






Contract No. AL G513

Expansion of Wo Hop Shek Crematorium

Quarterly EM&A Report No.1
(Period from 10 March to 30 June 2020)

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EXECUTIVE SUMMARY

INTRODUCTION

- A1. The Project, Expansion of Wo Hop Shek Crematorium, is a Designated Project under the Environmental Impact Assessment Ordinance (Cap. 499) (EIAO) and is currently governed by a Environmental Permit (EP No. EP – 329/2009) for the construction and operation of the Project.
- A2. In accordance with the Environmental Monitoring and Audit (EM&A) Manual for the Project, EM&A works for air quality monitoring and waste management should be carried out by Environmental Team (ET), Acuity Sustainability Consulting Limited (ASCL), during the construction phase of the Project.
- A3. This is the 1st Quarterly EM&A Report, prepared by ASCL, for the Project summarizing the monitoring results and audit findings of the EM&A programme at and around Wo Hop Shek Crematorium during the reporting period from 10 March 2020 to 30 June 2020.
- A4. The EM&A programme for this contract has covered environmental monitoring on construction dust level at selected NSRs and Contractor's environmental performance auditing in the aspects of construction dust, construction noise, water quality, waste management, Landscape and Visual and Ecology.

SUMMARY OF MAIN WORKS UNDERTAKEN & KEY MITIGATION MEASURES IMPLEMENTED

- A5. Key activities carried out in this reporting period for the Project included the following:
- ♦ Access Road Construction;
 - ♦ Tree Transplanting Works (T041-T047)
 - ♦ Site formation works;
 - ♦ Excavation for sub-structure work
 - ♦ Concrete breaking to existing Reinforced Concrete (RC) wall for rebar connection
 - ♦ Construction works to raft foundation and footings
 - ♦ Construction of basement wall
- A6. The major environmental impacts brought by the above construction works include:
- ♦ Dust generation from the tree transplanting works
 - ♦ Construction dust and noise generation from site formation works, excavation works and mechanical breaking works
 - ♦ Construction noise generation from form-board erection
 - ♦ Waste generation from construction activities
- A7. The key environmental mitigation measures implemented for the Project in this reporting period associated with the above construction works include:
- ♦ Dust suppression by regular wetting and water spraying for construction works
 - ♦ Watering to soil during tree transplanting works
 - ♦ Reduction of noise from equipment and machinery on-site
 - ♦ Sorting and storage of general refuse and construction waste

SUMMARY OF EXCEEDANCE & INVESTIGATION & FOLLOW-UP

- A8. No project-related exceedance in air quality monitoring, including 24-hour TSP and 1-hour TSP of the Action Level was recorded during the reporting period.
- A9. Weekly site inspections of the construction work by ET were carried out to audit the mitigation measures implementation status. Observations were recorded in the site inspection checklists and provided to the contractors together with the appropriate follow-up actions where necessary.

COMPLAINT HANDLING AND PROSECUTION

- A10. No project-related environmental complaint was received during the reporting period.
- A11. Neither notifications of summons nor prosecution was received for the Project.

REPORTING CHANGE

- A12. There was no change to be reported that may affect the on-going EM&A programme.

SUMMARY OF UPCOMING KEY ISSUES AND KEY MITIGATION MEASURES

- A13. Key activities anticipated in the next reporting period for the Project will include the following:
- ♦ Erecting tanking block wall
 - ♦ Mass filling
- A14. The major environmental impacts brought by the above construction works will include:
- ♦ Construction noise generation from block wall erection
 - ♦ Wastewater generation from mass filling
 - ♦ Waste generation from construction activities
- A15. The key environmental mitigation measures for the Project in the coming reporting period associated with the above construction works will include:
- ♦ Reduction of noise from equipment and machinery on-site
 - ♦ Treatment of wastewater from mass filling through sedimentation tank
 - ♦ Sorting and storage of general refuse and construction waste

1. BASIC PROJECT INFORMATION

1.1. BACKGROUND

The Food and Environmental Hygiene Department (FEHD) is responsible for the operation of public crematorium in Hong Kong including the Cremators at Wo Hop Shek Crematorium pursuant to Environmental Permit No. EP-329/2009. The existing Wo Hop Shek Crematorium (WHSC) was re-provisioned in February 2013. It comprises six body cremators, one bone cremator and three service halls. At the design stage, areas had already been reserved for the addition of two body cremators and one service hall. In order to cope with increasing demand for cremation sessions, Expansion of Wo Hop Shek Crematorium (the Project) is being taken forward in this juncture. This Project shall provide two new cremators at WHSC and one service hall for commissioning. Architectural Services Department (ArchSD) acts as the works agent for FEHD, is responsible for the project management of the project.

The Project consists of three construction phases. Phase I of the project was substantially completed in October 2012 while Phase II of the project was substantially completed in November 2013. The Project has been re-initiated as Phase III and Shing Hing Construction Co. Ltd. (the Contractor) has been awarded the construction contract for the Project with contract no. AL G513.

The scope of the Project comprises provision of:

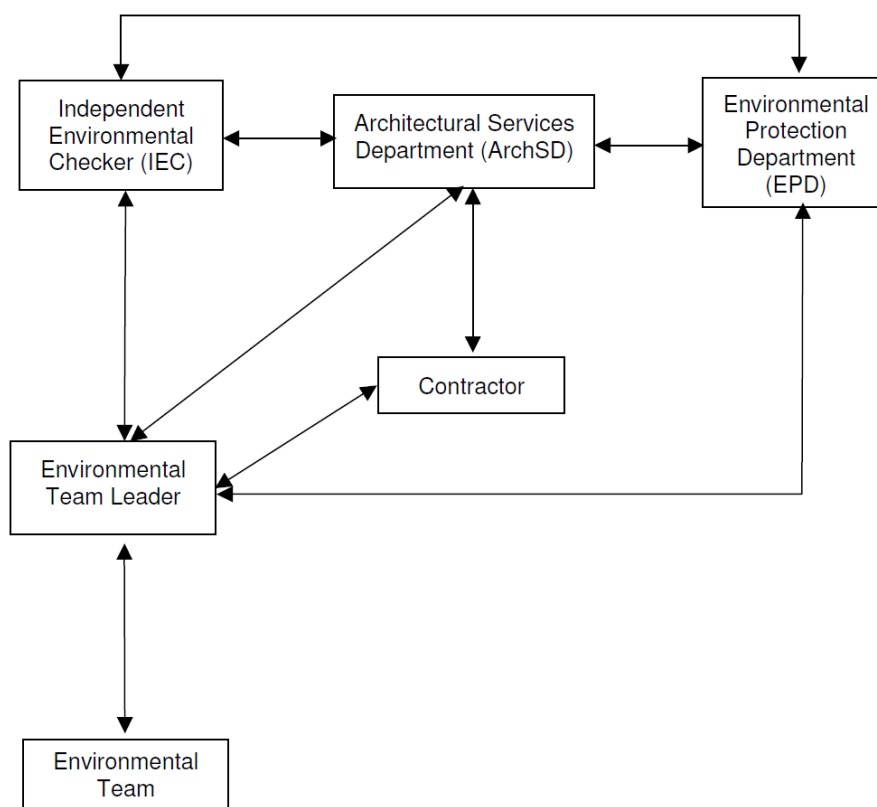
- ♦ Two new body cremators;
- ♦ One new multi-purpose service hall;
- ♦ A full range of ancillary facilities; and
- ♦ Addition, alteration and modification works that are necessary for the additional cremators and service hall.

1.2. THE REPORTING SCOPE

This is the 1st Quarterly EM&A Report for the Project which summarizes the key findings of the EM&A programme during the reporting period from 10 March to 30 June 2020.

1.3. PROJECT ORGANIZATION

The Project Organization structure for Construction Phase is presented in Figure 1.1.



↔ Line of Communication

Figure 1.1 Project Organization Chart

Contact details of the key personnel are presented in Table 1.1 below:



Table 1.1 Contact Details of Key Personnel

Party	Position	Name	Telephone no.
Shing Hing Construction Co Ltd	Site Agent	M.Y. Wong	2807-4665
Acuity Sustainability Consulting Limited	Environmental Team Leader	Kevin Li	2698-6833
Ove Arup & Partners Hong Kong Ltd	Independent Environmental Checker (IEC)	Sam Tsoi	2528-3031

1.4. SUMMARY OF CONSTRUCTION WORKS

Details of the major construction activities undertaken in this reporting period are shown in Table 1.2 below. The construction programme is presented in **Appendix A**.



Table 1.2 Summary of the Construction Activities Undertaken during the Reporting Period


Reporting Period	Construction Activities
March 2020	<p>1. Access Road Construction:</p>  



Reporting Period	Construction Activities
	<p>2. Tree Transplanting Works (T041-T047):</p>  

Reporting Period	Construction Activities
<p>April 2020</p>	<p>1. Site formation works:</p>  <p>2. Excavation for sub-structure work:</p> 

Reporting Peroid	Construction Activities
	

Reporting Period	Construction Activities
May 2020	<p>1. Excavation for sub-structure work:</p>  <p>2. Concrete breaking to existing Reinforced Concrete (RC) wall for rebar connection:</p> 

Reporting Peroid	Construction Activities
	

Reporting Period	Construction Activities
June 2020	<ol style="list-style-type: none"> <li data-bbox="518 286 1225 324">1. Construction works to raft foundation and footings  <li data-bbox="518 976 970 1014">2. Construction of basement wall 

1.5. SUMMARY OF ENVIRONMENTAL STATUS

Environmental permit (EP) conditions under the EIAO, submission status under the EP and implementation status of mitigation measures had been reviewed and implemented on schedule. The status of required submissions under the EP (EP-329/2009) as of the reporting period for the Project are summarised in Table 1.3.

Table 1.3 Summary of Status of Required Submission for EP-329/2009 for the Project

EP/FEP Condition (EP-457/2013/C)	Submission	Submission date
Condition 1.12	Notification of Commencement Date of Construction of the Project	14 Mar 2020
Condition 2.3	Inception Report	13 Mar 2019
Condition 2.4	Tree Transplant Proposal	12 Apr 2019
Condition 2.5	Landscape Plan with Tree Preservation Proposal	14 Feb 2018
Condition 5.2a	Baseline Monitoring Report	21 Jan 2020
Condition 5.2b	Alternative Air Quality Monitoring Station	05 Oct 2019
Condition 5.4	Quarterly EM&A Report (March 2020 - June 2020)	14 July 2020

A summary of the valid permits, licences, and /or notifications on environmental protection for this Project is presented in Table 1.4.

Table 1.4 Summary of the Status of Valid Environmental Licence, Notification, Permit and Documentations

Permit/ Licences/ Notification	Reference	Validity Period	Remarks
Environmental Permit	EP-329/2009	Throughout the Contract	-
Notification of Construction Works under the Air Pollution Control (Construction Dust) Regulation (Form NA)	Ref. Number: 455614	Throughout the Contract	-

Wastewater Discharge Licence	WT00034798-2019	10 Oct 2020 – 31 Oct 2024	-
Chemical Waste Producer Registration	5213-632-S4245-01	Throughout the Contract	-
Construction Noise Permit (24 hours)	GW-RN0022-20	25 Jan 2020 – 12 July 2020	-
Billing Account for Disposal of Construction Waste	7032841	Throughout the Contract	-

The status for all environmental aspects is presented in Table 1.5.

Table 1.5 Summary of Status for Key Environmental Aspects under the Updated EM&A Manual

Parameters	Status
Dust	
Baseline Monitoring	The baseline dust monitoring result has been reported in Baseline Monitoring Report and submitted to EPD under EP Condition 5.2a.
Impact Monitoring	On-going
Waste Management	
Mitigation Measures in Waste Monitoring Plan	On-going
Environmental Audit	
Site Inspection covering Measures of Air Quality, Noise Impact, Water Quality, Waste, Ecological Quality, Landscape and Visual	On-going

Other than the EM&A work by ET, environmental briefings, trainings and regular environmental management meetings were conducted, in order to enhance environmental awareness and closely monitor the environmental performance of the contractors.

The EM&A programme has been implemented in accordance with the recommendations presented in the approved EIA Report and the Updated EM&A Manual. A summary of implementation status of the environmental mitigation measures for the construction phase of the Project during the reporting period is provided in **Appendix C**.

2. Monitoring Results

2.1. MONITORING PARAMETERS

The impact monitoring had been carried out in accordance with section 2.6 of the approved EM&A Manual to determine the 1-hour and 24-hour total suspended particulates (TSP) levels at the monitoring locations in the reporting month.

The sampling frequency of at least once in every 6 days, shall be strictly observed at the monitoring stations for 24-hour TSP monitoring. For 1-hour TSP monitoring, the sampling frequency of at least 3 times in every 6 days should be undertaken when the highest dust impact occurs.

General meteorological conditions (wind speed, direction and precipitation) and notes regarding any significant adjacent dust producing sources had also been recorded throughout the impact monitoring period.

2.2. MONITORING LOCATIONS

Due to the disagreement of occupants in establishment of air quality monitoring station at their private permits, both of the original proposed dust monitoring locations were rejected. Two alternative air monitoring stations Fung Kai Liu Yun Sum Memorial School and Fanling Government School had been proposed by ET and approved by IEC. Two designated air monitoring locations were identified and agreed with IEC and EPD. Details of air monitoring stations are described in Table 2.2. The location plan of air quality monitoring stations is shown in **Appendix F**.

Table 2.2 Location of the Dust Monitoring Stations

Air Quality Monitoring Station	Dust Monitoring Station
A10	Fung Kai Liu Yun Sum Memorial School
A20	Fanling Government School

2.3. MONITORING DATE, TIME, FREQUENCY AND DURATION

A summary of impact monitoring duration, sampling parameter and frequency is presented in Table 2.3.

Table 2.3 Summary of Impact Monitoring Programme

Impact Monitoring	Duration	Sampling Parameter	Frequency
Dust	1-hour continuous measurement	1-hour TSP	3 times per six days
Dust	24-hour continuous sampling	24-hour TSP	Once per six days

2.4. RESULT SUMMARY

According to our field observations, the major dust source identified at the designated air quality monitoring station in the reporting month are summarised in Table 2.4.

Table 2.4 Observation at Dust Monitoring Station

Monitoring Station	Major Dust Source
A10	Nearby traffic
A20	Nearby traffic

Air quality impact monitoring for the reporting month was carried out 01, 09, 12, 18, 24 and 29 June 2020 at A10 and A20.

The results for 1-hour TSP and 24-hour TSP are summarized in Table 2.5 and Table 2.6. The measurement data and details of influencing factors such as weather conditions and site observation are presented in **Appendix G**.

Table 2.5 Summary of 1-hour TSP Monitoring Results

Monitoring Location	Range($\mu\text{g}/\text{m}^3$)	Action Level($\mu\text{g}/\text{m}^3$)	Limit Level($\mu\text{g}/\text{m}^3$)
A10	25 - 76	290	500
A20	27 - 84	291	500

Table 2.6 Summary of 24-hour TSP Monitoring Results

Monitoring Location	Range($\mu\text{g}/\text{m}^3$)	Action Level($\mu\text{g}/\text{m}^3$)	Limit Level($\mu\text{g}/\text{m}^3$)
A10	7 - 53	169	260
A20	9 - 61	167	260

3. Waste

The waste generated from this Project includes inert construction and demolition (C&D) materials, and non-inert C&D materials. Non-inert C&D materials are made up of general refuse, vegetative wastes and recyclable wastes such as plastics and paper/cardboard packaging waste. Steel materials generated from the project are also grouped into non-inert C&D materials as the materials were not disposed of with other inert C&D materials. With reference to relevant handling records and trip tickets of this Project, the quantities of different types of waste generated in the reporting month are summarised in Table 3.1. Details of cumulative waste management data are presented as a waste flow table in **Appendix H**.

Table 3.1 Quantities of Waste Generated from the Project from March to June 2020

Reporting Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper / cardboard packaging	Plastics (see Note)	Chemical Waste	Others, e.g. general refuse
	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)
March 2020	1.35	0	0	0	1.35	0	0	0	0	0	0
April 2020	858.29	0	0.61	0	855.61	0	0	0	0	0	3.29
May 2020	213.75	0	0	0	205.94	0	0	0	0	0	7.81
June 2020	1.86	0	0	0	0	0	0	0	0	0	1.86

Notes: (1) Plastics refer to plastic bottles / containers, plastic sheets / foam from packaging material

4. Summary of Monitoring Exceedance, Complaints, Notification of Summons and Prosecutions

The Environmental Complaint Handling Procedure is shown in below Figure 4.1:

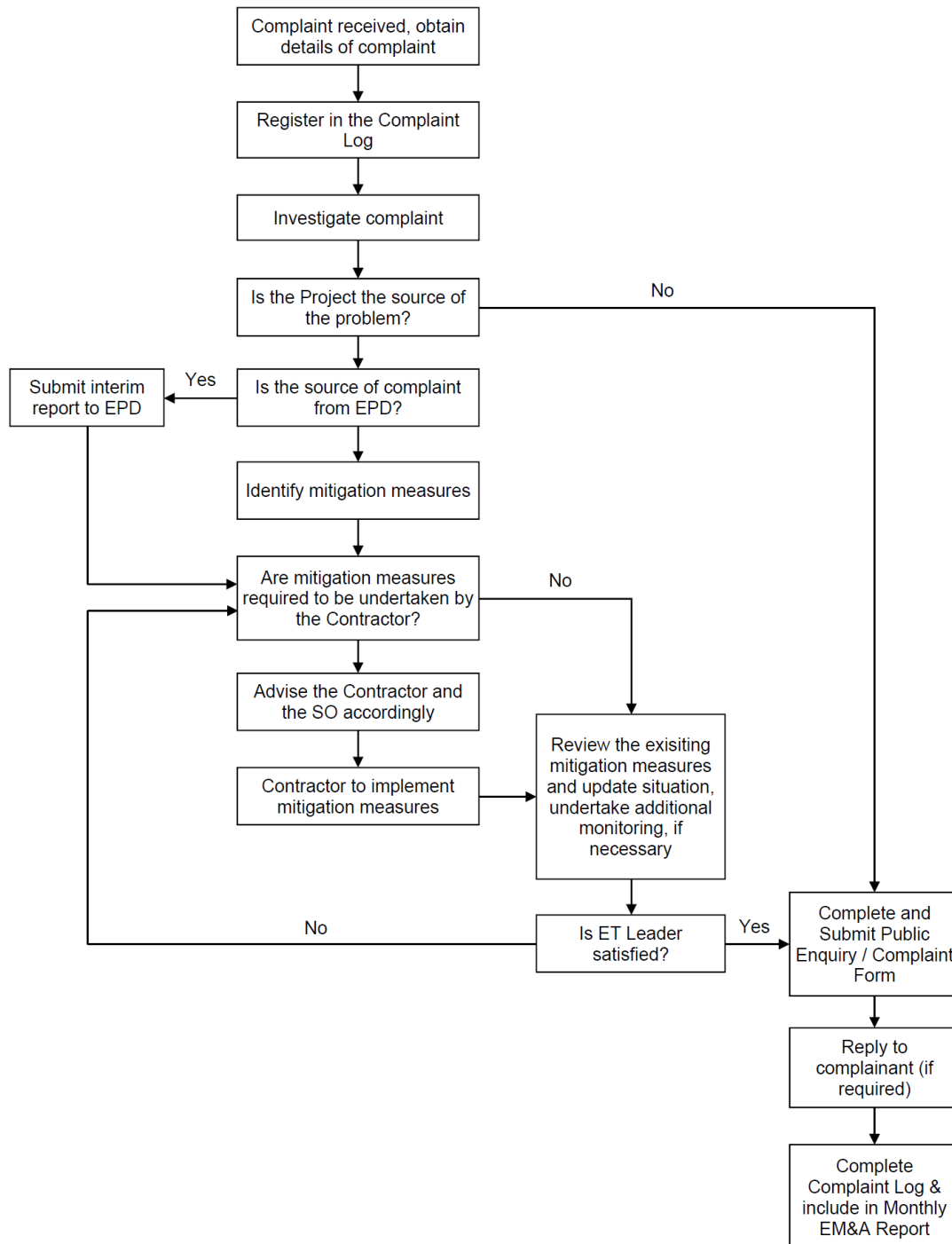


Figure 4.1 Environmental Complaint Handling Procedures

Air quality monitoring was conducted in the reporting period and no project-related exceedance of the Action Level was recorded during the reporting period.

No notification of summons and prosecution was received in the reporting period.

Statistics on complaints and regulatory compliance are summarized in **Appendix I**.

5. EM&A SITE INSPECTION

Site inspections were carried out on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures under the Contract. In the reporting period, site inspections were carried out at the site portions list in Table 5.1 below.

Table 5.1 Summaries of Site Inspection Record





Date	Inspected Site Portion	Time
11 March 2020	Wo Hop Shek Crematorium	10:00 – 11:00 AM
18 March 2020	Wo Hop Shek Crematorium	10:00 – 11:00 AM
25 March 2020	Wo Hop Shek Crematorium	09:30 – 10:20 AM
01 April 2020	Wo Hop Shek Crematorium	10:08 – 10:38 AM
08 April 2020	Wo Hop Shek Crematorium	10:17 – 11:47 AM
15 April 2020	Wo Hop Shek Crematorium	10:10 – 10:40 AM
22 April 2020	Wo Hop Shek Crematorium	15:10 – 17:10 PM
28 April 2020	Wo Hop Shek Crematorium	10:50 – 11:20 AM
06 May 2020	Wo Hop Shek Crematorium	10:15 – 10:35 AM
13 May 2020	Wo Hop Shek Crematorium	10:10 – 10:25 AM
20 May 2020	Wo Hop Shek Crematorium	10:11 – 10:45 AM
25 May 2020	Wo Hop Shek Crematorium	09:30 – 09:50 AM
03 June 2020	Wo Hop Shek Crematorium	10:30 – 10:45 AM
10 June 2020	Wo Hop Shek Crematorium	10:30 – 10:45 AM
17 June 2020	Wo Hop Shek Crematorium	10:10 – 10:25 AM
22 June 2020	Wo Hop Shek Crematorium	10:30 – 10:45 AM



Environmental deficiencies were observed during weekly site inspection. Key observations during the site inspections and during the reporting period are summarized in **Table 5.2**.



According to the EIA Study Report, Environmental Permit, contract documents and EM&A Manual, the mitigation measures detailed in the documents are implemented as much as practical during the reporting period. An updated Implementation Status of Environmental Mitigation Measures (EMIS) is provided in **Appendix C**.





Table 5.2 Site Observations





Date	Environmental Observations	Follow-up Status
11 March 2020 (Site inspection)	<u>Observation(s) and Recommendation(s)</u> 1. No major observation was observed.	Nil.
18 March 2020 (Site inspection)	<u>Observation(s) and Recommendation(s)</u> 1. No major observation was observed.	Nil.
24 March 2020 (Site inspection)	<u>Observation(s) and Recommendation(s)</u> 1. No major observation was observed.	Nil.



Date	Environmental Observations	Follow-up Status
01 April 2020 (Site inspection)	<p><u>Observation(s) and Recommendation(s):</u></p> <p>1. Exposed soil surface was not covered with impervious sheeting.</p>  <p>2. EP was not displayed on the entrance No major observation was observed.</p> 	<p>1. Transplanting are being in progress, frequent water spraying are provided to prevent dust pollution. Exposed soil surface shall be covered with tarpaulin sheet promptly.</p>  <p>2. EP was displayed on hoarding at the entrance</p> 





Date	Environmental Observations	Follow-up Status
08 April 2020 (Site inspection)	<p><u>Observation(s) and Recommendation(s)</u></p> <p>1. NRMM label was not displayed on excavator.</p> 	<p>1. EPD - NRMM label was displayed on excavator KATO with model No. HD 513 MR III</p> 
15 April 2020 (Site inspection)	<p><u>Observation(s) and Recommendation(s)</u></p> <p>No major observation was observed.</p>	Nil.



Date	Environmental Observations	Follow-up Status
22 April 2020 (Site inspection)	<p><u>Observation(s) and Recommendation(s)</u></p> <p>1. The chemical waste cabinet was not locked up.</p> 	<p>1. The chemical waste cabinet was locked up.</p> 
28 April 2020 (Site inspection)	<p><u>Observation(s) and Recommendation(s)</u></p> <p>1. No major observation was observed.</p>	Nil.



Date	Environmental Observations	Follow-up Status
06 May 2020 (Site inspection)	<p><u>Observation(s) and Recommendation(s):</u></p> <p>1. Construction materials were placed on the top of chemical waste cabinet, those materials should be removed.</p> 	<p>1. Construction materials were removed from the top of chemical waste cabinet</p> 
	<p>2. NRMM label should be displayed on PME.</p> 	<p>2. NRMM label was displayed on PME.</p> 

Date	Environmental Observations	Follow-up Status
13 May 2020 (Site inspection)	<p><u>Observation(s) and Recommendation(s)</u></p> <p>1. The access road to chemical waste cabinet was blocked.</p> 	<p>1. The access road to chemical waste cabinet was cleared.</p> 
	<p>2. The stagnant water on drip tray of generator was observed.</p> 	<p>2. The stagnant water on drip tray of generator was cleared.</p> 

Date	Environmental Observations	Follow-up Status
	<p>3. The chemicals in-use was not placed on drip tray.</p> 	<p>3. The utensils with chemicals were placed on drip tray.</p> 

<p>20 May 2020 (Site inspection)</p>	<p><u>Observation(s) and Recommendation(s)</u></p> <ol style="list-style-type: none"> The sedimentation tank was not ready-to-use.  <ol style="list-style-type: none"> The chemical in use was not placed on drip tray. 	<ol style="list-style-type: none"> The sedimentation tank was ready-to-use by connecting The discharge point to the storm drain.  <ol style="list-style-type: none"> The chemical in use was placed on drip tray. 
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Date	Environmental Observations	Follow-up Status
25 May 2020 (Site inspection)	<u>Observation(s) and Recommendation(s)</u> 1. NRMM label was not displayed on excavator. 	1. NRMM label issued by EPD was displayed on excavator. 
03 June 2020 (Site inspection)	<u>Observation(s) and Recommendation(s)</u> 1. No major observation was observed.	Nil.
10 June 2020 (Site inspection)	<u>Observation(s) and Recommendation(s)</u> 1. No major observation was observed.	Nil.
17 June 2020 (Site inspection)	<u>Observation(s) and Recommendation(s)</u> 1. No major observation was observed.	Nil.

Date	Environmental Observations	Follow-up Status
<p>22 June 2020 (Site inspection)</p>	<p><u>Observation(s) and Recommendation(s):</u></p> <ol style="list-style-type: none"> The exposed soil surface was not covered with impervious sheeting. 	<ol style="list-style-type: none"> The exposed soil surface was covered with impervious sheeting, to mitigate construction dust pollution 

6. CONCLUSIONS AND RECOMMENDATIONS

This is the 1st Quarterly EM&A Report for the Project which summarizes the key findings of the EM&A programme during the reporting period from 10 March to 30 June 2020., in accordance with the EM&A Manual and the requirement under EP – 329/2009.

Air quality monitoring was conducted in the reporting period and no project-related exceedance of the Action Level was recorded during the reporting period.

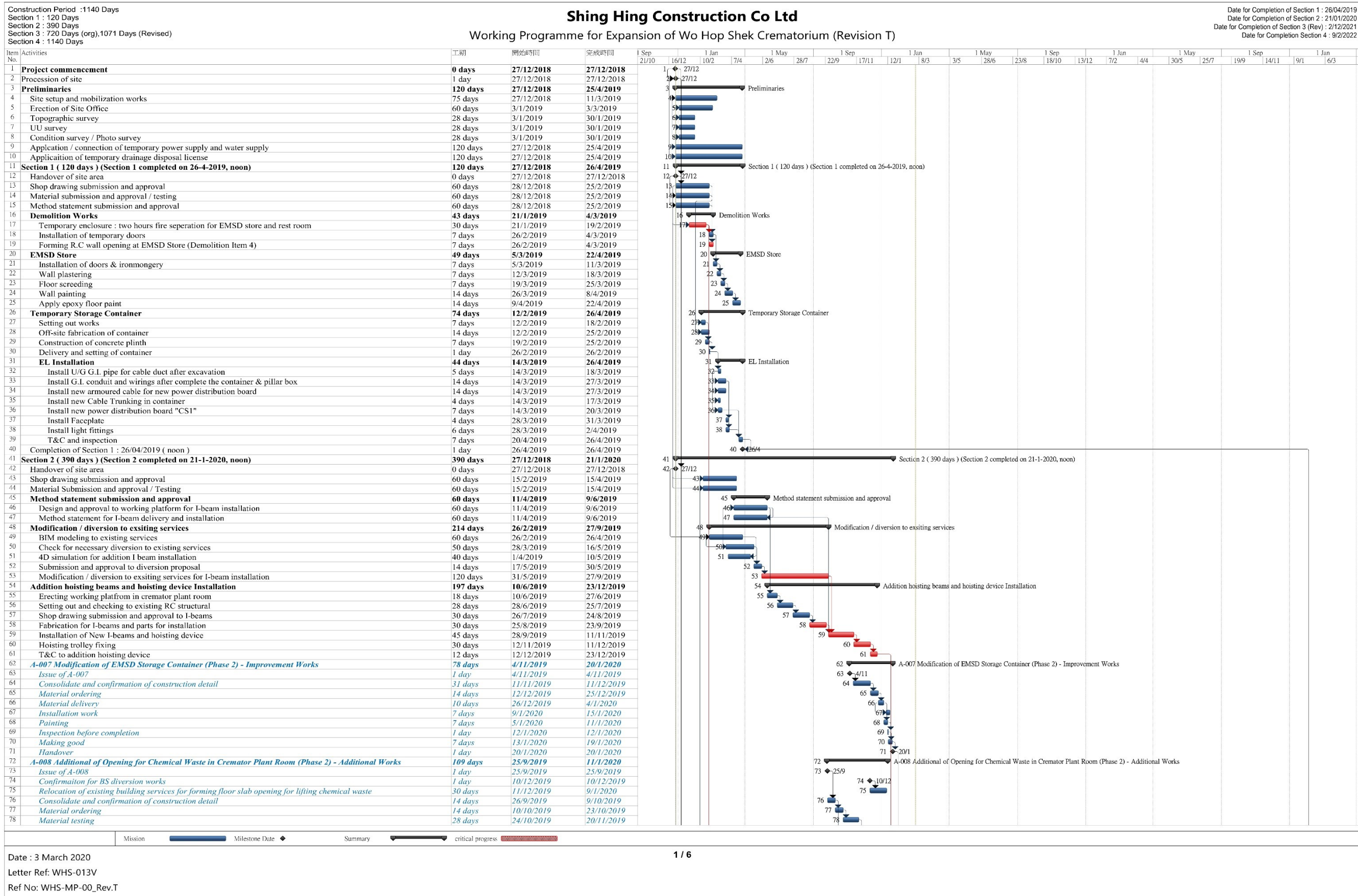
Weekly environmental site inspection was conducted during the reporting period. Some observations were observed during site inspection and rectifications had been accomplished by contractor within a week after site inspection. The environmental performance of the project was therefore considered satisfactory. Contractor was reminded to maintain the tidiness of the project site.

No environmental complaint was received in the reporting period.

No notification of summons or prosecution was received since commencement of the Contract.

The ET will keep track on the construction works to confirm compliance of environmental requirements and the proper implementation of all necessary mitigation measures.

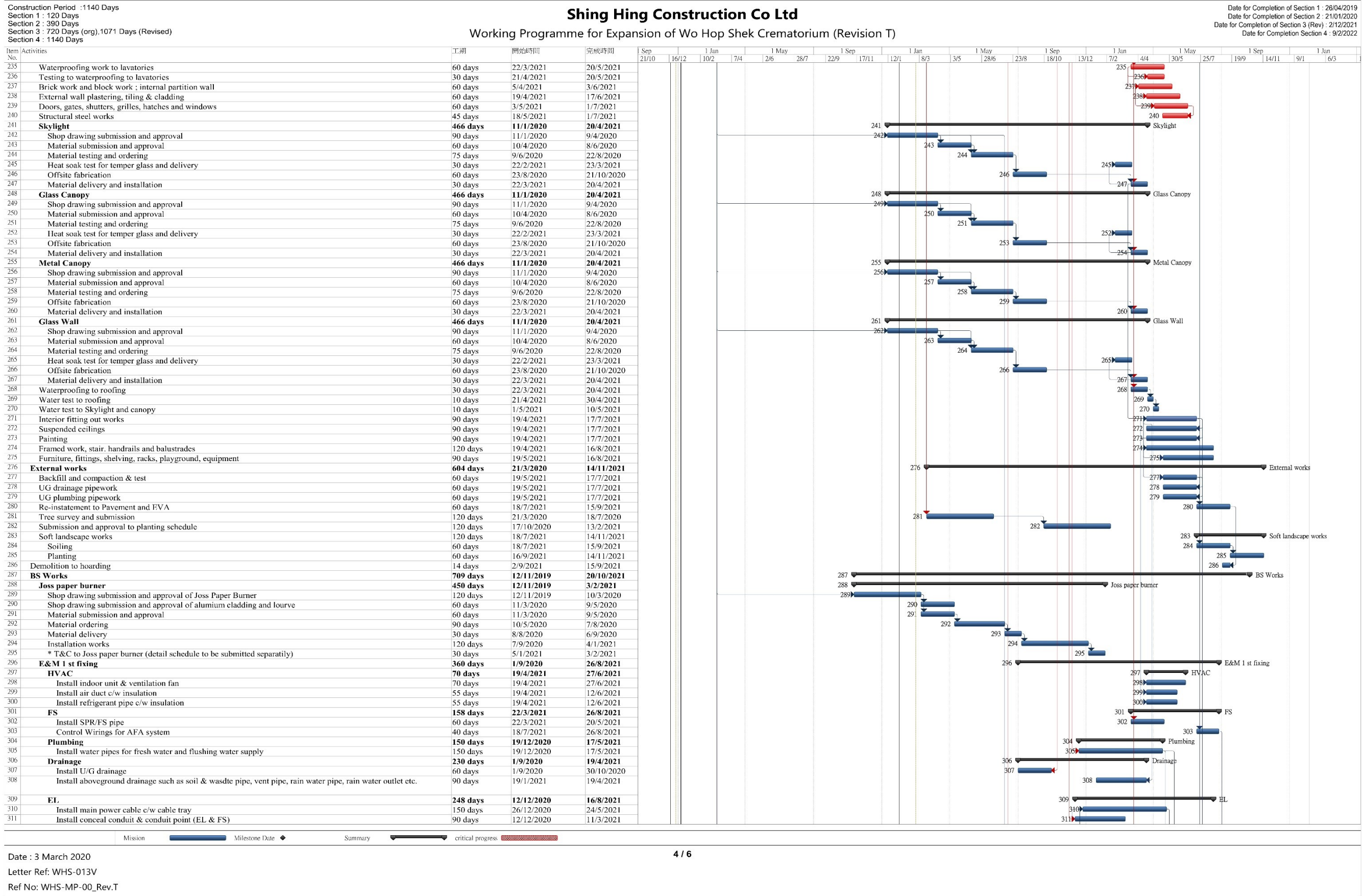
APPENDIX A: MASTER PROGRAMME

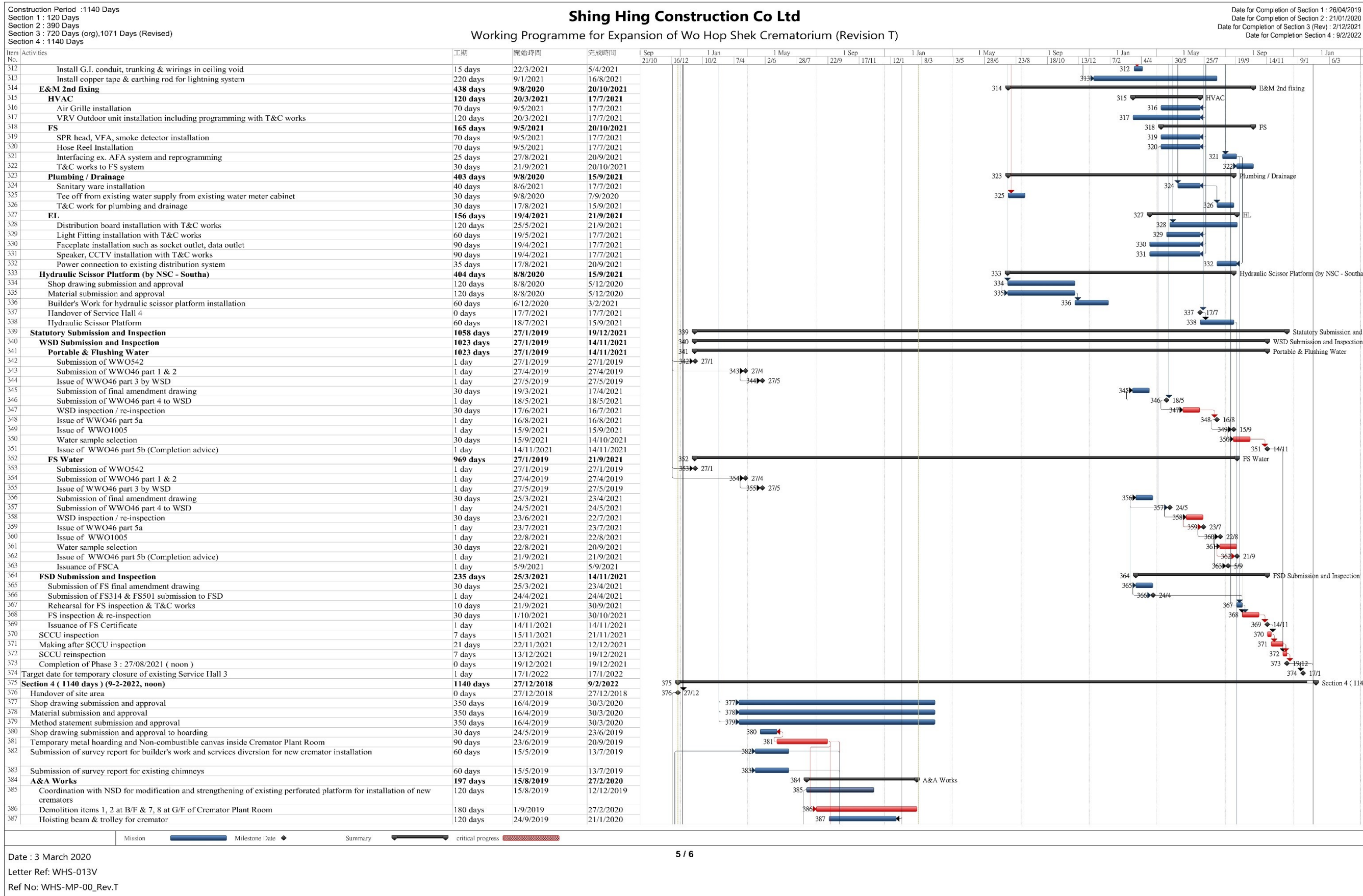


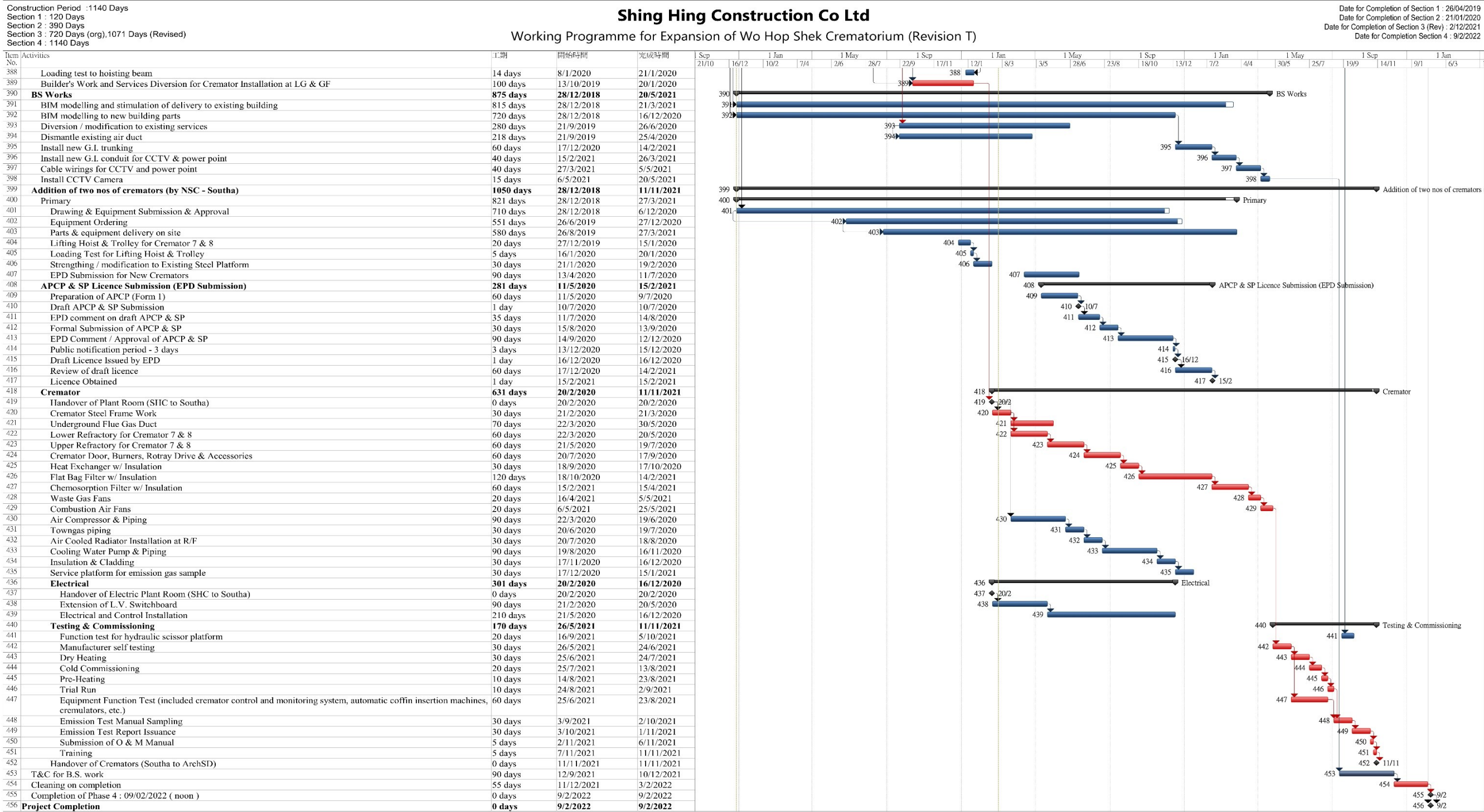
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Mission Milestone Date Summary critical progress

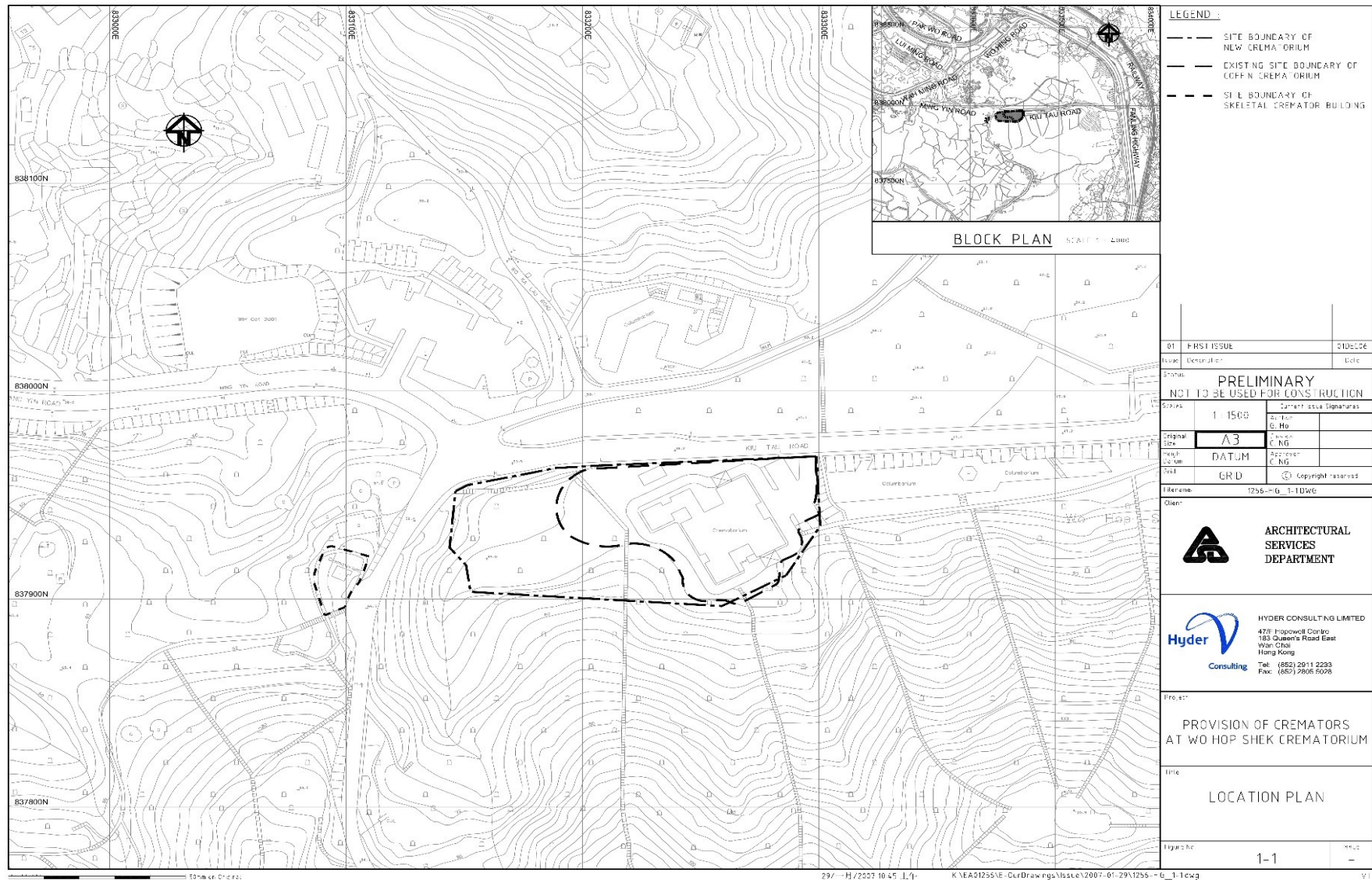
Date : 3 March 2020

Letter Ref: WHS-013V

Ref No: WHS-MP-00_Rev.T

APPENDIX B: WORK AREA FOR THE CONTRACT NO. AL G513

Contract No. AL G513
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APPENDIX C: SUMMARY OF IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION

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EIA Ref	EM&A Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stage	Relevant Legislation and Guidelines	Implementation Status
Air (Construction Phase)							
S.3.3.5		Under the Air Pollution Control (Specified Process) Regulation, an incinerator (including cremator) with an installed capacity exceeding 0.5 tonnes per hour, is classified as a specified process, and requires a Specified Process license to operate. FEHD shall apply for a specified licence under the APCO.	New Cremators in the New Crematorium / prior to operation	FEHD	Construction Phase	APCO	NA
S.3.9		Asbestos Investigation: ■ The incense burner, coffin and skeletal crematorium shall be thoroughly investigated prior to any demolition work commencing to ascertain the presence of any ACM. A registered asbestos consultant shall carry out an asbestos investigation report (AIR).	Incense burner, coffin and skeletal crematorium / Prior to any demolition work commencing	Arch SD, Registered Asbestos Consultant, Registered Asbestos Contractor	Construction Phase	APCO AIR and AAP	NA
S.3.9.2							
S.3.9.3		■ If any ACM are identified in the existing crematorium, an asbestos abatement plan shall be submitted to EPD prior to any asbestos abatement works.					
S.3.9.4		The following precautionary and mitigation measures shall be implemented during the removal of ACM: ■ Enclosure of the work area. ■ Containment and sealing for the asbestos containing waste. ■ Provision of personal decontamination facility. ■ Use of personal respiratory/protection equipment. ■ Use of vacuum cleaner equipped with high-efficiency air particulate (HEPA) filter for cleaning up the work area. ■ Carrying out air quality monitoring during the asbestos abatement works.					

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EIA Ref	EM&A Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stage	Relevant Legislation and Guidelines	Implementation Status
S.3.9.5		The following qualified personnel shall be appointed to carry out the asbestos abatement works: <ul style="list-style-type: none"> ■ Registered asbestos contractor for carrying out the asbestos removal works. ■ Registered asbestos supervisor for supervising the asbestos abatement works. ■ Registered asbestos laboratory for monitoring the air quality during the asbestos abatement works. ■ Registered asbestos consultant for supervising and certifying the asbestos abatement works. 					NA
S.3.9.7 – S.3.9.9		Other Site Management:					NA
S.3.9.7		The asbestos materials in each building/premises must be abated before other contractors/trades are allowed to work in the building/premises.					NA
S.3.9.8		Tight security measures shall be taken at the asbestos abatement works site to prevent any disturbance to ACM that may result from the stealing of valuable items on site such as electrical cable and copper pipes. It is recommended that priority shall be given for the abatement of all friable ACM.					NA
S.3.9.9		As different contractors may be working on-site at the same time, the following measures should be considered: <ul style="list-style-type: none"> ■ If there is a sensitive receptor around the area, conduct environmental air monitoring at this off-site receptor. ■ Submit to EPD a completion report, including photos and air monitoring results, immediately after completion of asbestos abatement work for every work zone. 					NA
S.3.9.9		As different contractors may be working on-site at the same time, the following measures should be considered: <ul style="list-style-type: none"> ■ If there is a sensitive receptor around the area, conduct environmental air monitoring at this off-site receptor. ■ Submit to EPD a completion report, including photos and air monitoring results, immediately after completion of asbestos abatement work for every work zone. 					NA

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S.3.10.1 - S.3.10.2		The contractor has a responsibility to notify EPD for undertaking any 'notifiable' works prior to the commencement of such works. In addition, the contractor is also required to fulfil specific dust control requirements given in the APCO Regulation's Schedule for specific jobs.	Prior to 'notifiable' works including Construction of the foundation of a building and construction of the superstructure of a building	Contractor	Construction Phase	Air Pollution Control (Construction Dust) Regulation APCO	Implemented
S.3.10.3 - S.3.10.4	S.2.9.1 - S.2.9.3	<p>Good site management / practices to avoid / minimise incidences of dust emissions:</p> <p><i>Site Boundary and Entrance</i></p> <ul style="list-style-type: none"> ■ Vehicle washing facilities including a high pressure water jet shall be provided at every discernible or designated vehicle exit point. ■ The area at which vehicle washing takes place and the section of the road between the washing facilities and the exit point shall be paved with concrete, bituminous or hardcore material. <p><i>Access Haul Roads and Unpaved Areas</i></p> <ul style="list-style-type: none"> ■ Each and every main haul road shall be paved with concrete, bituminous hardcore materials or metal plates, and kept clear of dusty materials. Or ■ Unpaved haul roads and areas shall be sprayed with water so as to keep the entire road surface wet. 	Project Site / Construction and Demolition	Contractor	Construction Phase	Air Pollution Control (Construction Dust) Regulation APCO	Implemented and rectified according to observation

EIA Ref	EM&A Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stage	Relevant Legislation and Guidelines	Implementation Status
		<p><i>Excavated Materials</i></p> <ul style="list-style-type: none"> Any stockpile of dusty material shall be either: (a) covered entirely by impervious sheeting. (b) placed in an area sheltered on the top and the three sides. or (c) sprayed with water or a dust suppression chemical so as to maintain the entire surface wet. <p><i>Exposed Earth</i></p> <ul style="list-style-type: none"> Exposed earth shall be properly treated by compaction, hydroseeding, vegetation planting or seating with latex, vinyl, bitumen within six months after the last construction activity on the site or part of the site where the exposed earth lies. <p><i>Loading, Unloading or Transfer of Dusty Materials</i></p> <ul style="list-style-type: none"> All dusty materials shall be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet. <p><i>Debris Handling</i></p> <ul style="list-style-type: none"> Any debris shall be covered entirely by impervious sheeting or stored in a debris collection area sheltered on the top and the three sides. Before debris is dumped into a chute, water shall be sprayed so that it remains wet when it is dumped. <p><i>Transport of Dusty Materials</i></p> <ul style="list-style-type: none"> Vehicles used for transporting dusty materials/spoils shall be covered with tarpaulin or similar material. The cover shall extend over the edges of the sides and tailboards. <p><i>Site Clearance</i></p> <ul style="list-style-type: none"> The working area for the uprooting of trees, shrubs, or vegetation or the removal of boulders, pole, pillars shall be sprayed with water immediately before, during and immediately after the operation so as to maintain the entire surface wet. All demolished items shall be covered by impervious sheeting or placed in a spot with shelters on top and three sides within a day of the demolition. Workers at all levels should be co-operative to avoid dust generation and dispersion to the surrounding environment. 					

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Air (EM&A for Construction Phase)							
S.11.2.4 - S.11.2.5	S.2.5 - S.2.6	Conduct baseline and regular 1-hr and 24-hr TSP monitoring at 2 measurement locations at a 6-day frequency	A22a and A22b / Baseline monitoring prior to construction works / Regular monitoring throughout construction period	Contractor	Construction Phase	EIAO	Implemented
Noise (Construction Phase)							
S.4.4.9 - S.4.4.10	S.3.2.1 - S.3.2.2	<p>Good Site Practice and Noise Management:</p> <ul style="list-style-type: none"> ■ Only well-maintained plant shall be operated on site and the plant shall be regularly serviced during the construction works. ■ Plant used intermittently shall be turned off or throttled down when not in active use. ■ Plant that is known to emit noise strongly in one direction shall be oriented to face away from NSRs. ■ Silencers, mufflers and enclosures for plant shall be used where possible and maintained adequately throughout the works. ■ Mobile plant shall be sited away from NSRs. ■ Stockpiles of excavated materials and other structures such as site buildings shall be used effectively to screen noise from the works. ■ PME shall be well maintained and use properly on site to minimise the any excessive noise generated. 	Work site / Construction phase	Contractor	Construction Phase	GW-TM & NCO	Implemented
Land Contamination (Construction Phase)							
		Remedial Action Plan:	All areas	Contractor	Construction Phase	Waste Disposal	

EIA Ref	EM&A Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stage	Relevant Legislation and Guidelines	Implementation Status
S.5.7.2		If large amounts of contaminated soil (say 500m ³) are found following further site investigation after the decommissioning of the crematorium, remediation options such as bioremediation for organics should be considered. Although disposal of small amount of contaminated soil to landfills might be considered as an economic and acceptable option for remediation, it should be considered as the last resort if all remediation options including reuse are considered to be inappropriate or infeasible.	requiring remedial works in Project site			Ordinance (Cap.354) Waste Disposal (Chemical Waste) Regulations Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes CAP	NA
S.5.7.3		<ul style="list-style-type: none"> ■ If disposal to landfills is chosen as the remediation measure, the criteria set primarily of Toxicity Characteristic Leaching Procedure (TCLP) limits, as stated in Annex E in the GN) should be met. ■ At least three soil samples should be taken from the most contaminated area(s) and tested for TCLP for a full suite of parameters (16 metals) as stated in Table E1 in Annex E in the GN. ■ If the testing result shows that any of the TCLP limits cannot be met, the soil shall be treated by cement stabilization and further tested for TCLP prior to landfill disposal or treated as chemical waste and disposed of at the Chemical Waste Treatment Centre (CWTC). 				ProPECC Note PN3/94 Dutch A, B, C Classification system WPCO Technical Memorandum on Standards for Effluents Discharged into Drainage and Sewerage Systems, Inland and Coastal Waters (TM)	NA
S.5.7.4		All soil treated as a chemical waste, shall be collected by a registered chemical waste contractor and the Waste Disposal (Chemical Waste) Regulations under the Waste Disposal Ordinance (Cap.354) shall be observed. Reference shall be made to the Registration of Chemical Waste Producers and Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes, issued by EPD.					NA

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S.5.7.6		<p>Confirmatory Soil Sampling</p> <ul style="list-style-type: none"> ■ In order to confirm the extent of the soil contamination and if the contaminated soil should be removed or treated, confirmatory soil sampling shall be carried out during the remediation works. ■ This shall consist of five to six samples in each location where soil contamination is identified from SI works. The locations will be to the north, south, east and west of the location where contaminated soil is found. Two locations should also be above and below the location (in terms of elevation) where contaminated soil is found. ■ If analytical results exceed the Dutch B Levels or other agreed remedial target suggested in a supplementary CAR, the contaminated area shall be extended and further confirmatory sampling shall be carried out until no further contamination is encountered. 					NA
S.5.8	S.4	Further Site Investigation	Areas that are currently in use and cannot be accessed, including the transformer room, dangerous goods stores, day tank room, fuel pump room, sunken fuel pipe and cremator.	Contractor	Construction Phase	Interim CAR and RAP	NA
S.5.8.1	S.4.1 - S.4.7	Further site investigations in areas that are currently in use and cannot be accessed are required. These areas include the transformer room, dangerous goods stores, day tank room, fuel pump room, sunken fuel pipe and cremator.				ProPECC Note PN3/94	
S.5.8.2		The demolition contractor shall carry out further site investigations, after the decommissioning of the existing crematorium and skeletal cremator building.				Guidance Notes for Investigation and Remediation of Contaminated Sites of Petrol Filling Stations, Boatyards and Car	
S.5.8.3		Potential contaminants in the soils have been identified in CAP and the parameters to be analysed for soils at different locations are summarised in Table 5-3 in S.5.8.3.					

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S.5.8.4		Sampling and analysis plans for these investigations shall be prepared and submitted to EPD for approval prior to any of these investigation works. Supplementary CAR and RAP shall be prepared to describe the results and findings of these site investigations and, if necessary, any remedial works.	After the decommissioning of the existing crematorium and skeletal crematorium building.			Repair / Dismantling Workshops	
Land Contamination (EM&A)							
S.11.2.9 - S.11.2.15	S.4.1 - S.4.7	Further Site Investigation: <ul style="list-style-type: none"> ■ Conduct further site investigation for Petroleum hydrocarbons and PAH in soil samples. ■ Conduct further site investigation for PCBs in soil samples. ■ Conduct further site investigation for PAH, Dioxins and Metals (Cr, Co, Ni, Cu, Zn, As, Mo, Cd, Sn, Ba, Hg, Pb) in soil samples. 	After decommissioning, prior to construction: Existing crematorium: Dangerous goods store, Daily tank room, fuel pump room and sunken fuel pipe Skeletal Crematorium Building: Dangerous goods store Existing crematorium: Transformer room Crematoriums (residual inside the crematorium, flue and	Contractor	Construction Phase	Interim CAR & RAP	NA

EIA Ref	EM&A Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stage	Relevant Legislation and Guidelines	Implementation Status
			chimneys				
Waste Management (Construction Phase)							
S.6.7.24		<p>Good Site Practice:</p> <ul style="list-style-type: none"> ■ Obtain the necessary waste disposal permits from the appropriate authorities, if they are required, in accordance with the Waste Disposal Ordinance (Cap. 354), Waste Disposal (Chemical Waste) (General) Regulation and the Land (Miscellaneous Provision) Ordinance (Cap. 28). ■ Obtain a billing account with EPD for disposal of construction waste. ■ A Waste Management Plan (WMP), incorporated in an Environmental Management Plan (EMP) shall be prepared and submitted to the Engineer/Supervising Officer for approval. Reference shall be made to Environment, Transport and Works Bureau Technical Circular (Works) (ETWB TCW) 19/2005. ■ Nomination of an approved person to be responsible for good site practice, arrangements for collection and effective disposal to an appropriate facility of all wastes generated at the site. ■ Use of a waste haulier, authorised or licensed to collect specific category of waste. ■ A trip-ticket system shall be included as one of the contractual requirements and implemented by the Environmental Team to monitor the disposal of C&D and solid wastes at public filling facilities and landfills, and to control fly tipping. Reference shall be made to ETWB TCW No. 31/2004. ■ Training of site personnel in proper waste management and chemical waste handling procedures. ■ Separation of chemical wastes for special handling and appropriate treatment at a licensed facility. ■ Routine cleaning and maintenance programme for drainage systems, sumps and oil interceptors. ■ Provision of sufficient waste disposal points and regular collection for disposal. ■ Adoption of appropriate measures to minimise windblown litter and dust during transportation of waste, such as covering trucks or transporting wastes in enclosed containers. ■ Implementation of a recording system for the amount of wastes 	Project site/ design, construction and demolition stages	Contractor	Construction Phase	<p>Waste Disposal Ordinance (Cap. 354)</p> <p>Waste Disposal (Chemical Waste) (General) Regulation</p> <p>Waste Disposal (Charges for Disposal of Construction Waste) Regulation</p>	Implemented

EIA Ref	EM&A Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stage	Relevant Legislation and Guidelines	Implementation Status
		generated, recycled and disposed of (including the disposal sites).					
S.6.7.25		<p>Waste Reduction Measures:</p> <ul style="list-style-type: none"> ■ Segregation and storage of different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal. ■ Encourage collection of aluminium cans, plastic bottles and packaging material (e.g. carton boxes) and office paper by individual collectors. Separate labelled bins shall be provided to help segregate this waste from other general refuse generated by the work force. ■ Any unused chemicals or those with remaining functional capacity shall be recycled as far as practicable. ■ Reuse C&D materials when possible to reduce the amount of C&D material/waste. ■ Wood, steel and other metals shall be separated for reuse and / or recycling Prior to disposal of C&D waste to minimise the quantity of waste to be disposed of to landfill. ■ Minimise the potential for damage or contamination of construction material by having proper storage and site practices. ■ Plan and stock construction materials carefully to minimise the amount of waste generated. 	Project site / construction and demolition stages	Contractor	Construction Phase	<p>WBTC No. 32/1992</p> <p>WBTC No. 19/2005</p>	Implemented

EIA Ref	EM&A Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stage	Relevant Legislation and Guidelines	Implementation Status
S.6.7.4		<i>Excavated Material</i> Rock and soil generated from excavation shall be reused for site formation and excavated material from foundation work reused for landscaping as far as practicable to avoid disposal off-site.	Project site / construction and demolition stages	Contractor	Construction Phase	WBTC No. 12/2000	Implemented
S.6.7.5 - S.6.7.7	S.5.3.5 - S.5.3.9	<i>Construction and Demolition Material</i> <ul style="list-style-type: none"> ■ Reuse of the public fill and C&D waste shall be practiced on site as far as practicable. ■ The handling of C&D materials is governed by WBTC No. 2/93. Inert C&D material (public fill) shall be directed to an approved public filling area or reclamation site, where it has the benefit of offsetting the need for removal of materials from borrow areas for reclamation purposes and helps to reduce the pressure on landfill sites. ■ Individuals or companies who deliver public fill to public filling areas require dumping licences. ■ Careful design, planning and good site management can minimise over-ordering and generation of waste materials such as concrete, mortar and cement grouts. The design of formwork shall maximise the use of standard wooden or metal panels so that high reuse levels can be achieved. Alternatives such as steel formwork, plastic fencing and reusable site office structures shall be considered to increase the potential for reuse and minimise C&D waste generation. ■ The contractor shall use as much as possible of the C&D material on-site. Proper segregation of waste types on site will increase the feasibility of certain components of the waste stream by recycling contractors. 	Project site / construction and demolition stages	ArchSD / Contractor	Construction Phase	WBTC No. 2/93 The Land (Miscellaneous Provision) Ordinance WBTC No. 19/2005	Implemented

EIA Ref	EM&A Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stage	Relevant Legislation and Guidelines	Implementation Status												
S.6.11.1 - S.6.11.5	S.5.3.1 0 - S.5.3.1 4	<div>Contaminated Material – Further Contamination Investigation</div> <div><div><div>■ After decommissioning but prior to demolition of the Existing Crematorium, the following further contamination investigations shall be carried out to confirm the quality and quantity of ash waste and building structures requiring treatment and disposal.</div><table><tr><th>Location</th><th>Investigation Parameter</th><th>Investigation Period</th><th>Responsible Party</th></tr><tr><td>Cremators / flue / chimney and surrounding areas</td><td>Asbestos (building structures)</td><td>After decommissioning but prior to demolition of the Existing Crematorium</td><td>The Contractor</td></tr><tr><td>Cremators / flue / chimney and surrounding areas</td><td>Dioxins, heavy metals, PAH (ash waste)</td><td></td><td></td></tr></table></div><div><div>■ Prior to any demolition work commencing, these areas suspected to contain asbestos containing material (ACM) shall be further inspected by aregistered asbestos consultant to determine the presence of any ACM. These areas shall be thoroughly investigated and the additional findings submitted as supplementary information to the Asbestos Investigation Report.</div><div>■ Samples shall be analysed for the presence and type of asbestos according to the Laboratory’s HOKLAS accredited testing procedures. If the findings of the investigation indicate ACM materials present on the premises an Asbestos Abatement Plan must be prepared prior to commencement of demolition works.</div></div></div>	Location	Investigation Parameter	Investigation Period	Responsible Party	Cremators / flue / chimney and surrounding areas	Asbestos (building structures)	After decommissioning but prior to demolition of the Existing Crematorium	The Contractor	Cremators / flue / chimney and surrounding areas	Dioxins, heavy metals, PAH (ash waste)			Cremators, Flues Chimneys and surrounding areas / After decommissioning but prior to demolition of the existing crematorium.	FEHD, ArchSD, Contractor	Construction Phase	ProPECC PN 2/97 ProPECC PN 3/94 APCO	NA
Location	Investigation Parameter	Investigation Period	Responsible Party																
Cremators / flue / chimney and surrounding areas	Asbestos (building structures)	After decommissioning but prior to demolition of the Existing Crematorium	The Contractor																
Cremators / flue / chimney and surrounding areas	Dioxins, heavy metals, PAH (ash waste)																		

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		<p>■ It is not currently possible to conduct inspection and sampling within the cremators, chimney and flues to assess the levels of contamination due to the operation of the crematorium. It is recommended that samples shall be collected from the potential areas of contamination for testing of dioxin, heavy metal and PAH after decommissioning and prior to the demolition of the Existing Crematorium.</p>					
S.6.9.6 - S.6.9.7	S.5.3.1 5 - S.5.3.1 7	<p>Asbestos Containing Material</p> <p>■ Asbestos wastes shall be handled in accordance with the Code of Practice on the Handling, Transportation and Disposal of Asbestos Waste issued by the Environment and Food Bureau.</p> <p>■ Production, collection and disposal of Asbestos waste will follow the 'trip-ticket' system. The registered asbestos contractor shall appoint a licensed asbestos waste collector to collect the packaged asbestos waste and deliver it to the designated landfill for disposal. Notification has to be given to EPD for its disposal. EPD will normally require ten working days notice of the intention to dispose of any quantity of asbestos waste. After processing the notification, EPD will issue specific instructions and directions for disposal of the waste. The waste producer or agent must strictly follow these directions.</p>	Cremator room in Existing Crematorium / before demolition and after decommission	Contractor	Construction Phase	COP on Handling, Transportation and Disposal of Asbestos Waste under the Waste Disposal (Chemical Waste) (General) Regulation.	NA
		<p>Dioxin Contaminated Materials (DCM) / Heavy Metal Contaminated Materials (HMCM) / Polyaromatic Hydrocarbon Contaminated Materials (PAHCM) from Demolition of the Existing Crematorium</p> <p>■ Proposed Contamination Classifications for Ash Waste with DCM / HMCM / PAHCM.</p>	Cremator room in Existing Crematorium / before demolition and after decommission	Contractor	Construction Phase	ProPECC PN 3/94 APCO	NA

EIA Ref	EM&A Ref.	Environmental Protection Measures / Mitigation Measures			Location / Timing	Implementation Agent	Implementation Stage	Relevant Legislation and Guidelines	Implementation Status														
		<table><tr><td>Classification of Contamination</td><td>Dioxin Level in ash waste</td><td>Heavy Metal Level / Polyaromatic Hydrocarbon in Ash Waste</td></tr><tr><td>Low Contaminated DCM/HMCM/PAHCM</td><td><1 ppb TEQ</td><td>< Dutch “B” List</td></tr><tr><td>Moderately/Severely Contaminated HMCM/PAHCM</td><td><1 ppb TEQ</td><td>> Dutch “B” List</td></tr><tr><td>Moderately Contaminated DCM</td><td>> 1 and < 10 ppb TEQ</td><td>Any Level</td></tr><tr><td>Severely contaminated DCM</td><td>>10 ppbTEQ</td><td>Any Level</td></tr></table>	Classification of Contamination	Dioxin Level in ash waste	Heavy Metal Level / Polyaromatic Hydrocarbon in Ash Waste	Low Contaminated DCM/HMCM/PAHCM	<1 ppb TEQ	< Dutch “B” List	Moderately/Severely Contaminated HMCM/PAHCM	<1 ppb TEQ	> Dutch “B” List	Moderately Contaminated DCM	> 1 and < 10 ppb TEQ	Any Level	Severely contaminated DCM	>10 ppbTEQ	Any Level						
Classification of Contamination	Dioxin Level in ash waste	Heavy Metal Level / Polyaromatic Hydrocarbon in Ash Waste																					
Low Contaminated DCM/HMCM/PAHCM	<1 ppb TEQ	< Dutch “B” List																					
Moderately/Severely Contaminated HMCM/PAHCM	<1 ppb TEQ	> Dutch “B” List																					
Moderately Contaminated DCM	> 1 and < 10 ppb TEQ	Any Level																					
Severely contaminated DCM	>10 ppbTEQ	Any Level																					
S.6.9.9	S.5.3.19	Demolition, Handling, Treatment and Disposal of Low Contaminated DCM / HMCM / PAHCM from Demolition of Existing Crematorium ■ Where the ash waste contains low contaminated DCM / HMCM / PAHCM, the contractor shall avoid ash waste becoming airborne during demolition. General dust suppression measures shall be followed. The ash waste can be directly disposed of at a landfill site.	Cremator room in Existing Crematorium / demolition	Contractor	Construction Phase	ProPECC PN 3/94 APCO	NA																
S.6.9.10 - S.6.9.14	S.5.3.20 - S.5.3.24	Demolition, Handling, Treatment and Disposal of Moderately / Severely Contaminated DCM and Moderately / Severely Contaminated HMCM / PAHCM from Demolition of the Existing Crematorium <i>Site preparation procedures:</i> ■ Except the cremators/flue/chimney, all removable contaminated items shall be removed as far as practicable to avoid obstructing the decontamination activities. ■ Preliminary site decontamination of all debris shall be carried out using High Efficiency Particulate Air (HEPA) vacuum cleaner. ■ A chamber with three layers of polythene sheets shall enclose the	Cremator room in Existing Crematorium / demolition	Contractor	Construction Phase	Waste Disposal (Chemical Waste) (General) Regulation ProPECC PN 3/94 APCO	NA																

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		<p>top portion of the chimney above the roof.</p> <ul style="list-style-type: none"> ■ A 3-chamber decontamination unit shall be constructed at the entrance to the cremators/flues/chimney for entry and exit from the work area. It shall comprise a dirty room, a shower room and a clean room of at least 1m x 1m base with 3 layers of fire retardant polythene sheet. ■ Workers shall carry out decontamination procedures before leaving the work area. ■ All workers shall wear full protective equipment, disposable protective overall, nitrile gloves, rubber boots, and full-face positive pressure respirator. ■ Warning signs in both Chinese and English shall be put up in conspicuous areas. <p><i>Site preparation procedures specific to severely contaminated DCM:</i></p> <ul style="list-style-type: none"> ■ The walls, floor and ceiling of the cremator room shall be lined with 3-layers of fire retardant polythene sheets. ■ Air movers shall be installed at the cremator room, and at the bottom of the chimney to exhaust air from the work area. A stand by air mover shall also be installed with each of the air movers. Sufficient air movement shall be maintained to give a minimum of 6 air changes per hour to the work area. ■ New pre-filters and HEPA filters shall be used on the air movers. ■ Before commencement of the decommissioning work a smoke test with non-toxic smoke shall be carried out to ensure the air tightness of the containment. <p><i>Demolition and handling procedures:</i></p> <ul style="list-style-type: none"> ■ The cremators/flue/chimney shall be removed from top down. ■ Scrubbing and HEPA vacuuming shall be used to remove any ash or residues attached to the cremators, flue, chimney and other building structures. ■ Wastes generated from the contaminant or decontamination unit including the workers protection clothing shall be disposed of at landfill site. ■ After completion of removal, all surfaces shall be decontaminated by HEPA vacuum. ■ If any contaminated wastewater needs to be discharged out of the 					

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		<p>site, it shall be properly treated to WPCO requirements with prior agreements with EPD on discharge standards.</p> <p><i>Demolition and handling procedures specific to severely contaminated DCM:</i></p> <ul style="list-style-type: none"> ■ The contaminated detached sections of the building structures shall be wrapped with 2 layers of fire retardant polythene sheets. A third layer shall be wrapped and secured with duct tape. Wet wiping shall be used to decontaminate the outer layer. ■ After completion of removal and decontamination, spray the innermost layer of the fire retardant polythene sheet with PVA. Upon drying, peel off and dispose of at landfill site. Repeat for the other 2 layers disposing the final layer as contaminated wastes. <p><i>Treatment and disposal procedures:</i></p> <ul style="list-style-type: none"> ■ Immobilise the ash waste by mixing with cement in the correct ratio as determined by pilot mixing and TCLP test. ■ Place material in polythene lined steel drums for disposal at landfill. The drums should clearly be marked with "DANGEROUS CHEMICAL WASTE" in English and Chinese. Prior agreement of the disposal criteria must be obtained from EPD and the landfill operator. ■ If the landfill disposal criteria cannot be met, disposal at the CWTC in Tsing Yi shall be considered. 					
S.6.9.1 - S.6.9.2	S.5.3.2 5 - S.5.3.7	<p>Chemical Waste</p> <ul style="list-style-type: none"> ■ Should any chemical waste be generated, the Contractor must register with the EPD as chemical waste producer. ■ All the chemical waste shall be handled according to the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. The chemical waste shall be stored and collected by an approved contractor for disposal at a licensed facility in accordance with the Waste Disposal (Chemical Waste) (General) Regulation. ■ Principles of reuse and recycle chemical waste on site as far as practicable shall be adopted by the Contractor. 	Project site / demolition	Contractor	Construction Phase	<p>Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes</p> <p>Waste Disposal (Chemical Waste) (General) Regulation.</p>	Implemented and rectified according to observation

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S.6.9.3	S.5.3.28	Containers used for the storage of chemical waste shall: <ul style="list-style-type: none"> ■ Be suitable for the substance they are holding, resistant to corrosion, maintained in good condition, and securely closed. ■ Have a capacity of less than 450 litres unless the specifications have been approved by the EPD. ■ Display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the Waste Disposal (Chemical Waste) (General) Regulation. 					
S.6.9.4	S.5.3.29	The storage area for chemical waste shall: <ul style="list-style-type: none"> ■ Be clearly labelled and used solely for the storage of chemical waste. ■ Be enclosed on at least 3 sides. ■ Have an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in that area, whichever is the greatest. ■ Have adequate ventilation. ■ Be covered to prevent rainfall entering (water collected within the bund must be tested and disposed as chemical waste if necessary). ■ Be properly arranged so that incompatible materials are adequately separated. 					
S.6.9.25	S.5.3.30	Disposal of chemical waste shall be: <ul style="list-style-type: none"> ■ Via a licensed waste collector. ■ A facility licensed to receive chemical waste, such as the Chemical Waste Treatment Facility at Tsing Yi, which offers a chemical waste collection service and can supply the necessary storage containers. or ■ A waste recycling plant approved by EPD. 					

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EIA Ref	EM&A Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stage	Relevant Legislation and Guidelines	Implementation Status
S.6.7.27 - S.6.7.28	S.5.3.3 1 - S.5.3.3 2	<p>General Refuse</p> <ul style="list-style-type: none"> General refuse shall be stored in enclosed bins or compaction units separate from C&D and chemical wastes. A reputable waste collector shall be employed by the contractor to remove general refuse from the site, separately from C&D and chemical wastes, on a daily or every second day basis to minimise odour, pest and litter impacts. Individual collectors often recover aluminium cans from the waste stream if they are segregated or easily accessible. Therefore, separately labelled bins for their deposit shall be provided if feasible. Similarly, plastic bottles and carton package material generated on site shall be separated for recycling as far as possible. Site office waste shall be reduced through recycling of paper if volumes are large enough to warrant collection. Participation in a local collection scheme shall be considered if one is available. 	Project site / construction and demolition stages	Contractor	Construction Phase		Implemented
Waste Management (EM&A)							
S.11.2.17	S.5.3.1 0	Supplementary site investigations shall be conducted for asbestos in building structures and for dioxins, heavy metals and PAH in ash/particular matter samples.	<p>Cremators / flue / chimney and surrounding area.</p> <p>After decommissioning but prior to demolition</p>	Contractor	Construction Phase	<p>ProPECC PN 2/97 and 3/94</p> <p>AIR, AMP/AAP to be submitted under APCO</p> <p>Future Supplementary Investigation Site Plan</p>	NA
Landscape and Visual (Construction Phase)							
S.7.9.2 MC 1	S.6.3.1	<p>Site offices and construction yards:</p> <ul style="list-style-type: none"> Site offices shall have olive green roof and façade coating or colour matches with existing environment. Site offices and the construction yard shall be decommissioned after construction. 	All site offices / Design and construction phases	ArchSD's Contractor	Construction Phase		Implemented
S.7.9.2 MC 2	S.6.3.1	<p>Height of site offices:</p> <ul style="list-style-type: none"> The height of site offices, including the rooftop shall not exceed 10m. Building services equipment such as antennas may exceed 10m and shall be coated in black. 	All site offices / Design and construction phases	ArchSD's Contractor	Construction Phase		Implemented

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EIA Ref	EM&A Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stage	Relevant Legislation and Guidelines	Implementation Status
S.7.9.2 MC 3	S.6.3.1	Hoarding and screening: ■ Where practical the site offices areas, construction yards and storage areas shall be screened using colour in harmony with the surrounding environment around the peripheries of the works area until the completion of relevant construction phases.	All site offices and construction yard areas / Design and construction phases	ArchSD's Contractor	Construction Phase		Implemented
S.7.9.2 MC 4	S.6.3.1	Construction plant and building material: ■ Shall be orderly and carefully stored in order to appear neat and avoid visibility from outside where practical. ■ Excess materials shall be removed from site as soon as practical. ■ All construction plants shall be removed from site upon completion of construction works.	Works site / Design and construction phases	ArchSD's Contractor	Construction Phase		Implemented
S.7.9.2 MC 5	S.6.3.1	Construction light: ■ To be oriented away from the viewing location of VSRs. ■ All lighting facing sensitive receiver shall have frosted diffusers and reflective covers.	All construction lights / Design and construction phases	ArchSD's Contractor	Construction Phase		Implemented
S.7.9.2 MC 6	S.6.3.1	Silting trap: ■ Silting traps shall be installed to minimise silting to streams.	Streams / Construction phase	Contractor	Construction Phase		NA
S.7.9.3 MT 1	S.6.3.1	Compensation for losses: ■ The tree compensation to tree loss ratio shall be at least 1:1 in term of quantity.	Within the Wo Hop Shek Crematorium	ArchSD's Contractor	Construction Phase	ETWB TCW No. 2/2004 ETWB TCW No. 3/2006	NA
S.7.9.3 MT 2	S.6.3.1	Where practical, trees that require removal shall be transplanted on Site.	Work site / Design and construction phases	ArchSD's Contractor	Construction Phase	ETWB TCW No. 2/2004 ETWB TCW No. 3/2006	Implemented

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EIA Ref	EM&A Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stage	Relevant Legislation and Guidelines	Implementation Status
S.7.9.3 MT 3	S.6.3.1	Amenity planting: <ul style="list-style-type: none"> Planting works shall be carried out under the supervision of a specialist landscape sub-contractor. The rooftop of the cremation plant room shall be planted with lawn. Open spaces shall be included Project. Screen planting such as planting a roll of trees along the site boundary butting Kiu Tau Road shall be carried out. New trees, shrubs and groundcover shall be carefully selected and designed to homogenize with the environment. 	As shown on mitigation measure plans / All phases	ArchSD's & FEHD's Contractor	Construction Phase	ETWB 2/2004	NA
S.7.9.3 MT 4	S.6.3.1	Woodland mix planting: <ul style="list-style-type: none"> Woodland mix, comprising of tree seedlings and shrubs, shall be planted within the Wo Hop Shek Cemetery to enhance the ecological value and compensatory of tree loss. 	Within the Wo Hop Shek Cemetery / All phases	ArchSD's Contractor	Construction Phase	ETWB TCW No. 2/2004 ETWB TCW No. 3/2006	NA
S.7.9.3 MT 5	S.6.3.1	Preservation: No tree shall be transplanted or felled without prior approval by relevant Government departments. <ul style="list-style-type: none"> All trees that are marked for retention shall be fenced off with a 1.2m high fence around the dripline of trees or larger area as far as feasible. Transplant preparation works shall be carried as soon as possible after commencement of construction. Over-pruning such as hard pruning of tree crown, pollarding or topping shall be avoided. Rootball and crown pruning shall be carried out over at least 3 months. Existing shrub and ground cover planting areas that will not be removed shall be maintained in good condition and enhanced where practical. 	Work site / All phases	ArchSD's Contractor	Construction Phase	ETWB TCW No. 2/2004 ETWB TCW No.	Implemented
S.7.9.4 MB 1	S.6.3.1	The 10m height headroom cremation plant room shall be half sunken to reduce the visual impact to pedestrians.	Cremation plant room / Design phase	ArchSD's Contractor	Construction Phase		NA
S.7.9.4 MB 2	S.6.3.1	The chimney shall be designed to have sculptural outlook and articulated.	Chimney / Design phase	ArchSD's Contractor	Construction Phase		NA
S.7.9.4 MB 3:	S.6.3.1	The chimney stacks shall be designed to locate at the least conspicuous location of the site to VSRs.	Chimney / Design phase	ArchSD's Contractor	Construction Phase		NA
Landscape and Visual (EM&A)							

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EIA Ref	EM&A Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stage	Relevant Legislation and Guidelines	Implementation Status
S.11.2.23 - S.11.2.24	S.6.2	Details of the inspection frequency and parameters will be outlined in the EM&A Manual.	Work site / Construction	Contractor	Construction Phase		NA
Water Quality (Construction Phase)							
S.8.7.1 - S.8.7.4	S.7.2.2	<p>Construction Runoff and Drainage</p> <ul style="list-style-type: none"> Wastewater shall be properly treated to meet the discharge standards set out in the relevant Water Pollution Control Ordinance (WPCO) discharge licence. No direct discharge of site runoff into the two streams shall be allowed. Provision of perimeter channels to intercept storm runoff from outside the Site. These shall be constructed in advance of site formation works and earthworks. Sand/silt removal facilities such as sand traps, silt traps and sediment basins should be provided to remove sand/silt particles from runoff to meet the requirements of the Technical Memorandum standard under the WPCO. Works shall be carefully programmed to minimise soil excavation works during rainy seasons. <p>Exposed soil surface shall be protected by paving as soon as possible to reduce the potential of soil erosion.</p> <ul style="list-style-type: none"> Temporary access roads shall be protected by crushed gravel and exposed slope surfaces shall be protected when rainstorms are likely to occur. Trench excavation shall be avoided in the wet season as far as practicable, and if necessary, these trenches shall be excavated and backfilled in short sections. Open stockpiles of construction materials on Site shall be covered with tarpaulin or similar fabric during rainstorms. Sand and silt in the wash water from the wheel from the wheel washing facility shall be settled out and removed before discharging into the storm drain. Oil receptor shall be provided in the drainage system and regularly emptied to prevent the release of oil and grease into the storm drainage system after accidental spillage. 	Work site / Construction	Contractor	Construction Phase	ProPECC PN 1-94 & WPCO	Implemented

EIA Ref	EM&A Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stage	Relevant Legislation and Guidelines	Implementation Status
S.8.7.5	S.7.2.3	General Construction Activities <ul style="list-style-type: none"> Debris and rubbish generated on Site shall be collected, handled and disposed of properly to avoid them entering the two streams. All fuel tanks and storage areas shall be provided with locks and be sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank. Open storm water drains and culverts near the works area shall be covered to block the entrance of large debris and refuse. 	Work site / Construction phase	Contractor	Construction Phase	ProPECC PN 1-94 & WPCO	Implemented
S.8.7.6	S.7.2.4	Sewage from On-site Workforce: <ul style="list-style-type: none"> Portable chemical toilets shall handle the sewage from construction work force if the existing toilets in the Site are not adequate. Licensed contractors who shall be responsible for appropriate disposal and maintenance of these facilities shall provide appropriate and adequate portable toilets. Sheet piling shall be provided at suitable location around the basement excavation to reduce the effect of lowering the water table from any dewatering process. Any discharge of groundwater pumped out from any dewatering process of the construction works shall be treated to comply with the standards set in the relevant discharge licence prior discharge. No discharge of the groundwater shall be allowed into the two streams. 	Work site / Construction phase	Contractor	Construction Phase	WPCO	Implemented
Ecology (Construction Phase)							
S.9.8.3 -	S.8.3.1	Mitigation to minimise impacts on habitat and vegetation loss: <ul style="list-style-type: none"> Layout of the Project shall be carefully designed to avoid or minimise the area of habitat loss and the numbers of trees to be felled. All trees shall be preserved as far as possible, especially species of conservation concern. Recommendations to be provided in the Tree Survey Report to mitigate impacts on trees shall be followed. Disturbance of individuals of the shrub / tree Transplantation of the two shrub / tree species of conservation concern, namely <i>Aquilaria sinensis</i> and <i>Cibotium barometz</i>, shall be avoided. Where loss of these species would be unavoidable, it is recommended to transplant them to same habitats with similar conditions. Following transplantation, regular monitoring of these trees shall be conducted by a suitable qualified botanist / horticulturist over a 12- 	Work site particularly semi-natural woodland / Design and construction phases.	Arch SD / Contractor	Construction Phase	ETWB Technical Circular No. 3/2006	Implemented

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EIA Ref	EM&A Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stage	Relevant Legislation and Guidelines	Implementation Status
		<p>month period.</p> <ul style="list-style-type: none"> ■ Transplantation of any affected trees to grassland / scrubland within the Wo Hop Shek Cemetery. ■ Compensatory planting of the felled trees shall follow the Technical Circular No. 3/2006 issued by ETWB. 					
S.9.8.15 - S.9.8.16	S.8.3.1	<p>Mitigation to construction runoff through general good site practice:</p> <ul style="list-style-type: none"> ■ Temporary access to the work sites shall be carefully planned and located to minimise disturbance caused to the streams and nearby habitats. ■ Use of less or smaller construction plant may be specified to reduce disturbance to the streams and nearby habitats. ■ Temporary sewage system shall be designed and installed to collect wastewater and prevent it from entering the streams and nearby habitats. ■ The Site inside or in the proximity of the streams and nearby habitats shall be temporarily isolated, such as by placing of sandbags or silt curtains with lead edge at bottom and properly supported props, to prevent adverse impacts on these areas. ■ Natural bottom and existing flow in the streams shall be preserved as much as possible to avoid disturbance to the stream habitats. ■ Proper locations well away from the streams and nearby habitats for temporary storage of materials (e.g. equipment, filling materials, chemicals and fuel) and temporary stockpile of construction debris and spoil shall be identified before commencement of the works. ■ Stockpiling of construction materials, if necessary, shall be properly covered and located away from the streams and nearby habitats. ■ Construction debris and spoil shall be covered up and/or properly disposed of as soon as possible to avoid being washed into the streams and nearby habitats by rain. ■ Construction effluent, site runoff and sewage shall be properly collected and/or treated. 	Work site / Construction phase	Contractor	Construction Phase	ETWB Technical Circular (Works) No. 5/2005.	Implemented

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EIA Ref	EM&A Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stage	Relevant Legislation and Guidelines	Implementation Status
		<ul style="list-style-type: none"> ■ Proper locations for discharge outlets of wastewater treatment facilities well away from the streams and nearby habitats shall be identified. ■ Vehicles and other plant shall be carefully maintained and properly used to minimise the chance for accidental spillage. ■ Any spillages that do occur shall be quickly identified and appropriately cleaned up before they can contaminate streams or groundwater. ■ Temporary geo-textile silt fences around earth moving works shall be erected to trap any sediments being washed away and prevent them from entering surrounding areas. ■ Silt traps shall be installed at points where drainage from the Site enters temporary sewage system. ■ Exposed soil or other loose materials shall be covered with tarpaulins to prevent erosion, and then seeded and covered with a biodegradable geo- textile blanket for erosion control purposes. 					
S.9.8.18		<p>Mitigation to protect the groundwater:</p> <ul style="list-style-type: none"> ■ Basement formation or any construction activities likely to pump out a large quantity of groundwater shall be protected with sheet-piling at suitable locations around the basement footprint, or by any like method. ■ No groundwater shall be pumped back to the two stream courses to protect the natural integrity of the stream habitat and the associated organism. 	Work site / Construction phase	Contractor	Construction Phase		NA
S.9.8.20	S.8.3.1	<p>Mitigation for noise and other disturbance on ecological integrity:</p> <ul style="list-style-type: none"> ■ Use of sturdy 1.8 metres protective fencing shall be located at the edge of the tree canopy but not around the trunk. ■ Works beneath the tree canopy shall be avoided: If encroachment under the canopy area is unavoidable, adequate protections shall be provided to ensure no damage of any part of the tree would occur due to the encroachment. ■ An approved Landscape Contractor shall implement any tree transplanting and planting works. Quality control of the work shall be undertaken by a qualified Landscape Architect through site inspections and approval of works. 	Work site / Construction phase	Contractor	Construction Phase		Implemented

EIA Ref	EM&A Ref.	Environmental Protection Measures / Mitigation Measures	Location / Timing	Implementation Agent	Implementation Stage	Relevant Legislation and Guidelines	Implementation Status
		<ul style="list-style-type: none"> Construction works shall be restricted to works area which are clearly defined. Woodland or other habitats that would be affected by the construction works shall be well-defined and minimised. Human inference to habitats beyond the site boundary and habitats proposed to be retained shall be avoided by providing temporary barricades. Works area shall be reinstated immediately after completion of the construction. Waste and other garbage generated during the construction of the proposed development shall be dumped properly. Uncontrolled fire shall be strictly prohibited. Appropriate fire control measures shall be provided in order to protect nearby habitats. 					
Ecology (EM&A)							
S.9.11 & S.11.2.29	S.8.2.1	Audit/Inspection: <ul style="list-style-type: none"> Regular site audit / inspection shall be conducted at least once a week to inspect the implementation of the recommended mitigation measures (details to be outlined in the EM&A Manual). 	Work site / Construction phase	Contractor	Construction Phase		Implemented
S.11.2.32 - S.11.2.33	S.8.2.2 - S.8.2.4	Monitoring on Transplantation: <ul style="list-style-type: none"> Trees requiring transplantation or protection shall be identified based on the information illustrated in the Tree Survey Report. Regular monitoring after transplantation of <i>Aquilaria sinensis</i> and <i>Cibotium barometz</i> individuals shall be conducted to check on the health and conditions of the plants. Monitoring shall cover the 12-month period following transplantation. The monitoring shall be conducted by a suitably qualified botanist / horticulturist at least twice a month for the first four months after transplantation, and once a month for the remaining eight months. 	Work site / Construction phase	Contractor	Construction Phase		Implemented

APPENDIX D: IMPACT MONITORING SCHEDULE OF THE REPORTING PERIOD

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Impact Monitoring Schedule for Expansion of Wo Hop Shek Crematorium

Mar-20						
Sun	Mon	Tue	Wed	Thur	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
			Weekly ET site inspection and audit	Air monitoring for A10, A20 for 1-hr TSP and 24-hr TSP Monitoring Time: 0900-1630		
15	16	17	18	19	20	21
			Weekly ET site inspection and audit Air monitoring for A10, A20 for 1-hr TSP and 24-hr TSP Monitoring Time: 0900-1630			
22	23	24	25	26	27	28
		Air monitoring for A10, A20 for 1-hr TSP and 24-hr TSP Monitoring Time: 0900-1630 Progress Meeting	Weekly ET site inspection and audit			
29	30	31				
	Air monitoring for A10, A20 for 1-hr TSP and 24-hr TSP Monitoring Time: 0900-1630					

- *Remarks: 1. This impact monitoring schedule is subject to change due to adverse weather conditions or other rationales.
2. Advance notification of the changes will be given to all relevant parties at least 48 hours prior to implementation.

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Impact Monitoring Schedule for Expansion of Wo Hop Shek Crematorium

Apr-20						
Sun	Mon	Tue	Wed	Thur	Fri	Sat
			1	2	3	4
			Weekly ET site inspection and audit		Air monitoring for A10, A20 for 1-hr TSP and 24-hr TSP Monitoring Time: 0900-1630	
5	6	7	8	9	10	11
			Weekly ET site inspection and audit	Air monitoring for A10, A20 for 1-hr TSP and 24-hr TSP Monitoring Time: 0900-1630		
12	13	14	15	16	17	18
			Weekly ET site inspection and audit Air monitoring for A10, A20 for 1-hr TSP and 24-hr TSP Monitoring Time: 0900-1630			
19	20	21	22	23	24	25
		Air monitoring for A10, A20 for 1-hr TSP and 24-hr TSP Monitoring Time: 0900-1630 Progress Meeting	Weekly ET site inspection and audit			
26	27	28	29	30		
	Air monitoring for A10, A20 for 1-hr TSP and 24-hr TSP Monitoring Time: 0900-1630					

*Remarks: 1. This impact monitoring schedule is subject to change due to adverse weather conditions or other rationales.
2. Advance notification of the changes will be given to all relevant parties at least 48 hours prior to implementation.

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Impact Monitoring Schedule for Expansion of Wo Hop Shek Crematorium

May-20						
Sun	Mon	Tue	Wed	Thur	Fri	Sat
					1	2
						Air monitoring for A10, A20 for 1-hr TSP and 24-hr TSP Monitoring Time: 0900-1630
3	4	5	6	7	8	9
			Weekly ET site inspection and audit		Air monitoring for A10, A20 for 1-hr TSP and 24-hr TSP Monitoring Time: 0900-1630	
10	11	12	13	14	15	16
			Weekly ET site inspection and audit	Air monitoring for A10, A20 for 1-hr TSP and 24-hr TSP Monitoring Time: 0900-1630		
17	18	19	20	21	22	23
			Weekly ET site inspection and audit Air monitoring for A10, A20 for 1-hr TSP and 24-hr TSP Monitoring Time: 0900-1630			
24	25	26	27	28	29	30
		Air monitoring for A10, A20 for 1-hr TSP and 24-hr TSP Monitoring Time: 0900-1630	Weekly ET site inspection and audit			
31						

*Remarks: 1. This impact monitoring schedule is subject to change due to adverse weather conditions or other rationales.
2. Advance notification of the changes will be given to all relevant parties at lease 48 hours prior to implementation.

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Impact Monitoring Schedule for Expansion of Wo Hop Shek Crematorium						
Jun-20						
Sun	Mon	Tue	Wed	Thur	Fri	Sat
	1	2	3	4	5	6
	Air monitoring for A10, A20 for 1-hr TSP and 24-hr TSP Monitoring Time: 0900-1630		Weekly ET site inspection and audit			Air monitoring for A10, A20 for 1-hr TSP and 24-hr TSP Monitoring Time: 0900-1630
7	8	9	10	11	12	13
			Weekly ET site inspection and audit		Air monitoring for A10, A20 for 1-hr TSP and 24-hr TSP Monitoring Time: 0900-1630	
14	15	16	17	18	19	20
			Weekly ET site inspection and audit	Air monitoring for A10, A20 for 1-hr TSP and 24-hr TSP Monitoring Time: 0900-1630		
21	22	23	24	25	26	27
	Weekly ET site inspection and audit		Air monitoring for A10, A20 for 1-hr TSP and 24-hr TSP Monitoring Time: 0900-1630			
28	29	30				
	Air monitoring for A10, A20 for 1-hr TSP and 24-hr TSP Monitoring Time: 0900-1630					

*Remarks: 1. This impact monitoring schedule is subject to change due to adverse weather conditions or other rationales.
2. Advance notification of the changes will be given to all relevant parties at least 48 hours prior to implementation.

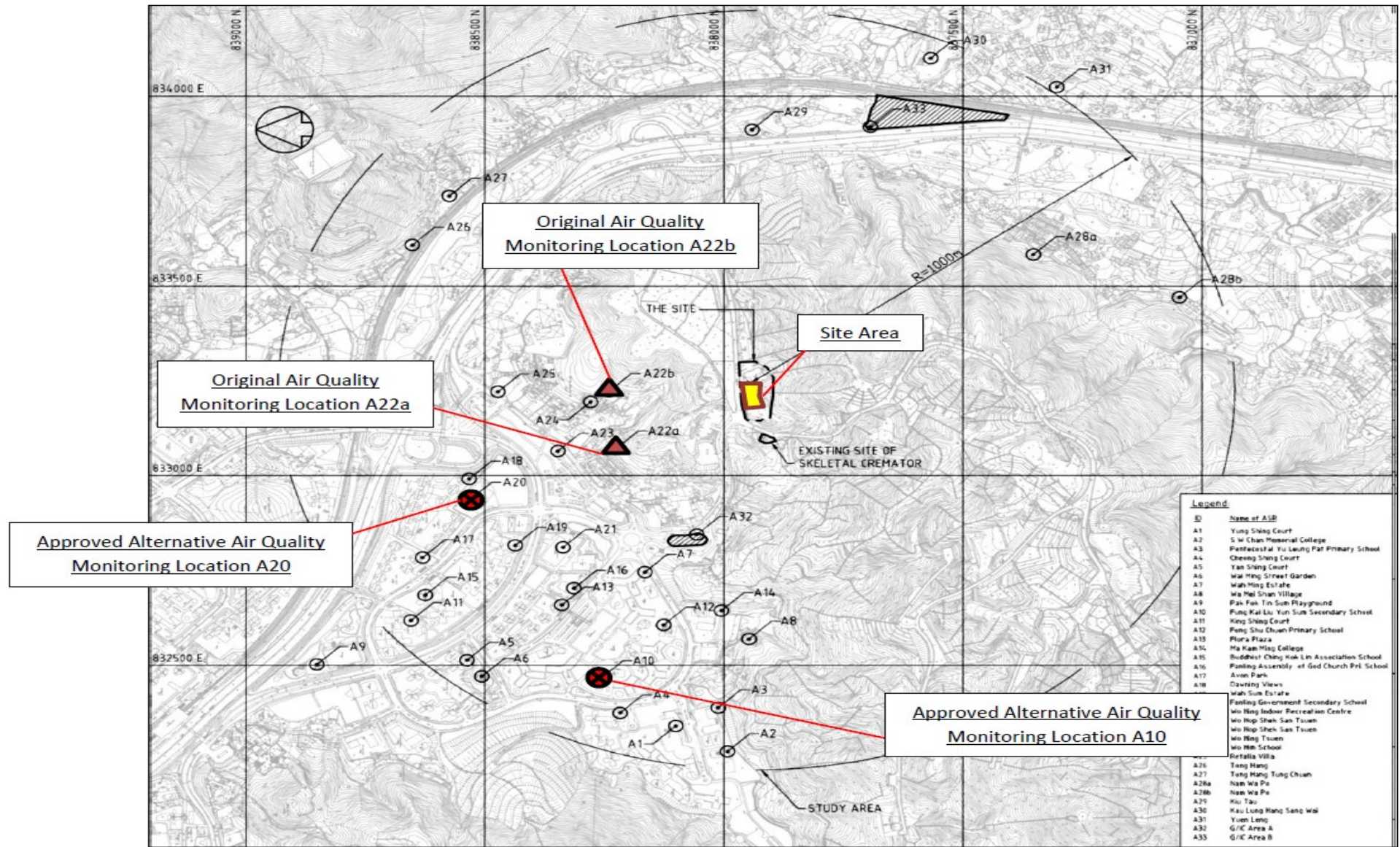
APPENDIX E: EVENT / ACTION PLAN FOR DUST EXCEEDANCE

Event	Action			
	ET	IEC	AR	Contractor
Action Level				
1. Exceedance for one sample	<ol style="list-style-type: none"> 1. Identify source, investigate the causes of complaint and propose remedial measures; 2. Inform IEC and AR; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily. 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET; 2. Check Contractor's working method. 	<ol style="list-style-type: none"> 1. Notify Contractor. 	<ol style="list-style-type: none"> 1. Rectify any unacceptable practice; 2. Amend working methods if appropriate.
2. Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> 1. Identify source; 2. Inform IEC and AR; 3. Advise the AR on the effectiveness of the proposed remedial measures; 4. Repeat measurements to confirm findings; 5. Increase monitoring frequency to daily; 6. Discuss with IEC and Contractor on remedial actions required; 7. If exceedance continues, arrange meeting with IEC and AR; 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ET on the effectiveness of the proposed remedial measures; 5. Supervise Implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented. 	<ol style="list-style-type: none"> 1. Submit proposals for remedial to AR within three working days of notification; 2. Implement the agreed proposals; 3. Amend proposal if appropriate.

Event	Action			
	ET	IEC	AR	Contractor
	8. If exceedance stops, cease additional monitoring.			
Limit Level				
1. Exceedance for one sample	<ol style="list-style-type: none"> 1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC, AR, Contractor and EPD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; 5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and AR informed of the results. 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the AR 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 exceedance in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within three working days of notification; 3. Implement the agreed proposals; 4. Amend proposal if appropriate.
2. Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> 1. Notify IEC, AR, Contractor and EPD; 2. Identify source; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily; 5. Carry out analysis of Contractor's working 	<ol style="list-style-type: none"> 1. Discuss amongst AR, ET, and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the AR accordingly; 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of exceedance in writing; 2. Notify Contractor; 3. In consultation with the IEC, agree with the Contractor on the remedial measures to be implemented; 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within three working days of notification; 3. Implement the agreed proposals;

Event	Action			
	ET	IEC	AR	Contractor
	<p>procedures to determine possible mitigation to be implemented;</p> <p>6. Arrange meeting with IEC and AR to discuss the remedial actions to be taken;</p> <p>7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and AR informed of the results;</p> <p>8. If exceedance stops, cease additional monitoring.</p>	<p>3. Supervise the implementation of remedial measures.</p>	<p>4. Ensure remedial measures properly implemented;</p> <p>5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.</p>	<p>4. Resubmit proposals if problem still not under control;</p> <p>5. Stop the relevant portion of works as determined by the AR until the exceedance is abated.</p>

APPENDIX F: LOCATION PLAN OF AIR QUALITY MONITORING STATION



APPENDIX G: AIR QUALITY MONITORING DATA

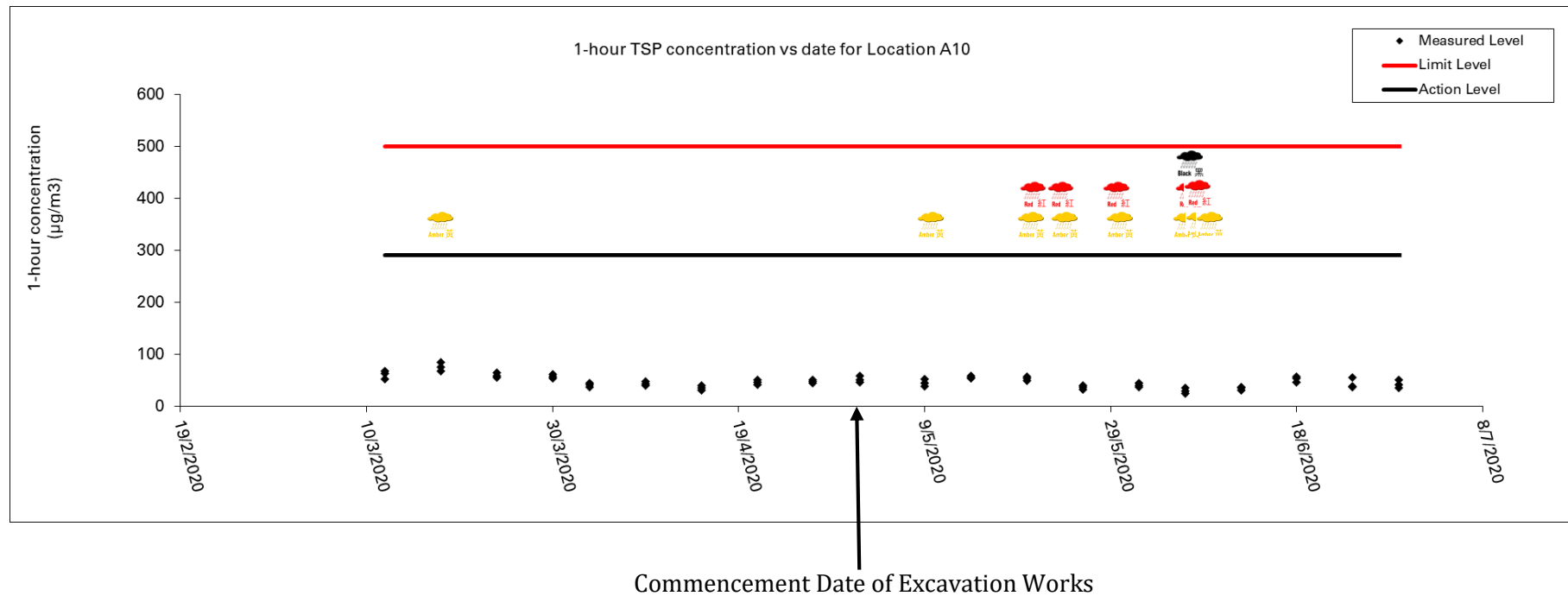
The Summary of 1-hour TSP Concentration ($\mu\text{g}/\text{m}^3$) at A10

Date	Weather	Sampling Time (1)	Sampling Time (2)	Sampling Time (3)	Reading (1) $\mu\text{g}/\text{m}^3$	Reading (2) $\mu\text{g}/\text{m}^3$	Reading (3) $\mu\text{g}/\text{m}^3$	Average $\mu\text{g}/\text{m}^3$
12/03/2020	Cloudy	10:00	11:00	12:00	64	60	71	65
18/03/2020	Cloudy	13:52	14:52	15:52	76	58	63	66
24/03/2020	Cloudy	10:30	11:30	12:30	49	55	52	52
30/03/2020	Cloudy	9:30	10:30	11:30	60	54	59	58
03/04/2020	Fine	15:20	16:20	17:20	37	45	41	41
09/04/2020	Sunny	15:09	16:09	17:09	48	40	43	44
15/04/2020	Sunny	09:30	10:30	11:30	36	31	40	36
21/04/2020	Sunny	09:30	10:30	11:30	42	46	51	46
27/04/2020	Sunny	09:30	10:30	11:30	50	44	48	47
02/05/2020	Sunny	14:50	15:50	16:50	51	58	46	52
09/05/2020	Fine	09:30	10:30	11:30	52	39	44	45
14/05/2020	Sunny	10:40	11:40	12:40	53	59	55	56
20/05/2020	Sunny	10:50	11:50	12:50	49	53	57	53
26/05/2020	Fine	15:25	16:25	17:25	37	32	40	36
01/06/2020	Sunny	14:30	15:30	16:30	44	37	40	40
06/06/2020	Fine	10:45	11:45	12:45	36	29	25	30
12/06/2020	Sunny	10:55	11:55	12:55	35	31	37	34
18/06/2020	Sunny	11:50	12:50	13:50	46	57	53	52
24/06/2020	Sunny	10:45	11:45	12:45	56	37	39	44
29/06/2020	Sunny	15:45	16:45	17:45	41	35	50	42

Average 1-hour TSP: 47

Max.: 66

Min.: 30



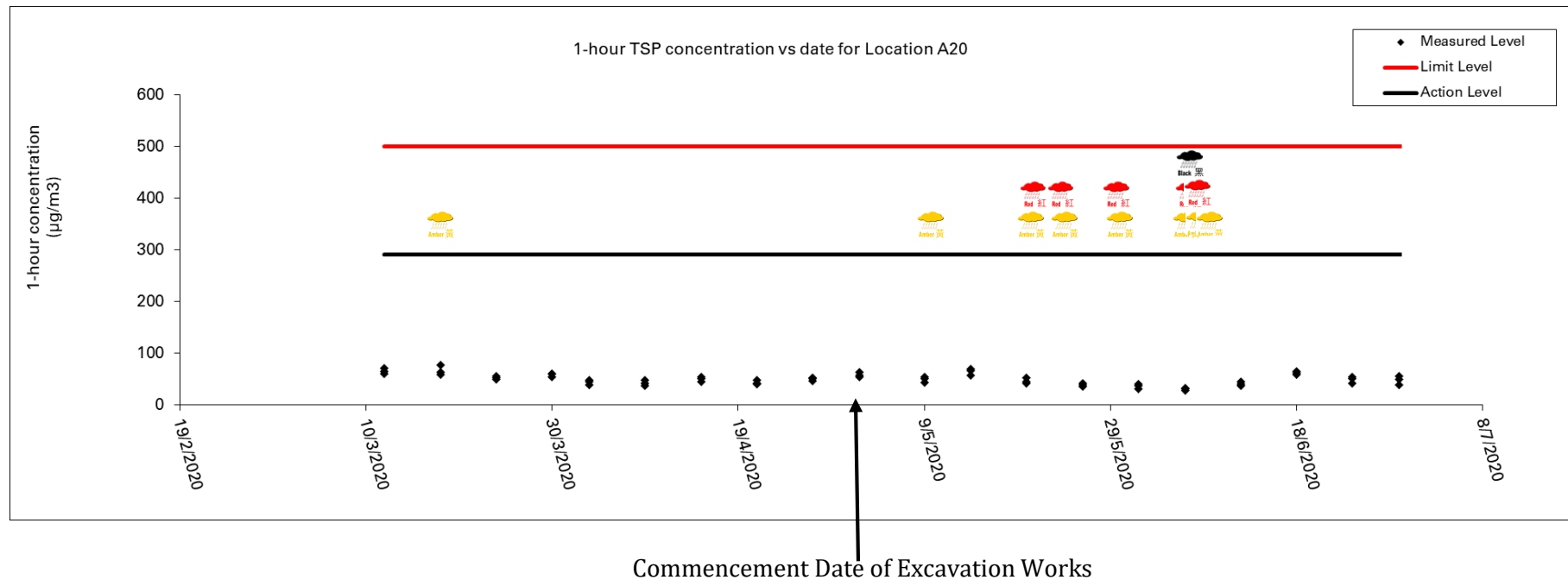
The Summary of 1-hour TSP Concentration ($\mu\text{g}/\text{m}^3$) at A20

Date	Weather	Sampling Time (1)	Sampling Time (2)	Sampling Time (3)	Reading (1) $\mu\text{g}/\text{m}^3$	Reading (2) $\mu\text{g}/\text{m}^3$	Reading (3) $\mu\text{g}/\text{m}^3$	Average $\mu\text{g}/\text{m}^3$
12/03/2020	Cloudy	10:30	11:30	12:30	52	68	63	61
18/03/2020	Cloudy	13:30	14:30	15:30	67	84	76	76
24/03/2020	Cloudy	11:00	12:00	13:00	55	59	65	60
30/03/2020	Cloudy	9:00	10:00	11:00	61	53	57	57
03/04/2020	Fine	15:00	16:00	17:00	44	38	47	43
09/04/2020	Sunny	14:39	15:39	16:39	36	47	42	42
15/04/2020	Sunny	09:45	10:45	11:45	50	53	45	49
21/04/2020	Sunny	10:00	11:00	12:00	39	42	47	43
27/04/2020	Sunny	10:00	11:00	12:00	46	52	50	49
02/05/2020	Sunny	14:20	15:20	16:20	63	54	57	58
09/05/2020	Fine	08:45	09:45	10:45	50	43	54	49
14/05/2020	Sunny	10:00	11:00	12:00	66	69	57	64
20/05/2020	Sunny	10:00	11:00	12:00	45	42	52	46
26/05/2020	Fine	15:00	16:00	17:00	41	35	38	38
01/06/2020	Sunny	14:10	15:10	16:10	36	31	39	35
06/06/2020	Fine	10:15	11:15	12:15	27	32	30	30
12/06/2020	Sunny	10:00	11:00	12:00	44	36	39	40
18/06/2020	Sunny	12:20	13:20	14:20	64	61	58	61
24/06/2020	Sunny	11:15	12:15	13:15	42	53	50	48
29/06/2020	Sunny	15:10	16:10	17:10	49	55	38	47

Average 1-hour TSP: 50

Max.: 76

Min.: 30



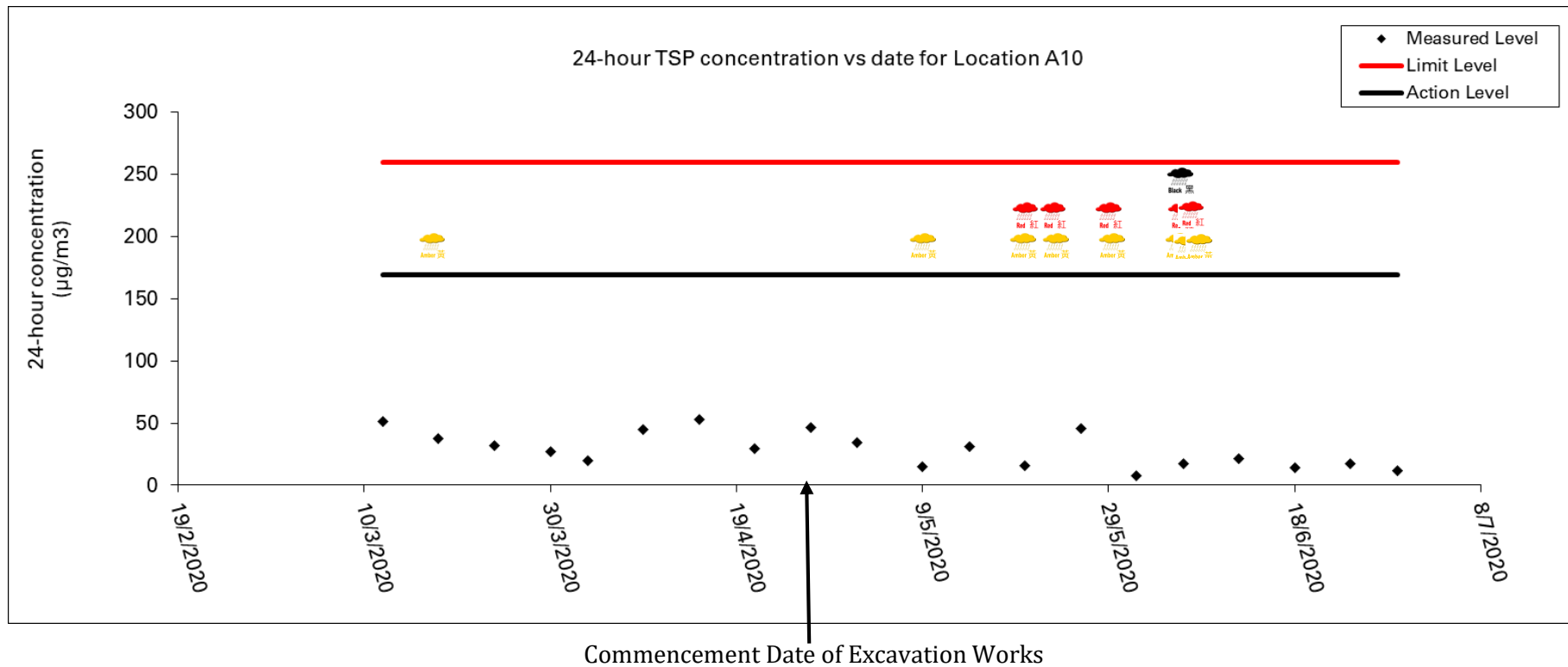
Calibration information for Location A10			
Date of Calibration:	12-Mar-20	Slop =	22.8488
Calibration due date:	26-Mar-20	Intercept =	10.9210
Date of Calibration:	24-Mar-20	Slop =	20.4062
Calibration due date:	7-Apr-20	Intercept =	14.6562
Date of Calibration:	9-Apr-20	Slop =	17.0099
Calibration due date:	23-Apr-20	Intercept =	19.9851
Date of Calibration:	21-Apr-20	Slop =	24.6122
Calibration due date:	5-May-20	Intercept =	10.9846
Date of Calibration:	2-May-20	Slop =	16.1098
Calibration due date:	16-May-20	Intercept =	20.9126
Date of Calibration:	14-May-20	Slop =	31.0248
Calibration due date:	28-May-20	Intercept =	2.5691
Date of Calibration:	1-Jun-20	Slop =	15.4917
Calibration due date:	14-Jun-20	Intercept =	21.0431
Date of Calibration:	18-Jun-20	Slop =	23.1034
Calibration due date:	1-Jul-20	Intercept =	7.4826

Contract No. AL G513
Expansion of Wo Hop Shek Crematorium
Quarterly EM&A Report No.1



Start Date	Weather Condition	Elapse Time			Chart Reading			Avg Air Temp	Avg Atmospheric Pressure	Flow Rate	Standard Air Volume	Filter Weight (g)		Particulate weight	Conc.
		Initial	Final	Actual (min)	Min	Max	Avg	(°C)	(mm Hg)	(m³/min)	(m³)	Initial	Final	(g)	(µg/m³)
12/03/2020	Cloudy	5859.2	5883.2	1440.0	40	40	40.0	20.8	763.3	1.29	1862	2.7452	2.8409	0.0957	51
18/03/2020	Cloudy	5883.2	5907.2	1440.0	40	40	40.0	19.5	765.4	1.30	1874	2.7149	2.7854	0.0705	38
24/03/2020	Cloudy	5909.7	5933.7	1440.0	40	41	40.5	21.8	763.4	1.31	1889	2.6949	2.7554	0.0605	32
30/03/2020	Cloudy	5933.7	5957.7	1440.0	40	40	40.0	19.7	760.0	1.29	1855	2.7008	2.7508	0.0500	27
03/04/2020	Fine	5957.7	5981.7	1440.0	39	40	39.5	21.9	761.8	1.23	1774	2.7095	2.7447	0.0352	20
09/04/2020	Sunny	5982.6	6006.6	1440.0	38	40	39.0	28.2	762.2	1.11	1602	2.6678	2.7393	0.0715	45
15/04/2020	Sunny	6006.6	6030.6	1440.0	40	41	40.5	23.3	763.3	1.22	1761	2.7229	2.8163	0.0934	53
21/04/2020	Sunny	6031.9	6055.9	1440.0	39	40	39.5	29.3	760.0	1.15	1652	2.7029	2.7520	0.0491	30
27/04/2020	Sunny	6055.9	6079.9	1440.0	40	40	40.0	25.4	763.8	1.19	1708	2.7382	2.8174	0.0792	46
02/05/2020	Sunny	5957.7	5981.7	1440.0	39	40	39.5	21.9	761.8	1.17	1688	2.7071	2.7652	0.0581	34
09/05/2020	Fine	5982.6	6006.6	1440.0	38	40	39.0	28.2	762.2	1.12	1608	2.7346	2.7588	0.0242	15
14/05/2020	Sunny	6006.6	6030.6	1440.0	40	41	40.5	23.3	763.3	1.23	1774	2.7309	2.7864	0.0555	31
20/05/2020	Sunny	6031.9	6055.9	1440.0	39	40	39.5	29.3	760.0	1.18	1701	2.7437	2.7705	0.0268	16
26/05/2020	Fine	6055.9	6079.9	1440.0	40	40	40.0	25.4	763.8	1.21	1745	2.7563	2.8360	0.0797	46
01/06/2020	Sunny	6081.1	6105.1	1440.0	40	40	40.0	30.7	756.8	1.19	1712	2.7064	2.7191	0.0127	7
06/06/2020	Fine	6105.1	6129.1	1440.0	37	38	37.5	25.6	756.2	1.05	1509	2.7353	2.7616	0.0263	17
12/06/2020	Sunny	6129.1	6153.1	1440.0	36	38	37.0	32.9	754.9	0.98	1416	2.7741	2.8041	0.0300	21
18/06/2020	Sunny	6154.8	6178.8	1440.0	37	38	37.5	32.2	756.8	1.27	1833	2.7101	2.7356	0.0255	14
24/06/2020	Sunny	6178.8	6202.8	1440.0	36	37	36.5	32.4	755.2	1.23	1767	2.7389	2.7697	0.0308	17
29/06/2020	Sunny	6202.8	6226.8	1440.0	38	40	39.0	35.1	753.2	1.32	1903	2.7302	2.7517	0.0215	11

Min: 7
Max: 53
Avg: 29



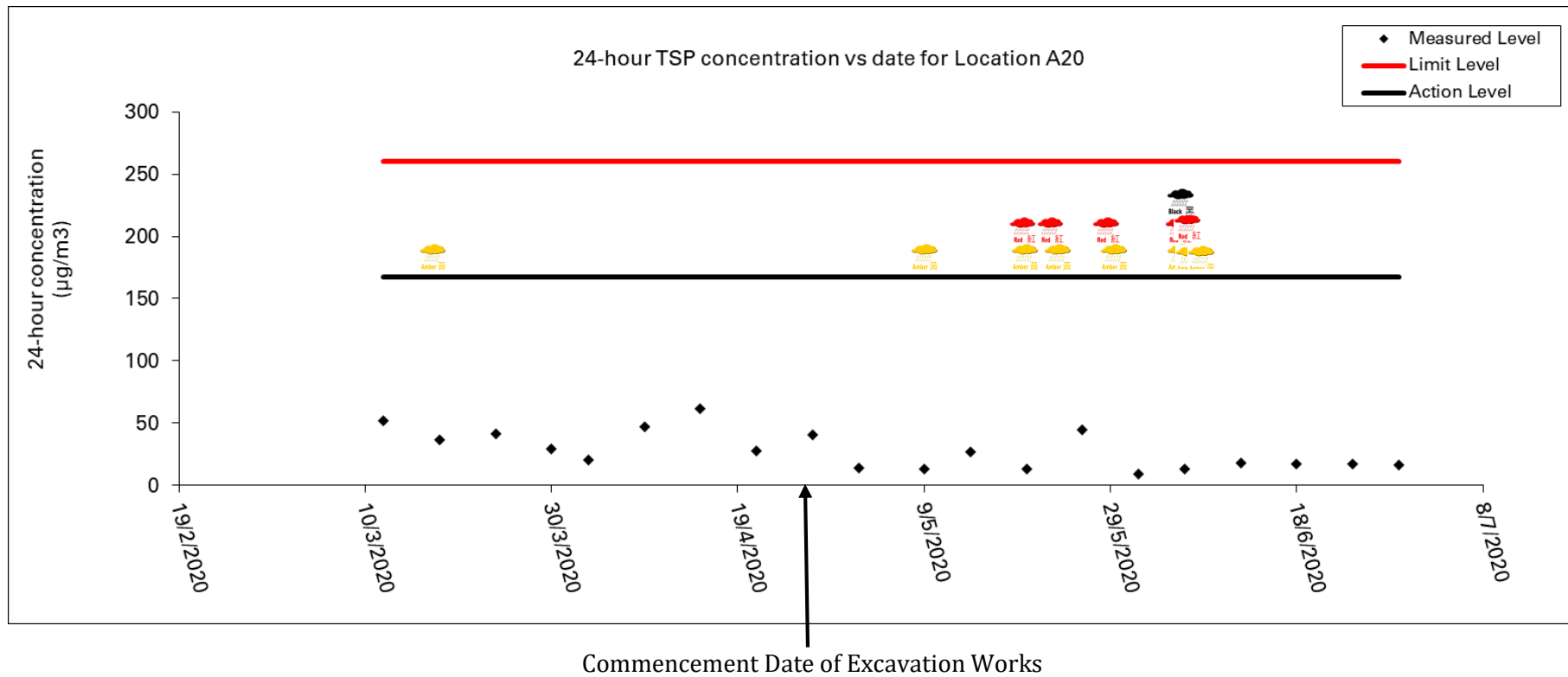
Calibration information for Location A20			
Date of Calibration:	12-Mar-20	Slop =	22.7535
Calibration due date:	26-Mar-20	Intercept =	13.2181
Date of Calibration:	24-Mar-20	Slop =	31.4670
Calibration due date:	7-Apr-20	Intercept =	2.2106
Date of Calibration:	9-Apr-20	Slop =	18.7514
Calibration due date:	23-Apr-20	Intercept =	19.0342
Date of Calibration:	21-Apr-20	Slop =	22.9005
Calibration due date:	5-May-20	Intercept =	13.6696
Date of Calibration:	2-May-20	Slop =	13.0048
Calibration due date:	16-May-20	Intercept =	23.7165
Date of Calibration:	14-May-20	Slop =	12.2657
Calibration due date:	28-May-20	Intercept =	26.0124
Date of Calibration:	1-Jun-20	Slop =	14.1619
Calibration due date:	14-Jun-20	Intercept =	22.8406
Date of Calibration:	18-Jun-20	Slop =	13.5467
Calibration due date:	1-Jul-20	Intercept =	21.6494

Contract No. AL G513
Expansion of Wo Hop Shek Crematorium
Quarterly EM&A Report No.1



Start Date	Weather Condition	Elapse Time			Chart Reading			Avg Air Temp	Avg Atmospheric Pressure	Flow Rate	Standard Air Volume	Filter Weight (g)		Particulate weight	Conc.
		Initial	Final	Actual (min)	Min	Max	Avg	(°C)	(mm Hg)	(m³/min)	(m³)	Initial	Final	(g)	(µg/m³)
12/03/2020	Cloudy	5859.3	5883.3	1440.0	39	40	39.5	20.8	763.3	1.18	1692	2.7466	2.8338	0.0872	52
18/03/2020	Cloudy	5883.3	5907.3	1440.0	39	40	39.5	19.5	765.4	1.18	1705	2.6989	2.7610	0.0621	36
24/03/2020	Cloudy	5910.2	5934.2	1440.0	39	40	39.5	21.8	763.4	1.17	1688	2.7001	2.7695	0.0694	41
30/03/2020	Cloudy	5933.7	5957.7	1440.0	40	40	40.0	19.7	760.0	1.19	1718	2.6789	2.7285	0.0496	29
03/04/2020	Fine	5957.8	5981.8	1440.0	39	41	40.0	21.9	761.8	1.21	1743	2.7325	2.7683	0.0358	21
09/04/2020	Sunny	5982.4	6006.4	1440.0	39	40	39.5	28.2	762.2	1.09	1564	2.6858	2.7591	0.0733	47
15/04/2020	Sunny	6006.4	6030.4	1440.0	39	40	39.5	23.3	763.3	1.11	1594	2.7020	2.7994	0.0974	61
21/04/2020	Sunny	6031.6	6055.6	1440.0	39	40	39.5	29.3	760.0	1.12	1607	2.7179	2.7627	0.0448	28
27/04/2020	Sunny	6055.6	6079.6	1440.0	39	40	39.5	25.4	763.8	1.14	1635	2.7225	2.7882	0.0657	40
02/05/2020	Sunny	5957.8	5981.8	1440.0	39	41	40.0	21.9	761.8	1.28	1837	2.7354	2.7605	0.0251	14
09/05/2020	Fine	5982.4	6006.4	1440.0	39	40	39.5	28.2	762.2	1.21	1737	2.7204	2.7432	0.0228	13
14/05/2020	Sunny	6006.4	6030.4	1440.0	39	40	39.5	23.3	763.3	1.12	1617	2.7754	2.8191	0.0437	27
20/05/2020	Sunny	6031.6	6055.6	1440.0	39	40	39.5	29.3	760.0	1.08	1550	2.7238	2.7445	0.0207	13
26/05/2020	Fine	6055.6	6079.6	1440.0	39	40	39.5	25.4	763.8	1.11	1604	2.7378	2.8090	0.0712	44
01/06/2020	Sunny	6081.2	6105.2	1440.0	39	39	39.0	30.7	756.8	1.10	1589	2.7045	2.7193	0.0148	9
06/06/2020	Fine	6105.2	6129.2	1440.0	39	40	39.5	25.6	756.2	1.16	1670	2.7329	2.7546	0.0217	13
12/06/2020	Sunny	6129.2	6153.2	1440.0	40	41	40.5	32.9	754.9	1.19	1715	2.7614	2.7925	0.0311	18
18/06/2020	Sunny	6154.9	6178.9	1440.0	39	39	39.0	32.2	756.8	1.23	1778	2.7562	2.7866	0.0304	17
24/06/2020	Sunny	6178.9	6202.9	1440.0	39	40	39.5	32.4	755.2	1.26	1820	2.7244	2.7559	0.0315	17
29/06/2020	Sunny	6202.9	6226.9	1440.0	39	40	39.5	35.1	753.2	1.24	1791	2.7406	2.7697	0.0291	16

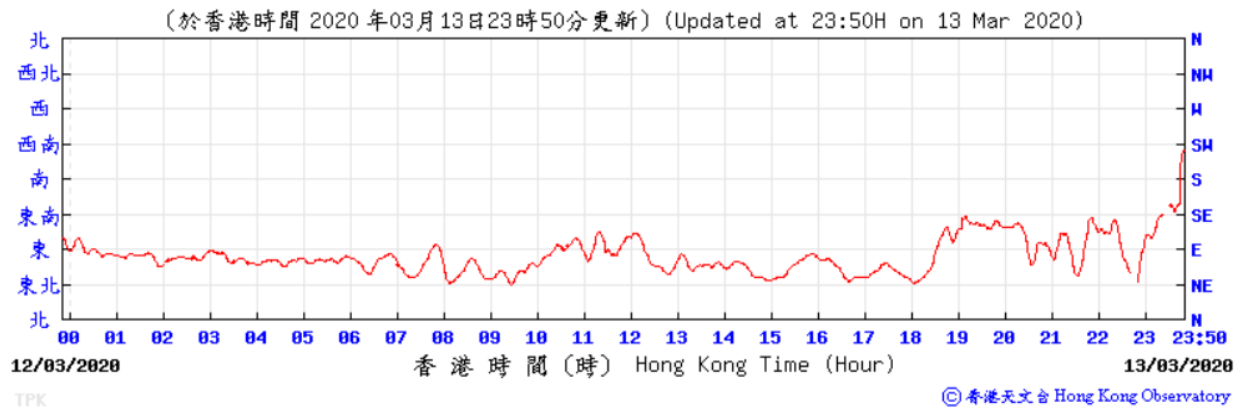
Min: 9
Max: 61
Avg: 28



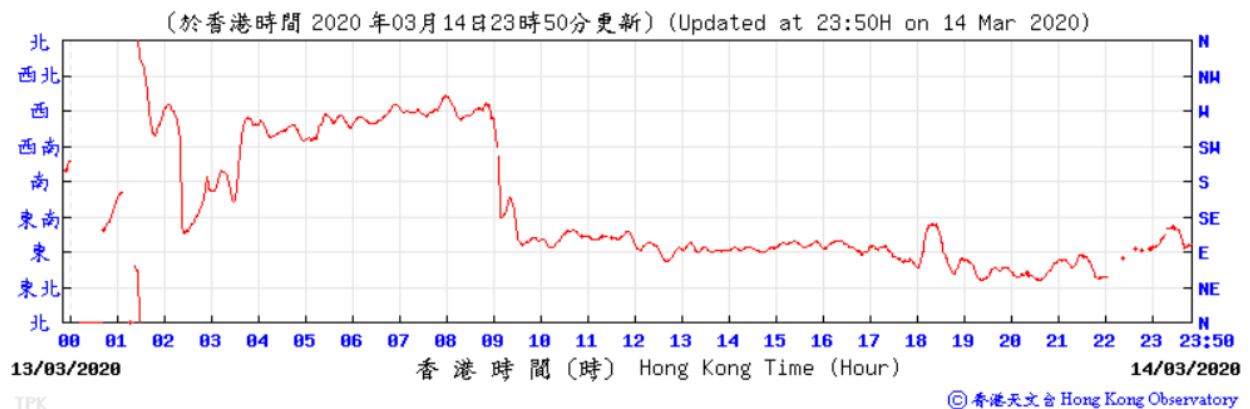
Wind direction data for 12, 18, 24 and 30 March 2020

A. 12/03/2020:

Wind Direction:

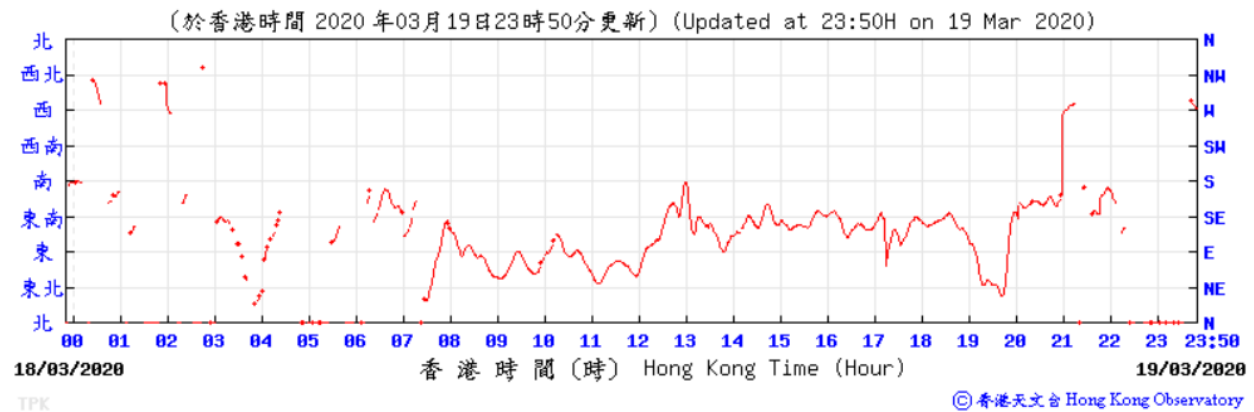


Wind Direction:

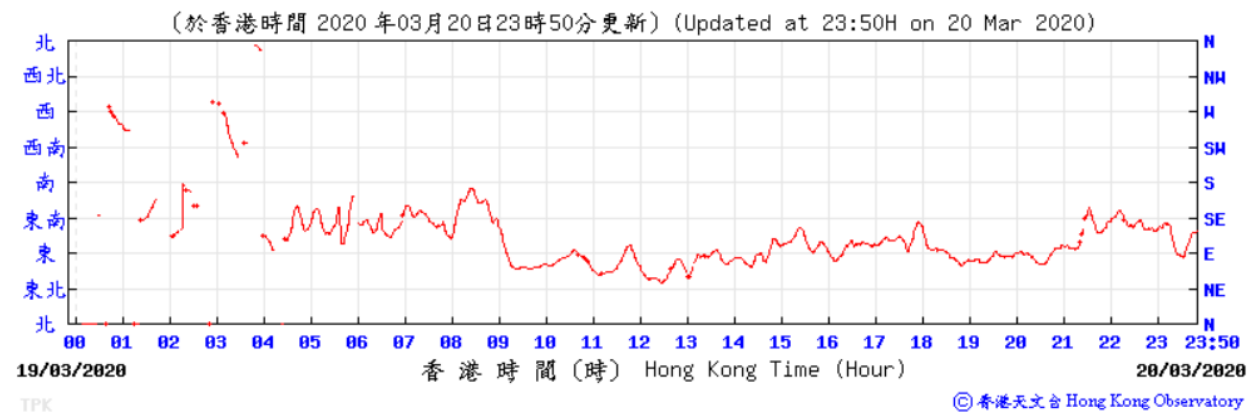


B. 18/03/2020:

Wind Direction:

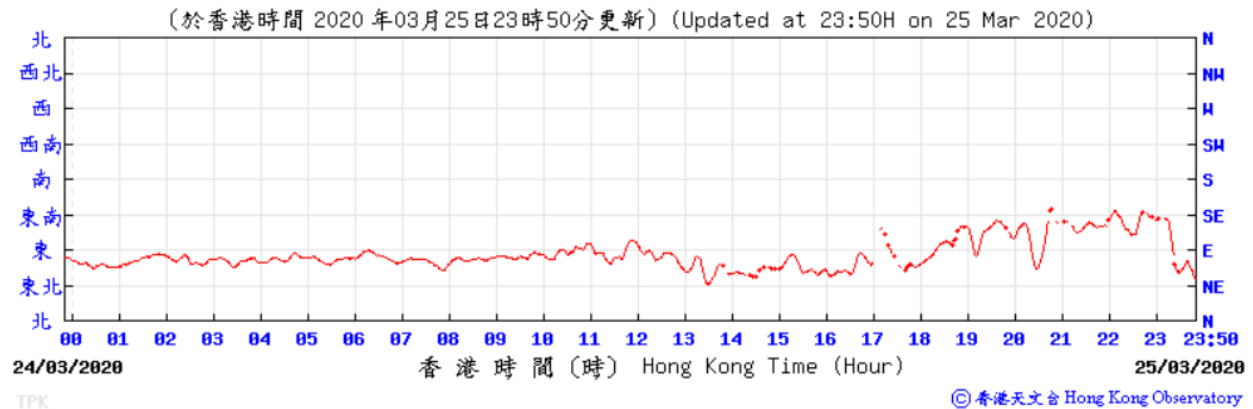


Wind Direction:

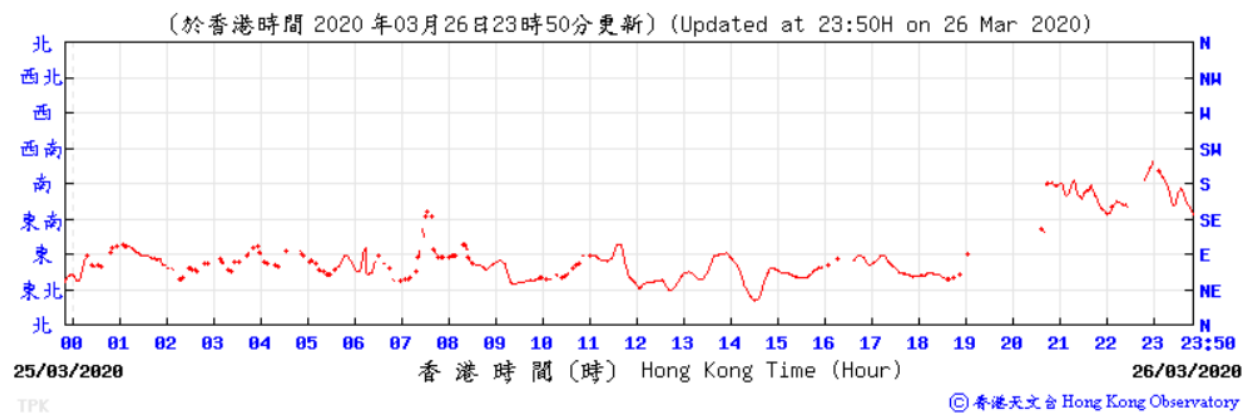


C. 24/03/2020:

Wind Direction:

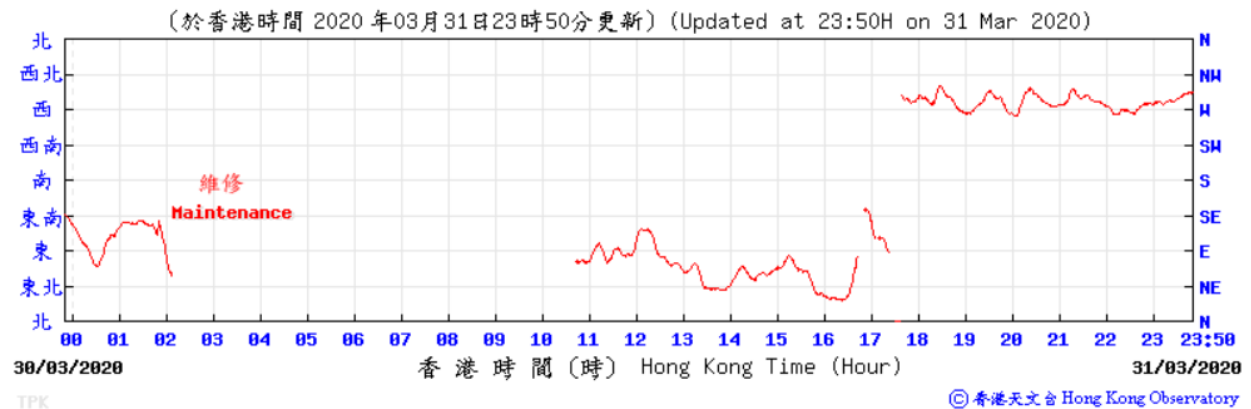


Wind Direction:

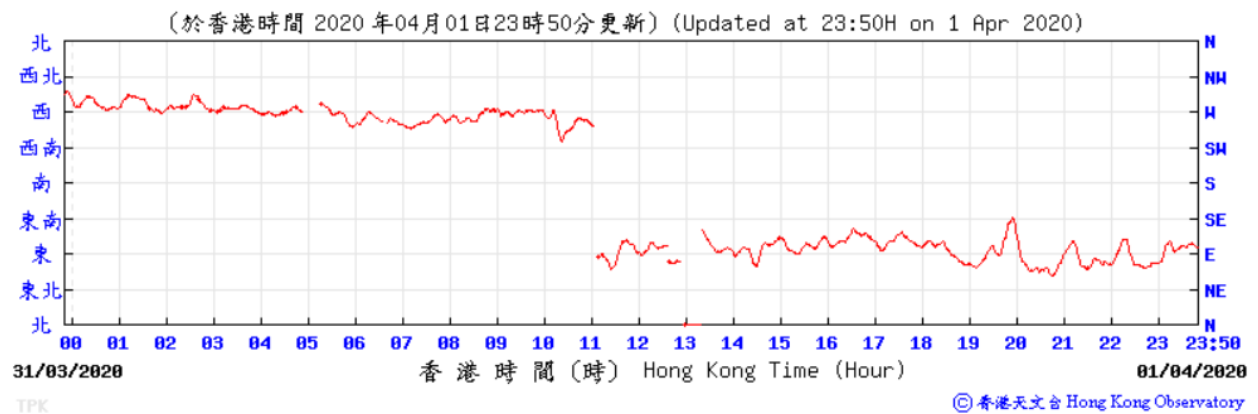


D. 30/03/2020:

Wind Direction:



Wind Direction:



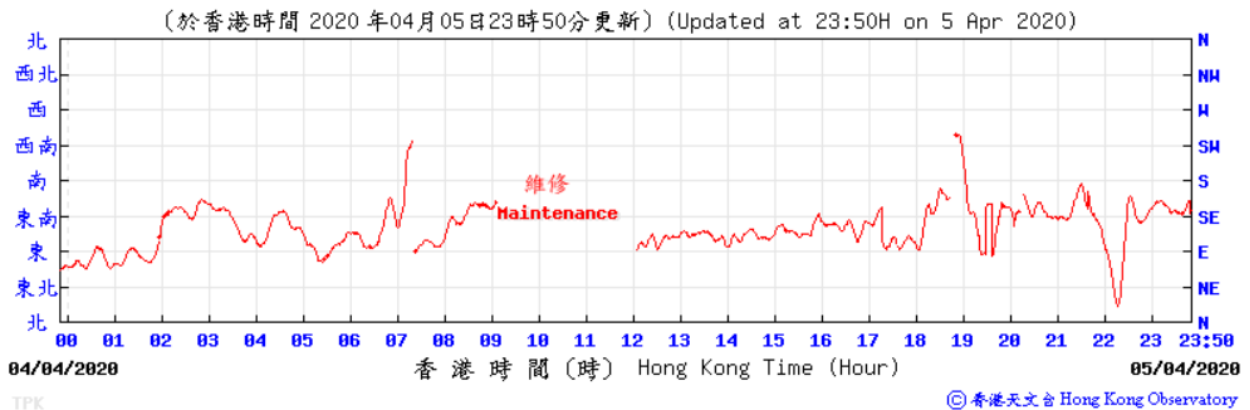
Wind direction data for 03, 09, 15, 21 and 27 April 2020

A. 03/04/2020:

Wind Direction:

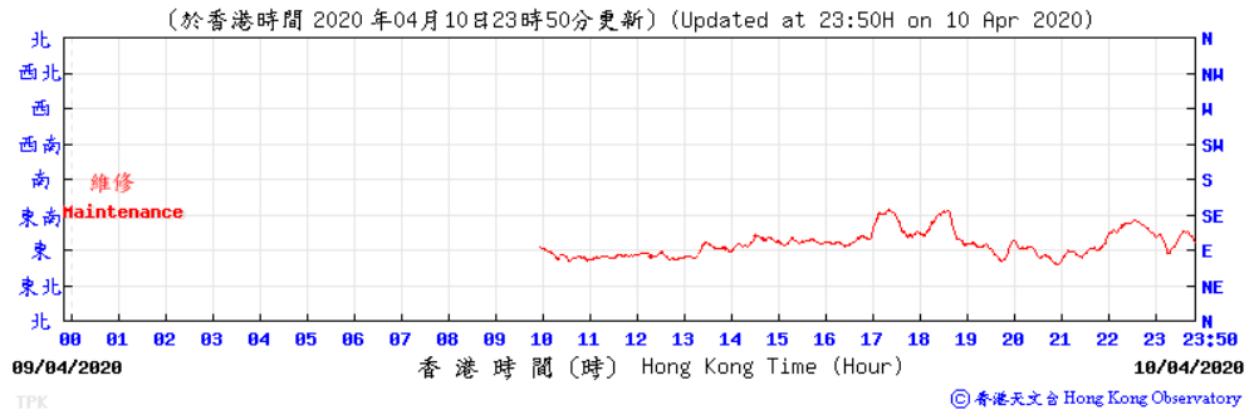


Wind Direction:

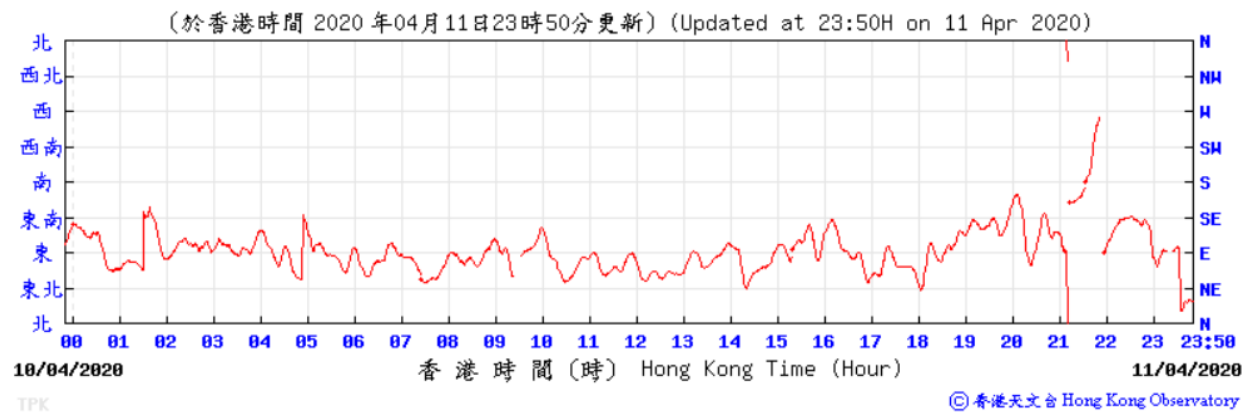


B. 09/04/2020:

Wind Direction:

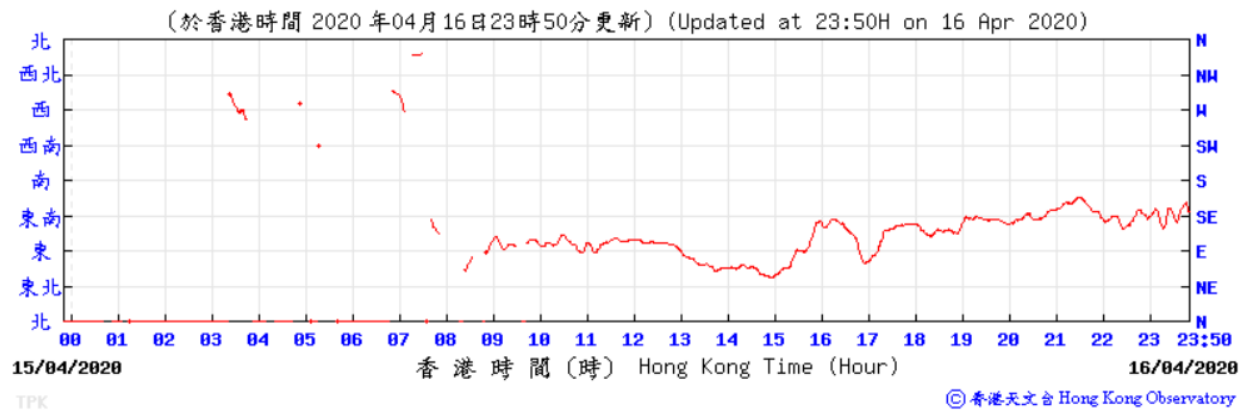


Wind Direction:

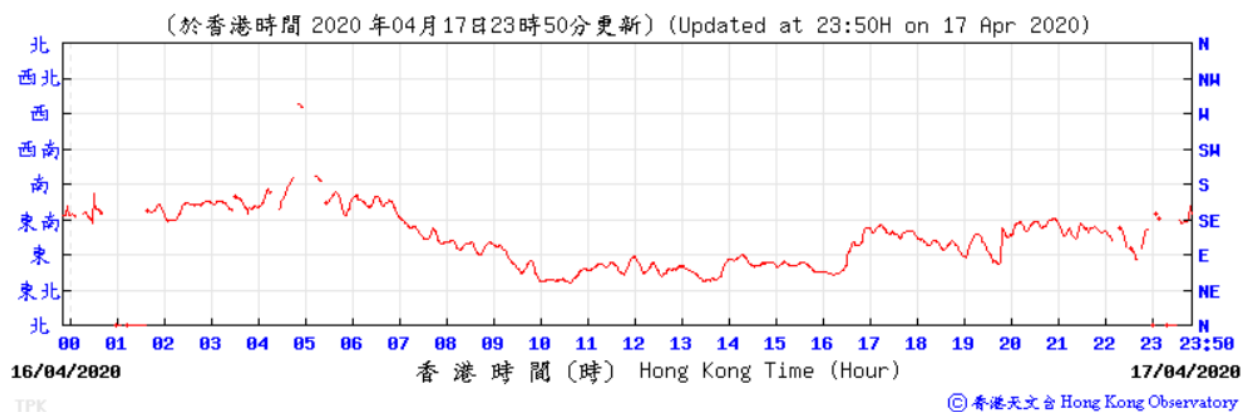


C. 15/04/2020:

Wind Direction:

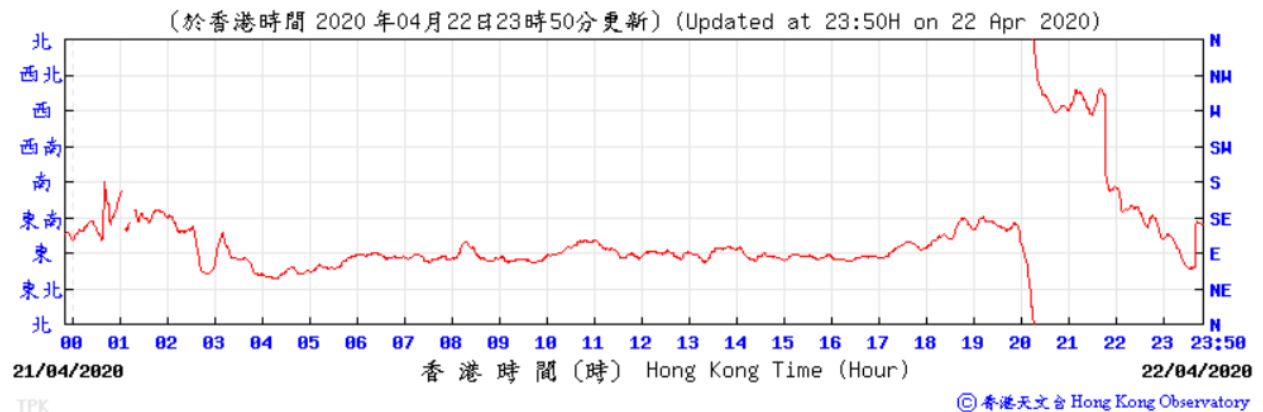


Wind Direction:

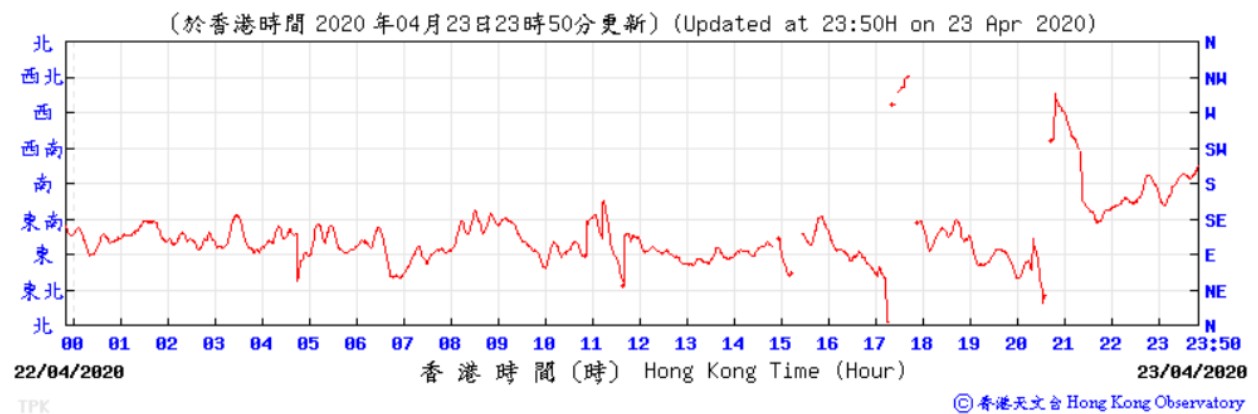


D. 21/04/2020:

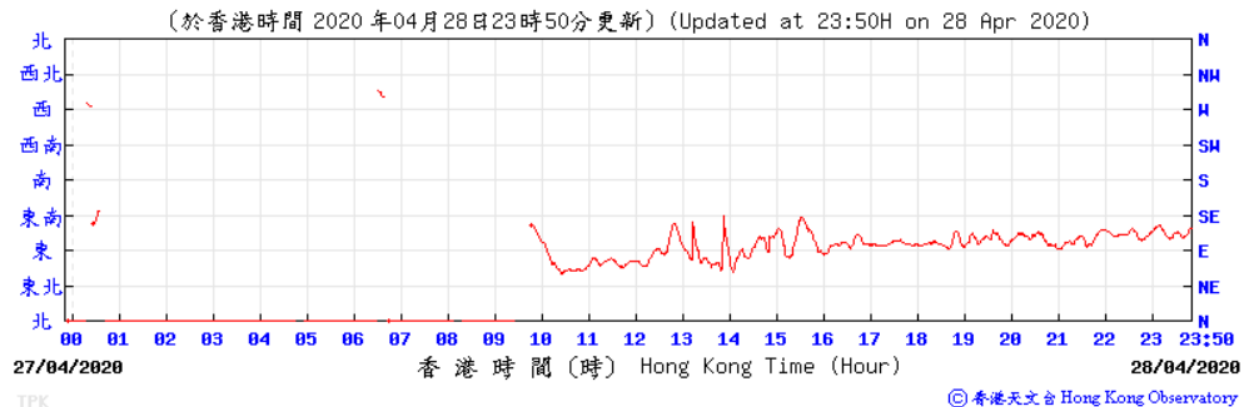
Wind Direction:



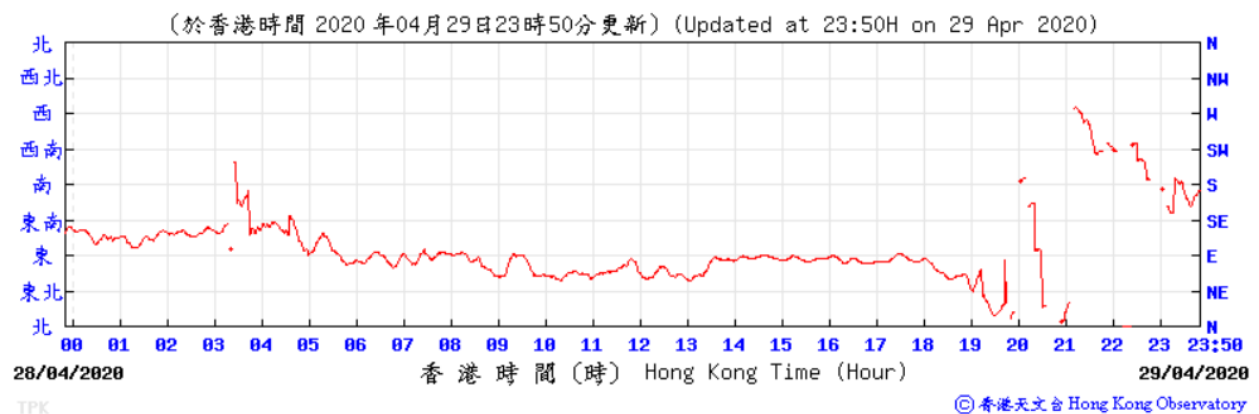
Wind Direction:



Wind Direction:



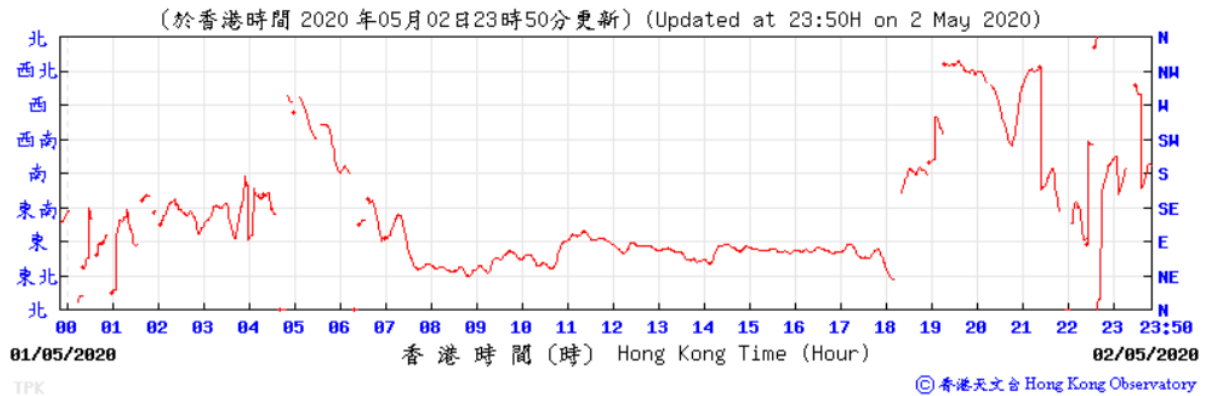
Wind Direction:



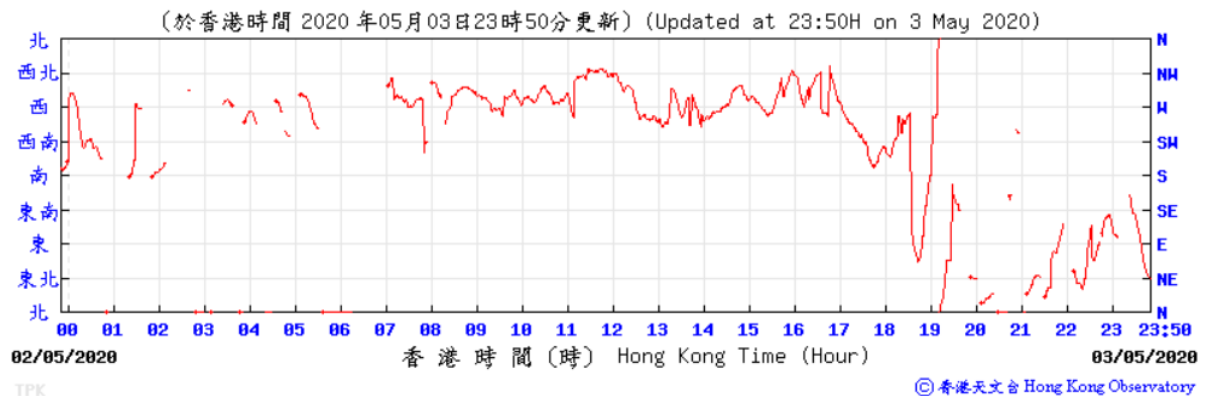
Wind direction data for 02, 09, 14, 20 and 26 May 2020

A. 02/05/2020:

Wind Direction:

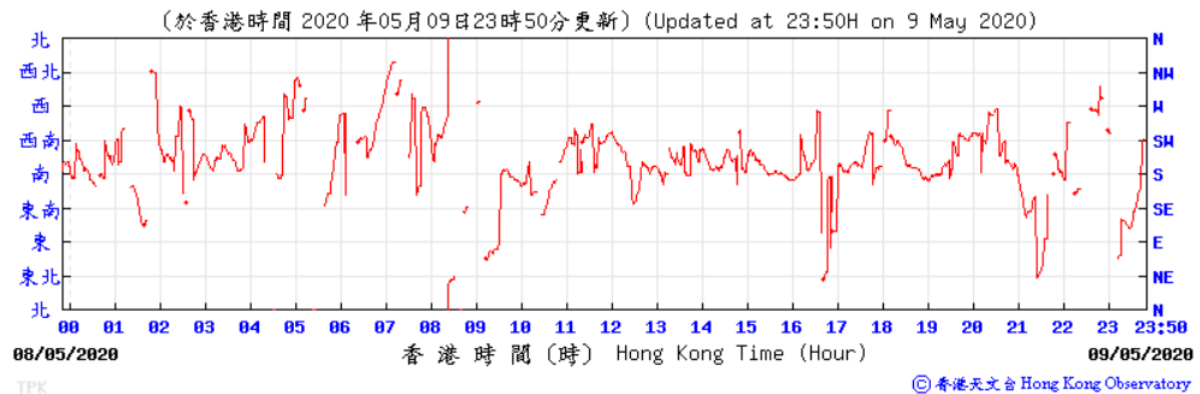


Wind Direction:

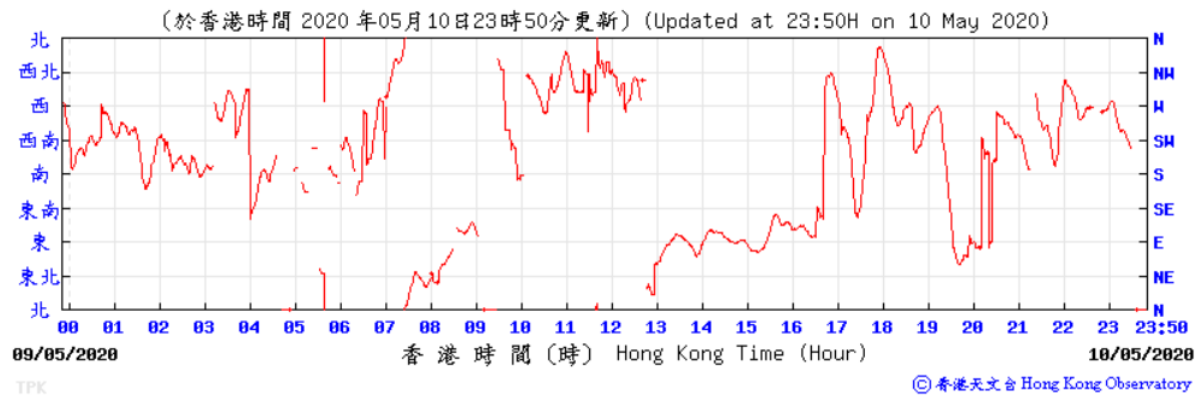


B. 09/05/2020:

Wind Direction:



Wind Direction:

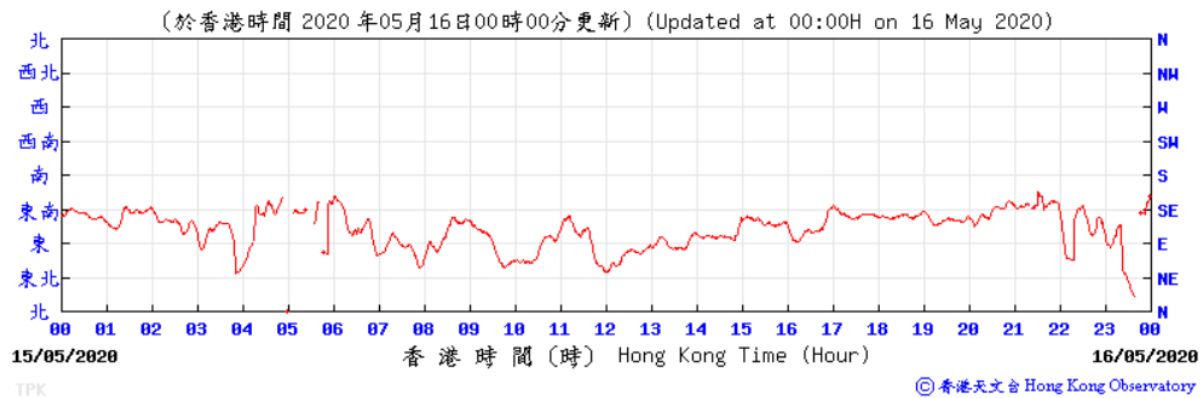


C. 14/05/2020:

Wind Direction:

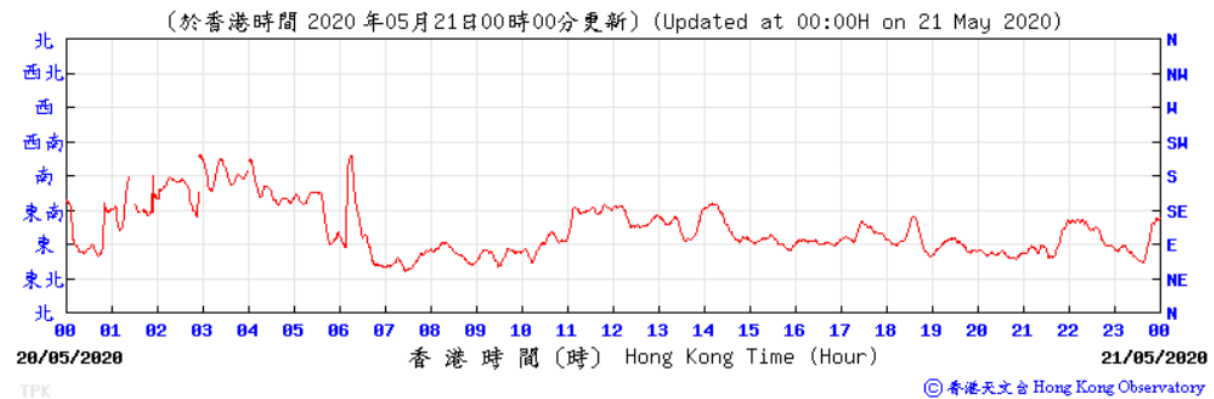


Wind Direction:

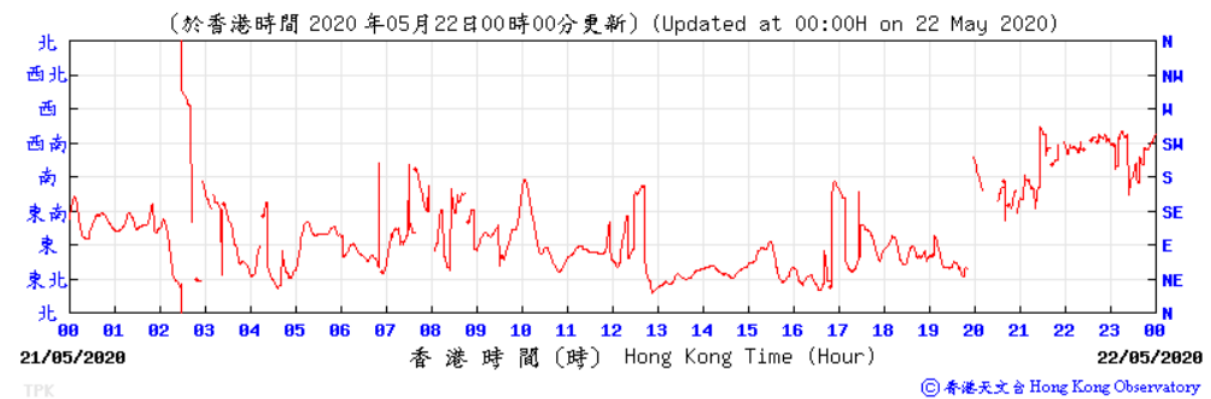


D. 20/05/2020:

Wind Direction:

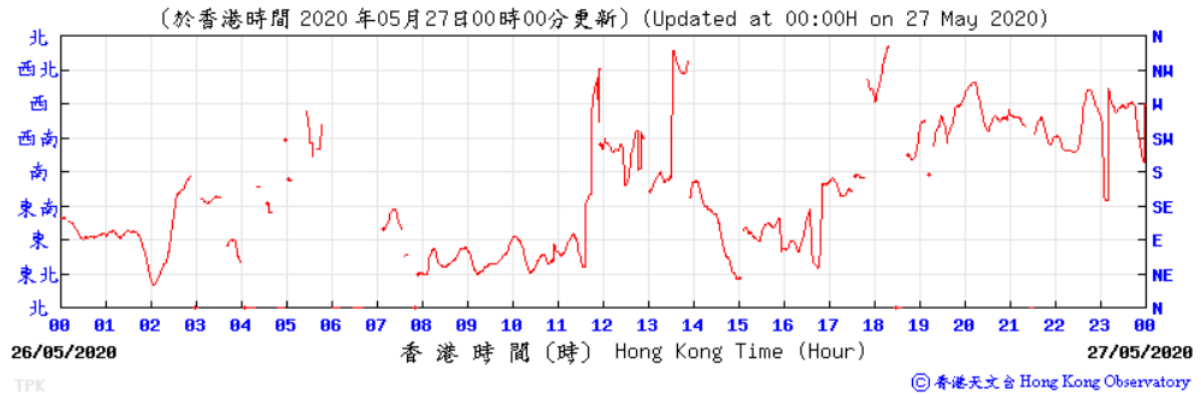


Wind Direction:

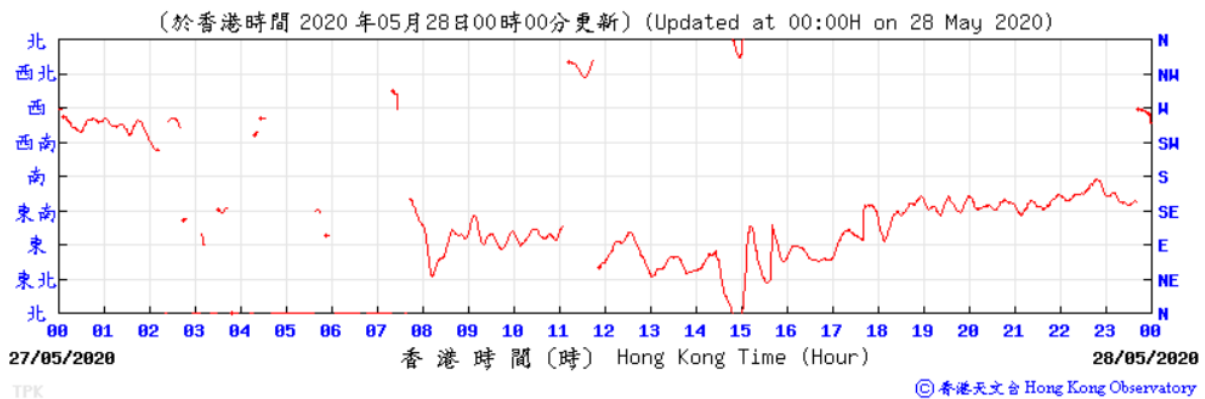


E. 26/05/2020

Wind Direction:



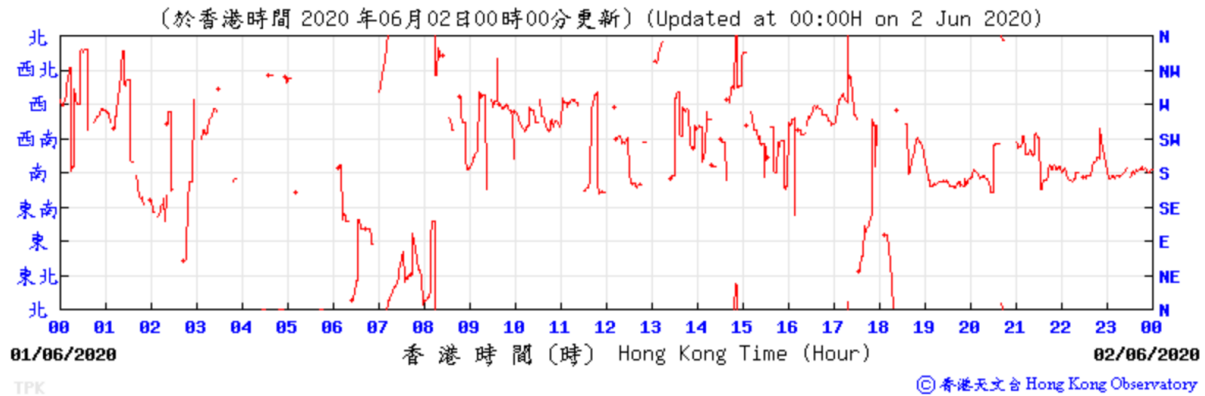
Wind Direction:



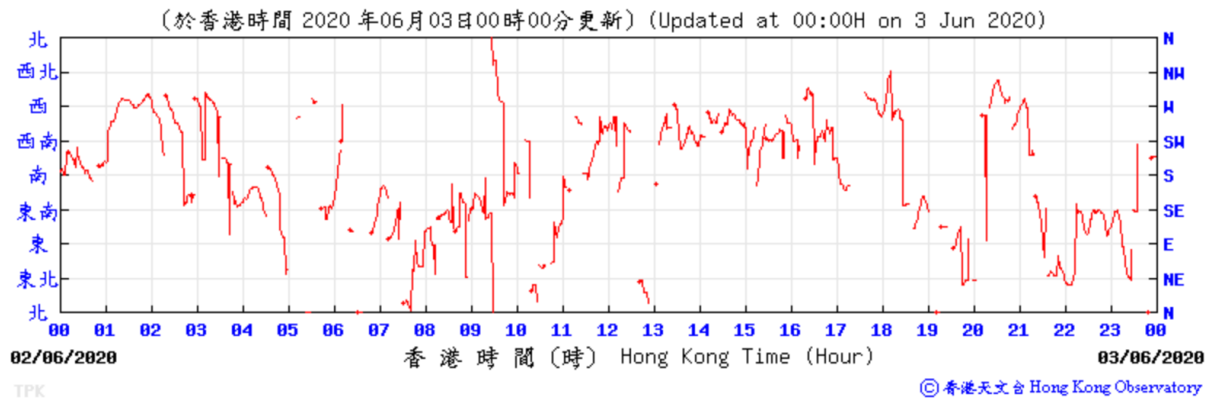
Wind direction data for 01, 06, 12, 18, 24 and 29 June 2020

A. 01/06/2020:

Wind Direction:

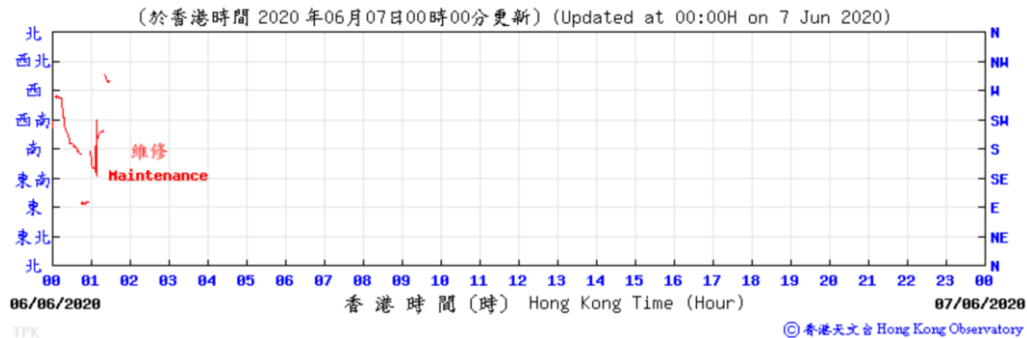


Wind Direction:

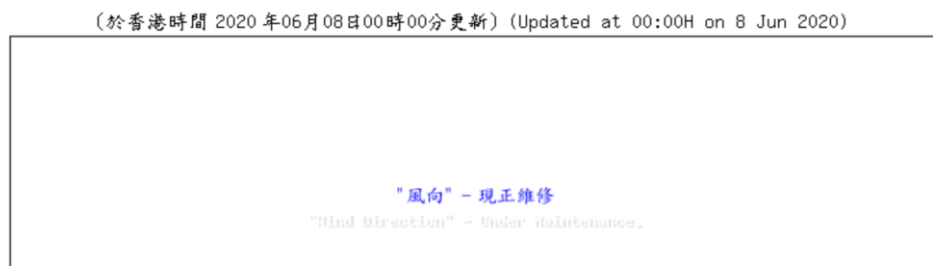


B. 06/06/2020:

Wind Direction:



Wind Direction:

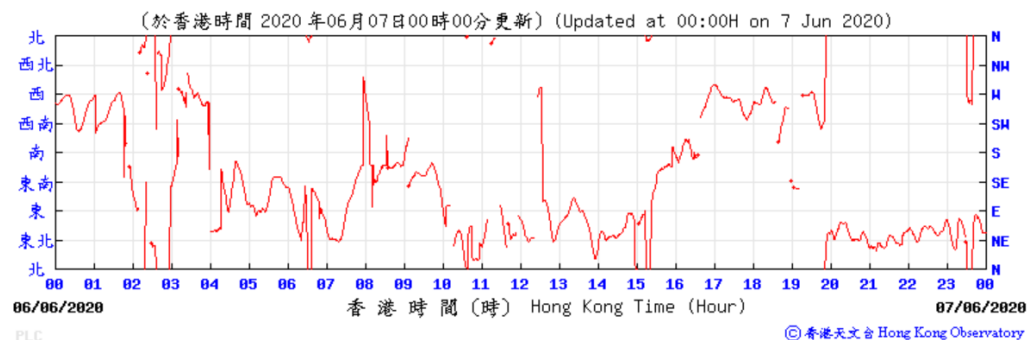


TPK

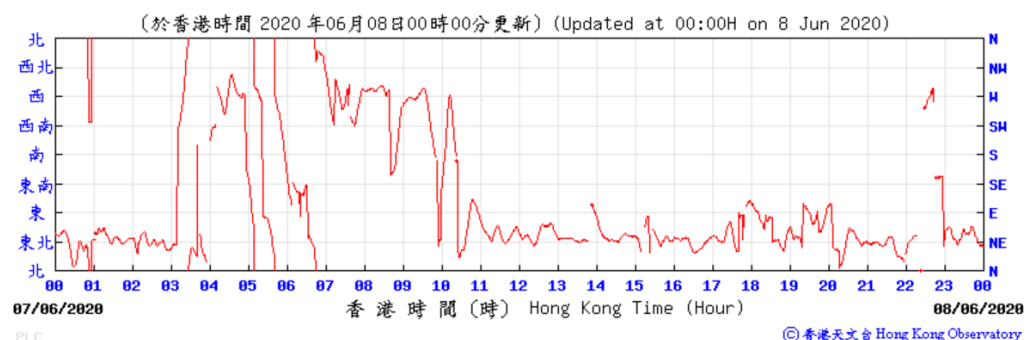
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*As the Tai Po Kau station was under maintenance on 6 and 7 June 2020, the data of wind direction from Tai Mei Tuk station was taken as reference:

Wind Direction:

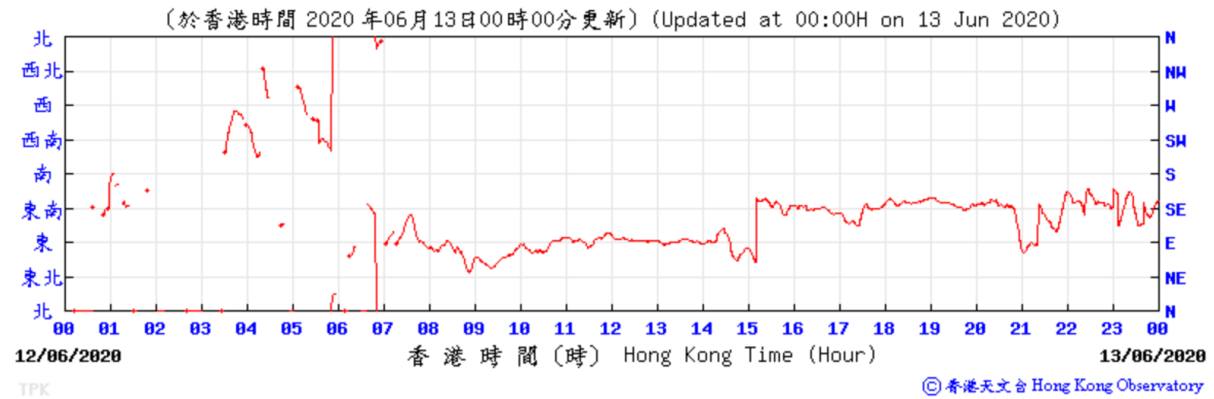


Wind Direction:

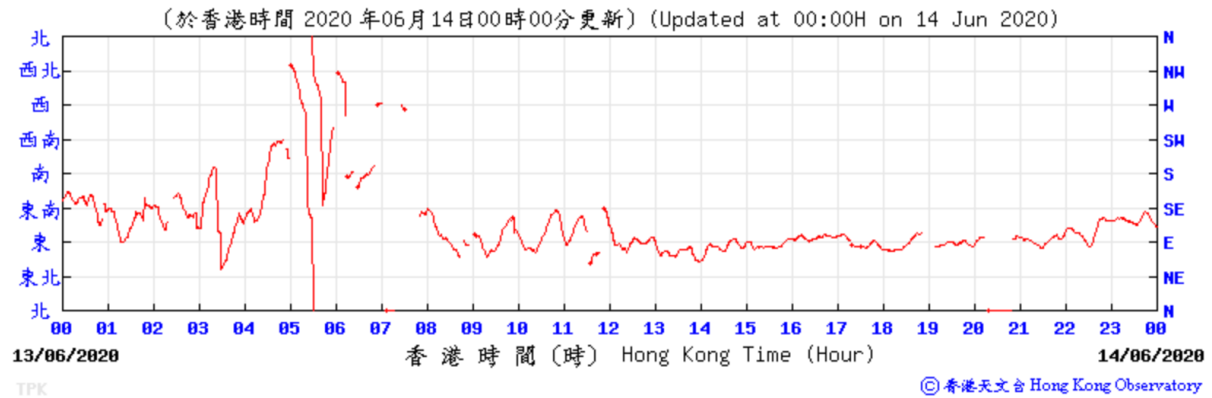


C. 12/06/2020:

Wind Direction:

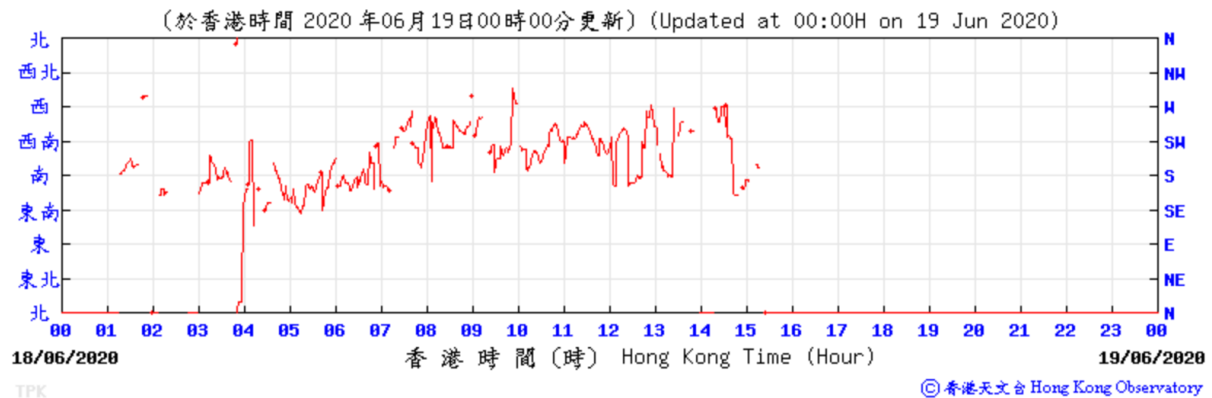


Wind Direction:

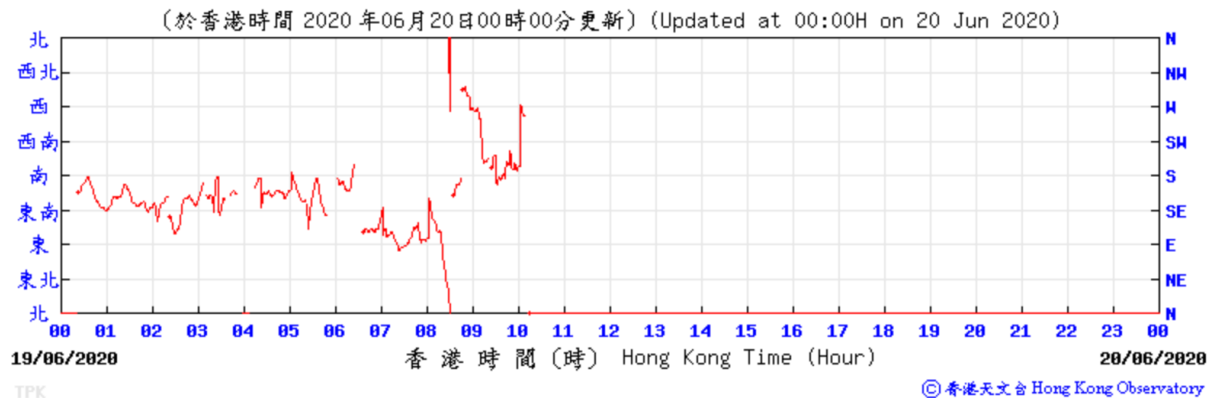


D. 18/06/2020:

Wind Direction:

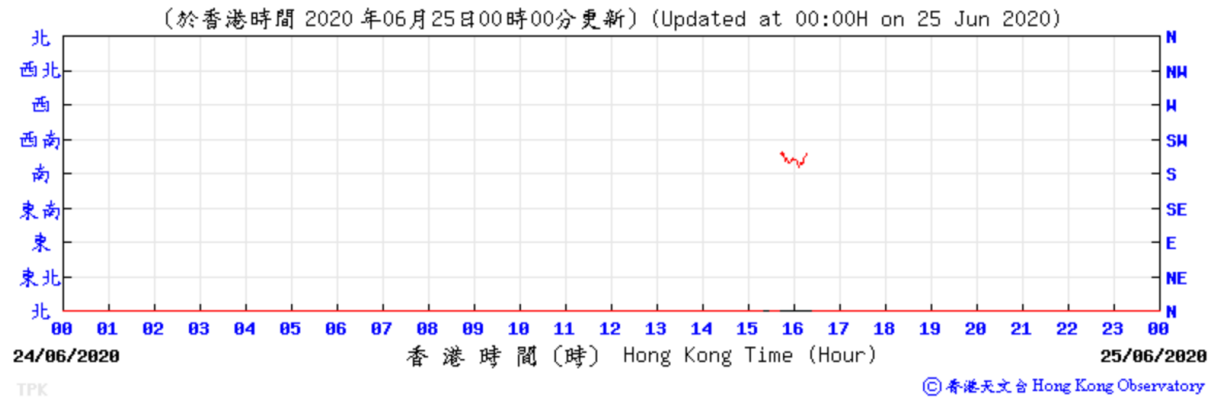


Wind Direction:

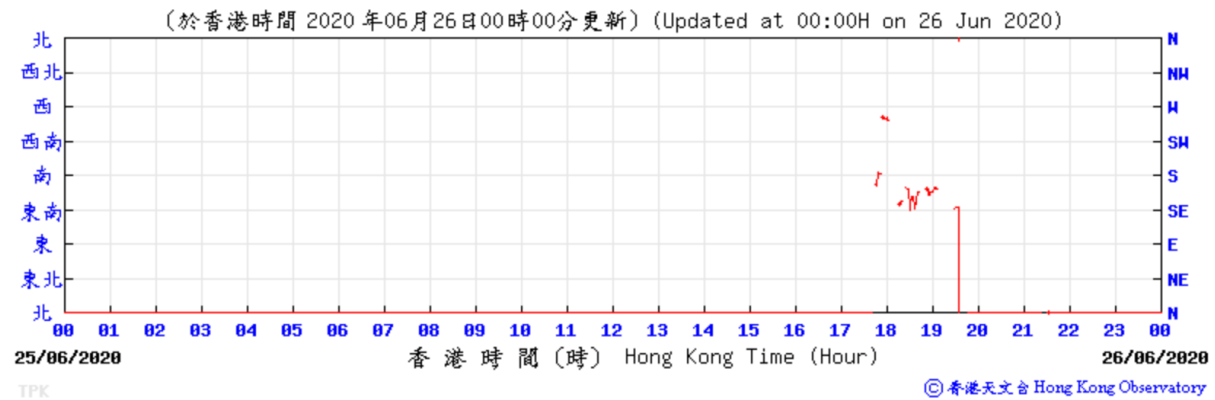


E. 24/06/2020

Wind Direction:

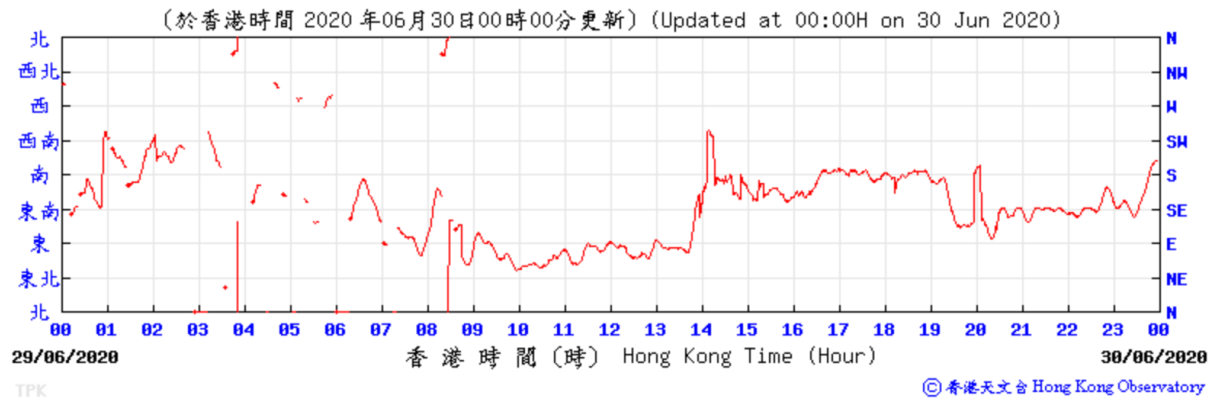


Wind Direction:

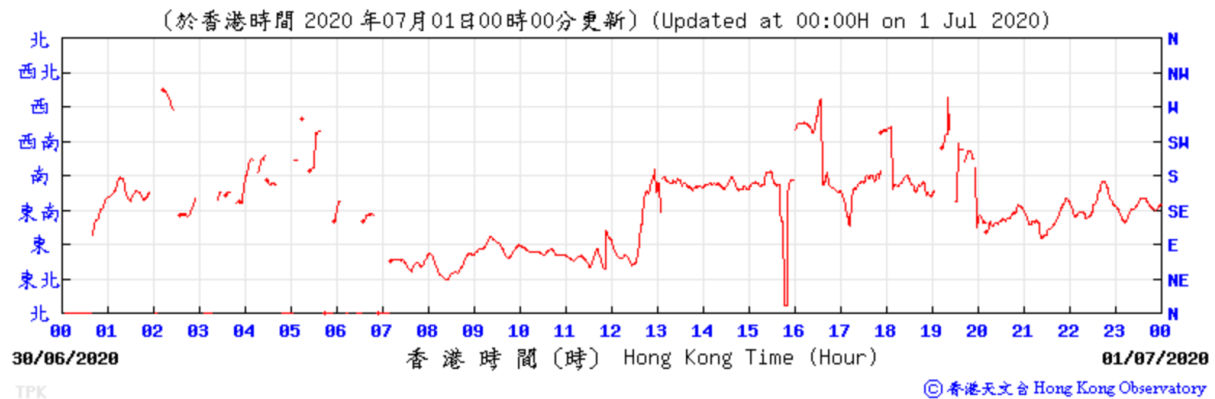


F. 29/06/2020

Wind Direction:



Wind Direction:

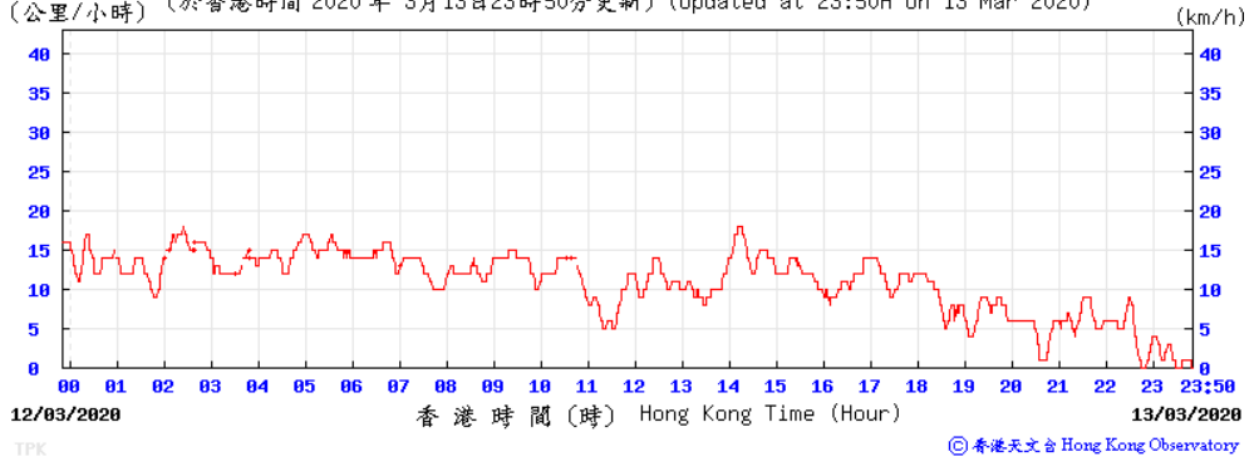


Wind speed data for 12, 18, 24 and 30 March 2020

A. 12/03/2020:

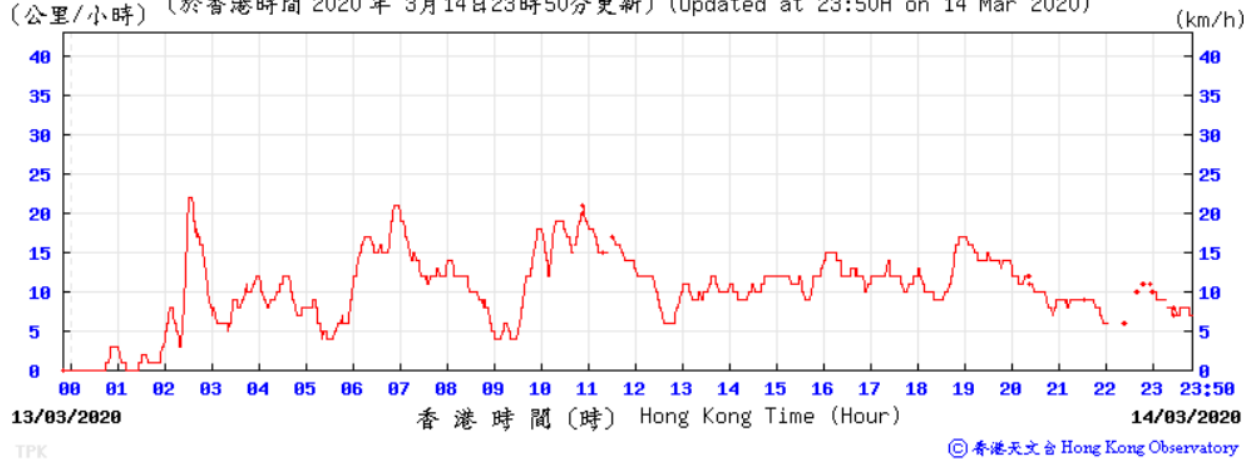
Wind Speed:

(公里/小時) (於香港時間 2020 年 3月13日23時50分更新) (Updated at 23:50H on 13 Mar 2020)



Wind Speed:

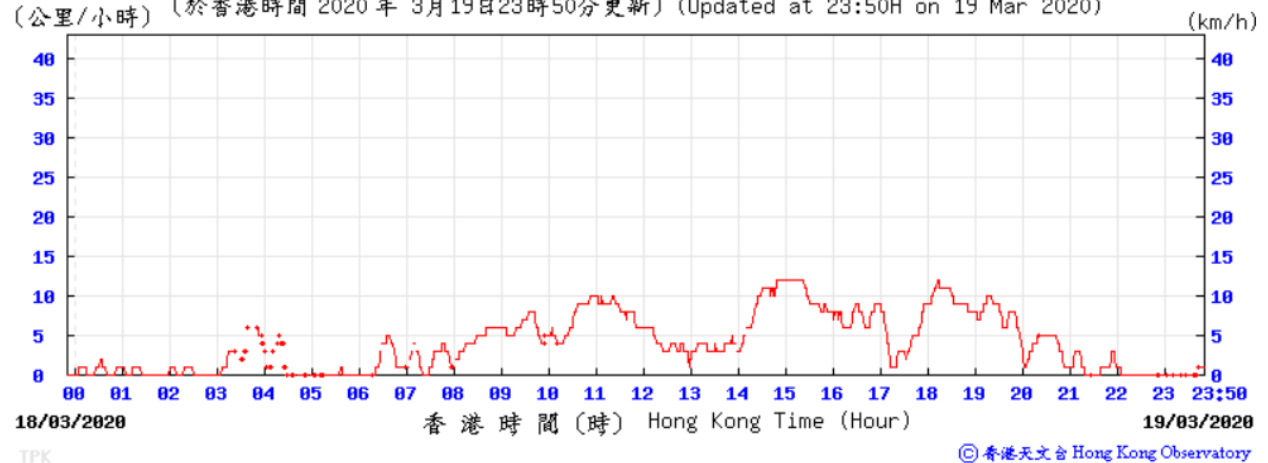
(公里/小時) (於香港時間 2020 年 3月14日23時50分更新) (Updated at 23:50H on 14 Mar 2020)



B. 18/03/2020:

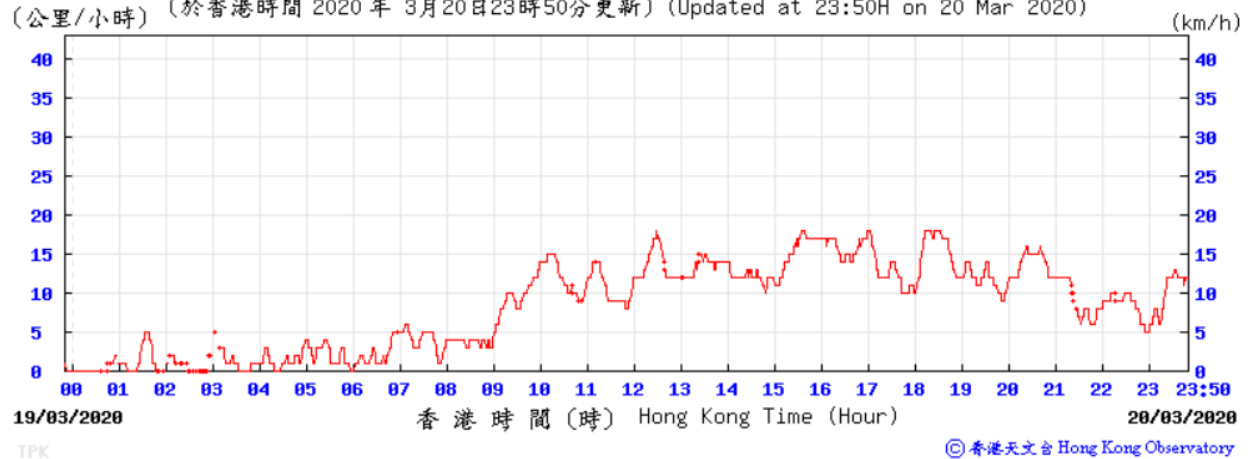
Wind Speed:

(公里/小時) (於香港時間 2020 年 3月19日23時50分更新) (Updated at 23:50H on 19 Mar 2020)



Wind Speed:

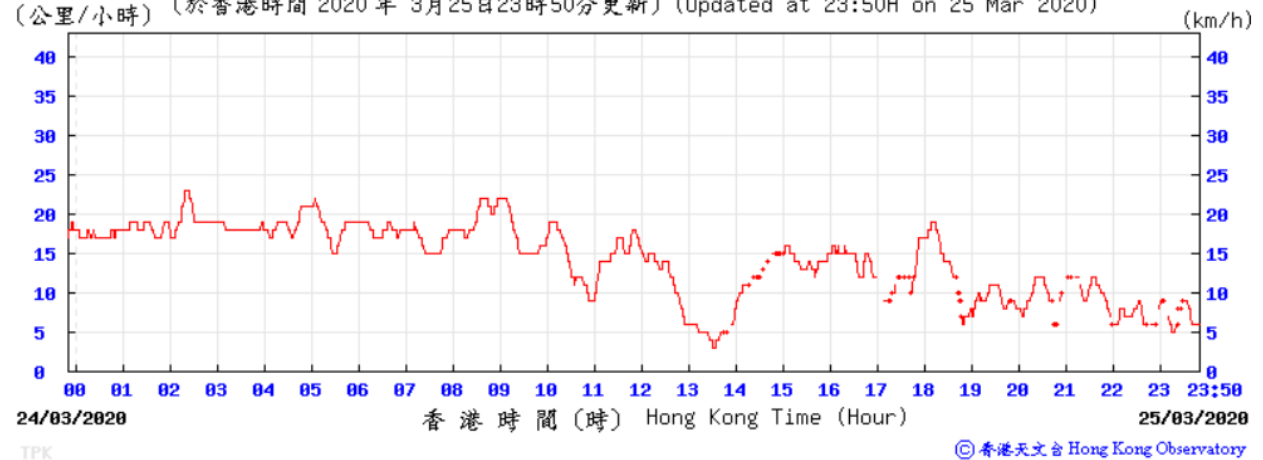
(公里/小時) (於香港時間 2020 年 3月20日23時50分更新) (Updated at 23:50H on 20 Mar 2020)



C. 24/03/2020:

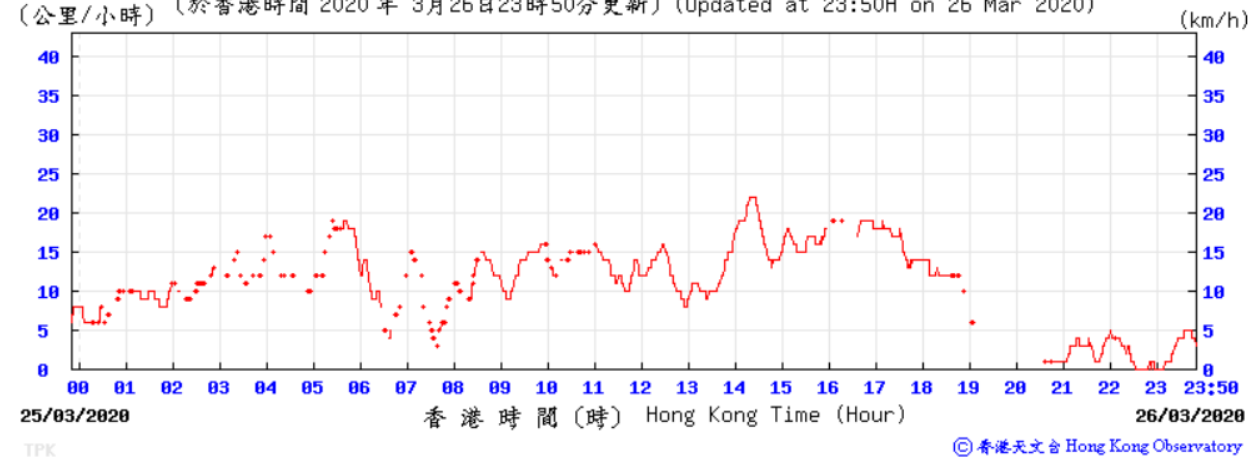
Wind Speed:

(公里/小時) (於香港時間 2020 年 3月25日23時50分更新) (Updated at 23:50H on 25 Mar 2020)



Wind Speed:

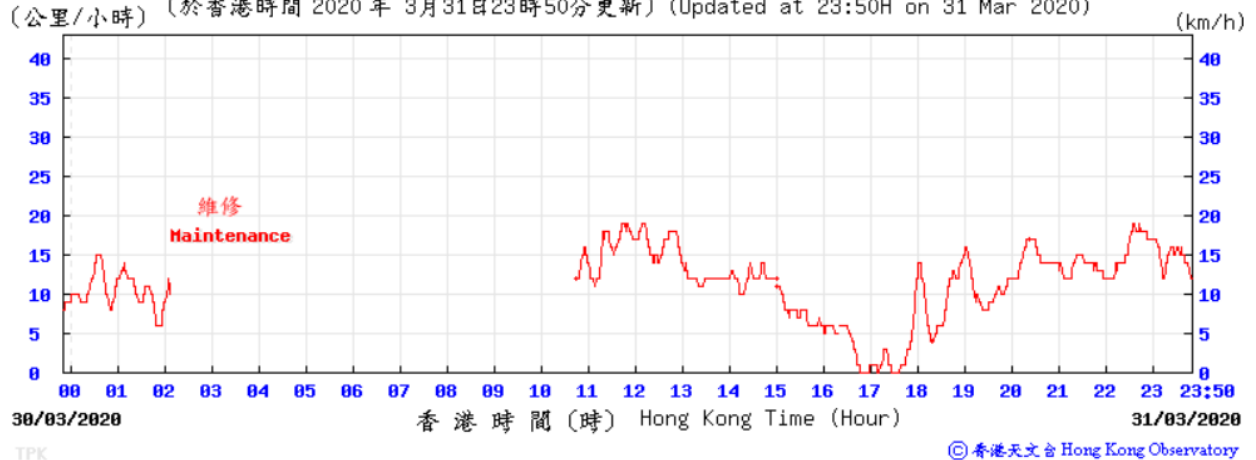
(公里/小時) (於香港時間 2020 年 3月26日23時50分更新) (Updated at 23:50H on 26 Mar 2020)



D. 30/03/2020:

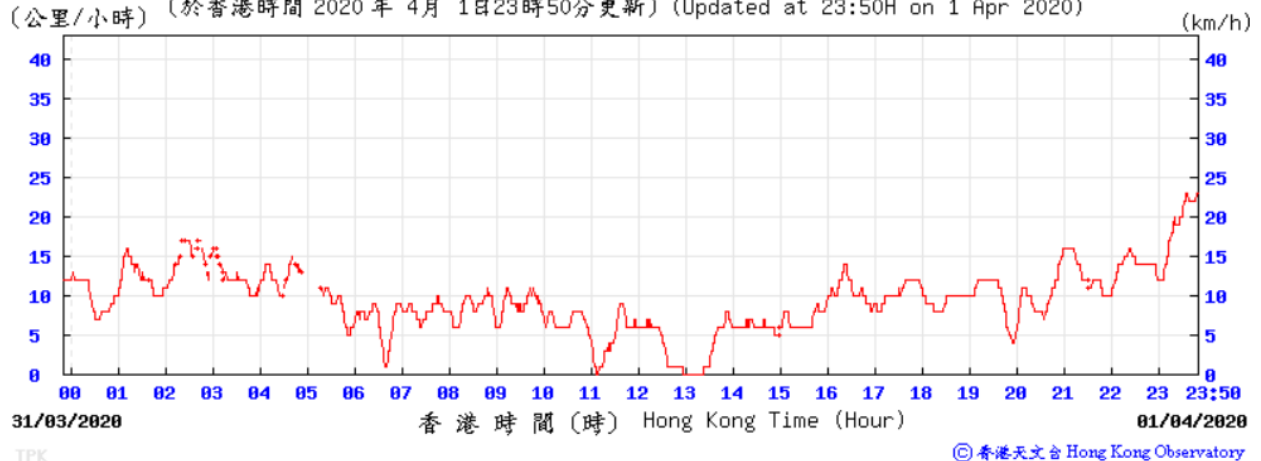
Wind Speed:

(公里/小時) (於香港時間 2020 年 3月31日23時50分更新) (Updated at 23:50H on 31 Mar 2020)



Wind Speed:

(公里/小時) (於香港時間 2020 年 4月 1日23時50分更新) (Updated at 23:50H on 1 Apr 2020)

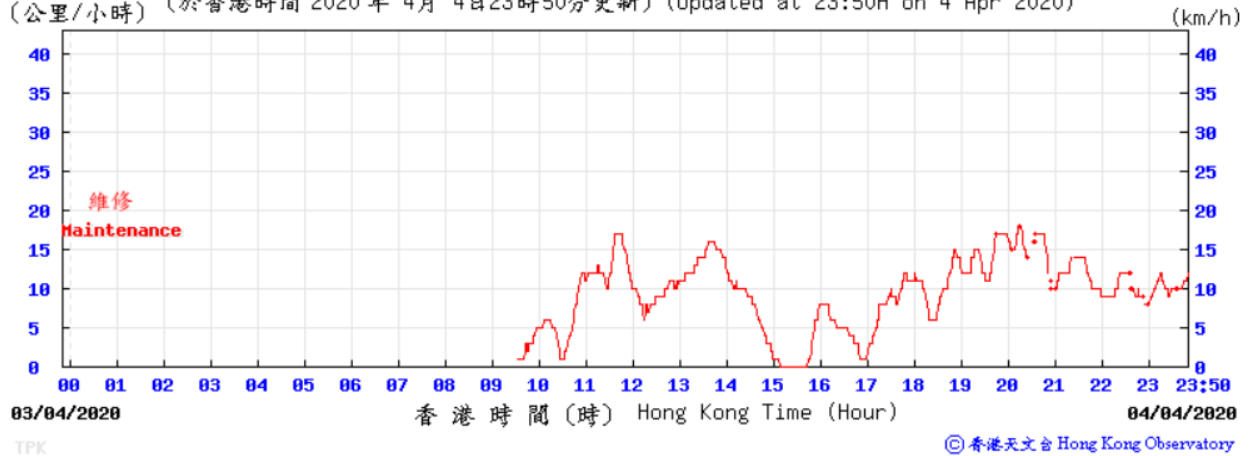


Wind speed data for 03, 09, 15, 21 and 27 April 2020

A. 03/04/2020

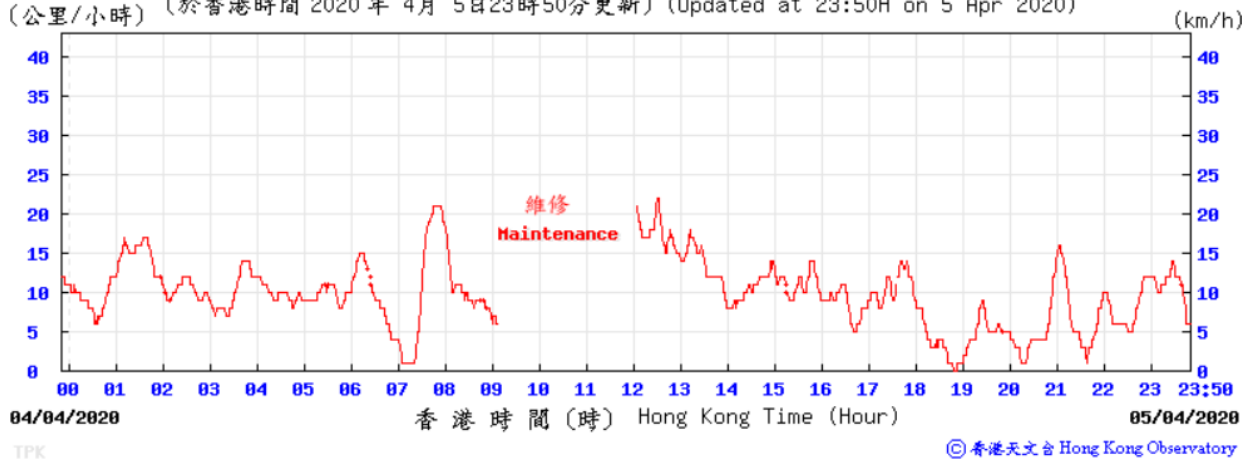
Wind Speed:

(公里/小時) (於香港時間 2020 年 4 月 4 日 23 時 50 分更新) (Updated at 23:50H on 4 Apr 2020)



Wind Speed:

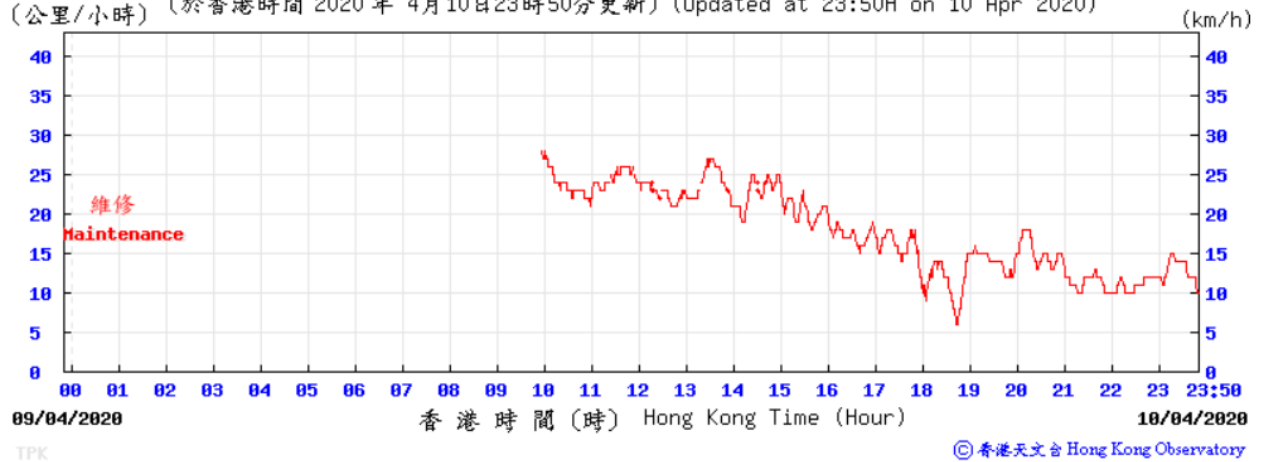
(公里/小時) (於香港時間 2020 年 4 月 5 日 23 時 50 分更新) (Updated at 23:50H on 5 Apr 2020)



B. 09/04/2020

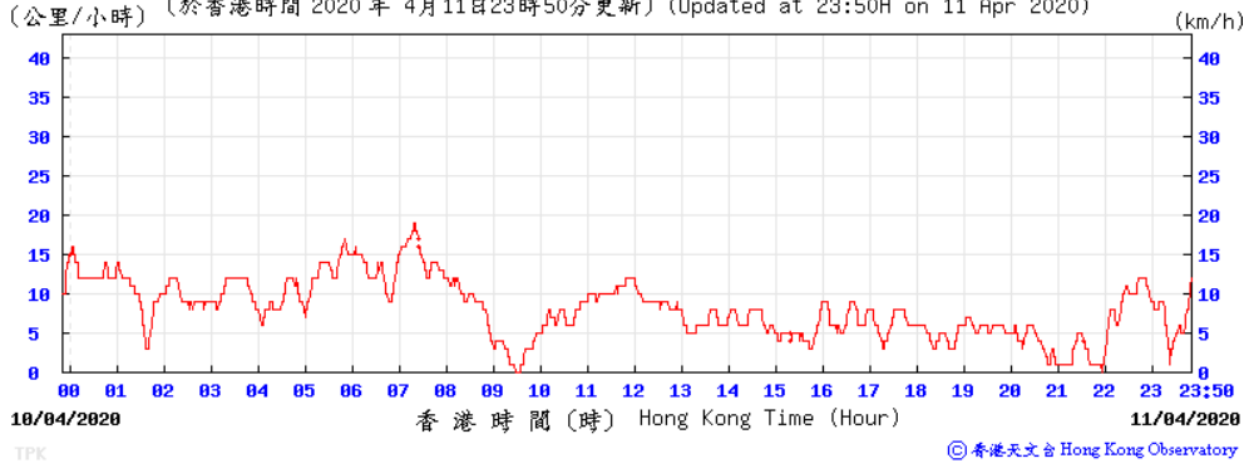
Wind Speed:

(公里/小時) (於香港時間 2020 年 4月10日23時50分更新) (Updated at 23:50H on 10 Apr 2020)



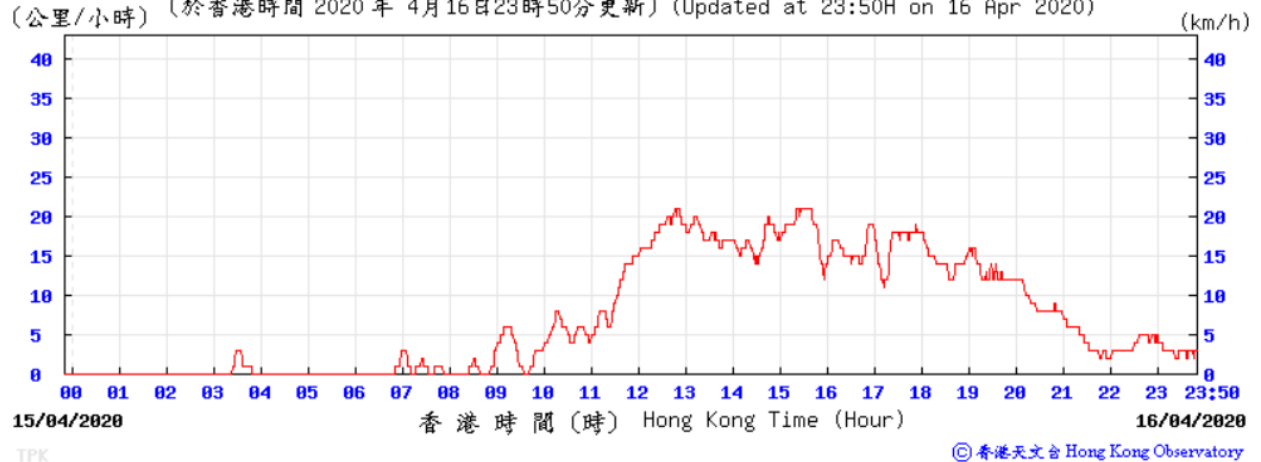
Wind Speed:

(公里/小時) (於香港時間 2020 年 4月11日23時50分更新) (Updated at 23:50H on 11 Apr 2020)



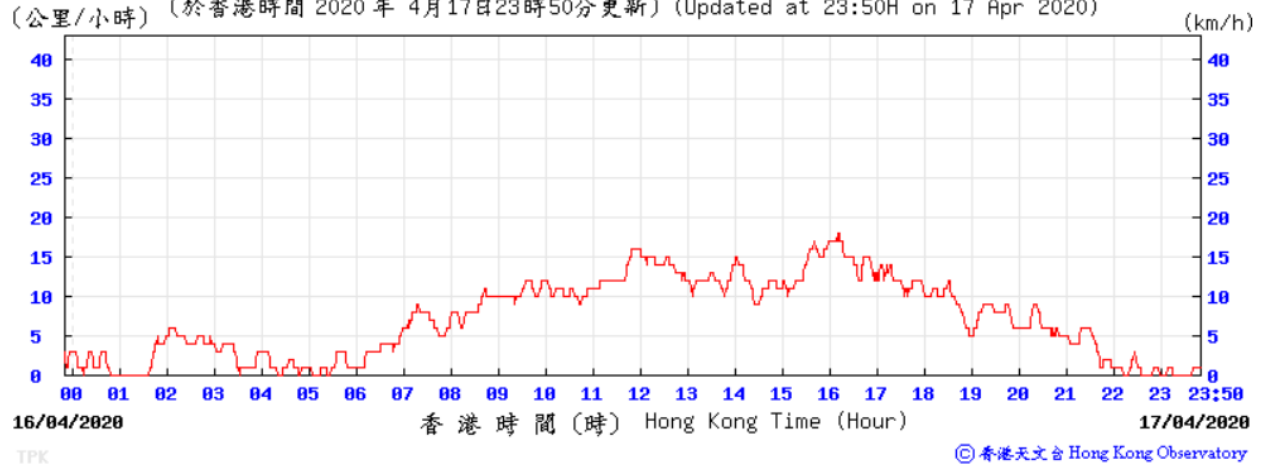
Wind Speed:

(公里/小時) (於香港時間 2020 年 4月16日23時50分更新) (Updated at 23:50H on 16 Apr 2020)



Wind Speed:

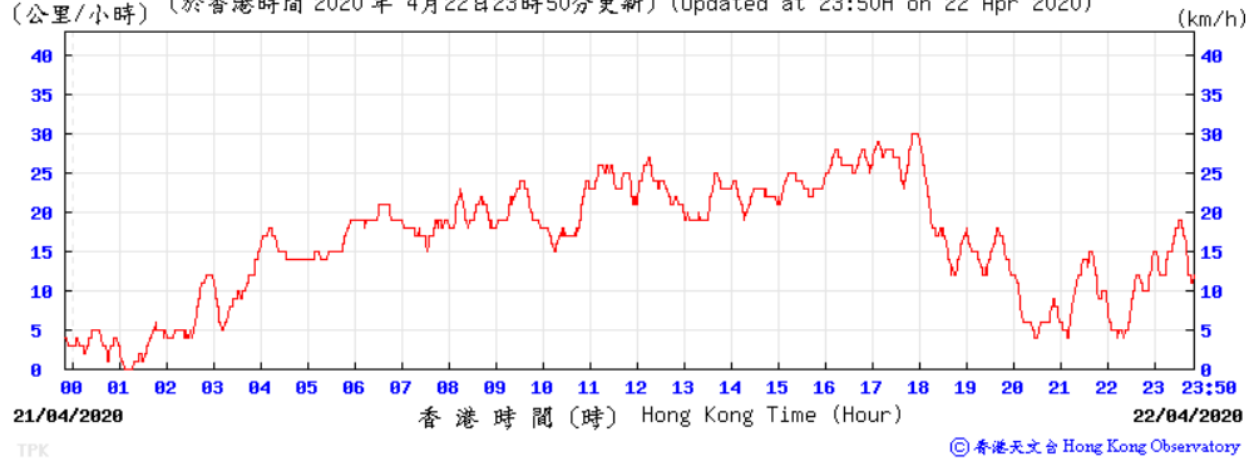
(公里/小時) (於香港時間 2020 年 4月17日23時50分更新) (Updated at 23:50H on 17 Apr 2020)



D. 21/04/2020

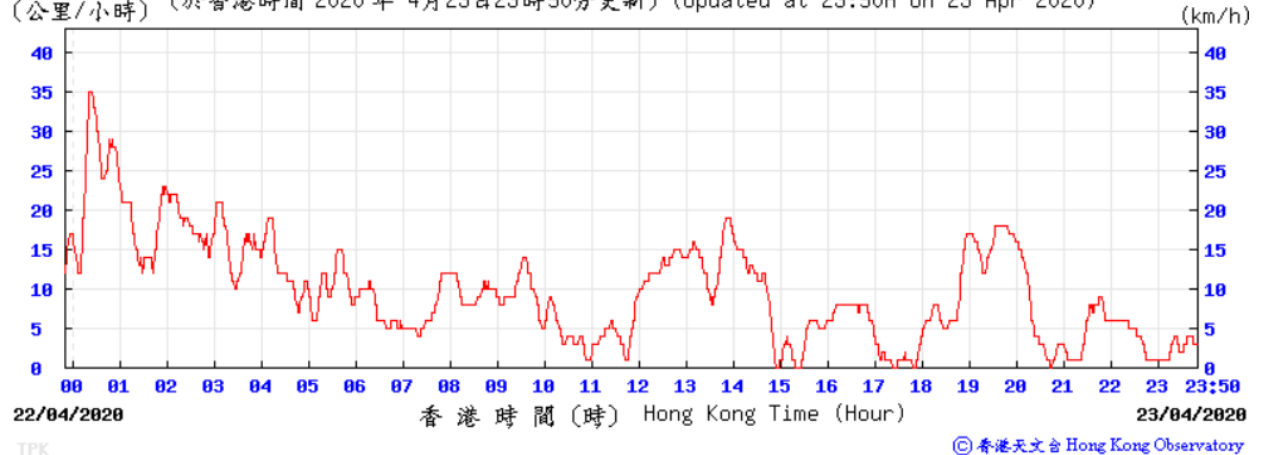
Wind Speed:

(公里/小時) (於香港時間 2020 年 4月22日23時50分更新) (Updated at 23:50H on 22 Apr 2020)



Wind Speed:

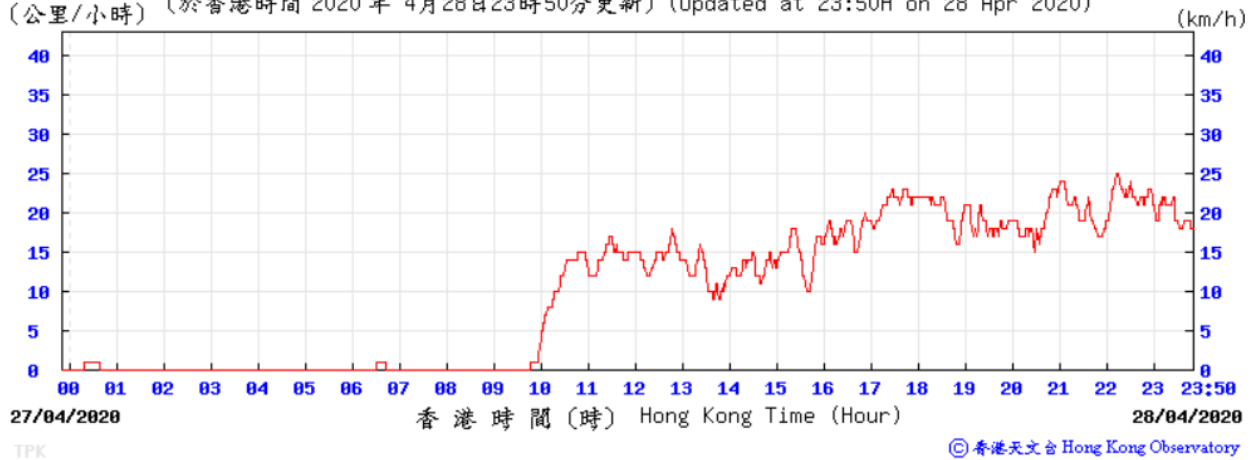
(公里/小時) (於香港時間 2020 年 4月23日23時50分更新) (Updated at 23:50H on 23 Apr 2020)



E. 27/04/2020

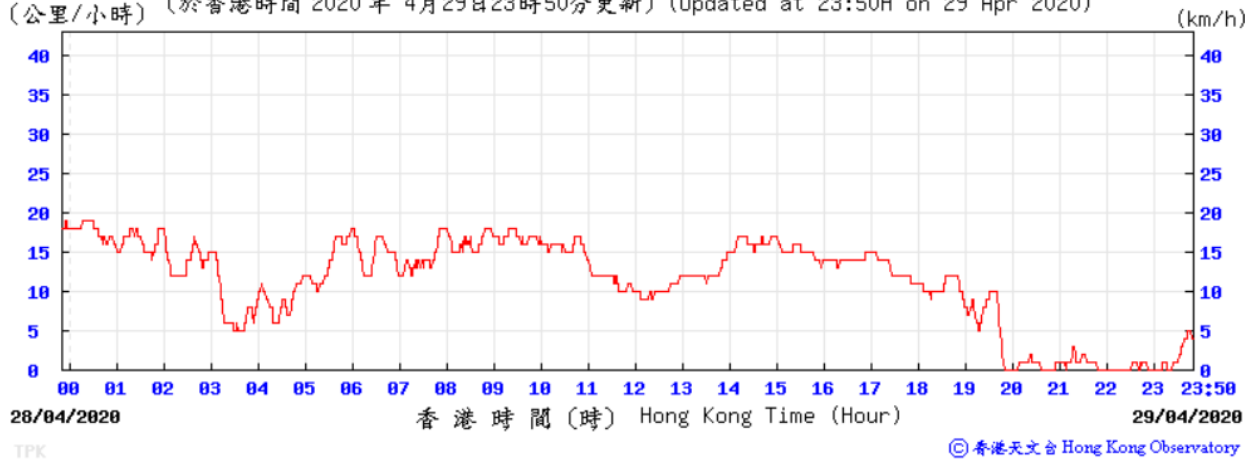
Wind Speed:

(公里/小時) (於香港時間 2020 年 4月28日23時50分更新) (Updated at 23:50H on 28 Apr 2020)



Wind Speed:

(公里/小時) (於香港時間 2020 年 4月29日23時50分更新) (Updated at 23:50H on 29 Apr 2020)

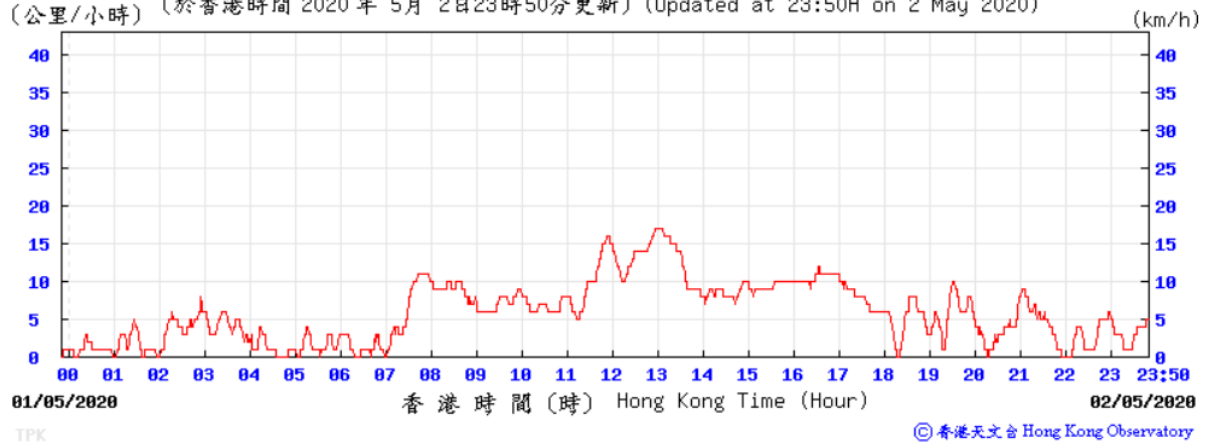


Wind speed data for 02, 09, 14, 20 and 26 May 2020

A. 02/05/2020:

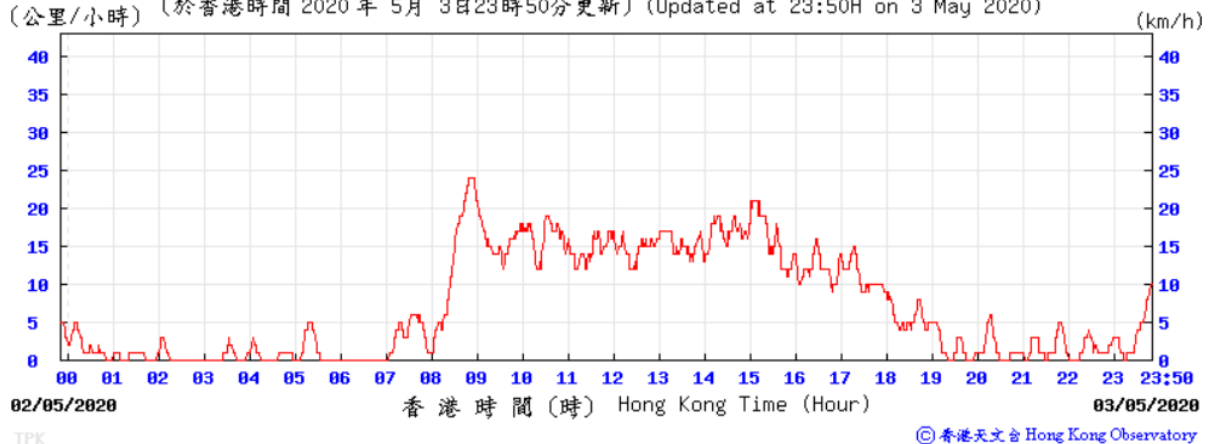
Wind Speed:

(公里/小時) (於香港時間 2020 年 5 月 2 日 23 時 50 分更新) (Updated at 23:50H on 2 May 2020)



Wind Speed:

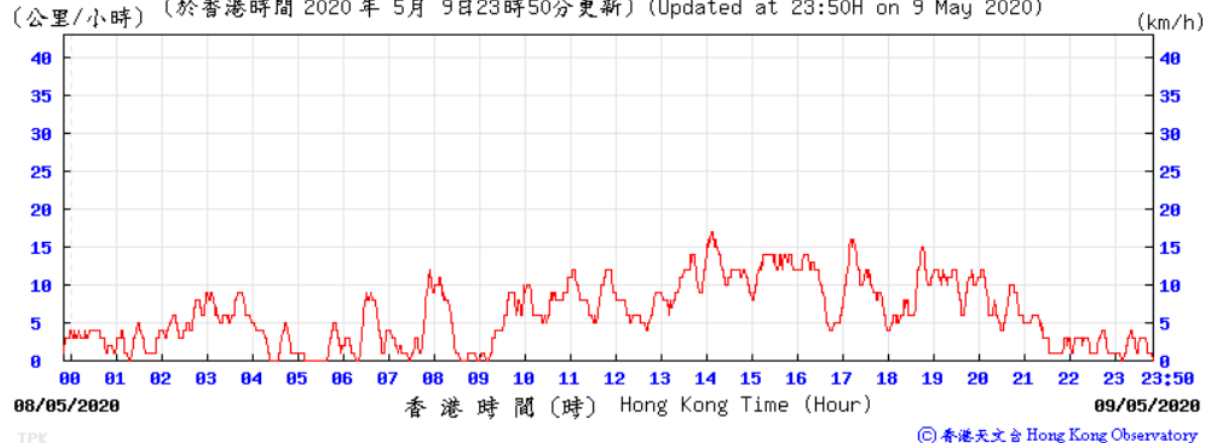
(公里/小時) (於香港時間 2020 年 5 月 3 日 23 時 50 分更新) (Updated at 23:50H on 3 May 2020)



B. 09/05/2020:

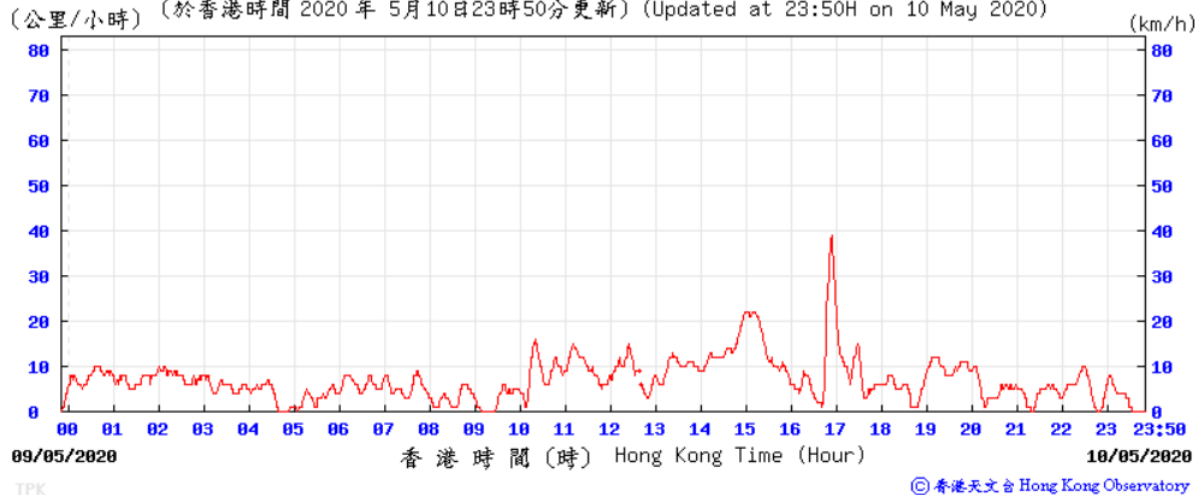
Wind Speed:

(公里/小時) (於香港時間 2020 年 5 月 9 日 23 時 50 分更新) (Updated at 23:50H on 9 May 2020)



Wind Speed:

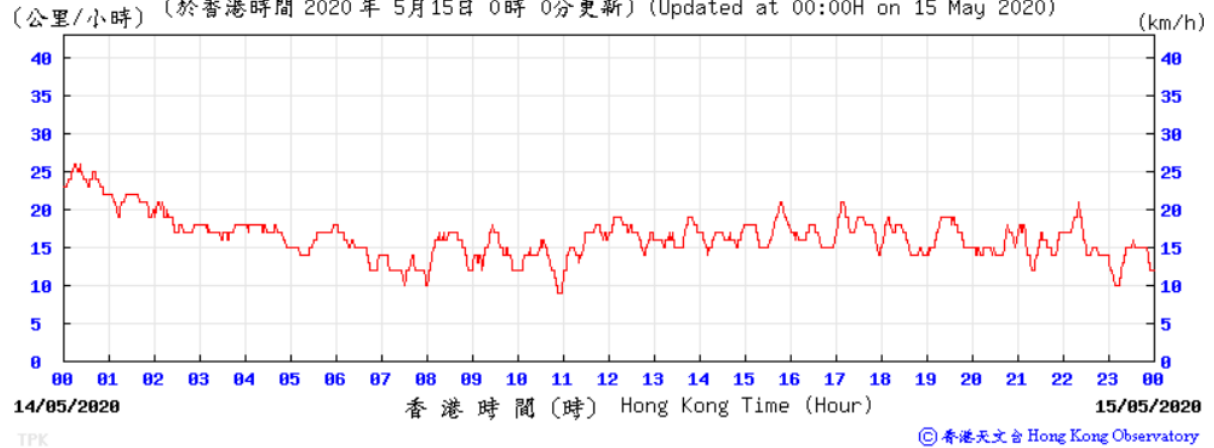
(公里/小時) (於香港時間 2020 年 5 月 10 日 23 時 50 分更新) (Updated at 23:50H on 10 May 2020)



C. 14/05/2020:

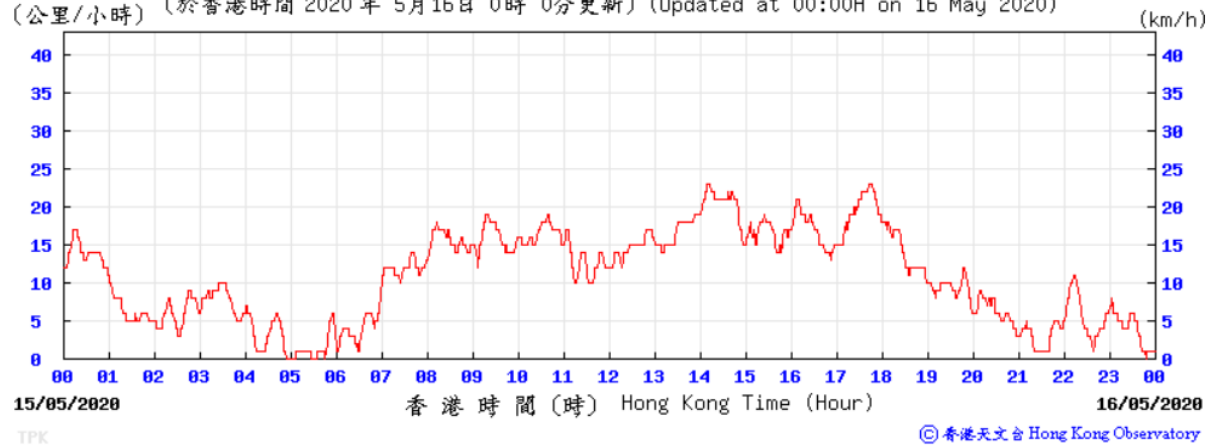
Wind Speed:

(公里/小時) (於香港時間 2020 年 5月15日 0時 0分更新) (Updated at 00:00H on 15 May 2020)



Wind Speed:

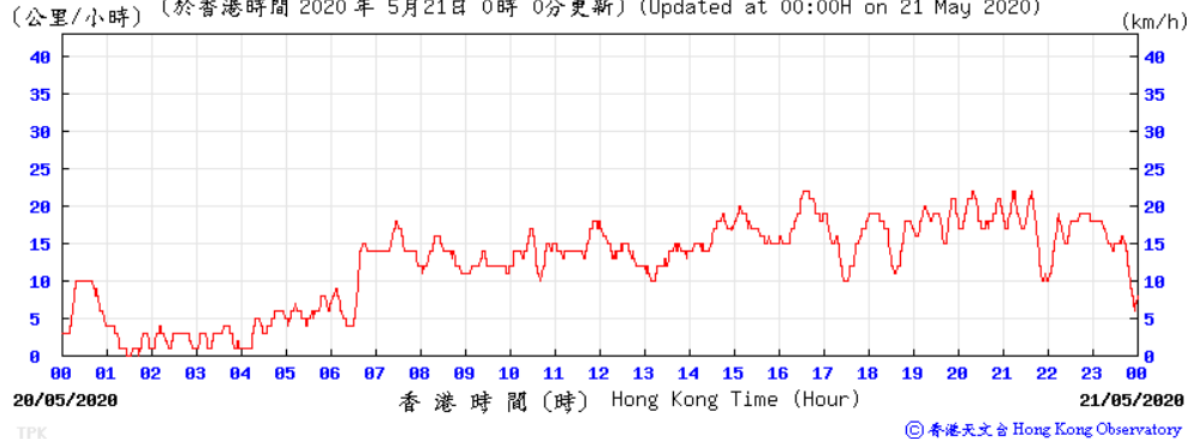
(公里/小時) (於香港時間 2020 年 5月16日 0時 0分更新) (Updated at 00:00H on 16 May 2020)



D. 20/05/2020:

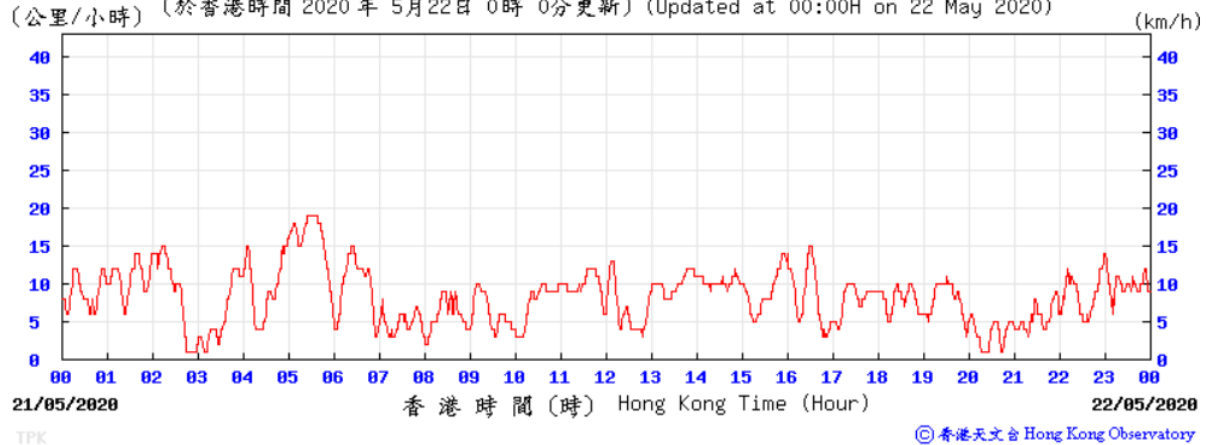
Wind Speed:

(公里/小時) (於香港時間 2020 年 5月21日 0時 0分更新) (Updated at 00:00H on 21 May 2020)



Wind Speed:

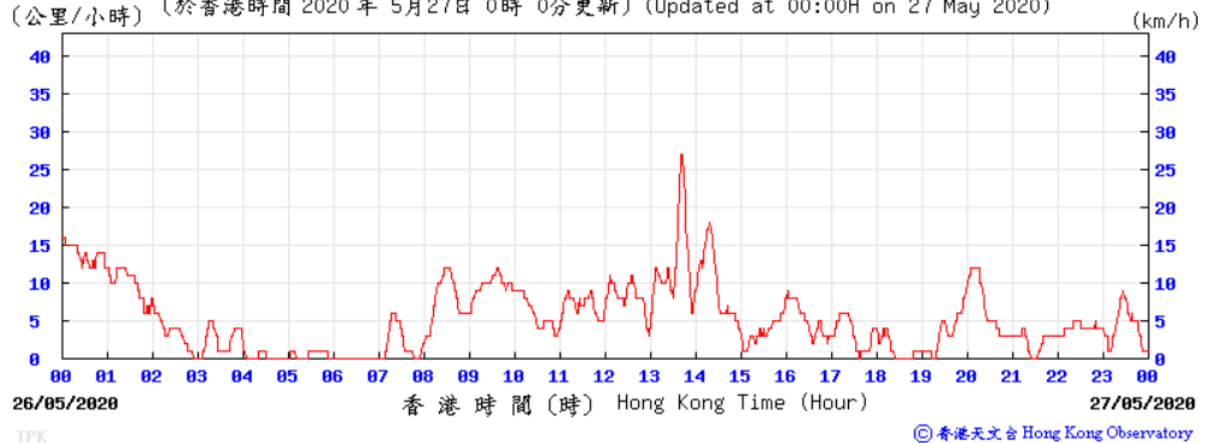
(公里/小時) (於香港時間 2020 年 5月22日 0時 0分更新) (Updated at 00:00H on 22 May 2020)



E. 26/05/2020

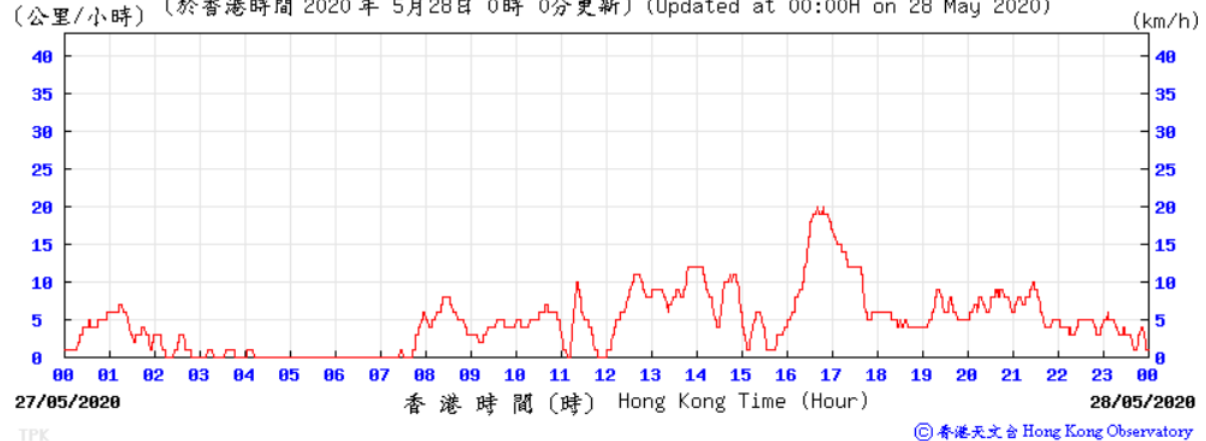
Wind Speed:

(公里/小時) (於香港時間 2020 年 5月27日 0時 0分更新) (Updated at 00:00H on 27 May 2020)



Wind Speed:

(公里/小時) (於香港時間 2020 年 5月28日 0時 0分更新) (Updated at 00:00H on 28 May 2020)

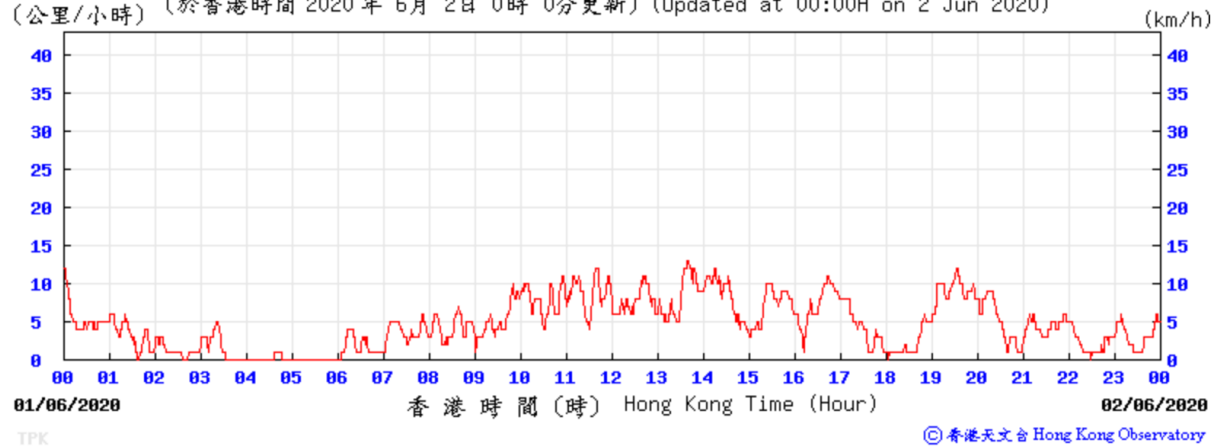


Wind speed data for 01, 06, 12, 18, 24 and 29 June 2020

A. 01/06/2020:

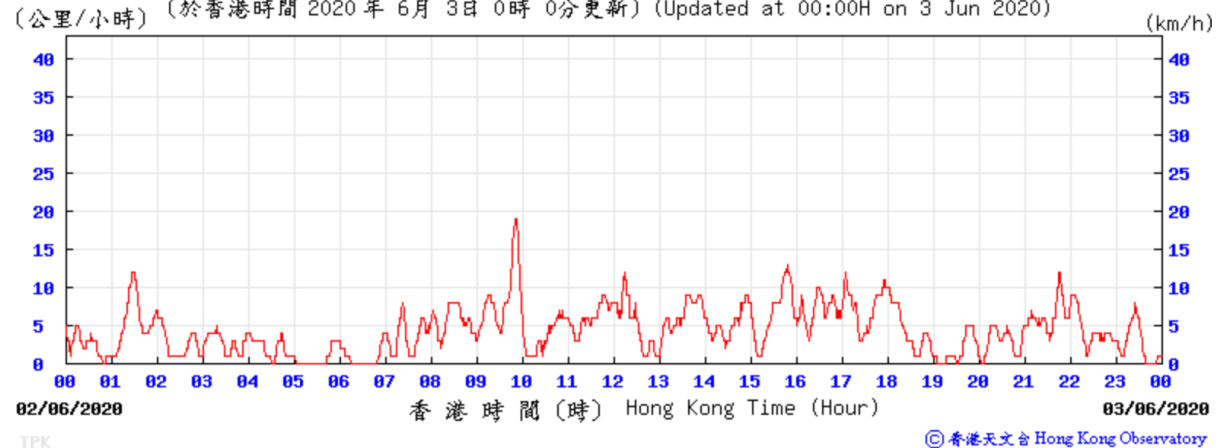
Wind Speed:

(公里/小時) (於香港時間 2020 年 6 月 2 日 0 時 0 分更新) (Updated at 00:00H on 2 Jun 2020)

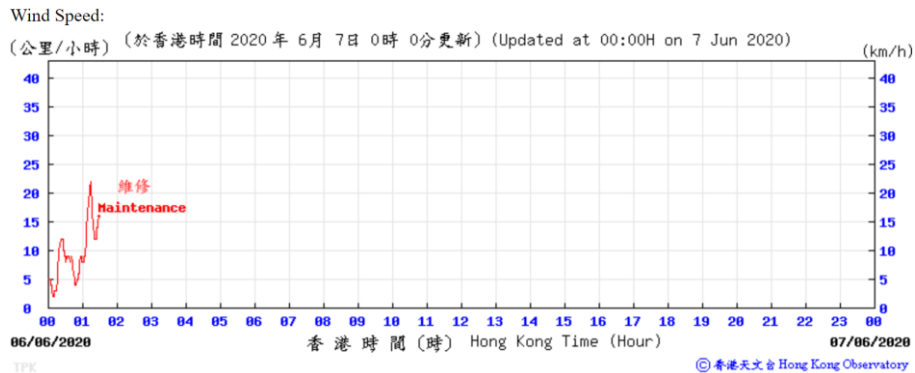


Wind Speed:

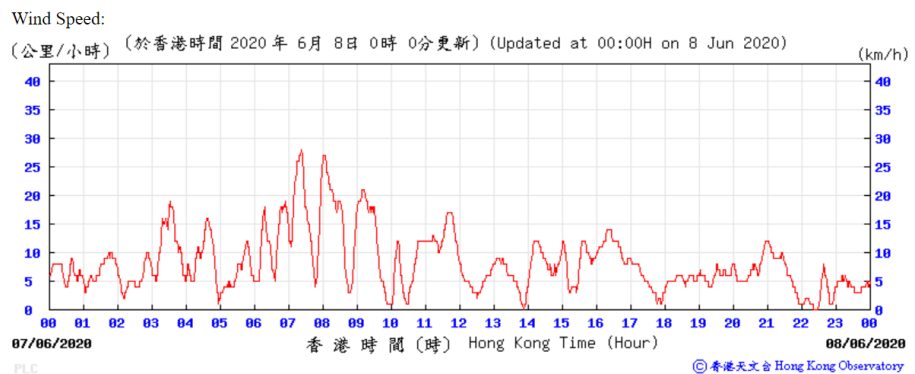
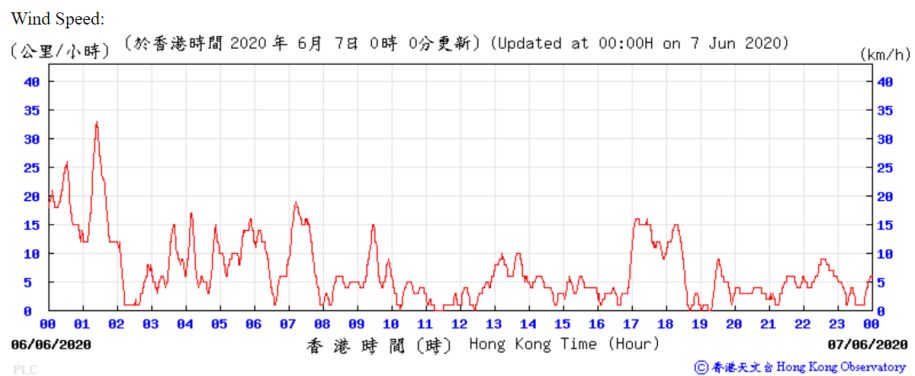
(公里/小時) (於香港時間 2020 年 6 月 3 日 0 時 0 分更新) (Updated at 00:00H on 3 Jun 2020)



B. 06/06/2020:



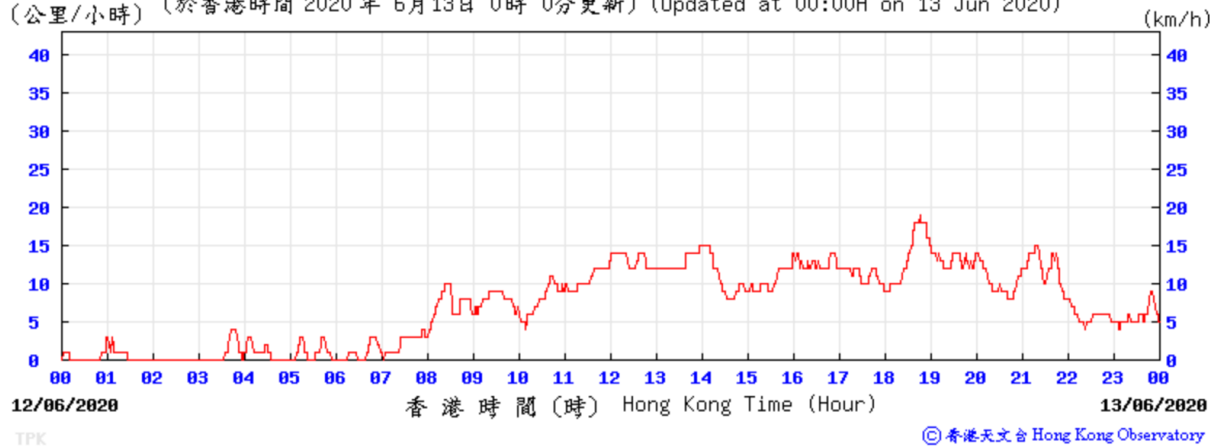
*As the Tai Po Kau station was under maintenance on 6 and 7 June 2020, the data of wind speed from Tai Mei Tuk station was taken as reference:



C. 12/06/2020:

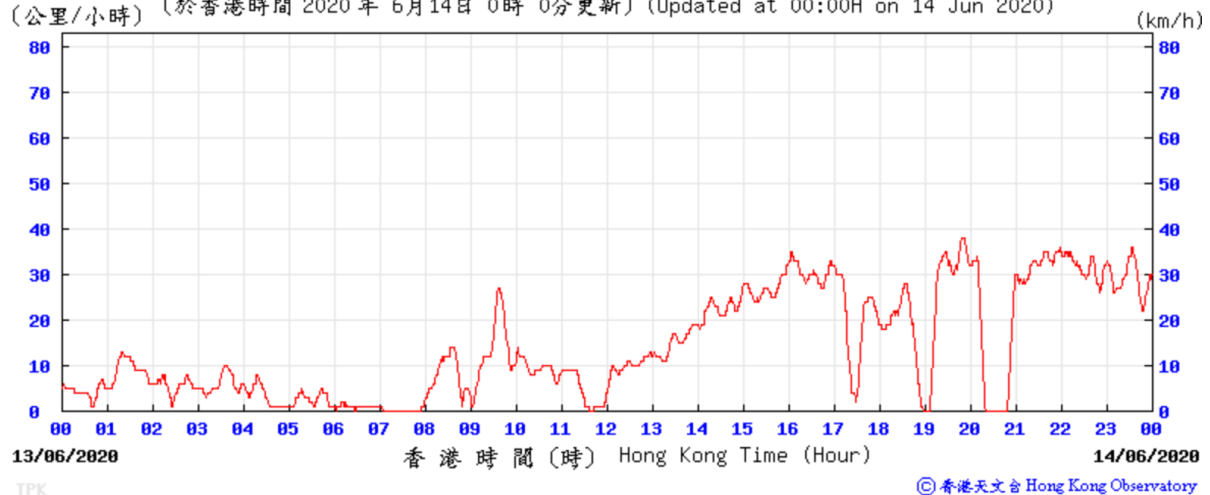
Wind Speed:

(公里/小時) (於香港時間 2020 年 6月13日 0時 0分更新) (Updated at 00:00H on 13 Jun 2020)



Wind Speed:

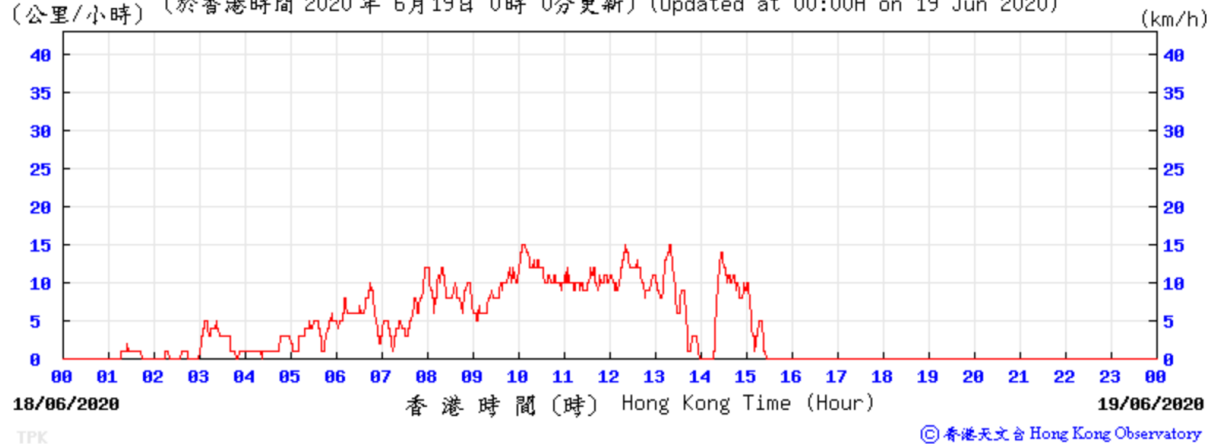
(公里/小時) (於香港時間 2020 年 6月14日 0時 0分更新) (Updated at 00:00H on 14 Jun 2020)



D. 18/06/2020:

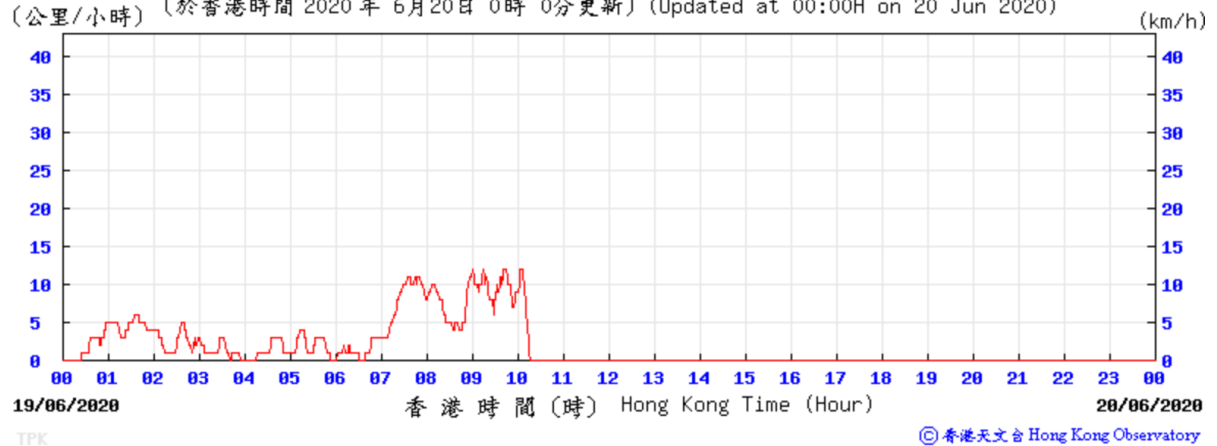
Wind Speed:

(公里/小時) (於香港時間 2020 年 6月19日 0時 0分更新) (Updated at 00:00H on 19 Jun 2020)



Wind Speed:

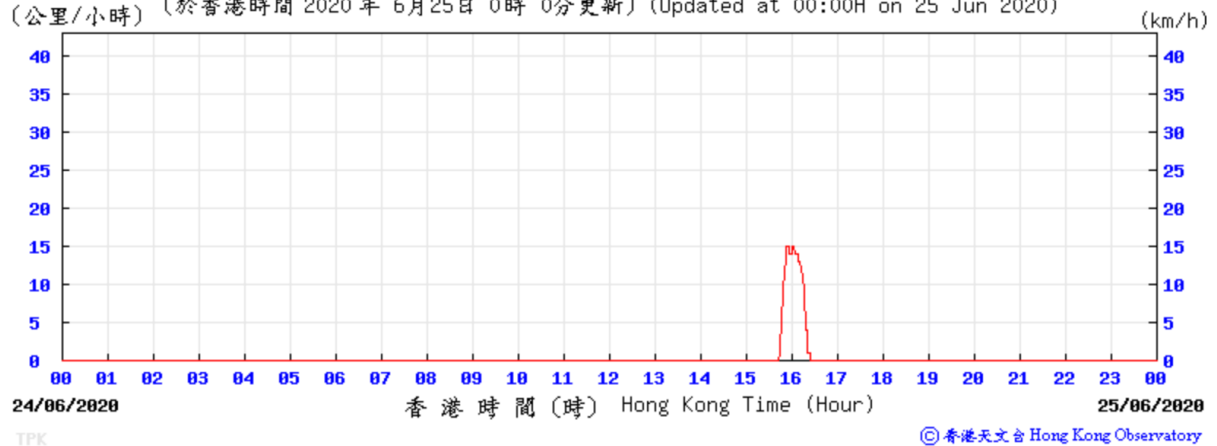
(公里/小時) (於香港時間 2020 年 6月20日 0時 0分更新) (Updated at 00:00H on 20 Jun 2020)



E. 24/06/2020

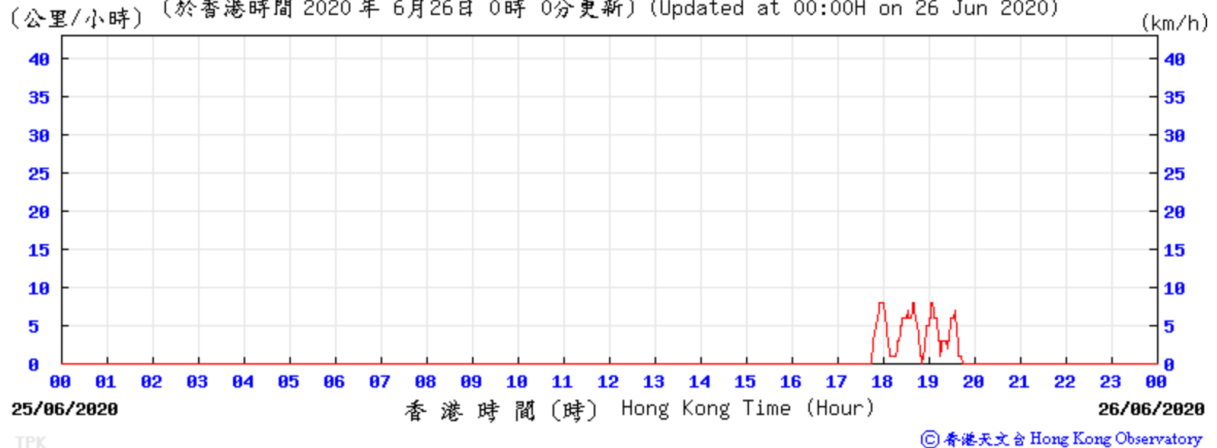
Wind Speed:

(公里/小時) (於香港時間 2020 年 6月25日 0時 0分更新) (Updated at 00:00H on 25 Jun 2020)



Wind Speed:

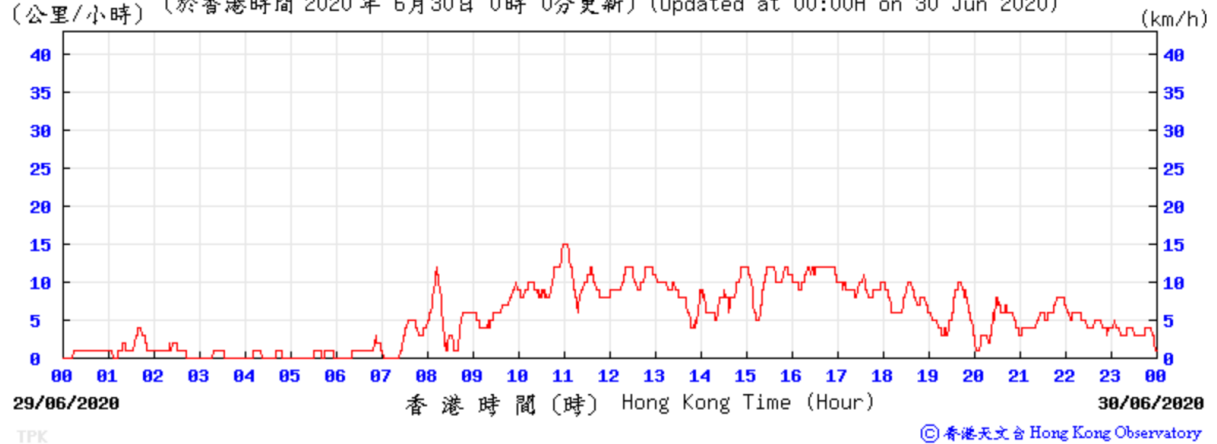
(公里/小時) (於香港時間 2020 年 6月26日 0時 0分更新) (Updated at 00:00H on 26 Jun 2020)



F. 29/06/2020

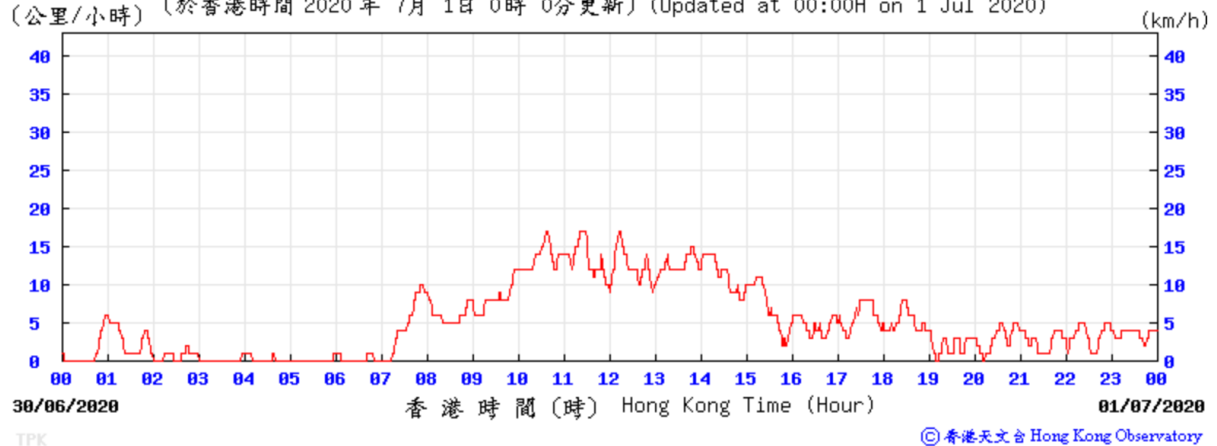
Wind Speed:

(公里/小時) (於香港時間 2020 年 6月30日 0時 0分更新) (Updated at 00:00H on 30 Jun 2020)



Wind Speed:

(公里/小時) (於香港時間 2020 年 7月 1日 0時 0分更新) (Updated at 00:00H on 1 Jul 2020)



APPENDIX H: WASTE FLOW TABLE

Reporting Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper / cardboard packaging	Plastics (see Note)	Chemical Waste	Others, e.g. general refuse
	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)	(in ,000kg)
March 2020	1.35	0	0	0	1.35	0	0	0	0	0	0
April 2020	858.29	0	0.61	0	855.61	0	0	0	0	0	3.29
May 2020	213.75	0	0	0	205.94	0	0	0	0	0	7.81
June 2020	1.86	0	0	0	0	0	0	0	0	0	1.86

Contract No. AL G513
Expansion of Wo Hop Shek Crematorium
Quarterly EM&A Report No.1



Waste to Fill Bank (March 2020):

Facility	Date of transaction	Vehicle No.	Account No.	Chit No.	Time-in	Time-out	Waste depth (meter)	Weight-in (tonne)	Weight-out (tonne)	Net weight (tonne)
TK0137FB	25/03/20	NP7*6	7032841	20269124	15:10	15:18	0	16.26	14.91	1.35
Grand Total:										1.35

Contract No. AL G513
Expansion of Wo Hop Shek Crematorium
Quarterly EM&A Report No.1

Waste to Fill Bank (April 2020):

Facility	Date of transaction	Vehicle No.	Account No.	Chit No.	Time-in	Time-out	Waste depth (meter)	Weight-in (tonne)	Weight-out (tonne)	Net weight (tonne)
TM38--FB	09/04/20	WL8*79	7032841	20269128	09:24	09:30	0.00	23.56	12.47	11.09
TM38--FB	09/04/20	UK4*54	7032841	20269126	09:51	09:57	0.00	23.61	12.18	11.43
TM38--FB	09/04/20	GU3*4	7032841	20269127	10:21	10:28	0.00	23.23	12.13	11.10
TM38--FB	09/04/20	WL8*79	7032841	20269129	10:47	10:53	0.00	23.66	12.46	11.20
TM38--FB	09/04/20	UK4*54	7032841	20269130	11:16	11:22	0.00	22.90	12.17	10.73
TM38--FB	09/04/20	GU3*4	7032841	20269131	12:39	12:43	0.00	23.20	12.10	11.10
TM38--FB	09/04/20	UK4*54	7032841	20269140	13:42	13:48	0.00	23.31	12.27	11.04
TM38--FB	09/04/20	GU3*4	7032841	20269133	14:09	14:15	0.00	23.25	12.09	11.16
TM38--FB	09/04/20	WL8*79	7032841	20269132	14:20	14:26	0.00	23.21	12.41	10.80
TM38--FB	09/04/20	WL8*79	7032841	20269136	15:50	15:56	0.00	23.62	12.39	11.23
TM38--FB	09/04/20	UK4*54	7032841	20269134	16:01	16:07	0.00	23.11	12.25	10.86
TM38--FB	09/04/20	GU3*4	7032841	20269135	16:51	17:02	0.00	23.12	12.06	11.06
TM38--FB	09/04/20	WL8*79	7032841	20269137	17:22	17:29	0.00	23.50	12.39	11.11
TM38--FB	09/04/20	UK4*54	7032841	20269138	17:33	17:39	0.00	23.13	12.20	10.93
TM38--FB	14/04/20	FY3*2	7032841	20269139	09:04	09:08	0.00	23.34	12.60	10.74
TM38--FB	14/04/20	UK4*54	7032841	20269141	09:16	09:20	0.00	23.40	12.18	11.22
TM38--FB	14/04/20	NS8*63	7032841	20269142	09:23	09:27	0.00	23.69	12.29	11.40
TM38--FB	14/04/20	WL8*79	7032841	20269143	10:25	10:28	0.00	23.34	12.54	10.80
TM38--FB	14/04/20	FY3*2	7032841	20269144	10:33	10:39	0.00	23.27	12.57	10.70
TM38--FB	14/04/20	UK4*54	7032841	20269145	10:47	10:53	0.00	23.04	12.17	10.87
TM38--FB	14/04/20	NS8*63	7032841	20269146	11:00	11:06	0.00	23.58	12.28	11.30
TM38--FB	14/04/20	FY3*2	7032841	20269147	11:59	12:02	0.00	23.46	12.55	10.91
TM38--FB	14/04/20	NH2*22	7032841	20269149	13:04	13:10	0.00	23.50	12.20	11.30
TM38--FB	14/04/20	UK4*54	7032841	20269148	13:06	13:12	0.00	23.44	12.13	11.31
TM38--FB	14/04/20	WL8*79	7032841	20269150	13:43	13:49	0.00	23.43	12.52	10.91
TM38--FB	14/04/20	NS8*63	7032841	20269151	13:50	13:54	0.00	23.69	12.24	11.45
TM38--FB	14/04/20	FY3*2	7032841	20269152	13:57	14:02	0.00	23.43	12.53	10.90
TM38--FB	14/04/20	UK4*54	7032841	20269153	14:34	14:42	0.00	22.70	12.10	10.60
TM38--FB	14/04/20	NH2*22	7032841	20269154	14:45	14:53	0.00	23.41	12.16	11.25
TM38--FB	14/04/20	NS8*63	7032841	20269155	15:17	15:24	0.00	23.76	12.23	11.53
TM38--FB	14/04/20	FY3*2	7032841	20269156	15:22	15:29	0.00	23.29	12.51	10.78
TM38--FB	14/04/20	UK4*54	7032841	20269157	16:16	16:23	0.00	23.74	12.23	11.51
TM38--FB	14/04/20	DH9*3	7032841	20269158	16:42	16:47	0.00	23.43	11.99	11.44
TM38--FB	14/04/20	GU3*4	7032841	20269159	16:50	16:56	0.00	23.32	12.13	11.19
TM38--FB	14/04/20	NS8*63	7032841	20269160	16:55	17:00	0.00	23.61	12.23	11.38
TM38--FB	14/04/20	FY3*2	7032841	20269161	17:00	17:08	0.00	23.41	12.51	10.90
TM38--FB	14/04/20	WL8*79	7032841	20269162	17:05	17:11	0.00	23.70	12.48	11.22
TM38--FB	16/04/20	PC1*00	7032841	20269121	08:58	09:04	0.00	23.50	12.18	11.32
TM38--FB	16/04/20	NH2*22	7032841	20269164	09:52	10:03	0.00	23.67	12.23	11.44
TM38--FB	16/04/20	FY3*2	7032841	20269165	10:09	10:13	0.00	24.05	12.54	11.51
TM38--FB	16/04/20	PC1*00	7032841	20269166	10:29	10:36	0.00	23.51	12.16	11.35
TM38--FB	16/04/20	TA6*42	7032841	20269163	11:12	11:18	0.00	23.57	12.05	11.52
TM38--FB	16/04/20	FY3*2	7032841	20269167	11:35	11:41	0.00	23.51	12.54	10.97
TM38--FB	16/04/20	WL8*79	7032841	20269168	12:22	12:26	0.00	23.33	12.45	10.88
TM38--FB	16/04/20	FY3*2	7032841	20269169	13:40	13:44	0.00	23.40	12.50	10.90
TM38--FB	16/04/20	TA6*42	7032841	20269170	14:00	14:04	0.00	23.90	12.01	11.89
TM38--FB	16/04/20	PC1*00	7032841	20269171	14:08	14:12	0.00	23.81	12.28	11.53
TM38--FB	16/04/20	NH2*22	7032841	20269172	14:23	14:28	0.00	23.48	12.19	11.29
TM38--FB	16/04/20	FY3*2	7032841	20269173	15:17	15:28	0.00	23.35	12.48	10.87
TM38--FB	16/04/20	TA6*42	7032841	20269174	15:44	15:51	0.00	23.26	12.01	11.25
TM38--FB	16/04/20	NH2*22	7032841	20269175	15:53	16:00	0.00	23.79	12.17	11.62
TM38--FB	16/04/20	FY3*2	7032841	20269176	16:49	16:53	0.00	23.58	12.46	11.12
TM38--FB	16/04/20	WL8*79	7032841	20269178	17:20	17:25	0.00	23.58	12.41	11.17
TM38--FB	16/04/20	TA6*42	7032841	20269177	17:20	17:26	0.00	23.45	11.98	11.47
TM38--FB	16/04/20	NH2*22	7032841	20269179	17:31	17:36	0.00	23.81	12.16	11.65
TM38--FB	17/04/20	EF2*93	7032841	20269180	08:58	09:02	0.00	23.59	12.58	11.01
TM38--FB	17/04/20	FY3*2	7032841	20269181	09:00	09:03	0.00	23.68	12.60	11.08
TM38--FB	17/04/20	GT8*66	7032841	20269182	09:11	09:15	0.00	22.96	12.23	10.73
TM38--FB	17/04/20	WL8*79	7032841	20269183	10:21	10:25	0.00	23.28	12.54	10.74
TM38--FB	17/04/20	FY3*2	7032841	20269185	10:32	10:37	0.00	23.45	12.60	10.85
TM38--FB	17/04/20	EF2*93	7032841	20269184	10:32	10:36	0.00	23.60	12.57	11.03
TM38--FB	17/04/20	GT8*66	7032841	20269186	10:44	10:49	0.00	23.41	12.23	11.18
TM38--FB	17/04/20	EF2*93	7032841	20269187	12:03	12:09	0.00	23.47	12.53	10.94
TM38--FB	17/04/20	FY3*2	7032841	20269188	12:07	12:11	0.00	23.82	12.57	11.25
TM38--FB	17/04/20	GT8*66	7032841	20269189	12:46	12:50	0.00	23.22	12.20	11.02
TM38--FB	17/04/20	WL8*79	7032841	20269191	13:37	13:40	0.00	23.64	12.50	11.14
TM38--FB	17/04/20	FY3*2	7032841	20269190	13:39	13:43	0.00	23.45	12.54	10.91
TM38--FB	17/04/20	EF2*93	7032841	20269192	13:51	13:55	0.00	23.33	12.51	10.82
TM38--FB	17/04/20	GT8*66	7032841	20269193	14:10	14:15	0.00	23.30	12.19	11.11
TM38--FB	17/04/20	FY3*2	7032841	20269195	15:03	15:08	0.00	23.56	12.52	11.04
TM38--FB	17/04/20	EF2*93	7032841	20269196	15:26	15:30	0.00	23.50	12.70	10.80
TM38--FB	17/04/20	GT8*66	7032841	20269197	15:30	15:35	0.00	22.97	12.16	10.81
TM38--FB	17/04/20	GU3*4	7032841	20269198	16:10	16:15	0.00	23.14	12.04	11.10
TM38--FB	17/04/20	DH9*3	7032841	20269199	16:17	16:25	0.00	23.29	11.98	11.31
TM38--FB	17/04/20	FY3*2	7032841	20269201	16:34	16:38	0.00	23.02	12.50	10.52
TM38--FB	17/04/20	JT1*14	7032841	20269200	16:52	16:57	0.00	23.38	11.96	11.42
TM38--FB	17/04/20	EF2*93	7032841	20269202	16:55	17:01	0.00	23.29	12.69	10.60
Grand Total:										855.61

Contract No. AL G513
Expansion of Wo Hop Shek Crematorium
Quarterly EM&A Report No.1



Waste to Fill Bank (May 2020):

Facility	Date of transaction	Vehicle No.	Account No.	Chit No.	Time-in	Time-out	Waste depth (meter)	Weight-in (tonne)	Weight-out (tonne)	Net weight (tonne)
TM38-FB	11/05/20	NH2*22	7032841	20269204	09:28	09:38	0	23.43	12.09	11.34
TM38-FB	11/05/20	WL8*79	7032841	20269205	09:40	09:45	0	23.41	12.45	10.96
TM38-FB	11/05/20	NH2*22	7032841	20269206	11:19	11:24	0	23.45	12.08	11.37
TM38-FB	11/05/20	WL8*79	7032841	20269207	11:35	11:41	0	22.9	12.43	10.47
TM38-FB	11/05/20	WL8*79	7032841	20269208	13:56	13:59	0	23.26	12.4	10.86
TM38-FB	11/05/20	NH2*22	7032841	20269209	14:19	14:24	0	23.23	12.07	11.16
TM38-FB	11/05/20	WL8*79	7032841	20269210	15:28	15:34	0	23.28	12.39	10.89
TM38-FB	11/05/20	NH2*22	7032841	20269211	15:58	16:04	0	23.2	12.04	11.16
TM38-FB	11/05/20	WL8*79	7032841	20269212	17:20	17:25	0	23.33	12.56	10.77
TM38-FB	11/05/20	NH2*22	7032841	20269213	17:55	18:02	0	23.53	12.25	11.28
TM38-FB	16/05/20	WL8*79	7032841	20269214	09:05	09:12	0	23.29	12.5	10.79
TM38-FB	16/05/20	RA1*18	7032841	20269215	09:18	09:25	0	23.11	12.45	10.66
TM38-FB	16/05/20	UK4*54	7032841	20269216	09:29	09:36	0	23.01	12.08	10.93
TM38-FB	16/05/20	UK4*54	7032841	20269217	12:01	12:09	0	22.59	12.14	10.45
TM38-FB	16/05/20	WL8*79	7032841	20269218	12:40	12:50	0	23.6	12.44	11.16
TM38-FB	23/05/20	PH5*90	7032841	22174795	11:41	11:47	0	22.95	13.01	9.94
TM38-FB	23/05/20	PH5*90	7032841	22174796	14:01	14:09	0	23.11	12.46	10.65
TM38-FB	23/05/20	PH5*90	7032841	22174797	15:36	15:42	0	23.15	12.43	10.72
TM38-FB	23/05/20	PH5*90	7032841	22174798	17:13	17:20	0	22.78	12.4	10.38
Grand Total:										205.94

Waste to Landfill (April 2020):

Facility	Date of transaction	Vehicle No.	Account No.	Chit No.	Time-in	Time-out	Waste depth (meter)	Weight-in (tonne)	Weight-out (tonne)	Net weight (tonne)
NENT	07/04/20	LA5*81	7032841	20269125	15:03	15:36	1.16	17.29	15.75	1.54
NENT	17/04/20	LA5*81	7032841	20269194	14:51	15:15	1.15	17.34	15.59	1.75
Grand Total:										3.29

Waste to Landfill (May 2020):

Facility	Date of transaction	Vehicle No.	Account No.	Chit No.	Time-in	Time-out	Waste depth (meter)	Weight-in (tonne)	Weight-out (tonne)	Net weight (tonne)
NENT	04/05/20	LA5*81	7032841	20269203	12:40	12:58	1.18	17.75	15.66	2.09
NENT	16/05/20	NP7*6	7032841	20269219	15:56	16:16	1.16	18.81	14.89	3.92
NENT	26/05/20	NP7*6	7032841	22174799	13:57	14:21	0.6	16.81	15.01	1.8
Grand Total:										7.81

Waste to Landfill (June 2020):

Facility	Date of transaction	Vehicle No.	Account No.	Chit No.	Time-in	Time-out	Waste depth (meter)	Weight-in (tonne)	Weight-out (tonne)	Net weight (tonne)
NENT	11/06/20	LA5*81	7032841	22174800	10:41	11:03	0.78	17.6	15.74	1.86
Grand Total:										1.86

APPENDIX I: STATISTICS ON COMPLAINT, NOTIFICATIONS OF SUMMONS AND SUCCESSFUL PROSECUTIONS

Statistical Summary of Exceedances

Air Quality			
Location	Action Level	Limit Level	Total
A10	0	0	0
A20	0	0	0

Statistical Summary of Environmental Complaints

Reporting Period	Environmental Complaint Statistics		
	Frequency	Cumulative	Complaint Nature
10 March 2020 -30 June 2020	0	0	N/A

Statistical Summary of Environmental Non-compliance

Reporting Period	Environmental Non-compliance Statistics		
	Frequency	Cumulative	Details
10 March 2020 -30 June 2020	0	0	N/A

Statistical Summary of Environmental Summons

Reporting Period	Environmental Summons Statistics		
	Frequency	Cumulative	Details
10 March 2020 -30 June 2020	0	0	N/A

Statistical Summary of Environmental Prosecution

Reporting Period	Environmental Prosecution Statistics		
	Frequency	Cumulative	Details
10 March 2020 -30 June 2020	0	0	N/A