

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

Quarterly EM&A Report (Apr 2021 – Jun 2021)

Jul 2021

Home Affairs Bureau
Kai Tak Sports Park Project Office
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

Quarterly EM&A Report (Apr 2021 – Jun 2021)

Jul 2021



Environmental Permit No. EP- 544/2017

Kai Tak Sports Park – Investigation

Environmental Team Leader Certification

Reference Document /Plan

Document/ Plan to be Certified:	Quarterly EM&A Report (Apr 2021 – Jun 2021)
Date of Report:	July 2021
Date received by ETL:	27 July 2021

Reference EP Condition

EM&A Manual (AEIAR-204/2017)	Sections 2.5.1 (v) & 14.1.1
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The ET should prepare monthly, quarterly and final EM&A reports to summarize environmental performance and to anticipate future key issues.

The ET shall prepare baseline monitoring report, monthly EM&A reports, quarterly EM&A report and final EM&A report. They shall be submitted to the EPD in paper and electronic formats in a timely manner.

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: 28 July 2021

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Executive Summary

This is the 9th Quarterly Environmental Monitoring & Audit (EM&A) Report for the construction phase of the Kai Tak Sports Park (KTSP) Project which summaries findings of the EM&A programme during the reporting period from 1 April 2021 to 30 June 2021 (the “reporting period”) under the Environmental Permit (No. EP-544/2017) requirement.

Environmental Monitoring and Audit Progress

The monthly EM&A programme was implemented by Environmental Team (ET) in accordance with the approved EM&A Manual. A summary of the EM&A activities during the reporting period is presented below:

Activities	Locations	Dates
Air quality impact monitoring (1-hour TSP)	AMS1, AMS2	1, 7, 13, 19, 24, 30 April 2021 6, 12, 18, 24, 28 May 2021 3, 9, 15, 21, 26 June 2021
Noise impact monitoring (L _{eq} (30 min))	NMS1, NMS2	7, 13, 19, 30 April 2021 6, 12, 18, 24 May 2021 3, 9, 15, 21 June 2021
Weekly environmental site inspections	Kai Tak Sports Park Project Site	7, 14, 21, 27 April 2021 5, 12, 18, 26 May 2021 2, 9, 16, 23, 30 June 2021
Bi-weekly landscape and visual site inspections	Kai Tak Sports Park Project Site	7, 21 April 2021 5, 18 May 2021 9, 23 June 2021

Breaches of Action and Limit Levels

Air Quality

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

Noise

No Action and Limit Level exceedances of noise at NMS1 and NMS2 was recorded during the reporting period.

Complaint Log

There were two environmental related complaints received during the reporting period.

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.

1 Project Information

1.1 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 (Home Affairs 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	Henry Leung	2828 5876	2827 1823
Independent Environmental Checker (ERM Hong Kong Limited)	Independent Environmental Checker	Mandy To	2271 3000	2723 5660
Contracted Party (Kai Tak Sports Park Limited)	Senior Project Manager	Michael Wong	3552 5003	2845 9295
	Senior Environmental Engineer	Hiko Law	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 (CR Construction Company Limited)	Contractor	Math Chan	3950 5714	-
24-hour Community Liaison Hotline	-	-	5587 6112	-

1.2 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**.

1.3 Construction Works undertaken during the Reporting Period

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

Table 1.2: Construction Works undertaken during the Reporting Period

April 2021	May 2021	June 2021
KTSP		
<ul style="list-style-type: none"> • Ground investigation works; • Rebar fixing; • Piling works (Percussive piling, Socket H piling and Bored piling); • Mobilization; • Concreting and excavation 	<ul style="list-style-type: none"> • Ground investigation works; • Rebar fixing; • Piling works (Percussive piling, Socket H piling and Bored piling); • Mobilization; and • Concreting and excavation 	<ul style="list-style-type: none"> • Ground investigation works; • Rebar fixing; • Piling works (Percussive piling, Socket H piling and Bored piling); • Mobilization; and • Concreting and excavation
H/O Development		
<ul style="list-style-type: none"> • Socket H piling; and • Excavation 	<ul style="list-style-type: none"> • Excavation 	<ul style="list-style-type: none"> • Excavation

2 Summary of EM&A Requirement

2.1 EM&A Requirement

In accordance with the EM&A Manual of the Project, the EM&A programme was established to assure compliance with the standards and predictions in the EIA study involving the construction and operation of the Project. The environmental performance was routinely monitored and audited for evaluating the effectiveness of the recommended mitigation measures or remedial action. Impact air quality and noise monitoring were required for the Project.

Air Quality

2.2 Air Quality 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 Air Quality Monitoring Locations

According to the EM&A Manual, a total of five air quality monitoring stations are identified for impact monitoring. AMS1 and AMS2 were set up at the proposed locations for impact monitoring during the reporting period. AMS3, AMS4 and AMS5 are planned residential use and were 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
AMS2	Sky Tower, Podium of Tower 7	Existing Air Sensitive Receiver
AMS3	Kai Tak Area 2B Site 4 (2B4) (residential use)	Planned Air Sensitive Receiver
AMS4	Kai Tak Area 1K Site 3 (1K3) (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 AMS1 and AMS2 were set up at the proposed locations for impact monitoring.

Permission on setting up and carrying out impact monitoring works at AMS3, AMS4 and AMS5 will be sought once each respective development is completed and occupied.

2.4 Action and Limit Levels for Air Quality Monitoring

The Action and Limit Levels for 1-hr TSP are provided in **Table 2.3**.

Table 2.3: Action and Limit Levels for 1-hour TSP

Monitoring Station	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
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**.

2.5 Wind Data

Wind data at Kai Tak automatic weather station collected from the Hong Kong Observatory (HKO) were used for the air quality monitoring for recording wind speed and wind direction. 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 detail of the wind data is shown in **Appendix F**.

Noise

2.6 Noise Monitoring Parameters, Frequency and Duration

Table 2.4 summarises the monitoring parameters, frequency and duration of impact noise monitoring.

Table 2.4: 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

2.7 Noise Monitoring Locations

According to the approved EM&A Manual, a total of seven noise monitoring stations were identified for the impact monitoring locations. NMS1 and NMS2 were set up at the proposed locations for impact monitoring during the reporting period. NMS1A, NMS2A, NMS3, NMS4 and NMS5 are planned residential use and were currently not available for impact monitoring.

Table 2.5 describes the details of the monitoring stations and **Figure 2.2** shows the locations of noise monitoring stations.

Table 2.5: Construction Noise Monitoring Locations

Monitoring Station	Location Description	Status
NMS1	Hong Kong Society for the Blind Workshop, Roof Floor	Existing Noise Sensitive Receiver
NMS2	Sky Tower, Podium of Tower 7	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
NMS4	Kai Tak Area 1K Site 3 (1K3) (residential use)	Planned Noise Sensitive Receiver
NMS5	Kai Tak Area 1L Site 3 (1L3) (residential use)	Planned Noise Sensitive Receiver

Action and Limit Levels for Noise Monitoring

The Action and Limit Levels for construction noise are defined in **Table 2.6**

Table 2.6: Action and Limit Level for Construction Noise

Monitoring Station	Time Period	Action Level	Limit Level
NMS1	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**.

3 Summary of Environmental Status

3.1 Construction Works undertaken during the Reporting Period

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

Table 3.1: Construction Works undertaken during the Reporting Period

April 2021	May 2021	June 2021
KTSP		
<ul style="list-style-type: none"> Ground investigation works; Rebar fixing; Piling works (Percussive piling, Socket H piling and Bored piling); Mobilization; Concreting and excavation; 	<ul style="list-style-type: none"> Ground investigation works; Rebar fixing; Piling works (Percussive piling, Socket H piling and Bored piling); Mobilization; and Concreting and excavation 	<ul style="list-style-type: none"> Ground investigation works; Rebar fixing; Piling works (Percussive piling, Socket H piling and Bored piling); Mobilization; and Concreting and excavation
H/O Development		
<ul style="list-style-type: none"> Socket H piling; and Excavation 	<ul style="list-style-type: none"> Excavation 	<ul style="list-style-type: none"> Excavation

3.2 Implementation Status of Environmental Mitigation Measures

Regular site inspections and audits were carried out to monitor the implementation of proper environmental pollution control mitigation measures for the Project. **Table 3.2** shows the summary of site inspection and audit conducted during the reporting period.

Table 3.2: Summary of Site Inspection and Landscape Audit during the Reporting Period

Activities	Locations	Dates
Weekly environmental site inspections	Kai Tak Sports Park Project Site	7, 14, 21, 27 April 2021 5, 12, 18, 26 May 2021 2, 9, 16, 23, 30 June 2021
Bi-weekly landscape and visual site inspections	Kai Tak Sports Park Project Site	7, 21 April 2021 5, 18 May 2021 9, 23 June 2021

A summary of the environmental mitigation measures implementation status is presented in **Appendix I**. Most of the necessary mitigation measures were implemented properly. A summary of the environmental licenses and permits is presented in **Appendix H**.

3.3 Monitoring Results

The monitoring results for 1-hour TSP at AMS1 and AMS2 are summarized in **Table 3.3**. Detailed impact air quality monitoring results are presented in **Appendix E**. The calibration certificate for the dust meter used during monitoring is shown in **Appendix K**.

Table 3.3: Summary of 1-hour TSP Monitoring Results during the Reporting Period

Monitoring Station	Average, $\mu\text{g}/\text{m}^3$	Min, $\mu\text{g}/\text{m}^3$	Max, $\mu\text{g}/\text{m}^3$	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
AMS1	44	24	78	283	500

AMS2	46	21	76	280	500
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There was no Action and Limit Level exceedance of 1-hr TSP level recorded at station AMS1 and AMS2 by the ET during the reporting period.

The monitoring results for construction noise are summarized in **Table 3.4**. Detailed impact noise monitoring results and relevant graphical plots are presented in **Appendix E**. The calibration certificate for the noise meter used during monitoring is shown in **Appendix K**

Table 3.4: Summary of Construction Noise Monitoring Results during the Reporting Period

Monitoring Station	Measured Noise Level L_{eq} (30 mins), dB(A)			
	Average	Min	Max	Limit Level
NMS1	70	69	73	75
NMS2	70	68	71	75

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

3.4 Solid and Liquid Waste Management Status

The summary of waste flow table during the reporting period is detailed in **Appendix G**.

The comparison of estimated amount of waste generated for construction of the Project and actual amount generated during the reporting period is showed in **Table 3.5**

Mitigation measures recommended in EIA Report were implemented by the Contractor as far as practicable and were considered effective in reducing the total quantity of waste generated during the reporting period.

Table 3.5: Comparison of Estimated Amount and Actual Amount of Waste Generated during the Reporting Period

Type of Waste	Estimated Amount for the Project in the EIA (m ³)	Actual Amount during Reporting Period (000kg)	Actual Amount during Reporting Period* (m ³)
Inert C&D materials (or public fills) to be disposed of	447,464	0	0
Non-inert C&D materials (or C&D waste) to be disposed of	68,110	4,834	6,043
Total C&D material of the Project	515,574	4,834	6,043

*Note:

Assumed Inert C&D waste density = 1,300 kg/m³

Assumed Non-inert C&D waste density = 800 kg/m³

3.5 Summary of Non-compliance Status

Exceedances

Air Quality

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

Noise

No Action and Limit Level exceedances of noise at NMS1 and NMS2 was recorded during the reporting period.

Complaints

There were two complaints received in relation to the environmental impact during the reporting period.

Table 3.6: Summary of Complaints during the reporting period

Date of Notification from EPD	Date of Complaint	Description of Complaint	Recommendations / Actions	Close-Out Date / Status
16 Apr 2021	N/A	- Complaint of dusty environment of the exit of road 3C at To Kwa Wan Road, and silt contamination on nearby pavement and road surface. - Please ensure the work fulfil the relevant environmental legislations and their subsidiary regulations. Please take necessary measures to minimize the environmental nuisance arising from the construction site.	1. Water truck has been provided regularly at road 3C to remove all dusty material. 2. Worker has been arranged to regularly maintain the tidiness at road 3C. 3. Wheel wash facility has been implemented at road 3C	23 April 2021
24 May 2021	N/A	-Complaint of potential mosquito nuisance to nearby residential building arising from Kai Tak construction site.	1. Maintain good site practices to keep the construction site dry and tidy. 2. Conduct regular checking to clear stagnant water on site.	27 May 2021

Detail of complaint investigation is shown in **Appendix L**.

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 J**.

4 Comments, Recommendations and Conclusion

4.1 Comments

Mitigation measures in the EM&A Manual were implemented during the reporting period. The weekly environmental site inspections ensured that all the environmental mitigation measures recommended were effectively implemented. Based on observation from the site inspections, landscape audits, and the air quality and noise impact monitoring results recorded, it was considered that mitigation measures were effective and efficient in controlling the potential impacts due to construction of the project during the reporting period.

4.2 Recommendations

During the reporting period, the following recommendations were provided:

April 2021

KTSP

- The contractor was reminded to provide drip tray for the chemical containers.
- The contractor was reminded to maintain regular cleaning for the drainage channel.
- The contractor was reminded to provide covering for the stockpiles on site.
- The contractor was reminded to clear the oil stain as soon as possible.
- The contractor was reminded to clear the stagnant water.
- The contractor was reminded to provide covering for the cement bags.
- The contractor was reminded to provide regular water spraying to maintain wet surface.
- The contractor was reminded to clear the sewage regularly to prevent overflow.
- The contractor was reminded to clear the chemical container and ensure proper storage of chemical container.
- The contractor was reminded to replace the NRMM label.

H/O Development

- The contractor was reminded to provide water spraying for demolition work.
- The contractor was reminded to maintain good housekeeping near the site hoarding area to prevent potential leakage of site runoff.
- The contractor was reminded to provide shoes washing area for workers to avoid mud being carried out from site.

May 2021

KTSP

- The contractor was reminded to provide covering for the stockpile.
- The contractor was reminded to store the chemical properly at designated area.
- The contractor was reminded to clear the drainage channel regularly.
- The contractor was reminded to clear the stagnant water.
- The contractor was reminded to provide drip tray for the chemical containers on site.

- The contractor was reminded to replace a new NRMM label for the generator.

H/O Development

- The contractor was reminded to display the NRMM label for the excavator on site.

June 2021

KTSP

- The contractor was reminded to provide temporary pumping to clear the stagnant water.
- The contractor was reminded to dispose of the general refuse properly.
- The contractor was reminded to clear the stagnant water regularly.
- The contractor was reminded to provide drip tray for the chemical container.
- The contractor was reminded to provide covering for the cement bags.
- The contractor was reminded to provide new NRMM label for the generator.

H/O Development

- There were no major observations during the site inspections in the reporting period.

Review of the effectiveness and efficiency of the EM&A programme will be continued, and recommendations will be provided to remediate any potential impacts due to the project and to improve the EM&A programme if deficiencies of the existing EM&A programme are identified.

4.3 Conclusions

General

The construction works for the Project commenced on 8 April 2019. This is the 9th Quarterly EM&A Report for the Project summarises findings of the EM&A works during the reporting period from 1 April 2021 to 30 June 2021. (the “reporting period”).

Breaches of Action and Limit Levels

Air Quality

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

Noise

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

Environmental Site Inspections

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

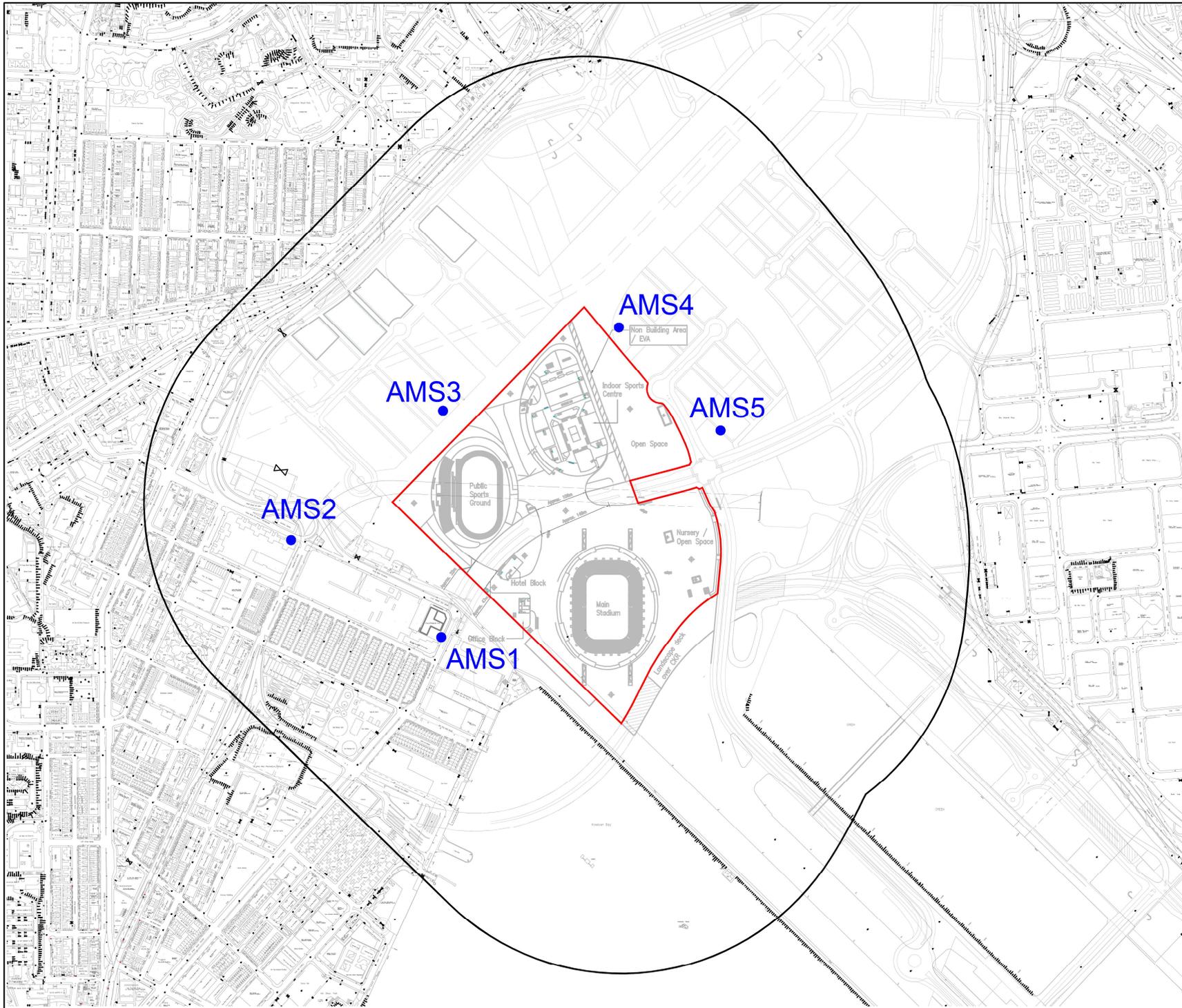
Complaints

There were two complaints received in relation to the environmental impact during the reporting period. Follow up actions have been taken and investigation reports were shown in **Appendix L**.

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

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

M
MOTT
MACDONALD

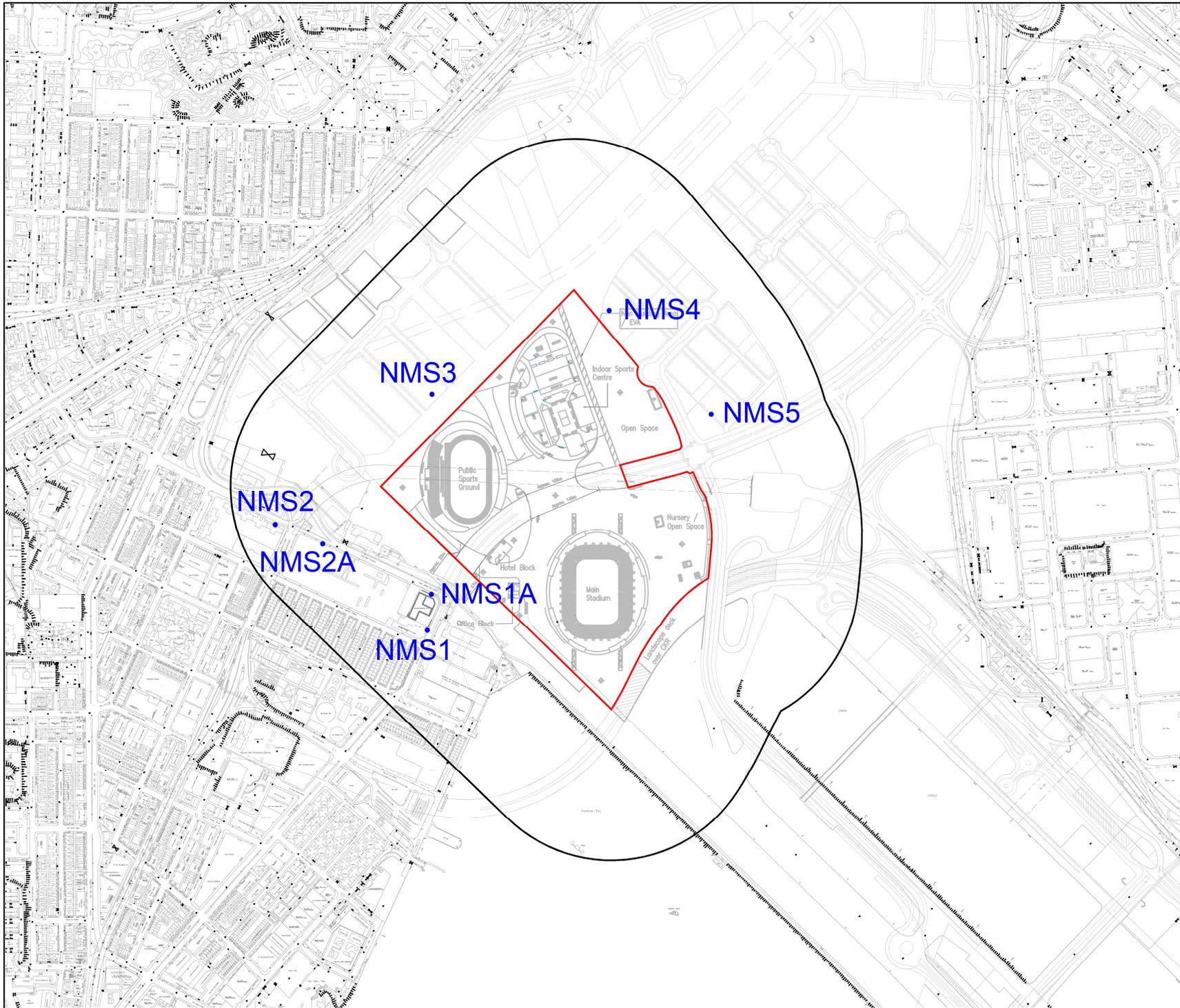
3/F, Mapletree Bay Point
348 Kowloon Tong Road
Kowloon, Kowloon
Hong Kong
T +852 2828 5757
F +852 2827 1659
W mottmac.com

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-ORDINATE 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

Rev	Date	Drawn	Description	Chk'd	App'd

M M MOTT MACDONALD	3/F Mapletree Bay Point 348 Kwan Tong Road Kowloon Hong Kong T +852 2828 5757 F +852 2827 1824 W mottmac.com
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Client

Project

Title

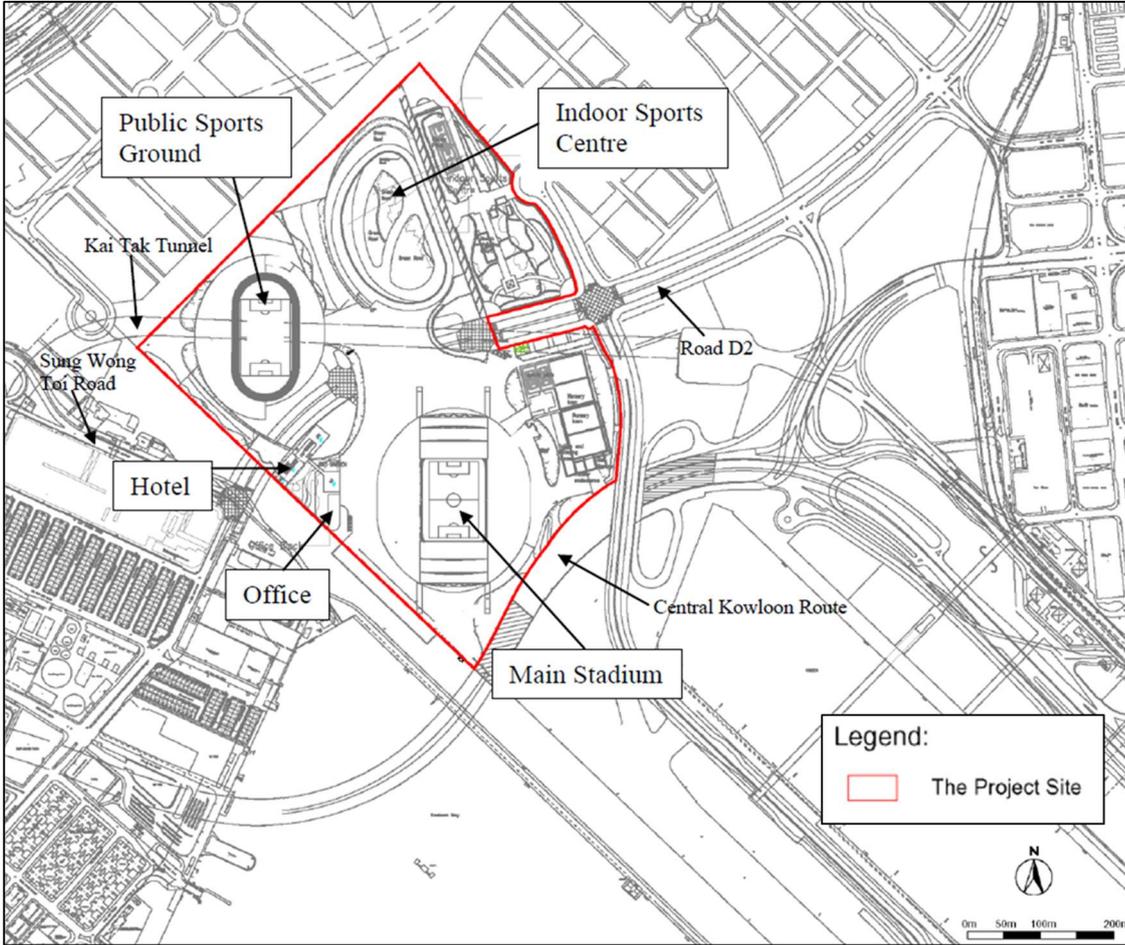
Figure 2.2
Location of Noise Monitoring Stations

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

Drawing Number

Appendix A. Project Organization for Environmental Works

Appendix B. Location of Works Areas



Appendix C. Construction Programme

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	ET	Contracted Party
Limit Level				
Exceedance for one sample	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Notify Contracted Party; 3. Ensure remedial measures properly implemented. 	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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	ET	Contracted Party
Action Level	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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 	<ol style="list-style-type: none"> 1. Submit noise mitigation proposals to SOR with copy to ET and IEC; 2. Implement noise mitigation proposals.
Limit Level	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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. Monitoring Data and Graphical Plots (Air Quality and Noise)

Data for 1-hour TSP Monitoring at Station AMS1

Date	Start Time	Finish Time	Weather	Wind Speed (m/s)	Wind Direction (deg)	1-hour TSP ($\mu\text{g}/\text{m}^3$)
1-Apr-21	9:02	10:02	Fine	1.7	135	29
1-Apr-21	10:02	11:02	Fine	2.2	156	32
1-Apr-21	11:02	12:02	Fine	1.7	142	35
7-Apr-21	9:10	10:10	Cloudy	5.3	79	42
7-Apr-21	10:10	11:10	Cloudy	2.8	88	46
7-Apr-21	11:10	12:10	Cloudy	4.2	112	51
13-Apr-21	9:03	10:03	Sunny	1.1	110	29
13-Apr-21	10:03	11:03	Sunny	1.1	145	36
13-Apr-21	11:03	12:03	Sunny	3.3	133	27
19-Apr-21	9:55	10:55	Cloudy	6.7	92	43
19-Apr-21	10:55	11:55	Cloudy	7.8	97	40
19-Apr-21	11:55	12:55	Cloudy	6.7	87	36
24-Apr-21	9:05	10:05	Fine	3.9	92	66
24-Apr-21	10:05	11:05	Fine	5.3	71	72
24-Apr-21	11:05	12:05	Fine	5.3	82	78
30-Apr-21	9:06	10:06	Sunny	0.3	173	26
30-Apr-21	10:06	11:06	Sunny	0.8	variable	30
30-Apr-21	11:06	12:06	Sunny	3.9	132	35
6-May-21	9:08	10:08	Cloudy	5.0	91	40
6-May-21	10:08	11:08	Cloudy	5.3	94	29
6-May-21	11:08	12:08	Cloudy	5.3	81	31
12-May-21	9:05	10:05	Fine	2.2	178	41
12-May-21	10:05	11:05	Fine	1.7	199	36
12-May-21	11:05	12:05	Fine	3.3	208	30
18-May-21	9:06	10:06	Fine	3.1	180	42
18-May-21	10:06	11:06	Fine	2.2	185	40
18-May-21	11:06	12:06	Fine	2.8	188	36
24-May-21	9:52	10:52	Fine	0.8	209	52
24-May-21	10:52	11:52	Fine	2.5	244	41
24-May-21	11:52	12:52	Fine	5.0	251	45
28-May-21	9:05	10:05	Sunny	2.8	228	32
28-May-21	10:05	11:05	Sunny	2.8	237	28
28-May-21	11:05	12:05	Sunny	3.9	223	24
3-Jun-21	10:04	11:04	Fine	5.0	91	60
3-Jun-21	11:04	12:04	Fine	5.3	94	65
3-Jun-21	12:04	13:04	Fine	5.3	81	71
9-Jun-21	9:07	10:07	Cloudy	2.2	178	61
9-Jun-21	10:07	11:07	Cloudy	1.7	199	67
9-Jun-21	11:07	12:07	Cloudy	3.3	208	73
15-Jun-21	9:08	10:08	Sunny	3.1	180	51
15-Jun-21	10:08	11:08	Sunny	2.2	185	44
15-Jun-21	11:08	12:08	Sunny	2.8	188	49
21-Jun-21	9:05	10:05	Fine	0.8	209	39
21-Jun-21	10:05	11:05	Fine	2.5	244	44
21-Jun-21	11:05	12:05	Fine	5.0	251	49
26-Jun-21	9:01	10:01	Cloudy	2.8	228	60
26-Jun-21	10:01	11:01	Cloudy	2.8	237	44
26-Jun-21	11:01	12:01	Cloudy	3.9	223	49

Data for 1-hour TSP Monitoring at Station AMS2

Date	Start Time	Finish Time	Weather	Wind Speed (m/s)	Wind Direction (deg)	1-hour TSP ($\mu\text{g}/\text{m}^3$)
1-Apr-21	8:50	9:50	Fine	1.7	135	32
1-Apr-21	9:50	10:50	Fine	2.2	156	36
1-Apr-21	10:50	11:50	Fine	1.7	142	39
7-Apr-21	8:25	9:25	Cloudy	5.3	79	39
7-Apr-21	9:25	10:25	Cloudy	2.8	88	40
7-Apr-21	10:25	11:25	Cloudy	4.2	112	38
13-Apr-21	8:15	9:15	Sunny	1.1	110	41
13-Apr-21	9:15	10:15	Sunny	1.1	145	35
13-Apr-21	10:15	11:15	Sunny	3.3	133	39
19-Apr-21	9:04	10:04	Cloudy	6.7	92	50
19-Apr-21	10:04	11:04	Cloudy	7.8	97	39
19-Apr-21	11:04	12:04	Cloudy	6.7	87	45
24-Apr-21	8:40	9:40	Fine	3.9	92	64
24-Apr-21	9:40	10:40	Fine	5.3	71	70
24-Apr-21	10:40	11:40	Fine	5.3	82	76
30-Apr-21	8:18	9:18	Sunny	0.3	173	34
30-Apr-21	9:18	10:18	Sunny	0.8	variable	42
30-Apr-21	10:18	11:18	Sunny	3.9	132	31
6-May-21	8:20	9:20	Cloudy	4.2	89	34
6-May-21	9:20	10:20	Cloudy	5.3	86	31
6-May-21	10:20	11:20	Cloudy	5.3	92	37
12-May-21	8:20	9:20	Fine	1.9	190	39
12-May-21	9:20	10:20	Fine	2.2	170	36
12-May-21	10:20	11:20	Fine	2.2	216	35
18-May-21	8:20	9:20	Fine	0.6	172	36
18-May-21	9:20	10:20	Fine	2.2	178	34
18-May-21	10:20	11:20	Fine	3.1	183	41
24-May-21	9:05	10:05	Fine	0.8	236	60
24-May-21	10:05	11:05	Fine	1.1	238	46
24-May-21	11:05	12:05	Fine	2.8	264	47
28-May-21	8:45	9:45	Sunny	2.8	254	30
28-May-21	9:45	10:45	Sunny	2.8	232	26
28-May-21	10:45	11:45	Sunny	3.9	228	21
3-Jun-21	9:15	10:15	Fine	4.2	89	58
3-Jun-21	10:15	11:15	Fine	5.3	86	63
3-Jun-21	11:15	12:15	Fine	5.3	92	69
9-Jun-21	8:18	9:18	Cloudy	1.9	190	58
9-Jun-21	9:18	10:18	Cloudy	2.2	170	64
9-Jun-21	10:18	11:18	Cloudy	2.2	216	70
15-Jun-21	8:18	9:18	Sunny	0.6	172	62
15-Jun-21	9:18	10:18	Sunny	2.2	178	60
15-Jun-21	10:18	11:18	Sunny	3.1	183	44
21-Jun-21	8:17	9:17	Fine	0.8	236	50
21-Jun-21	9:17	10:17	Fine	1.1	238	44
21-Jun-21	10:17	11:17	Fine	2.8	264	40
26-Jun-21	8:45	9:45	Cloudy	2.8	254	56
26-Jun-21	9:45	10:45	Cloudy	2.8	232	62
26-Jun-21	10:45	11:45	Cloudy	3.9	228	51

Data for Noise Monitoring at Station NMS1

Date	Time	Weather	L _{eq} (5min)	L ₁₀	L ₉₀	Measured L _{eq} (30min)
7-Apr-21	9:12	Cloudy	72.2	74.0	69.4	
7-Apr-21	9:17	Cloudy	71.1	73.2	69.3	
7-Apr-21	9:22	Cloudy	72.3	74.2	70.6	72.5
7-Apr-21	9:27	Cloudy	73.7	75.4	71.1	
7-Apr-21	9:32	Cloudy	72.5	74.6	70.4	
7-Apr-21	9:37	Cloudy	72.8	74.9	70.7	
13-Apr-21	9:05	Sunny	71.3	73.6	65.4	
13-Apr-21	9:10	Sunny	72.4	74.2	66.1	
13-Apr-21	9:15	Sunny	72.5	74.3	66.2	71.9
13-Apr-21	9:20	Sunny	71.4	73.6	65.5	
13-Apr-21	9:25	Sunny	71.7	73.1	65.6	
13-Apr-21	9:30	Sunny	71.9	73.8	66.0	
19-Apr-21	9:58	Cloudy	69.7	72.7	64.1	
19-Apr-21	10:03	Cloudy	69.2	71.7	64.6	
19-Apr-21	10:08	Cloudy	69.1	71.6	65.4	69.4
19-Apr-21	10:13	Cloudy	69.0	71.8	64.9	
19-Apr-21	10:18	Cloudy	69.9	72.1	64.7	
19-Apr-21	10:23	Cloudy	69.6	72.4	63.4	
30-Apr-21	9:08	Sunny	68.9	70.0	66.8	
30-Apr-21	9:13	Sunny	69.1	71.6	67.5	
30-Apr-21	9:18	Sunny	70.1	72.2	68.3	69.8
30-Apr-21	9:23	Sunny	70.4	72.3	68.5	
30-Apr-21	9:28	Sunny	70.4	72.6	68.2	
30-Apr-21	9:33	Sunny	69.7	71.6	67.8	
6-May-21	9:10	Cloudy	69.5	71.4	67.3	
6-May-21	9:15	Cloudy	70.4	72.2	68.1	
6-May-21	9:20	Cloudy	68.1	70.7	66.5	69.5
6-May-21	9:25	Cloudy	68.3	70.0	66.6	
6-May-21	9:30	Cloudy	69.1	71.7	67.8	
6-May-21	9:35	Cloudy	70.7	72.9	68.6	
12-May-21	9:07	Fine	68.6	70.3	66.5	
12-May-21	9:12	Fine	69.6	71.1	67.2	
12-May-21	9:17	Fine	69.0	71.1	67.7	69.4
12-May-21	9:22	Fine	70.8	72.2	68.5	
12-May-21	9:27	Fine	69.3	71.6	67.9	
12-May-21	9:32	Fine	68.7	70.4	66.1	
18-May-21	9:08	Fine	71.6	73.0	65.9	
18-May-21	9:13	Fine	70.1	72.3	64.4	
18-May-21	9:18	Fine	71.2	73.1	65.5	71.1
18-May-21	9:23	Fine	71.4	73.3	66.6	
18-May-21	9:28	Fine	71.5	73.8	66.1	
18-May-21	9:33	Fine	70.7	72.6	65.3	
24-May-21	9:55	Fine	67.9	70.7	62.6	
24-May-21	10:00	Fine	66.0	68.3	61.7	
24-May-21	10:05	Fine	67.8	70.7	63.1	68.6
24-May-21	10:10	Fine	69.8	72.9	65.0	
24-May-21	10:15	Fine	68.3	70.9	65.0	
24-May-21	10:20	Fine	70.5	72.6	63.0	

Date	Time	Weather	L _{eq} (5min)	L ₁₀	L ₉₀	Measured L _{eq} (30min)
3-Jun-21	10:07	Fine	69.6	73.3	62.9	70.8
3-Jun-21	10:12	Fine	70.0	72.1	63.4	
3-Jun-21	10:17	Fine	69.0	72.1	62.8	
3-Jun-21	10:22	Fine	71.7	73.6	66.0	
3-Jun-21	10:27	Fine	71.8	74.0	68.5	
3-Jun-21	10:32	Fine	71.6	74.1	67.4	
9-Jun-21	9:09	Cloudy	69.5	71.4	65.3	70.2
9-Jun-21	9:14	Cloudy	70.6	72.5	66.2	
9-Jun-21	9:19	Cloudy	68.4	70.0	65.7	
9-Jun-21	9:24	Cloudy	69.3	71.1	65.2	
9-Jun-21	9:29	Cloudy	70.7	72.8	66.6	
9-Jun-21	9:34	Cloudy	71.9	73.9	66.9	
15-Jun-21	9:10	Sunny	69.6	71.0	67.9	70.5
15-Jun-21	9:15	Sunny	70.2	72.1	68.8	
15-Jun-21	9:20	Sunny	70.2	72.1	68.4	
15-Jun-21	9:25	Sunny	69.1	71.3	67.5	
15-Jun-21	9:30	Sunny	71.4	73.5	69.6	
15-Jun-21	9:35	Sunny	71.7	73.6	69.5	
21-Jun-21	9:07	Fine	69.8	71.7	67.6	69.8
21-Jun-21	9:12	Fine	70.6	72.7	67.5	
21-Jun-21	9:17	Fine	70.4	72.5	67.6	
21-Jun-21	9:22	Fine	69.2	71.3	66.4	
21-Jun-21	9:27	Fine	69.4	71.1	67.3	
21-Jun-21	9:32	Fine	68.9	70.0	66.2	

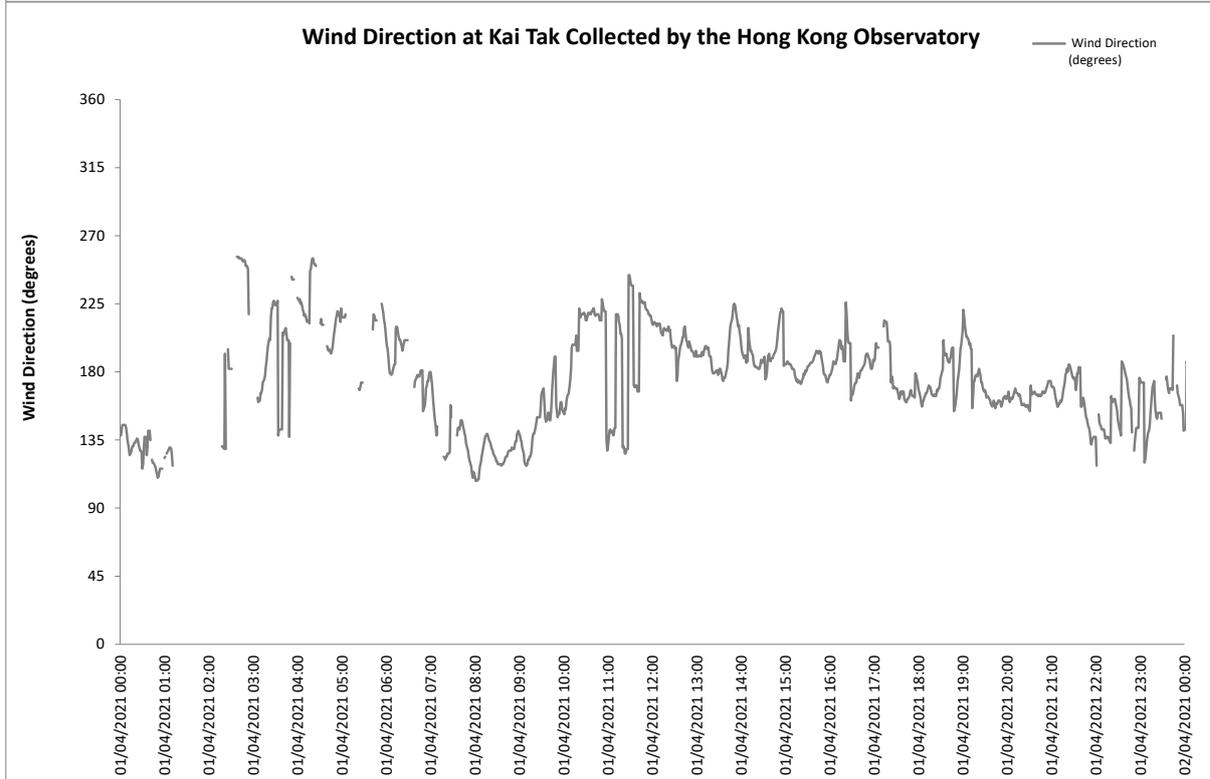
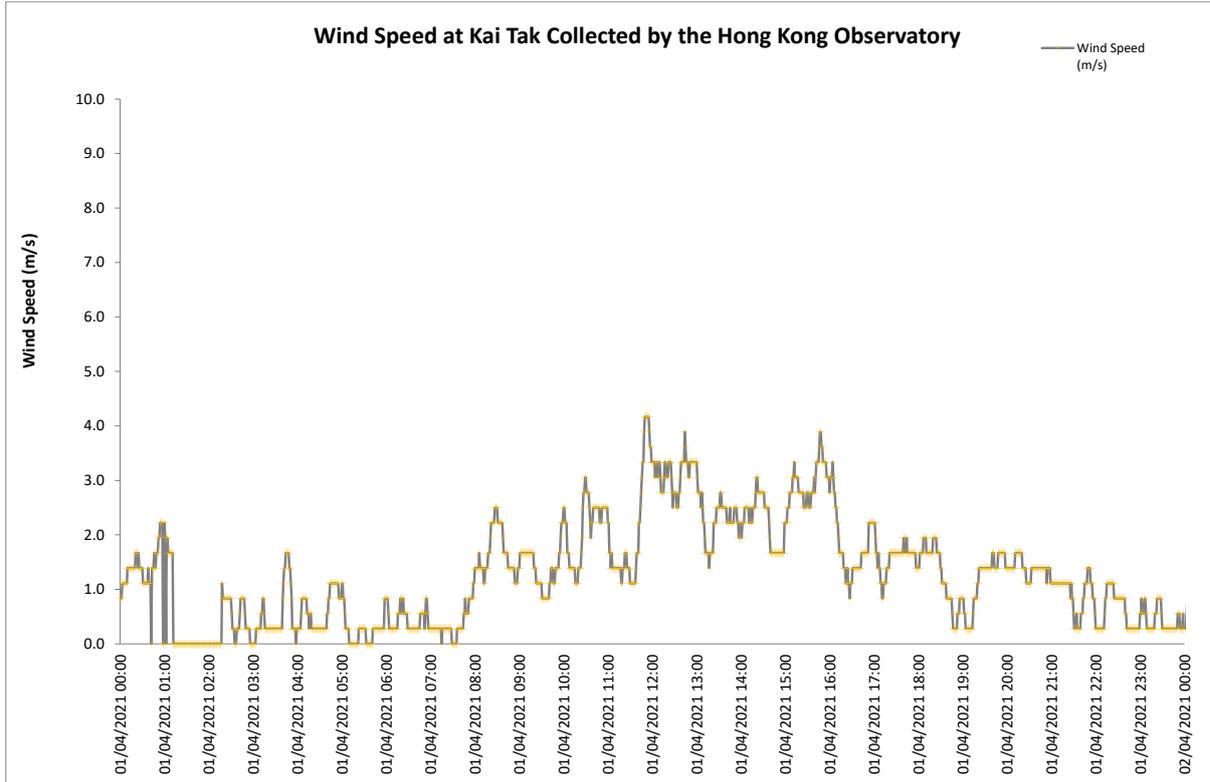
Data for Noise Monitoring at Station NMS2

Date	Time	Weather	L _{eq} (5min)	L ₁₀	L ₉₀	Measured L _{eq} (30min)
7-Apr-21	8:28	Cloudy	68.3	70.1	65.6	68.0
7-Apr-21	8:33	Cloudy	67.2	69.4	64.3	
7-Apr-21	8:38	Cloudy	67.2	69.0	65.1	
7-Apr-21	8:43	Cloudy	67.9	69.4	65.8	
7-Apr-21	8:48	Cloudy	68.5	70.2	66.7	
7-Apr-21	8:53	Cloudy	68.7	70.1	66.6	
13-Apr-21	8:20	Sunny	70.7	72.0	61.8	70.5
13-Apr-21	8:25	Sunny	69.1	71.2	64.9	
13-Apr-21	8:30	Sunny	69.3	71.4	64.5	
13-Apr-21	8:35	Sunny	70.1	72.3	65.5	
13-Apr-21	8:40	Sunny	71.4	73.2	66.7	
13-Apr-21	8:45	Sunny	71.6	73.7	66.6	
19-Apr-21	9:07	Cloudy	71.7	73.6	67.3	70.6
19-Apr-21	9:12	Cloudy	69.6	71.8	66.8	
19-Apr-21	9:17	Cloudy	69.8	71.3	66.6	
19-Apr-21	9:22	Cloudy	70.6	73.3	65.9	
19-Apr-21	9:27	Cloudy	71.0	73.2	67.1	
19-Apr-21	9:32	Cloudy	70.3	72.2	67.2	
30-Apr-21	8:21	Sunny	68.2	70.3	65.4	69.4
30-Apr-21	8:26	Sunny	69.7	71.6	66.5	
30-Apr-21	8:31	Sunny	69.3	71.2	66.1	
30-Apr-21	8:36	Sunny	68.6	70.7	65.8	
30-Apr-21	8:41	Sunny	69.2	71.1	66.4	
30-Apr-21	8:46	Sunny	70.9	72.7	67.0	
6-May-21	8:23	Cloudy	67.7	69.9	65.6	69.3
6-May-21	8:28	Cloudy	68.1	70.0	66.4	
6-May-21	8:33	Cloudy	69.1	71.2	67.5	
6-May-21	8:38	Cloudy	69.4	71.2	67.8	
6-May-21	8:43	Cloudy	70.3	72.5	68.6	
6-May-21	8:48	Cloudy	70.7	72.2	68.6	
12-May-21	8:23	Fine	68.4	70.0	66.7	69.7
12-May-21	8:28	Fine	69.1	71.3	67.2	
12-May-21	8:33	Fine	70.3	72.6	68.9	
12-May-21	8:38	Fine	70.5	72.5	68.5	
12-May-21	8:43	Fine	69.8	71.5	67.1	
12-May-21	8:48	Fine	69.9	71.2	67.6	
18-May-21	8:23	Fine	68.6	70.3	64.9	69.2
18-May-21	8:28	Fine	69.4	71.2	65.6	
18-May-21	8:33	Fine	69.1	71.5	65.8	
18-May-21	8:38	Fine	68.6	70.5	64.8	
18-May-21	8:43	Fine	70.0	72.7	66.2	
18-May-21	8:48	Fine	69.2	71.3	65.1	
24-May-21	9:55	Sunny	67.9	70.7	62.6	68.6
24-May-21	10:00	Sunny	66.0	68.3	61.7	
24-May-21	10:05	Sunny	67.8	70.7	63.1	
24-May-21	10:10	Sunny	69.8	72.9	65.0	
24-May-21	10:15	Sunny	68.3	70.9	65.0	
24-May-21	10:20	Sunny	70.5	72.6	63.0	

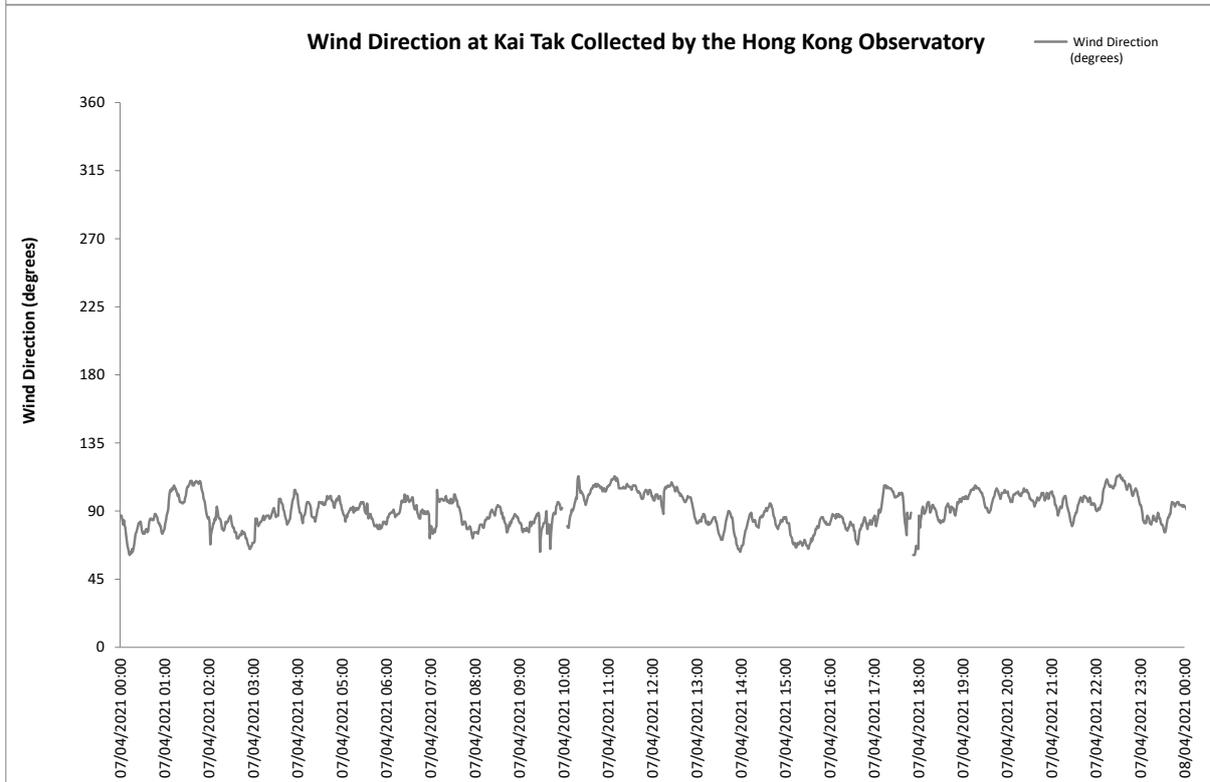
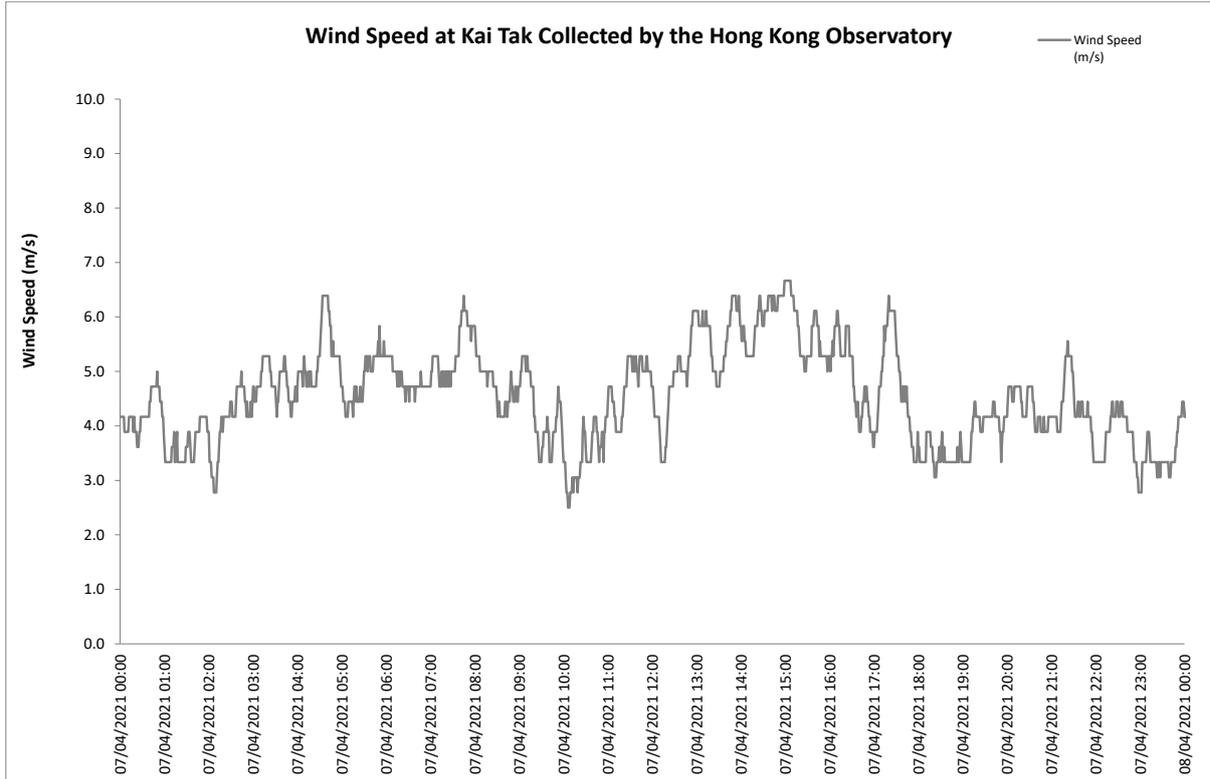
Date	Time	Weather	L _{eq} (5min)	L ₁₀	L ₉₀	Measured L _{eq} (30min)
3-Jun-21	9:19	Fine	71.2	73.5	67.3	70.5
3-Jun-21	9:24	Fine	69.8	72.2	66.0	
3-Jun-21	9:29	Fine	70.3	73.0	65.5	
3-Jun-21	9:34	Fine	70.9	73.8	66.4	
3-Jun-21	9:39	Fine	69.2	71.8	65.8	
3-Jun-21	9:44	Fine	71.0	72.4	66.1	
9-Jun-21	8:21	Cloudy	69.5	71.4	66.6	70.3
9-Jun-21	8:26	Cloudy	69.2	72.7	67.0	
9-Jun-21	8:31	Cloudy	70.1	72.2	68.0	
9-Jun-21	8:36	Cloudy	71.3	73.1	67.7	
9-Jun-21	8:41	Cloudy	70.6	72.8	65.5	
9-Jun-21	8:46	Cloudy	70.9	72.2	66.7	
15-Jun-21	8:22	Sunny	68.1	70.2	66.7	69.7
15-Jun-21	8:27	Sunny	69.7	71.8	67.6	
15-Jun-21	8:32	Sunny	70.1	72.0	68.2	
15-Jun-21	8:37	Sunny	70.3	72.9	68.5	
15-Jun-21	8:42	Sunny	69.4	71.2	67.6	
15-Jun-21	8:47	Sunny	70.4	72.5	68.3	
21-Jun-21	8:20	Fine	67.0	69.6	65.9	67.5
21-Jun-21	8:25	Fine	68.2	70.1	66.3	
21-Jun-21	8:30	Fine	66.2	68.6	64.8	
21-Jun-21	8:35	Fine	67.3	69.4	65.5	
21-Jun-21	8:40	Fine	68.5	70.4	66.3	
21-Jun-21	8:45	Fine	67.7	69.6	65.5	

Appendix F. Wind Data

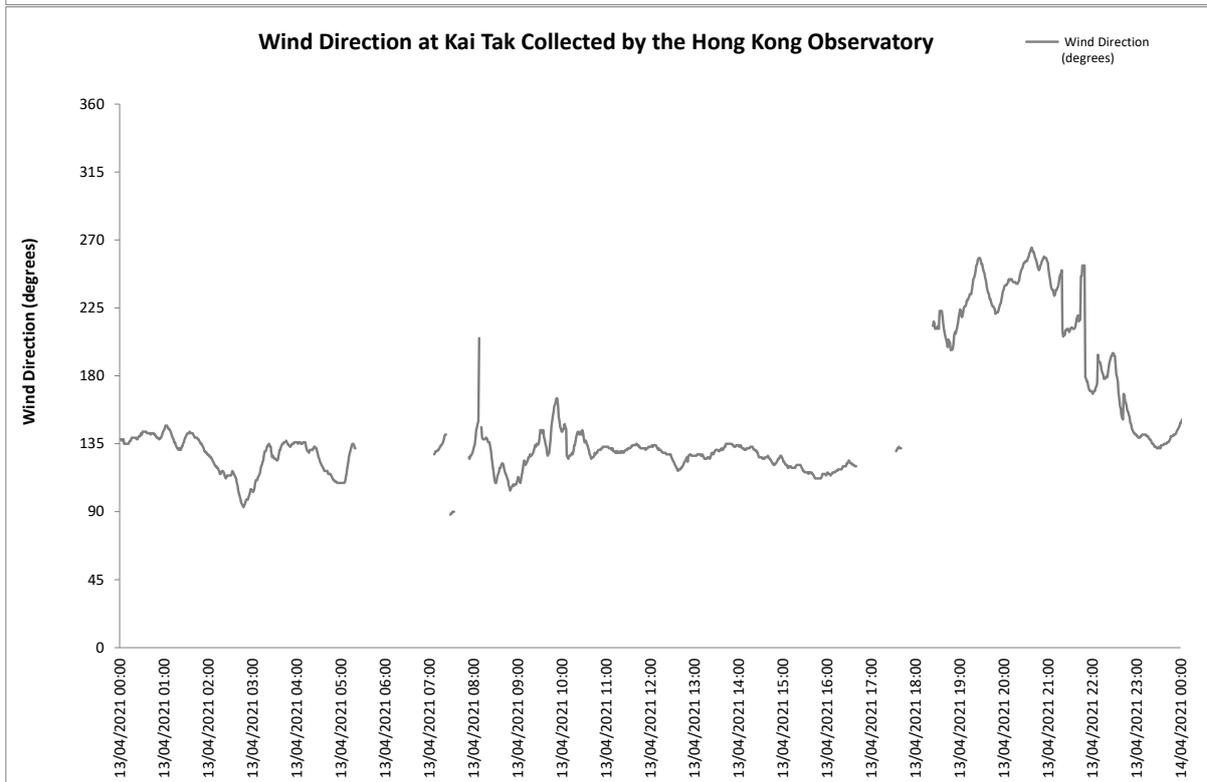
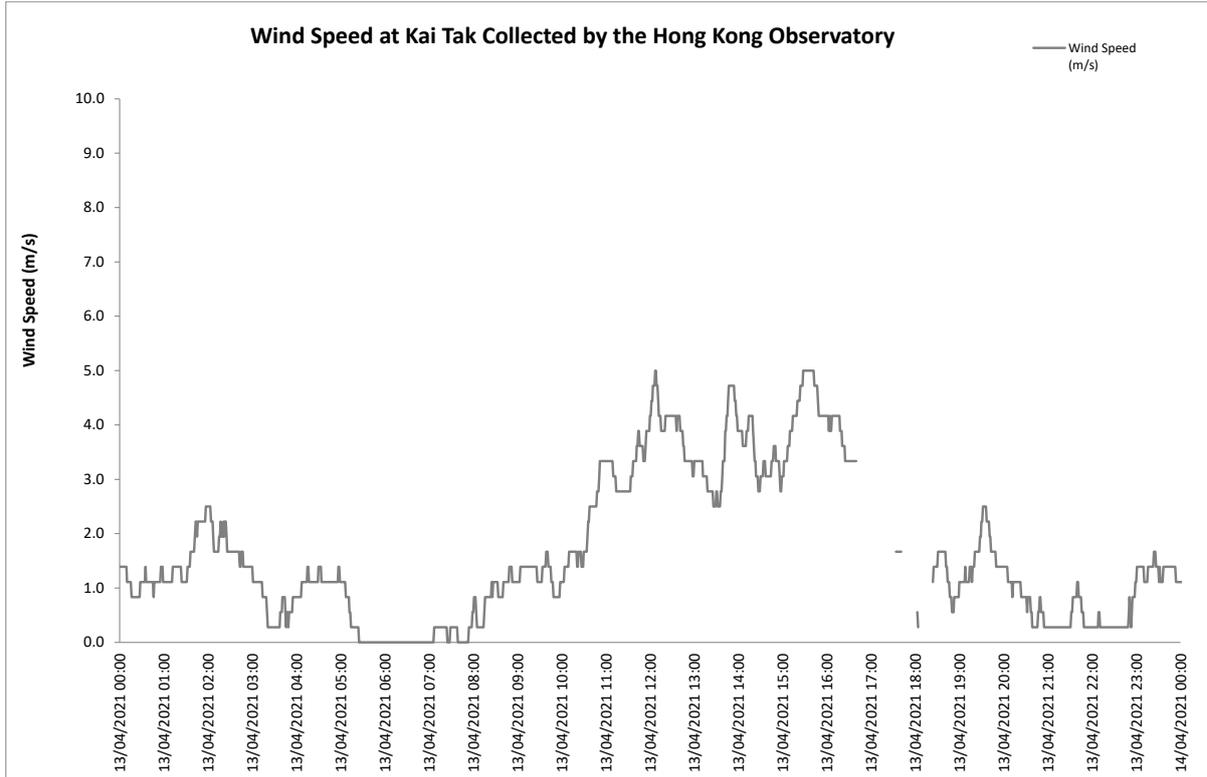
1 April 2021



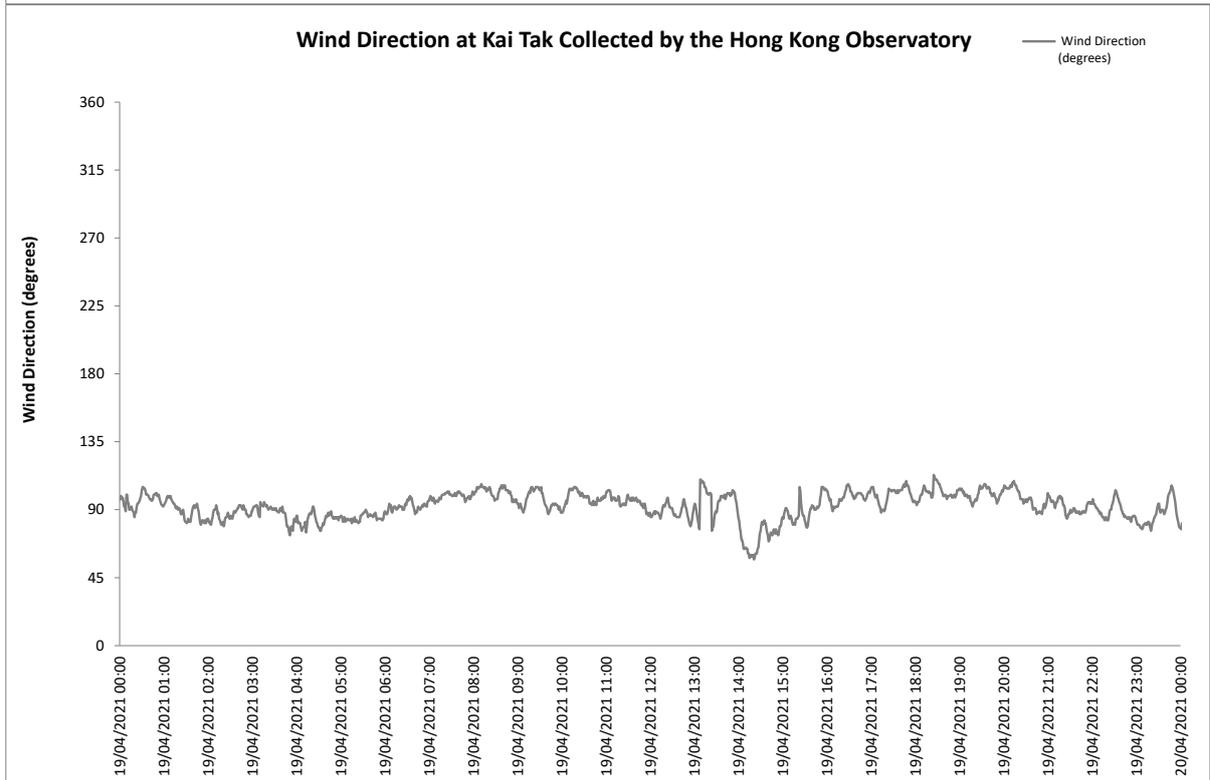
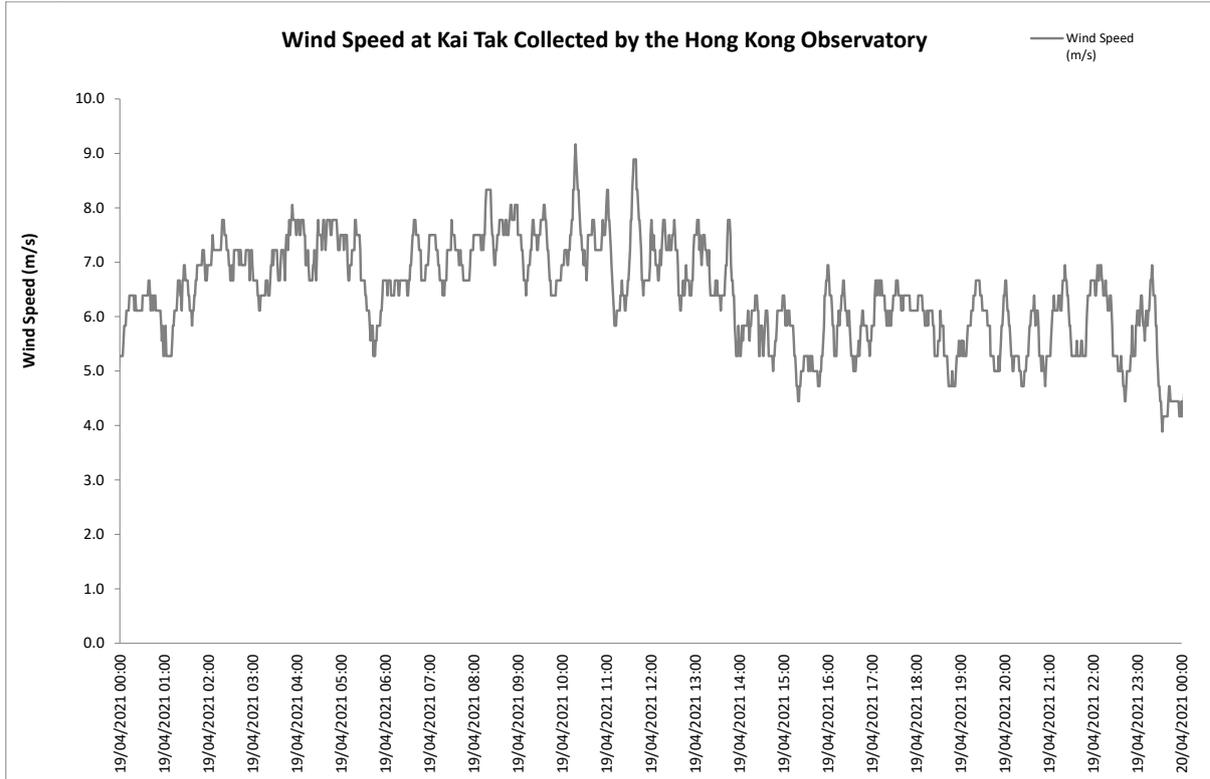
7 April 2021



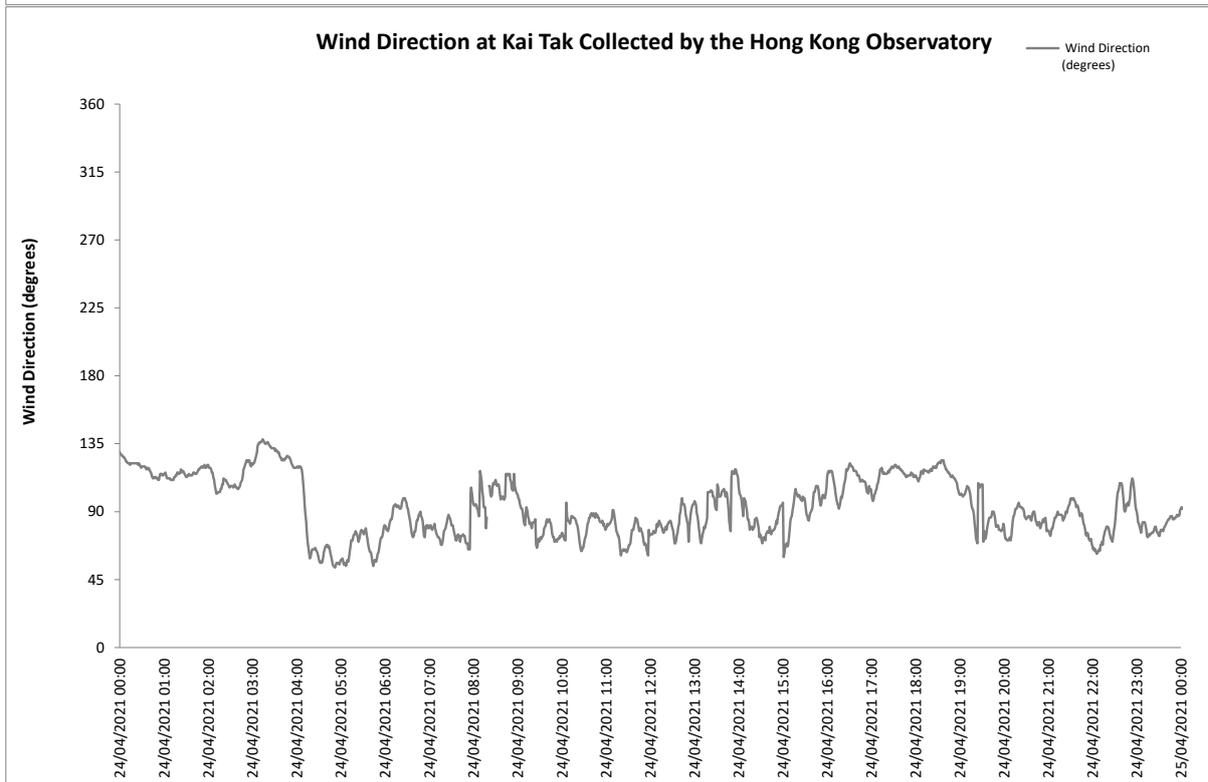
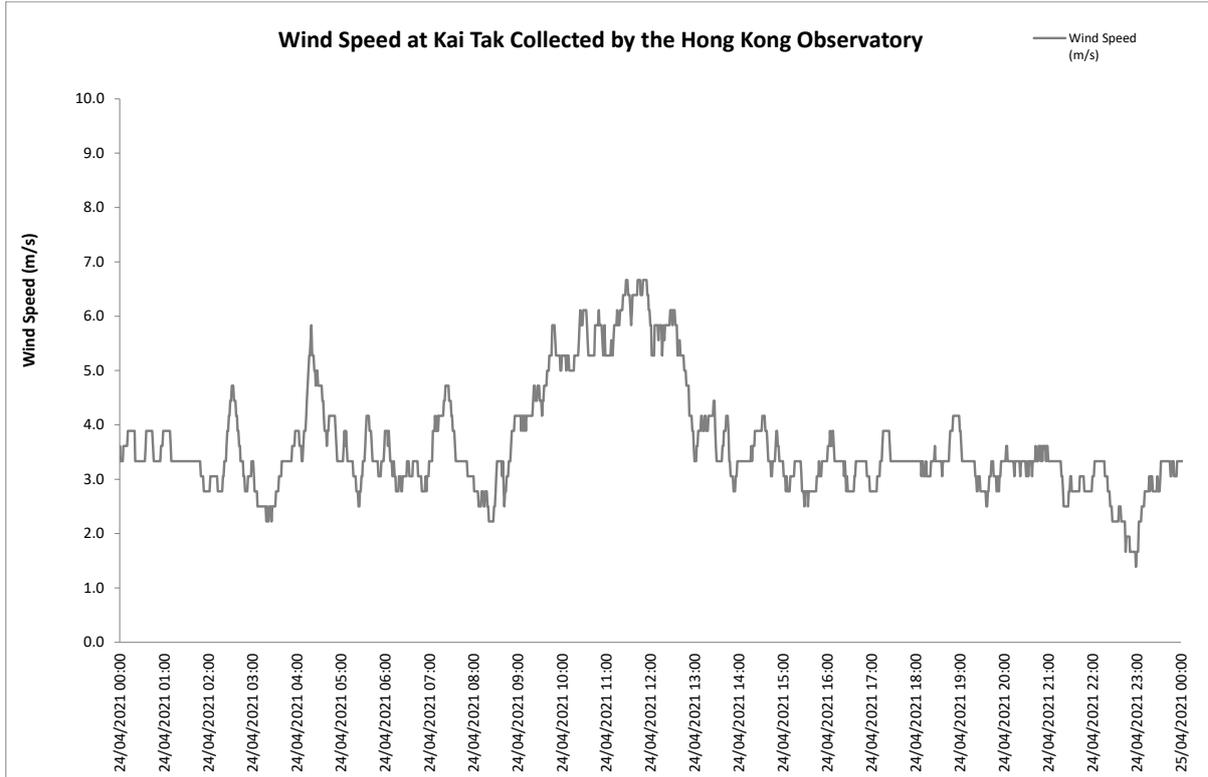
13 April 2021



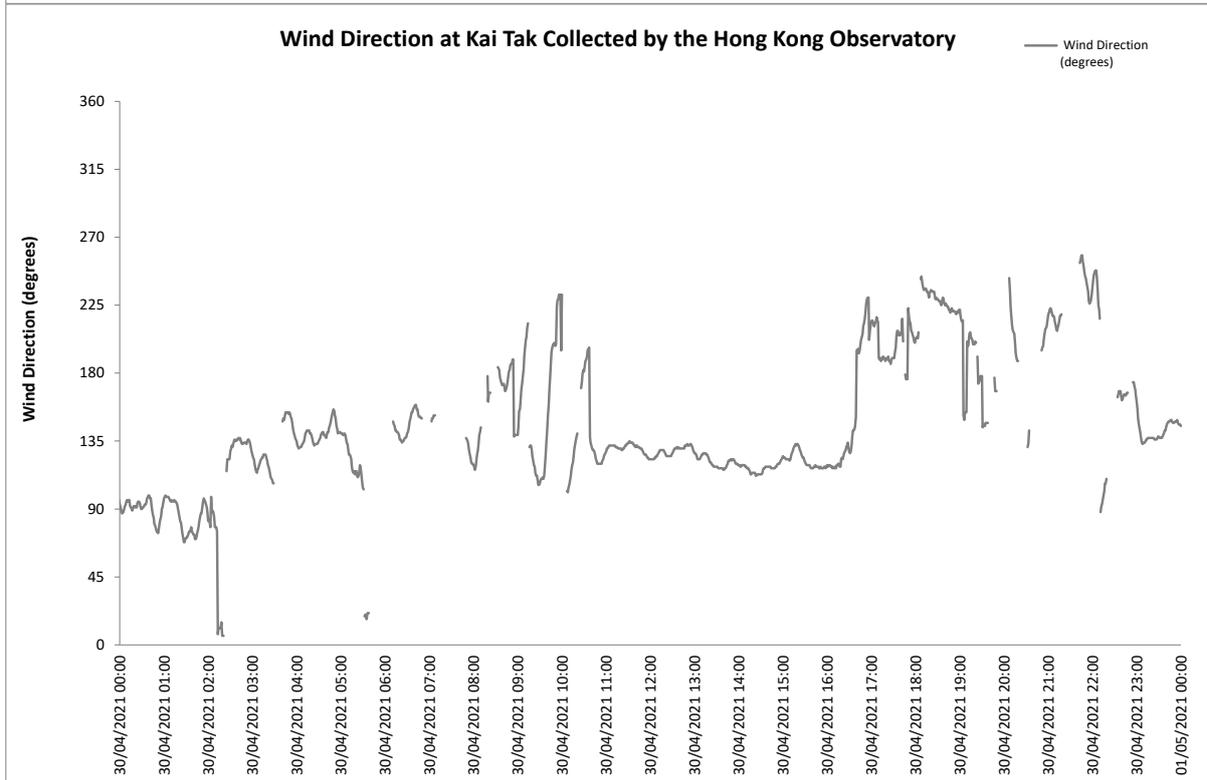
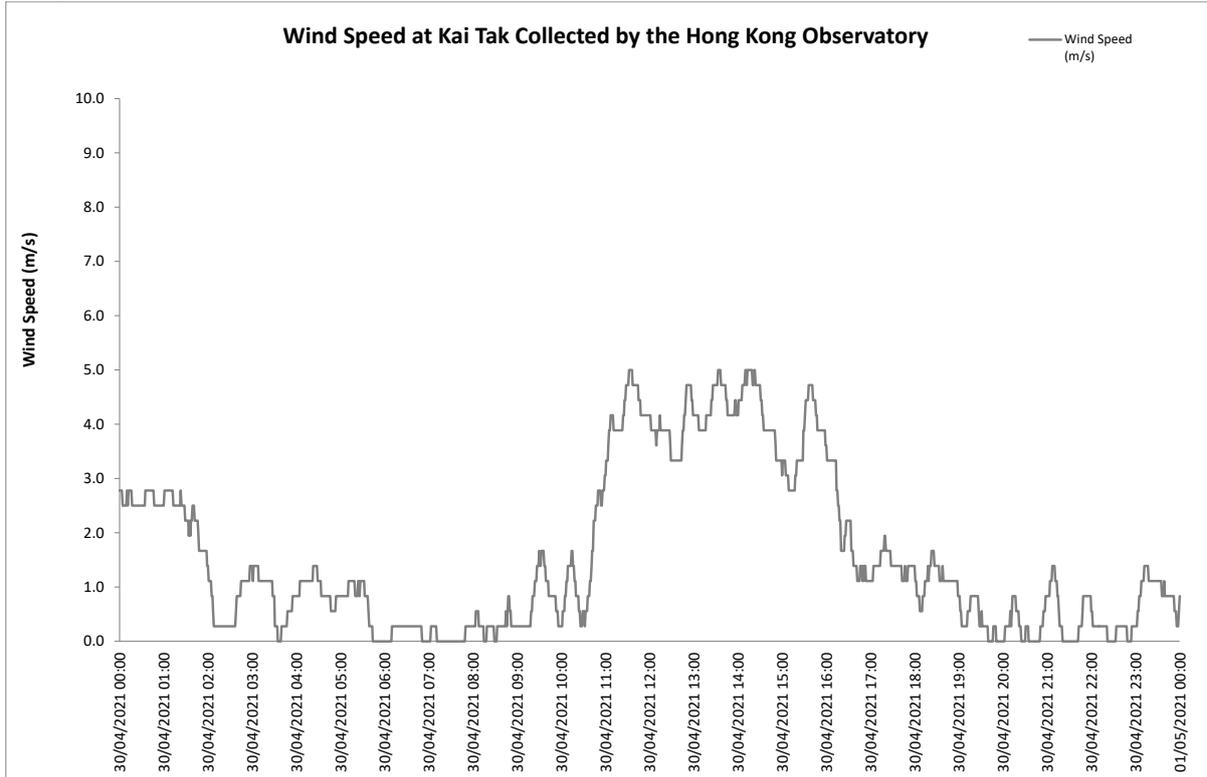
19 April 2021



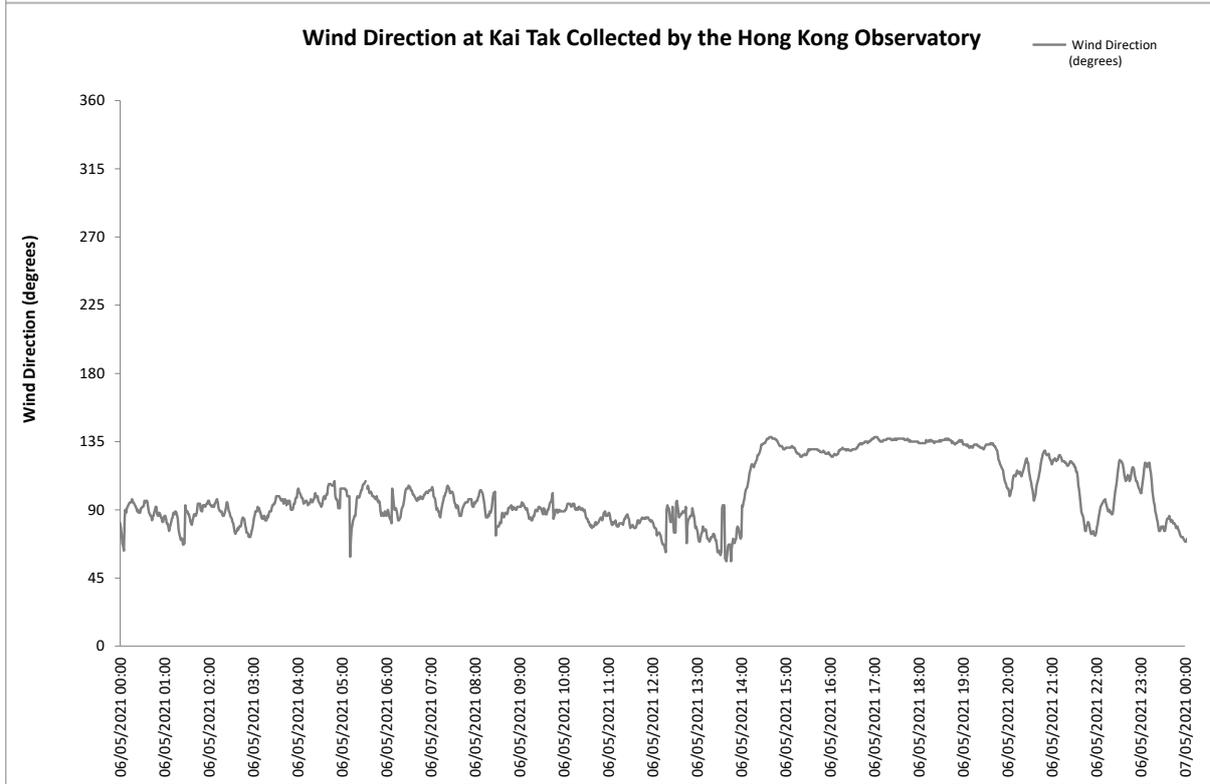
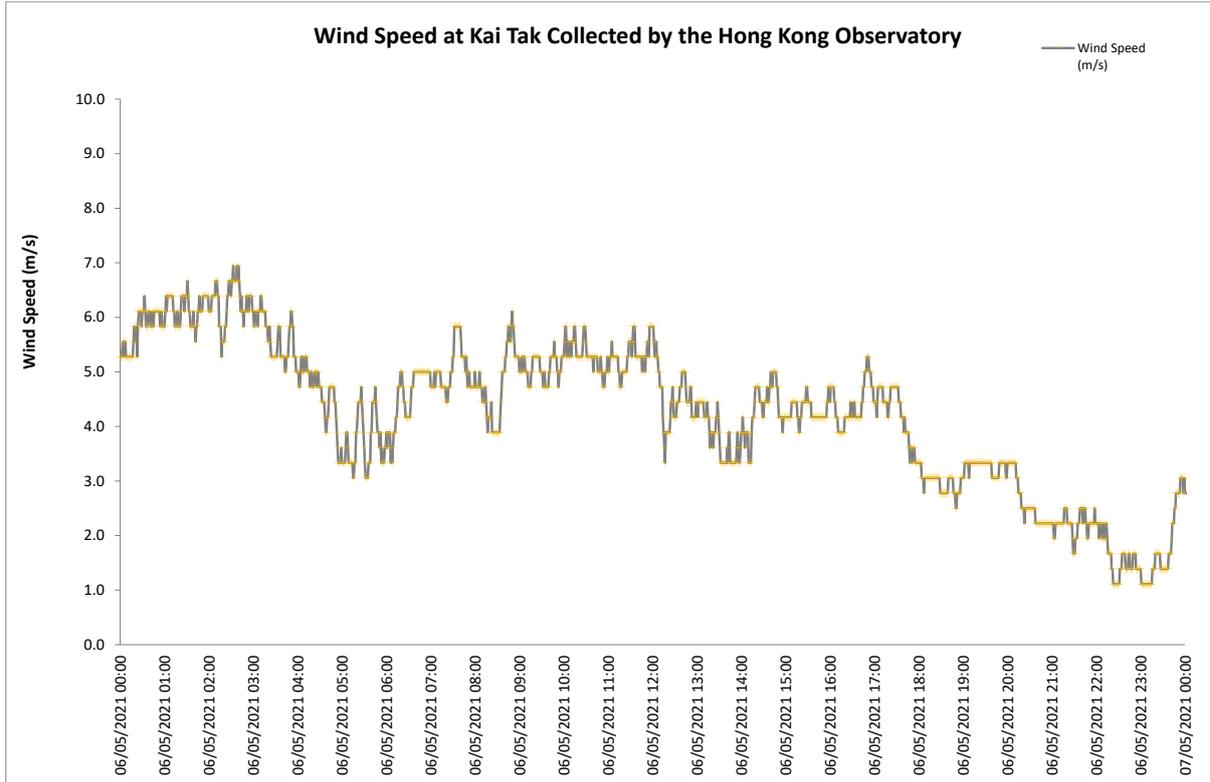
24 April 2021



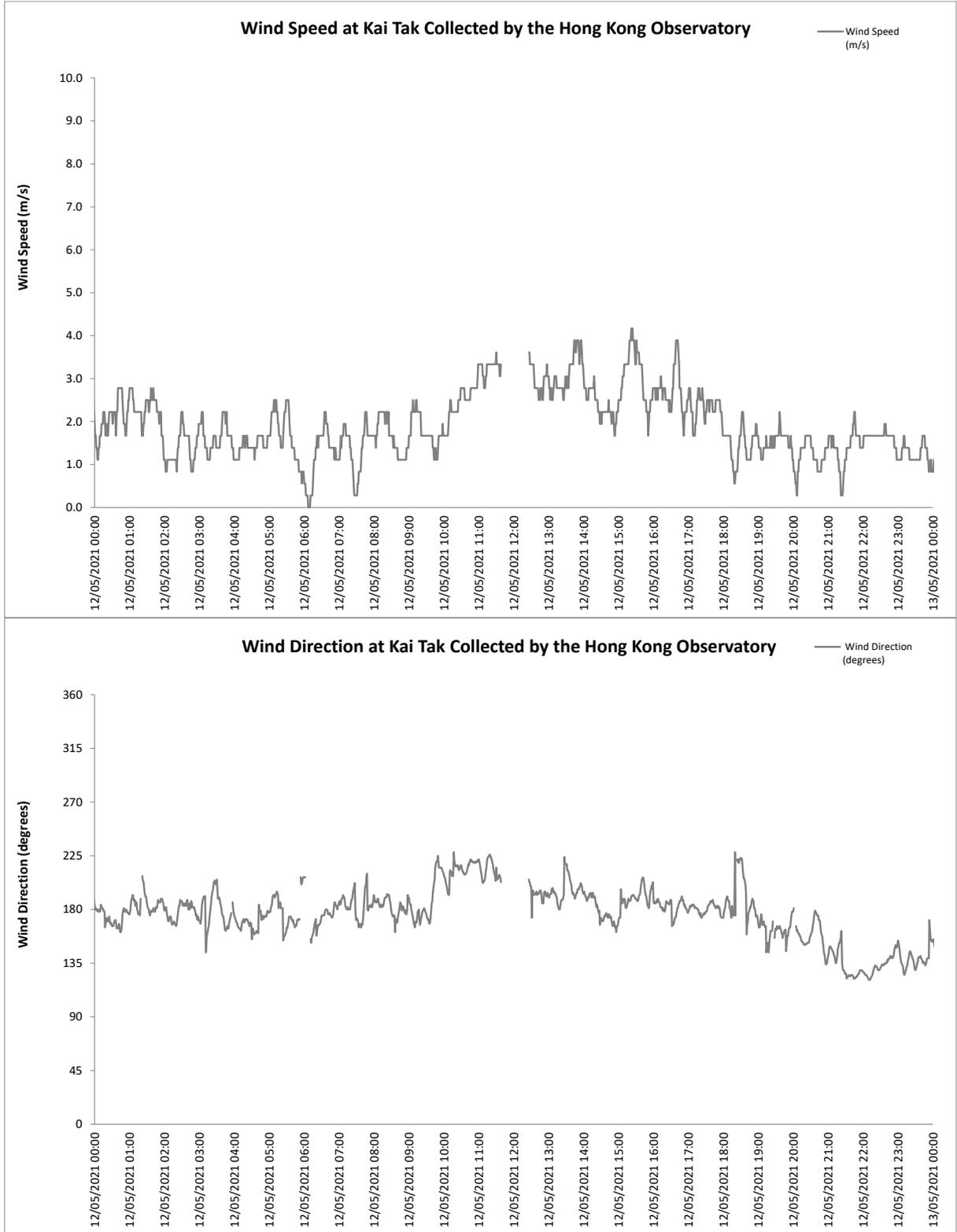
30 April 2021



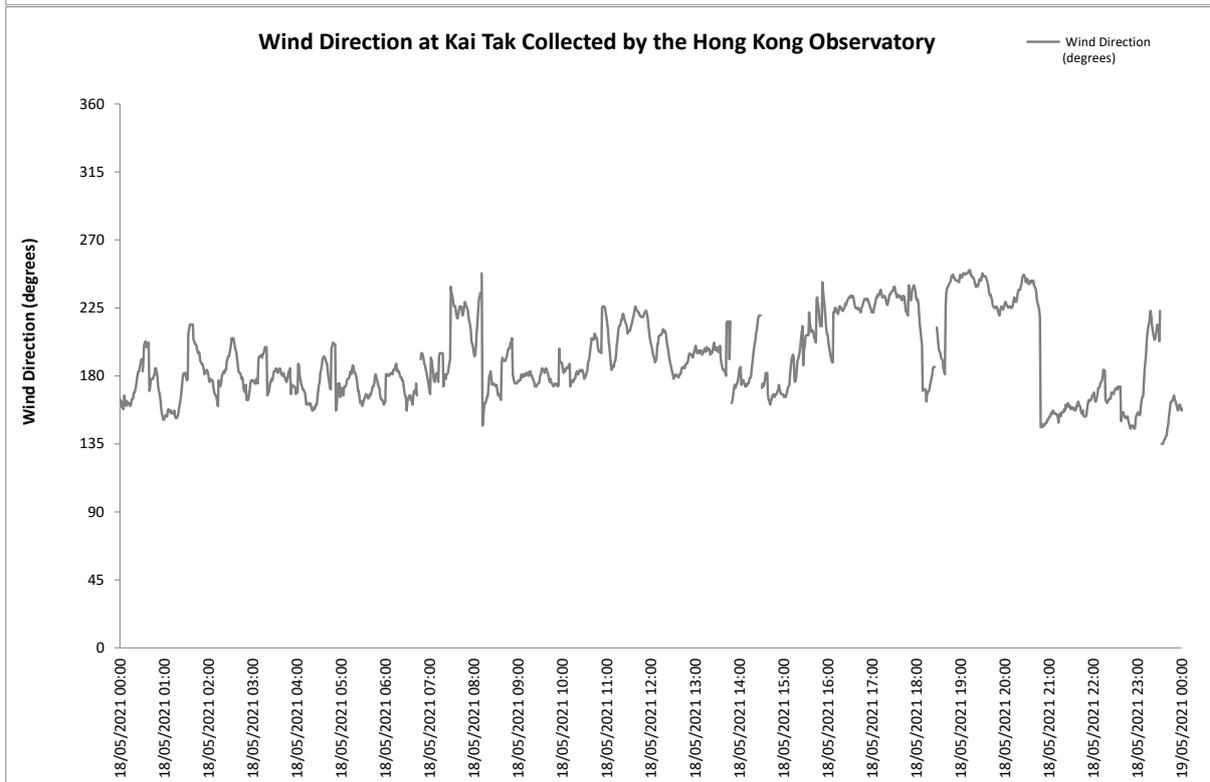
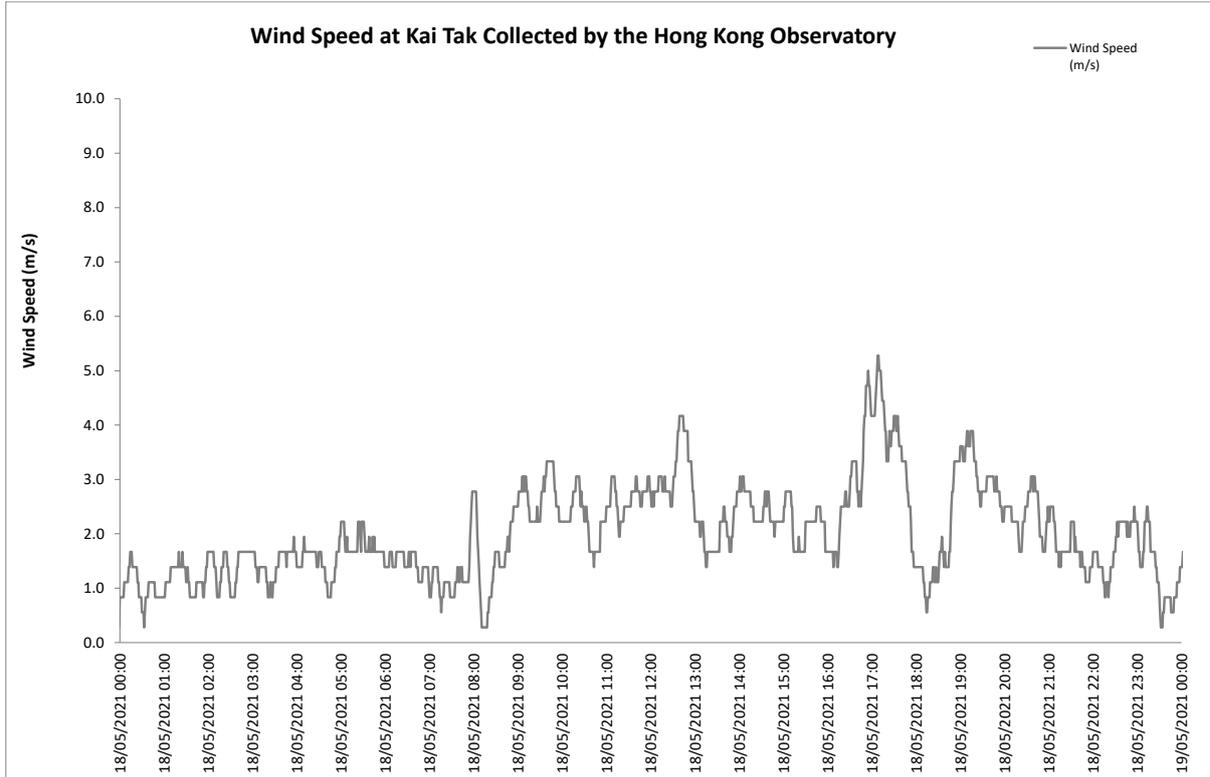
6 May 2021



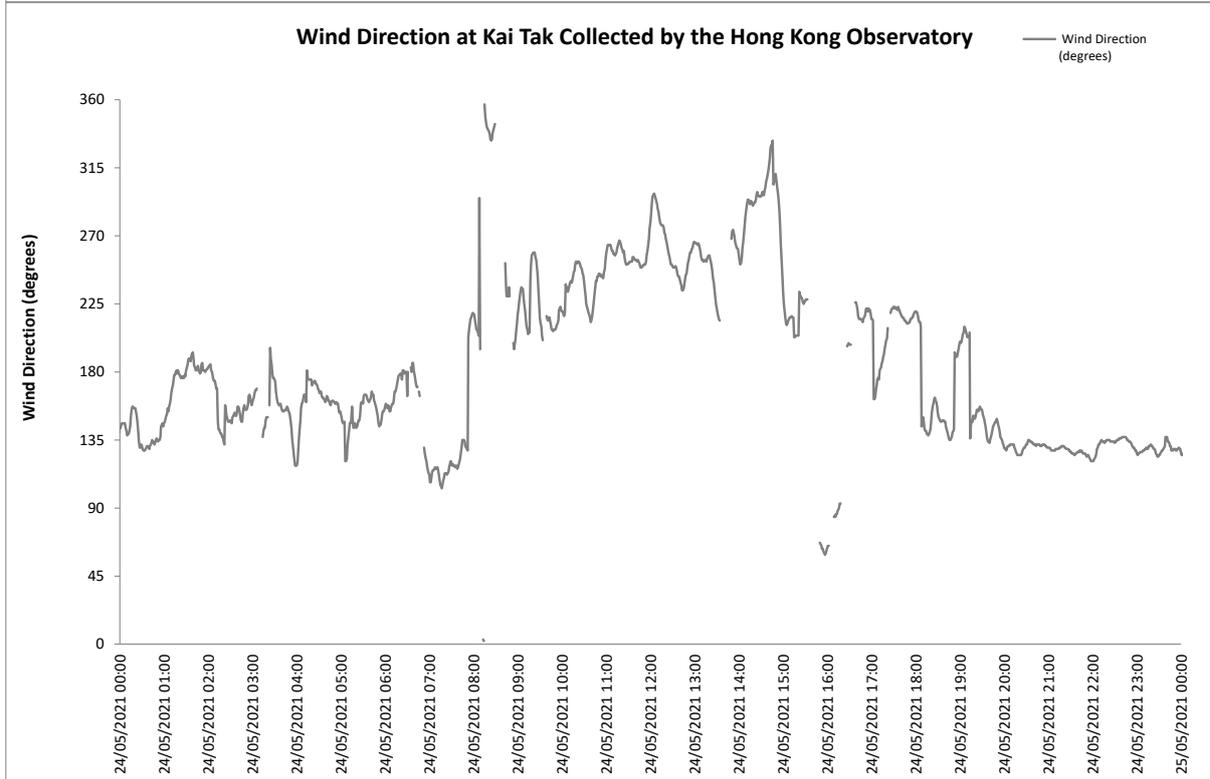
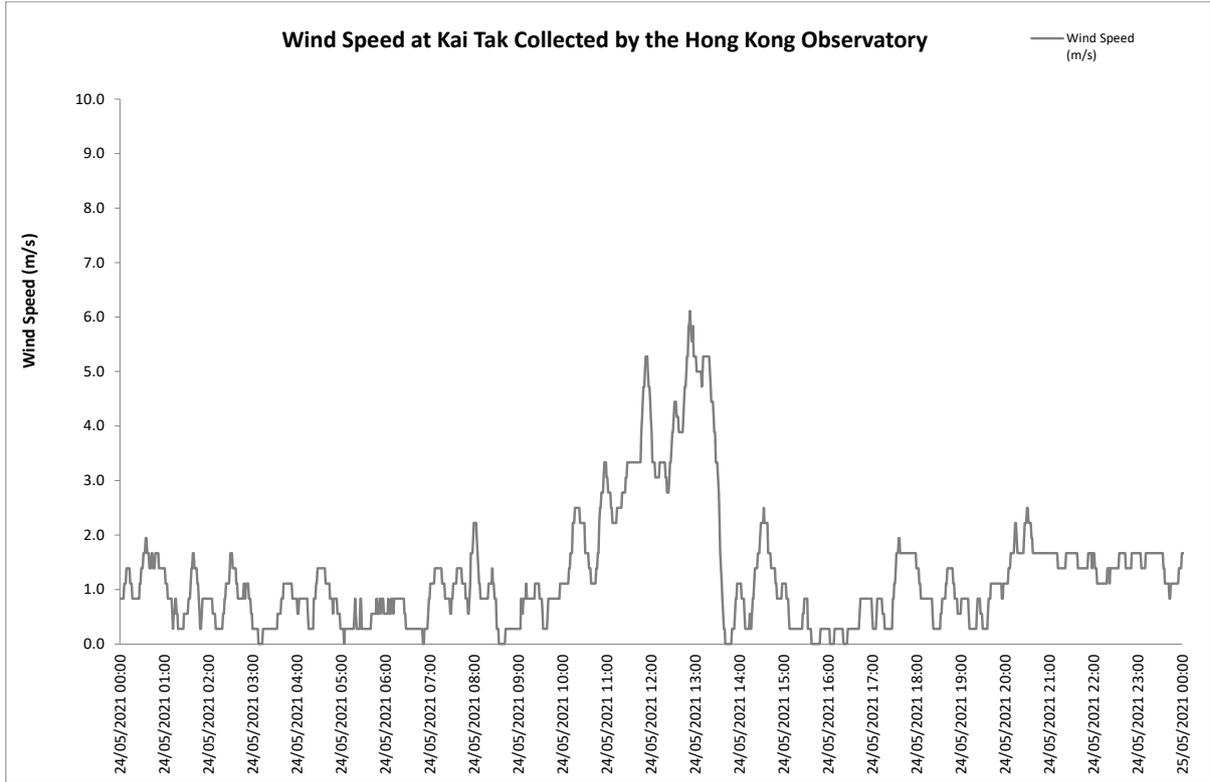
12 May 2021



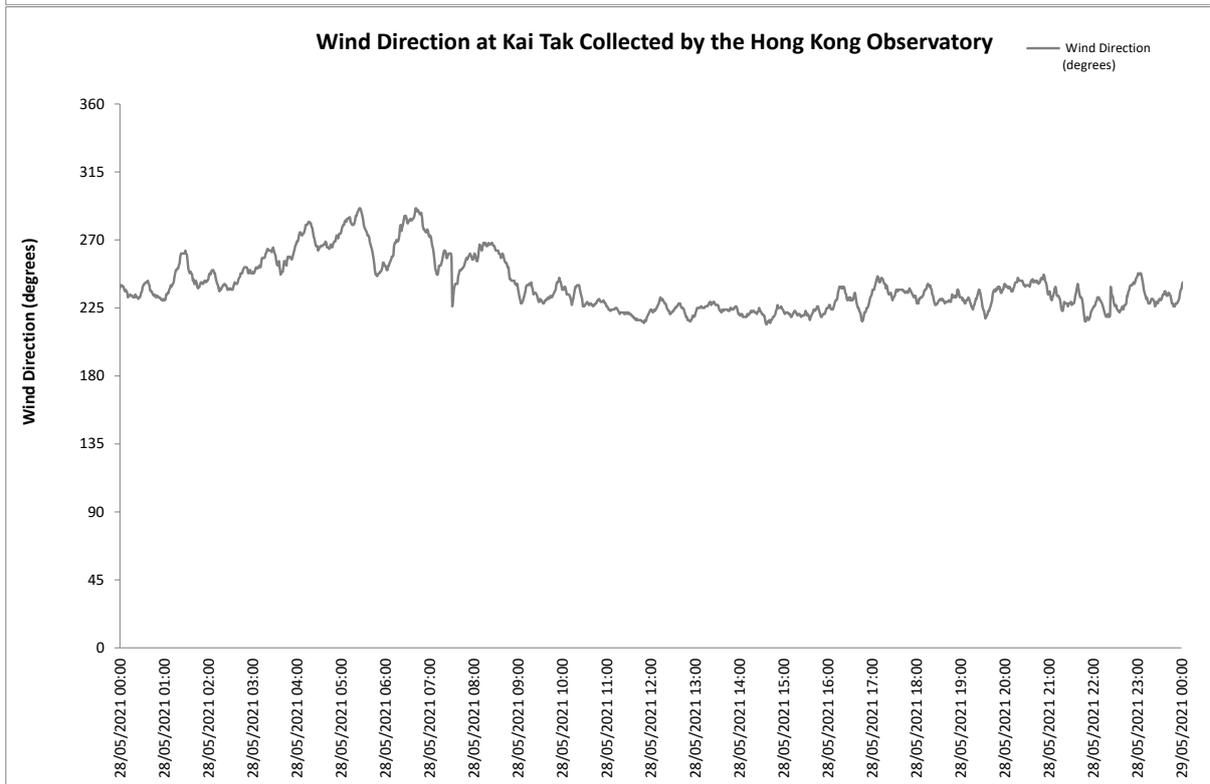
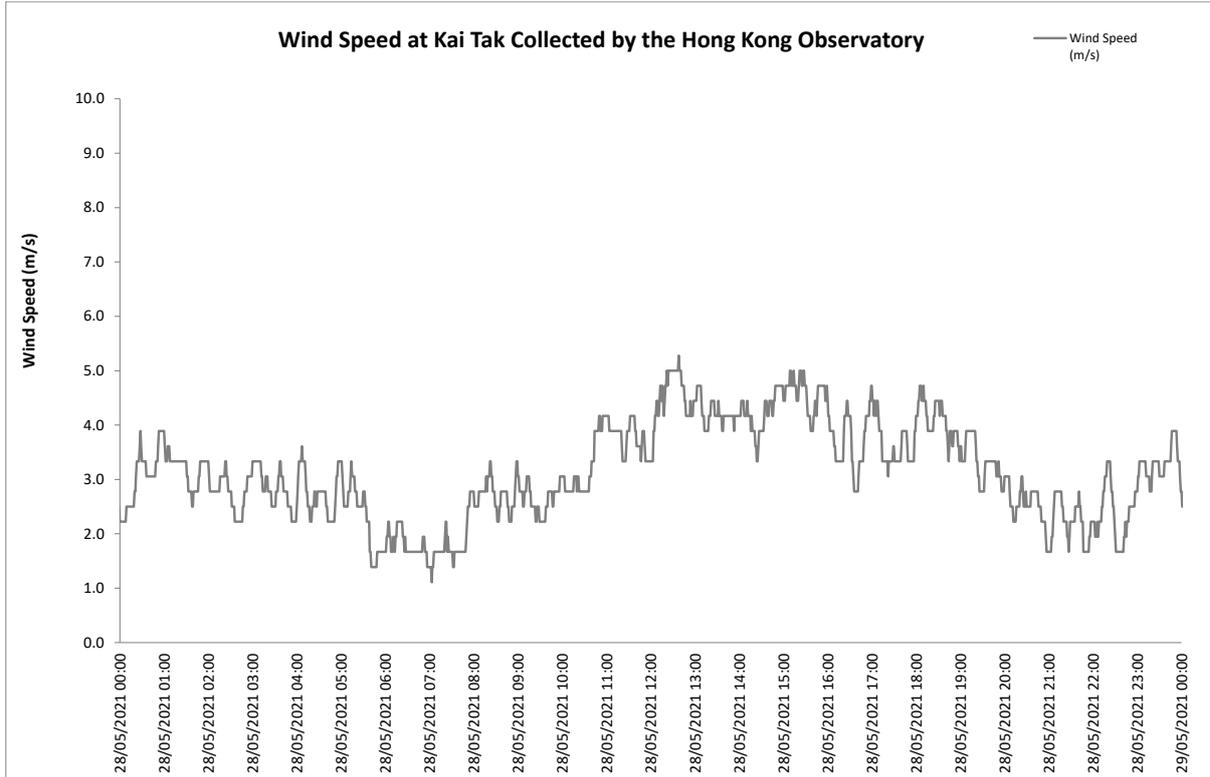
18 May 2021



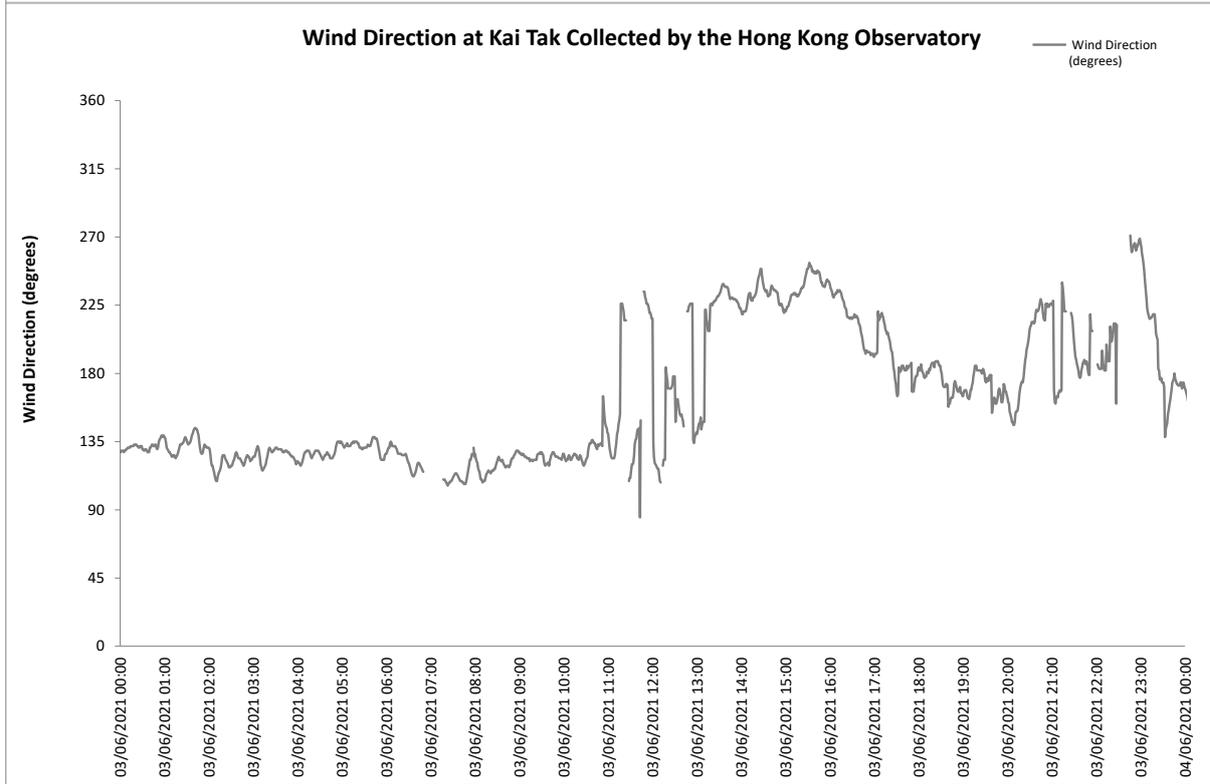
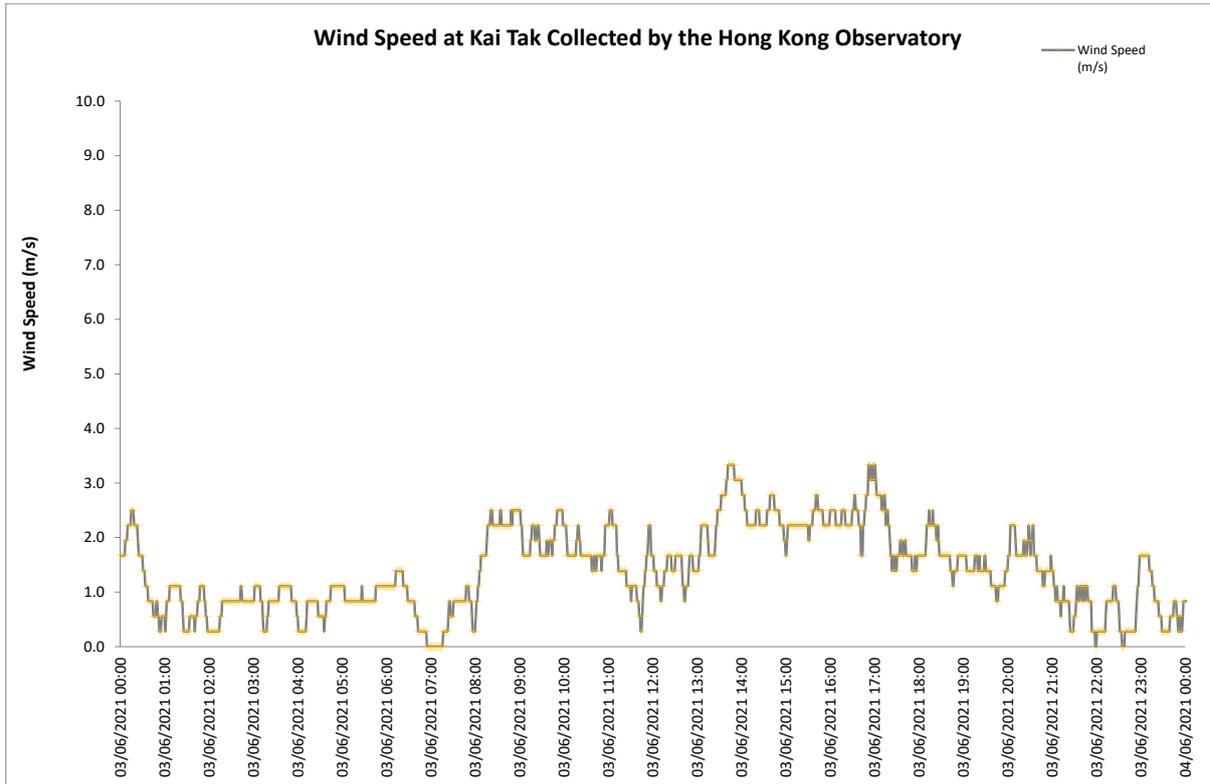
24 May 2021



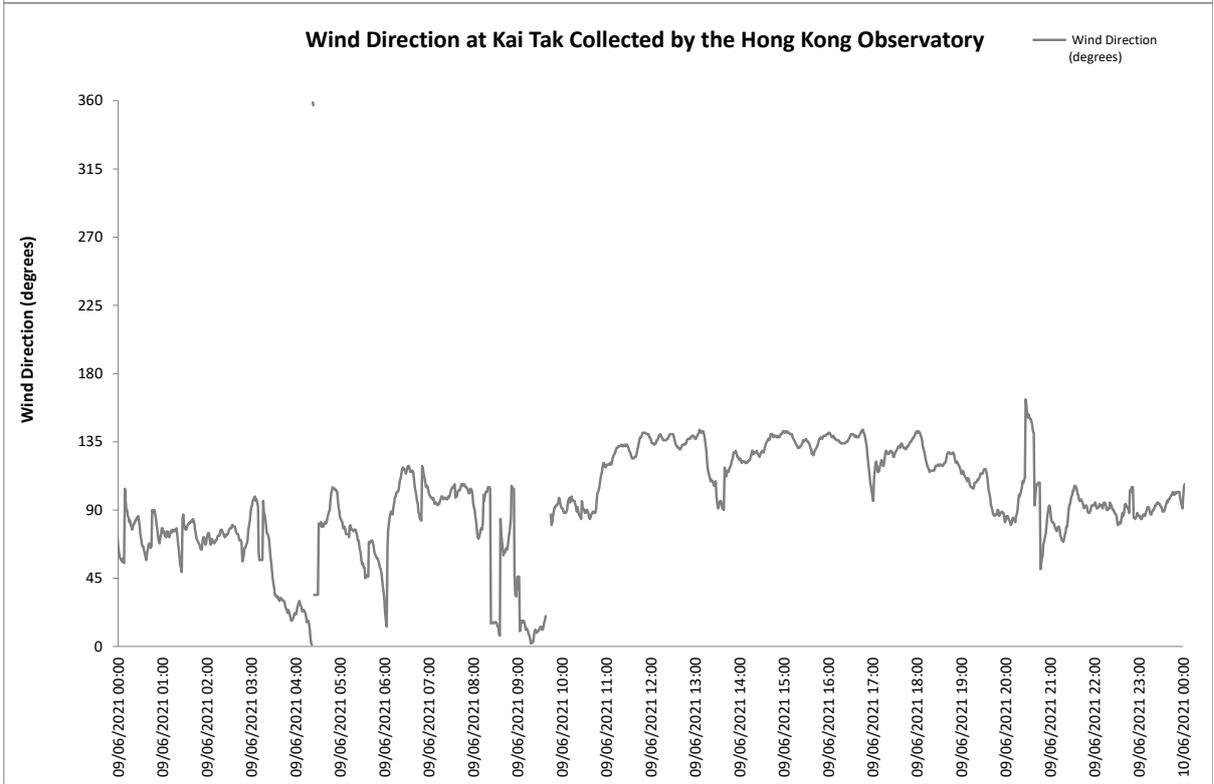
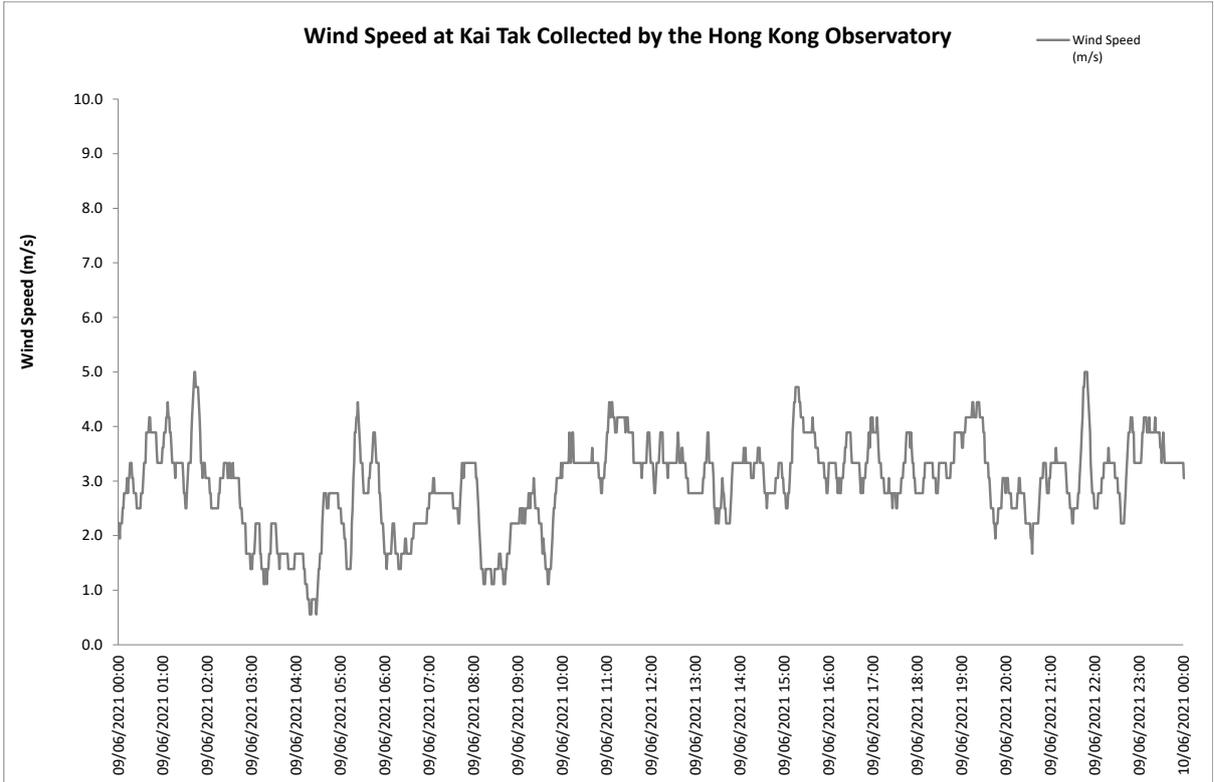
28 May 2021



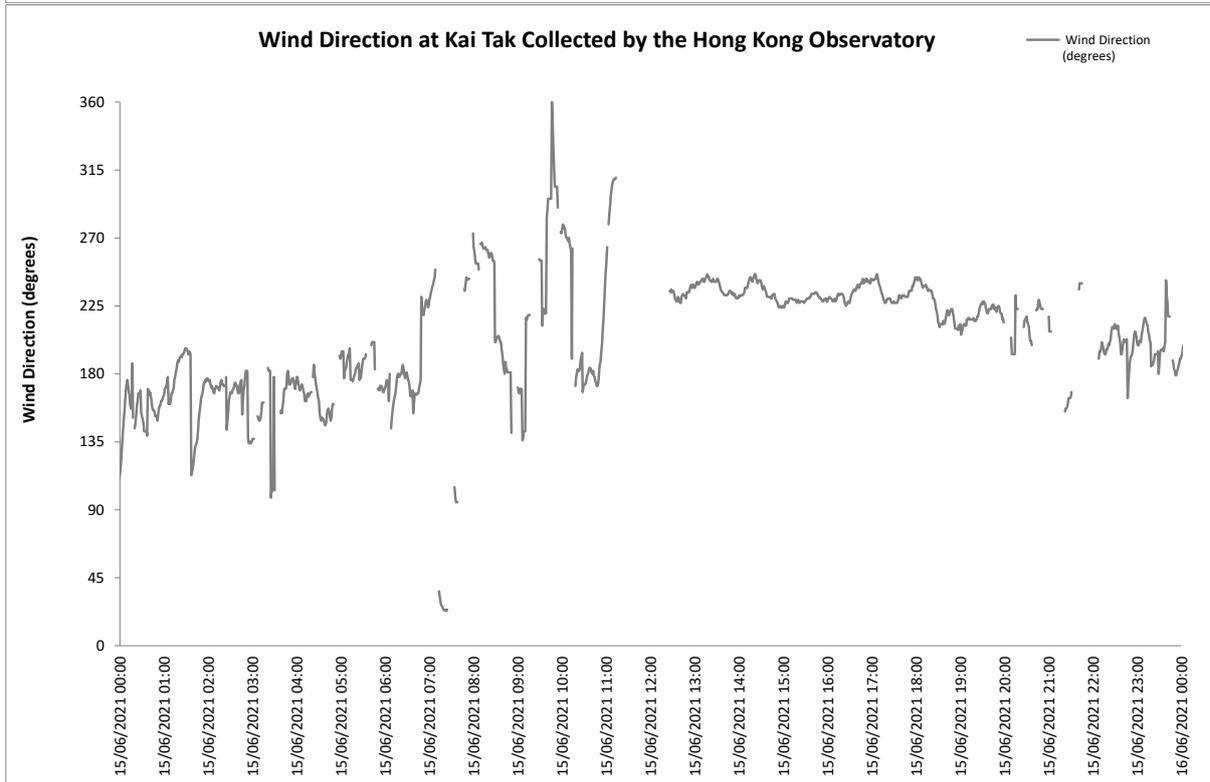
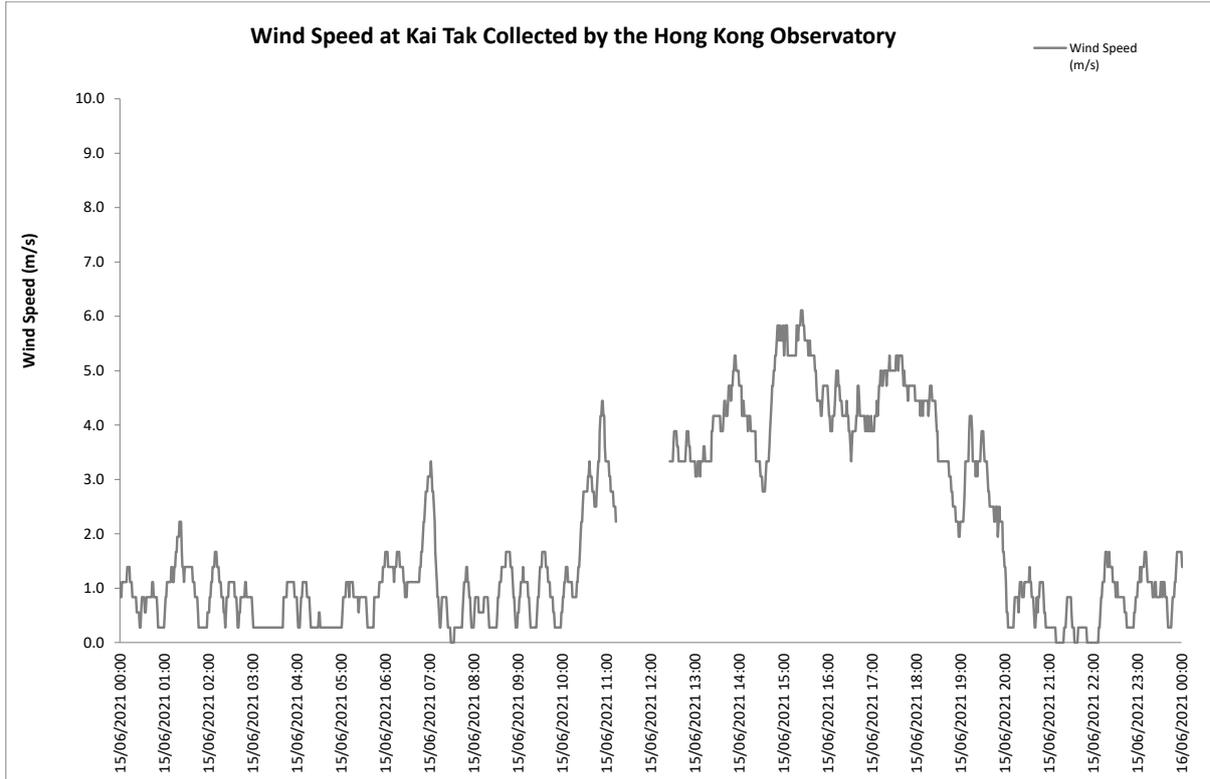
3 June 2021



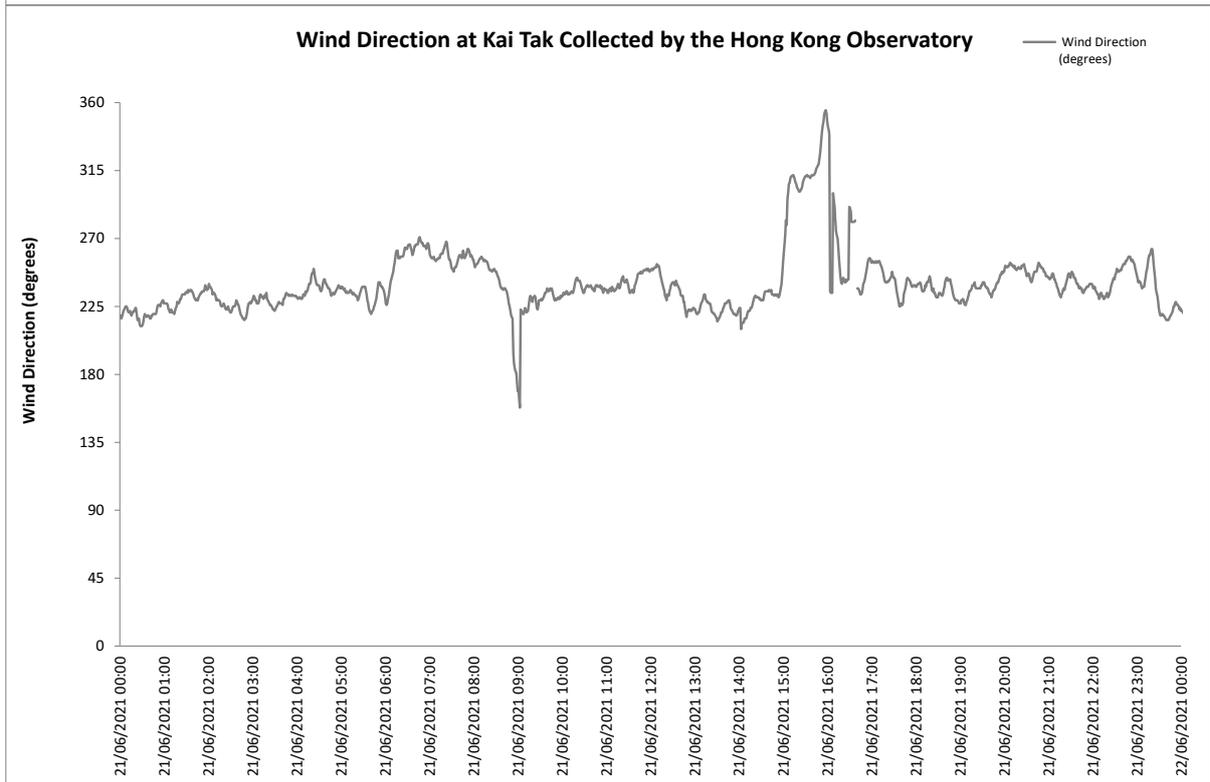
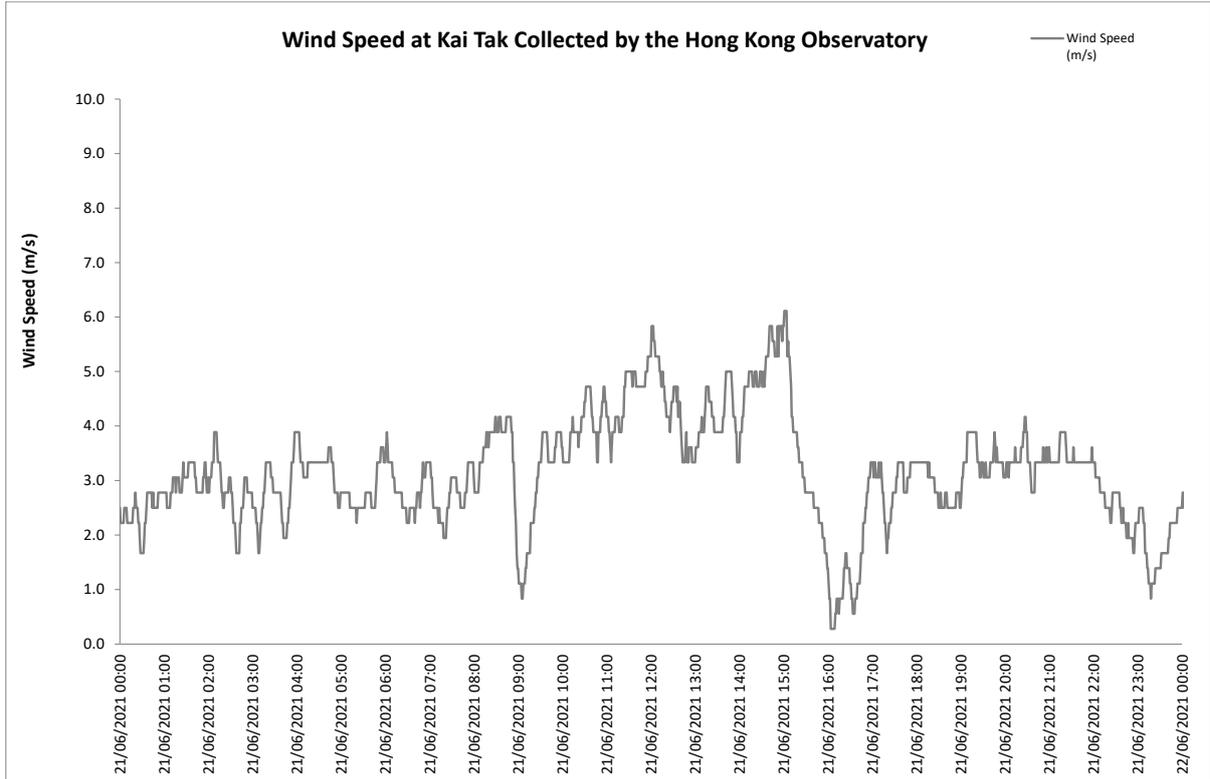
9 June 2021



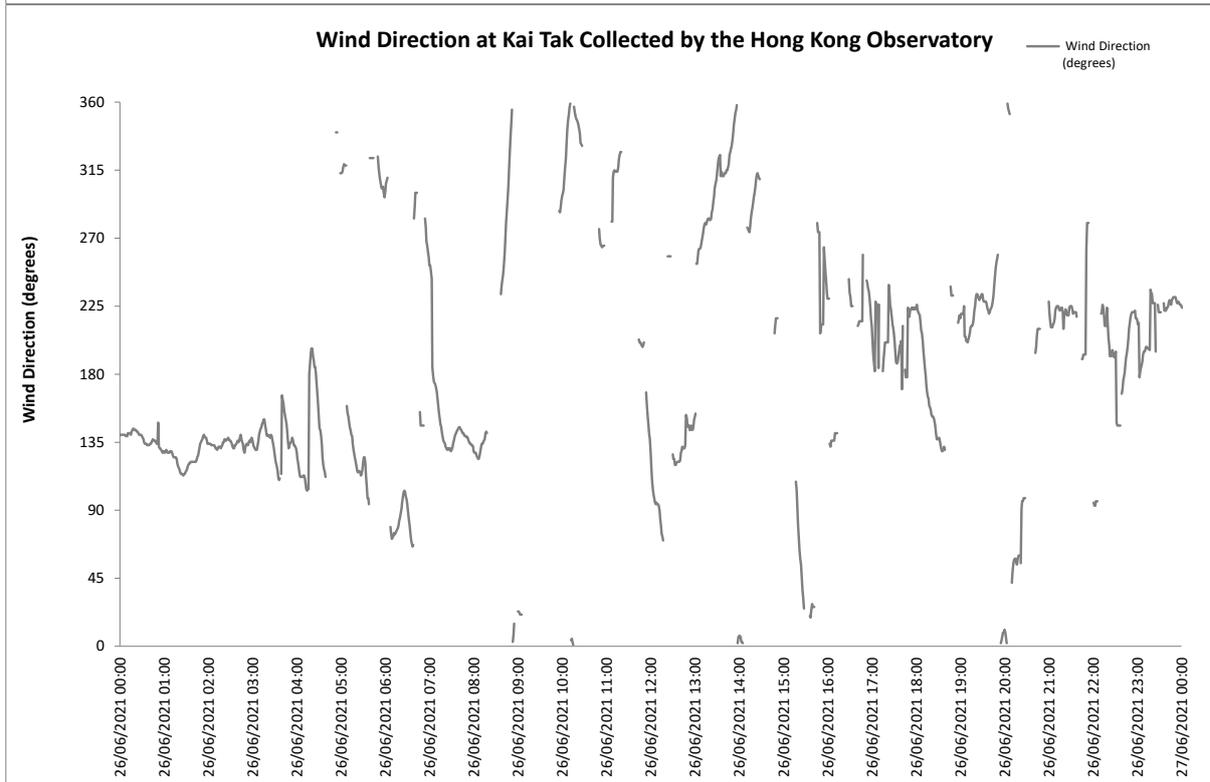
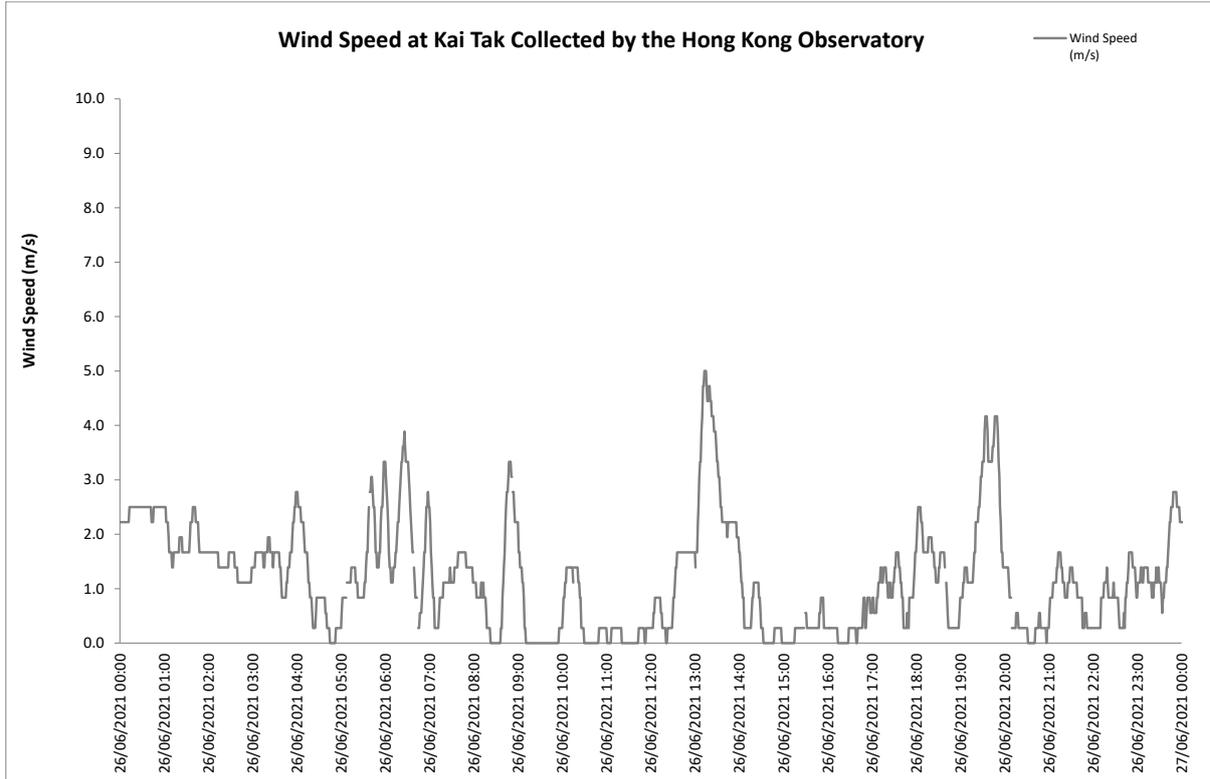
15 June 2021



21 June 2021



27 June 2021



Appendix G. 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: 2019-2021



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		
Jan-19																	
Feb-19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Mar-19	4960.89	4741.39	219.50	0.00	0.00	0.00	0.00	0.00	0.00	11.84	0.00	0.00	0.00	0.00	4729.55		
Apr-19	1218.47	1211.81	6.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	1211.75		
May-19	87.29	87.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	87.28		
Jun-19	80.77	80.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.00	0.08	0.42	0.00	79.61		
Jul-19	2302.16	614.79	1687.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.95	0.00	613.54		
Aug-19	3619.81	280.59	3339.22	0.00	0.00	0.00	0.00	0.00	0.00	1.77	0.00	0.00	1.29	0.60	276.93		
Sep-19	9840.16	349.65	9490.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.04	0.60	348.01		
Oct-19	11505.06	543.69	10961.37	0.00	0.00	0.00	0.00	0.00	0.00	81.95	0.00	1.43	1.15	0.00	459.16		
Nov-19	4718.13	313.84	4404.29	0.00	0.00	0.00	0.00	0.00	0.00	69.84	0.00	0.24	1.37	0.00	242.39		
Dec-19	5185.14	102.48	5082.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.63	0.80	100.05		
Jan-20	12107.08	127.05	11980.03	0.00	0.00	0.00	0.00	0.00	0.00	16.32	0.00	0.57	1.36	0.00	108.80		
Feb-20	18104.96	100.58	13459.32	0.00	4545.06	0.00	0.00	0.00	0.00	23.64	0.00	0.00	0.96	0.00	75.98		
Mar-20	35699.19	235.99	6615.03	0.00	28848.17	0.00	0.00	0.00	0.00	90.73	0.00	0.50	1.33	0.80	142.63		
Apr-20	42587.03	137.90	0.00	0.00	42449.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.10	0.00	136.80		
May-20	64506.51	218.89	0.00	0.00	64287.62	0.00	0.00	0.00	0.00	47.41	0.00	0.40	1.61	0.00	169.47		
Jun-20	44983.53	337.20	6519.25	0.00	38127.08	0.00	0.00	0.00	0.00	171.56	0.00	0.58	2.55	0.80	161.71		
Jul-20	43468.97	602.89	0.00	0.00	42866.08	0.00	0.00	0.00	0.00	377.41	0.01	1.03	2.16	0.00	222.28		
Aug-20	61609.05	1121.82	3771.32	0.00	56715.91	0.00	0.00	0.00	0.00	861.33	0.35	1.58	2.35	0.00	256.21		
Sep-20	111046.04	730.59	0.00	0.00	110315.45	0.00	0.00	0.00	0.00	443.46	0.01	1.39	1.87	0.00	283.86		
Oct-20	109678.75	712.61	0.00	0.00	108966.14	0.00	0.00	0.00	0.00	385.68	0.02	1.00	1.64	0.00	324.27		
Nov-20	135055.14	852.56	0.00	0.00	134202.58	0.00	0.00	0.00	0.00	362.36	0.01	0.86	2.12	0.60	486.61		
Dec-20	132183.00	1163.51	6981.13	0.00	124038.36	0.00	0.00	0.00	0.00	390.22	0.08	2.19	1.66	0.00	769.36		
Jan-21	78129.57	1315.84	4253.06	0.00	72560.67	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	386.46	0.07	1.24	0.64	0.00	523.76		
Mar-21	51743.65	1314.82	18740.08	0.00	31688.75	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	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	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	353.07	0.02	1.10	1.37	0.00	1456.83		
Total	1167129.07	23044.71	118278.40	0.00	1025805.97	0.00	0.00	0.00	0.00	5699.12	0.75	22.41	39.56	4.20	17278.68		

Total C&D waste generated	1167129.07	tonne			
Total C&D waste generated (excluding excavated materials)	23044.71	tonne	a1=b+c+d+e+f+g+h+i+j+k+l+m		
Total recycled C&D waste	5761.83	tonne	a2=c+d+e+f+g+h+i+j+k+l+m		
% of recycled C&D waste for BEAM Plus MA10 or MA11	25.00	%	a3=c+d+e+h+i+j+k		
			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 May 2021 and June 2021 have been updated according to the latest information from contractor in June 2021.
 - (9) Recycling record for metals, papers and plastics have been updated according to the latest information from contractor in June 2021.

Contract No. BD3/4091/19

Proposed Composite Development at N.K.I.L. 6607 Shing Kai Road, Kai Tak, Kowloon



Monthly Summary Waste Flow Table for 2020

Month	Actual Quantities of Inert C&D Materials Generated Monthly										Actual Quantities of C&D Wastes Generated Monthly									
	Total Quantity Generated		Broken Concrete (see Note 2)		Reused in the Contract		Reused in other Projects		Disposed as Public Fill		Metals		Paper / cardboard packaging		Plastics (see Note 1)		Chemical Waste		Other, e.g. general refuse	
	(in '000 m ³)		(in '000 m ³)		(in '000 m ³)		(in '000 m ³)		(in '000 m ³)		(in '000 kg)		(in '000 kg)		(in '000 kg)		(in '000 m ³)		(in '000 m ³)	
	Est.	Act.	Est.	Act.	Est.	Act.	Est.	Act.	Est.	Act.	Est.	Act.	Est.	Act.	Est.	Act.	Est.	Act.	Est.	Act.
Jan																				
Feb																				
Mar																				
Apr																				
May																				
Jun																				
Sub-total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jul	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aug	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sep	0.20	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Oct	0.80	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.80	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nov	0.80	1.63	0.00	0.00	0.00	0.00	0.00	0.00	0.80	1.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dec	0.80	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.80	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	2.60	4.56	0.00	0.00	0.00	0.00	0.00	0.00	2.60	4.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes : (1) Plastics refer to plastic bottles / container, plastic sheets / foam from packaging material.
 (2) Broken concrete for recycling into aggregates.

Contract No. BD3/4091/19

Proposed Composite Development at N.K.I.L. 6607 Shing Kai Road, Kai Tak, Kowloon



Monthly Summary Waste Flow Table for 2021

Month	Actual Quantities of Inert C&D Materials Generated Monthly										Actual Quantities of C&D Wastes Generated Monthly										
	Total Quantity Generated		Broken Concrete (see Note 2)		Reused in the Contract		Reused in other Projects		Disposed as Public Fill		Metals		Paper / cardboard packaging		Plastics (see Note 1)		Chemical Waste (incl. ACM, DCM, spent oil)		Other, e.g. general refuse		
	(in '000 m ³)		(in '000 m ³)		(in '000 m ³)		(in '000 m ³)		(in '000 m ³)		(in '000 kg)		(in '000 kg)		(in '000 kg)		(in '000 m ³)		(in '000 m ³)		
	Est.	Act.	Est.	Act.	Est.	Act.	Est.	Act.	Est.	Act.	Est.	Act.	Est.	Act.	Est.	Act.	Est.	Act.	Est.	Act.	
Jan	0.80	1.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.80	1.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Feb	0.80	1.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.80	1.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mar	0.80	0.76	0.00	0.00	0.00	0.00	0.00	0.00	5.63	0.80	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Apr	17.10	9.30	0.00	0.00	0.00	0.00	0.00	0.00	7.97	17.10	1.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
May	17.10	18.87	0.00	0.00	0.00	0.00	0.00	0.00	18.87	17.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jun	18.10	20.37	0.00	0.00	0.00	0.00	0.00	0.00	19.06	18.10	1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sub-total	54.70	51.71	0.00	0.00	0.00	0.00	0.00	0.00	51.53	54.70	5.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Jul																					
Aug																					
Sep																					
Oct																					
Nov																					
Dec																					
Total	54.70	51.71	0.00	0.00	0.00	0.00	0.00	0.00	51.53	54.70	5.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

- Notes :
- (1) Plastics refer to plastic bottles / container, plastic sheets / foam from packaging material.
 - (2) Broken concrete for recycling into aggregates.
 - (3) All quantity of "Disposed to Public Fill" in June 2021 are Cat. L Marine Deposit under Dumping Permit EP/MD/21-078.

Appendix H. Environmental Licences and Permits

Table H.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	6 Jan 2021	19 Jan 2021	11 May 2021	Superseded
			1 Apr 2021	13 Apr 2021	11 Aug 2021	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	15 Feb 2019	26 Jun 2019	30 Jun 2024	Issued
7	Construction Noise Permit (Percussive Piling)	PP-RE0047-20	29 Oct 2020	16 Nov 2020	10 May 2021	Superseded by PP-RE0012-21 on 11 May 2021
8	Construction Noise Permit (Construction Works, Barging Point)	GW-RE0910-20	14 Oct 2020	22 Nov 2020	20 May 2021	Superseded by GW-RE0378-21 on 21 May 2021
9	Construction Noise Permit (Construction Works, Northern Site)	GW-RE1129-20	17 Dec 2020	14 Jan 2021	27 Jun 2021	Superseded by GW-RE0441-21 on 11 May 2021
10	Construction Noise Permit (Construction Works, Southern Site)	GW-RE1130-20	17 Dec 2020	14 Jan 2021	27 Jun 2021	Superseded by GW-RE0444-21 on 11 May 2021
11	Construction Noise Permit (Percussive Piling)	PP-RE0012-21	13 Mar 2021	11 May 2021	10 Nov 2021	Issued

Item No.	Type of Permit / Licence	Reference No.	Application Date	Valid from	Valid until	Remark
12	Construction Noise Permit (Percussive Piling)	PP-RE0015-21	13 May 2021	3 Jun 2021	23 Nov 2021	Issued
13	Construction Noise Permit (Construction Works, Shing Kai Road)	GW-RE0365-21	24 Mar 2021	19 Apr 2021	16 Jul 2021	Issued
14	Construction Noise Permit (Construction Works, Barging Point)	GW-RE0378-21	12 Apr 2021	21 May 2021	10 Nov 2021	Issued
15	Construction Noise Permit (Construction Works, Northern Site)	GW-RE0441-21	19 Apr 2021	11 May 2021	2 Nov 2021	Issued
16	Construction Noise Permit (Construction Works, Southern Site)	GW-RE0444-21	19 Apr 2021	11 May 2021	2 Nov 2021	Issued

Table H.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
3	Construction Waste Disposal Account (Main)	7037993	5 Aug 2020	5 Aug 2020	N/A	N/A
4	Registration as a Chemical Waste Producer	WPN5113-286-C1286-03	17 Jul 2020	10 Sep 2020	N/A	N/A
5	Discharge Licence under WPCO	N/A	17 Jul 2020	22 Mar 2021	31 Mar 2026	Issued
6	Construction Noise Permit (Percussive Piling)	PP-RE0051-20	1 Dec 2020	4 Jan 2021	30 Apr 2021	Issued
7	Marine Dumping Permit under DASO	EP/MD/21-087	23 Nov 2020	5 Jul 2021	4 Aug 2021	Issued

Appendix I. 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	P	✓
• 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	✓	N/A
• 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	✓	P
• 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 extend 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 loose 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.	✓	✓
• Dusty materials on every vehicle's body and wheels should be removed in washing area before leaving the site	✓	✓

• 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	✓	N/A
• 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/m ³ 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	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/m ² . 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.	✓	P
• 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.	P	✓
• 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. Whole construction site Contractor P WPCO, EIAO-TM Page	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.	✓	✓
• 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.	✓	✓
• Good site practices should be adopted to keep the site dry and tidy, such as clean the rubbish and litter on the construction sites.	✓	✓
• Adequate temporary site drainage and pumping should be provided, if necessary.	P	✓
• 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.	✓	✓

<ul style="list-style-type: none"> 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. 	✓	✓
<ul style="list-style-type: none"> 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. 	✓	N/A
<ul style="list-style-type: none"> Clean the construction sites on a regular basis. 	P	✓
<ul style="list-style-type: none"> 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	N/A
<ul style="list-style-type: none"> 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		
<ul style="list-style-type: none"> 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
<ul style="list-style-type: none"> 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. 	✓	✓
<ul style="list-style-type: none"> 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. 	✓	✓
<ul style="list-style-type: none"> Adopt good site practice as follows: <ul style="list-style-type: none"> 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 	✓	✓
<ul style="list-style-type: none"> Adopt waste reduction measures as follows: <ul style="list-style-type: none"> 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 	✓	✓
<ul style="list-style-type: none"> Store waste materials properly as follows: <ul style="list-style-type: none"> 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	✓
<ul style="list-style-type: none"> 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). 	✓	✓
<ul style="list-style-type: none"> Hire licensed waste disposal contractors for waste collection and removal. Dispose waste at licensed waste disposal facilities. 	✓	✓
<ul style="list-style-type: none"> Implement trip-ticket system for recording the amount of waste generated, recycled and disposed, including chemical wastes 	✓	✓
<ul style="list-style-type: none"> 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 	✓	✓

<ul style="list-style-type: none"> Dispose dry waste or waste with less than 70% water content by weight to landfill 	✓	✓
<ul style="list-style-type: none"> Follow the Code of Practice on the Packaging, Labelling and Storage of Chemical Waste as follows: <ul style="list-style-type: none"> - 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 	P	✓
<ul style="list-style-type: none"> Comply with the requirement of the chemical storage area: <ul style="list-style-type: none"> - 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	✓
<ul style="list-style-type: none"> 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 	✓	✓
<ul style="list-style-type: none"> 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 	✓	✓
<ul style="list-style-type: none"> Hire reputable waste collector to separately collect and dispose general refuse from other wastes. Cover the waste to prevent being blown away 	✓	✓
<ul style="list-style-type: none"> 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 	✓	✓
<ul style="list-style-type: none"> 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. 	✓	✓
<ul style="list-style-type: none"> Organize training and reminders to site staff on waste minimization through avoidance and reduction, reusing and recycling 	✓	✓
<ul style="list-style-type: none"> 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
<ul style="list-style-type: none"> 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 	✓	✓
<ul style="list-style-type: none"> Carry out weekly site inspection to check the implementation status of the recommended waste management measures. 	✓	✓
<ul style="list-style-type: none"> 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
<ul style="list-style-type: none"> Erection of hoarding, fencing or provision of clear demarcation of work zone 	✓	✓
<ul style="list-style-type: none"> Designate areas for placement of equipment, building materials and wastes away from drainage channels 	✓	✓

<ul style="list-style-type: none"> Carry out weekly site inspection to check the implementation status and the effectiveness of the proposed mitigation measures 	✓	✓
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Landscape and Visual – Recommended Mitigation Measures

Landscape and Visual Mitigation Measures during construction	Implementation Status	
	KTSP	H/O
<ul style="list-style-type: none"> Construction Lighting Control <ul style="list-style-type: none"> 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). 	✓	N/A
<ul style="list-style-type: none"> Temporary Landscape Treatments <ul style="list-style-type: none"> 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
<ul style="list-style-type: none"> Decoration of Hoarding <ul style="list-style-type: none"> 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. 	✓	✓
<ul style="list-style-type: none"> 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 	✓	N/A
<ul style="list-style-type: none"> Site inspection should be undertaken once every two weeks. 	✓	✓
<ul style="list-style-type: none"> Compensatory Tree Planting <ul style="list-style-type: none"> 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

<ul style="list-style-type: none"> Relevant environmental permits/licences should be posted at all vehicle entrances/exits. 	✓	✓
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Legend:

- ✓ Implemented
- × Not implemented
- P Partially implemented
- N/A Not applicable

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

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

Reporting Period	Complaints	Notifications of Summons	Successful Prosecutions
This reporting period (Apr to Jun 2021)	2	0	0
From commencement date of construction to end of reporting month	16	0	0

Appendix K. Calibration Certificate



ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

SUB-CONTRACTING REPORT

CONTACT	: MR K.W. FAN	WORK ORDER	: HK2045301
CLIENT	: ENVIROTECH SERVICES CO.		
ADDRESS	: RM113, 1/F, MY LOFT, 9 HOI WING ROAD, TUEN MUN, N.T. HONG KONG	SUB-BATCH	: 1
		DATE RECEIVED	: 24-NOV-2020
		DATE OF ISSUE	: 30-NOV-2020
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., if any) is provided by client.
- Calibration was subcontracted to and analysed by Action United Enviro Services.

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

WORK ORDER : HK2045301
SUB-BATCH : 1
CLIENT : ENVIROTECH SERVICES CO.
PROJECT : ----



ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK2045301-001	S/N: 245833	Equipments	24-Nov-2020	S/N: 245833

Equipment Verification Report (TSP)

Equipment Calibrated:

Type: Laser Dust monitor
Manufacturer: Sibata LD-3B
Serial No. 245833
Equipment Ref: Nil
Job Order HK2045301

Standard Equipment:

Standard Equipment: Higher Volume Sampler (TSP)
Location & Location ID: AUES office (calibration room)
Equipment Ref: HVS 018
Last Calibration Date: 8 October 2020

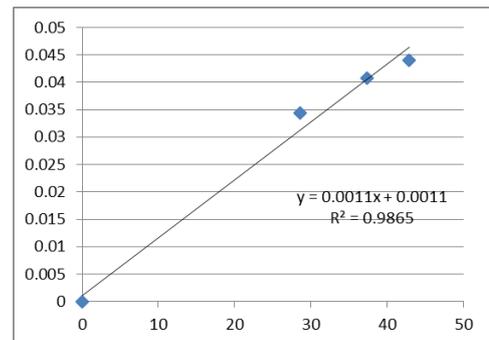
Equipment Verification Results:

Verification Date: 26 November 2020

Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in mg/m ³ (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/min)
2hr01min	09:18 ~ 11:19	24.0	1019.3	0.041	4525	37.3
2hr	11:22 ~ 13:22	24.0	1019.3	0.034	3430	28.6
2hr01min	13:25 ~ 15:26	24.0	1019.3	0.044	5196	42.9

Linear Regression of Y or X

Slope (K-factor): 0.0011
Correlation Coefficient 0.9932
Date of Issue 30 November 2020



Remarks:

1. **Strong** Correlation ($R > 0.8$)
 2. Factor 0.0011 should be applied for TSP monitoring
- *If $R < 0.5$, repair or re-verification is required for the equipment

Operator : Fai So Signature :  Date : 30 November 2020

QC Reviewer : Ben Tam Signature :  Date : 30 November 2020



ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

SUB-CONTRACTING REPORT

CONTACT	: MR K.W. FAN	WORK ORDER	: HK2045304
CLIENT	: ENVIROTECH SERVICES CO.		
ADDRESS	: RM113, 1/F, MY LOFT, 9 HOI WING ROAD, TUEN MUN, N.T. HONG KONG	SUB-BATCH	: 1
		DATE RECEIVED	: 24-NOV-2020
		DATE OF ISSUE	: 30-NOV-2020
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., if any) is provided by client.
- Calibration was subcontracted to and analysed by Action United Enviro Services.

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

WORK ORDER : HK2045304
SUB-BATCH : 1
CLIENT : ENVIROTECH SERVICES CO.
PROJECT : ----



ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK2045304-001	S/N: 276015	Equipments	24-Nov-2020	S/N: 276015

Equipment Verification Report (TSP)

Equipment Calibrated:

Type: Laser Dust monitor
Manufacturer: Sibata LD-3B
Serial No. 276015
Equipment Ref: Nil
Job Order HK2045304

Standard Equipment:

Standard Equipment: Higher Volume Sampler (TSP)
Location & Location ID: AUES office (calibration room)
Equipment Ref: HVS 018
Last Calibration Date: 8 October 2020

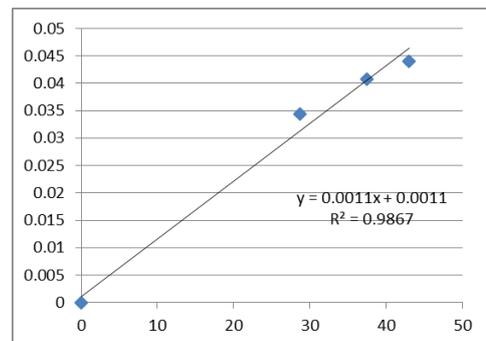
Equipment Verification Results:

Verification Date: 26 November 2020

Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in mg/m ³ (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/min)
2hr01min	09:18 ~ 11:19	24.0	1019.3	0.041	4541	37.5
2hr	11:22 ~ 13:22	24.0	1019.3	0.034	3443	28.7
2hr01min	13:25 ~ 15:26	24.0	1019.3	0.044	5211	43.0

Linear Regression of Y or X

Slope (K-factor): 0.0011
Correlation Coefficient 0.9933
Date of Issue 30 November 2020



Remarks:

1. **Strong** Correlation ($R > 0.8$)
 2. Factor 0.0011 should be applied for TSP monitoring
- *If $R < 0.5$, repair or re-verification is required for the equipment

Operator : Fai So Signature :  Date : 30 November 2020

QC Reviewer : Ben Tam Signature :  Date : 30 November 2020



輝創工程有限公司

Sun Creation Engineering Limited

Calibration & Testing Laboratory

Certificate of Calibration 校正證書

Certificate No. : C202843

證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC20-1013)

Date of Receipt / 收件日期 : 12 May 2020

Description / 儀器名稱 : Precision Acoustic Calibrator

Manufacturer / 製造商 : LARSON DAVIS

Model No. / 型號 : CAL200

Serial No. / 編號 : 11333

Supplied By / 委託者 : Envirotech Services Co.

Room 113, 1/F, My Loft, 9 Hoi Wing Road, Tuen Mun,
New Territories, Hong Kong

TEST CONDITIONS / 測試條件

Temperature / 溫度 : $(23 \pm 2)^{\circ}\text{C}$

Relative Humidity / 相對濕度 : $(50 \pm 25)\%$

Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 23 May 2020

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
- The Bruel & Kjaer Calibration Laboratory, Denmark
- 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

25 May 2020

The test equipment used for calibration is traceable to the National Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

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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 - 校正及檢測實驗室

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. : C202843
證書編號

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours before the commencement of the test.
- The results presented are the mean of 3 measurements at each calibration point.
- Test equipment :

<u>Equipment ID</u>	<u>Description</u>	<u>Certificate No.</u>
CL130	Universal Counter	C193756
CL281	Multifunction Acoustic Calibrator	CDK1806821
TST150A	Measuring Amplifier	C201309

- Test procedure : MA100N.

- 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	93.8	± 0.2	± 0.2
114 dB, 1 kHz	113.8		

- 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.

The test equipment used for calibration is traceable to the National Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

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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 - 校正及檢測實驗室

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. : C210001
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC20-2688) Date of Receipt / 收件日期 : 18 December 2020

Description / 儀器名稱 : Precision Acoustic Calibrator
Manufacturer / 製造商 : LARSON DAVIS
Model No. / 型號 : CAL200
Serial No. / 編號 : 11334
Supplied By / 委託者 : Envirotech Services Co.
Room 113, 1/F, My Loft, 9 Hoi Wing Road, Tuen Mun,
New Territories, Hong Kong

TEST CONDITIONS / 測試條件

Temperature / 溫度 : $(23 \pm 2)^{\circ}\text{C}$ Relative Humidity / 相對濕度 : $(50 \pm 25)\%$
Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 2 January 2021

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
The results do not exceed manufacturer's specification & user's specified acceptance criteria.
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
- The Bruel & Kjaer Calibration Laboratory, Denmark
- 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 : 4 January 2021
簽發日期

The test equipment used for calibration is traceable to the National Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗室所書面批准。

Certificate of Calibration

校正證書

Certificate No. : C210001
證書編號

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours before the commencement of the test.
- The results presented are the mean of 3 measurements at each calibration point.
- Test equipment :

<u>Equipment ID</u>	<u>Description</u>	<u>Certificate No.</u>
CL130	Universal Counter	C203952
CL281	Multifunction Acoustic Calibrator	CDK1806821
TST150A	Measuring Amplifier	C201309

- Test procedure : MA100N.

- Results :

5.1 Sound Level Accuracy

UUT Nominal Value	Measured Value (dB)	User's Spec. (dB)	Uncertainty of Measured Value (dB)
94 dB, 1 kHz	93.7	± 0.5	± 0.2
114 dB, 1 kHz	113.7		

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

Remarks : - The user's specified acceptance criteria (user's spec.) is a customer pre-defined operating tolerance of the UUT, suitable for one's own intended use.

- 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.

The test equipment used for calibration is traceable to the National Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗室書面批准。



Certificate of Calibration 校正證書

Certificate No. : C203822
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC20-1389)

Date of Receipt / 收件日期 : 30 June 2020

Description / 儀器名稱 : Sound Level Meter

Manufacturer / 製造商 : Rion

Model No. / 型號 : NL-52

Serial No. / 編號 : 01010406

Supplied By / 委託者 : Envirotech Services Co.

Room 113, 1/F, My Loft, 9 Hoi Wing Road, Tuen Mun,
New Territories, Hong Kong

TEST CONDITIONS / 測試條件

Temperature / 溫度 : $(23 \pm 2)^{\circ}\text{C}$

Relative Humidity / 相對濕度 : $(50 \pm 25)\%$

Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 9 July 2020

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.

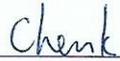
The results do not exceed manufacturer's specification.

The results are detailed in the subsequent page(s).

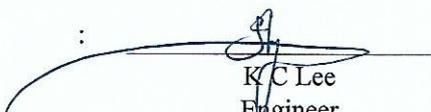
The test equipment used for calibration are traceable to National Standards via :

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Agilent Technologies / Keysight Technologies
- Fluke Everett Service Center, USA
- The Bruel & Kjaer Calibration Laboratory, Denmark

Tested By
測試


K P Cheuk
Assistant Engineer

Certified By
核證


K C Lee
Engineer

Date of Issue
簽發日期

10 July 2020

The test equipment used for calibration is traceable to the National Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗所書面批准。

Certificate of Calibration

校正證書

Certificate No. : C203822

證書編號

- 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.
- Self-calibration was performed before the test.
- The results presented are the mean of 3 measurements at each calibration point.

4. Test equipment :

<u>Equipment ID</u>	<u>Description</u>	<u>Certificate No.</u>
CL280	40 MHz Arbitrary Waveform Generator	C200258
CL281	Multifunction Acoustic Calibrator	CDK1806821

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	93.8	± 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	93.8 (Ref.)
				104.00		103.9
				114.00		113.8

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	93.8	Ref.
			Slow			93.8	± 0.3

The test equipment used for calibration is traceable to the National Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

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Certificate of Calibration

校正證書

Certificate No. : C203822

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	67.5	-26.2 ± 1.5
					125 Hz	77.6	-16.1 ± 1.5
					250 Hz	85.1	-8.6 ± 1.4
					500 Hz	90.6	-3.2 ± 1.4
					1 kHz	93.8	Ref.
					2 kHz	95.1	+1.2 ± 1.6
					4 kHz	94.9	+1.0 ± 1.6
					8 kHz	92.8	-1.1 (+2.1 ; -3.1)
					12.5 kHz	89.4	-4.3 (+3.0 ; -6.0)

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	92.9	-0.8 ± 1.5
					125 Hz	93.6	-0.2 ± 1.5
					250 Hz	93.8	0.0 ± 1.4
					500 Hz	93.8	0.0 ± 1.4
					1 kHz	93.8	Ref.
					2 kHz	93.7	-0.2 ± 1.6
					4 kHz	93.0	-0.8 ± 1.6
					8 kHz	90.9	-3.0 (+2.1 ; -3.1)
					12.5 kHz	87.5	-6.2 (+3.0 ; -6.0)

The test equipment used for calibration is traceable to the National Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

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Certificate of Calibration

校正證書

Certificate No. : C203822
證書編號

Remarks : - UUT Microphone Model No. : UC-59 & S/N : 04871

- 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
	12.5 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.

The test equipment used for calibration is traceable to the National Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗室書面批准。

Appendix L. Complaint Investigation Report

Complaint Investigation Report

RECEIPT OF COMPLAINT		Ref: COM_0015	
Date:	16 April 2021		
Time:	10:18		
From:	PS Chan (Hip Hing Construction Co., Ltd.)		
Via:	Email		
Contact no.:	-		
COMPLAINANT			
Name:	-	Address:	-
Contact no.:	-		
DETAILS OF COMPLAINT			
Date:	13 April 2021 and 14 April 2021		
Time:	-		
Parameter:*	Dust	Noise	Water Other (specify):
Description:	<p>- Complaint of dusty environment of the exit of road 3C at To Kwa Wan Road, and silt contamination on nearby pavement and road surface.</p> <p>- Please ensure the work fulfill the relevant environmental legislations and their subsidiary regulations. Please take necessary measures to minimize the environmental nuisance arising from the construction site.</p>		
INVESTIGATION RESULT & RESPONSE			
ET, IEC and SOR notified on:	16 April 2021		
Investigation conducted on:	19 April 2021		
Result of investigation:	<p>Regular weekly site inspection was carried out on 14 April 2021. According to the photo record of road 3C on 14 April 2021, the results of investigation were summarized as following:</p> <ol style="list-style-type: none"> 1. No dust emission at the road surface of the road 3C was observed and wet surface was maintained along the road 3C on 14 April 2021. (Photo 1) 2. No slit contamination on nearby pavement road surface was observed on 14 April 2021. (Photo 2) 3. Wheel wash facility has been implemented at road 3C (photo 5) <p>As all dust mitigation measures at the road 3C have been well maintained and implemented, the relevant complaint was considered not valid for the Kai Tak Sports Park project.</p>		
RECOMMENDATIONS / MITIGATION MEASURES / ACTIONS			
Environmental mitigation measures have been maintained as follow:	<ol style="list-style-type: none"> 1. Water truck has been provided regularly at road 3C to remove all dusty material. (photo 3) 2. Worker has been arranged to regularly maintain the tidiness at road 3C. (photo 4) 3. Wheel wash facility has been implemented at road 3C (photo 5) 		
Prepared by:	Sunny Chan	Title:	Environmental Team Leader
Signature:		Date:	23 April 2021

Attachment:

Photo Records:

Environmental Measure Implemented:



Photo 1: No dust emission at the road surface of the road 3C was observed and wet surface was maintained along the road 3C. (14 April 2021)



Photo 2: No slit contamination on nearby pavement road surface was observed. (14 April 2021)



Photo 3: Water truck has been provided regularly at road 3C to remove all dusty material. (16 April 2021)



Photo 4: Worker has been arranged to regularly maintain the tidiness at road 3C (16 April 2021)



Photo 5. Wheel wash facility has been implemented at road 3C (19 April 2021)

Complaint Investigation Report

RECEIPT OF COMPLAINT		Ref: COM_0016	
Date:	24 May 2021		
Time:	16:19		
From:	Fred Xu (Home Affairs Bureau)		
Via:	Email		
Contact no.:	-		
COMPLAINANT			
Name:	-	Address:	Yin On Street
Contact no.:	-		
DETAILS OF COMPLAINT			
Date:	17 May 2021		
Time:	-		
Parameter:*	Dust	Noise	Water Other (specify):
Description:	-Complaint of potential mosquito nuisance to nearby residential building arising from Kai Tak construction site.		
INVESTIGATION RESULT & RESPONSE			
ET, IEC and SOR notified on:	24 May 2021		
Investigation conducted on:	27 May 2021		
Result of investigation:	Complaint investigation was carried out on 27 May 2021, the results of investigation were summarized as following:		
According to the complaint information, the concerned residential building was located at Yin On Street. (See attached location plan)			
According to contractor information, existing mosquito control measures implemented on site included:			
<ol style="list-style-type: none"> 1. Apply larvicides twice per week to potential breeding sources or breeding grounds (drainage channel, trenches, wastewater treatment plants, and other potential water-holding spots) to prevent the growth of mosquito. (photos 1a, 1b, 1c and 1d) 2. Conduct regular checking to clear stagnant water on site. 3. Conduct routine pest control work twice per week during summer season (April to October). 4. Maintain communication between workers on reporting identified potential areas of mosquito breeding ground on site and conduct follow-up action on the identified areas. 5. Maintain communication between workers on raising awareness of mosquito prevention on site. 			
As all mosquito control mitigation measures at the Kai Tak Sports Park have been well maintained and implemented, and the concern location (i.e. Yin On street) was located far away from project site, it was unlikely that potential source of mosquito nuisance was due to the project site. In conclusion, the relevant complaint was considered not valid for the Kai Tak Sports Park project.			
RECOMMENDATIONS / MITIGATION MEASURES / ACTIONS			
Environmental mitigation measures have been maintained as follow:			
<ol style="list-style-type: none"> 1. Maintain good site practices to keep the construction site dry and tidy. 2. Conduct regular checking to clear stagnant water on site. 			
Prepared by:	Sunny Chan	Title:	Environmental Team Leader
Signature:		Date:	27 May 2021

Attachment:

Location Plan of the KTSP Project Site



Photo Records:

Environmental Measure Implemented:

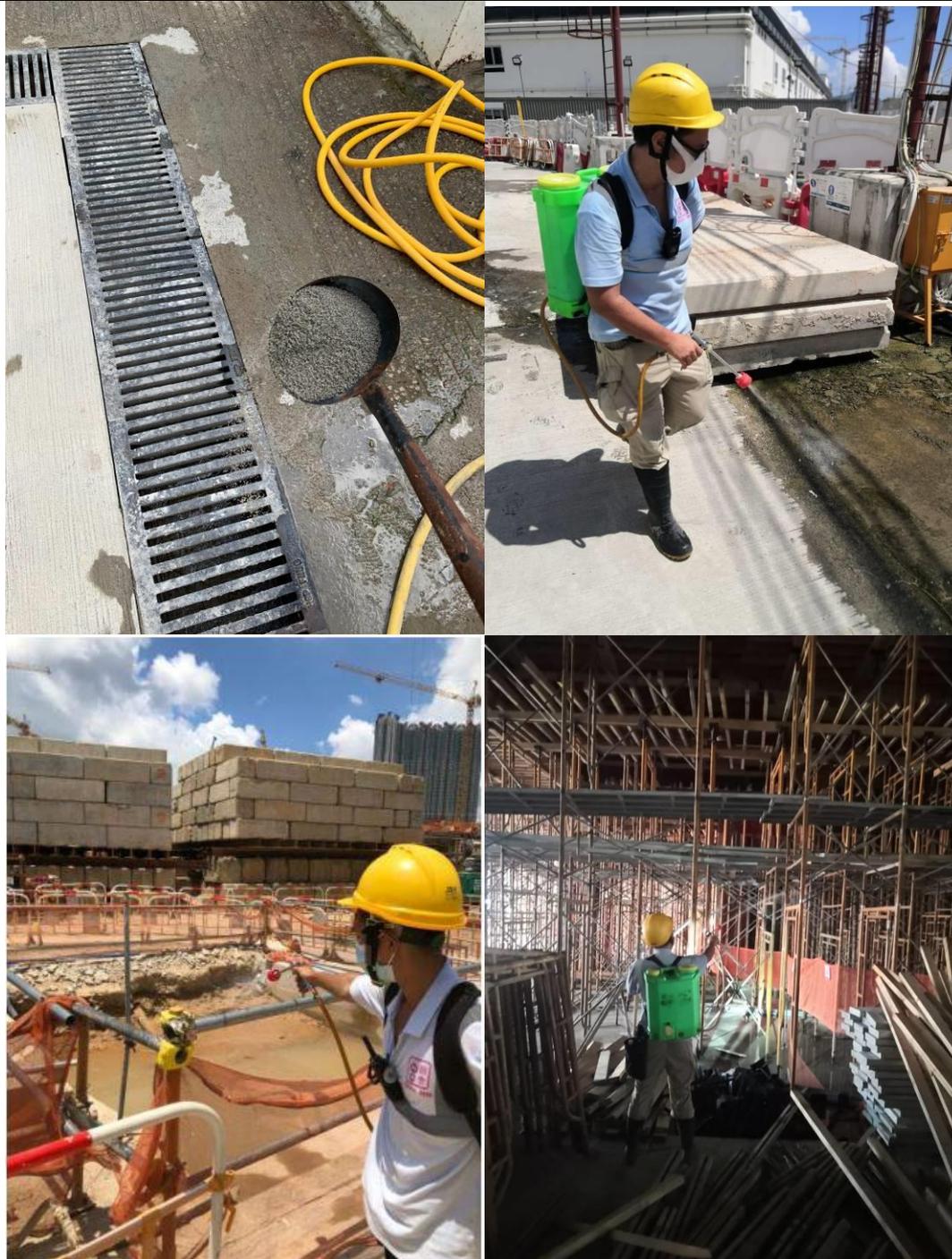


Photo 1a, 1b, 1c and 1d:
Apply larvicides to potential breeding sources or breeding grounds to prevent the growth of mosquito. (drainage channel, trenches, wastewater treatment plants, and other potential water-holding spots)