MOTT MACDONALD

Development at West Kowloon Cultural District

Monthly Environmental Monitoring and Audit (EM&A) Report for July 2020

7 August 2020

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

This Monthly EM&A Report has been reviewed and certified by the Environmental Team Leader (ETL) and verified by the Independent Environmental Checker (IEC).

Certified by:

CK Wu
Environmental Team Leader (ETL)
West Kowloon Cultural District Authority

Date 12-08-2020

Verified by:

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

Date 13-08-2020

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Executive summary

Mott MacDonald Hong Kong Limited (MMHK) was commissioned to undertake the Environmental Team (ET) services (including environmental monitoring and audit (EM&A)) for the construction of M+ Museum Main Works (Contract No.: CC/2015/3A/022) and Lyric Theatre Complex including the Foundation Works (Contract No.: CC/2015/3A/014), L1 Contract (Contract No. CC/2017/3A/030) and L2 Contract (Contract No. CC/2017/3A/031) at West Kowloon Cultural District (WKCD) (The Project) as part of the WKCD development. The Project Proponent is the West Kowloon Cultural District Authority (WKCDA). The construction works and EM&A programme for M+ Museum and Lyric Theatre Complex commenced on 31 October 2015 and 1 March 2016 respectively.

The overall works for the WKCD fall under two separate categories of Designated Project (DP) of the Environmental Impact Assessment Ordinance (EIAO), namely an "engineering feasibility study of urban development projects with a study area covering more than 20 ha or involving a total population of more than 100 000" (Item 1 of Schedule 3) and "an underpass more than 100m in length under the built areas" (Item A.9, Part I, Schedule 2). An Environmental Permit No. EP-453/2013/B (EP) was issued with respect to the "Underpass Road and Austin Road Flyover Serving the West Kowloon Cultural District" which specifically includes the abovementioned category of DP under Item A.9, Part I, Schedule 2 of the EIAO.

This Monthly EM&A Report presents the monitoring works at M+ Museum and Lyric Theatre Complex (L1 and L2 Contract) from 1 July to 31 July 2020.

Exceedance of Action and Limit Levels

There was no breach of Action or Limit levels for Air Quality (1-hour TSP and 24-hour TSP) and Noise in this reporting month.

Implementation of Mitigation Measures

Construction phase weekly site inspections were carried out on 7, 14, 24 and 27 July 2020 for M+ Museum and 2, 10, 16, 22 and 29 July 2020 for Lyric Theatre Complex (L1 and L2 Contract) to confirm the implementation measures undertaken by the Contractors in the reporting month. The outcomes are presented in Section 4 and the status of implementation of mitigation measures in the site is shown in **Appendix J**.

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

Record of Complaints

No environmental complaint was recorded in the reporting month.

Record of Notifications of Summons and Successful Prosecutions

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

Future Key Issues

The major site works for M+ Museum scheduled to be commissioned in the coming month include:

- Structure works completed

- MEP
  - BEL, BLT, ELV, BFS, BPD, BME works from G/F to 15/F of RDE
  - MEP works at CSF building majority finished
  - T&C for M+ / CSF
- ABWF
  - M+ B2F – 3/F Basement & Podium, finishing & Paving works, toilets / sanitary fitment installation, make good & finishes works
  - M+ Tower – paint/sealer, plaster, toilets / sanitary fitment installation, make good & finishes works
  - CSF – majority ABWF works at CSF accomplished, make good & defect rectification
  - RDE up to 15MF – blockwall, plastering, Artwall/drywall stud erection, False ceiling sub-frame installation, paving & flooring works
- Others
  - M+ G/F - Paving works, landscaping works (soil mix)
  - M+ 3F Podium Roof - landscaping works (soil mix, planting), drainage mat / cable installation
  - Paving works at M+ 1/F, G/F finished

The major site works for L1 scheduled to be commissioned in the coming month include:

- Excavation and Lateral Support works
- Extended basement structure construction
- Box culvert outfall to Victoria Harbour (PIW works)
- Austin Road West Lay-by (PIW Works)
- Cofferdam at the M+ Museum to LTC interface on the waterfront

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

- Visual Mock Up
  - VMU interior work
- LTC construction

  Structure
  - Install and erection tower crane
  - Waterproofing to RC structure
  - Construct B1 and B2 zones
  - Falsework and Formwork Erection
  - Reinforcement work
  - Concrete work

  BS Installation
- ASDA and Lyric Theatre Promenade
  - Structure works
- Remaining Works for M+ Promenade South

  - Site Clearance
  - Construct concrete slats deck
- DSC Cofferdam
  - Connection of DCS pipes
  - Construction of valve chamber, thrust blocks etc.
  - Back fill and removal of struts
- Modification to Existing Pump Cell
  - Hoarding to Site Boundary
  - Re-provision of Steel Plate Cover
  - ABWF works
- Extended Basement
  - AWBF works
  - BS installation
- Vibration Isolation Spring System Installation
  - Install Isolation Spring on B2
  - Install Remaining Spring
- Under Pass and Associated Area
  - ABWF works
  - BS Installation
- M+ Day 2 Works
  - Demolish ex carriageway
  - Conc. duct- Excavate to formation level
- Water Main at Promenade Installation

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

1 Introduction

1.1 Background

Mott MacDonald Hong Kong Limited (MMHK) was commissioned to undertake the Environmental Team (ET) services (including environmental monitoring and audit (EM&A)) for the construction of M+ Museum Main Works (Contract No.: CC/2015/3A/022) and Lyric Theatre Complex including the Foundation Works (Contract No.: CC/2015/3A/014), L1 Contract (Contract No. CC/2017/3A/030) and L2 Contract (Contract No. CC/2017/3A/031) at West Kowloon Cultural District (WKCD) (The Project) as part of the WKCD development. The Project Proponent is the West Kowloon Cultural District Authority (WKCDA). The construction works and EM&A programme for M+ Museum and Lyric Theatre Complex commenced on 31 October 2015 and 1 March 2016 respectively.

The overall works for the WKCD fall under two separate categories of Designated Project (DP) of the Environmental Impact Assessment Ordinance (EIAO), namely an “engineering feasibility study of urban development projects with a study area covering more than 20 ha or involving a total population of more than 100 000” (Item 1 of Schedule 3) and “an underpass more than 100m in length under the built areas” (Item A.9, Part I, Schedule 2). An Environmental Permit No. EP-453/2013/B (EP) was issued with respect to the “Underpass Road and Austin Road Flyover Serving the West Kowloon Cultural District” which specifically includes the abovementioned category of DP under Item A.9, Part I, Schedule 2 of the EIAO. The captioned projects include part of the abovementioned underpass road located within the site boundary also falls under this same category.

The M+ Museum development aims to provide an iconic presence for the M+ Museum, semi-transparent vertical plane, housing education facilities, a public restaurant and museum offices. At ground and lower levels, generous access will be provided to the park and other West Kowloon Cultural District facilities, alongside a public resource centre, theatres, retail and dining, and back-of-house functions.

The 1,200-seat Lyric Theatre Complex will be Hong Kong’s first world-class facility for dance performances, including ballet, contemporary and Chinese dance forms. In the run up to the opening of further major performing arts venues in the WKCD, it will also be used for a wide variety of performing arts events including drama, opera and musical performances. The Lyric Theatre Complex will act as a platform for Hong Kong’s leading arts organisations and be a new major venue to show programmes from Asia and worldwide.

The Monthly EM&A Report is prepared in accordance with the Condition 3.4 of the Environmental Permit No. EP-453/2013/B. This Monthly EM&A Report presents the monitoring works at M+ Museum and Lyric Theatre Complex (L1 and L2 Contract) from 1 July to 31 July 2020. The purpose of this report is to summarise the findings in the EM&A of the project over the reporting period.

1.2 Project Organisation

The organisation chart and lines of communication with respect to the on-site environmental management structure together with the contact information of the key personnel are shown in **Appendix A**.

1.3 Environmental Status in the Reporting Period

During the reporting period, construction works at M+ Museum undertaken include:

- MEP
  - BEL, BLT, ELV, BFS, BPD, BME works from G/F to 15/F of RDE
  - MEP works at CSF building majority finished
  - T&C for M+ / CSF
- ABWF
  - M+ B2F – 3/F Installation curtains, finishes make good, door & floor finishes installation
  - M+ Tower – paint/sealer, plaster, toilets / sanitary fitment installation, make good & finishes works
  - CSF – majority ABWF works at CSF accomplished, make good & defect rectification
  - RDE up to 15MF – blockwall, plastering, Artwall/drywall stud erection, False ceiling sub-frame installation, paving & flooring works
- Others
  - M+ G/F - Paving works, landscaping works (soil mix)
  - M+ 3F Podium Roof - landscaping works (soil mix, planting), drainage mat

During the reporting period, construction works at L1 undertaken include:

- Excavation and Lateral Support works
- Extended basement structure construction
- Box culvert outfall to Victoria Harbour (PIW works)
- Austin Road West Lay-by (PIW Works)
- Cofferdam at the M+ Museum to LTC interface on the waterfront

During the reporting period, construction works at L2 undertaken include:

- Visual Mock Up
  - VMU interior work
- LTC construction

  Structure
  - Install and erection tower crane
  - Waterproofing to RC structure
  - Construct B2 zones
  - Falsework and Formwork Erection
  - Reinforcement work
  - Concrete work

  BS Installation
- ASDA and Lyric Theatre Promenade
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- Remaining Works for M+ Promenade South

  - Site Clearance
  - Construct concrete slats deck
- DSC Cofferdam
  - Connection of DCS pipes
  - Construction of valve chamber, thrust blocks etc.
  - Back fill and removal of struts
- Modification to Existing Pump Cell
  - Re-provision of Sea Water Pump Cell
- Extended Basement
  - AWBF works
  - BS installation
- Vibration Isolation Spring System Installation
  - Install Isolation Spring on B2
  - Install Remaining Spring
- Under Pass and Associated Area
  - ABWF works
- Water Main at Promenade Installation

The Construction Works Programme of M+ Museum and Lyric Theatre Complex (L1 and L2 Contract) is provided in **Appendix B**. A layout plan of the Project is provided in **Figure 1**. Please refer to **Table 4.4**, **Table 4.5** and **Table 4.6** on the status if the environmental licenses.

1.4 Summary of EM&A Requirements

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

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

Table 1.1: Summary of Impact EM&A Requirements

Parameters	Descriptions	Locations	Frequencies
Air Quality	24-Hour TSP	AM1 - International Commerce Centre	At least once every 6 days
	1-Hour TSP	AM1 - International Commerce Centre	At least 3 times every 6 days
	24-Hour TSP	AM2 - The Harbourside Tower 1	At least once every 6 days
	1-Hour TSP	AM2 - The Harbourside Tower 1	At least 3 times every 6 days
Noise	Leq, 30 minutes	NM1- The Harbourside Tower 1	Weekly
Landscape & Visual	Monitor implementation of proposed mitigation measures during the construction stage	As described in Table 9.1 and 9.2 of the EM&A Manual	Bi-weekly

Given that the Project covers only a small part of the whole WKCD area (i.e. M+ Museum, Lyric Theatre Complex and respective portions of underpass road), it was proposed that the EM&A programme for the Project should only require 1 noise monitoring station and 2 air quality

monitoring stations located closest to the Project area. Currently, the works under the captioned project are confined in the western part of the WKCD site. Therefore, only the monitoring stations AM1, AM2 and NM1 were set up. Other monitoring locations are too far away (i.e. AM3 to AM5 and NM2 to NM5) are not included in this EM&A programme until the construction of the corresponding area commences.

The Harbourside management office formally rejected our proposal of setting up air quality and noise monitoring equipment on its premises at the podium level of Tower 1 (AM2/NM1) on 10 November 2015. Alternative noise monitoring location was identified at The Arch (NM2), however The Arch management office formally rejected our proposal of setting up noise monitoring equipment on its premises on 23 November 2015. Nevertheless, suitable air quality monitoring location at AM2 was identified on the ground floor in front of The Harbourside Tower 1, which is at the same location as that of baseline monitoring for consistency. No management approval is required at the ground floor for conducting the air monitoring. However, the electricity supply at AM2 was suspended from 31 August 2016 and was no longer available. In order to have a more secure electricity supply, an alternative air monitoring location (AM2A) was identified at Austin Road West opposite to The Harbourside Tower 1, which is close to Lyric Theatre Complex site entrance. This alternative air monitoring location was approved by EPD on 28 September 2016. Due to works programme, the air monitoring location AM2A has been relocated to the alternative monitoring location AM2B at the 1st floor of Gammon's site office, which was approved by EPD on 21 February 2019. Meanwhile, the opportunity of setting up the air monitoring location at The Harbourside is being explored. Noise monitoring at G/F of Harbourside will not be representative. Approval from the management office of the International Commerce Centre has been granted on 29 February 2016 for conducting noise monitoring at the alternative noise monitoring location identified at the podium floor (NM1A) which is free from screening to the construction activities. Therefore, 2 air quality monitoring stations and 1 noise impact monitoring station were confirmed for the impact monitoring.

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

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

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

2 Impact Monitoring Methodology

2.1 Introduction

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

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

2.2 Air Quality

2.2.1 Monitoring Parameters, Frequency and Duration

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

Table 2.1: Air Quality Monitoring Parameters, Frequency and Duration

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

2.2.2 Monitoring Locations

Currently, the works under the captioned project are confined in the western part of the WKCD site. Therefore, only the monitoring stations AM1 and AM2B were set up at the proposed locations in accordance with updated EM&A Manual. Location of the monitoring station is given in **Table 2.2** and shown in **Figure 1**.

Table 2.2: Air Quality Monitoring Station

Monitoring Station	Location
AM1	International Commerce Centre (ICC)
AM2B	1st Floor of Gammon's Site Office

2.2.3 Monitoring Equipment

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

Table 2.3: TSP Monitoring Equipment

Equipment	Model
24-hour TSP monitoring	
High Volume Sampler	TE-5170 (Serial No.: 0767 and 8919)
Calibrator	TE-5025A (Orifice I.D.: 2454)
1-hour TSP monitoring	
Portable direct reading dust meter	Sibata LD-3B (Serial No.: 235780 and 6Z7784)

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

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

2.2.4 Monitoring Methodology

24-hour TSP Monitoring

Installation

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

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

Preparation of Filter Papers

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

Field Monitoring Procedures

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

Maintenance and Calibration

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

1-hour TSP Monitoring

Field Monitoring

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

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

– Regular checking of the time period setting to ensure monitoring time of 1 hour.

Maintenance and Calibration

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

Weather Condition

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

2.3 Noise

2.3.1 Monitoring Parameters, Frequency and Duration

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

Table 2.4: Noise Monitoring Parameters, Period and Frequency

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

2.3.2 Monitoring Location

Currently, the works under the captioned project are confined in the western part of the WKCD site. Therefore, only the monitoring station NM1A was set up at the proposed location in accordance with updated EM&A Manual. Location of the monitoring station is given in **Table 2.5** and shown in **Figure 1**.

Table 2.5: Noise Monitoring Station

Monitoring Station	Location
NM1A	International Commerce Centre (ICC)

2.3.3 Monitoring Equipment

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

Table 2.6: Noise Monitoring Equipment

Monitoring Station	Equipment Model	
	Integrating Sound Level Meter	Calibrator
NM1A	Rion NL-52 (Serial No. 00175561)	LARSON DAVIS CAL200 (Serial No. 11334)

2.3.4 Monitoring Methodology

Field Monitoring

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

Maintenance and Calibration

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

Weather Condition

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

2.4 Landscape and Visual

2.4.1 Monitoring Program

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

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

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

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

3 Monitoring Results

3.1 Impact Monitoring

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

3.2 Air Quality Monitoring

3.2.1 1-hour TSP

Results of 1-hour TSP at the monitoring location AM1 and AM2B are summarised in **Table 3.1**. Graphical plots of the monitoring results are shown in **Appendix G**.

Table 3.1: Summary of 1-hour TSP monitoring results

Monitoring Station	Monitoring Date	Start Time	1-hour TSP (µg/m3)			Range (µg/m3)	Action Level (µg/m3)	Limit Level (µg/m3)
			1st Result	2nd Result	3rd Result			
AM1	06-Jul-20	8:14	24	29	26	19-36	273.7	500
	11-Jul-20	13:22	21	26	25			
	17-Jul-20	8:17	21	19	26			
	23-Jul-20	8:20	21	24	20			
	29-Jul-20	8:19	24	30	36			
AM2B	06-Jul-20	8:28	41	39	36	29-44	274.2	500
	11-Jul-20	13:36	40	35	31			
	17-Jul-20	8:32	41	35	33			
	23-Jul-20	8:34	44	39	36			
	29-Jul-20	8:34	34	29	39			

3.2.2 24-hour TSP

Results of 24-hour TSP at the monitoring location AM1 and AM2B are summarised in **Table 3.2**. Graphical plots of the monitoring results are shown in **Appendix G**.

Table 3.2: Summary of 24-hour TSP monitoring results

Monitoring Station	Monitoring Date	Start Time	Monitoring Results (µg/m^3)	Range (µg/m^3)	Action Level (µg/m^3)	Limit Level (µg/m^3)
AM1	06-Jul-20	8:12	16	10-16	143.6	260
	11-Jul-20	8:20	12			
	17-Jul-20	8:15	10			
	23-Jul-20	8:18	15			
	29-Jul-20	8:17	10			
AM2B	06-Jul-20	8:26	48	28-48	151.1	260
	11-Jul-20	8:34	30			
	17-Jul-20	8:30	28			
	23-Jul-20	8:30	37			
	29-Jul-20	8:32	30			

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

3.3 Noise Monitoring

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

Table 3.3: Summary of noise monitoring results during normal weekdays

Monitoring Date	Start Time	End Time	L_{eq} (30 mins)*, dB(A)	Limit Level for L_{eq} (dB(A))
06-Jul-20	10:35	11:05	69	75
17-Jul-20	10:41	11:11	68	
23-Jul-20	10:41	11:11	69	
29-Jul-20	10:42	11:12	68	

Remarks:

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

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

3.4 Landscape and Visual Impact

Landscape and visual impact inspections were conducted as part of the weekly site inspections on 7 and 24 July 2020 for M+ Museum, and 2, 16 and 29 July 2020 for Lyric Theatre Complex (L1 and L2 Contract) during the reporting month. As reviewed by the registered Landscape Architect, no adverse comment on landscape and visual aspects was made during these inspections.

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

4 Environmental Site Inspection

4.1 Site Inspection

4.1.1 M+ Museum

Construction phase weekly site inspections were carried out on 7, 14, 24 and 27 July 2020. The joint site inspection with IEC, ET, ER and Contractor was held on 24 July 2020. All observations have been recorded in the site inspection checklist and passed to the Contractor together with the appropriate recommended mitigation measures where necessary.

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

Table 4.1: Summary of Site Inspections and Recommendations for M+ Museum

Inspection Date	Parameter	Observation / Recommendation	Contactor's Responses / Action(s) Undertaken	Close-out (Date)
30-Jun-20	Air Quality	Sand was observed without cover at Gate 7. The contractor was reminded to cover the sand with impervious sheet to avoid dust impact.	The contractor has covered the sand with impervious sheet.	02-Jul-20
30-Jun-20	Water Quality	The wastewater treatment process was observed not satisfactory. The contractor was reminded to improve the treatment process and keep monitoring.	The contractor has improved the wastewater treatment process.	02-Jul-20
30-Jun-20	Water Quality	Wetsep maintenance logbook was observed not updated. The contractor was reminded to keep review.	The contractor has updated the wetsep maintenance logbook.	02-Jul-20
07-Jul-20	Water Quality	Dusty materials were observed outside Gate 1 boundary. The contractor was reminded to clear the dusty materials and provide mitigation measures to prevent effluent discharge out of the site boundary.	The contractor has cleared the dusty materials outside Gate 1 boundary.	10-Jul-20
07-Jul-20	Water Quality	Effluent quality of wetsep was checked. It was found visually clear when compared with standard solution and within proper pH range.	N/A	N/A
14-Jul-20	Air Quality	The contractor was reminded to completely cover the sand at Gate 7 with impervious sheet.	The contractor has covered the sand completely with impervious sheet.	14-Jul-20
14-Jul-20	Water Quality	Effluent quality of wetsep was checked. It was found visually clear when compared with standard solution and within proper pH range.	N/A	N/A

Inspection Date	Parameter	Observation / Recommendation	Contactor's Responses / Action(s) Undertaken	Close-out (Date)
24-Jul-20	Air Quality	The contractor was reminded to keep clear of dusty materials at Gate 1 site boundary.	The contractor has cleared the dusty materials.	27-Jul-20
24-Jul-20	Water Quality	Effluent quality of wetsep was checked. It was found visually clear when compared with standard solution and within proper pH range.	N/A	N/A
27-Jul-20	Air Quality	The contractor was reminded to cover the soil with impervious sheeting at the end of the working day.	The contractor has covered the soil with impervious sheeting.	27-Jul-20
27-Jul-20	Water Quality	Effluent quality of wetsep was checked. It was found visually clear when compared with standard solution and within proper pH range.	N/A	N/A

4.1.2 Lyric Theatre Complex

Construction phase weekly site inspections were carried out on 2, 10, 16, 22 and 29 July 2020 (L1 and L2 Contract). The joint site inspection with IEC, ET, ER and Contractor was held on 22 July 2020. All observations have been recorded in the site inspection checklist and passed to the Contractor together with the appropriate recommended mitigation measures where necessary.

The key observations from the site inspections and associated recommendations are summarized in **Table 4.2 and Table 4.3**.

Table 4.2: Summary of Site Inspections and Recommendations for L1

Inspection Date	Parameter	Observation / Recommendation	Contactor's Responses / Action(s) Undertaken	Close-out (Date)
-	-	-	-	-

Table 4.3: Summary of Site Inspections and Recommendations for L2

Inspection Date	Parameter	Observation / Recommendation	Contactor's Responses / Action(s) Undertaken	Close-out (Date)
-	-	-	-	-

4.2 Advice on the Solid and Liquid Waste Management Status

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

4.2.1 M+ Museum

As advised by the Contractor, 21.33 tonnes and 1000.68 tonnes of inert C&D material were disposed of at Tuen Mun Area 38 and Tseung Kwan O Area 137 Public Fill. 282.1 tonnes of general refuse were disposed of at SENT landfill. 100.0 tonnes of metal, 0.4 tonnes of paper/cardboard packaging, 0.0 tonne of plastic and 0.0 tonne of timber were collected by recycling contractors in the reporting month. 0.0 tonne of inert C&D material was reused on site.

0.0 tonne of inert C&D material was reused in other projects. 0.0 tonne of chemical waste was collected by licensed contractors in the reporting period.

The cumulative waste generation records for M+ Museum are shown in **Appendix I**.

4.2.2 Lyric Theatre Complex

As advised by the Contractors (L1 and L2 Contract), 124.94 tonnes and 23.84 tonnes of inert C&D material were disposed of at Tseung Kwan O Area 137 and Tuen Mun Area 38 Public Fill respectively, while 220.0 tonnes of general refuse were disposed of at SENT and WENT landfill. 458.6 tonnes of metal, 0.0 tonne of paper/cardboard packaging, 0.0 tonne of plastic and 0.0 tonne of timber were collected by recycling contractors in the reporting month. 0.0 tonne of inert C&D material was reused on site. 0.0 tonne of inert C&D materials was reused in other projects and 31.5 tonnes of inert C&D material were imported for reuse at site. 0.0 tonne of inert C&D material was disposed to sorting facility and 0.0 tonne of chemical waste was collected by licensed contractors in the reporting period.

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

4.3 Status of Environmental Licenses and Permits

The environmental permits, licenses, and/or notifications on environmental protection for this Project which were valid during the period are summarised in **Table 4.4** and **Table 4.5** and **Table 4.6.**

4.3.1 M+ Museum

Table 4.4: Status of Environmental Submissions, Licenses and Permits for M+ Museum

Permit / License No. / Notification / Reference No.	Valid Period		Status	Remarks
	From	To		
Chemical Waste Producer Registration				
WPN5213-217-G2347-53	04-Oct-18	--	Valid	--
Billing Account Construction Waste Disposal				
7031993	03-Oct-18	--	Account Active	--
Construction Noise Permit				
GW-RE0356-20	14-May-20	13-Nov-20	Valid	--
Wastewater Discharge License				
WT-00033363-2019	21-Mar-19	31-Mar-24	Valid	--
Notification under Air Pollution Control (Construction Dust) Regulation				
437339	12-Sep-18	--	Notified	--

4.3.2 Lyric Theatre Complex

Table 4.5: Status of Environmental Submissions, Licenses and Permits for L1

Permit / License No. / Notification / Reference No.	Valid Period		Status	Remarks
	From	To		
Chemical Waste Producer Registration				
WPN5213-217-G2347-39	17-Feb-16	--	Valid	--
Billing Account Construction Waste Disposal				
7029925	22-Jan-18	--	Account Active	--
Construction Noise Permit				
GW-RE0276-20	4-May-20	3-Jul-20	Cancelled	--
GW-RE0515-20	4-Jul-20	3-Jan-21	Valid	--
Wastewater Discharge License				
WT-00030694-2018	11-Apr-18	30-Apr-23	Valid	--
Notification under Air Pollution Control (Construction Dust) Regulation				
429708	16-Jan-18	--	Notified	--

Table 4.6: Status of Environmental Submissions, Licenses and Permits for L2

Permit / License No. / Notification / Reference No.	Valid Period		Status	Remarks
	From	To		
Chemical Waste Producer Registration				
WPN5213-217-G2347-39	17-Feb-16	--	Valid	This license/ permit is share with L1
Billing Account Construction Waste Disposal				
7032787	02-Jan-19	--	Account Active	--
Construction Noise Permit				
GW-RE0276-20	4-May-20	3-Jul-20	Cancelled	This license/ permit is share with L1
GW-RE0515-20	4-Jul-20	3-Jan-21	Valid	This license/ permit is share with L1
Wastewater Discharge License				
WT-00030694-2018	11-Apr-18	30-Apr-23	Valid	This license/ permit is share with L1
Notification under Air Pollution Control (Construction Dust) Regulation				
448474	27-Aug-19	--	Notified	--

4.4 Recommended Mitigation Measures

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

4.4.1 M+ Museum

Water Quality

- Site boundary should be kept clear of dusty materials.

Air Quality

- Dusty materials should be cover entirely by impervious sheeting or clear it as soon as possible to avoid dust impact.

4.4.2 Lyric Theatre Complex

L1

- No observation in the reporting month.

L2

- No observation in the reporting month.

5 Compliance with Environmental Permit

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

Table 5.1: Status of Submissions under the Environmental Permit

EP Condition	Submission	Submission Date
Condition 3.4	Monthly EM&A Report for June 2020	14 July 2020

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

6.1 Record on Non-compliance of Action and Limit Levels

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

6.2 Record on Environmental Complaints Received

No environmental complaint was received in the reporting month. The cumulative statistics on complaints were provided in **Appendix K**.

6.3 Record on Notifications of Summons and Successful Prosecution

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

7 Future Key Issues

7.1 Construction Works for the Coming Month(s)

7.1.1 M+ Museum

The major site works for M+ Museum scheduled to be commissioned in the coming month include:

- Structure works completed
- MEP
  - BEL, BLT, ELV, BFS, BPD, BME works from G/F to 15/F of RDE
  - MEP works at CSF building majority finished
  - T&C for M+ / CSF
- ABWF
  - M+ B2F – 3/F Basement & Podium, finishing & Paving works, toilets / sanitary fitment installation, make good & finishes works
  - M+ Tower – paint/sealer, plaster, toilets / sanitary fitment installation, make good & finishes works
  - CSF – majority ABWF works at CSF accomplished, make good & defect rectification
  - RDE up to 15MF – blockwall, plastering, Artwall/drywall stud erection, False ceiling sub-frame installation, paving & flooring works
- Others
  - M+ G/F - Paving works, landscaping works (soil mix)
  - M+ 3F Podium Roof - landscaping works (soil mix, planting), drainage mat / cable installation
  - Paving works at M+ 1/F, G/F finished

7.1.2 Lyric Theatre Complex

The major site works for L1 scheduled to be commissioned in the coming month include:

- Excavation and Lateral Support works
- Extended basement structure construction
- Box culvert outfall to Victoria Harbour (PIW works)
- Austin Road West Lay-by (PIW Works)
- Cofferdam at the M+ Museum to LTC interface on the waterfront

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

- Visual Mock Up
  - VMU interior work
- LTC construction

  Structure
  - Install and erection tower crane
  - Waterproofing to RC structure

  - Construct B1 and B2 zones
  - Falsework and Formwork Erection
  - Reinforcement work
  - Concrete work

BS Installation

- ASDA and Lyric Theatre Promenade
  - Structure works
- Remaining Works for M+ Promenade South
  - Site Clearance
  - Construct concrete slats deck
- DSC Cofferdam
  - Connection of DCS pipes
  - Construction of valve chamber, thrust blocks etc.
  - Back fill and removal of struts
- Modification to Existing Pump Cell
  - Hoarding to Site Boundary
  - Re-provision of Steel Plate Cover
  - ABWF works
- Extended Basement
  - AWBF works
  - BS installation
- Vibration Isolation Spring System Installation
  - Install Isolation Spring on B2
  - Install Remaining Spring
- Under Pass and Associated Area
  - ABWF works
  - BS Installation
- M+ Day 2 Works
  - Demolish ex carriageway
  - Conc. duct- Excavate to formation level
- Water Main at Promenade Installation

7.2 Key Issues for the Coming Month

7.2.1 M+ Museum

Key issues to be considered in the coming month include:

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

7.2.2 Lyric Theatre Complex

Key issues to be considered in the coming month include:

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

7.3 Monitoring Schedule for the Coming Month

The environmental site inspection and environmental monitoring will be continued in the coming month. Impact monitoring for air quality and noise in accordance with the approved EM&A Manual has commenced since 31 October 2015 and 5 March 2016 respectively. The tentative monitoring schedule for the coming month is shown in the **Appendix E**.

8 Conclusions and Recommendations

8.1 Conclusions

The EM&A programme as recommended in the EM&A Manual has been undertaken since the construction of M+ Museum main works commenced on 31 October 2015, and the construction of Lyric Theatre Complex commenced on 1 March 2016.

Monitoring of air quality and noise with respect to the Projects is underway. In particular, the 1-hour TSP, 24-hour TSP, noise level (as L_{eq}, 30 minutes) under monitoring have been checked against established Action and Limit levels. There was no breach of Action and Limit Levels for 1-hour TSP, 24-hour TSP and noise in the reporting month.

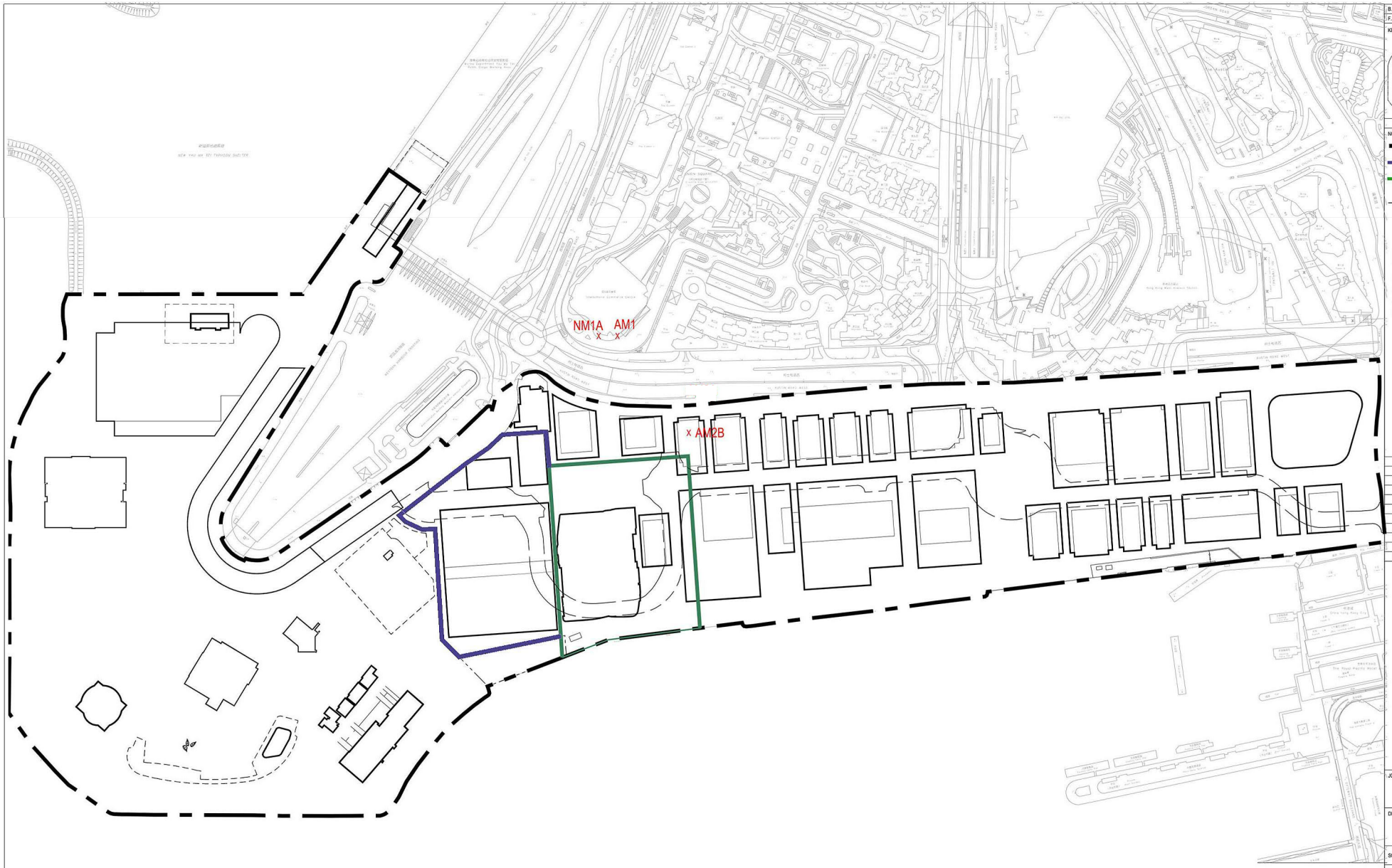
No environmental complaint, no notifications of summons or successful prosecutions were received during the reporting month.

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

8.2 Recommendations

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

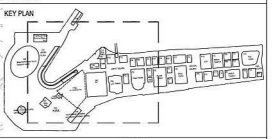
Figure 1 Site Layout Plan and Monitoring Stations



B.D. REF:

F.S.D. REF:

KEY PLAN



KEY PLAN

NOTES:

WKCD BOUNDARY

M+ MUSEUM BOUNDARY

LYRIC THEATRE BOUNDARY

BOUNDARY OF UNDERPASS ROAD SERVING THE PLANNED WKCD

X CONSTRUCTION AIR/NOISE MONITORING STATION

REMARKS:
THE AIR MONITORING STATION AM2A HAS BEEN RELOCATED TO THE ALTERNATIVE MONITORING STATION AM2B AT 1ST FLOOR OF GAMMON'S SITE OFFICE ON 26 FEBRUARY 2019.

REV.	DATE	DESCRIPTION	INITIAL

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

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

SCALE	1:100	PRINTED	A1
CHECKED		DATE	
APPROVED		DATE	
DRAWN	TY	DATE	16-10-2015
CONTRACT NO.	-		
DRAWING NO.	FIGURE 1	REV.	XA
CAD REF NAME:	XXXXX-AUT-PMS-DWG-P00-L000-0000-XXX.dwg		

AUTHORITY

westKowloon
西九文化區

A1 (841mm x 594mm) Sheet Size

Appendices

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

A. Project Organisation

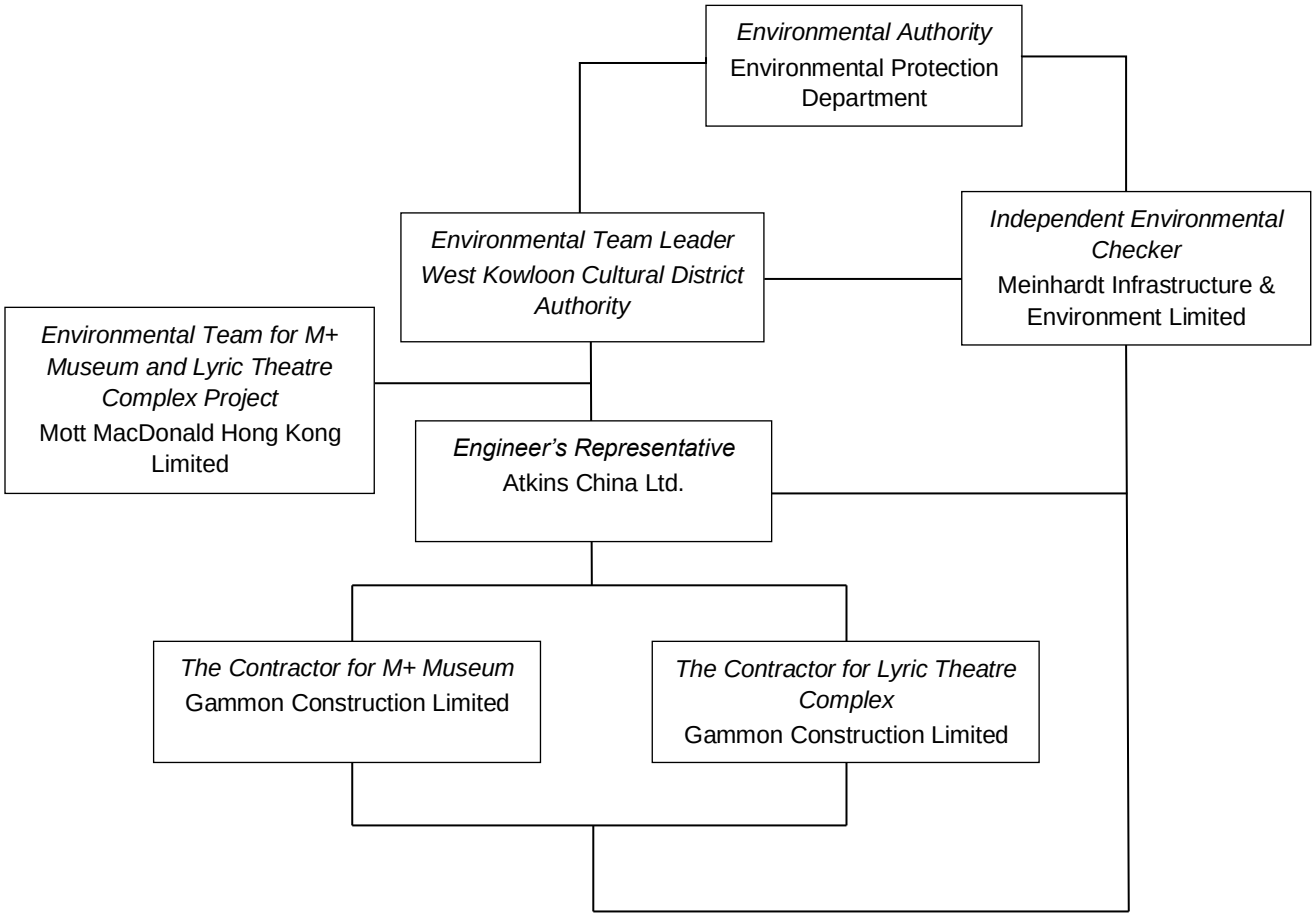


Table A-1: Contact information

Company Name	Role	Name	Telephone
Atkins China Ltd.	Resident Engineer	Ms. Gloria Lui	5506 6361
Meinhardt Infrastructure & Environment Limited	Independent Environmental Checker	Ms. Claudine Lee	2859 5409
Gammon Construction Limited (M+ Museum)	Environmental Manager	Mr. Andy Leung	9489 0035
Gammon Construction Limited (L1)	Environmental Manager	Ms. Sammie Chan	9864 4296
Gammon Construction Limited (L2)	Environmental Manager	Mr. Ivan Chiu	9416 1664
Mott MacDonald Hong Kong Ltd.	Contractor's Environmental Team Leader	Mr. Thomas Chan	2828 5757
West Kowloon Cultural District Authority	Senior Project Manager (Safety, Health and Environment)	Mr. C.K. Wu	5506 9178

B. Tentative Construction Programme

M+ Museum

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Main Works for M+ Museum Project

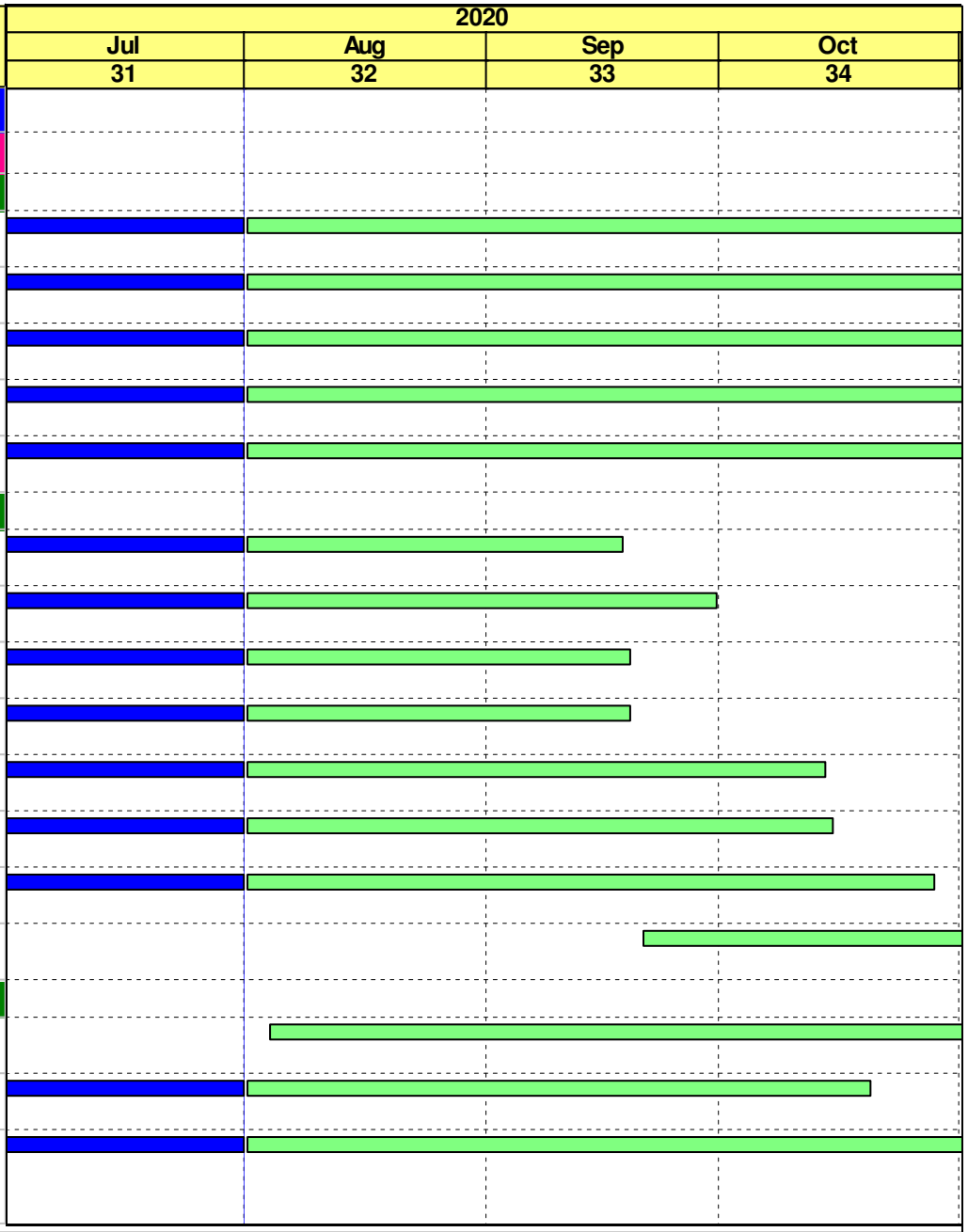
Three Month Rolling Programme

8/10/2020
-

Item	Description	Start	Finish	2020				
				July	August	September	October	November
M+ Tower, Podium & Basement; CSF Tower								
1	Defect Rectification to M+ Tower, CSF, Podium & Basement	Apr-20	Sep-20					
2	Fitout Works to M+ Tower	Apr-20	Oct-20					
3	Fitout Works to M+ Podium & Basment	Apr-20	Oct-20					
4	Statutory Procedure to M+ Tower, Podium & Basment	May-20	Sep-20					
5	External Works (Signage, Road Marking, soft landscaping, etc.)	May-20	Sep-20					
WKCDA Tower								
6	Defect Rectification to WKCDA Tower	May-20	Sep-20					
7	Fitout Works to WKCDA Tower	Jun-20	Oct-20					
8	Statutory Procedure to RDE	Jul-20	Sep-20					
9	PC to M+ Tower, Podium & Basement	Jul-20	Oct-20					
10	PC to WKCDA Tower	Jul-20	Oct-20					

L1

Activity ID	Activity Name	Start Date	Finish Date
L1 Contract for Lyric Theatre Complex (3MRP)			
Cost Centre C - Basement			
Cost Centre C1 - Essential Basement Structure (Excl. AET Protection & Box Culvert)			
SU10000	South Basement - Central Area	30-Apr-19 A	05-Nov-20
SU11000	South Basement - South / West Area	14-Dec-19 A	05-Nov-20
SU12000	South Basement - East Area	27-Feb-20 A	06-Nov-20
SU13000	North Basement - North Area	12-Jun-19 A	31-Dec-20
SU14000	North Basement - Area 6	01-Jun-19 A	21-Nov-20
Cost Centre C3 - AET Protection			
SU20000	Wall Beam WF	27-Mar-20 A	18-Sep-20
SU21000	Wall Beam WE	08-Jun-20 A	30-Sep-20
SU22000	Wall Beam W2	18-Apr-20 A	19-Sep-20
SU23000	Wall Beam W1	18-Apr-20 A	19-Sep-20
SU24000	Wall Beam WB	18-May-20 A	14-Oct-20
SU25000	Wall Beam WC	06-May-20 A	15-Oct-20
SU26000	Wall Beam WC	23-May-20 A	28-Oct-20
SU27000	Structure between Wall Beam	21-Sep-20	02-Jan-21
Cost Centre C4 - Box Culvert			
SU30000	South Section	04-Aug-20*	04-Nov-20
SU31000	North Section	22-Jun-20 A	20-Oct-20
SU32000	Austin Road	29-Jun-20 A	22-May-21



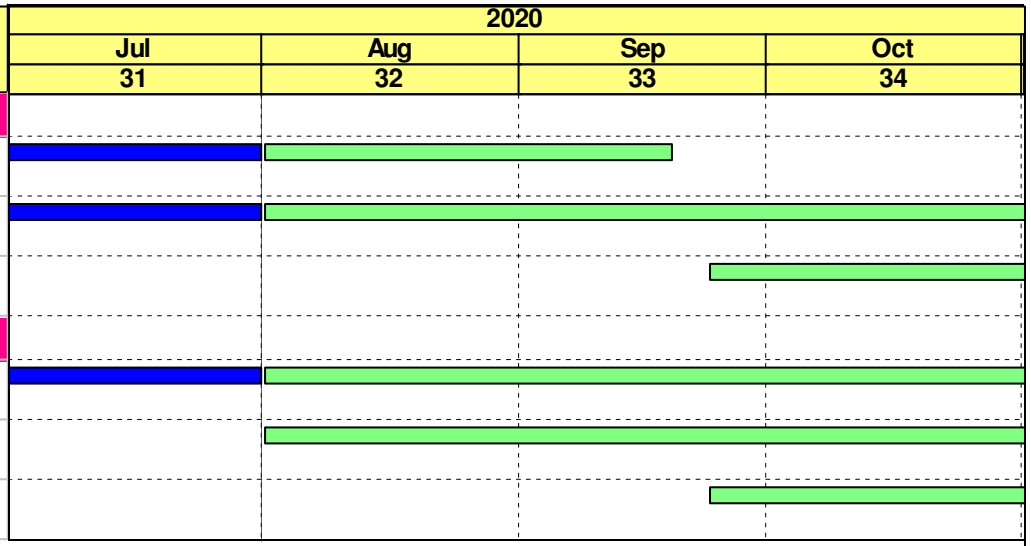
Remaining Work
Critical Remaining Work
Actual Work
Milestone

Project ID: L13MRP-20200731-ENV
Layout: L1-3MRP (Env)

West Kowloon Cultural District Authority
L1 Contract for Lyric Theatre Complex & Extended Basement
Three Month Rolling Programme (3MRP) - Status as of 31 Jul 2020

Gammon

Activity ID	Activity Name	Start Date	Finish Date
Cost Centre D - Public Infrastructure Works (PIW)			
SU40000	Drainage Works	20-Mar-18 A	19-Sep-20
SU41000	Utilities & Road Works	04-Oct-18 A	30-Jan-21
SU42000	Box Culvert Outfall	24-Sep-20	14-Jul-21
Cost Centre E - Miscellaneous Works			
SU50000	Drainage & Sewerage Works	19-Nov-19 A	02-Feb-21
SU51000	Water Works	01-Aug-20*	04-Jan-21
SU52000	DCS Outfall	24-Sep-20	14-Jul-21



Remaining Work
Critical Remaining Work
Actual Work
Milestone

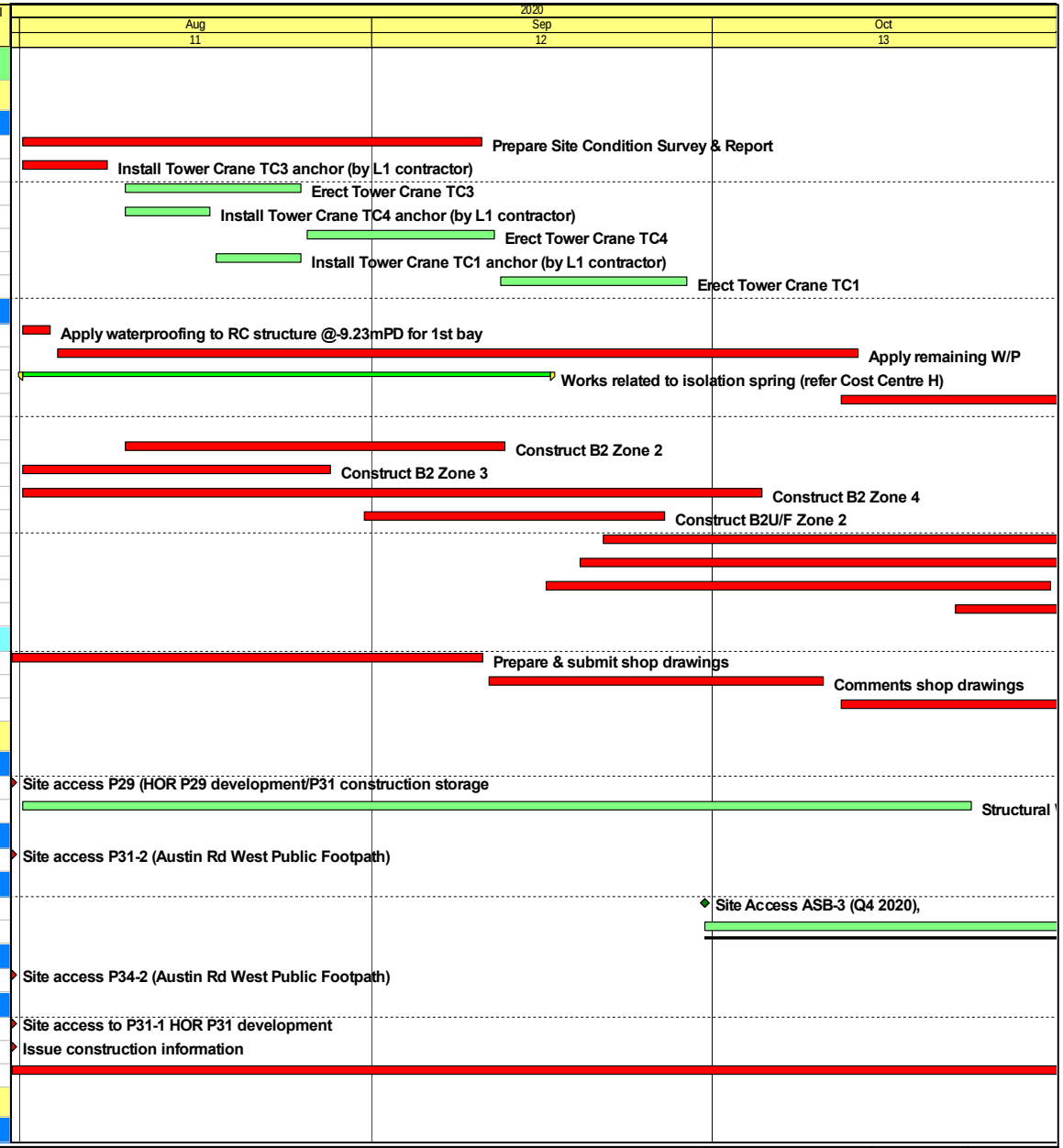
Project ID: L13MRP-20200731-ENV
Layout: L1-3MRP (Env)

West Kowloon Cultural District Authority
L1 Contract for Lyric Theatre Complex & Extended Basement
Three Month Rolling Programme (3MRP) - Status as of 31 Jul 2020

Gammon

L2

Activity ID	Activity Name	Forecast / Actual Start	Forecast / Actual Finish
L2-CMWP 2020-07-31			
COST CENTRE B - Lyric Theatre Complex			
Site Setup/ Mobilization			
B100100	Prepare Site Condition Survey & Report	21-Feb-20 A	10-Sep-20
B100500	Install Tower Crane TC3 anchor (by L1 contractor)	01-Aug-20	08-Aug-20
B100510	Erect Tower Crane TC3	10-Aug-20	25-Aug-20
B100600	Install Tower Crane TC4 anchor (by L1 contractor)	10-Aug-20	17-Aug-20
B100610	Erect Tower Crane TC4	26-Aug-20	11-Sep-20
B100700	Install Tower Crane TC1 anchor (by L1 contractor)	18-Aug-20	25-Aug-20
B100710	Erect Tower Crane TC1	12-Sep-20	28-Sep-20
Structure			
B200132	Apply waterproofing to RC structure @-9.23mPD for 1st bay	01-Aug-20	03-Aug-20
B200134	Apply remaining W/P	04-Aug-20	13-Oct-20
B200135	Works related to isolation spring (refer Cost Centre H)	30-Sep-19 A	16-Sep-20
B200180	Formwork to Isolation Pad	04-May-20 A	19-Nov-20
B200200	Construct B2 Zone 1	13-May-20 A	29-Dec-20
B200210	Construct B2 Zone 2	10-Aug-20	12-Sep-20
B200220	Construct B2 Zone 3	15-May-20 A	28-Aug-20
B200230	Construct B2 Zone 4	15-May-20 A	05-Oct-20
B200250	Construct B2U/F Zone 2	31-Aug-20	26-Sep-20
B200260	Construct B2U/F Zone 3	21-Sep-20	16-Nov-20
B200270	Construct B2U/F Zone 4	19-Sep-20	28-Nov-20
B200290	Construct B1L/F Zone 2	16-Sep-20	30-Oct-20
B200310	Construct B1/F Zone 2	22-Oct-20	17-Nov-20
Precast Elements Submission, Approval & Manufacture			
B200620	Prepare & submit shop drawings	31-Jul-20	10-Sep-20
B200630	Comments shop drawings	11-Sep-20	10-Oct-20
B200640	Prepare resubmission & approval	12-Oct-20	09-Nov-20
COST CENTRE C - ASDA and Lyric Theatre Promenade			
P29 (access options)			
C102005	Site access P29 (HOR P29 development/P31 construction stora	31-Jul-20*	
C102010	Structural Works	01-Aug-20	23-Oct-20
P31-2			
C201105	Site access P31-2 (Austin Rd West Public Footpath)	31-Jul-20*	
ASB-3 (No L2 Access)			
C201165	Site Access ASB-3 (Q4 2020)	30-Sep-20*	
C201170	Structural Works	30-Sep-20	18-Dec-20
P34-2			
C201225	Site access P34-2 (Austin Rd West Public Footpath)	31-Jul-20*	
P31-1			
C201345	Site access to P31-1 HOR P31 development	31-Jul-20*	
C201346	Issue construction information	31-Jul-20*	
C201347	Preparation	31-Jul-20	31-Oct-20
COST CENTRE E - DCS Cofferdam			
Section 1			

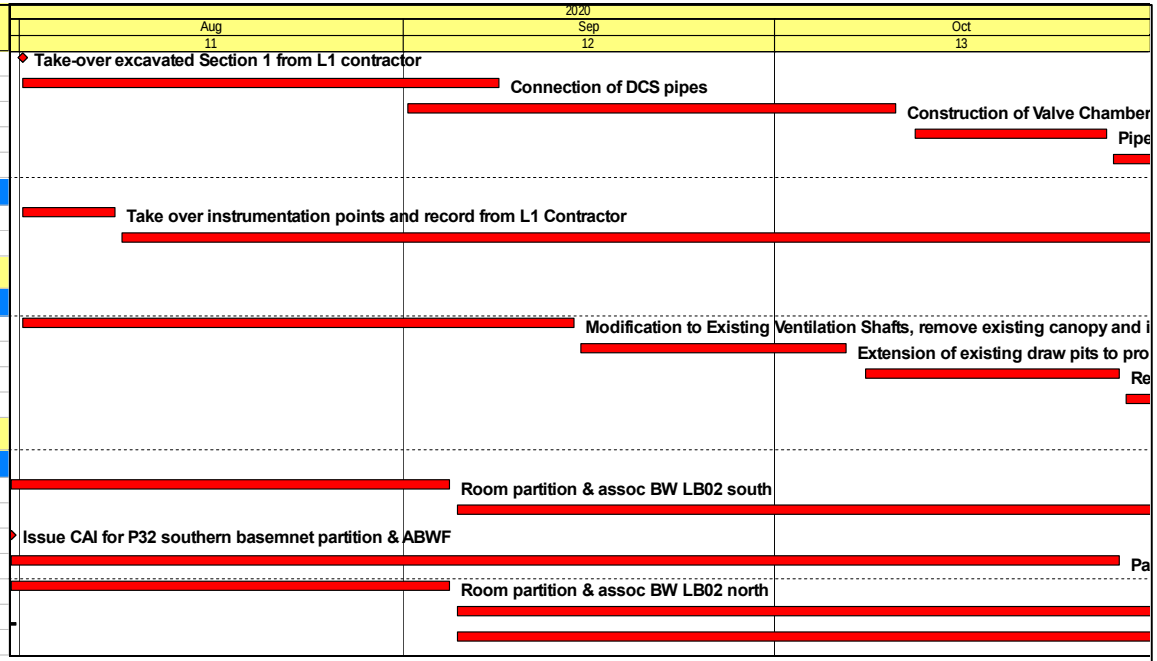


Actual Level of Effort
Summary LOE
Project Baseline
Critical LOE
Actual Work
Rema...
Critica...
Critica...
Milest...

West Kowloon Cultural District Authority
L2 Contract for Lyric Theatre Complex & Extended Basement
Three Month Rolling Programme (3MRP) - Status as of 31 Jul 2020

Date	Revision	Checked	Approved
30-Ju...	3MRP Update	BC / JL /...	AY

Activity ID	Activity Name	Forecast / Actual Start	Forecast / Actual Finish
E100610	Take-over excavated Section 1 from L1 contractor	01-Aug-20*	
E100620	Connection of DCS pipes	01-Aug-20	08-Sep-20
E100630	Construction of Valve Chamber, Thrust Blocks etc.	01-Sep-20	10-Oct-20
E100640	Pipe leakage tests	12-Oct-20	27-Oct-20
E100650	Back fill and removal of struts (Milestone E01)	28-Oct-20	09-Nov-20
Section 2			
E200100	Take over instrumentation points and record from L1 Contract	01-Aug-20	08-Aug-20
E200110	ELS submission, approval and consent	09-Aug-20	06-Nov-20
COST CENTRE F - Modification to Existing Pump Cell			
Reprovision of Sea Water Pump Cell			
F300120	Modification to Existing Ventilation Shafts, remove existing cai	01-Aug-20	14-Sep-20
F300130	Extension of existing draw pits to proposed landscape level (M	15-Sep-20	06-Oct-20
F300140	Reprovision of Steel Plate Cover	08-Oct-20	28-Oct-20
F300150	Reprovision of Steel Davit Arms	29-Oct-20	11-Nov-20
COST CENTRE G - Extended Basement			
Builder's Works			
G100110	Room partition & assoc BW LB02 south	31-Jul-20	04-Sep-20
G100120	Room partition & assoc BW LB01 south	05-Sep-20	02-Nov-20
G100133	Issue CAI for P32 southern basemnet partition & ABWF	31-Jul-20	
G100135	Partition work & ABWF for P32 in Extended basement	31-Jul-20	28-Oct-20
G100140	Room partition & assoc BW LB02 north	31-Jul-20	04-Sep-20
G100150	Room partition & assoc BW LB01 north	05-Sep-20	03-Nov-20
G100165	BW inside DCS plant rm LB02 south (Milestone G03b)	05-Sep-20	07-Nov-20



Actual Level of Effort
Summary LOE
Project Baseline
Critical LOE
Actual Work
Rema...
Critica...
Critica...
Milest...

West Kowloon Cultural District Authority
L2 Contract for Lyric Theatre Complex & Extended Basement
Three Month Rolling Programme (3MRP) - Status as of 31 Jul 2020

Date	Revision	Checked	Approved
30-Ju...	3MRP Update	BC / JL /...	AY

C. Action and Limit Levels for Construction Phase

Air Quality

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

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

Monitoring Station	Action Level (mg/m^3)	Limit Level (mg/m^3)
AM1	273.7	500
AM2B	274.2	500

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

Monitoring Station	Action Level ($\mu g/m^3$)	Limit Level ($\mu g/m^3$)
AM1	143.6	260
AM2B	151.1	260

Noise

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

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

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

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

Air Quality

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

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

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

Event	Action			
2. Exceedance for two or more consecutive samples	1. Notify IEC, WKCDA, Contractor and EPD; 2. Identify source; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Arrange meeting with IEC and WKCDA to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and WKCDA informed of the results; 8. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss amongst WKCDA, ET, and Contractor on the potential remedial actions; 4. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the WKCDA accordingly; 5. Monitor the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consolidation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Ensure remedial measures properly implemented; 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within three working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by the WKCDA until the exceedance is abated.

Construction Noise

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

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

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

Landscape and Visual Impact

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

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

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

E. Monitoring Schedule

JULY 2020

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2 Lyric Landscape & Visual Inspection	3	4
5	6 AM1, AM2B - 24hrTSP, 1hr TSP x3 NM1A - Noise Impact Monitoring	7 M+ Landscape & Visual Inspection	8	9	10	11 AM1, AM2B - 24hrTSP, 1hr TSP x3
12	13	14	15	16 Lyric Landscape & Visual Inspection	17 AM1, AM2B - 24hrTSP, 1hr TSP x3 NM1A - Noise Impact Monitoring	18
19	20	21	22	23 AM1, AM2B - 24hrTSP, 1hr TSP x3 NM1A - Noise Impact Monitoring	24 M+ Landscape & Visual Inspection	25
26	27	28	29 AM1, AM2B - 24hrTSP, 1hr TSP x3 NM1A - Noise Impact Monitoring Lyric Landscape & Visual Inspection	30	31	
		Notes: **AM1 - International Commerce Centre (ICC)** **AM2B - 1st Floor of Gammon's Site Office** **NM1A - International Commerce Centre (ICC)**				

AUGUST 2020

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4 AM1, AM2B - 24hrTSP, 1hr TSP x3 NM1A - Noise Impact Monitoring	5	6	7	8
9	10 AM1, AM2B - 24hrTSP, 1hr TSP x3 NM1A - Noise Impact Monitoring	11	12	13	14 AM1, AM2B - 24hrTSP, 1hr TSP x3	15
16	17	18	19	20 AM1, AM2B - 24hrTSP, 1hr TSP x3 NM1A - Noise Impact Monitoring	21	22
23	24	25	26 AM1, AM2B - 24hrTSP, 1hr TSP x3 NM1A - Noise Impact Monitoring	27	28	29
30	31	**Notes:** **AM1 - International Commerce Centre (ICC)** **AM2B - 1st Floor of Gammon's Site Office** **NM1A - International Commerce Centre (ICC)**				

F. Calibration Certifications

High-Volume TSP Sampler
5-Point Calibration Record

Location : AM1(ICC)
Calibrated by : K.T.Ho
Date : 20/05/2020

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

Calibration Orifice and Standard Calibration Relationship
Serial Number : 2454
Service Date : 18 February 2020
Slope (m) : 2.07134
Intercept (b) : -0.04091
Correlation Coefficient(r) : 0.99999

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

Calibration Condition
Pa (hpa) : 1005
Ta(K) : 301

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	10.2	3.165	1.548	60	59.46
2	13 holes	8.2	2.838	1.390	52	51.54
3	10 holes	6.2	2.468	1.211	42	41.62
4	7 holes	3.8	1.932	0.952	32	31.71
5	5 holes	2.2	1.470	0.729	20	19.82

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

Sampler Calibration Relationship

Slope(m):47.601 Intercept(b): -14.678 Correlation Coefficient(r): 0.9984

Checked by:_____ Date: 23/05/2020
Magnum Fan

High-Volume TSP Sampler
5-Point Calibration Record

Location	:	AM1 (ICC)
Calibrated by	:	K. T. Ho
Date	:	20/07/2020

Sampler

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

Calibration Orifice and Standard Calibration Relationship

Serial Number	:	2454
Service Date	:	18 February 2020
Slope (m)	:	2.07134
Intercept (b)	:	-0.04091
Correlation Coefficient(r)	:	0.99999

Standard Condition

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

Calibration Condition

Pa (hpa)	:	1010
Ta(K)	:	302

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	12.2	3.457	1.689	62	61.36
2	13 holes	8.8	2.936	1.437	52	51.47
3	10 holes	6.4	2.504	1.229	40	39.59
4	7 holes	4.0	1.980	0.975	30	29.69
5	5 holes	2.6	1.596	0.790	18	17.82

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

Sampler Calibration Relationship (Linear Regression)

Slope(m):48.018 Intercept(b):-18.790 Correlation Coefficient(r): 0.9969

Checked by: Magnum Fan Date: 22/07/2020

High-Volume TSP Sampler
5-Point Calibration Record

Location	:	AM2B (Gammon Office)
Calibrated by	:	K.T.Ho
Date	:	20/05/2020

Sampler

Model	:	TE-5170
Serial Number	:	S/N 8919

Calibration Orifice and Standard Calibration Relationship

Serial Number	:	2454
Service Date	:	18 February 2020
Slope (m)	:	2.07134
Intercept (b)	:	-0.04091
Correlation Coefficient(r)	:	0.99999

Standard Condition

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

Calibration Condition

Pa (hpa)	:	1005
Ta(K)	:	301

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	12.0	3.433	1.677	60	59.46
2	13 holes	8.2	2.838	1.390	52	51.54
3	10 holes	6.2	2.468	1.211	42	41.62
4	7 holes	3.8	1.932	0.952	32	31.71
5	5 holes	2.2	1.470	0.729	20	19.82

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

Sampler Calibration Relationship

Slope(m):42.242 Intercept(b):-9.521 Correlation Coefficient(r): 0.9938

Checked by:_____ Date: 23/05/2020

Magnum Fan

High-Volume TSP Sampler
5-Point Calibration Record

Location	:	AM2B(Gammon Office)
Calibrated by	:	K. T. Ho
Date	:	20/07/2020

Sampler

Model	:	TE-5170
Serial Number	:	S/N 8919

Calibration Orifice and Standard Calibration Relationship

Serial Number	:	2454
Service Date	:	18 February 2020
Slope (m)	:	2.07134
Intercept (b)	:	-0.04091
Correlation Coefficient(r)	:	0.99999

Standard Condition

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

Calibration Condition

Pa (hpa)	:	1010
Ta(K)	:	302

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	12.0	3.429	1.675	60	59.39
2	13 holes	8.2	2.834	1.388	50	49.49
3	10 holes	6.0	2.424	1.190	40	39.59
4	7 holes	3.8	1.929	0.951	30	29.69
5	5 holes	2.4	1.533	0.760	18	17.82

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

Sampler Calibration Relationship (Linear Regression)

Slope(m):45.113 Intercept(b):-14.621 Correlation Coefficient(r): 0.9951

Checked by: Magnum Fan Date: 22/07/2020

TISCH Environmental

RECALIBRATION DUE DATE:
February 18, 2021

Certificate of Calibration

Calibration Certification Information

Cal. Date: February 18, 2020 Rootsmeter S/N: 438320 Ta: 294 °K

Operator: Jim Tisch Pa: 753.1 mm Hg

Calibration Model #: TE-5025A Calibrator S/N: **2454**

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4190	3.2	2.00
2	3	4	1	1.0100	6.4	4.00
3	5	6	1	0.9020	7.9	5.00
4	7	8	1	0.8600	8.8	5.50
5	9	10	1	0.7110	12.7	8.00

Data Tabulation

Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H\left(Ta/Pa\right)}$ (y-axis)
1.0001	0.7048	1.4173	0.9958	0.7017	0.8836
0.9959	0.9860	2.0044	0.9915	0.9817	1.2496
0.9939	1.1019	2.2410	0.9895	1.0970	1.3971
0.9927	1.1543	2.3504	0.9883	1.1492	1.4653
0.9875	1.3889	2.8347	0.9831	1.3828	1.7672
QSTD	m=	2.07134	QA	m=	1.29704
	b=	-0.04091		b=	-0.02551
	r=	0.99999		r=	0.99999

Calculations

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

For subsequent flow rate calculations:

Qstd= $1/m\left(\left(\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}\right)-b\right)$ Qa= $1/m\left(\left(\sqrt{\Delta H\left(Ta/Pa\right)}\right)-b\right)$

Standard Conditions	
Tstd:	298.15 °K
Pstd:	760 mm Hg

Key

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

RECALIBRATION

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

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

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

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

SUB-CONTRACTING REPORT

CONTACT	: MR K.W. FAN	WORK ORDER	: **HK1950885**
CLIENT	: ENVIROTECH SERVICES CO.		
ADDRESS	: RM113, 1/F, MY LOFT, 9 HOI WING ROAD, TUEN MUN, N.T. HONG KONG	SUB-BATCH	: 1
		DATE RECEIVED	: 3-DEC-2019
		DATE OF ISSUE	: 13-DEC-2019
PROJECT	: ----	NO. OF SAMPLES	: 1
		CLIENT ORDER	: ---

General Comments

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

Signatories

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

Signatories	*Position*
Richard Fung	Managing Director

This is the Final Report and supersedes any preliminary report with this batch number.

Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.

ALS Technichem (HK) Pty Ltd
Part of the ALS Laboratory Group
11/F, Chung Shun Knitting Centre 1 - 3 Wing Yip Street Kwai Chung N.T. Hong Kong
Tel. +852 2610 1044 Fax. +852 2610 2021 www.alsglobal.com

WORK ORDER : HK1950885
SUB-BATCH : 1
CLIENT : ENVIROTECH SERVICES CO.
PROJECT : ----

ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK1950885-001	S/N: 235780	Equipments	03-Dec-2019	235780

Equipment Verification Report (TSP)

Equipment Calibrated:

Type:	Laser Dust monitor
Manufacturer:	Sibata LD-3B
Serial No.	235780
Equipment Ref:	Nil
Job Order	HK1950885

Standard Equipment:

Standard Equipment:	Higher Volume Sampler (TSP)
Location & Location ID:	AUES office (calibration room)
Equipment Ref:	HVS 018
Last Calibration Date:	3 December 2019

Equipment Verification Results:

Verification Date: 10 December 2019

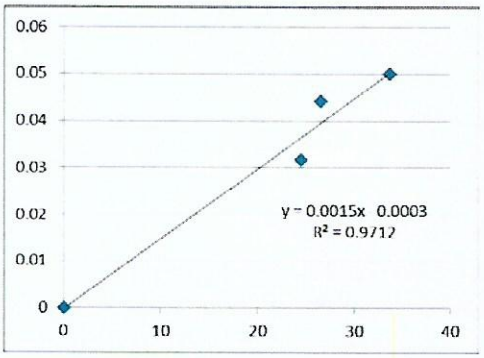
Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in mg/m^3 (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/min)
2hr02min	09:08 ~ 11:10	18.4	1018.6	0.032	2989	24.5
2hr01min	11:15 ~ 13:16	18.4	1018.6	0.044	3203	26.6
2hr01min	13:22 ~ 15:23	18.4	1018.6	0.050	4060	33.7

Linear Regression of Y or X

Slope (K-factor): 0.0015

Correlation Coefficient 0.9855

Date of Issue 13 December 2019



Remarks:

1. **Strong** Correlation (R>0.8)
2. Factor 0.0015 should be applied for TSP monitoring

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

Operator : Fai So Signature : Date : 13 December 2019

QC Reviewer : Ben Tam Signature : Date : 13 December 2019

ALS Technichem (HK) Pty Ltd

ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

SUB-CONTRACTING REPORT

CONTACT	: MR K.W. FAN	WORK ORDER	: **HK1950891**
CLIENT	: ENVIROTECH SERVICES CO.		
ADDRESS	: RM113, 1/F, MY LOFT, 9 HOI WING ROAD, TUEN MUN, N.T. HONG KONG	SUB-BATCH	: 1
		DATE RECEIVED	: 3-DEC-2019
		DATE OF ISSUE	: 13-DEC-2019
PROJECT	: ----	NO. OF SAMPLES	: 1
		CLIENT ORDER	: ---

General Comments

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

Signatories

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

Signatories	*Position*
Richard Fung	Managing Director

This is the Final Report and supersedes any preliminary report with this batch number.

Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release.

ALS Technichem (HK) Pty Ltd
Part of the ALS Laboratory Group
11/F. Chung Shun Knitting Centre 1 - 3 Wing Yip Street Kwai Chung N.T. Hong Kong
Tel. +852 2610 1044 Fax. +852 2610 2021 www.alsglobal.com

WORK ORDER : HK1950891
SUB-BATCH : 1
CLIENT : ENVIROTECH SERVICES CO.
PROJECT : ----

ALS Lab ID	Client's Sample ID	Sample Type	Sample Date	External Lab Report No.
HK1950891-001	S/N: 6Z7784	Equipments	03-Dec-2019	6Z7784

Equipment Verification Report (TSP)

Equipment Calibrated:

Type:	Laser Dust monitor
Manufacturer:	Sibata LD-3B
Serial No.	6Z7784
Equipment Ref:	Nil
Job Order	HK1950891

Standard Equipment:

Standard Equipment:	Higher Volume Sampler (TSP)
Location & Location ID:	AUES office (calibration room)
Equipment Ref:	HVS 018
Last Calibration Date:	3 December 2019

Equipment Verification Results:

Verification Date: 10 December 2019

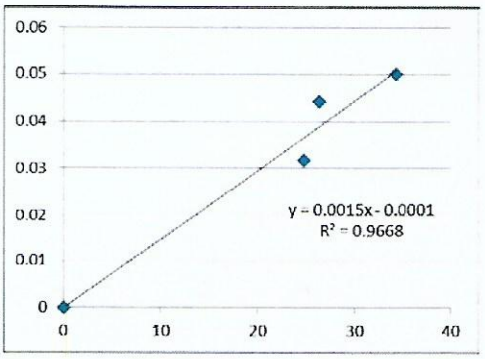
Hour	Time	Mean Temp °C	Mean Pressure (hPa)	Concentration in mg/m^3 (Standard Equipment)	Total Count (Calibrated Equipment)	Count/Minute (Total Count/min)
2hr02min	09:08 ~ 11:10	18.4	1018.6	0.032	3020	24.8
2hr01min	11:15 ~ 13:16	18.4	1018.6	0.044	3185	26.4
2hr01min	13:22 ~ 15:23	18.4	1018.6	0.050	4141	34.3

Linear Regression of Y or X

Slope (K-factor): 0.0015

Correlation Coefficient 0.9833

Date of Issue 13 December 2019



Remarks:

1. **Strong** Correlation (R>0.8)
2. Factor 0.0015 should be applied for TSP monitoring

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

Operator : Fai So Signature : Date : 13 December 2019

QC Reviewer : Ben Tam Signature : Date : 13 December 2019

Certificate of Calibration

for

Description:	*Sound Level Meter*
Manufacturer:	*RION*
Type No.:	*NL-52 (Serial No.: 00175561)*
Microphone:	*UC-53A (Serial No.: 99995)*
Preamplifier:	*NH-25 (Serial No.:65663)*

Submitted by:

Customer:	***Envirotech Services Co.***
Address:	***Rm.113, 1/F., My Loft, 9 Hoi Wing Road, Tuen Mun, N.T., Hong Kong.***

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

☑ **Within**
☐ **Outside**

the allowable tolerance.

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

Date of receipt: 24 September 2019

Date of calibration: 26 September 2019

Calibrated by: _____
Calibration Technician

Certified by: _____
Mr. Ng Yan Wa
Laboratory Manager

Date of issue: **26 September 2019**

(A+A) *L

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

1. *Calibration Precaution:*

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

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

2. *Calibration Conditions:*

Air Temperature:	24.1 °C
Air Pressure:	1006 hPa
Relative Humidity:	54.2 %

3. *Calibration Equipment:*

	Type	Serial No.	Calibration Report Number	Traceable to
Multifunction Calibrator	B&K 4226	2288467	AV180064	HOKLAS

4. *Calibration Results*

Sound Pressure Level

Reference Sound Pressure Level

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

Linearity

Setting of Unit-under-test (UUT)			Applied value		UUT Reading, dB	IEC 61672 Class 1 Specification, dB
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz		
30-130	dBA SPL	Fast	94	1000	94.0	Ref
			104		104.0	±0.3
			114		114.1	±0.3

Time Weighting

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

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Frequency Response

Linear Response

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dB SPL	Fast	94	31.5	94.3	±2.0
				63	94.2	±1.5
				125	94.1	±1.5
				250	94.0	±1.4
				500	94.0	±1.4
				1000	94.0	Ref
				2000	93.9	±1.6
				4000	93.7	±1.6
				8000	91.9	+2.1; -3.1

A-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBA SPL	Fast	94	31.5	55.2	-39.4±2.0
				63	68.0	-26.2±1.5
				125	78.0	-16.1±1.5
				250	85.4	-8.6±1.4
				500	90.8	-3.2±1.4
				1000	94.0	Ref
				2000	95.1	+1.2±1.6
				4000	94.7	+1.0±1.6
				8000	90.9	-1.1+2.1; -3.1

C-weighting

Setting of Unit-under-test (UUT)			Applied value		UUT Reading,	IEC 61672 Class 1
Range, dB	Freq. Weighting	Time Weighting	Level, dB	Frequency, Hz	dB	Specification, dB
30-130	dBC SPL	Fast	94	31.5	91.3	-3.0±2.0
				63	93.4	-0.8±1.5
				125	93.9	-0.2±1.5
				250	94.0	-0.0±1.4
				500	94.0	-0.0±1.4
				1000	94.0	Ref
				2000	93.8	-0.2±1.6
				4000	92.9	-0.8±1.6
				8000	89.0	–3.0 +2.1: –3.1

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5. *Calibration Results Applied*

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

Uncertainties of Applied Value:

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

The uncertainties are evaluated for a 95% confidence level.

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

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

Certificate of Calibration
校正證書

Certificate No. : C196453
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC19-2418) Date of Receipt / 收件日期 : 18 November 2019

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

TEST CONDITIONS / 測試條件

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

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 30 November 2019

TEST RESULTS / 測試結果

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

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

Tested By 測試 : H T Wong, Technical Officer

Certified By 核證 : K C Lee, Engineer

Date of Issue 簽發日期 : 3 December 2019

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

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

Certificate of Calibration
校正證書

Certificate No. : C196453
證書編號

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

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

3. Test equipment :

Equipment ID	Description	Certificate No.
CL130	Universal Counter	C193756
CL281	Multifunction Acoustic Calibrator	CDK1806821
TST150A	Measuring Amplifier	C181288

4. Test procedure : MA100N.

5. Results :

5.1 Sound Level Accuracy

UUT Nominal Value	Measured Value (dB)	User's Spec. (dB)	Uncertainty of Measured Value (dB)
94 dB, 1 kHz	93.8	± 0.5	± 0.2
114 dB, 1 kHz	113.7		

5.2 Frequency Accuracy

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

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

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

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

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

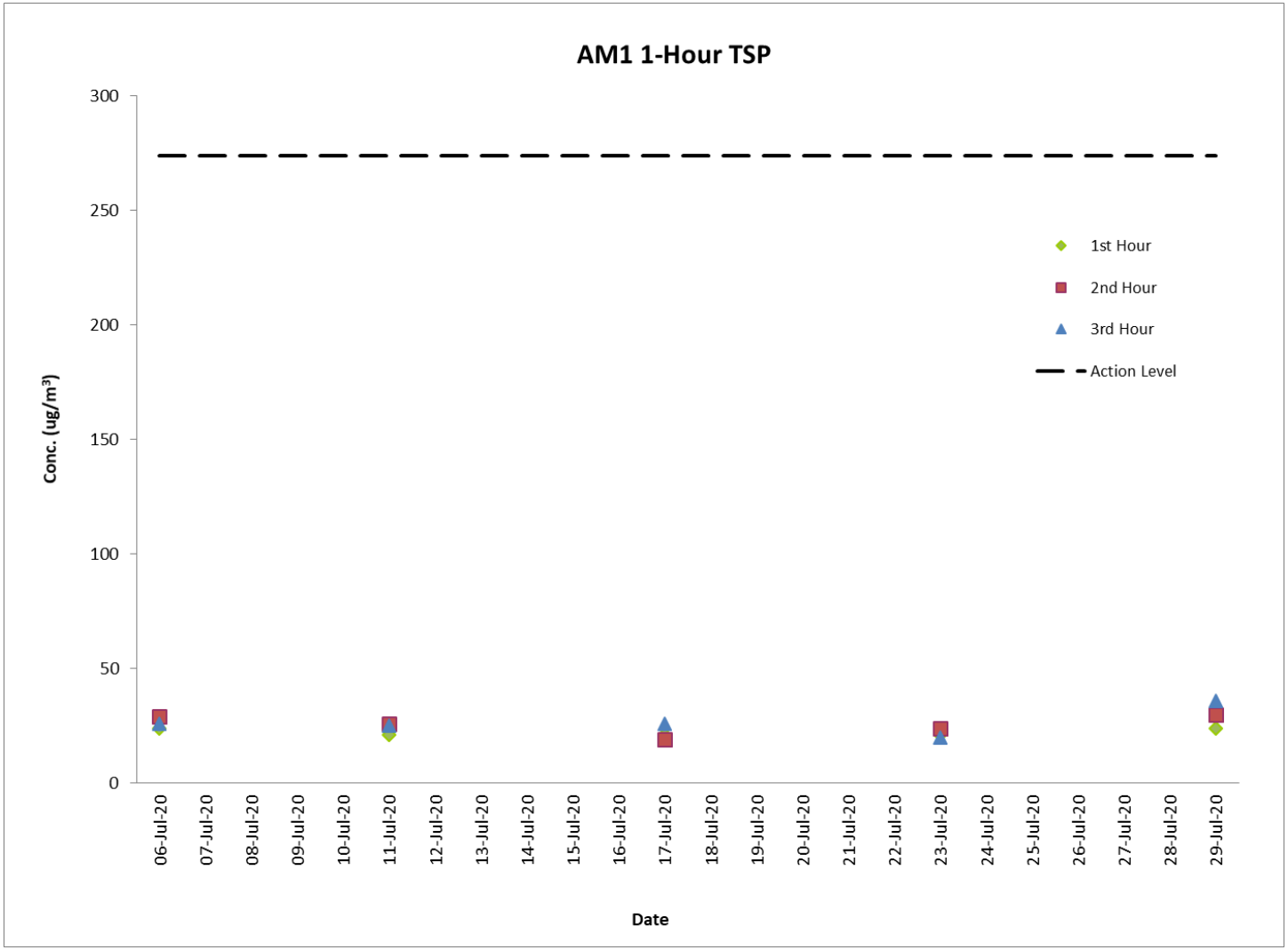
Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 — 校正及檢測實驗所
c/o 香港新界屯門興安里一號四樓
Tel/電話: (852) 2927 2606 Fax/傳真: (852) 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

G. Graphical Plots of the Monitoring Results

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

Date	Weather Condition	Time	Conc. (μg/m^3)			Action Level (μg/m^3)	Limit Level (μg/m^3)
			1st Hour	2nd Hour	3rd Hour		
06-Jul-20	Fine	8:14 - 11:14	24	29	26	273.7	500
11-Jul-20	Fine	13:22 - 16:22	21	26	25	273.7	500
17-Jul-20	Fine	8:17 - 11:17	21	19	26	273.7	500
23-Jul-20	Fine	8:20 - 11:20	21	24	20	273.7	500
29-Jul-20	Sunny	8:19 - 11:19	24	30	36	273.7	500

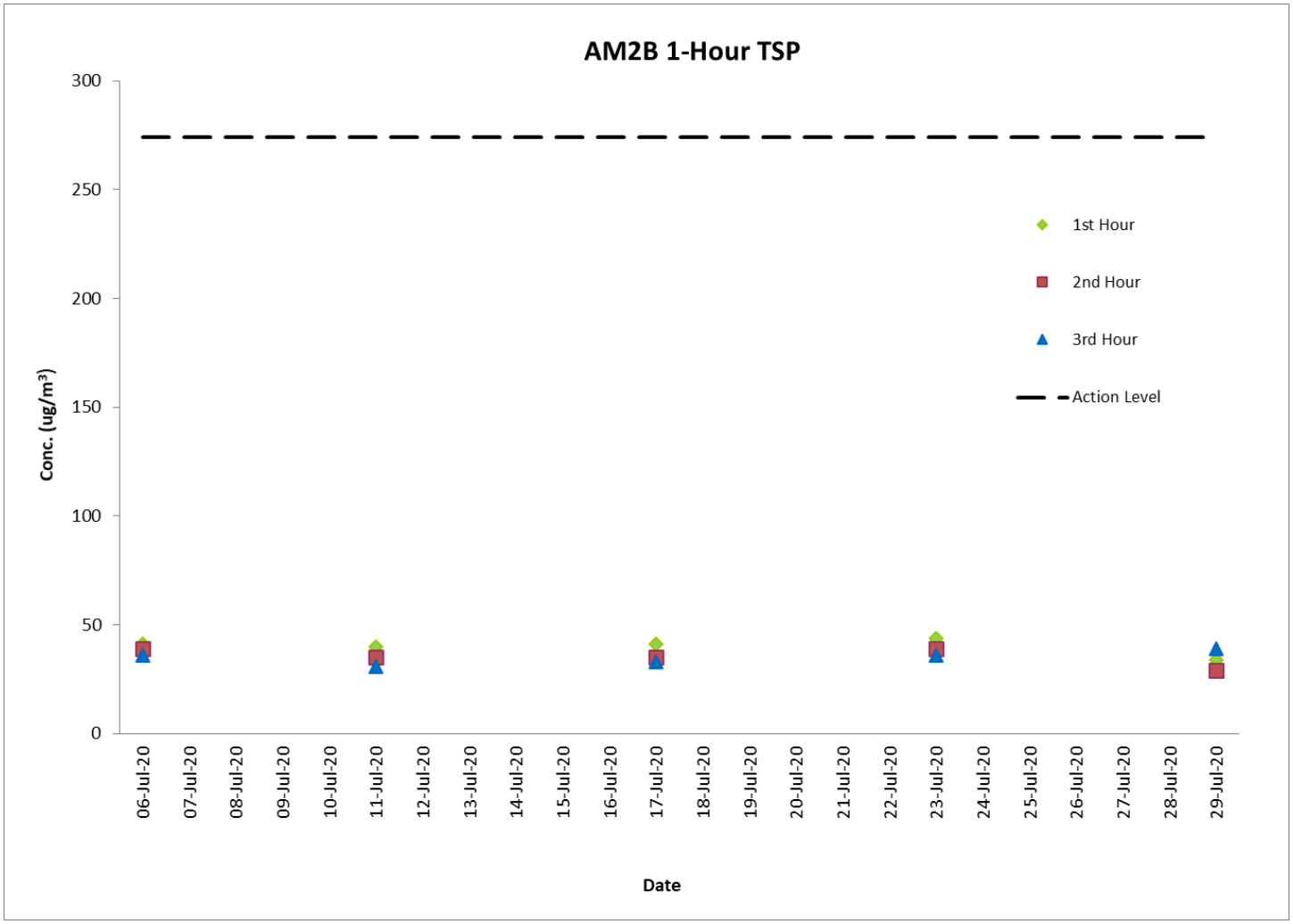
Graphical Presentation of Air Quality Monitoring Result at Station AM1 (1-hour TSP)



Air Quality Monitoring Result at Station AM2B (1-hour TSP)

Date	Weather Condition	Time	Conc. (μg/m^3)			Action Level (μg/m^3)	Limit Level (μg/m^3)
			1st Hour	2nd Hour	3rd Hour		
06-Jul-20	Fine	8:28 - 11:28	41	39	36	274.2	500
11-Jul-20	Fine	13:36 - 16:36	40	35	31	274.2	500
17-Jul-20	Fine	8:32 - 11:32	41	35	33	274.2	500
23-Jul-20	Fine	8:34 - 11:34	44	39	36	274.2	500
29-Jul-20	Sunny	8:34 - 11:34	34	29	39	274.2	500

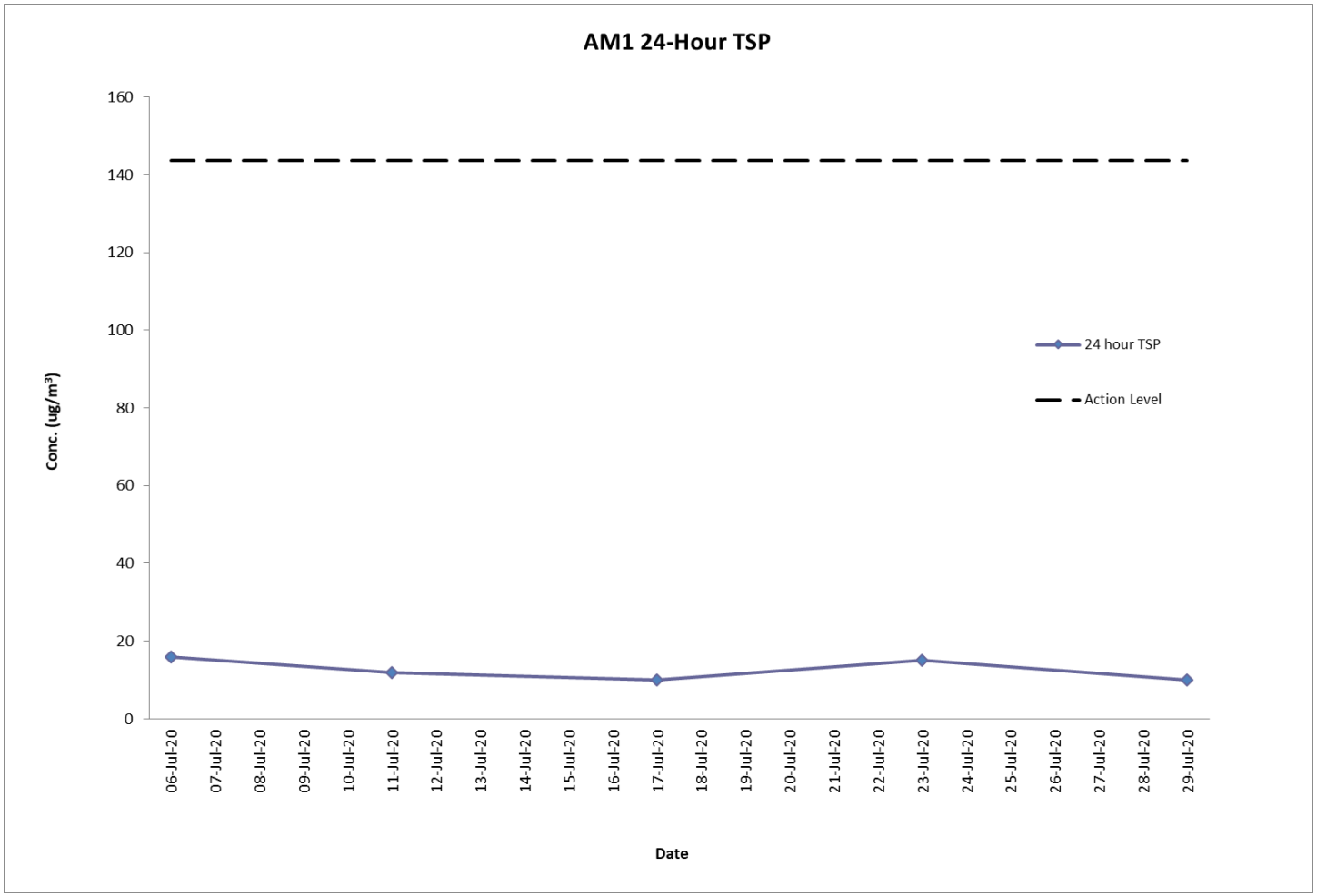
Graphical Presentation of Air Quality Monitoring Result at Station AM2B (1-hour TSP)



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

Start		Finish		Filter Weight (g)		Elapsed Time Reading		Sampling Time (hrs)	Flow Rate (m^3/min)			Conc. ($\mu g/m^3$)	Weather Condition	Action Level	Limit Level
Date	Time	Date	Time	Initial	Final	Initial	Final		Initial	Final	Average				
06-Jul-20	8:12	07-Jul-20	8:12	2.7090	2.7364	22016.38	22040.38	24	1.19	1.19	1.19	16	Fine	143.6	260
11-Jul-20	8:20	12-Jul-20	8:20	2.6962	2.7170	22040.38	22064.38	24	1.19	1.19	1.19	12	Fine	143.6	260
17-Jul-20	8:15	18-Jul-20	8:15	2.6944	2.7118	22064.38	22088.38	24	1.19	1.19	1.19	10	Fine	143.6	260
23-Jul-20	8:18	24-Jul-20	8:18	2.6832	2.7110	22088.38	22112.38	24	1.27	1.27	1.27	15	Fine	143.6	260
29-Jul-20	8:17	30-Jul-20	8:17	2.6884	2.7076	22122.38	22146.38	24	1.27	1.27	1.27	10	Sunny	143.6	260

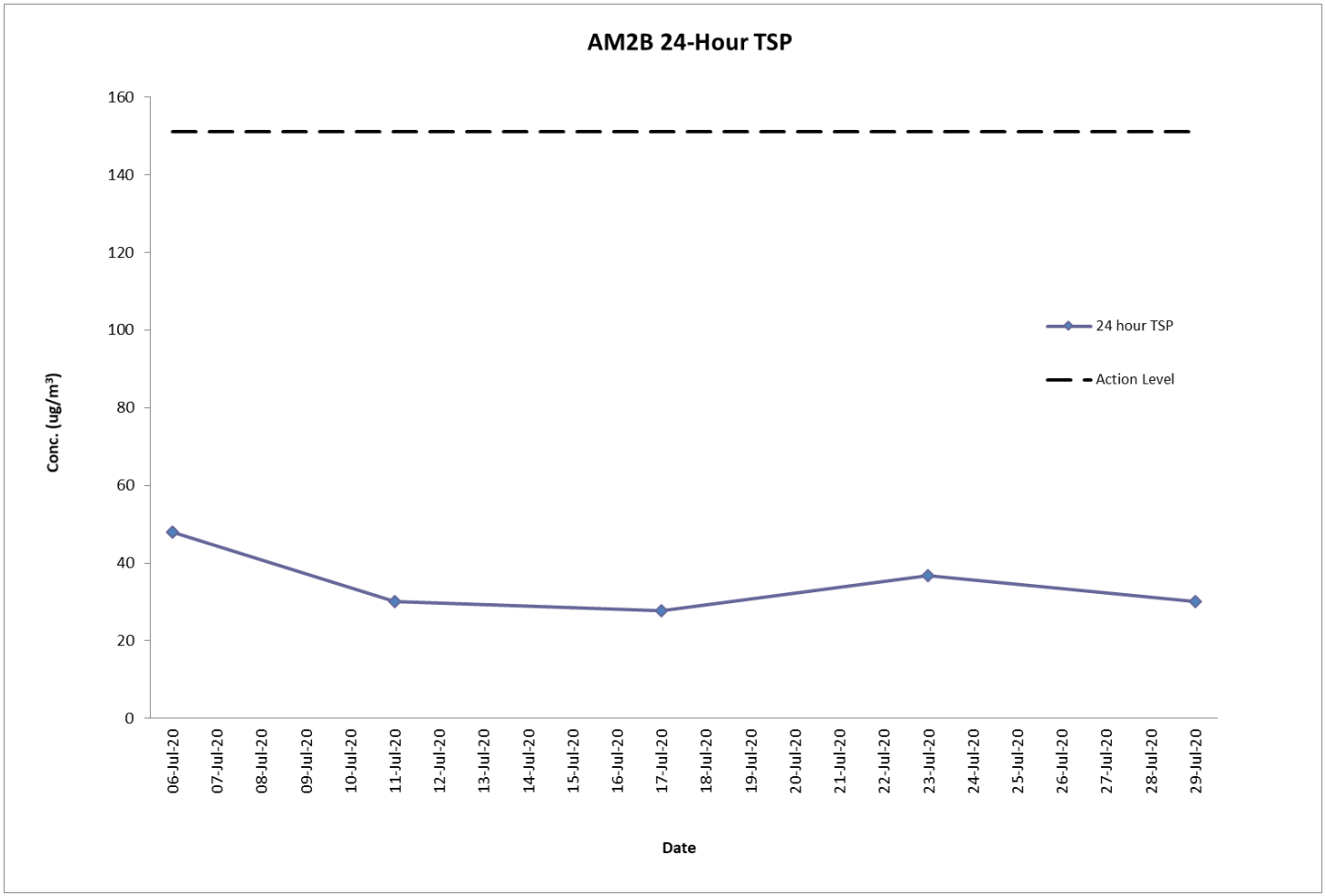
Graphical Presentation of Air Quality Monitoring Result at Station AM1 (24-hour TSP)



Air Quality Monitoring Result at Station AM2B (24-hour TSP)

Start		Finish		Filter Weight (g)		Elapsed Time Reading		Sampling Time (hrs)	Flow Rate (m^3/min)			Conc. ($\mu g/m^3$)	Weather Condition	Action Level	Limit Level
Date	Time	Date	Time	Initial	Final	Initial	Final		Initial	Final	Average				
06-Jul-20	8:26	07-Jul-20	8:26	2.7079	2.7923	21571.05	21595.05	24	1.22	1.22	1.22	48	Fine	151.1	260
11-Jul-20	8:34	12-Jul-20	8:34	2.6968	2.7497	21595.05	21619.05	24	1.22	1.22	1.22	30	Fine	151.1	260
17-Jul-20	8:30	18-Jul-20	8:30	2.7129	2.7616	21619.05	21643.05	24	1.22	1.22	1.22	28	Fine	151.1	260
23-Jul-20	8:30	24-Jul-20	8:30	2.6841	2.7509	21643.05	21667.05	24	1.26	1.26	1.26	37	Fine	151.1	260
29-Jul-20	8:32	30-Jul-20	8:32	2.6877	2.7422	21667.05	21691.05	24	1.26	1.26	1.26	30	Sunny	151.1	260

Graphical Presentation of Air Quality Monitoring Result at Station AM2B (24-hour TSP)



Noise Monitoring Result at Station NM1A

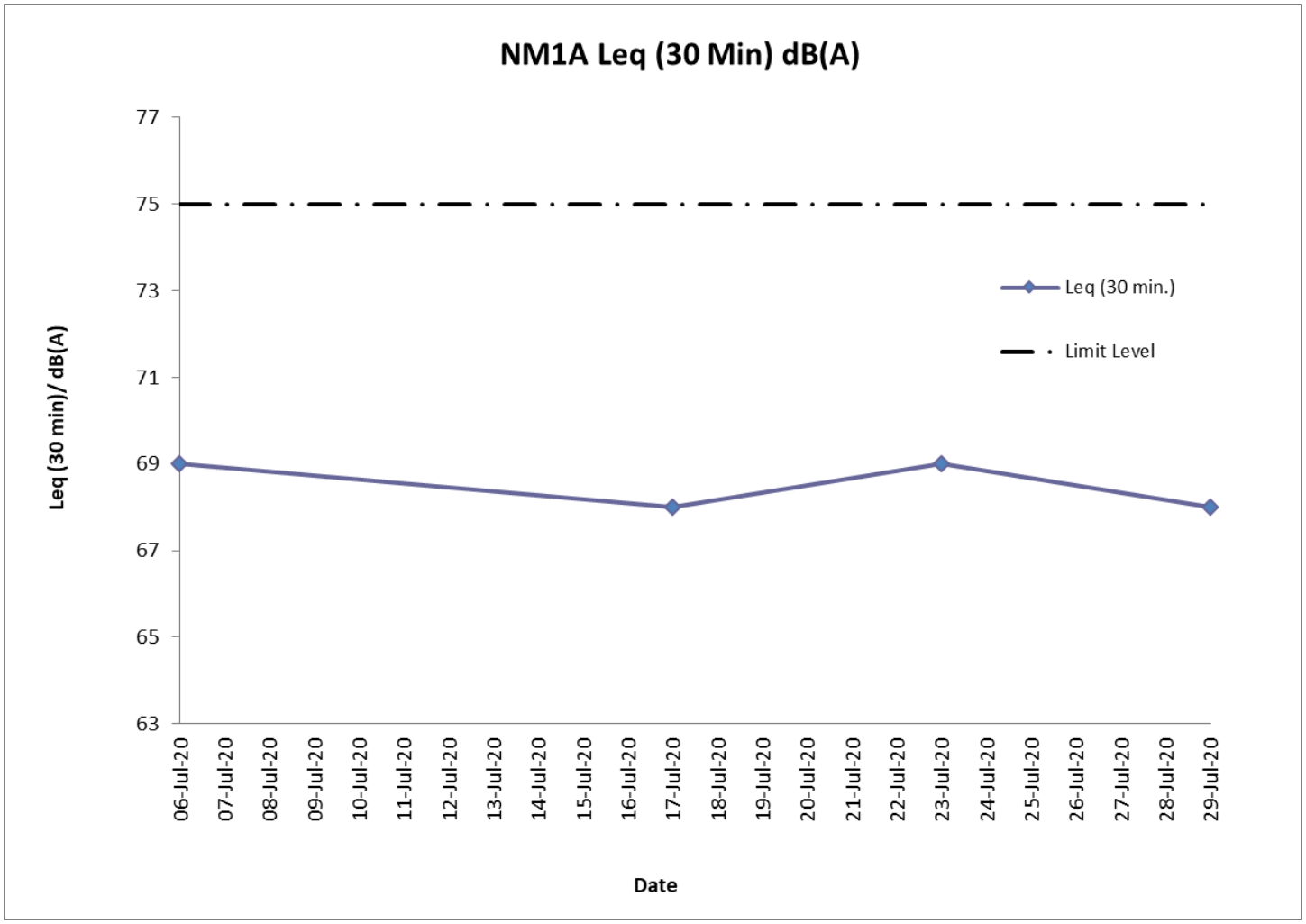
Date	Time	Measured L_{10}, dB(A)	Measured L_{90}, dB(A)	L_{eq} (30 min.)*, dB(A)
06-Jul-20	10:35	68.0	64.3	69
06-Jul-20	10:40	67.7	63.5	
06-Jul-20	10:45	66.6	62.3	
06-Jul-20	10:50	68.4	64.1	
06-Jul-20	10:55	61.1	63.6	
06-Jul-20	11:00	66.2	62.7	
17-Jul-20	10:41	67.0	63.4	68
17-Jul-20	10:46	68.8	64.6	
17-Jul-20	10:51	66.1	62.7	
17-Jul-20	10:56	67.3	63.5	
17-Jul-20	11:01	64.5	64.1	
17-Jul-20	11:06	67.5	63.2	
23-Jul-20	10:41	66.8	62.7	69
23-Jul-20	10:46	67.6	63.4	
23-Jul-20	10:51	68.3	64.1	
23-Jul-20	10:56	68.4	64.6	
23-Jul-20	11:01	66.1	62.7	
23-Jul-20	11:06	69.3	65.6	
29-Jul-20	10:42	66.5	62.3	68
29-Jul-20	10:47	67.4	63.1	
29-Jul-20	10:52	68.6	64.4	
29-Jul-20	10:57	66.8	62.7	
29-Jul-20	11:02	66.3	62.4	
29-Jul-20	11:07	67.1	63.3	

Remarks:

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

The station set-up of a free-field measurement at Station NM1A.

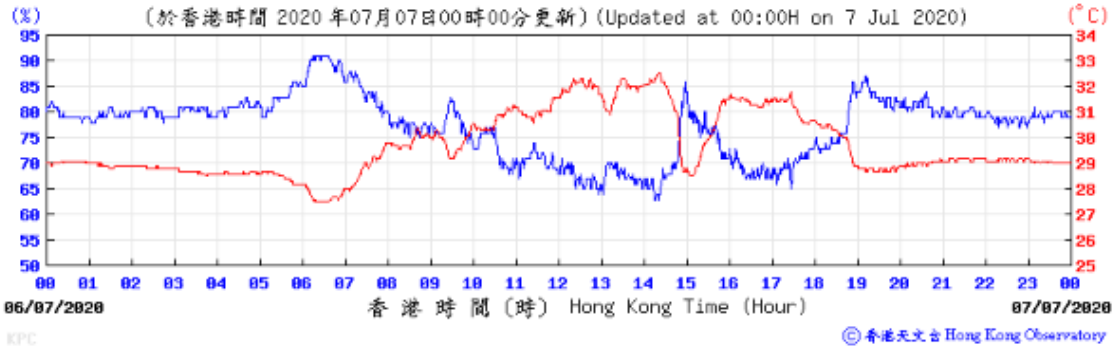
Graphical Presentation Noise Monitoring Result at Station NM1A



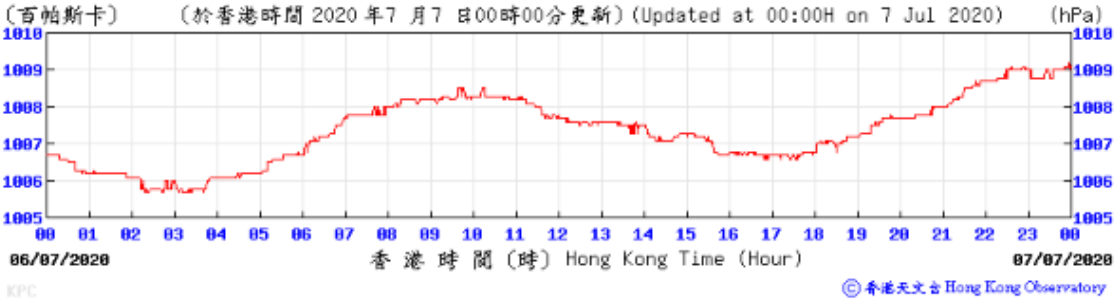
H. Meteorological Data Extracted from Hong Kong Observatory

Extract of Meteorological Observations for King's Park Automatic Weather Station, July 2020

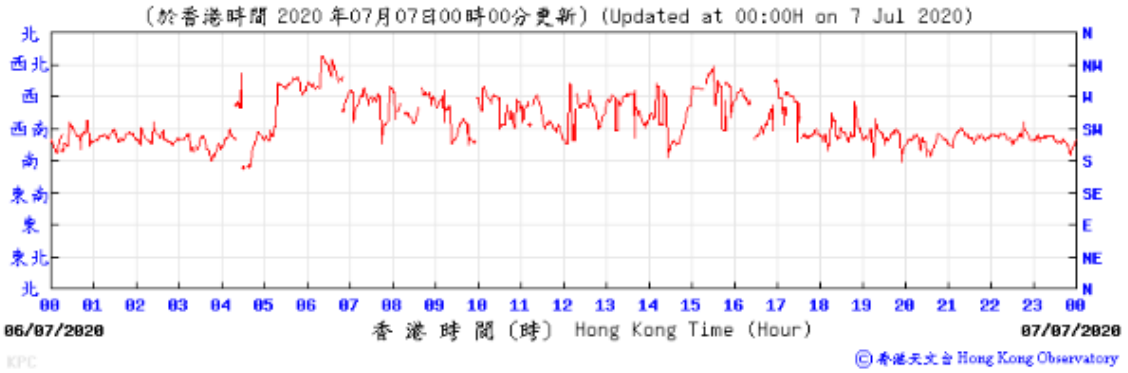
Tempearture/Humidity:



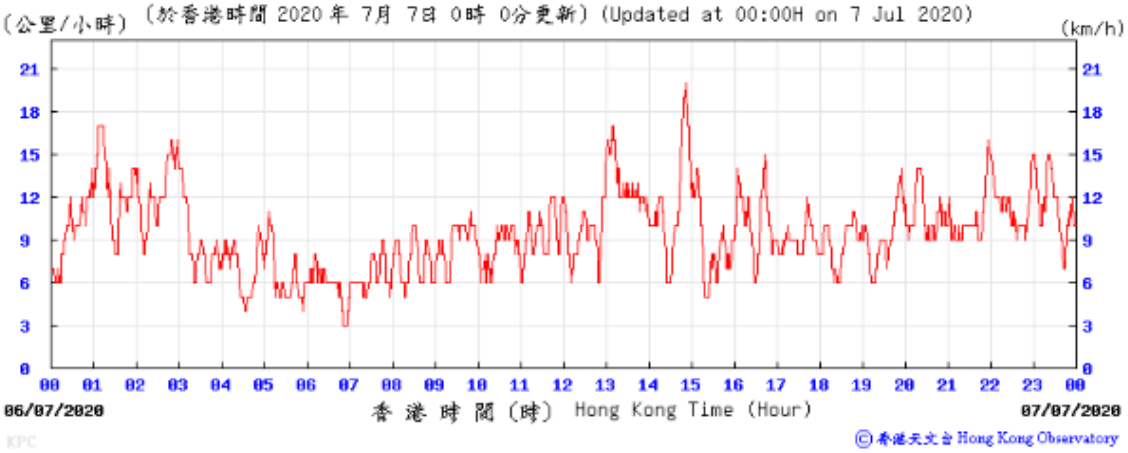
Pressure:



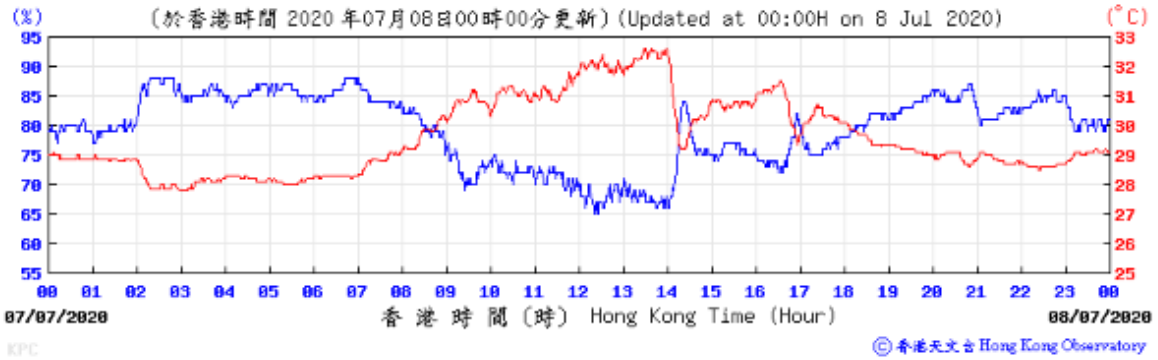
Wind Direction:



Wind Speed:

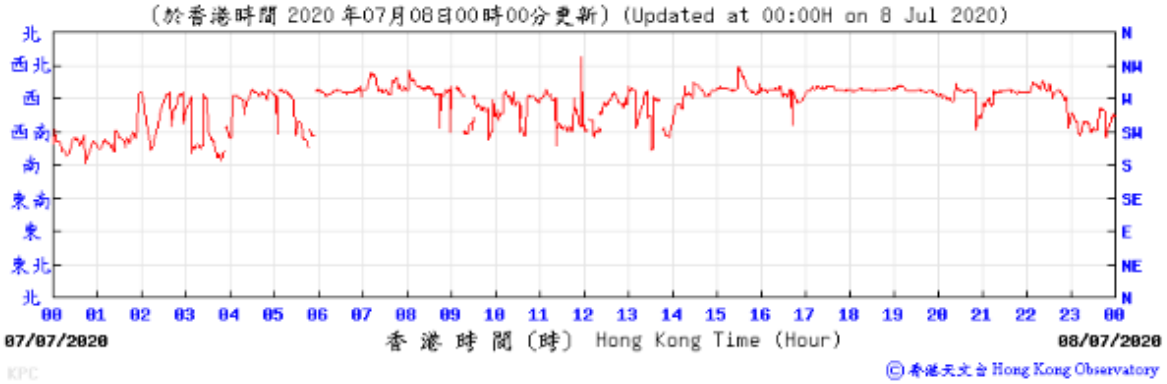


Tempearture/Humidity:

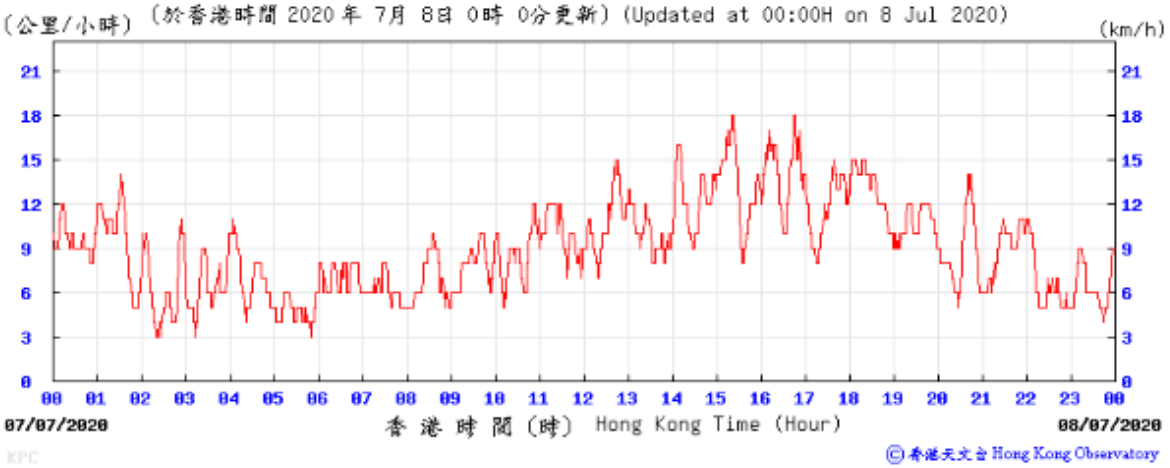


Pressure:

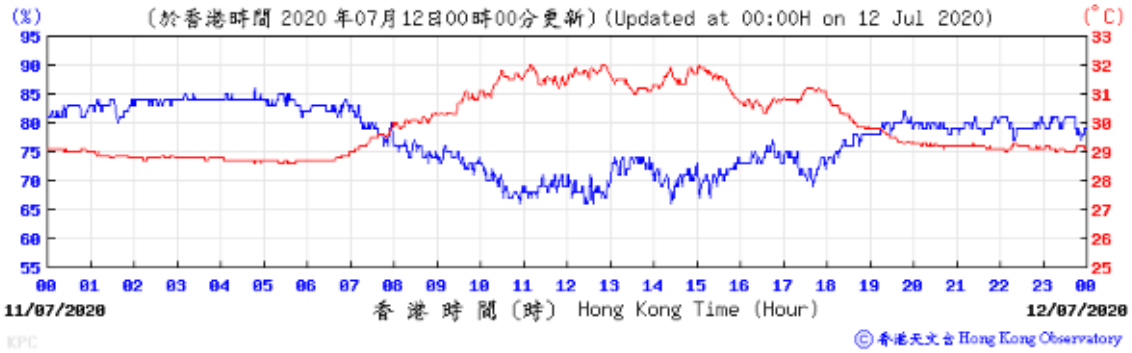
Wind Direction:



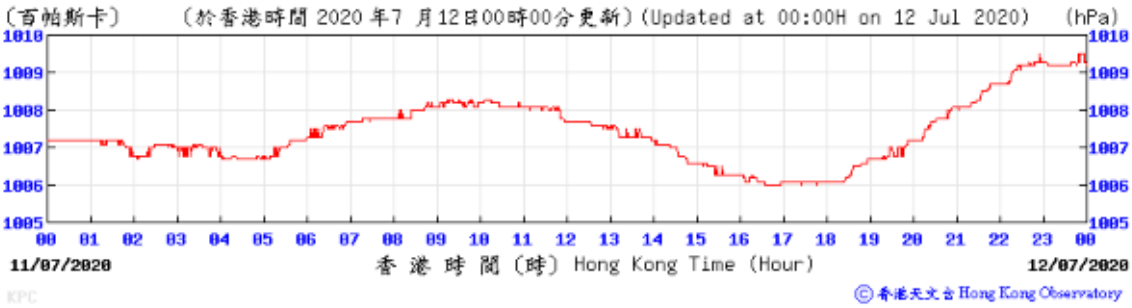
Wind Speed:



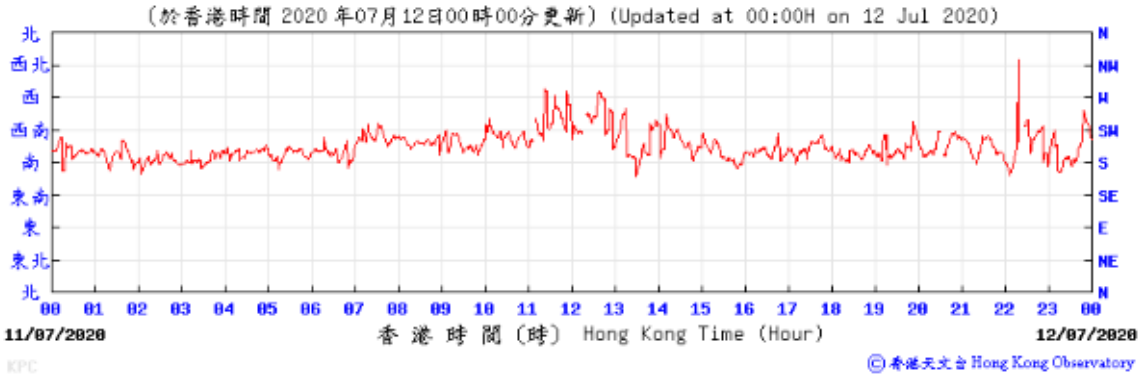
Tempearture/Humidity:



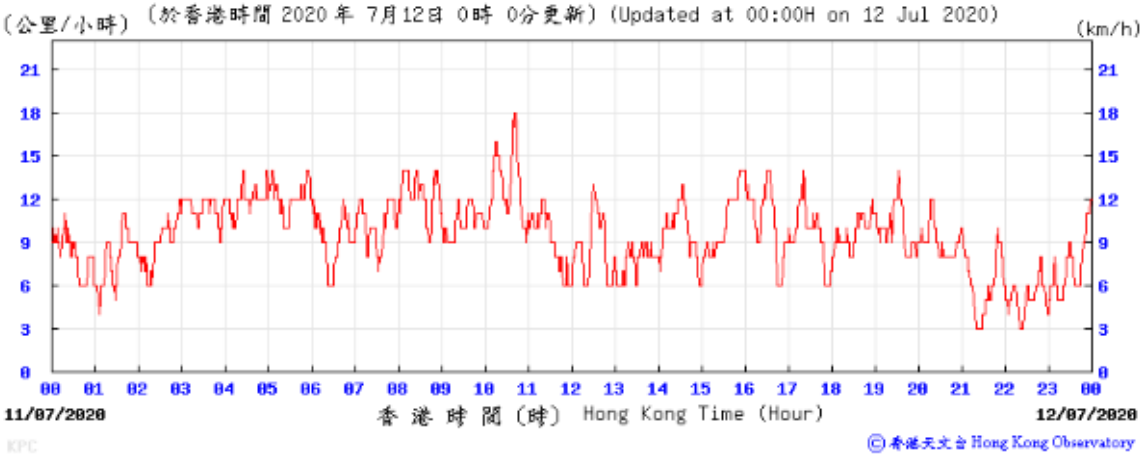
Pressure:



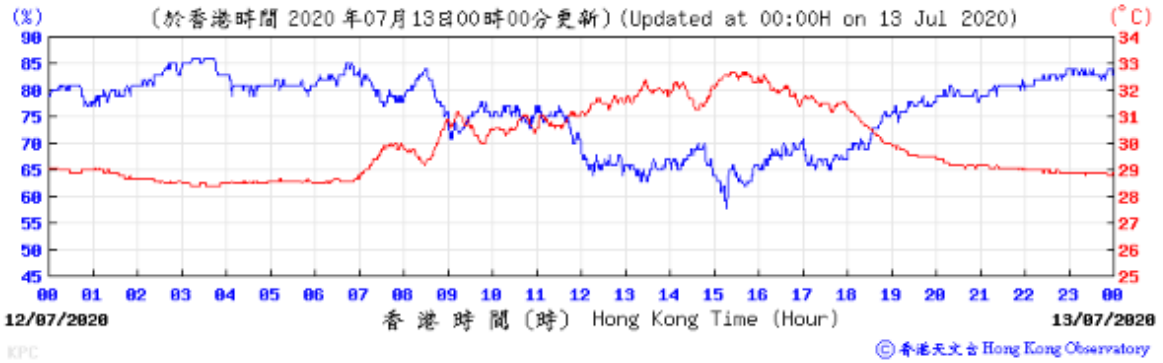
Wind Direction:



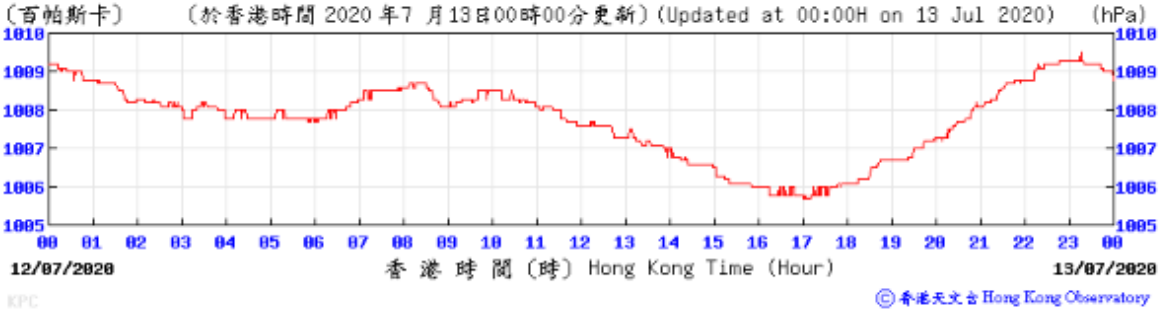
Wind Speed:



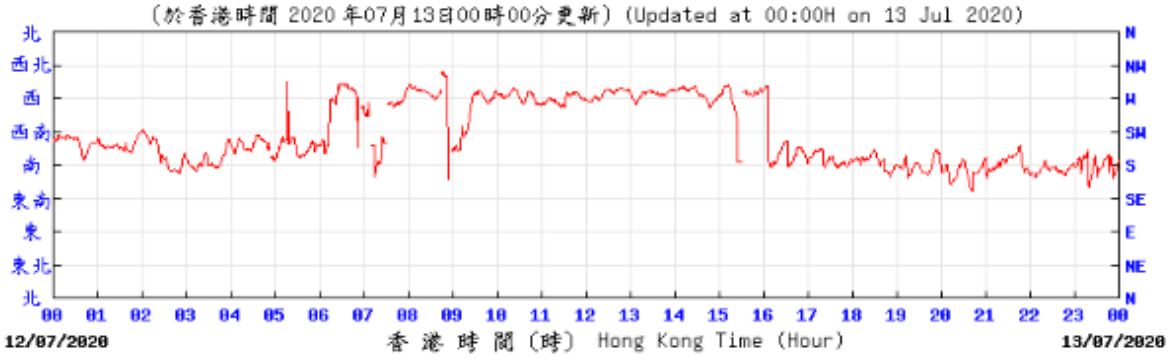
Tempearture/Humidity:



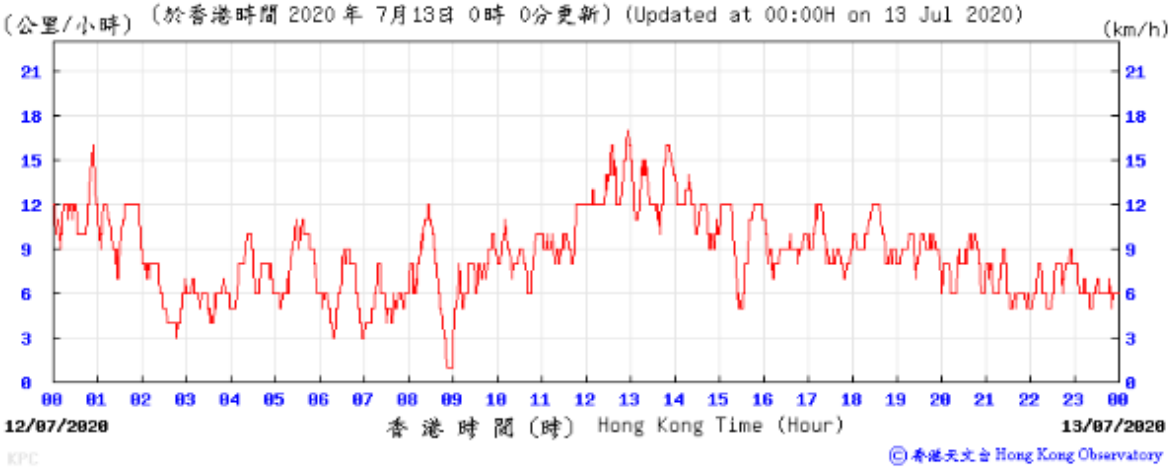
Pressure:



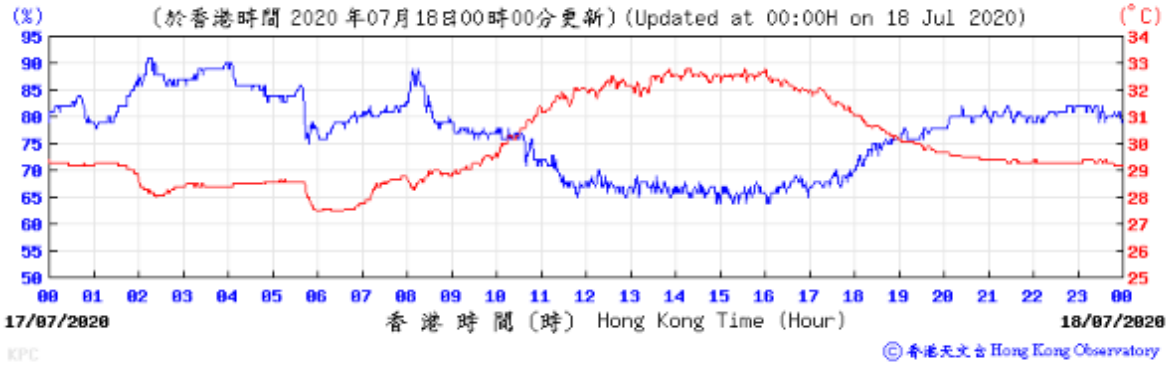
Wind Direction:



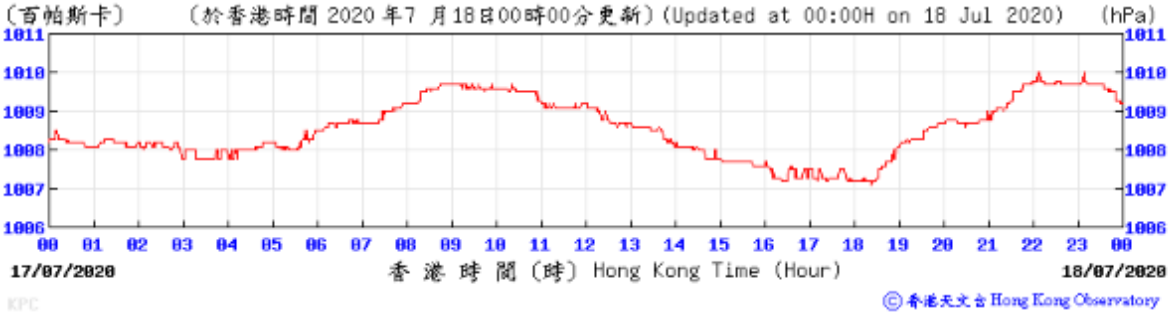
Wind Speed:



Tempearture/Humidity:



Pressure:



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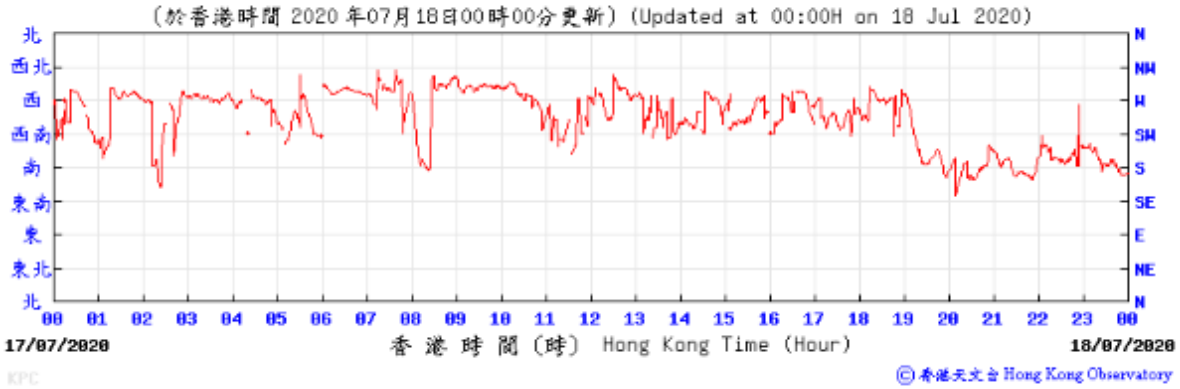

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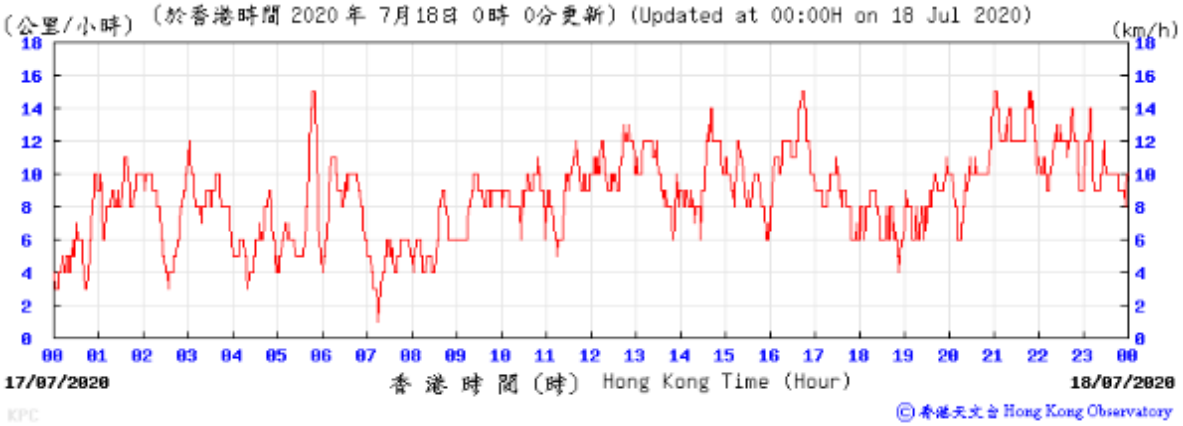

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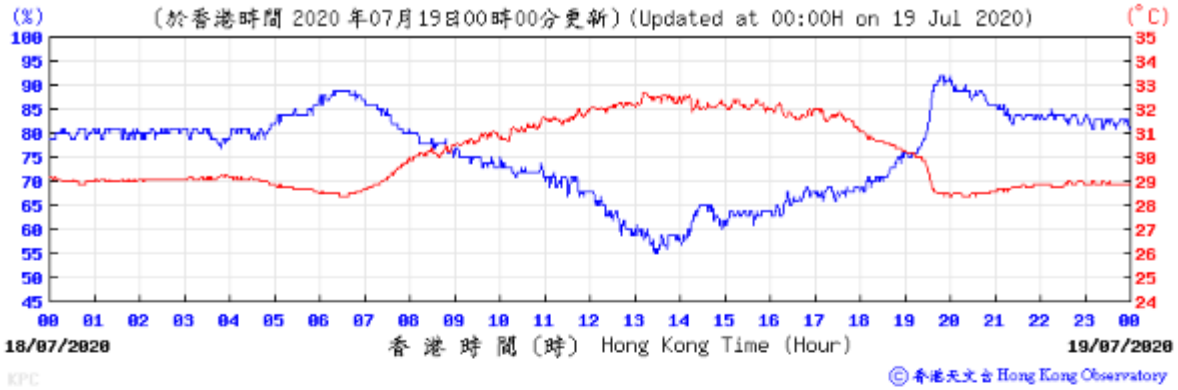

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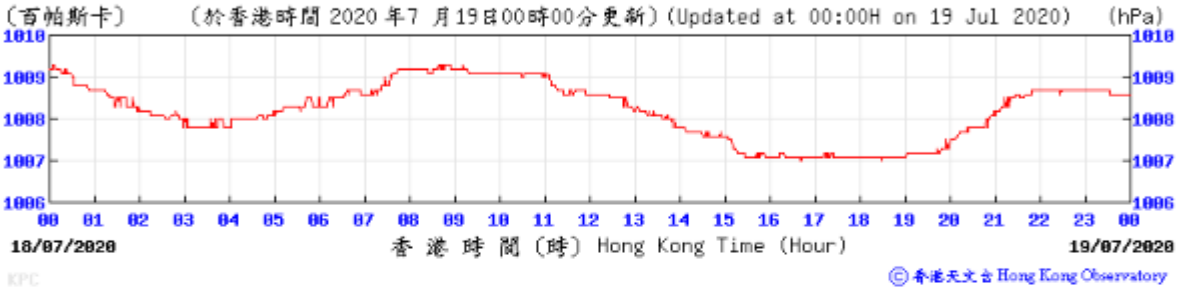

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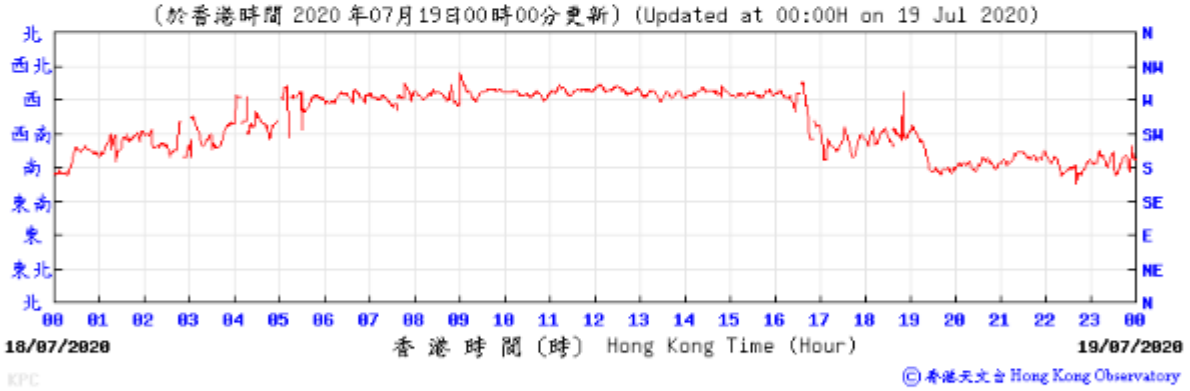

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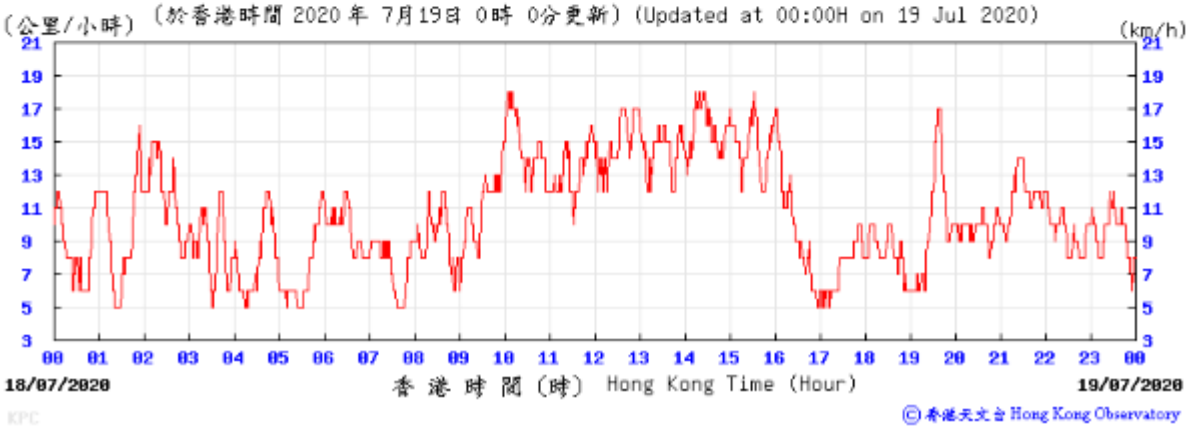

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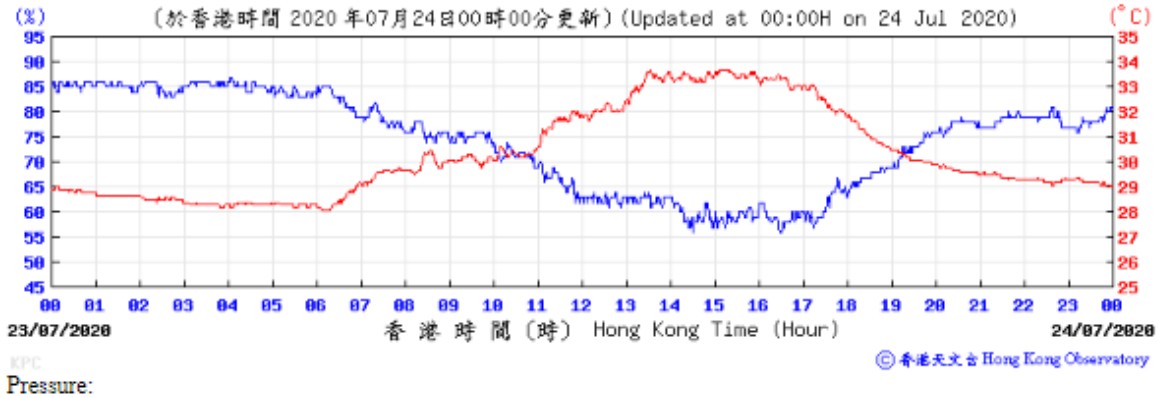

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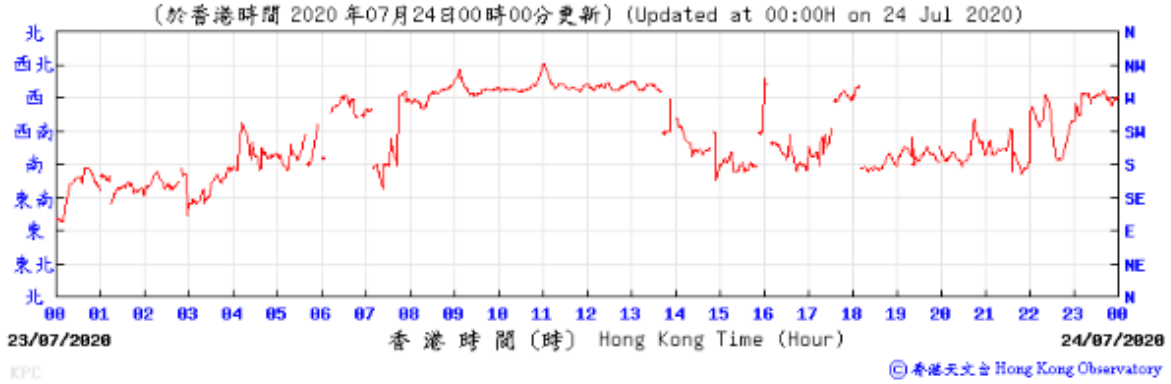

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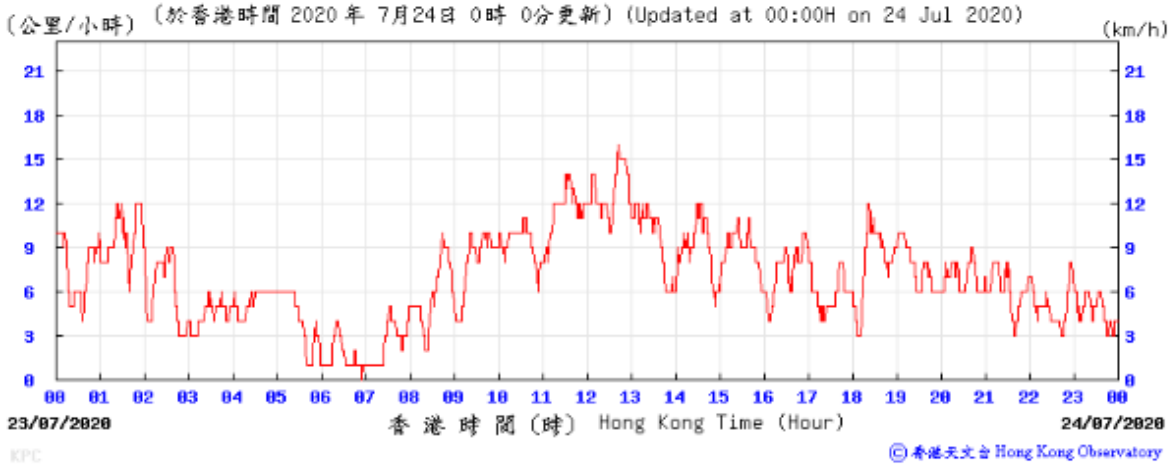

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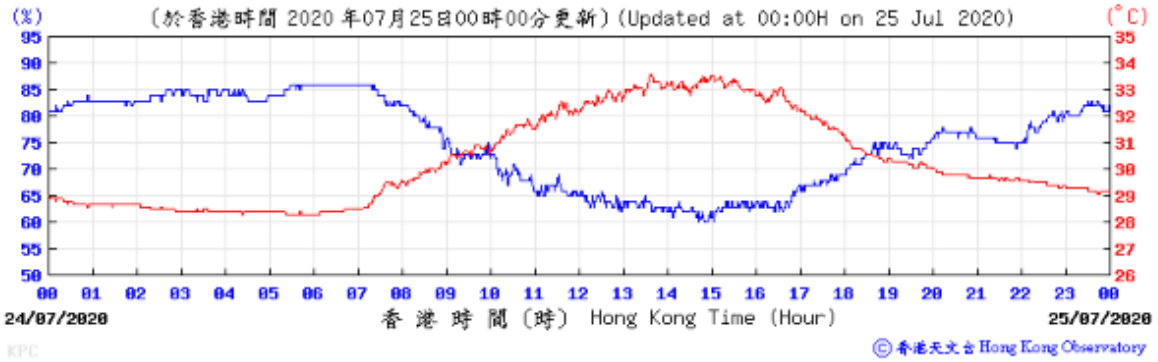

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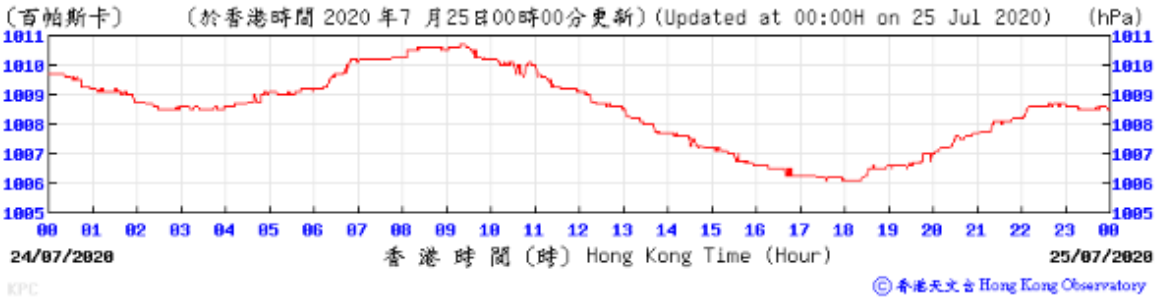

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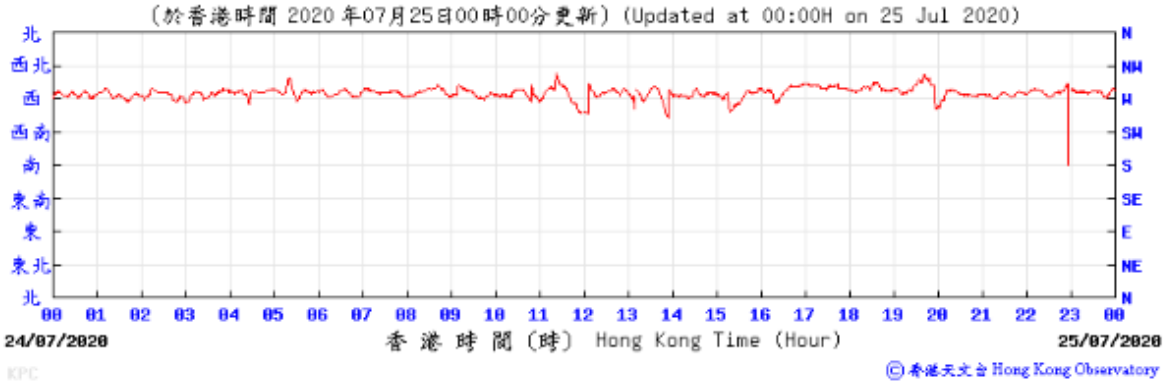

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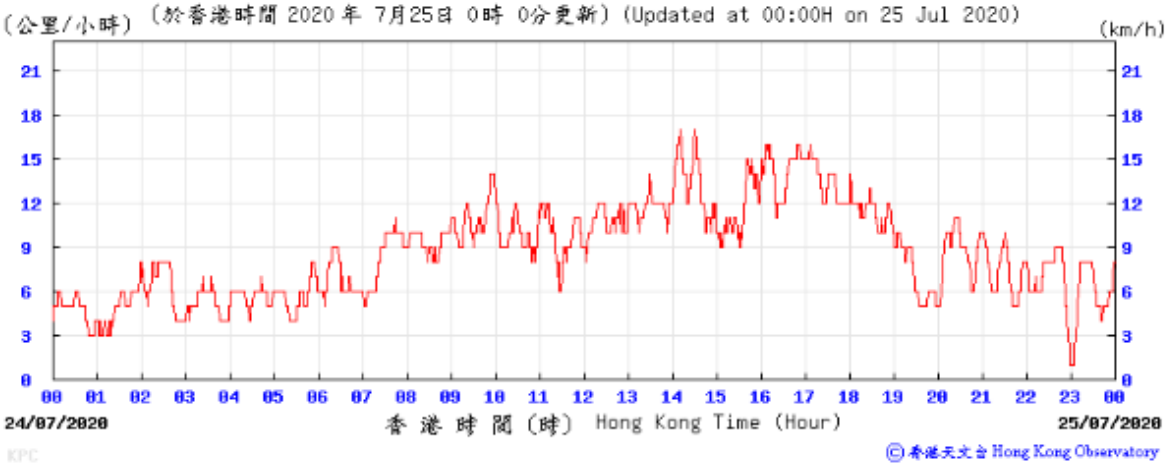

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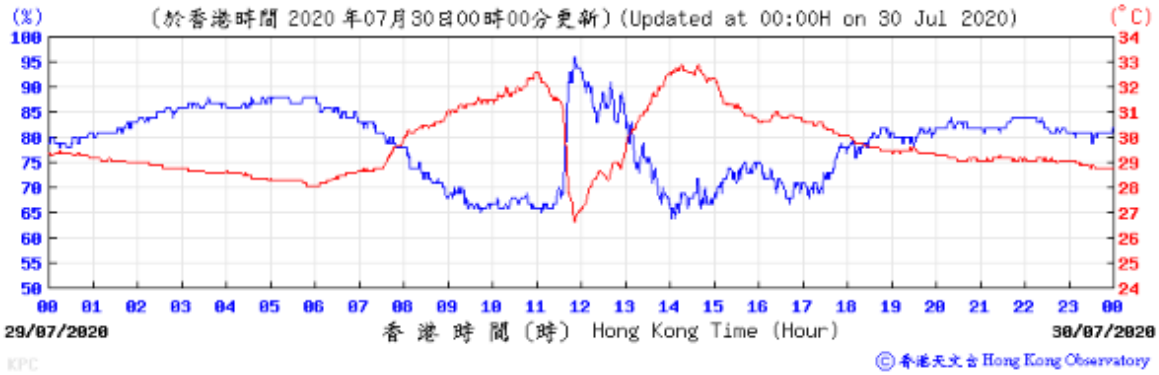

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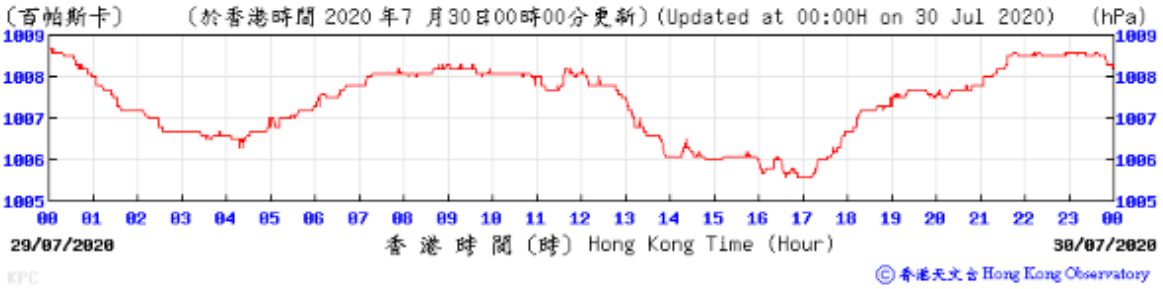

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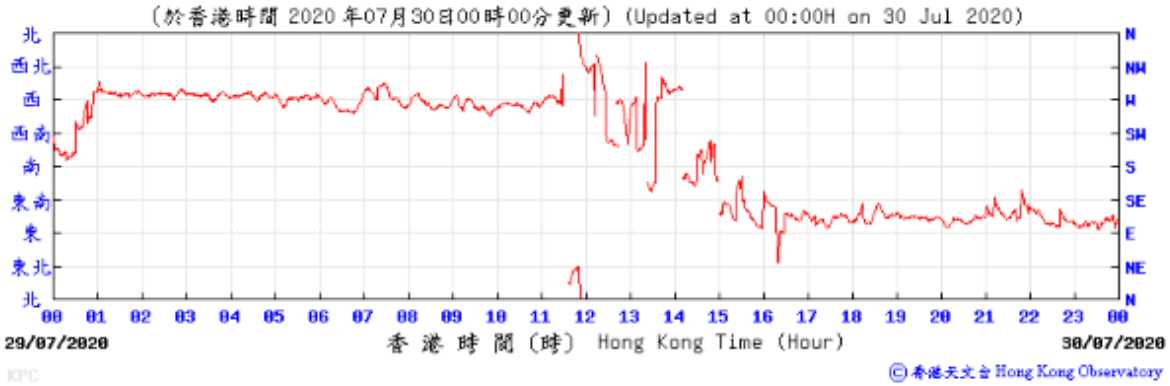

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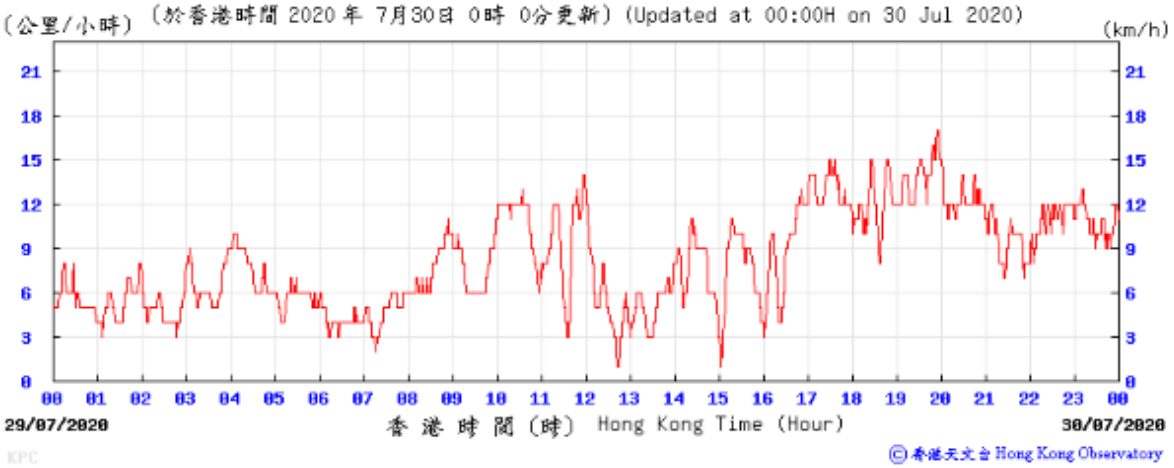

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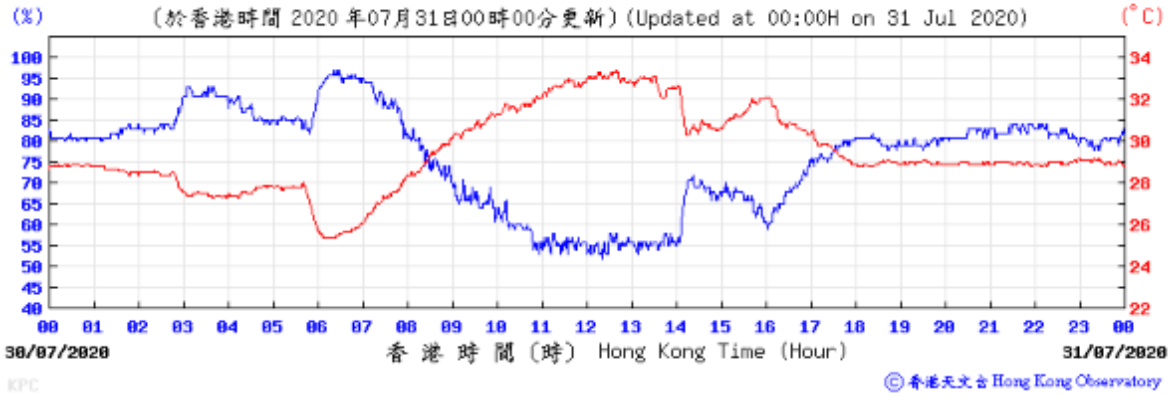

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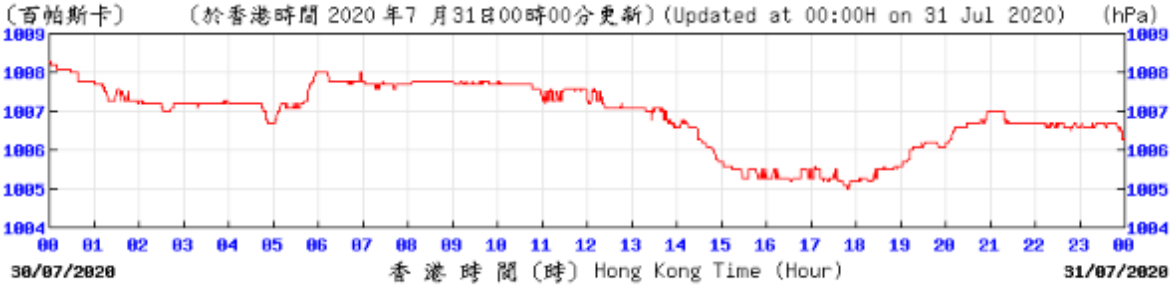

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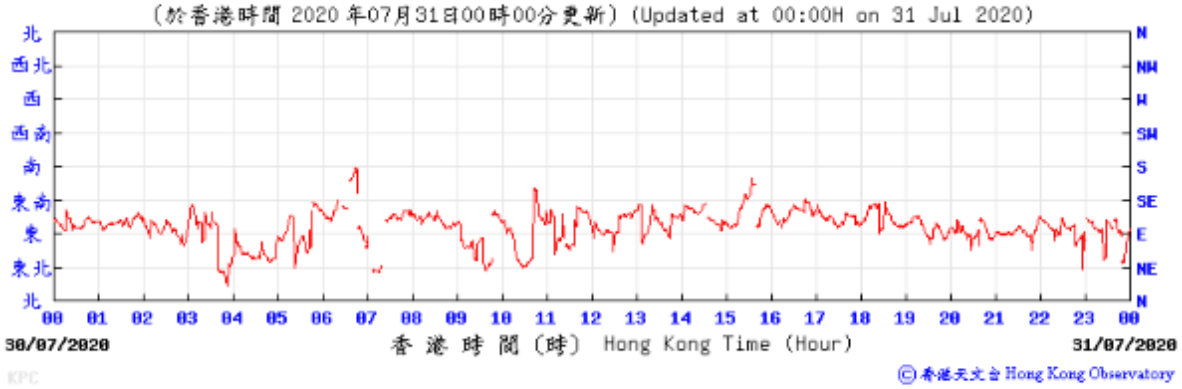

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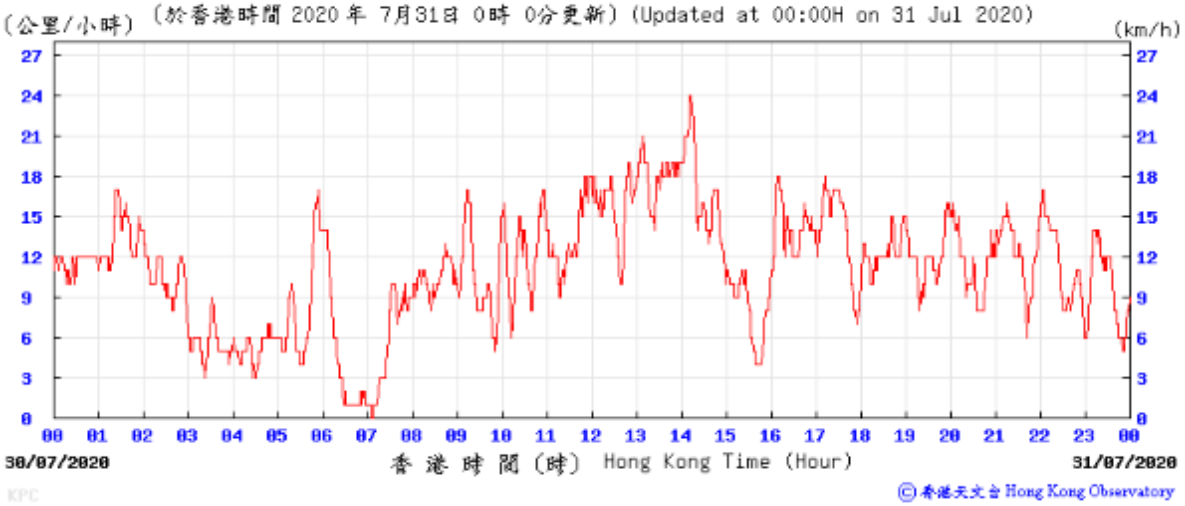

I. Waste Flow table

M+ Museum

Table I-1: Monthly Waste Flow Table for M+ Museum

Month	Actual Quantities of Inert C&D Materials Generated Monthly							Actual Quantities of C&D Wastes Generated Monthly					
	Total Quantity Generated	Hard Rocks and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Disposed to Sorting Facility	Imported Fill	Metals	Paper/ Cardboard Packaging	Plastics	Wood/ Timber	Chemical Waste	Others, e.g. General Refuse
	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)
2015													
Nov	46607.4	0.0	0.0	8240.0	38367.4	0.0	0.0	76.2	0.0	0.0	0.0	0.0	67.6
Dec	29652.9	0.0	0.0	29621.4	31.5	0.0	0.0	26.3	0.0	0.0	0.0	1.0	66.0
Sub-total (2015)	76260.3	0.0	0.0	37861.4	38398.9	0.0	0.0	102.5	0.0	0.0	0.0	1.0	133.6
2016													
Jan	21077.4	0.0	6352.0	14576.0	149.4	0.0	0.0	18.8	0.0	0.0	0.0	0.0	23.2
Feb	7626.2	0.0	3424.0	4048.0	154.2	0.0	0.0	59.8	0.0	0.0	0.0	0.0	20.5
Mar	10442.5	0.0	1600.0	7888.0	954.5	0.0	0.0	29.7	0.0	0.0	0.0	0.0	46.3
Apr	30413.2	0.0	6352.0	23408.0	653.2	0.0	0.0	25.8	0.1	0.0	27.8	0.0	34.5
May	24083.5	0.0	112.0	23216.0	755.5	0.0	0.0	61.5	0.4	0.0	33.6	0.0	62.3
Jun	7880.1	0.0	4736.0	2384.0	760.1	0.0	0.0	106.6	0.1	0.0	14.6	0.0	52.8
Jul	5893.1	0.0	2656.0	2240.0	997.1	0.0	0.0	77.6	0.0	0.0	33.6	0.0	83.1
Aug	13709.6	0.0	0.0	12432.0	1277.6	0.0	0.0	111.3	0.2	0.0	38.5	0.0	104.9
Sep	6702.0	0.0	0.0	5648.0	1000.1	53.9	0.0	104.2	0.0	0.0	45.5	0.2	107.9
Oct	2103.6	0.0	0.0	496.0	1595.4	12.2	0.0	83.0	0.4	0.0	73.5	0.0	108.2
Nov	3302.7	0.0	0.0	2384.0	855.5	63.2	0.0	88.4	0.6	0.0	63.0	0.0	129.1
Dec	899.8	0.0	0.0	736.0	126.8	37.0	0.0	48.3	0.6	0.0	70.0	0.0	89.0
Sub-total (2016)	134133.5	0.0	25232.0	99456.0	9279.3	166.3	0.0	814.9	2.3	0.0	400.1	0.2	861.8
2017													
Jan	675.2	0.0	0.0	432.0	237.9	5.3	0.0	79.5	1.0	0.0	70.0	0.0	79.7
Feb	927.7	0.0	0.0	768.0	125.6	34.0	0.0	70.5	0.6	0.0	84.0	0.0	81.4
Mar	1856.7	0.0	0.0	1280.0	466.9	109.8	0.0	62.8	0.4	0.0	98.0	0.0	148.5
Apr	642.4	0.0	0.0	160.0	324.9	157.5	0.0	87.5	0.7	0.0	175.0	0.0	102.5
May	1118.2	0.0	0.0	528.0	416.4	173.7	0.0	118.3	0.0	0.0	280.0	0.0	139.0
Jun	650.0	0.0	0.0	0.0	451.6	198.4	0.0	199.7	1.4	0.0	350.0	0.0	98.7
Jul	1762.0	0.0	0.0	0.0	1466.6	295.4	0.0	36.9	1.2	0.0	244.0	0.0	164.2
Aug	1231.5	0.0	0.0	0.0	867.5	364.0	0.0	82.5	0.9	0.0	59.0	0.0	186.9
Sep	1681.7	0.0	0.0	0.0	1342.0	339.7	0.0	114.3	0.7	0.0	77.0	0.0	265.3
Oct	483.6	0.0	0.0	0.0	242.5	241.1	0.0	458.1	0.6	0.0	24.1	0.0	128.5
Nov	822.8	0.0	0.0	0.0	344.5	478.3	0.0	1168.9	0.7	0.0	140.0	0.2	219.1
Dec	601.3	0.0	0.0	0.0	236.2	365.1	0.0	995.8	0.8	0.0	320.0	0.0	241.9
Sub-total (2017)	12453.0	0.0	0.0	3168.0	6522.6	2762.4	0.0	3474.8	8.9	0.0	1921.1	0.2	1855.5

Table I-1: Monthly Waste Flow Table for M+ Museum

Month	Actual Quantities of Inert C&D Materials Generated Monthly							Actual Quantities of C&D Wastes Generated Monthly					
	Total Quantity Generated	Hard Rocks and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Disposed to Sorting Facility	Imported Fill	Metals	Paper/ Cardboard Packaging	Plastics	Wood/ Timber	Chemical Waste	Others, e.g. General Refuse
	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)
2018													
Jan	1015.3	0.0	0.0	0.0	574.1	441.2	0.0	634.6	1.5	0.0	100.0	0.0	183.6
Feb	847.6	0.0	0.0	0.0	608.3	239.3	0.0	14.2	1.0	0.0	25.0	0.0	154.9
Mar	1507.0	0.0	0.0	0.0	1102.1	404.9	0.0	647.5	1.5	0.0	120.0	0.0	264.1
Apr	2942.8	0.0	0.0	0.0	2542.4	400.4	0.0	253.4	0.3	0.0	100.0	0.0	252.5
May	2109.2	0.0	0.0	0.0	1593.3	515.9	0.0	179.4	0.4	0.0	70.0	0.0	311.4
Jun	1697.6	0.0	0.0	0.0	1162.4	535.2	0.0	81.3	0.3	0.0	105.0	0.0	188.2
Jul	945.5	0.0	0.0	0.0	646.1	299.4	0.0	47.6	0.4	0.0	150.0	0.0	277.6
Aug	730.8	0.0	0.0	0.0	461.4	269.4	0.0	29.3	0.0	0.0	40.0	0.0	109.1
Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Oct	1193.1	0.0	0.0	0.0	895.7	297.5	0.0	130.8	2.7	0.0	200.0	0.0	116.6
Nov	1608.9	0.0	0.0	0.0	841.1	767.7	0.0	139.9	1.1	0.0	245.0	0.0	213.9
Dec	1457.8	0.0	0.0	314.4	341.9	801.5	0.0	352.7	0.8	0.0	180.0	0.0	198.2
Sub-total (2018)	16055.4	0.0	0.0	314.4	10768.7	4972.3	0.0	2510.6	9.9	0.0	1335.0	0.0	2270.2
2019													
Jan	1632.5	0.0	0.0	153.6	572.3	906.6	0.0	587.8	0.8	0.0	40.0	0.0	303.9
Feb	618.5	0.0	0.0	0.0	397.4	221.2	0.0	158.3	1.2	0.0	20.0	0.0	429.7
Mar	1555.1	0.0	0.0	441.6	920.2	193.2	0.0	371.3	0.0	0.0	20.0	0.0	645.2
Apr	327.4	0.0	0.0	0.0	127.3	200.2	0.0	291.4	1.3	0.0	300.0	0.9	477.4
May	712.8	0.0	0.0	361.9	116.7	234.3	0.0	197.4	0.8	0.0	320.0	0.0	531.1
Jun	219.9	0.0	0.0	0.0	95.6	124.4	0.0	199.6	0.5	0.0	350.0	0.0	448.0
Jul	445.8	0.0	0.0	0.0	171.6	274.1	0.0	137.7	1.1	0.0	300.0	0.6	553.1
Aug	692.6	0.0	0.0	55.2	354.1	283.3	0.0	139.1	0.0	0.0	0.0	0.0	596.8
Sep	549.4	0.0	0.0	72.0	218.2	259.2	0.0	367.8	0.0	0.0	420.0	0.0	560.5
Oct	373.0	0.0	0.0	0.0	204.4	168.6	0.0	161.9	0.0	1.2	450.0	0.4	657.7
Nov	681.1	0.0	0.0	192.0	263.0	226.1	0.0	143.9	0.7	0.9	380.0	0.0	659.8
Dec	727.5	0.0	0.0	240.0	341.0	146.5	0.0	476.1	0.8	0.7	345.0	0.0	682.3
Sub-total (2019)	8535.5	0.0	0.0	1516.3	3781.6	3237.7	0.0	3232.3	7.1	2.8	2945.0	1.9	6545.5

Table I-1: Monthly Waste Flow Table for M+ Museum

Month	Actual Quantities of Inert C&D Materials Generated Monthly							Actual Quantities of C&D Wastes Generated Monthly					
	Total Quantity Generated	Hard Rocks and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Disposed to Sorting Facility	Imported Fill	Metals	Paper/ Cardboard Packaging	Plastics	Wood/ Timber	Chemical Waste	Others, e.g. General Refuse
	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)
2020													
Jan	404.3	0.0	0.0	0.0	351.1	53.2	0.0	224.2	0.8	0.0	335.0	0.0	523.7
Feb	699.4	0.0	0.0	144.0	511.3	44.1	0.0	61.0	1.7	1.6	280.0	0.0	333.2
Mar	613.8	0.0	0.0	144.0	459.4	10.4	0.0	165.5	0.6	0.7	140.0	0.0	394.9
Apr	365.5	0.0	0.0	0.0	333.6	31.9	0.0	554.3	0.9	0.0	0.0	0.0	389.4
May	96.8	0.0	0.0	0.0	84.2	12.6	0.0	181.2	0.5	0.0	0.0	0.0	401.1
Jun	467.9	0.0	0.0	0.0	455.9	12.0	0.0	120.0	0.4	0.0	0.0	0.0	232.0
Jul	1022.0	0.0	0.0	0.0	1022.0	0.0	0.0	100.0	0.4	0.0	0.0	0.0	282.1
Aug													
Sep													
Oct													
Nov													
Dec													
Sub-total (2020)	3669.7	0.0	0.0	288.0	3217.4	164.2	0.0	1406.3	5.1	2.4	755.0	0.0	2556.3
Total	**251107.4**	**0.0**	**25232.0**	**142604.1**	**71968.4**	**11302.9**	**0.0**	**11541.3**	**33.4**	**5.1**	**7356.2**	**3.2**	**14223.0**

Note:

- 0 tonnes, 21.33 tonnes, 1000.68 tonnes, 0 tonnes of inert C&D material were disposed of as public fill to Chai Wan Public Fill Barging Point, Tuen Mun Area 38, Tseung Kwan O Area 137 Public Fill and Tseung Kwan O Area 137 Sorting Facility respectively in the reporting month.

- For inert C&D materials reused in other projects, the projects refer to (1) Green Valley; (2) Advance Works for Shek Wu Hui Sewage Treatment Works (3) Design and Construction of Kai Tak Cable Tunnel, CLP; (4) MTR Contract 1002 Whampoa Station and Overrun Tunnel; (5) CEDD Tuen Mun Area 54 Contract No. CV/2015/03; (6) Union Construction Ltd.'s site; (7) Foundation Works at Marriot Hotel at Ocean Park.(8) Ming Tai warehoues (9) No.1 Plantation Road; (10) L1 lyric theather (11) sales to Ho Jet Plant

Lyric Theatre Complex

Table I-2: Monthly Waste Flow Table for Lyric Theatre Complex

Month	Actual Quantities of Inert C&D Materials Generated Monthly							Actual Quantities of C&D Wastes Generated Monthly					
	Total Quantity Generated	Hard Rocks and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Disposed to Sorting Facilty	Imported Fill	Metals	Paper/ Cardboard Packaging	Plastics	Wood/ Timber	Chemical Waste	Others, e.g. General Refuse
	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)
2016													
Mar	2702.1	0.0	0.0	0.0	2702.1	0.0	0.0	4.5	0.1	0.0	0.0	0.0	30.6
Apr	8631.5	0.0	0.0	0.0	8631.5	0.0	0.0	16.0	0.0	0.0	0.0	0.0	19.2
May	12487.8	0.0	0.0	0.0	12487.8	0.0	0.0	34.0	0.0	0.0	0.0	0.7	60.5
Jun	8600.8	0.0	0.0	0.0	8600.8	0.0	0.0	31.4	0.2	0.0	0.0	0.5	13.5
Jul	12624.2	0.0	0.0	0.0	12624.2	0.0	0.0	19.6	0.0	0.0	0.0	2.0	9.9
Aug	14419.9	0.0	0.0	0.0	14419.9	0.0	0.0	43.9	0.0	0.0	0.0	0.0	11.1
Sep	13671.3	0.0	0.0	0.0	13671.3	0.0	0.0	59.8	0.0	0.0	0.0	1.6	12.4
Oct	13088.9	0.0	0.0	0.0	13088.9	0.0	0.0	36.9	0.2	1.5	0.0	0.0	15.2
Nov	12424.7	0.0	0.0	0.0	12424.7	0.0	0.0	74.7	0.0	0.0	0.0	1.4	10.2
Dec	12487.6	0.0	0.0	0.0	12487.6	0.0	0.0	13.9	0.0	0.0	0.0	1.3	9.0
Sub-total (2016)	111138.8	0.0	0.0	0.0	111138.8	0.0	0.0	334.5	0.4	1.5	0.0	7.6	191.6
2017													
Jan	9607.8	0.0	0.0	0.0	9607.8	0.0	0.0	29.5	0.0	0.0	0.0	0.0	7.3
Feb	9108.2	0.0	0.0	0.0	9108.2	0.0	0.0	50.2	0.2	0.0	0.0	0.7	9.8
Mar	11361.7	0.0	0.0	0.0	11361.7	0.0	0.0	16.1	0.0	0.0	0.0	1.4	8.5
Apr	2591.5	0.0	0.0	0.0	2591.5	0.0	0.0	35.7	0.0	0.0	0.0	0.0	4.7
May	2579.3	0.0	0.0	99.0	2480.3	0.0	0.0	20.9	0.1	0.0	0.0	0.5	10.0
Jun	476.0	0.0	0.0	341.0	129.7	5.3	0.0	0.0	0.0	0.0	0.0	0.0	7.6
Jul	3419.0	0.0	0.0	804.0	2615.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.8
Aug	3730.9	0.0	0.0	1377.5	2353.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4
Sep	2108.2	0.0	0.0	1133.5	974.7	0.0	0.0	34.6	0.2	0.0	0.0	0.0	10.8
Oct	9159.0	0.0	0.0	7868.0	1291.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	9.3
Nov	5095.4	0.0	0.0	4352.0	725.2	18.1	0.0	0.0	0.0	0.0	0.0	0.0	38.8
Dec	3856.2	0.0	0.0	3076.0	780.2	0.0	0.0	0.0	0.2	0.0	0.0	0.4	8.4
Sub-total (2017)	63093.1	0.0	0.0	19051.0	44018.7	23.4	0.0	187.1	0.7	0.0	0.0	3.8	137.3

Table I-2: Monthly Waste Flow Table for Lyric Theatre Complex

Month	Actual Quantities of Inert C&D Materials Generated Monthly							Actual Quantities of C&D Wastes Generated Monthly					
	Total Quantity Generated	Hard Rocks and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Disposed to Sorting Facilty	Imported Fill	Metals	Paper/ Cardboard Packaging	Plastics	Wood/ Timber	Chemical Waste	Others, e.g. General Refuse
	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)
2018													
Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5
Mar	6120.2	0.0	0.0	5782.0	338.2	0.0	0.0	0.0	0.0	1.0	0.0	0.5	17.6
Apr	14460.3	0.0	0.0	12484.1	1976.3	0.0	0.0	0.0	0.0	0.2	0.0	0.0	7.6
May	59783.7	0.0	0.0	46989.0	12794.7	0.0	0.0	59.6	0.0	0.0	0.0	0.0	9.4
Jun	53117.5	0.0	0.0	37642.8	15474.7	0.0	0.0	51.5	0.2	0.0	0.0	0.0	12.8
Jul	89901.5	0.0	0.0	85317.1	4584.4	0.0	165.1	114.6	0.0	0.0	0.0	0.0	41.3
Aug	35137.3	0.0	0.0	33731.6	1405.7	0.0	214.3	148.1	0.0	0.0	0.0	0.0	48.5
Sep	4924.3	0.0	0.0	4641.2	196.1	87.0	174.6	40.0	0.0	0.0	0.0	0.0	179.2
Oct	19099.9	0.0	0.0	11301.0	7642.8	156.1	0.0	106.3	0.4	0.0	0.0	0.0	528.5
Nov	104168.0	0.0	0.0	79811.6	24351.0	5.3	0.0	54.5	0.0	0.6	0.0	0.0	31.5
Dec	62989.9	0.0	0.0	51284.4	11699.9	5.6	0.0	95.1	0.0	0.6	0.0	0.0	65.9
Sub-total (2018)	449702.6	0.0	0.0	368984.8	80463.7	254.0	553.9	669.7	0.5	2.4	0.0	0.5	943.7
2019													
Jan	74479.1	0.0	0.0	69249.5	5229.7	0.0	318.0	326.7	0.2	0.0	0.0	0.0	76.3
Feb	21969.9	0.0	0.0	17723.9	4246.0	0.0	16.5	55.2	0.0	0.0	0.0	0.0	26.7
Mar	19311.9	0.0	0.0	8569.9	10742.0	0.0	337.8	64.5	0.0	0.0	0.0	0.0	36.3
Apr	28559.9	0.0	0.0	21280.3	7279.6	0.0	0.0	32.6	0.0	0.8	0.0	0.0	24.9
May	45418.0	0.0	0.0	11200.6	34217.4	0.0	0.0	27.4	0.2	0.5	0.0	0.0	33.7
Jun	66633.4	0.0	0.0	23874.5	42748.0	10.9	59.2	11.9	0.0	0.9	0.0	0.0	35.3
Jul	36619.6	0.0	0.0	1632.7	34960.9	26.0	64.4	120.7	0.0	0.0	0.0	0.0	57.9
Aug	2526.8	0.0	0.0	0.0	2499.0	27.8	31.9	40.2	0.0	0.8	0.0	0.0	66.3
Sep	4117.6	0.0	0.0	0.0	4088.7	28.9	95.2	19.0	0.0	0.6	0.0	0.0	127.4
Oct	6974.2	0.0	0.0	0.0	6948.1	26.1	15.9	11.4	0.2	1.0	0.0	0.6	223.6
Nov	5334.4	0.0	0.0	0.0	5304.1	30.3	0.0	8.9	0.0	0.0	0.0	0.0	151.6
Dec	6236.8	0.0	0.0	0.0	6236.8	0.0	0.0	70.6	0.0	0.0	0.0	0.0	98.9
Sub-total (2019)	318181.6	0.0	0.0	153531.3	164500.1	150.1	938.9	788.8	0.6	4.6	0.0	0.6	959.0

Table I-2: Monthly Waste Flow Table for Lyric Theatre Complex

Month	Actual Quantities of Inert C&D Materials Generated Monthly							Actual Quantities of C&D Wastes Generated Monthly					
	Total Quantity Generated	Hard Rocks and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Disposed to Sorting Facilty	Imported Fill	Metals	Paper/ Cardboard Packaging	Plastics	Wood/ Timber	Chemical Waste	Others, e.g. General Refuse
	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)	(in tonnes)
2020													
Jan	7089.9	0.0	0.0	0.0	7089.9	0.0	0.0	10.6	0.2	0.0	0.0	0.0	65.7
Feb	16822.3	0.0	0.0	0.0	16822.3	0.0	0.0	232.2	0.1	0.0	0.0	0.0	66.3
Mar	6559.0	0.0	0.0	0.0	6559.0	0.0	110.4	63.1	0.0	0.9	0.0	0.0	138.3
Apr	4997.9	0.0	0.0	1615.7	3382.2	0.0	159.2	1123.9	1.9	0.0	0.0	0.0	113.2
May	2236.0	0.0	0.0	452.3	1783.6	0.0	0.0	406.5	0.0	0.0	0.0	0.0	188.8
Jun	1134.3	0.0	0.0	0.0	1134.3	0.0	31.5	262.6	0.2	0.6	0.0	0.0	210.6
Jul	148.8	0.0	0.0	0.0	148.8	0.0	31.5	458.6	0.0	0.0	0.0	0.0	220.0
Aug													
Sep													
Oct													
Nov													
Dec													
Sub-total (2020)	38988.2	0.0	0.0	2068.1	36920.1	0.0	332.5	2557.5	2.4	1.4	0.0	0.0	1002.9
Total	**981104.2**	**0.0**	**0.0**	**543635.2**	**437041.4**	**427.5**	**1825.3**	**4537.5**	**4.6**	**9.9**	**0.0**	**12.5**	**3234.4**

Note:

- 124.94 tonnes and 23.84 tonnes of inert C&D material were disposed of as public fill to Tseung Kwan O Area 137 Public Fill and Tuen Mun Area 38 Public Fill respectively in the reporting month.

J. Environmental Mitigation Measures – Implementation Status

Table J-1: Environmental Mitigation Measures Implementation Status (July 2020)

EM&A Ref.	Recommendation Measures	Implementation Stage		
		M+ Museum	L1	L2
Air Quality Impact (Construction)				
2.1 & 10.3.1	**General Dust Control Measures** Frequent water spraying for active construction areas (12 times a day or once every one hour), including Heavy construction activities such as construction of buildings or roads, drilling, ground excavation, cut and fill operations (i.e., earth moving)	✓	✓	✓
2.1 & 10.3.1	**Best Practice For Dust Control** The relevant best practices for dust control as stipulated in the Air Pollution Control (construction Dust) Regulation should be adopted to further reduce the construction dust impacts from the Project. These best practices include:			
	Good Site Management			
	• Good site management is important to help reducing potential air quality impact down to an acceptable level. As a general guide, the Contractor should maintain high standard of housekeeping to prevent emission of fugitive dust. Loading, unloading, handling and storage of raw materials, wastes or by-products should be carried out in a manner so as to minimise the release of visible dust emission. Any piles of materials accumulated on or around the work areas should be cleaned up regularly. Cleaning, repair and maintenance of all plant facilities within the work areas should be carried out in a manner minimising generation of fugitive dust emissions. The material should be handled properly to prevent fugitive dust emission before cleaning.	Rem	✓	✓
	Disturbed Parts of the Roads			
	• Each and every main temporary access should be paved with concrete, bituminous hardcore materials or metal plates and kept clear of dusty materials; or	✓	✓	✓
	• Unpaved parts of the road should be sprayed with water or a dust suppression chemical so as to keep the entire road surface wet.	✓	✓	✓

EM&A Ref.	Recommendation Measures	Implementation Stage		
		M+ Museum	L1	L2
	Exposed Earth			
	• Exposed earth should be properly treated by compaction, hydroseeding, vegetation planting or seating with latex, vinyl, bitumen within six months after the last construction activity on the site or part of the site where the exposed earth lies.	N/A No exposed earth in this project.	N/A No exposed earth in this project.	N/A No exposed earth in this project.
	Loading, Unloading or Transfer of Dusty Materials			
	• All dusty materials should be sprayed with water immediately prior to any loading or transfer operation so as to keep the dusty material wet.	✓	✓	✓
	Debris Handling			
	• Any debris should be covered entirely by impervious sheeting or stored in a debris collection area sheltered on the top and the three sides.	Rem	✓	✓
	• Before debris is dumped into a chute, water should be sprayed so that it remains wet when it is dumped.	✓	✓	✓
	Transport of Dusty Materials			
	• Vehicle used for transporting dusty materials/spoils should be covered with tarpaulin or similar material. The cover should extend over the edges of the sides and tailboards.	✓	✓	✓
	Wheel washing			
	• Vehicle wheel washing facilities should be provided at each construction site exit. Immediately before leaving the construction site, every vehicle should be washed to remove any dusty materials from its body and wheels.	✓	✓	✓
	Use of vehicles			
	• The speed of the trucks within the site should be controlled to about 10km/hour in order to reduce adverse dust impacts and secure the safe movement around the site.	✓	✓	✓
	• Immediately before leaving the construction site, every vehicle should be washed to remove any dusty materials from its body and wheels.	✓	✓	✓
	• Where a vehicle leaving the construction site is carrying a load of dusty materials, the load should be covered entirely by clean impervious sheeting to ensure that the dusty materials do not leak from the vehicle.	✓	✓	✓

EM&A Ref.	Recommendation Measures	Implementation Stage M+ Museum	L1	L2
	Site hoarding • Where a site boundary adjoins a road, street, service lane or other area accessible to the public, hoarding of not less than 2.4m high from ground level should be provided along the entire length of that portion of the site boundary except for a site entrance or exit.	✓	✓	✓
2.1 & 10.3.1	**Best Practicable Means for Cement Works (Concrete Batching Plant)** The relevant best practices for dust control as stipulated in the Guidance Note on the Best Practicable Means for Cement Works (Concrete Batching Plant) BPM 3/2(93) should be followed and implemented to further reduce the construction dust impacts of the Project. These best practices include: Exhaust from Dust Arrestment Plant • Wherever possible the final discharge point from particulate matter arrestment plant, where is not necessary to achieve dispersion from residual pollutants, should be at low level to minimise the effect on the local community in the case of abnormal emissions and to facilitate maintenance and inspection	N/A No concrete batching plant in this project.	N/A No concrete batching plant in this project.	N/A No concrete batching plant in this project.
	Emission Limits • All emissions to air, other than steam or water vapour, shall be colourless and free from persistent mist or smoke	N/A No concrete batching plant in this project.	N/A No concrete batching plant in this project.	N/A No concrete batching plant in this project.
	Engineering Design/Technical Requirements • As a general guidance, the loading, unloading, handling and storage of fuel, raw materials, products, wastes or by-products should be carried out in a manner so as to prevent the release of visible dust and/or other noxious or offensive emissions	N/A No concrete batching plant in this project.	N/A No concrete batching plant in this project.	N/A No concrete batching plant in this project.
-	**Non-Road Mobile Machinery (NRMM):** All NRMMs operating on-site which are subject to emission control of Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation are approved/exempted (as the case may be) and affixed with the requisite approval/exemption labels.	✓	✓	✓

EM&A Ref.	Recommendation Measures	Implementation Stage		
		M+ Museum	L1	L2
Noise Impact (Construction)				
3.1 & 10.4.1	**Good Site Practice** Good site practice and noise management can significantly reduce the impact of construction site activities on nearby NSRs. The following package of measures should be followed during each phase of construction:			
	• only well-maintained plant to be operated on-site and plant should be serviced regularly during the construction works;	✓	✓	✓
	• machines and plant that may be in intermittent use to be shut down between work periods or should be throttled down to a minimum	✓	✓	✓
	• plant known to emit noise strongly in one direction, should, where possible, be orientated to direct noise away from the NSRs;	✓	✓	✓
	• mobile plant should be sited as far away from NSRs as possible; and	✓	✓	✓
	• material stockpiles and other structures to be effectively utilised, where practicable, to screen noise from on-site construction activities.	✓	✓	✓
3.1 & 10.4.1	**Adoption of Quieter PME** The recommended quieter PME adopted in the assessment were taken from the EPD's QPME Inventory and "*Sound Power Levels of Other Commonly Used PME*" are presented in **Table 4.26** in the EIA report. It should be noted that the silenced PME selected for assessment can be found in Hong Kong.	✓	✓	✓
3.1 & 10.4.1	**Use of Movable Noise Barriers** Movable noise barriers can be very effective in screening noise from particular items of plant when constructing the Project. Noise barriers located along the active works area close to the noise generating component of a PME could produce at least 10 dB(A) screening for stationary plant and 5 dB(A) for mobile plant provided the direct line of sight between the PME and the NSRs is blocked.	✓	✓	✓
3.1 & 10.4.1	**Use of Noise Enclosure/ Acoustic Shed** The use of noise enclosure or acoustic shed is to cover stationary PME such as air compressor and concrete pump. With the adoption of the noise enclosure, the PME could be completely screened, and noise reduction of 15 dB(A) can be achieved according to the EIAO Guidance Note No. 9/2010.	✓	✓	✓

EM&A Ref.	Recommendation Measures	Implementation Stage M+ Museum	L1	L2
3.1 & 10.4.1	**Use of Noise Insulating Fabric** Noise insulating fabric can also be adopted for certain PME (e.g. drill rig, pilling machine etc). The fabric should be lapped such that there are no openings or gaps on the joints. According to the approved Tsim Sha Tsui Station Northern Subway EIA report (AEIAR-127/2008), a noise reduction of 10 dB(A) can be achieved for the PME lapped with the noise insulating fabric.	✓	✓	✓
3.1 & 10.4.1	**Scheduling of Construction Works outside School Examination Periods** During construction phase, the contractor should liaise with the educational institutions (including NSRs LCS and CRGPS) to obtain the examination schedule and avoid the noisy construction activities during school examination periods.	N/A No educational institutions nearby the site.	N/A No educational institutions nearby the site.	N/A No educational institutions nearby the site.
Water Quality Impact (Construction)				
4.1 & 10.5.1	**Construction site runoff and drainage** The site practices outlined in ProPECC Note PN 1/94 should be followed as far as practicable in order to minimise surface runoff and the chance of erosion. The following measures are recommended to protect water quality and sensitive uses of the coastal area, and when properly implemented should be sufficient to adequately control site discharges so as to avoid water quality impacts: • At the start of site establishment, perimeter cut-off drains to direct off-site water around the site should be constructed with internal drainage works and erosion and sedimentation control facilities implemented. Channels, earth bunds or sand bag barriers should be provided on site to direct storm water to silt removal facilities. The design of the temporary on-site drainage system should be undertaken by the WKCDA's Contractor prior to the commencement of construction;	Obs	✓	✓

EM&A Ref.	Recommendation Measures	Implementation Stage		
		M+ Museum	L1	L2
	• Sand/silt removal facilities such as sand/silt traps and sediment basins should be provided to remove sand/silt particles from runoff to meet the requirements of the TM standards under the WPCO. The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC Note PN 1/94. Sizes may vary depending upon the flow rate. The detailed design of the sand/silt traps should be undertaken by the WKCDA's Contractor prior to the commencement of construction.	✓	✓	✓
	• All drainage facilities and erosion and sediment control structures should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly during rainstorms. Deposited silt and grit should be regularly removed, at the onset of and after each rainstorm to ensure that these facilities are functioning properly at all times.	✓	✓	✓
	• Measures should be taken to minimize the ingress of site drainage into excavations. If excavation of trenches in wet periods is necessary, they should be dug and backfilled in short sections wherever practicable. Water pumped out from foundation excavations should be discharged into storm drains via silt removal facilities.	✓	✓	✓
	• All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and sited wheel washing facility should be provided at construction site exit where practicable. Wash-water should have sand and silt settled out and removed regularly to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains.	✓	✓	✓
	• Open stockpiles of construction materials or construction wastes on-site should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system.	✓	✓	✓

EM&A Ref.	Recommendation Measures	Implementation Stage		
		M+ Museum	L1	L2
	• Manholes (including newly constructed ones) should be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and stormwater runoff being directed into foul sewers.	✓	✓	✓
	• Precautions should be taken at any time of the year when rainstorms are likely. Actions should be taken when a rainstorm is imminent or forecasted and actions to be taken during or after rainstorms are summarized in Appendix A2 of ProPECC Note PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events, especially for areas located near steep slopes.	✓	✓	✓
	• Bentonite slurries used in piling or slurry walling should be reconditioned and reused wherever practicable. Temporary enclosed storage locations should be provided on-site for any unused bentonite that needs to be transported away after all the related construction activities are completed. The requirements in ProPECC Note PN 1/94 should be adhered to in the handling and disposal of bentonite slurries.	N/A No bentonite slurries are used in this project.	N/A No bentonite slurries are used in this project.	N/A No bentonite slurries are used in this project.
	Barging facilities and activities Recommendations for good site practices during operation of the proposed barging point include:			
	• All vessels should be sized so that adequate clearance is maintained between vessels and the seabed in all tide conditions, to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash;	N/A No barging facilities in this project.	N/A No barging facilities in this project.	N/A No barging facilities in this project.
	• Loading of barges and hoppers should be controlled to prevent splashing of material into the surrounding water. Barges or hoppers should not be filled to a level that will cause the overflow of materials or polluted water during loading or transportation;	N/A No barging facilities in this project.	N/A No barging facilities in this project.	N/A No barging facilities in this project.
	• All hopper barges should be fitted with tight fitting seals to their bottom openings to prevent leakage of material; and	N/A No barging facilities in this project.	N/A No barging facilities in this project.	N/A No barging facilities in this project.
	• Construction activities should not cause foam, oil, grease, scum, litter or other objectionable matter to be present on the water within the site.	N/A No barging facilities in this project.	N/A No barging facilities in this project.	N/A No barging facilities in this project.

EM&A Ref.	Recommendation Measures	Implementation Stage		
		M+ Museum	L1	L2
4.1 & 10.5.1	**Sewage effluent from construction workforce** Temporary sanitary facilities, such as portable chemical toilets, should be employed on-site where necessary to handle sewage from the workforce. A licensed contractor should be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance.	✓	✓	✓
4.1 & 10.5.1	**General construction activities**			
	• Construction solid waste, debris and refuse generated on-site should be collected, handled and disposed of properly to avoid entering any nearby storm water drain. Stockpiles of cement and other construction materials should be kept covered when not being used.	✓	✓	✓
	• Oils and fuels should only be stored in designated areas which have pollution prevention facilities. To prevent spillage of fuels and solvents to any nearby storm water drain, all fuel tanks and storage areas should be provided with locks and be sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank. The bund should be drained of rainwater after a rain event.	✓	✓	✓
Waste Management Implications (Construction)				
6.1 & 10.7.1	**Good Site Practices** Recommendations for good site practices during the construction activities include:			
	• Nomination of an approved person, such as a site manager, to be responsible for good site practices, arrangements for collection and effective disposal to an appropriate facility, of all wastes generated at the site	✓	✓	✓
	• Training of site personnel in proper waste management and chemical handling procedures	✓	✓	✓
	• Provision of sufficient waste disposal points and regular collection of waste	✓	✓	✓
	• Appropriate measures to minimise windblown litter and dust/odour during transportation of waste by either covering trucks or by transporting wastes in enclosed containers	✓	✓	✓

EM&A Ref.	Recommendation Measures	Implementation Stage		
		M+ Museum	L1	L2
	• Provision of wheel washing facilities before the trucks leaving the works area so as to minimise dust introduction to public roads	✓	✓	✓
	• Well planned delivery programme for offsite disposal such that adverse environmental impact from transporting the inert or non-inert C&D materials is not anticipated	✓	✓	✓
6.1 & 10.7.1	**Waste Reduction Measures** Recommendations to achieve waste reduction include:			
	• Sort inert C&D material to recover any recyclable portions such as metals	✓	✓	✓
	• Segregation and storage of different types of waste in different containers or skips to enhance reuse or recycling of materials and their proper disposal	✓	✓	✓
	• Encourage collection of recyclable waste such as waste paper and aluminium cans by providing separate labelled bins to enable such waste to be segregated from other general refuse generated by the work force	✓	✓	✓
	• Proper site practices to minimise the potential for damage or contamination of inert C&D materials	✓	✓	✓
	• Plan the use of construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of wastes	✓	✓	✓
6.1 & 10.7.1	**Inert and Non-inert C&D Materials** In order to minimise impacts resulting from collection and transportation of inert C&D material for off-site disposal, the excavated materials should be reused on-site as fill material as far as practicable. In addition, inert C&D material generated from excavation works could be reused as fill materials in local projects that require public fill for reclamation.	✓	✓	✓
	• The surplus inert C&D material will be disposed of at the Government's PFRFs for beneficial use by other projects in Hong Kong.	✓	✓	✓
	• Liaison with the CEDD Public Fill Committee (PFC) on the allocation of space for disposal of the inert C&D materials at PFRF is underway. No construction work is allowed to proceed until all issues on management of inert C&D materials have been resolved and all relevant arrangements have been endorsed by the relevant authorities including PFC and EPD.	✓	✓	✓

EM&A Ref.	Recommendation Measures	Implementation Stage		
		M+ Museum	L1	L2
	• The C&D materials generated from general site clearance should be sorted on site to segregate any inert materials for reuse or disposal of at PFRFs whereas the non-inert materials will be disposed of at the designated landfill site.	✓	✓	✓
	• In order to monitor the disposal of inert and non-inert C&D materials at respectively PFRFs and the designated landfill site, and to control fly-tipping, it is recommended that the Contractor should follow the Technical Circular (Works) No. 6/2010 for Trip Ticket System for Disposal of Construction & Demolition Materials issued by Development Bureau. In addition, it is also recommended that the Contractor should prepare and implement a Waste Management Plan detailing their various waste arising and waste management practices in accordance with the relevant requirements of the Technical Circular (Works) No. 19/2005 Environmental Management on Construction Site.	✓	✓	✓
6.1 & 10.7.1	**Chemical Waste**			
	• If chemical wastes are produced at the construction site, the Contractor will be required to register with the EPD as a chemical waste producer and to follow the guidelines stated in the "Code of Practice on the Packaging Labelling and Storage of Chemical Wastes". Good quality containers compatible with the chemical wastes should be used, and incompatible chemicals should be stored separately. Appropriate labels should be securely attached on each chemical waste container indicating the corresponding chemical characteristics of the chemical waste, such as explosive, flammable, oxidizing, irritant, toxic, harmful, corrosive, etc. The Contractor should use a licensed collector to transport and dispose of the chemical wastes at the approved Chemical Waste Treatment Centre or other licensed recycling facilities, in accordance with the Waste Disposal (Chemical Waste) (General) Regulation.	✓	✓	✓
	• Potential environmental impacts arising from the handling activities (including storage, collection, transportation and disposal of chemical waste) are expected to be minimal with the implementation of appropriate mitigation measures as recommended.	✓	✓	✓

EM&A Ref.	Recommendation Measures	Implementation Stage		
		M+ Museum	L1	L2
6.1 & 10.7.1	**General Refuse** General refuse should be stored in enclosed bins or compaction units separated from inert C&D materials. A reputable waste collector should be employed by the Contractor to remove general refuse from the site, separately from inert C&D materials. Preferably an enclosed and covered area should be provided to reduce the occurrence of 'wind blown' light material.	✓	✓	✓
Land Contamination (Construction)				
7.1 & 10.8.1	The potential for land contamination issues at the TST Fire Station due to its future relocation will be confirmed by site investigation after land acquisition. Where necessary, mitigation measures for minimising potential exposure to contaminated materials (if any) or remediation measures will be identified. If contaminated land is identified (e.g., during decommissioning of fuel oil storage tanks) after the commencement of works, mitigation measures are proposed in order to minimise the potentially adverse effects on the health and safety of construction workers and impacts arising from the disposal of potentially contaminated materials. The following measures are proposed for excavation and transportation of contaminated material:			
	• To minimize the chance for construction workers to come into contact with any contaminated materials, bulk earth-moving excavation equipment should be employed;	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.
	• Contact with contaminated materials can be minimised by wearing appropriate clothing and personal protective equipment such as gloves and masks (especially when interacting directly with contaminated material), provision of washing facilities and prohibition of smoking and eating on site;	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.
	• Stockpiling of contaminated excavated materials on site should be avoided as far as possible;	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.

EM&A Ref.	Recommendation Measures	Implementation Stage		
		M+ Museum	L1	L2
	• The use of contaminated soil for landscaping purpose should be avoided unless pre-treatment was carried out;	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.
	• Vehicles containing any contaminated excavated materials should be suitably covered to reduce dust emissions and/or release of contaminated wastewater;	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.
	• Truck bodies and tailgates should be sealed to stop any discharge;	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.
	• Only licensed waste haulers should be used to collect and transport contaminated material to treatment/disposal site and should be equipped with tracking system to avoid fly tipping;	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.
	• Speed control for trucks carrying contaminated materials should be exercised;	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.
	• Observe all relevant regulations in relation to waste handling, such as Waste Disposal Ordinance (Cap. 354), Waste Disposal (Chemical Waste) (General) Regulation (Cap. 354) and obtain all necessary permits where required; and	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.
	• Maintain records of waste generation and disposal quantities and disposal arrangements.	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.	N/A TST Fire Station is out of this project boundary, no mitigation measure is required.
Ecological Impact (Construction)				
	No mitigation measure is required.			
Landscape and Visual Impact (Construction)				

		Implementation Stage		
EM&A Ref.	Recommendation Measures	M+ Museum	L1	L2
Table 9.1 & 10.8 (CM1)	Trees should be retained in situ on site as far as possible. Should tree removal be unavoidable due to construction impacts, trees will be transplanted or felled with reference to the stated criteria in the Tree Removal Applications to be submitted to relevant government departments for approval in accordance to ETWB TCW No. 29/2004 and 3/2006.	✓	✓	✓
Table 9.1 & 10.8 (CM2)	Compensatory tree planting shall be incorporated to the proposed project and maximize the new tree, shrubs and other vegetation planting to compensate tree felled and vegetation removed. Also, implementation of compensatory planting should be of a ratio not less than 1:1 in terms of quality and quantity within the site.	✓	N/A Compensatory tree planting is being reviewed.	N/A Compensatory tree planting is being reviewed.
Table 9.1 & 10.8 (CM3)	Buffer trees for screening purposes to soften the hard architectural and engineering structures and facilities.	N/A Buffer trees and vertical climber will be incorporated into the project, but it has not been completed yet.	N/A Roof garden is designed to be built, but it has not been completed yet.	N/A Roof garden is designed to be built, but it has not been completed yet.
Table 9.1 & 10.8 (CM4)	Softscape treatments such as vertical green wall panel /planting of climbing and/or weeping plants, etc, to maximize the green coverage and soften the hard architectural and engineering structures and facilities.	N/A Climbing plants is designed to be planted on CSF as vertical green wall, but it has not been completed yet.	N/A Climbing or weeping plants are designed to be planted, but proposal is being reviewed for the planting location.	N/A Climbing or weeping plants are designed to be planted, but proposal is being reviewed for the planting location.
Table 9.1 & 10.8 (CM5)	Roof greening by means of intensive and extensive green roof to maximize the green coverage and improve aesthetic appeal and visual quality of the building/structure.	N/A Roof greening on 3/F podium has not yet been completed yet.	N/A Roof garden is designed to be built, but it has not been completed yet.	N/A Roof garden is designed to be built, but it has not been completed yet.
Table 9.1 & 10.8 (CM6)	Sensitive streetscape design should be incorporated along all new roads and streets.	N/A Along the northern perimeter, inter-planting of diverse trees forms a thick living wall to providing a sense of enclosure internally and visually buffering the large buildings to the north of the site, but it has not been completed yet.	N/A Greening along the seafront is proposed, but it has not been completed yet.	N/A Greening along the seafront is proposed, but it has not been completed yet.

EM&A Ref.	Recommendation Measures	Implementation Stage		
		M+ Museum	L1	L2
Table 9.1 & 10.8 (CM7)	Structure, ornamental planting shall be provided along amenity strips to enhance the landscape quality.	N/A Various types of trees and shrubs are proposed to be planted in the planting area, but it has not been completed yet.	N/A Gardens are designed to be built, but it has not been completed yet.	N/A Gardens are designed to be built, but it has not been completed yet.
Table 9.1 & 10.8 (CM8)	Landscape design shall be incorporated to architectural and engineering structures in order to provide aesthetically pleasing designs.	N/A A garden is designed to be planted on 3/F podium, but it has not been completed yet.	N/A Roof garden is designed to be built, but it has not been completed yet.	N/A Roof garden is designed to be built, but it has not been completed yet.
Table 9.1 (CM9)	Minimize the structure of marine facilities to be built on the seabed and foreshore in order to minimize the affected extent to the waterbody	N/A No marine facilities for this project.	N/A No marine facilities for this project.	N/A No marine facilities for this project.
Table 9.2 & 10.9 (MCP1)	Use of decorative screen hoarding/boards	✓	✓	✓
Table 9.2 & 10.9 (MCP2)	Early introduction of landscape treatments	N/A No landscape treatments during this stage.	N/A No landscape treatments during this stage.	N/A No landscape treatments during this stage.
Table 9.2 & 10.9 (MCP3)	Adoption of light colour for the temporary ventilation shafts for the basement during the transition period.	N/A No ventilation shafts for this project.	N/A No ventilation shafts for this project.	N/A No ventilation shafts for this project.
Table 9.2 & 10.9 (MCP4)	Control of night time lighting	✓	✓	✓
Table 9.2 & 10.9 (MCP5)	Use of greenery such as grass cover for the temporary open areas will help achieve the visual balance and soften the hard edges of the structures.	N/A No temporary open areas for this project.	N/A No temporary open areas for this project.	N/A No temporary open areas for this project.

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

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

Cumulative statistics for complaints, notifications of summons and successful prosecutions for the Project account for period starting from the date of commencement of construction works (i.e. 31 October 2015 for M+ Museum main works and 1 March 2016 for Lyric Theatre Complex) to the end of the reporting month and are summarised in the **Table K-1** and **Table K-2** below respectively.

Table K-1: Statistics for complaints, notifications of summons and successful prosecutions for M+ Museum Main Works

Reporting Period	Cumulative Statistics		
	Complaints	**Notifications of summons**	**Successful prosecutions**
This reporting month	0	0	0
From 31 October 2015 to end of the reporting month (Jul 2020)	8	1	0

Table K-2: Statistics for complaints, notifications of summons and successful prosecutions for Lyric Theatre Complex

Reporting Period	Cumulative Statistics		
	Complaints	**Notifications of summons**	**Successful prosecutions**
This reporting month	0	0	0
From 1 March 2016 to end of the reporting month (Jul 2020)	12	0	0