MOTT MACDONALD

Agreement No. CE 30/2018 (EP) Environmental Team for Kai Tak Sports Park – Design and Construction

Monthly EM&A Report for May 2023

June 2023

Culture, Sports and Tourism Bureau

Culture, Sports and Tourism
Bureau 1/F, Block A, Kai Tak
Sports Park Site Office, Muk Tai
Street,
Kai Tak, Kowloon

Agreement No. CE 30/2018 (EP)
Environmental Team for Kai Tak Sports Park – Design and Construction

Monthly EM&A Report for May 2023

June 2023

Mott MacDonald Hong Kong Limited
registered in Hong Kong no. 236497

Culture, Sports and Tourism Bureau

Culture, Sports and Tourism Bureau
The Government of the Hong Kong Special Administrative Region
of the People's Republic of China

ERM

Environmental Permit No. EP-544/2017

Kai Tak Sports Park - Investigation

Independent Environmental Checker Verification

Reference Document/Plan

Document/~~Plan~~ to be ~~Certified~~/ Verified:	Monthly EM&A Report No. 50 (May 2023)
Date of Report:	9 June 2023
Date received by IEC:	9 June 2023

Reference EP Condition

Environmental Permit Condition: 3.4

Three hard copies and one electronic copy of the monthly EM&A Report shall be submitted to the Director within 10 working days after the end of each reporting month. The monthly EM&A Reports shall include a summary of all non-compliance with the recommendations in the approved EIA Report (Register No. AEIAR–204/2017) or this Permit. The submissions shall be certified by the ET Leader and verified by the IEC as complying with the requirements as set out in the EM&A Manual before submission to the Director. Additional copies of submission shall be provided upon request by the Director.

IEC Verification

I hereby verify that the above referenced document/~~plan~~ complies with the above referenced condition of EP-544/2017.

Ms Mandy To

Independent Environmental Checker

Date: 9 June 2023

Our ref: 0500384_IEC Verification Cert_KTSP_Monthly EM&A Rpt No.50.docx

Culture, Sports and Tourism Bureau
The Government of the Hong Kong Special Administrative Region of the People's Republic of China

MOTT MACDONALD

Environmental Permit No. EP- 544/2017

Kai Tak Sports Park – Investigation

Environmental Team Leader Certification

Reference Document /Plan

Document/~~Plan~~ to be Certified:	Monthly EM&A Report for May 2023
Date of Report:	9 June 2023
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Three hard copies and one electronic copy of the monthly EM&A Report shall be submitted to the Director within 10 working days after the end of each reporting month. The monthly EM&A Reports shall include a summary of all non-compliance with the recommendations in the approved EIA Report (Register No. AEIAR–204/2017) or this Permit. The submissions shall be certified by the ET Leader and verified by the IEC as complying with the requirements as set out in the EM&A Manual before submission to the Director. Additional copies of submission shall be provided upon request by the Director.

ETL Certification

I hereby certify that the above reference document complies with the above referenced condition of EP-544/2017.

Mr Sunny Chan
Environmental Team Leader Date: 9 June 2023

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Executive summary

The Project – hereby meaning the Designated Project (Items O.6 and O.7 Part I, Schedule 2 of the Environmental Impact Assessment Ordinance (EIAO)), comprising the "Kai Tak Sports Park" (KTSP) project and the Hotel and Office (H/O) Development of NKIL 6607 adjoining the KTSP – is located in the Kai Tak Development (KTD) area in Kowloon.

An EIA Report for the Project (Register No. AEIAR-204/2017) was approved by the Environmental Protection Department (EPD) on 6 January 2017. The current Environmental Permit (EP) for the Project, namely No. EP-544/2017, was issued on 8 September 2017. These documents are available through the EIA Ordinance Register. The Project construction works commenced on 8 April 2019.

In February 2019, Mott MacDonald Hong Kong Limited was appointed by the Home Affairs Bureau (HAB), as the Environmental Team (ET) to implement the Environmental Monitoring & Audit (EM&A) programme for the construction phase and first year of operation of the Project in accordance with the approved EM&A Manual.

In July 2022, Home Affairs Bureau (HAB) has been reorganized as Culture, Sports and Tourism Bureau (CSTB).

This is the 50th Monthly EM&A Report for the construction phase of the Project which summaries findings of the EM&A programme during the reporting period from 1 to 31 May 2023.

Key Construction Works in the Reporting Period

A summary of construction activities undertaken during the reporting period is presented below:

KTSP

- Mobilization and lifting;
- Concreting;
- Excavation; and
- Main Stadium pre-cast material delivery.

H/O Development

- Excavation; and
- Concreting.

Environmental Monitoring and Audit Progress

The monthly EM&A programme was undertaken by ET in accordance with the approved EM&A Manual. A summary of the monitoring activities during the reporting period is presented below:

Activity	Monitoring Locations	Date
Air Quality Monitoring (1-hour TSP)	AMS1-T, AMS2, AMS4	3, 9, 15, 19, 24, 30 May 2023
Noise Monitoring ($L_{eq\ (30\ min)}$)	NMS1-T, NMS2, NMS4	3, 9, 15, 24, 30 May 2023
Weekly environmental site inspections	-	3, 10, 17, 23, 31 May 2023
Landscape and visual site inspections	-	10, 23 May 2023

*Note:

During the reporting period, monitoring station, Hong Kong Society for the Blind Workshop (AMS1 and NMS1), was no longer open for impact monitoring from 1 September 2022, due to relocation of the Hong Kong Society for the Blind Workshop.

Agriculture, Fisheries and Conservation Department Kowloon Animal Management Centre (AMS1-T and NMS1-T) were proposed to conduct dust and noise impact monitoring during the reporting period. Details of temporary alternative monitoring locations are presented in Temporary Alternative Proposal for Monitoring Station as proposed by ET and agreed by IEC dated 6 January 2021. The details of temporary monitoring station are described in Section 2 and Section 3 respectively.

Breaches of Action and Limit Levels

Air Quality

There was no breach of Action or Limit Levels for air quality (1-hr TSP) during the reporting month.

Noise

There was no breach of Action or Limit Levels for noise during the reporting month.

Complaint Log

There was one complaint in relation to the environmental impact received during the reporting month.

Summary of Complaints in the Reporting Month

Date of Notification from EPD	Date of Complaint	Description of Complaint	Recommendations / Actions	Close-Out Date / Status
23 May 2023	19 May 2023	- Complaint of discharging polluting wastewater from North Gate No. 4 at Muk Tai Street. - Please ensure the wastewater generated from your site to be properly treated and the discharge fulfill the conditions stipulated in the valid WPCO licence. - Please ensure the works fulfill the relevant environmental legislation and conditions stipulated in the valid construction noise permit. - Please take necessary measures to minimize the environmental nuisance arising from the construction site.	1. Self-monitoring of wastewater discharge sample had been conducted and reported monthly. 2. Regular pest control measures had been provided near North Gate No. 4 Area.	24 May 2023

Notifications of Summons and Successful Prosecutions

There were no notifications of summons or prosecutions received during this reporting period.

Reporting Changes

There was no reporting change during the reporting period.

Future Key Issues

The future key issues to be undertaken in the upcoming month are:

KTSP

- Mobilization and lifting;
- Concreting;
- Excavation;
- Main Stadium pre-cast material delivery; and
- Public Sports Ground drainage layer construction

H/O Development

- Excavation; and
- Concreting.

1 Introduction

1.1 Background

The Project – hereby meaning the Designated Project (Items O.6 and O.7 Part I, Schedule 2 of the Environmental Impact Assessment Ordinance (EIAO)), comprising the "Kai Tak Sports Park" (KTSP) project and the Hotel and Office (H/O) Development of NKIL 6607 adjoining the KTSP – is located in the Kai Tak Development (KTD) area in Kowloon.

The key construction works of the Project include:

(i) KTSP project

a. a multi-purpose Main Stadium with a spectator capacity of around 50,000;
b. a Public Sports Ground, with a spectator capacity of around 5,000;
c. an Indoor Sports Centre with a multi-purpose main arena with a seating capacity of up to 10,000 and an ancillary sports hall with a seating capacity of 500;
d. retail and dining outlets with a gross floor area (GFA) of about 57,000 square metres (m^2), a bowling centre with 40 lanes and a health and wellness centre with about 2,500 m^2 GFA;
e. more than 8 hectares of public open space including landscaped deck structures across Shing Kai Road, passive amenities and park features, outdoor ball courts; and
f. ancillary facilities such as car parks, toilets, changing rooms, etc.

(ii) H/O Development

g. an office development;
h. a 300-room hotel with a GFA of about 16,000 m^2; and
i. ancillary facilities such as retails, car parks, etc.

In February 2019, Mott MacDonald Hong Kong Limited (MMHK) was commissioned by the Home Affairs Bureau (HAB) under Agreement No. CE 30/2018 (EP) to undertake the Environmental Team (ET) services for carrying out the Environmental Monitoring & Audit (EM&A) programme during the construction phase and first year of operation of the Project in accordance with the approved Environmental Impact Assessment (EIA) Report (Register No.: AEIAR-204/2017), EM&A Manual (including any subsequent amendments) and EP (including any subsequent variations of it and/or any further environmental permit issued under the EIAO). The current EP (No. EP-544/2017) was issued by EPD on 8 September 2017.

In July 2022, Home Affairs Bureau (HAB) has been reorganized as Culture, Sports and Tourism Bureau (CSTB).

This is the 50th Monthly EM&A Report summarising the key findings of the construction phase EM&A programme from 1 to 31 May 2023 (the "reporting period") and is submitted to fulfil Condition 3.4 of the EP.

1.2 Project Organisation

The organisation chart and lines of communication with respect to the on-site environmental management structure of the key personnel are shown in **Appendix A**. The key personnel contact names and numbers are summarized in **Table 1.1**.

Table 1.1: Contact Information of Key Personnel

Party	Position	Name	Telephone	Fax
Project Proponent (Culture, Sports and Tourism Bureau)	Project Director (Sports Park)	Edwin Wong	3586 3403	3586 0591
Supervising Officer's Representative (Home Affairs Bureau)	Senior Engineer	Keith Man	3586 3149	3586 0591
Environmental Team (Mott MacDonald Hong Kong Limited)	Environmental Team Leader	Sunny Chan	2828 5962	2827 1823
	Deputy Environmental Team Leader	Ken Wong	2828 5757	2827 1823
Independent Environmental Checker (ERM Hong Kong Limited)	Independent Environmental Checker	Mandy To	2271 3000	3015 8052
Contracted Party (Kai Tak Sports Park Limited)	Assistant Contract Manager	Eric Chung	3552 5003	2845 9295
	Environmental Officer	Gary Yim	3552 5013	3552 5099
Hotel and Office Development				
Project Manager (Sanon Limited)	Senior Group Project Director	David Lee	2910 8368	2815 9949
	Project Manager	William Chan	2910 8363	2815 9949
Project Architect (P&T Architects & Engineers Limited)	Project Architect	Patrick Chan	2832 7205	-
Contractor (Hip Hing Construction Co., Ltd.	Project Manager	Ian Ku	6099 9686	-
24-hour Community Liaison Hotline	-	-	5587 6112	-

1.3 Works Area and Construction Programme

The construction works commenced on 8 April 2019. The works area of the Project is shown in **Appendix B**. The Construction Works Programme of the Project is provided in **Appendix C**.

1.4 Construction Works undertaken during the Reporting Period

A summary of construction activities undertaken during this reporting period is presented below:

KTSP

- Mobilization and lifting;
- Concreting;
- Excavation; and
- Main Stadium pre-cast material delivery.

H/O Development

- Excavation; and
- Concreting.

2 Air Quality Monitoring

2.1 Introduction

In accordance with the EM&A Manual of the Project, baseline 1-hour Total Suspended Particulates (TSP) levels at air quality monitoring stations AMS1 and AMS2 were established. Impact 1-hour TSP monitoring was conducted for at least three times every 6 days.

2.2 Monitoring Parameters, Frequency and Duration

Table 2.1 summarises the monitoring parameters, frequency and duration of impact air quality monitoring.

Table 2.1: Air Quality Monitoring Parameters, Frequency and Duration

Parameter	Frequency and Duration
1-hour TSP	3 times every six-days

2.3 Monitoring Locations

According to the EM&A Manual, a total of five air quality monitoring stations are identified for impact monitoring. Of these, two air sensitive receivers (AMS3 and AMS5) are planned residential use and were not available for baseline monitoring; the same two are also currently not available for impact monitoring.

Table 2.2 describes the impact air quality monitoring stations and **Figure 2.1** shows their locations.

Table 2.2: Construction Dust Monitoring Locations

Monitoring Station	Location	Status
AMS1	Hong Kong Society for the Blind Workshop, Roof Floor	Existing Air Sensitive Receiver (not accessible from 1 September 2022)
AMS2	Sky Tower, Podium of Tower 7	Existing Air Sensitive Receiver
AMS4	Retail Building in front of The Henley, Rooftop	Existing Air Sensitive Receiver
AMS3	Kai Tak Area 2B Site 4 (2B4) (residential use)	Planned Air Sensitive Receiver
AMS5	Kai Tak Area 1L Site 3 (1L3) (residential use)	Planned Air Sensitive Receiver

During the reporting period, monitoring locations AMS2 and AMS4 were set up at the proposed locations for impact monitoring.

Permission on setting up and carrying out impact monitoring works at AMS3 and AMS5 will be sought once each respective development is completed and occupied.

During the reporting period, monitoring station AMS1 was no longer open for impact monitoring from 1 September 2022, due to relocation of the Hong Kong Society for the Blind Workshop.

Temporary air quality monitoring station, AMS1-T, was used to conduct dust monitoring during the reporting period. Details of temporary alternative monitoring location was presented in Temporary Alternative Proposal for Monitoring Station as proposed by ET and agreed by IEC

dated 6 January 2021. The details of temporary monitoring station are described in **Table 2.3** and the location of temporary monitoring station is shown in **Figure 2.1**.

Table 2.3: Temporary Construction Dust Monitoring Location

Monitoring Station	Location	Status
AMS1-T	Agriculture, Fisheries and Conservation Department Kowloon Animal Management Centre, 102 Sung Wong Toi Road	Existing Air Sensitive Receiver

2.4 Monitoring Action and Limit Levels

The Action and Limit Levels for 1-hr TSP are provided in **Table 2.4**.

Table 2.4: Action and Limit Levels for 1-hour TSP

Monitoring Station	Action Level, µg/m^3	Limit Level, µg/m^3
AMS1 – Hong Kong Society for the Blind Workshop, Roof Floor	283	500
AMS2 – Sky Tower, Podium of Tower 7	280	500
AMS3 - Kai Tak Area 2B Site 4 (2B4) (residential use)	287*	500
AMS4 - Kai Tak Area 1K Site 3 (1K3) (residential use)	287*	500
AMS5 - Kai Tak Area 1L Site 3 (1L3) (residential use)	287*	500

*Remarks: the Action Level for AMS3, AMS4 and AMS5 were derived from an alternative monitoring station AMS3-4-5 during the baseline monitoring.

The event and action plan is provided in **Appendix D.**

If exceedance(s) at these stations is/are recorded by the ET of the Project, it will carry out an investigation and findings will be reported in the monthly EM&A Report.

2.5 Monitoring Schedule for the Reporting Period

The schedule for air quality monitoring at AMS1-T, AMS2 and AMS4 in the reporting period is presented in **Appendix E**.

2.6 Monitoring Equipment

Portable direct reading dust meters were used to carry out the 1-hour TSP monitoring. The brand(s) and model(s) of the equipment used for air quality monitoring stations AMS1-T, AMS2 and AMS4 under this Project are given in **Table 2.5**.

Table 2.5: 1-hour TSP Monitoring Equipment

Equipment	Brand	Model No.
Portable direct reading dust meter	Sibata Digital Dust Monitor	LD-3B (S/N: 235780, 456668, 476664, 436553, 326285)

2.7 Monitoring Methodology

Field Monitoring

The measuring procedures of the 1-hour TSP 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 given in **Appendix F**.

2.8 Monitoring Results

The monitoring results for 1-hour TSP at AMS1-T, AMS2 and AMS4 are summarized in **Table 2.6**. Detailed impact air quality monitoring results are presented in **Appendix G**.

Table 2.6: Summary of 1-hour TSP Monitoring Results During the Reporting Period

Monitoring Station	Average, µg/m^3	Min, µg/m^3	Max, µg/m^3	Action Level, µg/m^3	Limit Level, µg/m^3
AMS1-T	68	49	124	283	500
AMS2	63	41	121	280	500
AMS4	61	42	104	287	500

There was no Action and Limit Level exceedance of 1-hr TSP level recorded at station AMS1-T, AMS2 and AMS4 by the ET during the reporting period.

2.9 Wind Data

Wind data at Kai Tak automatic weather station collected from the Hong Kong Observatory (HKO) were used for the air quality monitoring and they are shown in **Appendix H**. It is considered that the wind data obtained at the existing Kai Tak wind station are representative of the Project area and could be used for undertaking the construction phase baseline and impact air quality monitoring programme for the Project.

The proposed use of the existing wind data from Kai Tak automatic weather station collected from HKO for wind data collection instead of setting up wind monitoring equipment near the monitoring stations was proposed by ET and agreed by IEC in accordance with the requirements as stated in Section 3.4.7 of the EM&A Manual of the Project.

3 Noise Monitoring

3.1 Introduction

In accordance with the EM&A Manual, impact noise monitoring was conducted at least once per week for each noise monitoring location during the construction phase of the Project.

3.2 Monitoring Parameters, Frequency and Duration

Table 3.1 summarises the monitoring parameters, frequency and duration of impact noise monitoring.

Table 3.1: Noise Monitoring Parameters, Frequency and Duration

Parameter	Frequency and Duration
30-minutes measurement at each monitoring station between 0700 and 1900 on normal weekdays (Monday to Saturday). L_{eq}, L_{10} and L_{90} would be recorded.	At least once per week

3.3 Monitoring Locations

According to the approved EM&A Manual, a total of seven noise monitoring stations were identified for the impact monitoring locations. Of these, four noise sensitive receivers are planned residential use (NMS1A, NMS2A, NMS3 and NMS5). **Table 3.2** describes the details of the monitoring stations and **Figure 3.1** shows the locations of noise monitoring stations.

Table 3.2: Construction Noise Monitoring Locations

Monitoring Station	Location Description	Status
NMS1	Hong Kong Society for the Blind Workshop, Roof Floor	Existing Noise Sensitive Receiver (not accessible from 1 September 2022)
NMS2	Sky Tower, Podium of Tower 7	Existing Noise Sensitive Receiver
NMS4	Retail Building in front of The Henley, Rooftop	Existing Noise Sensitive Receiver
NMS1A	Sung Wong Toi Road Public Housing Site	Planned Noise Sensitive Receiver
NMS2A	Sung Wong Toi Road CDA Site (mixed use)	Planned Noise Sensitive Receiver
NMS3	Kai Tak Area 2B Site 4 (2B4) (residential use)	Planned Noise Sensitive Receiver
NMS5	Kai Tak Area 1L Site 3 (1L3) (residential use)	Planned Noise Sensitive Receiver

During the reporting period, monitoring locations NMS2 and NMS4 were set up at the proposed locations for impact monitoring.

Since NMS1A & NMS2A are planned (i.e. not existing) noise sensitive receivers, noise monitoring should be carried out initially at NMS1 and NMS2 respectively before the population intake of the planned developments. Once the planned developments are completed and occupied, NMS1A shall replace NMS1, while NMS2A shall replace NMS2. It is proposed that

the baseline noise level and Limit Level at NMS1A and NMS2A will be the same as those derived from the baseline monitoring data recorded at NMS1 and NMS2 respectively.

Permission on setting up and carrying out impact monitoring works at NMS3 and NMS5 will be sought once each respective development is completed and occupied.

During the reporting period, monitoring station NMS1 was no longer open for impact monitoring from 1 September 2022, due to relocation of the Hong Kong Society for the Blind Workshop. Temporary noise monitoring station, NMS1-T, was used to conduct noise monitoring during the reporting period. Details of temporary alternative monitoring locations are presented in Temporary Alternative Proposal for Monitoring Station as proposed by ET and agreed by IEC dated 6 January 2021. The details of temporary monitoring station are described in **Table 3.3** and the location of noise monitoring station is shown in **Figure 3.1**

Table 3.3: Temporary Construction Noise Monitoring Location

Monitoring Station	Location Description	Status	Type of Measurement
NMS1-T	Agriculture, Fisheries and Conservation Department Kowloon Animal Management Centre, 102 Sung Wong Toi Road	Exiting Noise Sensitive Receiver	Façade

3.4 Action and Limit Levels

The Action and Limit Levels for construction noise are defined in **Table 3.4**.

Table 3.4: Action and Limit Level for Construction Noise

Monitoring Station	Time Period	Action Level	Limit Level
NMS1-T NMS2 NMS4	0700 – 1900 hours on normal weekdays	When one documented complaint is received	75 dB(A)

The event and action plan is provided in **Appendix D**.

If exceedance(s) at these stations is/are recorded by the ET of the Project, it will carry out an investigation and findings will be reported in the monthly EM&A Report.

3.5 Monitoring Schedule for the Reporting Period

The schedule for noise monitoring in the reporting period is presented in **Appendix E**.

3.6 Monitoring Equipment

Noise monitoring was performed using sound level meters at each designed monitoring station. The sound level meters deployed comply with the International Electrotechnical Commission Publications (IEC) 651:1979 (Type 1) and 804:1985 (Type 1) specifications. Acoustic calibrator was deployed to check the sound level meters at a known sound pressure level. Brand and model of the equipment used for noise monitoring under this Project is given in **Table 3.5**

Table 3.5: Noise Monitoring Equipment

Equipment	Brand	Model No.
Integrated Sound Level Meter	Rion	NL-52 (S/N 00643040)
Acoustic Calibrator	LARSON DAVIS	CAL200 (S/N 16878)

3.7 Monitoring Methodology

- Façade and Free Field measurements were made at the monitoring locations.
- For Façade measurement, the microphone head of the sound level meter was positioned 1m exterior of the noise sensitive façade and lowered sufficiently so that the building's external wall acts as a reflecting surface.
- For free field, the microphone of the Sound Level Meter was set at least 1.2 m above the ground.
- A correction of +3dB(A) was made for free field measurement.
- 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-minute 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 repeated after the 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.
- Noise measurements were not made in presence of fog, rain, wind with a steady speed exceeding 5m/s or wind with gusts exceeding 10m/s.

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**.

3.8 Monitoring Results

The monitoring results for construction noise are summarized in **Table 3.6**. Detailed impact noise monitoring results and relevant graphical plots are presented in **Appendix G**.

Table 3.6: Summary of Construction Noise Monitoring Results During the Reporting Period

	Measured Noise Level $L_{eq\ (30\ mins)}$, dB(A)			
Monitoring Station	Average	Min	Max	Limit Level
NMS1-T	71	71	72	75
NMS2	69	68	70	75
NMS4	66	64	70	75

No noise exceedances were recorded at stations NMS1-T, NMS2 and NMS4 by ET during the reporting period.

4 Environmental Site and Audit

4.1 Site Inspection

Site inspections were carried out by ET on a weekly basis to monitor the implementation of proper environmental pollution control mitigation measures for the Project. Key observations were recorded in the site inspection checklist and passed to the Contracted Party together with the appropriate recommended mitigation measures where necessary. During the reporting period, site inspections were carried out on 3, 10, 17, 23 and 31 May 2023. Joint IEC site inspections were carried out on 10 and 23 May 2023.

Bi-weekly landscape and visual site audit was carried out on 10 and 23 May 2023. The landscape and visual audit have been audited by Registered Landscape Architect (RLA). No major observations of landscape and visual impact were identified. The result findings were summarised in **Appendix K.**

Key observations during the site inspections are described in **Table 4.1.**

Table 4.1: Summary of Site Inspections and Recommendations

Inspection Date	Key Observations	Recommendations / Actions	Close-Out Date / Status
Kai Tak Sports Park			
3 May 2023	Accumulation of general refuse was observed at southern site.	The contractor was reminded to clear the general refuse regularly.	10 May 2023
3 May 2023	Rubbish bins without cover was observed at southern site.	The contractor was reminded to provide cover for the rubbish bin for proper storage of general refuse.	10 May 2023
10 May 2023	Accumulation of general refuse at northern site was observed.	The contractor was reminded to clear the general refuse regularly.	17 May 2023
10 May 2023	Overflow at chemical drip tray was observed at northern site.	The contractor was reminded to clear the drip tray regularly	17 May 2023
10 May 2023	The pH value of the waste water treatment plant was not shown at northern site.	The contractor was reminded to fix the display screen.	17 May 2023
10 May 2023	A generator without NRMM label was observed at northern site.	The contractor was reminded to provide NRMM label for the generator.	17 May 2023
17 May 2023	Accumulation of general refuse on the ground was observed at southern site.	The contractor was reminded to dispose the general refuse properly	23 May 2023
17 May 2023	A rubbish bin without cover was observed at southern site.	The contractor was reminded to provide cover rubbish bin for proper storage of general refuse.	23 May 2023
23 May 2023	Accumulation of mud near vehicular access at northern site was observed.	The contractor was reminded to keep the vehicular access clear.	31 May 2023
31 May 2023	Accumulation of general refuse on the floor was observed at southern site.	The contractor was reminded to dispose of the general refuse properly.	7 Jun 2023
31 May 2023	Accumulation of stagnant water was observed at southern site.	The contractor was reminded to clear the stagnant water.	7 Jun 2023
31 May 2023	Accumulation of mud outside the site exit was observed at northern site.	The contractor was reminded to provide sufficient wheel washing and drainage measures to avoid mud and site runoff carried out by construction vehicles.	7 Jun 2023

Inspection Date	Key Observations	Recommendations / Actions	Close-Out Date / Status
Hotel and Office Development			
3 May 2023	Accumulation of stockpile without covering was observed.	The contractor was reminded to provide covering for the stockpile on site.	10 May 2023
10 May 2023	Accumulation of general refuse was observed.	The contractor was reminded to clear general refuse regularly.	17 May 2023
17 May 2023	Accumulation of mud at the site entrance was observed.	The contractor was reminded to maintain clearance of mud at site entrance.	23 May 2023
23 May 2023	The general refuse mixing with construction waste was observed.	The contractor was reminded to dispose of general refuse properly.	31 May 2023
31 May 2023	Stockpile without covering was observed on site.	The contractor was reminded to provide covering for the stockpile.	7 Jun 2023

4.2 Advice on the Solid and Liquid Waste Management Status

KTSP

The Contracted Party was registered as a chemical waste producer for the Project. Construction and demolition (C&D) material sorting was carried out on site. Sufficient numbers of receptacles were provided for general refuse collection and sorting. Excavated inert C&D materials were reused to minimise the disposal of C&D waste to public fill.

The Contracted Party was reminded to maintain on site waste sorting and recording system and maximize reuse / recycling of C&D wastes, whenever these are generated.

H/O Development

Construction and demolition (C&D) material sorting was carried out on site. Sufficient numbers of receptacles were provided for general refuse collection and sorting. Excavated inert C&D materials were designated for on temporary site storage and collected for the disposal to public fill.

The Contractor was reminded to maintain on site waste sorting and maximize reuse / recycling of C&D wastes, whenever these are generated.

The monthly summary of waste flow table is detailed in **Appendix I**.

4.3 Environmental Licenses and Permits

The valid environmental licenses and permits for the Project during the reporting period are summarized in **Appendix J**.

4.4 Implementation Status of Environmental Mitigation Measures

In response to the site audit findings, the Contracted Party carried out corrective actions.

A summary of the environmental mitigation measures implementation status is presented in **Appendix K**. Most of the necessary mitigation measures were implemented properly.

4.5 Summary of Exceedance of the Environmental Quality Performance Limit

Air Quality

No Action and Limit Level exceedances of 1-hour TSP level was recorded at AMS1-T, AMS2 and AMS4 during the reporting period.

Noise

No Action and Limit Level exceedances for noise levels was recorded at NMS1-T, NMS2 and NMS4 during the reporting month.

4.6 Summary of Complaints, Notification of Summons and Successful Prosecution

Complaints

There was one complaint received in relation to the environmental impact during the reporting month.

Table 4.2: Summary of Complaints in the Reporting Month

Date of Notification from EPD	Date of Complaint	Description of Complaint	Recommendations / Actions	Close-Out Date / Status
23 May 2023	19 May 2023	- Complaint of discharging polluting wastewater from North Gate No. 4 at Muk Tai Street. - Please ensure the wastewater generated from your site to be properly treated and the discharge fulfill the conditions stipulated in the valid WPCO licence. - Please ensure the works fulfill the relevant environmental legislation and conditions stipulated in the valid construction noise permit. - Please take necessary measures to minimize the environmental nuisance arising from the construction site.	1. Self-monitoring of wastewater discharge sample had been conducted and reported monthly. 2. Regular pest control measures had been provided near North Gate No. 4 Area.	24 May 2023

Notification of Summons and Successful Prosecution

No notification of summons or prosecutions was received during the reporting period.

Statistics on notifications of summons and successful prosecutions are summarized in **Appendix L**.

5 Future Key Issues

5.1 Construction Programme for the Coming Months

As informed by the Contracted Party, the major construction activities for the next reporting period (June 2023) are summarized in **Table 5.1**.

Table 5.1: Construction Activities for the Next Reporting Period

Site Area	Description of Activities
• Kai Tak Sports Park	• Mobilization and lifting; • Concreting; • Excavation; • Main Stadium pre-cast material delivery; and • Public Sports Ground drainage layer construction
• Hotel and Office Development	• Excavation; and • Concreting.

The tentative schedule for weekly site inspection and monitoring for air quality and noise for the next reporting period is provided in **Appendix E**.

6 Conclusions

6.1 Conclusions

General

The construction works for the Project commenced on 8 April 2019.

The ET of the Project has implemented the air quality and noise environmental impact monitoring under the construction phase EM&A programme during the reporting period.

Breaches of Action and Limit Levels

Air Quality

No Action or Limit Level exceedances of 1-hour TSP level was recorded during the reporting period.

Noise

No Action or Limit Level exceedances of noise level was recorded during the reporting period.

Environmental Site Inspections

Environmental site inspections were carried out five times during the reporting period. Recommendations on remedial actions were given to the Contracted Party for the deficiencies identified during the site inspections.

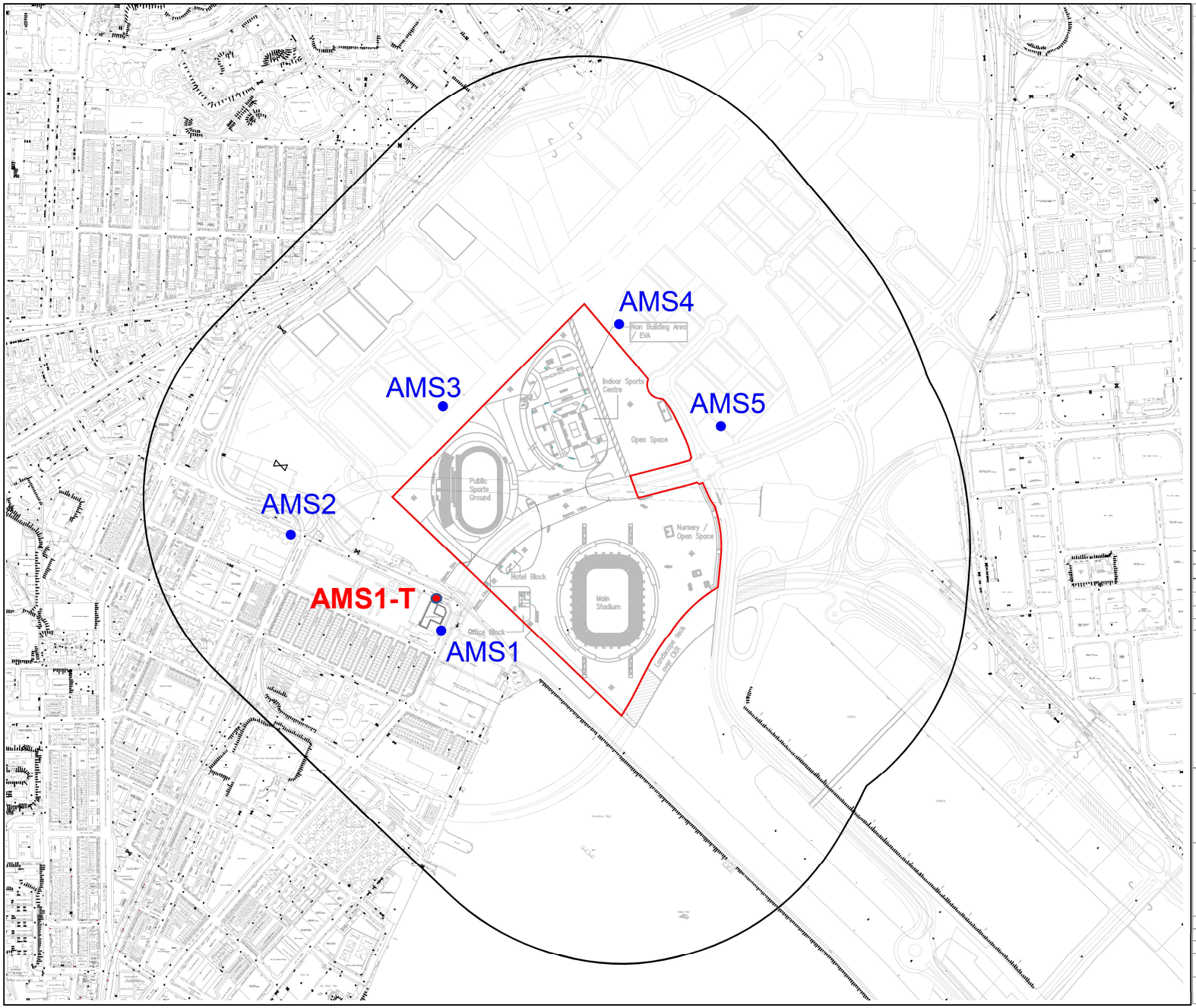
Complaints

There was one complaint received in relation to the environmental impact during the reporting period. Complaint investigation was conducted and mitigation measures were implemented.

Notifications of Summons and Successful Prosecutions

There were no notifications of summons or prosecutions received during the reporting period.

Figures



Key Plan:

Notes:

1. ALL LEVELS ARE METRES TO PRINCIPAL DATUM (PD) UNLESS NOTED OTHERWISE.
2. ALL CO-ORDINATES REFER TO HONG KONG (1980) METRIC GRID CO-ORDINATES SYSTEM.
3. PIPE AND BOX CULVERT SIZES ARE SHOWN IN MILLIMETERS

Key to symbols:

LEGEND:

- Project Site
- 500m from Site Boundary
- AMS1 Air Monitoring Station 1
- AMS1-T **Temporary Air Monitoring Station**

Rev	Date	Drawn	Description	Ch'k'd	App'd

MOTT MACDONALD
3/F Mapletree Bay Point
348 Kwun Tong Road
Kwun Tong, Kowloon
Hong Kong
T +852 2828 5757
F +852 2827 1823
W mottmac.com

Client

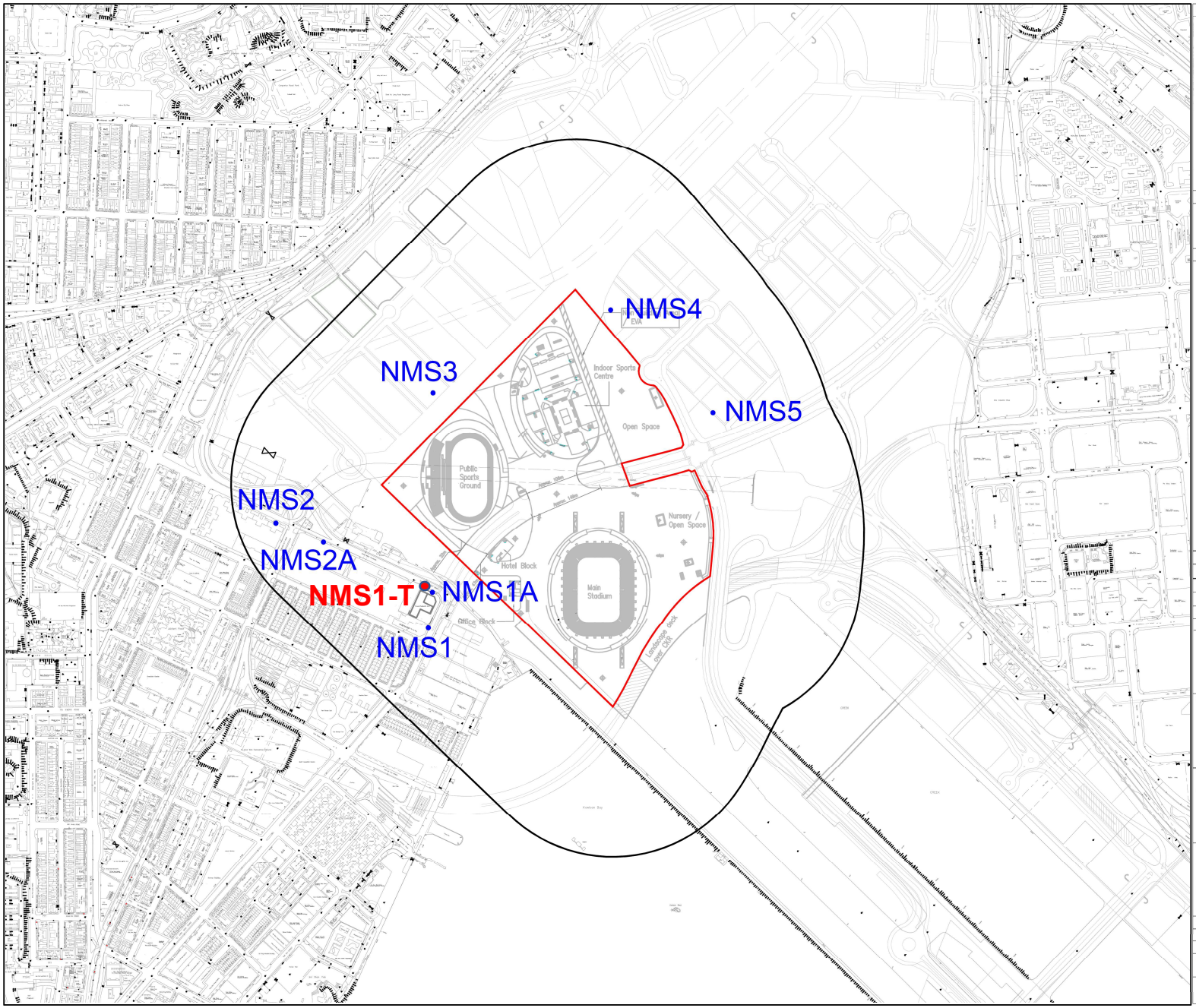
Project

Title

Figure 2.1
Location of Air Quality Monitoring Stations

Designed			Eng check		
Drawn			Coordination		
Dwg check			Approved		
Scale at A3		Status		Rev	

Drawing Number



Key Plan:

Notes:

1. ALL LEVELS ARE METRES TO PRINCIPAL DATUM (PD) UNLESS NOTED OTHERWISE.
2. ALL CO-ORDINATES REFER TO HONG KONG (1980) METRIC GRID CO-ORDINATES SYSTEM.
3. PIPE AND BOX CULVERT SIZES ARE SHOWN IN MILLIMETERS

Key to symbols:

LEGEND:

- Project Site
- 300m from Site Boundary
- NMS1 — Construction Noise Monitoring Station 1
- NMS1-T — **Temporary Noise Monitoring Station**

Rev	Date	Drawn	Description	Ch'k'd	App'd

MOTT MACDONALD
3/F Mapletree Bay Point
348 Kwun Tong Road
Kwun Tong, Kowloon
Hong Kong
T +852 2828 5757
F +852 2827 1823
W mottmac.com

Client:

Project:

Title:

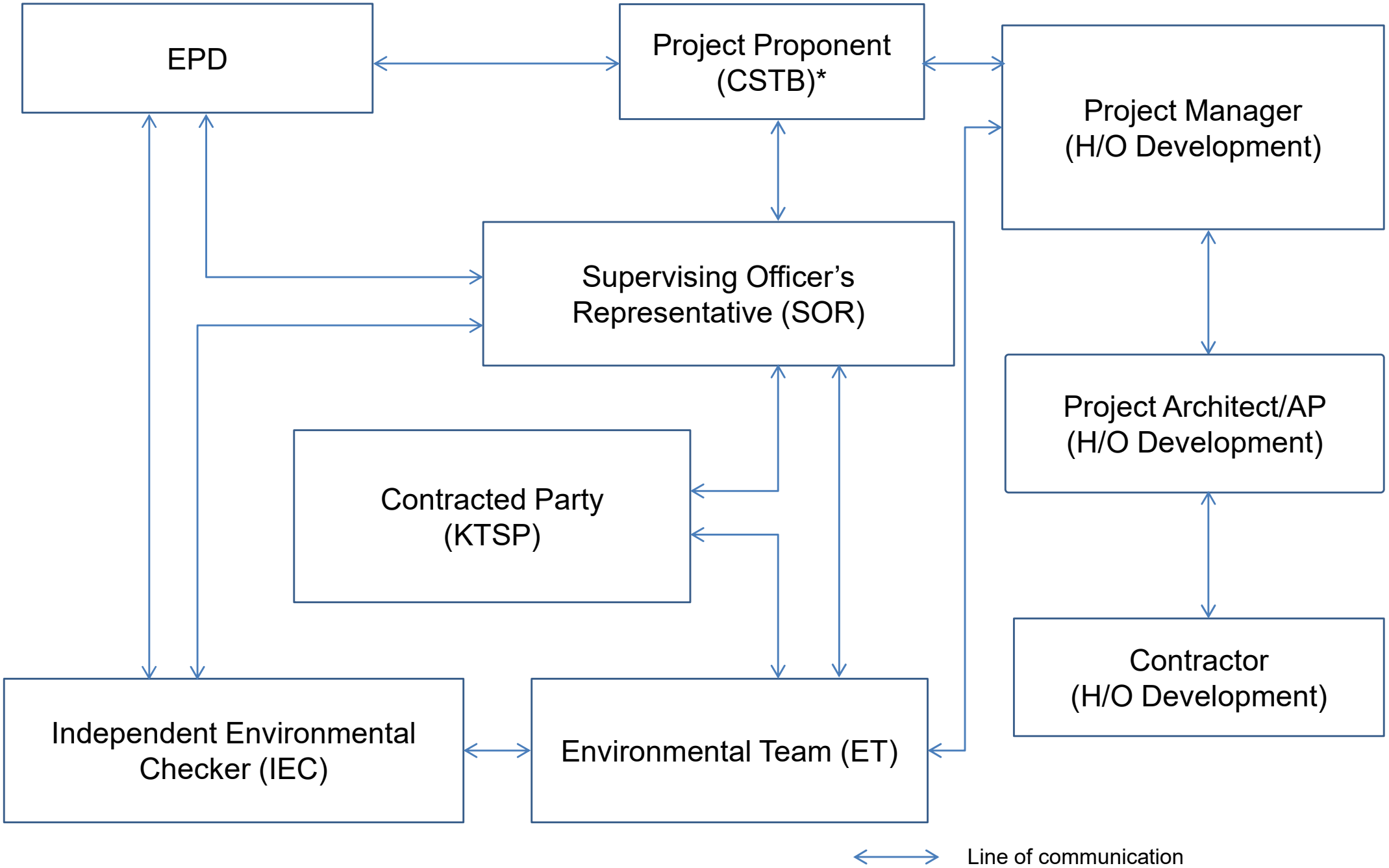
Figure 3.1
Location of Noise Monitoring Stations

Designed			Eng check		
Drawn			Coordination		
Dwg check			Approved		
Scale at A3		Status		Rev	

Drawing Number

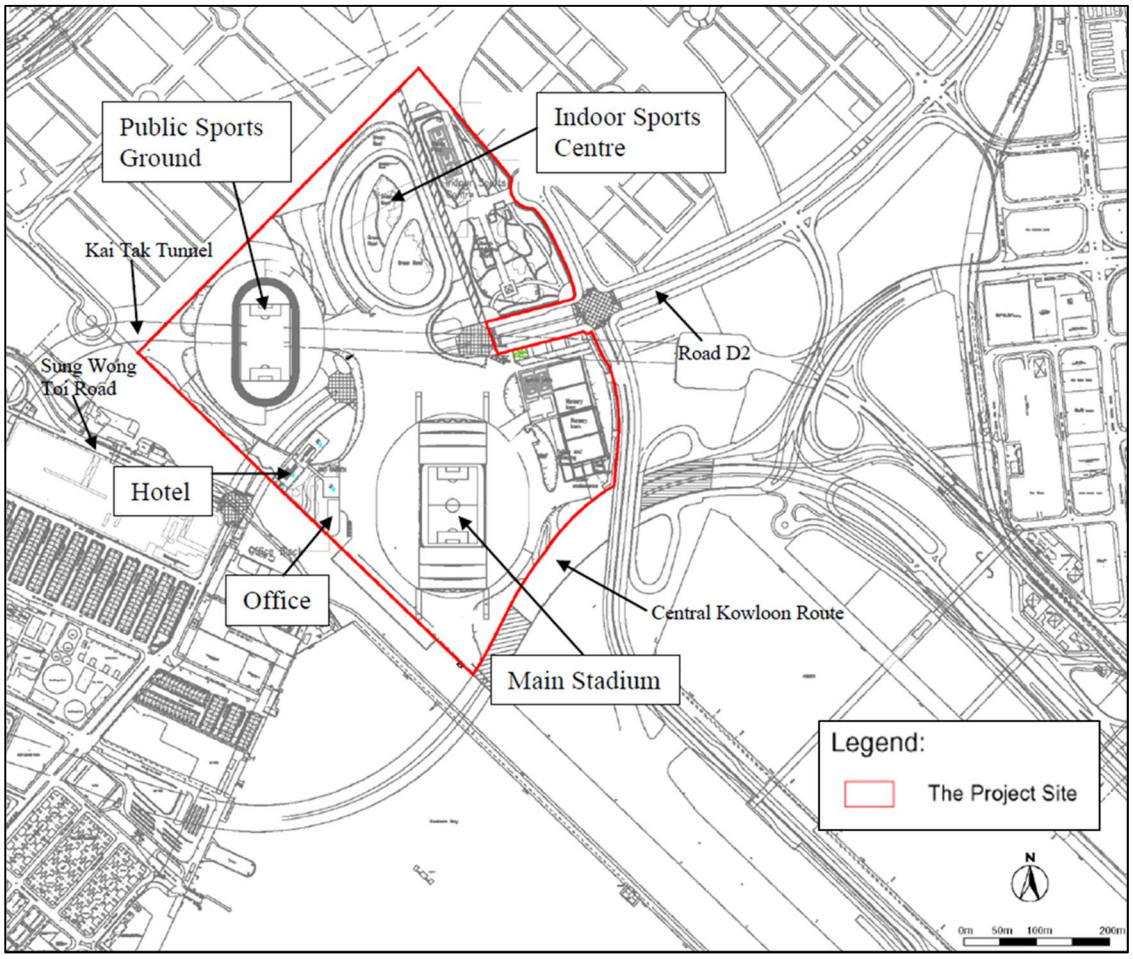
Appendix A. Project Organization for Environmental Works

Project Organisation for Environmental Works



** Home Affairs Bureau (HAB) reorganized as Culture, Sports and Tourism Bureau (CSTB) in July 2022*

Appendix B. Location of Works Areas



Appendix C. Construction Programme

Construction Programme (May 2023 to Aug 2023)

Kai Tak Sports Park

	2023											
Construction Activities	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Plants Mobilization												
Loading/ Unloading of Materials												
Excavation												
C&D Waste Disposal												
Concreting												
Lifting												
C&D Materials Internal Transportation												
Main Stadium Pre-cast Material Delivery												
Construction of drainage layer (PSG)												

Hotel and Office Development

	2023											
Construction Activities	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Loading/Unloading of Materials												
Excavation												
Concreting												
C&D Waste Disposal												

Appendix D. Event and Action Plan

Should non-compliance of the air quality criteria occur, actions in accordance with the Event and Action Plan in **Table D.1** and **Table D.2** shall be carried out.

Table D.1: Event and Action Plan for Construction Air Quality (Action Level)

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

Table D.2: Event and Action Plan for Construction Air Quality (Limit Level)

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

Should non-compliance of the noise criteria occur, actions in accordance with the Event and Action Plan in **Table D.3** shall be carried out.

Table D.3: Event and Action Plan for Construction Noise

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

Appendix E. Environmental Site Inspection and Monitoring Schedule

Table E.1: Site Inspection and Monitoring Schedule for May 2023

Impact Environmental Monitoring Schedule for May 2023

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1 Labour Day	2	3 site inspection AMS1-T, AMS2, AMS4 NMS1-T, NMS2, NMS4	4	5	6
7	8	9 AMS1-T, AMS2, AMS4 NMS1-T, NMS2, NMS4	10 site inspection landscape and visual audit	11	12	13
14	15 AMS1-T, AMS2, AMS4 NMS1-T, NMS2, NMS4	16	17 site inspection	18	19 AMS1-T, AMS2, AMS4	20
21	22	23 site inspection landscape and visual audit	24 AMS1-T, AMS2, AMS4 NMS1-T, NMS2, NMS4	25	26 The Birthday of the Buddha	27
28	29	30 AMS1-T, AMS2, AMS4 NMS1-T, NMS2, NMS4	31 site inspection			

Air Quality/Noise Monitoring

Remark: Joint site walk with IEC on 10 and 23 May 2023

Table E.2: Tentative Site Inspection and Monitoring Schedule for Jun 2023

Tentative Impact Environmental Monitoring Schedule for June 2023

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5 AMS1-T, AMS2, AMS4 NMS1-T, NMS2, NMS4	6	7 site inspection landscape and visual audit	8	9 AMS1-T, AMS2, AMS4	10
11	12	13	14 site inspection	15 AMS1-T, AMS2, AMS4 NMS1-T, NMS2, NMS4	16	17
18	19	20	21 site inspection landscape and visual audit AMS1-T, AMS2, AMS4 NMS1-T, NMS2, NMS4	22 Tuen Ng Festival	23	24
25	26	27 AMS1-T, AMS2, AMS4 NMS1-T, NMS2, NMS4	28 site inspection	29	30	

Air Quality/Noise Monitoring

Remark: The schedule is subject to change due to unforeseeable circumstances (e.g. adverse weather, etc)

Appendix F. Calibration Certificates

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

SUB-CONTRACTING REPORT

CONTACT	: MR K.W. FAN	WORK ORDER	: HK2247804
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	: 30-NOV-2022
		DATE OF ISSUE	: 9-DEC-2022
PROJECT	: ----	NO. OF SAMPLES	: 1
		CLIENT ORDER	: ---

General Comments

- **Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested.**
- **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.**
- **Calibration was subcontracted to and analysed by Action-United Environmental Services & Consulting.**

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
Kwai Tsing Hong Kong

WORK ORDER : HK2247804
SUB-BATCH : 1
CLIENT : ENVIROTECH SERVICES CO.
PROJECT : ----

ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK2247804-001	S/N: 235780	Equipments	30-Nov-2022	S/N: 235780

Equipment Verification Report (TSP)

Equipment Calibrated:

Type:	Laser Dust monitor
Manufacturer:	Sibata LD – 3B
Serial No.	235780
Equipment Ref:	NA
Job Order	HK2247804

Standard Equipment:

Standard Equipment:	Higher Volume Sampler (TSP)
Location & Location ID:	AUES office (calibration room)
Equipment Ref:	HVS 018
Last Calibration Date:	13 September 2022

Equipment Verification Results:

Verification Date: 6 December 2022

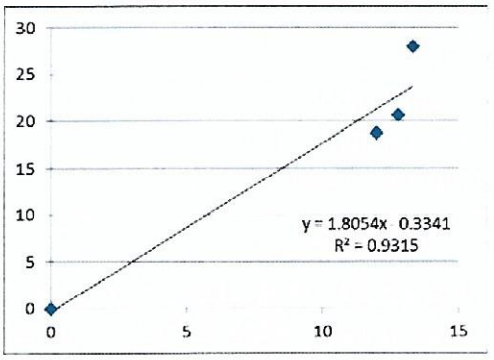
Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in ug/m³ (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/min)
2hr01mins	09:37 ~ 11:38	17.1	1019.7	18.8	1451	12.0
2hr01mins	11:42 ~ 13:43	17.1	1019.7	20.7	1543	12.8
2hr01mins	13:48 ~ 15:49	17.1	1019.7	28.0	1605	13.3

Linear Regression of Y or X

Slope (K-factor): 1.8054 (μg/m³)/CPM

Correlation Coefficient (R) 0.9651

Date of Issue 7 December 2022



Remarks:

1. **Strong** Correlation (R>0.8)
2. Factor 1.8054 (μg/m³)/CPM should be applied for TSP monitoring

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

Operator : Fai So Signature : Date : 7 December 2022

QC Reviewer : Ben Tam Signature : Date : 7 December 2022

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

SUB-CONTRACTING REPORT

CONTACT	: MR MAGNUM FAN	WORK ORDER	: HK2312358
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	: 31-MAR-2023
		DATE OF ISSUE	: 11-APR-2023
PROJECT	: ----	NO. OF SAMPLES	: 1
		CLIENT ORDER	: ----

General Comments

- Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested.
- 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.
- Calibration was subcontracted to and analysed by 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 : HK2312358
SUB-BATCH : 1
CLIENT : ENVIROTECH SERVICES CO.
PROJECT : ----

ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK2312358-001	Sibata (326285)	Equipments	18-Mar-2023	S/N: 326285

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.:	326285
Equipment Ref.:	N/A
Job Order:	HK2311344

Standard Equipment

Standard Equipment:	High Volume Sampler (TSP)
Location & Location ID:	Envirotech Room (Calibration Room)
Equipment Ref.:	HVS 8162
Last Calibration Date:	28-Feb-2023

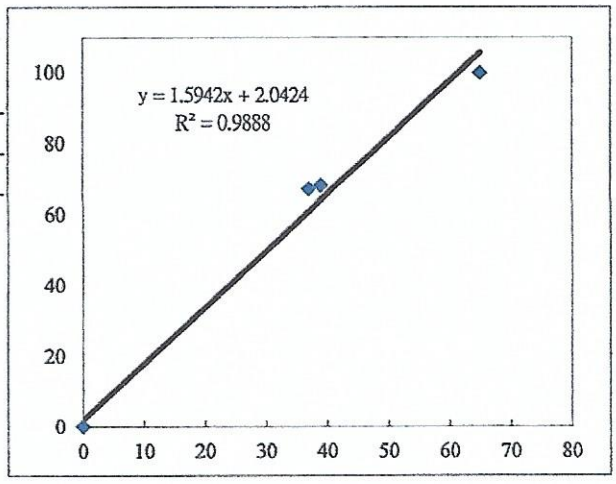
Equipment Verification Results:

Verification Date: 17 & 18 March 2023

Hour	Time	Mean Temp °C	Mean Pressure (hpa)	Concentration in µg/m³ (Standard Equipment)	Total Count (Calibrated Equipment)	Count /Minute (Total Count/min)
1hr 00mins	1410-1510	24.2	1018.2	100	3910	65
1hr 00mins	0810-0910	22.2	1021.5	67	2218	37
1hr 00mins	1510-1610	25.0	1022.4	68	2350	39

Linear Regression of Y or X

Slope (K-factor):	1.5942(µg/m³)/CPM
Correlation Coefficient (R):	0.9944
Date of Issue:	29-Mar-2023



Remarks:

1 . Strong Correlation (>0.8)

2. Factor 1.5942 (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 Fai Date: 29 March 2023

QC Reviewer: K.F.Ho Signature Fat Date: 29 March 2023

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

SUB-CONTRACTING REPORT

CONTACT	: MR K.W. FAN	WORK ORDER	: **HK2241670**
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	: 21-OCT-2022
		DATE OF ISSUE	: 1-NOV-2022
PROJECT	: ----	NO. OF SAMPLES	: 1
		CLIENT ORDER	: ---

General Comments

- **Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested.**
- **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.**
- **Calibration was subcontracted to and analysed by Action-United Environmental Services & Consulting.**

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 is the Final Report and supersedes any preliminary report with this batch 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
Kwai Tsing Hong Kong

WORK ORDER : HK2241670
SUB-BATCH : 1
CLIENT : ENVIROTECH SERVICES CO.
PROJECT : ----

ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK2241670-001	S/N: 436553	Equipments	21-Oct-2022	S/N: 436553

Equipment Verification Report (TSP)

Equipment Calibrated:

Type:	Laser Dust monitor
Manufacturer:	Sibata LD – 3B
Serial No.	436553
Equipment Ref:	NA
Job Order	HK2241670

Standard Equipment:

Standard Equipment:	Higher Volume Sampler (TSP)
Location & Location ID:	AUES office (calibration room)
Equipment Ref:	HVS 018
Last Calibration Date:	13 September 2022

Equipment Verification Results:

Verification Date: 25 October 2022

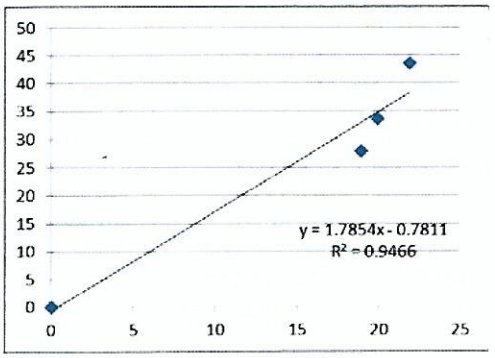
Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in ug/m^3 (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/min)
2hr01mins	09:20 ~ 11:21	23.8	1018.2	33.7	2401	19.9
2hr02mins	11:23 ~ 13:25	23.8	1018.2	27.9	2303	18.9
2hr04mins	13:27 ~ 15:31	23.8	1018.2	43.6	2703	21.9

Linear Regression of Y or X

Slope (K-factor): 1.7854 (μg/m^3)/CPM

Correlation Coefficient (R) 0.9729

Date of Issue 26 October 2022



Remarks:

1. **Strong** Correlation (R>0.8)
2. Factor 1.7854 (μg/m^3)/CPM should be applied for TSP monitoring

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

Operator : Fai So Signature : Date : 26 October 2022

QC Reviewer : Ben Tam Signature : Date : 26 October 2022

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

SUB-CONTRACTING REPORT

CONTACT	: MR K.W. FAN	WORK ORDER	: HK2219477
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	: 26-MAY-2022
		DATE OF ISSUE	: 7-JUN-2022
PROJECT	: ----	NO. OF SAMPLES	: 1
		CLIENT ORDER	: ---

General Comments

- **Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested.**
- **Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.**
- **Calibration was subcontracted to and analysed by Action-United Environmental Services & Consulting.**

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 is the Final Report and supersedes any preliminary report with this batch 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
Kwai Tsing Hong Kong

WORK ORDER : HK2219477
SUB-BATCH : 1
CLIENT : ENVIROTECH SERVICES CO.
PROJECT : ---

ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK2219477-001	S/N: 456668	Equipments	26-May-2022	S/N: 456668

Equipment Verification Report (TSP)

Equipment Calibrated:

Type:	Laser Dust monitor
Manufacturer:	Sibata LD – 3B
Serial No.	456668
Equipment Ref:	NA
Job Order	HK2219477

Standard Equipment:

Standard Equipment:	Higher Volume Sampler (TSP)
Location & Location ID:	AUES office (calibration room)
Equipment Ref:	HVS 018
Last Calibration Date:	27 May 2022

Equipment Verification Results:

Verification Date: 27 May 2022

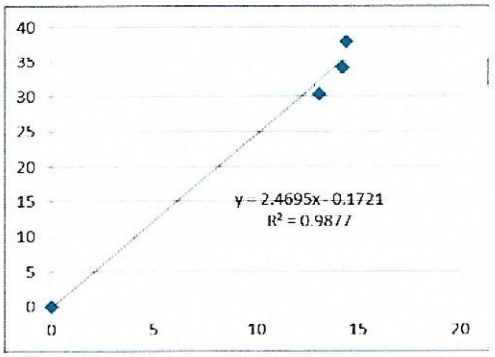
Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in ug/m^3 (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/min)
2hr01mins	09:27 ~ 11:28	27.4	1004.3	38.0	1735	14.4
2hr01mins	11:32 ~ 13:33	27.4	1004.3	30.3	1585	13.1
2hr	13:37 ~ 15:37	27.4	1004.3	34.1	1712	14.3

Linear Regression of Y or X

Slope (K-factor): 2.4695 (µg/m^3)/CPM

Correlation Coefficient (R) 0.9938

Date of Issue 2 June 2022



Remarks:

1. **Strong** Correlation (R>0.8)
2. Factor 2.4695 (µg/m^3)/CPM should be applied for TSP monitoring

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

Operator : Fai So Signature : Date : 2 June 2022

QC Reviewer : Ben Tam Signature : Date : 2 June 2022

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

SUB-CONTRACTING REPORT

CONTACT	: MR K.W. FAN	WORK ORDER	: **HK2219480**
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	: 26-MAY-2022
		DATE OF ISSUE	: 7-JUN-2022
PROJECT	: ----	NO. OF SAMPLES	: 1
		CLIENT ORDER	: ---

General Comments

- **Sample(s) was/ were submitted by client. Sample(s) arrived laboratory in ambient condition. The result(s) related only to the item(s) tested.**
- **Sample information (Project name, Sample ID, Sampling date/time, etc.) is provided by client.**
- **Calibration was subcontracted to and analysed by Action-United Environmental Services & Consulting.**

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 is the Final Report and supersedes any preliminary report with this batch 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
Kwai Tsing Hong Kong

WORK ORDER : HK2219480
SUB-BATCH : 1
CLIENT : ENVIROTECH SERVICES CO.
PROJECT : ----

ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK2219480-001	S/N: 476664	Equipments	26-May-2022	S/N: 476664

Equipment Verification Report (TSP)

Equipment Calibrated:

Type:	Laser Dust monitor
Manufacturer:	Sibata LD – 3B
Serial No.	476664
Equipment Ref:	NA
Job Order	HK2219480

Standard Equipment:

Standard Equipment:	Higher Volume Sampler (TSP)
Location & Location ID:	AUES office (calibration room)
Equipment Ref:	HVS 018
Last Calibration Date:	27 May 2022

Equipment Verification Results:

Verification Date: 27 May 2022

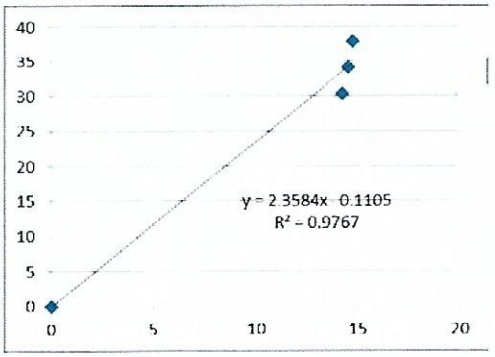
Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in ug/m^3 (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/min)
2hr01mins	09:27 ~ 11:28	27.4	1004.3	38.0	1779	14.8
2hr01mins	11:32 ~ 13:33	27.4	1004.3	30.3	1727	14.2
2hr	13:37 ~ 15:37	27.4	1004.3	34.1	1751	14.6

Linear Regression of Y or X

Slope (K-factor): 2.3584 (μg/m^3)/CPM

Correlation Coefficient (R) 0.9883

Date of Issue 2 June 2022



Remarks:

1. **Strong** Correlation (R>0.8)
2. Factor 2.3584 (μg/m^3)/CPM should be applied for TSP monitoring

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

Operator : Fai So Signature : Date : 2 June 2022

QC Reviewer : Ben Tam Signature : Date : 2 June 2022

輝創工程有限公司
Sun Creation Engineering Limited
Calibration & Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C224774
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC22-1518) Date of Receipt / 收件日期 : 1 August 2022

Description / 儀器名稱 : Precision Acoustic Calibrator
Manufacturer / 製造商 : LARSON DAVIS
Model No. / 型號 : CAL200
Serial No. / 編號 : 16878
Supplied By / 委託者 : Envirotech Services Co.
Room 712, 7/F, My Loft, 9 Hoi Wing Road, Tuen Mun,
New Territories, Hong Kong

TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C Relative Humidity / 相對濕度 : (50 ± 25)%
Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 20 August 2022

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
The results do not exceed manufacturer's specification.
The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via :
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Agilent Technologies / Keysight Technologies
- Fluke Everett Service Center, USA

Tested By 測試 : H T Wong
Assistant Engineer

Certified By 核證 : K C Lee
Engineer

Date of Issue 簽發日期 : 23 August 2022

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 – 校正及檢測實驗所
c/o 香港新界屯門興安里一號四樓
Tel/電話: (852) 2927 2606 Fax/傳真: (852) 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

輝創工程有限公司
Sun Creation Engineering Limited
Calibration & Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C224774
證書編號

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours before the commencement of the test.

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

3. Test equipment :

Equipment ID	Description	Certificate No.
CL130	Universal Counter	C223647
CL281	Multifunction Acoustic Calibrator	AV210017
TST150A	Measuring Amplifier	C221705

4. Test procedure : MA100N.

5. Results :

5.1 Sound Level Accuracy

UUT Nominal Value	Measured Value (dB)	Mfr's Spec. (dB)	Uncertainty of Measured Value (dB)
94 dB, 1 kHz	93.9	± 0.2	± 0.2
114 dB, 1 kHz	113.9		

5.2 Frequency Accuracy

UUT Nominal Value (kHz)	Measured Value (kHz)	Mfr's Spec.	Uncertainty of Measured Value (Hz)
1	1.000	1 kHz ± 1 %	± 1

Remark : The uncertainties are for a confidence probability of not less than 95 %.

Note :
Only the original copy or the laboratory's certified true copy is valid.

The values given in this Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.

Sun Creation Engineering Limited – Calibration & Testing Laboratory
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輝創工程有限公司 - 校正及檢測實驗所
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輝創工程有限公司
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Calibration & Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C224775
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC22-1518) Date of Receipt / 收件日期 : 1 August 2022

Description / 儀器名稱	:	Sound Level Meter
Manufacturer / 製造商	:	Rion
Model No. / 型號	:	NL-52
Serial No. / 編號	:	00643040
Supplied By / 委託者	:	Envirotech Services Co. Room 712, 7/F, My Loft, 9 Hoi Wing Road, Tuen Mun, New Territories, Hong Kong

TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C Relative Humidity / 相對濕度 : (50 ± 25)%
Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 20 August 2022

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
The results do not exceed manufacturer's specification.
The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via :
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Agilent Technologies / Keysight Technologies
- Fluke Everett Service Center, USA

Tested By 測試 : H T Wong
Assistant Engineer

Certified By 核證 : K C Lee
Engineer

Date of Issue 簽發日期 : 23 August 2022

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 – 校正及檢測實驗所
c/o 香港新界屯門興安里一號四樓
Tel/電話: (852) 2927 2606 Fax/傳真: (852) 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

Certificate of Calibration
校正證書

Certificate No. : C224775
證書編號

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours, and switched on to warm up for over 10 minutes before the commencement of the test.

2. Self-calibration was performed before the test.

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

4. Test equipment :

Equipment ID	Description	Certificate No.
CL280	40 MHz Arbitrary Waveform Generator	C220381
CL281	Multifunction Acoustic Calibrator	AV210017

5. Test procedure : MA101N.

6. Results :

6.1 Sound Pressure Level

6.1.1 Reference Sound Pressure Level

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
30 - 130	L_A	A	Fast	94.00	1	94.3	± 1.1

6.1.2 Linearity

UUT Setting				Applied Value		UUT Reading (dB)
Range (dB)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	
30 - 130	L_A	A	Fast	94.00	1	94.3 (Ref.)
				104.00		104.5
				114.00		114.6

IEC 61672 Class 1 Spec. : ± 0.6 dB per 10 dB step and ± 1.1 dB for overall different.

6.2 Time Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
30 - 130	L_A	A	Fast	94.00	1	94.3	Ref.
			Slow			94.3	± 0.3

Certificate of Calibration
校正證書

Certificate No. : C224775
證書編號

6.3 Frequency Weighting

6.3.1 A-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
30 - 130	L_A	A	Fast	94.00	63 Hz	68.1	-26.2 ± 1.5
					125 Hz	78.1	-16.1 ± 1.5
					250 Hz	85.6	-8.6 ± 1.4
					500 Hz	91.0	-3.2 ± 1.4
					1 kHz	94.3	Ref.
					2 kHz	95.5	+1.2 ± 1.6
					4 kHz	95.3	+1.0 ± 1.6
					8 kHz	93.3	-1.1 (+2.1 ; -3.1)
					16 kHz	86.3	-6.6 (+3.5 ; -17.0)

6.3.2 C-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
30 - 130	L_C	C	Fast	94.00	63 Hz	93.4	-0.8 ± 1.5
					125 Hz	94.1	-0.2 ± 1.5
					250 Hz	94.3	0.0 ± 1.4
					500 Hz	94.3	0.0 ± 1.4
					1 kHz	94.3	Ref.
					2 kHz	94.1	-0.2 ± 1.6
					4 kHz	93.5	-0.8 ± 1.6
					8 kHz	91.4	-3.0 (+2.1 ; -3.1)
					16 kHz	84.4	-8.5 (+3.5 ; -17.0)

Certificate of Calibration
校正證書

Certificate No. : C224775
證書編號

Remarks : - UUT Microphone Model No. : UC-59 & S/N : 10446

- Mfr's Spec. : IEC 61672 Class 1

- Uncertainties of Applied Value :

94 dB	: 63 Hz - 125 Hz	: ± 0.35 dB
	250 Hz - 500 Hz	: ± 0.30 dB
	1 kHz	: ± 0.20 dB
	2 kHz - 4 kHz	: ± 0.35 dB
	8 kHz	: ± 0.45 dB
	16 kHz	: ± 0.70 dB
104 dB	: 1 kHz	: ± 0.10 dB (Ref. 94 dB)
114 dB	: 1 kHz	: ± 0.10 dB (Ref. 94 dB)

- The uncertainties are for a confidence probability of not less than 95 %.

Note :
Only the original copy or the laboratory's certified true copy is valid.

The values given in this Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.

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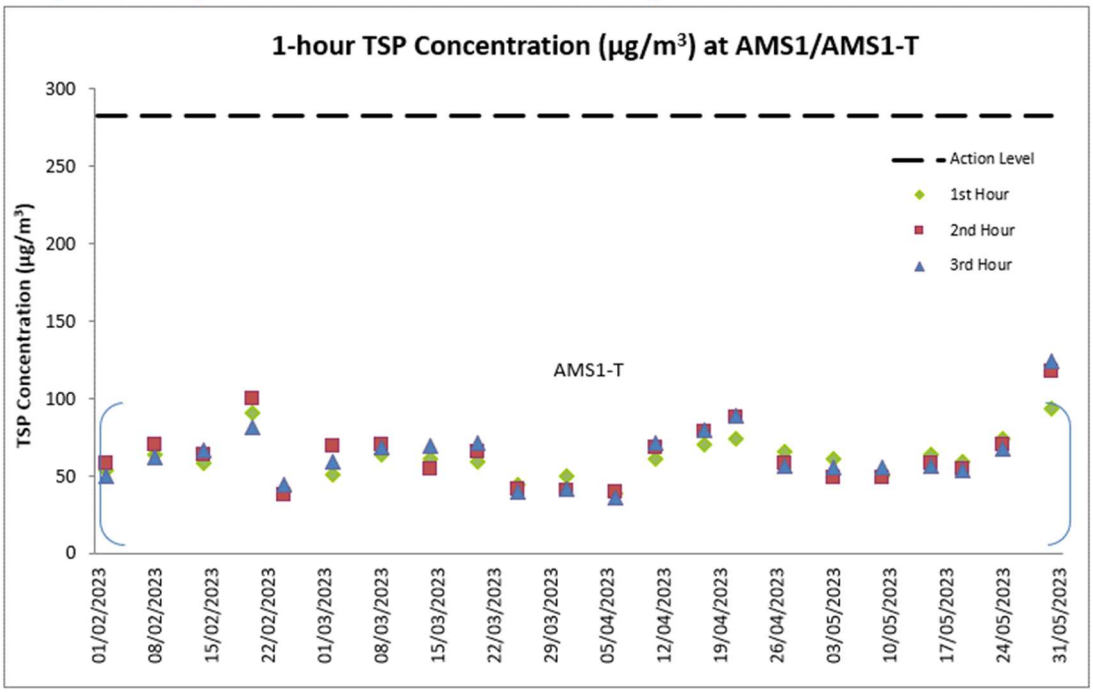
Appendix G. Monitoring Data and Graphical Plots (Air Quality and Noise)

Data for 1-hour TSP Monitoring at Station AMS1/AMS1-T during the Reporting Month

	Date	Start Time	Finish Time	Weather	Wind Speed (m/s)	Wind Direction (deg)	1-hour TSP ($\mu g/m^3$)
*	03-May-23	9:03	10:03	Cloudy	2.5	119	61
*	03-May-23	10:03	11:03	Cloudy	2.2	129	49
*	03-May-23	11:03	12:03	Cloudy	3.3	108	56
*	09-May-23	8:58	9:58	Cloudy	5.8	119	50
*	09-May-23	9:58	10:58	Cloudy	5.0	115	49
*	09-May-23	10:58	11:58	Cloudy	5.0	114	56
*	15-May-23	9:00	10:00	Cloudy	3.3	134	64
*	15-May-23	10:00	11:00	Cloudy	2.5	110	59
*	15-May-23	11:00	12:00	Cloudy	2.8	139	57
*	19-May-23	8:30	9:30	Cloudy	1.7	154	60
*	19-May-23	9:30	10:30	Cloudy	2.8	153	55
*	19-May-23	10:30	11:30	Cloudy	2.5	149	54
*	24-May-23	9:01	10:01	Cloudy	1.4	variable	74
*	24-May-23	10:01	11:01	Cloudy	3.9	137	71
*	24-May-23	11:01	12:01	Cloudy	3.1	134	68
*	30-May-23	10:26	11:26	Sunny	2.2	147	94
*	30-May-23	11:26	12:26	Sunny	2.8	151	118
*	30-May-23	12:26	13:26	Sunny	2.2	145	124

* During the reporting period, monitoring station AMS1 was no longer open for impact monitoring from 1 September 2022, due to the relocation of the Hong Kong Society for the Blind Workshop. Temporary air quality monitoring station, AMS1-T was used to conduct dust monitoring in September 2022. Details of temporary alternative monitoring locations are presented in Temporary Alternative Proposal for Monitoring Station as proposed by ET and agreed by IEC dated 6 January 2021.

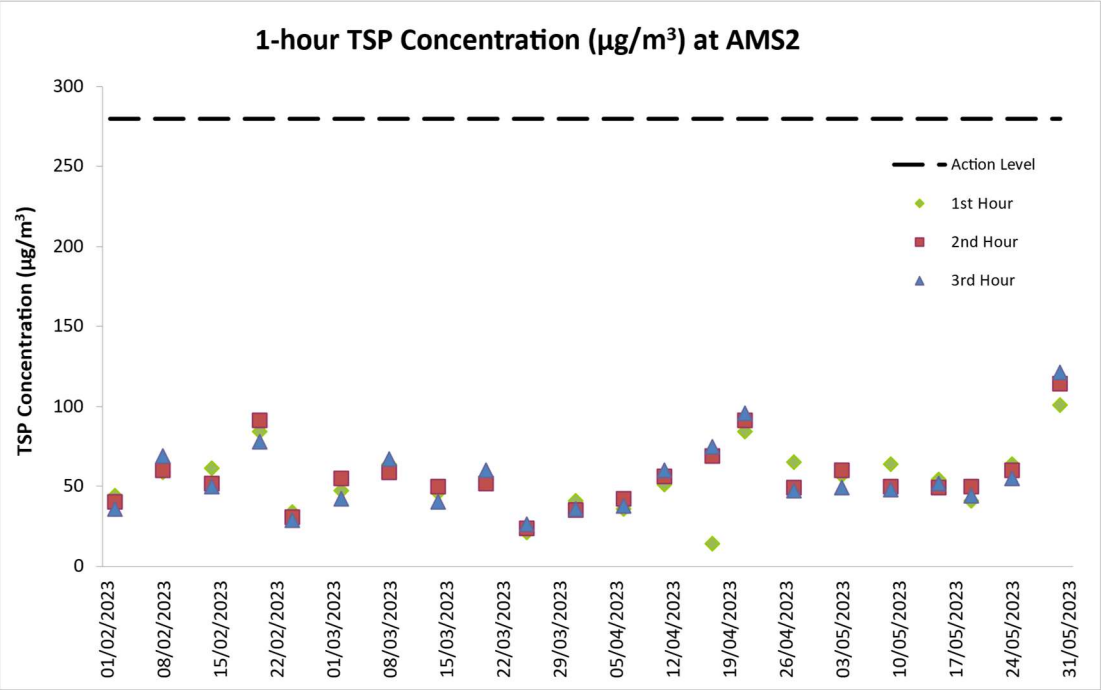
Graphical Presentation for 1-hour TSP Monitoring at AMS1/AMS1-T



Data for 1-hour TSP Monitoring at Station AMS2 during the Reporting Month

Date	Start Time	Finish Time	Weather	Wind Speed (m/s)	Wind Direction (deg)	1-hour TSP ($\mu g/m^3$)
03-May-23	8:19	9:19	Cloudy	2.2	138	57
03-May-23	9:19	10:19	Cloudy	2.8	128	60
03-May-23	10:19	11:19	Cloudy	1.4	124	49
09-May-23	8:15	9:15	Cloudy	5.3	126	64
09-May-23	9:15	10:15	Cloudy	3.9	134	50
09-May-23	10:15	11:15	Cloudy	5.0	113	48
15-May-23	8:18	9:18	Cloudy	1.7	153	54
15-May-23	9:18	10:18	Cloudy	2.8	132	49
15-May-23	10:18	11:18	Cloudy	3.3	128	52
19-May-23	8:20	9:20	Cloudy	1.7	156	41
19-May-23	9:20	10:20	Cloudy	1.7	149	50
19-May-23	10:20	11:20	Cloudy	2.2	151	44
24-May-23	8:18	9:18	Cloudy	3.1	128	64
24-May-23	9:18	10:18	Cloudy	2.5	142	60
24-May-23	10:18	11:18	Cloudy	2.8	144	55
30-May-23	9:06	10:06	Sunny	0.8	106	101
30-May-23	10:06	11:06	Sunny	1.1	170	114
30-May-23	11:06	12:06	Sunny	3.3	156	121

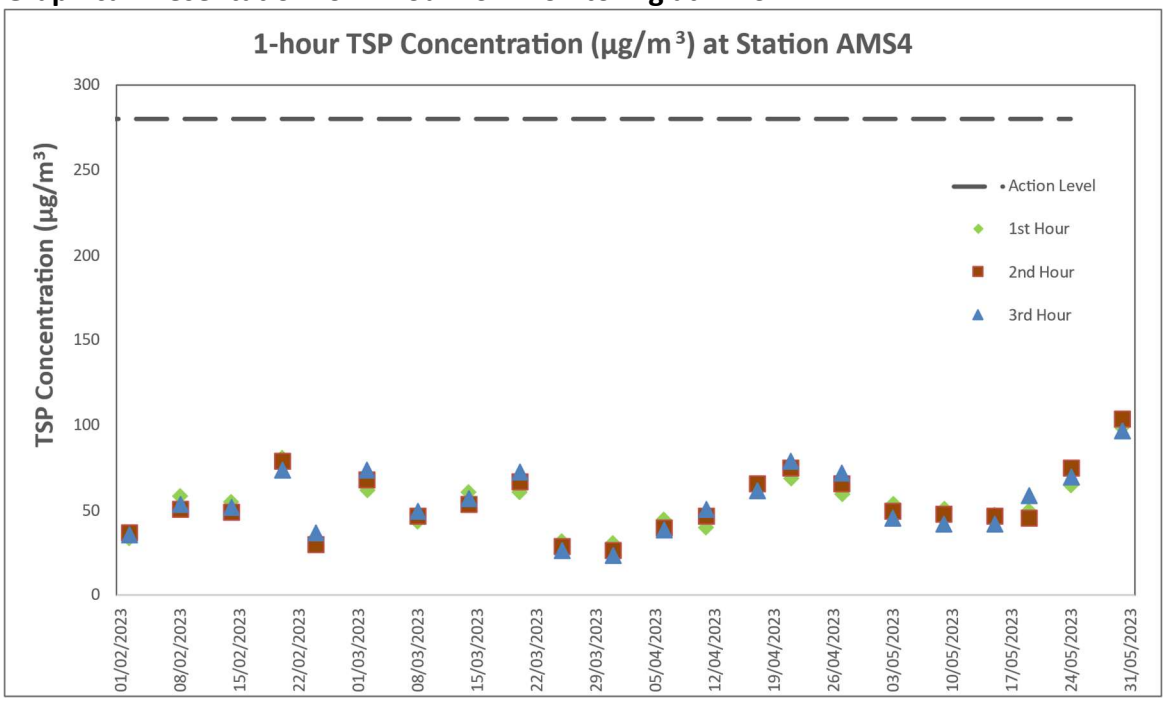
Graphical Presentation for 1-hour TSP Monitoring at AMS2



Data for 1-hour TSP Monitoring at Station AMS4 during the Reporting Month

Date	Start Time	Finish Time	Weather	Wind Speed (m/s)	Wind Direction (deg)	1-hour TSP ($\mu g/m^3$)
03-May-23	9:55	10:55	Cloudy	1.7	146	54
03-May-23	10:55	11:55	Cloudy	3.3	119	50
03-May-23	11:55	12:55	Cloudy	1.9	145	46
09-May-23	9:51	10:51	Cloudy	5.3	116	51
09-May-23	10:51	11:51	Cloudy	5.0	116	48
09-May-23	11:51	12:51	Cloudy	4.4	112	42
15-May-23	9:53	10:53	Cloudy	3.3	118	48
15-May-23	10:53	11:53	Cloudy	3.3	130	47
15-May-23	11:53	12:53	Cloudy	2.2	159	42
19-May-23	8:50	9:50	Cloudy	1.7	136	50
19-May-23	9:50	10:50	Cloudy	2.2	141	46
19-May-23	10:50	11:50	Cloudy	2.5	146	59
24-May-23	9:55	10:55	Cloudy	2.8	142	65
24-May-23	10:55	11:55	Cloudy	2.8	133	75
24-May-23	11:55	12:55	Cloudy	4.7	131	70
30-May-23	11:18	12:18	Sunny	2.2	147	99
30-May-23	12:18	13:18	Sunny	2.2	146	104
30-May-23	13:18	14:18	Sunny	2.2	148	97

Graphical Presentation for 1-hour TSP Monitoring at AMS4

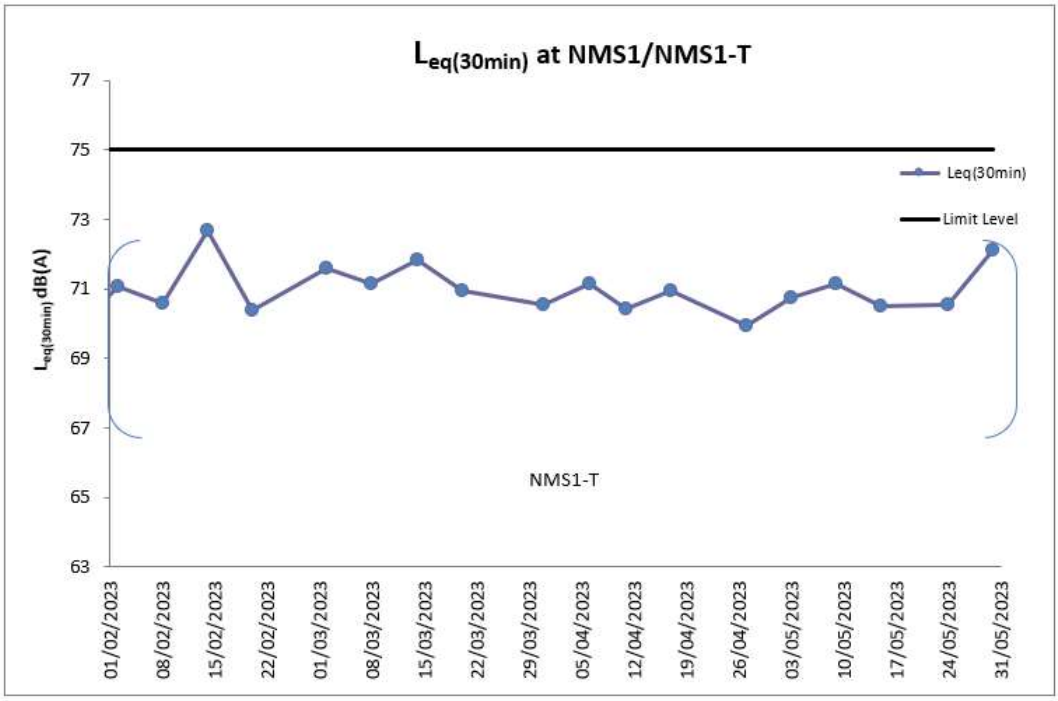


Data for Noise Monitoring at Station NMS1/NMS1-T during the Reporting Month

	Date	Time	Weather	$L_{eq(5min)}$	L_{10}	L_{90}	Measured $L_{eq(30min)}$
*	03-May-23	09:06	Cloudy	69.7	72.0	64.3	70.7
*	03-May-23	09:11	Cloudy	70.1	73.2	65.4	
*	03-May-23	09:16	Cloudy	71.9	74.9	65.5	
*	03-May-23	09:21	Cloudy	69.4	72.6	64.8	
*	03-May-23	09:26	Cloudy	71.7	74.6	65.7	
*	03-May-23	09:31	Cloudy	71.0	74.4	65.2	
*	09-May-23	09:01	Cloudy	70.6	73.2	65.3	71.1
*	09-May-23	09:06	Cloudy	71.8	74.9	66.4	
*	09-May-23	09:11	Cloudy	71.7	74.6	66.5	
*	09-May-23	09:16	Cloudy	70.5	73.8	65.8	
*	09-May-23	09:21	Cloudy	71.1	74.0	66.9	
*	09-May-23	09:26	Cloudy	71.0	74.4	66.3	
*	15-May-23	09:03	Cloudy	69.9	72.2	64.3	70.5
*	15-May-23	09:08	Cloudy	69.6	72.8	64.4	
*	15-May-23	09:13	Cloudy	70.4	73.6	65.5	
*	15-May-23	09:18	Cloudy	70.7	73.5	65.9	
*	15-May-23	09:23	Cloudy	71.1	74.0	66.4	
*	15-May-23	09:28	Cloudy	71.0	74.1	66.2	
*	24-May-23	09:04	Cloudy	69.4	72.2	64.3	70.5
*	24-May-23	09:09	Cloudy	70.5	73.6	65.4	
*	24-May-23	09:14	Cloudy	71.6	74.5	66.6	
*	24-May-23	09:19	Cloudy	71.9	74.8	66.7	
*	24-May-23	09:24	Cloudy	70.1	73.0	65.9	
*	24-May-23	09:29	Cloudy	69.0	72.4	64.1	
*	30-May-23	09:54	Sunny	72.1	75.7	63.1	72.1
*	30-May-23	09:59	Sunny	71.6	74.9	63.8	
*	30-May-23	10:04	Sunny	72.4	76.3	62.5	
*	30-May-23	10:09	Sunny	69.8	73.0	63.3	
*	30-May-23	10:14	Sunny	71.5	75.3	65.3	
*	30-May-23	10:19	Sunny	74.2	78.6	62.0	

* During the reporting period, monitoring station NMS1 was no longer open for impact monitoring from 1 September 2022, due to relocation of the Hong Kong Society for the Blind Workshop. Temporary noise monitoring station, NMS1-T was used to conduct noise monitoring in September 2022. Details of temporary alternative monitoring locations are presented in Temporary Alternative Proposal for Monitoring Station as proposed by ET and agreed by IEC dated 6 January 2021.

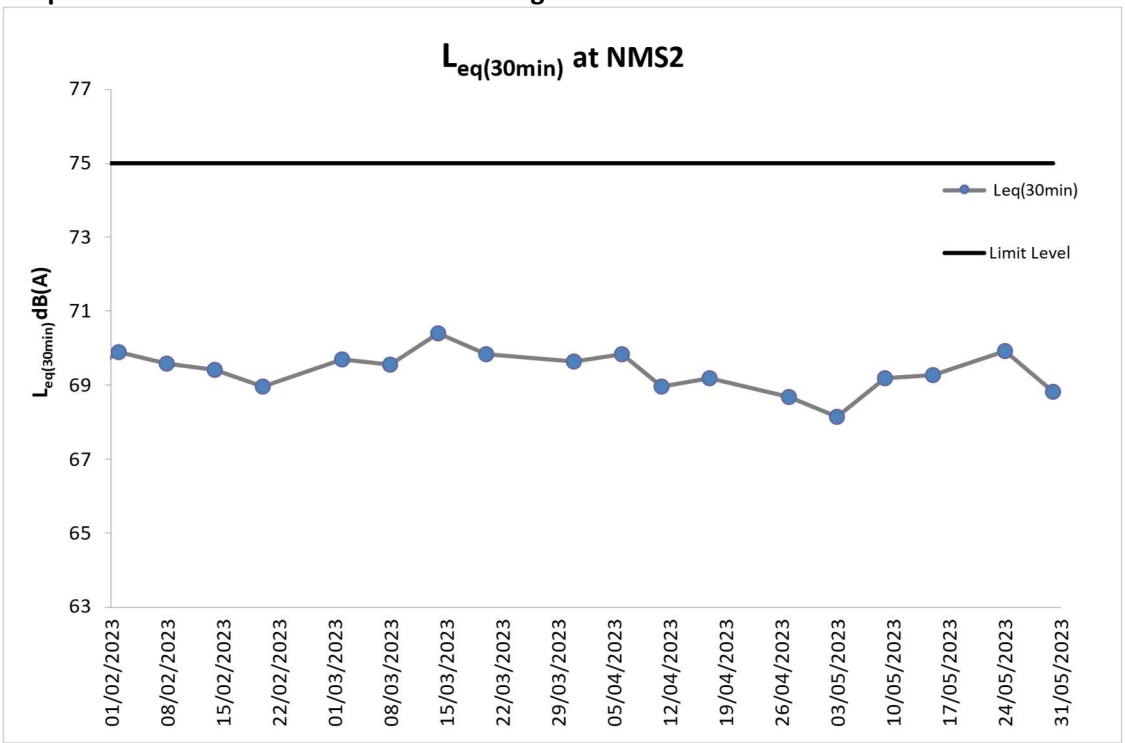
Graphical Presentation for Noise Monitoring at NMS1/NMS1-T



Data for Noise Monitoring at Station NMS2 during the Reporting Month

Date	Time	Weather	$L_{eq(5min)}$	L_{10}	L_{90}	Measured $L_{eq(30min)}$
03-May-23	08:22	Cloudy	67.4	69.2	65.3	68.1
03-May-23	08:27	Cloudy	68.1	70.6	66.4	
03-May-23	08:32	Cloudy	69.9	71.5	67.8	
03-May-23	08:37	Cloudy	67.6	69.7	65.6	
03-May-23	08:42	Cloudy	68.1	70.0	66.5	
03-May-23	08:47	Cloudy	67.2	69.9	65.2	
09-May-23	08:18	Cloudy	69.4	71.2	67.3	69.2
09-May-23	08:23	Cloudy	68.5	70.5	66.4	
09-May-23	08:28	Cloudy	68.6	70.7	66.8	
09-May-23	08:33	Cloudy	70.9	72.6	68.7	
09-May-23	08:38	Cloudy	69.1	71.0	67.6	
09-May-23	08:43	Cloudy	68.0	70.9	66.5	
15-May-23	08:21	Cloudy	68.8	70.2	64.3	69.3
15-May-23	08:26	Cloudy	69.4	71.9	65.4	
15-May-23	08:31	Cloudy	68.9	70.5	64.8	
15-May-23	08:36	Cloudy	68.6	70.7	64.6	
15-May-23	08:41	Cloudy	69.1	71.0	65.4	
15-May-23	08:46	Cloudy	70.5	72.2	65.0	
24-May-23	08:21	Cloudy	68.9	70.0	66.2	69.9
24-May-23	08:26	Cloudy	68.7	70.1	66.4	
24-May-23	08:31	Cloudy	69.2	71.3	67.5	
24-May-23	08:36	Cloudy	70.4	72.6	68.9	
24-May-23	08:41	Cloudy	70.7	72.8	68.7	
24-May-23	08:46	Cloudy	71.0	73.5	69.0	
30-May-23	09:09	Sunny	68.8	71.4	64.3	68.8
30-May-23	09:14	Sunny	68.7	71.6	64.6	
30-May-23	09:19	Sunny	68.6	70.6	63.6	
30-May-23	09:24	Sunny	68.4	71.1	63.9	
30-May-23	09:29	Sunny	69.2	71.6	65.7	
30-May-23	09:34	Sunny	69.2	72.3	64.6	

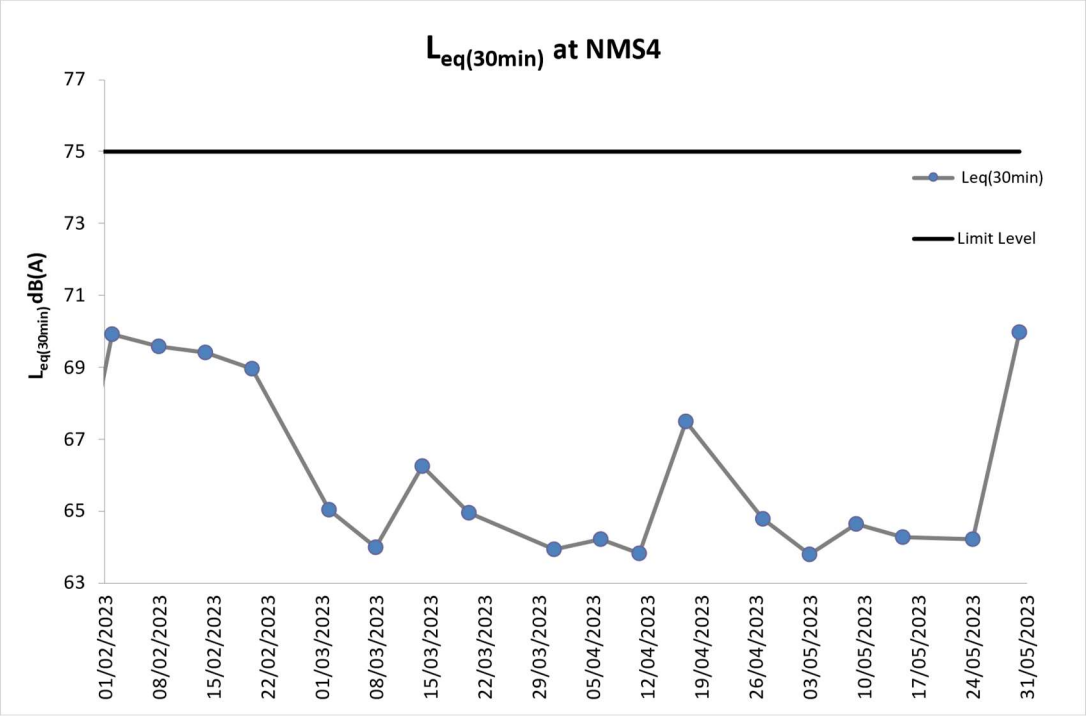
Graphical Presentation for Noise Monitoring at NMS2



Data for Noise Monitoring at Station NMS4 during the Reporting Month

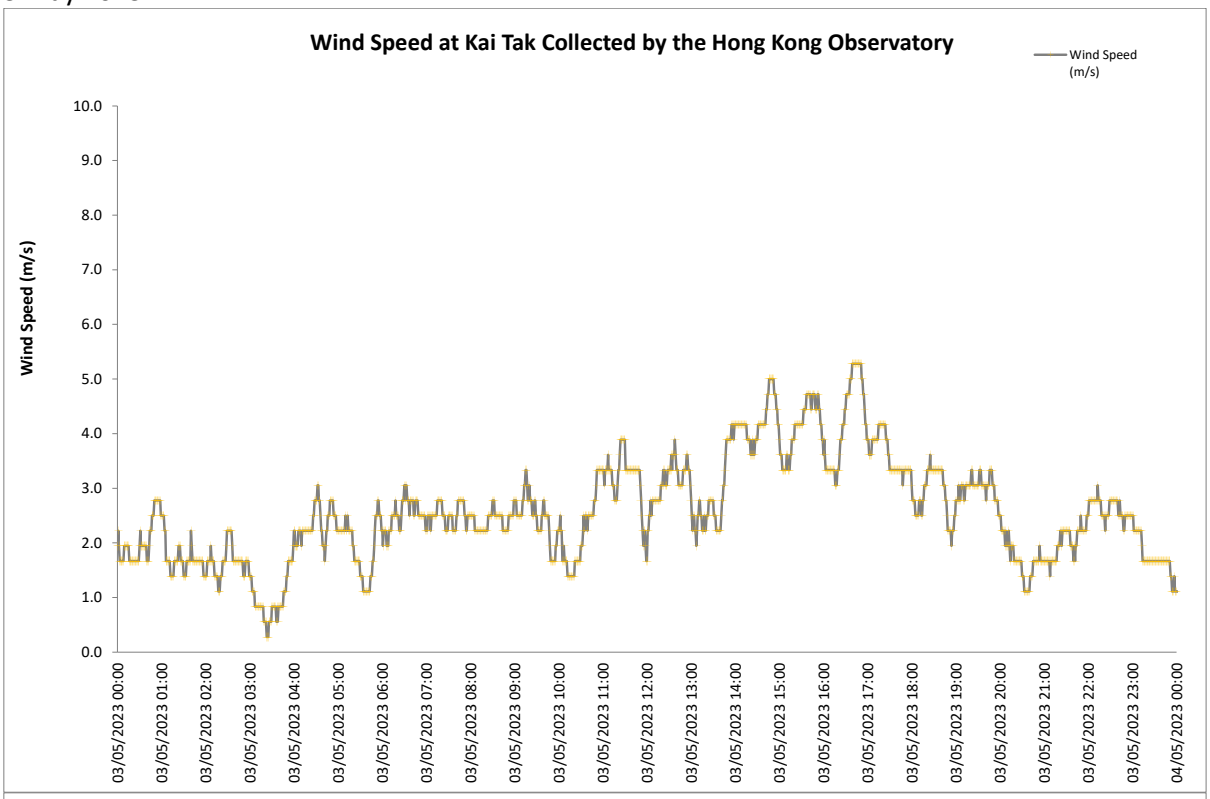
Date	Time	Weather	$L_{eq(5min)}$	L_{10}	L_{90}	Measured $L_{eq(30min)}$
03-May-23	08:22	Cloudy	64.4	66.2	62.3	63.8
03-May-23	08:27	Cloudy	63.1	65.7	61.4	
03-May-23	08:32	Cloudy	63.2	65.6	61.5	
03-May-23	08:37	Cloudy	64.7	66.8	62.9	
03-May-23	08:42	Cloudy	64.1	66.0	62.6	
03-May-23	08:47	Cloudy	62.9	64.3	60.2	
09-May-23	08:18	Cloudy	64.9	66.2	62.3	64.6
09-May-23	08:23	Cloudy	65.6	67.3	63.4	
09-May-23	08:28	Cloudy	64.7	66.6	62.5	
09-May-23	08:33	Cloudy	65.5	67.8	63.9	
09-May-23	08:38	Cloudy	63.1	65.0	61.6	
09-May-23	08:43	Cloudy	63.4	65.7	61.4	
15-May-23	08:21	Cloudy	64.7	66.3	62.4	64.3
15-May-23	08:26	Cloudy	63.4	65.2	61.5	
15-May-23	08:31	Cloudy	64.8	66.7	62.6	
15-May-23	08:36	Cloudy	65.2	67.3	63.9	
15-May-23	08:41	Cloudy	63.1	65.0	61.8	
15-May-23	08:46	Cloudy	64.0	66.9	62.4	
24-May-23	08:21	Cloudy	64.4	66.2	62.3	64.2
24-May-23	08:26	Cloudy	63.1	65.6	61.4	
24-May-23	08:31	Cloudy	64.2	66.5	62.6	
24-May-23	08:36	Cloudy	63.8	65.7	61.9	
24-May-23	08:41	Cloudy	65.1	67.0	63.4	
24-May-23	08:46	Cloudy	64.5	66.9	62.0	
30-May-23	09:09	Sunny	72.3	75.9	65.7	70.0
30-May-23	09:14	Sunny	70.9	75.2	65.1	
30-May-23	09:19	Sunny	70.6	74.6	65.6	
30-May-23	09:24	Sunny	70.4	74.2	63.8	
30-May-23	09:29	Sunny	66.1	69.0	61.7	
30-May-23	09:34	Sunny	65.7	68.5	62.0	

Graphical Presentation for Noise Monitoring at NMS4



Appendix H. Wind Data

3 May 2023


Wind Speed at Kai Tak Collected by the Hong Kong Observatory
Wind Speed (m/s)
Wind Speed (m/s)
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
03/05/2023 00:00
03/05/2023 01:00
03/05/2023 02:00
03/05/2023 03:00
03/05/2023 04:00
03/05/2023 05:00
03/05/2023 06:00
03/05/2023 07:00
03/05/2023 08:00
03/05/2023 09:00
03/05/2023 10:00
03/05/2023 11:00
03/05/2023 12:00
03/05/2023 13:00
03/05/2023 14:00
03/05/2023 15:00
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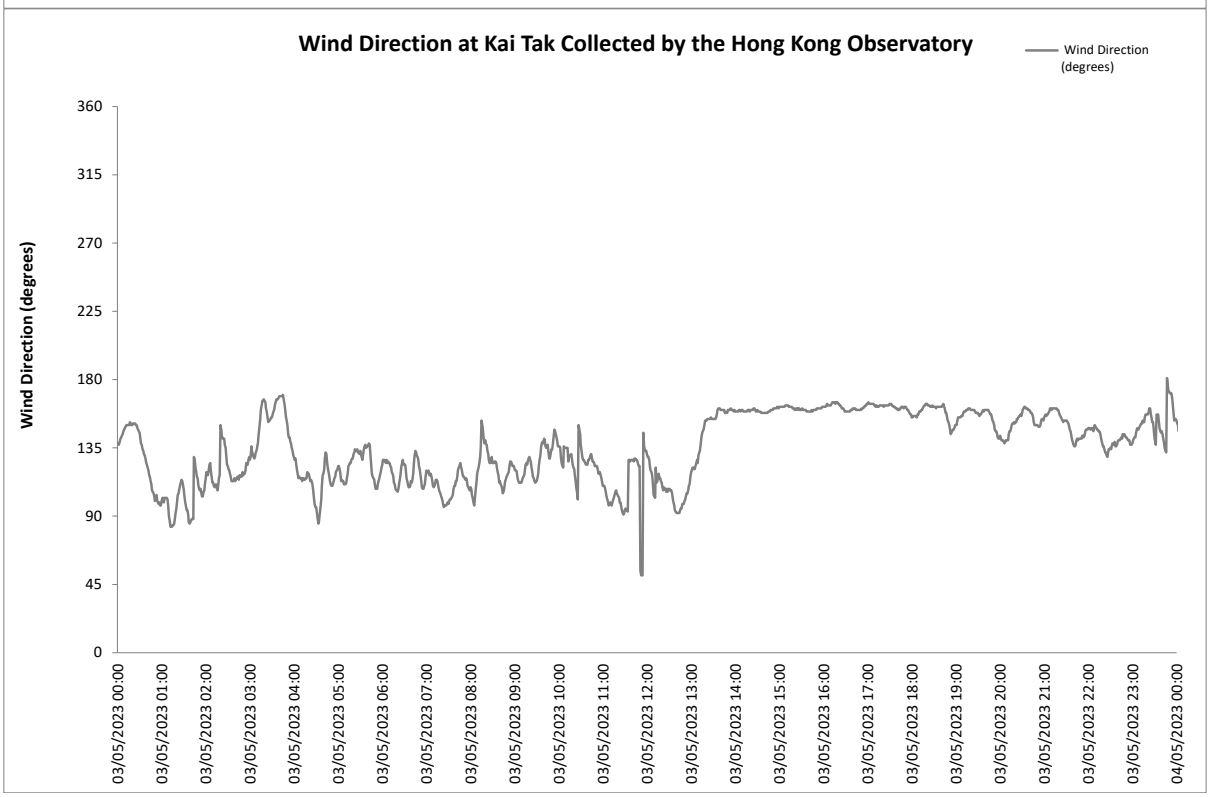
03/05/2023 19:00
03/05/2023 20:00
03/05/2023 21:00
03/05/2023 22:00
03/05/2023 23:00
04/05/2023 00:00


Wind Direction at Kai Tak Collected by the Hong Kong Observatory
Wind Direction (degrees)
Wind Direction (degrees)
360
315
270
225
180
135
90
45
0
03/05/2023 00:00
03/05/2023 01:00
03/05/2023 02:00
03/05/2023 03:00
03/05/2023 04:00
03/05/2023 05:00
03/05/2023 06:00
03/05/2023 07:00
03/05/2023 08:00
03/05/2023 09:00
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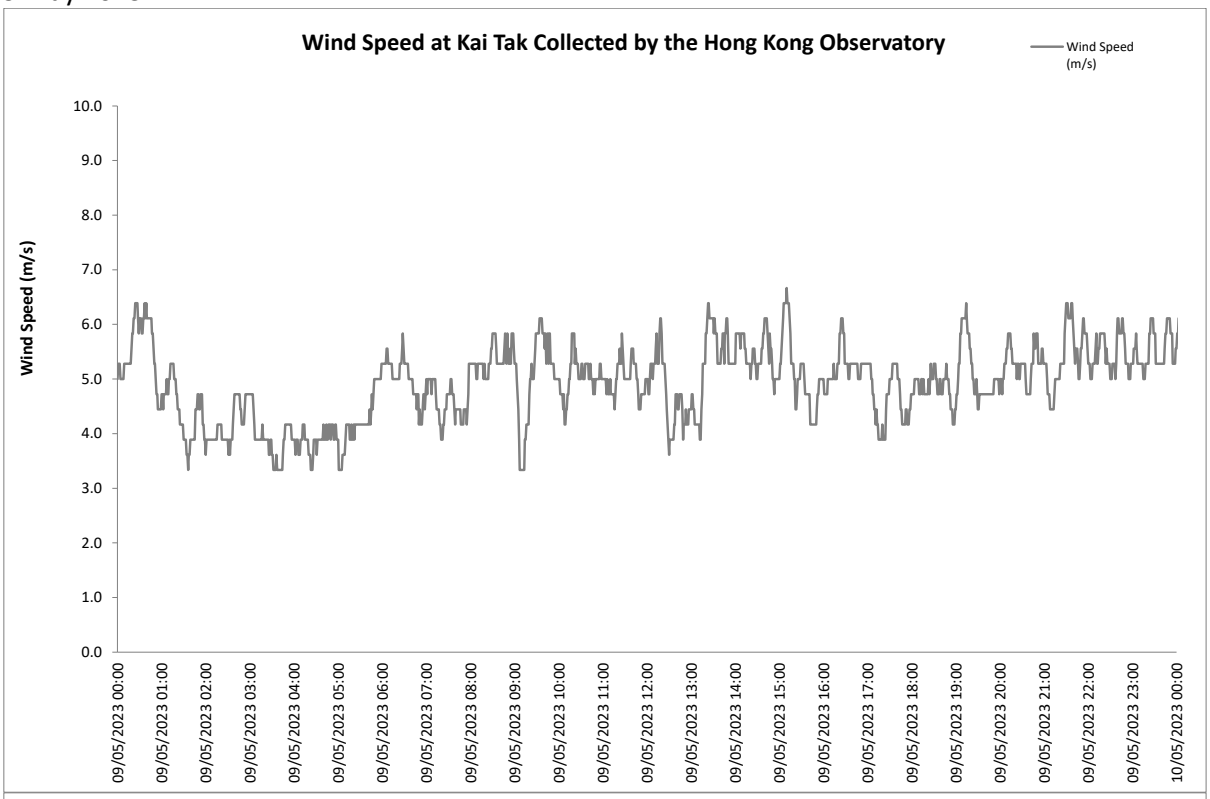
03/05/2023 23:00
04/05/2023 00:00

9 May 2023


Wind Speed at Kai Tak Collected by the Hong Kong Observatory
Wind Speed (m/s)
Wind Speed (m/s)
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
09/05/2023 00:00
09/05/2023 01:00
09/05/2023 02:00
09/05/2023 03:00
09/05/2023 04:00
09/05/2023 05:00
09/05/2023 06:00
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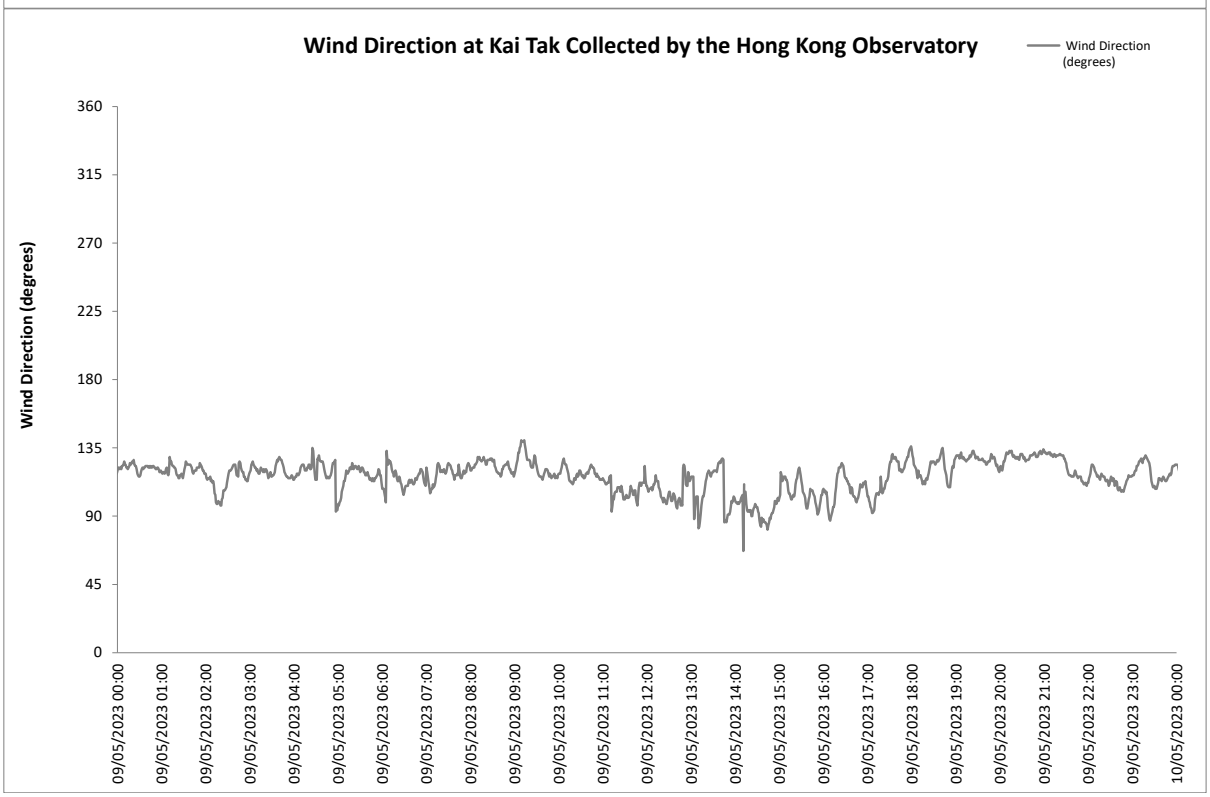
09/05/2023 19:00
09/05/2023 20:00
09/05/2023 21:00
09/05/2023 22:00
09/05/2023 23:00
10/05/2023 00:00


Wind Direction at Kai Tak Collected by the Hong Kong Observatory
Wind Direction (degrees)
Wind Direction (degrees)
360
315
270
225
180
135
90
45
0
09/05/2023 00:00
09/05/2023 01:00
09/05/2023 02:00
09/05/2023 03:00
09/05/2023 04:00
09/05/2023 05:00
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09/05/2023 18:00
09/05/2023 19:00
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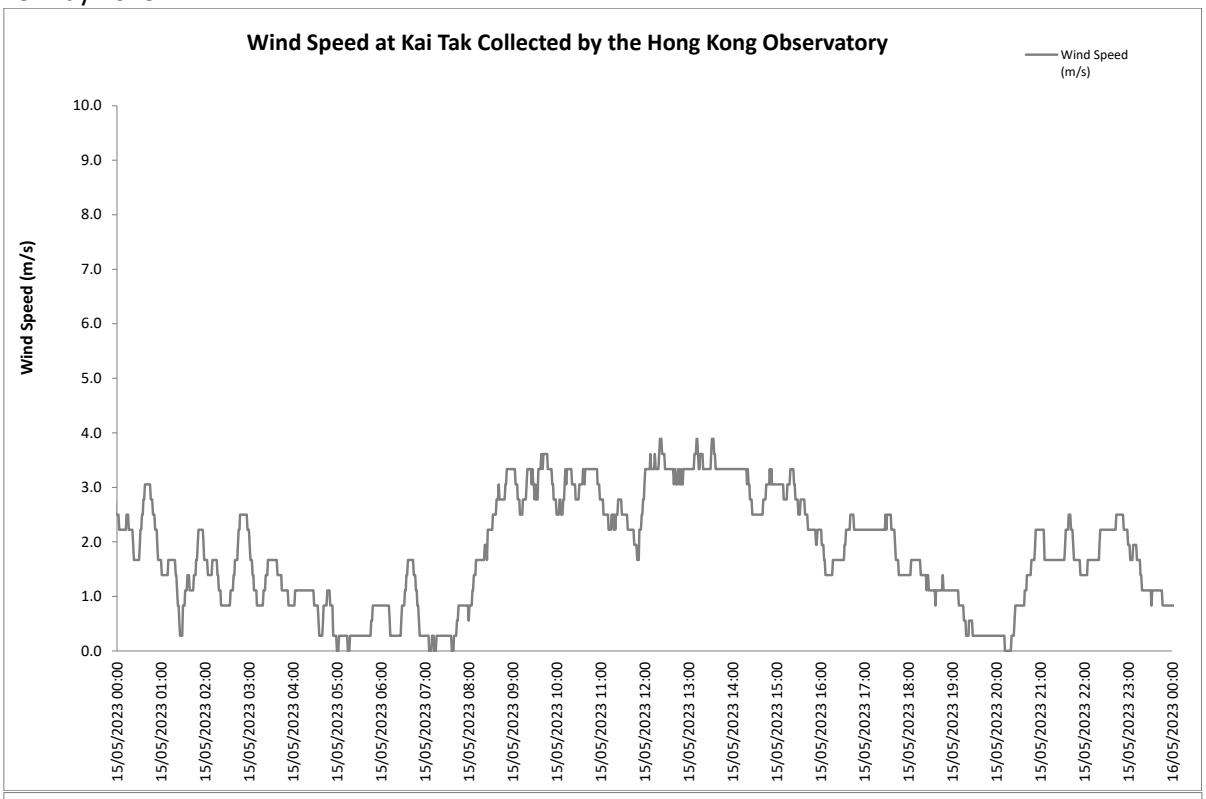
09/05/2023 21:00
09/05/2023 22:00
09/05/2023 23:00
10/05/2023 00:00

15 May 2023


Wind Speed at Kai Tak Collected by the Hong Kong Observatory
Wind Speed (m/s)
Wind Speed (m/s)
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
15/05/2023 00:00
15/05/2023 01:00
15/05/2023 02:00
15/05/2023 03:00
15/05/2023 04:00
15/05/2023 05:00
15/05/2023 06:00
15/05/2023 07:00
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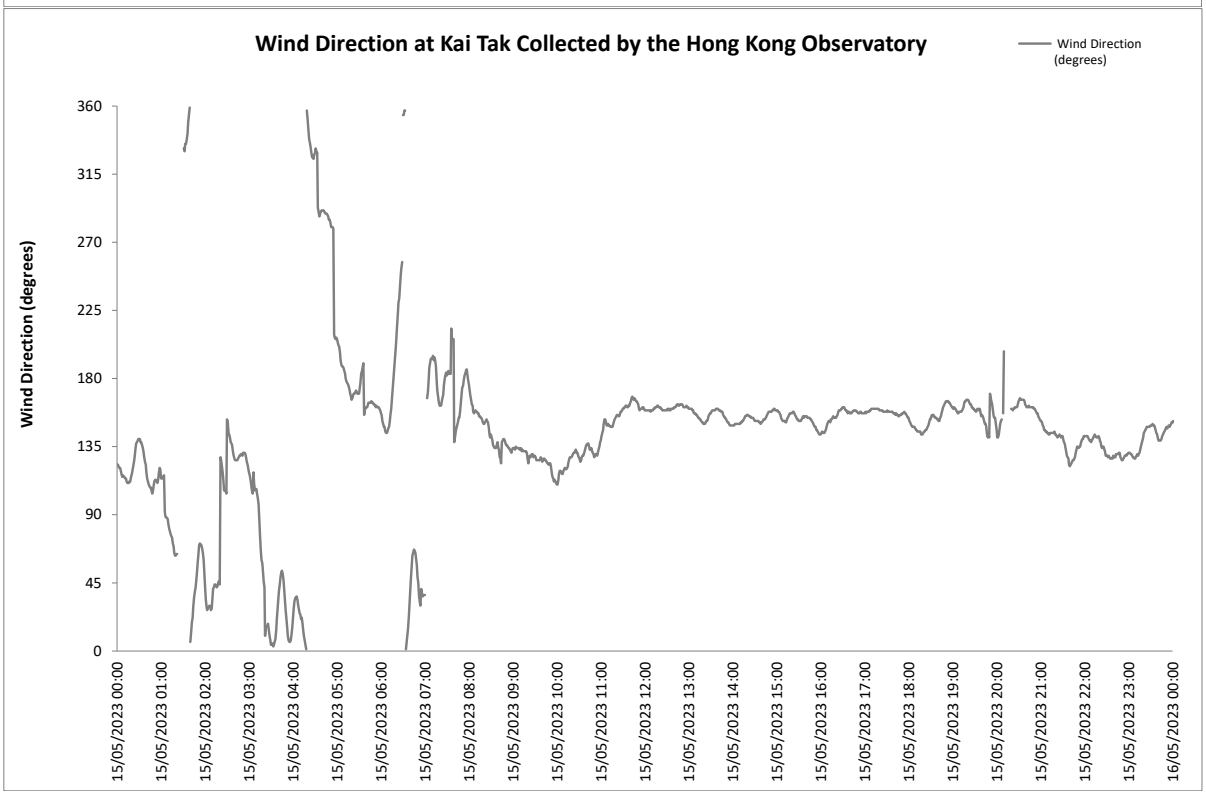
15/05/2023 23:00
16/05/2023 00:00


Wind Direction at Kai Tak Collected by the Hong Kong Observatory
Wind Direction (degrees)
Wind Direction (degrees)
360
315
270
225
180
135
90
45
0
15/05/2023 00:00
15/05/2023 01:00
15/05/2023 02:00
15/05/2023 03:00
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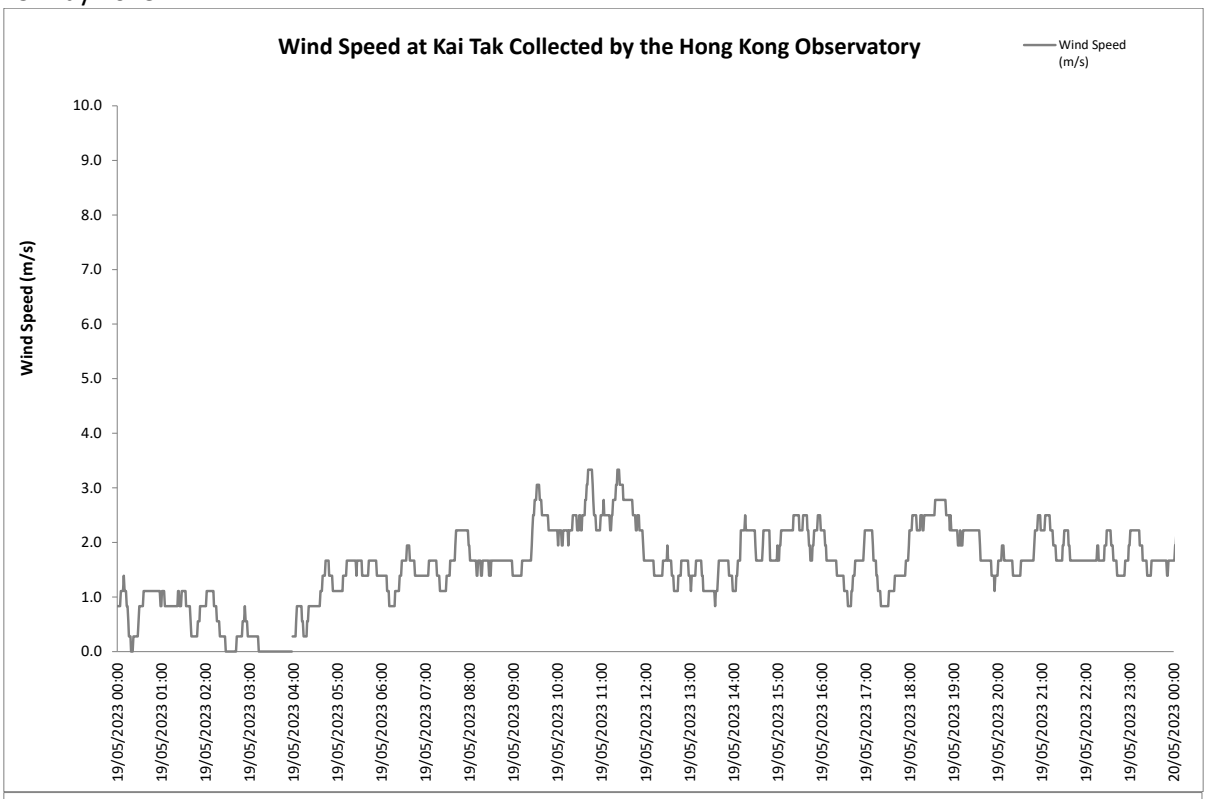
16/05/2023 00:00

19 May 2023


Wind Speed at Kai Tak Collected by the Hong Kong Observatory
Wind Speed (m/s)
Wind Speed (m/s)
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
19/05/2023 00:00
19/05/2023 01:00
19/05/2023 02:00
19/05/2023 03:00
19/05/2023 04:00
19/05/2023 05:00
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19/05/2023 19:00
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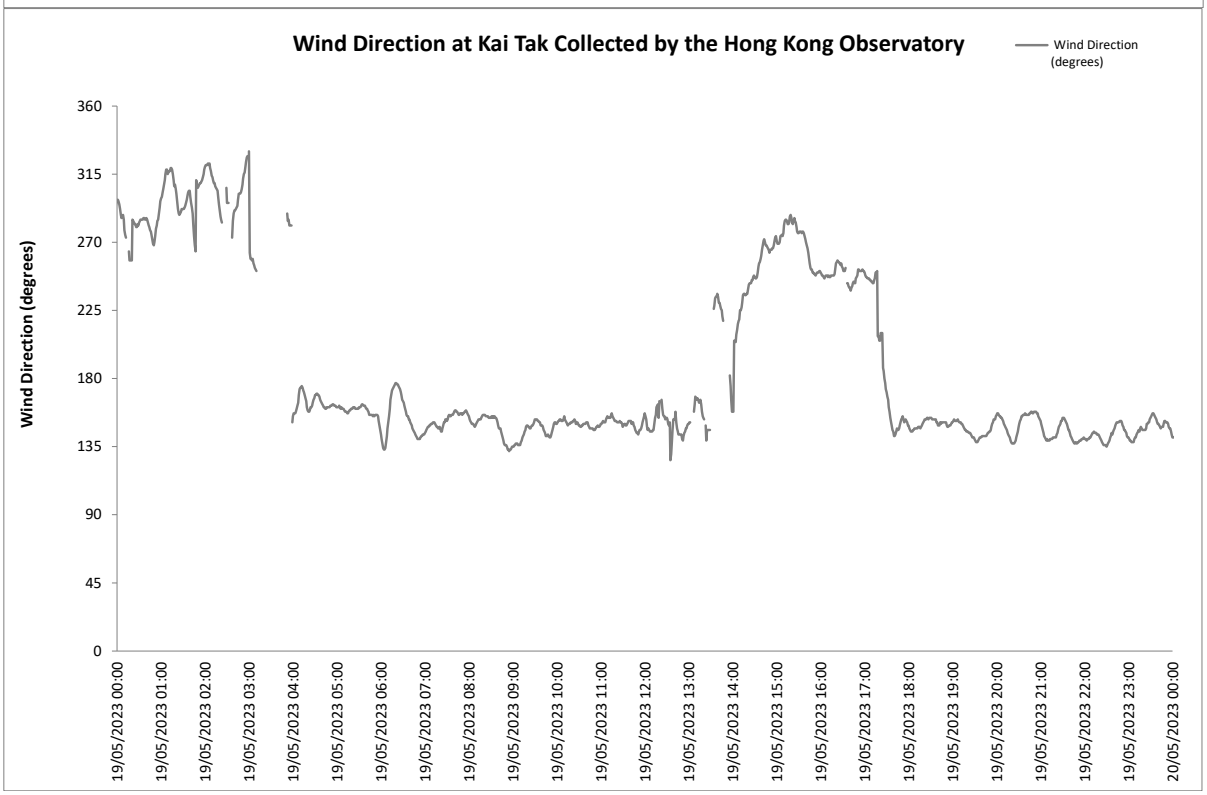
19/05/2023 21:00
19/05/2023 22:00
19/05/2023 23:00
20/05/2023 00:00


Wind Direction at Kai Tak Collected by the Hong Kong Observatory
Wind Direction (degrees)
Wind Direction (degrees)
360
315
270
225
180
135
90
45
0
19/05/2023 00:00
19/05/2023 01:00
19/05/2023 02:00
19/05/2023 03:00
19/05/2023 04:00
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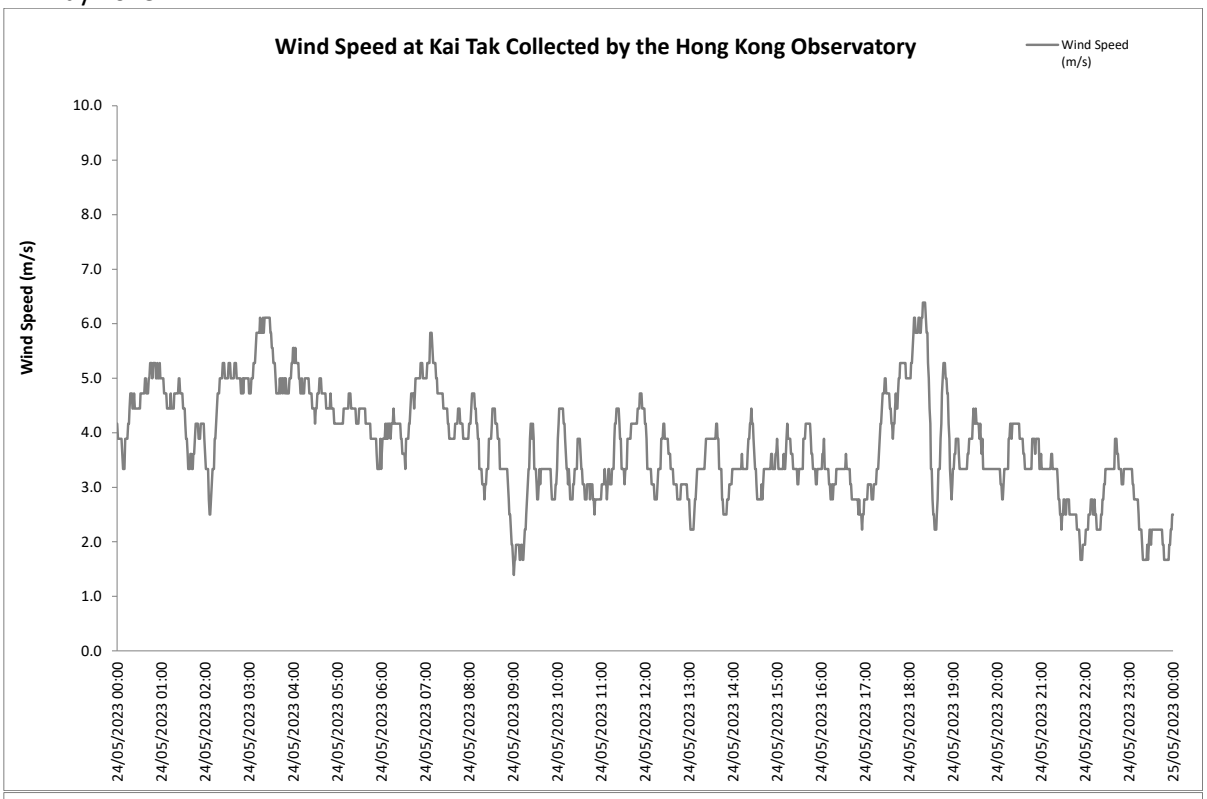
24 May 2023


Wind Speed at Kai Tak Collected by the Hong Kong Observatory
Wind Speed (m/s)
Wind Speed (m/s)
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
24/05/2023 00:00
24/05/2023 01:00
24/05/2023 02:00
24/05/2023 03:00
24/05/2023 04:00
24/05/2023 05:00
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24/05/2023 19:00
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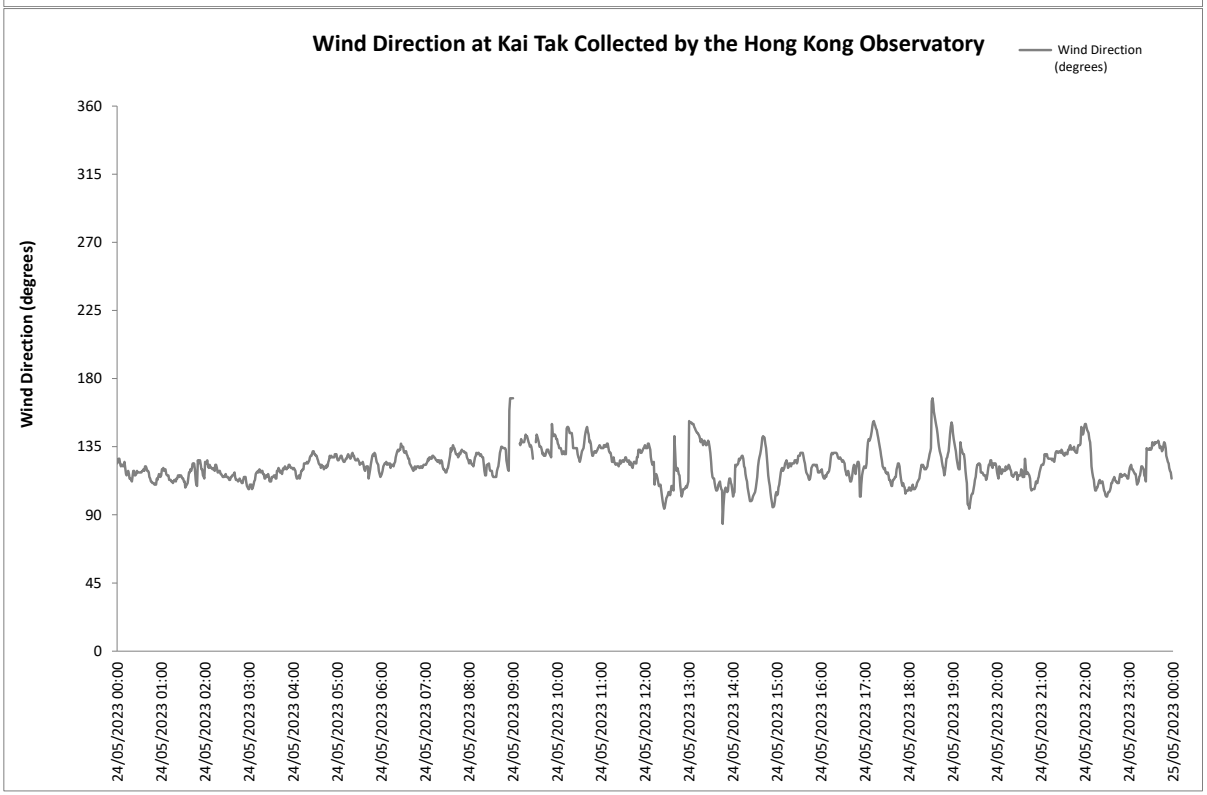
24/05/2023 21:00
24/05/2023 22:00
24/05/2023 23:00
25/05/2023 00:00


Wind Direction at Kai Tak Collected by the Hong Kong Observatory
Wind Direction (degrees)
Wind Direction (degrees)
360
315
270
225
180
135
90
45
0
24/05/2023 00:00
24/05/2023 01:00
24/05/2023 02:00
24/05/2023 03:00
24/05/2023 04:00
24/05/2023 05:00
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24/05/2023 19:00
24/05/2023 20:00
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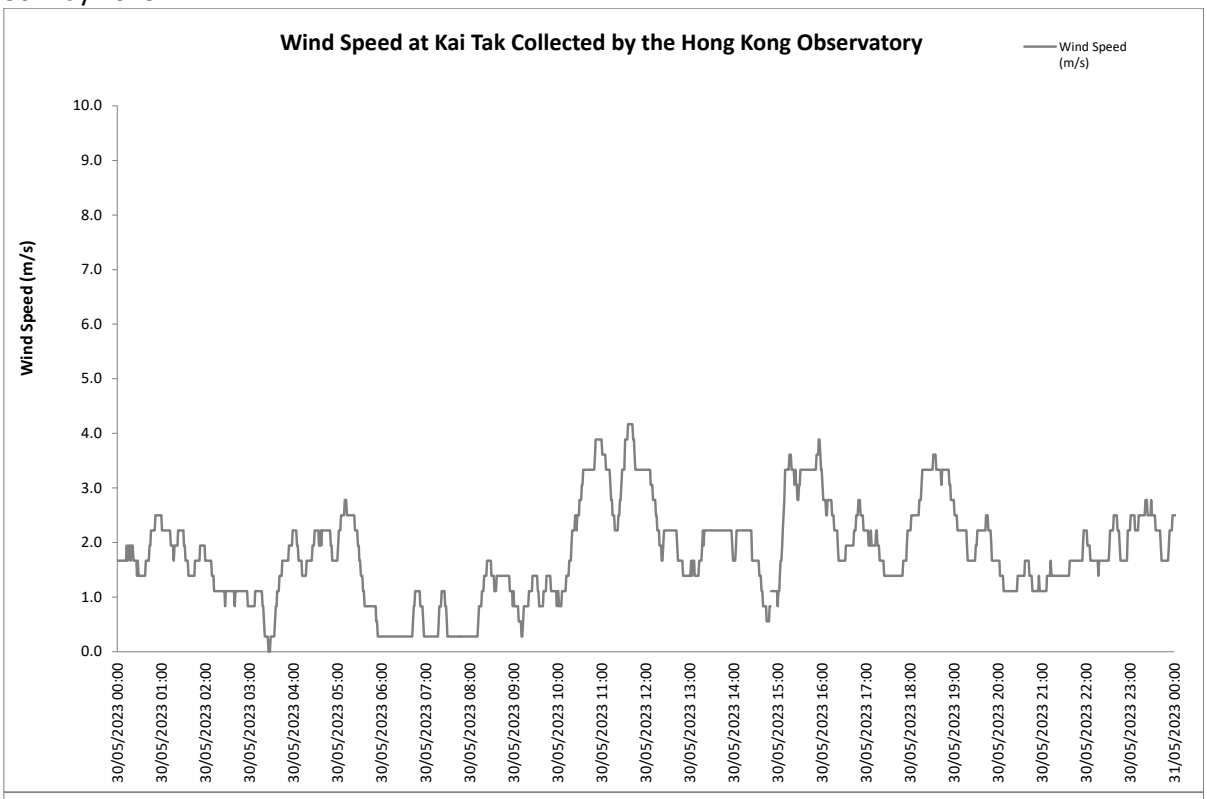
25/05/2023 00:00

30 May 2023


Wind Speed at Kai Tak Collected by the Hong Kong Observatory
Wind Speed (m/s)
Wind Speed (m/s)
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
30/05/2023 00:00
30/05/2023 01:00
30/05/2023 02:00
30/05/2023 03:00
30/05/2023 04:00
30/05/2023 05:00
30/05/2023 06:00
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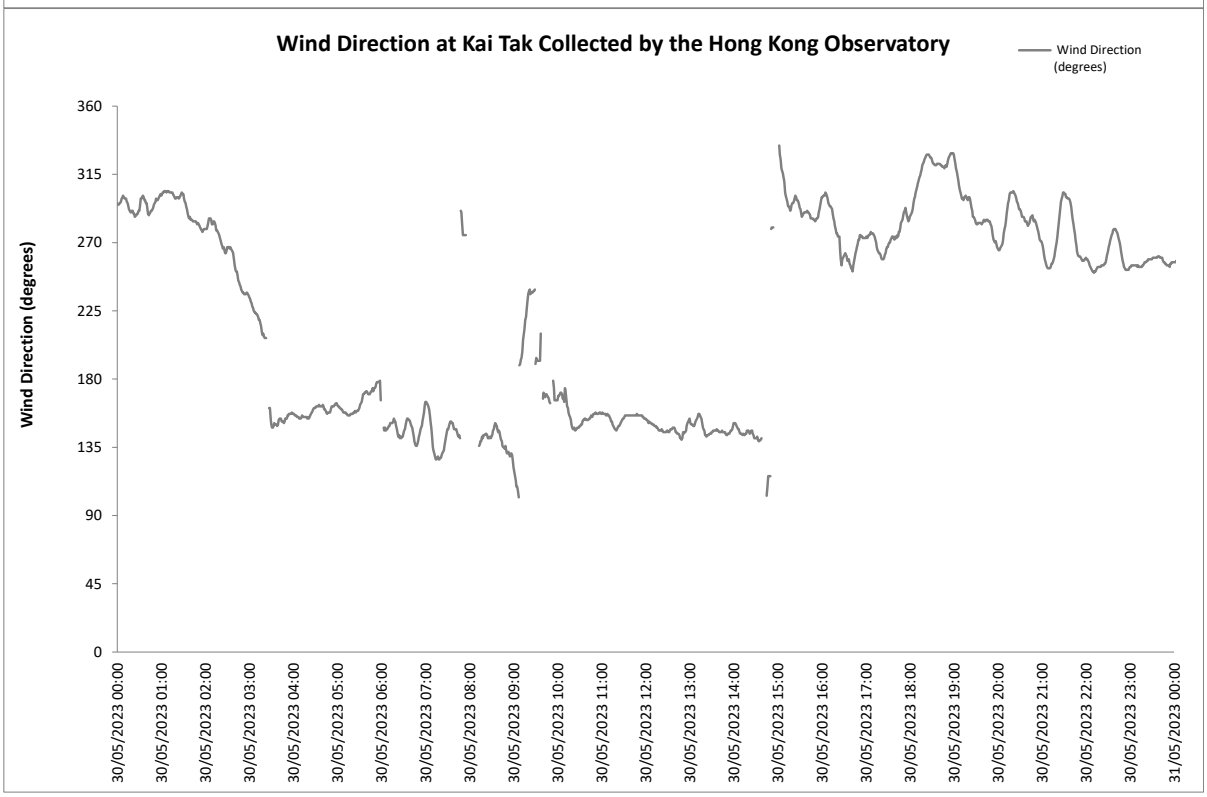
30/05/2023 23:00
31/05/2023 00:00


Wind Direction at Kai Tak Collected by the Hong Kong Observatory
Wind Direction (degrees)
Wind Direction (degrees)
360
315
270
225
180
135
90
45
0
30/05/2023 00:00
30/05/2023 01:00
30/05/2023 02:00
30/05/2023 03:00
30/05/2023 04:00
30/05/2023 05:00
30/05/2023 06:00
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30/05/2023 18:00
30/05/2023 19:00
30/05/2023 20:00
30/05/2023 21:00
30/05/2023 22:00
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31/05/2023 00:00

Appendix I. Waste Flow Table

Project: Kai Tak Sport Park
Contract No.: HAB/ KTSP/ 01
Contract Title: Design, Construction and Operation of the Kai Tak Sports Park at Kai Tak, Kowloon City District, Hong Kong
Year of Record: 2019-2023

協興工程有限公司
HIP HING ENGINEERING CO LTD
新創建集團成員 Member of NWS Holdings

Monthly Waste Flow Table

Month	Total Quantity Generated	Total Quantity Generated (Excluded Excavated Material)	Actual Quantities of Inert C&D Materials Generated Monthly								Actual Quantities of C&D Materials Generated Monthly						Remarks
			Excavated Materials			Non-excavated Materials					Metals (steel bar / metal strip)(1)	Metals (aluminum can)(1)	Paper / cardboard packaging (1)	Plastics (1) & (4)	Chemical waste (wasted lubricant oil/ oil container)	Other, e.g. general refuse	
			Disposed in Public Fill	Disposed in Sorting Facilities	Others (e.g Reused in the Contract / Other Projects)	Broken Concrete or Construction Waste Collected by Recycled Company	Reused in the Contract	Reused in other Projects	Disposed in Public Fill	Disposed in Sorting Facilities							
	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	
	a1	a2	b	b	b	c	d	e	f	g	h	i	j	k	l	m	
2019	43517.88	8326.30	35191.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	166.07	0.00	2.05	7.92	2.00	8148.27	
2020	811029.24	6341.58	49326.08	0.00	755361.58	0.00	0.00	0.00	0.00	0.00	3170.12	0.47	10.10	20.71	2.20	3137.98	
Jan-21	78129.57	1315.84	4253.06	0.00	72560.67	0.00	0.00	0.00	0.00	0.00	393.38	0.05	2.68	1.96	0.00	917.77	
Feb-21	70013.03	912.17	10767.60	0.00	58333.26	0.00	0.00	0.00	0.00	0.00	386.46	0.07	1.24	0.64	0.00	523.76	
Mar-21	51743.64	1314.81	18740.08	0.00	31688.75	0.00	0.00	0.00	0.00	0.00	320.13	0.12	2.08	2.45	0.00	990.03	
Apr-21	16431.34	1411.19	0.00	0.00	15020.15	0.00	0.00	0.00	0.00	0.00	467.54	0.02	1.84	1.70	0.00	940.09	
May-21	39675.06	1610.42	0.00	0.00	38064.64	0.00	0.00	0.00	0.00	0.00	442.35	0.00	1.31	2.81	0.00	1163.95	
Jun-21	56589.31	1812.39	0.00	0.00	54776.92	0.00	0.00	0.00	0.00	0.00	353.07	0.02	1.10	1.37	0.00	1456.83	
Jul-21	18264.19	2544.22	0.00	0.00	15719.97	0.00	0.00	0.00	0.00	0.00	383.64	0.00	1.55	3.36	0.00	2155.67	
Aug-21	7959.53	2028.39	4150.75	0.00	1780.39	0.00	0.00	0.00	0.00	0.00	326.91	0.00	1.28	1.40	0.00	1698.80	
Sep-21	32389.58	2259.89	30129.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	269.75	0.00	1.99	2.68	0.00	1985.47	
Oct-21	34559.10	2034.74	17144.35	0.00	15380.01	0.00	0.00	0.00	0.00	0.00	289.21	0.00	1.04	2.83	0.00	1741.66	
Nov-21	34821.07	2353.58	6551.45	0.00	25916.04	0.00	0.00	0.00	0.00	0.00	164.09	0.00	1.27	3.80	0.60	2183.82	
Dec-21	10648.02	2282.17	8365.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	125.27	0.00	1.54	0.69	0.00	2154.67	
Jan-22	6238.85	2367.85	3871.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	130.89	0.00	1.43	1.76	0.00	2233.77	
Feb-22	6654.84	1294.33	5360.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	158.11	0.00	0.51	0.00	0.00	1135.71	
Mar-22	27279.95	1820.78	25459.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	162.33	0.00	0.81	0.85	0.00	1656.79	
Apr-22	15402.21	1792.21	13610.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	36.78	0.00	0.62	3.11	0.00	1751.70	
May-22	8425.54	2151.70	6273.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	83.12	0.00	0.61	1.47	0.00	2066.50	
Jun-22	8171.01	2700.44	5470.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	192.21	0.00	1.66	1.91	0.00	2504.66	
Jul-22	5804.34	2575.55	3228.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	238.36	0.00	1.56	4.87	0.00	2330.75	
Aug-22	11860.09	2557.97	9302.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	138.66	0.00	0.92	4.03	0.00	2414.36	
Sep-22	14721.29	2391.62	12329.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	155.67	0.00	0.52	5.72	0.00	2229.71	
Oct-22	12307.08	2428.20	9878.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.57	0.00	0.50	0.73	0.00	2411.40	
Nov-22	16034.69	2332.38	13702.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	83.73	0.00	1.07	1.24	0.00	2246.34	
Dec-22	21702.52	1944.12	19758.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.41	0.00	0.81	1.96	0.00	1926.94	
Jan-23	14065.32	1261.42	12803.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66	1.54	0.00	1259.22	
Feb-23	17813.51	1729.85	16083.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43	1.83	0.00	1726.59	
Mar-23	14767.87	2148.99	12618.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96	3.68	0.00	2144.35	
Apr-23	13579.71	1411.83	12167.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.80	3.06	0.00	1407.97	
May-23	9704.79	1744.90	7959.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.05	0.00	0.32	4.02	0.00	1733.51	
Total	1530304.17	71201.83	374499.96	0.00	1084602.38	0.00	0.00	0.00	0.00	0.00	8674.89	0.75	46.25	96.11	4.80	62379.04	

Total C&D waste generated	1530304.17	tonne	a1=b+c+d+e+f+g+h+i+j+k+l+m
Total C&D waste generated (excluding excavated materials)	71201.83	tonne	a2=c+d+e+f+g+h+i+j+k+l+m
Total recycled C&D waste	8817.99	tonne	a3=c+d+e+h+i+j+k
% of recycled C&D waste for BEAM Plus MA10 or MA11	12.38	%	a4=a3/a2 x 100%

Notes:
(1) Metal, paper & plastic were collected by recycler.
(2) The performance target of waste recycling are specified in the Contract.
(3) The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
(4) Plastics refer to plastic bottles/ containers, plastic/ foam from packaging material.
(5) Broken concrete for recycling into aggregates.
(6) Excavated materials/waste will NOT be considered as part of construction waste. It should be excluded in the calculation.
(7) Disposal of inert waste to public fill or sorting facilities will NOT be considered as recycled waste.
(8)Disposal record for March 2023 and April 2023 have been updated according to the latest information from contractor in May 2023.
(9)Recycling record for metals, papers and plastics have been updated according to the latest information from contractor in May 2023.

Project: Proposed Composite Development at NKIL 6607,Shing Kai Road, Kai Tak, Kowloon

Company: Hip Hing Construction Co., Ltd.

Monthly Summary Waste Flow Table

Month	Total Quantities Generated	Total Quantities Generated (excluded excavated material)	Accumulated Quantities of Inert C&D Materials Generated Monthly					Accumulated Quantities of Non-inert C&D Wastes Generated Monthly						
			(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
			Broken Concrete Recycled	Broken Concrete Diverted to Public Fill	Excavated Materials Reused in this Project	Excavated Materials Reused in other Projects	Excavated Materials Disposed as Public Fill	Mixed Wastes Diverted to Sorting Facility	Metals Recycled	Paper/ Cardboard Packaging Recycled	Timber/Wood Pallet Recycled	Plastics Recycled	Chemical Waste Collected	Others, e.g. General Refuse Disposed at Landfill
	(in'000 kg)	(in'000 kg)	(in'000 kg)	(in'000 kg)	(in'000 kg)	(in'000 kg)	(in'000 kg)	(in'000 kg)	(in'000 kg)	(in'000 kg)	(in'000 kg)	(in'000 kg)	(in'000 kg)	(in'000 kg)
Aug-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Sep-21	1550.68	0.00	0	0	0	1550.68	0.00	0.00	0.00	0.00	0	0	0	0.00
Oct-21	3691.90	28.13	0	0	0	3663.77	0.00	0.00	13.17	0.00	0	0	0	14.96
Nov-21	5447.65	68.57	0	0	0	5309.20	69.88	6.05	32.40	0.00	0	0	0	30.12
Dec-21	400.90	180.45	0	0	0	63.20	157.25	0.00	138.58	0.00	0	0	0	41.87
Jan-22	1487.95	321.73	0	0	0	493.40	672.82	27.52	278.94	0.00	0	0	0	15.27
Feb-22	193.97	160.16	0	0	0	0.00	33.81	4.65	130.39	0.05	0	0	0	25.07
Mar-22	1793.62	450.14	0	0	0	0.00	1343.48	89.56	342.35	0.00	0	0	0	18.23
Apr-22	1434.06	565.89	0	0	0	0.00	868.17	87.83	461.38	0.00	0	0	0	16.68
May-22	1314.36	178.02	0	0	0	0.00	1136.34	102.49	75.53	0.00	0	0	0	0.00
Jun-22	464.11	77.27	0	0	0	0.00	386.84	55.75	21.43	0.09	0	0	0	0.00
Jul-22	813.76	98.52	0	0	0	0.00	715.24	58.30	32.29	0.00	0	0	0	7.93
Aug-22	453.58	65.85	0	0	0	0.00	387.73	54.95	10.90	0.00	0	0	0	0.00
Sep-22	787.15	91.96	0	0	0	0.00	695.19	91.80	0.00	0.16	0	0	0	0.00
Oct-22	1428.67	157.88	0	0	0	0.00	1270.79	154.05	0.00	0.00	0	0	0	3.83
Nov-22	2145.69	184.84	0	0	0	0.00	1960.85	147.07	10.83	0.63	0	0	0	26.31
Dec-22	864.13	212.59	0	0	0	0.00	651.54	198.44	0.00	0.00	0	0	0	14.15
Jan-23	885.60	135.88	0	0	0	0.00	749.72	133.59	0.00	0.00	0	0	0	2.29
Feb-23	1269.03	207.94	0	0	0	0.00	1061.09	181.53	6.79	0.52	0	0	0	19.10
Mar-23	619.95	182.20	0	0	0	0.00	437.75	149.17	0.00	0.75	0	0	0	32.28
Apr-23	3745.25	57.16	0	0	0	0.00	3688.09	30.39	0.00	1.33	0	0	0	25.44
May-23	2343.08	125.85	0	0	0	0.00	2217.23	5.92	114.01	0.00	0	0	0	5.92
Total	**33135.10**	**3551.04**	**0**	**0**	**0**	**11080.25**	**18503.81**	**1579.06**	**1669.00**	**0.93**	**0.00**	**0.00**	**0.00**	**299.45**

Total C&D Waste generated	33135.10	Tons
Total C&D waste generated (Excluded excavated materials)	3551.04	Tons
Total C&D waste recycled	1669.93	Tons

$$\text{Waste Recycling Rate} = \frac{(a) + (g) + (h) + (i) + (j)}{(a) + (b) + (f) + (g) + (h) + (i) + (j) + (l)} \times 100\% = 47.03\%$$

Note:

For BEAM Plus certification scheme, excavated materials are excluded from the calculation of the waste reduction rate Record with Underlined indicated updated content

Appendix J. Environmental Licences and Permits

Table J.1: Summary of Environmental Licences and Permits Status (KTSP)

Item No.	Type of Permit / Licence	Reference No.	Application Date	Valid from	Valid until	Remark
1	Environmental Permit under EIAO	EP-544/2017	21 Aug 2017	8 Sep 2017	N/A	Issued
2	Construction Dust Notification under APCO	441733	25 Jan 2019	29 Jan 2019	N/A	N/A
3	Construction Waste Disposal Account (Main)	7033182	12 Feb 2019	12 Feb 2019	N/A	N/A
4	Construction Waste Disposal Account (Vessel)	7033555	11 Jul 2022	10 Aug 2022	10 Nov 2022	Issued
5	Registration as a Chemical Waste Producer	WPN5213-286-H3906-02	29 Jan 2019	12 Feb 2019	N/A	N/A
6	Discharge Licence under WPCO	WT00034082-2019	12 Jun 2019	26 Jun 2019	30 Jun 2024	Issued
7	Construction Noise Permit (Construction Works, Southern Site)	GW-RE1157-22	11 Oct 2022	25 Nov 2022	20 May 2023	Superseded by GW-RE0425-23 on 24 May 2023
8	Construction Noise Permit (Construction Works, Barging Point)	GW-RE1227-22	3 Nov 2022	21 Nov 2022	20 May 2023	Superseded by GW-RE0522-23 on 21 May 2023
9	Construction Noise Permit (Special Truss Delivery Port)	GW-RE0236-23	27 Feb 2023	6 Apr 2023	5 Jul 2023	Issued
10	Construction Noise Permit (Special Shing Kai Road)	GW-RE0348-23	21 Mar 2023	2 May 2023	29 Jul 2023	Issued
11	Construction Noise Permit (Construction Works, Northern Site)	GW-RE0400-23	23 Mar 2023	30 Apr 2023	29 Jul 2023	Issued

Item No.	Type of Permit / Licence	Reference No.	Application Date	Valid from	Valid until	Remark
12	Construction Noise Permit (Construction Works, Southern Site)	GW-RE0425-23	11 Apr 2023	24 May 2023	23 Aug 2023	Issued
13	Construction Noise Permit (Construction Works, Barging Point)	GW-RE0522-23	27 Apr 2023	21 May 2023	20 Nov 2023	Issued

Table J.2: Summary of Environmental Licences and Permits Status (H/O Development)

Item No.	Type of Permit / Licence	Reference No.	Application Date	Valid from	Valid until	Remark
1	Environmental Permit under EIAO	EP-544/2017	21 Aug 2017	8 Sep 2017	N/A	Issued
2	Construction Dust Notification under APCO	458255	17 Jul 2020	17 Jul 2020	N/A	N/A
		470045	29 Jul 2021	29 Jul 2021	N/A	N/A
3	Construction Waste Disposal Account (Main)	7041267	29 Jul 2021	11 Aug 2021	N/A	Issued
4	Registration as a Chemical Waste Producer	WPN5211-286-H1103-23	29 Jul 2021	24 Aug 2021	N/A	Issued
5	Discharge Licence under WPCO	WT00039490-2021	6 Aug 2021	9 Nov 2021	30 Nov 2026	Issued
6	Construction Noise Permit	GW-RE1321-22	22 Nov 2022	2 Jan 2023	1 Jun 2023	Issued

Appendix K. Environmental Mitigation Measures Implementation Status

Air Quality – Recommended Mitigation Measures

Air Quality Mitigation Measures during construction	Implementation Status	
	KTSP	H/O
• Good housekeeping to minimize dust generation, e.g. by properly handling and storing dusty materials	✓	✓
• Store cement in shelter with 3 sides and the top covered by impervious materials if the stack exceeds 20 bags	✓	✓
• Cement delivered in bulk should be stored in a closed silo fitted with an audible high level alarm which is interlocked with the material filling line and no overfilling is allowed	N/A	N/A
• Loading, unloading, transfer, handling or storage of bulk cement should be carried out in a totally enclosed system or facility, and any vent or exhaust should be fitted with an effective fabric filter or equivalent air pollution control system	✓	✓
• Dusty materials (e.g. debris) should be wetted by misting / water-spraying before any loading, unloading, transfer or transport operation	✓	✓
• Any skip hoist for material transport should be fully enclosed by impervious sheeting	✓	✓
• Surfaces where any pneumatic or power-driven drilling, cutting, polishing or other mechanical breaking operation takes place should be sprayed with water or a dust suppression chemical continuously	✓	✓
• Any area that involves demolition activities should be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities to maintain the entire surface wet	✓	✓
• Excavation area should be minimized as far as possible	✓	✓
• Stockpile of dusty materials should not be extended beyond the pedestrian barriers, fencing or traffic cones	✓	✓
• Excavated or stockpile of dusty material should be covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet, and then removed, backfilled or reinstated where practicable within 24 hours of the excavation or unloading	✓	P
• Dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads	✓	✓
• Properly fitted side and tail boards are necessary for any vehicle with open load area	✓	✓
• While transporting materials that potentially create dust (e.g. debris), materials should not be loaded higher than side and tail boards, and should be fully covered by tarpaulin or similar materials which extent at least 300 mm over the edges of the side and tail boards to prevent leakage.	✓	✓
• Limit the maximum vehicle speed within the site to 10km/hr	✓	✓
• Haulage and delivery vehicles should be confined to designated roads	✓	✓
• Every main haul road should either be 1.) paved with concrete and kept clear of dusty materials, or 2.) sprayed or watered to maintain the entire road surface wet	✓	✓
• All on-site unpaved roads should be compacted and kept free of lose materials as possible	✓	✓
• Provide vehicle washing (e.g. wheel washing bay & high pressure water jet where practicable) at every vehicle exit point for cleaning vehicle body and wheels	✓	✓
• The vehicle washing area and the road between washing area and site exit should be paved with concrete, bituminous or other hardcores	✓	✓
• The portion of any road leading only to construction site that is within 30m of a vehicle entrance or exit should be kept clear of dusty materials.	P	P
• Dusty materials on every vehicle's body and wheels should be removed in washing area before leaving the site	✓	✓

Air Quality Mitigation Measures during construction	Implementation Status	
	KTSP	H/O
• Regular maintenance of all plant equipment	✓	✓
• Throttle down or switch off unused machines or machine in intermittent use	✓	✓
• If the site is adjacent to area where accessible to the public (e.g. road and service lane etc.), hoarding of not less than 2.4 m high from ground level should be erected along the adjoining the entire length of that portion of the site boundary, except for a site entrance or exit. The hoarding should be well maintained throughout the construction period.	✓	✓
• Where a scaffolding is erected around the perimeter of a building under construction, effective dust screens, sheeting or netting should be provided to enclose the scaffolding from the ground floor level of the building, or a canopy should be provided from the first floor level up to the highest level of the scaffolding	✓	✓
• Exposed earth should be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shortcrete or other suitable surface stabiliser within six months after the last construction activity on the construction site or part of the construction site where the exposed earth lies	✓	✓
• Carry out air quality monitoring throughout the construction period	✓	✓
• Carry out weekly site inspection to audit the implementation of mitigation measures	✓	✓
• Regular watering once per hour on exposed worksites and haul road with an equivalent intensity of not less than 1.3L/m3 to achieve 91.7% dust removal efficiency.	✓	✓
• Provision of electrical vehicle (EV) charging facilities in at least one-third of the car parking spaces for private cars. Provision of EV charging enabling facilities in all car parking spaces provided for private cars.	✓	N/A
Non-Road Mobile Machinery (NRMMs)		
• All NRMMs operated on-site are approved or exempted (as the case may be) and affixed with the requisite approval/exemption labels under the Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation or are in the process of application for such approval/exemption during the relevant grace period.	P	✓

Noise – Recommended Mitigation Measures

Noise Mitigation Measures during construction	Implementation Status	
	KTSP	H/O
• Adopt good site practice, such as throttle down or switch off equipment unused or intermittently used between works	✓	✓
• Regular maintenance of equipment to prevent noise emission due to impair	✓	✓
• Position mobile noisy equipment in locations away from NSRs and point the noise sources to directions away from NSRs	✓	✓
• Use silencer or muffler for equipment	✓	✓
• Make good use structures for noise screening	✓	✓
• Use Quality Powered Mechanical Equipment (QPME) and quiet equipment which produces lower noise level.	✓	✓
• Erect movable noise barrier of 3m height to shed large plant equipment (e.g. breaker, backhoe & mobile crane) or hand-held items (e.g. poker, wood saw, power rammer & compactor) near low-rise NSR. Where necessary, special design (e.g. with noise absorbing material or bend top) should be adopted. The barrier's length should be at least five times greater than its height, and the minimum surface density is 10 kg/m2. Alternatively, acoustic shed, enclosure or silencer (for generator, air compressor and concrete pump) or acoustic mat (for piling) can be adopted.	✓	N/A
• Carry out regular site inspection to audit the implementation of mitigation measures	✓	✓
• Carry out noise monitoring throughout the construction period	✓	✓

Water Quality – Recommended Mitigation Measures

Water Quality Mitigation Measures during construction	Implementation Status	
	KTSP	H/O
• Practices outlined in ProPECC PN 1/94 Construction Site Drainage should be adopted.	✓	✓
• Install perimeter channels in the works areas to intercept runoff from boundary prior to the commencement of any earthwork	✓	✓
• To prevent storm runoff from washing across exposed soil surfaces, intercepting channels should be provided.	✓	✓
• Drainage channels are required to convey site runoff to sand/silt traps and oil interceptors. Provision of regular cleaning and maintenance to ensure the normal operation of these facilities throughout the construction period.	✓	✓
• Any practical options for the diversion and realignment of drainage should comply with both engineering and environmental requirements	✓	✓
• Minimum distances of 100 m should be maintained between the discharge points of construction site runoff and the existing WSD saltwater intake and EMSD cooling water intake.	✓	✓
• The following good site measures should be adopted for the use of the existing barging facilities being operated by the MTR SCL Project: - 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. - All hopper barges should be fitted with tight fitting seals to their bottom openings to prevent leakage of material. - Construction activities should not cause foam, oil, grease, scum, litter or other objectionable matter to be present on the water within the site. - 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	N/A
• The runoff and wastewater generated from the works areas should be treated so that it satisfies all the standards listed in the TM-DSS.	P	✓
• Reuse and recycling of the treated effluent from construction site runoff.	✓	✓
• Weekly site audit should be carried out to check the implementation status of the recommended water quality impact mitigation measures throughout construction period.	✓	✓
• The construction programme should be properly planned to minimise soil excavation, if any, in rainy seasons.	✓	✓
• Any exposed soil surfaces should be properly protected to minimise dust emission.	✓	✓
• In areas where a large amount of exposed soils exist, earth bunds or sand bags should be provided.	✓	✓
• Exposed stockpiles should be covered with tarpaulin or impervious sheets at all times.	✓	✓
• The stockpiles of materials should be placed at locations away from any stream courses so as to avoid releasing materials into the water bodies.	✓	✓
• Final surfaces of earthworks should be compacted and protected by permanent work.	✓	✓
• Haul roads should be paved with concrete and the temporary access roads protected using crushed stone or gravel, wherever practicable.	✓	✓
• Wheel washing facilities should be provided at all site exits to ensure that earth, mud and debris would not be carried out of the works areas by vehicles.	P	✓
• Good site practices should be adopted to keep the site dry and tidy, such as clean the rubbish and litter on the construction sites.	P	✓
• Adequate temporary site drainage and pumping should be provided, if necessary.	✓	✓
• Provide sufficient temporary toilets in the works areas. The toilet facilities should be more than 30 m from any watercourse. A licensed waste collector should be deployed to clean the temporary toilets on a regular basis.	✓	✓
• Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment during the construction phase of the Project.	✓	✓

Water Quality Mitigation Measures during construction	Implementation Status	
	KTSP	H/O
• Contractor must register as a chemical waste producer if chemical wastes would be produced from the construction activities. The Waste Disposal Ordinance (Cap 354) and its subsidiary regulations in particular the Waste Disposal (Chemical Waste) (General) Regulation should be observed and complied with for control of chemical wastes.	✓	✓
• Any service shop and maintenance facilities should be located on hard standings within a bunded area, and sumps and oil interceptors should be provided. Maintenance of vehicles and equipment involving activities with potential for leakage and spillage should only be undertaken within the areas appropriately equipped to control these discharges.	✓	✓
• Clean the construction sites on a regular basis.	✓	✓
• Oil interceptor in car parking area shall be designed and constructed according to Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers, APP-46 (PNAP 124)	✓	N/A
• Provide two sequential storage tanks to contain surface water with residual fertilizers and pesticides and third holding tank for incidental rainstorm	N/A	N/A
Sewerage and Sewage Treatment Implications		
• Implementation of Sewer No. 1 and Sewer No.2 as proposed in Sections 7.2.2 - 7.2.3 of the EIA Report	✓	✓

Waste Management – Recommended Mitigation Measures

Waste Management Mitigation Measures during construction	Implementation Status	
	KTSP	H/O
• Inert C&D materials (or public fills) will be used to form the ramps and other filling area as far as civil engineering design permits.	✓	✓
• The contractor should formulate waste management measures on waste minimization, storage, handling and disposal in a Waste Management Plan as part of Environmental Management Plan.	✓	✓
• Adopt good site practice as follows: - Provide training to workers on site cleanliness, waste management (waste reduction, reuse and recycle) and chemical handling procedures - Provide sufficient waste collection points and regular removal - Cover waste materials with tarpaulin or in enclosure during transportation - Maintain drainage systems, sumps and oil interceptors - Sort out chemical waste for proper handling and treatment onsite or offsite	P	P
• Adopt waste reduction measures as follows: - Allocate area/containers for sorting, recovering and storing waste for reuse, recycle or disposal (e.g. demolition debris and excavated materials, general refuse like aluminium cans.) Remove waste from the Site for sorting once generated if no suitable space can be identified. - Allocate area for proper storage of construction materials to prevent contamination - Minimize wastage through careful planning and avoiding over-purchase of construction materials	✓	✓
• Store waste materials properly as follows: - Avoid contamination by proper handling and storing waste - Prevent erosion by covering waste - Apply water spray on excavated materials - Maintain and clean storage area regularly - Sort and stockpile different materials at designated location to enhance reuse	P	P
• Apply for relevant waste disposal permits in accordance with the Waste Disposal Ordinance (Cap. 354), Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 345) and the Land (Miscellaneous Provisions) Ordinance (Cap. 28), Dumping at Sea Ordinance (Cap. 466).	✓	✓
• Hire licensed waste disposal contractors for waste collection and removal. Dispose waste at licensed waste disposal facilities.	✓	✓
• Implement trip-ticket system for recording the amount of waste generated, recycled and disposed, including chemical wastes	✓	✓

Waste Management Mitigation Measures during construction	Implementation Status	
	KTSP	H/O
• Reduce water content in wet spoil generated from piling work by mixing with dry materials. Only dispose treated spoil with less than 25% dry density to Public Fill Reception Facilities	✓	✓
• Dispose dry waste or waste with less than 70% water content by weight to landfill	✓	✓
• Follow the Code of Practice on the Packaging, Labelling and Storage of Chemical Waste as follows: - Store chemical wastes with suitable containers. Seal and maintain the container to avoid leakage or spillage during storage, handling and transport - Label chemical waste containers in both English and Chinese with instructions in accordance to Schedule 2 of the Waste Disposal (Chemical Waste) (General) Regulation - The container capacity should be smaller than 450 litres unless agreed by the EPD	✓	✓
• Comply with the requirement of the chemical storage area: - Store only chemical waste and label clearly the chemical characters of the waste - Have at least 3 sides enclosed and protected from rainfall with cover - Provide sufficient ventilation - Have impermeable floor and has bunds to contain 110% of the capacity of the largest container or 20% of the total volume of the stored waste in the area, whichever is larger - Adequately spaced incompatible materials	P	✓
• Transfer used lubricants, waste oils and other chemicals to oil recycling companies, if possible, and empty oil drums for reuse or refill. No direct or indirect discharge is permitted	✓	✓
• Hire licensed chemical waste disposal contractors for waste collection and removal. Dispose chemical waste at the approved Chemical Waste Treatment Centre at Tsing Yi or other licensed facility	✓	✓
• Hire reputable waste collector to separately collect and dispose general refuse from other wastes. Cover the waste to prevent being blown away	✓	✓
• The hauling of C&D materials shall follow established environmental mitigation measures as stated in Practice Note for Registered Contractors No. 17 “Control of Environmental Nuisance from Construction Sites” issued by the Buildings Department	✓	✓
• Provide recycling bins for sorting out recyclables for collection by recycling companies. Non-recyclables should be removed to designated landfills every day by licensed collectors to prevent environmental and health nuisance.	✓	✓
• Organize training and reminders to site staff on waste minimization through avoidance and reduction, reusing and recycling	✓	✓
• Bentonite slurry which will not be reused shall be disposed of from the Site as soon as possible. Residual used dewatered bentonite slurry should be disposed to a public filling area and liquid bentonite slurry if mixed with inert fill material should be disposed to a public filling area.	N/A	N/A
• If chemical wastes were to be produced at the construction site, the Contractor would 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 waste such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. The Contractor shall use a licensed collector to transport the chemical wastes. • The licensed collector shall deliver the waste to the Chemical Waste Treatment Centre at Tsing Yi, or other licensed facility, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation	✓	✓
• Carry out weekly site inspection to check the implementation status of the recommended waste management measures.	✓	✓
• The barging of C&DM for this Project shall use the existing Kai Tak Barging Facility (KTBF), or otherwise approved by the Director.	N/A	N/A

Ecology – Recommended Mitigation Measures

Ecology Mitigation Measures during construction	Implementation Status	
	KTSP	H/O
• Erection of hoarding, fencing or provision of clear demarcation of work zone	✓	✓
• Designate areas for placement of equipment, building materials and wastes away from drainage channels	✓	✓
• Carry out weekly site inspection to check the implementation status and the effectiveness of the proposed mitigation measures	✓	✓

Landscape and Visual – Recommended Mitigation Measures

Landscape and Visual Mitigation Measures during construction	Implementation Status	
	KTSP	H/O
• Construction Lighting Control - All security floodlights for construction sites should be equipped with adjustable shields, frosted diffusers and reflective covers, and be controlled to minimize light pollution and night-time glare to the visual sensitive receivers (VSRs).	✓	✓
• Temporary Landscape Treatments - Including vertical greening, pot planting and application of green roofing to site offices, Hydroseeding of site formation areas and short term greening of site boundaries and land not immediately developed.	✓	N/A
• Decoration of Hoarding - Erection of screen hoardings should be designed appropriately to be compatible with the existing urban context, either brightly and imaginatively or with visually unobtrusive design and colours where more appropriate.	✓	✓
• All security floodlights for construction sites shall be equipped with adjustable shield, frosted diffusers and reflective covers, and be carefully controlled to minimize light pollution and night-time glare to nearby receivers	✓	✓
• Site inspection should be undertaken once every two weeks.	✓	✓
• Compensatory Tree Planting - A new parkland area is created in the project development to be used for the implementation of compensatory tree planting to offset the net loss of key landscape resources. It is recommended that 340 trees be planted in this regard and a compensatory tree planting proposal outlining the locations of tree compensation will be submitted separately in seeking relevant government department's approval in accordance with DEVB TC No.7/2015.	N/A	N/A

Other – Recommended Mitigation Measures

• Relevant environmental permits/licences should be posted at all vehicle entrances/exits.	✓	✓

Legend:
✓ Implemented
× Not implemented
P Partially implemented
N/A Not applicable

Appendix L. Statistics on Environmental Complaints, Notification of Summons and Successful Prosecutions

Table L.1: Statistics on Environmental Complaints, Notifications of Summons and Successful Prosecutions

Reporting Period	Complaints	Notifications of Summons	Successful Prosecutions
This reporting period (May 2023)	1	0	0
From commencement data of construction to end of reporting month	28	0	0

Appendix M. Complaint Investigation Report

Complaint Investigation Report

RECEIPT OF COMPLAINT		**Ref: COM_0028**
Date:	23 May 2023	
Time:	15:32	
From:	public complaint referred by EPD (EPD Ref.: K19/RE/00012659-23)	
Via:	email by contractor representative	
Contact no.:	-	

COMPLAINANT			
Name:	-	Address:	-
Contact no.:	-		

DETAILS OF COMPLAINT

Date: 19 May 2023

Time: -

Parameter:* ~~Dust~~ ~~Noise~~ Water ~~Other (specify)~~:

Description:

- Complaint of discharging polluting wastewater from North Gate No. 4 at Muk Tai Street.
- Please ensure the wastewater generated from your site to be properly treated and the discharge fulfill the conditions stipulated in the valid WPCO licence.
- Please ensure the works fulfill the relevant environmental legislation and conditions stipulated in the valid construction noise permit.
- Please take necessary measures to minimize the environmental nuisance arising from the construction site.

INVESTIGATION RESULT & RESPONSE

ET, IEC and SOR notified on: 23 May 2023

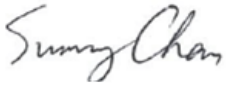
Investigation conducted on: 24 May 2023

Result of investigation:

Complaint investigation was carried out with contractor on 24 May 2023, the results of investigation were summarized as following:

No discharge of polluting wastewater from North Gate No. 4 at Muk Tai Street was observed. (Photos 1a and 1b). The wastewater treatment plant on site was in normal condition. (Photos 2a, 2b and 2c) All wastewater effluent has been treated in accordance with the approved WPCO license (WT00034082-2019). (Photos 5a and 5b) All construction works carried out at northern site have been strictly followed the Construction Noise Permit requirement (GW-RE0400-23). (Photos 6a and 6b)

In conclusion, water pollution control mitigation measures at the Kai Tak Sports Park have been implemented and maintained. All construction works carried out have been fulfilling the relevant environmental legislations, WPCO licence and CNP requirement during the concerned period.

RECOMMENDATIONS / MITIGATION MEASURES / ACTIONS			
Environmental mitigation measures have been maintained as follow: 1. Self-monitoring of wastewater discharge sample had been conducted and reported monthly. (Photo 3) 2. Regular pest control measures had been provided near North Gate No. 4 Area. (Photo 4)			
Prepared by:	Sunny Chan	Title:	Environmental Team Leader
Signature:		Date:	25 May 2023

Attachment:
1. Photo Records

Photo Records:

Photo 1a and 1b: No discharge of polluting wastewater from North Gate No. 4 at Muk Tai Street was observed (24 May 2023).

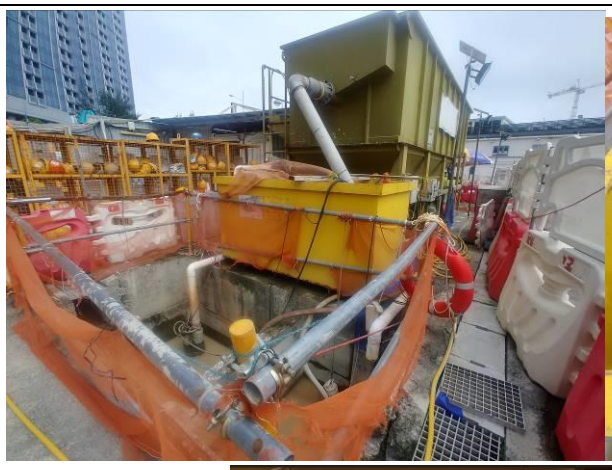


Photo 2a, 2b and 2c: Wastewater treatment plant is set up at North 4 Gate and wastewater has been treated in accordance with the approved WPCO discharge license. (24 May 2023)

Environmental Measure Implemented:

Analytical Results

Sub-Matrix: **WATER**

			Sample ID	WWTP Sample 7 (North 4)
			Sampling date / time	03-Apr-2023
Compound	*CAS Number*	*LOR*	*Unit*	HK2312067-007
EA/ED: Physical and Aggregate Properties				
EA002: pH Value	----	0.1	pH Unit	7.8
EA025: Suspended Solids (SS)	----	2	mg/L	<2
EP: Aggregate Organics				
EP026C: Chemical Oxygen Demand	----	5	mg/L	9

Photo 3: Self-monitoring of wastewater discharge sample had been conducted and reported monthly.

Photo 4: Regular pest control measures had been provided near North Gate No. 4 Area.

Appendix 附錄

Licence No.: WT00034082-2019
牌照編號 : WT00034082-2019

This Licence is Valid to : 30/06/2024
本牌照有效期至 :二零二四年六月三十日

ENVIRONMENTAL PROTECTION DEPARTMENT
環 境 保 護 署

WATER POLLUTION CONTROL ORDINANCE (CAP. 358)
水 污 染 管 制 條 例（第 358 章）

LICENCE PURSUANT TO SECTION ~~15~~/20/~~23A~~*
按第 ~~15~~ / 20/ ~~23A~~*條簽發的牌照

The Director of Environmental Protection ("the Authority") grants this licence under the Water Pollution Control Ordinance ("the Ordinance") on the terms and conditions stated below.

環境保護署署長(「監督」)按下列的條款及條件，根據水污染管制條例(「本條例」)批給此牌照。

21 May 2020
Date
日 期

(CHAN Wai-lun)
For *the Authority*
監督 (陳偉麟 代行)

PART A 甲部 : GENERAL TERMS 一般條款

Name of Licensee ("the Licensee") 持 牌 人 名 稱 (「持 牌 人」)	Hip Hing Engineering Company Limited 協興工程有限公司	
Discharge Premises ("the premises") 排 放 處 所 (「處 所」)	Construction Site of the Kai Tak Sports Park at Kai Tak, Kowloon City, Kowloon (HAB Contract No. HAB/KTSP/01) (See Annex I) 九龍九龍城啟德啟德體育園之建築地盤 (民政事務局合約編號: HAB/KTSP/01) (參見附件 I)	
Water Control Zone 水 質 管 制 區	Victoria Harbour (Phase Two) Water Control Zone 維多利亞港(第二期)水質管制區	
Discharge Category 排 放 種 類	Discharge of industrial trade effluent 工業污水排放	
Nature of Discharge and Wastewater Treatment Facilities 排 放 性 質 及 廢 水 處 理 設 施	Effluent, Surface Run-off and all other wastewater discharges from the premises 上址排放的污水、地面徑流水及其他的廢水 Chemical precipitation, pH adjustment and Sedimentation tank 化學沉降、酸鹼值調節及沉澱池	
Discharge Point(s) 排 放 點	Stream A 水流 A: Discharge into communal storm water drain 排放入公用雨水渠	Stream B 水流 B: Discharge into inshore waters of Victoria Harbour 排放入維多利亞港沿岸水域
Sampling Point(s) 取 樣 點	Discharge outlet(s) of Wastewater Treatment Facility marked S.P.1 – S.P.8 on Annex II-IX 參見附件 II - IX 中標指 S.P.1 – S.P.8 的廢水處理設施的出水口	Discharge outlet(s) of Wastewater Treatment Facility marked S.P. 9 on Annex X 參見附件 X 中標指 S.P. 9 的廢水處理設施的出水口

*Delete as appropriate
將不適用者刪去

Reference No. 參考編號 EP682/286/01301

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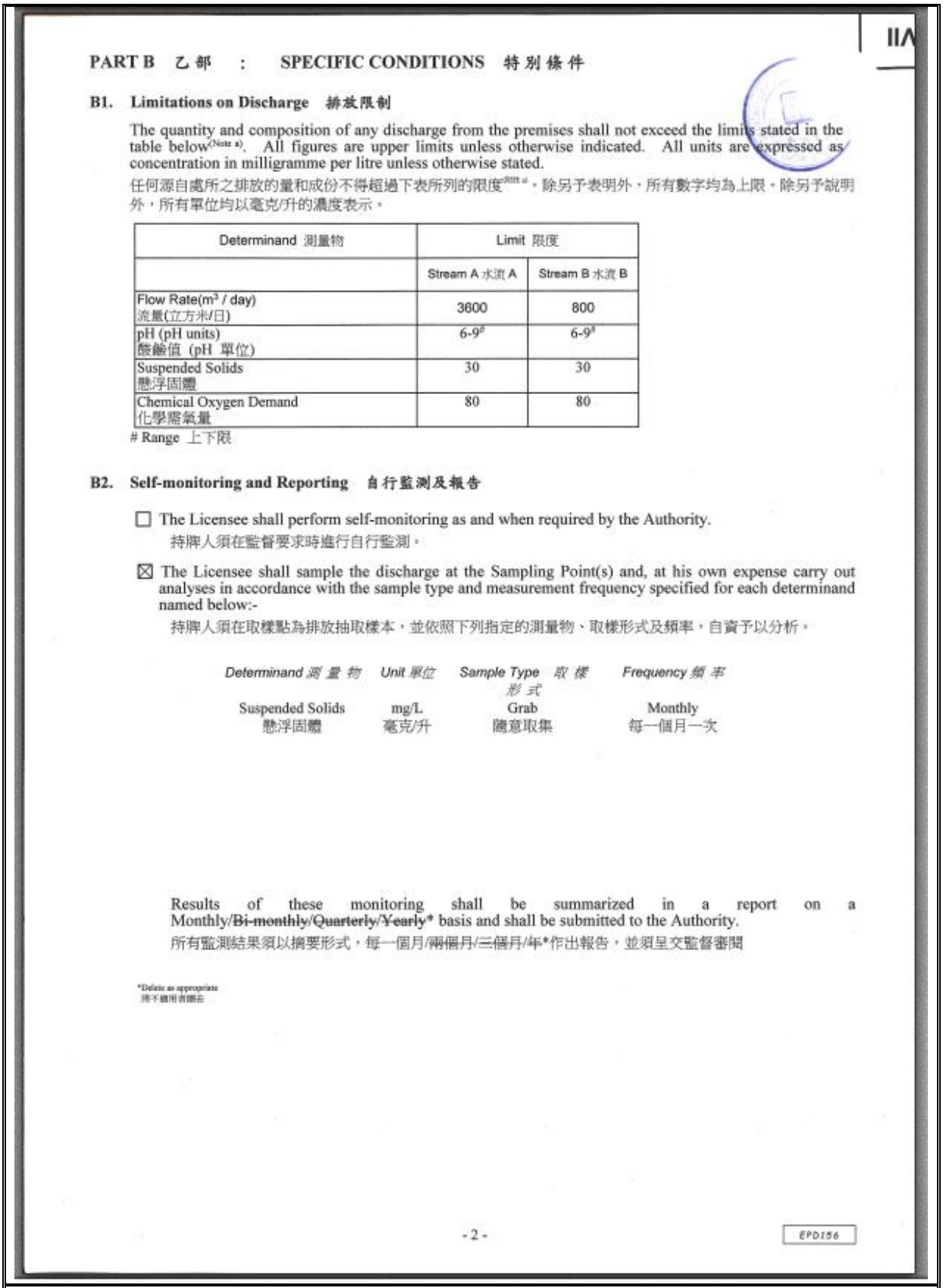

IIA

PART B 乙部 : SPECIFIC CONDITIONS 特別條件

B1. Limitations on Discharge 排放限制

The quantity and composition of any discharge from the premises shall not exceed the limits stated in the table below(Note a). All figures are upper limits unless otherwise indicated. All units are expressed as concentration in milligramme per litre unless otherwise stated.

任何源自處所之排放的量和成份不得超過下表所列的限度(Note a)。除另予表明外，所有數字均為上限。除另予說明外，所有單位均以毫克/升的濃度表示。

Determinand 測量物	Limit 限度	
	Stream A 水流 A	Stream B 水流 B
Flow Rate(m^3 / day) 流量(立方米/日)	3600	800
pH (pH units) 酸鹼值 (pH 單位)	6-9#	6-9#
Suspended Solids 懸浮固體	30	30
Chemical Oxygen Demand 化學需氧量	80	80

Range 上下限

B2. Self-monitoring and Reporting 自行監測及報告

☐ The Licensee shall perform self-monitoring as and when required by the Authority.
持牌人須在監督要求時進行自行監測。

☒ The Licensee shall sample the discharge at the Sampling Point(s) and, at his own expense carry out analyses in accordance with the sample type and measurement frequency specified for each determinand named below:-
持牌人須在取樣點為排放抽取樣本，並依照下列指定的測量物、取樣形式及頻率，自資予以分析。

Determinand 測量物	*Unit 單位*	*Sample Type 取樣形式*	*Frequency 頻率*
Suspended Solids 懸浮固體	mg/L 毫克/升	Grab 隨意取集	Monthly 每一個月一次

Results of these monitoring shall be summarized in a report on a Monthly/~~Bi-monthly/Quarterly/Yearly~~* basis and shall be submitted to the Authority.
所有監測結果須以摘要形式，每一個月/~~兩個月/三個月/年~~*作出報告，並須呈交監督審閱

*Delete as appropriate
~~將不適用者刪去~~

- 2 -

EPD156

Photo 5a and 5b: Record of WPCO discharge licence - WT00034082-2019 .

FORM 3 [reg.5(a)]
NOISE CONTROL ORDINANCE
(Chapter 400)
SECTION 8(9)

CONSTRUCTION NOISE PERMIT FOR THE USE OF POWERED MECHANICAL EQUIPMENT FOR THE PURPOSE OF CARRYING OUT CONSTRUCTION WORK OTHER THAN PERCUSSIVE PILING AND/OR THE CARRYING OUT OF PRESCRIBED CONSTRUCTION WORK

CONSTRUCTION NOISE PERMIT NO. GW-RE0400-23

To : HIP HING ENGINEERING COMPANY LIMITED

This construction noise permit is issued in accordance with section 8 of the Noise Control Ordinance. Permission is granted for the use of powered mechanical equipment for the purpose of carrying out construction work other than percussive piling and/or the carrying out of prescribed construction work, subject to the conditions set out below. The carrying out of construction work otherwise than in accordance with the conditions may result in the permit being cancelled and in a prosecution for an offence.

CONDITIONS

1. Construction site where the powered mechanical equipment and/or prescribed construction work may be employed :
   Full address : Construction site of Kai Tak Sports Park (North), Kai Tak, Kowloon.
   Lot No.: ---
   The site boundary, that is, the boundary of the area within which the powered mechanical equipment may be used and the prescribed construction work may be carried out is delineated on the attached plan which forms part of this construction noise permit.

2. * ~~PART~~/WHOLE of the site falls * ~~WITHIN~~/OUTSIDE a designated area.

3. Powered Mechanical Equipment

   a. Items of powered mechanical equipment which may be used inside the site boundary :

Identification code of item of powered mechanical equipment (if applicable)	*Description of item of powered mechanical equipment*	*No. of units*
	Refer to attached sheet	

   b. Validity of the construction noise permit for the use of the powered mechanical equipment:
   Date and time of commencement : 30 April 2023 at 0000 hours
   Days and hours : 0000-2400 hours on general holiday (including Sunday), 0000-0700 hours and 1900-2400 hours on any day not being a general holiday [but note condition 3.d.1. below for the operating hours within which the use of the above listed powered mechanical equipment is allowed].
   This part of the permit expires on : 29 July 2023 at 2400 hours

   c. One photograph, endorsed by the Authority, of each item of powered mechanical equipment described in this construction noise permit is required to be kept on the construction site and made available for inspection by the Authority.

   d. Other conditions imposed on the use of the powered mechanical equipment:
   Refer to attached sheet.

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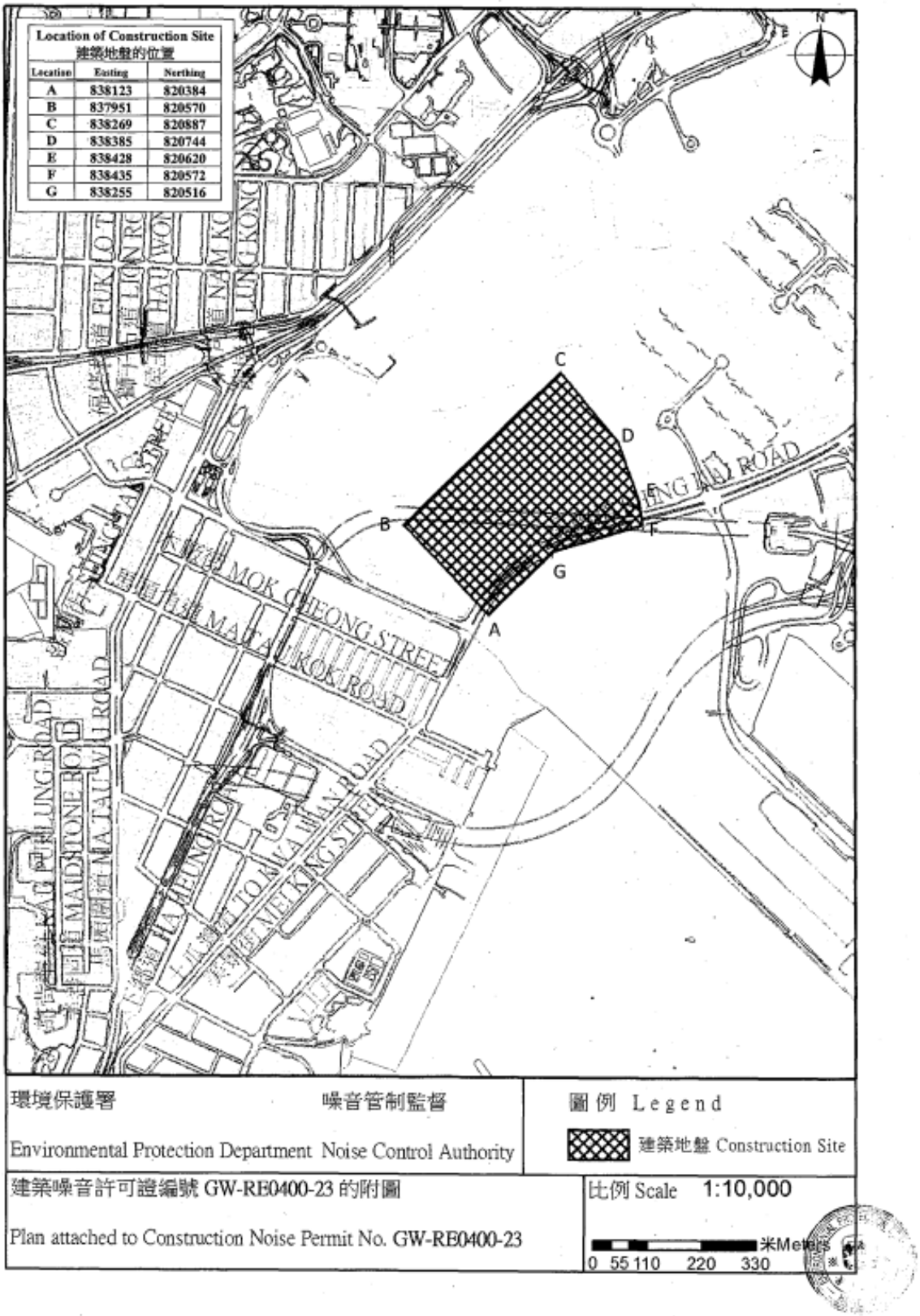

Photo 6a and 6b: Record of Construction Noise Permit - GW-RE0400-23.