Development at West Kowloon Cultural District

Monthly Environmental Monitoring and Audit (EM&A) Report for May 2025

12 June 2025

In accordance with the Environmental Permit, Condition 3.4, this Monthly EM&A Report has been certified by the Environmental Team Leader (ETL) and verified by the Independent Environmental Checker (IEC) as complying with the requirements as set out in Sections 1, 10, 11, 12 and 13 of the EM&A Manual.

Certified by:

Max LEE
Environmental Team Leader (ETL)
West Kowloon Cultural District Authority

Date 12 June 2025

Verified by:

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

Date 12 June 2025

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

MOTT MACDONALD

Development at West Kowloon Cultural District

Monthly Environmental Monitoring and Audit (EM&A) Report for May 2025

10 June 2025

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

Executive summary

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.

This Monthly EM&A Report presents the monitoring works at Lyric Theatre Complex (L2 Contract) from 1 May to 31 May 2025.

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 month.

Implementation of Mitigation Measures

Construction phase weekly site inspections were carried out on 7, 14, 21 and 28 May 2025 for Lyric Theatre Complex (L2 Contract) to confirm the implementation measures undertaken by the Contractor in the reporting month. The outcomes are presented in Section 4 and the status of implementation of mitigation measures in the site is shown in **Appendix J**.

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

Record of Complaints

No environmental complaint was recorded in the reporting month.

Record of Notifications of Summons and Successful Prosecutions

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

Future Key Issues

The major site works for L2 to be commissioned in the coming month include:

- LTC construction
  - ABWF works
  - Façade work
  - MEP works
- ASDA and Lyric Theatre Promenade
  - Defects rectification
  - Installation of subframe
  - Plastering work
  - Modification work for manholes
- DCS cofferdam
  - Backfilling
  - Sheet piling
  - Grouting work
  - Pipe connection

Potential environmental impacts due to the construction activities, including air quality, noise, water quality, waste, landscape and visual, will be monitored or reviewed. The recommended environmental mitigation measures shall be implemented on site and regular inspections as required will be carried out to ensure that the environmental conditions are acceptable.

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) were 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 Lyric Theatre Complex (now known as “the WestK Performing Arts Centre”) will comprise a 1,450-seat Grand Theatre, a 600-seat Medium Theatre and a 270-seat Studio Theatre. The complex will also house extensive rehearsal facilities and a Resident Company Centre that will serve as an exploration, development and collaboration hub for dance companies and artists in Hong Kong.

The Monthly EM&A Report is prepared in accordance with the Condition 3.4 of the Environmental Permit No. EP-453/2013/B. This Monthly EM&A Report presents the monitoring works at Lyric Theatre Complex (L2 Contract) from 1 May to 31 May 2025. 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 works
  - Façade work
  - MEP works
- ASDA and Lyric Theatre Promenade
  - Defects rectification
- DCS cofferdam
  - Backfilling
  - Sheet piling

The Construction Works Programme of Lyric Theatre Complex (L2 Contract) is provided in **Appendix B**. As on 31 January 2023, site area P32 was handed over to AST Developer and was thus excluded from the site boundary of Lyric Theatre Complex (L2 Contract), the area was delineated in red in the layout plan of the Project which is provided in **Figure 1**. Please refer to **Table 4.1** on the status of the environmental licenses.

1.4 Summary of EM&A Requirements and Alternative Monitoring Locations

The EM&A programme requires environmental monitoring of air quality, noise, landscape and visual as specified in the approved EM&A Manual.

1.4.1 EM&A Requirements

A summary of impact EM&A requirements is presented in **Table 1.1**.

Table 1.1: Summary of Impact EM&A Requirements

Parameters	Descriptions	Locations	Frequencies
Air Quality	24-Hour TSP	AM1 – International Commerce Centre	At least once every 6 days
	1-Hour TSP	AM1 – International Commerce Centre	At least 3 times every 6 days
	24-Hour TSP	AM2 – The Harbourside Tower 1	At least once every 6 days
	1-Hour TSP	AM2 – The Harbourside Tower 1	At least 3 times every 6 days
Noise	Leq, 30 minutes	NM1- The Harbourside Tower 1	Weekly
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

1.4.2 Alternative Monitoring Locations

In the context of the monitoring activities at M+ Museum and the Lyric Theatre 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 (i.e. AM3 to AM5 and NM2 to NM5) 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.

The Environmental Quality Performance Limits for air quality and noise are shown in **Appendix C**.

The Event and Action Plan for air quality, construction noise, and landscape and visual are shown in **Appendix D**.

The EM&A programme followed the recommended mitigation measures in the EM&A Manual. The EM&A requirements as well as the summary of implementation status of the environmental mitigation measures are provided in **Appendix J**.

2 Impact Monitoring Methodology

2.1 Introduction

For air quality and noise, the monitoring methodology, including the monitoring locations, monitoring equipment used, monitoring parameters, and frequency and duration etc., for air quality and noise are detailed in this Section. The environmental monitoring schedules for the reporting period and the tentative monitoring schedule for the coming month are provided in **Appendix E**.

For landscape and visual impact, the relevant EM&A monitoring requirements and details are also presented in this Section.

2.2 Air Quality

2.2.1 Monitoring Parameters, Frequency and Duration

Table 2.1 summarizes the monitoring parameters, frequency and duration of the TSP monitoring.

Table 2.1: Air Quality Monitoring Parameters, Frequency and Duration

Parameter	Frequency	Duration
24-hour TSP	At least once in every six-days	24 hours
1-hour TSP	At least 3 times every six-days	60 minutes

2.2.2 Monitoring Locations

Currently, the works under the captioned project are confined in the western part of the WKCD site. Therefore, only the monitoring stations AM1 and AM2 were set up at the proposed locations in accordance with updated EM&A Manual. Location of the monitoring station is given in **Table 2.2** and shown in **Figure 1**.

Table 2.2: Air Quality Monitoring Station

Monitoring Station	Location
AM1	International Commerce Centre (ICC)
AM2	The Harbourside Tower 1 – Ground Floor

2.2.3 Monitoring Equipment

For 24-hour TSP air quality monitoring, High Volume Sampler (HVS) was used at air monitoring station AM1 and portable direct reading dust meter was used at air monitoring station AM2 due to the unavailability of power supply for HVS at / in the vicinity of the AM2. The portable direct reading dust meter is capable of producing comparable results as that by the HVS method. For 1-hour TSP monitoring, portable direct reading dust meter was used for the measurement.

Table 2.3 summarizes the equipment used in the impact air quality monitoring. Copies of the calibration certificates for the calibration kit and portable dust meters are attached in **Appendix F**.

Table 2.3: TSP Monitoring Equipment

Equipment	Model
24-hour TSP monitoring	
High Volume Sampler	TE-5170 (Serial No: 0767)
Calibrator	TE-5025A (Orifice I.D.: 2454)
Portable direct reading dust meter	Sibata LD-5R (Serial No.: 831656)
1-hour TSP monitoring	
Portable direct reading dust meter	Sibata LD-3B (Serial No.: 235780 and 245834)

Calibration of the HVS (five point calibration) using Calibration Kit was carried out every two months. The HVS calibration orifice will be calibrated annually. Calibration certificate of the TE-5025A Calibration Kit and the HVS are provided in **Appendix F**.

The portable direct reading dust meter should be determined periodically (e.g. annually) by the HVS to check the validity and accuracy of the results measured by direct reading method.

2.2.4 Monitoring Methodology

24-hour TSP Monitoring (HVS)

Installation

The HVS was installed at the site boundary. The following criteria were considered in the installation of the HVS.

- A horizontal platform with appropriate support to secure the sampler against gusty wind was provided.
- The distance between the HVS and any obstacles, such as buildings, was at least twice the height that the obstacle protrudes above the HVS.
- A minimum of 2 metres separation from walls, parapets and penthouse was required for rooftop sampler.
- A minimum of 2 metres separation from any supporting structure, measured horizontally was required.
- No furnace or incinerator flues or building vent were nearby.
- Airflow around the sampler was unrestricted.
- The sampler has been more than 20 metres from any drip line.
- Permission was obtained to set up the sampler and to obtain access to the monitoring station.
- A secured supply of electricity is needed to operate the sampler.

Preparation of Filter Papers

- Glass fibre filters were labelled and sufficient filters that were clean and without pinholes were selected.
- The filters used are specified to have a minimum collection efficiency of 99 percent for 0.3 μm (DOP) particles.
- All filters were equilibrated in the conditioning environment for 24 hours before weighing. The conditioning environment temperature was around 25 °C and not variable by more than ±3 °C with relative humidity (RH) < 50% and was not variable by more than ±5 %. A convenient working RH was 40%. All preparation of filters was done by Hong Kong Laboratory Accreditation Scheme (HOKLAS) accredited laboratory.

Field Monitoring Procedures

- The power supply was checked to ensure the HVS works properly.
- The filter holder and the area surrounding the filter were cleaned.
- The filter holder was removed by loosening the four bolts and a new filter, with stamped number upward, on a supporting screen was aligned carefully.
- The filter was properly aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter.
- The swing bolts were fastened to hold the filter holder down to the frame. The pressure applied should be sufficient to avoid air leakage at the edges.
- The shelter lid was closed and was secured with the aluminium strip.
- The HVS was warmed-up for about 5 minutes to establish run-temperature conditions.
- A new flow rate record sheet was set into the flow recorder.
- The flow rate of the HVS was checked and adjusted at around 1.3 m^3/min. The range specified in the EM&A Manual was between 0.6-1.7 m^3/min.
- The programmable timer was set for a sampling period of 24 hours, and the starting time, weather condition and the filter number were recorded.
- The initial elapsed time was recorded.
- At the end of sampling, the sampled filter was removed carefully and folded in half length so that only surfaces with collected particulate matter were in contact.
- It was then placed in a clean plastic envelope and sealed.
- All monitoring information was recorded on a standard data sheet.
- Filters were sent to a Hong Kong Laboratory Accreditation Scheme (HOKLAS) accredited laboratory for analysis.

Maintenance and Calibration

- The HVS and its accessories are maintained in good working condition, such as replacing motor brushes routinely and checking electrical wiring to ensure a continuous power supply.
- HVSs were calibrated upon installation and thereafter at bi-monthly intervals. The calibration kits were calibrated annually.

Weather Condition

- Meteorological data extracted from Hong Kong Observatory for the reporting month is provided in **Appendix H**.

<u>24-hour TSP Monitoring (Portable direct reading dust meter)</u>

Field Monitoring

The measuring procedures of the portable direct reading dust meter are in accordance with the Manufacturer's Instruction Manual as follows:

- Turn the power on.
- Close the air collecting opening cover.
- Push the "TIME SETTING" switch to [BG].
- Push "START/STOP" switch to perform background measurement for 6 seconds.
- Turn the knob at SENSI ADJ position to insert the light scattering plate.

- Leave the equipment for 1 minute upon “SPAN CHECK” is indicated in the display.
- Push “START/STOP” switch to perform automatic sensitivity adjustment. This measurement takes 1 minute.
- Pull out the knob and return it to MEASURE position.
- Setting time period of 24 hours for the 24-hour TSP measurement.
- Push “START/STOP” to start the 24-hour TSP measurement.
- Regular checking of the time period setting to ensure monitoring time of 24 hours.

Maintenance and Calibration

- The portable direct reading dust meter would be checked at 3-month intervals and calibrated at 1-year intervals throughout all stages of the air quality monitoring.
- Calibration records for direct dust meters are shown in **Appendix F**.

Weather Condition

- Meteorological data extracted from Hong Kong Observatory for the reporting month is provided in **Appendix H**.

1-hour TSP Monitoring

Field Monitoring

The measuring procedures of the 1-hour dust meter are in accordance with the Manufacturer’s Instruction Manual as follows:

- Turn the power on.
- Close the air collecting opening cover.
- Push the “TIME SETTING” switch to [BG].
- Push “START/STOP” switch to perform background measurement for 6 seconds.
- Turn the knob at SENSI ADJ position to insert the light scattering plate.
- Leave the equipment for 1 minute upon “SPAN CHECK” is indicated in the display.
- Push “START/STOP” switch to perform automatic sensitivity adjustment. This measurement takes 1 minute.
- Pull out the knob and return it to MEASURE position.
- Setting time period of 1 hour for the 1-hour TSP measurement.
- Push “START/STOP” to start the 1-hour TSP measurement.
- Regular checking of the time period setting to ensure monitoring time of 1 hour.

Maintenance and Calibration

- The 1-hour dust meter would be checked at 3-month intervals and calibrated at 1-year intervals throughout all stages of the air quality monitoring.
- Calibration records for direct dust meters are shown in **Appendix F**.

Weather Condition

- Meteorological data extracted from Hong Kong Observatory for the reporting month is provided in **Appendix H**.

2.3 Noise

2.3.1 Monitoring Parameters, Frequency and Duration

Table 2.4 summarizes the monitoring parameters, frequency and duration of noise monitoring. The noise in A-weighted levels L_{eq}, L_{10} and L_{90} are recorded in a 30-minute interval between 0700 and 1900 hours.

Table 2.4: Noise Monitoring Parameters, Period and Frequency

Time Period	Parameters	Frequency
Daytime on normal weekdays (0700-1900 hours)	L_{eq}(30 min), L_{90}(30 min) & L_{10} (30 min)	Once every week

2.3.2 Monitoring Location

Currently, the works under the captioned project are confined in the western part of the WKCD site. Therefore, only the monitoring station NM1A was set up. Location of the monitoring station is given in **Table 2.5** and shown in **Figure 1**.

Table 2.5: Noise Monitoring Station

Monitoring Station	Location
NM1A	International Commerce Centre (ICC)

2.3.3 Monitoring Equipment

Integrating Sound Level Meter was used for noise monitoring. It was a Type 1 sound level meter capable of giving a continuous readout of the noise level readings including equivalent continuous sound pressure level (L_{Aeq}) and percentile sound pressure level (L_x). They comply with International Electrotechnical Commission Publications 651:1979 (Type 1) and 804:1985 (Type 1). **Table 2.6** summarizes the noise monitoring equipment model being used.

Table 2.6: Noise Monitoring Equipment

Monitoring Station	Equipment Model	
	Integrating Sound Level Meter	Calibrator
NM1A	Rion NL-52 (Serial No. 00643040)	LARSON DAVIS CAL200 (Serial No. 16172)

2.3.4 Monitoring Methodology

Field Monitoring

- The microphone of the Sound Level Meter was set at least 1.2 m above the ground.
- Free Field measurement was made at the monitoring locations.
- The battery condition was checked to ensure the correct functioning of the meter.
- Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:
  - frequency weighting: A
  - time weighting: Fast
  - time measurement: 30 minutes intervals (between 0700-1900 on normal weekdays)
- Prior to and after each noise measurement, the meter was calibrated using a Calibrator for 94 dB at 1 kHz. If the difference in the calibration level before and after measurement was more than 1 dB, the measurement would be considered invalid and has to be repeated after re-calibration or repair of the equipment.

– During the monitoring period, the L_{eq}, L_{10} and L_{90} were recorded. In addition, any site observations and noise sources were recorded on a standard record sheet.
– A correction of +3dB(A) was made to the free field measurements.

Maintenance and Calibration

– The microphone head of the sound level meter and calibrator is cleaned with soft cloth at quarterly intervals.
– The sound level meter and calibrator are sent to the supplier or HOKLAS laboratory to check and calibrate at yearly intervals.
– Calibration records are shown in **Appendix F**.

Weather Condition

– Meteorological data extracted from Hong Kong Observatory for the reporting month is provided in **Appendix H**.

2.4 Landscape and Visual

2.4.1 Monitoring Program

Table 2.7 details the monitoring program (as proposed in the WKCD EIA report) for landscape and visual impact during the construction phase.

Table 2.7: Monitoring Program for Landscape and Visual Impact during Construction Phase

Stage	Monitoring Task	Frequency	Report	Approval
Construction	Monitor implementation of proposed mitigation measures during the construction stage.	Bi-weekly	ET to report on Contractor's compliance	Counter-signed by IEC

During the landscape and visual impact monitoring, any changes in relation to the landscape and visual amenity should be monitored with reference to the baseline conditions of the site. In addition, mitigation measures were proposed in the WKCD EIA report to minimise the landscape and visual impacts during the construction phase. The proposed mitigation measures as shown in Table 9.1 and Table 9.2 of the EM&A Manual should be checked for proper implementation.

3 Monitoring Results

3.1 Impact Monitoring

Construction impact monitoring for air quality, noise and landscape and visual impact was undertaken in compliance with the EM&A Manual during the reporting month.

3.2 Air Quality Monitoring

3.2.1 1-hour TSP

Results of 1-hour TSP at the monitoring location AM1 and AM2 are summarised in **Table 3.1**. Graphical plots of the monitoring results are shown in **Appendix G**.

Table 3.1: Summary of 1-hour TSP monitoring results

Monitoring Station	Monitoring Date	Start Time	1-hour TSP (μg/m3)			Range (μg/m3)	Action Level (μg/m3)	Limit Level (μg/m3)
			1st Result	2nd Result	3rd Result			
AM1	03-May-25	8:33	56	54	51	19-56	273.7	500
	09-May-25	8:28	24	19	27			
	15-May-25	8:29	24	27	28			
	21-May-25	8:38	21	24	25			
	27-May-25	8:34	40	37	39			
AM2	03-May-25	8:49	64	69	66	29-69	274.2	500
	09-May-25	8:43	33	29	36			
	15-May-25	8:45	40	36	35			
	21-May-25	8:43	32	29	30			
	27-May-25	8:50	51	54	56			

3.2.2 24-hour TSP

Results of 24-hour TSP at the monitoring location AM1 and AM2 are summarised in **Table 3.2**. Graphical plots of the monitoring results are shown in **Appendix G**.

Table 3.2: Summary of 24-hour TSP monitoring results

Monitoring Station	Monitoring Date	Start Time	Monitoring Results (μg/m^3)	Range (μg/m^3)	Action Level (μg/m^3)	Limit Level (μg/m^3)
AM1	03-May-25	8:30	77	10-77	143.6	260
	09-May-25	8:25	11			
	15-May-25	8:26	16			
	21-May-25	8:35	10			
	27-May-25	8:31	37			
AM2	03-May-25	8:46	53	21-53	151.1	260
	09-May-25	8:40	21			
	15-May-25	8:42	25			
	21-May-25	8:41	28			
	27-May-25	8:47	42			

No exceedance of 1-hour and 24-hour TSP (Action or Limit Level) was recorded in the reporting period.

3.3 Noise Monitoring

The construction noise monitoring results at the monitoring location NM1A are summarized in **Table 3.3**. Graphical plots of the monitoring data and the station set-up of a free-field measurement are shown in **Appendix G**.

Table 3.3: Summary of noise monitoring results during normal weekdays

Monitoring Date	Start Time	End Time	L_{eq} (30 mins)*, dB(A)	Limit Level for L_{eq} (dB(A))
09-May-25	9:28	9:58	63	75
15-May-25	9:30	10:00	63	
21-May-25	9:28	9:58	63	
27-May-25	9:35	10:05	64	

Remarks:

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

No exceedance (Action/Limit Level) of construction noise was recorded in the reporting month.

3.4 Landscape and Visual Impact

Landscape and visual impact inspections were conducted as part of the weekly site inspection on 14 and 28 May 2025 for Lyric Theatre Complex (L2 Contract) during the reporting month. As reviewed by the registered Landscape Architect, no adverse comment on landscape and visual aspects was made during this inspection.

The landscape and visual mitigation measures were implemented during the reporting period. The summary of implementation status of the environmental mitigation measures is provided in **Appendix J**.

4 Site Environmental Management

4.1 Site Inspection

Construction phase weekly site inspections were carried out on 7, 14, 21 and 28 May 2025 at Lyric Theatre Complex (L2 Contract). While the site environmental management committee meeting with IEC, ET, ER and Contractor was held on 28 May 2025. All observations have been recorded in the site inspection checklist and passed to the Contractor together with the appropriate recommended mitigation measures where necessary.

The key observations from the site inspections and associated recommendations are summarized in **Table 4.1.**

Table 4.1: Summary of Site Inspections and Recommendations for L2

Inspection Date	Parameter	Observation / Recommendation	Contactor's Responses / Action(s) Undertaken	Close-out (Date)
7/5/2025	Air Quality	The contractor was reminded to properly cover the cement bags. (Reminder)	The contractor has properly covered the cement bags.	13/5/2025
7/5/2025	Water Quality	The wastewater treatment facility was not functioning properly, the contractor was reminded to ensure the wastewater treatment facility was functioning properly.	The contractor has ensured the wastewater treatment facilities are working properly.	13/5/2025
7/5/2025	Waste Management	The container for storing general refuse was observed without cover, the contractor was reminded to provide enclosed bins for general refuse.	The contractor has provided enclosed bin for collecting general refuse.	13/5/2025
21/5/2025	Water Quality	Chemical spillage was observed, the contractor was reminded to clean up the spill and treat it as chemical waste.	The contractor has cleared the spill and treat it as chemical waste.	22/5/2025
28/5/2025	Waste Management	General refuse was observed without proper storage, the contractor was reminded to regularly clear them and store them properly.	Pending	--
28/5/2025	Water Quality	Chemicals were found with damaged drip tray, the contractor was reminded to provide suitable drip tray for the chemical containers.	Pending	--

4.2 Advice on the Solid and Liquid Waste Management Status

The Contractor has been registered as a chemical waste producer for the Project. Construction and demolition (C&D) material sorting will be carried out on site. A sufficient number of receptacles were available for general refuse collection.

As advised by the Lyric Theatre Complex (L2 Contract) Contractor, 254.8 tonnes, 119.9 tonnes and 0.0 tonne of inert C&D materials were disposed of as public fill to Tseung Kwan O Area 137 Public Fill, Tuen Mun Area 38 Public Fill and Chai Wan Public Fill Barging Point respectively in the reporting month, while 558.1 tonnes of general refuse were disposed of at SENT and WENT landfill. 0.0 tonne of metals, 0.0 tonne of paper/cardboard packaging, 0.0 tonne of plastics and 0.0 tonne of timber were collected by recycling contractors in the reporting month. 0.0 tonne of

inert C&D material was reused on site. 0.0 tonne of inert C&D material was reused in other projects and 0.0 tonne of inert C&D material was imported for reuse at site. 0.0 tonne of inert C&D material was disposed to sorting facility and 0.0 tonne of chemical waste were collected by licensed contractors in the reporting period.

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

4.3 Status of Environmental Licenses and Permits

The environmental permits, licenses, and/or notifications on environmental protection for this Project which were valid during the period are summarised in **Table 4.2**.

Table 4.2: Status of Environmental Submissions, Licenses and Permits for L2

Permit / License No. / Notification / Reference No.	Valid Period		Status	Remarks
	From	To		
Chemical Waste Producer Registration				
WPN:5213-217-G2347-39	13-Sep-21	-	Valid	
Billing Account Construction Waste Disposal				
7032787	02-Jan-19	-	Account Active	
Construction Noise Permit				
GW-RE0109-25	12-Feb-25	11-Aug-25	Valid	
Wastewater Discharge License				
WT00043449-2023	30-Mar-23	30-Apr-28	Valid	
Notification under Air Pollution Control (Construction Dust) Regulation				
448474	27-Aug-19	-	Notified	

4.4 Recommended Mitigation Measures

The EM&A programme followed the recommended mitigation measures in the EM&A Manual. The EM&A requirements as well as the summary of implementation status of the environmental mitigation measures are provided in **Appendix J**. In particular, the following mitigation measures were brought to attention during the site inspections:

Air Quality

– High standard of housekeeping should be maintained to prevent emission of fugitive dust.

Water Quality

– All drainage facilities and erosion and sediment control structures should be regularly inspected and maintained to ensure proper and efficient operation.

– Oils and fuels should be stored in designated areas which have pollution prevention facilities.

Waste Management

– General refuse should be sorted in enclosed bins or compaction units separated from inert C&D materials.

5 Compliance with Environmental Permit

The status of the required submission under the EP during the reporting period is summarized in **Table 5.1**.

Table 5.1: Status of Submissions under the Environmental Permit

EP Condition	Submission	Submission Date
Condition 3.4	Monthly EM&A Report for Apr 2025	14 May 2025

6 Report in Non-compliance, Complaints, Notification of Summons and Successful Prosecutions

6.1 Record on Non-compliance of Action and Limit Levels

There was no breach of Action or Limit Levels for Air Quality and Noise monitoring in the reporting month.

6.2 Record on Environmental Complaints Received

No environmental complaint was received in the reporting month.

The cumulative statistics on complaints were provided in **Appendix K**.

6.3 Record on Notifications of Summons and Successful Prosecution

No notifications of summons or successful prosecutions were received this month. The cumulative statistics on notifications of summons and successful prosecutions were provided in **Appendix K**.

7 Future Key Issues

7.1 Construction Works for the Coming Month(s)

The major site works for L2 to be commissioned in the coming month include:

- LTC construction
  - ABWF works
  - Façade work
  - MEP works
- ASDA and Lyric Theatre Promenade
  - Defects rectification
  - Installation of subframe
  - Plastering work
  - Modification work for manholes
- DCS cofferdam
  - Backfilling
  - Sheet piling
  - Grouting work
  - Pipe connection

7.2 Key Issues for the Coming Month

Key issues to be considered at Lyric Theatre Complex in the coming month include:

- Generation of dust from construction works;
- Noise impact from operating equipment and machinery on-site;
- Generation of site surface runoffs and wastewater from activities on-site;
- Management of stockpiles and slopes, particularly on rainy days;
- Sorting, recycling, storage and disposal of general refuse and construction waste;
- Management of chemicals and avoidance of oil spillage on-site; and
- Operating conditions of drainage facilities.

7.3 Monitoring Schedule for the Coming Month

The environmental site inspection and environmental monitoring will be continued in the coming month. The tentative monitoring schedule for the coming month is shown in the **Appendix E**.

8 Conclusions and Recommendations

8.1 Conclusions

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, noise level (as L_{eq}, 30 minutes) under monitoring have been checked against established Action and Limit levels. There was no breach of Action and Limit Levels for 1-hour TSP, 24-hour TSP and noise in the reporting month.

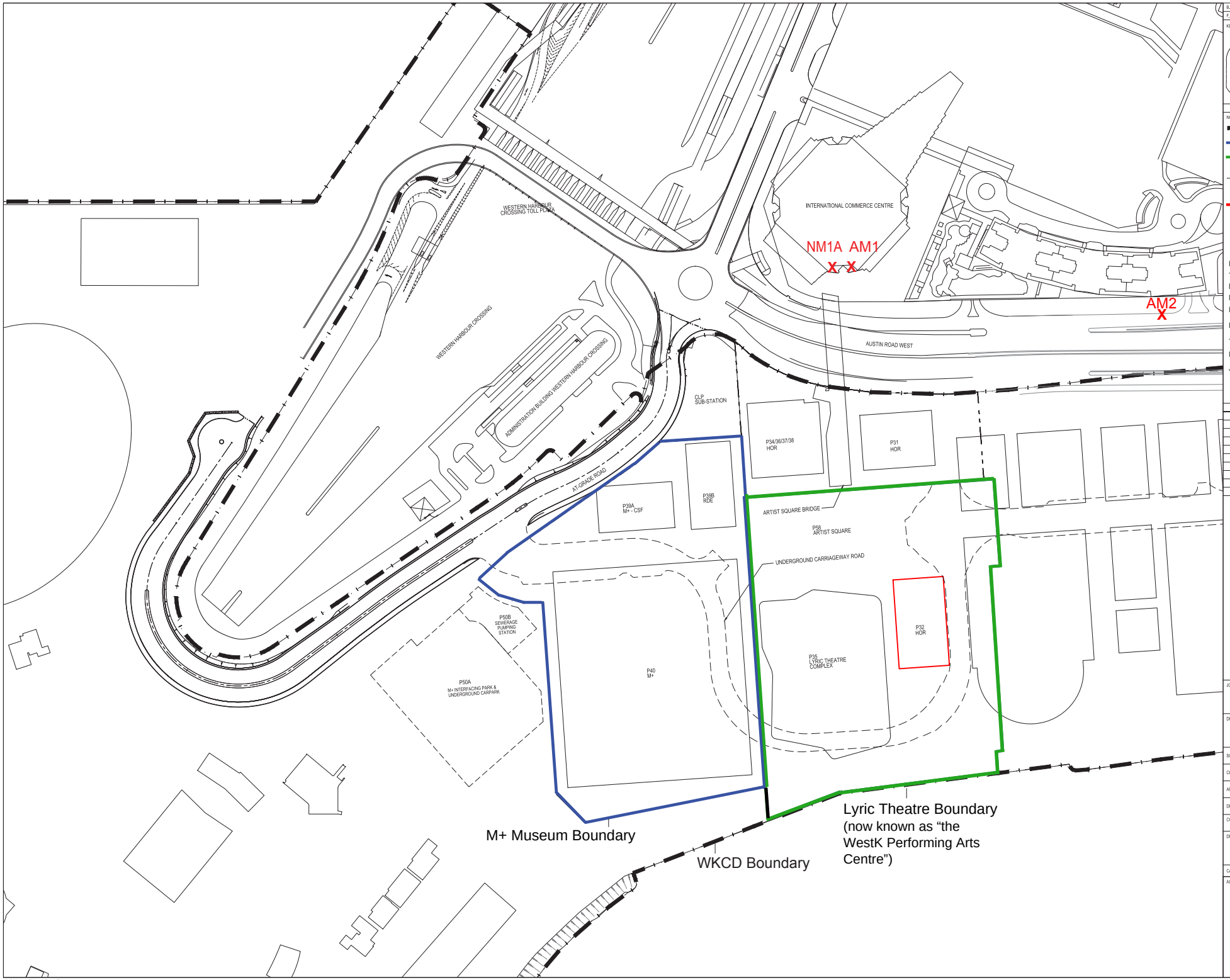
No environmental complaint was recorded in the reporting month. No notifications of summons or successful prosecutions were received during the reporting month.

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

8.2 Recommendations

Potential environmental impacts due to the construction activities, including air quality, noise, water quality, waste, landscape and visual, will be monitored or reviewed. The recommended environmental mitigation measures shall be implemented on site and regular inspections as required will be carried out to ensure that the environmental conditions are acceptable.

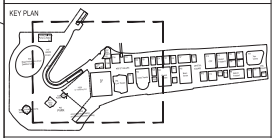
Figure 1 Site Layout Plan and Monitoring Stations



B.D. REF:

F.S.D. REF:

KEY PLAN



KEY PLAN

NOTES:

- WKCD BOUNDARY
- M+ MUSEUM BOUNDARY
- LYRIC THEATRE BOUNDARY
- BOUNDARY OF UNDERPASS ROAD SERVING THE PLANNED WKCD
- AREA HANDED OVER TO SUN HUNG KAI PROPERTIES
- X CONSTRUCTION AIR/NOISE MONITORING STATIONS

REMARKS 1:

THE AIR MONITORING STATION AM2B HAS BEEN RELOCATED TO THE ALTERNATIVE MONITORING STATION AM2 AT THE G/F OF HARBOURSIDE ON 1 JUNE 2021

REMARKS 2:

THE SITE P32 (DELINEATED IN RED) WAS HANDED OVER TO AST DEVELOPER ON 31 JANUARY 2023.

REV.	DATE	DESCRIPTION	INITIAL

JOB TITLE: **M+ MUSEUM FOR VISUAL CULTURE (MAIN CONTRACT WORKS) & LYRIC THEATRE COMPLEX**

DRAWING TITLE: **PROPOSED LOCATIONS OF CONSTRUCTION AIR/NOISE MONITORING STATIONS**

SCALE	1:100	PRINTED	A1
CHECKED		DATE	
APPROVED		DATE	
DRAWN		DATE	
CONTRACT NO.			

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

CAD REF NAME: XXXXX-AUT-PMS-DWG-P00-L000-0000-XXX.dwg

AUTHORITY

westKowloon 西九文化區

A1 (841mm x 594mm) Sheet Size

Appendices

A. Project Organisation
B. Tentative Construction Programme
C. Action and Limit Levels for Construction Phase
D. Event and Action Plan for Air Quality, Noise, Landscape and Visual Impact
E. Monitoring Schedule
F. Calibration Certifications
G. Graphical Plots of the Monitoring Results
H. Meteorological Data Extracted from Hong Kong Observatory
I. Waste Flow table
J. Environmental Mitigation Measures – Implementation Status
K. Cumulative Statistics on Complaints, Notifications of Summons and Successful Prosecutions

A. Project Organisation

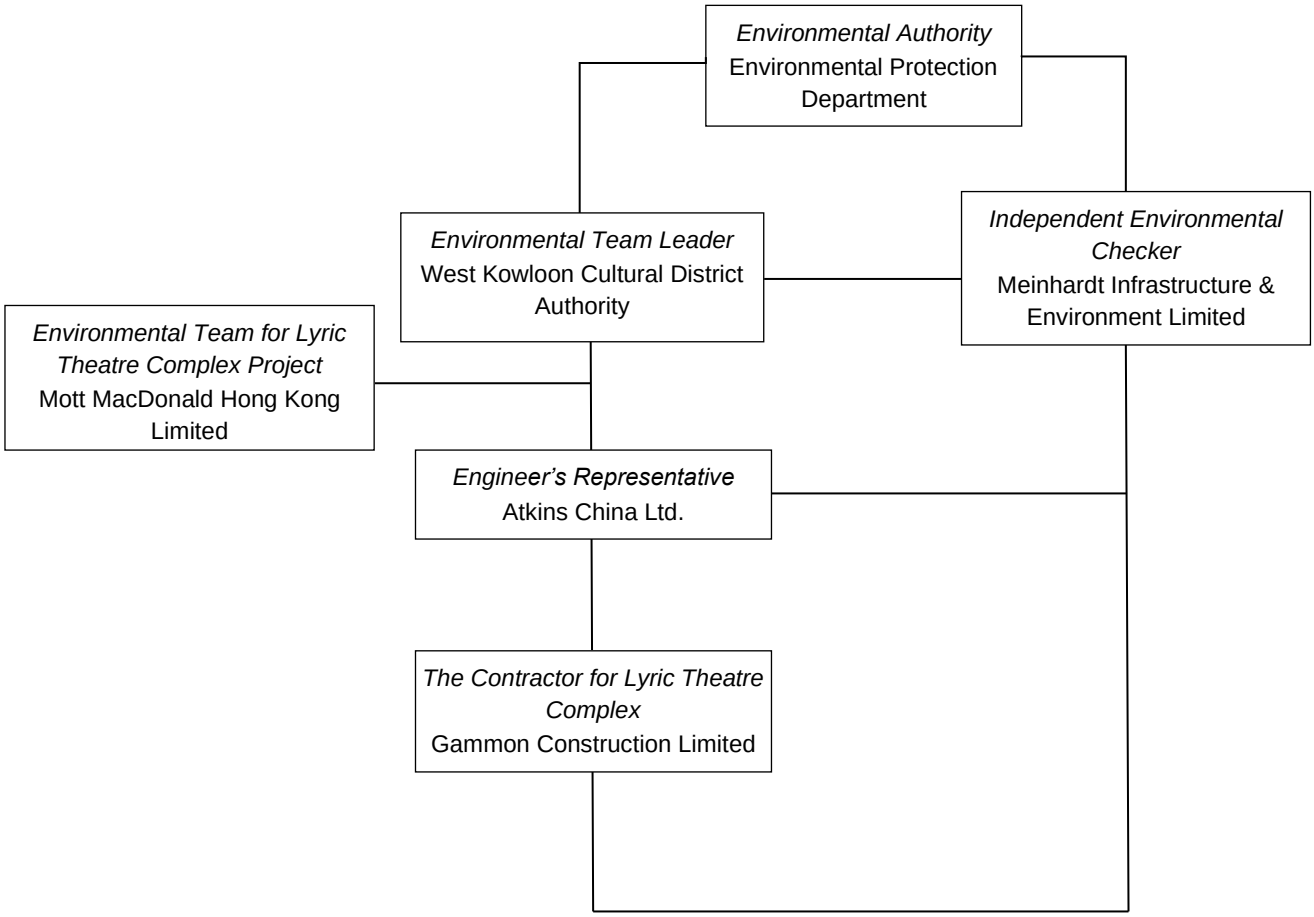


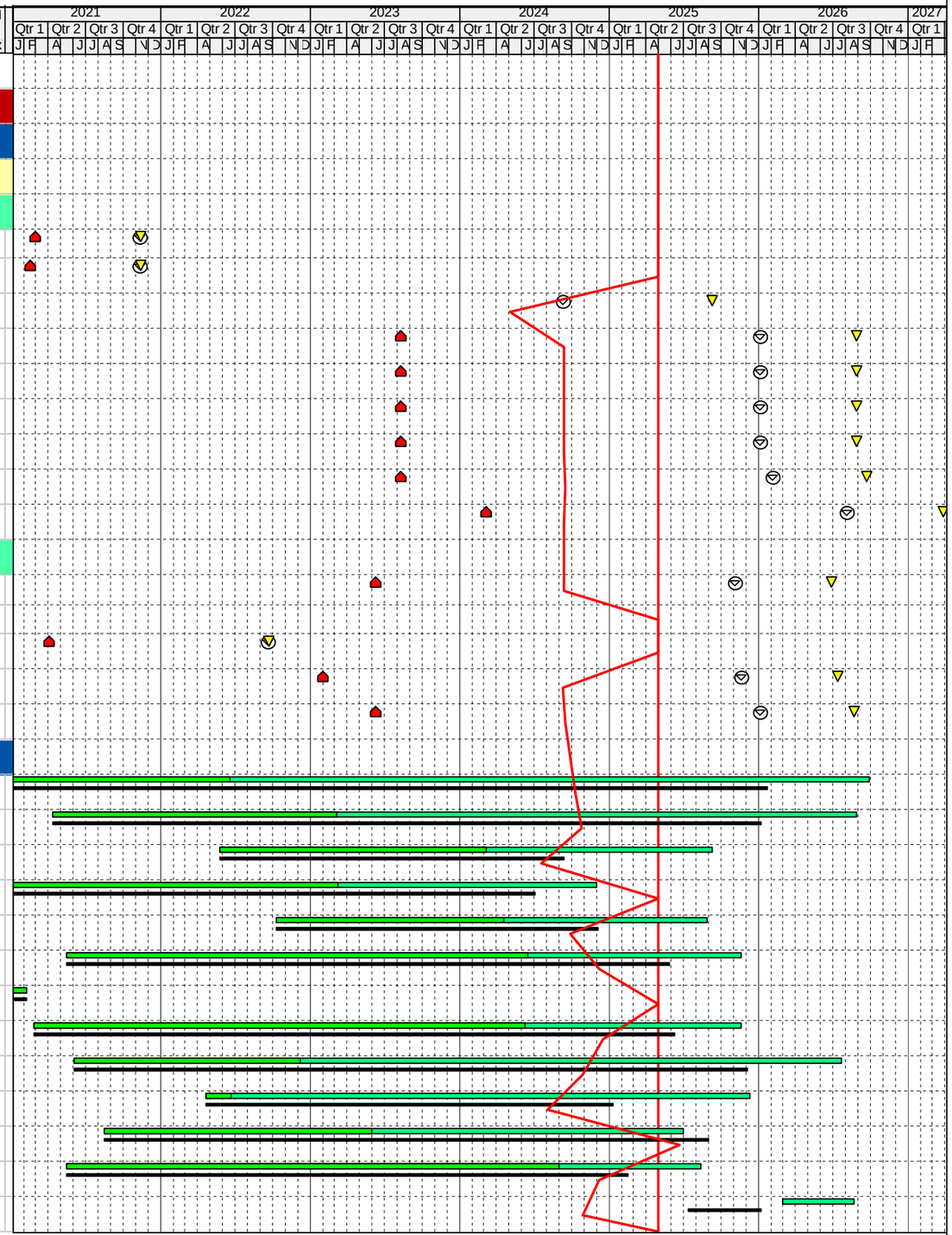
Table A-1: Contact information

Company Name	Role	Name	Telephone	Email
Atkins China Ltd.	Project Manager	Mr. Simha LytheRao	2204 8259	Simha.Lytherao@atkinsglobal.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@wkcda.hk

B. Tentative Construction Programme

TASK filter: UPD: Summary Level 1 Prog.

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
*L2 CMWP_R_3_B - Rev_3B_15 2nd DRAFT [DD=30Apr25] ***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		08-Sep-25*	-1841	-362	-31	-362
KD08	PC for HO Local ICT/Riser/SCR/TBE/MNO Rooms	0	09-Aug-23		07-Jan-26		26-Aug-26*	-1113	-231	-59	-231
KD10	PC for HO of ASDA, Lyric Theatre Promenade South to Authority	0	09-Aug-23		07-Jan-26		26-Aug-26*	-1113	-231	-59	-231
KD09	PC for HO of RDE areas for Tenancy Fit-out Wrks	0	09-Aug-23		07-Jan-26		26-Aug-26*	-1113	-231	-59	-231
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		26-Aug-26*	-1113	-231	-59	-231
KD07	PRACTICAL COMPLETION for M+ Day 2 Works to the Authority	0	09-Aug-23		06-Feb-26		22-Sep-26*	-1140	-228	-58	-228
KD13	PRACTICAL COMPLETION for LT, EB & C'Way 3B (Including PPE)	0	06-Mar-24		07-Aug-26		26-Mar-27*	-1115	-231	-59	-231
Stage Keydates											
KD03	OBTAIN OP for Lyric Theatre & Extended Basement	0	10-Jun-23		07-Nov-25		26-Jun-26*	-1112	-231	-59	-231
KD01	Compl Dsgn Coor/Subm and obtn NNO for L1 Contr Bsmt constn 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		13-Jul-26*	-1259	-233	-60	-233
KD02	Obtain BA14 Acknowledge from BD for M+ Day2 A&A Works	0	10-Jun-23		06-Jan-26		22-Aug-26*	-1169	-228	-58	-228
CMWP - Summary Program - RSS											
SUM100	[LoE] CC_B - Lyric Theatre	421		02-May-20	22-Jan-26	02-May-20 A	28-Sep-26		-202	-49	146
SUM101	[LoE] CC_C - ASDA and Lyric Theatre Promenade	394		12-Apr-21	07-Jan-26	12-Apr-21 A	26-Aug-26		-188	-50	173
SUM102	[LoE] CC_D - Remaining Works for M+ Promenade South	108		26-May-22	11-Sep-24	26-May-22 A	08-Sep-25		-287	-26	-287
SUM103	[LoE] CC_E - DCS Cofferdam	0		07-Aug-20	04-Jul-24	07-Aug-20 A	30-Nov-24 A		-111	0	
SUM104	[LoE] CC_F - Modification to Existing Pump Cell	99		12-Oct-22	04-Dec-24	12-Oct-22 A	28-Aug-25		-214	-32	279
SUM105	[LoE] CC_G - Extended Basement	167		15-May-21	28-May-25	15-May-21 A	19-Nov-25		-145	3	39
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	167		24-Feb-21	09-Jun-25	24-Feb-21 A	19-Nov-25		-136	-3	3
SUM108	[LoE] CC_J - M+ Day 2 Works	365		03-Jun-21	03-Dec-25	03-Jun-21 A	23-Jul-26		-186	-49	-160
SUM109	[LoE] CC_K - Water Main at Promenade	184		23-Apr-22	10-Jan-25	23-Apr-22 A	09-Dec-25		-270	-86	-133
SUM110	[LoE] CC_N - Lifts & Escalators	49		16-Aug-21	30-Aug-25	16-Aug-21 A	30-Jun-25		52	-13	40
SUM111	[LoE] P32 Interim Development	84		17-May-21	14-Feb-25	17-May-21 A	11-Aug-25		-144	-22	268
SUM112	[LoE] Project Wide Stat. Inspections & Approval [LTC&EB FSD & BD Summary LTC/EB_3B & 3A)]	146		14-Jul-25	06-Jan-26	27-Feb-26	22-Aug-26		-186	-49	-186



Gammon

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_15 2nd DRAFT [DD=30Apr25] ***L I V E***

Date	Revision	Checked	Approved
21-May-25	CMWP Rev_3_B Apr25 Update	NS	IH

C. Action and Limit Levels for Construction Phase

Air Quality

The Action and Limit Levels for 1-hour and 24-hour TSP for the monitoring station are presented in following tables:

Table C-1: Action and Limit Levels for 1-hour TSP

Monitoring Station	Action Level (mg/m^3)	Limit Level (mg/m^3)
AM1	273.7	500
AM2	274.2	500

Table C-2: Action and Limit Levels for 24-hour TSP

Monitoring Station	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)
AM1	143.6	260
AM2	151.1	260

Noise

The Action and Limit Levels for Noise for the monitoring stations are presented in following table:

Table C-3: Action and Limit Levels for Construction Noise

Time Period & Monitoring Locations	Action Level	Limit Level
NM1A		
0700-1900 hours on normal weekdays	When one valid documented complaint is received.	75 dB(A)

D. Event and Action Plan for Air Quality, Noise, Landscape and Visual Impact

Air Quality

In case the Action and Limit Levels are not complied during construction stage, the following Event and Action Plan should be followed:

Table D-1: Event and Action Plan for Air Quality

Event	Action			
	ET	IEC	WKCDA	Contractor
Action Level				
1. Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC and WKCDA; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method.	1. Notify Contractor	1. Rectify any unacceptable practice; 2. Amend working methods if appropriate.
2. Exceedance for two or more consecutive samples	1. Identify source; 2. Inform IEC and WKCDA; 3. Advise the WKCDA on the effectiveness of the proposed remedial measures; 4. Repeat measurements to confirm findings; 5. Increase monitoring frequency to daily; 6. Discuss with IEC and Contractor on remedial actions required; 7. If exceedance continues, arrange meeting with IEC and WKCDA; 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ET on the effectiveness of the proposed remedial measures; 5. Monitor the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented.	1. Submit proposals for remedial to WKCDA within three working days of notification; 2. Implement the agreed proposals; 3. Amend proposal if appropriate.
Limit Level				
1. Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform WKCDA, Contractor and EPD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; 5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and WKCDA informed of the results.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the WKCDA on the effectiveness of the proposed remedial measures; 5. Monitor the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within three working days of notification; 3. Implement the agreed proposals; 4. Amend proposal if appropriate.

Event	Action			
2. Exceedance for two or more consecutive samples	1. Notify IEC, WKCDA, 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 WKCDA to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and WKCDA informed of the results; 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss amongst WKCDA, ET, and Contractor on the potential remedial actions; 4. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the WKCDA accordingly; 5. Monitor the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Ensure remedial measures properly implemented; 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 within three working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by the WKCDA until the exceedance is abated.

Construction Noise

In case the Action and Limit Levels are not complied during construction stage, the following Event and Action Plan should be followed:

Table D-2: Event and Action Plan for Construction Noise

Event	Action			
	ET	IEC	WKCDA	Contractor
Action Level	1. Notify WKCDA, IEC and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IEC, WKCDA and Contractor; 4. Discuss with the IEC and Contractor on remedial measures required; 5. Increase monitoring frequency to check mitigation effectiveness.	1. Review the investigation results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the WKCDA accordingly; 3. Advise the WKCDA on the effectiveness of the proposed remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise the implementation of remedial measures.	1. Submit noise mitigation proposals to IEC and WKCDA; 2. Implement noise mitigation proposals.
Limit Level	1. Inform IEC, WKCDA, Contractor and EPD; 2. Repeat measurements to confirm findings; 3. Increase monitoring frequency; 4. Identify source and investigate the cause of exceedance; 5. Carry out analysis of Contractor's working procedures; 6. Discuss with the IEC, Contractor and WKCDA on remedial measures required; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and WKCDA informed of the results; 8. If exceedance stops, cease additional monitoring.	1. Discuss amongst WKCDA, ET, and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the WKCDA accordingly.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise the implementation of remedial measures; 5. If exceedance continues, consider stopping the Contractor to continue working on that portion of work which causes the exceedance until the exceedance is abated.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC and WKCDA within 3 working days of notification; 3. Implement the agreed proposals; 4. Submit further proposal if problem still not under control; 5. Stop the relevant portion of works as instructed by the WKCDA until the exceedance is abated.

Landscape and Visual Impact

In case of non-compliance of landscape and visual impacts, procedures in accordance with the Event and Action Plan should be followed:

Table D-3: Event and Action Plan for Landscape and Visual Impact

Event	Action			
	ET	IEC	WKCDA	Contractor
Design Check	1. Design check to make sure the design complies with all the proposed mitigation measures in the EIA report; 2. Prepare and submit report.	1. Check report submitted by ET; 2. Recommend remedial design if necessary.	1. Undertake remedial design if necessary.	-
Non-conformity on one occasion	1. Identify source of non-conformity; 2. Report to IEC and WKCDA; 3. Discuss remedial actions with IEC, WKCDA and Contractor; 4. Monitor remedial actions until rectification has been completed.	1. Check and verify source of non-conformity; 2. Discuss remedial actions with ET and Contractor; 3. Advise WKCDA on effectiveness of proposed remedial actions; 4. Check implementation of remedial actions.	1. Notify Contractor; 2. Ensure remedial actions are properly implemented.	1. Amend working method as necessary; 2. Rectify damage and undertake necessary replacement and remedial actions.
Repeated non-conformity	1. Identify source of non-conformity; 2. Report to IEC and WKCDA; 3. Increase monitoring frequency; 4. Discuss remedial actions with IEC, WKCDA and Contractor; 5. Monitor remedial actions until rectification has been completed; 6. If non-conformity rectified, reduce monitoring frequency back to normal.	1. Check and verify source of non-conformity; 2. Check Contractor's working method; 3. Discuss remedial actions with ET and Contractor; 4. Advise WKCDA on effectiveness of proposed remedial actions; 5. Supervise implementation of remedial actions.	1. Notify Contractor; 2. Ensure remedial actions are properly implemented.	1. Amend working method as necessary; 2. Rectify damage and undertake necessary replacement and remedial actions.

E. Monitoring Schedule

May 2025

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3 AM1, AM2 - 24hrTSP, 1hr TSP x3
4	5	6	7	8	9 AM1, AM2 - 24hrTSP, 1hr TSP x3 NM1A - Noise Impact Monitoring	10
11	12	13	14 Lyric Landscape & Visual Inspection	15 AM1, AM2 - 24hrTSP, 1hr TSP x3 NM1A - Noise Impact Monitoring	16	17
18	19	20	21 AM1, AM2 - 24hrTSP, 1hr TSP x3 NM1A - Noise Impact Monitoring	22	23	24
25	26	27 AM1, AM2 - 24hrTSP, 1hr TSP x3 NM1A - Noise Impact Monitoring	28 Lyric Landscape & Visual Inspection	29	30	31
		Notes AM1 - International Commerce Centre (ICC) AM2 - The Harbourside Tower 1 - Ground Floor NM1A - International Commerce Centre (ICC)				

June 2025

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2 AM1, AM2 - 24hrTSP, 1hr TSP x3 NM1A - Noise Impact Monitoring	3	4	5	6 AM1, AM2 - 24hrTSP, 1hr TSP x3	7
8	9	10	11	12 AM1, AM2 - 24hrTSP, 1hr TSP x3 NM1A - Noise Impact Monitoring	13	14
15	16	17	18 AM1, AM2 - 24hrTSP, 1hr TSP x3 NM1A - Noise Impact Monitoring	19	20	21
22	23	24 AM1, AM2 - 24hrTSP, 1hr TSP x3 NM1A - Noise Impact Monitoring	25	26	27	28
29	30 AM1, AM2 - 24hrTSP, 1hr TSP x3 NM1A - Noise Impact Monitoring					

Notes

AM1 - International Commerce Centre (ICC)
AM2 - The Harbourside Tower 1 - Ground Floor
NM1A - International Commerce Centre (ICC)

F. Calibration Certifications

High-Volume TSP Sampler
5-Point Calibration Record

Location	:	AM1(ICC)
Calibrated by	:	K.T.Ho
Date	:	05/03/2025

Sampler

Model	:	TE-5170
Serial Number	:	S/N 0767

Calibration Orifice and Standard Calibration Relationship

Serial Number	:	2454
Next Calibration Date	:	02 December 2025
Slope (m)	:	2.08315
Intercept (b)	:	-0.04938
Correlation Coefficient(r)	:	0.99985

Standard Condition

Pstd (hpa)	:	1013
Tstd (K)	:	298.18

Calibration Condition

Pa (hpa)	:	1013
Ta(K)	:	295

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	11.2	3.364	1.639	58	58.30
2	13 holes	8.2	2.878	1.405	50	50.26
3	10 holes	6.2	2.503	1.225	42	42.22
4	7 holes	4.4	2.109	1.036	34	34.18
5	5 holes	2.6	1.621	0.802	22	22.11

Notes:Z=SQRT{dH(Pa/Pstd)(Tstd/Ta)}, X=Z/m-b ,Y(Corrected Flow)=IC*{SQRT(Pa/Pstd)(Tstd/Ta)}

Sampler Calibration Relationship

Slope(m):43.298 Intercept(b):-11.470 Correlation Coefficient(r): 0.9972

Checked by:  Date: 08/03/2025

Magnum Fan

High-Volume TSP Sampler
5-Point Calibration Record

Location	:	AM1(ICC)
Calibrated by	:	K.T.Ho
Date	:	04/05/2025

Sampler

Model	:	TE-5170
Serial Number	:	S/N 0767

Calibration Orifice and Standard Calibration Relationship

Serial Number	:	2454
Next Calibration Date	:	02 December 2025
Slope (m)	:	2.08315
Intercept (b)	:	-0.04938
Correlation Coefficient(r)	:	0.99985

Standard Condition

Pstd (hpa)	:	1013
Tstd (K)	:	298.18

Calibration Condition

Pa (hpa)	:	1010
Ta(K)	:	301

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	10.2	3.173	1.547	58	57.63
2	13 holes	7.5	2.721	1.330	50	49.68
3	10 holes	5.6	2.351	1.152	42	41.73
4	7 holes	3.8	1.937	0.954	34	33.78
5	5 holes	2.6	1.602	0.793	24	23.85

Notes:Z=SQRT{dH(Pa/Pstd)(Tstd/Ta)}, X=Z/m-b ,Y(Corrected Flow)=IC*{SQRT(Pa/Pstd)(Tstd/Ta)}

Sampler Calibration Relationship

Slope(m):44.098 Intercept(b):-9.6053 Correlation Coefficient(r): 0.9959

Checked by: Magnum Fan Date: 06/05/2025

TISCH Environmental

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:** **2454**		

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4200	3.2	2.00
2	3	4	1	1.0170	6.4	4.00
3	5	6	1	0.9090	7.9	5.00
4	7	8	1	0.8700	8.8	5.50
5	9	10	1	0.7140	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)	$\sqrt{\Delta H\left(Ta/Pa\right)}$ (y-axis)
1.0093	0.7108	1.4238	0.9958	0.7013	0.8796
1.0051	0.9883	2.0136	0.9916	0.9750	1.2439
1.0031	1.1035	2.2512	0.9896	1.0886	1.3907
1.0018	1.1515	2.3611	0.9884	1.1361	1.4586
0.9965	1.3956	2.8476	0.9831	1.3769	1.7592
QSTD	**m=**	**2.08315**	**QA**	**m=**	**1.30443**
	b=	**-0.04938**		**b=**	**-0.03050**
	r=	**0.99985**		**r=**	**0.99985**

Calculations

Vstd=	ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)	**Va=**	ΔVol((Pa-ΔP)/Pa)
Qstd=	Vstd/ΔTime	**Qa=**	Va/ΔTime

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= $1/m\left(\left(\sqrt{\Delta H\left(Ta/Pa\right)}\right)-b\right)$

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

Tisch Environmental, Inc.
145 South Miami Avenue
Village of Cleves, OH 45002

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TOLL FREE: (877)263-7610
FAX: (513)467-9009

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

SUB-CONTRACTING REPORT

CONTACT	: MR MAGNUM FAN	WORK ORDER	: HK2502565
CLIENT	: ENVIROTECH SERVICES CO.		
ADDRESS	: RM 712, 7/F, MY LOFT 9 HOI WING ROAD, TUEN MUN, N.T. HK	SUB-BATCH	: 1
		DATE RECEIVED	: 15-JAN-2025
		DATE OF ISSUE	: 21-JAN-2025
PROJECT	: ----	NO. OF SAMPLES	: 1
		CLIENT ORDER	: ---

General Comments

- **Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.**
- **Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified. The result(s) is/are related only to the item(s) tested.**
- **Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition.**
- **Calibration was subcontracted to Envirotech Services Company.**

Signatories

This document has been signed by those names that appear on this report and are the authorised signatories

Signatories	*Position*
Richard Fung	Managing Director

This report supersedes any previous report(s) with the same work order number.

All pages of this report have been checked and approved for release.

ALS Technichem (HK) Pty Ltd
Part of the ALS Laboratory Group

11/F. Chung Shun Knitting Centre 1 - 3 Wing Yip Street Kwai Chung N.T. Hong Kong
Tel. +852 2610 1044 Fax. +852 2610 2021 www.alsglobal.com

WORK ORDER : HK2502565
SUB-BATCH : 1
CLIENT : ENVIROTECH SERVICES CO.
PROJECT : ----

ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK2502565-001	Sibata LD-5R (831656)	Equipments	02-Jan-2025	S/N: 831656

-------- END OF REPORT --------

Envirotech Services Co.
Rm. 712, 7/F
My Loft,
9 Hoi Wing Road,
Tuen Mun, H.K.
Tel : 2560 8450
Fax : 2560 6553
E-mail: envirotech@netvigator.com

Equipment Verification Report (TSP)

Equipment Calibrated:

Type:	Laser Dust Monitor
Manufacturer:	Sibata LD-5R
Serial No.:	831656
Equipment Ref.:	N/A
ALS Job Order:	HK2500343

Standard Equipment

Standard Equipment:	High Volume Sampler (TSP)
Location :	Envirotech Room (Calibration Room)
Equipment Ref.:	HVS 8162
Last Calibration Date:	1-Jan-2025

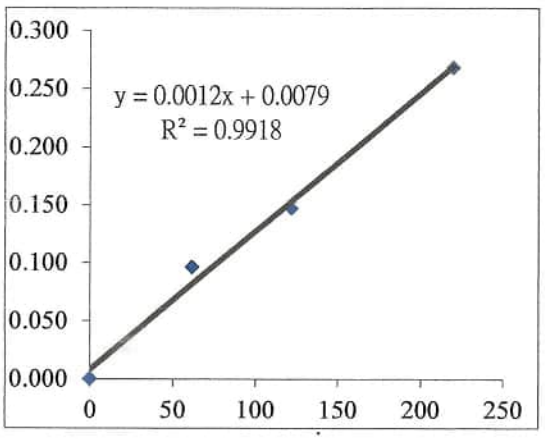
Equipment Verification Results:

Verification Date: 2-Jan-2025

Hour	Time	Mean Temp °C	Mean Pressure (hpa)	TSP Level in mg (Standard Equipment) (Y-Axis)	Total Count (Calibrated Equipment) (X-Axis)
1hr 00mins	0900-1000	16.1	1023	0.096	62
2hr 00mins	1005-1205	20.5	1022	0.147	122
3hr 00mins	1330-1630	21.0	1022	0.268	220

Linear Regression of Y or X

Slope (K-factor):	0.0012(mg)/Count
Correlation Coefficient (R):	0.9959
Date of Issue:	15-Jan-2025



Remarks:

1 . Strong Correlation (>0.8)

2. Factor 0.0012(mg)/Count should be applied for TSP monitoring

*If R<0.5, repair or verification is required for the equipment

Operator: P.F.Yeung Signature Date: 15 Jan 2025

QC Reviewer: K.F.Ho Signature Date: 15 Jan 2025

TSP SAMPLER CALIBRATION CACULATION SPREADSHEET

Location :	Rm. 712, My Loft, Tuen Mun	Date of Calibration:	1-Jan-25
HVS ID:	8162	Next Calibration Date:	31-Mar-25
Name and Model :	TISCH HVS Model TE-5170	Operator:	K.F.Ho

CONDITIONS

Sea Level Pressure (hpa)	1023	Corrected Pressure (mm Hg)	767.3
Temperature (°C)	15.8	Temperature (K)	288.8

CALIBRATION ORIFICE

Make:	TISCH	Qstd Slope	2.08315
Model:	TE-5025A	Qstd Intercept	-0.04938
Serial#:	2454		

CALIBRATION

Plate No.	H2O(L) (in)	H20(R) (in)	H2O (in)	Qstd (m3/min)	I (chart)	IC (corrected)	LINEAR REGRESSION
18	6.4	6.4	12.8	1.777	62	63.30	Slope= 35.208
13	5.3	5.3	10.6	1.619	56	57.17	Intercept= -0.0015
10	4.2	4.2	8.4	1.444	48	49.00	Corr. Coeff.= 0.9959
7	2.7	2.7	5.4	1.163	41	41.86	
5	1.7	1.7	3.4	0.927	32	32.67	

Calulations:

Qstd = 1/m[Sqrt(H2O(Pa/Pstd)(Tstd/Ta))-b]

IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

Qstd = standard flow rate

IC = corrected chart response

I = actual chart response

m = calibrator Qstd slope

b = calibrator Qstd intercept

Ta = actual temperature during calibration (deg K)

Pa = actual pressure during calibration (mm Hg)

For **subsequent calculation of sampler flow:**

1/m((I)[Sqrt(298/Tav)(Pav/760)]-b)

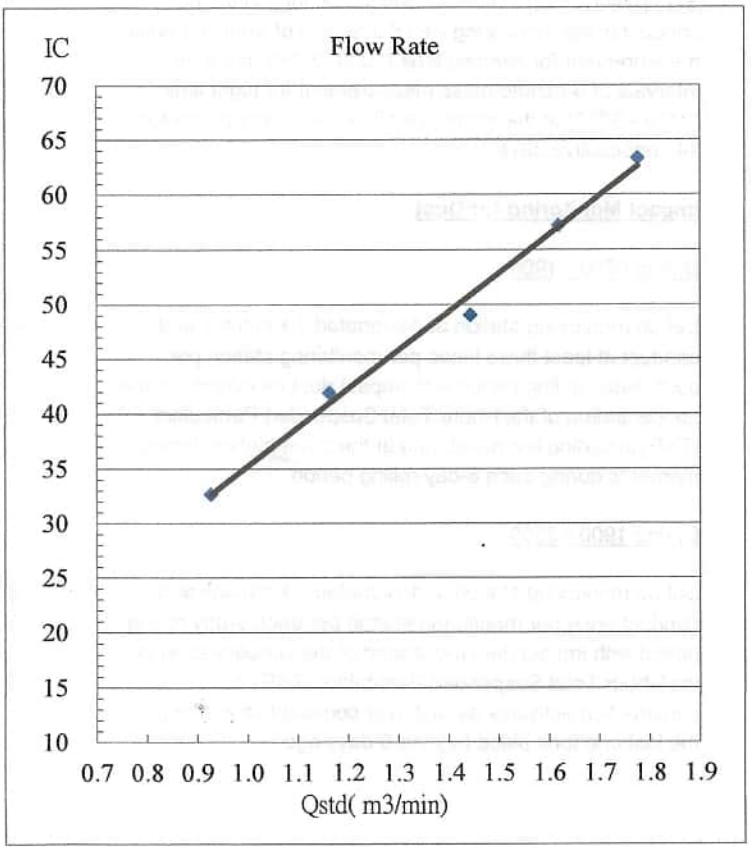
m = sampler slope

b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure



TISCH Environmental

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:** **2454**		

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4200	3.2	2.00
2	3	4	1	1.0170	6.4	4.00
3	5	6	1	0.9090	7.9	5.00
4	7	8	1	0.8700	8.8	5.50
5	9	10	1	0.7140	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)	$\sqrt{\Delta H\left(Ta/Pa\right)}$ (y-axis)
1.0093	0.7108	1.4238	0.9958	0.7013	0.8796
1.0051	0.9883	2.0136	0.9916	0.9750	1.2439
1.0031	1.1035	2.2512	0.9896	1.0886	1.3907
1.0018	1.1515	2.3611	0.9884	1.1361	1.4586
0.9965	1.3956	2.8476	0.9831	1.3769	1.7592
QSTD	**m=**	**2.08315**	**QA**	**m=**	**1.30443**
	b=	**-0.04938**		**b=**	**-0.03050**
	r=	**0.99985**		**r=**	**0.99985**

Calculations

Vstd=	ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)	**Va=**	ΔVol((Pa-ΔP)/Pa)
Qstd=	Vstd/ΔTime	**Qa=**	Va/ΔTime

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= $1/m\left(\left(\sqrt{\Delta H\left(Ta/Pa\right)}\right)-b\right)$

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

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FAX: (513)467-9009

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

SUB-CONTRACTING REPORT

CONTACT	: MR MAGNUM FAN	WORK ORDER	: HK2500019
CLIENT	: ENVIROTECH SERVICES CO.		
ADDRESS	: RM 712, 7/F, MY LOFT 9 HOI WING ROAD, TUEN MUN, N.T. HK	SUB-BATCH	: 1
		DATE RECEIVED	: 16-DEC-2024
		DATE OF ISSUE	: 8-JAN-2025
PROJECT	: ----	NO. OF SAMPLES	: 1
		CLIENT ORDER	: ---

General Comments

- Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.
- Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified. The result(s) is/are related only to the item(s) tested.
- Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition.
- Calibration was subcontracted to Envirotech Services Company.

Signatories

This document has been signed by those names that appear on this report and are the authorised signatories

Signatories	*Position*
Richard Fung	Managing Director

This report supersedes any previous report(s) with the same work order number.

All pages of this report have been checked and approved for release.

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Part of the **ALS Laboratory Group**

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Tel. +852 2610 1044 Fax. +852 2610 2021 **www.alsglobal.com**

WORK ORDER : HK2500019
SUB-BATCH : 1
CLIENT : ENVIROTECH SERVICES CO.
PROJECT : ----

ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK2500019-001	Sibata LD-3B (235780)	Equipments	07-Dec-2024	S/N: 235780

——— END OF REPORT ———

Envirotech Services Co.
Rm. 712, 7/F
My Loft,
9 Hoi Wing Road,
Tuen Mun, H.K.
Tel : 2560 8450
Fax : 2560 6553
E-mail: envirotech@netvigator.com

Equipment Verification Report (TSP)

Equipment Calibrated:

Type:	Laser Dust Monitor
Manufacturer:	Sibata LD-3B
Serial No.:	235780
Equipment Ref.:	N/A
ALS Job Order:	HK2451037

Standard Equipment

Standard Equipment:	High Volume Sampler (TSP)
Location :	Envirotech Room (Calibration Room)
Equipment Ref.:	HVS 8162
Last Calibration Date:	19-Oct-2024

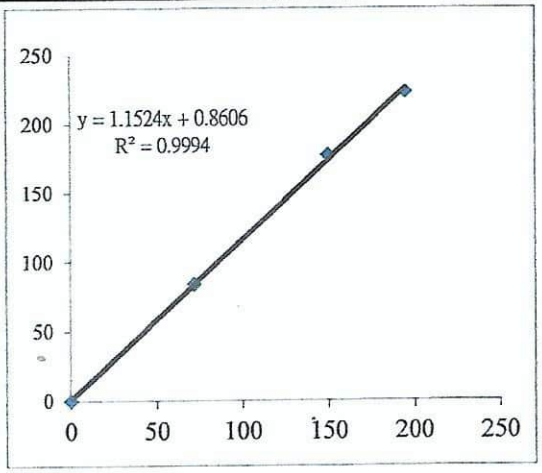
Equipment Verification Results:

Verification Date: 7-Dec-2024

Hour	Time	Mean Temp °C	Mean Pressure (hpa)	Concentration in µg/m³ (Standard Equipment) (Y-Axis)	Concentration in µg/m³ (Calibrated Equipment) (X-Axis)
1hr 00mins	0910-1010	19.5	1022	84	72
2hr 00mins	1300-1500	21.2	1019	177	150
3hr 00mins	1505-1805	21.5	1018	223	195

Linear Regression of Y or X

Slope (K-factor):	1.1524(µg/m³)/CPM
Correlation Coefficient (R):	0.9997
Date of Issue:	14-Dec-2024



Remarks:

1 . Strong Correlation (>0.8)

2. Factor 1.1524(µg/m³)/CPM should be applied for TSP monitoring

*If R<0.5, repair or verification is required for the equipment

Operator: P.F.Yeung Signature Date: 14 Dec 2024

QC Reviewer: K.F.Ho Signature Date: 14 Dec 2024

TSP SAMPLER CALIBRATION CACULATION SPREADSHEET

Location :	Rm. 712, My Loft, Tuen Mun	Date of Calibration:	19-Oct-24
HVS ID:	8162	Next Calibration Date:	19-Dec-24
Name and Model :	TISCH HVS Model TE-5170	Operator:	K.F.Ho

CONDITIONS

Sea Level Pressure (hpa)	1015	Corrected Pressure (mm Hg)	761.3
Temperature (°C)	26.0	Temperature (K)	299

CALIBRATION ORIFICE

Make:	TISCH	Qstd Slope	2.07544
Model:	TE-5025A	Qstd Intercept	-0.03205
Serial#:	2454		

CALIBRATION

Plate No.	H2O(L) (in)	H20(R) (in)	H2O (in)	Qstd (m3/min)	I (chart)	IC (corrected)	LINEAR REGRESSION
18	6.1	6.4	12.5	1.718	62	61.97	Slope= 45.67
13	4.9	5.2	10.1	1.546	56	55.97	Intercept= -15.103
10	3.6	3.8	7.4	1.325	48	47.97	Corr. Coeff.= 0.9947
7	2.4	2.7	5.1	1.103	34	33.98	
5	1.4	1.7	3.1	0.863	24	23.99	

Calulations:

Qstd = 1/m[Sqrt(H2O(Pa/Pstd)(Tstd/Ta))-b]

IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

Qstd = standard flow rate

IC = corrected chart response

I = actual chart response

m = calibrator Qstd slope

b = calibrator Qstd intercept

Ta = actual temperature during calibration (deg K)

Pa = actual pressure during calibration (mm Hg)

For subsequent calculation of sampler flow:

1/m((I)[Sqrt(298/Tav)(Pav/760)]-b)

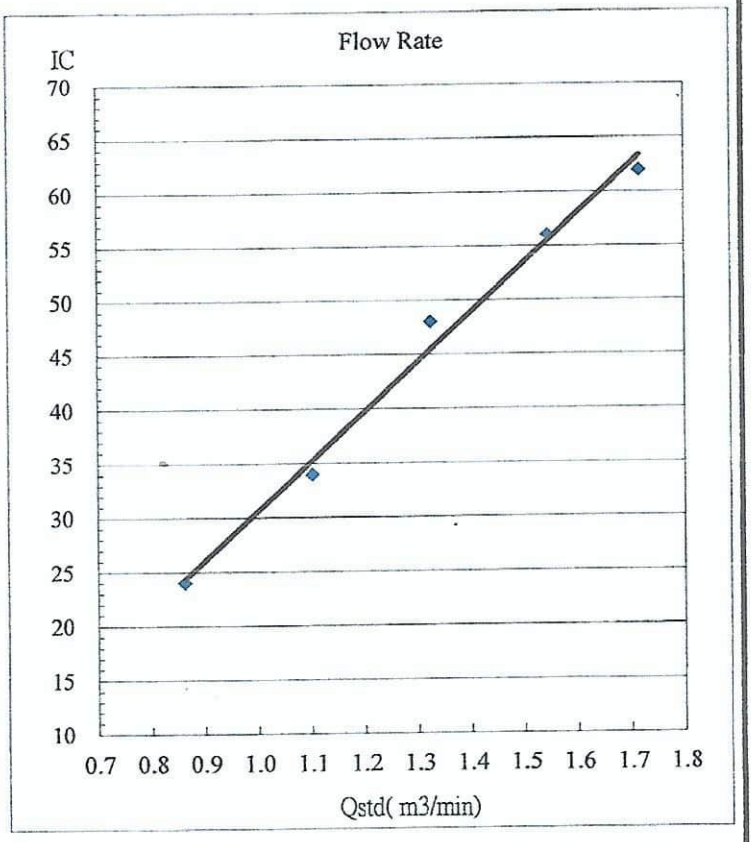
m = sampler slope

b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure



TISCH Environmental

RECALIBRATION DUE DATE:
December 15, 2024

Certificate of Calibration

Calibration Certification Information				
Cal. Date:	December 15, 2023	**Rootsmeter S/N:** 438320	**Ta:** 295	°K
Operator:	Jim Tisch		**Pa:** 748.5	mm Hg
Calibration Model #:	TE-5025A	**Calibrator S/N:** **2454**		

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4250	3.2	2.00
2	3	4	1	1.0090	6.4	4.00
3	5	6	1	0.9040	7.9	5.00
4	7	8	1	0.8610	8.8	5.50
5	9	10	1	0.7110	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)	$\sqrt{\Delta H\left(Ta/Pa\right)}$ (y-axis)
0.9907	0.6952	1.4106	0.9957	0.6988	0.8878
0.9864	0.9776	1.9949	0.9914	0.9826	1.2556
0.9844	1.0890	2.2304	0.9894	1.0945	1.4037
0.9832	1.1420	2.3393	0.9882	1.1478	1.4723
0.9779	1.3754	2.8213	0.9829	1.3824	1.7756
QSTD	**m=**	**2.07544**	**QA**	**m=**	**1.29961**
	b=	**-0.03205**		**b=**	**-0.02017**
	r=	**0.99999**		**r=**	**0.99999**

Calculations			
Vstd=	ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)	**Va=**	ΔVol((Pa-ΔP)/Pa)
Qstd=	Vstd/ΔTime	**Qa=**	Va/ΔTime
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=**	$1/m\left(\left(\sqrt{\Delta H\left(Ta/Pa\right)}\right)-b\right)$

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

Tisch Environmental, Inc.
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FAX: (513)467-9009

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

SUB-CONTRACTING REPORT

CONTACT	: MR MAGNUM FAN	WORK ORDER	: HK2448121
CLIENT	: ENVIROTECH SERVICES CO.		
ADDRESS	: RM 712, 7/F, MY LOFT 9 HOI WING ROAD, TUEN MUN, N.T. HK	SUB-BATCH	: 1
		DATE RECEIVED	: 13-NOV-2024
		DATE OF ISSUE	: 20-NOV-2024
PROJECT	: ----	NO. OF SAMPLES	: 1
		CLIENT ORDER	: ---

General Comments

- Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.
- Result(s) of sample(s) is/are reported on as received basis, unless otherwise specified. The result(s) is/are related only to the item(s) tested.
- Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition.
- Calibration was subcontracted to Envirotech Services Company.

Signatories

This document has been signed by those names that appear on this report and are the authorised signatories

Signatories	*Position*
Richard Fung	Managing Director

This report supersedes any previous report(s) with the same work order number.

All pages of this report have been checked and approved for release.

ALS Technichem (HK) Pty Ltd
Part of the ALS Laboratory Group

11/F. Chung Shun Knitting Centre 1 - 3 Wing Yip Street Kwai Chung N.T. Hong Kong
Tel. +852 2610 1044 Fax. +852 2610 2021 www.alsglobal.com

WORK ORDER : HK2448121
SUB-BATCH : 1
CLIENT : ENVIROTECH SERVICES CO.
PROJECT : ----

ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK2448121-001	Sibata LD-3B (245834)	Equipments	09-Nov-2024	S/N: 245834

-------- END OF REPORT --------

Envirotech Services Co.

Rm. 712, 7/F
My Loft,
9 Hoi Wing Road,
Tuen Mun, H.K.
Tel : 2560 8450
Fax : 2560 8553
E-mail: envirotech@netvigator.com

Equipment Verification Report (TSP)

Equipment Calibrated:

Type:	Laser Dust Monitor
Manufacturer:	Sibata LD-3B
Serial No.:	245834
Equipment Ref.:	N/A
ALS Job Order:	HK2446853

Standard Equipment

Standard Equipment:	High Volume Sampler (TSP)
Location :	Envirotech Room (Calibration Room)
Equipment Ref.:	HVS 8162
Last Calibration Date:	19-Oct-2024

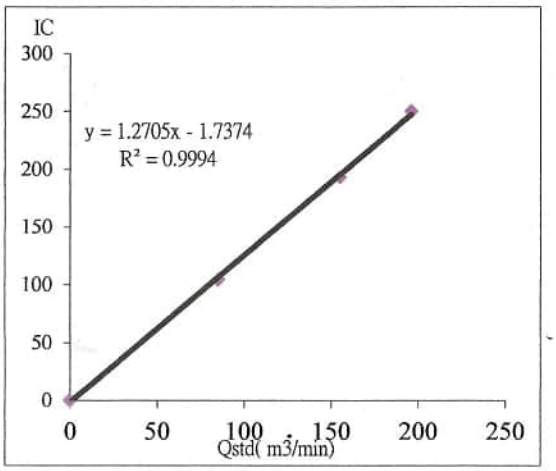
Equipment Verification Results:

Verification Date: 9-Nov-2024

Hour	Time	Mean Temp °C	Mean Pressure (hpa)	Concentration in µg/m³ (Standard Equipment) (Y-Axis)	Concentration in µg/m³ (Calibrated Equipment) (X-Axis)
1hr 00mins	0905-1005	24.9	1013	85	104
2hr 00mins	1015-1215	25.2	1014	155	193
3hr 00mins	1430-1730	25.6	1014	196	250

Linear Regression of Y or X

Slope (K-factor):	1.2705(µg/m³)/CPM
Correlation Coefficient (R):	0.9997
Date of Issue:	13-Nov-2024



Remarks:

1 . Strong Correlation (>0.8)

2. Factor 1.2705(µg/m³)/CPM should be applied for TSP monitoring

*If R<0.5, repair or verification is required for the equipment

Operator: P.F.Yeung Signature Date: 11 Nov 2024

QC Reviewer: K.F.Ho Signature Date: 11 Nov 2024

TSP SAMPLER CALIBRATION CACULATION SPREADSHEET

Location :	Rm. 712, My Loft, Tuen Mun	Date of Calibration:	19-Oct-24
HVS ID:	8162	Next Calibration Date:	19-Dec-24
Name and Model :	TISCH HVS Model TE-5170	Operator:	K.F.Ho

CONDITIONS

Sea Level Pressure (hpa)	1015	Corrected Pressure (mm Hg)	761.3
Temperature (°C)	26.0	Temperature (K)	299

CALIBRATION ORIFICE

Make:	TISCH	Qstd Slope	2.07544
Model:	TE-5025A	Qstd Intercept	-0.03205
Serial#:	2454		

CALIBRATION

Plate No.	H2O(L) (in)	H20(R) (in)	H2O (in)	Qstd (m3/min)	I (chart)	IC (corrected)	LINEAR REGRESSION
18	6.1	6.4	12.5	1.718	62	61.97	Slope= 45.67
13	4.9	5.2	10.1	1.546	56	55.97	Intercept= -15.103
10	3.6	3.8	7.4	1.325	48	47.97	Corr. Coeff.= 0.9947
7	2.4	2.7	5.1	1.103	34	33.98	
5	1.4	1.7	3.1	0.863	24	23.99	

Calulations:

Qstd = 1/m[Sqrt(H2O(Pa/Pstd)(Tstd/Ta))-b]

IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

Qstd = standard flow rate

IC = corrected chart response

I = actual chart response

m = calibrator Qstd slope

b = calibrator Qstd intercept

Ta = actual temperature during calibration (deg K)

Pa = actual pressure during calibration (mm Hg)

For subsequent calculation of sampler flow:

1/m((I)[Sqrt(298/Tav)(Pav/760)]-b)

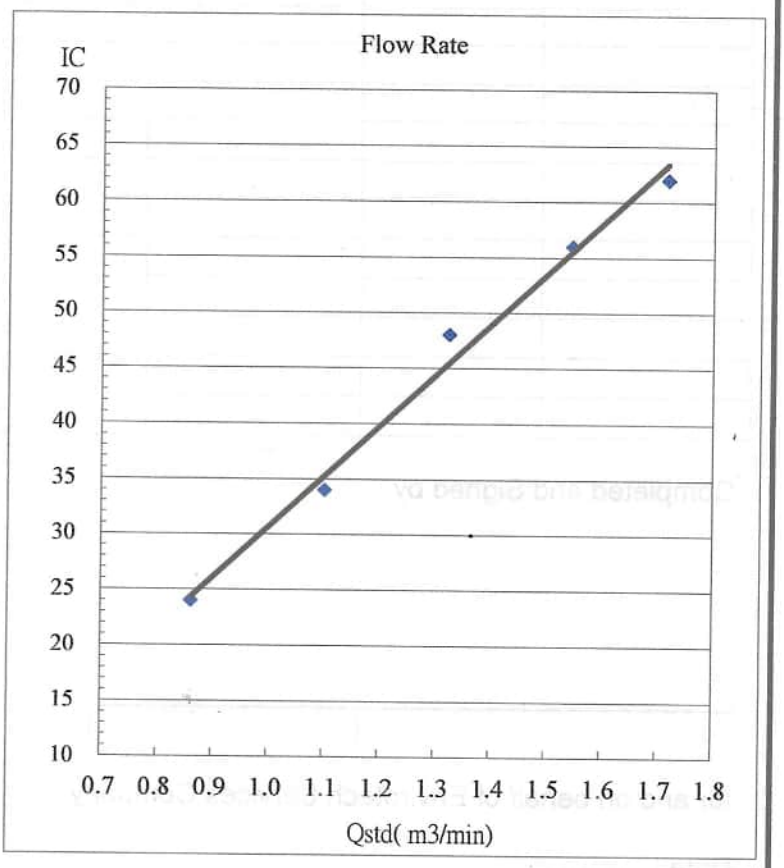
m = sampler slope

b = sampler intercept

I = chart response

Tav = daily average temperature

Pav = daily average pressure



TISCH Environmental

RECALIBRATION DUE DATE:
December 15, 2024

Certificate of Calibration

Calibration Certification Information				
Cal. Date:	December 15, 2023	**Rootsmeter S/N:** 438320	**Ta:** 295	°K
Operator:	Jim Tisch		**Pa:** 748.5	mm Hg
Calibration Model #:	TE-5025A	**Calibrator S/N:** 2454		

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4250	3.2	2.00
2	3	4	1	1.0090	6.4	4.00
3	5	6	1	0.9040	7.9	5.00
4	7	8	1	0.8610	8.8	5.50
5	9	10	1	0.7110	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)	$\sqrt{\Delta H\left(Ta/Pa\right)}$ (y-axis)
0.9907	0.6952	1.4106	0.9957	0.6988	0.8878
0.9864	0.9776	1.9949	0.9914	0.9826	1.2556
0.9844	1.0890	2.2304	0.9894	1.0945	1.4037
0.9832	1.1420	2.3393	0.9882	1.1478	1.4723
0.9779	1.3754	2.8213	0.9829	1.3824	1.7756
QSTD	**m=**	**2.07544**	**QA**	**m=**	**1.29961**
	b=	**-0.03205**		**b=**	**-0.02017**
	r=	**0.99999**		**r=**	**0.99999**

Calculations

Vstd=	ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)	**Va=**	ΔVol((Pa-ΔP)/Pa)
Qstd=	Vstd/ΔTime	**Qa=**	Va/ΔTime

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= $1/m\left(\left(\sqrt{\Delta H\left(Ta/Pa\right)}\right)-b\right)$

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

sch Environmental, Inc.
45 South Miami Avenue
llage of Cleves, OH 45002

www.tisch-env.com
TOLL FREE: (877)263-7610
FAX: (513)467-9009

Certificate of Calibration

for

Description:	***Sound Level Calibrator***
Manufacturer:	***Larson Davis***
Type No.:	***CAL200***
Serial No.:	***16172***

Submitted by:

Customer:	*Envirotech Services Co.*
Address:	*Rm.712, 7/F., My Loft, 9 Hoi Wing Road,*
	Tuen Mun, Hong Kong

Upon receipt for calibration, the instrument was found to be:

☑ **Within**
☐ **Outside**

the allowable tolerance.

The test equipments used for calibration are traceable to National Standards via:
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory

Date of receipt: 6 February 2025

Date of calibration: 7 February 2025

Date of NEXT calibration: 6 February 2026

Calibrated by: _____
Calibration Technician

Certified by: _____
Mr. Ng Yan Wa
Laboratory Manager

Date of issue: 7 February 2025

Room 422,Leader Industrial Centre,57-59 Au Pui Wan Street ,Fo Tan, Shatin,N.T.,Hong Kong
Tel: (852) 2668 3423 Fax:(852) 2668 6946
Homepage: http://www.aa-lab.com E-mail : inquiry@aa-lab.com

1. *Calibration Precautions:*

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 24 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
- The results presented are the mean of 3 measurements at each calibration point.

2. *Calibration Specifications:*

Calibration check

3. *Calibration Conditions:*

Air Temperature:	24.3 °C
Air Pressure:	1006 hPa
Relative Humidity:	59.2 %

4. *Calibration Equipment:*

Test Equipment	Type	Serial No.	Calibration Report Number	Traceable to
Multifunction Calibrator	B&K 4226	2288467	AV240081	HOKLAS
Sound Level Meter	RION NA-28	30721812	AV240109	HOKLAS

5. *Calibration Results*

5.1 Sound Pressure Level

Nominal value dB	Accept lower level dB	Accept upper level dB	Measured value dB
94.0	93.6	94.4	93.7
114.0	113.6	114.4	113.7

6. *Calibration Results Applied*

The results apply to the particular unit-under-test only. All calibration points are within manufacture's specification as IEC 60942 Class 1.

Note:
The values given in this certification only related to the values measured at the time of the calibration.

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Homepage: http://www.aa-lab.com E-mail : inquiry@aa-lab.com

Certificate of Calibration

for

Description:	***Sound Level Meter***
Manufacturer:	***RION***
Type No.:	***NL-52 (Serial No.: 00643040)***
Microphone:	***PCB 377B02 (Serial No.: 172764)***
Preamplifier:	***NH-25 (Serial No.:21757)***

Submitted by:

Customer:	*Envirotech Services Co.*
Address:	*Rm.712, 7/F., My Loft, 9 Hoi Wing Road, Tuen Mun, Hong Kong*

Upon receipt for calibration, the instrument was found to be:

☑ **Within (31.5Hz – 8kHz)**
☐ **Outside**

the allowable tolerance.

The test equipment used for calibration are traceable to National Standards via:
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory

Date of receipt: 25 September 2024

Date of calibration: 27 September 2024

Date of NEXT calibration: 26 September 2025

Calibrated by: _____
Calibration Technician

Certified by: _____
Mr. Ng Yan Wa
Laboratory Manager

Date of issue: 27 September 2024

ACOUSTICS AND AIR TESTING LABORATORY CO. LTD. (A+A)*L

Room 422,Leader Industrial Centre,57-59 Au Pui Wan Street ,Fo Tan, Shatin,N.T.,Hong Kong
Tel: (852) 2668 3423 Fax:(852) 2668 6946
Homepage: http://www.aa-lab.com E-mail : inquiry@aa-lab.com

1. *Calibration Precaution:*

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 24 hours, and switched on to warm up for over 10 minutes before the commencement of the test.

- The results presented are the mean of 3 measurements at each calibration point.

2. *Calibration Conditions:*

Air Temperature: 24.9 °C
Air Pressure: 1006 hPa
Relative Humidity: 54.5 %

3. *Calibration Equipment:*

	Type	Serial No.	Calibration Report Number	Traceable to
Multifunction Calibrator	B&K 4226	2288467	AV240081	HOKLAS

4. *Calibration Results*

Sound Pressure Level

Reference Sound Pressure Level

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz		
30-130	dBA SPL	Fast	94	1000	94.0	±0.4

Linearity

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz		
30-130	dBA SPL	Fast	94	1000	94.0	Ref
			104		104.0	±0.3
			114		114.0	±0.3

Time Weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz		
30-130	dBA SPL	Fast	94	1000	94.0	Ref
		Slow			94.0	±0.3

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Frequency Response

Linear Response

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dB SPL	Fast	94	31.5	93.8	±2.0
				63	93.9	±1.5
				125	93.9	±1.5
				250	93.9	±1.4
				500	93.9	±1.4
				1000	94.0	Ref
				2000	94.0	±1.6
				4000	94.5	±1.6
				8000	91.8	+2.1; -3.1

A-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA SPL	Fast	94	31.5	54.4	-39.4 ±2.0
				63	67.8	-26.2 ±1.5
				125	77.8	-16.1 ±1.5
				250	85.3	-8.6 ±1.4
				500	90.7	-3.2 ±1.4
				1000	94.0	Ref
				2000	95.2	+1.2 ±1.6
				4000	95.5	+1.0 ±1.6
				8000	90.8	-1.1+2.1; -3.1

C-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBC SPL	Fast	94	31.5	90.8	-3.0 ±2.0
				63	93.1	-0.8 ±1.5
				125	93.7	-0.2 ±1.5
				250	93.9	-0.0 ±1.4
				500	93.9	-0.0 ±1.4
				1000	94.0	Ref
				2000	93.8	-0.2 ±1.6
				4000	93.7	-0.8 ±1.6
				8000	89.0	–3.0 +2.1: –3.1

Room 422,Leader Industrial Centre,57-59 Au Pui Wan Street ,Fo Tan, Shatin,N.T.,Hong Kong
Tel: (852) 2668 3423 Fax:(852) 2668 6946
Homepage: http://www.aa-lab.com E-mail : inquiry@aa-lab.com

5. *Calibration Results Applied*

The results apply to the particular unit-under-test only. All calibration points are within manufacture's specification as IEC 61672 Class 1.

Uncertainties of Applied Value:

94 dB	31.5 Hz	± 0.15
	63 Hz	± 0.10
	125 Hz	± 0.10
	250 Hz	± 0.05
	500 Hz	± 0.10
	1000 Hz	± 0.05
	2000 Hz	± 0.05
	4000 Hz	± 0.05
	8000 Hz	± 0.10
104 dB	1000 Hz	± 0.05
114 dB	1000 Hz	± 0.05

The uncertainties are evaluated for a 95% confidence level.

Note:
The values given in this certification only related to the values measured at the time of the calibration and any uncertainties quoted will not allow for the equipment long-term drift, variations with environmental changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the calibration. (A+A)*L shall not be liable for any loss or damage resulting from the use of the equipment.

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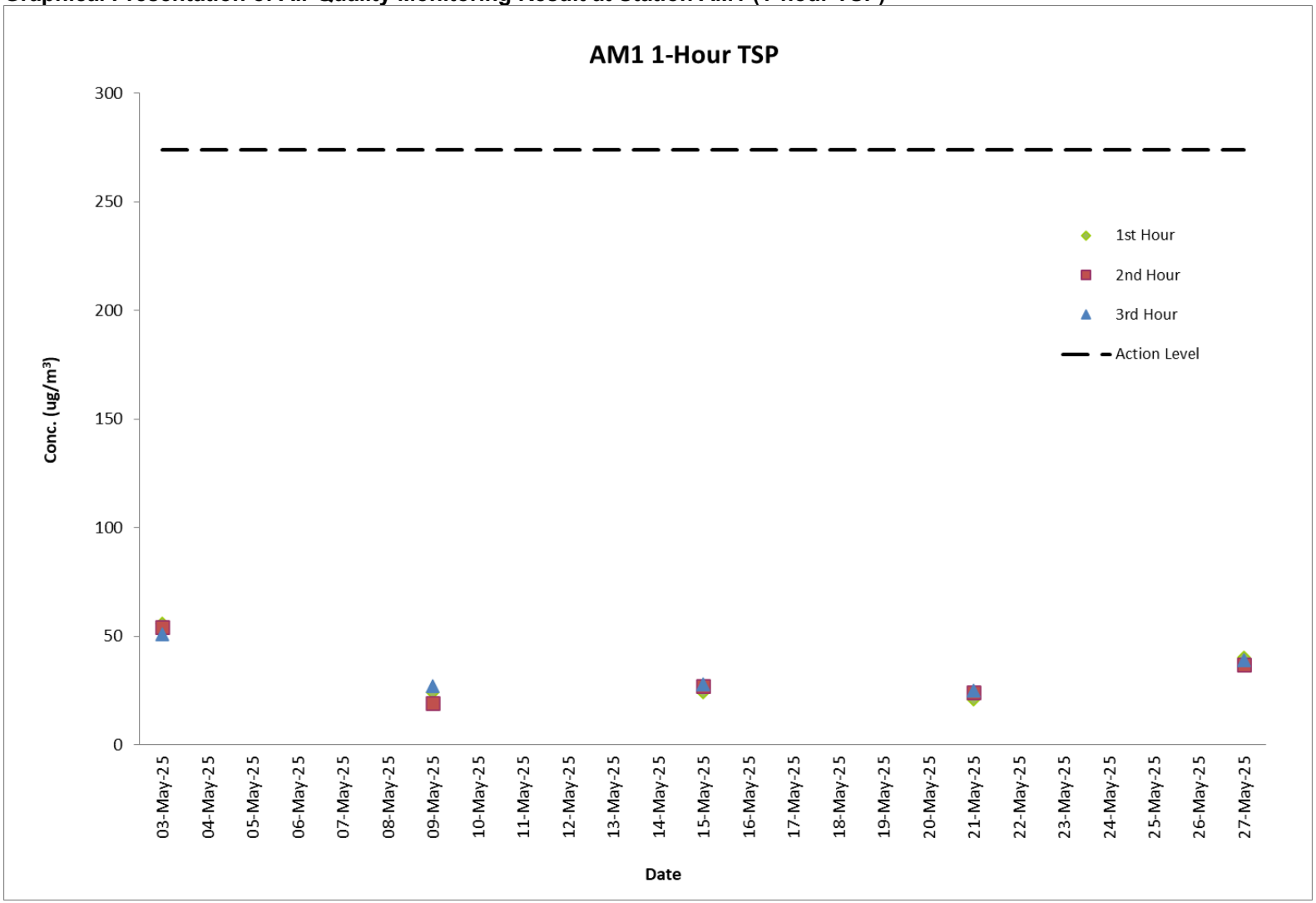
G. Graphical Plots of the Monitoring Results

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

Date	Weather Condition	Time	Conc. (μg/m^3)			Action Level (μg/m^3)	Limit Level (μg/m^3)
			1st Hour	2nd Hour	3rd Hour		
03-May-25	Cloudy	8:33 - 11:33	56	54	51	273.7	500
09-May-25	Cloudy	8:28 - 11:28	24	19	27	273.7	500
15-May-25	Cloudy	8:29 - 11:29	24	27	28	273.7	500
21-May-25	Fine	8:38 - 11:38	21	24	25	273.7	500
27-May-25	Fine	8:34 - 11:34	40	37	39	273.7	500

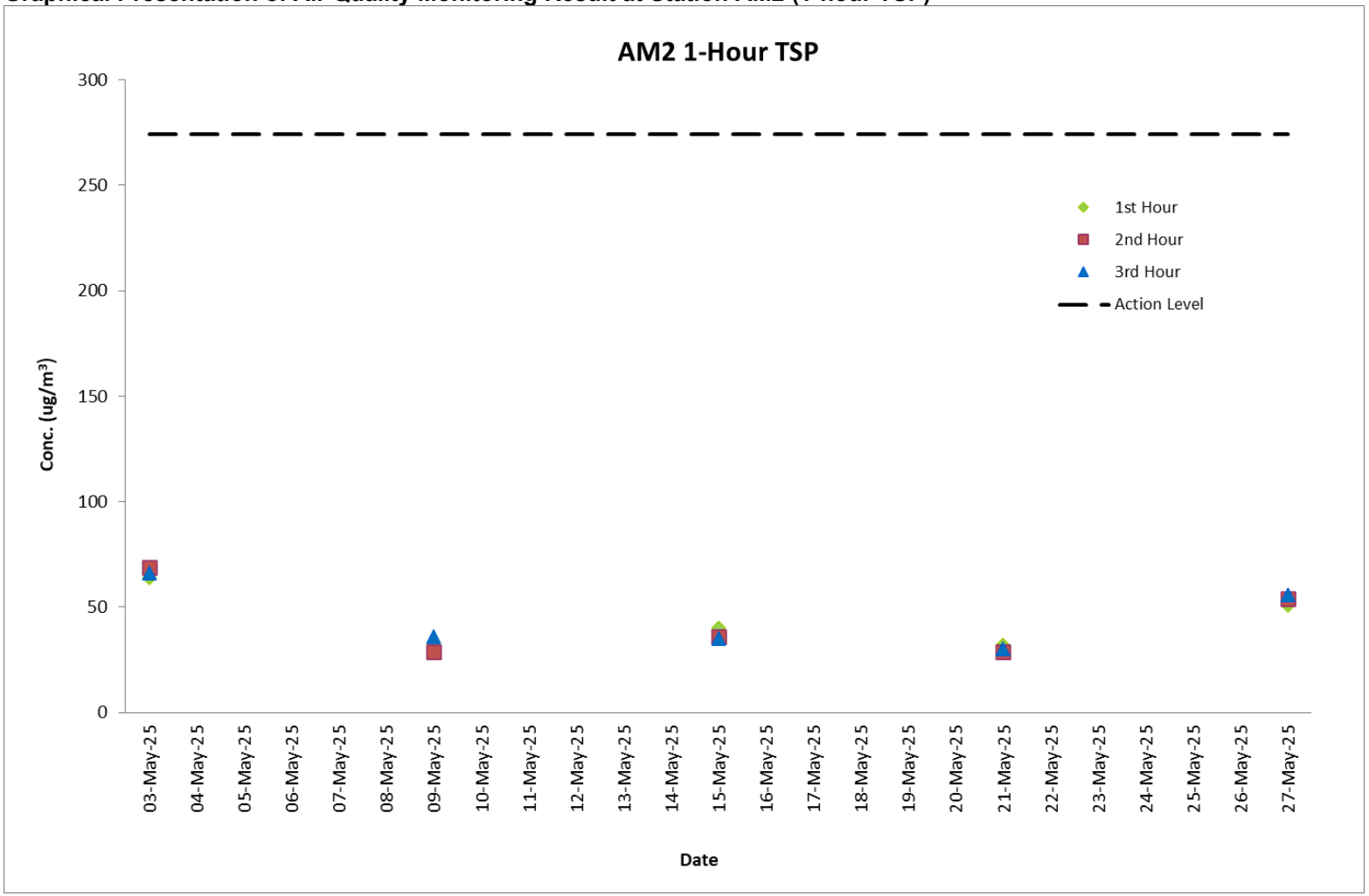
Graphical Presentation of Air Quality Monitoring Result at Station AM1 (1-hour TSP)



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

Date	Weather Condition	Time	Conc. (μg/m^3)			Action Level (μg/m^3)	Limit Level (μg/m^3)
			1st Hour	2nd Hour	3rd Hour		
03-May-25	Cloudy	8:49 - 11:49	64	69	66	274.2	500
09-May-25	Cloudy	8:43 - 11:43	33	29	36	274.2	500
15-May-25	Cloudy	8:45 - 11:45	40	36	35	274.2	500
21-May-25	Fine	8:43 - 11:43	32	29	30	274.2	500
27-May-25	Fine	8:50 - 11:50	51	54	56	274.2	500

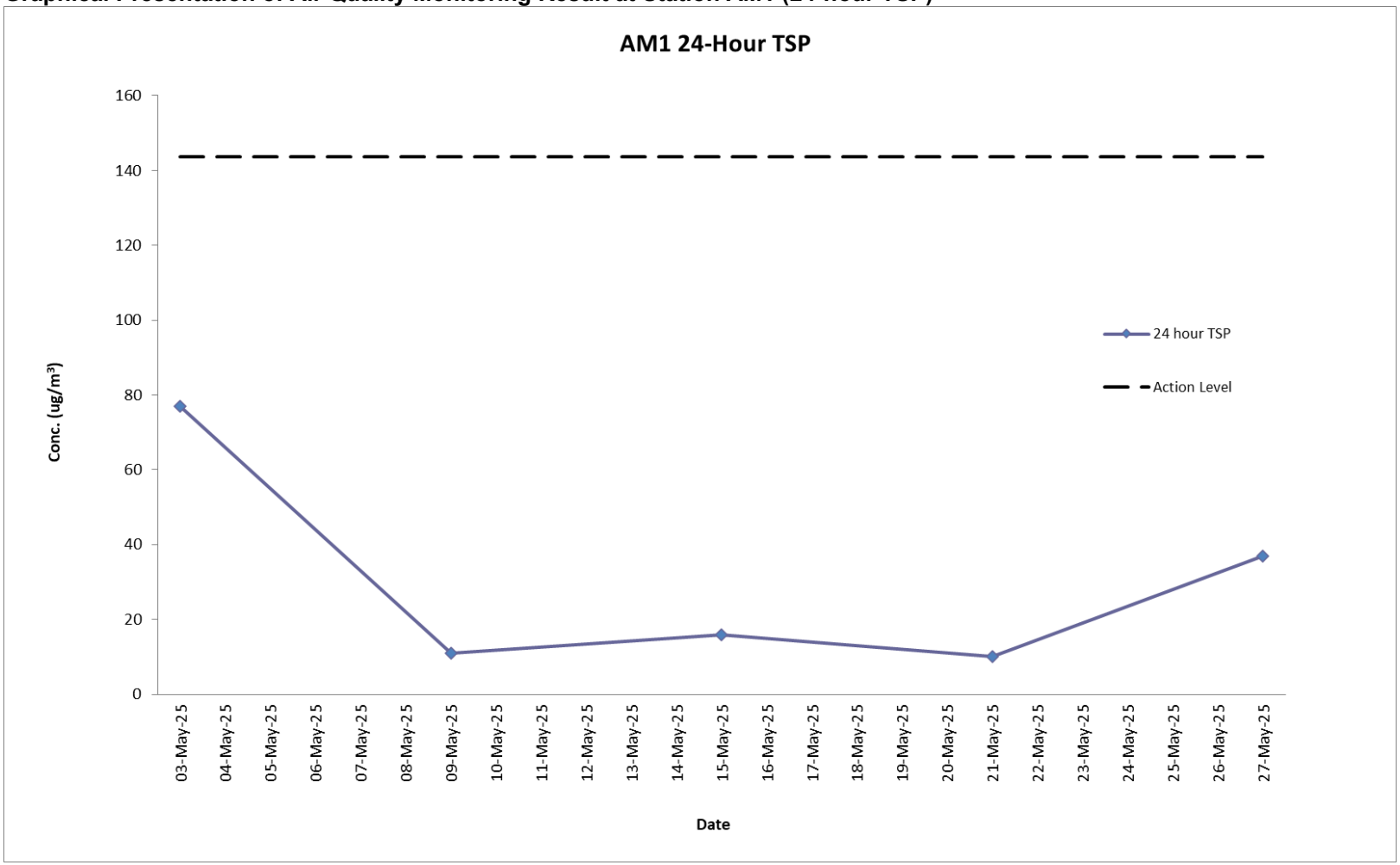
Graphical Presentation of Air Quality Monitoring Result at Station AM2 (1-hour TSP)



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

Start		Finish		Filter Weight (g)		Elapsed Time Reading		Sampling Time (hrs)	Flow Rate (m^3/min)			Conc. ($\mu g/m^3$)	Weather Condition	Action Level	Limit Level
Date	Time	Date	Time	Initial	Final	Initial	Final		Initial	Final	Average				
03-May-25	08:30	04-May-25	08:30	2.8173	2.9545	29644.38	29668.38	24	1.24	1.24	1.24	77	Cloudy	143.6	260
09-May-25	08:25	10-May-25	08:25	2.8291	2.8485	29668.38	29692.38	24	1.18	1.18	1.18	11	Cloudy	143.6	260
15-May-25	08:26	16-May-25	08:26	2.8110	2.8380	29692.38	29716.38	24	1.18	1.18	1.18	16	Cloudy	143.6	260
21-May-25	08:35	22-May-25	08:35	2.8166	2.8338	29716.38	29740.38	24	1.18	1.18	1.18	10	Fine	143.6	260
27-May-25	08:31	28-May-25	08:31	2.8170	2.8806	29740.38	29764.38	24	1.18	1.18	1.18	37	Fine	143.6	260

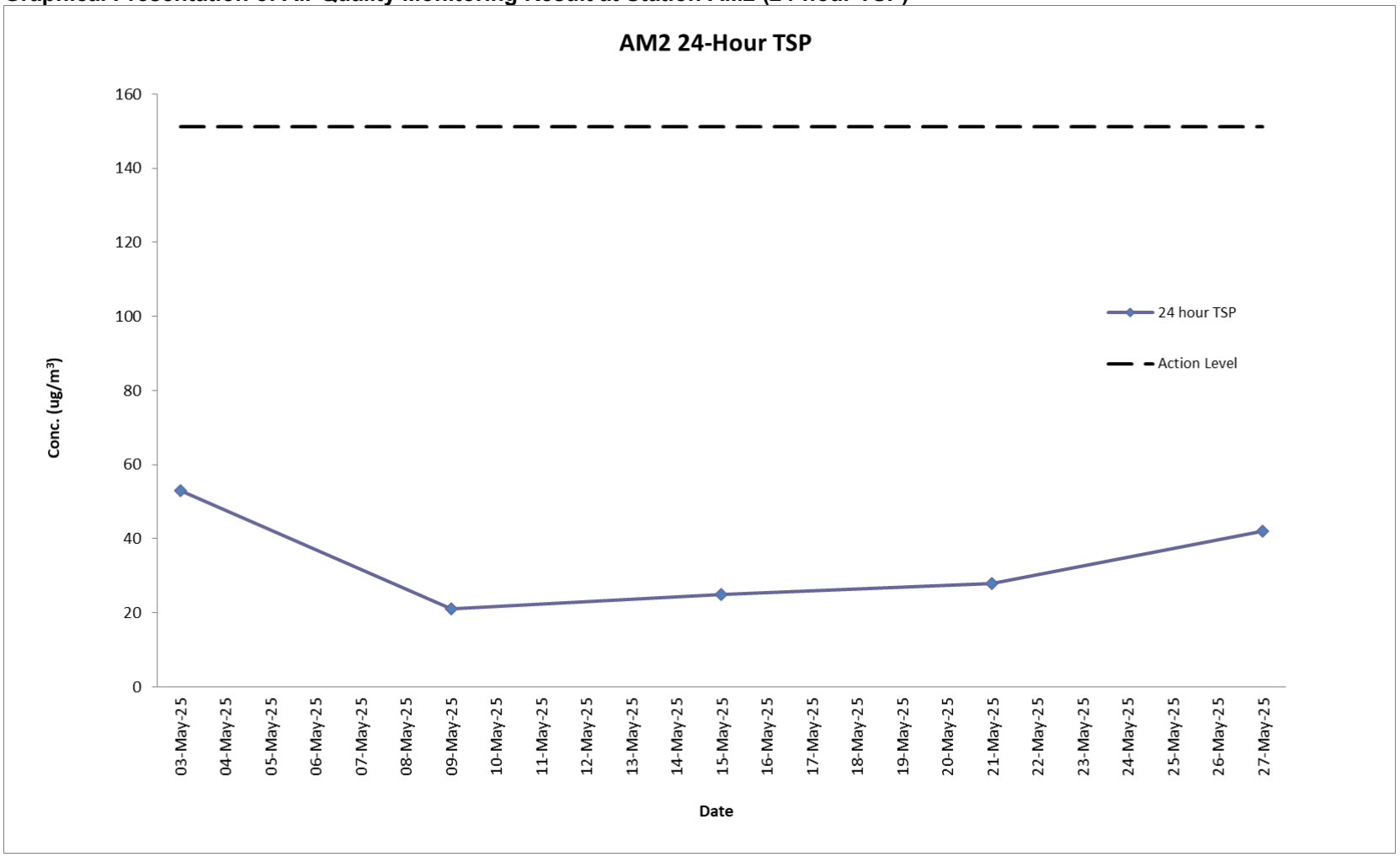
Graphical Presentation of Air Quality Monitoring Result at Station AM1 (24-hour TSP)



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

Start		Finish		Sampling Time (hrs)	Conc. ($\mu g/m^3$)	Weather Condition	Action Level	Limit Level
Date	Time	Date	Time					
03-May-25	08:46	04-May-25	08:46	24	53	Cloudy	151.1	260
09-May-25	08:40	10-May-25	08:40	24	21	Cloudy	151.1	260
15-May-25	08:42	16-May-25	08:42	24	25	Cloudy	151.1	260
21-May-25	08:41	22-May-25	08:41	24	28	Fine	151.1	260
27-May-25	08:47	28-May-25	08:47	24	42	Fine	151.1	260

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



Noise Monitoring Result at Station NM1A

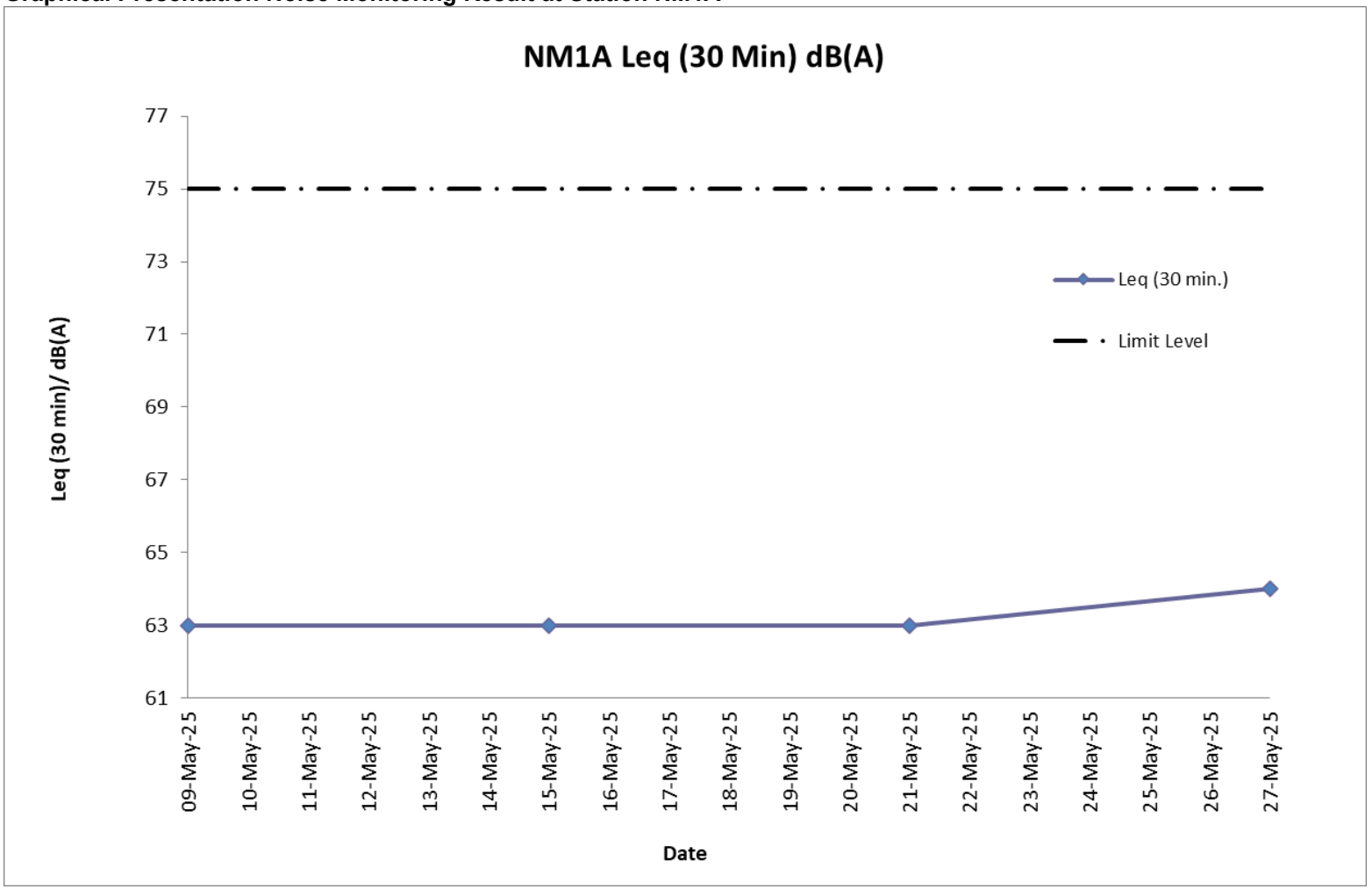
Date	Time	Measured L_{10}, dB(A)	Measured L_{90}, dB(A)	L_{eq} (30 min.)*, dB(A)
9-May-25	9:28	61.8	57.6	63
9-May-25	9:33	62.5	58.3	
9-May-25	9:38	61.2	57.0	
9-May-25	9:43	62.9	58.9	
9-May-25	9:48	61.0	57.9	
9-May-25	9:53	62.6	58.4	
15-May-25	9:30	61.5	57.6	63
15-May-25	9:35	62.8	58.3	
15-May-25	9:40	61.2	57.0	
15-May-25	9:45	61.7	57.9	
15-May-25	9:50	62.0	58.7	
15-May-25	9:55	63.9	59.6	
21-May-25	9:28	61.8	57.6	63
21-May-25	9:33	62.5	58.3	
21-May-25	9:38	62.2	58.0	
21-May-25	9:43	61.9	57.9	
21-May-25	9:48	60.0	56.7	
21-May-25	9:53	61.7	57.6	
27-May-25	9:35	61.8	57.6	64
27-May-25	9:40	62.5	58.3	
27-May-25	9:45	63.2	59.0	
27-May-25	9:50	62.9	58.9	
27-May-25	9:55	63.0	59.7	
27-May-25	10:00	62.7	58.4	

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

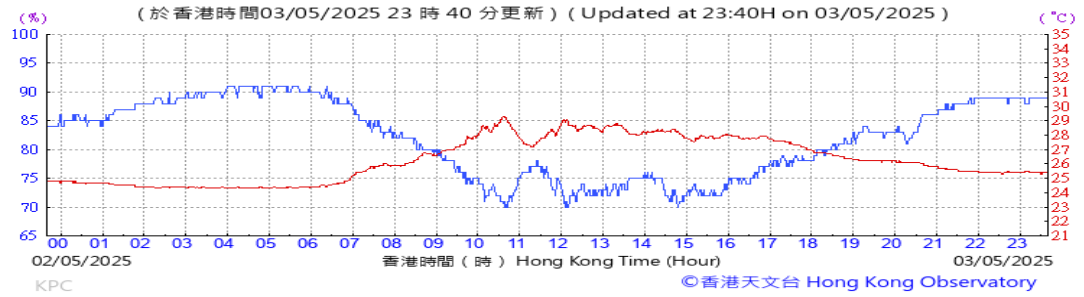


H. Meteorological Data Extracted from Hong Kong Observatory

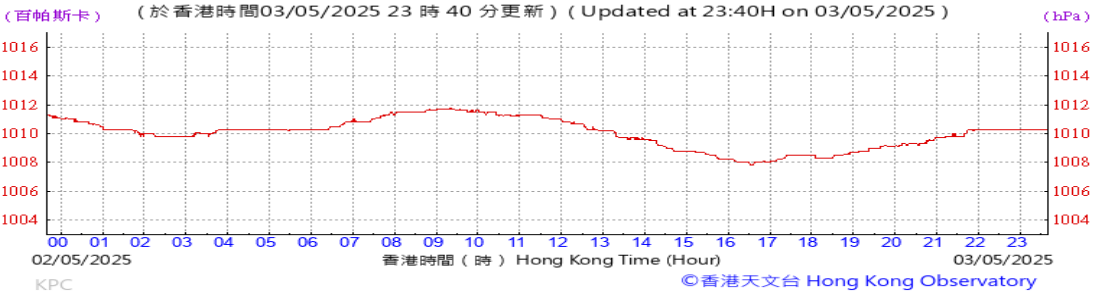
Extract of Meteorological Observations for King's Park Automatic Weather Station

May 2025

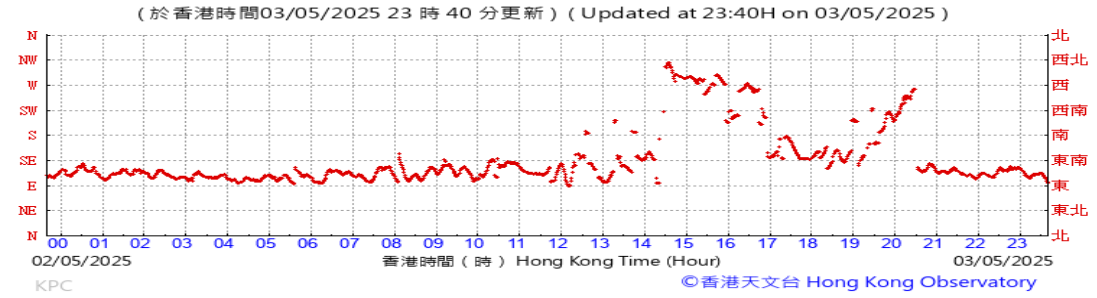
Temperature/Humidity:



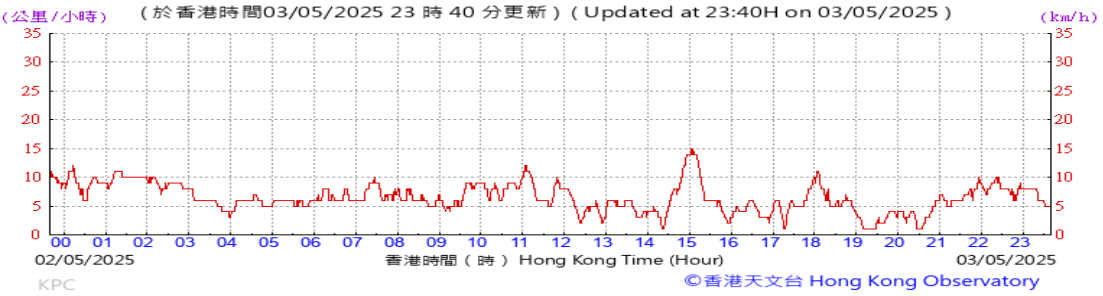
Pressure:



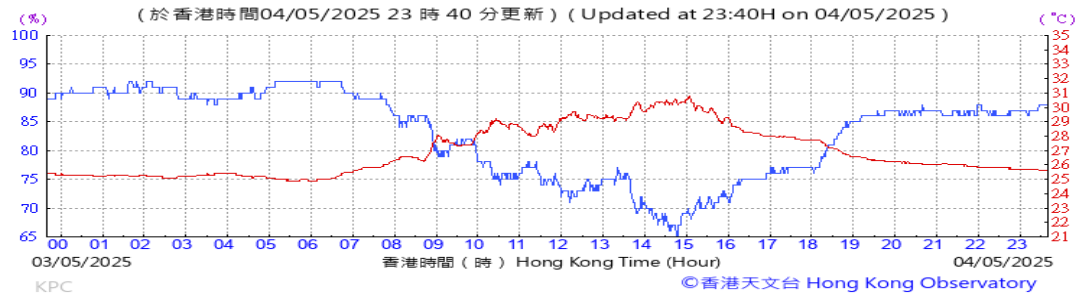
Wind Direction:



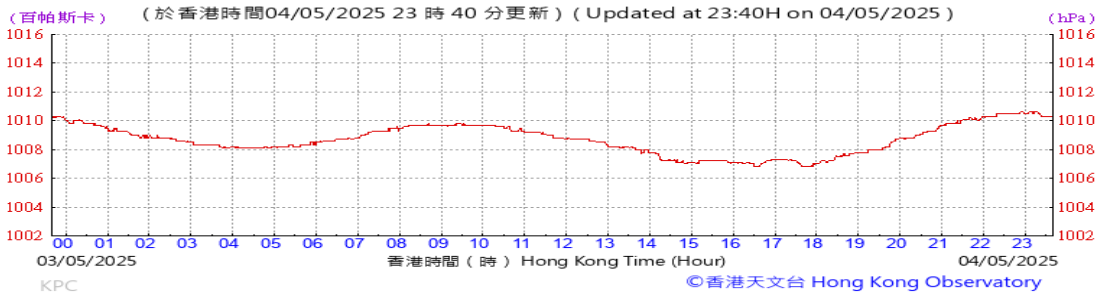
Wind Speed:



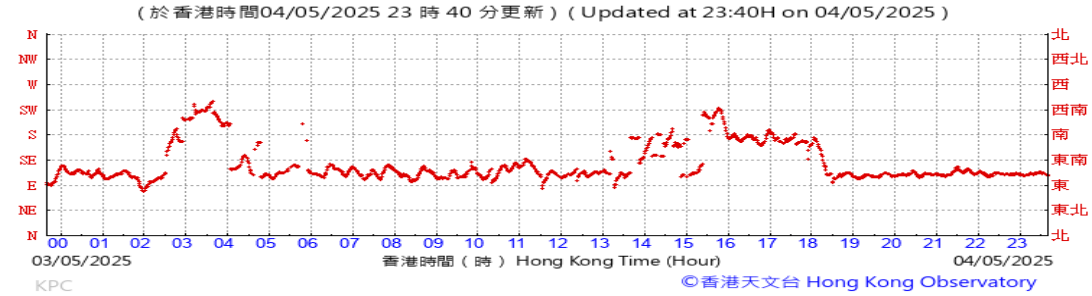
Temperature/Humidity:



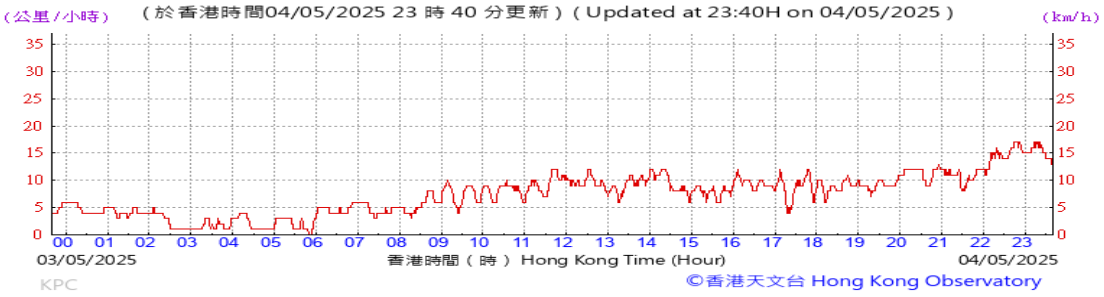
Pressure:



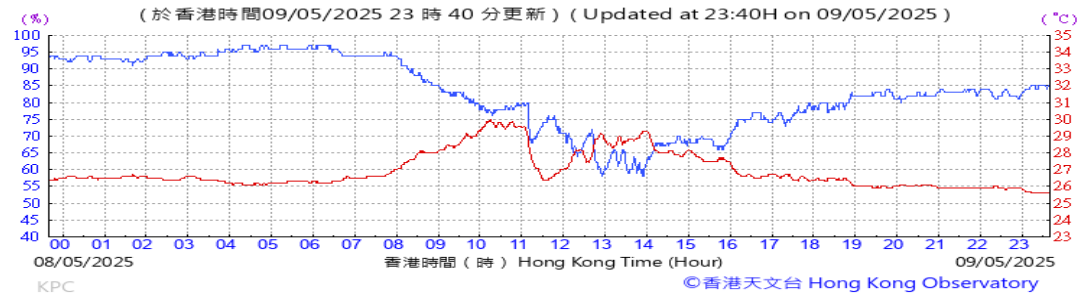
Wind Direction:



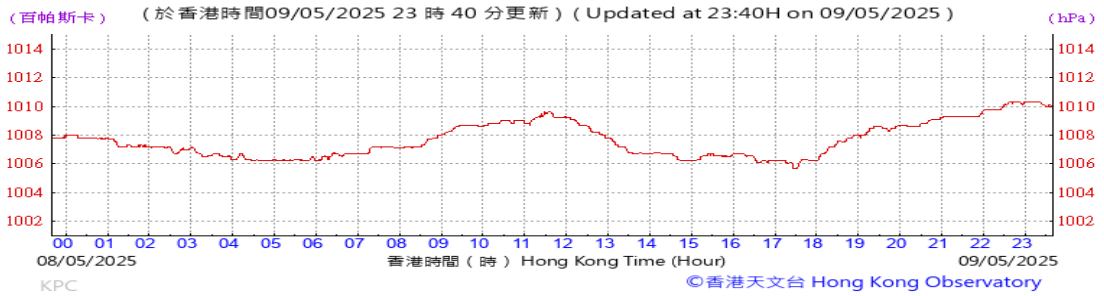
Wind Speed:



Temperature/Humidity:



Pressure:



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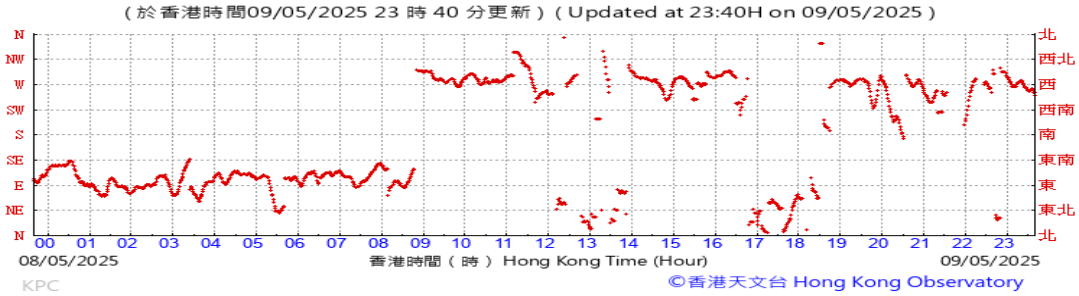

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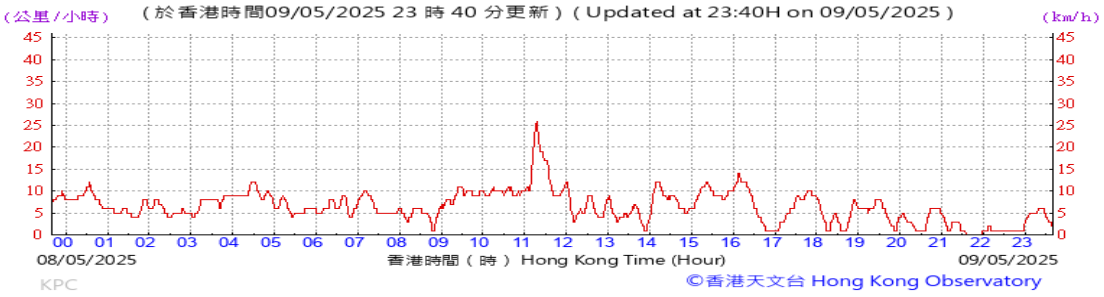

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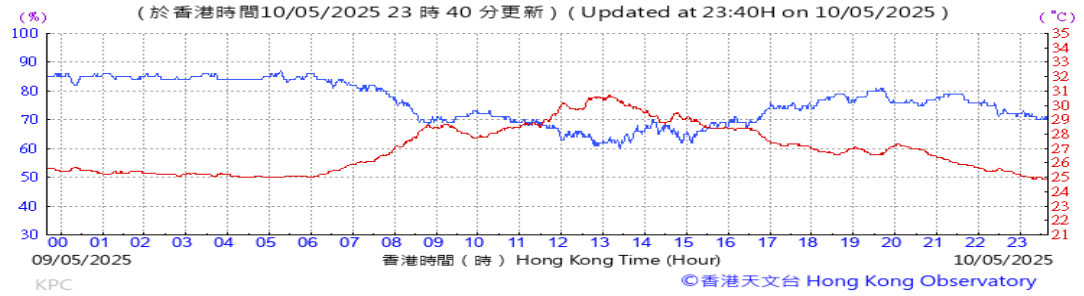

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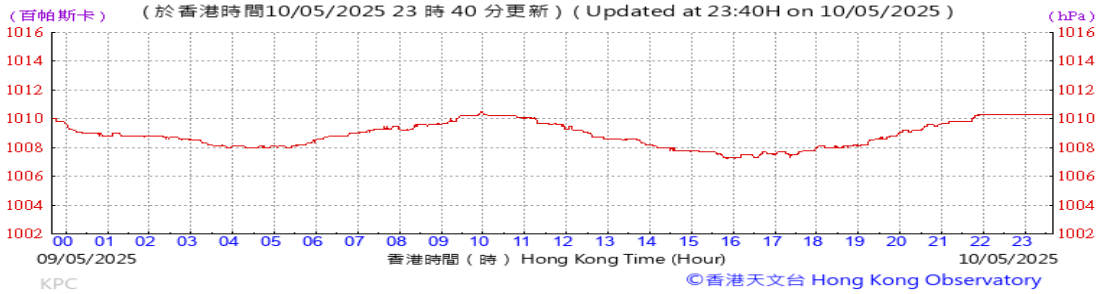

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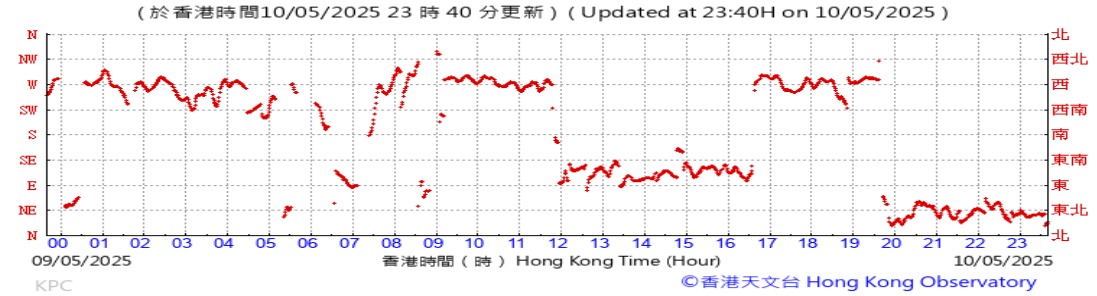

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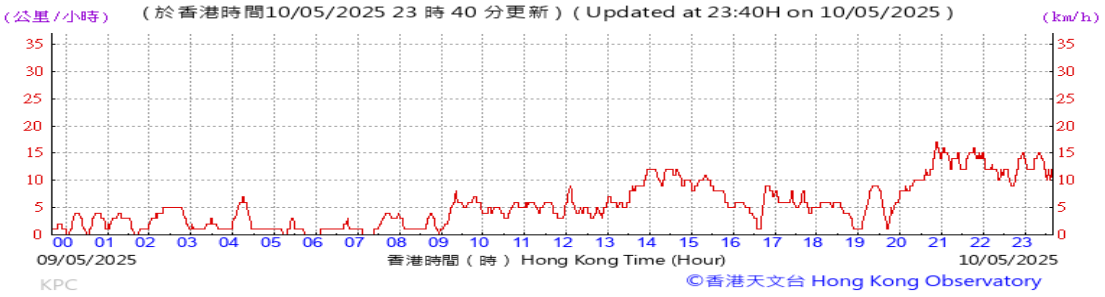

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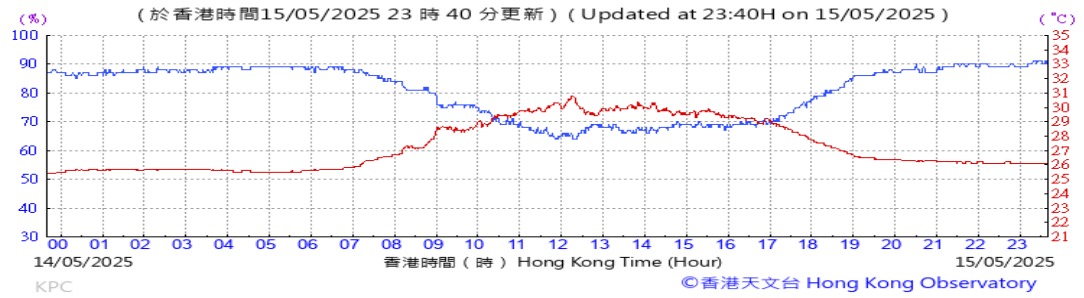

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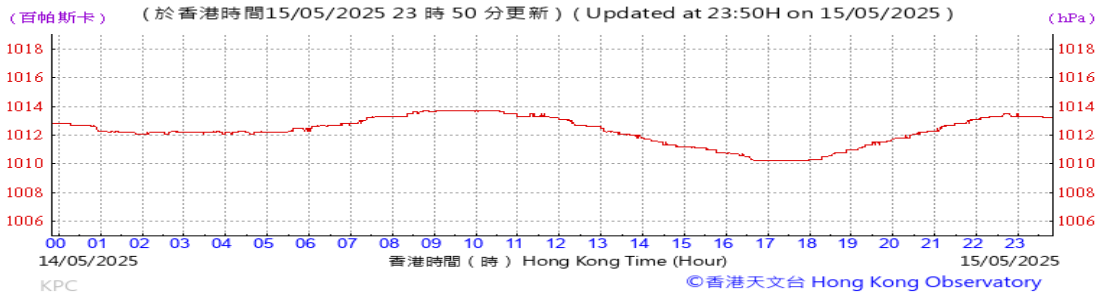

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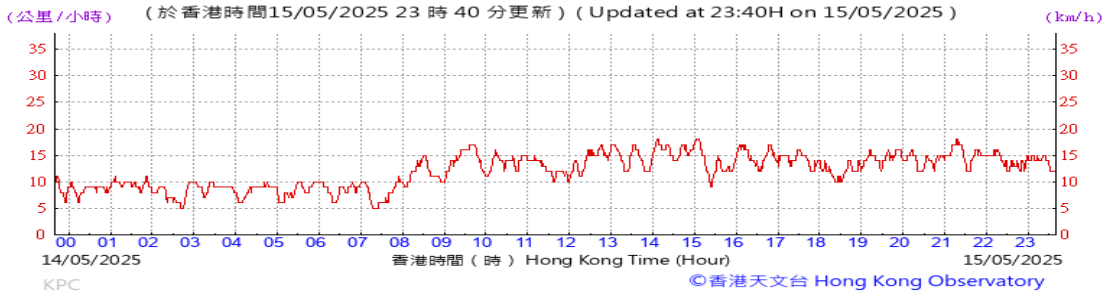

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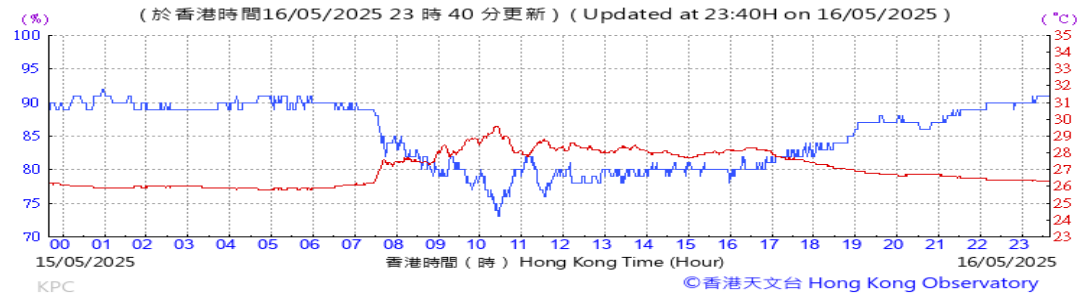

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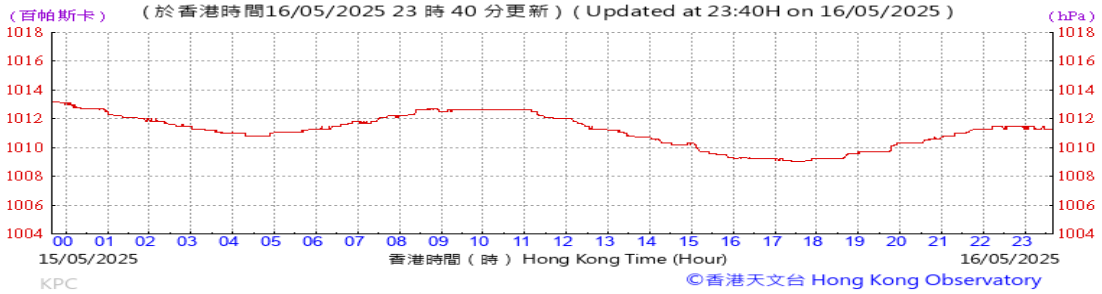

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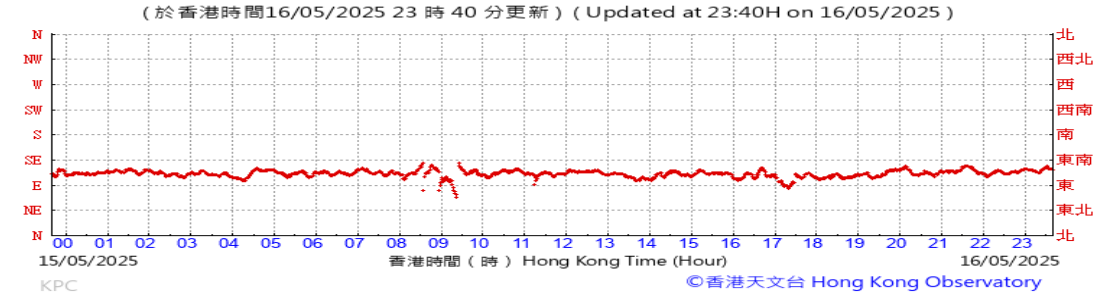

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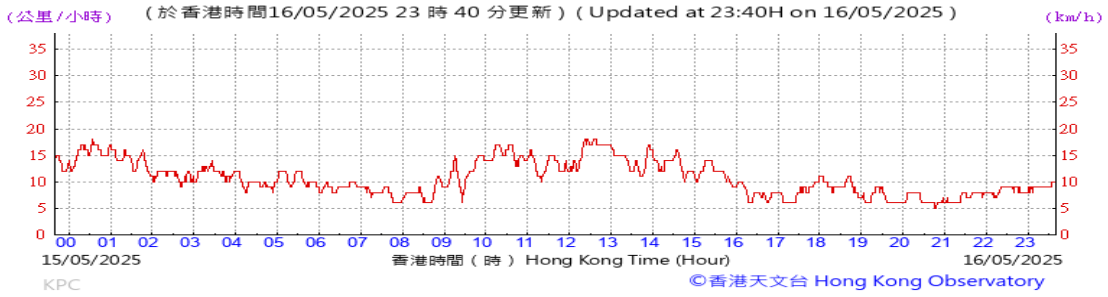

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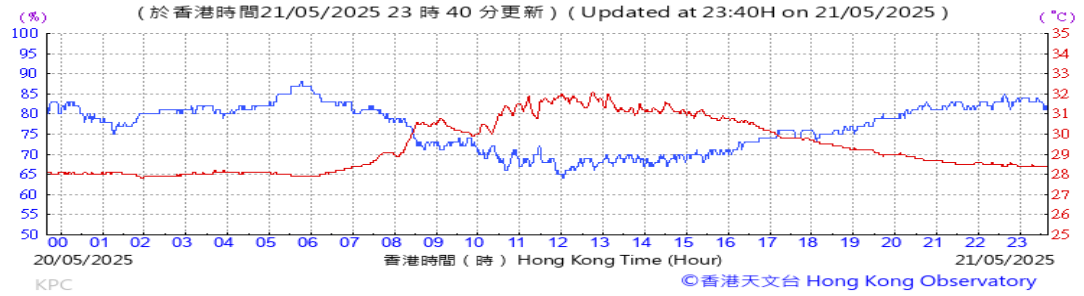

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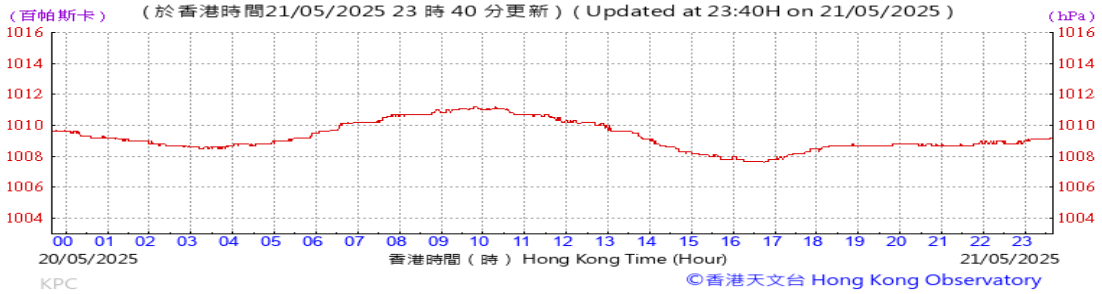

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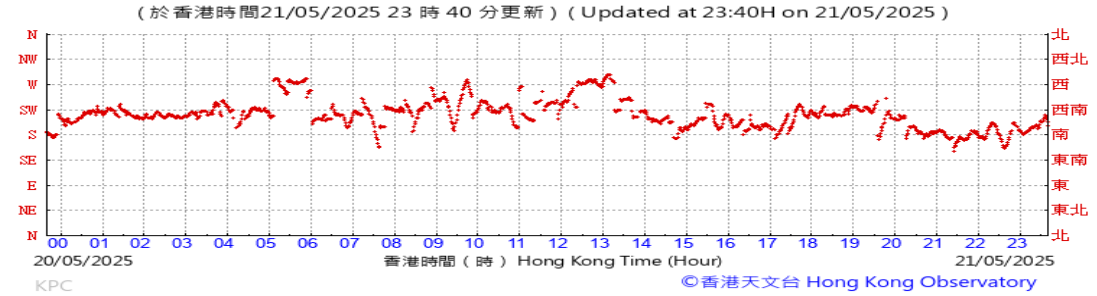

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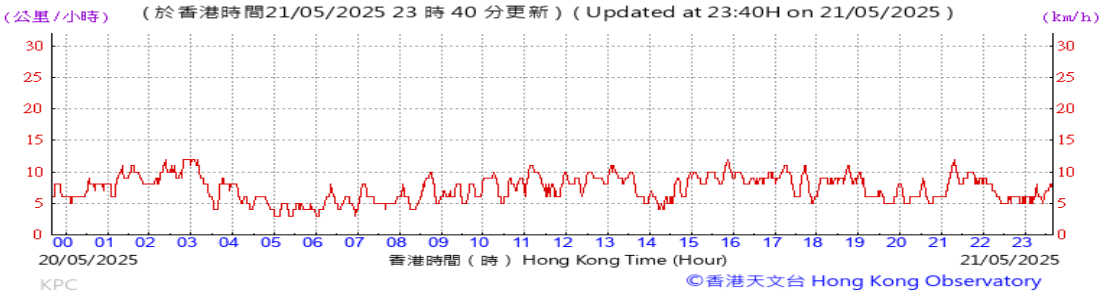

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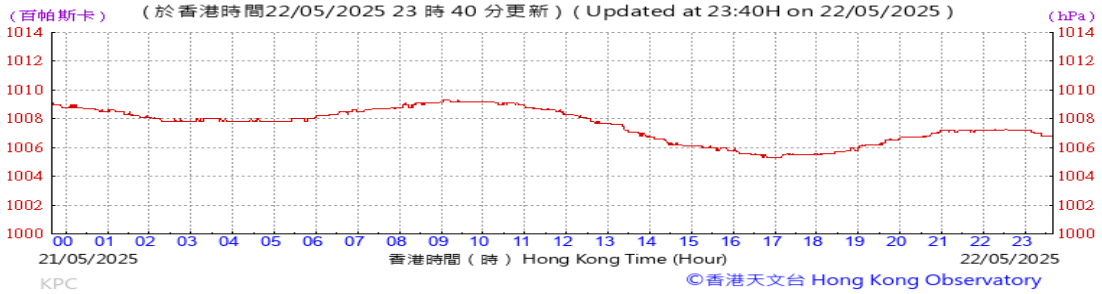

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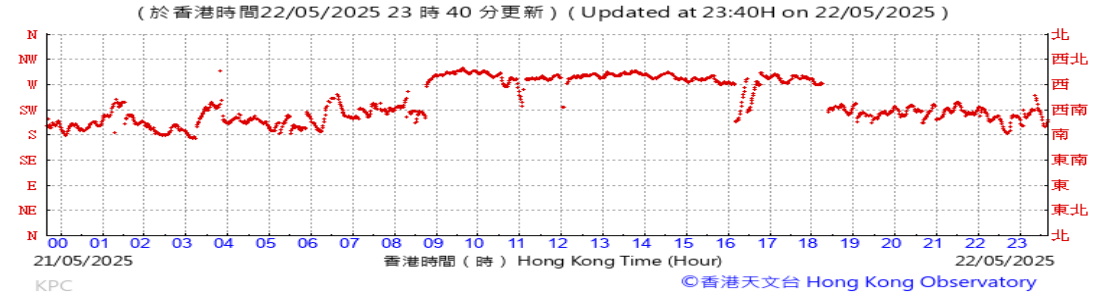

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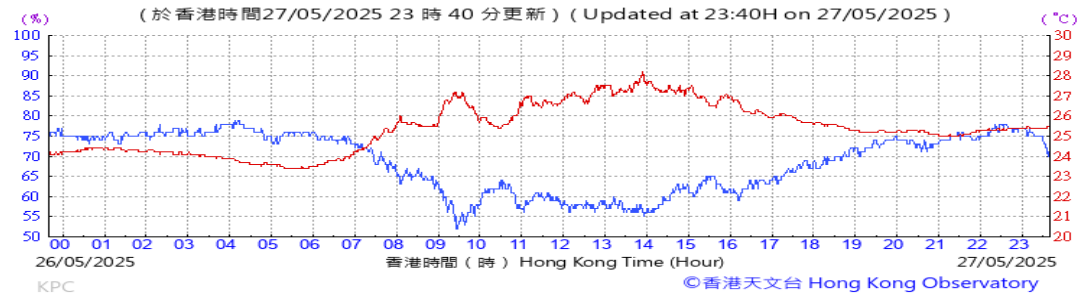
Temperature/Humidity:



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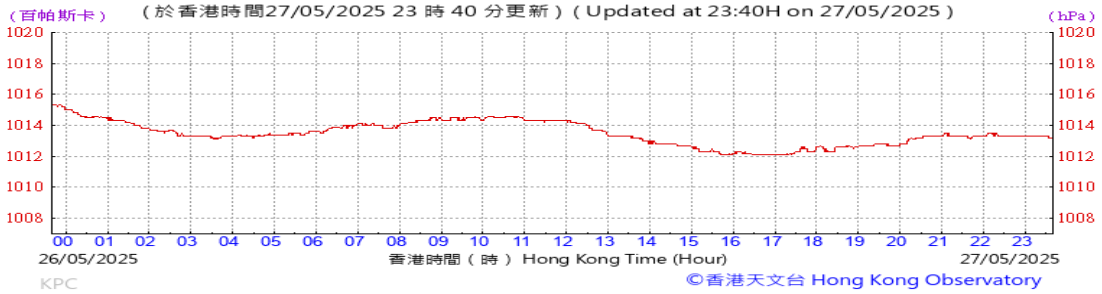

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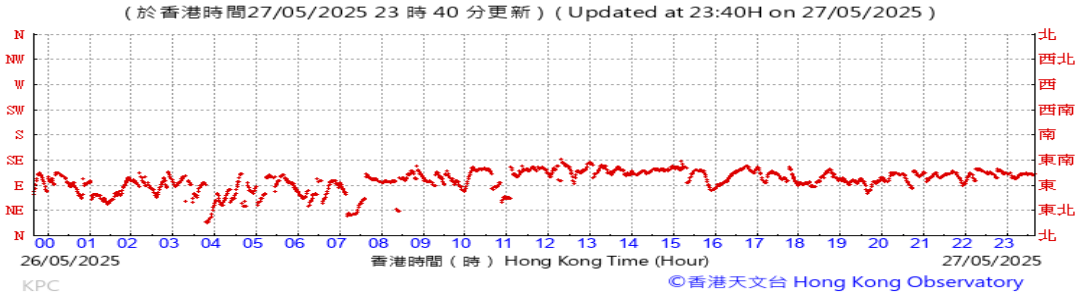

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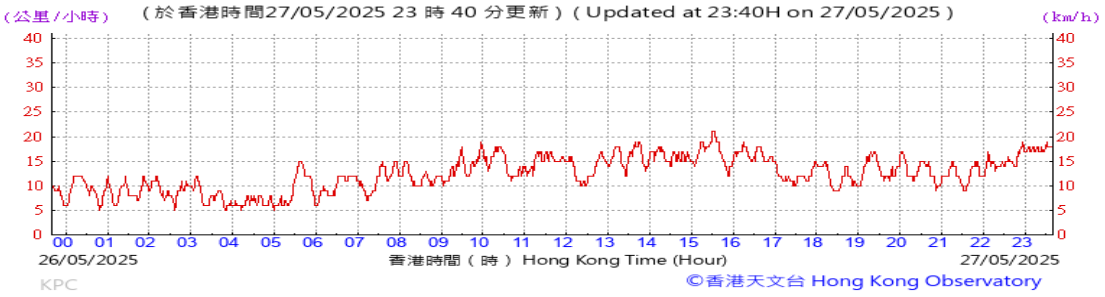

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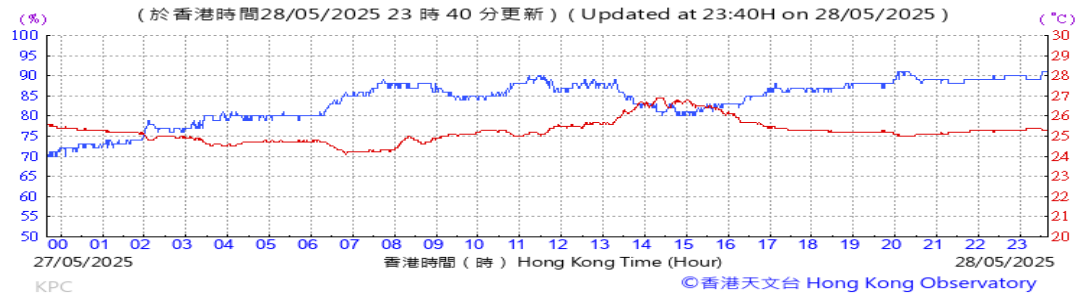

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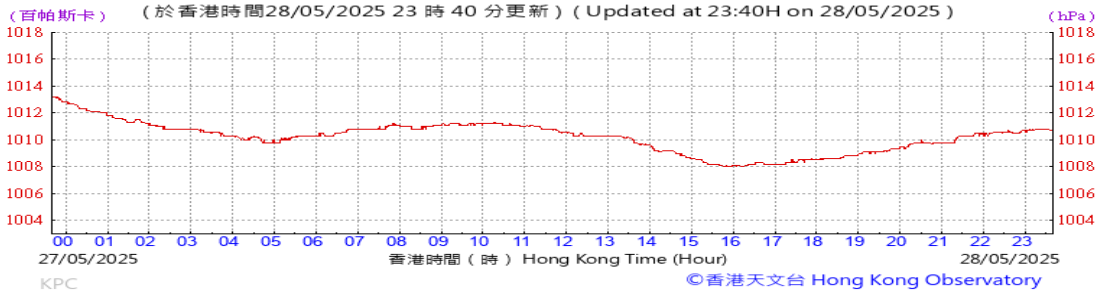

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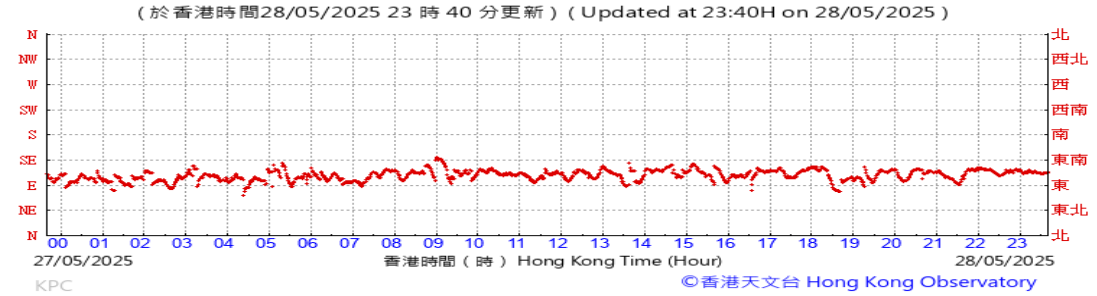

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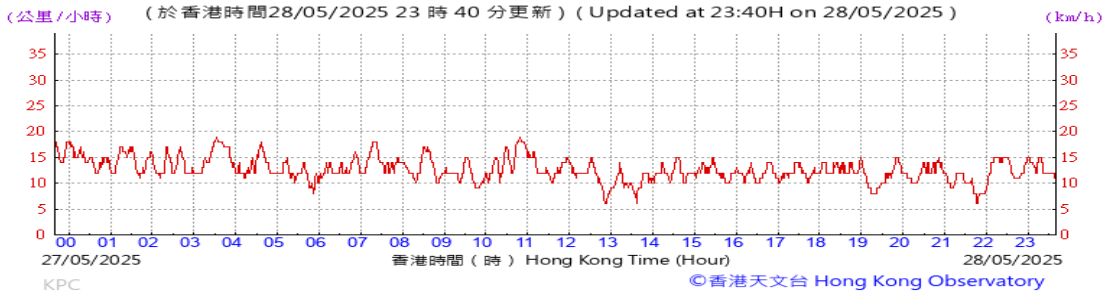

I. Waste Flow Table

Table I-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 Facilty	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)
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 I-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 Facilty	Imported Fill	Metals	Paper/ Cardboard Packaging	Plastics	Wood/ Timber	Chemical Waste	Others, e.g. General Refuse
	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)
2018													
Jan	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 I-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 Facilty	Imported Fill	Metals	Paper/ Cardboard Packaging	Plastics	Wood/ Timber	Chemical Waste	Others, e.g. General Refuse
	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)
2020													
Jan	7089.9	0.0	0.0	0.0	7089.9	0.0	0.0	39.6	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	240.5	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	1129.2	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	412.3	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	328.7	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	502.2	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	393.4	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	835.6	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	756.1	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	567.8	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	503.4	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	5771.9	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	906.7	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	206.3	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	1235.0	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	480.8	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	382.8	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	163.7	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	56.5	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	270.0	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	193.2	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	92.0	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	93.9	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	85.2	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	4165.9	4.4	0.1	0.0	0.4	6315.9

Table I-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 Facilty	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)
2022													
Jan	579.3	0.0	0.0	0.0	579.3	0.0	0.0	41.3	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	85.7	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	87.1	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	44.7	0.0	0.0	0.0	0.0	390.9
May	357.3	0.0	0.0	0.0	350.1	7.2	0.0	99.4	0.3	0.0	0.0	0.0	401.9
Jun	200.4	0.0	0.0	0.0	200.4	0.0	0.0	134.7	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	15.3	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)	4043.5	0.0	0.0	0.0	4036.3	7.2	0.0	618.3	2.3	0.3	0.0	1.8	4586.5
2023													
Jan	307.0	0.0	0.0	0.0	307.0	0.0	0.0	44.5	0.2	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	0.1	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	1.3	0.0	0.0	0.0	4813.3

Table I-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 Facilty	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													
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	1056.5	0.0	0.0	0.0	1056.5	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
Nov	599.0	0.0	0.0	0.0	599.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	708.8
Dec	291.0	0.0	0.0	0.0	291.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	646.5
Sub-total (2024)	6576.1	0.0	0.0	0.0	6576.1	0.0	0.0	701.7	3.0	0.0	0.0	0.0	5277.4
2025													
Jan	318.6	0.0	0.0	0.0	312.8	5.8	0.0	0.0	0.1	0.0	0.0	0.0	714.3
Feb	1147.3	0.0	0.0	0.0	1147.3	0.0	0.0	0.0	0.1	0.0	0.0	0.0	600.1
Mar	1513.2	0.0	0.0	0.0	1513.2	0.0	0.0	0.0	0.5	0.0	0.0	0.0	592.8
Apr	335.3	0.0	0.0	0.0	335.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	564.2
May	374.7	0.0	0.0	0.0	374.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	558.1
Sub-total (2025)	3689.1	0.0	0.0	0.0	3683.3	5.8	0.0	0.0	0.7	0.0	0.0	0.0	3029.5
Total	**1018994.6**	**0.0**	**0.0**	**543635.2**	**474353.6**	**1005.7**	**2301.1**	**13716.7**	**17.6**	**10.8**	**0.0**	**14.7**	**29000.9**

Note:

- 254.83 tonnes, 119.87 tonnes and 0.0 tonne of inert C&D materials were disposed of as public fill to Tseung Kwan O Area 137 Public Fill, Tuen Mun Area 38 Public Fill and Chai Wan Public Fill Barging Point respectively in the reporting month.

J. Environmental Mitigation Measures – Implementation Status

Table J-1: Environmental Mitigation Measures Implementation Status (May 2025)

EM&A Ref.	Recommendation Measures	Implementation Stage L2
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)	✓
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:	
	Good Site Management	
	• Good site management is important to help reducing potential air quality impact down to an acceptable level. As a general guide, the Contractor should maintain high standard of housekeeping to prevent emission of fugitive dust. Loading, unloading, handling and storage of raw materials, wastes or by-products should be carried out in a manner so as to minimise the release of visible dust emission. Any piles of materials accumulated on or around the work areas should be cleaned up regularly. Cleaning, repair and maintenance of all plant facilities within the work areas should be carried out in a manner minimising generation of fugitive dust emissions. The material should be handled properly to prevent fugitive dust emission before cleaning.	Rem
	Disturbed Parts of the Roads	
	• 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.	✓
	Exposed Earth	
	• 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.	N/A No exposed earth in this project.
	Loading, Unloading or Transfer of Dusty Materials	
	• All dusty materials should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet.	✓
	Debris Handling	
	• Any debris should be covered entirely by impervious sheeting or stored in a debris collection area sheltered on the top and the three sides.	✓
	• Before debris is dumped into a chute, water should be sprayed so that it remains wet when it is dumped.	✓

EM&A Ref.	Recommendation Measures	Implementation Stage L2
	Transport of Dusty Materials	
	• 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.	✓
	Wheel washing	
	• 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.	✓
	Use of vehicles	
	• The speed of the trucks within the site should be controlled to about 10km/hour in order to reduce adverse dust impacts and secure the safe movement around the site.	✓
	• Immediately before leaving the construction site, every vehicle should be washed to remove any dusty materials from its body and wheels.	✓
	• Where a vehicle leaving the construction site is carrying a load of dusty materials, the load should be covered entirely by clean impervious sheeting to ensure that the dusty materials do not leak from the vehicle.	✓
	Site hoarding	
	• 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	**Best Practicable Means for Cement Works (Concrete Batching Plant)** 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	
	• 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 No concrete batching plant in this project.
	Emission Limits	
	• All emissions to air, other than steam or water vapour, shall be colourless and free from persistent mist or smoke	N/A No concrete batching plant in this project.
	Engineering Design/Technical Requirements	
	• 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 No concrete batching plant in this project.

EM&A Ref.	Recommendation Measures	Implementation Stage L2
	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.	✓
Noise Impact (Construction)		
3.1 & 10.4.1	**Good Site Practice**	
	Good site practice and noise management can significantly reduce the impact of construction site activities on nearby NSRs. The following package of measures should be followed during each phase of construction:	
	• only well-maintained plant to be operated on-site and plant should be serviced regularly during the construction works;	✓
	• machines and plant that may be in intermittent use to be shut down between work periods or should be throttled down to a minimum	✓
	• plant known to emit noise strongly in one direction, should, where possible, be orientated to direct noise away from the NSRs;	✓
	• mobile plant should be sited as far away from NSRs as possible; and	✓
	• material stockpiles and other structures to be effectively utilised, where practicable, to screen noise from on-site construction activities.	✓
3.1 & 10.4.1	**Adoption of Quieter PME**	
	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, 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.	✓

EM&A Ref.	Recommendation Measures	Implementation Stage L2
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 No educational institutions nearby the site.
Water Quality Impact (Construction)		
4.1 & 10.5.1	**Construction site runoff and drainage** The site practices outlined in ProPECC Note PN 1/94 should be followed as far as practicable in order to minimise surface runoff and the chance of erosion. The following measures are recommended to protect water quality and sensitive uses of the coastal area, and when properly implemented should be sufficient to adequately control site discharges so as to avoid water quality impacts:	
	• 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
	• 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.	✓
	• 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.	✓
	• 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.	✓
	• 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.	✓

EM&A Ref.	Recommendation Measures	Implementation Stage L2
	• Precautions should be taken at any time of the year when rainstorms are likely. Actions should be taken when a rainstorm is imminent or forecasted and actions to be taken during or after rainstorms are summarized in Appendix A2 of ProPECC Note PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events, especially for areas located near steep slopes.	✓
	• Bentonite slurries used in piling or slurry walling should be reconditioned and reused wherever practicable. Temporary enclosed storage locations should be provided on-site for any unused bentonite that needs to be transported away after all the related construction activities are completed. The requirements in ProPECC Note PN 1/94 should be adhered to in the handling and disposal of bentonite slurries.	N/A No bentonite slurries are used in this project.
	Barging facilities and activities	
	Recommendations for good site practices during operation of the proposed barging point include:	
	• 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 No barging facilities in this project.
	• Loading of barges and hoppers should be controlled to prevent splashing of material into the surrounding water. Barges or hoppers should not be filled to a level that will cause the overflow of materials or polluted water during loading or transportation;	N/A No barging facilities in this project.
	• All hopper barges should be fitted with tight fitting seals to their bottom openings to prevent leakage of material; and	N/A No barging facilities in this project.
	• 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 No barging facilities in this project.
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**	
	• 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

EM&A Ref.	Recommendation Measures	Implementation Stage L2
Waste Management Implications (Construction)		
6.1 & 10.7.1	**Good Site Practices**	
	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	✓
	• 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 & 10.7.1	**Waste Reduction Measures**	
	Recommendations to achieve waste reduction include:	
	• 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	**Inert and Non-inert C&D Materials**	
	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.	✓
	• The surplus inert C&D material will be disposed of at the Government's PFRFs for beneficial use by other projects in Hong Kong.	✓
	• Liaison with the CEDD Public Fill Committee (PFC) on the allocation of space for disposal of the inert C&D materials at PFRF is underway. No construction work is allowed to proceed until all issues on management of inert C&D materials have been resolved and all relevant arrangements have been endorsed by the relevant authorities including PFC and EPD.	✓
	• The C&D materials generated from general site clearance should be sorted on site to segregate any inert materials for reuse or disposal of at PFRFs whereas the non-inert materials will be disposed of at the designated landfill site.	✓

EM&A Ref.	Recommendation Measures	Implementation Stage L2
	• 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	**Chemical Waste** • 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	**General Refuse** 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.	Obs
Land Contamination (Construction)		
7.1 & 10.8.1	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: • To minimize the chance for construction workers to come into contact with any contaminated materials, bulk earth-moving excavation equipment should be employed;	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.

EM&A Ref.	Recommendation Measures	Implementation Stage L2
	• 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;	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.
	• Stockpiling of contaminated excavated materials on site should be avoided as far as possible;	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.
	• The use of contaminated soil for landscaping purpose should be avoided unless pre-treatment was carried out;	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.
	• Vehicles containing any contaminated excavated materials should be suitably covered to reduce dust emissions and/or release of contaminated wastewater;	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.
	• Truck bodies and tailgates should be sealed to stop any discharge;	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.
	• 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 TST Fire Station is out of this project boundary, no mitigation measure is required.
	• Speed control for trucks carrying contaminated materials should be exercised;	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.
	• 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 TST Fire Station is out of this project boundary, no mitigation measure is required.

EM&A Ref.	Recommendation Measures	Implementation Stage L2
	• Maintain records of waste generation and disposal quantities and disposal arrangements.	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.
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 No trees under this Contract.
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 Compensatory tree planting is being reviewed.
Table 9.1 & 10.8 (CM3)	Buffer trees for screening purposes to soften the hard architectural and engineering structures and facilities.	N/A Roof garden is designed to be built, but it has not been completed yet.
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 Climbing or weeping plants are designed to be planted, but proposal is being reviewed for the planting location.
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 Roof garden is designed to be built, but it has not been completed yet.
Table 9.1 & 10.8 (CM6)	Sensitive streetscape design should be incorporated along all new roads and streets.	N/A Greening along the seafront is proposed, but it has not been completed yet.
Table 9.1 & 10.8 (CM7)	Structure, ornamental planting shall be provided along amenity strips to enhance the landscape quality.	N/A Gardens are designed to be built, but it has not been completed yet.

EM&A Ref.	Recommendation Measures	Implementation Stage L2
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 Roof garden is designed to be built, but it has not been completed yet.
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 No marine facilities for this project.
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 No landscape treatments during this stage.
Table 9.2 & 10.9 (MCP3)	Adoption of light colour for the temporary ventilation shafts for the basement during the transition period.	N/A No ventilation shafts for this project.
Table 9.2 & 10.9 (MCP4)	Control of night time lighting	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 No temporary open areas for this project.

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

K. 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 month are summarised in the **Table K-1** below respectively.

Table K-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 month	0	0	0
From 1 March 2016 to end of the reporting month (May 2025)	62	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

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

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Contents

Executive summary

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 Project Proponent is the West Kowloon Cultural District Authority (WKCDA). 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/A (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.

This Monthly EM&A Report presents the monitoring works at Zones 2A, 2B & 2C from 01 to 31 May 2025.

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 Construction Noise in this reporting month.

Implementation of Mitigation Measures

Construction phase weekly site inspections were carried out on 02, 07, 15, 21 and 29 May 2025 for Excavation and Lateral Support Works in Zones 2A, 2B & 2C to confirm the implementation measures undertaken by the Contractors in the reporting month. The outcomes are presented in Section 4 and the status of implementation of mitigation measures in the site is shown in **Appendix J**.

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

Record of Complaints

No environmental complaints were recorded in the reporting month.

Record of Notifications of Summons and Successful Prosecutions

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

Future Key Issues

The major site works for Zones 2A, 2B & 2C scheduled to be commissioned in the coming month include:

- Bored Pile, Pipe Pile and King Post Works
- Drainage Diversion Works

Potential environmental impacts due to the construction activities, including air, noise, water quality, waste, landscape and visual, will be monitored or reviewed. The recommended environmental mitigation measures shall be implemented on site and regular inspections as required will be carried out to ensure that the environmental conditions are acceptable.

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 purpose of the development in Zone 2A and Zone 2B & 2C is to reserve for Integrated Basement (IB) and Underground Road (UR). The Zone 2A construction activities involve the foundation, excavation and lateral support (ELS) works, road works, drainage diversion works, and temporary car parking. The Zone 2B & 2C construction activities involve the piling works. 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/A (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 Monthly EM&A Report is prepared in accordance with the Condition 3.4 of the Environmental Permit No. EP-453/2013/A. This Monthly EM&A Report presents the monitoring works at 2A, 2B & 2C from 01 to 31 May 2025. 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 Construction Works Status in the Reporting Period

During the reporting period, construction works at Zones 2A, 2B & 2C undertaken include:

- Bored Pile, Pipe Pile and King Post Works
- Drainage Diversion Works

The Construction Works Programme of Zones 2A, 2B & 2C is provided in **Appendix B**. A layout plan of the Project is provided in **Figure 1**. Please refer to **Table 4.3** on the status of the environmental licenses.

1.4 Summary of EM&A Requirements and Alternative Monitoring Locations

1.4.1 EM&A Requirements

The EM&A programme requires environmental monitoring of air quality, noise, landscape and visual as specified in the approved EM&A Manual.

A summary of impact EM&A requirements is presented in **Table 1.1**.

Table 1.1: Summary of Impact EM&A Requirements

Parameters	Descriptions	Locations	Frequencies
Air Quality	24-Hours TSP	AM3-The Victoria Towers Tower 1	At least once every 6 days
	1-Hour TSP	AM3-The Victoria Towers Tower 1	At least 3 times every 6 days
	24-Hours TSP	AM4-Canton Road Government Primary School	At least once every 6 days
	1-Hour TSP	AM4-Canton Road Government Primary School	At least 3 times every 6 days
	24-Hours TSP	AM5-Topside Developments at West Kowloon Terminus Site	At least once every 6 days
	1-Hour TSP	AM5-Topside Developments at West Kowloon Terminus Site	At least 3 times every 6 days
Noise	Leq, 30 minutes	NM2-The Arch, Sun Tower	Weekly
	Leq, 30 minutes	NM3-The Victoria Towers Tower 1	Weekly
	Leq, 30 minutes	NM4-Canton Road Government Primary School	Weekly
	Leq, 30 minutes	NM5-Development next to Austin Station	Weekly
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

1.4.2 Alternative Monitoring Locations

The EM&A programme for the Project should require 5 noise monitoring station and 5 air 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 (International Commerce Centre), AM2 (The Harbourside Tower 1) for air monitoring, and NM1 (The Harbourside Tower 1) for noise monitoring.

In the context of the construction activities in Zone 2A and Zone 2B & 2C, all other monitoring locations including AM3 (The Victoria Towers Tower 1), AM4 (Canton Road Government Primary School), and AM5 (Topside Developments at West Kowloon Terminus Site) for air monitoring; and NM2 (The Arch, Sun Tower), NM3 (The Victoria Towers Tower 1), NM4 (Canton Road Government Primary School) and NM5 (Development next to Austin Station) for noise monitoring,

have been taken into account. However, access to all these originally designated monitoring stations was declined as described below point-by-point.

The Arch management office and owners' committee have formally declined the proposal of setting up noise monitoring instrument on its premises at the podium level of Sun Tower (NM2) on 24 July 2014. Thus, alternative noise monitoring location was identified at the ground floor in front of The Arch – Sun Tower (NM2A), which is at the same location as stated in the EM&A Manual for consistency. No management approval is required at the ground floor for conducting the noise monitoring. This alternative air monitoring location was approved by EPD on 29 September 2020.

The Victoria Towers management office formally declined the proposal of setting up air quality and noise monitoring instruments on its premises at the podium area of Tower 1 (AM3/NM3) on 16 June 2020. Alternative air monitoring location was identified at ground floor at the Northeast corner of West Kowloon Station's station box (AM3A), in the same direction to the area of major construction site activities in Zone 2A. This alternative air monitoring location was approved by EPD on 29 September 2020. An alternative noise monitoring location was identified at the ground floor in front of the Xiqu Centre (NM3A), which is 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. No management approval is required at the ground floor for conducting the noise monitoring. This alternative air monitoring location was approved by EPD on 29 September 2020.

Canton Road Government Primary School formally declined the proposal of setting up air quality and noise monitoring instruments on its premise at the podium level (AM4/NM4) on 16 June 2020. Alternative air monitoring location was identified at ground floor at the Southeast corner of West Kowloon Station's station box (AM4A), in same direction to the area of major construction site activities in Zone 2A. This alternative air monitoring location was approved by EPD on 29 September 2020. An alternative noise monitoring location was identified at the ground floor next to Tsim Sha Tsui Fire Station (NM4A), which is 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. No management approval is required at the ground floor for conducting the noise monitoring. This alternative air monitoring location was approved by EPD on 29 September 2020.

MTR also formally declined the access to the designated AM5 location (topside developments at West Kowloon Terminus Site) on 15 July 2020. Alternative air monitoring location was identified at ground floor at the North of West Kowloon Station's station box (AM5A), in same direction to the area of major construction site activities in Zone 2A. This alternative air monitoring location was approved by EPD on 29 September 2020.

Grand Austin property management office formally declined our proposal of setting up noise monitoring instrument on its premises at the podium level (NM5) on 10 July 2020. Alternative noise monitoring location was identified at the Pedestrian road (ground floor) outside West Kowloon Station (NM5A), which is 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. No management approval is required at the ground floor for conducting the noise monitoring. This alternative air monitoring location was approved by EPD on 29 September 2020.

The Environmental Quality Performance Limits for air quality and noise are shown in **Appendix C**.

The Event and Action Plan for air quality, construction noise, and landscape and visual are shown in **Appendix D**.

The EM&A programme followed the recommended mitigation measures in the EM&A Manual. The EM&A requirements as well as the summary of implementation status of the environmental mitigation measures are provided in **Appendix J**.

2 Impact Monitoring Methodology

2.1 Introduction

Air quality and noise monitoring methodology, including the monitoring locations, equipment used, parameters, frequency and duration etc., are described in this Section. The environmental monitoring schedules for the reporting period and the tentative monitoring Schedule for the coming month are provided in **Appendix E**.

The relevant EM&A monitoring requirements and details for landscape and audit impact, are also presented in this Section.

2.2 Air Quality

2.2.1 Monitoring Parameters, Frequency and Duration

Table 2.1 summarizes the monitoring parameters, frequency and duration of the TSP monitoring.

Table 2.1: Air Quality Monitoring Parameters, Frequency and Duration

Parameter	Frequency	Duration
24-hour TSP	At least once in every six-days	24 hours
1-hour TSP	At least 3 times every six-days	60 minutes

2.2.2 Monitoring Locations

Monitoring stations and locations are given in **Table 2.2** and shown in **Figure 1**.

Table 2.2: Air Quality Monitoring Station

Monitoring Station	Location Description
AM3A	Northeast corner of West Kowloon Station's station box (G/F)
AM4A	Southeast corner of West Kowloon Station's station box (G/F)
AM5A	North of West Kowloon Station's station box (G/F)

2.2.3 Monitoring Equipment

Continuous 24-hour TSP air quality monitoring was conducted using High Volume Sampler (HVS) (Model: TE-5170) located at the designated monitoring station. The HVS meets all the requirements stated in of the EM&A Manual. Portable direct reading dust meter was used to carry out the 1-hour TSP monitoring. **Table 2.3** summarizes the equipment used in the impact air quality monitoring. Copies of the calibration certificates for the HVS, calibration kit and portable dust meters are attached in **Appendix F**.

Table 2.3: TSP Monitoring Equipment

Equipment	Model
24-hour TSP monitoring	
High Volume Sampler	TE-5170 (Serial No.: 4340; 3998; 4344)

Equipment	Model
Calibrator	TE-5025A (Orifice I.D.: 4088)
1-hour TSP monitoring	
Portable direct reading dust meter	Sibata-LD-3B (Serial No.: 276004, 336338, 476672)

Calibration of the HVS (five-point calibration) using Calibration Kit was carried out every two months. The HVS calibration orifice will be calibrated annually. Calibration certificate of the TE-5025A Calibration Kit and the HVS are provided in **Appendix F**.

The 1-hour TSP monitoring should be determined periodically (e.g. annually) by the HVS to check the validity and accuracy of the results measured by direct reading method.

2.2.4 Monitoring Methodology

24-hour TSP Monitoring

Installation

The HVS was installed at the site boundary. The following criteria were considered in the installation of the HVS.

- A horizontal platform with appropriate support to secure the sampler against gusty wind was provided.
- The distance between the HVS and any obstacles, such as buildings, was at least twice the height that the obstacle protrudes above the HVS.
- A minimum of 2 metres separation from walls, parapets and penthouse was required for rooftop sampler.
- A minimum of 2 metres separation from any supporting structure, measured horizontally was required.
- No furnace or incinerator flues or building vent were nearby.
- Airflow around the sampler was unrestricted.
- The sampler has been more than 20 metres from any drip line.
- Permission was obtained to set up the sampler and to obtain access to the monitoring station.
- A secured supply of electricity is needed to operate the sampler.

Preparation of Filter Papers

- Glass fibre filters were labelled and sufficient filters that were clean and without pinholes were selected.
- The filters used are specified to have a minimum collection efficiency of 99 percent for 0.3 μm (DOP) particles.
- All filters were equilibrated in the conditioning environment for 24 hours before weighing. The conditioning environment temperature was around 25 °C and not variable by more than ±3 °C with relative humidity (RH) < 50% and was not variable by more than ±5 %. A convenient working RH was 40%. All preparation of filters was done by Hong Kong Laboratory Accreditation Scheme (HOKLAS) accredited laboratory.

Field Monitoring Procedures

- The power supply was checked to ensure the HVS works properly.
- The filter holder and the area surrounding the filter were cleaned.

- The filter holder was removed by loosening the four bolts and a new filter, with stamped number upward, on a supporting screen was aligned carefully.
- The filter was properly aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter.
- The swing bolts were fastened to hold the filter holder down to the frame. The pressure applied should be sufficient to avoid air leakage at the edges.
- The shelter lid was closed and was secured with the aluminium strip.
- The HVS was warmed-up for about 5 minutes to establish run-temperature conditions.
- A new flow rate record sheet was set into the flow recorder.
- The flow rate of the HVS was checked and adjusted at around 1.3 m^3/min. The range specified in the EM&A Manual was between 0.6-1.7 m^3/min.
- The programmable timer was set for a sampling period of 24 hours, and the starting time, weather condition and the filter number were recorded.
- The initial elapsed time was recorded.
- At the end of sampling, the sampled filter was removed carefully and folded in half length so that only surfaces with collected particulate matter were in contact.
- It was then placed in a clean plastic envelope and sealed.
- All monitoring information was recorded on a standard data sheet.
- Filters were sent to a Hong Kong Laboratory Accreditation Scheme (HOKLAS) accredited laboratory for analysis.

Maintenance and Calibration

- The HVS and its accessories are maintained in good working condition, such as replacing motor brushes routinely and checking electrical wiring to ensure a continuous power supply.
- HVSs were calibrated upon installation and thereafter at bi-monthly intervals. The calibration kits were calibrated annually.
- Calibration records for HVS and calibration kit are shown in **Appendix F**.

1-hour TSP Monitoring

Field Monitoring

The measuring procedures of the 1-hour dust meter are in accordance with the Manufacturer's Instruction Manual as follows:

- Turn the power on.
- Close the air collecting opening cover.
- Push the "TIME SETTING" switch to [BG].
- Push "START/STOP" switch to perform background measurement for 6 seconds.
- Turn the knob at SENSI ADJ position to insert the light scattering plate.
- Leave the equipment for 1 minute upon "SPAN CHECK" is indicated in the display.
- Push "START/STOP" switch to perform automatic sensitivity adjustment. This measurement takes 1 minute.
- Pull out the knob and return it to MEASURE position.
- Setting time period of 1 hour for the 1-hour TSP measurement.
- Push "START/STOP" to start the 1-hour TSP measurement.
- Regular checking of the time period setting to ensure monitoring time of 1 hour.

Maintenance and Calibration

- The 1-hour dust meter would be checked at 3-month intervals and calibrated at 1-year intervals throughout all stages of the air quality monitoring.
- Calibration records for direct dust meters are shown in **Appendix F**.

Weather Condition

- Meteorological data extracted from Hong Kong Observatory for the reporting month is provided in **Appendix H**.

2.3 Noise

2.3.1 Monitoring Parameters, Frequency and Duration

Table 2.4 summarizes the monitoring parameters, frequency and duration of noise monitoring. The noise in A-weighted levels L_{eq}, L_{10} and L_{90} are recorded in a 30-minute interval between 0700 and 1900 hours.

Table 2.4: Noise Monitoring Parameters, Period and Frequency

Time Period	Parameters	Frequency
Daytime on normal weekdays (0700-1900 hours)	L_{eq}(30 min), L_{90}(30 min) & L_{10}(30 min)	Once every week

Note: *70 dB(A) for schools and 65 dB(A) during school examination periods.
If works are to be carried out during restricted hours, the conditions stipulated in the Construction Noise Permit (CNP) issued by the Noise Control Authority have to be followed.

2.3.2 Monitoring Location

Noise monitoring stations and locations are given in **Table 2.5** and shown in **Figure 1**.

Table 2.5: Noise Monitoring Station

Monitoring Station	Location
NM2A	The Arch – Sun Tower (G/F)
NM3A	Xiqu Centre (G/F)
NM4A	Next to Tsim Sha Tsui Fire Station (G/F)
NM5A	Pedestrian road (G/F) outside West Kowloon Station

2.3.3 Monitoring Equipment

Integrating Sound Level Meter was used for noise monitoring. It was a Type 1 sound level meter capable of giving a continuous readout of the noise level readings including equivalent continuous sound pressure level (L_{Aeq}) and percentile sound pressure level (L_x). They comply with International Electrotechnical Commission Publications 651:1979 (Type 1) and 804:1985 (Type 1). **Table 2.6** summarizes the noise monitoring equipment model being used.

Table 2.6: Noise Monitoring Equipment

Equipment Model	
Integrating Sound Level Meter	**Calibrator**
AWA5661 (Serial No.: 341483)	Quest QC-10 (Serial No.: Q19010183)

2.3.4 Monitoring Methodology

Field Monitoring

- The microphone of the Sound Level Meter was set at least 1.2 m above the ground.
- Free Field measurement was made at NM5A monitoring location.
- The battery condition was checked to ensure the correct functioning of the meter.
- Parameters such as frequency weighting, the time weighting and the measurement time were set as follows:
  - frequency weighting: A
  - time weighting: Fast
  - time measurement: 30 minutes intervals (between 0700-1900 on normal weekdays)
- Prior to and after each noise measurement, the meter was calibrated using a Calibrator for 94 dB at 1 kHz. If the difference in the calibration level before and after measurement was more than 1 dB, the measurement would be considered invalid and has to be repeated after re-calibration or repair of the equipment.
- During the monitoring period, the L_{eq}, L_{10} and L_{90} were recorded. In addition, any site observations and noise sources were recorded on a standard record sheet.
- A correction of +3dB(A) was made to the free field measurements.

Maintenance and Calibration

- The microphone head of the sound level meter and calibrator is cleaned with soft cloth at quarterly intervals.
- The sound level meter and calibrator are sent to the supplier or HOKLAS laboratory to check and calibrate at yearly intervals.
- Calibration records are shown in **Appendix F**.

Weather Condition

- Meteorological data extracted from Hong Kong Observatory for the reporting month is provided in **Appendix H**.

2.4 Landscape and Visual

2.4.1 Monitoring Program

Table 2.7 details the monitoring program (as proposed in the WKCD EIA report) for landscape and visual impact during the construction phase.

Table 2.7: Monitoring Program for Landscape and Visual Impact during Construction Phase

Stage	Monitoring Task	Frequency	Report	Approval
Construction	Monitor implementation of proposed mitigation measures during the construction stage.	Bi-weekly	ET to report on Contractor's compliance	Counter-signed by IEC

During the landscape and visual impact monitoring, any changes in relation to the landscape and visual amenity should be monitored with reference to the baseline conditions of the site. In addition, mitigation measures were proposed in the WKCD EIA report to minimise the landscape and visual impacts during the construction phase. The proposed mitigation measures as shown in Table 9.1 and Table 9.2 of the EM&A Manual should be checked for proper implementation.

3 Monitoring Results

3.1 Impact Monitoring

Air quality, noise and landscape and visual impact monitoring was undertaken in compliance with the EM&A Manual during the reporting month.

3.2 Air Quality Monitoring

3.2.1 1-hour TSP

Results of 1-hour TSP are summarised in **Table 3.1**. Graphical plots of the monitoring results are shown in **Appendix G**.

Table 3.1: Summary of 1-hour TSP monitoring results

Monitoring Station	Monitoring Date	Start Time	1-hour TSP (µg/m3)			Range (µg/m3)	Action Level (µg/m3)	Limit Level (µg/m3)
			1st Result	2nd Result	3rd Result			
AM3A	02-May-25	08:01	56	58	58	32-58	280.4	500
	08-May-25	14:03	42	50	44			
	14-May-25	08:00	40	35	35			
	20-May-25	14:05	35	38	32			
	26-May-25	08:07	52	58	52			
	28-May-25	14:09	45	44	40			
AM4A	02-May-25	08:09	54	56	58	35-58	278.5	500
	08-May-25	14:11	41	47	41			
	14-May-25	08:08	43	41	39			
	20-May-25	14:13	35	38	35			
	26-May-25	08:15	53	52	52			
	28-May-25	14:17	42	45	47			
AM5A	02-May-25	08:24	56	58	53	34-58	275.4	500
	08-May-25	14:28	41	48	49			
	14-May-25	08:23	39	41	39			
	20-May-25	14:30	35	34	40			
	26-May-25	08:30	51	53	54			
	28-May-25	14:34	41	39	40			

3.2.2 24-hour TSP

Results of 24-hour TSP are summarised in **Table 3.2**. Graphical plots of the monitoring results are shown in **Appendix G**.

Table 3.2: Summary of 24-hour TSP monitoring results

Monitoring Station	Monitoring Date	Start Time	Monitoring Results (μg/m^3)	Range (μg/m^3)	Action Level (μg/m^3)	Limit Level (μg/m^3)
AM3A	02-May-25	10:00	52	31-52	152.4	260
	08-May-25	10:00	44			
	14-May-25	10:00	31			
	20-May-25	10:00	33			
	26-May-25	10:00	51			
	28-May-25	10:00	41			
AM4A	02-May-25	10:00	52	33-52	152.6	260
	08-May-25	10:00	42			
	14-May-25	10:00	35			
	20-May-25	10:00	33			
	26-May-25	10:00	51			
	28-May-25	10:00	40			
AM5A	02-May-25	10:00	53	33-53	141.1	260
	08-May-25	10:00	42			
	14-May-25	10:00	35			
	20-May-25	10:00	33			
	26-May-25	10:00	48			
	28-May-25	10:00	38			

No exceedance of 1-hour and 24-hour TSP (Action or Limit Level) was recorded in the reporting period.

3.3 Noise Monitoring

The construction noise monitoring results are summarized in **Table 3.3**. Graphical plots of the monitoring data and the station set-up as façade and free-field measurements are shown in **Appendix G**.

Table 3.3: Summary of noise monitoring results during normal weekdays

Monitoring Stations	Monitoring Date	Start Time	End Time	L_{eq} (30 mins) dB(A)	Limit Level for L_{eq} (dB(A))
NM2A	02-May-25	07:00	07:25	62.7	75
	08-May-25	14:00	14:25	62.9	
	14-May-25	07:00	07:25	62.6	
	20-May-25	14:00	14:25	62.7	
	26-May-25	07:01	07:26	62.9	
	28-May-25	14:00	14:25	62.7	
NM3A	02-May-25	08:30	08:55	60.7	75
	08-May-25	15:21	15:46	60.9	
	14-May-25	08:30	08:55	60.5	
	20-May-25	15:25	15:50	60.4	
	26-May-25	08:40	09:05	61.2	
	28-May-25	15:25	15:50	60.9	
NM4A	02-May-25	10:35	11:00	58.3	70/65^#
	08-May-25	15:56	16:21	58.3	

Monitoring Stations	Monitoring Date	Start Time	End Time	L_{eq} (30 mins) dB(A)	Limit Level for L_{eq} (dB(A))
	14-May-25	10:35	11:00	58.3	
	20-May-25	16:00	16:25	58.5	
	26-May-25	10:45	11:10	58.3	
	28-May-25	16:00	16:25	58.4	
NM5A*	02-May-25	07:50	08:15	63.4	75
	08-May-25	14:40	15:05	63.1	
	14-May-25	07:50	08:15	63.5	
	20-May-25	14:38	15:12	63.7	
	26-May-25	07:51	08:25	63.8	
	28-May-25	14:38	15:12	63.3	

Remarks:
* +3dB (A) correction was applied to free-field measurement.
^ 70 dB(A) for schools and 65 dB(A) during school examination periods.
# No school examination was conducted during reporting period.

No exceedance of Construction Noise (Action or Limit Level) was recorded in the reporting month

Construction Noise Permits for the works carried out during restricted hours were obtained and listed in **Table 4.3**.

3.4 Landscape and Visual Impact

Landscape and visual impact inspections were conducted as part of the weekly site inspections on 7 and 21 May 2025 for Zones 2A, 2B & 2C during the reporting month. As reviewed by the registered Landscape Architect, no adverse comment on landscape and visual aspects was made during these inspections.

The landscape and visual mitigation measures were implemented during the reporting period. The summary of implementation status of the environmental mitigation measures is provided in **Appendix J**.

4 Site Environmental Management

4.1 Site Inspection

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

Construction phase weekly site inspections were carried out on 02, 07, 15, 21 and 29 May 2025 at Zones 2A, 2B & 2C. The joint site inspection with IEC, ET, ER and Contractor for Zones 2A, 2B & 2C was held on 15 May 2025. All observations have been recorded in the site inspection checklist and passed to the Contractor together with the appropriate recommended mitigation measures where necessary.

The key observations from the site inspections and associated recommendations are summarized in **Table 4.**.

Table 4.1: Summary of Site Inspections and Recommendations for Zones 2A, 2B & 2C

Inspection Date	Parameter	Observation / Recommendation	Contactor's Responses / Action(s) Undertaken	Close-out (Date)
02-May-25	Waste Management	The contractor was reminded to clean up the drip tray regularly to avoid overflow and maintain sufficiency of the drip tray capacity.	Stagnant water was removed to resume the function of the drip tray.	03-May-25
07-May-25	Waste Management	The contractor was reminded to have better housekeeping and dispose of general refuse frequently at designated areas and to avoid accumulation on site which may lead to hygiene problems.	General refuse was removed.	09-May-25
15-May-25	Air Quality	The contractor was reminded that NRMM labels shall be provided for all regulated machinery on site, using either a green or yellow coloured label.	Colour of NRMM label was corrected.	16-May-25
21-May-25	Water Quality	Bags of cement shall be properly covered when not in use. The contractor was reminded to clean up the deposited silt.	Cement material was covered. The deposited slit was cleaned.	23-May-25

Inspection Date	Parameter	Observation / Recommendation	Contactor's Responses / Action(s) Undertaken	Close-out (Date)
29-May-25	Waste Management	The contractor was reminded to have better housekeeping and dispose of general refuse frequently at designated areas and to avoid accumulation on site which may lead to hygiene problems.	General refuse was collected and disposed.	30-May-25

4.2 Advice on the Solid and Liquid Waste Management Status

The Contractors have been registered as a chemical waste producer for the Project. Construction and demolition (C&D) material sorting will be carried out on site. A sufficient number of receptacles were available for general refuse collection.

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

As advised by the Zones 2A, 2B & 2C Contractor, 4992.41 tonne and 0.0 tonne of inert C&D material were disposed of as public fill to Tseung Kwan O Area 137 Public Fill and Tuen Mun Area 38 Public Fill respectively, while 37.06 tonne of general refuse were disposed of at SENT landfill. 6.09 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 month. 0.00 tonne of inert C&D material were reused on site. 0.0 tonne of inert C&D material were reused in other projects and 0.0 tonne of inert C&D material was imported for reuse at site in the reporting month. 0.00 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 period.

The cumulative waste generation records for Zones 2A, 2B & 2C are shown in **Appendix I**.

4.3 Status of Environmental Licenses and Permits

The environmental permits, licenses, and/or notifications on environmental protection for this Project which were valid during the period are summarised in **Table 4.3**.

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

The environmental permits, licenses, and/or notifications on environmental protection for this Project which were valid during the period are summarised in **Table 4.**.

Table 4.3: Status of Environmental Submissions, Licenses and Permits for Zones 2A, 2B & 2C

Permit / License No. / Notification / Reference No.	Valid Period		Status	Remarks
	From	To		
Chemical Waste Producer Registration				
WPN5117-256-V1011-40	11-Jul-24	--	Valid	--
Billing Account Construction Waste Disposal				
7051739	01-Aug-24	--	Account Active	--
Construction Noise Permit				
GW-RE0383-25	08-Apr-25	30-Sep-25	Valid	-

Permit / License No. / Notification / Reference No.	Valid Period		Status	Remarks
	From	To		
PP-RE0010-25	07-Apr-25	30-Sep-25	Valid	
Wastewater Discharge License				
WT00045374-2024	24-Oct-24	31-Oct-2029	Valid	--
Notification under Air Pollution Control (Construction Dust) Regulation				
10006790	11-Jul-24	--	Notified	--

4.4 Recommended Mitigation Measures

The EM&A programme followed the recommended mitigation measures in the EM&A Manual. The EM&A requirements as well as the summary of implementation status of the environmental mitigation measures are provided in **Appendix J**. In particular, the following mitigation measures were brought to attention during the site inspections:

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

Air Quality

- NRMM labels shall be provided for all regulated machinery on site, using either a green or yellow coloured label.

Waste Management

- Better housekeeping shall be strengthened to avoid accumulation on site which may lead to hygiene problem.
- Drip tray shall be provided to avoid overflow.

Water Quality

- The deposited silt shall be cleaned up.
- Bags of cement shall be properly covered when not in use.

5 Compliance with Environmental Permit

The status of the required submission under the EP during the reporting period is summarized in **Table 5.1**.

Table 5.1: Status of Submissions under the Environmental Permit

EP Condition	Submission	Submission Date
Condition 3.4	Monthly EM&A Report for April 2025	14 May 2025

6 Report in Non-compliance, Complaints, Notification of Summons and Successful Prosecutions

6.1 Record on Non-compliance 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 Construction Noise in this reporting month.

6.2 Record on Environmental Complaints Received

No environmental complaint was received in the reporting month.

The cumulative statistics on complaints were provided in **Appendix K**.

6.3 Record on Notifications of Summons and Successful Prosecution

No notifications of summons or successful prosecutions were received this month. The cumulative statistics on notifications of summons and successful prosecutions were provided in **Appendix K**.

7 Future Key Issues

7.1 Construction Works for the Coming Month(s)

The major site works for Zones 2A, 2B & 2C scheduled to be commissioned in the coming month include:

- Bored Pile, Pipe Pile and King Post Works
- Drainage Diversion Works

7.2 Key Issues for the Coming Month

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

Key issues to be considered in the coming month include:

- Generation of dust from construction works;
- Noise impact from piling works;
- Generation of site surface runoffs and wastewater from activities on-site;
- Management of stockpiles and slopes, particularly on rainy days;
- Sorting, recycling, storage and disposal of general refuse and construction waste; and
- Management of chemicals and avoidance of oil spillage on-site.

7.3 Monitoring Schedule for the Coming Month

The environmental site inspection and environmental monitoring will be continued in the coming month. The tentative monitoring schedule for the coming month is shown in the **Appendix E**.

8 Conclusions and Recommendations

8.1 Conclusions

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 Projects is underway. In particular, the 1-hour TSP, 24-hour TSP, Noise Level (as L_{eq}, 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 Construction Noise in this reporting month.

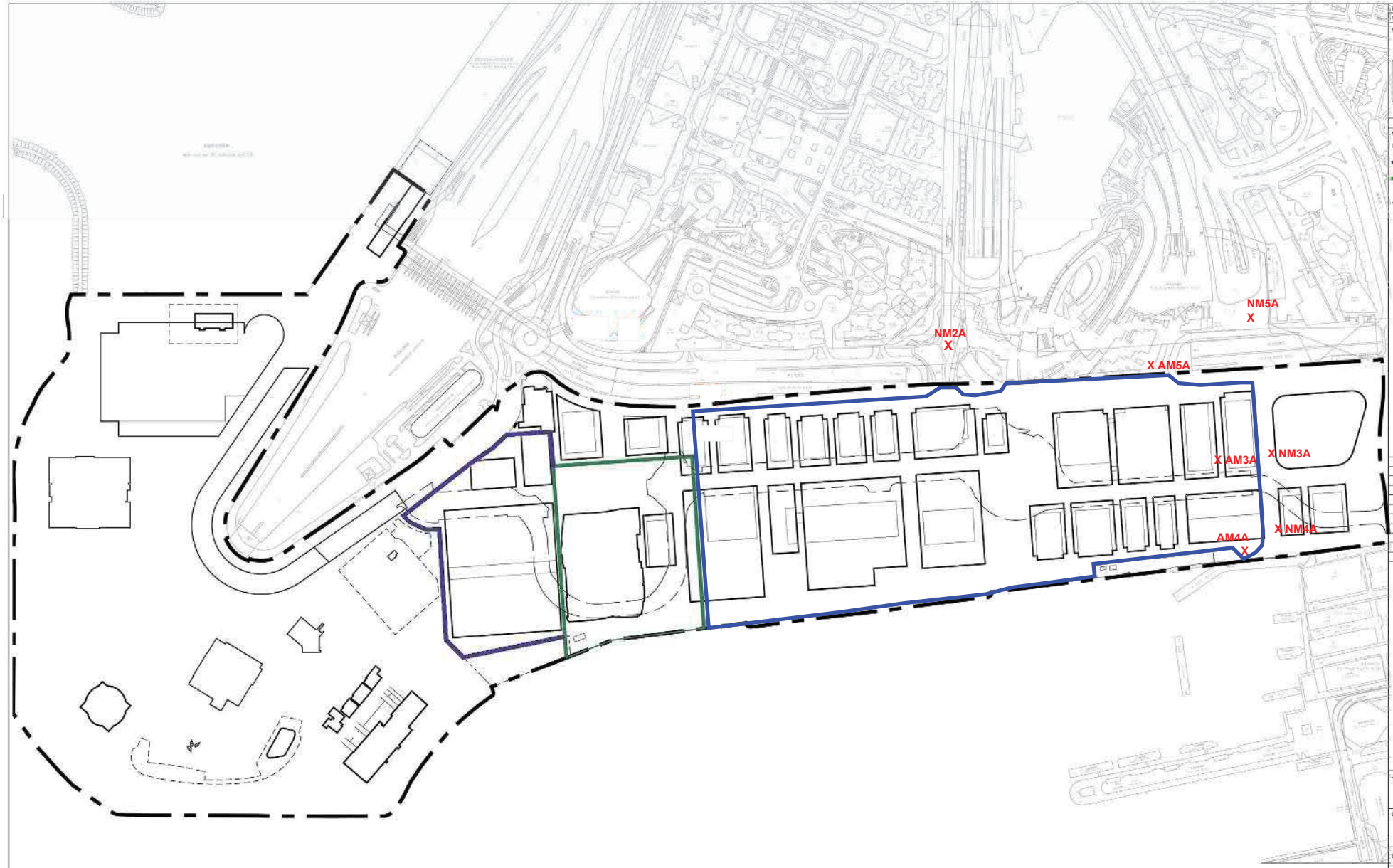
No environmental complaints were recorded in the reporting month. No notifications of summons or successful prosecutions were received during the reporting month.

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

8.2 Recommendations

Potential environmental impacts due to the construction activities, including air quality, noise, water quality, waste, landscape and visual, will be monitored or reviewed. The recommended environmental mitigation measures shall be implemented on site and regular inspections as required will be carried out to ensure that the environmental conditions are acceptable.

Figure 1 Site Layout Plan and Monitoring Stations



B.D. REF:

H.S.D. REF:

KEY PLAN

KEY PLAN

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

JOB TITLE: **DEVELOPMENT AT WEST KOWLOON CULTURAL DISTRICT**

DRAWING TITLE: **SITE LAYOUT PLAN AND MONITORING STATIONS**

SCALE:	1:100	PRINTED:	A1
CHECKED:		DATE:	
APPROVED:		DATE:	
DRAWN:	TY	DATE:	16-05-2025

CONTRACT NO.: -

DRAWING NO.: **FIGURE 1**

REV.: XX

CAD REF NAME: XXXXX-AUT-PHS DWG P60-L080-0080-XXX.dwg

AUTHORITY

westKowloon
西九文化區

A1 (841mm x 594mm) Sheet Size

Appendices

A. Project Organisation
B. Tentative Construction Programme
C. Action and Limit Levels for Construction Phase
D. Event and Action Plan for Air Quality, Noise, Landscape and Visual Impact
E. Monitoring Schedule
F. Calibration Certifications
G. Graphical Plots of the Monitoring Results
H. Meteorological Data Extracted from Hong Kong Observatory
I. Waste Flow table
J. Environmental Mitigation Measures – Implementation Status
K. Cumulative Statistics on Complaints, Notifications of Summons and Successful Prosecutions

A. Project Organisation

Project Organization

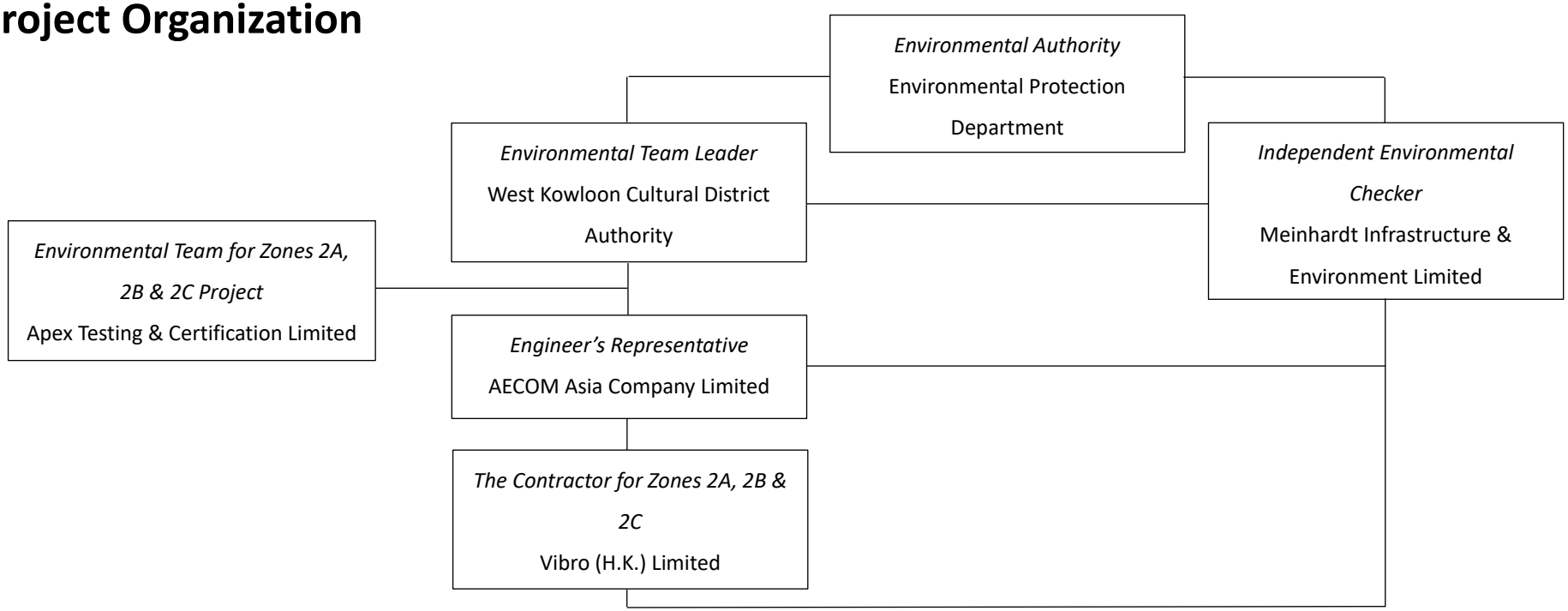


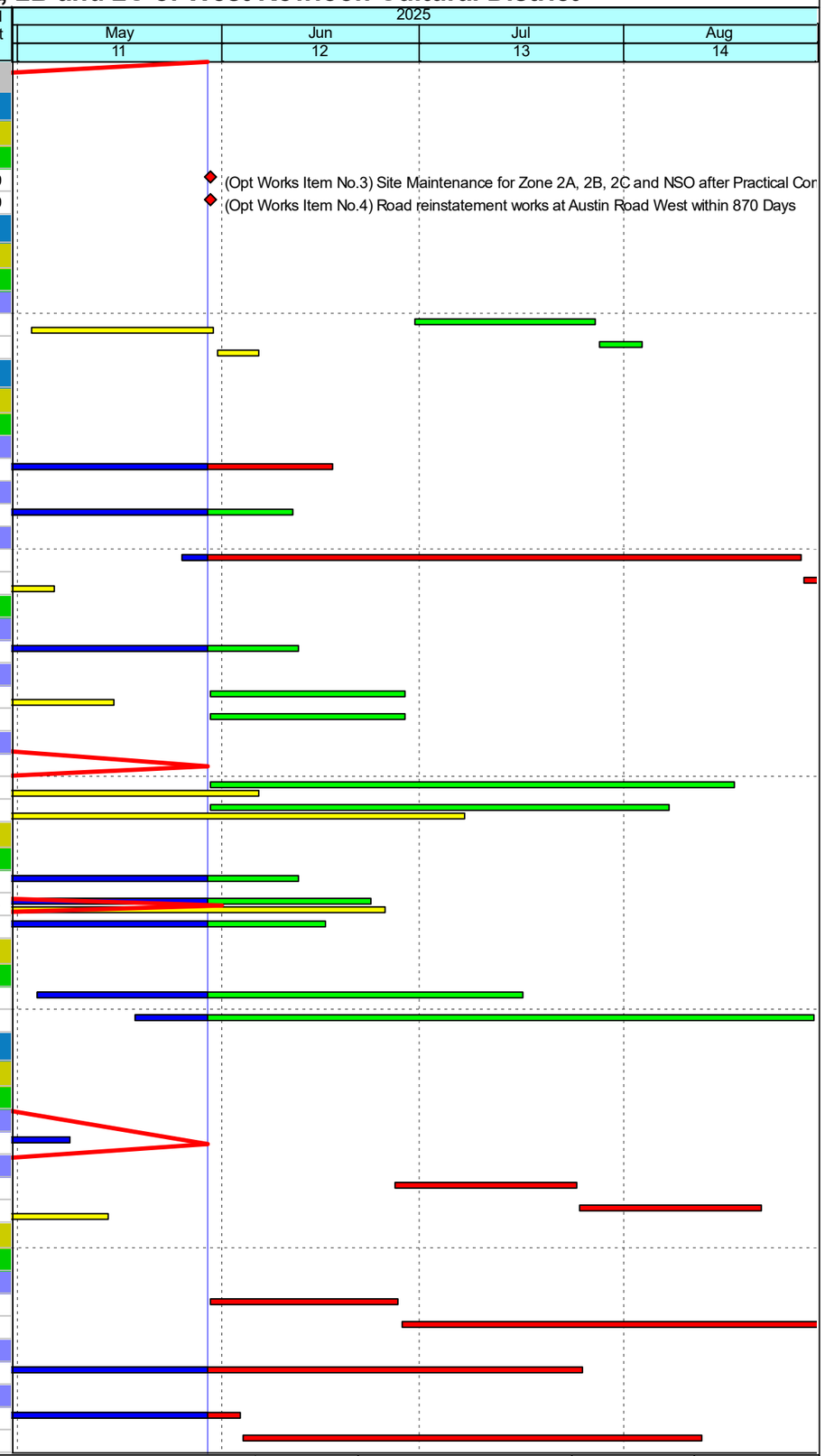
Table A-1: Contract Information

Company Name	Role	Name	Telephone	Email
West Kowloon Cultural District Authority	WKCDA Representative & Project ETL	Mr. Max LEE	2200 0782	max.sl.lee@wkcda.hk
Meinhardt Infrastructure & Environment Limited	Independent Environmental Checker	Ms. Claudine LEE	2859 5409	claudinelee@meinhardt.com.hk
Leigh & Orange Ltd.	Clerk of Works	Mr. Dick TAM	9762 6960	dick.tam@leighorange.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. Tentative Construction Programme

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	R0 Draft Dur	R0 Draft Start	R0 Draft Finish	Dur	Forecast /Actual Start	Forecast /Actual Finish	%	Total Float
ELS Works (Stages 1 & 2) for IBUR in Zones 2A, 2B and 2C of WKCD_May									
Contract Dates									
CAI Date for Optional Works									
Between 5 Jul 2024 and 21 Nov 2026, within 870 Days									
WKCDA-#AD-03030	(Opt Works Item No.3) Site Maintenance for Zone 2A, 2B, 2C and NSO after Pra	0	05-Jul-24		0	30-May-25*		0%	-329
WKCDA-#AD-03040	(Opt Works Item No.4) Road reinstatement works at Austin Road West within 870	0	05-Jul-24		0	30-May-25*		0%	-329
BD Statutory Submissions									
Consent BA8 and BA10 Submissions									
Zone 2A-2-1									
BD Submission and Consent for Excavation and ELS Installation									
WKCDA-BD-STA-01180	BA8 for excavation and ELS installation at Zone 2A-2-1(Stage 2)(Consent 10)	28	03-May-25	30-May-25	28	30-Jun-25	27-Jul-25	0%	7
WKCDA-BD-STA-01190	BA10 for excavation and ELS installation at Zone 2A-2-1(Stage 2)(Consent 10)	7	31-May-25	06-Jun-25	7	28-Jul-25	03-Aug-25	0%	7
Cost Centre A - Preliminaries, General Requirements									
General Submission and Procurement									
Submission and Approval									
Contingency Management Plan									
WKCDA-A-SUB-01140	Review and approve submission of Contingency Management Plan	28	02-Aug-24	29-Aug-24	336	17-Jul-24 A	17-Jun-25	75%	0
Authority Department Submission									
WKCDA-A-SUB-01440	Application to EPD and obtain permit for marine dumping	90	02-Nov-24	30-Jan-25	262	23-Sep-24 A	11-Jun-25	64%	50
Joint Written Guarantee for the water-tightness of ELS for Zones 2A-1 and 2A-2-1									
WKCDA-A-SUB-01460	Prepare and submit Joint Written Guarantee for the water-tightness of ELS for Zo	90	09-Jan-25	08-Apr-25	94	26-May-25 A	27-Aug-25	2%	-55
WKCDA-A-SUB-01480	Review and approve submission of Joint Written Guarantee for the water-tightnes	28	09-Apr-25	06-May-25	28	28-Aug-25	24-Sep-25	0%	-55
Procurement and Delivery of Materials									
King Post Materials									
WKCDA-A-PRO-2100	Delivery of King Post Material for Zone 2B & 2A-1 (ELS and Steel Platform)	14	16-Dec-24	29-Dec-24	93	12-Mar-25 A	12-Jun-25	50%	20
Steel Platform Material									
WKCDA-A-PRO-2060	Delivery of Steel Platform material for Zone 2A-2-1	30	16-Apr-25	15-May-25	30	30-May-25	28-Jun-25	0%	62
WKCDA-A-PRO-2140	Delivery of Steel Platform material for Zone 2B & 2A-1	30	28-Feb-25	29-Mar-25	30	30-May-25	28-Jun-25	0%	60
Strut and Wailing									
WKCDA-A-PRO-2320	Procurement of Strut and Wailing for Zone 2B & 2A-1	60	28-Feb-25	28-Apr-25	60	01-Mar-25 A	30-Apr-25 A	100%	
WKCDA-A-PRO-2300	Delivery of Steel Strut and Wailing for Zone 2A-2-1	80	19-Mar-25	06-Jun-25	80	30-May-25	17-Aug-25	0%	45
WKCDA-A-PRO-2340	Delivery of Strut and Wailing for Zone 2B & 2A-1	70	29-Apr-25	07-Jul-25	70	30-May-25	07-Aug-25	0%	31
Coordination									
Interface Contractors and Other Project Contractors									
WKCDA-A-CIC-01040	Coordination with Contract no.CC/2017/3A/030 L1 Works of the Lyric Theatre Co	180	30-Aug-24	25-Feb-25	343	05-Jul-24 A	12-Jun-25	77%	49
WKCDA-A-CIC-01060	Coordination with MTRCL, other Project Contractors and Future PIW Works Cont	300	30-Aug-24	25-Jun-25	354	05-Jul-24 A	23-Jun-25	74%	155
WKCDA-A-CIC-01050	Coordination with Contract no.CC/2017/3A/031 L2 Contract for Lyric Theatre Con	180	30-Aug-24	25-Feb-25	347	05-Jul-24 A	16-Jun-25	75%	72
Construction									
Preliminaries, Site Accommodation and Facilities									
WKCDA-A-MOB-01140	Design submission and approval for Barging Point	21	30-Nov-24	24-Dec-24	61	04-May-25 A	16-Jul-25	60%	91
WKCDA-A-MOB-01160	Construct Barging point, inspection and ready for operation	90	27-Dec-24	16-Apr-25	88	19-May-25 A	29-Aug-25	22%	53
Cost Centre B & I - General, Hoarding and Monitoring Works									
General Submission									
Submission and Approval									
Method statement for hoarding, covered walkway and gantries modification									
WKCDA-B-SUB-01080	Prepare and submit method statement for hoarding, covered walkway and gantri	28	05-Jul-24	01-Aug-24	308	05-Jul-24 A	09-May-25 A	100%	
As-built record of drainage works to CA and DSD									
WKCDA-B-SUB-01160	Prepare and submit as-built record of drainage works to CA and DSD	28	20-Mar-25	16-Apr-25	28	27-Jun-25	24-Jul-25	0%	-34
WKCDA-B-SUB-01180	Review and approve submission of as-built record of drainage works to CA and D	28	17-Apr-25	14-May-25	28	25-Jul-25	21-Aug-25	0%	-34
Construction									
General and Monitoring Works									
Relocate water check meter cabinet									
WKCDA-B-MOB-01240	Relocation of check water meter cabinet at Zone 2A East gantry	24	08-Nov-24	05-Dec-24	24	30-May-25	27-Jun-25	0%	-31
WKCDA-B-MOB-01100	Site clearance, break up and removal of existing road pavement and light posts,	60	06-Dec-24	20-Feb-25	60	28-Jun-25	05-Sep-25	0%	-31
Monitoring Works with MTRC									
WKCDA-B-MOB-01200	Coordination with WSD and MTRC	75	06-Dec-24	18-Feb-25	386	05-Jul-24 A	25-Jul-25	52%	-7
Monitoring Works with HyD									
WKCDA-B-MOB-01160	Coordination with highways department(HyD)	60	08-Nov-24	06-Jan-25	334	05-Jul-24 A	03-Jun-25	75%	-13
WKCDA-B-MOB-01180	Relocation of existing light post at Zone 2A East gantry	60	07-Jan-25	20-Mar-25	60	04-Jun-25	12-Aug-25	0%	-10



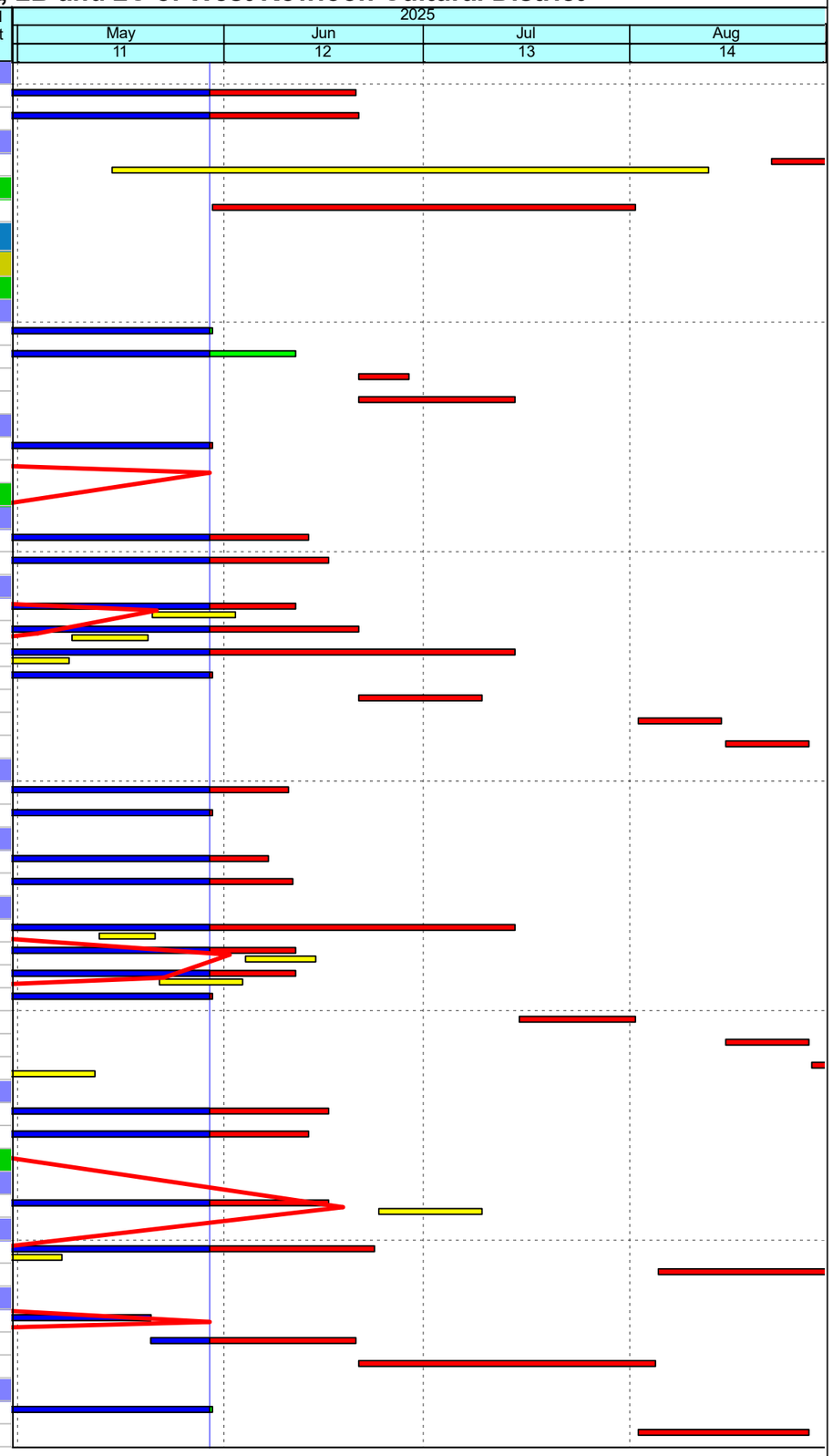
◇ Milestone — Planned Bar
◆ Critical MS — Actual Work Completed
Critical Bar — ◇ R0 MS

CC/2023/2B/095
Three Month Rolling Programme as of 30-May-25

Date	Revision	Checked	Approved
07-May-25	R0 Draft	KL	

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	R0 Draft Dur	R0 Draft Start	R0 Draft Finish	Dur	Forecast /Actual Start	Forecast /Actual Finish	%	Total Float
	Monitoring Works with drainage diversion								
WKCDA-B-MOB-01120	Coordination with relevant authorities for drainage diversion	60	22-Aug-24	20-Oct-24	285	05-Jul-24 A	20-Jun-25	95%	-51
WKCDA-B-MOB-01140	Carry-out drainage diversion works, T&C and backfilling works at Zone 2B Austin I	85	04-Dec-24	19-Mar-25	84	07-Mar-25 A	21-Jun-25	95%	-51
	Monitoring Works with FW107								
WKCDA-B-MOB-01220	Carry-out FW107 diversion works including T&C and inspection, waterproofing, m	76	15-May-25	12-Aug-25	76	22-Aug-25	21-Nov-25	0%	-29
	Hoarding and Gantry								
WKCDA-B-MOB-01300	Hoarding, covered walkway, gantries and waterbarriers modification including gra	54	03-Sep-24	07-Nov-24	54	30-May-25	01-Aug-25	0%	-51
	Cost Centre C - Excavation and Lateral Support Works for Zone 2B (Stage 1)								
	Construction								
	Preliminaries, Trial Trench & Fabrication Works								
	Trial trench before drilling work								
WKCDA-C-CON-01190	Trial trench before drilling work at Zone 2B (PP-168 to PP-250) - Austin Rd	20	22-Oct-24	13-Nov-24	94	03-Feb-25 A	30-May-25	75%	3
WKCDA-C-CON-01470	Trial trench before drilling work for king post at Zone 2B	20	28-Dec-24	21-Jan-25	46	12-Apr-25 A	11-Jun-25	50%	26
WKCDA-C-CON-01112	Trial trench before drilling work at zone 2B (PP-251 to PP-280) - Austin Rd	7	20-Mar-25	27-Mar-25	7	21-Jun-25	28-Jun-25	0%	-22
WKCDA-C-CON-10920	Trial trench before drilling work at zone 2B (PP-281 to PP-319) - Austin Rd	20	20-Mar-25	12-Apr-25	20	21-Jun-25	14-Jul-25	0%	-51
	Gravity Casing Grout Works								
WKCDA-C-CON-01200	Gravity casing grout work (P_C001 to P_C035)(36nos)(Consent 6a)	36	04-Dec-24	17-Jan-25	124	23-Dec-24 A	30-May-25	45%	-29
WKCDA-C-CON-01380	Gravity casing grout work(B_C001 to B_C036)(38nos)(Consent 5)	38	04-Dec-24	20-Jan-25	100	23-Dec-24 A	30-Apr-25 A	100%	
	Pre-Grout Curtain Works								
	Drilling for pre-grout curtain at Zone 2B at AURW Row (PP-164 to PP-001)								
WKCDA-C-CON-01040	Drilling for pre-grout curtain at Zone 2B(P_A017 to P_A001 EVEN)(P_B009 to P_	12	05-Mar-25	18-Mar-25	209	26-Sep-24 A	13-Jun-25	80%	-9
WKCDA-C-CON-01123	Drilling for pre-grout curtain at Zone 2B(P_A167 to P_A138 EVEN)(P_B085 to P_	20	30-Oct-24	21-Nov-24	92	21-Feb-25 A	16-Jun-25	98%	-11
	Drilling for pre-grout curtain at Zone 2B at AURW Row (PP-165 to PP-319)								
WKCDA-C-CON-10120	Drilling for pre-grout curtain at Zone 2B(P_A310 to P_A321 EVEN)(P_B157 to P_	10	21-May-25	02-Jun-25	123	08-Jan-25 A	11-Jun-25	93%	-39
WKCDA-C-CON-10110	Drilling for pre-grout curtain at Zone 2B(P_A296 to P_A309 EVEN)(P_B150 to P_	10	09-May-25	20-May-25	130	09-Jan-25 A	21-Jun-25	95%	-47
WKCDA-C-CON-10100	Drilling for pre-grout curtain at Zone 2B(P_A284 to P_A295 EVEN)(P_B144 to P_	8	28-Apr-25	08-May-25	146	14-Jan-25 A	14-Jul-25	33%	-51
WKCDA-C-CON-01122	Drilling for pre-grout curtain at Zone 2B(P_A198 to P_A227 EVEN)(P_B101 to P_	20	16-Dec-24	10-Jan-25	74	26-Feb-25 A	30-May-25	60%	-13
WKCDA-C-CON-01521	Drilling for pre-grout curtain at Zone 2B(P_A228 to P_A249 EVEN)(P_B116 to P_	16	18-Jan-25	08-Feb-25	16	21-Jun-25	09-Jul-25	0%	-47
WKCDA-C-CON-01220	Drilling for pre-grout curtain at Zone 2B(P_A250 to P_A264 EVEN)(P_B129 to P_	11	28-Mar-25	10-Apr-25	11	02-Aug-25	14-Aug-25	0%	-51
WKCDA-C-CON-01221	Drilling for pre-grout curtain at Zone 2B(P_A265 to P_A283 EVEN)(P_B137 to P_	11	11-Apr-25	26-Apr-25	11	15-Aug-25	27-Aug-25	0%	-19
	Drilling for pre-grout curtain at Zone 2B at Middle Row (PPB-171 to PPB-001)								
WKCDA-C-CON-01301	Drilling for pre-grout curtain at Zone 2B(B_A102 to B_A082 ODD)(B_B053 to B_E	14	29-Oct-24	13-Nov-24	160	21-Nov-24 A	10-Jun-25	55%	-39
WKCDA-C-CON-01401	Drilling for pre-grout curtain at Zone 2B(B_A018 to B_A001 ODD)(B_B008 to B_E	12	10-Mar-25	22-Mar-25	81	18-Feb-25 A	30-May-25	30%	-30
	Pre-grout curtain works at Zone 2B at AURW Row (PP-164 to PP-001)								
WKCDA-C-CON-01060	Carry-out Pre-grout curtain works at Zone 2B(P_A017 to P_A001 EVEN)(P_B009	12	31-Mar-25	14-Apr-25	175	01-Nov-24 A	07-Jun-25	65%	-37
WKCDA-C-CON-01142	Carry-out Pre-grout curtain works at Zone 2B(P_A167 to P_A138 EVEN)(P_B085	20	22-Nov-24	14-Dec-24	68	15-Mar-25 A	11-Jun-25	95%	-39
	Pre-grout curtain works at Zone 2B at AURW Row (PP-165 to PP-319)								
WKCDA-C-CON-10170	Carry-out Pre-grout curtain works at Zone 2B(P_A284 to P_A295 EVEN)(P_B144	8	13-May-25	21-May-25	129	06-Feb-25 A	14-Jul-25	33%	-51
WKCDA-C-CON-10190	Carry-out Pre-grout curtain works at Zone 2B(P_A310 to P_A321 EVEN)(P_B157	10	04-Jun-25	14-Jun-25	101	06-Feb-25 A	11-Jun-25	93%	-23
WKCDA-C-CON-10180	Carry-out Pre-grout curtain works at Zone 2B(P_A296 to P_A309 EVEN)(P_B150	10	22-May-25	03-Jun-25	100	07-Feb-25 A	11-Jun-25	93%	-23
WKCDA-C-CON-01144	Carry-out Pre-grout curtain works at Zone 2B(P_A198 to P_A227 EVEN)(P_B101	20	11-Jan-25	06-Feb-25	67	06-Mar-25 A	30-May-25	40%	-13
WKCDA-C-CON-01145	Carry-out Pre-grout curtain works at Zone 2B(P_A228 to P_A249 EVEN)(P_B116	16	10-Feb-25	27-Feb-25	16	15-Jul-25	01-Aug-25	0%	-51
WKCDA-C-CON-01240	Carry-out Pre-grout curtain works at Zone 2B(P_A250 to P_A264 EVEN)(P_B129	11	11-Apr-25	26-Apr-25	11	15-Aug-25	27-Aug-25	0%	-51
WKCDA-C-CON-01241	Carry-out Pre-grout curtain works at Zone 2B(P_A265 to P_A283 EVEN)(P_B137	11	28-Apr-25	12-May-25	11	28-Aug-25	09-Sep-25	0%	-19
	Pre-grout curtain works at Zone 2B at Middle Row (PPB-171 to PPB-001)								
WKCDA-C-CON-01320	Carry-out Pre-grout curtain works at Zone 2B(B_A102 to B_A082 ODD)(B_B053 t	14	14-Dec-24	02-Jan-25	165	21-Nov-24 A	16-Jun-25	60%	-44
WKCDA-C-CON-01420	Carry-out Pre-grout curtain works at Zone 2B(B_A018 to B_A001 ODD)(B_B008 t	12	26-Mar-25	09-Apr-25	93	18-Feb-25 A	13-Jun-25	63%	-42
	Interlocking Pipe Pile Wall Works								
	Interlocking Pipe Pile Wall Works at AURW Row (PP-030 to PP-001)'								
WKCDA-C-CON-01080	Installation of interlocking pipe pile wall at Zone 2B(PP-014 to PP-001)(14nos, 1	14	24-Jun-25	09-Jul-25	125	10-Jan-25 A	16-Jun-25	43%	-31
	Interlocking Pipe Pile Wall Works at AURW Row (PP-031 to PP-120)'								
WKCDA-C-CON-01095	Installation of interlocking pipe pile wall at Zone 2B(PP-120 to PP-054)(67nos, 1	20	09-Apr-25	07-May-25	72	23-Mar-25 A	23-Jun-25	70%	-37
WKCDA-C-CON-01160	Installation of interlocking pipe pile wall at Zone 2B(PP-104 to PP-074)(31nos, 1	31	03-Mar-25	08-Apr-25	31	05-Aug-25	09-Sep-25	0%	-73
	Interlocking Pipe Pile Wall Works at AURW Row (PP-200 to PP-121)'								
WKCDA-C-CON-01174	Installation of interlocking pipe pile wall at Zone 2B(PP-165 to PP-200)(36nos, 1	30	14-Jan-25	20-Feb-25	37	01-Apr-25 A	21-May-25 A	100%	
WKCDA-C-CON-01166	Installation of interlocking pipe pile wall at Zone 2B(PP-164 to PP-143)(22nos, 1	22	16-Dec-24	13-Jan-25	26	21-May-25 A	20-Jun-25	50%	-73
WKCDA-C-CON-01164	Installation of interlocking pipe pile wall at Zone 2B(PP-142 to PP-121)(22nos, 1	38	14-Jan-25	01-Mar-25	38	21-Jun-25	04-Aug-25	0%	-73
	Interlocking Pipe Pile Wall Works at AURW Row (PP-201 to PP-319)'								
WKCDA-C-CON-01176	Installation of interlocking pipe pile wall at Zone 2B(PP-201 to PP-224)(24nos, 1	30	21-Feb-25	27-Mar-25	39	09-Apr-25 A	30-May-25	50%	3
WKCDA-C-CON-01178	Installation of interlocking pipe pile wall at Zone 2B(PP-225 to PP-246)(22nos, 1	22	28-Mar-25	26-Apr-25	22	02-Aug-25	27-Aug-25	0%	-51



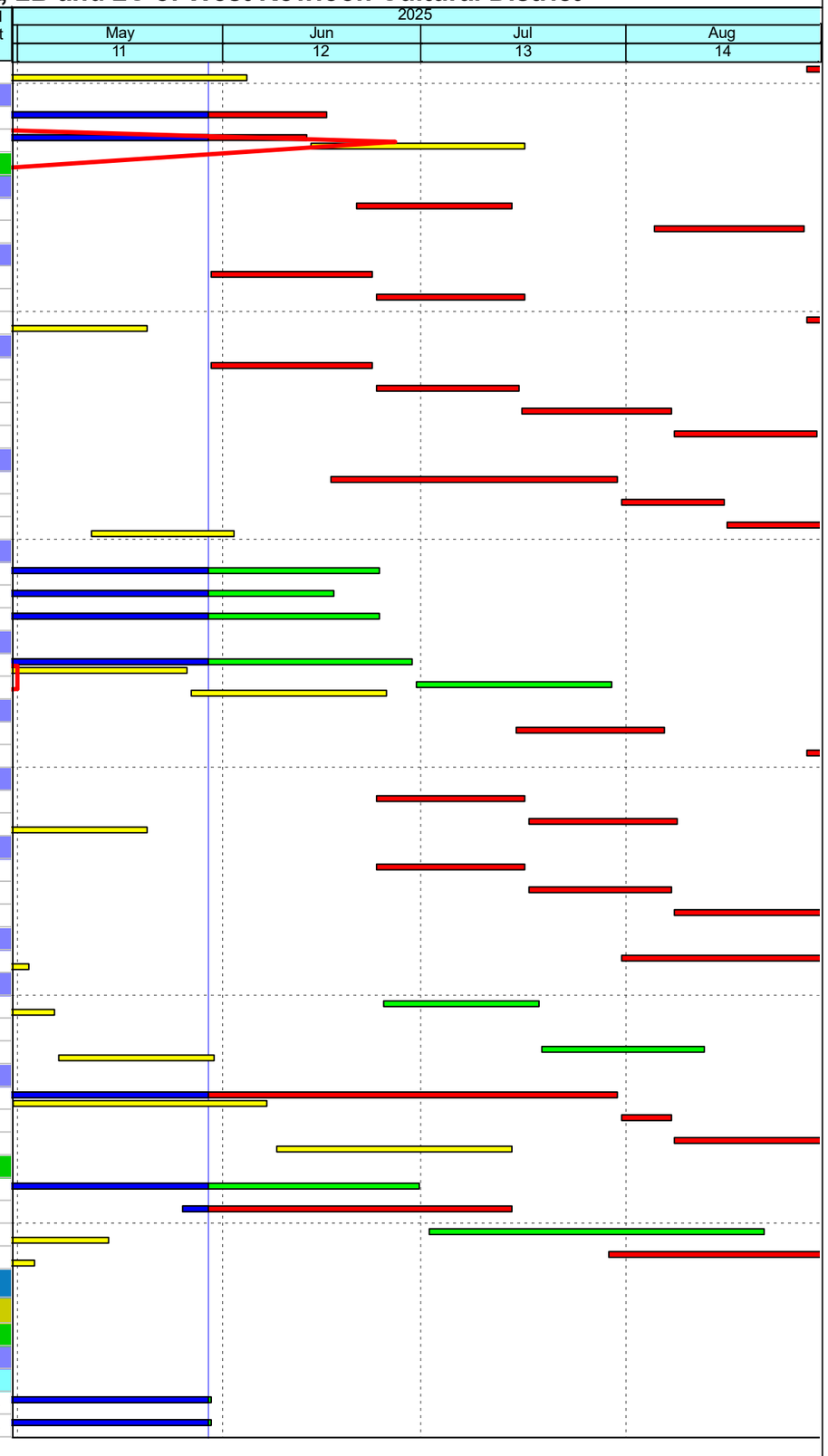
◇ Milestone — Planned Bar
◆ Critical MS — Actual Work Completed
Critical Bar — ◇ R0 MS

CC/2023/2B/095
Three Month Rolling Programme as of 30-May-25

Date	Revision	Checked	Approved
07-May-25	R0 Draft	KL	

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	R0 Draft Dur	R0 Draft Start	R0 Draft Finish	Dur	Forecast /Actual Start	Forecast /Actual Finish	%	Total Float
WKCDA-C-CON-01260	Installation of interlocking pipe pile wall at Zone 2B(PP-247 to PP-276)(30nos, 1	30	28-Apr-25	04-Jun-25	30	28-Aug-25	02-Oct-25	0%	-51
Interlocking Pipe Pile Wall Works at Middle Row (PPB-171 to PPB-001)									
WKCDA-C-CON-01345	Installation of interlocking pipe pile wall at Zone 2B(PPB-142 to PPB-114)(29nos,	29	21-Jan-25	26-Feb-25	165	21-Nov-24 A	16-Jun-25	97%	-44
WKCDA-C-CON-01450	Installation of interlocking pipe pile wall at Zone 2B(PPB-028 to PPB-001)(28nos,	28	14-Jun-25	16-Jul-25	93	18-Feb-25 A	13-Jun-25	96%	-42
Post Grout Curtain Works									
Drilling for post-grout Curtain Works AURW Row (PP-164 to PP-001)									
WKCDA-C-CON-10360	Drilling for post grout curtain works at Zone 2B(P_A167 to P_A138)(Consent 3) 3	20	14-Jan-25	08-Feb-25	20	21-Jun-25	14-Jul-25	0%	-44
WKCDA-C-CON-10340	Drilling for post grout curtain works at Zone 2B(P_A137 to P_A108)(Consent 3) 3	20	03-Mar-25	25-Mar-25	20	05-Aug-25	27-Aug-25	0%	-62
Drilling for post-grout Curtain Works AURW Row (PP-165 to PP-319)									
WKCDA-C-CON-10400	Drilling for post grout curtain works at Zone 2B(P_A168 to P_A197)(Consent 3) 3	20	21-Feb-25	15-Mar-25	20	30-May-25	23-Jun-25	0%	-9
WKCDA-C-CON-10380	Drilling for post grout curtain works at Zone 2B(P_A198 to P_A227)(Consent 3) 3	20	28-Mar-25	24-Apr-25	20	24-Jun-25	16-Jul-25	0%	-9
WKCDA-C-CON-10240	Drilling for post grout curtain works at Zone 2B(P_A228 to P_A253)(Consent 3) 2	18	28-Apr-25	20-May-25	18	28-Aug-25	17-Sep-25	0%	-43
Drilling for post-grout Curtain Works Middle Row (PPB-172 to PPB-342)									
WKCDA-C-CON-10620	Drilling for post grout curtain works at Zone 2B(B_A163 to B_A192)(Consent 3) 3	20	30-Nov-24	23-Dec-24	20	30-May-25	23-Jun-25	0%	-19
WKCDA-C-CON-10680	Drilling for post grout curtain works at Zone 2B(B_A193 to B_A220)(Consent 3) 2	19	08-Jan-25	01-Feb-25	19	24-Jun-25	15-Jul-25	0%	-19
WKCDA-C-CON-10700	Drilling for post grout curtain works at Zone 2B(B_A221 to B_A250)(Consent 3) 3	20	15-Feb-25	10-Mar-25	20	16-Jul-25	07-Aug-25	0%	-19
WKCDA-C-CON-10720	Drilling for post grout curtain works at Zone 2B(B_A251 to B_A278)(Consent 3) 2	19	22-Mar-25	14-Apr-25	19	08-Aug-25	29-Aug-25	0%	-19
Drilling for post-grout Curtain Works Middle Row (PPB-171 to PPB-001)									
WKCDA-C-CON-10640	Drilling for post grout curtain works at Zone 2B(B_A162 to B_A103)(Consent 3) 6	40	21-Jan-25	11-Mar-25	38	17-Jun-25	30-Jul-25	0%	-44
WKCDA-C-CON-10580	Drilling for post grout curtain works at Zone 2B(B_A102 to B_A082)(Consent 3) 2	14	02-Apr-25	22-Apr-25	14	31-Jul-25	15-Aug-25	0%	-22
WKCDA-C-CON-10600	Drilling for post grout curtain works at Zone 2B(B_A081 to B_A056)(Consent 3) 2	18	12-May-25	02-Jun-25	18	16-Aug-25	05-Sep-25	0%	-22
Drilling for post-grout Curtain Works between Zone 3 and Zone 2B									
WKCDA-C-CON-10800	Drilling for post grout curtain works between Zone 3 and Zone 2B (G_A032 to G_	21	18-Feb-25	13-Mar-25	122	22-Jan-25 A	24-Jun-25	87%	55
WKCDA-C-CON-10780	Drilling for post grout curtain works between Zone 3 and Zone 2B(G_A001 to G_	21	14-Mar-25	08-Apr-25	95	19-Feb-25 A	17-Jun-25	70%	103
WKCDA-C-CON-10820	Drilling for post grout curtain works between Zone 3 and Zone 2B (G_A063 to G_	21	21-Jan-25	17-Feb-25	96	25-Feb-25 A	24-Jun-25	77%	55
Drilling for post-grout Curtain Works between Zone 3 and Zone 2C									
WKCDA-C-CON-10880	Drilling for post grout curtain works between Zone 3 and Zone 2B (G_A163 to G_	31	15-Apr-25	26-May-25	107	18-Feb-25 A	29-Jun-25	97%	5
WKCDA-C-CON-10900	Drilling for post grout curtain works between Zone 3 and Zone 2B (G_A194 to G_	25	27-May-25	25-Jun-25	25	30-Jun-25	29-Jul-25	0%	67
Post Grout Curtain Works AURW Row (PP-164 to PP-001)									
WKCDA-C-CON-01167	Carry-out Post grout curtain works at Zone 2B(P_A167 to P_A138)(Consent 3) 3(	20	10-Feb-25	04-Mar-25	20	15-Jul-25	06-Aug-25	0%	-42
WKCDA-C-CON-01165	Carry-out Post grout curtain works at Zone 2B(P_A137 to P_A108)(Consent 3) 3(	20	26-Mar-25	22-Apr-25	20	28-Aug-25	19-Sep-25	0%	-60
Post Grout Curtain Works AURW Row (PP-165 to PP-319)									
WKCDA-C-CON-01175	Carry-out Post grout curtain works at Zone 2B(P_A168 to P_A197)(Consent 3) 3(	20	17-Mar-25	09-Apr-25	20	24-Jun-25	16-Jul-25	0%	-9
WKCDA-C-CON-01177	Carry-out Post grout curtain works at Zone 2B(P_A198 to P_A227)(Consent 3) 3(	20	25-Apr-25	20-May-25	20	17-Jul-25	08-Aug-25	0%	-9
Post Grout Curtain Works Middle Row (PPB-172 to PPB-342)									
WKCDA-C-CON-01351	Carry-out Post grout curtain works at Zone 2B(B_A163 to B_A192)(Consent 3) 3(	20	24-Dec-24	18-Jan-25	20	24-Jun-25	16-Jul-25	0%	-19
WKCDA-C-CON-01353	Carry-out Post grout curtain works at Zone 2B(B_A193 to B_A220)(Consent 3) 2(	19	03-Feb-25	24-Feb-25	19	17-Jul-25	07-Aug-25	0%	-19
WKCDA-C-CON-01355	Carry-out Post grout curtain works at Zone 2B(B_A221 to B_A250)(Consent 3) 3(	20	11-Mar-25	02-Apr-25	20	08-Aug-25	30-Aug-25	0%	-19
Post Grout Curtain Works Middle Row (PPB-171 to PPB-001)									
WKCDA-C-CON-01341	Carry-out Post grout curtain works at Zone 2B(B_A162 to B_A103)(Consent 3) 6(	40	12-Mar-25	02-May-25	40	31-Jul-25	15-Sep-25	0%	-44
Post Grout Curtain Works between Zone 3 and Zone 2B									
WKCDA-C-CON-01050	Carry-out Post grout curtain works between Zone 3 and Zone 2B (G_A032 to G_	21	07-Apr-25	06-May-25	21	25-Jun-25	18-Jul-25	0%	55
WKCDA-C-CON-01070	Carry-out Post grout curtain works between Zone 3 and Zone 2B (G_A063 to G_	21	12-Mar-25	05-Apr-25	0	04-Jul-25 A	24-Jun-25	0%	55
WKCDA-C-CON-01010	Carry-out Post grout curtain works between Zone 3 and Zone 2B(G_A001 to G_/	21	07-May-25	30-May-25	21	19-Jul-25	12-Aug-25	0%	55
Post Grout Curtain Works between Zone 3 and Zone 2C									
WKCDA-C-CON-01150	Carry-out Post grout curtain works between Zone 3 and Zone 2B (G_A132 to G_	31	30-Apr-25	07-Jun-25	181	17-Dec-24 A	30-Jul-25	87%	-28
WKCDA-C-CON-01135	Carry-out Post grout curtain works between Zone 3 and Zone 2B (G_A125 to G_	7	22-Apr-25	29-Apr-25	7	31-Jul-25	07-Aug-25	0%	-28
WKCDA-C-CON-01170	Carry-out Post grout curtain works between Zone 3 and Zone 2B (G_A163 to G_	31	09-Jun-25	14-Jul-25	31	08-Aug-25	12-Sep-25	0%	-28
King Post Works									
WKCDA-C-CON-01480	Installation of king post at Zone 2B(44nos, 3days/pile/rig, 3rigs) for ELS	44	22-Jan-25	17-Mar-25	62	14-Apr-25 A	30-Jun-25	20%	1
WKCDA-C-CON-01490	Installation of king post at Zone 2B(44nos, 3days/pile/rig, 3rigs) for ELS	44	22-Jan-25	17-Mar-25	42	26-May-25 A	14-Jul-25	5%	-2
WKCDA-C-CON-01485	Installation of king post at Zone 2B(44nos, 3days/pile/rig, 3rigs) for ELS	44	18-Mar-25	14-May-25	44	02-Jul-25	21-Aug-25	0%	1
WKCDA-C-CON-01495	Installation of king post at Zone 2B(36nos, 3days/pile/rig, 3rigs) for ELS	36	18-Mar-25	03-May-25	36	29-Jul-25	08-Sep-25	0%	-14
Cost Centre D - Excavation and Lateral Support Works for Zone 2C (Stage 1)									
Construction									
Pre-Grout Curtain Works									
Drilling for pre-grout curtain at Zone 2C									
Drilling for pre-grout curtain at Zone 2C Part 1									
WKCDA-D-CON-01042	Drilling for pre-grout curtain at Zone 2C(A_A122 to A_A077 EVEN)(A_B040 to A_	31	15-Jan-25	22-Feb-25	149	23-Nov-24 A	30-May-25	52%	134
WKCDA-D-CON-01044	Drilling for pre-grout curtain at Zone 2C(A_A214 to A_A169 EVEN)(A_B086 to A_	31	31-Oct-24	05-Dec-24	149	23-Nov-24 A	30-May-25	62%	134



Milestone · Critical MS · Critical Bar · Planned Bar · Actual Work Completed · R0 MS

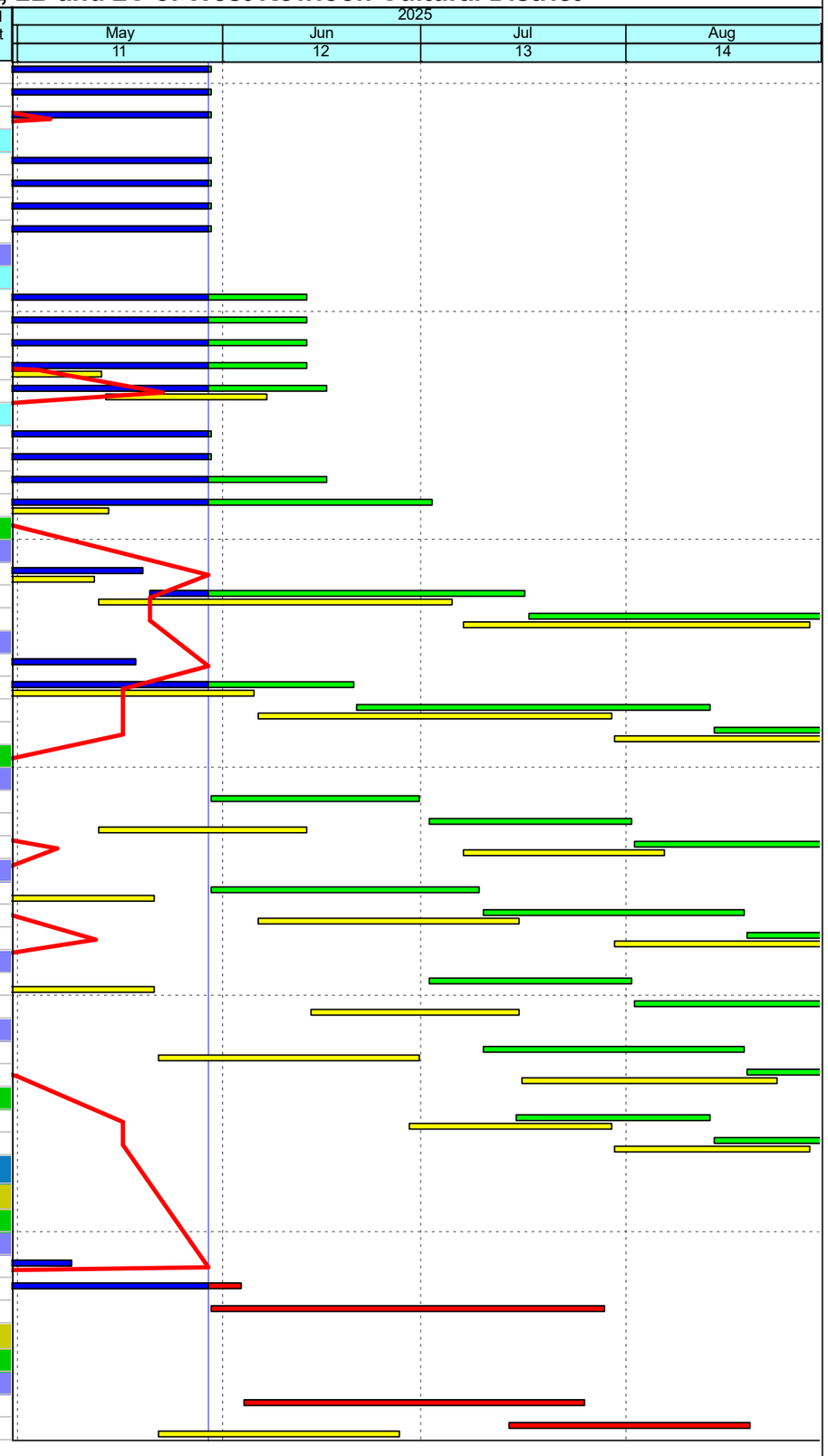
CC/2023/2B/095

Three Month Rolling Programme as of 30-May-25

Date	Revision	Checked	Approved
07-May-25	R0 Draft	KL	

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	R0 Draft Dur	R0 Draft Start	R0 Draft Finish	Dur	Forecast /Actual Start	Forecast /Actual Finish	%	Total Float
WKCDA-D-CON-01043	Drilling for pre-grout curtain at Zone 2C(A_A168 to A_A123 EVEN)(A_B063 to A_	31	06-Dec-24	14-Jan-25	142	02-Dec-24 A	30-May-25	54%	88
WKCDA-D-CON-01041	Drilling for pre-grout curtain at Zone 2C(A_A076 to A_A031 EVEN)(A_B017 to A_	31	24-Feb-25	31-Mar-25	117	03-Jan-25 A	30-May-25	50%	88
WKCDA-D-CON-01040	Drilling for pre-grout curtain at Zone 2C(A_A030 to A_A001EVEN)(A_B001 to A_I	21	01-Apr-25	29-Apr-25	102	21-Jan-25 A	30-May-25	48%	134
Drilling for pre-grout curtain at Zone 2C Part 2									
WKCDA-D-CON-01045	Drilling for pre-grout curtain at Zone 2C(A_A216 to A_A260 EVEN)(A_B109 to A_	31	31-Oct-24	05-Dec-24	140	04-Dec-24 A	30-May-25	56%	77
WKCDA-D-CON-01046	Drilling for pre-grout curtain at Zone 2C(A_A262 to A_A306 EVEN)(A_B132 to A_	31	06-Dec-24	14-Jan-25	126	20-Dec-24 A	30-May-25	50%	77
WKCDA-D-CON-01047	Drilling for pre-grout curtain at Zone 2C(A_A308 to A_A350 EVEN)(A_B155 to A_	32	15-Jan-25	24-Feb-25	73	27-Feb-25 A	30-May-25	74%	53
WKCDA-D-CON-01048	Drilling for pre-grout curtain at Zone 2C(A_A352 to A_A396 EVEN)(A_B180 to A_	31	25-Feb-25	01-Apr-25	64	10-Mar-25 A	30-May-25	98%	99
Pre-grout curtain works at Zone 2C									
Pre-grout curtain works at Zone 2C Part 1									
WKCDA-D-CON-01062	Carry-out Pre-grout curtain works at Zone 2C(A_A122 to A_A077 EVEN)(A_B040	31	24-Feb-25	31-Mar-25	142	16-Dec-24 A	13-Jun-25	52%	122
WKCDA-D-CON-01063	Carry-out Pre-grout curtain works at Zone 2C(A_A168 to A_A123 EVEN)(A_B063	31	15-Jan-25	22-Feb-25	141	17-Dec-24 A	13-Jun-25	52%	76
WKCDA-D-CON-01064	Carry-out Pre-grout curtain works at Zone 2C(A_A214 to A_A169 EVEN)(A_B086	31	06-Dec-24	14-Jan-25	134	27-Dec-24 A	13-Jun-25	52%	122
WKCDA-D-CON-01060	Carry-out Pre-grout curtain works at Zone 2C(A_A076 to A_A031 EVEN)(A_B017	31	01-Apr-25	13-May-25	102	07-Feb-25 A	13-Jun-25	52%	76
WKCDA-D-CON-01061	Carry-out Pre-grout curtain works at Zone 2C(A_A030 to A_A001EVEN)(A_B001	21	14-May-25	07-Jun-25	80	07-Mar-25 A	16-Jun-25	48%	120
Pre-grout curtain works at Zone 2C Part 2									
WKCDA-D-CON-01065	Carry-out Pre-grout curtain works at Zone 2C(A_A216 to A_A260 EVEN)(A_B109	31	06-Dec-24	14-Jan-25	123	24-Dec-24 A	30-May-25	52%	77
WKCDA-D-CON-01066	Carry-out Pre-grout curtain works at Zone 2C(A_A262 to A_A306 EVEN)(A_B132	31	15-Jan-25	22-Feb-25	72	28-Feb-25 A	30-May-25	50%	77
WKCDA-D-CON-01067	Carry-out Pre-grout curtain works at Zone 2C(A_A308 to A_A350 EVEN)(A_B155	32	25-Feb-25	02-Apr-25	75	13-Mar-25 A	16-Jun-25	6%	39
WKCDA-D-CON-01068	Carry-out Pre-grout curtain works at Zone 2C(A_A352 to A_A396 EVEN)(A_B180	31	02-Apr-25	14-May-25	89	13-Mar-25 A	02-Jul-25	52%	71
Interlocking Pipe Pile Wall Works									
Interlocking Pipe Pile Wall Works Part 1									
WKCDA-D-CON-01160	Installation of interlocking pipe pile wall at Zone 2C(PPA-167 to PPA-122)(46nos,	46	13-Mar-25	12-May-25	43	24-Mar-25 A	20-May-25 A	100%	
WKCDA-D-CON-01140	Installation of interlocking pipe pile wall at Zone 2C(PPA-121 to PPA-076)(46nos,	46	13-May-25	05-Jul-25	48	21-May-25 A	16-Jul-25	18%	48
WKCDA-D-CON-01080	Installation of interlocking pipe pile wall at Zone 2C(PPA-075 to PPA-030)(46nos,	46	07-Jul-25	28-Aug-25	46	17-Jul-25	08-Sep-25	0%	48
Interlocking Pipe Pile Wall Works Part 2									
WKCDA-D-CON-01220	Installation of interlocking pipe pile wall at Zone 2C(PPA-214 to PPA-259)(46nos,	46	11-Feb-25	05-Apr-25	53	11-Mar-25 A	19-May-25 A	100%	
WKCDA-D-CON-01240	Installation of interlocking pipe pile wall at Zone 2C(PPA-260 to PPA-305)(46nos,	46	07-Apr-25	05-Jun-25	43	29-Apr-25 A	20-Jun-25	42%	35
WKCDA-D-CON-01260	Installation of interlocking pipe pile wall at Zone 2C(PPA-306 to PPA-351)(46nos,	46	06-Jun-25	29-Jul-25	46	21-Jun-25	13-Aug-25	0%	35
WKCDA-D-CON-01280	Installation of interlocking pipe pile wall at Zone 2C(PPA-352 to PPA-397)(46nos,	46	30-Jul-25	20-Sep-25	46	14-Aug-25	08-Oct-25	0%	35
Post Grout Curtain Works									
Drilling for post-grout curtain works Part 1									
WKCDA-D-CON-1440	Drilling for post grout curtain works at Zone 2C(A_A197 to A_A158)(Consent 6b)	27	13-Mar-25	14-Apr-25	27	30-May-25	30-Jun-25	0%	53
WKCDA-D-CON-1420	Drilling for post grout curtain works at Zone 2C(A_A157 to A_A118)(Consent 6b)	27	13-May-25	13-Jun-25	27	02-Jul-25	01-Aug-25	0%	53
WKCDA-D-CON-1400	Drilling for post grout curtain works at Zone 2C(A_A117 to A_A078)(Consent 6b)	27	07-Jul-25	06-Aug-25	27	02-Aug-25	02-Sep-25	0%	53
Drilling for post-grout curtain works Part 2									
WKCDA-D-CON-1460	Drilling for post grout curtain works at Zone 2C(A_A198 to A_A247)(Consent 6b)	34	07-Apr-25	21-May-25	34	30-May-25	09-Jul-25	0%	43
WKCDA-D-CON-1480	Drilling for post grout curtain works at Zone 2C(A_A248 to A_A297)(Consent 6b)	34	06-Jun-25	15-Jul-25	34	10-Jul-25	18-Aug-25	0%	43
WKCDA-D-CON-1500	Drilling for post grout curtain works at Zone 2C(A_A298 to A_A347)(Consent 6b)	34	30-Jul-25	06-Sep-25	34	19-Aug-25	26-Sep-25	0%	43
Post Grout Curtain Works Part 1									
WKCDA-D-CON-01294	Carry-out post grout curtain works at Zone 2C(A_A197 to A_A158)(Consent 6b) 4	27	15-Apr-25	21-May-25	27	02-Jul-25	01-Aug-25	0%	53
WKCDA-D-CON-01293	Carry-out post grout curtain works at Zone 2C(A_A157 to A_A118)(Consent 6b) 4	27	14-Jun-25	15-Jul-25	27	02-Aug-25	02-Sep-25	0%	53
Post Grout Curtain Works Part 2									
WKCDA-D-CON-01295	Carry-out post grout curtain works at Zone 2C(A_A198 to A_A247)(Consent 6b) 5	34	22-May-25	30-Jun-25	34	10-Jul-25	18-Aug-25	0%	43
WKCDA-D-CON-01296	Carry-out post grout curtain works at Zone 2C(A_A248 to A_A297)(Consent 6b) 5	34	16-Jul-25	23-Aug-25	34	19-Aug-25	26-Sep-25	0%	43
Pumping Test									
WKCDA-D-CON-01320	Installation of pump wells(OW,DW&RW)(17nos, 3days/no/rig, 3rig) at Zone 2C 1	26	29-Jun-25	29-Jul-25	26	15-Jul-25	13-Aug-25	0%	71
WKCDA-D-CON-01321	Installation of pump wells(OW,DW&RW)(17nos, 3days/no/rig, 3rig) at Zone 2C 2	26	30-Jul-25	28-Aug-25	26	14-Aug-25	12-Sep-25	0%	71
Cost Centre E - Excavation and Lateral Support Works for Zone 2B (Stage 2)									
Submissions and Approval									
Design Submission and Statutory Submission									
ELS design at zone 2B & zone 2A-1 (stage 2)									
WKCDA-C-SUB-01200	Prepare and submit ELS design at zone 2B & zone 2A-1(stage 2)	60	05-Jul-24	02-Sep-24	259	23-Aug-24 A	09-May-25 A	100%	
WKCDA-C-SUB-01220	Review and approve submission of ELS design at zone 2B & zone 2A-1(stage 2	28	03-Sep-24	30-Sep-24	43	22-Apr-25 A	03-Jun-25	35%	-97
WKCDA-C-SUB-01240	Review and approve submission of ELS design at zone 2B & zone 2A-1 (stage 2	60	01-Oct-24	29-Nov-24	60	30-May-25	28-Jul-25	0%	-92
Construction									
Excavation, Temporary Shoring and Struts									
Temporary Shoring									
WKCDA-E-CON-01020	Installation of king post at Zone 2B(90nos, 3days/pile/rig, 6rigs) for Steel Platform	45	04-Jan-25	28-Feb-25	45	04-Jun-25	25-Jul-25	0%	-76
WKCDA-E-CON-10200	Installation of king post at Zone 2B(62nos, 3days/pile/rig, 6rigs) for Steel Platform	31	22-May-25	27-Jun-25	32	14-Jul-25	19-Aug-25	0%	-76



Milestone · Critical MS · Critical Bar · Planned Bar · Actual Work Completed · R0 MS

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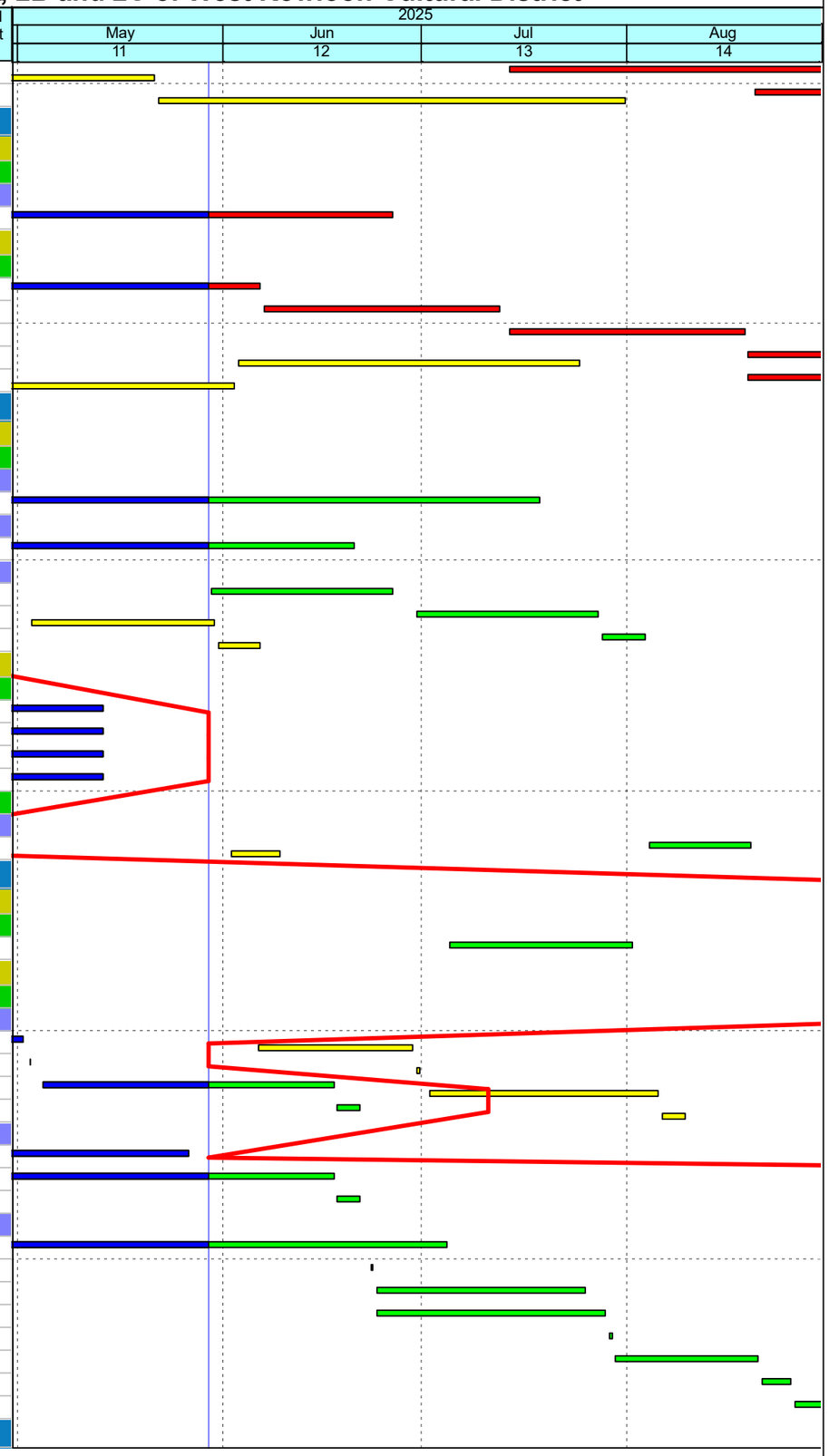
Three Month Rolling Programme as of 30-May-25

Date	Revision	Checked	Approved
07-May-25	R0 Draft	KL	

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	R0 Draft Dur	R0 Draft Start	R0 Draft Finish	Dur	Forecast /Actual Start	Forecast /Actual Finish	%	Total Float
WKCDA-E-CON-01021	Installation of king post at Zone 2B(128nos, 3days/pile/rig, 6rigs) for Steel Platfor	64	01-Mar-25	21-May-25	64	14-Jul-25	25-Sep-25	0%	-76
WKCDA-E-CON-01000	Carry-out ground treatment works at Zone 2B	60	22-May-25	31-Jul-25	60	20-Aug-25	31-Oct-25	0%	-76
Cost Centre F - Excavation and Lateral Support Works for Zone 2A-1 (Stage 2)									
Submissions and Approval									
Design Submission and Statutory Submission									
ELS design at Zone 2A-1 (Stage 2)									
WKCDA-F-SUB-01080	Review and approve submission of ELS design at zone 2B & zone 2A-1 (stage 2	60	29-Nov-24	27-Jan-25	130	17-Feb-25 A	26-Jun-25	70%	-34
Construction									
King Post									
WKCDA-F-CON-01000	Carry out predrilling work at Zone 2A-1	10	21-Oct-24	31-Oct-24	57	25-Mar-25 A	06-Jun-25	90%	-53
WKCDA-F-CON-01010	Installation of king post at Zone 2A-1(31nos, 3days/pile/rig, 3rigs) For ELS	31	17-Jan-25	25-Feb-25	31	07-Jun-25	12-Jul-25	0%	-53
WKCDA-F-CON-01015	Installation of king post at Zone 2A-1(31nos, 3days/pile/rig, 3rigs) For ELS	31	26-Feb-25	02-Apr-25	31	14-Jul-25	18-Aug-25	0%	-53
WKCDA-F-CON-01030	Installation of king post at Zone 2A-1(15nos, 3days/pile/rig, 1rig) for Steel Platfor	45	03-Jun-25	24-Jul-25	45	19-Aug-25	11-Oct-25	0%	-53
WKCDA-F-CON-01020	Installation of king post at Zone 2A-1(15nos, 3days/pile/rig, 1rig) for Steel Platfor	45	03-Apr-25	02-Jun-25	45	19-Aug-25	11-Oct-25	0%	-53
Cost Centre G - Excavation and Lateral Support Works for Zone 2A-2-1 (Stage 2)									
Submissions and Approval									
Design Submission and Statutory Submission									
ELS design at Zone 2A-2-1 (Stage 2)									
WKCDA-G-SUB-02060	Review and approve of ELS design at Zone 2A-2-1 (Stage 2) by BD	60	16-Jan-25	16-Mar-25	152	17-Feb-25 A	18-Jul-25	55%	38
Method statement for excavation and lateral support installation at Zone 2A-2-1 (Stage 2)									
WKCDA-G-SUB-02100	Review and approve submission of method statement for excavation & lateral su	28	13-Feb-25	12-Mar-25	112	01-Mar-25 A	20-Jun-25	71%	73
BD Submission									
WKCDA-G-SUB-02160	Submit BA14 and acknowledgment from BD for king post at Zone 2A-2-1	28	02-Apr-25	29-Apr-25	28	30-May-25	26-Jun-25	0%	7
WKCDA-G-SUB-02180	Application and obtain consent(BA8) for excavation and ELS installation at Zone	28	03-May-25	30-May-25	28	30-Jun-25	27-Jul-25	0%	7
WKCDA-G-SUB-02200	Submit BA10 for excavation and ELS installation at Zone 2A-2-1	7	31-May-25	06-Jun-25	7	28-Jul-25	03-Aug-25	0%	7
Construction									
King Post									
WKCDA-G-CON-01030	Installation of king post at Zone 2A-2-1(50nos, 3days/pile/rig, 6rigs) for Steel Plat	25	04-Mar-25	01-Apr-25	110	23-Dec-24 A	14-May-25 A	100%	
WKCDA-G-CON-01020	Installation of king post at Zone 2A-2-1(50nos, 3days/pile/rig, 6rigs) for Steel Plat	25	03-Feb-25	03-Mar-25	110	23-Dec-24 A	14-May-25 A	100%	
WKCDA-G-CON-01000	Installation of king post at Zone 2A-2-1(39nos, 3days/pile/rig, 3rigs) for ELS	39	28-Oct-24	11-Dec-24	65	20-Feb-25 A	14-May-25 A	100%	
WKCDA-G-CON-01010	Installation of king post at Zone 2A-2-1(39nos, 3days/pile/rig, 3rigs) for ELS	39	12-Dec-24	01-Feb-25	65	20-Feb-25 A	14-May-25 A	100%	
Excavation, Temporary Shoring and Struts									
Excavation									
WKCDA-G-CON-01080	Mobilize excavation and temporary shoring and strut plant and equipment at Zor	7	02-Jun-25	09-Jun-25	14	04-Aug-25	19-Aug-25	0%	6
Cost Centre H - Bored Pile Foundation for Zone 2A-2-2									
Submissions and Approval									
Design Submission and Statutory Submission									
WKCDA-H-SUB-01240	Submit BA14 and acknowledgment from BD bored piling works at Zone 2A-2-2	28	20-Sep-26	17-Oct-26	28	05-Jul-25	01-Aug-25	0%	521
Construction									
Bored Pile Foundation 2A-2-2									
Bored Pile Works BP28Y									
WKCDA-H-CON-01280	Casing Installation and Soft Excavation for bored pile(BP28Y)	21	06-Jun-25	29-Jun-25	5	25-Apr-25 A	02-May-25 A	100%	
WKCDA-H-CON-01300	Plant Setup of RCD for bored pile(BP28Y)	1	30-Jun-25	30-Jun-25	0	03-May-25 A	03-May-25 A	100%	
WKCDA-H-CON-01320	Rock Drilling of bored pile(BP28Y)	30	02-Jul-25	05-Aug-25	36	05-May-25 A	17-Jun-25	50%	441
WKCDA-H-CON-01340	Koden Test, Air Lifting, Installation of Rebar Cage and Concreting(BP28Y)(Includi	4	06-Aug-25	09-Aug-25	4	18-Jun-25	21-Jun-25	0%	441
Bored Pile Works BP30Y									
WKCDA-H-CON-01680	Casing Installation and Soft Excavation for bored pile(BP30Y)	30	09-Mar-26	16-Apr-26	32	14-Apr-25 A	27-May-25 A	100%	
WKCDA-H-CON-01720	Rock Drilling of bored pile (BP30Y)	26	18-Apr-26	19-May-26	45	23-Apr-25 A	17-Jun-25	50%	386
WKCDA-H-CON-01740	Koden Test, Air Lifting, Installation of Rebar Cage and Concreting(BP30Y)(Includi	4	20-May-26	23-May-26	4	18-Jun-25	21-Jun-25	0%	386
Bored Pile Works BP30X									
WKCDA-H-CON-01880	Interface core for bored piles(8nos, 4days/pile/rig, 1rig)	16	02-Sep-26	19-Sep-26	73	03-Apr-25 A	04-Jul-25	30%	406
WKCDA-H-CON-01760	Plant Setup of Oscillator for bored pile (BP30X)	1	26-May-26	26-May-26	1	23-Jun-25	23-Jun-25	0%	386
WKCDA-H-CON-01860	Last bored pile design strength	28	31-Jul-26	01-Sep-26	28	24-Jun-25	25-Jul-25	0%	412
WKCDA-H-CON-01780	Casing Installation and Soft Excavation for bored pile (BP30X)	30	27-May-26	02-Jul-26	30	24-Jun-25	28-Jul-25	0%	386
WKCDA-H-CON-01800	Plant Setup of RCD for bored pile (BP30X)	1	03-Jul-26	03-Jul-26	1	29-Jul-25	29-Jul-25	0%	386
WKCDA-H-CON-01820	Rock Drilling of bored pile (BP30X)	19	04-Jul-26	25-Jul-26	19	30-Jul-25	20-Aug-25	0%	386
WKCDA-H-CON-01840	Koden Test, Air Lifting, Installation of Rebar Cage and Concreting(BP30X)(Includi	4	27-Jul-26	30-Jul-26	4	21-Aug-25	25-Aug-25	0%	386
WKCDA-H-CON-01900	Demobilization of bored piling rigs	7	31-Jul-26	07-Aug-26	7	26-Aug-25	02-Sep-25	0%	386
Cost Centre J & M - Site Safety and Smart Site Safety System									



Milestone | Planned Bar
Critical MS | Actual Work Completed
Critical Bar | R0 MS

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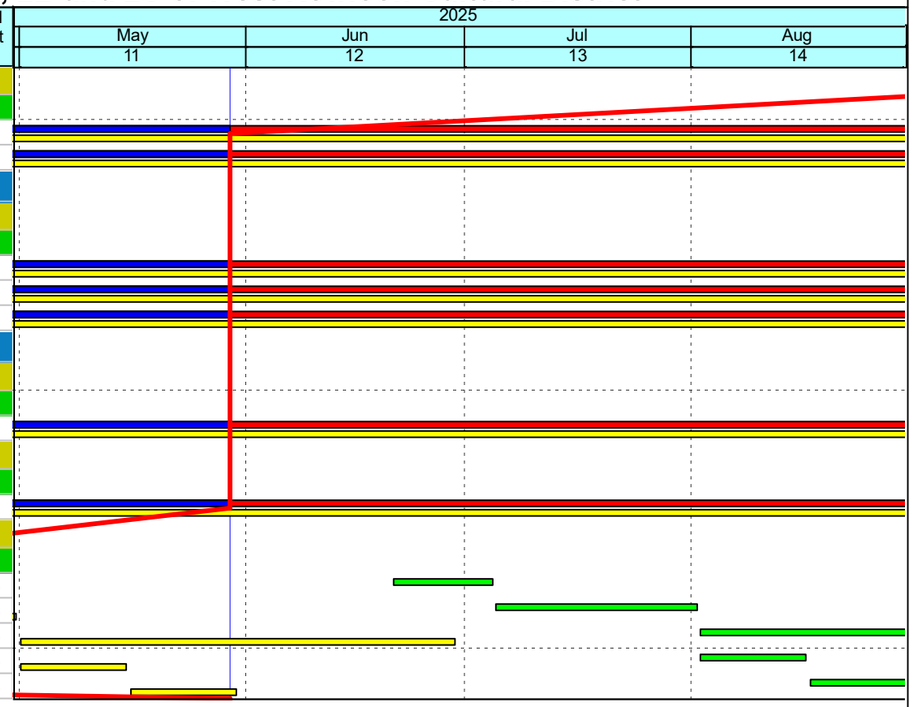
Three Month Rolling Programme as of 30-May-25

Date	Revision	Checked	Approved
07-May-25	R0 Draft	KL	

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	R0 Draft Dur	R0 Draft Start	R0 Draft Finish	Dur	Forecast /Actual Start	Forecast /Actual Finish	%	Total Float
General Submission									
Submission and Approval and Implementation									
WKCDA-JM-SUB-01000	Submit and update Construction Health and Safety Plan	914	05-Jul-24	04-Jan-27	904	15-Jul-24 A	04-Jan-27	35%	0
WKCDA-JM-SUB-01100	Implementation and update of SSSS(including communication network,centralize	879	09-Aug-24	04-Jan-27	852	05-Sep-24 A	04-Jan-27	33%	0
Cost Centre K - Environmental Management									
General Submission									
Submission and Approval and Implementation									
WKCDA-K-SUB-01020	Conduct environmental monitoring & audit and submit EM&A report to EPD	914	05-Jul-24	04-Jan-27	914	05-Jul-24 A	04-Jan-27	33%	0
WKCDA-K-SUB-01000	Submit and update Environmental Management Plan	914	05-Jul-24	04-Jan-27	881	07-Aug-24 A	04-Jan-27	34%	0
WKCDA-K-SUB-01040	Implementation of the EM&A programme	914	05-Jul-24	04-Jan-27	881	07-Aug-24 A	04-Jan-27	34%	0
Cost Centre P, Q, R & S- Optional Works									
Item No.1 - Maintenance and Demolition of NSO									
Site Maintenance and Demolition of NSO									
WKCDA-P-#OW-01000	Take-over and maintenance of NSO	855	01-Aug-24	03-Dec-26	882	05-Jul-24 A	03-Dec-26	36%	0
Item No.2 - Adoption of G/F as CA's and RSS's Site Office & Maintenance of 1/F and Demolition of NSO									
Site Maintenance and Demolition of NSO									
WKCDA-Q-#OW-01000	Take-over adoption of G/F NSO as CA and RSS's site office and maintenance of	855	01-Aug-24	03-Dec-26	882	05-Jul-24 A	03-Dec-26	36%	0
Item No.4 - Road Reinstatement Works at Austin Road West									
Road Reinstatement Works									
WKCDA-S-#OW-01000	Prepare and submit TTMS scheme for road reinstatement works at Austin Road '	14	20-Mar-25	02-Apr-25	14	21-Jun-25	04-Jul-25	0%	135
WKCDA-S-#OW-01020	Review and approve submission of TTMS scheme for road reinstatement works a	28	03-Apr-25	30-Apr-25	28	05-Jul-25	01-Aug-25	0%	135
WKCDA-S-#OW-01040	Coordination and approval of TTMS scheme with TMLG	60	01-May-25	29-Jun-25	60	02-Aug-25	30-Sep-25	0%	135
WKCDA-S-#OW-01040a	- 1st Relevant Authority's review	15	01-May-25	15-May-25	15	02-Aug-25	16-Aug-25	0%	135
WKCDA-S-#OW-01040b	- Address comment from Relevant Authority	15	16-May-25	30-May-25	15	17-Aug-25	31-Aug-25	0%	135



Milestone | Planned Bar
Critical MS | Actual Work Completed
Critical Bar | R0 MS

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C. Action and Limit Levels for Construction Phase

Air Quality

The Action and Limit Levels for 1-hour and 24-hour TSP for the monitoring stations are presented in following tables:

Table C-1: Action and Limit Levels for 1-hour TSP

Monitoring Station	Action Level (µg/m3)	Limit Level (µg/m3)
AM3A	280.4	500
AM4A	278.5	500
AM5A	275.4	500

Table C-2: Action and Limit Levels for 24-hour TSP

Monitoring Station	Action Level (µg/m3)	Limit Level (µg/m3)
AM3A	152.4	260
AM4A	152.6	260
AM5A	141.1	260

Noise

The Action and Limit Levels for Noise for the monitoring stations are presented in following table:

Table C-3: Action and Limit Levels for Construction Noise

Time Period & Monitoring Locations	Action Level	Limit Level
NM2A, NM3A, NM4A and NM5A		
0700-1900 hours on normal weekdays	When one valid documented complaint is received from any one of the sensitive receiver	75

Note:

*Reduce to 70dB(A) for school and 65 dB(A) during school examination period.

D. Event and Action Plan for Air Quality, Noise, Landscape and Visual Impact

Air Quality

In case the Action and Limit Levels are not complied during construction stage, the following Event and Action Plan should be followed:

Table D-1: Typical Event and Action Plan for Air Quality

Event	Action			
	ET	IEC	WKCDA	Contractor
Action Level				
1. Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC and WKCDA; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method.	1. Notify Contractor	1. Rectify any unacceptable practice; 2. Amend working methods if appropriate.
2. Exceedance for two or more consecutive samples	1. Identify source; 2. Inform IEC and WKCDA; 3. Advise the WKCDA on the effectiveness of the proposed remedial measures; 4. Repeat measurements to confirm findings; 5. Increase monitoring frequency to daily; 6. Discuss with IEC and Contractor on remedial actions required; 7. If exceedance continues, arrange meeting with IEC and WKCDA; 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ET on the effectiveness of the proposed remedial measures; 5. Monitor the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented.	1. Submit proposals for remedial to WKCDA within three working days of notification; 2. Implement the agreed proposals; 3. Amend proposal if appropriate.

Event	Action			
	ET	IEC	WKCDA	Contractor
Limit Level				
1. Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform WKCDA, Contractor and EPD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; 5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and WKCDA informed of the results.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the WKCDA on the effectiveness of the proposed remedial measures; 5. Monitor the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within three working days of notification; 3. Implement the agreed proposals; 4. Amend proposal if appropriate.
2. Exceedance for two or more consecutive samples	1. Notify IEC, WKCDA, 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 WKCDA to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and WKCDA informed of the results; 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss amongst WKCDA, ET, and Contractor on the potential remedial actions; 4. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the WKCDA accordingly; 5. Monitor the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Ensure remedial measures properly implemented; 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 within three working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by the WKCDA until the exceedance is abated.

Construction Noise

In case the Action and Limit Levels are not complied during construction stage, the following Event and Action Plan should be followed:

Table D-2: Event and Action Plan for Construction Noise

Event	Action			
	ET	IEC	WKCDA	Contractor
Action Level	1. Notify WKCDA, IEC and Contractor; 2. Carry out investigation; 3. Report the results of investigation to the IEC, WKCDA and Contractor; 4. Discuss with the IEC and Contractor on remedial measures required; 5. Increase monitoring frequency to check mitigation effectiveness.	1. Review the investigation results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the WKCDA accordingly; 3. Advise the WKCDA on the effectiveness of the proposed remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise the implementation of remedial measures.	1. Submit noise mitigation proposals to IEC and WKCDA; 2. Implement noise mitigation proposals.
Limit Level	1. Inform IEC, WKCDA, Contractor and EPD; 2. Repeat measurements to confirm findings; 3. Increase monitoring frequency; 4. Identify source and investigate the cause of exceedance; 5. Carry out analysis of Contractor's working procedures; 6. Discuss with the IEC, Contractor and WKCDA on remedial measures required; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and WKCDA informed of the results; 8. If exceedance stops, cease additional monitoring.	1. Discuss amongst WKCDA, ET, and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the WKCDA accordingly.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Supervise the implementation of remedial measures; 5. If exceedance continues, consider stopping the Contractor to continue working on that portion of work which causes the exceedance until the exceedance is abated.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC and WKCDA within 3 working days of notification; 3. Implement the agreed proposals; 4. Submit further proposal if problem still not under control; 5. Stop the relevant portion of works as instructed by the WKCDA until the exceedance is abated.

Landscape and Visual Impact

In case of non-compliance of landscape and visual impacts, procedures in accordance with the Event and Action Plan should be followed:

Table D-3: Event and Action Plan for Landscape and Visual Impact

Event	Action			
	Action	Event	Action	Event
Design Check	1. Design check to make sure the design complies with all the proposed mitigation measures in the EIA report; 2. Prepare and submit report.	1. Check report submitted by ET; 2. Recommend remedial design if necessary.	1. Undertake remedial design if necessary.	-
Non-conformity on one occasion	1. Identify source of non-conformity; 2. Report to IEC and WKCDA; 3. Discuss remedial actions with IEC, WKCDA and Contractor; 4. Monitor remedial actions until rectification has been completed.	1. Check and verify source of non-conformity; 2. Discuss remedial actions with ET and Contractor; 3. Advise WKCDA on effectiveness of proposed remedial actions; 4. Check implementation of remedial actions.	1. Notify Contractor; 2. Ensure remedial actions are properly implemented.	1. Amend working method as necessary; 2. Rectify damage and undertake necessary replacement and remedial actions.
Repeated non-conformity	1. Identify source of non-conformity; 2. Report to IEC and WKCDA; 3. Increase monitoring frequency; 4. Discuss remedial actions with IEC, WKCDA and Contractor; 5. Monitor remedial actions until rectification has been completed; 6. If non-conformity rectified, reduce monitoring frequency back to normal.	1. Check and verify source of non-conformity; 2. Check Contractor's working method; 3. Discuss remedial actions with ET and Contractor; 4. Advise WKCDA on effectiveness of proposed remedial actions; 5. Supervise implementation of remedial actions.	1. Notify Contractor; 2. Ensure remedial actions are properly implemented.	1. Amend working method as necessary; 2. Rectify damage and undertake necessary replacement and remedial actions.

E. Monitoring Schedule

Notes:
AM3A - Northeast corner of West Kowloon Station's station box (G/F)
AM4A - Southeast corner of West Kowloon Station's station box (G/F)
AM5A - North of West Kowloon Station's station box (G/F)
NM2A - The Arch – Sun Tower (G/F)
NM3A - Xiqu Centre (G/F)
NM4A - Next to Tsim Sha Tsui Fire Station (G/F)
NM5A - Pedestrian road (G/F) outside West Kowloon Station

May 2025 (Hong Kong)

Sun	Mon	Tue	Wed	Thu	Fri	Sat
27	28	29	30	1 • Labour Day	2 AM3A,AM4A,AM5A - 24-hr TSP, 1-hr TSP X 3 NM2A,NM3A,NM4A,NM5A - Noise Impact Monitoring	3
4	5 • Buddha's Birthday	6	7 Landscape & Visual inspection Zones 2A, 2B & 2C	8 AM3A,AM4A,AM5A - 24-hr TSP, 1-hr TSP X 3 NM2A,NM3A,NM4A,NM5A - Noise Impact Monitoring	9	10
11	12	13	14 AM3A,AM4A,AM5A - 24-hr TSP, 1-hr TSP X 3 NM2A,NM3A,NM4A,NM5A - Noise Impact Monitoring	15	16	17
18	19	20 AM3A,AM4A,AM5A - 24-hr TSP, 1-hr TSP X 3 NM2A,NM3A,NM4A,NM5A - Noise Impact Monitoring	21 Landscape & Visual inspection Zones 2A, 2B & 2C	22	23	24
25	26 AM3A,AM4A,AM5A - 24-hr TSP, 1-hr TSP X 3 NM2A,NM3A,NM4A,NM5A - Noise Impact Monitoring	27	28 AM3A,AM4A,AM5A - 24-hr TSP, 1-hr TSP X 3 NM2A,NM3A,NM4A,NM5A - Noise Impact Monitoring	29	30	31 • Dragon Boat Festival

Notes:
AM3A - Northeast corner of West Kowloon Station's station box (G/F)
AM4A - Southeast corner of West Kowloon Station's station box (G/F)
AM5A - North of West Kowloon Station's station box (G/F)
NM2A - The Arch – Sun Tower (G/F)
NM3A - Xiqu Centre (G/F)
NM4A - Next to Tsim Sha Tsui Fire Station (G/F)
NM5A - Pedestrian road (G/F) outside West Kowloon Station

June 2025 (Hong Kong)

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3 AM3A,AM4A,AM5A - 24-hr TSP, 1-hr TSP X 3 NM2A,NM3A,NM4A,NM5A - Noise Impact Monitoring	4 Landscape & Visual inspection Zones 2A, 2B & 2C	5	6 AM3A,AM4A,AM5A - 24-hr TSP, 1-hr TSP X 3 NM2A,NM3A,NM4A,NM5A - Noise Impact Monitoring	7
8	9	10	11	12 AM3A,AM4A,AM5A - 24-hr TSP, 1-hr TSP X 3 NM2A,NM3A,NM4A,NM5A - Noise Impact Monitoring	13	14
15	16	17	18 Landscape & Visual inspection Zones 2A, 2B & 2C AM3A,AM4A,AM5A - 24-hr TSP, 1-hr TSP X 3 NM2A,NM3A,NM4A,NM5A - Noise Impact Monitoring	19	20	21
22	23	24 AM3A,AM4A,AM5A - 24-hr TSP, 1-hr TSP X 3 NM2A,NM3A,NM4A,NM5A - Noise Impact Monitoring	25	26	27	28
29	30 AM3A,AM4A,AM5A - 24-hr TSP, 1-hr TSP X 3 NM2A,NM3A,NM4A,NM5A - Noise Impact Monitoring	1 Hong Kong Special Administrative Region Establishment Day	2	3	4	5

F. Calibration Certifications

CERTIFICATE OF ACCREDITATION

This is to attest that

AQUALITY TESTCONSULT LIMITED

11A&B, KAI FONG GARDEN, PING CHE ROAD
FANLING, HONG KONG

Calibration Laboratory CL-207

has met the requirements of AC204, *IAS Accreditation Criteria for Calibration Laboratories*, and has demonstrated compliance with ISO/IEC Standard 17025:2017, *General requirements for the competence of testing and calibration laboratories.* This organization is accredited to provide the services specified in the scope of accreditation.

Effective Date February 19, 2024

IAS ACCREDITED

President

Visit www.iasonline.org for current accreditation information.

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Search Results

Showing 1 of 1 Items

Accreditation #	Expires	Organization Name	City, State	Country	Program	Status
View Certificate CL-207	Dec 1, 2025	**Aquality Testconsult Limited**	Fanling	HK	Calibration Laboratories	Accredited

For full recognition details, please visit the **About IAS** web page.

SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

3060 Saturn Street, Suite 100, Brea, California 92821, U.S.A. | www.iasonline.org

AQUALITY TESTCONSULT LIMITED

Contact Name Lee Mei Yee, Julia **Contact Phone** +852-56138988

Accredited to ISO/IEC 17025:2017 *Effective Date February 19, 2024*

CALIBRATION AND MEASUREMENT CAPABILITY (CMC)*

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY[1,2] (±)	CALIBRATION PROCEDURE AND/OR STANDARD EQUIPMENT USED
Dimensional			
Caliper -Vernier, Dial & Electronic[3]	0 mm to 300 mm	30 µm	Checker by Direct method (Based on BS 887:1982, BS 887:2008
Steel Ruler[3]	1 mm to 1000 mm	280 µm	Reference Steel Rule by comparison method (Based on BS 4372:1968)
Dial Indicator/Gauge (Plunger)[3]	0 mm to 50 mm	8 µm	Reference micrometer head by comparison method (Based on BS 907:2008)
Feeler Gauge[3]	0.01 mm to 1 mm	8 µm	Reference Dial Gauge by Direct method (Based on BS 957: 2008)
Measuring tape[3]	0 m to 5 m	1200 µm	Reference steel ruler by comparison method (Based on BS 4035:1966)
Engineering Square[3]	Length: 0 mm to 160 mm	20 µm	Reference engineering square and Feeler Gauge by Direct Method (Based on BS 939:2007)
Slump cone[3]	Diameter: 0 mm to 200 mm Thickness: ≥1.5 mm Height: 0 mm to 300 mm	560 µm 70 µm 560 µm	Reference Caliper & Reference Steel ruler by direct measurement (Verification in accordance with in-house method for the dimensional requirements as specified CS1:1990 Vol.1 A4; CS1: 2010 Vol. 1, A5) (BS EN 12350-2: 2009 Cl. 4.1 BS EN 12350-1: 2019 Cl. 4.1.7)

** If information in this CMC is presented in non-SI units, the conversion factors stated in NIST Special Publication 811 "Guide for the Use of the International System of Units (SI)" apply.*

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY[1,2] (±)	CALIBRATION PROCEDURE AND/OR STANDARD EQUIPMENT USED
Tamping rod[3]	Diameter: 0 mm to 16 mm Length: 600 mm	50 µm 290 µm	Reference steel ruler & Reference Caliper by direct measurement (Verification in accordance with in-house method for the dimensional requirements as specified CS1:1990 Vol.1 A5; CS1: 2010 Vol. 1, A6) (BS EN 12350-2: 2009 Cl. 4.2 ,BS EN 12350-1: 2019 Cl. 4.1.8)
Cube mould[3]	(Max dimensions 150 mm per side) Dimension Flatness Perpendicularity Parallelism	 50 µm 10 µm 10 µm 50 µm	Reference Caliper, straight edge & feeler gauge by direct measurement. (Verification in accordance with in-house method for the dimensional requirements as specified in BS1881: Part 108:1983; CS1:1990 Vol1, A21; CS1:2010 Vol 1, A25; BS EN 12390-1:2000 Cl. 5.2.4, BS EN 12390-1: 2012 Cl. 5.2.4, BS EN 12390-1: 2021 Cl. 5.2.2)
Compacting Bar[3]	Ramming Face: 25 mm Length: 380 mm Weight: 1.8 kg	100 µm 560 µm 1 g	Reference Caliper, Steel ruler & Weiging Balance by direct measurement. (Verification in accordance with in-house method for the dimensional & mass requirements as specified in BS 1881: Part 105: 1984 Cl 3.3; CS1: 1990 Vol 2, E3; CS1: 2010 Vol 1 A10; BS EN 12390-2: 2000 Cl 3.3; BS EN 12350-1: 2019 Cl. 4.1.8)
Covermeter	20 mm to 103 mm	2.9 mm	Reference concrete block (Verification in accordance with in-house method for the dimensional requirements as specified in BS 1881-204:1988 Cl.6.4- Method C)
Flow table[3]	Mass 15 kg to 17 kg Dimension 1 mm up to 71 cm	 12 g 600 µm	Weighing Balance, Reference caliper & Reference steel ruler by direct measurement (Verification in accordance with in-house method for the

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY[1,2] (±)	CALIBRATION PROCEDURE AND/OR STANDARD EQUIPMENT USED
			dimensional requirements as specified in BS 1881- Part 105: 1984)
Test Sieve[3]	4 mm to 50 mm	50 µm	Reference Caliper by direct measurement as per BS 410 : 1986
Elongation Gauge[3]	Gap between Pins of Gauge 10 mm to 100 mm	0.29 mm	Reference Caliper by direct measurement (Verification in accordance with in-house method for the dimensional requirements as specified in BS 812- Part 1:1975; BS 812- Part 105.2: 1990)
Flakiness Gauge[3]	Length of Slot of Gauge 4.9 mm to 33.9 mm	0.06 mm	Reference Caliper by direct measurement ((Verification in accordance with in-house method for the dimensional requirements as specified in BS 812- Part 1:1975; BS 812- Part105.1:1985; BS 812- Part105.1:1989)
Riffle Box[3]	Width 6 mm to 100 mm	0.06 mm	Reference Caliper by direct measurement (Verification in accordance with in-house method for the dimensional requirements as specified in BS 812- Part 1:1975)
Mechanical			
Force Measuring Machine[3] (Compression Mode)	1 kN to 3000 kN	0.4 %	Reference Load cell by direct measurement (Based on BS 1610: Part 1:1985; BS 1610: Part 1:1992; BS EN ISO 12390-4:2000 Annex B; BS EN 12390-4: 2019; BS EN ISO 7500-1:2004, BS EN ISO 7500-1: 2015, BS EN ISO 7500-1: 2018)
Laser Dust Meter[3]	Dust particles 0.1 mg/m^3 to 3 mg/m^3 3 mg/m^3 to 8 mg/m^3	 0.006 mg/m^3 0.39 mg/m^3	By comparison method by using reference laser dust meter (Based on ISO 12103-1:2016)
Rebound Hammer[3]	80 unit (hardness)	1.6 rebound count	Reference Rebound count by comparison method (Based on BS1881: Part 202:1986; BS EN 12504-2:2001; BS EN

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY[1,2] (±)	CALIBRATION PROCEDURE AND/OR STANDARD EQUIPMENT USED
			12504-2:2012; BS EN 12504-2:2021)
Mass (F2 class and coarser)	1 g 2 g 5 g 10 g 20 g 50 g 100 g 200 g 500 g 1 kg 2 kg 5 kg 10 kg 20 kg 50 kg	0.7 mg 0.7 mg 0.7 mg 0.7 mg 0.7 mg 0.7 mg 0.7 mg 0.7 mg 0.03 g 0.03 g 0.03 g 0.06 g 3.06 g 3.06 g 6 g	Standard Weight E2/ F1 Class & Weighing Balances by comparison (ABBA) method (Based on OIML-R-111)
Weighing Scale & Balance[3]	0 g to 200 g 200 g to 5 kg 5 kg to 30 kg 30 kg to 50 kg	0.32 mg 12 mg 0.75 g 3.1 g	Standard weight of E2/F1 Grade by direct measurement (Based on OIML-R-111)
Volumetric Glassware	1 mL to 100 mL 100 mL to 1000 mL	0.004 mL 0.09 mL	Standard weight E2 Class, Weighing Balances & Distilled water by gravimetric method (Based on BS 1792: 1982, BS 1797: 1987)
Thermal			
Digital/Liquid in Glass Thermometers & RTD/ Thermocouples with or without Indicators	15 °C to 55 °C 55 °C to 95 °C	0.4 °C 0.7 °C	Water Baths, Reference Sensor and Indicator by Comparison Method (Based on OIML R133)
Curing Tank[3]	(Calibration at 20 °C and at 27 °C @ 30 min) 20 °C Temperature distribution 27 °C Temperature distribution Efficiency of circulation	 0.4 °C 0.4 °C 5 s	Reference Temperature datalogger by Mapping Method & Reference Stop Watch (Verification in accordance with in-house method for the Temp & Time requirements as specified in BS1881-111:1983, CS1:1990 Vol 1 App A24, CS1:2010 Vol 1 App A28, BE EN 12390-2:2000, BS EN 12390-2: 2019)
Oven/Furnace[3]	40.0 °C to 180.0 °C 200.0 °C to 1300 °C	1.5 °C 6 °C	Reference Thermocouple with Indicator By Mapping or Single sensor method (AS 2853:1986)

MEASURED QUANTITY or DEVICE TYPE CALIBRATED	RANGE	UNCERTAINTY[1,2] (±)	CALIBRATION PROCEDURE AND/OR STANDARD EQUIPMENT USED
Water bath[3]	15 °C to 95 °C	0.2 °C	Reference Temperature datalogger by Mapping Method (Based on AS 2853:1986)
Time and Frequency			
Stop Watch/Timer[3]	0 s to 3600 s 0 s to 21600 s (6 hours) 0 s to 86400 s (24 hours)	0.2 s 0.6 s 0.61 s	Reference stop watch by Direct Method (NIST 960-12 Cl. 4.A.2)
Grout Flow Cone[3]	7 s to 9 s	0.2 s	Reference stop watch by direct method (Based on ASTM C939-10 Cl.9)

[1]The uncertainty covered by the Calibration and Measurement Capability (CMC) is expressed as the expanded uncertainty having a coverage probability of approximately 95 %. It is the smallest measurement uncertainty that a laboratory can achieve within its scope of accreditation when performing calibrations of a best existing device. The measurement uncertainty reported on a calibration certificate may be greater than that provided in the CMC due to the behavior of the calibration item and other factors that may contribute to the uncertainty of a specific calibration.

[2]When uncertainty is stated in relative terms (such as percent, a multiplier expressed as a decimal fraction or in scientific notation), it is in relation to instrument reading or instrument output, as appropriate, unless otherwise indicated.

[3]Also available as site calibration. Note that actual measurement uncertainties achievable at a customer's site can normally be expected to be larger than the uncertainties listed on this Scope of Accreditation

FAQ / Information

Mutual Recognition Arrangements (MRA) / Multilateral Recognition Arrangements (MLA)

Mutual Recognition Arrangement (MRA) Partners for HOKLAS

Every effort is made to promote acceptance of test data from accredited laboratories, both internationally and locally. HKAS has concluded mutual recognition arrangements with accreditation bodies listed below by being one of the signatories of the International Laboratory Accreditation Cooperation Mutual Recognition Arrangement (ILAC MRA) and the Asia Pacific Accreditation Cooperation Mutual Recognition Arrangement (APAC MRA) for testing, calibration, medical testing, Proficiency Testing Providers (PTP) and Reference Material Producers (RMP). Click here to view the up-to-date signatories of ILAC and here to access the up-to-date signatories of APAC.

Visitors checking the names, logos and accreditation symbols shown on an endorsed certificate or report should note that some of our MRA partners may have their names, logos or accreditation symbols changed recently and test reports or certificates endorsed by displaying their old accreditation symbols may still be valid during the change-over period. For details, please visit their websites or contact them directly.

» Mutual Recognition Arrangement (MRA) Partners for HOKLAS

HKAS MRA partners will recognise HOKLAS endorsed test certificates as having the same technical validity as certificates endorsed by their respective schemes.

Multilateral Recognition Arrangements (MLA) for HKCAS

Mutual Recognition Arrangement (MRA) Partners for HKIAS

back

Hong Kong Laboratory Accreditation Scheme (HOKLAS) - Mutual Recognition Arrangement (MRA) Partners

Economy	Logo	Name of Partner	URL	Test Area
United States of America		AIHA Laboratory Accreditation Programs, LLC (AIHA-LAP, LLC)	http://www.aihaaccreditedlabs.org/	Non-medical Testing
United States of America		American Association for Laboratory Accreditation (A2LA)	http://www.a2la.org	Calibration, Medical Testing, Non-medical Testing, Proficiency Testing Provider, Reference Material Producer
United States of America		ANSI National Accreditation Board (ANAB)	http://www.anab.org/	Calibration, Medical Testing, Non-medical Testing, Proficiency Testing Provider, Reference Material Producer
United States of America		International Accreditation Service Inc. (IAS)	http://www.iasonline.org/	Calibration, Medical Testing, Non-medical Testing
United States of America		National Voluntary Laboratory Accreditation Program (NVLAP)	http://www.nist.gov/nvlap	Calibration, Non-medical Testing

AQuality 東恒測試顧問有限公司
AQUALITY TESTCONSULT LIMITED
香港新界粉嶺坪輋路啟芳園11A&11B號
No. 11A&B, KAI FONG GARDEN, PING CHE ROAD, FANLING, NEW TERRITORIES, HONG KONG
TEL : 852-3582-9589 FAX : 852-2674-1177 EMAIL : cal.aqtl@gmail.com WEBSITE: www.aqtlgroup.com

CERTIFICATE OF CALIBRATION

Report Number : 240818MCA-162F
Date of Report : 22-Aug-24
Page Number : 1 of 3
Customer * : Apex Testing & Certification Ltd.
Customer Address* : Unit D6A, 10/F, TML Tower, 3 Hoi Shing Road, Tsuen Wan, N.T., HK
Customers Ref. * : A005

Item Under Calibration (IUC)*
- Equipment No. : N/A
- Manufacturer : Sibata Scientific Technology Ltd
- Model No. : LD-3B
- Serial No. : 276004
- Scale Division : 0.001 mg/m3
- Range : 0.001 to 1 mg/m3
- Condition of Item : Normal

Date Item Received : 18-Aug-24
Date Calibrated : 18-Aug-24
Calibration Location : AQuality Calibration Lab.
Date of Next Calibration : 17-Aug-25
Calibrated By : Jessica Liu

Test Environment

Ambient Temperature	:	25.8	°C to	30.3	°C
Relative Humidity	:	82	% to	88	%

Calibration Results

Reference True Reading (mg/m3)	Average IUC Reading (mg/m^3)	Correction (mg/m^3)	Error of IUC Reading (%)	Coverage Factor K
0.176	0.177	-0.001	0.3%	2.0
4.832	4.873	-0.041	0.8%	2.0
8.143	8.074	0.069	0.9%	2.0

Remarks :
1. * Denotes information supplied by customer.
3. The results relate only to the items calibrated.
3. The results apply to the items as received.
4. Correction = Average of (Ref reading - IUC reading)
5. The technical requirement of laser dust meter. +/- 30% error for the particles concentration.

Approved by: _____
LEE Mei Yee, Julia
Managing Director

東恒測試顧問有限公司
AQUALITY TESTCONSULT LIMITED
香港新界粉嶺坪輋路啟芳園11A&11B號
No. 11A&11B, KAI FONG GARDEN, PING CHE ROAD, FANLING, NEW TERRITORIES, HONG KONG
TEL : 852-3582-9589 FAX : 852-2674-1177 EMAIL : cal.aqtl@gmail.com WEBSITE: www.aqtlgroup.com

CERTIFICATE OF CALIBRATION

Report Number : 240818MCA-162F
Date of Report : 22-Aug-24

Customer * : Apex Testing & Certification Ltd.
Customers Ref. * : A005

Details of Calibration

1. The calibration was performed in accordance with AQuality Testconsult Procedure Number ENV-L-003 (in-house method), by comparison with the laboratory's reference equipment which have traceable international standards of measurement.

3. The item under calibration (IUC) was allowed to stabilize in the laboratory for 0.35 hour before commencement of calibration.

3. A set of readings were made at each calibration concentration. The values quoted in the results are the average of each set of readings.

4. The values given in this calibration certificate only relate to the values measured at the time of calibration. Any uncertainties quoted do not include allowance for the capabiliy of any other laboratory to repeat the measurement. The uncertainty quoted relate only to item at time of calibration. AQuality Testconsult Limited is not liable for any loss or damage resulting from the use of this equipment.

5. The identification, calibration certificate numbers for the reference equipment used were as follows :

Equipment Number	Certificate Number	Description
CH-LDM-1	HBW202401001	粉尘测试仪

6. Copies of the Calibration certificates of the reference equipment used in this calibration may be obtained from AQuality Testconsult Limited, if necessary.

- End of Report -

東恒測試顧問有限公司
AQUALITY TESTCONSULT LIMITED
香港新界粉嶺坪輋路啟芳園11A&11B號
No. 11A&11B, KAI FONG GARDEN, PING CHE ROAD, FANLING, N.T., HONG KONG
TEL : 852-3582-9589
FAX : 852-2674-1177
EMAIL : cal.aqtl@gmail.com
WEBSITE: www.aqtlgroup.com

CERTIFICATE OF CALIBRATION

Apex Testing & Certification Ltd. Unit D6A, 10/F, TML Tower, 3 Hoi Shing Road, Tsuen Wan, N.T., HK	Test Report No.	240818MCA-162F
	Date of Issue	22-Aug-24
	Date of Testing	18-Aug-24
	Page	1 of 1

Item for Calibration

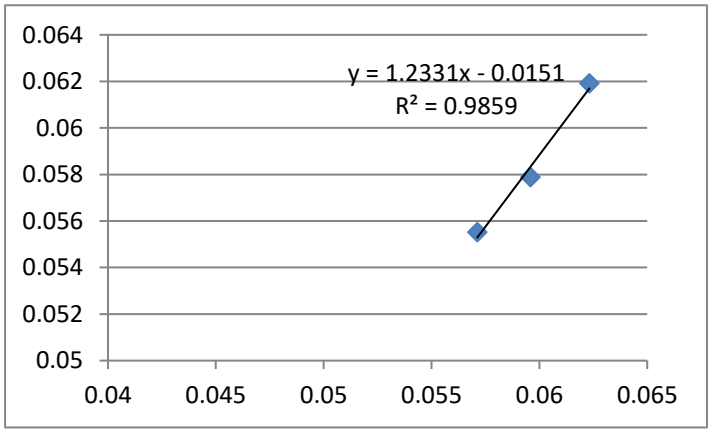
Description : Laser Dust Monitor
Manufacturer : Sibata Scientific Technology Ltd
Model No. : LD-3B
Serial No. : 276004

Standard Equipment

Description : High Volume Sampler / Calibration Orifice
Manufacturer : Tisch Environmental, Inc.
Model No. : TE-5170 / TE-5025A
Serial No. 3476 / 4088
Last Calibration : 17-AUG-24 / 7-NOV-23

Date	Time	Mean Temp (°C)	Mean Pressure (hPa)	Concentration Standard Equipment (mg/m3)	Concentration Calibrated Equipment (mg/m3)
18-Aug-24	19:00	28.1	1006.1	0.0623	0.0619
18-Aug-24	20:05	28.1	1006.1	0.0571	0.0555
18-Aug-24	21:10	28.1	1006.1	0.0596	0.0579

By Linear Regression of Y or X
Slope : 1.2331
Correlation Coefficient : 0.9859
K-Factor : 1.0216
Validity of Calibration : 17-Aug-25



Recorded by : Jessica Liu Signature: Jessica Date: 18-Aug-24

Checked by : S Tang Signature: Tang Date: 18-Aug-24

AQuality 東恒測試顧問有限公司
AQUALITY TESTCONSULT LIMITED
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CERTIFICATE OF CALIBRATION

Report Number : 240818MCA-163F
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Customer * : Apex Testing & Certification Ltd.
Customer Address* : Unit D6A, 10/F, TML Tower, 3 Hoi Shing Road, Tsuen Wan, N.T., HK
Customers Ref. * : A005

Item Under Calibration (IUC)*
Equipment No. : N/A
Manufacturer : Sibata Scientific Technology Ltd
Model No. : LD-3B
Serial No. : 336338
Scale Division : 0.001 mg/m3
Range : 0.001 to 1 mg/m3
Condition of Item : Normal

Date Item Received : 18-Aug-24
Date Calibrated : 18-Aug-24
Calibration Location : AQuality Calibration Lab.
Date of Next Calibration : 17-Aug-25
Calibrated By : Jessica Liu

Test Environment
Ambient Temperature : 25.8 °C to 30.3 °C
Relative Humidity : 82 % to 88 %

Calibration Results

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8.143	8.265	-0.122	1.5%	2.0

Remarks :
1. * Denotes information supplied by customer.
2. The results relate only to the items calibrated.
3. The results apply to the items as received.
4. Correction = Average of (Ref reading - IUC reading)
5. The technical requirement of laser dust meter. +/- 20% error for the particles concentration.

Approved by: _____
LEE Mei Yee, Julia
Managing Director

東恒測試顧問有限公司
AQUALITY TESTCONSULT LIMITED
香港新界粉嶺坪輋路啟芳園11A&11B號
No. 11A&11B, KAI FONG GARDEN, PING CHE ROAD, FANLING, NEW TERRITORIES, HONG KONG
TEL : 852-3582-9589 FAX : 852-2674-1177 EMAIL : cal.aqtl@gmail.com WEBSITE: www.aqtlgroup.com

CERTIFICATE OF CALIBRATION

Report Number : 240818MCA-163F
Date of Report : 22-Aug-24

Customer * : Apex Testing & Certification Ltd.
Customers Ref. * : A005

Details of Calibration

1. The calibration was performed in accordance with AQuality Testconsult Procedure Number ENV-L-003 (in-house method), by comparison with the laboratory's reference equipment which have traceable international standards of measurement.

2. The item under calibration (IUC) was allowed to stabilize in the laboratory for 0.25 hour before commencement of calibration.

3. A set of readings were made at each calibration concentration. The values quoted in the results are the average of each set of readings.

4. The values given in this calibration certificate only relate to the values measured at the time of calibration. Any uncertainties quoted do not include allowance for the capabiliy of any other laboratory to repeat the measurement. The uncertainty quoted relate only to item at time of calibration. AQuality Testconsult Limited is not liable for any loss or damage resulting from the use of this equipment.

5. The identification, calibration certificate numbers for the reference equipment used were as follows :

Equipment Number	Certificate Number	Description
CH-LDM-1	HBW202401001	粉尘测试仪

6. Copies of the Calibration certificates of the reference equipment used in this calibration may be obtained from AQuality Testconsult Limited, if necessary.

- End of Report -

東恒測試顧問有限公司
AQUALITY TESTCONSULT LIMITED
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TEL : 852-3582-9589
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EMAIL : cal.aqtl@gmail.com
WEBSITE: www.aqtlgroup.com

CERTIFICATE OF CALIBRATION

Apex Testing & Certification Ltd. Unit D6A, 10/F, TML Tower, 3 Hoi Shing Road, Tsuen Wan, N.T., HK	Test Report No.	240818MCA-163F
	Date of Issue	22-Aug-24
	Date of Testing	18-Aug-24
	Page	1 of 1

Item for Calibration

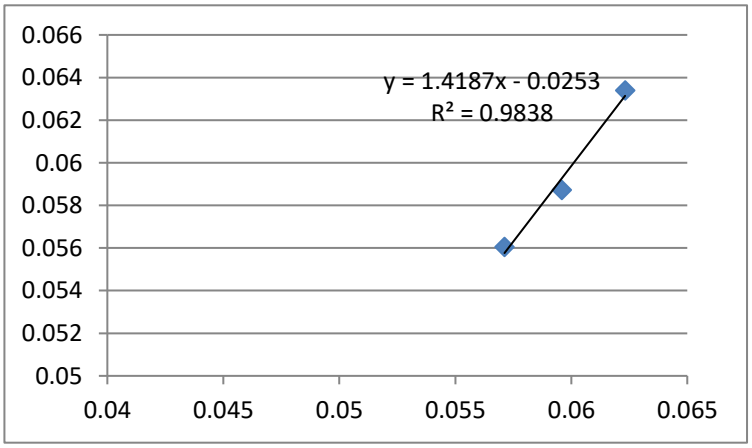
Description : Laser Dust Monitor
Manufacturer : Sibata Scientific Technology Ltd
Model No. : LD-3B
Serial No. : 336338

Standard Equipment

Description : High Volume Sampler / Calibration Orifice
Manufacturer : Tisch Environmental, Inc.
Model No. : TE-5170 / TE-5025A
Serial No. 3476 / 4088
Last Calibration : 17-AUG-24 / 7-NOV-23

Date	Time	Mean Temp (°C)	Mean Pressure (hPa)	Concentration Standard Equipment (mg/m3)	Concentration Calibrated Equipment (mg/m3)
18-Aug-24	19:00	28.1	1006.1	0.0623	0.0634
18-Aug-24	20:05	28.1	1006.1	0.0571	0.0561
18-Aug-24	21:10	28.1	1006.1	0.0596	0.0587

By Linear Regression of Y or X
Slope : 1.4187
Correlation Coefficient : 0.9838
K-Factor : 1.0056
Validity of Calibration : 17-Aug-25



Recorded by : Jessica Liu Signature: Jessica Date: 18-Aug-24

Checked by : S Tang Signature: Tang Date: 18-Aug-24

AQuality 東恒測試顧問有限公司
AQUALITY TESTCONSULT LIMITED
香港新界粉嶺坪輋路啟芳園11A&11B號
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CERTIFICATE OF CALIBRATION

Report Number : 240818MCA-161F
Date of Report : 22-Aug-24
Page Number : 1 of 2
Customer * : Apex Testing & Certification Ltd.
Customer Address* : Unit D6A, 10/F, TML Tower, 3 Hoi Shing Road, Tsuen Wan, N.T., HK
Customers Ref. * : A005

Item Under Calibration (IUC)*
- Equipment No. : N/A
- Manufacturer : Sibata Scientific Technology Ltd
- Model No. : LD-3B
- Serial No. : 476672
- Scale Division : 0.001 mg/m3
- Range : 0.001 to 1 mg/m3
- Condition of Item : Normal

Date Item Received : 18-Aug-24
Date Calibrated : 18-Aug-24
Calibration Location : AQuality Calibration Lab.
Date of Next Calibration : 17-Aug-25
Calibrated By : Jessica Liu

Test Environment

Ambient Temperature	:	25.8	°C to	30.3	°C
Relative Humidity	:	82	% to	88	%

Calibration Results

Reference True Reading (mg/m3)	Average IUC Reading (mg/m^3)	Correction (mg/m^3)	Error of IUC Reading (%)	Coverage Factor K
0.176	0.174	0.003	1.4%	2.0
4.832	4.706	0.126	2.6%	2.0
8.143	8.245	-0.102	1.3%	2.0

Remarks :
1. * Denotes information supplied by customer.
2. The results relate only to the items calibrated.
3. The results apply to the items as received.
4. Correction = Average of (Ref reading - IUC reading)
5. The technical requirement of laser dust meter. +/- 20% error for the particles concentration.

Approved by: _____
LEE Mei Yee, Julia
Managing Director

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CERTIFICATE OF CALIBRATION

Report Number : 240818MCA-161F
Date of Report : 22-Aug-24

Customer * : Apex Testing & Certification Ltd.
Customers Ref. * : A005

Details of Calibration

1. The calibration was performed in accordance with AQuality Testconsult Procedure Number ENV-L-003 (in-house method), by comparison with the laboratory's reference equipment which have traceable international standards of measurement.

2. The item under calibration (IUC) was allowed to stabilize in the laboratory for 0.25 hour before commencement of calibration.

3. A set of readings were made at each calibration concentration. The values quoted in the results are the average of each set of readings.

4. The values given in this calibration certificate only relate to the values measured at the time of calibration. Any uncertainties quoted do not include allowance for the capabiliy of any other laboratory to repeat the measurement. The uncertainty quoted relate only to item at time of calibration. AQuality Testconsult Limited is not liable for any loss or damage resulting from the use of this equipment.

5. The identification, calibration certificate numbers for the reference equipment used were as follows :

Equipment Number	Certificate Number	Description
CH-LDM-1	HBW202401001	粉尘测试仪

6. Copies of the Calibration certificates of the reference equipment used in this calibration may be obtained from AQuality Testconsult Limited, if necessary.

- End of Report -

東恒測試顧問有限公司
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CERTIFICATE OF CALIBRATION

Apex Testing & Certification Ltd. Unit D6A, 10/F, TML Tower, 3 Hoi Shing Road, Tsuen Wan, N.T., HK	Test Report No.	240818MCA-161F
	Date of Issue	22-Aug-24
	Date of Testing	18-Aug-24
	Page	1 of 1

Item for Calibration

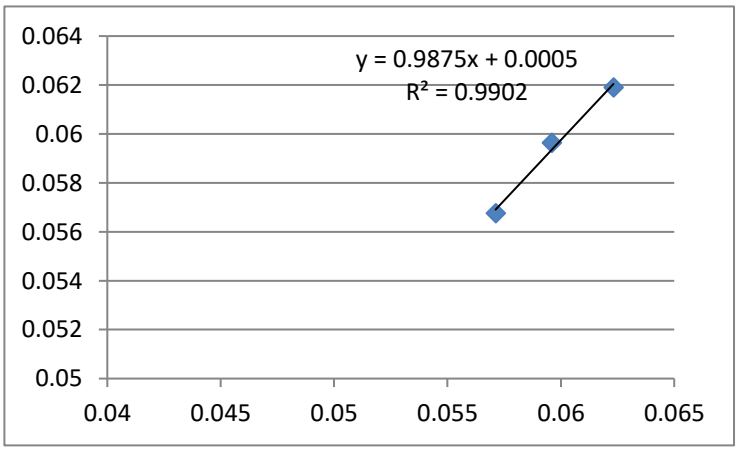
Description : Laser Dust Monitor
Manufacturer : Sibata Scientific Technology Ltd
Model No. : LD-3B
Serial No. : 476672

Standard Equipment

Description : High Volume Sampler / Calibration Orifice
Manufacturer : Tisch Environmental, Inc.
Model No. : TE-5170 / TE-5025A
Serial No. 3476 / 4088
Last Calibration : 17-AUG-24 / 7-NOV-23

Date	Time	Mean Temp (°C)	Mean Pressure (hPa)	Concentration Standard Equipment (mg/m3)	Concentration Calibrated Equipment (mg/m3)
18-Aug-24	19:00	28.1	1006.1	0.0623	0.0619
18-Aug-24	20:05	28.1	1006.1	0.0571	0.0568
18-Aug-24	21:10	28.1	1006.1	0.0596	0.0596

By Linear Regression of Y or X
Slope : 0.9875
Correlation Coefficient : 0.9902
K-Factor : 1.0042
Validity of Calibration : 17-Aug-25



Recorded by : Jessica Liu Signature: Jessica Date: 18-Aug-24

Checked by : S Tang Signature: Tang Date: 18-Aug-24

TISCH Environmental

RECALIBRATION DUE DATE:
October 15, 2025

Certificate of Calibration

Calibration Certification Information				
Cal. Date:	October 15, 2024	**Rootsmeter S/N:** 438320	**Ta:** 294	°K
Operator:	Jim Tisch		**Pa:** 752.1	mm Hg
Calibration Model #:	TE-5025A	**Calibrator S/N:** **4088**		

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4330	3.2	2.00
2	3	4	1	1.0260	6.4	4.00
3	5	6	1	0.9190	7.9	5.00
4	7	8	1	0.8740	8.8	5.50
5	9	10	1	0.7230	12.7	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)	$\sqrt{\Delta H\left(Ta/Pa\right)}$ (y-axis)
0.9988	0.6970	1.4164	0.9957	0.6949	0.8842
0.9945	0.9693	2.0031	0.9915	0.9664	1.2505
0.9925	1.0800	2.2395	0.9895	1.0767	1.3980
0.9913	1.1342	2.3488	0.9883	1.1308	1.4663
0.9861	1.3639	2.8328	0.9831	1.3598	1.7684
QSTD	**m=**	**2.12356**	**QA**	**m=**	**1.32974**
	b=	**-0.05931**		**b=**	**-0.03702**
	r=	**0.99996**		**r=**	**0.99996**

Calculations

Vstd=	ΔVol((Pa-ΔP)/Pstd)(Tstd/Ta)	**Va=**	ΔVol((Pa-ΔP)/Pa)
Qstd=	Vstd/ΔTime	**Qa=**	Va/ΔTime

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= $1/m\left(\left(\sqrt{\Delta H\left(Ta/Pa\right)}\right)-b\right)$

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

Tisch Environmental, Inc.
145 South Miami Avenue
Village of Cleves, OH 45002

www.tisch-env.com
TOLL FREE: (877)263-7610
FAX: (513)467-9009

TE-5170 Calibration Worksheet

Site Information

Location: AM3A	**Site ID:** Zones 2A at West Kowloon Cultural	**Date:** 18-Mar-25
Sampler: TE-5170	**Serial No:** 4340	**Tech:** CS Tang

Site Conditions

Barometric Pressure (in Hg): 30.19	**Corrected Pressure (mm Hg):** 767
Temperature (deg F): 63	**Temperature (deg K):** 290
Average Press. (in Hg): 30.19	**Corrected Average (mm Hg):** 767
Average Temp. (deg F): 63	**Average Temp. (deg K):** 290

Calibration Orifice

Make: Tisch	**Qstd Slope:** 2.12356
Model: TE-5025A	**Qstd Intercept:** -0.05931
Serial#: 4088	**Date Certified:** 15-Oct-24

Calibration Information

Plate or Test #	H2O (in)	Qstd (m3/min)	I (chart)	IC (corrected)
1	12.70	1.736	53.0	53.96
2	10.50	1.581	48.0	48.87
3	7.40	1.332	41.0	41.74
4	4.70	1.067	33.0	33.60
5	2.80	0.830	23.0	23.42

Linear Regression

Slope: 32.8530
Intercept: -2.7045
Corr. Coeff: 0.9969

# of Observations: 5

Calculations

Qstd = 1/m[Sqrt(H2O(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

Qstd = standard flow rate
IC = corrected chart response
I = actual chart response
m = calibrator Qstd slope
b = calibrator Qstd intercept
Ta = actual temperature during calibration (deg K)
Pa = actual pressure during calibration (mm Hg)
Tstd = 298 deg K
Pstd = 760 mm Hg
For subsequent calculation of sampler flow:
1/m((I)[Sqrt(298/Tav)(Pav/760)]-b)

m = sampler slope
b = sampler intercept
I = chart response
Tav = daily average temperature
Pav = daily average pressure

Average I (chart): 40
Average Flow Calculation m3/min
1.309466267
Average Flow Calculation in CFM
46.23725387
Sample Time (Hrs): 1.0
Total Flow in m3/min
78.56797599
Total Flow in CFM
2774.235232

NOTE: Ensure calibration orifice has been certified within 12 months of use

TE-5170 Calibration Worksheet

Site Information

Location: AM4A	**Site ID:** Zones 2A at West Kowloon Cultural	**Date:** 18-Mar-25
Sampler: TE-5170	**Serial No:** 3998	**Tech:** CS Tang

Site Conditions

Barometric Pressure (in Hg): 30.19	**Corrected Pressure (mm Hg):** 767
Temperature (deg F): 63	**Temperature (deg K):** 290
Average Press. (in Hg): 30.19	**Corrected Average (mm Hg):** 767
Average Temp. (deg F): 63	**Average Temp. (deg K):** 290

Calibration Orifice

Make: Tisch	**Qstd Slope:** 2.12356
Model: TE-5025A	**Qstd Intercept:** -0.05931
Serial#: 4088	**Date Certified:** 15-Oct-24

Calibration Information

Plate or Test #	H2O (in)	Qstd (m3/min)	I (chart)	IC (corrected)
1	12.50	1.723	53.0	53.96
2	10.70	1.596	48.0	48.87
3	7.70	1.358	41.0	41.74
4	4.50	1.045	33.0	33.60
5	2.50	0.786	23.0	23.42

Linear Regression

Slope: 31.3498
Intercept: -0.4907
Corr. Coeff: 0.9974

# of Observations: 5

Calculations

Qstd = 1/m[Sqrt(H2O(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

Qstd = standard flow rate
IC = corrected chart response
I = actual chart response
m = calibrator Qstd slope
b = calibrator Qstd intercept
Ta = actual temperature during calibration (deg K)
Pa = actual pressure during calibration (mm Hg)
Tstd = 298 deg K
Pstd = 760 mm Hg
For subsequent calculation of sampler flow:
1/m((I)[Sqrt(298/Tav)(Pav/760)]-b)

m = sampler slope
b = sampler intercept
I = chart response
Tav = daily average temperature
Pav = daily average pressure

Average I (chart): 40
Average Flow Calculation m3/min
1.301635232
Average Flow Calculation in CFM
45.96074003
Sample Time (Hrs): 1.0
Total Flow in m3/min
78.09811391
Total Flow in CFM
2757.644402

NOTE: Ensure calibration orifice has been certified within 12 months of use

TE-5170 Calibration Worksheet

Site Information

Location: AM5A	**Site ID:** Zones 2A at West Kowloon Cultural	**Date:** 18-Mar-25
Sampler: TE-5170	**Serial No:** 4344	**Tech:** CS Tang

Site Conditions

Barometric Pressure (in Hg): 30.19	**Corrected Pressure (mm Hg):** 767
Temperature (deg F): 63	**Temperature (deg K):** 290
Average Press. (in Hg): 30.19	**Corrected Average (mm Hg):** 767
Average Temp. (deg F): 63	**Average Temp. (deg K):** 290

Calibration Orifice

Make: Tisch	**Qstd Slope:** 2.12356
Model: TE-5025A	**Qstd Intercept:** -0.05931
Serial#: 4088	**Date Certified:** 15-Oct-24

Calibration Information

Plate or Test #	H2O (in)	Qstd (m3/min)	I (chart)	IC (corrected)
1	12.80	1.743	53.0	53.96
2	10.50	1.581	48.0	48.87
3	7.40	1.332	41.0	41.74
4	4.50	1.045	33.0	33.60
5	2.60	0.801	23.0	23.42

Linear Regression

Slope: 31.5650
Intercept: -0.7349
Corr. Coeff: 0.9970

# of Observations: 5

Calculations

Qstd = 1/m[Sqrt(H2O(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

Qstd = standard flow rate
IC = corrected chart response
I = actual chart response
m = calibrator Qstd slope
b = calibrator Qstd intercept
Ta = actual temperature during calibration (deg K)
Pa = actual pressure during calibration (mm Hg)
Tstd = 298 deg K
Pstd = 760 mm Hg
For subsequent calculation of sampler flow:
1/m((I)[Sqrt(298/Tav)(Pav/760)]-b)

m = sampler slope
b = sampler intercept
I = chart response
Tav = daily average temperature
Pav = daily average pressure

Average I (chart): 40
Average Flow Calculation m3/min
1.300501818
Average Flow Calculation in CFM
45.92071921
Sample Time (Hrs): 1.0
Total Flow in m3/min
78.0301091
Total Flow in CFM
2755.243152

NOTE: Ensure calibration orifice has been certified within 12 months of use

TE-5170 Calibration Worksheet

Site Information

Location: AM3A	**Site ID:** Zones 2A at West Kowloon Cultural	**Date:** 15-May-25
Sampler: TE-5170	**Serial No:** 4340	**Tech:** CS Tang

Site Conditions

Barometric Pressure (in Hg): 29.89	**Corrected Pressure (mm Hg):** 759
Temperature (deg F): 83	**Temperature (deg K):** 301
Average Press. (in Hg): 29.89	**Corrected Average (mm Hg):** 759
Average Temp. (deg F): 83	**Average Temp. (deg K):** 301

Calibration Orifice

Make: Tisch	**Qstd Slope:** 2.12356
Model: TE-5025A	**Qstd Intercept:** -0.05931
Serial#: 4088	**Date Certified:** 15-Oct-24

Calibration Information

Plate or Test #	H2O (in)	Qstd (m3/min)	I (chart)	IC (corrected)
1	12.50	1.683	53.0	52.69
2	10.40	1.538	48.0	47.72
3	7.60	1.319	41.0	40.76
4	4.50	1.021	33.0	32.81
5	2.70	0.797	23.0	22.87

Linear Regression

Slope: 32.5214
Intercept: -1.9828
Corr. Coeff: 0.9966

# of Observations: 5

Calculations

Qstd = 1/m[Sqrt(H2O(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

Qstd = standard flow rate
IC = corrected chart response
I = actual chart response
m = calibrator Qstd slope
b = calibrator Qstd intercept
Ta = actual temperature during calibration (deg K)
Pa = actual pressure during calibration (mm Hg)
Tstd = 298 deg K
Pstd = 760 mm Hg
For subsequent calculation of sampler flow:
1/m((I)[Sqrt(298/Tav)(Pav/760)]-b)

m = sampler slope
b = sampler intercept
I = chart response
Tav = daily average temperature
Pav = daily average pressure

Average I (chart): 40
Average Flow Calculation m3/min
1.271510093
Average Flow Calculation in CFM
44.89702138
Sample Time (Hrs): 1.0
Total Flow in m3/min
76.29060557
Total Flow in CFM
2693.821283

NOTE: Ensure calibration orifice has been certified within 12 months of use

TE-5170 Calibration Worksheet

Site Information

Location: AM4A	**Site ID:** Zones 2A at West Kowloon Cultural	**Date:** 15-May-25
Sampler: TE-5170	**Serial No:** 3998	**Tech:** CS Tang

Site Conditions

Barometric Pressure (in Hg): 29.89	**Corrected Pressure (mm Hg):** 759
Temperature (deg F): 83	**Temperature (deg K):** 301
Average Press. (in Hg): 29.89	**Corrected Average (mm Hg):** 759
Average Temp. (deg F): 83	**Average Temp. (deg K):** 301

Calibration Orifice

Make: Tisch	**Qstd Slope:** 2.12356
Model: TE-5025A	**Qstd Intercept:** -0.05931
Serial#: 4088	**Date Certified:** 15-Oct-24

Calibration Information

Plate or Test #	H2O (in)	Qstd (m3/min)	I (chart)	IC (corrected)
1	12.70	1.696	53.0	52.69
2	10.30	1.530	48.0	47.72
3	7.40	1.301	41.0	40.76
4	4.30	0.999	33.0	32.81
5	2.40	0.753	23.0	22.87

Linear Regression

Slope: 30.8457
Intercept: 0.6260
Corr. Coeff: 0.9974

# of Observations: 5

Calculations

Qstd = 1/m[Sqrt(H2O(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

Qstd = standard flow rate
IC = corrected chart response
I = actual chart response
m = calibrator Qstd slope
b = calibrator Qstd intercept
Ta = actual temperature during calibration (deg K)
Pa = actual pressure during calibration (mm Hg)
Tstd = 298 deg K
Pstd = 760 mm Hg
For subsequent calculation of sampler flow:
1/m((I)[Sqrt(298/Tav)(Pav/760)]-b)

m = sampler slope
b = sampler intercept
I = chart response
Tav = daily average temperature
Pav = daily average pressure

Average I (chart): 40
Average Flow Calculation m3/min
1.256010815
Average Flow Calculation in CFM
44.34974188
Sample Time (Hrs): 1.0
Total Flow in m3/min
75.3606489
Total Flow in CFM
2660.984513

NOTE: Ensure calibration orifice has been certified within 12 months of use

TE-5170 Calibration Worksheet

Site Information

Location: AM5A	**Site ID:** Zones 2A at West Kowloon Cultural	**Date:** 15-May-25
Sampler: TE-5170	**Serial No:** 4344	**Tech:** CS Tang

Site Conditions

Barometric Pressure (in Hg): 29.89	**Corrected Pressure (mm Hg):** 759
Temperature (deg F): 83	**Temperature (deg K):** 301
Average Press. (in Hg): 29.89	**Corrected Average (mm Hg):** 759
Average Temp. (deg F): 83	**Average Temp. (deg K):** 301

Calibration Orifice

Make: Tisch	**Qstd Slope:** 2.12356
Model: TE-5025A	**Qstd Intercept:** -0.05931
Serial#: 4088	**Date Certified:** 15-Oct-24

Calibration Information

Plate or Test #	H2O (in)	Qstd (m3/min)	I (chart)	IC (corrected)
1	12.50	1.683	53.0	52.69
2	10.30	1.530	48.0	47.72
3	7.20	1.284	41.0	40.76
4	4.50	1.021	33.0	32.81
5	2.60	0.783	23.0	22.87

Linear Regression

Slope: 32.3163
Intercept: -1.3596
Corr. Coeff: 0.9972

# of Observations: 5

Calculations

Qstd = 1/m[Sqrt(H2O(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

Qstd = standard flow rate
IC = corrected chart response
I = actual chart response
m = calibrator Qstd slope
b = calibrator Qstd intercept
Ta = actual temperature during calibration (deg K)
Pa = actual pressure during calibration (mm Hg)
Tstd = 298 deg K
Pstd = 760 mm Hg
For subsequent calculation of sampler flow:
1/m((I)[Sqrt(298/Tav)(Pav/760)]-b)

m = sampler slope
b = sampler intercept
I = chart response
Tav = daily average temperature
Pav = daily average pressure

Average I (chart): 40
Average Flow Calculation m3/min
1.260294415
Average Flow Calculation in CFM
44.50099579
Sample Time (Hrs): 1.0
Total Flow in m3/min
75.6176649
Total Flow in CFM
2670.059748

NOTE: Ensure calibration orifice has been certified within 12 months of use

华南国家计量测试中心
广东省计量科学研究院
SOUTH CHINA NATIONAL CENTER OF METROLOGY
GUANGDONG INSTITUTE OF METROLOGY

中国认可
国际互认
校准
CALIBRATION
CNAS L0730

校 准 证 书

CALIBRATION CERTIFICATE

证书编号 SXE202411475 第 1 页，共 4 页
Certificate No. Page of

客户名称 上峰检测认证有限公司
Name of the Customer

联络信息 香港荃湾海盛路3号TML广场10楼D6A室
Contact Information

计量器具名称 声校准器
Description

型号/规格 QC-10
Model/Type

制造厂 QUEST
Manufacturer

出厂编号 QI9010183 设备管理编号 ----
Serial No. Equipment No.

接收日期 2024 年 09 月 06 日
Receipt on Y M D

结论 符合JJG 176-2022（1级）技术要求
Conclusion Comply with JJG 176-2022(for Class 1)

校准日期 2024 年 09 月 11 日
Calibration on Y M D

发布日期 2024 年 09 月 11 日
Issue on Y M D

批 准 杨德俊
Authorized by

核 验 李广智
Reviewed by

校 准 何卓斌
Calibrated by

证书专用章
Stamp

扫一扫查真伪

本中心地址：中国广州市广园中路松柏东街30号 邮政编码：510405
电话：(8620)86594172 传真：(8620)86590743 投诉电话：(8620)36611242 E-mail：scm@scm.com.cn
Add: No.30, Songbai East Street, Guangyuan Middle Road, Guangzhou, Guangdong, China
Post Code: 510405 Tel: (8620)86594172 Fax: (8620)86590743 Complaint Tel: (8620)36611242
证书真伪查询：www.scm.com.cn；cert.scm.com.cn Certificate AuthenticityIdentify: www.scm.com.cn; cert.scm.com.cn

说　明

证书编号 SXE202411475
Certificate No.

DIRECTIONS

1. 本中心是国家市场监督管理总局在华南地区设立的国家法定计量检定机构，本中心的质量管理体系符合ISO/IEC 17025:2017标准的要求。
   This laboratory is the National Legal Metrological Verification Institution in southern China set up by the State Administration for Market Regulation. The quality system is in accordance with ISO/IEC 17025:2017.

2. 本中心所出具的数据均可溯源至国家计量基准和/或国际单位制(SI)。
   All data issued by this laboratory are traceable to national primary standards and/or International System of Units (SI).

3. 校准地点、环境条件：
   Location and environmental conditions of the calibration:

地点 Location	声学/振动实验室 Acoustics/Vibration Lab.	温度 Temperature	(25±1) ℃	相对湿度 R.H.	(30～40) %

4. 本次校准的技术依据：
   Reference documents for the calibration:
   JJG 176-2022 声校准器检定规程　V.R. of Sound Calibrators

5. 本次校准所使用的主要计量标准器具：
   Major standards of measurement used in the calibration:

设备名称/型号规格/测量范围 Name of Equipment /Model/Type/Range	编号 Serial No.	证书号/有效期/溯源单位 Certificate No./Due Date /Traceability to	计量特性 Metrological Characteristic
动态信号分析仪 Dynamical Signal Analyzer /3560C（3110模块）/0.1 Hz～200 kHz	2392397	SXE202400567 /2025-04-17 /本中心	电压:U_{rel}=0.2%,频率:U_{rel}=0.002%(k =2) Voltage:U_{rel}=0.2%,Frequency :U_{rel}=0.002%(k =2)
工作标准传声器 Working standard microphone /4190/20 Hz～20 kHz	2383233	SXE202400278 /2025-03-04 /本中心	20 Hz～4 kHz, U=0.20dB 5 kHz～20 kHz, U=0.50dB (k =2)
声校准器 Sound Level Calibrator /4231/94 dB，114 dB	2730392	SXE202400209 /2025-02-17 /本中心	1 级 Class 1

注：1. 本证书校准结果只与受校准仪器有关。The results relate only to the items calibrated.
Note: 2. 未经本机构书面批准，不得部分复制此证书。This certificate shall not be reproduced except in full, without the written approval of our laboratory.
3. “客户名称”、“联络信息”由委托方提供，“制造厂”、“型号规格”、“出厂编号”以及“设备编号”为仪器上标注，委托方对上面内容如有异议，须在收到证书后二十个工作日内提出。
The information **Name of the Customer** and **Contact Information** are provided by client, and the **Manufacturer**, **Model/Type**, **Serial No.** and **Equipment No.** are marked on the items. Client shall submit any objection within 20 working days after receiving the certificate for the information above.

校 准 结 果
RESULTS OF CALIBRATION

证书编号 SXE202411475 Certificate No.　　原始记录号 SXE202411475 Record No.　　第 3 页,共 4 页 Page of

1 外观： 符合要求

Apparent inspection: Pass

2 声压级：见表1

Sound Pressure Level: Shown in table 1

表1 Table 1

标称频率/Hz Nominal Frequency	规定声压级/dB Specified sound pressure level	测得的声压级/dB Measured sound pressure level	测得的声压级与规定声压级之差的绝对值/dB absolute value of Error	接受限/dB Acceptance limit	结论 Conclusion
1000	114	114.07	0.07	0.25	符合要求(Pass)

3 频率：见表2

Frequency: Shown in table 2

表2 Table 2

规定频率/Hz Specified frequency	标称声压级/dB Nominal sound pressure level	测得的频率/Hz Measured frequency	测得的频率与规定频率相对误差的绝对值/% absolute value of Error	接受限/% Acceptance limit	结论 Conclusion
1000	114	1001.52	0.152	0.7	符合要求(Pass)

4 总失真+噪声： 见表3

Total distortion + noise: Shown in table 3

表3 Table 3

规定频率/Hz Specified frequency	标称声压级/dB Nominal sound pressure level	总失真+噪声/% Total Distortion+ noise	接受限/% Acceptance limit	结论 Conclusion
1000	114	0.2	2.5	符合要求(Pass)

校 准 结 果
RESULTS OF CALIBRATION

证书编号 SXE202411475 原始记录号 SXE202411475 第 4 页,共 4 页
Certificate No. Record No. Page of

说明：

Note:

1 测量结果扩展不确定度：

Expanded uncertainty of measurement results:

声压级：U=0.15 dB，频率：U_{rel}=0.1%，总失真+噪声：U=0.4%，包含因子：k=2

Sound Pressure Level , Frequency , Total distortion + noise , Coverage factor

2 本证书中给出的扩展不确定度依据JJF1059.1-2012《测量不确定度评定与表示》评定，由合成标准不确定度乘以包含概率约为95%时对应的包含因子k得到。

The expanded uncertainty given in this certificate is evaluated according to JJF 1059.1-2012 "Evaluation and Expression of Uncertainty in Measurement", which is obtained by multiplying the combined standard uncertainty by the coverage factor k corresponding to the coverage probability of about 95%.

3 校准结果符合性判定依据JJF 1094-2002《测量仪器特性评定》之5.3.1和JJG 176-2005《声校准器检定规程》。

Decision rules of conformity are JJF 1094-2002 *Evaluation of the Characteristics of Measuring Instruments* (5.3.1) and JJG 176-2005 *V.R. of Sound Calibrators*.

4 结论：被校准仪器校准结果符合 JJG 176-2005 (1级)全部后续项目技术要求。

Conclusion: The data of instrument calibrated comply with the technical characteristics of all subsequent items in JJG 176-2005 (for Class 1).

5 该仪器的溯源日期为本证书的"校准日期"，按照所依据技术文件的规定，建议复校时间间隔不超过1年。更换重要部件、维修或对仪器性能有怀疑时，应及时校准。

The traceability date of this instrument is the "Calibration Date" on this certificate, According to the demand of reference document, next calibration is proposed within 1 year. In case of replacement of important parts, maintenance or doubt on the performance of the instrument, it shall be calibrated in time.

6 校准活动中对测量结果有影响的条件：

Conditions under which the calibrations were made that have an influence on the measurement results

温度（Temperature）：（25±1）℃

湿度（Humidity）：（30~40）%RH

静压（Static pressure）：（100.0~101.0）kPa

CTI

中国认可
国际互认
校准
CALIBRATION
CNAS L5102

华测计量检测有限公司

CTI MEASUREMENT AND TESTING CO., LTD.

校准证书

Calibration Certificate

证书编号 Certificate No.	C2501141610001	第1页共7页 Page of	
委托单位 Customer	上峰检测认证有限公司		
委托单位地址 Address	香港荃湾海盛路3号TML广场10楼D6A室		
器具名称 Name of instrument	声级计		
型号规格 Model	AWA5661		
制造商 Manufacturer	杭州爱华仪器有限公司		
出厂编号 Serial No.	341483	管理编号 Management No.	--------
接收日期 Received date	2025/01/15	校准日期 Calibration date	2025/01/20
发布日期 Issue date	2025/01/20	建议下次校准日期 Next calibration date	2026/01/19

华测计量检测有限公司 CTI MEASUREMENT AND TESTING CO., LTD. 校准专用章 Calibration Seal

证书/报告章
Stamp

批准 Approved by	曾财萍
审核 Inspected by	刘然
校准 Calibrated by	张翔

总部地址：广东省深圳市宝安区西乡街道铁岗社区桃花源科技创新园B、C栋
Headquarter address: Building B and C, Taohuayuan Sci-Tech Innovation Park, Tiegang Community, Xixiang Sub-district, Bao'an District, Shenzhen, Guangdong, China
实验室地址：广东省深圳市宝安区西乡街道铁岗社区桃花源科技创新园B、C栋
Laboratory address: Building B and C, Taohuayuan Sci-Tech Innovation Park, Tiegang Community, Xixiang Sub-district, Bao'an District, Shenzhen, Guangdong, China
邮编 Post code：518101 电话 Tel.：86-755-33682045 电子邮箱 E-mail：calibration@cti-cert.com

说 明

Directions

1. **本证书校准结果均可溯源至国际单位制（SI）单位。**
The results are traceable to International System of Units(SI).

2. **证书未盖本公司证书/报告章及骑缝章无效。未经本公司书面批准，不得部分复制此证书。**
Any certificate is deemed to be invalid without both the certificate/report seal and its across-page seal. This certificate shall not be copied partly without the written approval.

3. **本证书校准结果只与受校准仪器有关。如证书中的英文内容与中文内容有差异，以中文为准。**
The results relate only to the items calibrated. In case of any discrepancy between the English version and Chinese version of the certificate(if generated), the Chinese version shall prevail.

4. **本次校准的技术依据：**
Reference documents for the calibration
JJG 188-2017 声级计检定规程

5. **校准地点、环境条件：**
Place and environment condition during calibration
地点：本实验室力学室(6)
Place
温度：21.2℃ 相对湿度：41%
Temperature R.H.

计量溯源性声明

6. **本次校准所使用的主要计量标准器具：**
Main mearsurement standards used in the calibration

名称/型号规格 Name/Model	编号 Serial No.	测量范围 Measurement range	准确度等级/最大允许误差/不确定度 Accuracy class/Maximum permissible error/Uncertainty	证书号/溯源机构 Certificate No./Traceability to	有效期 Due date
消声箱 AWA188	080312	10Hz~20kHz （20~130）dB	U=0.8dB,k=2	JL2411712691 深圳市计量质量检测研究院	2025/09/09
测试声源(扬声器) AWA5511A	090677	20Hz~20kHz	最大声压级:U=0.6dB,k=2 声源稳定性:U=0.6dB,k=2 总失真:U_{rel}=2.7%,k=2 频率响应:U=0.6dB,k=2	SXE202401131 广东省计量科学研究院	2025/07/16
信号发生器 AWA1650	089943	0.5Hz~20kHz	电压：U_{rel}=0.2%,k=2 频率：U_{rel}=0.1%,k=2	SXE202401156 广东省计量科学研究院	2025/07/18
测量放大器 AWA5810D	089909	4Hz~20kHz	灵敏度：U=0.04dB,k=2 频率计权：U=0.2dB,k=2 线性计权： 4Hz ~ 10Hz:U=0.11dB,k=2 10Hz ~ 20kHz:U=0.04dB,k=2	SXE202483068 广东省计量科学研究院	2025/07/22
声校准器 4231	3014336	94dB~114dB	1级	SXE202411381 广东省计量科学研究院	2025/07/16

说 明

Directions

证书编号 C2501141610001
Certificate No.

名称/型号规格 Name/Model	编号 Serial No.	测量范围 Measurement range	准确度等级/最大允许误差/不确定度 Accuracy class/Maximum permissible error/Uncertainty	证书号/溯源机构 Certificate No./Traceability to	有效期 Due date
有源耦合腔 AWA6153S+	2006409	10Hz~400kHz	声压级:U=0.2dB,k=2 失真度:U=0.2%,k=2	SXE202483069 广东省计量科学研究院	2026/07/22
声频功率放大器 AWA5871	080649	/	U=0.03dB,k=2	SXE202401155 广东省计量科学研究院	2025/07/18
实验室标准传声器 4180	3055317	10Hz~25000Hz	U=(0.05~0.12)dB,k=2	LSsx2024-05614 中国计量科学研究院	2025/05/15

校准结果

Results of calibration

证书编号 C2501141610001
Certificate No.

1. 外观及工作正常性检查
Appearance and function check
正常 Normal

2. 指示声级调整（1000HZ）

声级计频率计权	声校准器频率	声校准器标准值	调校前声级计示值	调校后声级计示值	接受限	结论
	(Hz)	(dB)	(dB)	(dB)	(dB)	Pass/Fail
A	1000	94	93.9	/	93.7 ~ 94.3	Pass

3. 频率计权的声信号实验 （频率：1000Hz/A频率计权）

声压级标准值	声压级指示值	接受限	结论
(dB)	(dB)	(dB)	Pass/Fail
44	44.5	43.2 ~ 44.8	Pass
54	53.9	53.2 ~ 54.8	Pass
64	63.8	63.2 ~ 64.8	Pass
74	73.8	73.2 ~ 74.8	Pass
84	83.8	83.2 ~ 84.8	Pass
94	93.7	93.2 ~ 94.8	Pass
104	103.8	103.2 ~ 104.8	Pass
114	114.2	113.2 ~ 114.8	Pass

4. 本机自生噪音

测试类型	频率计权	实测值（dB）
声信号	A	34.8
电信号	A	34.2
	C	40.2
	Z	42.5

5. 级线性（1dB ~ 10dB内变化）： 起始点指示声级 90 dB

频率	测量项目	实测值	接受限	结论
(Hz)	----	(dB)	(dB)	Pass/Fail
1000	起始点以上每间隔10dB最大偏差	+0.1	± 0.3	Pass
	起始点以下每间隔10dB最大偏差	+0.2	± 0.3	Pass
	距上限5dB内每隔1dB最大偏差	0.0	± 0.3	Pass
	距下限5dB内每隔1dB最大偏差	+0.2	± 0.3	Pass
8000	起始点以上每间隔10dB最大偏差	+0.1	± 0.3	Pass
	起始点以下每间隔10dB最大偏差	+0.3	± 0.3	Pass
	距上限5dB内每隔1dB最大偏差	0.0	± 0.3	Pass
	距下限5dB内每隔1dB最大偏差	+0.2	± 0.3	Pass

校准结果

Results of calibration

证书编号 C2501141610001
Certificate No.

6. 频率计权

频率 (Hz)	A计权标准值 (dB)	声压级指示值 (dB)	接受限 (dB)	结论 Pass/Fail
20	-50.5	-50.6	-48.5 ~ -52.5	Pass
31.5	-39.4	-39.8	-37.9 ~ -40.9	Pass
63	-26.2	-26.5	-25.2 ~ -27.2	Pass
125	-16.1	-16.6	-15.1 ~ -17.1	Pass
250	-8.6	-8.8	-7.6 ~ -9.6	Pass
500	-3.2	-3.6	-2.2 ~ -4.2	Pass
1000	0.0	0.0	+0.7 ~ -0.7	Pass
2000	+1.2	+1.2	+2.2 ~ +0.2	Pass
4000	+1.0	+1.1	+2.0 ~ 0.0	Pass
8000	-1.1	-1.2	+0.4 ~ -3.6	Pass
16000	-6.6	-6.9	-4.1 ~ -22.6	Pass
20000	-9.3	-10.9	-6.3 ~ -∞	Pass

频率 (Hz)	C计权标准值 (dB)	声压级指示值 (dB)	接受限 (dB)	结论 Pass/Fail
20	-6.2	-6.0	-4.2 ~ -8.2	Pass
31.5	-3.0	-3.2	-1.5 ~ -4.5	Pass
63	-0.8	-0.9	+0.2 ~ -1.8	Pass
125	-0.2	-0.2	+0.8 ~ -1.2	Pass
250	0.0	0.0	+1.0 ~ -1.0	Pass
500	0.0	0.0	+1.0 ~ -1.0	Pass
1000	0.0	0.0	+0.7 ~ -0.7	Pass
2000	-0.2	-0.1	+0.8 ~ -1.2	Pass
4000	-0.8	-0.9	+0.2 ~ -1.8	Pass
8000	-3.0	-3.2	-1.5 ~ -4.5	Pass
16000	-8.5	-9.2	-6.0 ~ -24.5	Pass
20000	-11.2	-11.6	-8.2 ~ -∞	Pass

校准结果

Results of calibration

证书编号 C2501141610001
Certificate No.

频率 (Hz)	Z计权标准值 (dB)	声压级指示值 (dB)	接受限 (dB)	结论 Pass/Fail
20	0.0	−0.1	+2.0 ~ −2.0	Pass
31.5	0.0	0.0	+1.5 ~ −1.5	Pass
63	0.0	0.0	+1.5 ~ −1.5	Pass
125	0.0	0.0	+1.0 ~ −1.0	Pass
250	0.0	0.0	+1.0 ~ −1.0	Pass
500	0.0	0.0	+1.0 ~ −1.0	Pass
1000	0.0	0.0	+0.7 ~ −0.7	Pass
2000	0.0	0.0	+1.0 ~ −1.0	Pass
4000	0.0	0.0	+1.0 ~ −1.0	Pass
8000	0.0	−0.2	+1.5 ~ −2.5	Pass
16000	0.0	−0.3	+2.5 ~ −16.0	Pass
20000	0.0	−0.2	+3.0 ~ −∞	Pass

7. 1kHz处的频率计权

A计权参考声级 (dB)	C频率计权相对A频率计权的偏差 (dB)	Z频率计权相对A频率计权的偏差 (dB)	结论 Pass/Fail	接受限 (dB)
94	−0.1	0.0	Pass	± 0.2

8. F和S时间计权

衰减速率 (dB/s)	实测值 (dB/s)	接受限 (dB/s)	结论 Pass/Fail
快（F）计权	32.2	31.0 ~ 38.5	Pass
慢（S）计权	4.9	3.6 ~ 5.1	Pass

9. 猝发音响应（A计权）

猝发音持续时间 (ms)	(LAFmax−LA)标准值 (dB)	(LAFmax−LA)指示值 (dB)	接受限 (dB)	结论 Pass/Fail
200	−1.0	−1.0	−0.5 ~ −1.5	Pass
2	−18.0	−18.2	−17.0 ~ −18.5	Pass
0.25	−27.0	−27.1	−26.0 ~ −30.0	Pass
猝发音持续时间 (ms)	(LASmax−LA)标准值 (dB)	(LSFmax−LA)指示值 (dB)	接受限(dB) (dB)	结论 Pass/Fail
200	−7.4	−7.5	−6.9 ~ −7.9	Pass
2	−27.0	−27.0	−26.0 ~ −30.0	Pass

校准结果

Results of calibration

证书编号 C2501141610001
Certificate No.

注：仪器配传声器型号： AWA14425 ，传声器编号： H-41633
本次校准结果的扩展不确定度为：
Expanded uncertainty of measurement:
声信号：20Hz～200Hz，U= 0.5 dB，k=2； 250Hz～400Hz，U= 0.4 dB，k=2； 500Hz～1250Hz，U= 0.4 dB，k=2； 1600Hz～10000Hz，U= 0.6 dB，k=2； 12.5kHz~20kHz，U= 1.0 dB；
正弦电信号：（0～140）dB，（20～20000）Hz，U= 0.3 dB，k=2；
猝发音电信号：（0～140）dB，（1000～8000）Hz，(0.25～1000)ms U= 0.3 dB，k=2；
时间计权 F 和 S： F:(25～40)dB/s，U= 3.2 dB/s，k=2； S:(1～10)dB/s，U= 0.3 dB/s，k=2。

备注：
Notes

1. 依据JJF1059.1-2012测量不确定度评定与表示。
   According to JJF1059.1-2012 Evaluation and Expression of Uncertainty in Measurement.
2. 校准项目符合1级技术要求。
   The calibrated measurand are accord with class 1 technical specifications.

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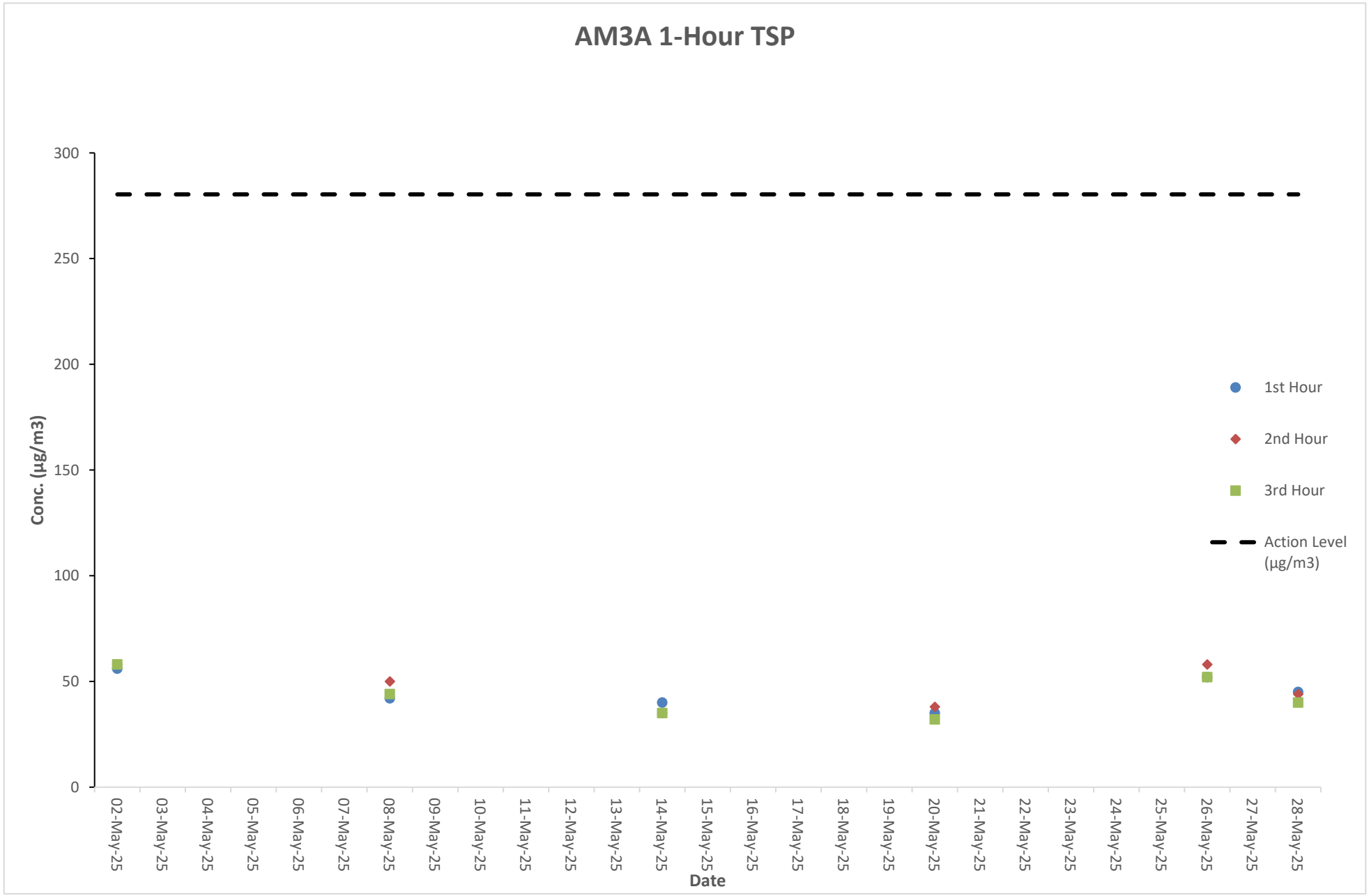
G. Graphical Plots of the Monitoring Results

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

Date	Weather Condition	Time		Conc. (μg/m3)			Action Level	Limit Level
		Start	Finish	1st Hour	2nd Hour	3rd Hour		
02-May-25	Fine	08:01	11:01	56	58	58	280.4	500
08-May-25	Cloudy	14:03	17:03	42	50	44	280.4	500
14-May-25	Cloudy	08:00	11:00	40	35	35	280.4	500
20-May-25	Fine	14:05	17:05	35	38	32	280.4	500
26-May-25	Fine	08:07	11:07	52	58	52	280.4	500
28-May-25	Cloudy	14:09	17:09	45	44	40	280.4	500

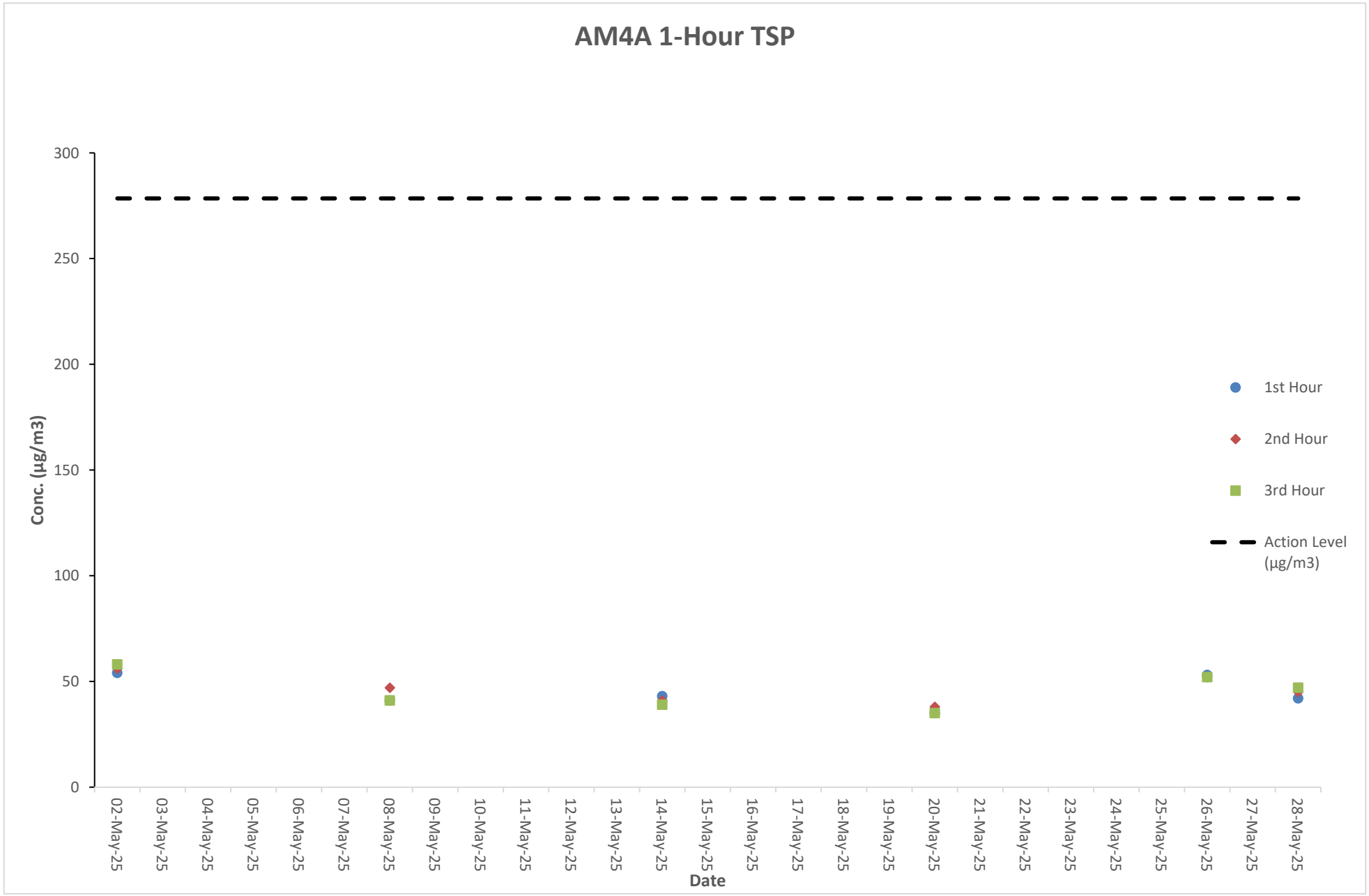
Graphical Presentation of Air Quality Monitoring Result at Station AM3A (1-hour TSP)



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

Date	Weather Condition	Time		Conc. (μg/m3)			Action Level	Limit Level
		Start	Finish	1st Hour	2nd Hour	3rd Hour		
02-May-25	Fine	08:09	11:09	54	56	58	278.5	500
08-May-25	Cloudy	14:11	17:11	41	47	41	278.5	500
14-May-25	Cloudy	08:08	11:08	43	41	39	278.5	500
20-May-25	Fine	14:13	17:13	35	38	35	278.5	500
26-May-25	Fine	08:15	11:15	53	52	52	278.5	500
28-May-25	Cloudy	14:17	17:17	42	45	47	278.5	500

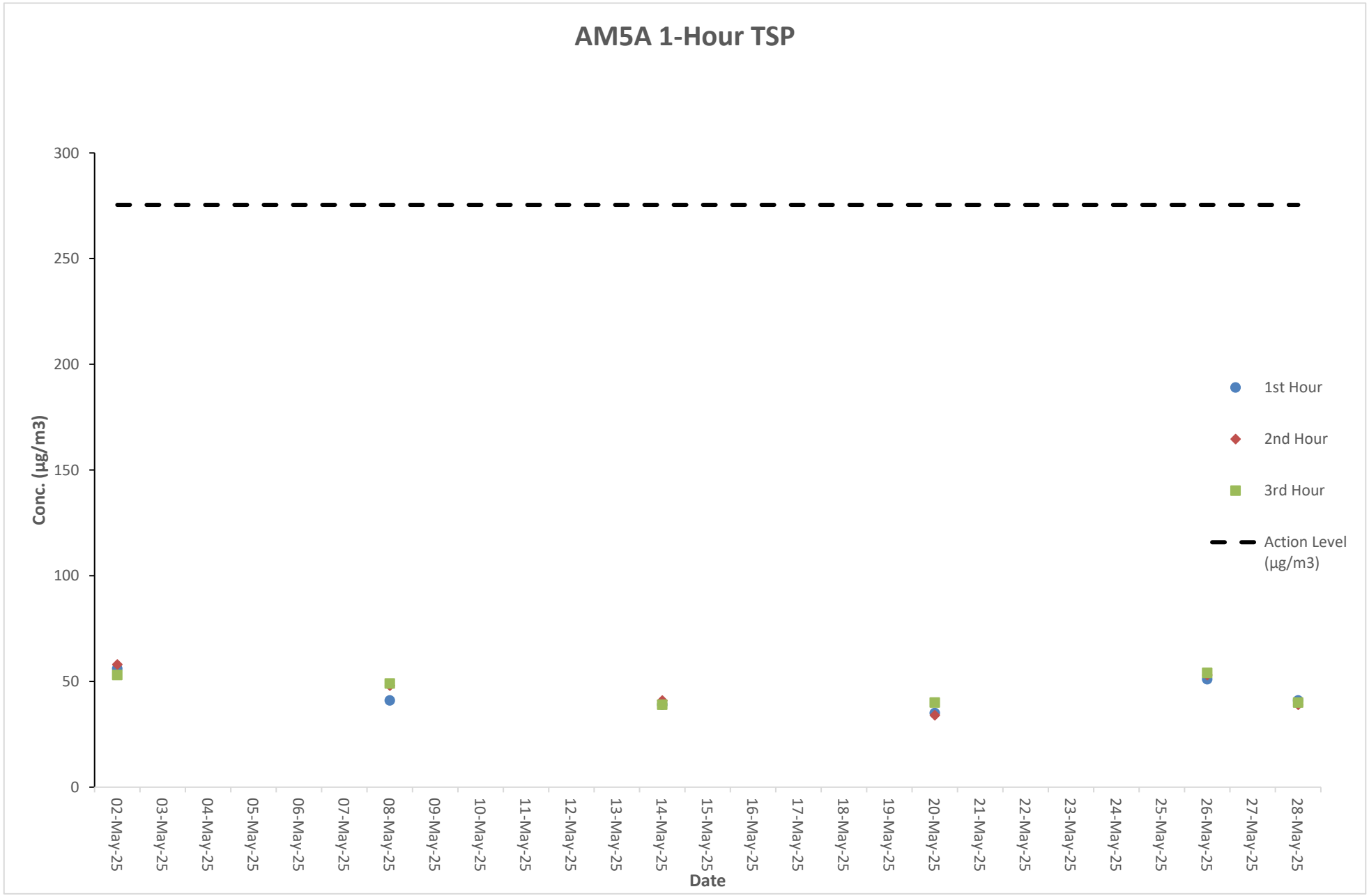
Graphical Presentation of Air Quality Monitoring Result at Station AM4A (1-hour TSP)



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

Date	Weather Condition	Time		Conc. (μg/m3)			Action Level	Limit Level
		Start	Finish	1st Hour	2nd Hour	3rd Hour		
02-May-25	Fine	08:24	11:24	56	58	53	275.4	500
08-May-25	Cloudy	14:28	17:28	41	48	49	275.4	500
14-May-25	Cloudy	08:23	11:23	39	41	39	275.4	500
20-May-25	Fine	14:30	17:30	35	34	40	275.4	500
26-May-25	Fine	08:30	11:30	51	53	54	275.4	500
28-May-25	Cloudy	14:34	17:34	41	39	40	275.4	500

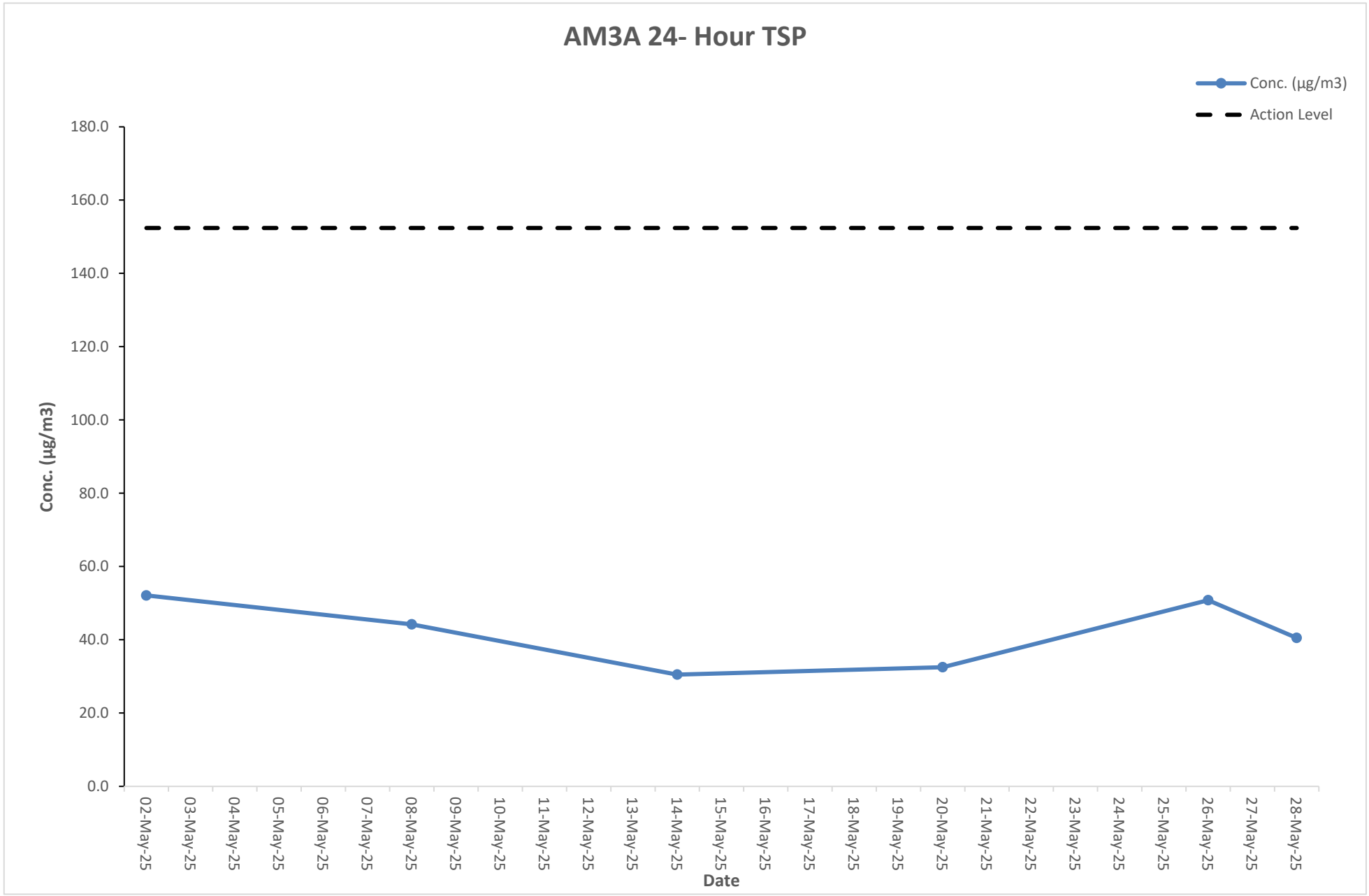
Graphical Presentation of Air Quality Monitoring Result at Station AM5A (1-hour TSP)



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

Start		Finish		Filter Weight (g)		Elapsed Time Reading		Sampling	Flow Rate (m^3/min)			Conc.	Weather	Action	Limit
Date	Time	Date	Time	Initial	Final	Initial	Final	Time (hrs)	Initial	Final	Average	(µg/m3)	Condition	Level	Level
02-May-25	10:00AM	03-May-25	10:00AM	2.8066	2.8904	8301.8	8325.8	24	1.12	1.12	1.12	52.1	Cloudy	152.4	260
08-May-25	10:00AM	09-May-25	10:00AM	2.8089	2.8801	8325.8	8349.8	24	1.12	1.12	1.12	44.2	Rainy	152.4	260
14-May-25	10:00AM	15-May-25	10:00AM	2.8012	2.8502	8349.8	8373.8	24	1.12	1.12	1.12	30.5	Cloudy	152.4	260
20-May-25	10:00AM	21-May-25	10:00AM	2.8035	2.8558	8373.8	8397.8	24	1.12	1.12	1.12	32.5	Cloudy	152.4	260
26-May-25	10:00AM	27-May-25	10:00AM	2.8073	2.8891	8397.8	8421.8	24	1.12	1.12	1.12	50.8	Sunny	152.4	260
28-May-25	10:00AM	29-May-25	10:00AM	2.8043	2.8695	8421.8	8445.8	24	1.12	1.12	1.12	40.5	Cloudy	152.4	260

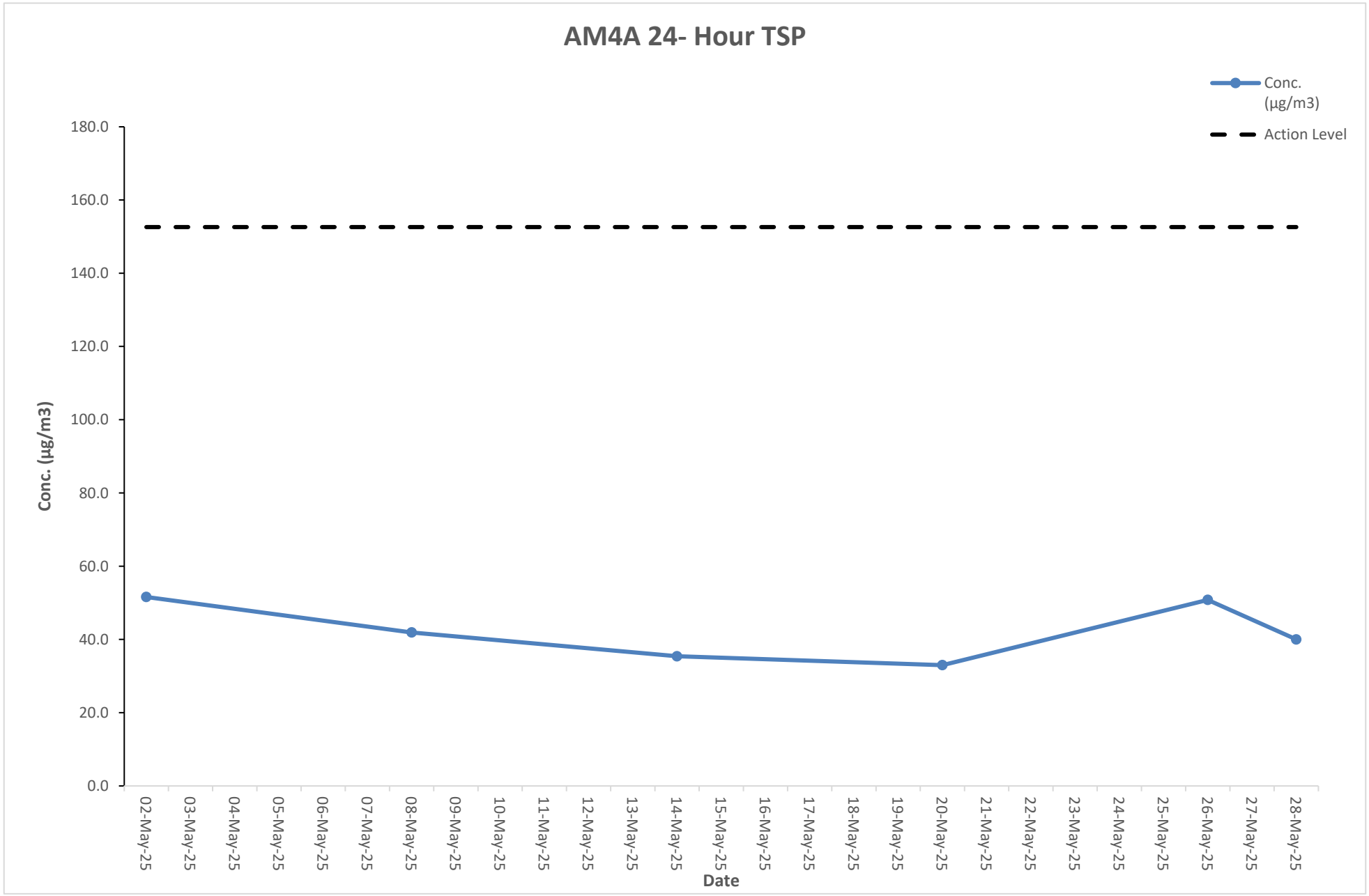
Graphical Presentation of Air Quality Monitoring Result at Station AM3A (24-hour TSP)



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

Start		Finish		Filter Weight (g)		Elapsed Time Reading		Sampling	Flow Rate (m^3/min)			Conc.	Weather	Action	Limit
Date	Time	Date	Time	Initial	Final	Initial	Final	Time (hrs)	Initial	Final	Average	(µg/m3)	Condition	Level	Level
02-May-25	10:00AM	03-May-25	10:00AM	2.8050	2.8881	8721.4	8745.4	24	1.12	1.12	1.12	51.6	Cloudy	152.6	260
08-May-25	10:00AM	09-May-25	10:00AM	2.8070	2.8743	8745.4	8769.4	24	1.12	1.12	1.12	41.9	Rainy	152.6	260
14-May-25	10:00AM	15-May-25	10:00AM	2.8018	2.8587	8769.4	8793.4	24	1.12	1.12	1.12	35.4	Cloudy	152.6	260
20-May-25	10:00AM	21-May-25	10:00AM	2.8063	2.8595	8793.4	8817.4	24	1.12	1.12	1.12	33.0	Cloudy	152.6	260
26-May-25	10:00AM	27-May-25	10:00AM	2.8037	2.8855	8817.4	8841.4	24	1.12	1.12	1.12	50.8	Sunny	152.6	260
28-May-25	10:00AM	29-May-25	10:00AM	2.8033	2.8677	8841.4	8865.4	24	1.12	1.12	1.12	40.0	Cloudy	152.6	260

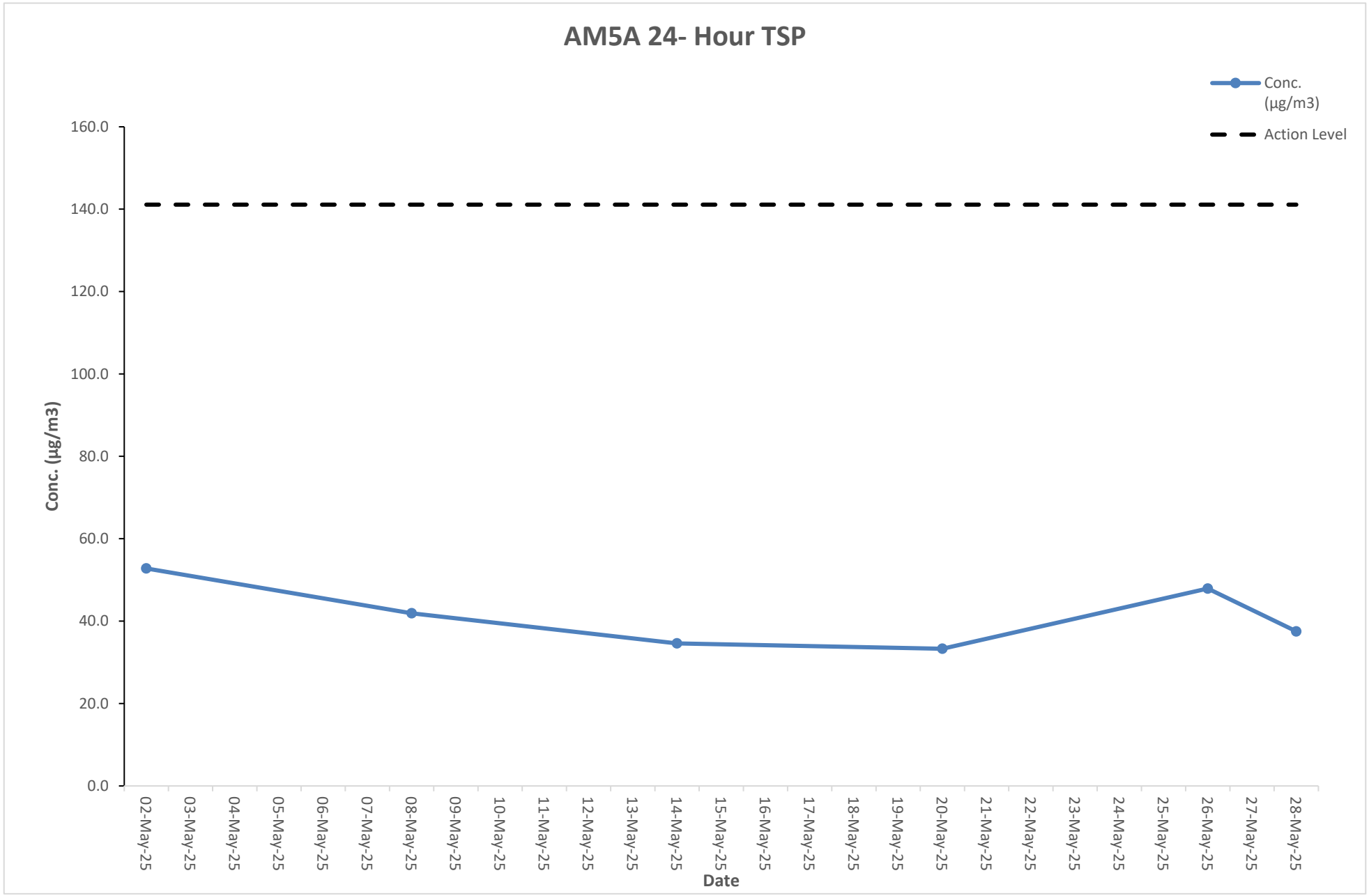
Graphical Presentation of Air Quality Monitoring Result at Station AM4A (24-hour TSP)



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

Start		Finish		Filter Weight (g)		Elapsed Time Reading		Sampling	Flow Rate (m^3/min)			Conc.	Weather	Action	Limit
Date	Time	Date	Time	Initial	Final	Initial	Final	Time (hrs)	Initial	Final	Average	(µg/m3)	Condition	Level	Level
02-May-25	10:00AM	03-May-25	10:00AM	2.8075	2.8925	8859.6	8883.6	24	1.12	1.12	1.12	52.8	Cloudy	141.1	260
08-May-25	10:00AM	09-May-25	10:00AM	2.8046	2.8721	8883.6	8907.6	24	1.12	1.12	1.12	41.9	Rainy	141.1	260
14-May-25	10:00AM	15-May-25	10:00AM	2.8060	2.8616	8907.6	8931.6	24	1.12	1.12	1.12	34.6	Cloudy	141.1	260
20-May-25	10:00AM	21-May-25	10:00AM	2.8040	2.8576	8931.6	8955.6	24	1.12	1.12	1.12	33.3	Cloudy	141.1	260
26-May-25	10:00AM	27-May-25	10:00AM	2.8077	2.8847	8955.6	8979.6	24	1.12	1.12	1.12	47.9	Sunny	141.1	260
28-May-25	10:00AM	29-May-25	10:00AM	2.8022	2.8626	8979.6	9003.6	24	1.12	1.12	1.12	37.5	Cloudy	141.1	260

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

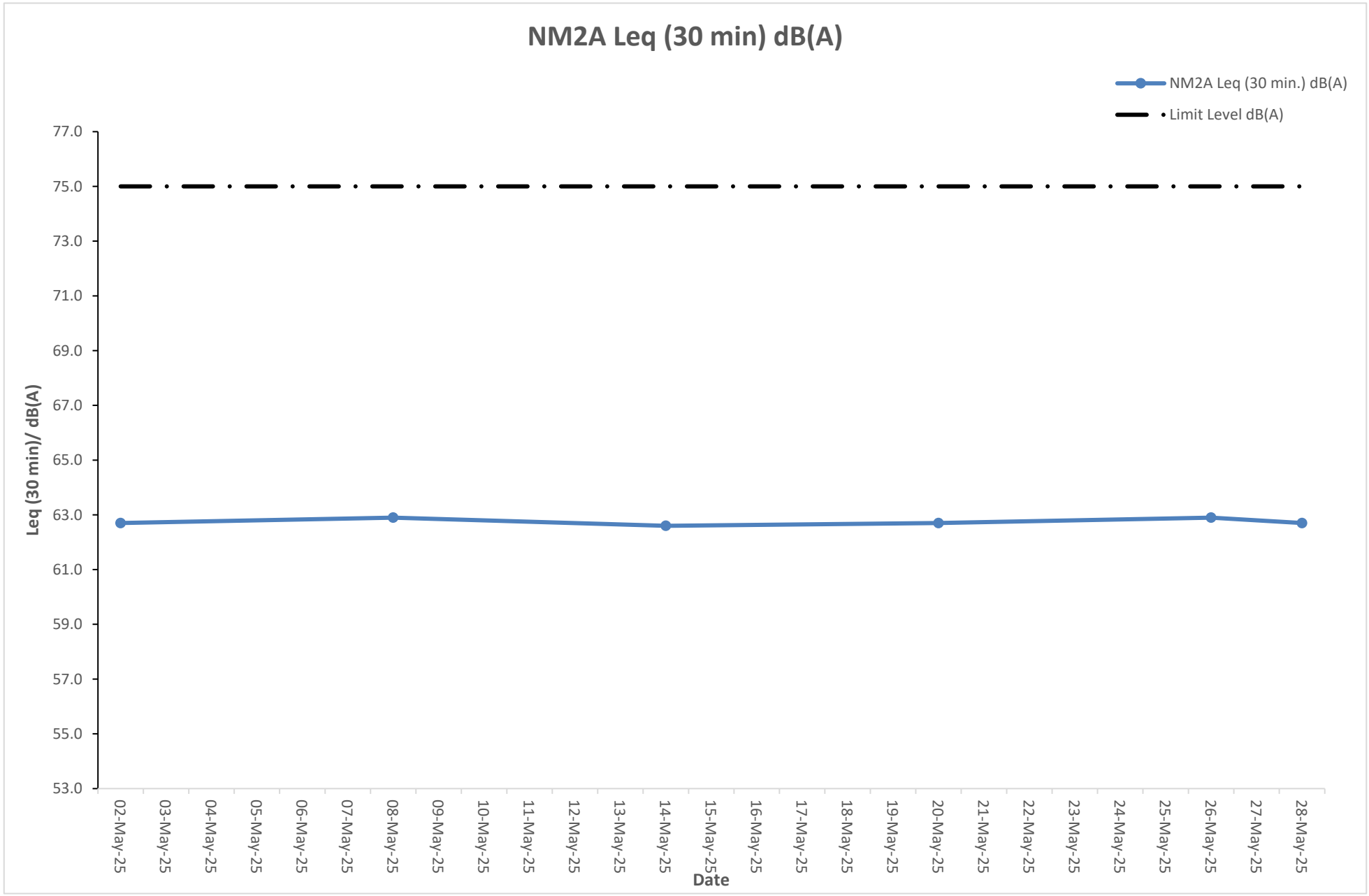


Noise Monitoring Result at Station NM2A

Date	Time	Measured L10 dB(A)	Measured L90 dB(A)	Leq (30 min.) dB(A)
02-May-25	7:00	63.7	61.0	62.7
02-May-25	7:05	63.7	61.5	
02-May-25	7:10	64.5	60.8	
02-May-25	7:15	64.9	60.6	
02-May-25	7:20	64.2	61.1	
02-May-25	7:25	64.6	61.2	
08-May-25	14:00	64.7	60.8	62.9
08-May-25	14:05	64.2	61.2	
08-May-25	14:10	65.0	61.1	
08-May-25	14:15	65.0	60.5	
08-May-25	14:20	64.8	60.4	
08-May-25	14:25	63.8	61.4	
14-May-25	7:00	64.2	60.4	62.6
14-May-25	7:05	64.6	60.7	
14-May-25	7:10	63.8	61.5	
14-May-25	7:15	64.0	60.2	
14-May-25	7:20	64.4	61.6	
14-May-25	7:25	64.5	61.6	
20-May-25	14:00	64.0	60.4	62.7
20-May-25	14:05	63.7	61.6	
20-May-25	14:10	64.7	60.2	
20-May-25	14:15	64.2	60.8	
20-May-25	14:20	64.0	61.6	
20-May-25	14:25	64.2	60.2	
26-May-25	7:01	64.4	61.1	62.9
26-May-25	7:06	64.0	61.0	
26-May-25	7:11	64.5	60.2	
26-May-25	7:16	63.6	60.2	
26-May-25	7:21	64.1	61.6	
26-May-25	7:26	64.3	61.0	
28-May-25	14:00	64.0	60.3	62.7
28-May-25	14:05	64.3	61.2	
28-May-25	14:10	64.9	60.5	
28-May-25	14:15	64.5	61.6	
28-May-25	14:20	65.0	61.0	
28-May-25	14:25	64.6	60.9	

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

Graphical Presentation of Noise Monitoring Result at Station NM2A

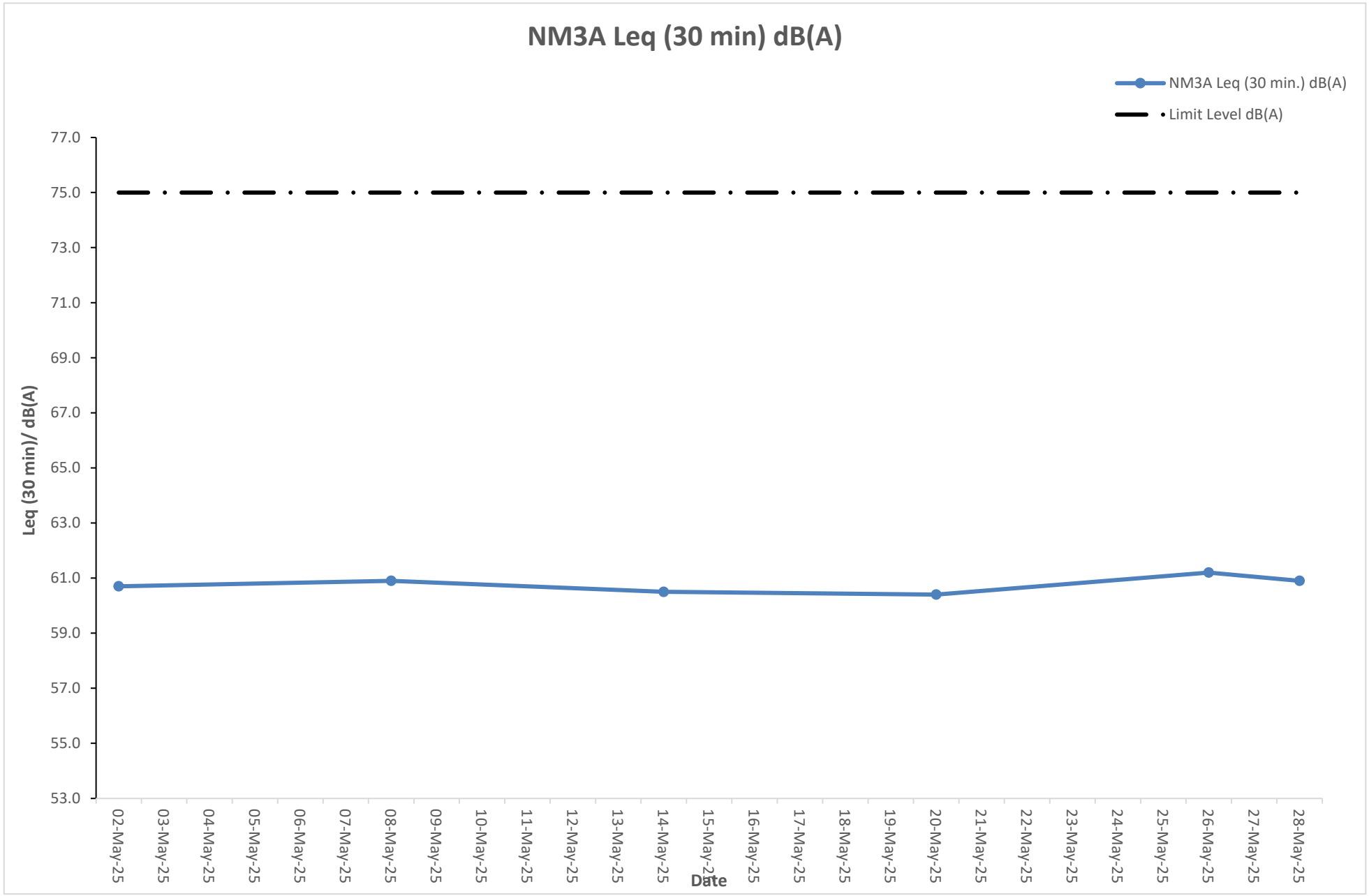


Noise Monitoring Result at Station NM3A

Date	Time	Measured L10 dB(A)	Measured L90 dB(A)	Leq (30 min.) dB(A)
02-May-25	8:30	61.9	57.8	60.7
02-May-25	8:35	62.1	57.8	
02-May-25	8:40	62.2	57.7	
02-May-25	8:45	62.1	57.3	
02-May-25	8:50	63.3	57.3	
02-May-25	8:55	62.4	56.6	
08-May-25	15:21	62.5	57.2	60.9
08-May-25	15:26	63.5	56.4	
08-May-25	15:31	63.5	56.0	
08-May-25	15:36	62.6	57.8	
08-May-25	15:41	62.6	56.1	
08-May-25	15:46	62.7	57.3	
14-May-25	8:30	63.2	56.6	60.5
14-May-25	8:35	63.0	57.8	
14-May-25	8:40	63.4	57.3	
14-May-25	8:45	63.4	57.3	
14-May-25	8:50	63.6	56.5	
14-May-25	8:55	62.9	56.0	
20-May-25	15:25	63.4	55.9	60.4
20-May-25	15:30	63.2	56.8	
20-May-25	15:35	62.7	56.8	
20-May-25	15:40	63.0	57.8	
20-May-25	15:45	62.4	57.7	
20-May-25	15:50	62.5	56.9	
26-May-25	8:40	63.4	56.2	61.2
26-May-25	8:45	63.6	57.3	
26-May-25	8:50	61.9	56.3	
26-May-25	8:55	62.6	56.8	
26-May-25	9:00	63.8	57.2	
26-May-25	9:05	62.6	57.6	
28-May-25	15:25	62.3	57.7	60.9
28-May-25	15:30	63.2	56.6	
28-May-25	15:35	63.7	57.8	
28-May-25	15:40	62.0	57.0	
28-May-25	15:45	62.4	57.7	
28-May-25	15:50	62.4	57.8	

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

Graphical Presentation of Noise Monitoring Result at Station NM3A

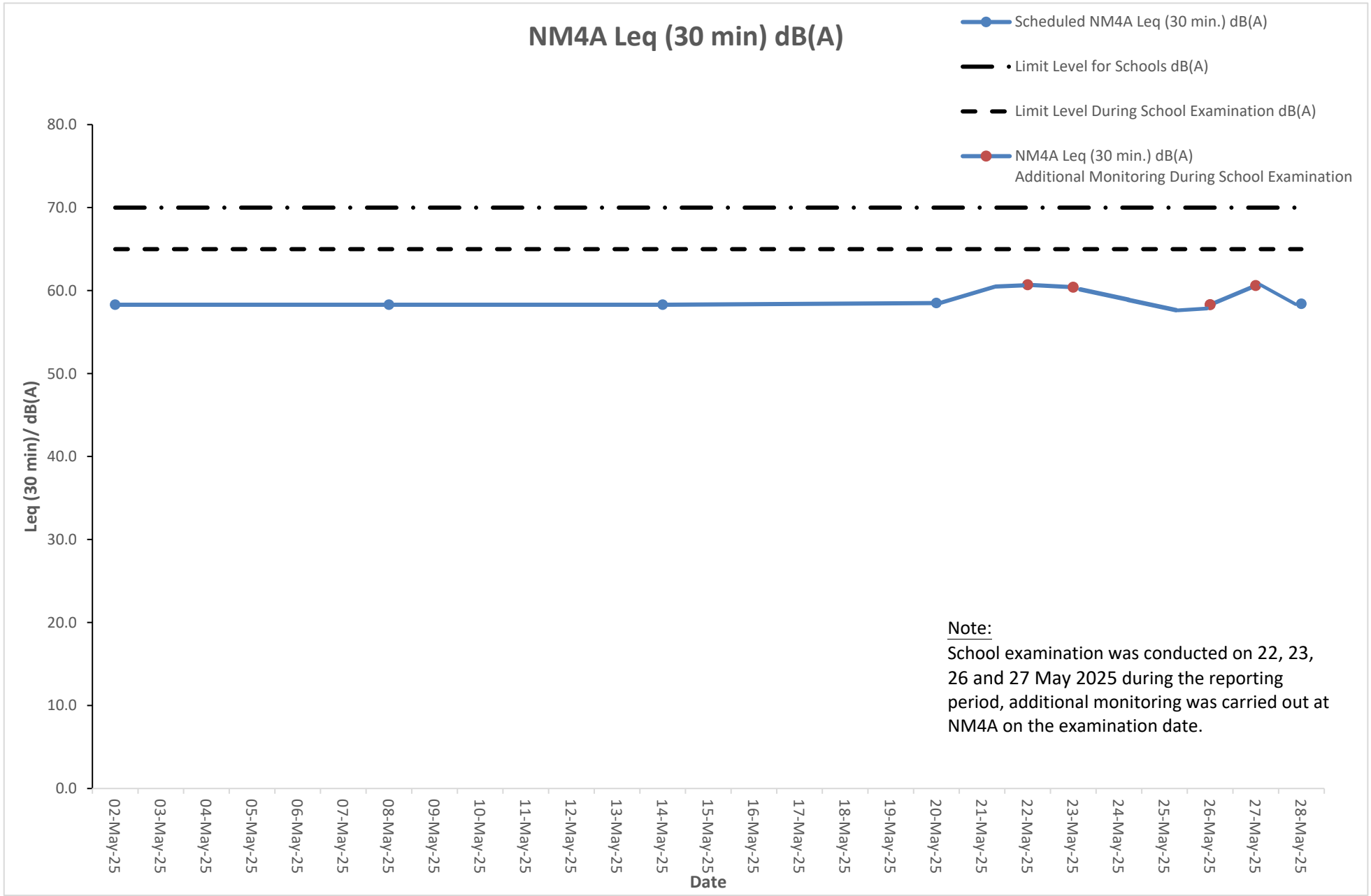


Noise Monitoring Result at Station NM4A

Date	Time	Measured L10 dB(A)	Measured L90 dB(A)	Leq (30 min.) dB(A)
02-May-25	10:35	59.6	56.9	58.3
02-May-25	10:40	60.3	57.0	
02-May-25	10:45	59.8	56.1	
02-May-25	10:50	59.5	55.9	
02-May-25	10:55	60.3	56.9	
02-May-25	11:00	60.4	55.7	
08-May-25	15:56	59.5	57.1	58.3
08-May-25	16:01	59.9	56.9	
08-May-25	16:06	59.3	55.9	
08-May-25	16:11	59.6	55.7	
08-May-25	16:16	59.4	56.0	
08-May-25	16:21	60.4	55.8	
14-May-25	10:35	59.6	56.8	58.3
14-May-25	10:40	59.7	56.8	
14-May-25	10:45	59.2	56.1	
14-May-25	10:50	59.2	55.9	
14-May-25	10:55	59.2	56.4	
14-May-25	11:00	59.5	56.0	
20-May-25	16:00	59.4	56.2	58.5
20-May-25	16:05	59.6	56.1	
20-May-25	16:10	59.2	56.4	
20-May-25	16:15	59.2	57.0	
20-May-25	16:20	59.8	56.3	
20-May-25	16:25	59.4	55.9	
26-May-25	10:45	59.4	56.8	58.3
26-May-25	10:50	59.3	56.7	
26-May-25	10:55	59.2	56.3	
26-May-25	11:00	60.6	55.8	
26-May-25	11:05	59.6	56.1	
26-May-25	11:10	59.6	55.8	
28-May-25	16:00	60.2	56.4	58.4
28-May-25	16:05	59.3	56.8	
28-May-25	16:10	60.1	56.6	
28-May-25	16:15	60.6	56.3	
28-May-25	16:20	59.6	57.0	
28-May-25	16:25	60.6	56.0	

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

Graphical Presentation of Noise Monitoring Result at Station NM4A

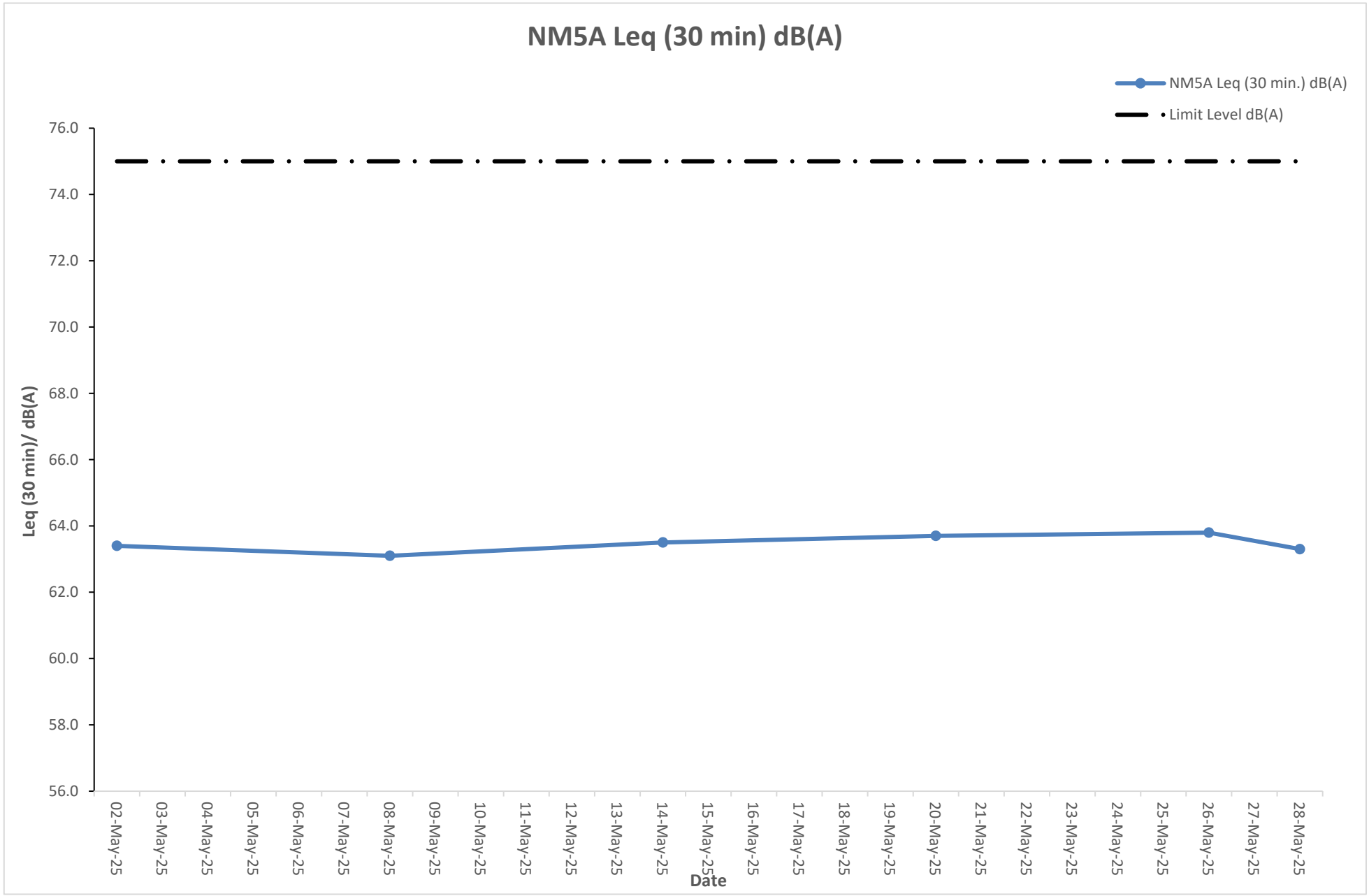


Noise Monitoring Result at Station NM5A

Date	Time	Measured L10 dB(A)	Measured L90 dB(A)	Leq (30 min.) dB(A)	Leq (30 min.) +3 dB(A)
02-May-25	7:50	61.5	57.8	60.4	63.4
02-May-25	7:55	62.3	57.4		
02-May-25	8:00	61.5	58.5		
02-May-25	8:05	61.6	57.6		
02-May-25	8:10	62.6	57.8		
02-May-25	8:15	61.4	57.5		
08-May-25	14:40	62.0	58.8	60.1	63.1
08-May-25	14:45	62.6	57.8		
08-May-25	14:50	62.1	57.8		
08-May-25	14:55	62.4	57.8		
08-May-25	15:00	61.5	59.0		
08-May-25	15:05	62.1	58.3		
14-May-25	7:50	62.3	58.3	60.5	63.5
14-May-25	7:55	62.3	58.4		
14-May-25	8:00	61.5	59.2		
14-May-25	8:05	62.8	57.7		
14-May-25	8:10	62.2	58.7		
14-May-25	8:15	62.4	59.1		
20-May-25	14:38	61.5	59.3	60.7	63.7
20-May-25	14:52	61.4	58.5		
20-May-25	14:57	61.6	58.7		
20-May-25	15:02	61.4	58.5		
20-May-25	15:07	62.3	58.2		
20-May-25	15:12	61.7	58.2		
26-May-25	7:51	62.2	59.1	60.8	63.8
26-May-25	8:05	62.1	57.6		
26-May-25	8:10	62.0	58.9		
26-May-25	8:15	61.7	58.1		
26-May-25	8:20	62.5	58.6		
26-May-25	8:25	61.9	57.8		
28-May-25	14:38	61.6	59.0	60.3	63.3
28-May-25	14:52	62.2	58.9		
28-May-25	14:57	62.8	59.2		
28-May-25	15:02	62.3	58.5		
28-May-25	15:07	61.7	57.5		
28-May-25	15:12	62.5	58.9		

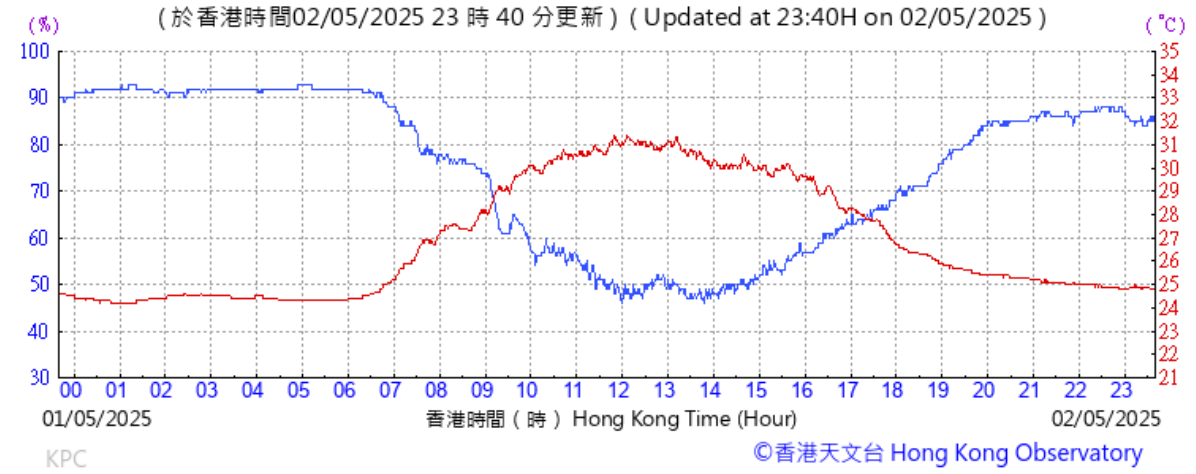
The station set-up of a free-field measurement at station NM5A.

Graphical Presentation of Noise Monitoring Result at Station NM5A

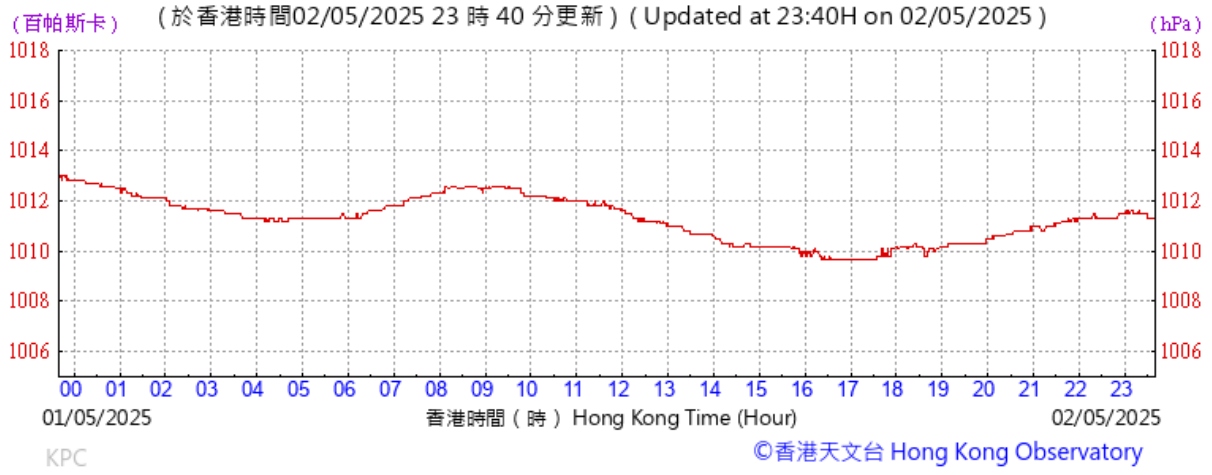


H. Meteorological Data Extracted from Hong Kong Observatory

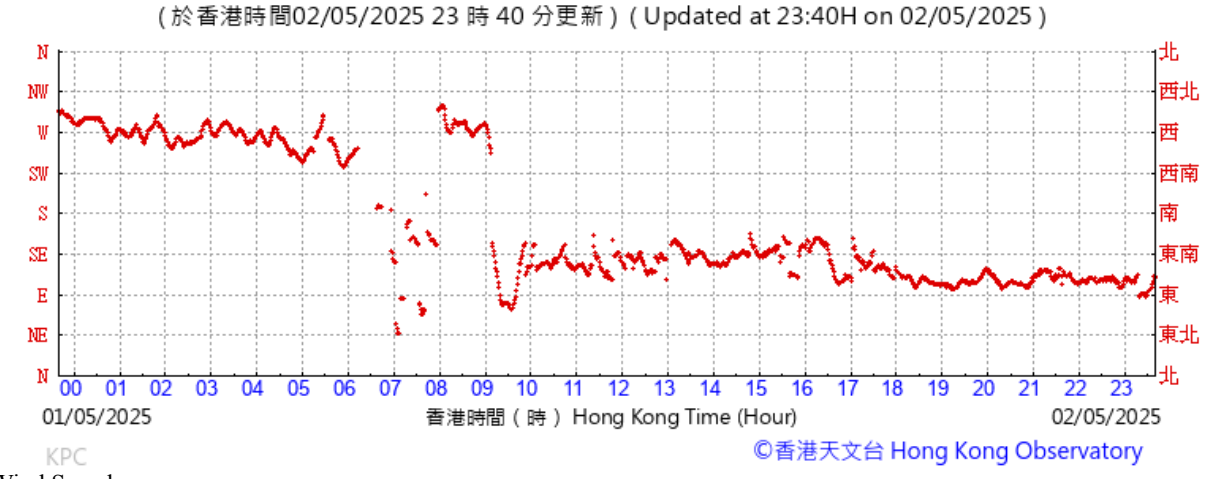
Tempearture/Humidity:



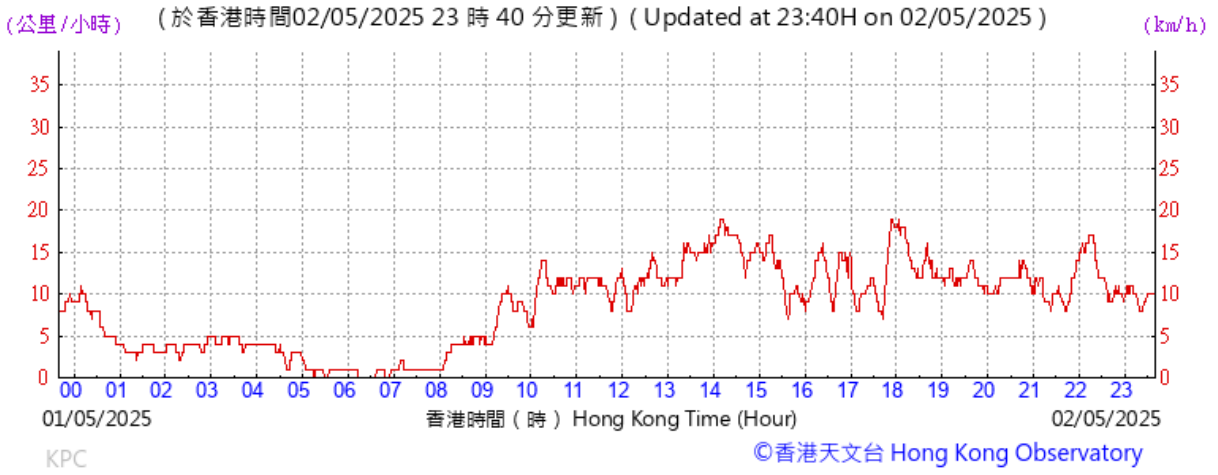
Pressure:



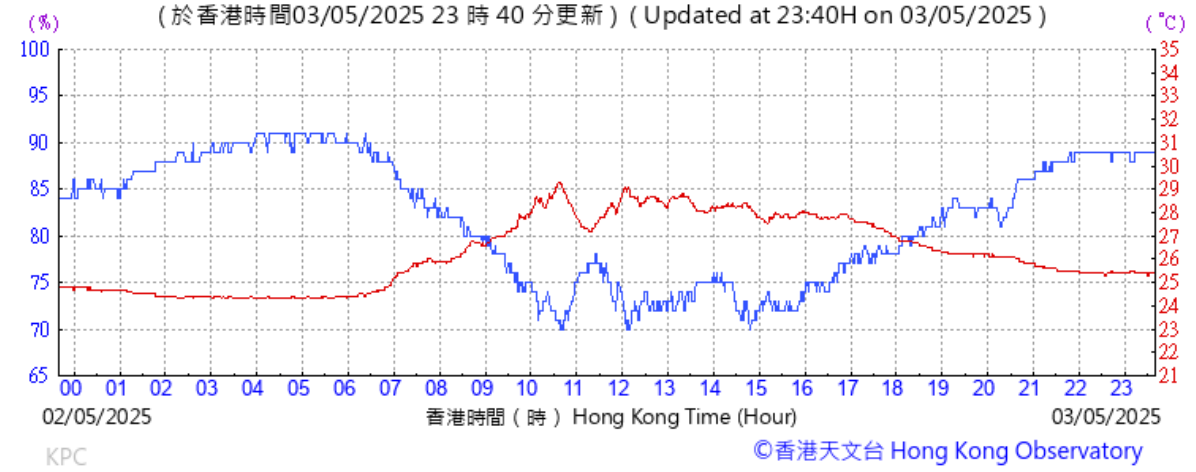
Wind Direction:



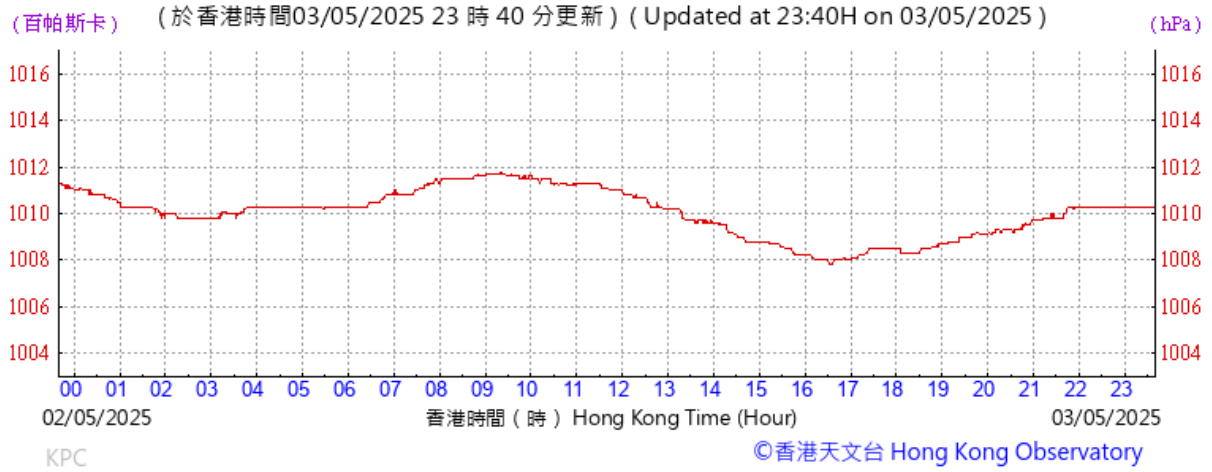
Wind Speed:



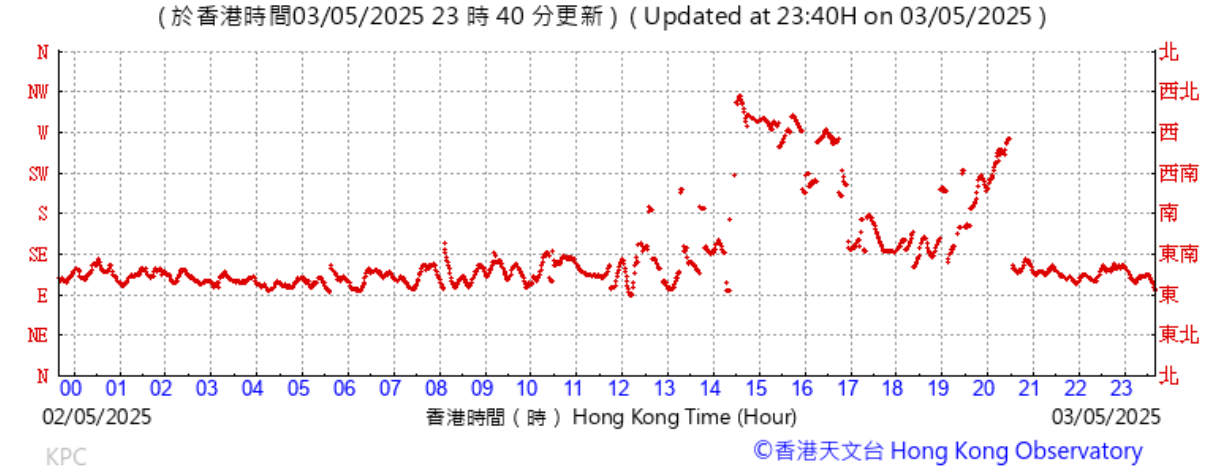
Tempearture/Humidity:



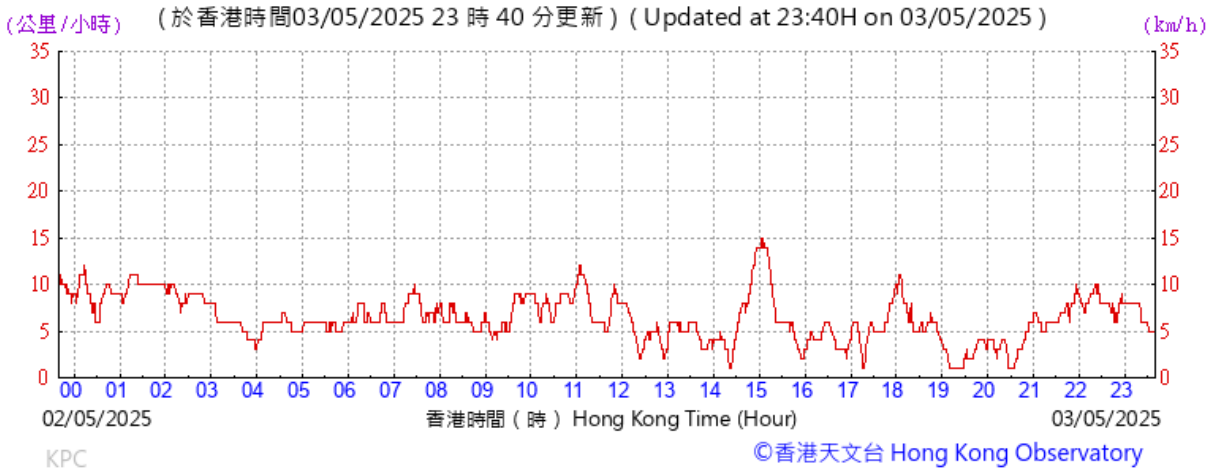
Pressure:



Wind Direction:



Wind Speed:



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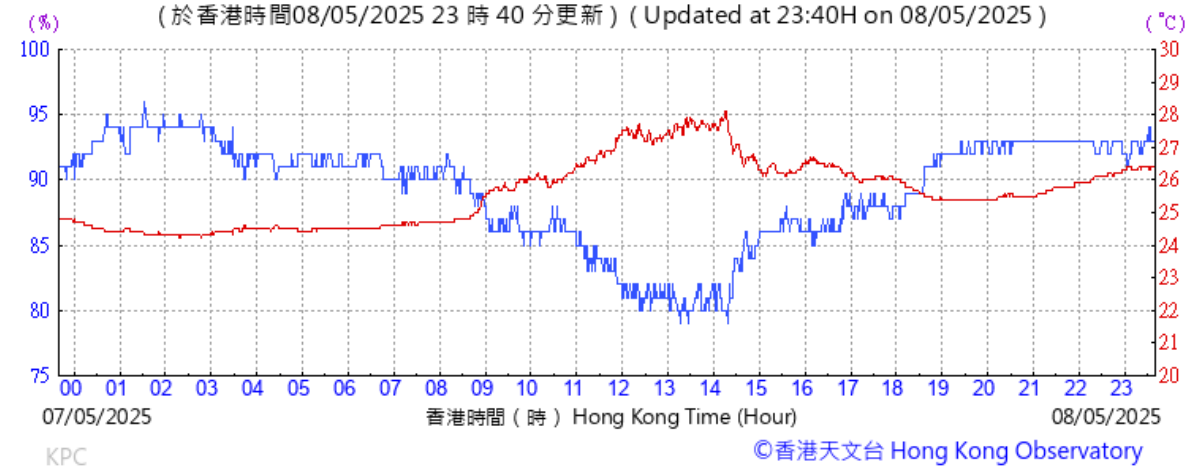

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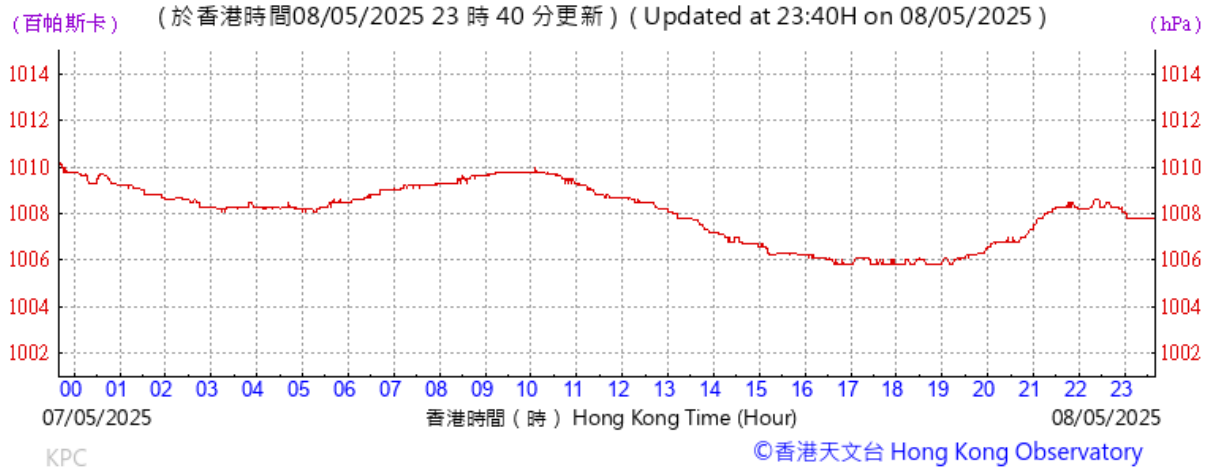

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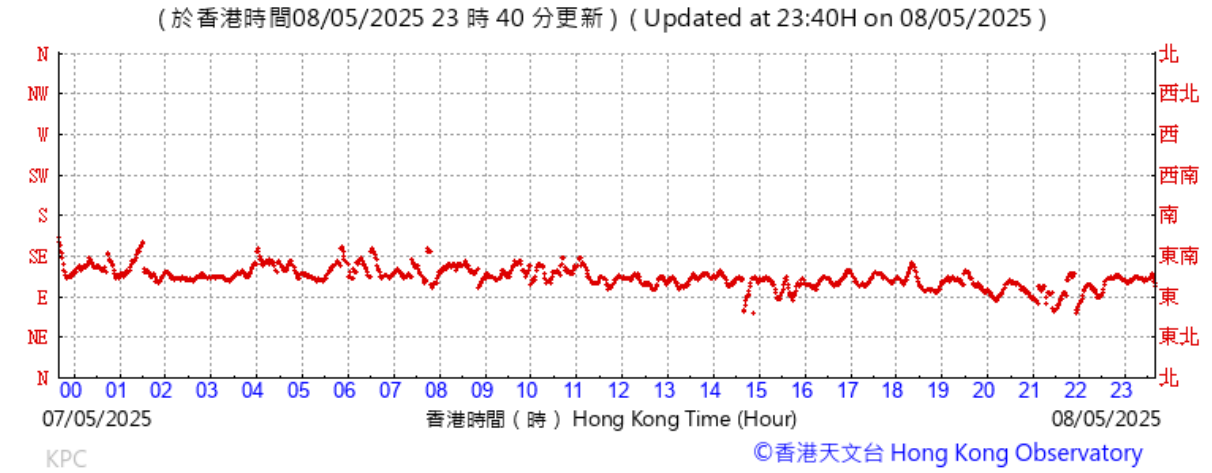

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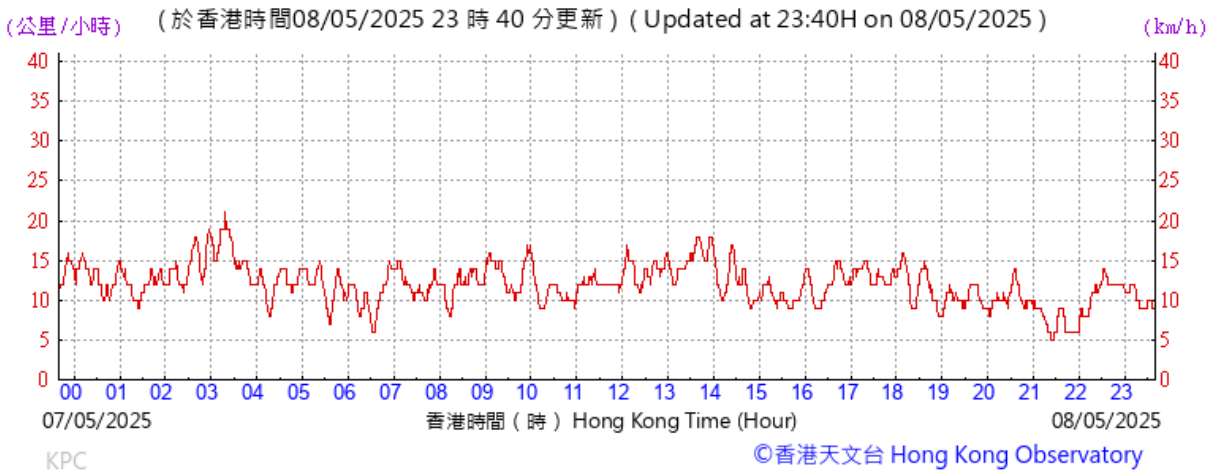

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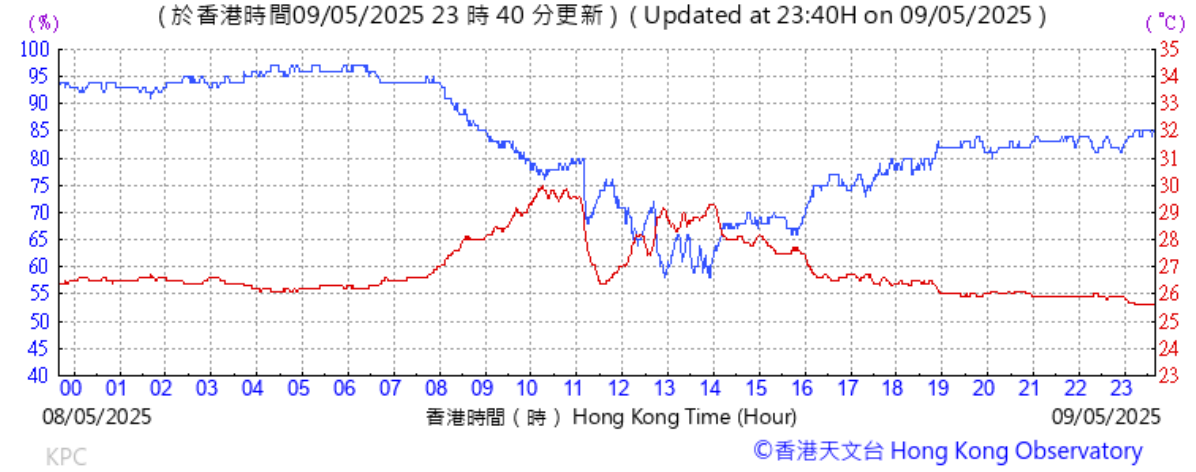

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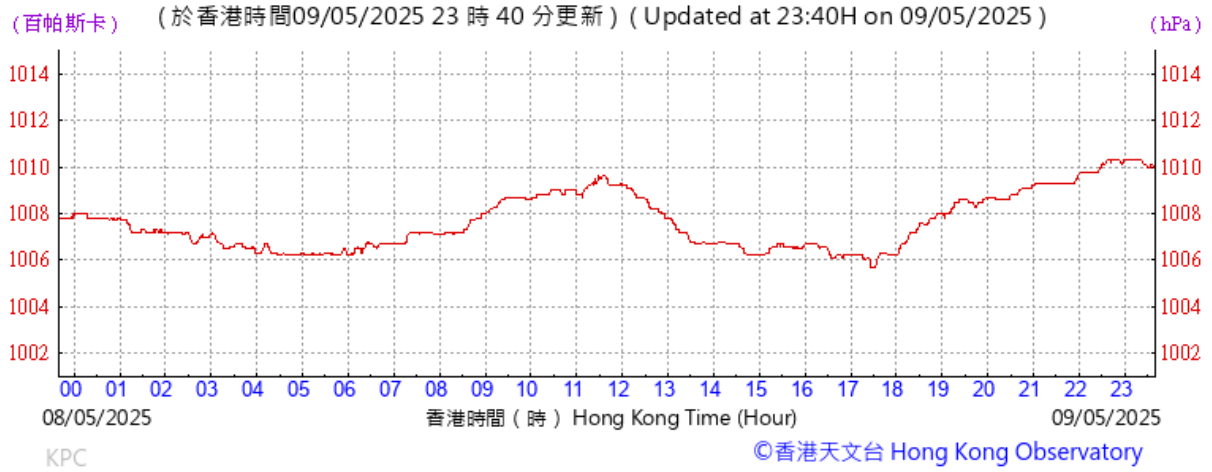

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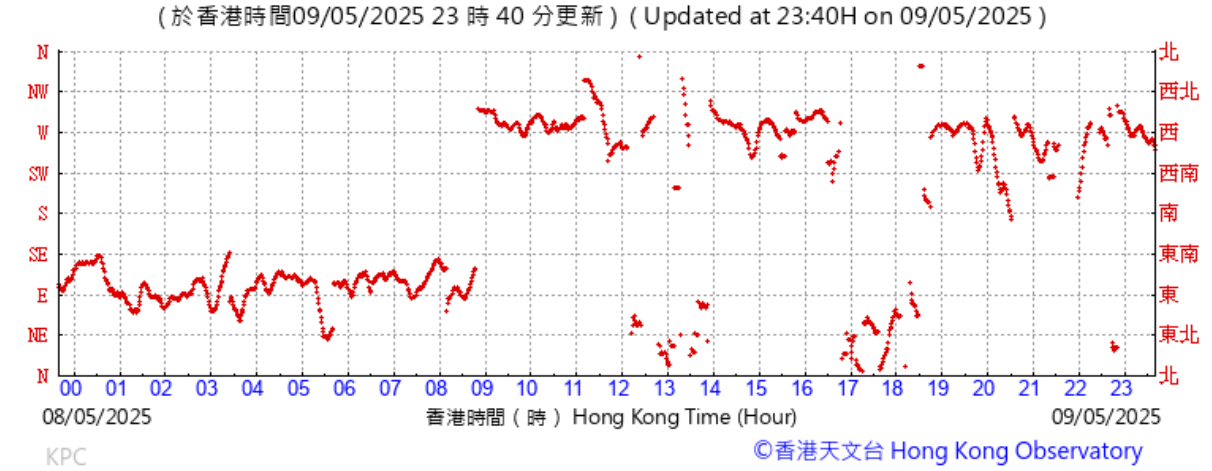

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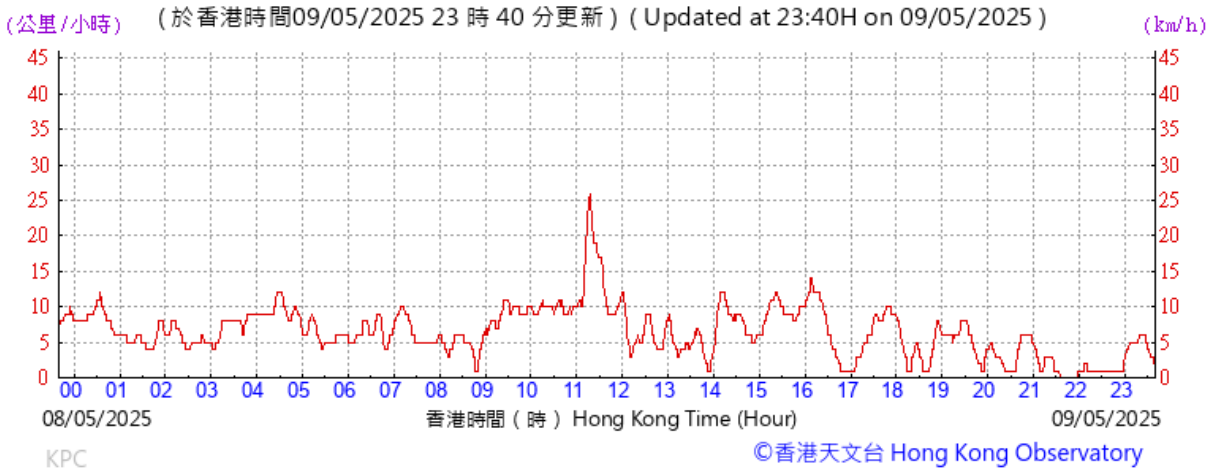

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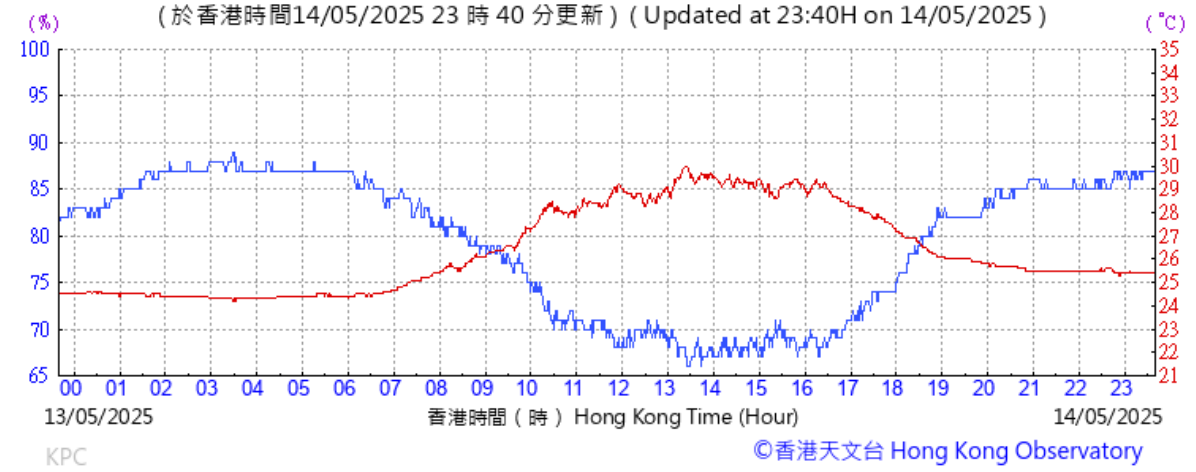

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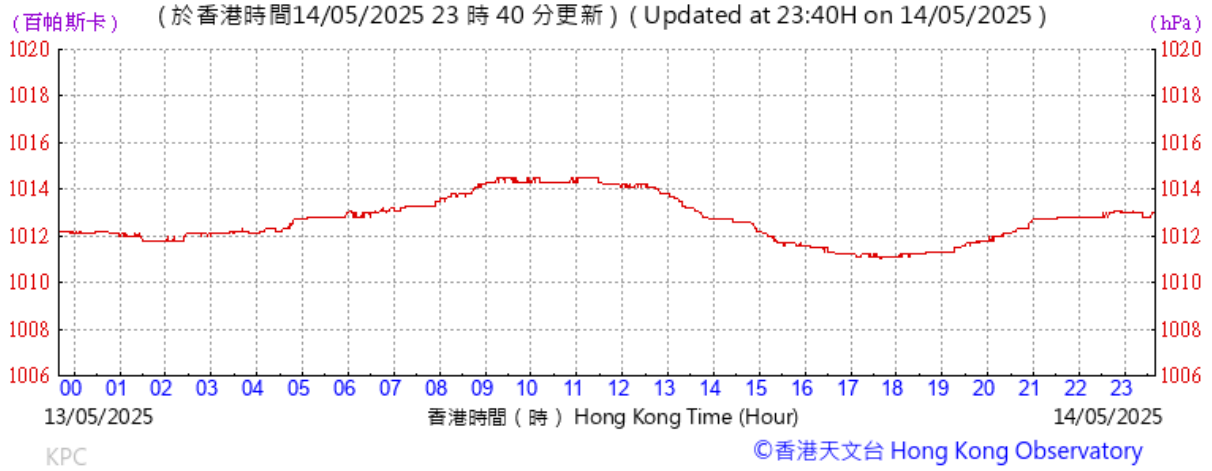

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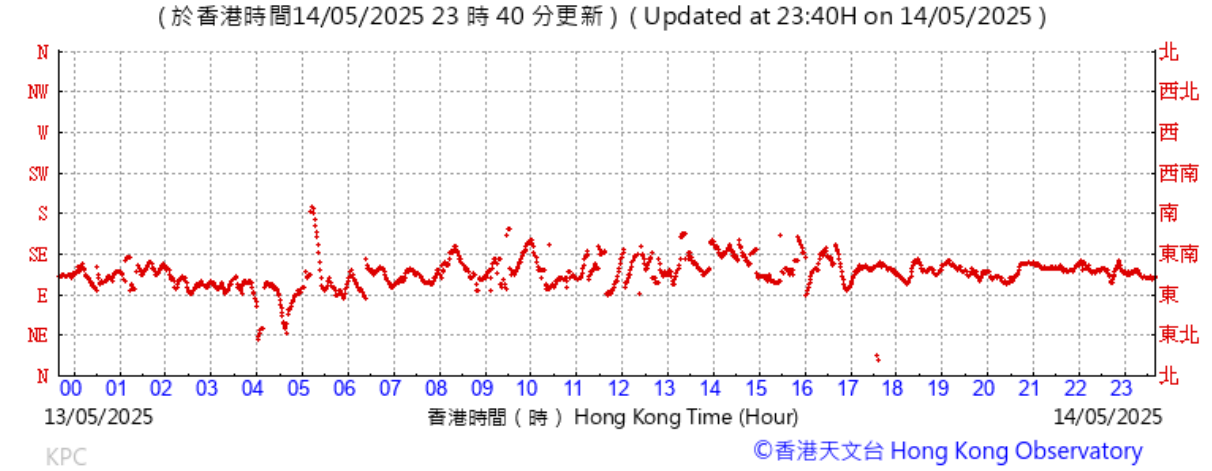

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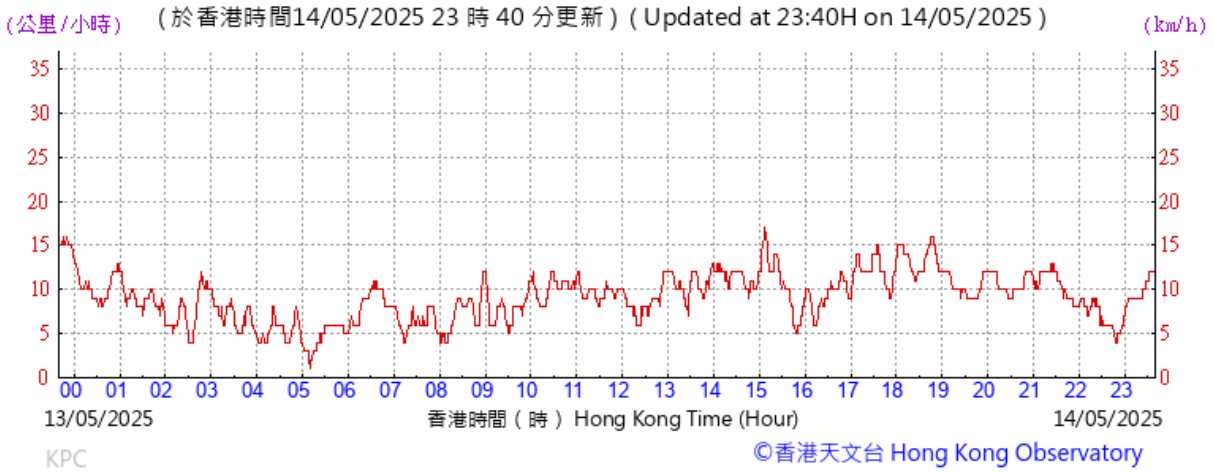

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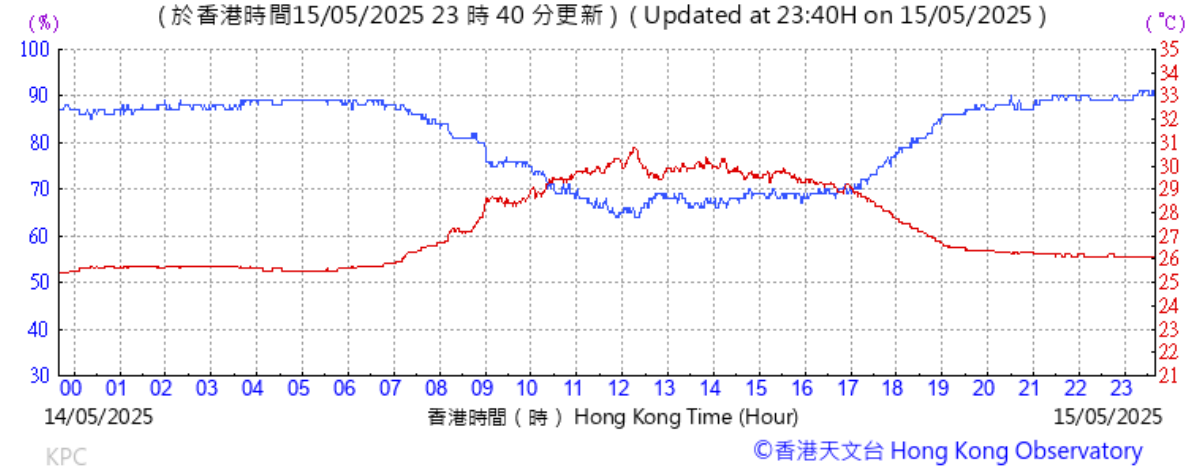

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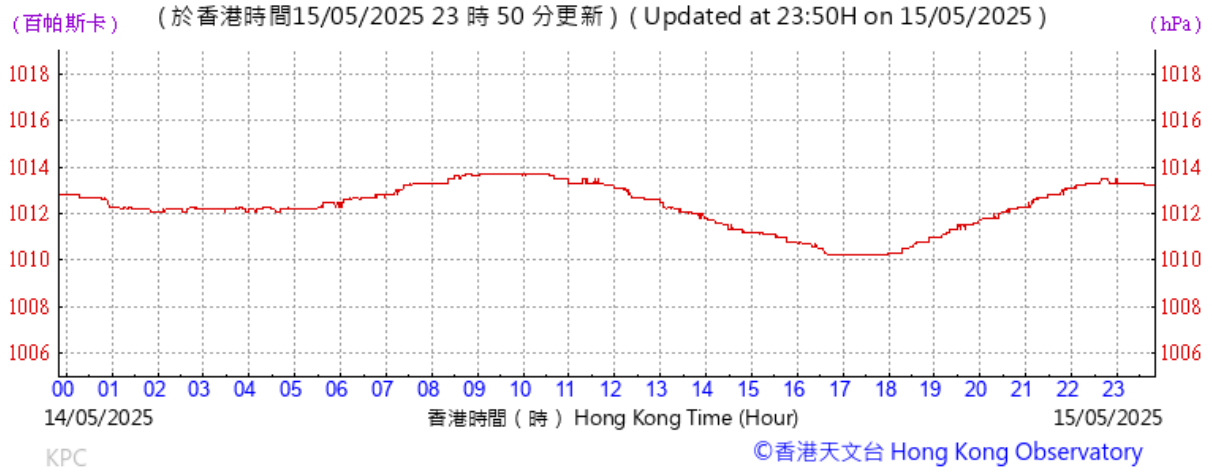

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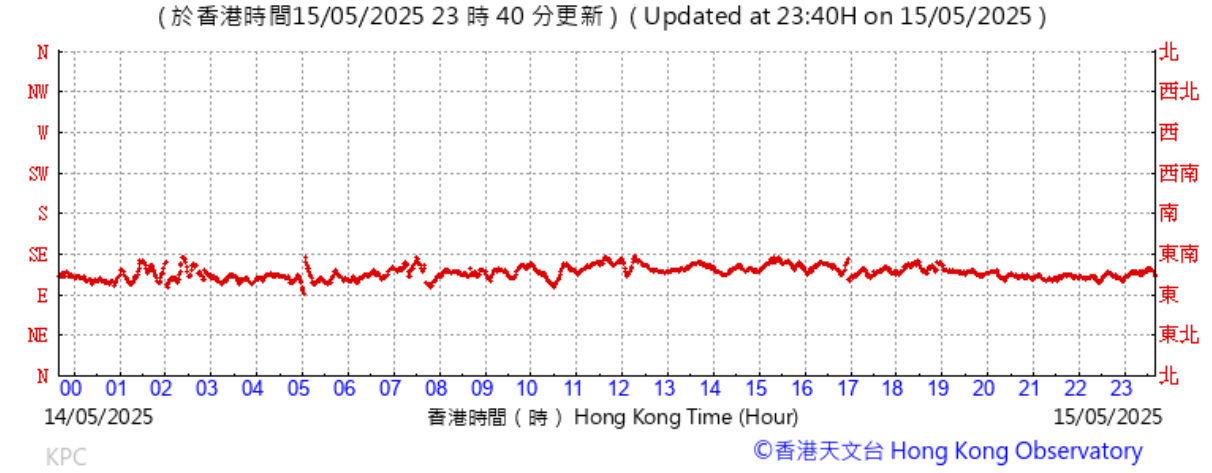

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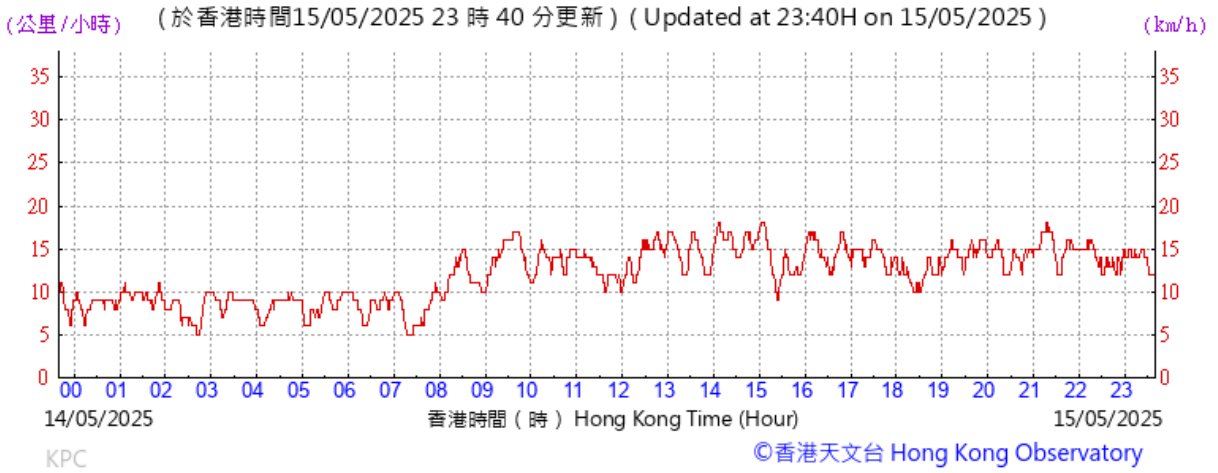

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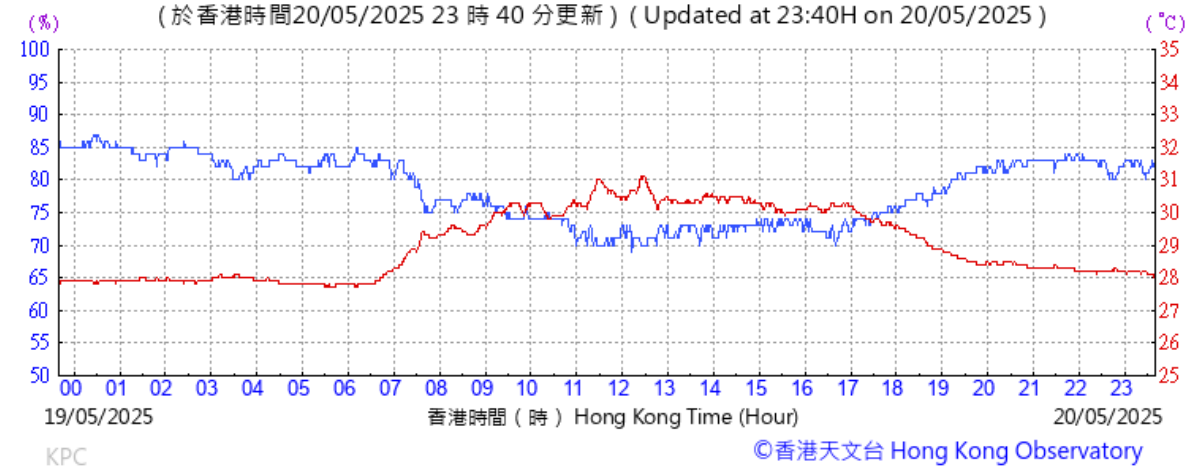

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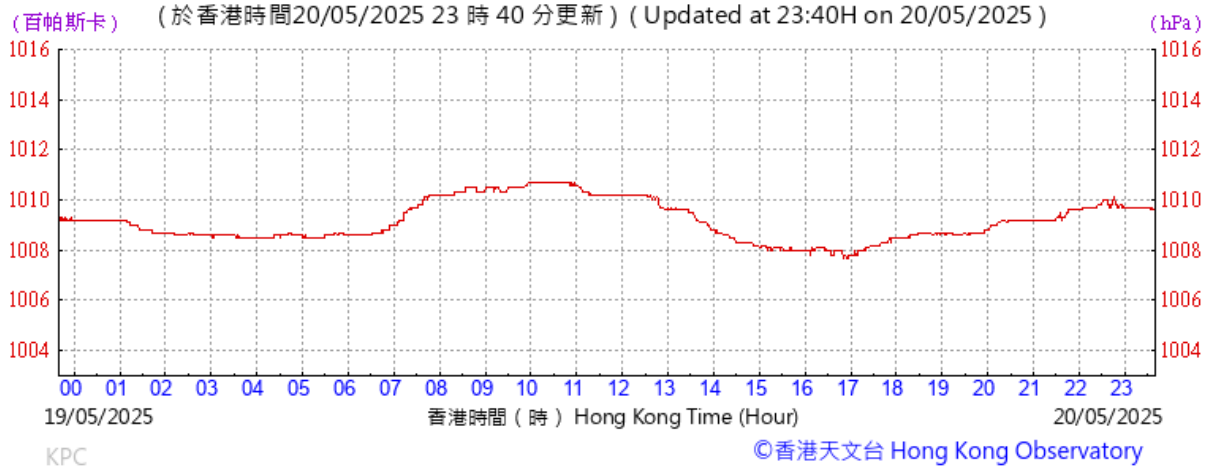

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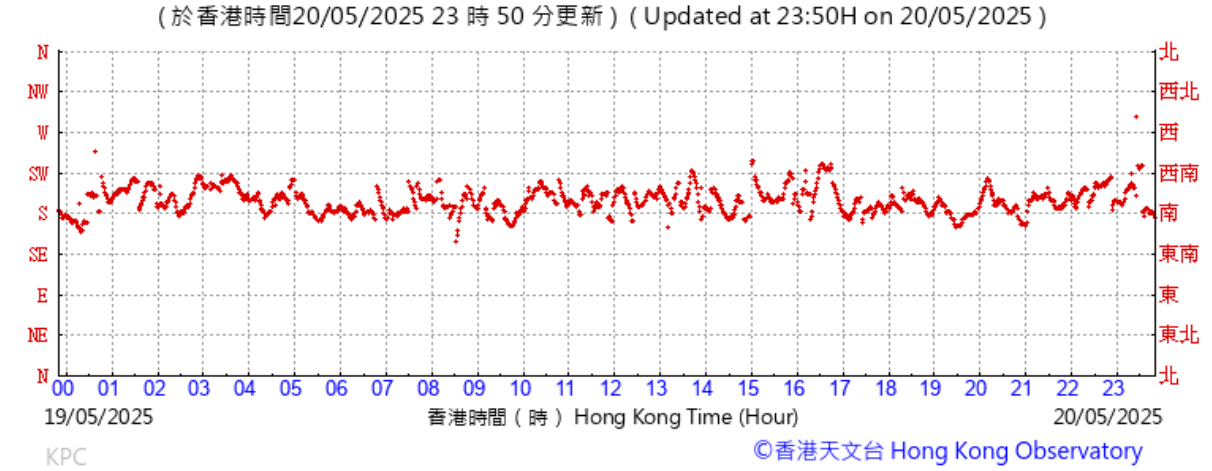

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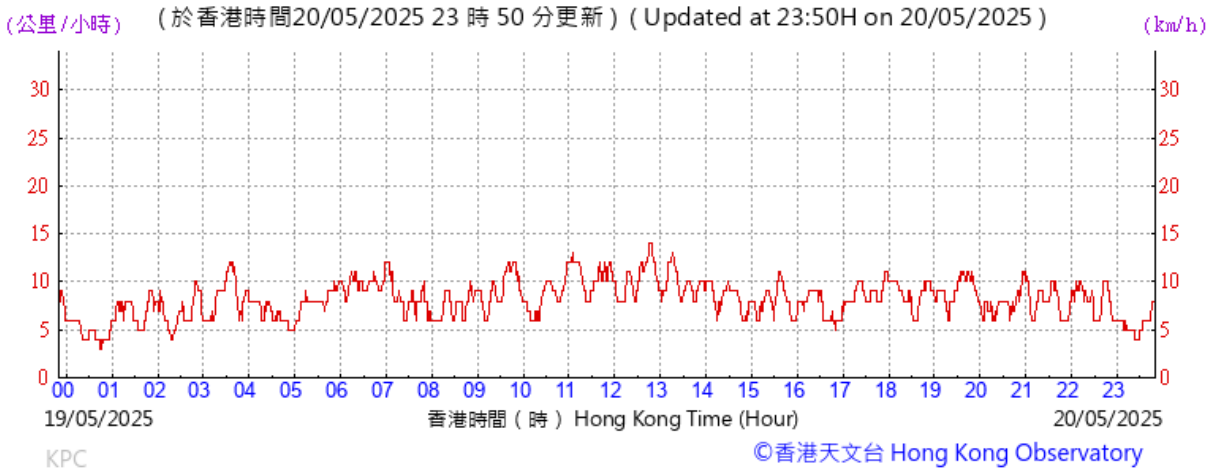

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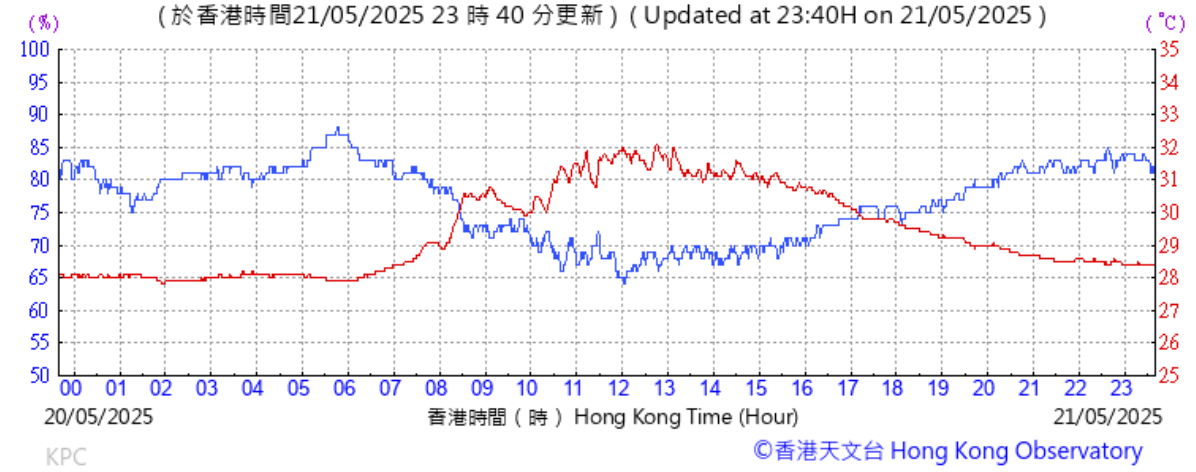

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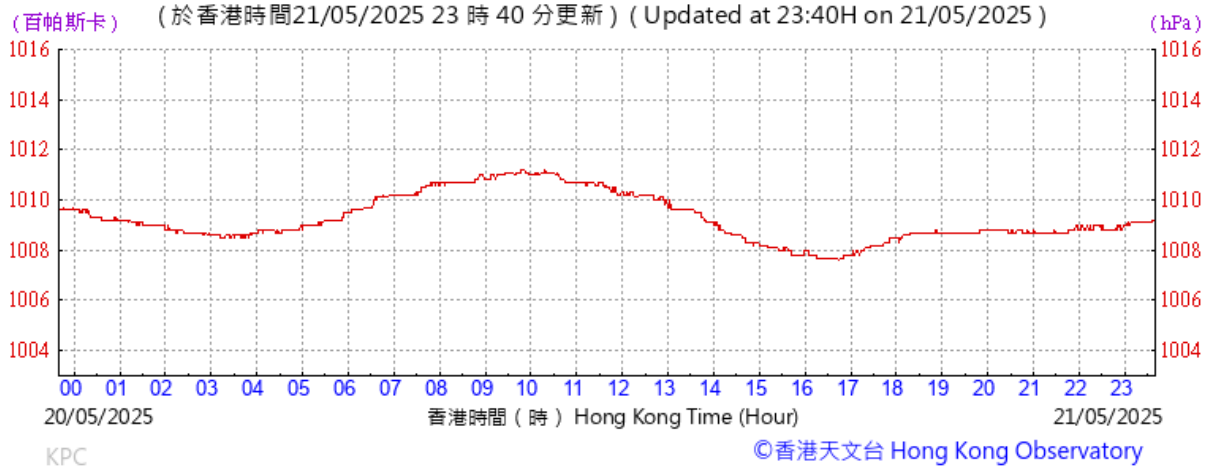

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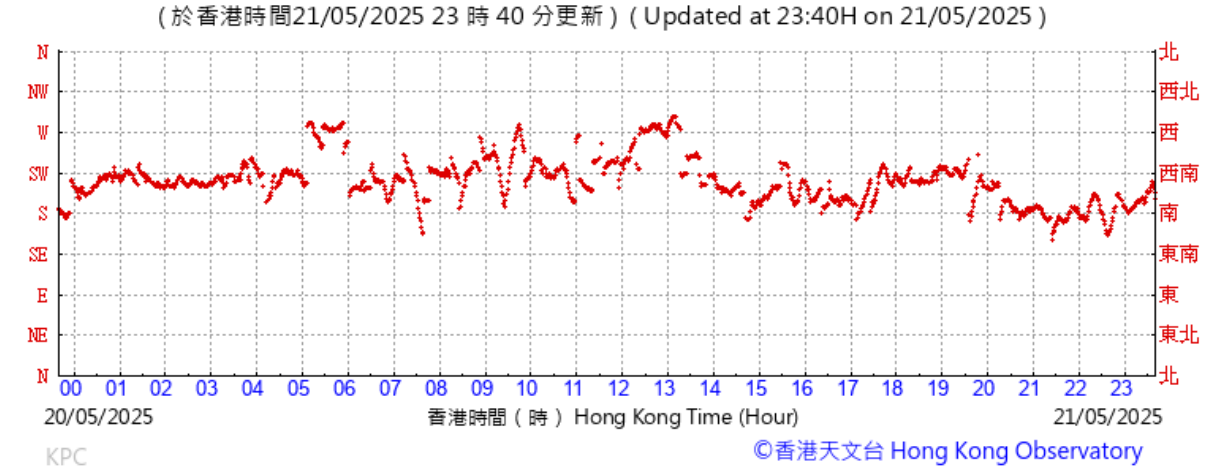

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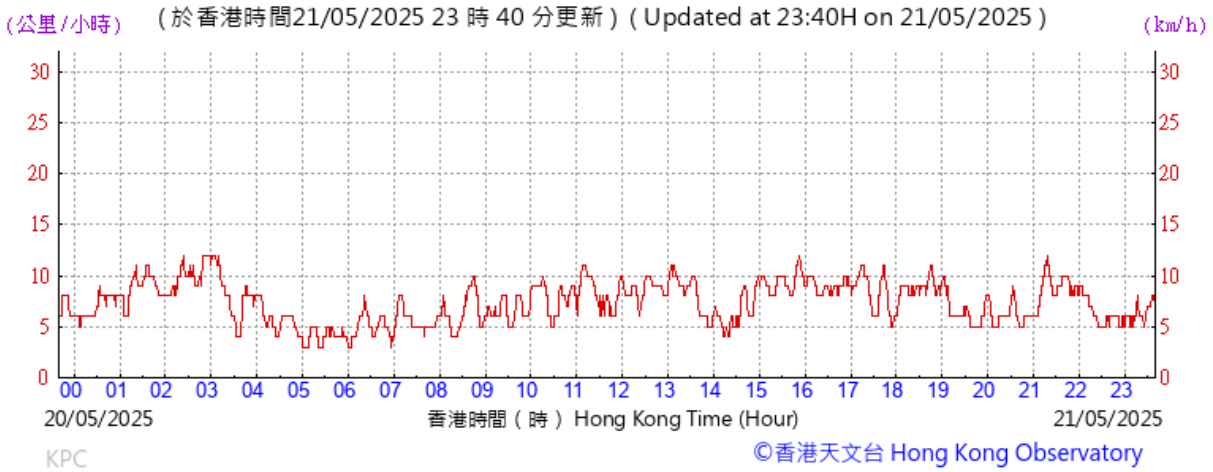

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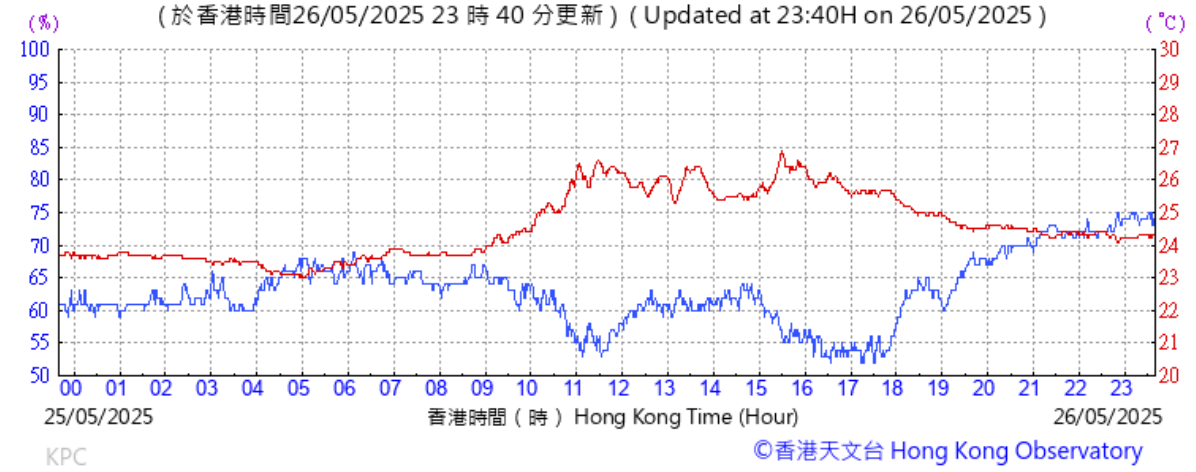

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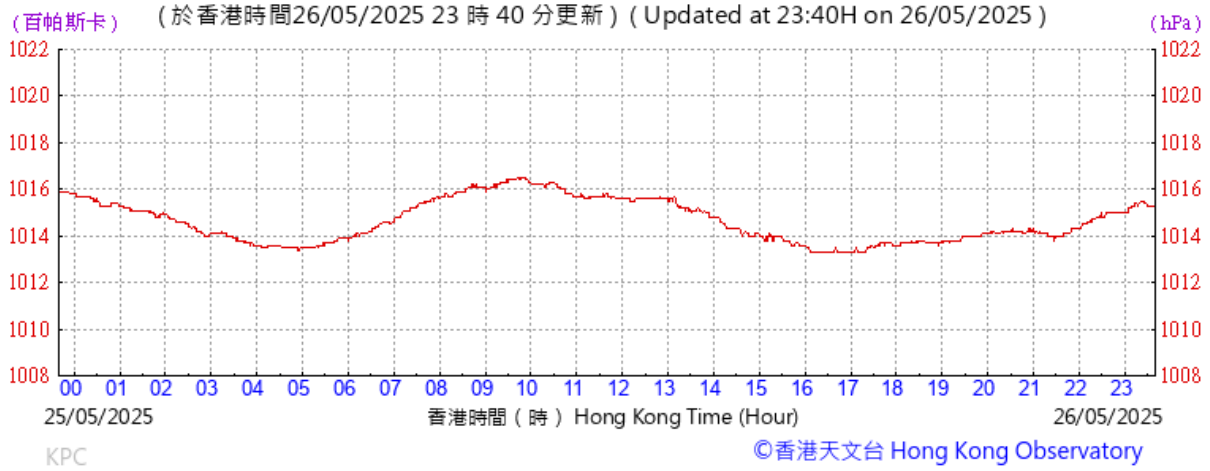

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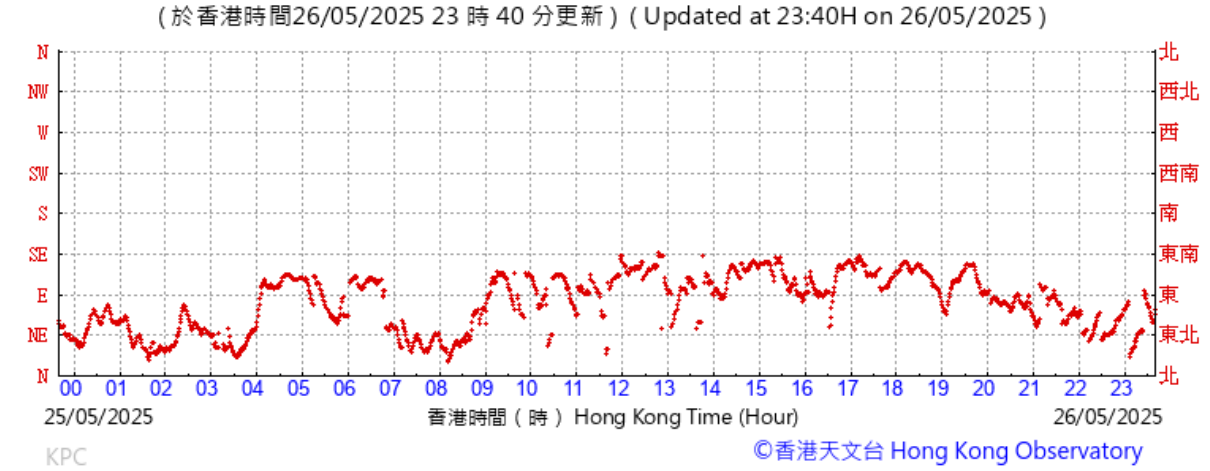

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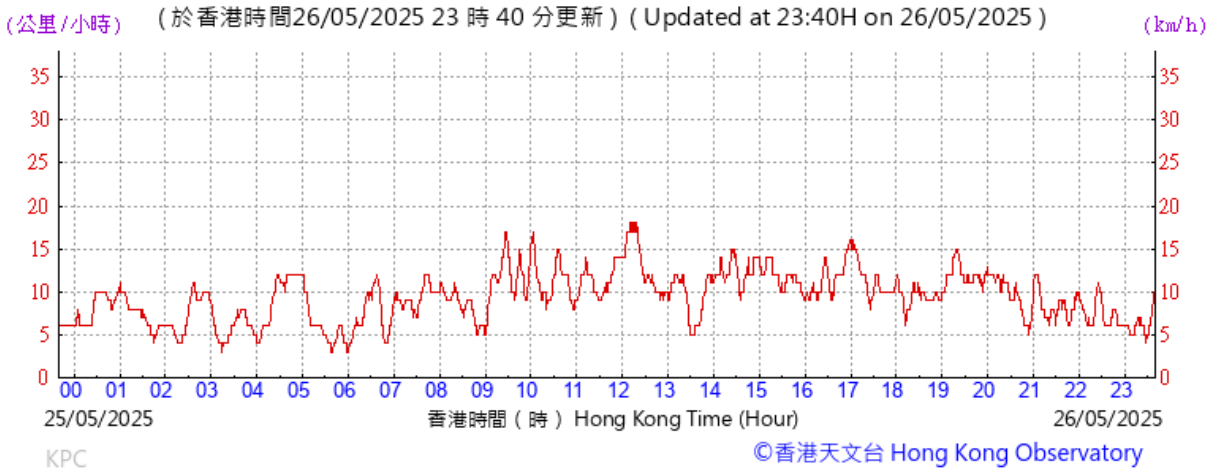

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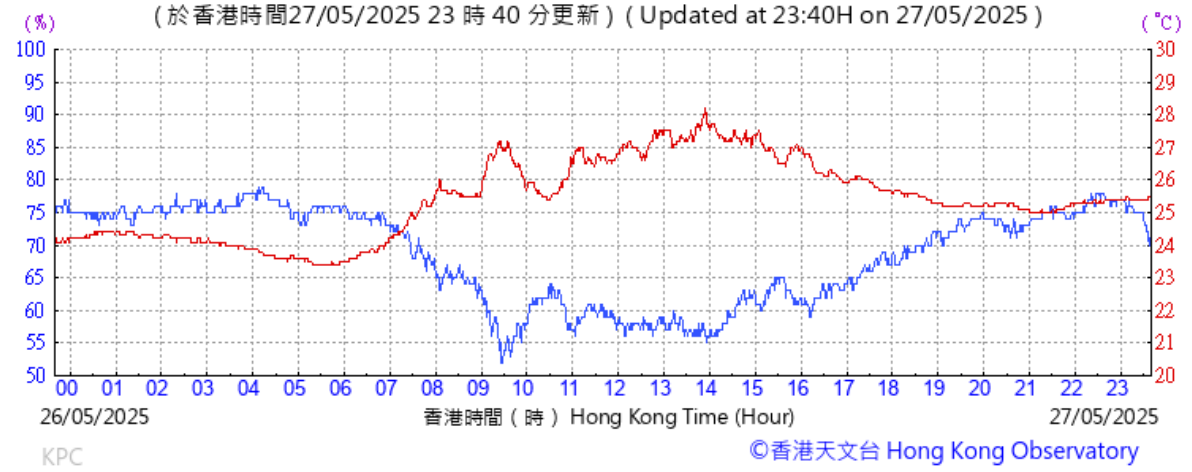

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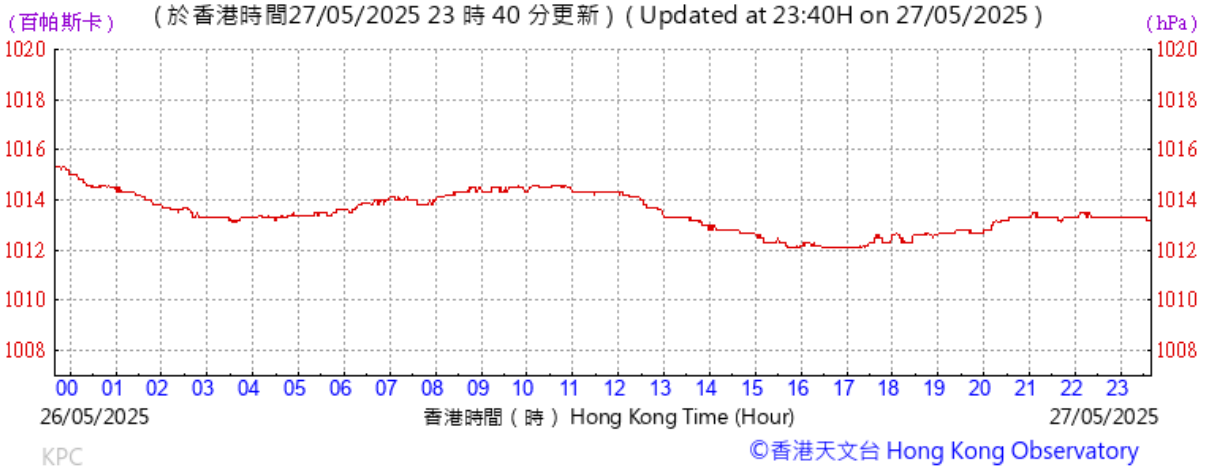

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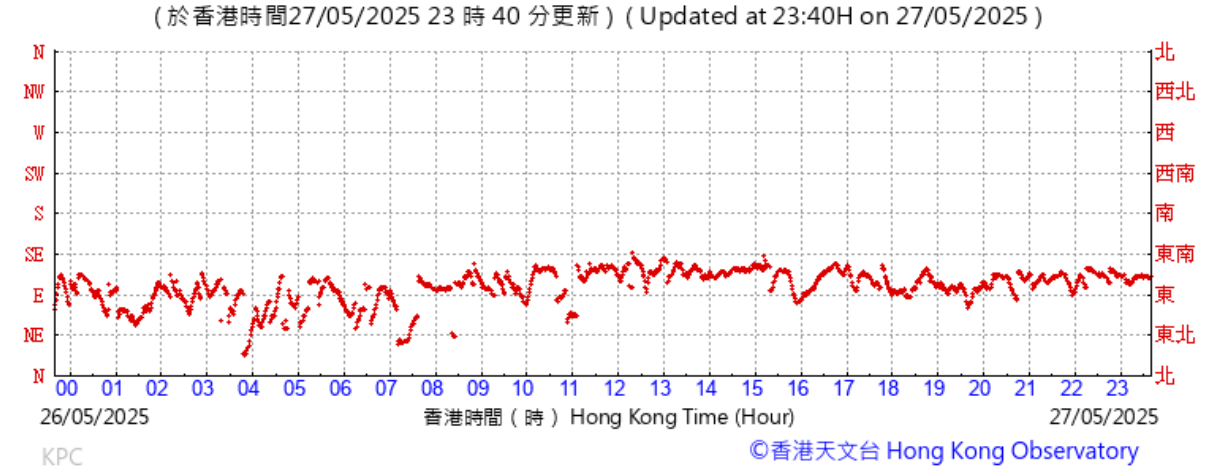

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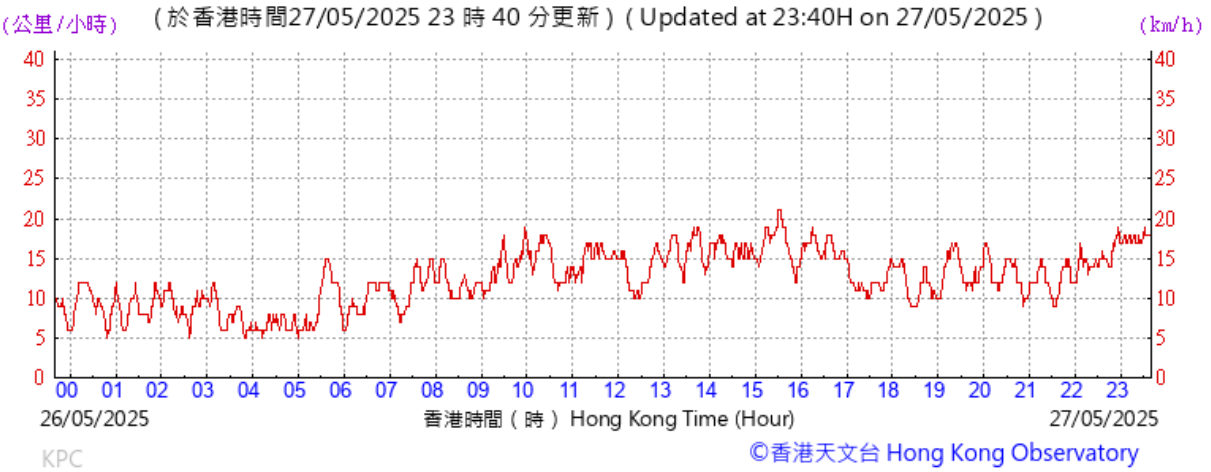

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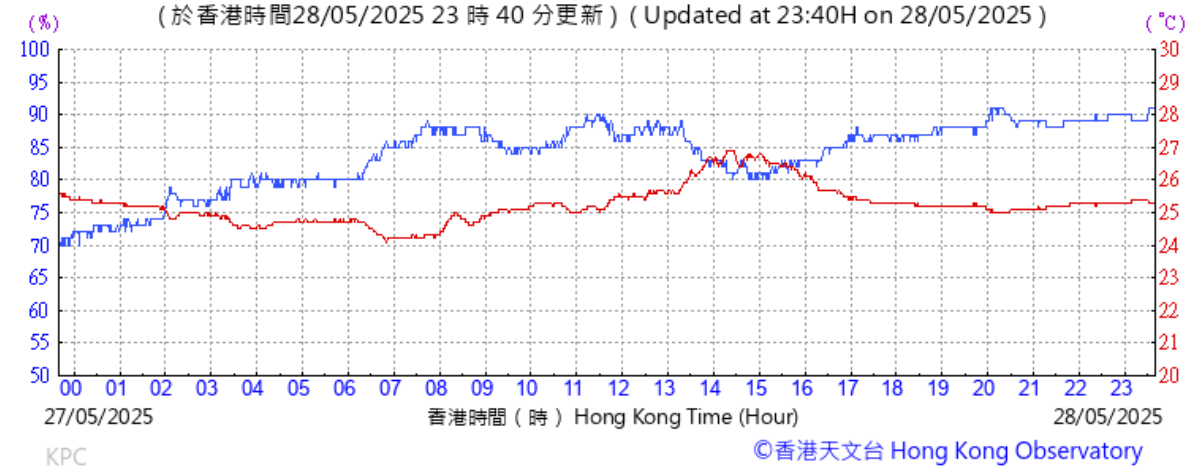

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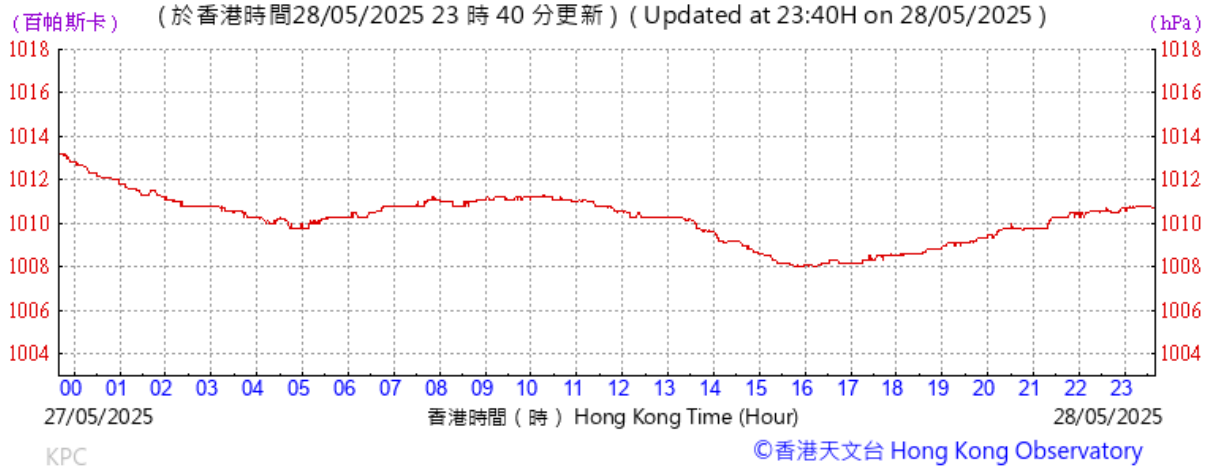

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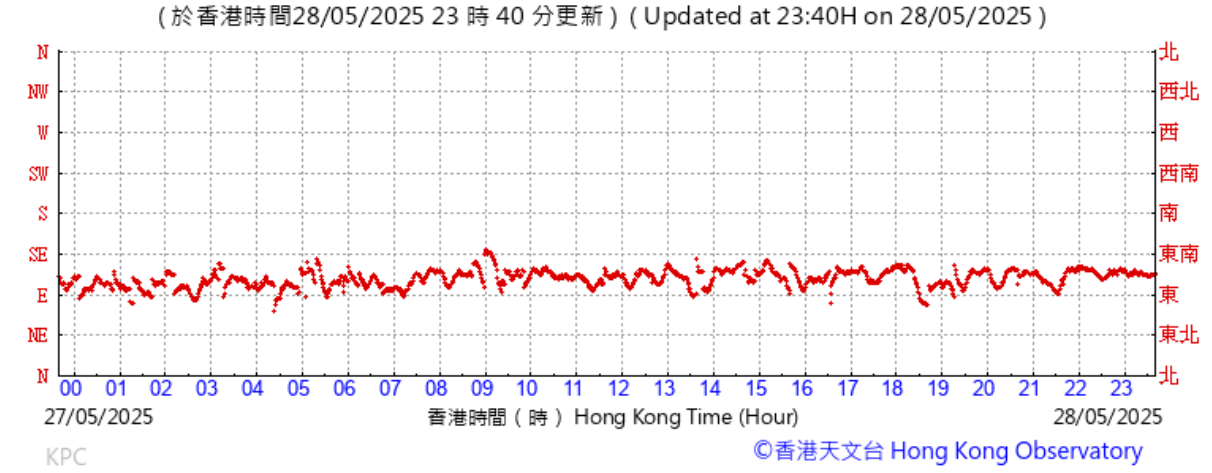

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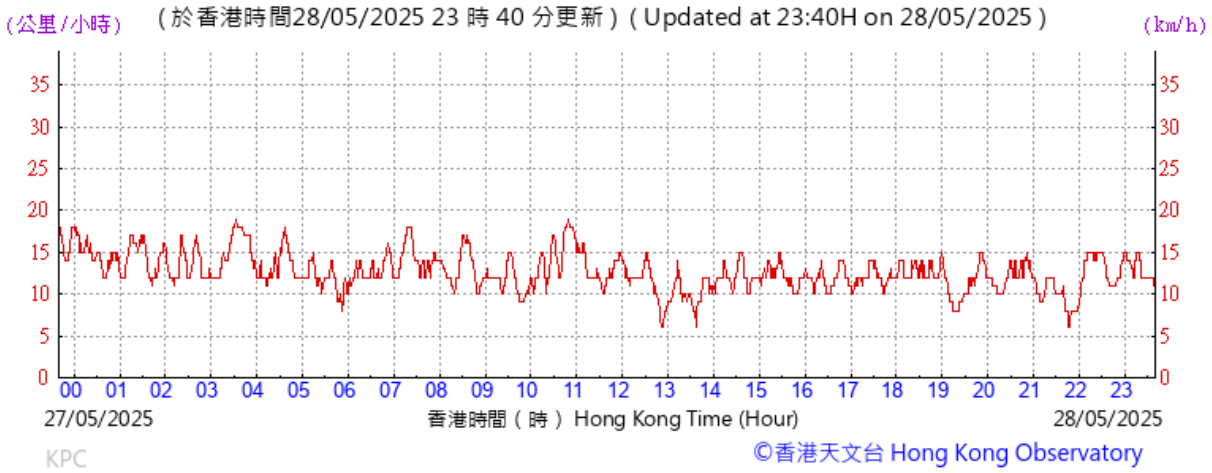

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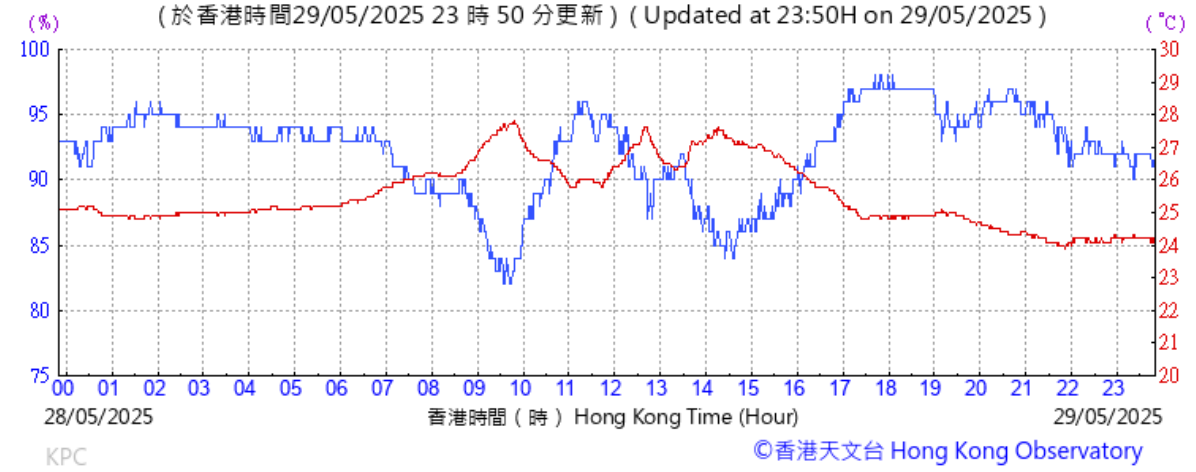

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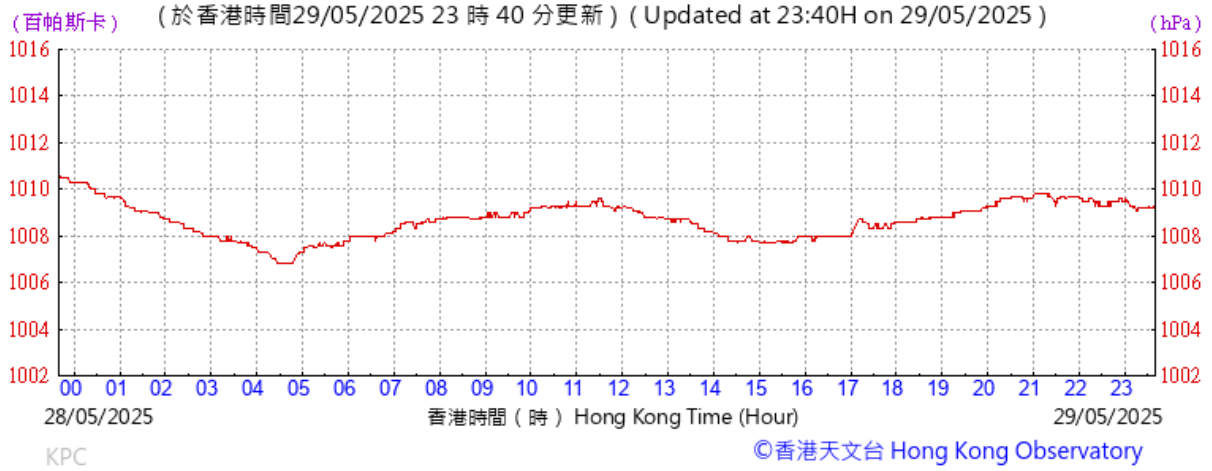

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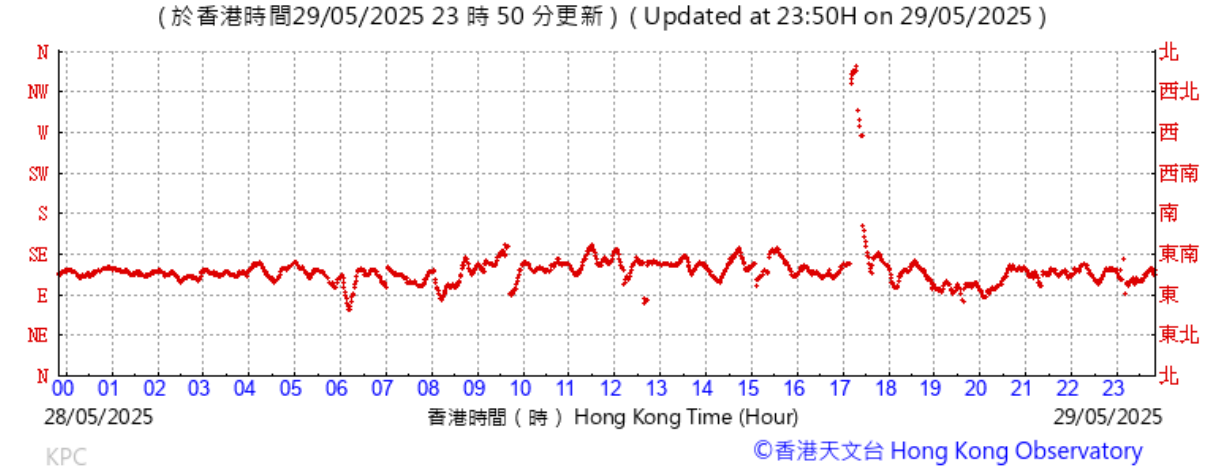

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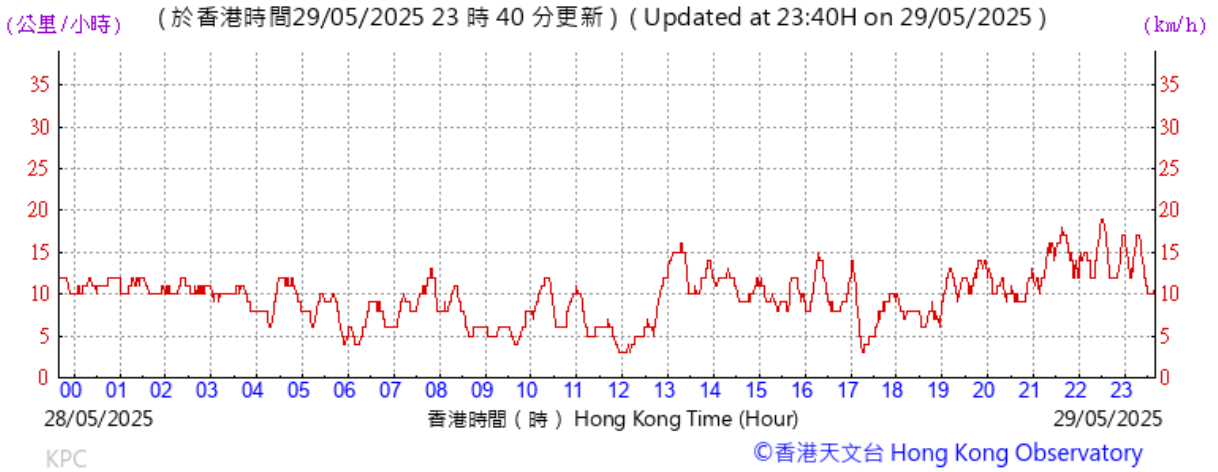

I. Waste Flow table

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	5383.52	0.00	0.00	4340.40	1043.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	155.23
Dec	5757.15	0.00	0.00	3082.05	2675.10	0.00	0.00	151.49	0.00	0.00	0.00	0.00	38.92
Sub-total (2024)	11513.62	0.00	0.00	7422.45	4080.99	10.18	0.00	151.49	0.00	0.00	0.00	0.00	214.34
2025													
Jan	4500.55	0.00	0.00	2090.69	2391.44	18.42	0.00	147.67	0.00	0.00	0.00	0.00	29.39
Feb	2785.60	0.00	0.00	0.00	2785.60	0.00	0.00	91.33	0.00	0.00	0.00	0.00	21.33
Mar	3263.24	0.00	0.00	0.00	3263.24	0.00	0.00	4.70	0.00	0.00	0.00	0.00	20.17
Apr	3696.49	0.00	0.00	0.00	3689.80	6.69	0.00	8.86	0.00	0.00	0.00	0.00	71.98
May	4992.41	0.00	0.00	0.00	4992.41	0.00	0.00	6.09	0.00	0.00	0.00	0.00	37.06
Jun													
Jul													
Aug													
Sep													
Oct													
Nov													
Dec													
Sub-total (2025)	19238.29	0.00	0.00	2090.69	17122.49	25.11	0.00	258.65	0.00	0.00	0.00	0.00	179.93
Total	**30751.91**	**0.00**	**0.00**	**9513.14**	**21203.48**	**35.29**	**0.00**	**410.14**	**0.00**	**0.00**	**0.00**	**0.00**	**394.27**

Note:
- 4826.52 tonnes and 165.89 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 Public Fill respectively in the reporting month.

J. Environmental Mitigation Measures – Implementation Status

Table J-1: Environmental Mitigation Measures Implementation Status (May 2025)

EM&A Ref.	Recommendation Measures	Implementation Stage Zone 2A, 2B & 2C
Air Quality Impact (Construction)		
2.1	**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)	✓
2.1	**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: *Good Site Management* • 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. *Disturbed Parts of the Roads* • 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. *Exposed Earth* • Exposed earth should be properly treated by compaction, hydroseeding, vegetation planting or seating with latex, vinyl, bitumen within six months after the last construction	✓ ✓ ✓ N/A No exposed earth in this project.

EM&A Ref.	Recommendation Measures	Implementation Stage Zone 2A, 2B & 2C
	activity on the site or part of the site where the exposed earth lies.	
	Loading, Unloading or Transfer of Dusty Materials	✓
	• All dusty materials should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet.	
	Debris Handling	✓
	• Any debris should be covered entirely by impervious sheeting or stored in a debris collection area sheltered on the top and the three sides.	
	• Before debris is dumped into a chute, water should be sprayed so that it remains wet when it is dumped.	N/A No debris chute on-site
	Transport of Dusty Materials	✓
	• 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.	
	Wheel washing	✓
	• 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.	
	Use of vehicles	✓
	• The speed of the trucks within the site should be controlled to about 10km/hour in order to reduce adverse dust impacts and secure the safe movement around the site.	
	• Immediately before leaving the construction site, every vehicle should be washed to remove any dusty materials from its body and wheels.	✓
	• Where a vehicle leaving the construction site is carrying a load of dusty materials, the load should be covered entirely by clean impervious sheeting to ensure that the dusty materials do not leak from the vehicle.	✓
	Site hoarding	✓
	• 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.	

EM&A Ref.	Recommendation Measures	Implementation Stage Zone 2A, 2B & 2C
2.1	**Best Practicable Means for Cement Works (Concrete Batching Plant)**	
	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	N/A
	• 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	No concrete batching plant in in this project.
	Emission Limits	N/A
	• All emissions to air, other than steam or water vapour, shall be colourless and free from persistent mist or smoke	No concrete batching plant in in this project.
	Engineering Design/Technical Requirements	N/A
	• 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	No concrete batching plant in this project.
	Non-Road Mobile Machinery (NRMM):	Obs
	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.	
Noise Impact (Construction)		

EM&A Ref.	Recommendation Measures	Implementation Stage Zone 2A, 2B & 2C
3.1	**Good Site Practice** Good site practice and noise management can significantly reduce the impact of construction site activities on nearby NSRs. The following package of measures should be followed during each phase of construction:	
	• only well-maintained plant to be operated on-site and plant should be serviced regularly during the construction works;	✓
	• machines and plant that may be in intermittent use to be shut down between work periods or should be throttled down to a minimum	✓
	• plant known to emit noise strongly in one direction, should, where possible, be orientated to direct noise away from the NSRs;	✓
	• mobile plant should be sited as far away from NSRs as possible; and	✓
	• material stockpiles and other structures to be effectively utilised, where practicable, to screen noise from on-site construction activities.	✓
3.1	**Adoption of Quieter PME** 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	**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	✓

EM&A Ref.	Recommendation Measures	Implementation Stage Zone 2A, 2B & 2C
	plant and 5 dB(A) for mobile plant provided the direct line of sight between the PME and the NSRs is blocked.	
3.1	**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	**Use of Noise Insulating Fabric** 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.	✓
3.1	**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.	✓
Water Quality Impact (Construction)		
4.1	**Construction site runoff and drainage** The site practices outlined in ProPECC Note PN 1/94 should be followed as far as practicable in order to minimise surface runoff and the chance of erosion. The following measures are recommended to protect water quality and sensitive uses of the coastal area, and when properly implemented should be sufficient to adequately control site discharges so as to avoid water	

EM&A Ref.	Recommendation Measures	Implementation Stage Zone 2A, 2B & 2C
	quality impacts:	
	• 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
	• 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.	✓
	• All vehicles and plant should be cleaned before leaving a construction site to ensure no	✓

EM&A Ref.	Recommendation Measures	Implementation Stage Zone 2A, 2B & 2C
	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.	
	• 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.	✓
	• Manholes (including newly constructed ones) should be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and stormwater runoff being directed into foul sewers.	✓
	• Precautions should be taken at any time of the year when rainstorms are likely. Actions should be taken when a rainstorm is imminent or forecasted and actions to be taken during or after rainstorms are summarized in Appendix A2 of ProPECC Note PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events, especially for areas located near steep slopes.	✓
	• Bentonite slurries used in piling or slurry walling should be reconditioned and reused wherever practicable. Temporary enclosed storage locations should be provided on-site for any unused bentonite that needs to be transported away after all the related construction activities are completed. The requirements in ProPECC Note PN 1/94 should be adhered to in the handling and disposal of bentonite slurries.	N/A No bentonite slurries are used in this project.

EM&A Ref.	Recommendation Measures	Implementation Stage Zone 2A, 2B & 2C
4.1	**Barging facilities and activities** Recommendations for good site practices during operation of the proposed barging point include:	
	• 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 No barging facilities in this project at this stage.
	• Loading of barges and hoppers should be controlled to prevent splashing of material into the surrounding water. Barges or hoppers should not be filled to a level that will cause the overflow of materials or polluted water during loading or transportation;	N/A No barging facilities in this project at this stage.
	• All hopper barges should be fitted with tight fitting seals to their bottom openings to prevent leakage of material; and	N/A No barging facilities in this project at this stage.
	• 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 No barging facilities in this project at this stage.
4.1	**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	**General construction activities**	
	• 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	Obs

EM&A Ref.	Recommendation Measures	Implementation Stage Zone 2A, 2B & 2C
	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** 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	Obs
	• Training of site personnel in proper waste management and chemical handling procedures	✓
	• Provision of sufficient waste disposal points and regular collection of waste	✓
	• Appropriate measures to minimise windblown litter and dust/odour during transportation of waste by either covering trucks or by transporting wastes in enclosed containers	✓
	• Provision of wheel washing facilities before the trucks leaving the works area so as to minimise dust introduction to public roads	✓
	• Well planned delivery programme for offsite disposal such that adverse environmental impact from transporting the inert or non-inert C&D materials is not anticipated	✓
6.1	**Waste Reduction Measures** Recommendations to achieve waste reduction include:	

EM&A Ref.	Recommendation Measures	Implementation Stage Zone 2A, 2B & 2C
	• 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	Obs
	• Plan the use of construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of wastes	✓
6.1	**Inert and Non-inert C&D Materials** 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.	
	• The surplus inert C&D material will be disposed of at the Government's PFRFs for beneficial use by other projects in Hong Kong.	✓
	• Liaison with the CEDD Public Fill Committee (PFC) on the allocation of space for disposal of the inert C&D materials at PFRF is underway. No construction work is allowed to proceed until all issues on management of inert C&D materials have been resolved and all relevant arrangements have been endorsed by the relevant authorities including PFC and EPD.	✓
	• The C&D materials generated from general site clearance should be sorted on site to	✓

EM&A Ref.	Recommendation Measures	Implementation Stage Zone 2A, 2B & 2C
	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**	
	• 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,	✓

EM&A Ref.	Recommendation Measures	Implementation Stage Zone 2A, 2B & 2C
	collection, transportation and disposal of chemical waste) are expected to be minimal with the implementation of appropriate mitigation measures as recommended.	
6.1	**General Refuse** 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.	✓
Land Contamination (Construction)		
7.1	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:	
	• To minimize the chance for construction workers to come into contact with any contaminated materials, bulk earth-moving excavation equipment should be employed;	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.
	• 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	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.

EM&A Ref.	Recommendation Measures	Implementation Stage Zone 2A, 2B & 2C
	smoking and eating on site;	
	• Stockpiling of contaminated excavated materials on site should be avoided as far as possible;	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.
	• The use of contaminated soil for landscaping purpose should be avoided unless pre-treatment was carried out;	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.
	• Vehicles containing any contaminated excavated materials should be suitably covered to reduce dust emissions and/or release of contaminated wastewater;	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.
	• Truck bodies and tailgates should be sealed to stop any discharge;	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.
	• 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 TST Fire Station is out of this project boundary, no mitigation measure is required.
	• Speed control for trucks carrying contaminated materials should be exercised;	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.
	• 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 TST Fire Station is out of this project boundary, no mitigation measure is required.
	• Maintain records of waste generation and disposal quantities and disposal arrangements.	N/A

EM&A Ref.	Recommendation Measures	Implementation Stage Zone 2A, 2B & 2C
		TST Fire Station is out of this project boundary, no mitigation measure is required.
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 Compensatory tree planting is being reviewed.
Table 9.1 (CM3)	Buffer trees for screening purposes to soften the hard architectural and engineering structures and facilities.	N/A Roof garden is designed to be built, but it has not been completed yet.
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 Climbing or weeping plants are designed to be planted, but proposal is being reviewed for the planting location.
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 Roof garden is designed to be built, but it has not been completed yet.

EM&A Ref.	Recommendation Measures	Implementation Stage Zone 2A, 2B & 2C
Table 9.1 (CM6)	Sensitive streetscape design should be incorporated along all new roads and streets.	N/A Greening along the seafront is proposed, and under review.
Table 9.1 (CM7)	Structure, ornamental planting shall be provided along amenity strips to enhance the landscape quality.	N/A Gardens are designed to be built, and under review.
Table 9.1 (CM8)	Landscape design shall be incorporated to architectural and engineering structures in order to provide aesthetically pleasing designs.	N/A Roof garden is designed to be built, and under review.
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 No marine facilities for this project.
Table 9.2 (MCP1)	Use of decorative screen hoarding/boards	✓
Table 9.2 (MCP2)	Early introduction of landscape treatments	N/A No landscape treatments during this stage.
Table 9.2 (MCP3)	Adoption of light colour for the temporary ventilation shafts for the basement during the transition period.	N/A No ventilation shafts for this project.
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 No temporary open areas for this project.

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

K. 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. 05 July 2024 for Zones 2A, 2B & 2C (Contract No.: CC/2023/2B/095)) to the end of the reporting month and are summarised in the Table K-1 below respectively.

Table K-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 month (May 2025)	0	0	0
From 05 July 2024 to end of the reporting month	3	0	0

END OF THE REPORT