engineering Infrastructure, “Baseline Monitoring Report (Environmental Permit No. EP-528/2017)”, August 2023.

- 2.5.3 During the baseline monitoring between 6 and 19 August 2025, construction works were ongoing at Site 2-18 and Site 2-19. Fugitive dust suppression measures such as water spraying and covering open stockpiles were adopted on site during the monitoring period. With these air quality mitigation measures and the rainy weather during the baseline monitoring period, there are no signs of direct impact of the construction activities from Site 2-18 and Site 2-19 on the baseline air quality monitoring data. Another dust emission source was the road widening works at Tin Wah Road near AM18, though the impact appears minimal due to dust suppression measures implemented on site and the wet weather during the monitoring period. No other dust emission source was detected near AM19 and AM20.
- 2.5.4 The photo records of the adoption of air quality mitigation measures at Site 2-18 and Site 2-19 during the baseline monitoring period are presented in **Plate 2.1 to Plate 2.12** respectively.

Plate 2.1 Air Quality Mitigation Measures Recorded on site on 6 August 2025



Plate 2.2 Air Quality Mitigation Measures Recorded on site on 7 August 2025



Plate 2.3 Air Quality Mitigation Measures Recorded on site on 8 August 2025



Plate 2.4 Air Quality Mitigation Measures Recorded on site on 9 August 2025



Plate 2.5 Air Quality Mitigation Measures Recorded on site on 11 August 2025



Plate 2.6 Air Quality Mitigation Measures Recorded on site on 12 August 2025

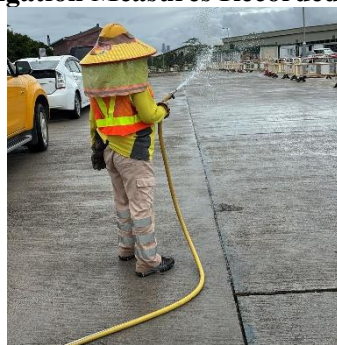


Plate 2.7 Air Quality Mitigation Measures Recorded on site on 13 August 2025



Plate 2.8 Air Quality Mitigation Measures Recorded on site on 14 August 2025



Plate 2.9 Air Quality Mitigation Measures Recorded on site on 15 August 2025



Plate 2.10 Air Quality Mitigation Measures Recorded on site on 16 August 2025



Plate 2.11 Air Quality Mitigation Measures Recorded on site on 18 August 2025



Plate 2.12 Air Quality Mitigation Measures Recorded on site on 19 August 2025



2.6 Action and Limit Levels

- 2.6.1 The baseline 1-hour TSP monitoring results form the basis for determining the air quality criteria for the impact monitoring. **Table 2.6** shows the criteria for establishing the Action and Limit Levels for air quality monitoring.

Table 2.6 Determination of Action and Limit Levels for Air Quality Monitoring during Construction Period

Parameters	Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
1-hour TSP Level ($\mu\text{g}/\text{m}^3$)	$\text{BL} \leq 384 \mu\text{g}/\text{m}^3$, $\text{AL} = (\text{BL} \times 1.3 + \text{LL})/2$ $\text{BL} > 384 \mu\text{g}/\text{m}^3$, $\text{AL} = \text{LL}$	500

- 2.6.2 Following the above guidelines, the Action and Limit Levels for 1-hour TSP impact monitoring of AM18, AM19 and AM20 were set. They are presented in **Table 2.7**, together with the Action and Limit Levels of the other stations already defined.

Table 2.7 Action and Limit Levels of Impact Monitoring of 1-hour TSP

Monitoring Station(s)	Action Level (µg/m³)	Limit Level (µg/m³)
Site 2-18, Site 2-19, Fung Kong Tsuen Road, Ha Tsuen Road/ Lau Fau Shan Road		
AM18	285	500
AM19	282	
AM20	268	
AM21 *	275	
Road L51		
AM23 †	290	500
AM24 †	290	
AM25a †	300	
Sha Chau Lei Tsuen		
AM7 *	282	500
AM8a *	267	
AM9 *	276	
AM11 *	276	
AM12 *	273	
AM13 *	264	
AM15 *	271	

References:

* Service Contract No. WD/03/2023, Hung Shui Kiu/Ha Tsuen New Development Area Second Phase Development – Environmental Team, “Baseline Monitoring Report”, December 2024. ([https://hskhtnda-p2.com/upload/HSK%20NDA%20Second%20Phase_BMR_R2\(full\).pdf?v=1739355176](https://hskhtnda-p2.com/upload/HSK%20NDA%20Second%20Phase_BMR_R2(full).pdf?v=1739355176))

† Service Contract No. WD/02/2021, Environmental Team for Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works – Site Formation and Engineering Infrastructure, “Baseline Monitoring Report (Environmental Permit No. EP-528/2017)”, August 2023.

3 Construction Noise

3.1 Monitoring Requirement

- 3.1.1 Baseline construction noise monitoring shall be carried out at designated monitoring stations for 14 consecutive days. The minimum logging interval shall be 30 minutes with average of 6 consecutive A-weighted equivalent continuous sound pressure level over 5 minutes ($L_{eq(5-min)}$); L_{10} and L_{90} shall also be measured at 5-minute intervals.

3.2 Monitoring Parameters, Frequency and Duration

- 3.2.1 **Table 3.1** summarizes the monitoring parameters, frequency and duration of the baseline air quality monitoring.

Table 3.1 Baseline Construction Noise Monitoring Parameters, Frequency and Duration

Parameter	Frequency and Duration
L_{eq} (30mins) (as an average of 6 consecutive L_{eq} (5-min)); L_{10} (5-min) and L_{90} (5-min)	Continuous for 14 consecutive days with each sampling period of 5 minutes throughout the monitoring

3.3 Monitoring Location

- 3.3.1 No designated noise monitoring stations are located within 300 m buffer distance from the site boundary of the Schedule 2 DP under HSK/HT NDA Stage 1 Work. **Figure 3.1** presents that no monitoring had been conducted for the Schedule 2 DP under HSK/HT NDA Stage 1 Works.
- 3.3.2 According to the Updated EM&A Manual⁽⁴⁾, the designated noise monitoring stations that are within 300 m buffer distance from the site boundary of non-Schedule 2 DP under HSK/HT NDA Stage 1 Works are listed in **Table 3.2**. Their locations are shown in **Figure 3.2**.

Table 3.2 Noise Monitoring Stations for Baseline and Impact Monitoring

ID No.	EIA ID	Location	Nature of Use	Type of Measurement
<i>Site 2-18, Site 2-19, Fung Kong Tsuen Road, Ha Tsuen Road/ Lau Fau Shan Road</i>				
CM6 ^(a)	ELFS03	No. 325 Sha Kong Wai	Residential	Façade
CM26 ^(b)	EFKT01	No. 61, Fung Kong Tsuen	Residential	Free-Field
CM30 ^(b)	21801	Planned Residential Development in Site 2-18	Residential	Free-Field
<i>Road L51</i>				
-	-	-	-	-

(4) Service Contract No. WD/02/2021, Environmental Team for Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works – Site Formation and Engineering Infrastructure, “Updated EM&A Manual”, April 2022.

ID No.	EIA ID	Location	Nature of Use	Type of Measurement
<i>Sha Chau Lei Tsuen</i>				
CM20 ^(b)	ESCL03	No. 45, Sha Chau Lei Tsuen	Residential	Free-Field
CM22 ^(b)	ELUT01	Block 11, Yan Wu Garden	Residential	Free-Field

Note:

- (a) Baseline noise monitoring carried out under the CEDD's Road Widening Works of Tin Wah Road (Quotation No. PU 01/2024) in accordance with EP-528/2017 was referred.
- (b) For Free Field measurement, +3 dB(A) should be added to the measured results.

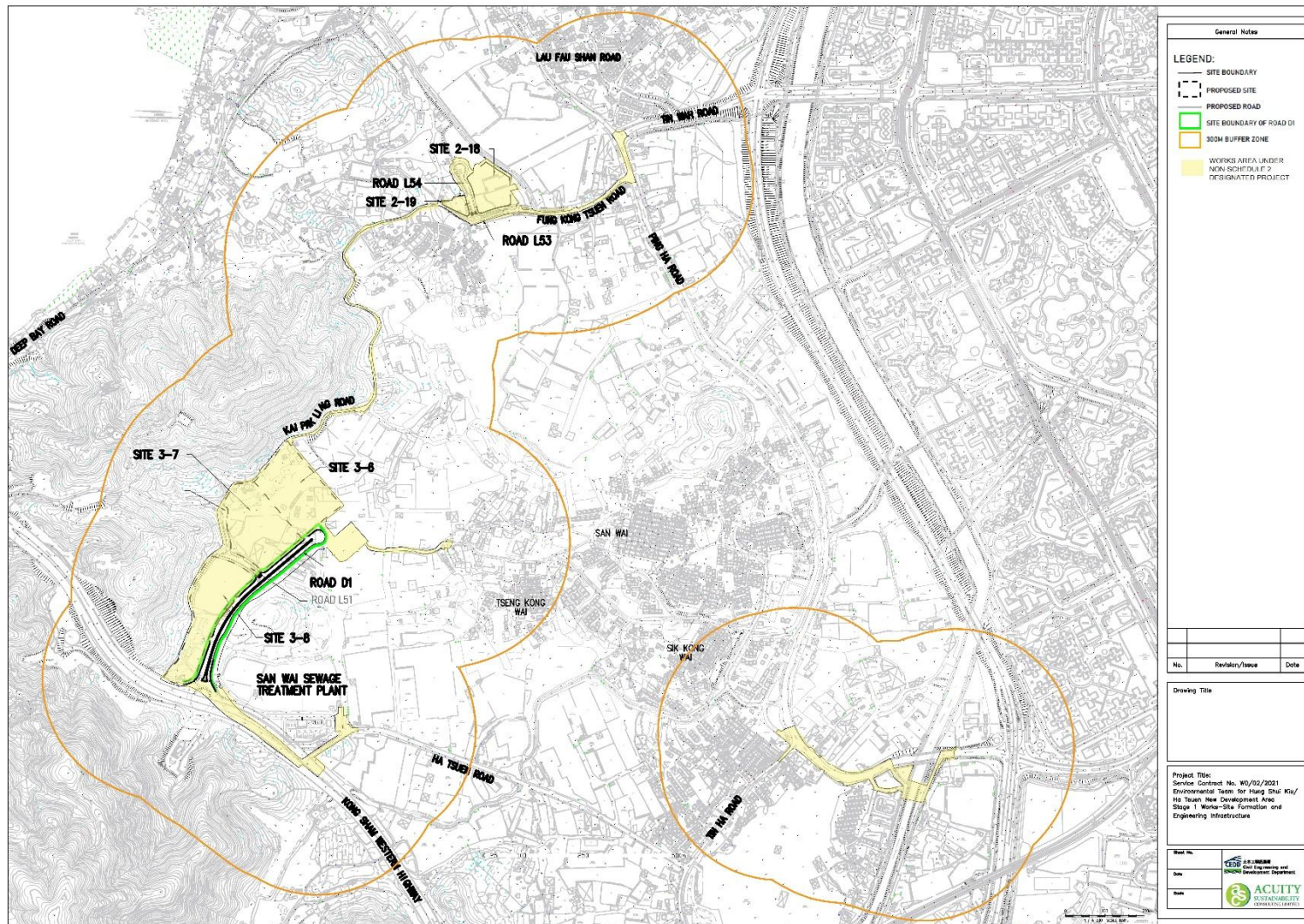
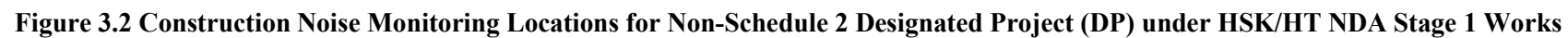


Figure 3.1 Construction Noise Monitoring Locations for Schedule 2 Designated Project (DP) under HSK/HT NDA Stage 1 Works



3.4 Monitoring Equipment

- 3.4.1 Sound level meters and calibrators shall comply with the International Electrotechnical Commission Publication 651:1979 (Type 1) and 804:1985 (Type 1) specification as referred to in the Technical Memorandum (TM) issued under the Noise Control Ordinance. The sound level meters shall be supplied and used with the manufacturer recommended weather shield as appropriate.
- 3.4.2 Sound level meters shall be calibrated using a portable calibrator prior to and following each noise measurement. The calibration levels shall be noted with the measurement results and where the difference between the calibration levels is greater than 1.0 dB(A), the measurement shall be repeated.
- 3.4.3 Noise measurements will not be made in the presence of fog, rain, wind with a steady speed exceeding 5 m/s or wind with gusts exceeding 10 m/s.

3.5 Monitoring Methodology

- 3.5.1 The details of noise measurement procedures are described as follows:
- Free-field and façade measurements were made at the monitoring locations.
 - For free field, the sound level meter was set at a height of 1.2 m above ground.
 - For façade measurement, the microphone of the sound level meter was positioned 1 m away from the building external wall of sensitive receiver, and the sound level meter was set up at a height of 1.2 m above ground.
 - Regular visits, for a period of at least once every three to four days, were conducted by the ET to ensure the continuous operation of the sound level meter during the baseline monitoring. The battery condition was checked to ensure proper functioning of the meter.
 - A-weighted L_{eq} , L_{10} and L_{90} were measured by weatherproof logging sound level meter over a two-week period, and a sampling period of 5 minutes was used throughout the baseline monitoring.
 - Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:
 - Frequency weighting: A
 - Time weighting: Fast
 - Measurement time: Six consecutive L_{eq} (5-min) readings are measured to provide L_{eq} (30-min) for the non-restricted hours.
 - Prior to and after each noise measurement, the meter was calibrated using an acoustic calibrator for 94.0 dB at 1000 Hz. If the difference in the calibration level before and after measurement was more than 1.0 dB, the measurement would be considered invalid and repeat of noise measurement would be required after recalibration or repair of the equipment.
 - No construction activities were observed near the monitoring stations during the baseline monitoring. Measurements were recorded to the nearest 0.1 dB.
 - Noise measurement should be paused during periods of high intrusive noise if possible and observation shall be recorded when intrusive noise is not avoided.
 - Noise monitoring should be conducted with the wind speed not exceeding 5 m/s and no gusts exceeding 10 m/s.

3.6 Maintenance and Calibration

3.6.1 Maintenance and calibration procedures are as follows:

- The microphone head of the sound level meter and calibrator were regularly cleaned with a soft cloth; and
- The sound level meter and acoustic calibrator were calibrated annually by a HOKLAS accredited laboratory or the manufacturer.

3.7 Results and Observations

- 3.7.1 The baseline noise monitoring at CM6 had been conducted under the project of Road Widening Works at Tin Wah Road and the monitoring results were presented in the corresponding Baseline Monitoring Report⁽⁵⁾. The baseline noise monitoring at CM6 had been verified by the IEC of project of Road Widening Works at Tin Wah Road.
- 3.7.2 The baseline noise monitoring at CM20, CM22, CM26 and CM30 had been conducted under HSK/HT NDA Second Phase Development and the monitoring results were presented in the corresponding Baseline Monitoring Report⁽⁶⁾. The baseline noise monitoring at CM20, CM22, CM26 and CM30 had been verified by the IEC of HSK/HT NDA Second Phase Development.
- 3.7.3 The verified baseline monitoring results are summarized in **Tables 3.3 to 3.5**.

(5) Quotation No. PU 01/2024: Environmental Team For Road Widening Works At Tin Wah Road, “Baseline Monitoring Report”, June 2025.
([https://www.tinwahroadwidening.lamenviro.com/web/report/EPS/BMR/Baseline%20Monitoring%20Report_final\(2025.06\).pdf](https://www.tinwahroadwidening.lamenviro.com/web/report/EPS/BMR/Baseline%20Monitoring%20Report_final(2025.06).pdf))

(6) Service Contract No. WD/03/2023, Hung Shui Kiu/Ha Tsuen New Development Area Second Phase Development – Environmental Team, “Baseline Monitoring Report”, December 2024. ([https://hskhtnda-p2.com/upload/HSK%20NDA%20Second%20Phase_BMR_R2\(full\).pdf?v=1739355176](https://hskhtnda-p2.com/upload/HSK%20NDA%20Second%20Phase_BMR_R2(full).pdf?v=1739355176))

Table 3.3 Summary of Noise Monitoring Results during 07:00 – 19:00

Noise Monitoring Station	Average $L_{eq}(30\text{-min})$	Minimum $L_{eq}(30\text{-min})$	Maximum $L_{eq}(30\text{-min})$
<i>Site 2-18, Site 2-19, Fung Kong Tsuen Road, Ha Tsuen Road/ Lau Fau Shan Road</i>			
CM6	72.7	66.5	76.1
CM26 *	47.6	38.1	64.7
CM30 *	60.2	38.5	72.5
<i>Sha Chau Lei Tsuen</i>			
CM20 *	57.8	50.8	71.8
CM22 *	63.9	50.6	80.8

Note:

* For free field measurement, +3 dB(A) was added to the measured results.

Reference:

1. Quotation No. PU 01/2024: Environmental Team For Road Widening Works At Tin Wah Road, “Baseline Monitoring Report”, June 2025.
([https://www.tinwahroadwidening.lamenviro.com/web/report/EPS/BMR/Baseline%20Monitoring%20Report_final\(2025.06\).pdf](https://www.tinwahroadwidening.lamenviro.com/web/report/EPS/BMR/Baseline%20Monitoring%20Report_final(2025.06).pdf))
2. Service Contract No. WD/03/2023, Hung Shui Kiu/Ha Tsuen New Development Area Second Phase Development – Environmental Team, “Baseline Monitoring Report”, December 2024.
([https://hskhtnda-p2.com/upload/HSK%20NDA%20Second%20Phase_BMR_R2\(full\).pdf?v=1739355176](https://hskhtnda-p2.com/upload/HSK%20NDA%20Second%20Phase_BMR_R2(full).pdf?v=1739355176))

Table 3.4 Summary of Noise Monitoring Results during 19:00 – 23:00

Noise Monitoring Station	Average $L_{eq}(30\text{-min})$	Minimum $L_{eq}(30\text{-min})$	Maximum $L_{eq}(30\text{-min})$
<i>Site 2-18, Site 2-19, Fung Kong Tsuen Road, Ha Tsuen Road/ Lau Fau Shan Road</i>			
CM26 *	47.5	38.5	54.8
CM30 *	57.1	38.7	71.7
<i>Sha Chau Lei Tsuen</i>			
CM20 *	55.6	48.0	66.9
CM22 *	58.4	47.9	68.3

Note:

* For free field measurement, +3 dB(A) was added to the measured results.

Reference:

Service Contract No. WD/03/2023, Hung Shui Kiu/Ha Tsuen New Development Area Second Phase Development – Environmental Team, “Baseline Monitoring Report”, December 2024.
([https://hskhtnda-p2.com/upload/HSK%20NDA%20Second%20Phase_BMR_R2\(full\).pdf?v=1739355176](https://hskhtnda-p2.com/upload/HSK%20NDA%20Second%20Phase_BMR_R2(full).pdf?v=1739355176))

Table 3.5 Summary of Noise Monitoring Results during 23:00 – 07:00 of the following day

Noise Monitoring Station	Average $L_{eq(30-min)}$	Minimum $L_{eq(30-min)}$	Maximum $L_{eq(30-min)}$
<i>Site 2-18, Site 2-19, Fung Kong Tsuen Road, Ha Tsuen Road/ Lau Fau Shan Road</i>			
CM26 *	46.4	39.2	55.8
CM30 *	51.2	38.5	67.6
<i>Sha Chau Lei Tsuen</i>			
CM20 *	54.6	48.3	70.1
CM22 *	56.4	44.6	78.8

Note:

* For free field measurement, +3 dB(A) was added to the measured results.

Reference:

Service Contract No. WD/03/2023, Hung Shui Kiu/Ha Tsuen New Development Area Second Phase Development – Environmental Team, “Baseline Monitoring Report”, December 2024.

([https://hskhtnda-p2.com/upload/HSK%20NDA%20Second%20Phase_BMR_R2\(full\).pdf?v=1739355176](https://hskhtnda-p2.com/upload/HSK%20NDA%20Second%20Phase_BMR_R2(full).pdf?v=1739355176))

3.8 Action and Limit Level

3.8.1 The criteria for action and limit levels for construction noise are defined in **Table 3.6**.

Table 3.6 Action and Limit Levels for Construction Noise Monitoring

Time Period	Action	Limit
07:00 - 19:00 on normal weekdays	When one or more documented complaints are received	75 dB(A)

4 WATER QUALITY

4.1 Monitoring Requirements

- 4.1.1 In accordance with the recommendations of the EIA Report (EIAO Register No. AEIAR-203/2016) and the Updated EM&A Manual (April 2022), the baseline water quality monitoring was conducted to establish baseline conditions to derive the Action and Limit levels for impact stations.

4.2 Water Quality Parameters and Monitoring Frequency

- 4.2.1 The parameters that have been selected for measurement in-situ and in the laboratory are those that are either determined in the EIA to be those with the most potential to be affected by the construction works or a standard check on water quality conditions. Parameters to be measured in the baseline water quality monitoring are listed in **Table 4.1**.

Table 4.1 Parameters measured in the Baseline Water Quality Monitoring

Parameters	Units	Abbreviations	Frequency
<i>In-situ measurements</i>			3 days per week for at least 4 weeks (the interval between 2 sets of monitoring should not be less than 36 hours)
Dissolved oxygen	mg/L	DO	
Dissolved oxygen saturation	%	DO%	
Temperature	°C	-	
pH	-	-	
Turbidity	NTU	-	
<i>Laboratory measurements</i>			
Suspended Solids	mg/L	SS	

- 4.2.2 In addition to the water quality parameters, other relevant data were also being measured and recorded in data record sheet, including the location of the sampling stations, time, weather conditions, special phenomena and work activities undertaken around the monitoring stations and works area that may influence the monitoring results.

4.3 Monitoring Locations

- 4.3.1 In accordance with the Updated EM&A Manual⁽⁷⁾, the baseline water quality monitoring stations for Schedule 2 Designated Project (DP) are presented in **Figure 4.1**. The baseline water quality monitoring stations for non-Schedule 2 Designated Project (DP) are shown in **Figure 4.2** and detailed in **Table 4.2**.

(7) Service Contract No. WD/02/2021, Environmental Team for Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works – Site Formation and Engineering Infrastructure, “Updated EM&A Manual”, April 2022.

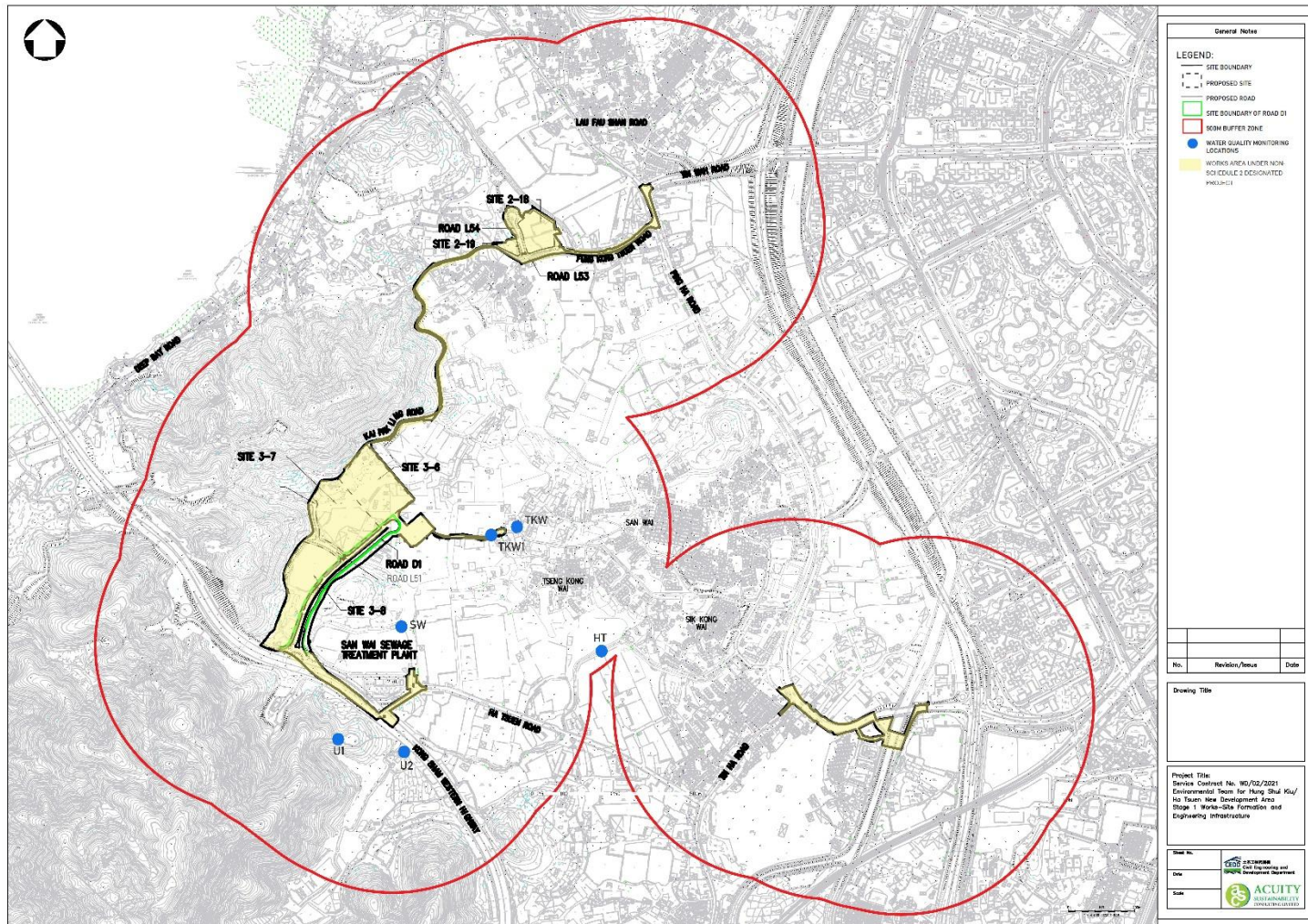


Figure 4.1 Locations of Water Quality Monitoring Stations for Schedule 2 Designated Project (DP) under HSK/HT NDA Stage 1 Works

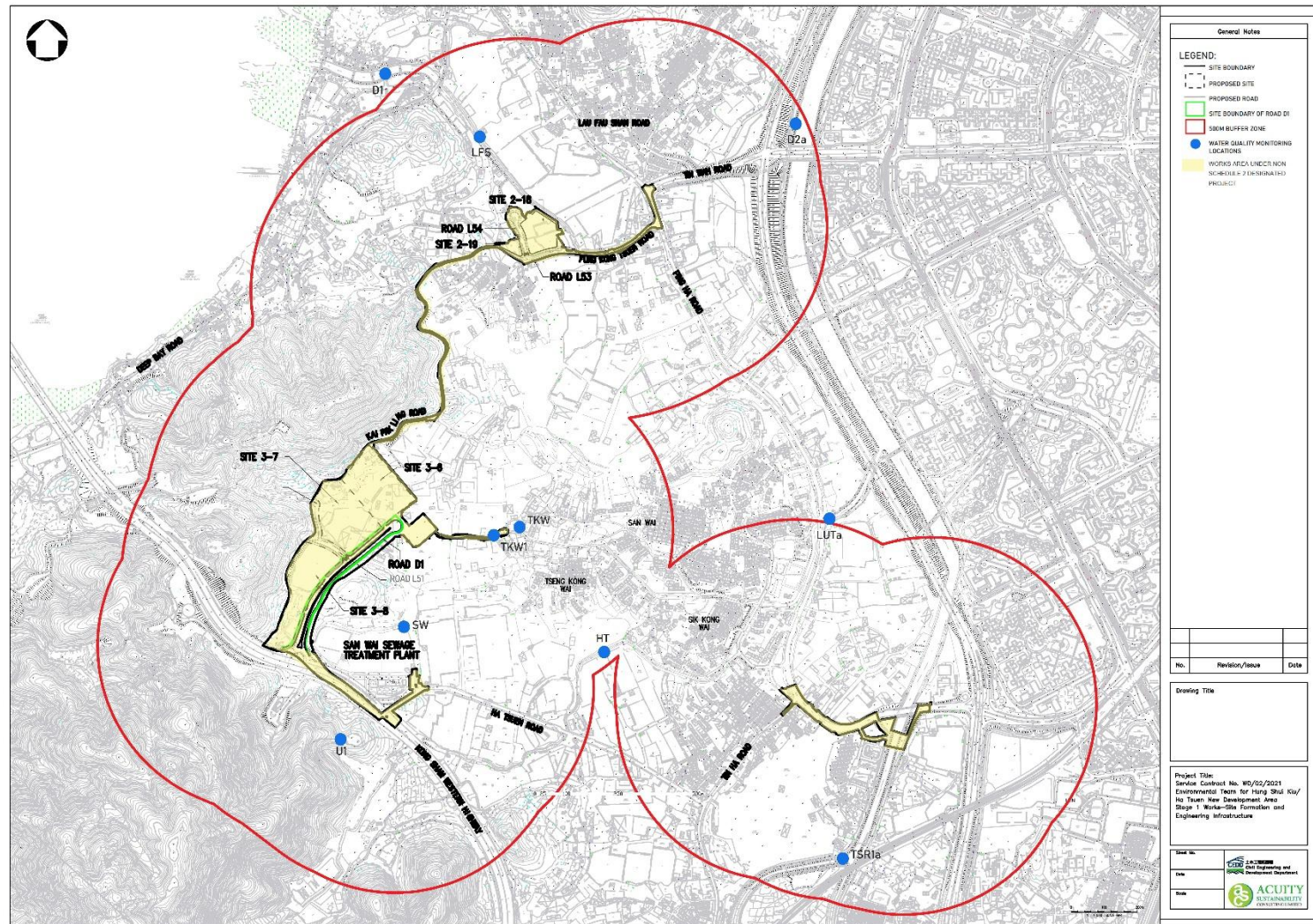


Figure 4.2 Locations of Water Quality Monitoring Stations for Non-Schedule 2 Designated Project (DP) under HSK/HT NDA Stage 1 Works

Table 4.2 Water Quality Monitoring Stations for Non-Schedule 2 DP under HSK/ HT NDA Stage 1 Works

Station	Description	Easting	Northing
<i>Site 2-18, Site 2-19, Fung Kong Tsuen Road, Ha Tsuen Road/ Lau Fau Shan Road</i>			
LFS	Gradient station (Downstream of the construction site of Site 2-18 and 2-19)	816504	835862
D1	Impact Station (Downstream of LFS and the construction site of Site 2-18 and 2-19)	816187	836064
D2a	Impact Station (Downstream of the construction site at <i>Fung Kong Tsuen Road, Ha Tsuen Road/ Lau Fau Shan Road</i>)	817483	835855
<i>Road L51</i>			
U1	Upstream Station	815936	834150
SW	Gradient station (Downstream of U1 and the construction site of Road L51)	816304	834321
HT	Gradient station (Downstream of the construction site of Road L51)	816866	834314
TKW1	Gradient station (Downstream of the construction site of Road L51)	816563	834686
TKW	Gradient station (Downstream of TKW1 and construction site of Road L51)	816594	834690
LUTa	Gradient station (Downstream of the construction site of Road L51)	817547	834717
D2a	Impact Station (Downstream of LUTa and the construction site of Road L51)	817483	835855
<i>Sha Chau Lei Tsuen</i>			
TSR1a	Gradient station (Upstream of the construction site at Sha Chau Lei Tsuen)	817786	834125
LUTa	Gradient station (Downstream of the construction site at Sha Chau Lei Tsuen)	817547	834717
D2a	Impact Station (Downstream of TSR1a and LUTa, and the construction site of Sha Chau Lei Tsuen)	817483	835855

Reference:

Service Contract No. WD/02/2021, Environmental Team for Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works – Site Formation and Engineering Infrastructure, “Updated EM&A Manual”, April 2022.

4.4 Monitoring Equipment and Methodology

- 4.4.1 In-situ measurements at monitoring locations including DO, DO%, pH, temperature and turbidity were collected using equipment such as water sampler and multi parameter water quality system. The detection limit for the in-situ measurement is shown in **Table 4.3**.
- 4.4.2 Water samples for suspended solids (SS) analysis were stored in high density polythene bottles, packed in ice (cooled to 4 °C without being frozen), and delivered to a HOKLAS laboratory as soon as possible after collection of the water samples.

Table 4.3 Detection Limits and Precision for Water Quality Determinates

Parameters	Detection limit	Accuracy	Precision
DO	0 – 20 mg/L	± 0.1 mg/L	25%
Temperature	0 – 45 °C	± 0.1 °C	
pH	0 – 14	± 0.1	
Turbidity	0 – 1000 NTU	± 2	

- 4.4.3 During the baseline monitoring, the depths of waters at the monitoring stations were all less than 3 m. Thus, only mid-depth samples were collected. For *in-situ* measurements, duplicate readings were made at each station. Duplicate water samples were also collected at each station.
- 4.4.4 In-situ monitoring instruments for water quality parameters were checked, calibrated and certified by a laboratory accredited under HOKLAS before use. Responses of sensors and electrodes were checked with certified standard solutions before each use. Wet bulb calibration for a DO meter was carried out before measurement at each monitoring day.

4.5 Laboratory Measurement and Analysis

- 4.5.1 Analysis of SS was carried out in a HOKLAS accredited laboratory, Acumen Laboratory and Testing Limited (Reg. No. HOKLAS 241). Sufficient water samples were collected at each of the monitoring stations for carrying out the laboratory SS determination.
- 4.5.2 The SS determination works started within 24 hours after collection of the water samples. The analysis followed the APHA 2540D analytical method with the detection limit of 1.0 mg/L.
- 4.5.3 Parameters for laboratory measurements, their standard methods and the detection limits are presented in **Table 4.4**.

Table 4.4 Analytical Methods Applied to Water Quality Samples

Parameter	Standard Method	Detection Limit	Accuracy
Suspended Solids (mg/L)	APHA 2540D	1.0 mg/L	±17%

4.6 QA/QC Requirements

Decontamination Procedures

- 4.6.1 Water sampling equipment used during the course of the monitoring process was decontaminated by manual washing and rinsed with distilled water after each sampling event. All of the disposable components/ accessories were discarded after sampling.

Sampling Management and Supervision

- 4.6.2 All sampling bottles were labelled with the sample ID numbers (including the sampling station), and sampling date. Water samples were dispatched to the testing laboratory for analysis as soon as possible. All the collected samples were stored in a cool box to keep the temperature less than 4 °C but without frozen. All water samples were handled under chain of custody protocols and relinquished to the laboratory representatives at locations specified by the laboratory.

Quality Control Measures for Sample Testing

- 4.6.3 Quality control of laboratory analysis of water samples was performed by a HOKLAS accredited laboratory for every batch of 20 samples:
- A minimum of 1 laboratory method blank was analyzed;
 - A minimum of 1 sample duplicate was analyzed; and
 - A minimum of 1 sample matrix spike was analyzed.

4.7 Results and Observations

- 4.7.1 Baseline water quality monitoring at U1, SW, HT, TKW and TKW1 were carried out under HSK/ HT NDA Stage 1 Works in 2022, while baseline monitoring at TSR1a, LUTa, LFS, D1 and D2a were carried out under HSK/HT NDA Second Phase Development in 2024. The monitoring results are presented in the corresponding Baseline Monitoring Reports^(8, 9). **Tables 4.5 and 4.6** summarize the baseline water quality monitoring results already verified under HSK/HT NDA Stage 1 Works. **Table 4.7** summarizes the baseline water quality monitoring results already verified under HSK/HT NDA Second Phase Development.

(8) Service Contract No. WD/02/2021, Environmental Team for Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works – Site Formation and Engineering Infrastructure, “Baseline Monitoring Report (Environmental Permit No. EP-528/2017)”, August 2023.

(9) Service Contract No. WD/03/2023, Hung Shui Kiu/Ha Tsuen New Development Area Second Phase Development – Environmental Team, “Baseline Monitoring Report”, December 2024.
([https://hskhtnda-p2.com/upload/HSK%20NDA%20Second%20Phase_BMR_R2\(full\).pdf?v=1739355176](https://hskhtnda-p2.com/upload/HSK%20NDA%20Second%20Phase_BMR_R2(full).pdf?v=1739355176))

Table 4.5 Summary of Baseline Water Quality Monitoring Results of U1, SW, HT, TKW and TKW1 (Wet Season)

Locations		Parameters				
		Temperature (°C)	pH	DO (mg/L) (Middle)	Turbidity (NTU)	SS (mg/L)
U1	Average	22.6	8.1	7.3	17.5	12.8
	Minimum	19.9	7.3	4.3	4.7	3.7
	Maximum	26.8	9.1	10.5	53.2	36.0
SW	Average	22.7	7.9	7.2	11.5	6.2
	Minimum	20.2	7.4	3.5	1.9	<1.0
	Maximum	26.4	8.6	10.7	23.2	24.0
HT	Average	22.6	8.0	6.9	16.2	15.4
	Minimum	20.2	7.3	2.2	2.8	<1.0
	Maximum	26.1	8.7	10.6	45.1	69.0
TKW1	Average	22.7	8.0	7.7	14.3	9.4
	Minimum	20.3	7.4	2.8	3.4	<1.0
	Maximum	26.4	8.7	10.8	63.2	54.0
TKW	Average	22.7	7.9	7.0	14.4	10.2
	Minimum	20.2	7.4	2.4	4.0	<1.0
	Maximum	26.3	8.7	10.3	57.3	52.0

Source:

Service Contract No. WD/02/2021, Environmental Team for Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works – Site Formation and Engineering Infrastructure, “Baseline Monitoring Report (Environmental Permit No. EP-528/2017)”, August 2023.

Table 4.6 Summary of Baseline Water Quality Monitoring Results of U1, SW, HT, TKW and TKW1 (Dry Season)

Locations		Parameters				
		Temperature (°C)	pH	DO (mg/L) (Middle)	Turbidity (NTU)	SS (mg/L)
U1	Average	15.0	7.7	5.8	10.1	11.4
	Minimum	12.2	6.8	3.0	4.2	1.2
	Maximum	18.0	8.7	7.6	21.0	98.0
SW	Average	15.5	7.5	3.6	10.4	4.9
	Minimum	3.2	7.1	1.9	2.8	1.0
SW	Maximum	20.1	8.2	4.9	22.4	16.0
HT	Average	16.1	7.5	2.8	9.7	3.6
	Minimum	11.8	7.2	2.1	1.2	1.0
	Maximum	18.8	8.0	5.8	31.6	8.3
TKW1	Average	16.5	7.5	2.8	9.5	3.8
	Minimum	12.0	7.0	2.0	2.5	1.0

Locations		Parameters				
		Temperature (°C)	pH	DO (mg/L) (Middle)	Turbidity (NTU)	SS (mg/L)
TKW	Maximum	20.0	8.2	4.3	17.9	12.0
	Average	16.4	7.4	2.9	12.0	3.9
	Minimum	11.2	7.1	2.2	3.3	1.9
	Maximum	19.9	8.1	4.2	26.8	7.6

Reference:

Service Contract No. WD/02/2021, Environmental Team for Hung Shui Kiu/Ha Tsuen New Development Area Stage 1 Works – Site Formation and Engineering Infrastructure, “Baseline Monitoring Report (Environmental Permit No. EP-528/2017)”, August 2023.

Table 4.7 Summary of Baseline Water Quality Monitoring Results at TSR1a, LUTa, LFS, D1 and D2a

Locations		Parameters				
		Temperature (°C)	pH	DO (mg/L) (Middle)	Turbidity (NTU)	SS (mg/L)
TSR1a	Average	30.6	7.6	7.7	7.3	5.3
	Minimum	25.8	6.9	4.4	1.3	1.8
	Maximum	34.4	8.2	9.7	16.2	14.0
LUTa	Average	30.8	7.5	5.5	6.5	5.7
	Minimum	25.7	7.2	0.2	2.9	1.3
	Maximum	34.5	8.0	7.7	10.5	20.9
LFS	Average	28.4	7.3	3.9	15.2	7.9
	Minimum	25.9	7.0	0.8	8.9	2.0
	Maximum	30.3	7.6	6.1	30.8	25.0
D1	Average	28.9	7.2	5.1	17.2	13.6
	Minimum	26.0	6.8	1.0	9.4	1.3
	Maximum	31.5	7.4	7.4	43.7	52.4
D2a	Average	30.8	7.7	2.1	7.9	15.9
	Minimum	24.7	7.3	0.5	3.8	1.8
	Maximum	35.9	8.1	4.5	11.7	138.0

Reference:

Service Contract No. WD/03/2023, Hung Shui Kiu/Ha Tsuen New Development Area Second Phase Development – Environmental Team, “Baseline Monitoring Report”, December 2024.
([https://hskhtnda-p2.com/upload/HSK%20NDA%20Second%20Phase_BMR_R2\(full\).pdf?v=1739355176](https://hskhtnda-p2.com/upload/HSK%20NDA%20Second%20Phase_BMR_R2(full).pdf?v=1739355176))

4.8 Action and Limit Levels

- 4.8.1 The Action and Limit Levels were derived following the approach specified in the Updated EM&A Manual as shown in **Table 4.8**.

Table 4.8 Determination of Action and Limit Levels of Water Quality for Impact Monitoring

Parameters	Action	Limit
DO in mg/L	<u>Surface and Middle, Bottom DO</u> ≤5%-ile of baseline data	<u>Surface and Middle DO</u> ≤4 mg/L and 1%-ile of baseline data for surface and middle layers <u>Bottom DO</u> ≤2 mg/L and 1%-ile of baseline data for bottom layer
SS in mg/L	<u>Depth-averaged SS</u> ≥ 95%-ile of baseline data or 120% of upstream control station of the same day (applicable to station at SW and HT only)	<u>Depth-averaged SS</u> ≥ 99%-ile of baseline data or 130% of upstream control station of the same day (applicable to station at SW and HT only)
Turbidity in NTU	<u>Depth-averaged Turbidity</u> ≥ 95%-ile of baseline data or 120% of upstream control station of the same day (applicable to station at SW and HT only)	<u>Depth-averaged Turbidity</u> ≥ 99%-ile of baseline data or 130% of upstream control station of the same day (applicable to station at SW and HT only)
pH	Beyond the range 6.6 – 8.4	Beyond the range of 6.5 – 8.5

Note:

- (1) For DO, non-compliance of the water quality limit occurs when monitoring result is lower than the limit.
- (2) For SS and turbidity, non-compliance of the water quality limit occurs when monitoring result is higher than the limit.

4.8.2 Based on the baseline water quality monitoring data and the approach specified in **Table 4.8**, the Action and Limit Levels were derived and are presented in **Tables 4.9 to 4.11**.

Table 4.11 Action and Limit Levels for Impact Water Quality Monitoring at D2a and D1

Parameters	Action Levels *	Limit Levels *
D2a		
DO (mg/L)	5.4	4
Turbidity (NTU)	11.6	11.7
SS (mg/L)	14.0	15.6
pH	Less than 6.6 or greater than 8.4	Less than 6.5 or greater than 8.5
D1		
DO (mg/L)	4.2	4
Turbidity (NTU)	23.4	24.5
SS (mg/L)	32.8	36.8
pH	Less than 6.6 or greater than 8.4	Less than 6.5 or greater than 8.5

Note:

- * Action and Limit Levels are extracted from the Baseline Monitoring Report (December 2024) prepared for Service Contract No. WD/03/2023, Hung Shui Kiu/Ha Tsuen New Development Area Second Phase Development – Environmental Team.
([https://hskhtnda-p2.com/upload/HSK%20NDA%20Second%20Phase_BMR_R2\(full\).pdf?v=1739355176](https://hskhtnda-p2.com/upload/HSK%20NDA%20Second%20Phase_BMR_R2(full).pdf?v=1739355176)).

5 COMMENTS AND CONCLUSION

5.1 Revision for Inclusion in the EM&A Manual

- 5.1.1 The baseline monitoring was conducted according to the Updated EM&A Manual for air quality, noise and water quality.
- 5.1.2 The monitoring methodology, parameters monitored, and monitoring locations are all generally in line with the Updated EM&A Manual.

5.2 Air Quality

- 5.2.1 According to the layout of HSK/HT NDA Stage 1 Works, 14 air quality monitoring stations were identified for the EM&A programme of non-Schedule 2 DP.
- 5.2.2 Baseline air quality monitoring at AM18, AM19 and AM20 was conducted from 6 August 2025 to 19 August 2025. The baseline air quality monitoring of AM7, AM8a, AM9, AM11, AM12, AM13, AM15 and AM21 had been carried out and the results were verified by the IEC of HSK/HT NDA Second Phase Development earlier. The baseline air quality monitoring of AM23, AM24 and AM25a had been carried out and the results were verified by the IEC of HSK/HT NDA Stage 1 Works earlier.
- 5.2.3 Action and Limit Levels for non-Schedule 2 DP under HSK/HT NDA Stage 1 Works were derived according to the Updated EM&A Manual.

5.3 Construction Noise

- 5.3.1 According to the layout of HSK/HT NDA Stage 1 Works, 5 noise monitoring stations were identified for the EM&A programme of non-Schedule 2 DP.
- 5.3.2 Baseline noise monitoring at CM6 had been carried out and the results were verified by the IEC of the project of Road Widening Works at Tin Wah Road earlier.
- 5.3.3 Baseline noise monitoring at CM20, CM22, CM26 and CM30 had been carried out and the results were verified by the IEC of HSK/HT NDA Second Phase Development earlier.
- 5.3.4 Action and Limit Levels for non-Schedule 2 DP under HSK/HT NDA Stage 1 Works were derived according to the Updated EM&A Manual.

5.4 Water Quality

- 5.4.1 According to the layout of HSK/HT NDA Stage 1 Works, 10 water quality monitoring stations were identified for the EM&A programme of non-Schedule 2 DP.

- 5.4.2 Baseline water quality monitoring at U1, SW, HT, TKW and TKW1 had been carried out and the results were verified by the IEC of HSK/HT NDA Stage 1 Works earlier. Baseline water quality monitoring at TSR1a, LUTa, LFS, D1 and D2a had been carried out and the results were verified by the IEC of HSK/HT NDA Second Phase Development earlier.
- 5.4.3 Action and Limit Levels for non-Schedule 2 DP under HSK/HT NDA Stage 1 Works were derived according to the Updated EM&A Manual.

5.5 Comment/ Recommendation

- 5.5.1 No further comment or recommendation was provided in this baseline monitoring report.

Appendix A – Air Quality Monitoring Equipment Calibration Certificates

RECALIBRATION

DUE DATE:

December 2, 2025

Certificate of Calibration

Calibration Certification Information

Cal. Date: December 2, 2024 Rootsmeter S/N: 438320 Ta: 293 °K
Operator: Jim Tisch Pa: 757.4 mm Hg
Calibration Model #: TE-5025A Calibrator S/N: 3465

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4300	3.2	2.00
2	3	4	1	1.0190	6.4	4.00
3	5	6	1	0.9090	7.9	5.00
4	7	8	1	0.8680	8.8	5.50
5	9	10	1	0.7170	12.8	8.00

Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H \left(\frac{Pa}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H \left(\frac{Ta}{Pa} \right)}$ (y-axis)
1.0093	0.7058	1.4238	0.9958	0.6963	0.8796
1.0051	0.9863	2.0136	0.9916	0.9731	1.2439
1.0031	1.1035	2.2512	0.9896	1.0886	1.3907
1.0018	1.1542	2.3611	0.9884	1.1387	1.4586
0.9965	1.3898	2.8476	0.9831	1.3711	1.7592
QSTD	m=	2.08107	QA	m=	1.30313
	b=	-0.04295		b=	-0.02653
	r=	0.99999		r=	0.99999

Calculations

Vstd=	$\Delta Vol((Pa-\Delta P)/Pstd)(Tstd/Ta)$	Va=	$\Delta Vol((Pa-\Delta P)/Pa)$
Qstd=	$Vstd/\Delta Time$	Qa=	$Va/\Delta Time$
For subsequent flow rate calculations:			
Qstd= $1/m \left(\left(\sqrt{\Delta H \left(\frac{Pa}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)} \right) - b \right)$		Qa= $1/m \left(\left(\sqrt{\Delta H \left(\frac{Ta}{Pa} \right)} \right) - b \right)$	

Standard Conditions

Tstd:	298.15 °K
Pstd:	760 mm Hg
Key	
ΔH: calibrator manometer reading (in H2O)	
ΔP: rootsmeter manometer reading (mm Hg)	
Ta: actual absolute temperature (°K)	
Pa: actual barometric pressure (mm Hg)	
b: intercept	
m: slope	

RECALIBRATION

US EPA recommends annual recalibration per 1998 40 Code of Federal Regulations Part 50 to 51, Appendix B to Part 50, Reference Method for the Determination of Suspended Particulate Matter in the Atmosphere, 9.2.17, page 30

HIVOL SAMPLER CALIBRATION DATA SHEET (TSP)

Site Information

Location:	Representative For Heung YuenWai	Site ID:	AM2	Date:	10-Feb-2025
Serial No:	1106	Model:	TE-5170X	Operator:	Andy Li

Ambient Condition

Actual Pressure during Calibration (P _a) (mm Hg):	766.3	Actual Temperature during Calibration (T _a) (deg K):	289.4
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Calibration Orifice

Model:	TE-5025A	Slope (m _c):	2.08107
Serial No.:	3465	Intercept (b _c):	-0.04295
Calibration Due Date:	2-Dec-25	Corr. Coeff:	0.99999

Calibration Data

Plate or Test #	ΔH ₂ O (in)	Q _a , X-Axis (m ³ /min)	I, CFM (chart)	IC, Y-Axis (corrected)
18	12.00	1.717	53.0	54.00
13	10.20	1.584	50.0	50.95
10	8.20	1.423	44.0	44.83
7	5.60	1.179	36.0	36.68
5	3.00	0.869	30.0	30.57

Sampler Calibration Relationship (Q_a on x-axis, IC on y-axis)

m = 28.7309

b = 4.4948

Corr. Coeff = 0.9930

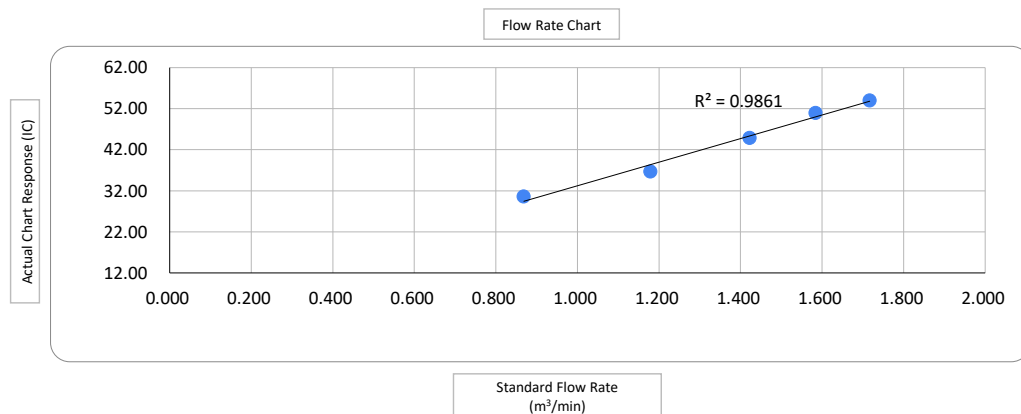
Calculations

$$Q_a = 1/m_c [\text{Sqrt}(\Delta H_2O \cdot (P_a/P_{std}) \cdot (T_{std}/T_a)) - b_c]$$

$$IC = I \cdot (\text{Sqrt}(P_a/P_{std}) \cdot (T_{std}/T_a))$$

Q_a = actual flow rate
IC = corrected chart response
I = actual chart response
m_c = calibrator slope
b_c = calibrator intercept

m = sampler slope
b = sampler intercept
T_{std} = 298 deg K
P_{std} = 760 mm Hg
T_a = actual temperature during calibration (deg K)
P_a = actual pressure during calibration (mm Hg)



Checked by: F.C Tsang
Monitoring Team Leader

Date: 11-Feb-2025

Sibata LD-5R K-Factor Verification Test by Total Suspended Particulates HVS Test Report

Information of Calibrated Equipment

Verification Test Date:	23-Feb-25	to	2-Mar-25	Next Verification Test Date:	23-Feb-26
Unit-under-Test- Model No.:	Sibata LD-5R				
Unit-under-Test Serial No.:	851816				
Our Report Reference No.:	RPT-25-HVS-0103				
Calibration Location:	AM2, location near the Leachate Treatment Works within the NENTX Landfill				

Standard Equipment Information

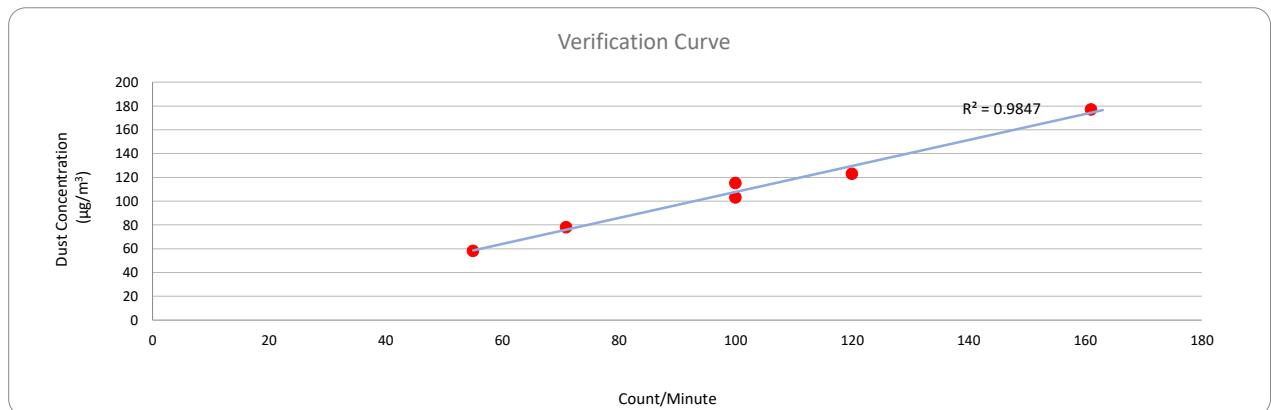
Verification Equipment Type:	Tisch TSP HVS	Tisch HVS Calibrator
Standard Equipment Model No.:	TE-5170X	TE-5025A
Equipment serial no.:	1106	3465
Last Calibration Date:	10-Feb-25	2-Dec-24
Next Calibration Date:	9-Apr-25	2-Dec-25

Equipment Verification Result

Verification Test No.	Date	Duration			Results from Calibrated Equipment		Results from Standard Equipment
		Start-time	End-time	Elapsed Time (in min)	Total Counts	Counts/ Minute x-axis	Dust Concentration ($\mu\text{g}/\text{m}^3$) y-axis
1	23/02/2025	5385.00	5388.00	180.00	12780	71	78
2	23/02/2025	5388.00	5391.00	180.00	28980	161	177
3	23/02/2025	5394.00	5397.00	180.00	18000	100	115
4	2/03/2025	5397.00	5400.00	180.00	9900	55	58
5	2/03/2025	5400.00	5403.00	180.00	18000	100	103
6	2/03/2025	5403.00	5406.00	180.00	21600	120	123

Linear Regression of y on x

Slope, K factor:	<u>1.0922</u>	Intercept:	<u>-1.4901</u>	*Correlation Coefficient, R:	<u>0.9923</u>
Verification Test Result:	<u>Strong Correlation, Results were accepted.</u>				* If the Correlation Coefficient, R is <0.5. Checking and Re-verification are required.



Operated By:

Andy Li

Project Technician, Environmental

Date: 04-03-2025

Checked By:

Vega Wong

Senior Consultant, Environmental

Date: 04-03-2025

Aerocet 831 K-Factor Verification Test by Total Suspended Particulates HVS Test Report

Information of Calibrated Equipment

Verification Test Date:	23-Feb-25	to	2-Mar-25	Next Verification Test Date:	23-Feb-26
Unit-under-Test- Model No.:	Sibrata				
Unit-under-Test Serial No.:	851820				
Our Report Reference No.:	RPT-25-HVS-0156				
Calibration Location:	AM2, location near the Leachate Treatment Works within the NENTX Landfill				

Standard Equipment Information

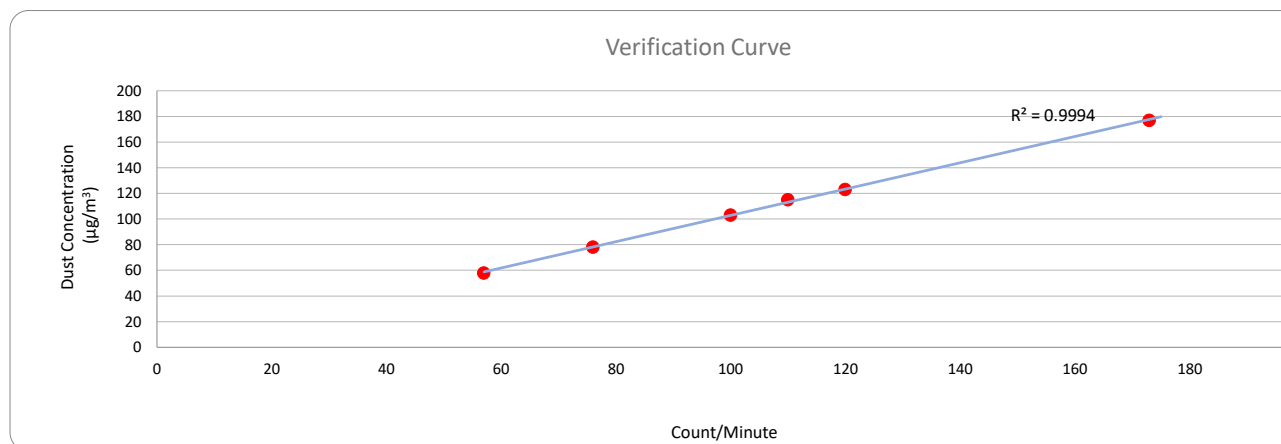
Verification Equipment Type:	Tisch TSP HVS	Tisch HVS Calibrator
Standard Equipment Model No.:	TE-5170X	TE-5025A
Equipment serial no.:	1106	3465
Last Calibration Date:	10-Feb-25	2-Dec-24
Next Calibration Date:	9-Apr-25	2-Dec-25

Equipment Verification Result

Verification Test No.	Date	Duration			Results from Calibrated Equipment		Results from Standard Equipment
		Start-time	End-time	Elapsed Time (in min)	Total Counts	Counts/ Minute x-axis	Dust Concentration ($\mu\text{g}/\text{m}^3$) y-axis
1	23/2/2025	5385.00	5388.00	180.00	13680	76	78
2	23/2/2025	5388.00	5391.00	180.00	31140	173	177
3	23/2/2025	5394.00	5397.00	180.00	19800	110	115
4	2/3/2025	5397.00	5400.00	180.00	10260	57	58
5	2/3/2025	5400.00	5403.00	180.00	18000	100	103
6	2/3/2025	5403.00	5406.00	180.00	21600	120	123

Linear Regression of y on x

Slope, K factor:	<u>1.0253</u>	Intercept:	<u>0.3230</u>	*Correlation Coefficient, R:	<u>0.9997</u>
Verification Test Result: <u>Strong Correlation, Results were accepted.</u>			* If the Correlation Coefficient, R is <0.5. Checking and Re-verification are required.		



Operated By:

Andy Li
Project Technician, Environmental

Date: 04-03-2025

Checked By:

Vega Wong
Senior Consultant, Environmental

Date: 04-03-2025

Aerocet 831 K-Factor Verification Test by Total Suspended Particulates HVS Test Report

Information of Calibrated Equipment

Verification Test Date:	23-Feb-25	to	2-Mar-25	Next Verification Test Date:	23-Feb-26
Unit-under-Test- Model No.:	Sibrata				
Unit-under-Test Serial No.:	992821				
Our Report Reference No.:	RPT-25-HVS-0155				
Calibration Location:	AM2, location near the Leachate Treatment Works within the NENTX Landfill				

Standard Equipment Information

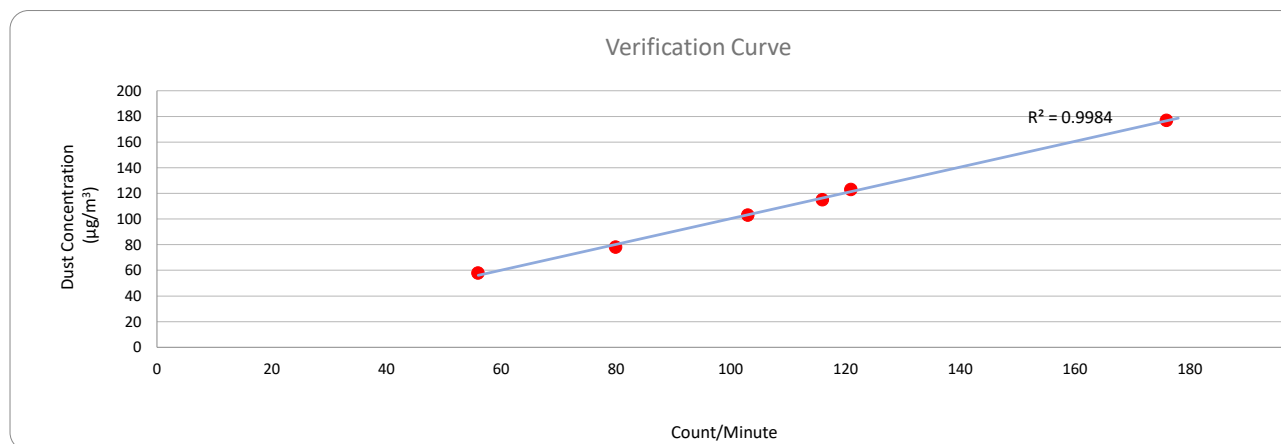
Verification Equipment Type:	Tisch TSP HVS	Tisch HVS Calibrator
Standard Equipment Model No.:	TE-5170X	TE-5025A
Equipment serial no.:	1106	3465
Last Calibration Date:	10-Feb-25	2-Dec-24
Next Calibration Date:	9-Apr-25	2-Dec-25

Equipment Verification Result

Verification Test No.	Date	Duration			Results from Calibrated Equipment		Results from Standard Equipment
		Start-time	End-time	Elapsed Time (in min)	Total Counts	Counts/ Minute x-axis	Dust Concentration ($\mu\text{g}/\text{m}^3$) y-axis
1	23/2/2025	5385.00	5388.00	180.00	14400	80	78
2	23/2/2025	5388.00	5391.00	180.00	31680	176	177
3	23/2/2025	5394.00	5397.00	180.00	20880	116	115
4	2/3/2025	5397.00	5400.00	180.00	10080	56	58
5	2/3/2025	5400.00	5403.00	180.00	18540	103	103
6	2/3/2025	5403.00	5406.00	180.00	21780	121	123

Linear Regression of y on x

Slope, K factor:	<u>1.0044</u>	Intercept:	<u>-0.1429</u>	*Correlation Coefficient, R:	<u>0.9992</u>
Verification Test Result: <u>Strong Correlation, Results were accepted.</u>			* If the Correlation Coefficient, R is <0.5. Checking and Re-verification are required.		



Operated By: Andy Li
Project Technician, Environmental

Date: 04-03-2025

Checked By: Vega Wong
Senior Consultant, Environmental

Date: 04-03-2025

Sibata LD-5R K-Factor Verification Test by Total Suspended Particulates HVS Test Report

Information of Calibrated Equipment

Verification Test Date:	23-Feb-25	to	2-Mar-25	Next Verification Test Date:	23-Feb-26
Unit-under-Test- Model No.:	Sibata LD-5R				
Unit-under-Test Serial No.:	0Z4545				
Our Report Reference No.:	RPT-25-HVS-0115				
Calibration Location:	AM2, location near the Leachate Treatment Works within the NENTX Landfill				

Standard Equipment Information

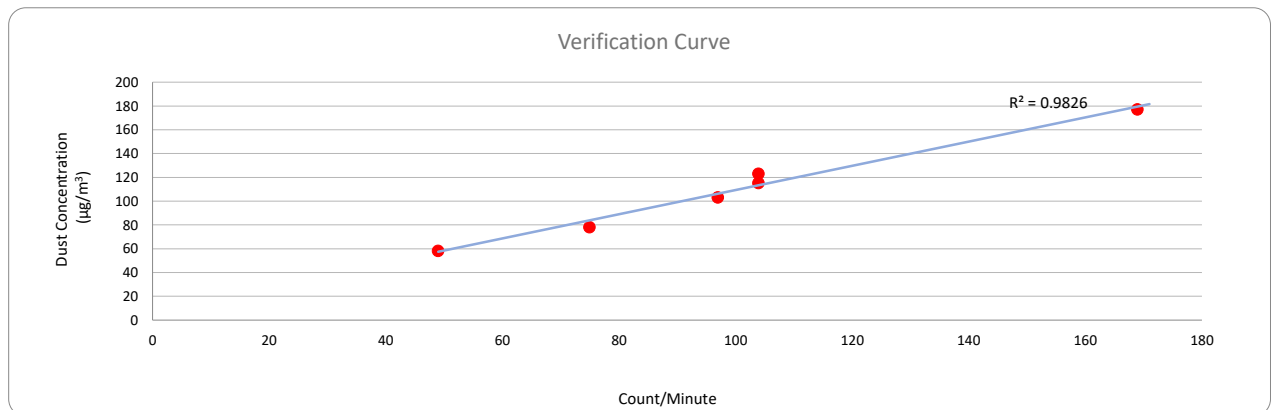
Verification Equipment Type:	Tisch TSP HVS	Tisch HVS Calibrator
Standard Equipment Model No.:	TE-5170X	TE-5025A
Equipment serial no.:	1106	3465
Last Calibration Date:	10-Feb-25	2-Dec-24
Next Calibration Date:	9-Apr-25	2-Dec-25

Equipment Verification Result

Verification Test No.	Date	Duration			Results from Calibrated Equipment		Results from Standard Equipment
		Start-time	End-time	Elapsed Time (in min)	Total Counts	Counts/ Minute x-axis	Dust Concentration ($\mu\text{g}/\text{m}^3$) y-axis
1	23/02/2025	5385.00	5388.00	180.00	13500	75	78
2	23/02/2025	5388.00	5391.00	180.00	30420	169	177
3	23/02/2025	5394.00	5397.00	180.00	18720	104	115
4	2/03/2025	5397.00	5400.00	180.00	8820	49	58
5	2/03/2025	5400.00	5403.00	180.00	17460	97	103
6	2/03/2025	5403.00	5406.00	180.00	18720	104	123

Linear Regression of y on x

Slope, K factor:	<u>1.0173</u>	Intercept:	<u>7.6117</u>	*Correlation Coefficient, R:	<u>0.9913</u>
Verification Test Result:	<u>Strong Correlation, Results were accepted.</u>				* If the Correlation Coefficient, R is <0.5. Checking and Re-verification are required.



Operated By:

Andy Li

Project Technician, Environmental

Date:

04-03-2025

Checked By:

Vega Wong

Senior Consultant, Environmental

Date:

04-03-2025

Appendix B – Baseline Air Quality Monitoring Results and Graphical Presentation

Summary of 1-hour Total Suspended Particulates ("1-hour TSP") Concentration (µg/m³) at Location AM18								
Date	Weather	Sampling Time (1)	Sampling Time (2)	Sampling Time (3)	Reading (1)	Reading (2)	Reading (3)	Average
					µg/m³	µg/m³	µg/m³	µg/m³
06-08-25	Fine	15:28	16:28	17:28	56	61	64	60
07-08-25	Sunny	15:41	16:41	17:41	65	69	67	67
08-08-25	Sunny	9:37	10:37	11:37	55	56	58	56
09-08-25	Sunny	15:01	16:01	17:01	33	31	36	33
10-08-25	Sunny	13:56	14:56	15:56	34	33	31	33
11-08-25	Sunny	14:35	15:35	16:35	54	52	56	54
12-08-25	Cloudy	8:41	9:41	10:41	56	59	55	57
13-08-25	Fine	13:00	14:00	15:00	71	68	70	70
14-08-25	Rainy	14:16	15:16	16:16	66	59	63	63
15-08-25	Cloudy	15:36	16:36	17:36	36	37	33	35
16-08-25	Sunny	8:30	9:30	10:30	31	29	32	31
17-08-25	Rainy	14:33	15:33	16:33	33	28	39	33
18-08-25	Rainy	14:21	15:21	16:21	76	79	80	78
19-08-25	Rainy	14:02	15:02	16:02	88	71	77	79

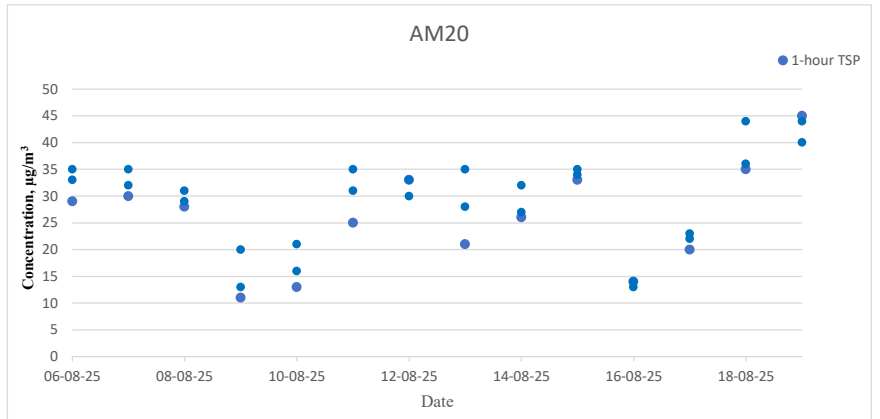
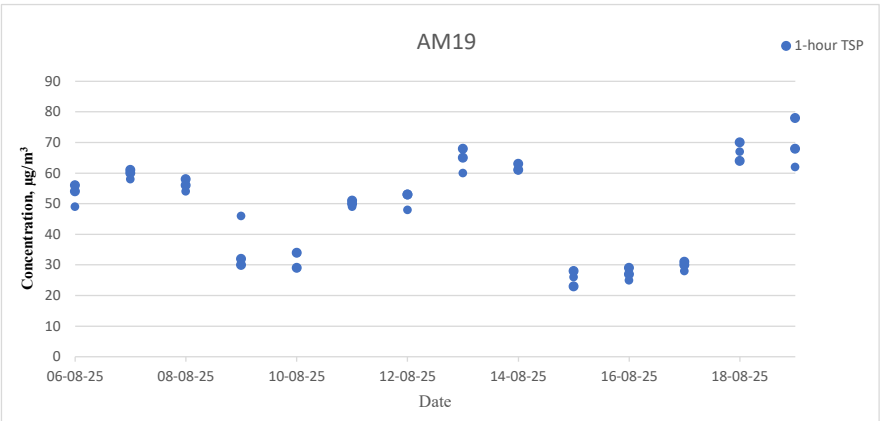
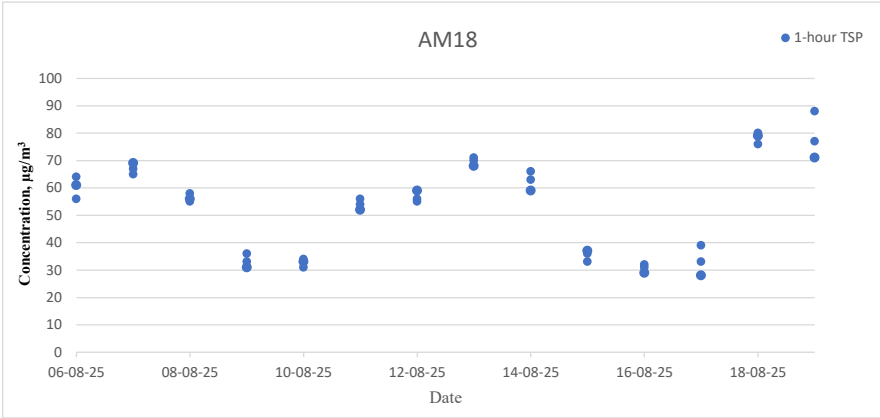
TSP-1hr		
Average	Max.	Min.
54	88	28

Summary of 1-hour Total Suspended Particulates ("1-hour TSP") Concentration (µg/m³) at Location AM19								
Date	Weather	Sampling Time (1)	Sampling Time (2)	Sampling Time (3)	Reading (1)	Reading (2)	Reading (3)	Average
					µg/m³	µg/m³	µg/m³	
06-08-25	Fine	15:43	16:43	17:43	54	56	49	53
07-08-25	Sunny	15:50	16:50	17:50	60	61	58	60
08-08-25	Sunny	9:46	10:46	11:46	56	58	54	56
09-08-25	Sunny	15:11	16:11	17:11	32	30	46	36
10-08-25	Sunny	14:08	15:08	16:08	34	29	34	32
11-08-25	Sunny	14:45	15:45	16:45	51	50	49	50
12-08-25	Cloudy	8:55	9:55	10:55	53	53	48	51
13-08-25	Fine	13:16	14:16	15:16	68	65	60	64
14-08-25	Rainy	14:25	15:25	16:25	61	63	61	62
15-08-25	Cloudy	15:24	16:24	17:24	23	28	26	26
16-08-25	Sunny	8:40	9:40	10:40	29	27	25	27
17-08-25	Rainy	14:45	15:45	16:45	31	30	28	30
18-08-25	Rainy	14:41	15:41	16:41	70	64	67	67
19-08-25	Rainy	14:10	15:10	16:10	78	68	62	69

TSP-1hr		
Average	Max.	Min.
49	78	23

Summary of 1-hour Total Suspended Particulates ("1-hour TSP") Concentration (µg/m³) at Location AM20								
Date	Weather	Sampling Time (1)	Sampling Time (2)	Sampling Time (3)	Reading (1)	Reading (2)	Reading (3)	Average
					µg/m³	µg/m³	µg/m³	
06-08-25	Fine	15:50	16:50	17:50	29	35	33	32
07-08-25	Sunny	15:57	16:57	17:57	30	32	35	32
08-08-25	Sunny	9:52	10:52	11:52	28	29	31	29
09-08-25	Sunny	15:20	16:20	17:20	11	20	13	15
10-08-25	Sunny	14:14	15:14	16:14	13	21	16	17
11-08-25	Sunny	14:56	15:56	16:56	25	35	31	30
12-08-25	Cloudy	9:04	10:04	11:04	33	33	30	32
13-08-25	Fine	13:25	14:25	15:25	21	28	35	28
14-08-25	Rainy	14:46	15:46	16:46	26	27	32	28
15-08-25	Cloudy	15:32	16:32	17:32	33	35	34	34
16-08-25	Sunny	8:48	9:48	10:48	14	14	13	14
17-08-25	Rainy	15:00	16:00	17:00	20	22	23	22
18-08-25	Rainy	15:01	16:01	17:01	35	36	44	38
19-08-25	Rainy	14:16	15:16	16:16	45	44	40	43

TSP-1hr		
Average	Max.	Min.
28	45	11



Appendix C – Event and Action Plan

Table E1 – Event and Action Plan for Air Quality

Event	Action			
	ET	IEC	ER	Contractor
Limit Level being exceeded by one sampling	1. Identify source, investigation the causes of exceedance and propose remedial measure; 2. Inform Contractor, IEC, ER, and EPD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; and 5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on proposed remedial measures 4. Advise the ER on the effectiveness of proposed remedial measure; and 5. Supervise implementation of remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. Ensure remedial measure properly implemented.	1. Identify source(s) and investigate the causes of exceedance; 2. Take immediate action to avoid further exceedance; 3. Submit proposals for remedial measures to ER with a copy to ET and IEC within three working days of notification; 4. Implement the agreed proposals; and 5. Amend proposal if appropriate.
Limit Level being exceeded by two or more consecutive sampling	1. Notify IEC, ER, Contractor and EPD; 2. Identify source; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Arrange meeting with IEC and ER to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; and 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by the ET; 2. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 3. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; and 4. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of exceedance in writing; 2. In consultation with the ET and IEC, agree with the Contractor on the remedial measures to be implemented; 3. Supervise the implementation of remedial measures; and 4. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	1. Identify source(s) and investigate the causes of exceedance; 2. Take immediate action to avoid further exceedance; 3. Submit proposals for remedial measures to the ER with a copy to the IEC and ET within three working days of notification; 4. Implement the agreed proposals; 5. Revise and resubmit proposals if problem still not under control; and 6. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

Appendix

Table E2 – Event and Action Plan for Construction Noise

Event	Action			
	ET	IEC	ER	Contractor
Action Level	1. Notify IEC and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IEC, ER and Contractor; 4. Discuss with the Contractor and formulate remedial measures; and 5. Increase monitoring frequency to check mitigation effectiveness.	1. Review the analysed results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; and 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Require Contractor to propose remedial measures for the analysed noise problem; and 4. Ensure remedial measures are properly implemented.	1. Submit noise mitigation proposals to IEC ; and 2. Implement noise mitigation proposals.
Limit Level	1. Identify source; 2. Inform IEC, ER, EPD and Contractor; 3. Repeat measurements to confirm findings; 4. Increase monitoring frequency; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Inform IEC, ER and EPD the causes and actions taken for the exceedances; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; and 8. If exceedance stops, cease additional monitoring.	1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractors remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; and 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Require Contractor to propose remedial measures for the analysed noise problem; 4. Ensure remedial measures properly implemented; and 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC and ER within 3 working days of notification; 3. Implement the agreed proposals; 4. Resubmit further proposal if problem still not under control; and 5. Stop the relevant portion of works as determined by ER, until the exceedance is abated.

Appendix

Table E3 - Event and Action Plan for Water Quality

Event	Action			
	ET	IEC	ER	Contractor
Action Level being exceeded by one sampling day	1. Repeat in-situ measurement to confirm findings; 2. Identify source(s) of impact; 3. Inform IEC and Contractor; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC and Contractor; 6. Repeat measurement on next day of exceedance.	1. Discuss with ET and Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly; 3. Assess the effectiveness of the implemented mitigation measures	1. Discuss with IEC on the proposed mitigation measures; 2. Make agreement on the mitigation measures to be implemented;	1. Inform the ER and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with ET and IEC and propose mitigation measures to IEC and ER; 6. Implement the agreed mitigation measures.
Action Level being exceeded by more than one consecutive sampling days	1. Repeat in-situ measurement to confirm findings; 2. Identify source(s) of impact; 3. Inform IEC and Contractor; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC and Contractor; 6. Ensure mitigation measures are implemented; 7. Prepare to increase the monitoring frequency to daily; 8. Repeat measurement on next day of exceedance.	1. Discuss with ET and Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly; 3. Assess the effectiveness of the implemented mitigation measures.	1. Discuss with IEC on the proposed mitigation measures; 2. Make agreement on the mitigation measures to be implemented; 3. Assess the effectiveness of the implemented mitigation measures	1. Inform the Engineer and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with ET and IEC and propose mitigation measures to IEC and ER within 3 working days; 6. Implement the agreed mitigation measures.

Appendix

Event	Action			
	ET	IEC	ER	Contractor
Limit Level being exceeded by one sampling day	1. Repeat in-situ measurement to confirm findings; 2. Identify source(s) of impact; 3. Inform IEC, contractor and EPD; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC, ER and Contractor; 6. Ensure mitigation measures are implemented; 7. Increase the monitoring frequency to daily until no exceedance of Limit level.	1. Discuss with ET and Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly; 3. Assess the effectiveness of the implemented mitigation measures.	1. Discuss with IEC, ET and Contractor on the proposed mitigation measures; 2. Request Contractor to critically review the working methods; 3. Make agreement on the mitigation measures to be implemented; 4. Assess the effectiveness of the implemented mitigation measures.	1. Inform the Engineer and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with ET, IEC and ER and propose mitigation measures to IEC and ER within 3 working days; 6. Implement the agreed mitigation measures.
Limit Level being exceeded by more than one consecutive sampling days	1. Repeat in-situ measurement to confirm findings; 2. Identify source(s) of impact; 3. Inform IEC, contractor and EPD; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC, ER and Contractor; 6. Ensure mitigation measures are implemented; 7. Increase the monitoring frequency to daily until no exceedance of Limit level for two consecutive days.	1. Discuss with ET and Contractor on the mitigation measures; 2. Review proposals on mitigation measures submitted by Contractor and advise the ER accordingly; 3. Assess the effectiveness of the implemented mitigation measures.	1. Discuss with IEC, ET and Contractor on the proposed mitigation measures; 2. Request Contractor to critically review the working methods; 3. Make agreement on the mitigation measures to be implemented; 4. Assess the effectiveness of the implemented mitigation measures; 5. Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the marine work until no exceedance of Limit level.	1. Inform the ER and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment; 4. Consider changes of working methods; 5. Discuss with ET, IEC and ER and propose mitigation measures to IEC and ER within 3 working days; 6. Implement the agreed mitigation measures; 7. As directed by the Engineer, to slow down or to stop all or part of the marine work or construction activities.

Appendix

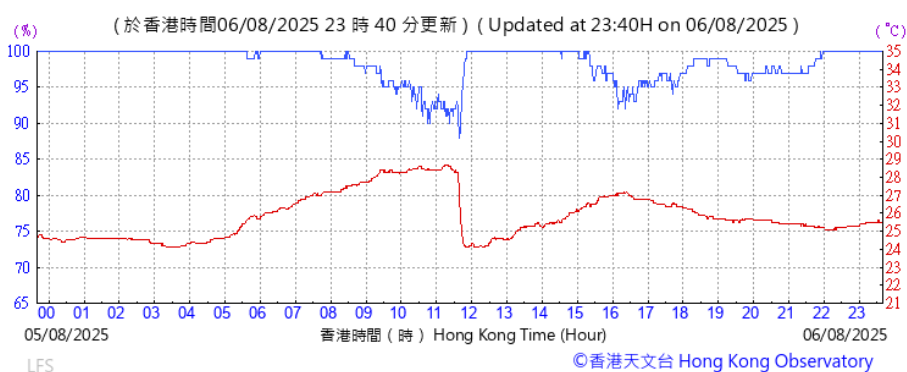
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Appendix D –

Extract of Meteorological Observations for Hong Kong – Lau Fau Shan

06 August 2025

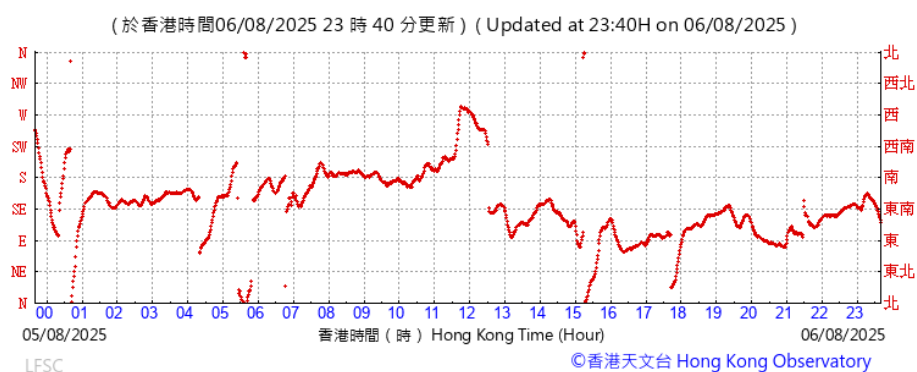
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Pressure:



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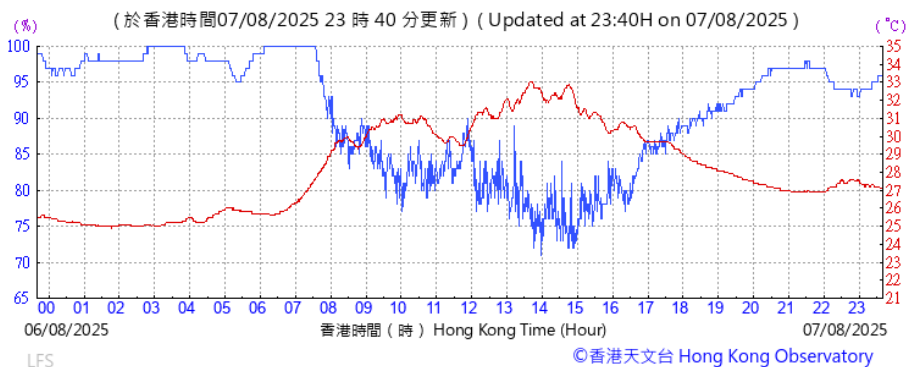


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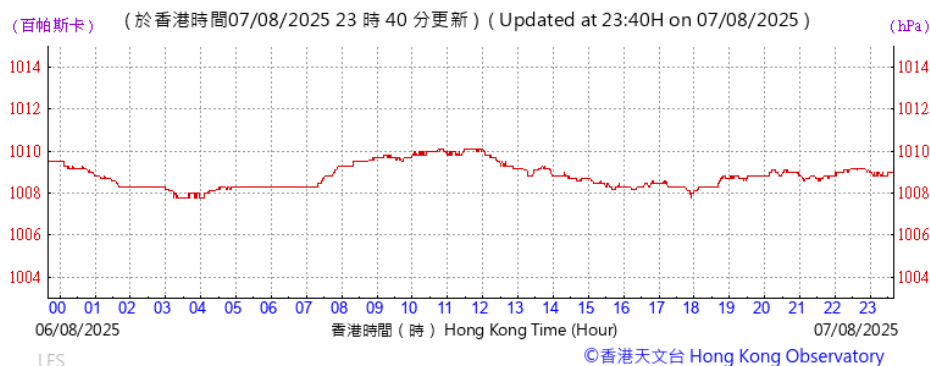


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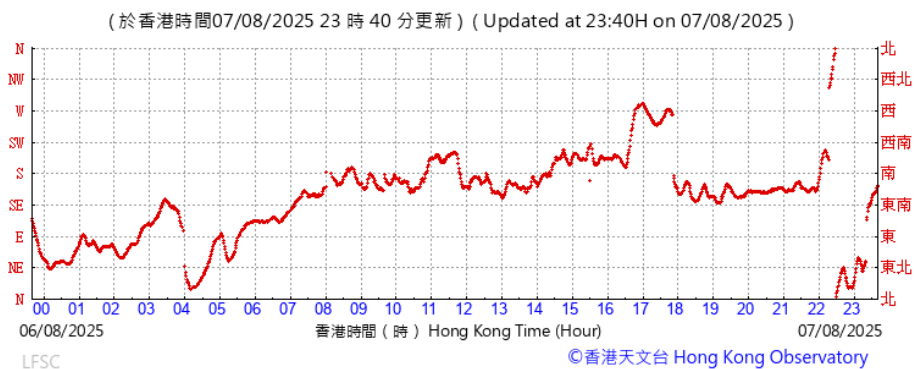
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Pressure:



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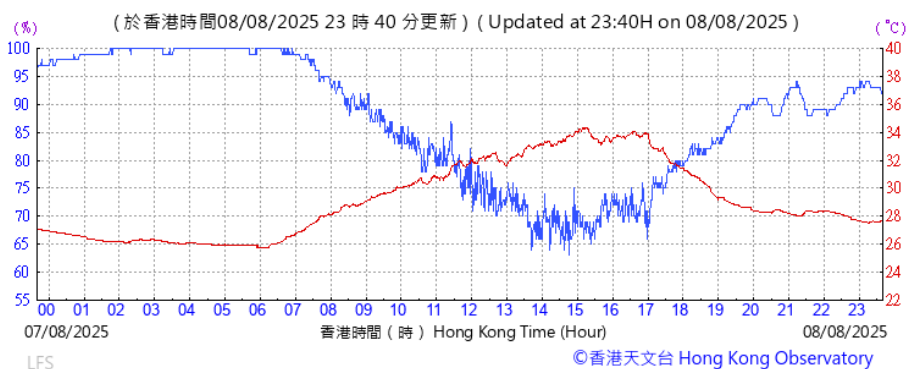


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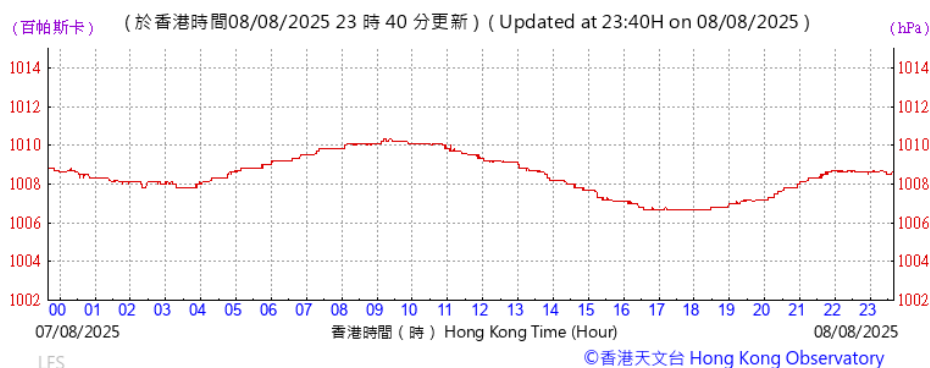


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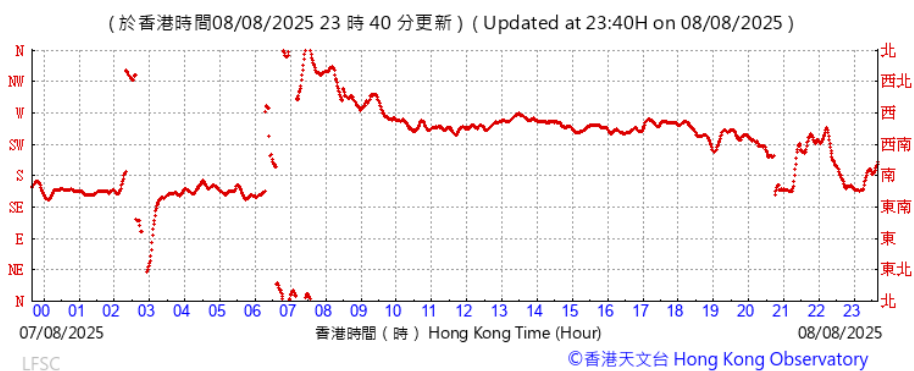
Temperature/humidity:



Pressure:



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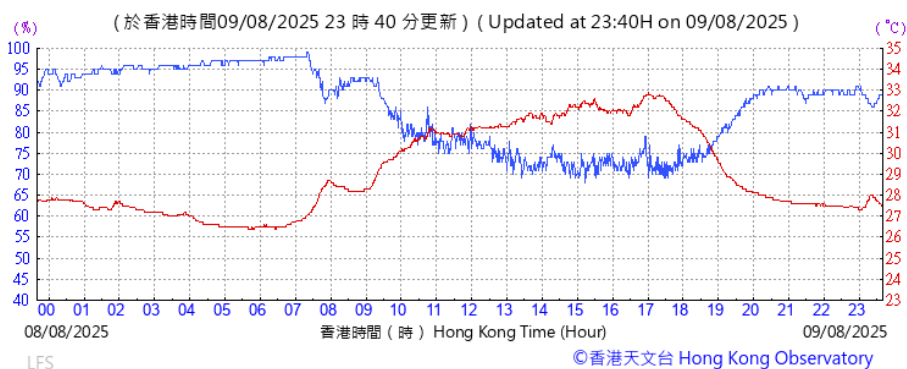


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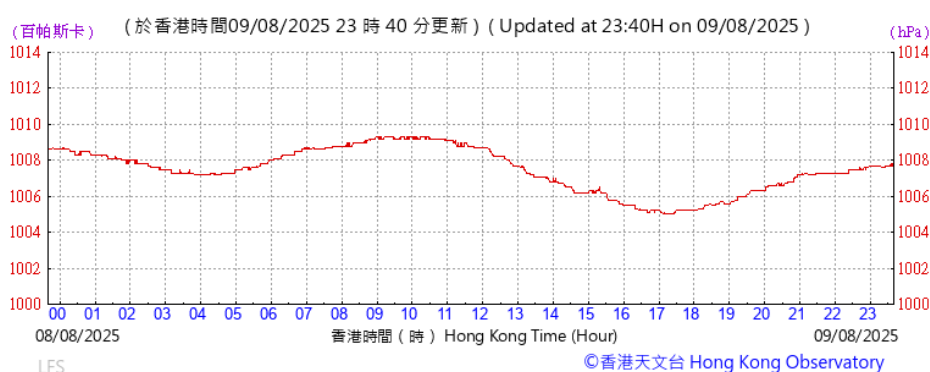


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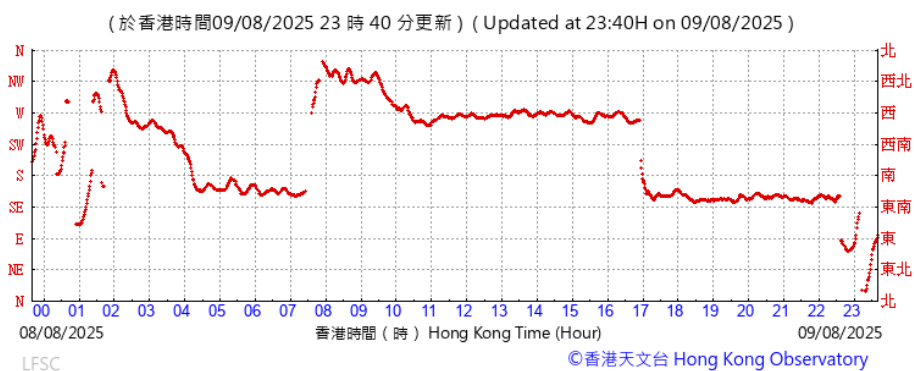
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Pressure:

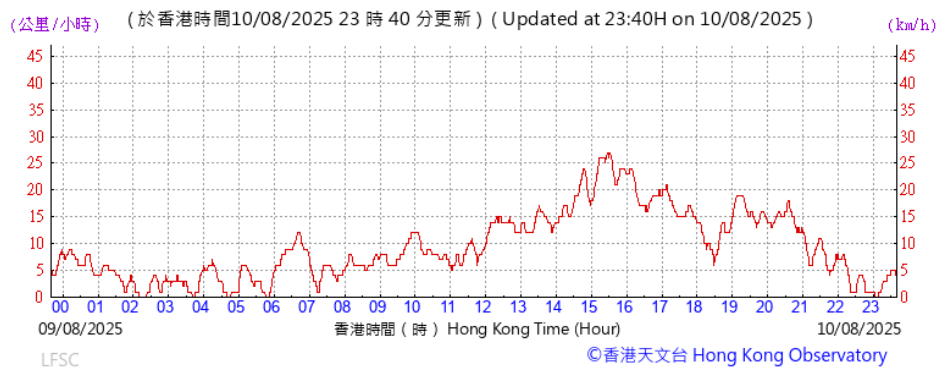


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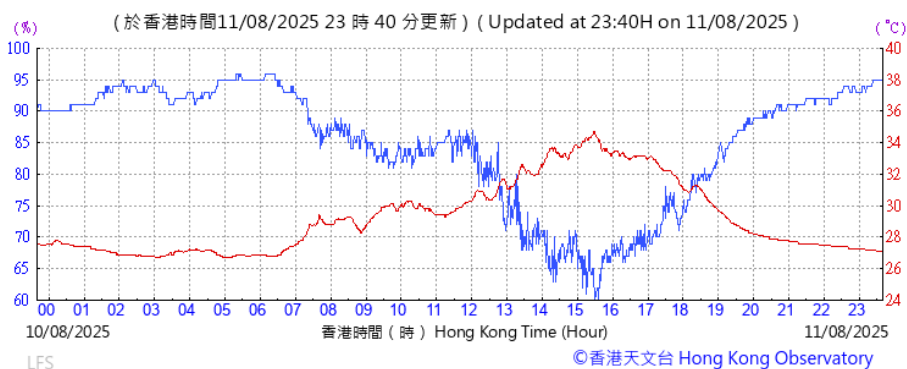
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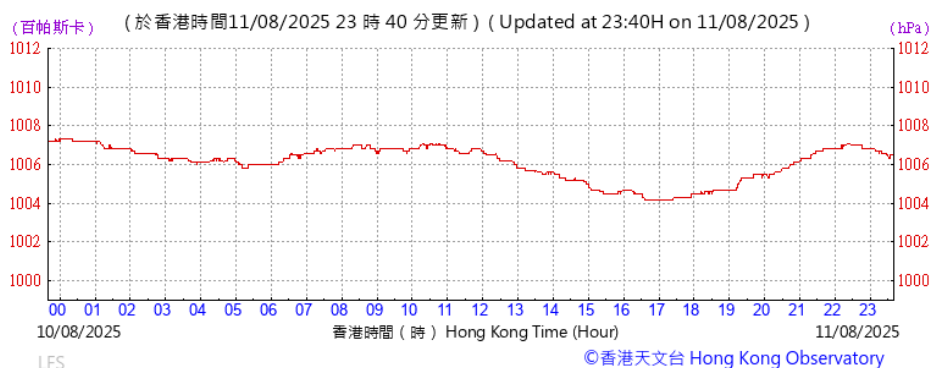


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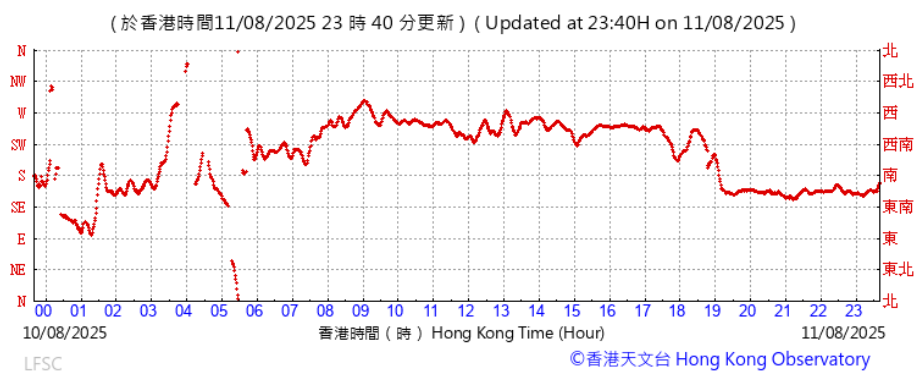
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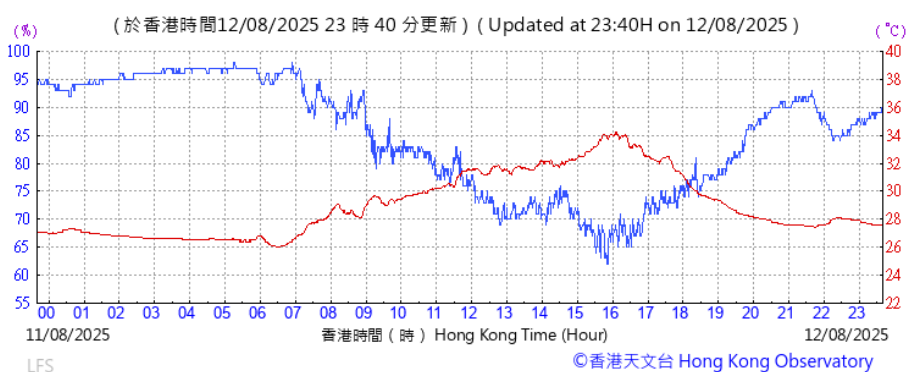


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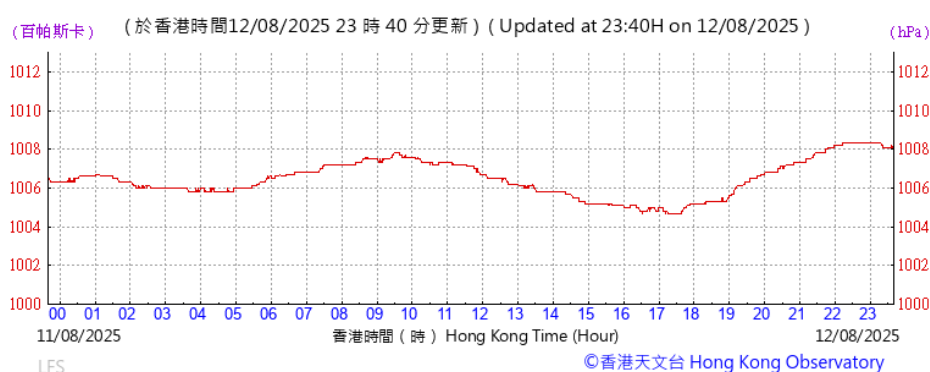


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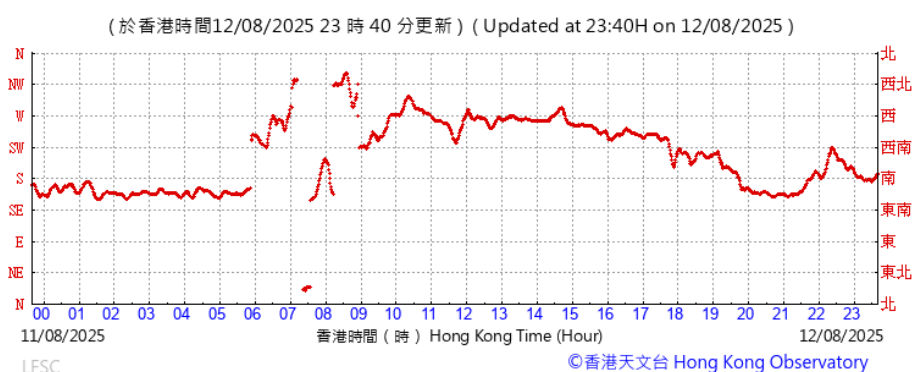
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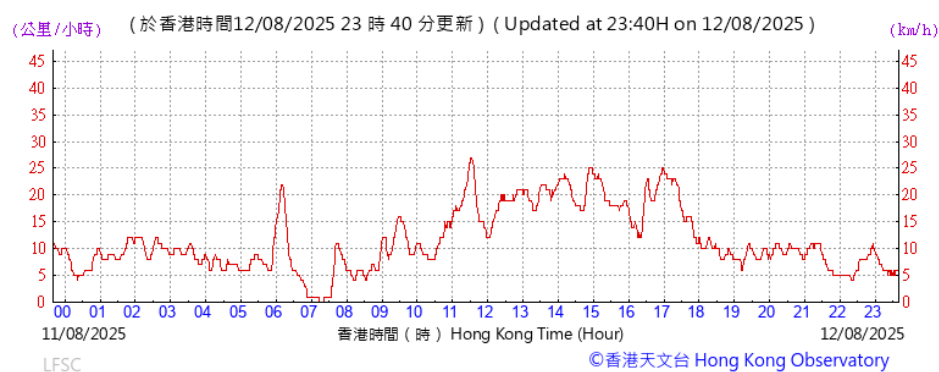
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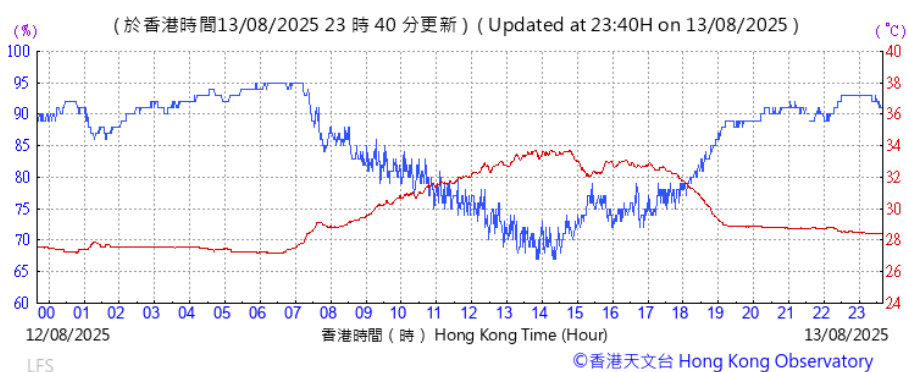


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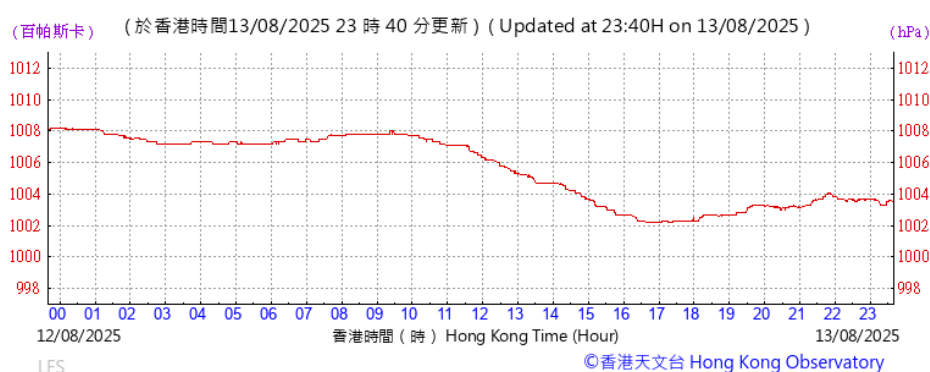


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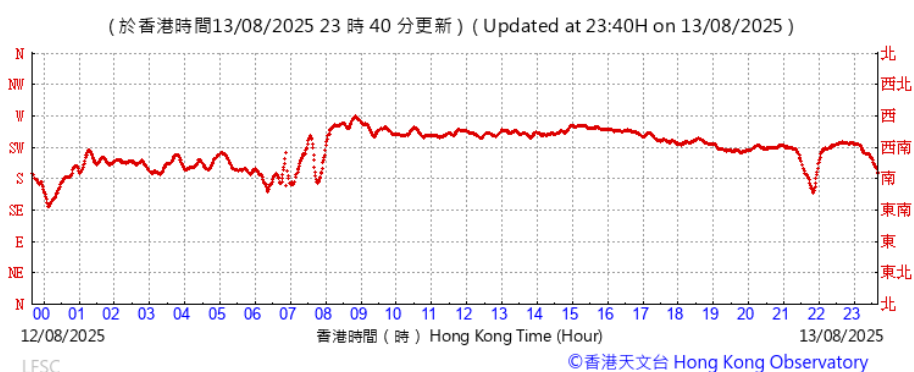
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Pressure:



Wind Direction:

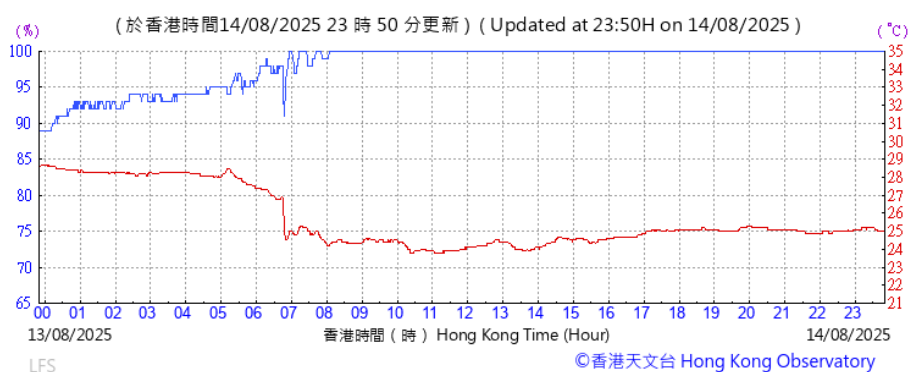


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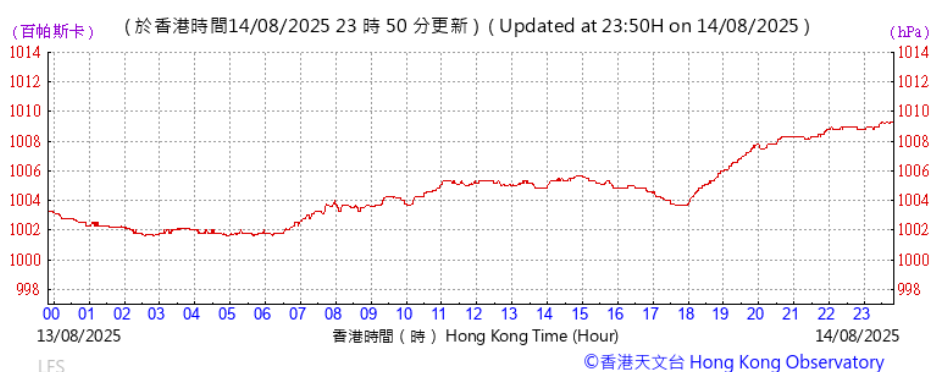


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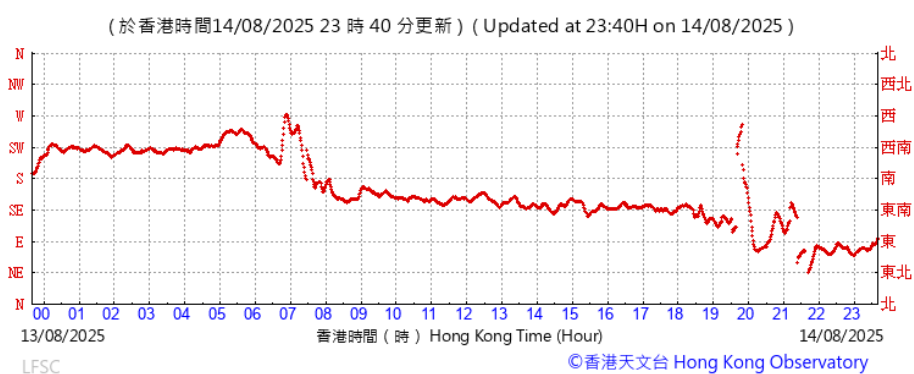
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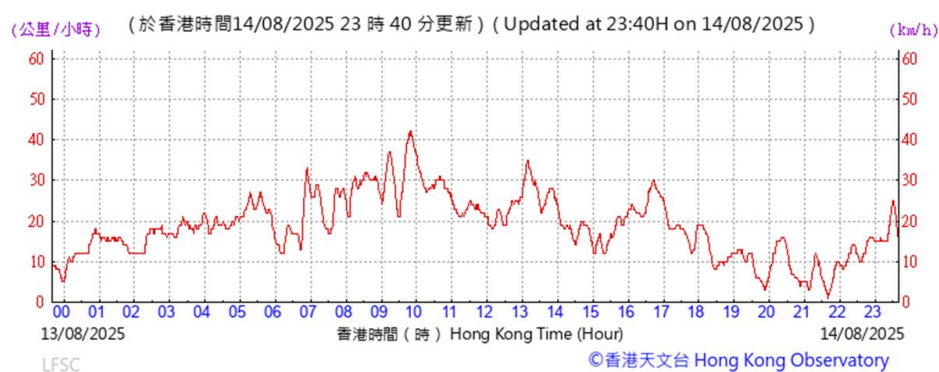
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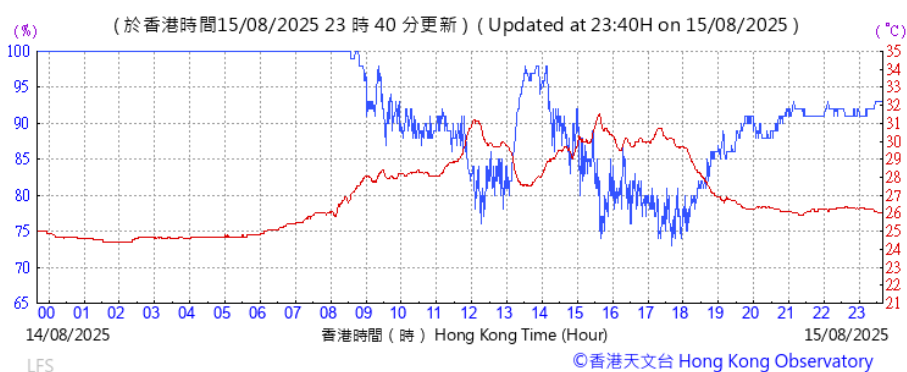


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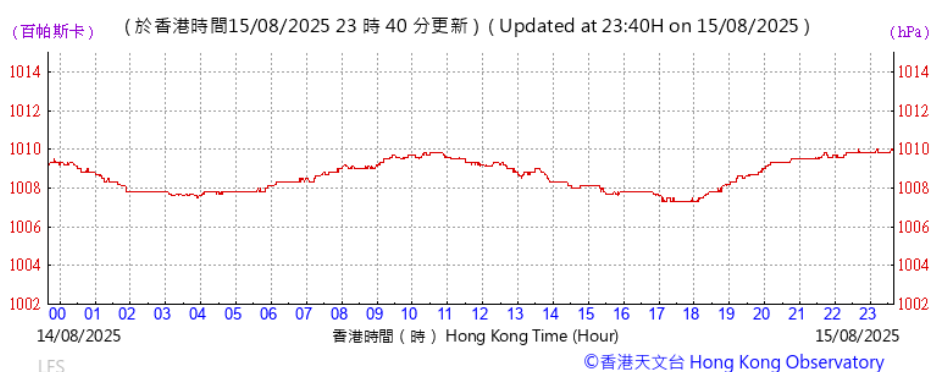


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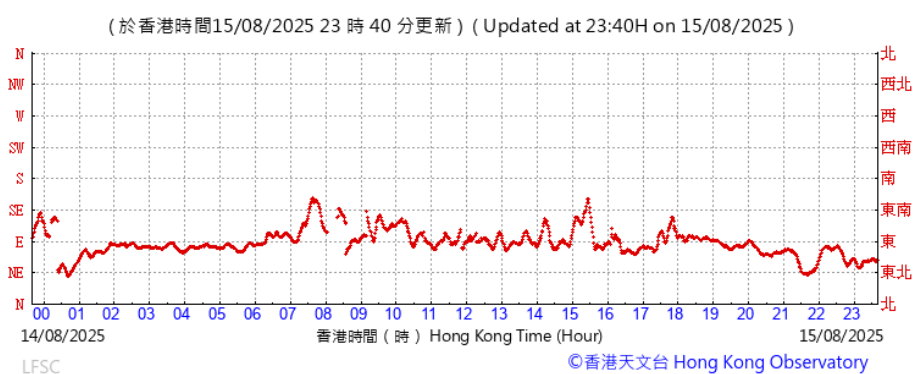
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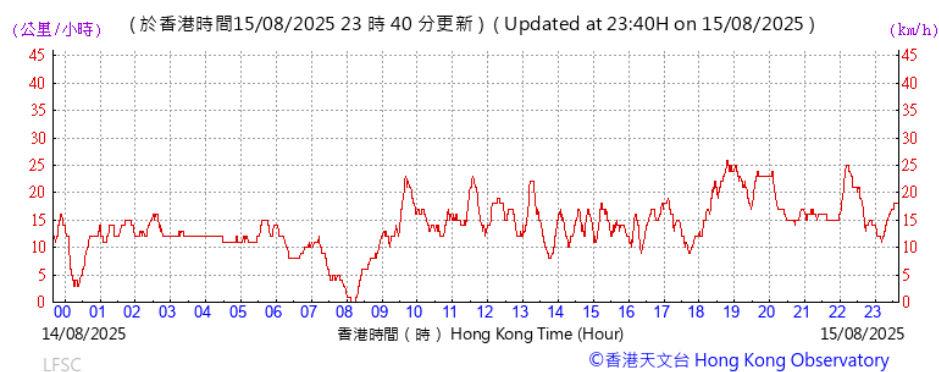
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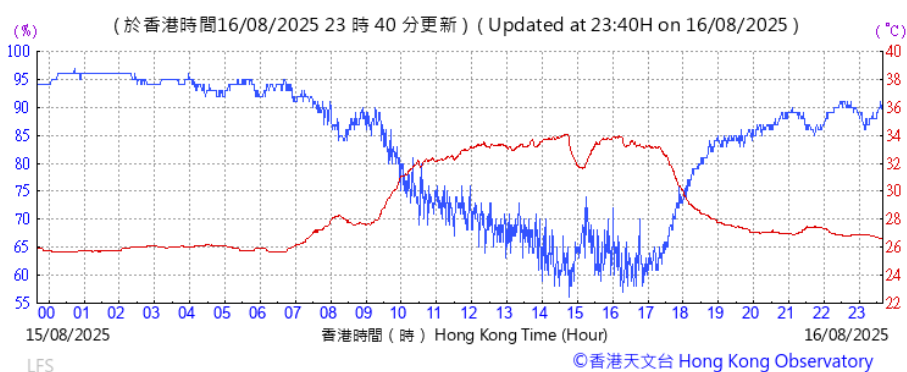


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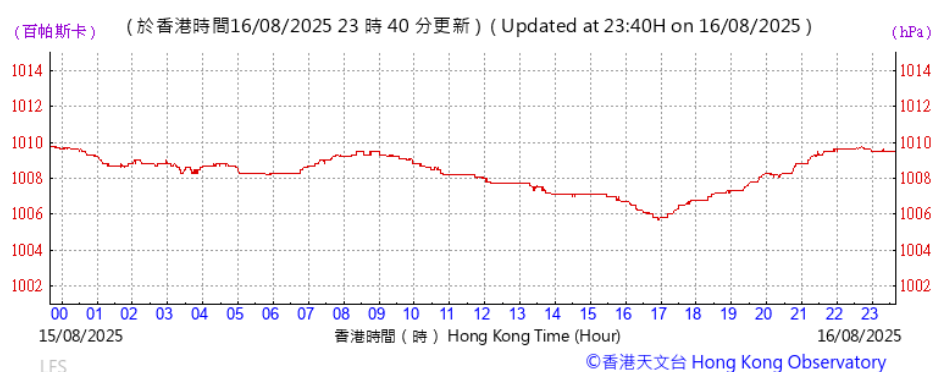


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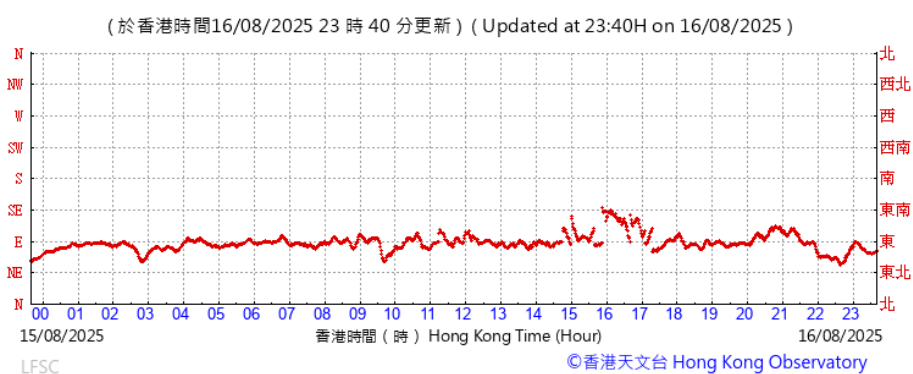
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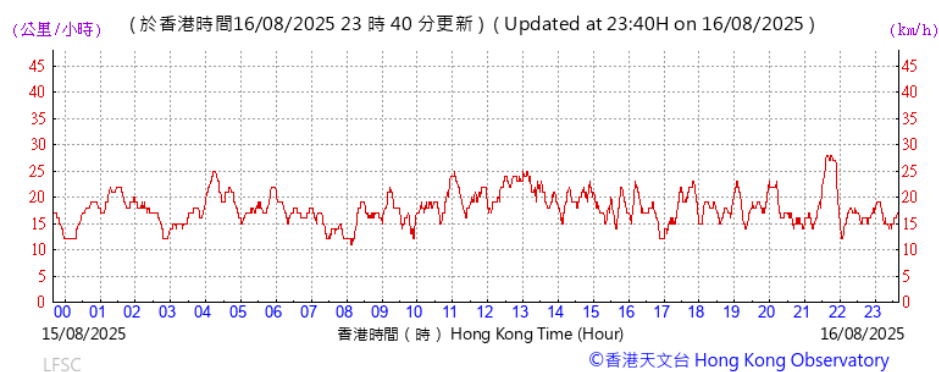
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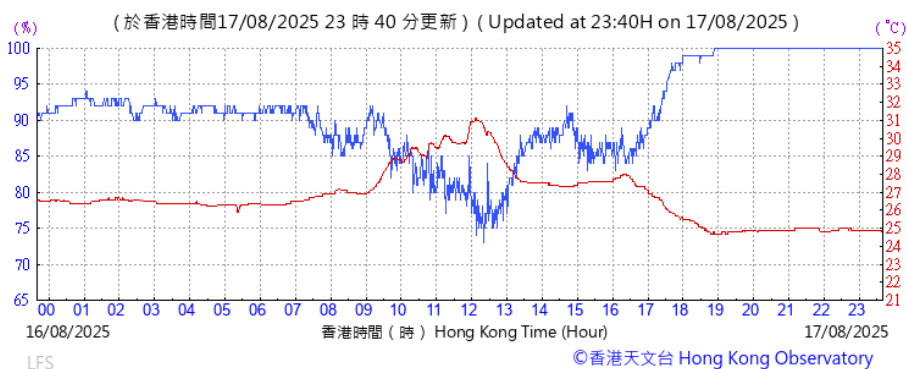


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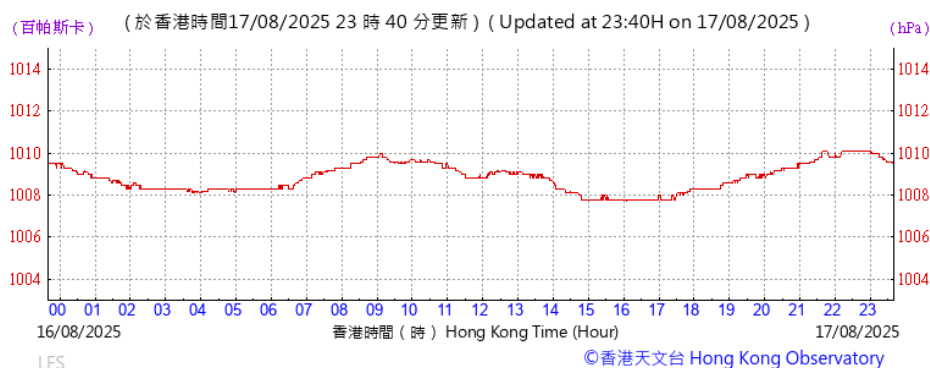


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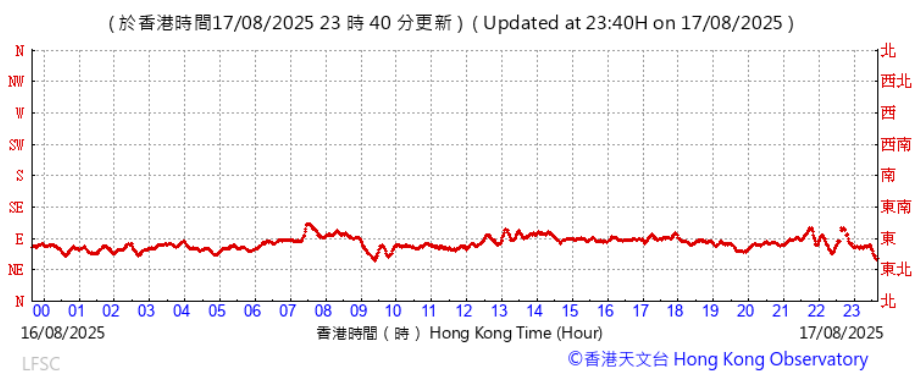
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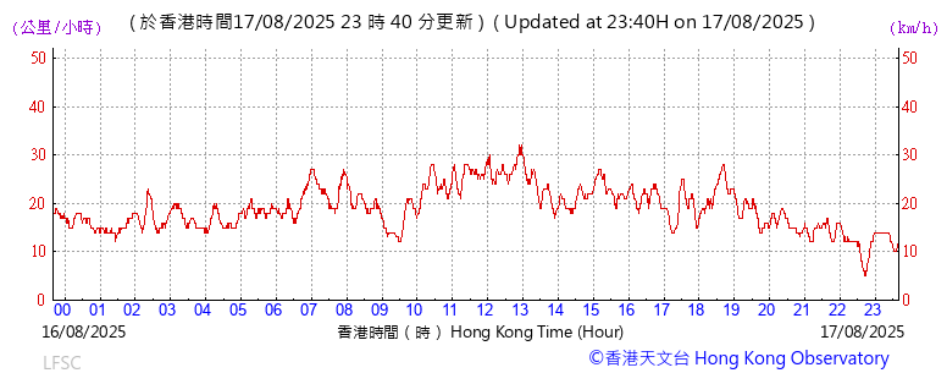
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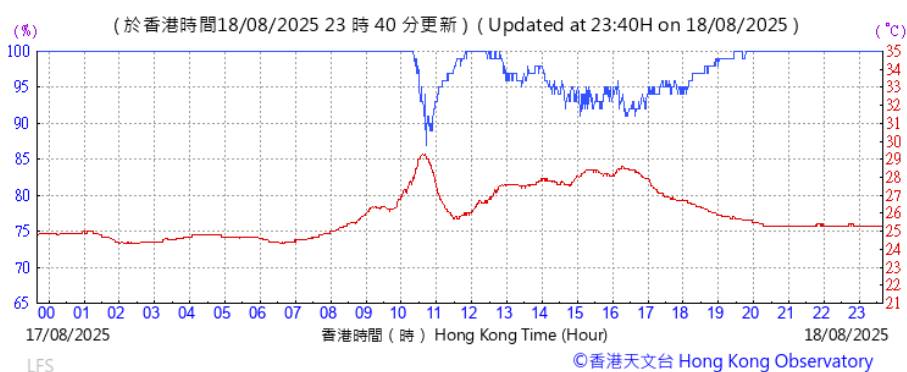


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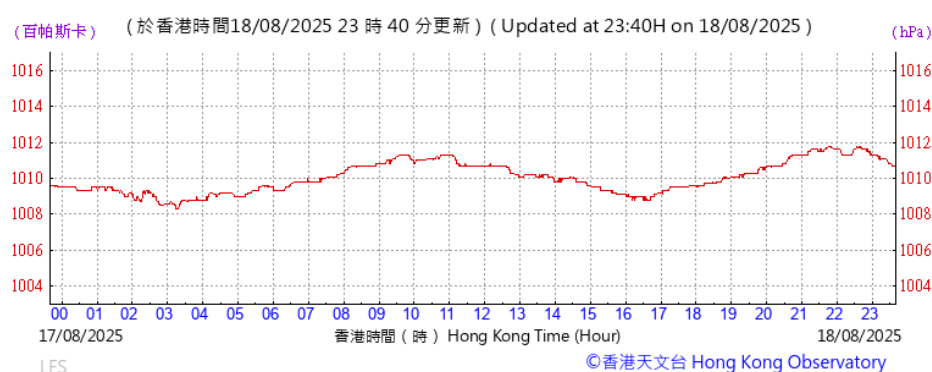


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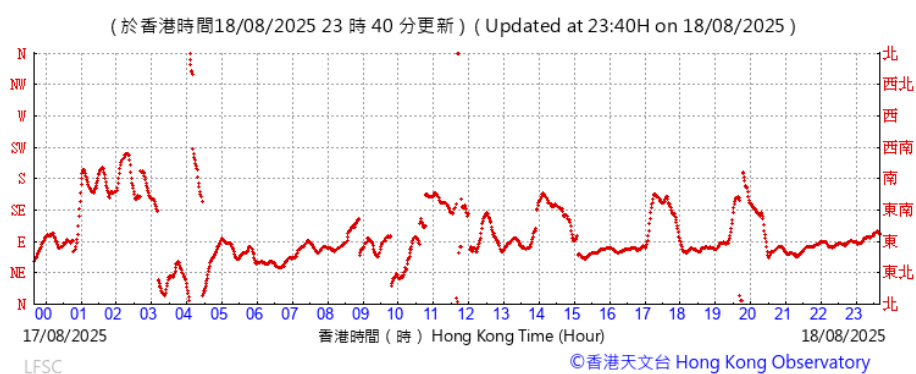
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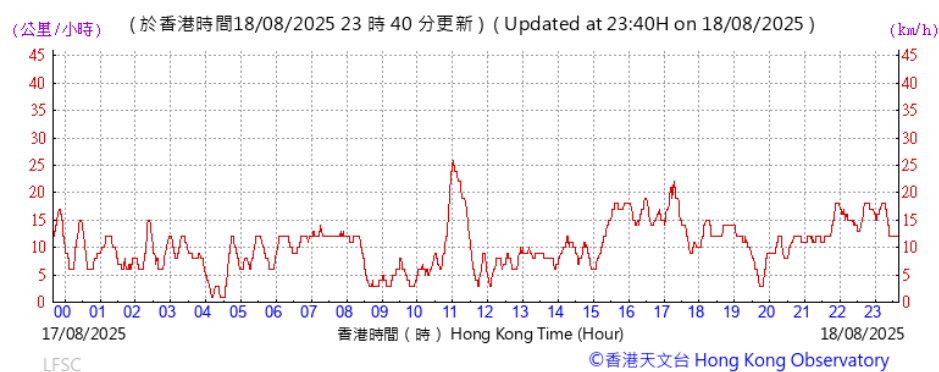
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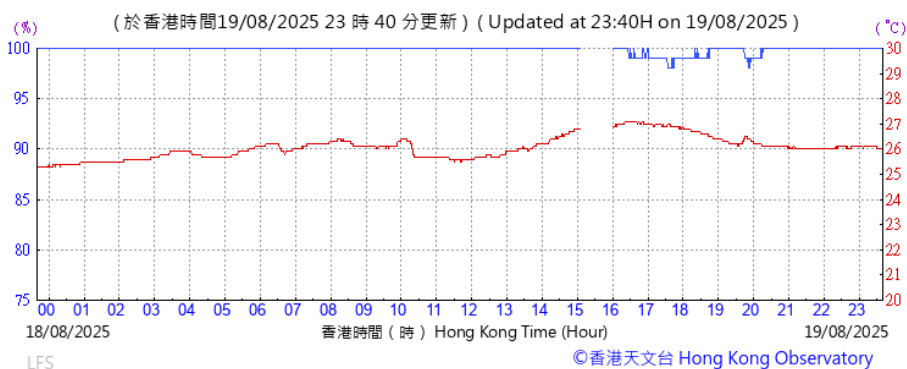


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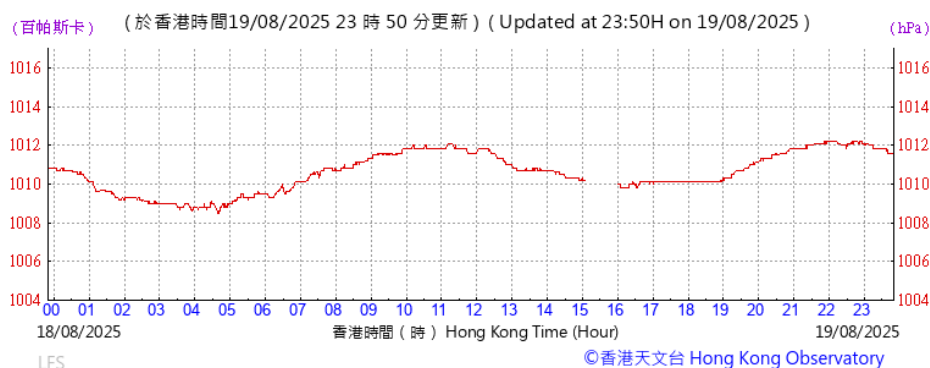


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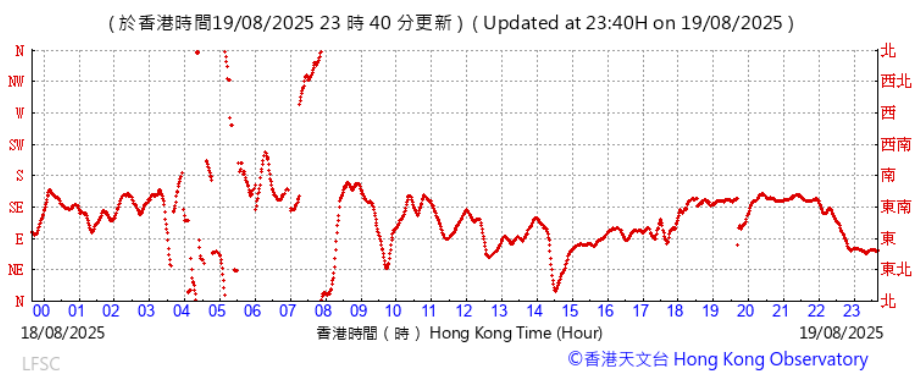
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Pressure:



Wind Direction:



Wind Speed:

