

Vol. 5 of 5

EP-457/2013/C

Central Kowloon Route

Kai Tak East

Contract No. HY/2018/02

August 2020

KAI TAK
DEVELOPMENT

JY/2018/02
VOLUME 5 OF 5



九龍灣
KOWLOON BAY

MA TAU WAI
MA TAU KOK
TO KWA WAN
HO MANTIN

YAU MA TEI

HUNG HOM

JORDAN

WEST KOWLOON

Ma Tei
Shelter



Environmental Permit No. EP-457/2013/C

Central Kowloon Route

Independent Environmental Checker Verification

Works Contract:

Kai Tak East (HY/2018/02)

Reference Document/Plan

Document/ Plan to be Certified/ Verified:	Monthly EM&A Report No.12 (August 2020)
Date of Report:	9 September 2020 (Rev. 1)
Date received by IEC:	9 September 2020

Reference EP Condition

Environmental Permit Condition: 3.4

Submission of Monthly EM&A Report of the Project

3.4 Four hard copies and one electronic copy of monthly EM&A Report shall be submitted to the Director within 2 weeks after the end of each reporting month throughout the entire construction period. The EM&A Reports shall include a summary of all non-compliance. The submissions shall be certified by the ET Leader and verified by the IEC as complying with the requirements as set out in the EM&A Manual before submission to the Director. Additional copies of the submission shall be provided to the Director upon request by the Director.

IEC Verification

I hereby verify that the above referenced document/~~plan~~ complies with the above referenced condition of EP-457/2013/C.

Ms Mandy To

Date:

9 September 2020

Independent Environmental Checker



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Alchmex – Paul Y Joint Venture

Central Kowloon Route Contract HY/2018/02

Section of Kai Tak East

Monthly EM&A Report No. 12

(Period from 1 to 31 August 2020)

Rev. 1

(9 Sep 2020)

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TABLE OF CONTENTS

EXECUTIVE SUMMARY

1. BASIC PROJECT INFORMATION	6
2. ENVIRONMENTAL STATUS.....	9
3. MONITORING RESULTS.....	10
4. SUMMARY OF COMPLAINTS, NOTIFICATION OF SUMMONS AND PROSECUTIONS.....	15
5. EM&A SITE INSPECTION	16
6. FUTURE KEY ISSUES	17
7. CONCLUSION AND RECOMMENDATIONS	18

LIST OF APPENDICES

- A. Alignment and Works Area for the Contract No. HY/2018/02
- B. Construction Programme
- C. Project Organization Chart
- D. Dust Event-Action Plan (EAP)
- E. Noise Event-Action Plan (EAP)
- F. Environmental Mitigation Implementation Schedule (EMIS)
- G. Monitoring Schedules of the Reporting Month
- H. Calibration Certificate (Air Monitoring)
- I. The Certification of Laboratory with HOKLAS Accredited Analytical Tests
- J. Location Plan of Air Quality Monitoring Station
- K. Monitoring Data (Air Monitoring)
- L. Waste Flow Table
- M. Statistics on Complaint, Notifications of Summons and Successful Prosecutions
- N. Monitoring Schedule of the Coming Month

EXECUTIVE SUMMARY

- A.1 Alchmex – Paul Y Joint Venture (“Contractor”) commenced the construction works of Highway Department (HyD) Central Kowloon Route Contract No. HY/2018/02 – Section of Kai Tak East (“The Project”) on 9 September 2019. This is the 12th monthly Environmental Monitoring and Audit (EM&A) report presenting the EM&A works carried out during the period from 1 Aug 2020 to 31 Aug 2020.
- A.2 A summary of major Construction activities by Contractor for the Project during the reporting month is listed below.

Construction Activities undertaken

- Ground Investigation at Portion 2B & 3B & Kai Cheung U Turn & Kai Cheung Loop Road.
 - Bored Pile at Portion 1A, 2B, 3B & Kai Cheung Loop Road.
 - Foundation Work for the Foot Bridge at Kai Fuk Road.
 - Sheetpiling Works for Adit at Area 1D3.
 - Sheetpiling Works for Underpass at Portion 3B.
 - Construction of Marine Platform at Kai Tak Nallah.
-

- A.3 A summary of regular construction dust monitoring activities in this reporting period is listed below:

Construction dust (24-hour TSP) monitoring

E-A1 5 times

Construction dust (1-hour TSP) monitoring

E-A1 15 times

- A.4 Joint weekly site inspections were conducted by representatives of Environmental team (ET), Contractor and Engineer on 4, 12, 20 and 26 August 2020. Also, a joint site inspection with Independent Environmental Checker (IEC) was undertaken on 12 August 2020. Details of the audit findings and implementation status are presented in Section 5.

- A.5 Bi-weekly inspection of the implementation of landscape and visual mitigation measures by ET was conducted on 4 and 20 August 2020. Details of the audit findings and implementation status are presented in Section 5.

- A.6 Details of waste management are presented in Section 3.

- A.7 No exceedance of the Action and Limit Levels of 24-hour TSP and 1-hour TSP monitoring were recorded during the reporting month.

- A.8 No complaint or non-compliance was received in the reporting month.

- A.9 No notification of summons and prosecution was received in the reporting period.

A.10 A summary of Construction Activities provided by Contractor in next reporting month is listed below:

Construction Activities to be undertaken

- Bored Pile at Portion 1A, 2B, 3B & Kai Cheung Loop Road.
 - Foundation Work for the Foot Bridge at Kai Fuk Road.
 - Sheetpiling Works for Adit at Area 1D3.
 - Sheetpiling Works for Underpass at Portion 3B.
 - Construction of Marine Platform at Kai Tak Nallah.
 - Reconstruction of Box Culvert at Portion 2B.
-

1. BASIC PROJECT INFORMATION

- 1.1. Central Kowloon Route (CKR) is a 4.7 km long dual 3-lane trunk road in Central Kowloon linking Yau Ma Tei Interchange in West Kowloon with the road network on Kai Tak Development and Kowloon Bay in East Kowloon.
- 1.2. The Central Kowloon Route – Design and Construction Environmental Impact Assessment Report (Register No.: AEIAR-171/2013) was approved with conditions by the Environmental Protection Department (EPD) on 11 July 2013. An Environmental Permit (EP 457/2013) was issued on 9 August 2013. Variations of EP (VEP) was subsequently applied for and the latest EP (EP-457/2013/C) was issued by EPD on 16 January 2017.
- 1.3. The construction of the CKR had been divided into different sections. This Contract No. HY/2018/02 – Section of Kai Tak East (KTE) covers part of the construction activities located at Kai Tak under the EP which includes:
 - Section of Kai Tak East
 - i. construction of an approximately 700m long dual 2-lane Central Kowloon Route mainline at Kai Tak, including at-grade roads and bridges;
 - ii. construction of Kai Tak Interchange, including bridges, underpass, and associated at-grade slip roads, connecting the Central Kowloon Route with the existing road network;
 - iii. construction of a footbridge, and demolition/backfill of an existing subway across Kai Fuk Road;
 - iv. realignment of existing Kai Fuk Road, Kai Cheung Road and Kai Cheung Road/Kai Fuk Road loop road;
 - v. reconstruction of an approximately 30m long existing multi-cell box culvert;
 - vi. construction of an approximately 130m long underground ventilation and E&M audit;
 - vii. construction of Ring Road Underpass, connecting Central Kowloon Route mainline and Central Kowloon Route Administration Building;
 - viii. junction improvement works at existing Wang Kwong Road/Kai Cheung Road and Wang Kwong Road/Lam Hing Street junctions;
 - ix. arrangement and implementation of cross boundary disposal of construction and demolition materials; and
 - x. associated roadworks, drainage, waterworks, landscaping works, geotechnical works, and electrical and mechanical works.

The alignment and works area for the Contract No. HY/2018/02 - are shown in Appendix A.

1.4. A summary of major construction activities provided by the Contractor in this reporting period is shown in Table 1.1. The construction programme is presented in Appendix B.

Table 1.1 Summary of Construction Activities provided by Contractor during this Reporting Month.

Construction Activities undertaken

- Ground Investigation at Portion 2B & 3B & Kai Cheung U Turn & Kai Cheung Loop Road.
- Bored Pile at Portion 1A, 2B, 3B & Kai Cheung Loop Road.
- Foundation Work for the Foot Bridge at Kai Fuk Road.
- Sheetpiling Works for Adit at Area 1D3.
- Sheetpiling Works for Underpass at Portion 3B.
- Construction of Marine Platform at Kai Tak Nallah.

1.5. The project organisational chart specifying management structure and contact details are shown in Appendix C.

1.6. A summary of the valid permits, licences, and /or notifications on environmental protection for this Project is presented in Table 1.2

Table 1.2 Summary of the Status of Valid Environmental Licence,
Notification, Permit and Documentations

Permit/ Licences/ Notification /Reference No.	Valid Period		Status	Remark
	From	To		
Environmental Permit				
EP-457/2013/C	23 Apr 2019	End of Project	Valid	-
Wastewater Discharge License				
WT00035029-2019	17 Dec 2019	31 Dec 2024	Valid	-
Notification of Construction Works under the Air Pollution Control (Construction Dust) Regulation				
445001	Apr 2019	Dec 2023	Notified	-
Chemical Waste Producer Registration				
WPN5113-247-A2940-01	17 May 2019	End of Project	Valid	-
Billing Account for Disposal of Construction Waste				
7034073	15 Jun 2019	End of Project	Valid	-
Construction Noise Permit				
GW-RE0298-20	5-May-20	5-Aug-20	Superseded by GW-RE0398-20	Central Divider Removal
GW-RE0398-20	21-May-20	18-Aug-20	Valid until 18-Aug-20	
GW-RE0160-20	16-Mar-20	15-Sep-20	Superseded by GW-RE0415-20	General Work for Area A
GW-RE0415-20	29-May-20	15-Sep-20	Valid	
GW-RE0097-20	24-Feb-20	11-Aug-20	Superseded by GW-RE0321-20	General Work for Area B and Site Office
GW-RE0321-20	6-May-20	28-Oct-20	Valid	
GW-RE0551-20	4-Jul-20	3-Jan-21	Valid	Kai Cheung U Turns
GW-RE0600-20	26-Jul-20	25-Nov-20	Valid	Portion 2B
GW-RE0352-20	16-May-20	9-Aug-20	Valid until 9-Aug-20	Temporary Decking at Kai Fuk Road
GW-RE0511-20	16-Jun-20	10-Aug-20	Valid until 10-Aug-20	Watermain Diversion
GW-RE0528-20	27-Jun-20	26-Sep-20	Valid	BEM Office
GW-RE0608-20	27-Jul-20	29-Aug-20	Valid until 29-Aug-20	Street Light Relocation
GW-RE0620-20	28-Jul-20	29-Aug-20	Valid until 29-Aug-20	High Mast CCTV
GW-RE0632-20	31-Jul-20	29-Aug-20	Valid until 29-Aug-20	Road Paving at Kai Fuk Road
GW-RE0625-20	25-Aug-20	13-Sep-20	Valid	Night work at KITEC bus stop

2. ENVIRONMENTAL STATUS

2.1. Environmental permit (EP) conditions under the EIAO, submission status under the EP and implementation status of mitigation measures had been reviewed and implemented on schedule. The status of required submissions under the EP (EP-457/2013/C) as of the reporting period for the Project are summarised in Table 2.1

Table 2.1 Summary of Status of Required Submission for EP-457/2013/C for the Project

EP Condition (EP-457/2013/C)	Submission	Submission date
Condition 1.12	Notification of Commencement Date of Construction of the Project	26 Jul 2019
Condition 2.4	Management organisation of the main construction companies	26 Jul 2019
Condition 2.5	Construction Programme and EP Submission Schedule	26 Jul 2019
Condition 2.6	Design Drawing	26 Jul 2019
Condition 2.8	Landscape Mitigation Plan	26 Jul 2019
Condition 3.3	Baseline Monitoring Report	21 Aug 2019
Condition 3.4	Monthly EM&A Report (July 2020)	14 Aug 2020

2.2. Details of the major construction activities provided by the Contractor in this reporting period are shown in Table 2.2.

Table 2.2 Summary of Construction Activities provided by Contractor during the Reporting Month.

Construction Activities undertaken

- Ground Investigation at Portion 2B & 3B & Kai Cheung U Turn & Kai Cheung Loop Road.
- Bored Pile at Portion 1A, 2B, 3B & Kai Cheung Loop Road.
- Foundation Work for the Foot Bridge at Kai Fuk Road.
- Sheetpiling Works for Adit at Area 1D3.
- Sheetpiling Works for Underpass at Portion 3B.
- Construction of Marine Platform at Kai Tak Nallah.

2.3. The drawing showing the project layout and the location of the monitoring station and environmental sensitive receivers are attached in Appendix A and Appendix J. Co-ordinates of the monitoring location is shown in below:

Table 2.3 Summary for the location of monitoring station

Monitoring Location	Location ID	Latitude	Longitude
Hong Kong International Trade and Exhibition Centre	E-A1	22.323912	114.203512

3. MONITORING RESULTS

3.1. Monitoring Parameters

Air Quality

- 3.1.1. The impact monitoring had been carried out in accordance with section 5.8 of the approved EM&A Manual to determine the 1-hour and 24-hour total suspended particulates (TSP) levels at the monitoring locations in the reporting month.
- 3.1.2. The sampling frequency of at least once in every 6 days, shall be strictly observed at the monitoring stations for 24-hour TSP monitoring. For 1-hour TSP monitoring, the sampling frequency of at least 3 times in every 6 days should be undertaken when the highest dust impact occurs.
- 3.1.3. General meteorological conditions (wind speed, direction and precipitation) and notes regarding any significant adjacent dust producing sources had also been recorded throughout the impact monitoring period.

3.2. Monitoring Equipment

Air Quality

- 3.2.1. 1-hour TSP levels and 24-hour TSP had been measured with direct reading dust meter and High Volume Samplers respectively. It has been demonstrated its capability in achieving comparable results with high volume sampling method as set out in the Title 40 of the Code of Federal Regulations, Chapter 1 (Part 50).
- 3.2.2. The 1-hour TSP meter was calibrated by the manufacturer prior to purchasing. Zero response of the instrument was checked before and after each monitoring event. Operation of the 1-hour TSP meter followed manufacturer's Operation and Service Manual. The 24-hour TSP meter was calibrated against firmware 80570-8100-V1.0.4, annually. Operation of the 24-hour TSP meter followed manufacturer's Operation and Service Manual. Valid calibration certificate of dust monitoring equipment is attached in Appendix H.
- 3.2.3. A summary of the equipment that was deployed for the 24- hour averaged monitoring is shown in Table 3.1. The TSP monitoring was conducted as per the schedule presented in Appendix G.
- 3.2.4. The equipment used for 1-hour TSP and 24-hour TSP measurement and calibration are summarised in Table 3.1

Table 3.1 Construction Dust Monitoring Equipment

Monitoring Parameter	Monitoring Equipment	Serial Number	Date of Calibration
1-hour TSP	LD-5R Digital Dust Indicator	882106	22 Jul 2020
	TE-5170X High Volume Sampler	1049	22 Jul 2020, 6 and 21 Aug 2020
	TE-5028A Calibration Kit	3702	10 Oct 2019

3.3. Monitoring Methodology and QA/QC results

Air Quality

- 3.3.1. The 1-hour TSP monitor, portable dust meters (Sibata Digital Dust Indicator Model LD-5R) was used for the impact monitoring. The 1-hour TSP meters provides a real time 1-hour TSP measurement based on 90° light scattering. Three 1-hour TSP level were logged per every six days.
- 3.3.2. The 24-hour TSP monitor, High Volume Samplers (Tisch TE-5170x High Volume Air Sampler) were used for the impact monitoring. The 24-hour TSP monitoring consists of the following:
- ◆ The HVS was set at the monitoring location, with electricity supply connected and secured;
 - ◆ HVS was calibrated before commencing the 1st measurement;
 - ◆ The filter paper was weight and provided by HOKLAS lab (Acumen Laboratory and Testing Limited and ALS Technichem (HK) Pty Ltd) before and after the sampling. Certificate of HOKLAS accredited laboratory can be referred to Appendix I;
 - ◆ The airflow over time during sampling process was recorded by the HVS.
- 3.3.3. HVSs were free-standing with no obstruction. The following criteria were considered in the installation of the HVS:
- ◆ Appropriate support to secure the samples against gusty wind needed to be provided the monitoring station;
 - ◆ A minimum of 2m separation from walls, parapets and penthouses was required for rooftop samplers;
 - ◆ No furnace or incinerator flues was nearby;
 - ◆ Airflow around the sampler was unrestricted; and
 - ◆ Permission could be obtained to set up the samplers and gain access to the monitoring station.
 - ◆ Any wire fence and gate, to protect the sampler, should not cause any obstruction during monitoring
 - ◆ A secured supply of electricity is needed to operate the samplers.
- 3.3.4. Preparation of Filter Papers
- ◆ Glass fiber filters were labelled and sufficient filters that were clean and without pinholes were selected;
 - ◆ All filters were equilibrated in the conditioning environment for 24 hours before weighing. The conditioning environment temperature was around 25°C and not varied by more than ±3°C; the relative humidity (RH)was 40%; and

- ◆ Acumen Laboratory and Testing Limited and ALS Technichem (HK) Pty Limited, as HOKLAS accredited laboratory, implemented comprehensive quality assurance and quality control programmes on the filters.

3.3.5. Field Monitoring

- ◆ The power supply was checked to ensure that the HVS was working properly;
- ◆ The filter holder and area surrounding the filter were cleaned;
- ◆ The filter holder was removed by loosening the foul 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 secured with an aluminum strip;
- ◆ The HVS was warmed- up for about 5 minutes to establish run- temperature conditions;
- ◆ A new flow rate record sheet was inserted into the flow recorder;
- ◆ The flow rates of the HVS was checked and adjusted to between $1.10\text{-}1.13 \text{ m}^3\text{min}^{-1}$, which was within the range specified in the EM&A Manual (i.e. $0.6\text{-}1.7 \text{ m}^3\text{min}^{-1}$);
- ◆ The programmable timer was set for a sampling period of 24 hours \pm hour, and the starting time, weather condition and 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 so that only surfaces with collected particulate matter were in contact;
- ◆ The filter paper was placed in a clean plastic envelope and sealed; all monitoring information was recorded on a standard data sheet and
- ◆ The filters were sent to (Acumen Laboratory and Testing Ltd and ALS Technichem (HK) Pty Ltd) for analysis.

3.3.6. Maintenance and Calibration

- ◆ The HVS and their accessories were maintained in a good working condition. For example, motor brushes were replaced routinely and electrical wiring was checked to ensure a continuous power supply; and
- ◆ The flow rate of each HVS with mass flow controller was calibrated using an orifice calibrator, Initial calibrations of the dust monitoring equipment were conducted upon installation and prior to commissioning. Five- point calibration was carried out for HVS using TE-5028A Calibration Kit. HVS is calibrated in fortnightly Intervals. The calibration records for the HVS is given in Appendix H.

3.3.7. Wind Data Monitoring

- ◆ The wind speed has been recorded from Hong Kong Observatory- King's Park meteorological station, along with portable wind speed meter stand by as back up if malfunction occurred or data was not recorded from HKO

3.4. Monitoring Locations

Air Quality

- 3.4.1. During the site visit, air monitoring station Hong Kong International Trade and Exhibition Centre had been recommended in the approved EM&A Manual and approved by IEC. A designated air monitoring location was identified and agreed with IEC and EPD. Detail of the air monitoring station is described in Table 3.2. The location plan of air quality monitoring stations is shown in Appendix J.

Table 3.2 Location of the Dust Monitoring Stations

Air Quality Monitoring Station	Dust Monitoring Station
E-A1	Hong Kong International Trade and Exhibition Centre

3.5. Monitoring date, time, frequency and duration

- 3.5.1. A summary of impact monitoring duration, sampling parameter and frequency is presented in Table 3.3.

Table 3.3: Summary of Impact Monitoring Programme

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

3.6. Result Summary

Air Quality

- 3.6.1. According to our field observations, the major dust source identified at the designated air quality monitoring station in the reporting month are summarised in Table 3.4

Table 3.4 Observation at Dust Monitoring Station

Monitoring Station	Major Dust Source
E-A1	Nearby traffic

- 3.6.2. Air quality impact monitoring for the reporting month was carried out on 4, 10, 15, 21 and 27 August 2020 at E-A1.

- 3.6.3. The results for 1-hour TSP and 24-hour TSP are summarized in Table 3.5 and Table 3.6. The measurement data and details of influencing factors such as weather conditions and site observation are presented in Appendix K.

Table 3.5 Summary of 1-hour TSP Monitoring Results

Monitoring Location	Range($\mu\text{g}/\text{m}^3$)	Action Level($\mu\text{g}/\text{m}^3$)	Limit Level($\mu\text{g}/\text{m}^3$)
E-A1	36 - 54	279	500

Table 3.6 Summary of 24-hour TSP Monitoring Results

Monitoring Location	Range($\mu\text{g}/\text{m}^3$)	Action Level($\mu\text{g}/\text{m}^3$)	Limit Level($\mu\text{g}/\text{m}^3$)
E-A1	12 - 52	142	260

Waste management

- 3.6.4. The waste generated from this Project includes inert C&D materials, and non-inert C&D materials. Non-inert C&D materials are made up of general refuse, vegetative wastes and recyclable wastes such as plastics and paper/cardboard packaging waste. Steel materials generated from the project are also grouped into non-inert C&D materials as the materials were not disposed of with other inert C&D materials. With reference to relevant handling records and trip tickets of this Project, the quantities of different types of waste generated in the reporting month are summarised in Table 3.7. Details of cumulative waste management data are presented as a waste flow table in Appendix L.

Table 3.7 Quantities of waste generated from the Project

Reporting period	Quantity					
	Inert C&D Materials (in 'tonnes)	Chemical Waste (in '000 Kg)	Non-inert C&D Materials			
			Others, e.g. General Refuse disposed at Landfill (in 'tonnes)	Recycled materials		
				Paper/card board (in '000 Kg)	Plastics (in '000 Kg)	Metals (in '000 Kg)
Aug-2020	11,316.5	0.0	38.8	0.1	0.0	0.0

4. SUMMARY OF COMPLAINTS, NOTIFICATION OF SUMMONS AND PROSECUTIONS

4.1. The Environmental Complaint Handling Procedure is shown in below Table 4.1:

Table 4.1 Environmental Complaint Handling Procedure

Complaint Received via Project Hotline	Complaint Received via 1823 or from other government departments
Contractor notify ER, ET and IEC	ER notify Contractor, ET and IEC
Contractor log complaint and date of receipt onto the complaint database. Contractor, ER and ET to conduct investigation of complaint	
If complaint is considered not valid	If complaint is found valid
ET or ER to reply the complainant if necessary	Contractor to identify and implement remedial measures in consultation with the IEC, ET and ER.
The ER, ET and IEC to review the effectiveness of the Contractor's remedial measures and the updated situation; ET to undertake additional monitoring and audit to verify the situation if necessary, and oversee that circumstances leading to the complaint do not recur. ER to conduct further inspection as necessary.	
If the complaint is referred by the EPD, the Contractor to prepare interim report on the status of the complaint investigation and follow-up actions stipulated above, including the details of the remedial measures and additional monitoring identified or already taken, for submission to EPD within the time frame assigned by the EPD	
The ET to record the details of the complaint, results of the investigation, subsequent actions taken to address the complaint and updated situation including the effectiveness of the remedial measures, supported by regular and additional monitoring results in the monthly EM&A reports	

- 4.2. Should non-compliance of the criteria occur, action in accordance with the Action Plan in Appendix D and Appendix E shall be carried out.
- 4.3. No exceedance of the Action and Limit Levels of 24-hour TSP and 1-hour TSP monitoring was recorded during the reporting month.
- 4.4. No complaint and non-compliance were received in the reporting month.
- 4.5. No notification of summons and successful prosecution was received in the reporting period.
- 4.6. Statistics on complaints, notifications of summons and successful prosecutions are summarized in Appendix M.

5. EM&A SITE INSPECTION

- 5.1. Site inspections were carried out on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures under the Contract. In the reporting period, 4 site inspections were carried out by the representative of ET, Contractor and Engineer on 4, 12, 20 and 26 Aug 2020, along with bi-weekly inspection of the implementation of landscape and visual mitigation measures conducted on 4 and 20 Aug 2020.
- 5.2. One joint site inspection with IEC also undertaken on 12 Aug 2020. Minor deficiencies were observed during weekly site inspection. Key observations during the site inspections are summarized in Table 5.1.

Table 5.1 Site Observations

Date	Environmental Observations	Follow-up Status
4 Aug 2020	1. Stockpile of dusty material was observed being stored without covering by impervious sheeting completely at Portion 2B and BEM office.	1. Stockpile of dusty material was covered by impervious sheeting.
12 Aug 2020	1. Wastewater should be treated before discharge near the gate of Portion 3B. 2. NRMM label should be displayed on crane lorry at Portion 3B next to Kai Tak River.	1. Sand bags were provided to block the untreated water run-off. 2. NRMM label was provided.
20 Aug 2020	1. Stagnant water was found on drip tray at KITEC.	1. Stagnant water was removed.
26 Aug 2020	1. Cleaning should be provided to the gate of Portion 3B. 2. Water barriers should be sealed to prevent muddy water runoff at Kai Fuk Road Loop Road.	1. The road was maintained clean. 2. Sand bags were provided.

- 5.3. The Contractor had rectified all observation identified during environmental site inspection in the reporting period.
- 5.4. According to the EIA Study Report, Environmental Permit, contract documents and EM&A Manual, the mitigation measures detailed in the documents had been implemented as much as practical during the reporting period. An updated Implementation Status of Environmental Mitigation Measures (EMIS) is provided in Appendix F.

6. FUTURE KEY ISSUES

6.1. The construction activities provided by Contractor in the next reporting month are:

- Bored Pile at Portion 1A, 2B, 3B & Kai Cheung Loop Road.
- Foundation Work for the Foot Bridge at Kai Fuk Road.
- Sheetpiling Works for Adit at Area 1D3.
- Sheetpiling Works for Underpass at Portion 3B.
- Construction of Marine Platform at Kai Tak Nallah.
- Reconstruction of Box Culvert at Portion 2B.

6.2. Potential environmental impacts arising from the above construction activities are mainly associated with dust and waste management.

6.3. The tentative schedule of 1-hour TSP and 24-hour TSP monitoring in the next reporting period is presented in Appendix N.

6.4. The construction programme for the Project for the next reporting month is presented in Appendix B.

7. CONCLUSION AND RECOMMENDATIONS

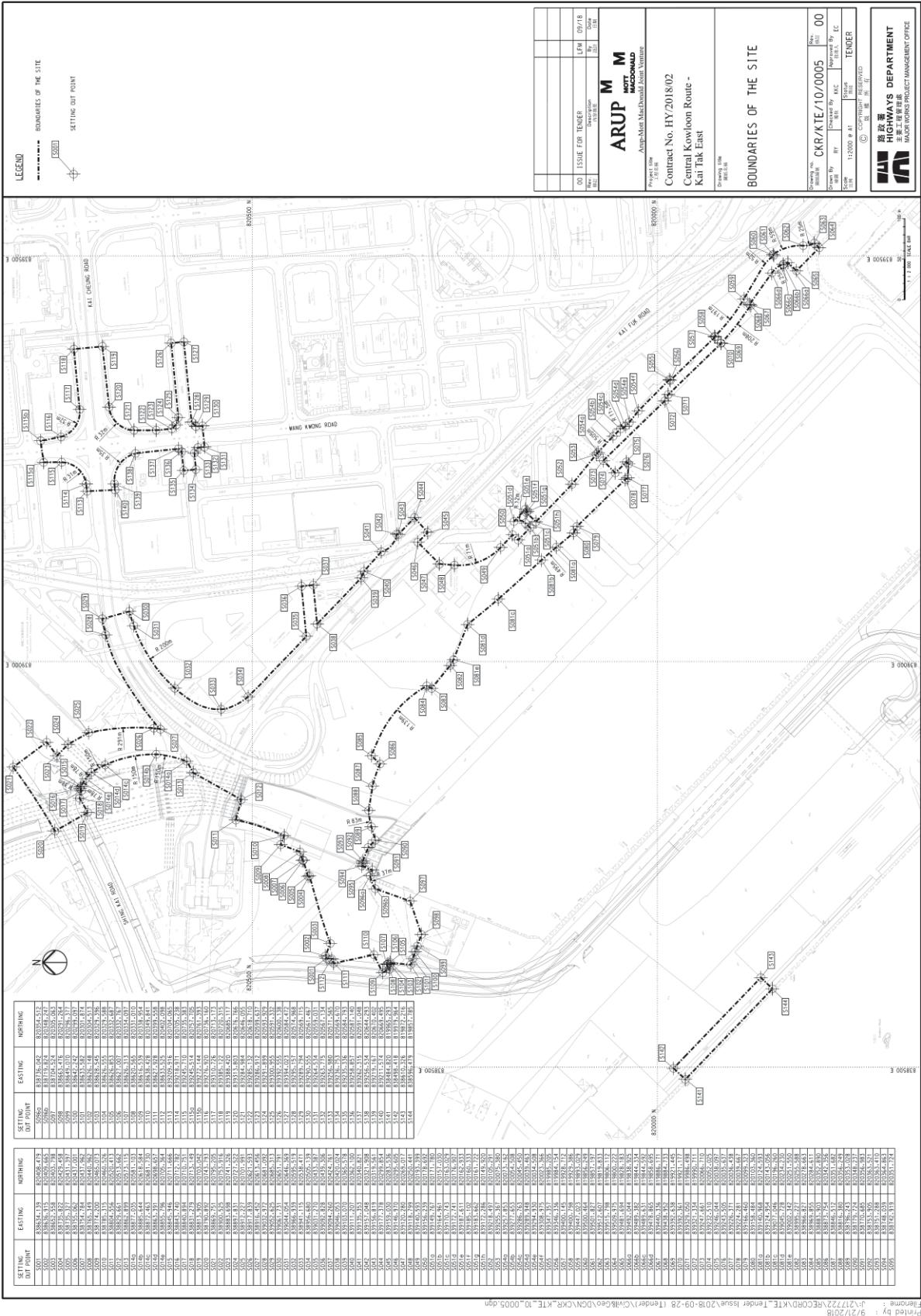
- 7.1. This 12th monthly EM&A Report presents the EM&A works undertaken during the period from 1 Aug 2020 to 31 Aug 2020 in accordance with the EM&A Manual and the requirement under EP- 457/2013/C.
- 7.2. Air quality (including 1-hour TSP and 24-hour TSP) was carried out in the reporting period. No exceedance of the Action and Limit Level was recorded for air quality impact monitoring during the reporting month.
- 7.3. Weekly environmental site inspections by the representative of ET, Contractor and Engineer were conducted during the reporting period. Joint site inspection with IEC were carried out on 12 Aug 2020. Minor deficiency was observed during site inspection and was rectified within the specified deadlines. The environmental performance of the Project was therefore considered satisfactory.
- 7.4. No complaint and non-compliance situation were received in the reporting month.
- 7.5. No notification of summons or prosecution was received since commencement of the Contract.
- 7.6. The ET will keep track on the construction works to confirm compliance of environmental requirements and the proper implementation of all necessary mitigation measures.

Appendix A

Alignment and Works Area for the Contract No. HY/2018/02

Contract No. HY/2018/02
Environmental Monitoring & Auditing

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Appendix B

Construction Programme

Contract No. HY/2018/02
Centra Kowloon Route - Kai Tak East

Contract No. HY/2018/02
Environmental Monitoring & Auditing

Activity ID	Activity Name	Timeline												Owner	Reviewer
		Start	Finish	Last State	Last T/F finish	Date (Day)	18A	19A	20A	21A	22A	23A	24A		
DES-0134	CSD-S1/S2 Piers & Deck ICE: Checking and approval	11/10/2020 A	01-Sep/2020	27-Aug/2020	05-Sep/2020	2									
DES-135	CSD-S1/S2 Piers & Deck ICE: Submit to PHM & all relevant parties for review and approval	70/22-Aug/2020 A	08-Oct/2020	27-Aug/2020	10-Oct/2020										
DES-0138	CSD-S1/S2 Piers & Deck Consent to start the works	0	08-Oct/2020	19-Aug/2020	26-Aug/2020										
Detailed Design for Bridge S2, S7 & S8 - Piles & Pile Caps		102/04-Nov/2020 A	31-Aug/2020	19-Aug/2020	26-Aug/2020	-55	0.00								
Bridge S7		102/04-Nov/2020 A	31-Aug/2020	19-Aug/2020	26-Aug/2020	-55	0.00								
DES-0165	CSD-S7 Piers & Deck Foundation Design Review and approval	36/04-Nov/2020 A	31-Aug/2020	19-Aug/2020	26-Aug/2020	-55	0.00								
DES-0166	CSD-S7 Piers & Deck Consent to start the works	0	31-Aug/2020	10-Aug/2020	26-Aug/2020	-55	0.00								
Detailed Design for Bridge S2, S7 & S8 - Piers & Deck		79/10-Aug/2020 A	27-Oct/2020	27-Aug/2021	13-Aug/2022	473	0.00								
Bridge S2		66/18-Aug/2020 A	27-Oct/2020	26-Aug/2021	24-Sep/2021	267	0.00								
DES-0174	CSD-S2 Piers & Deck ICE: Checking and approval	15/18-Aug/2020 A	05-Sep/2020	26-Aug/2021	09-Aug/2021	267	0.00								
DES-0176	CSD-S2 Piers & Deck Submit to PHM & all relevant parties for review and approval	52/18-Aug/2020 A	29-Oct/2020	26-Aug/2021	24-Sep/2021	267	0.00								
DES-0178	CSD-S2 Piers & Deck Consent to start the works	0	27-Oct/2020	24-Sep/2021	24-Sep/2021	267	0.00								
Bridge S7		52/10-Aug/2020 A	10-Oct/2020	27-Aug/2021	13-Aug/2021	218	0.00								
DES-0180	CSD-S7 Piers & Deck ICE: Checking and approval	26/10-Aug/2020 A	25-Sep/2020	27-Aug/2021	25-Aug/2021	218	0.00								
DES-0182	CSD-S7 Piers & Deck Submit to PHM & all relevant parties for review and approval	39/10-Aug/2020 A	10-Oct/2020	27-Aug/2021	13-Aug/2021	218	0.00								
DES-0184	CSD-S7 Piers & Deck Consent to start the works	0	10-Oct/2020	13-Aug/2021	218	0.00									
Bridge S8		64/25-Aug/2020 A	27-Oct/2020	07-Aug/2022	13-Aug/2022	473	0.00								
DES-0188	CSD-S8 Piers & Deck ICE: Checking and approval	52/25-Aug/2020 A	27-Oct/2020	07-Aug/22	13-Aug/22	473	0.00								
DES-0186	CSD-S8 Piers & Deck ICE: Checking and approval	12/25-Aug/2020 A	07-Sep/2020	07-Aug/22	23-Aug/2022	473	0.00								
DES-0190	CSD-S8 Piers & Deck Consent to start the works	0	27-Oct/2020	13-Aug/2022	473	0.00									
CSO-F for Foundation of Ring Road Underpass & Ventilation Adit		164/28-Feb/2020 A	15-Sep/2020	29-Mar/2022	19-May/2022	503	0.00								
Detailed Design for Foundation of Ring Road Underpass & Ventilation Adit		164/28-Feb/2020 A	15-Sep/2020	29-Mar/2022	19-May/2022	503	0.00								
DES-1198	CSD-Submit to PHM & all relevant parties for review and approval	51/28-Feb/2020 A	15-Sep/2020	29-Mar/22	19-May/22	503	0.00								
DES-0196	CSD-ICE: Checking and approval	13/28-Feb/2020 A	15-Sep/2020	29-Mar/22	19-May/22	503	0.00								
DES-0200	CSD-Consent to start the works	0	15-Sep/2020	15-Aug/22	503	0.00									
CSO-G for Bridges across Kai Tak River (3 spans to 2 spans)		135/19-Nov/2020 A	09-Sep/2020	12-Jul/22	530	0.00									
Detailed Design for Bridge S1, S3, S4, CKE & CRW - Piers & Deck		135/19-Nov/2020 A	15-Sep/2020	08-Sep/2020	12-Jul/22	530	0.00								
Bridge S3		94/27-Nov/2020 A	15-Sep/2020	20-Jun/22	12-Jun/22	530	0.00								
DES-0236	CSD-S3 Piers & Deck Submit to PHM & all relevant parties for review and approval	51/27-Nov/2020 A	20-Jun/22	12-Jun/22	530	0.00									
DES-0238	CSD-Consent to start the works	0	15-Sep/2020	12-Jun/22	530	0.00									
Bridge S4		63/27-Nov/2020 A	08-Sep/2020	29-Sep/2020	12	0.00									
DES-0242	CSD-C3/4 Piers & Deck Submit to PHM & all relevant parties for review and approval	24/27-Nov/2020 A	08-Sep/2020	08-Sep/2020	12	0.00									
DES-0244	CSD-C3/4 Piers & Deck Consent to start the works	0	15-Sep/2020	29-Sep/2020	12	0.00									
Bridge CKE & CRW		135/19-Nov/2020 A	15-Sep/2020	14-Apr/21	06-May/21	183	0.00								
DES-0248	CSD-C3/4 & CRW Piers & Deck Submit to PHM & all relevant parties for review and approval	47/19-Nov/2020 A	15-Sep/2020	14-Apr/21	06-May/21	183	0.00								
DES-0250	CSD-C3/4 & CRW Piers & Deck Consent to start the works	0	15-Sep/2020	06-May/21	183	0.00									
Temporary Works Design & Engineering		322/13-Feb/2020 A	15-Mar/2020	29-Feb/2020	04-Mar/22	325	0.00								
DES - Temporary Works for Bridges		304/13-Feb/2020 A	28-Feb/2020	29-Feb/2020	03-Mar/22	342	0.00								

**Central Kowloon Route - Kai Tak East (Month 16 Update) (Rev10 - CSD)
Three Month Rolling Programme**

DES - Temporary Works

CKE - Current Maintenance Work

CRW - Critical Repair Work

FW - Future Work

PM - Planned Work

RC - Routine Work

SC - Subsequent Work

TC - Test Work

WC - Working

WC - Working</p

Contract No. HY/2018/02
Environmental Monitoring & Auditing

Activity ID	Activity Name	Dong Dur.	Start	Finish	Lab State	Last Fin/Finish	Total TBA (Day)	TBA (Hour)	August	September												November					
										18	17	16	15	14	13	12	11	10	09	08	07	06					
1-2356	KTR - Clearing Part 1 area (IE-51) / 3E-53 / 05-CORE (CDNA-00023)	36	08-Jun-20 A	15-Jul-20 A	05-Aug-20	05-Aug-20	54																	27			
1-2358	KTR - Clearing Part 2 (Remaining area) (CDNA-00023)	48	16-Jul-20 A	15-Sep-20	20-Nov-20	20-Nov-20	54																	27			
Temporary steel platform over Kai Tak River																											
DIA Stage 1																											
1-2316	SE - Temp steel platform for 1D, piles	56	07-Aug-20 A	13-Oct-20	05-Aug-20	21-Aug-20	-144	12.00																			
1-2322	SE - Preparation work for inverted Casing & temporary pregrouting for 1D/51/59/A (1 m)	26	14-Oct-20	13-Nov-20	10-Nov-20	08-Aug-20	-80	4.00																			
DIA Stage 2																											
1-2318	SE - Temporary steel platform for 1E, 3E, CORE-KS piles	48	14-Oct-20	09-Dec-20	22-Apr-20	18-Jun-20	-144	12.00																			
1-2324	SE - Temporary pregrouting for 1E-51, 2E-53, CORE-4S (4 ms)	36	16-Dec-20	25-Mar-21	14-Mar-20	24-Aug-20	-125	5.00																			
DIA Stage 3																											
1-2332	SE - Install FD concrete block and bolting for Platform 1 (53', CORE & OEM)	36	10-Dec-20	23-Mar-21	19-Dec-20	30-Nov-20	-44	6.00																			
Temporary piling platform at KCKU U-turn section																											
1-2330	1 - Construct piling platform (15x15x15) adjacent to existing KCR platform	75	07-Sep-20	05-Oct-20	07-Sep-20	21-Mar-21	-37	20.00																			
1-2328	1. Construct piling platform (8x8x8.25x2.5) adjacent to existing KCR platform	60	14-Sep-20	25-Nov-20	10-Nov-20	21-Mar-21	-46	10.00																			
High Mast CCTV relocation (CE-0035)																											
1-2344	1 - Place High Mast CCTV after (50 days) [Potential early delivery on mid of Jun]	0	13-Jun-20 A	01-Aug-20 A	19-Jun-20	19-Jun-20	0.00																				
1-2345	1 - Procurement for CCTV	50	13-Jun-20 A	31-Mar-20 A	19-Jun-20	19-Jun-20																					
1-2346	1 - Construct new foiling for High Mast CCTV	12	04-Mar-20 A	31-Mar-20 A	19-Jun-20	19-Jun-20																					
1-2348	1 - Exact High Mast CCTV and ITAC (Subject to KTCM TTA arrangement)	17	01-Aug-20 A	24-Aug-20 A	19-Jun-20	19-Jun-20																					
1-2349	1 - Complete High Mast CCTV relocation works	0	24-Aug-20 A	15-Oct-20	09-Aug-20	18-Jun-20	-111	0.00																			
Watermain diversion at U-turn area (CE-0108)																											
54-5677-1	1 - Preparation works for watermain diversion (relocating, materials submission / etc)	35	13-Aug-20 A	22-Sep-20	09-Aug-20	13-Aug-20	-111																				
54-5677-2	1 - Watermain - Overhead works (indirect & connection)	15	23-Sep-20	12-Oct-20	14-Aug-20	30-Nov-20	-111																				
54-5677-3	1 - Watermain - water sample testing	10	12-Oct-20	23-Oct-20	01-Dec-20	11-Mar-20	-111																				
54-5677-4	1 - Watermain - Construction by NSD	6	24-Oct-20	31-Oct-20	12-Jan-20	18-Jun-20	-111																				
54-5677-5	1 - Complete watermain diversion works	0	31-Oct-20	15-Jan-20	18-Jun-20	11-Mar-20	-111																				
Mitigation Measures - Grout Curbing Barrier (NKE-0086)																											
For 1E-51/59/2 pole																											
1-1516-1	Grd - 1E-51/59/2 pole - Trial pit for Grout holes	12	17-Aug-20 A	29-Aug-20	21-Aug-20	26-Aug-20	-126																				
1-1516-2	Grd - 1E-51/59/2 pole - Grout hole drilling & grouting (12 rms)	66	31-Aug-20	18-Aug-20	27-Aug-20	18-Aug-20	-126																				
For 2E-52/53/2 pole	For 2E-52/53/2 pole	66	13-Aug-20 A	05-Aug-20	03-Aug-20	03-Aug-20	-126																				
1-1516-3	Grd - 2E-52 - Trial pit for Grout holes	12	17-Aug-20 A	22-Aug-20 A	03-Aug-20	03-Aug-20	-126																				
1-1516-4	Grd - 2E-52 - Grout hole drilling & grouting (10 rms)	60	25-Aug-20	05-Nov-20	03-Aug-20	13-Oct-20	-19																				
For 1E-51/59/2 pole	For 1E-51/59/2 pole	60	03-Oct-20	28-Nov-20	26-Nov-20	23-Dec-20	-19																				
1-1516-5	Grd - 1E-51/59 - Trial pit for Grout holes	12	04-Oct-20	21-Oct-20	28-Sep-20	11-Oct-20	-7																				
1-1516-6	Grd - 1E-51/59 - Grout holes drilling & grouting (8 rms)	60	06-Nov-20	19-Nov-20	14-Dec-20	23-Dec-20	-19																				
BIM Site Accommodation (PAH-0065)																											
1-1509	BIM - Access Date to BIM Site - Accommodation Area	0	24-Jun-20 A																								

**Central Kowloon Route - Kai Tak East (Month 16 Update) (Rev10 - CSD)
Three Month Rolling Programme**

Project ID: KTE-WP10_M16
Baseline: 3 Months Rolling Programme
Layout: Task Filter: 3 Months Rolling KTE - Submission
Filter: Task: 3 Months Rolling Programme Rev10
BIM: BIM Programme Rev10
Page 6 of 19

Contract No. HY/2018/02
Environmental Monitoring & Auditing

Activity ID	Activity Name	Timeline												Timeline															
		Start	Finish	Last State	Last Task	Task ID	Task Name	Start	Finish	Last State	Last Task	Task ID	Task Name	Start	Finish	Last State	Last Task	Task ID	Task Name	Start	Finish	Last State	Last Task	Task ID	Task Name				
Sch_3.3 Bridge S3 Works	S3 - Piling Works	16/03/2020	08/03/2020	08/03/2020	ABUT A-3A-S3	13-3A-S3	13-3A-S3	438	13.00																				
Piling Works - ABUT A-3A-S3	S3 - Bond Piles for ABUT A-3A-S3 (1 m)	16/03/2020	08/03/2020	08/03/2020	ABUT A-3A-S3	13-3A-S3	13-3A-S3	438	13.00																				
3.3-2801	S3 - Bond Piles for ABUT A-3A-S3 (2 m)	17/03/2020	08/03/2020	08/03/2020	ABUT A-3A-S3	13-3A-S3	13-3A-S3	439	13.00																				
3.3-2800	S3 - ABUT A-3A-S3 Proof drilling & Piles testing	24/03/2020	08/04/2020	08/04/2020	ABUT A-3A-S3	13-3A-S3	13-3A-S3	439	13.00																				
3.3-2802	S3 - ABUT A-3A-S3 Proof drilling & Piles testing	24/03/2020	08/04/2020	08/04/2020	ABUT A-3A-S3	13-3A-S3	13-3A-S3	439	13.00																				
Piling Works - ABUT A-3D-S3	S3 - Bond Piles for ABUT A-3D-S3 (1 m)	13/04/2020	08/03/2020	08/03/2020	ABUT A-3D-S3	13-3D-S3	13-3D-S3	438	13.00																				
3.3-2813	S3 - Bond Piles for ABUT A-3D-S3 (2 m)	14/04/2020	08/03/2020	08/03/2020	ABUT A-3D-S3	13-3D-S3	13-3D-S3	439	13.00																				
3.3-2814	S3 - ABUT A-3D-S3 Proof drilling & Piles testing	24/04/2020	08/05/2020	08/05/2020	ABUT A-3D-S3	13-3D-S3	13-3D-S3	438	13.00																				
Sch_3.4 Bridge S4 Works	S4 - Piling Works	16/03/2020	13/03/2020	13/03/2020	ABUT A-4A-S4	13-4A-S4	13-4A-S4	439	16.00																				
Piling Works - ABUT A-4A-S4	S4 - Bond Piles for ABUT A-4A-S4 Proof drilling & Piles testing	16/03/2020	13/03/2020	13/03/2020	ABUT A-4A-S4	13-4A-S4	13-4A-S4	439	16.00																				
3.4-2808	S4 - ABUT A-4A-S4 Proof drilling & Piles testing	24/03/2020	19/03/2020	19/03/2020	ABUT A-4A-S4	13-4A-S4	13-4A-S4	439	16.00																				
Piling Works - Pier P-AB-S4-A	S4 - AB-S4-A Proof drilling & Re-testing	24/03/2020	23/04/2020	19/03/2020	Pier P-AB-S4-A	13-4B-S4-A	13-4B-S4-A	439	16.00																				
3.4-2010	S4 - AB-S4-A Proof drilling & Re-testing	24/03/2020	23/04/2020	19/03/2020	Pier P-AB-S4-A	13-4B-S4-A	13-4B-S4-A	439	16.00																				
Piling Works - Pier P-AB-S4-B	S4 - AB-S4-B Proof drilling & Piles testing	24/03/2020	23/04/2020	19/03/2020	Pier P-AB-S4-B	13-4B-S4-B	13-4B-S4-B	439	16.00																				
3.4-2014	S4 - AB-S4-B Proof drilling & Piles testing	24/03/2020	23/04/2020	19/03/2020	Pier P-AB-S4-B	13-4B-S4-B	13-4B-S4-B	439	16.00																				
Piling Works - Pier P-AB-S4-C	S4 - Bond Piles for 4E-S4 (1 m)	13/03/2020	19/03/2020	19/03/2020	Pier P-AB-S4-C	13-4C-S4-C	13-4C-S4-C	439	16.00																				
3.4-2012	S4 - Bond Piles for 4E-S4 (1 m)	21/03/2020	30/03/2020	19/03/2020	Pier P-AB-S4-C	13-4C-S4-C	13-4C-S4-C	439	16.00																				
3.4-2034	S4 - 4E-S4 Proof drilling & Piles testing	21/03/2020	20/03/2021	19/03/2020	Pier P-AB-S4-C	13-4C-S4-C	13-4C-S4-C	439	16.00																				
Piling Works - Pier P-AB-S4-D	S4 - 4E-S4 Proof drilling & Piles testing	21/03/2020	20/03/2021	19/03/2020	Pier P-AB-S4-D	13-4D-S4-D	13-4D-S4-D	439	16.00																				
3.4-2037	S4 - Bond Piles for 4E-S4 (1 m) - CSD	28/03/2020	19/03/2020	19/03/2020	Pier P-AB-S4-D	13-4D-S4-D	13-4D-S4-D	439	16.00																				
Piling Works - Pier P-4G-S4	S4 - Bond Piles for 4G-S4 (1 m)	17/03/2020	30/03/2020	19/03/2020	Pier P-4G-S4	13-4G-S4	13-4G-S4	439	16.00																				
3.4-2040	S4 - Bond Piles for 4G-S4 (1 m)	20/03/2020	02/04/2020	03/03/2020	Pier P-4G-S4	13-4G-S4	13-4G-S4	439	16.00																				
3.4-2044	S4 - 4G-S4 Proof drilling & Piles testing	20/03/2020	30/03/2020	18/03/2020	Pier P-4G-S4	13-4G-S4	13-4G-S4	439	16.00																				
S4 - Pier Caps, Pier / Abutment	S4 - Bond Piles for 4G-S4 (1 m) - CSD	31/03/2020	07/03/2021	15/03/2020	Pier P-4G-S4	13-4G-S4	13-4G-S4	439	16.00																				
Pier 4G-S4	S4 - Pier Caps, Pier Head (1 m) for 4G-S4	31/03/2020	14/03/2021	15/03/2020	Pier 4G-S4	13-4G-S4	13-4G-S4	439	16.00																				
3.4-1128	S4 - Pier Caps, Pier Head (1 m) for 4G-S4	13/03/2020	21/03/2020	15/03/2020	Pier 4G-S4	13-4G-S4	13-4G-S4	439	16.00																				
3.4-1130	S4 - Construct Pier Cap 4G-S4	18/03/2020	22/03/2021	15/03/2020	Pier 4G-S4	13-4G-S4	13-4G-S4	439	16.00																				
Sch_3.5 Bridge S7 Works	S7 - Piling Works	17/03/2020	16/03/2020	17/03/2020	Piling Works - Pier P-7B	13-4B-S7	13-4B-S7	439	16.00																				
Piling Works - Pier P-7B	S7 - Modulation	44/03/2020	19/03/2021	19/03/2020	Piling Works - Pier P-7B	13-4B-S7	13-4B-S7	439	16.00																				
3.5-3399	S7 - Bond Piles for 7B-S7-1 (ONE-045)	6/03/2020	25/03/2020	19/03/2020	Piling Works - Pier P-7B	13-4B-S7	13-4B-S7	439	16.00																				
3.5-3404	S7 - Bond Piles for 7C-S7-1 (ONE-045)	38/03/2020	12/03/2021	27/03/2020	Piling Works - Pier P-7C	13-4C-S7	13-4C-S7	439	16.00																				
3.5-404	S7 - Bond Piles for 7C-S7-1 (ONE-045)	38/03/2020	17/03/2021	17/03/2020	Piling Works - Pier P-7D	13-4D-S7	13-4D-S7	439	16.00																				
3.5-408	S7 - Bond Piles for 7D-S7-1 (ONE-045)	84/03/2020	10/03/2021	19/03/2020	Piling Works - Pier P-7D	13-4D-S7	13-4D-S7	439	16.00																				
3.5-2408	S7 - Bond Piles for 7D-S7-1 (ONE-045)	84/03/2020	10/03/2021	19/03/2020	Piling Works - Pier P-7D	13-4D-S7	13-4D-S7	439	16.00																				

Central Kowloon Route - Kai Tak East (Month 16 Update) (Rev10 - CSD)
Three Month Rolling Programme

Project ID: KTE/WP10_M16
Baseline: 3 Months Rolling Programme
Filter: TASK Iter 5 Months Rolling KTE - Submission
Report Period: Month 16 M16
Report Date: 20/03/2020
Page 8 of 19

Contract No. HY/2018/02
Environmental Monitoring & Auditing

Activity ID	Activity Name	Timeline												Owner	Supervisor	Reviewer														
		Start	Finish	Last State	Last T/Finish	Total	T/A	F/A	Aug 1	Aug 2	Aug 3	Aug 4	Aug 5																	
Sch_3.6 Bridge S8 Works	S8 - Piling Works	199 13-May-20 A	04-Jun-21	15-Jun-21	05-Aug-22	462	17.00																							
Piling Works - Pier P-BC		199 13-May-20 A	04-Jun-21	15-Jun-21	05-Aug-22	462	17.00																							
3.6-5604	S8 - Bond Piles for S8-C58 (2 m)	76 03-Oct-20	04-Nov-21	05-Nov-22	462	8.00																								
Piling Works - Pier P-BD		76 03-Oct-20	04-Nov-21	05-Nov-22	462	8.00																								
3.6-5606	S8 - Bond Piles for S8-C58 (3 m)	84 13-May-20 A	30-Nov-20	19-Jun-21	05-Aug-21	120	9.00																							
Sch_3.7 Bridge S9 Works		Timeline												Owner	Supervisor	Reviewer														
S9 - Piling Works		172 01-Jun-20 A	02-Apr-20	23-Mar-20	-26	32.00																								
Piling Works - Pier P-9A		172 01-Jun-20 A	02-Apr-20	23-Mar-20	-26	29.00																								
3.7-5600	S9 - Bond Piles for S9A (1 m)	26 03-Oct-20	03-Dec-20	23-Mar-20	19-May-20	41	3.00																							
S9 - Shallow drilling & Piles testing		24 06-Nov-20	03-Dec-20	24-Mar-20	19-May-20	41	0.00																							
Piling Works - Pier P-9B		56 19-Apr-20	26-Jun-21	03-Jun-20	05-Sep-20	-16	8.00																							
3.7-5604	S9 - Bond Piles for S9B (2 m)	56 19-Nov-20	26-Jun-21	03-Jun-20	05-Sep-20	-16	8.00																							
Piling Works - Pier P-9C		121 24-Jun-20 A	16-Oct-20	16-May-20	23-Mar-20	6	10.00																							
S9 - Bond Piles for S9C (1 m)		56 24-Mar-20 A	11-May-20	07-Nov-20	25-Nov-20	61	6.00																							
3.7-5609	S9 - Bond Piles for S9C (1 m)	39 03-Oct-20	18-Nov-20	16-May-20	02-Jul-20	-16	4.00																							
S9 - S9C Proof drilling & Piles testing		24 19-Nov-20	15-Dec-20	26-Nov-20	23-Dec-20	6	0.00																							
Piling Works - Pier P-9D		137 01-Jun-20 A	12-Dec-20	02-Apr-20	26-Nov-20	-14	8.00																							
3.7-5612	S9 - Bond Piles for S9D (1 m)	28 01-Jun-20 A	21-Aug-20 A	02-Apr-20	03-Apr-20	4.00																								
3.7-5614	S9 - Bond Piles for S9E (1 m)	41 14-Aug-20 A	30-Sep-20	03-Apr-20	15-Aug-20	-16	4.00																							
3.7-5616	S9 - S9F Proof drilling & Piles testing	24 16-Nov-20	12-Dec-20	30-Dec-20	26-Apr-20	-14	0.00																							
S9 - Pier Caps, Pier / Abutment		14 14-Dec-20	31-Dec-20	27-Feb-20	12-Dec-20	-14	3.00																							
Pier 9D		14 14-Dec-20	31-Dec-20	27-Feb-20	12-Dec-20	-14	3.00																							
3.7-5652	S9 - Install steelplate for pier cap S9A	4 14-Dec-20	17-Dec-20	27-Nov-20	01-Dec-20	-14	1.00																							
S9 - Excavation down to foundation level C-S9A		10 15-Dec-20	31-Dec-20	02-Dec-20	12-Dec-20	-14	2.00																							
Sch_3.8 Bridge S1/S9 Works	S1/S9 - Piling Works	S2 05-Nov-20	07-Nov-21	08-Mar-20	19-Oct-20	-65	4.00																							
S1/S9 - Piling Works		S2 05-Nov-20	07-Nov-21	08-Mar-20	19-Oct-20	-65	4.00																							
Piling Works - Pier P-1D-B		S2 05-Nov-20	07-Nov-21	08-Mar-20	19-Oct-20	-65	4.00																							
3.8-4000	S1/S9 - Bond Piles for 1DS1 (1 m)	28 05-Nov-20	07-Nov-20	08-Mar-20	08-Apr-20	-100	4.00																							
3.8-4002	S1/S9 - 1DS1/DS9S Proof drilling & Piles testing	24 08-Dec-20	07-Mar-21	19-Sep-20	19-Oct-20	-65	0.00																							
Sch_3.9 Bridge C9/CW Works	C9Rw - Piling Works	137 08-Jan-20 A	05-Dec-20	04-Feb-20	12-Mar-21	170	15.00																							
C9Rw - Piling Works		137 08-Jan-20 A	05-Dec-20	04-Feb-20	12-Mar-21	170	15.00																							
3.9-4218	OKRW - Bond Piles for ABUT-K4-K1-OKRW-1A (1 m) - ONE-E049	136 13-Mar-20 A	05-Dec-20	24-Feb-20	09-Mar-20	-149	12.00																							
3.9-4216	OKRW - Bond Piles for ABUT-K4-K1-OKRW-3 (1 m) - ONE-E049	30 02-Feb-20	05-Dec-20	06-Feb-20	09-Mar-20	-149	4.00																							
Piling Works - ABUT-K4-K4-C9RW		75 08-Jun-20 A	21-May-20	05-Jun-20	13-Mar-21	232	3.00																							
3.9-4224	OKRW - Bond Piles for ABUT-K4-K4-C9RW (2 m)	58 08-Jun-20 A	13-Aug-20 A	05-Jun-20	13-Mar-21	300																								
3.9-4226	OKRW - ABUT-K4-K4-C9RW Proof drilling & Piles testing	24 25-Aug-20	21-May-20	12-Jun-21	12-Mar-21	232	0.00																							

**Central Kowloon Route - Kai Tak East (Month 16 Update) (Rev10 - CSD)
Three Month Rolling Programme**

Project ID: KTE/WP10_M16
Baseline: 3 Months Rolling Programme
Filter: TASK Iter 5 Months Rolling KTE - Submission
Page 9 of 19

Contract No. HY/2018/02
Environmental Monitoring & Auditing

Activity ID	Activity Name	Timeline												Owner	Supervisor	Reviewer															
		Start	Finish	Last State	Last T/Finish	Total	T/A	F/A	Aug 1	Aug 2	Aug 3	Aug 4	Aug 5																		
Sch_3.6 Bridge S8 Works	S8 - Piling Works	199 13-May-20 A	04-Jun-21	15-Jun-21	05-Aug-22	462	17.00																								
Piling Works - Pier P-BC		199 13-May-20 A	04-Jun-21	15-Jun-21	05-Aug-22	462	17.00																								
3.6-5604	S8 - Bond Piles for S8-C58 (2 m)	76 03-Oct-20	04-Nov-21	05-Nov-22	462	8.00																									
Piling Works - Pier P-BD		76 03-Oct-20	04-Nov-21	05-Nov-22	462	8.00																									
3.6-5606	S8 - Bond Piles for S8-C58 (3 m)	84 13-May-20 A	30-Nov-20	19-Jun-21	05-Aug-21	120	9.00																								
Sch_3.7 Bridge S9 Works		172 01-Jun-20 A	02-Apr-20	23-Mar-20	-26	32.00																									
S9 - Piling Works		172 01-Jun-20 A	02-Apr-20	23-Mar-20	-26	29.00																									
Piling Works - Pier P-9A		52 03-Oct-20	23-Mar-20	19-May-20	41	3.00																									
3.7-5600	S9 - Bond Piles for S9-A (1 m)	26 05-Oct-20	05-Nov-20	22-Mar-20	22-Aug-20	61	3.00																								
S9 - Shallow drilling & Piles testing		24 06-Nov-20	03-Dec-20	24-Aug-20	19-May-20	61	0.00																								
Piling Works - Pier P-9B		56 19-Nov-20	26-Nov-20	03-Mar-21	03-Aug-20	05-May-20	-16	8.00																							
3.7-5604	S9 - Bond Piles for S9-B (2 m)	56 19-Nov-20	26-Nov-20	03-Mar-21	03-Aug-20	05-May-20	-16	8.00																							
Piling Works - Pier P-9C		121 24-Mar-20 A	16-Oct-20	16-May-20	23-Mar-20	6	10.00																								
S9 - Bond Piles for S9-C (1 m)		56 24-Mar-20 A	11-Sep-20	07-Nov-20	25-Nov-20	61	6.00																								
3.7-5609	S9 - Bond Piles for S9-C (1 m)	39 03-Oct-20	18-Nov-20	16-May-20	02-Jul-20	-16	4.00																								
S9 - S9 Pile drilling & Piles testing		24 19-Nov-20	15-Dec-20	26-Nov-20	23-Dec-20	6	0.00																								
Piling Works - Pier P-9D		137 01-Jun-20 A	12-Oct-20	02-Apr-20	26-Nov-20	-14	8.00																								
3.7-5612	S9 - Bond Piles for S9-D (1 m)	28 01-Jun-20 A	21-Aug-20 A	02-Apr-20	03-Aug-20	4.00																									
3.7-5614	S9 - Bond Piles for S9-E (1 m)	41 14-Aug-20 A	30-Sep-20	03-Apr-20	15-Aug-20	-16	4.00																								
3.7-5616	S9 - S9 Pile drilling & Piles testing	24 16-Nov-20	12-Dec-20	30-Dec-20	26-Apr-20	-14	0.00																								
S9 - Pier Caps, Pier / Abutment		14 14-Oct-20	31-Oct-20	27-Feb-20	12-Dec-20	-14	3.00																								
Pier 9D		14 14-Oct-20	31-Oct-20	27-Feb-20	12-Dec-20	-14	3.00																								
3.7-5652	S9 - Install steelrod for pile cap S9A	4 14-Oct-20	17-Dec-20	27-Nov-20	01-Dec-20	-14	1.00																								
3.7-5656	S9 - Excavation down to foundation level C-S9A	10 15-Dec-20	31-Dec-20	02-Dec-20	12-Dec-20	-14	2.00																								
Sch_3.8 Bridge S1/S9 Works	S1/S9 - Piling Works	S2 05-Nov-20	07-Nov-20	08-Mar-21	19-May-20	-65	4.00																								
S1/S9 - Piling Works		S2 05-Nov-20	07-Nov-20	08-Mar-21	19-May-20	-65	4.00																								
Piling Works - Pier P-1D-B		S2 05-Nov-20	07-Nov-20	08-Mar-21	19-May-20	-65	4.00																								
3.8-0000	S1/S9 - Bond Piles for 1DS1 (1 m)	28 05-Nov-20	07-Nov-20	08-Mar-21	08-Aug-20	-100	4.00																								
3.8-0002	S1/S9 - 1D51/2S9A Proof drilling & Piles testing	24 08-Dec-20	07-Mar-21	19-May-20	19-Oct-20	-65	0.00																								
Sch_3.9 Bridge C9/C9 Works	C9Rw - Piling Works	137 08-Jun-20 A	05-Dec-20	08-Mar-21	19-May-20	-65	4.00																								
C9Rw - Piling Works		137 08-Jun-20 A	05-Dec-20	08-Mar-21	19-May-20	-65	4.00																								
3.9-0118	OKRW - Bond Piles for ABUT-K4-KCRW/M-1 (2 m) - ONE-E049	136 13-Jun-20 A	05-Dec-20	24-Feb-20	09-Mar-20	-149	12.00																								
3.9-0116	OKRW - Bond Piles for ABUT-K4-KCRW/M-1 (2 m) - ONE-E049	30 02-Nov-20	05-Dec-20	06-Feb-20	09-Mar-20	-149	4.00																								
Piling Works - ABUT-K4-KCRW		75 08-Jun-20 A	21-May-20	05-Jun-20	13-Mar-21	232	3.00																								
3.9-0224	OKRW - Bond Piles for ABUT-K4-KCRW/M-1 (2 m)	58 08-Jun-20 A	13-Aug-20 A	05-Jun-20	13-Mar-21	232	3.00																								
3.9-0226	OKRW - ABUT-K4-KCRW Proof drilling & Piles testing	24 25-Aug-20	21-Sep-20	12-Mar-21	12-Mar-21	232	0.00																								

**Central Kowloon Route - Kai Tak East (Month 16 Update) (Rev10 - CSD)
Three Month Rolling Programme**

Project ID: KTE/WP10_M16
Baseline: Month 16
Filter: Task Iter 1
Review: Month 16

Page 9 of 19

Current Month
Actual Work
Critical Planning Work
Planning Work

Activity ID	Activity Name	Start Date	End Date	Duration	Timeline		Last Month Total (Days)	This Month Total (Days)	Remaining Duration
					Actual Start	Finish			
Section 3 - Wang Kwong Road Junction Improvement Works									
SCH_5D_Wang Kwong Road Junction Improvement Works									
TM Stage 2a-2b (WWR/LHS Junction - Kelleit School)									
SD-5978	IC - Plate load test and reporting	14.11-Dec-20	29-Dec-20	16-Nov-20	01-Dec-20	-5d	31.06		
SD-5975	WWR-Stage2-1 - Temporary traffic light setting up (WWR)	6.28-Nov-20 A	03-Jan-20 A	24-Nov-20	28-Oct-20	-5d	26	02	22
SD-5977	WWR-Stage2-1 - Draw pit installation and duct laying for EMH/ATC/PL	20.29-Nov-20 A	20-Jan-20 A	22-Sep-20	22-Sep-20	0d	26	02	22
SD-5972	WWR-Stage2-1 - Relocation of Gully	12.15-Nov-20 A	25-Mar-20 A	22-Sep-20	22-Sep-20	0d	56		
SD-5974	WWR-Stage2-1 - Road level installation	12.15-Nov-20 A	25-Mar-20 A	28-Sep-20	28-Sep-20	0d	56		
SD-5976	WWR-Stage2-1 - Traffic light / Sign post installation	6.22-Nov-20 A	25-Mar-20 A	28-Sep-20	28-Sep-20	0d	56		
SD-5978	WWR-Stage2-1 - Road reinforcement	41.25-Mar-20 A	10-Sep-20	22-Sep-20	10-Oct-20	-2d	156		
5-5979	WWR-Stage2-1 - Temporary traffic light setting up (HS)	5.31-Aug-20	04-Sep-20	28-Sep-20	05-Oct-20	-2d	156		
SD-5980	WWR-Stage2-1 - Railing installation	8.02-Sep-20	10-Sep-20	30-Sep-20	10-Oct-20	-2d	156		
SD-5982	WWR-Stage2-1 - Completion of TTA Stage 2-1	0	10-Sep-20		10-Oct-20	-2d	156		
TM Stage 2c (WWR/KCR Junction - Kelleit School)									
SD-6038	WWR-Stage2c - UU joints, show pit and cable re-alignment works - H&C & CLP	12.30-Nov-20 A	12-Jun-20 A	16-Sep-20	16-Sep-20	0d	156		
SD-6011a	WWR-Stage2c - Installation for Town Gas New (LWR/HY) Existing Gas Main	6.30-Nov-20 A	05-Jun-20 A	24-Nov-20	24-Nov-20	0d	156		
SD-6011b	WWR-Stage2c - Town Gas pipe modification works (5 way)*	30.10-Nov-20 A	14-Jun-20 A	24-Nov-20	24-Nov-20	0d	156		
SD-6042	WWR-Stage2c - Draw pit installation and duct laying for HL	6.13-Mar-20 A	18-Mar-20 A	24-Mar-20	24-Mar-20	0d	156		
SD-6044	WWR-Stage2c - Sheet lining relocation	12.20-Mar-20 A	22-Aug-20 A	16-Sep-20	16-Sep-20	0d	156		
SD-6046	WWR-Stage2c - Relocation of Gully	15.24-Aug-20 A	06-Sep-20	16-Sep-20	01-Oct-20	-1d	156		
SD-6048	WWR-Stage2c - Kitch installation	6.02-Sep-20	04-Sep-20	25-Sep-20	03-Oct-20	-2d	156		
SD-6052	WWR-Stage2c - Railing installation	6.10-Sep-20	16-Sep-20	05-Oct-20	10-Oct-20	-1d	156		
SD-6050	WWR-Stage2c - Road reinforcement	6.10-Sep-20	16-Sep-20	05-Oct-20	10-Oct-20	-1d	156		
SD-6054	WWR-Stage2c - Completion of TTA Stage 2c	0	16-Sep-20		10-Oct-20	-1d	156		
TM Stage 3 (WWR/LHS Junction - Bus Depot) [OE-00033]									
SD-6050	WWR-Stage3 - Draw pit installation and duct laying for EM / ATC	6.27-Nov-20 A	05-Jun-20 A	22-Sep-20	22-Sep-20	0d	156		
SD-6062	WWR-Stage3 - Fire Hydrant, water valve relocation	9.27-Nov-20 A	05-Jun-20 A	22-Sep-20	22-Sep-20	0d	156		
SD-6064	WWR-Stage3 - Relocation of Gully	3.06-Mar-20 A	25-Aug-20 A	22-Sep-20	22-Sep-20	0d	156		
SD-6066	WWR-Stage3 - Kitch installation	6.06-Mar-20 A	25-Aug-20 A	22-Sep-20	22-Sep-20	0d	156		
SD-6072	WWR-Stage3 - Road reinforcement and block paving	23.24-Mar-20 A	03-Sep-20	22-Sep-20	30-Sep-20	-2d	156		
SD-6068	WWR-Stage3 - Traffic light installation	6.01-Aug-20 A	10-Oct-20	10-Oct-20	10-Oct-20	0d	156		
SD-6070	WWR-Stage3 - Sign Post installation	5.25-Aug-20 A	29-Aug-20 A	22-Sep-20	22-Sep-20	0d	156		
SD-6074	WWR-Stage3 - Railing installation	5.25-Aug-20 A	10-Sep-20	22-Sep-20	10-Oct-20	-2d	156		
SD-6076	WWR-Stage3 - Completion of TTA Stage 3	0	10-Sep-20		10-Oct-20	-2d	156		
TM Stage 4 (WWR/LHS Junction - Wing On)									
SD-6078	WWR-Stage4 - Implement TTA Stage 4	11.28-Mar-20 A	08-Aug-20 A	24-Nov-20	24-Nov-20	0d	156		
SD-6080	WWR-Stage4 - Traffic Excavation	0.28-Mar-20 A	24-Nov-20	24-Nov-20	24-Nov-20	0d	156		
SD-6082	WWR-Stage4 - Draw pit installation and duct laying for EM / ATC	4.30-Mar-20 A	03-Aug-20 A	24-Nov-20	24-Nov-20	0d	156		
Central Kowloon Route - Kai Tak East (Month 16 Update) (Rev10 - CSD)									
Three Month Rolling Programme									
Project ID: KTE-WP10_M16		Start Date: 24-Apr-20		Review: 24-Apr-20		Overshoot: 0d		Approved:	
Baseline:		Actual Work:		Overall Progress:		Remaining Work:		Planned Work:	
Layout & Task: Task 3: Month Rolling Programme		Start Date: 24-Apr-20		Progress: 0%		Remaining Work: 0%		Planned Work: 0%	
File: Task 3: Month Rolling Programme		Start Date: 25-Aug-20		Progress: 0%		Remaining Work: 0%		Planned Work: 0%	
Phase: Month 3: Month Rolling Programme		Start Date: 25-Aug-20		Progress: 0%		Remaining Work: 0%		Planned Work: 0%	
Page: 11 of 19		Page: 11 of 19		Page: 11 of 19		Page: 11 of 19		Page: 11 of 19	

Contract No. HY/2018/02
Environmental Monitoring & Auditing

Activity ID	Activity Name	September										October										November													
		Ding Dur.	Start	Finish	Last State	Last T/Finish	Total T/Finish	(Day)	Flost	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
SD46084	WKR Stage1 - Blockoff and traffic diversion	5	04-Aug-20 A	05-Aug-20 A	24-May-20	24-May-20	0.50																												
SD46086	WKR Stage1 - Completion of TTA Stage 4	0	08-Aug-20 A	09-Aug-20 A	24-May-20	24-May-20	0.50																												
TM Stage 5 (WKR / KCR Junction)		100	14-Aug-20 A	09-Sep-20	12-09-20	28-Oct-20	39	2.50																											
SD46156	WKR Stage5 - Duct pvt installation and duct laying for E&M	36	14-Aug-20 A	27-Aug-20	12-09-20	14-Oct-20	39	0.50																											
SD46158	WKR Stage5 - Existing duct hand demolition	6	25-Aug-20 A	31-Aug-20	12-09-20	17-Oct-20	39	0.50																											
SD46160	WKR Stage5 - New items stand construction	6	28-Aug-20	03-Sep-20	15-Oct-20	21-Oct-20	39	0.50																											
SD46162	WKR Stage5 - Traffic belief installation	6	01-Sep-20	07-Sep-20	19-Oct-20	24-Oct-20	39	0.50																											
SD46164	WKR Stage5 - Traffic light installation	6	03-Sep-20	09-Sep-20	21-Oct-20	28-Oct-20	39	0.50																											
SD46166	WKR Stage5 - Completion of TTA Stage 5	0	09-Sep-20	15-Sep-20	28-Oct-20	28-Oct-20	39																												
TM Stage 6 (Pavement Resurfacing and reinforcement works)		102	31-Aug-20	03-Sep-21	26-Feb-20	01-Apr-20	126	12.00																											
SD46168	WKR Stage6 - Jigment TTA Stage 6 (CDM40079)	0	31-Aug-20	29-Aug-20	29-Aug-20	18-Aug-20	-124																												
SD461701	WKR Stage6 - Pavement resurfacing for WKR/HJS Junction (HJS EB + FS)	21	31-Aug-20	20-Sep-20	29-Aug-20	18-Aug-20	-155	2.00																											
SD461702	WKR Stage6 - Pavement resurfacing for WKR/HJS Junction (WKR SSJ)	19	21-Sep-20	09-Oct-20	19-Aug-20	07-Aug-20	-155	2.00																											
SD461703	WKR Stage6 - Pavement resurfacing for WKR/HJS Junction (WB Island)	19	10-Oct-20	19-Oct-20	05-May-20	17-Aug-20	-155	2.00																											
SD461704	WKR Stage6 - Pavement resurfacing for WKR/HJS Junction (HJS Island)	13	20-Oct-20	01-Nov-20	18-Aug-20	30-May-20	-155	2.00																											
SD461705	WKR Stage6 - Pavement resurfacing for WKR/HJS Junction (WB NB SSJ)	35	02-Nov-20	06-Dec-20	31-Aug-20	04-Jul-20	-155	2.00																											
SD461706	WKR Stage6 - Pavement resurfacing for WKR/HJS Junction (WB NBJ)	26	07-Dec-20	03-Jan-21	05-Mar-20	01-Aug-20	-155	2.00																											
Sch. 8 WKR - Soil Landscape Works		24	21-Sep-20	20-Oct-20	28-Sep-20	28-Oct-20	6	4.00																											
86126	LS - Soft landscaping work for Wong Koon Road Junction Improvement	24	21-Sep-20	20-Oct-20	28-Sep-20	28-Sep-20	6	4.00																											
Section 8 - Ventilation and E&M adit and Ring Road Underpass		140	05-Jun-20 A	13-Sep-21	06-Jun-20 A	02-Jun-20	4	51.00																											
Sch. 6A Ventilation and E&M Adit Works		180	09-Jun-20 A	15-Mar-21	06-Jun-20	22-Jun-20	-16	32.00																											
Area Part 1D1, 1D3, 1S1 & 1S2		180	09-Jun-20 A	13-Mar-21	06-Jun-20	22-Jun-20	-16	32.00																											
VA - ELS Works		180	09-Jun-20 A	13-Mar-21	06-Jun-20	23-Jun-20	46	21.00																											
VA - ELS Stage 1		118	19-Jun-20 A	30-Jun-20	27-Jun-20	25-Jun-20	24	2.00																											
6A4522	VA - Excavation Down to 2nd levelling & Sealing; Instal walling & Sealing; Instal walling & Sealing	18	09-Jun-20 A	15-Mar-21	25-Jun-20	25-Jun-20	2.00																												
6A4524	VA - Excavation Down to 3rd levelling & Sealing	18	16-Jun-20 A	10-Aug-21	25-Jun-20	25-Jun-20	2.00																												
6A4525	VA - Excavation Down to 4th levelling & Sealing; Instal walling & Sealing	18	11-Aug-21	14-Aug-21	14-Aug-21	14-Aug-21	-26	2.00																											
6A4526	VA - Excavation Down to 5th levelling & Sealing; Instal walling & Sealing	14	15-Sep-20	30-Sep-20	15-Aug-20	31-Aug-20	-26	2.00																											
6A4527	VA - Excavation Down to 6th levelling & Sealing; Instal walling & Sealing	14	20-Oct-20	19-Oct-20	01-Sep-20	15-Sep-20	-26	2.00																											
6A4528	VA - Excavation Down to Final Formation Level, 1D1&1D3	8	20-Oct-20	29-Oct-20	17-Sep-20	25-Sep-20	-26	2.00																											
VA - ELS Stage 3		146	13-Aug-21 A	13-Aug-21	06-Jun-20	02-Jun-20	-46	3.00																											
6A4530	VA - Install Coferdam, Stage 3 (nd & pos)	92	13-Aug-21 A	01-Dec-20	06-Jun-20	11-Sep-20	66	5.00																											
6A4534	VA - Excavation Down to 1st levelling & Sealing; Instal walling & Sealing	14	02-Dec-20	17-Dec-20	12-Sep-20	28-Sep-20	66	2.00																											
6A4536	VA - Excavation Down to 2nd levelling & Sealing; Instal walling & Sealing	20	18-Dec-20	13-Dec-21	29-Sep-20	23-Oct-20	66	2.00																											
VA - RC Structures		54	30-Oct-20	04-Nov-21	26-Sep-20	22-Oct-20	46	11.00																											
VA - RC Structures - very 1M (1km)		54	30-Oct-20	04-Nov-21	26-Sep-20	22-Oct-20	46	1.00																											
6A4544	VA&E - Construct Base Slab	18	30-Oct-20	19-Nov-20	26-Sep-20	19-Oct-20	-26	3.00																											
6A4546	VA&E - Construct RC Walls & Metal Slab	18	31-Oct-20	04-Nov-21	11-Nov-20	01-Dec-20	-26	2.00																											

**Central Kowloon Route - Kai Tak East (Month 16 Update) (Rev10 - CSD)
Three Month Rolling Programme**

Project ID: KTE/WP10_M16
Baseline: 3 Months Rolling Programme
Layout: Task Iter 3 Months Rolling KTE - Submission
Filter: Task Progress Fltr 10

Page 12 of 19

Project ID: KTE/WP10_M16
Baseline: 3 Months Rolling Programme
Layout: Task Iter 3 Months Rolling KTE - Submission
Filter: Task Progress Fltr 10

Page 12 of 19

Project ID: KTE/WP10_M16
Baseline: 3 Months Rolling Programme
Layout: Task Iter 3 Months Rolling KTE - Submission
Filter: Task Progress Fltr 10

Page 12 of 19

Project ID: KTE/WP10_M16
Baseline: 3 Months Rolling Programme
Layout: Task Iter 3 Months Rolling KTE - Submission
Filter: Task Progress Fltr 10

Page 12 of 19

Project ID: KTE/WP10_M16
Baseline: 3 Months Rolling Programme
Layout: Task Iter 3 Months Rolling KTE - Submission
Filter: Task Progress Fltr 10

Page 12 of 19

Project ID: KTE/WP10_M16
Baseline: 3 Months Rolling Programme
Layout: Task Iter 3 Months Rolling KTE - Submission
Filter: Task Progress Fltr 10

Page 12 of 19

Project ID: KTE/WP10_M16
Baseline: 3 Months Rolling Programme
Layout: Task Iter 3 Months Rolling KTE - Submission
Filter: Task Progress Fltr 10

Page 12 of 19

Project ID: KTE/WP10_M16
Baseline: 3 Months Rolling Programme
Layout: Task Iter 3 Months Rolling KTE - Submission
Filter: Task Progress Fltr 10

Page 12 of 19

Project ID: KTE/WP10_M16
Baseline: 3 Months Rolling Programme
Layout: Task Iter 3 Months Rolling KTE - Submission
Filter: Task Progress Fltr 10

Page 12 of 19

Contract No. HY/2018/02
Environmental Monitoring & Auditing

Activity ID	Activity Name	Timeline										Timeline										
		Start	Finish	Last State	Last F/Finish	Date	TSR	Day	Week	Month	Year	Start	Finish	Last State	Last F/Finish	Date	TSR	Day	Week	Month	Year	
VA_Section - Bay #4 (1km)		1 20-Nov-20	10-Dec-20	10-Nov-20	10-Nov-20	14-Nov-20	-26	10	18	11	2020	1 20-Nov-20	10-Dec-20	10-Nov-20	10-Nov-20	14-Nov-20	-26	10	18	11	2020	
6A-6550	VAPB - Construct Base Slab	18 11-Dec-20	04-Jan-21	11-Dec-20	11-Dec-20	18-Dec-20	-26	10	18	11	2020	18 11-Dec-20	04-Jan-21	11-Dec-20	11-Dec-20	18-Dec-20	-26	10	18	11	2020	
VA_Section - Bay #5 (1km)		18 11-Dec-20	04-Jan-21	12-Dec-20	12-Dec-20	18-Dec-20	-26	10	18	11	2020	18 11-Dec-20	04-Jan-21	12-Dec-20	12-Dec-20	18-Dec-20	-26	10	18	11	2020	
6A-6556	VAPB - Construct Base Slab	18 11-Dec-20	04-Jan-21	23-Dec-20	23-Dec-20	18-Dec-20	-26	10	18	11	2020	18 11-Dec-20	04-Jan-21	23-Dec-20	23-Dec-20	18-Dec-20	-26	10	18	11	2020	
Sch_4.1 Ring Road Underpass		11 19-Aug-20 A	29-Dec-20	26-Aug-20	26-Aug-20	11 19-Aug-20 A	3 19.00					11 19-Aug-20 A	29-Dec-20	26-Aug-20	26-Aug-20	11 19-Aug-20 A	3 19.00					
RR - Part D1,1D2,1D3,1D4,1B1 & 1B2		85 19-Aug-20 A	26-Nov-20	28-Aug-20	30-Nov-20	85 19-Aug-20 A	3 16.00					85 19-Aug-20 A	26-Nov-20	28-Aug-20	30-Nov-20	85 19-Aug-20 A	3 16.00					
RR - ELS Works		105 18-Aug-20 A	25-Aug-20	26-Aug-20	28-Aug-20	105 18-Aug-20 A	3 16.00					105 18-Aug-20 A	25-Aug-20	26-Aug-20	28-Aug-20	105 18-Aug-20 A	3 16.00					
IR - T1S Stage 2		110 19-Aug-20 A	29-Dec-20	28-Aug-20	30-Nov-20	110 19-Aug-20 A	3 16.00					110 19-Aug-20 A	29-Dec-20	28-Aug-20	30-Nov-20	110 19-Aug-20 A	3 16.00					
RR - Excavation Down to 1st ceiling & Static Install waling & Strut		6 19-Aug-20 A	31-Aug-20	28-Aug-20	03-Sep-20	6 19-Aug-20 A	3 2.00					6 19-Aug-20 A	31-Aug-20	28-Aug-20	03-Sep-20	6 19-Aug-20 A	3 2.00					
4-6720	RR - Excavation Down to 1st ceiling & Static Install waling & Strut	20 01-Sep-20	23-Sep-20	04-Sep-20	26-Sep-20	20 01-Sep-20	3 4.00					20 01-Sep-20	23-Sep-20	04-Sep-20	26-Sep-20	20 01-Sep-20	3 4.00					
4-6722	RR - Excavation Down to 2nd ceiling & Static Install waling & Strut	21 24-Sep-20	29-Sep-20	30-Oct-20	29-Sep-20	21 24-Sep-20	3 4.00					21 24-Sep-20	29-Sep-20	30-Oct-20	29-Sep-20	21 24-Sep-20	3 4.00					
4-6724	RR - Excavation Down to 3rd ceiling & Static Install waling & Strut	21 24-Sep-20	29-Sep-20	30-Oct-20	29-Sep-20	21 24-Sep-20	3 4.00					21 24-Sep-20	29-Sep-20	30-Oct-20	29-Sep-20	21 24-Sep-20	3 4.00					
4-6725	RR - Excavation Down to 4th ceiling & Static Install waling & Strut	21 21-Oct-20	14-Nov-20	24-Oct-20	18-Nov-20	21 21-Oct-20	3 4.00					21 21-Oct-20	14-Nov-20	24-Oct-20	18-Nov-20	21 21-Oct-20	3 4.00					
4-6726	RR - Excavation Down to Final Formation Level 1D1/D4	21 16-Nov-20	26-Nov-20	19-Nov-20	30-Nov-20	21 16-Nov-20	3 2.00					21 16-Nov-20	26-Nov-20	19-Nov-20	30-Nov-20	21 16-Nov-20	3 2.00					
RR - Box Sections, Pump Supply & FS Pump Room		26 22-Nov-20	29-Nov-20	01-Dec-20	02-Dec-21	26 22-Nov-20	3 1.00					26 22-Nov-20	29-Nov-20	01-Dec-20	02-Dec-21	26 22-Nov-20	3 1.00					
RR - Bay 100 (2011.CHR.1452.1 to 01.211.6) (All grades)		26 27-Nov-20	29-Dec-20	01-Dec-20	02-Dec-21	26 27-Nov-20	3 1.00					26 27-Nov-20	29-Dec-20	01-Dec-20	02-Dec-21	26 27-Nov-20	3 1.00					
4-6774	IR&SU1 - Construct Sump Pump Room slab	26 27-Nov-20	29-Dec-20	01-Dec-20	02-Dec-21	26 27-Nov-20	3 1.00					26 27-Nov-20	29-Dec-20	01-Dec-20	02-Dec-21	26 27-Nov-20	3 1.00					
Section 10 - Footbridge, E&M Installation and Miscellaneous Wc		225 29-Nov-20 A	04-Feb-21	10-Nov-20	07-Feb-21	225 29-Nov-20 A	3 104.00					225 29-Nov-20 A	04-Feb-21	10-Nov-20	07-Feb-21	225 29-Nov-20 A	3 104.00					
Sch_7 FB - Piling Work		35 19-Nov-20 A	05-Aug-20 A	10-Nov-20 A	07-Dec-20	35 19-Nov-20 A	0.00					35 19-Nov-20 A	05-Aug-20 A	10-Nov-20 A	07-Dec-20	35 19-Nov-20 A	0.00					
FB - Piling Works (Main Span)		8 19-Nov-20 A	13-Dec-20 A	13-Dec-20 A	13-Dec-20 A	8 19-Nov-20 A	0.00					8 19-Nov-20 A	13-Dec-20 A	13-Dec-20 A	13-Dec-20 A	8 19-Nov-20 A	0.00					
PW Stage 1 - LB-FB1		8 19-Nov-20 A	18-Dec-20 A	13-Dec-20 A	13-Dec-20 A	8 19-Nov-20 A	0.00					8 19-Nov-20 A	18-Dec-20 A	13-Dec-20 A	13-Dec-20 A	8 19-Nov-20 A	0.00					
7-70211	PB - Removal of Works for LB-FB1	8 19-Nov-20 A	18-Dec-20 A	13-Dec-20 A	13-Dec-20 A	8 19-Nov-20 A	0.00					8 19-Nov-20 A	18-Dec-20 A	13-Dec-20 A	13-Dec-20 A	8 19-Nov-20 A	0.00					
FB - Piling Works (KITEC Portion)		16 19-Nov-20 A	15-Nov-20 A	10-Nov-20 A	10-Nov-20 A	16 19-Nov-20 A	0.00					16 19-Nov-20 A	15-Nov-20 A	10-Nov-20 A	10-Nov-20 A	16 19-Nov-20 A	0.00					
PW Stage 1 - LA-FB3		16 19-Nov-20 A	15-Nov-20 A	10-Nov-20 A	10-Nov-20 A	16 19-Nov-20 A	0.00					16 19-Nov-20 A	15-Nov-20 A	10-Nov-20 A	10-Nov-20 A	16 19-Nov-20 A	0.00					
7-702018	FB - Install SfP For LAFB1 1 (1 no)	11 15-Nov-20 A	30-Jan-20 A	10-Dec-20 A	10-Dec-20 A	11 15-Nov-20 A	0.00					11 15-Nov-20 A	30-Jan-20 A	10-Dec-20 A	10-Dec-20 A	11 15-Nov-20 A	0.00					
7-702019	FB - In-situ drilling	5 10-Dec-20 A	15-Mar-20 A	10-Dec-20 A	10-Dec-20 A	5 10-Dec-20 A	0.00					5 10-Dec-20 A	15-Mar-20 A	10-Dec-20 A	10-Dec-20 A	5 10-Dec-20 A	0.00					
PW - Pile Testing		5 24-Mar-20 A	05-Aug-20 A	07-Dec-20 A	07-Dec-20 A	5 24-Mar-20 A	0.00					5 24-Mar-20 A	05-Aug-20 A	07-Dec-20 A	07-Dec-20 A	5 24-Mar-20 A	0.00					
7-7038	FB - SIP Loading Test - Terexn 1 no	5 24-Mar-20 A	04-Feb-21	10-Dec-20 A	07-Feb-21	5 24-Mar-20 A	0.00					5 24-Mar-20 A	04-Feb-21	10-Dec-20 A	07-Feb-21	5 24-Mar-20 A	0.00					
Sch_7 FB - Main Span, Staircase A & B		225 29-Nov-20 A	04-Feb-21	10-Dec-20 A	07-Feb-21	225 29-Nov-20 A	0.00					225 29-Nov-20 A	04-Feb-21	10-Dec-20 A	07-Feb-21	225 29-Nov-20 A	0.00					
FB - Abutments, Pilecaps & Piers		175 30-Nov-20 A	28-Dec-20	10-Dec-20 A	16-Nov-20	175 30-Nov-20 A	3 51.00					175 30-Nov-20 A	28-Dec-20	10-Dec-20 A	16-Nov-20	175 30-Nov-20 A	3 51.00					
FB - KITEC Portion		137 16-Nov-20 A	28-Dec-20	10-Dec-20 A	16-Nov-20	137 16-Nov-20 A	3 24.00					137 16-Nov-20 A	28-Dec-20	10-Dec-20 A	16-Nov-20	137 16-Nov-20 A	3 24.00					
PBEN-PBS		51 23-Jun-20 A	03-Aug-20 A	10-Nov-20 A	07-Aug-20	51 23-Jun-20 A	0.00					51 23-Jun-20 A	03-Aug-20 A	10-Nov-20 A	07-Aug-20	51 23-Jun-20 A	0.00					
7-7050	PFB1 - Install Sheetpiles (Slant Pier CE 0045)*	5 23-Jun-20 A	25-Jun-20 A	10-Nov-20 A	10-Nov-20	5 23-Jun-20 A	3 0.00					5 23-Jun-20 A	25-Jun-20 A	10-Nov-20 A	10-Nov-20	5 23-Jun-20 A	3 0.00					
7-7052	PFB2 - Excavation, prepare pile head (3 nos)	13 08-Aug-20 A	22-Aug-20 A	10-Nov-20 A	10-Nov-20	13 08-Aug-20 A	3 1.00					13 08-Aug-20 A	22-Aug-20 A	10-Nov-20 A	10-Nov-20	13 08-Aug-20 A	3 1.00					
7-7054	PFB3 - Construct Pic Cap for Pier PFB3	9 24-Aug-20 A	03-Sep-20 A	10-Nov-20 A	20-Nov-20	9 24-Aug-20 A	3 1.00					9 24-Aug-20 A	03-Sep-20 A	10-Nov-20 A	20-Nov-20	9 24-Aug-20 A	3 1.00					
7-7055	PFB3 - Construct Pier PFB3	14 04-Sep-20 A	19-Sep-20 A	21-Nov-20 A	05-Nov-20	14 04-Sep-20 A	3 1.00					14 04-Sep-20 A	19-Sep-20 A	21-Nov-20 A	05-Nov-20	14 04-Sep-20 A	3 1.00					
7-7056	PFB3 - Backfilling	9 04-Sep-20 A	14-Sep-20 A	27-Nov-20 A	05-Nov-20	9 04-Sep-20 A	3 0.00					9 04-Sep-20 A	14-Sep-20 A	27-Nov-20 A	05-Nov-20	9 04-Sep-20 A	3 0.00					
LIFT LA-FB3		9 27-Jul-20 A	30-Dec-20	10-Nov-20 A	17-Nov-20	9 27-Jul-20 A	3 1.00					9 27-Jul-20 A	30-Dec-20	10-Nov-20 A	17-Nov-20	9 27-Jul-20 A	3 1.00					
7-7060	PFB3 - Install Sheetpiles (Slant Pier CE 0045)*	4 27-Jul-20 A	30-Nov-20	10-Nov-20 A	10-Nov-20	4 27-Jul-20 A	3 1.00					4 27-Jul-20 A	30-Nov-20	10-Nov-20 A	10-Nov-20	4 27-Jul-20 A	3 1.00					

◆ Current Monitor
◆ Annual Work
◆ Critical/Bottleneck Work
◆ Permitting Work

◆ Project ID: KTE-WP10_M16
Baseline: 3 Months Rolling Programme
Filter: Task Iter 1: 3 Months Rolling KTE - Submission
Page 13 of 19

◆ Central Kowloon Route - Kai Tak East (Month 16 Update) (Rev10 - CSD)
Three Month Rolling Programme

◆ Current Monitor
◆ Annual Work
◆ Critical/Bottleneck Work
◆ Permitting Work

◆ Project ID: KTE-WP10_M16
Baseline: 3 Months Rolling Programme
Filter: Task Iter 2: 3 Months Rolling KTE - Submission
Page 13 of 19

Contract No. HY/2018/02
Environmental Monitoring & Auditing

Activity ID	Activity Name	September										October										November													
		Start	End	Duration	Frequency	Lab Status	Last Lab Date	Last Lab Finish	Date	TSA	Flow	Start	End	Duration	Frequency	Lab Status	Last Lab Date	Last Lab Finish	Date	TSA	Flow	Start	End	Duration	Frequency	Lab Status	Last Lab Date	Last Lab Finish	Date	TSA	Flow				
7-7062	FB3-L - Excavation; prepare Pile Head (4 nos.)	13	05-Aug-20 A	25-Aug-20 A	10:30-20	11:30-20	-39	1.00				10	31-Aug-20 A	11-Aug-20 A	17:00-20	17:00-20	-20				11	15-Aug-20 A	16-Aug-20 A	-20											
7-7064	FB3-L - Construct Pile Cap for FB3-L	9	27-Aug-20	22-Aug-20	01:50-20	01:50-20	-4	1.00				11	07-Sep-20	02-Sep-20	07:50-20	07:50-20	-4	0.00					12	12-Sep-20	22-Sep-20	17:50-20	-4	1.00							
7-7066	FB3-L - Bouldering	5	07-Sep-20	11-Sep-20	02:50-20	07:50-20	-4	0.00				9	12-Sep-20	22-Sep-20	08:50-20	17:50-20	-4																		
7-7066	FB3-L - Construct L/H Base FB3-L	12A	31-Aug-20 A	08-Sep-20 A	17:50-20	18:50-20	-34	5.00																											
ABUT A-S32																																			
7-7093	FT52 - Install Anchorage Bar Pilars (CE 0045)	10	31-Aug-20 A	11-Aug-20 A	17:00-20	17:00-20	-20	2.00																											
7-7094	FT52 - Excavation down to formation level	2	27-Nov-20	28-Nov-20	19:00-20	19:00-20	-34	0.00																											
7-7095	FT52 - Plate load test and report	5	04-Dec-20	20-Dec-20	24:00-20	24:00-20	-34	2.00																											
7-7096	FT52 - Construct Pile Cap for ABUT A-S2	9	05-Dec-20	27-Dec-20	05:40-20	05:40-20	-34	1.00																											
7-7095	AS42 - Construct Nutment A-S2	9	16-Dec-20	25-Dec-20	06:40-20	16:40-20	-34	1.00																											
P/S41 - S41																																			
7-7085	P/S41 - Install Anchorage (S41) Pilars (CE 0045)	5	16-Oct-20 A	21-Oct-20 A	10:30-20	10:30-20	-20	2.00																											
7-7086	P/S41 - Excavation down to formation level	2	25-Nov-20	26-Nov-20	15:00-20	15:00-20	-34	0.00																											
7-7086	P/S41 - Construct Pile Cap for P/S41	9	05-Dec-20	25-Dec-20	08:40-20	08:40-20	-33	1.00																											
7-7088	P/S41 - Construct Pile Cap for P/S41	8	16-Dec-20	24-Dec-20	07-Nov-20	16-Nov-20	-33	2.00																											
7-7090	P/S41 - Construct Pier P/S41	10	30-Nov-20 A	06-Dec-20 A	13:30-20	24:50-20	-8	29.00																											
F8 - Main Span Portion																																			
P/F2 - F2																																			
7-7040	P/F2 - Install Sheetpiles	8	30-Nov-20 A	09-Jun-20 A	13:30-20	13:30-20	-20	2.00																											
7-7042	P/F2 - Excavation; prepare Pile Head (4 nos.)	12	09-Jan-20 A	20-Jan-20 A	22:30-20	22:30-20	-1.00																												
7-7044	P/F2 - Construct Pile Cap for Pier P/F2	15	02-Feb-20 A	13-Feb-20 A	22:30-20	22:30-20	-1.00																												
7-7046	P/F2 - Construct Pier P/F2	17	18-Feb-20 A	04-Feb-20 A	23:30-20	23:30-20	-2.00																												
7-7048	P/F2 - Bouldering	5	25-Aug-20	29-Aug-20	22:30-20	27:30-20	-29	0.00																											
P/E1 - E1																																			
7-7070	P/E1 - Excavation; prepare Pile Head (2 nos.)	6	17-Mar-20 A	22-Mar-20 A	13:30-20	13:30-20	-1.00																												
7-7072	P/E1 - Construct Pile Cap for Pier P/E1	9	23-Mar-20 A	10-Apr-20 A	22:30-20	22:30-20	-1.00																												
7-7074	P/E1 - Construct Pier P/E1	10	11-Apr-20 A	28-Apr-20	23:30-20	27:30-20	-28	2.00																											
7-7076	P/E1 - Bouldering	5	25-Aug-20	29-Aug-20	22:30-20	27:30-20	-29	0.00																											
L1/F1 - E1																																			
7-7077	FB1-L - Install Sheetpiles	6	06-Mar-20 A	17-Mar-20 A	13:30-20	13:30-20	-30																												
7-7078	FB1-L - Excavation; prepare Pile Head (4 nos.)	7	17-Mar-20 A	22-Mar-20 A	13:30-20	13:30-20	-1.00																												
7-7080	FB1-L - Construct Pile Cap for FB1-L	9	23-Mar-20 A	10-Apr-20 A	13:30-20	14:30-20	-37	1.00																											
7-7084	FB1-L - Bouldering	2	25-Aug-20	26-Aug-20	13:30-20	14:30-20	-37	0.00																											
7-7082	FB1-L - Construct L/H Base FB1-L	11	27-Aug-20	08-Sep-20	15:30-20	27:30-20	-37	2.00																											
ABUT A-S2																																			
7-7109	FE52 - Install Sheetpiles	6	09-Mar-20 A	11-Mar-20 A	15:40-20	15:40-20	-2.00																												
7-7110	FE52 - Excavation down to formation level	3	11-Mar-20 A	27-Aug-20	15:40-20	18:40-20	-6	1.00																											
7-7111	FE52 - Plate load test and report	14	28-Aug-20	12-Sep-20	19:40-20	03:50-20	-6	2.00																											
7-7112	FE52 - Construct Pile Cap for ABUT A-S2	7	14-Sep-20	21-Sep-20	04:50-20	11:50-20	-6	1.00																											

**Central Kowloon Route - Kai Tak East (Month 16 Update) (Rev10 - CSD)
Three Month Rolling Programme**

Project ID: KTE/WP10_M16
Baseline: 3 Months Rolling Programme
Layout: TASK Iterts: 3 Months Rolling Programme
Filter: TASK Iterts: 3 Months Rolling Programme
Report: Current Status Report

Page 14 of 19

Contract No. HY/2018/02
Environmental Monitoring & Auditing

Activity ID	Activity Name	Timeline										Owner	Supervisor	Reviewer
		Start	Finish	Last State	Last T/Finish	Last T/F	Task ID	Task (Day)	Task (Week)	Task (Month)	Task (Year)			
77114	A-020 - Contract Abutment A-S02	7 22-Sep-20	29-Sep-20	15-Aug-20	15-Aug-20	4	1.00							
77116	A-020 - Bedding	2 03-Oct-20	03-Sep-20	21-Sep-20	23-Sep-20	4	0.00							
P/SB1 - P/SB1		2020-09-01 ~ 2020-09-01												
77101	P/SB1 - Install Sheetwalls	6 09-Aug-20	11-Jun-20	15-Aug-20	15-Aug-20	2.00								
77102	P/SB1 - Excavation down to foundation level	3 11-Jun-20	28-Jul-20	15-Sep-20	15-Sep-20	1.00								
77104	P/SB1 - Contractile Pipe Cap for Pier P/SB1	7 14-Aug-20	21-Aug-20	15-Sep-20	15-Sep-20	1.00								
77106	P/SB1 - Contract Pier P/SB1	7 14-Sep-20	21-Sep-20	22-Sep-20	22-Sep-20	1	1.00							
77108	P/SB1 - Bedding	2 05-Oct-20	06-Oct-20	23-Sep-20	24-Sep-20	48	0.00							
F8 - Superstructures		2020-09-01 ~ 2020-09-01												
F8 - Main Span (F81 - F82)		2020-09-01 ~ 2020-09-01												
77178	HB - Construct Framework and Framework (FB1-FB2)	16 09-Sep-20	26-Sep-20	26-Sep-20	14-Aug-20	37	2.00							
77180	HB - Construct Web and Softe (FB1-FB2)	12 26-Sep-20	13-Oct-20	15-Aug-20	28-Aug-20	37	2.00							
77182	HB - Construct Deck Section (FB1-FB2)	10 14-Oct-20	24-Oct-20	02-Nov-20	09-Oct-20	37	2.00							
77184	HB - Remove Framework and Framework (FB1-FB2)	6 27-Oct-20	02-Nov-20	10-Sep-20	15-Sep-20	37	2.00							
FB - Main Span (FB2 - FB3)		2020-09-01 ~ 2020-09-01												
77120	MB - Place Support for the Main Bridge Construction (B12)	4 05-Aug-20	14-Aug-20	05-Aug-20	05-Aug-20	1.00								
77118	MB - Erect Steel portal across Kai Tak Road (WB) (Night work) [1] - Above 4+2 right shift	23 15-Aug-20	28-Aug-20	08-Aug-20	08-Aug-20	20	1.00							
77122	MB - Construct Framework and Framework (FB2 to mid support)	6 29-Aug-20	04-Sep-20	22-Aug-20	28-Aug-20	46	2.00							
77124	MB - Construct Web and Softe (FB2 to mid support)	8 05-Sep-20	14-Sep-20	29-Aug-20	07-Sep-20	46	3.00							
77126	MB - Construct Deck Section (FB2 to mid support)	4 15-Sep-20	18-Sep-20	08-Sep-20	11-Sep-20	46	1.00							
FB - Main Span (Mid Support to B12)		2020-09-01 ~ 2020-09-01												
77339	HB - Erect mid support members + bolts + survey (one 3 nights)	10 29-Aug-20	09-Jun-20	09-Jun-20	06-Aug-20	3.00								
77340	HB - Place Support for the Main Bridge Construction (B12)	3 21-Sep-20	23-Sep-20	06-Aug-20	06-Aug-20	39	1.00							
77342	HB - Erect Steel portal across Kai Tak Road (EB) (Night work) [1] - Above 4+2 right shift	11 24-Sep-20	04-Oct-20	09-Aug-20	13-Aug-20	46	1.00							
77344	HB - Construct Framework and Framework (mid support to FB3)	6 05-Oct-20	10-Oct-20	20-Oct-20	26-Aug-20	37	1.00							
77346	HB - Construct Web and Softe (mid support to FB3)	8 12-Oct-20	20-Oct-20	27-Aug-20	04-Sep-20	37	1.00							
77348	HB - Construct Deck Section (mid support to FB3)	6 21-Oct-20	28-Oct-20	05-Sep-20	11-Sep-20	37	0.00							
77128	MB - Remove Framework and Framework (FB3 to mid support)	8 29-Oct-20	05-Nov-20	12-Sep-20	21-Sep-20	37	0.00							
FB - L/R/A (L/R Shaft)		2020-09-01 ~ 2020-09-01												
77188	LA - Structural Steel works (Prefabricated in module and erected in concrete)	3 31-Oct-20	18-Sep-20	21-Sep-20	32	2.00								
77190	LA - Cladding Louvre/Freight lifting frame from shaft to roof	15 07-Nov-20	24-Nov-20	22-Sep-20	10-Oct-20	37	3.00							
FB - L/R B (L/R Shaft)		2020-09-01 ~ 2020-09-01												
77192	LA - Lift sheet framework erection	19 03-Nov-20	24-Nov-20	17-Sep-20	10-Oct-20	37	2.00							
77194	LA - Structural Steel works	3 03-Nov-20	05-Nov-20	17-Sep-20	19-Sep-20	37	0.00							
77196	LA - Cladding louvre/steel frame from shaft to roof	10 13-Nov-20	24-Nov-20	28-Sep-20	10-Oct-20	37	0.00							
FB - Showcase B		2020-09-01 ~ 2020-09-01												
77198	SB - Contract Framework and Framework	8 07-Oct-20	15-Oct-20	25-Sep-20	06-Oct-20	6	1.00							

**Central Kowloon Route - Kai Tak East (Month 16 Update) (Rev10 - CSD)
Three Month Rolling Programme**

Project ID: KTE/WP10_M16	Baseline:	Review:
Filter: Task Iter 1 Month Rolling	Submissions:	
Filter: Task Iter 2 Month Rolling	Review	
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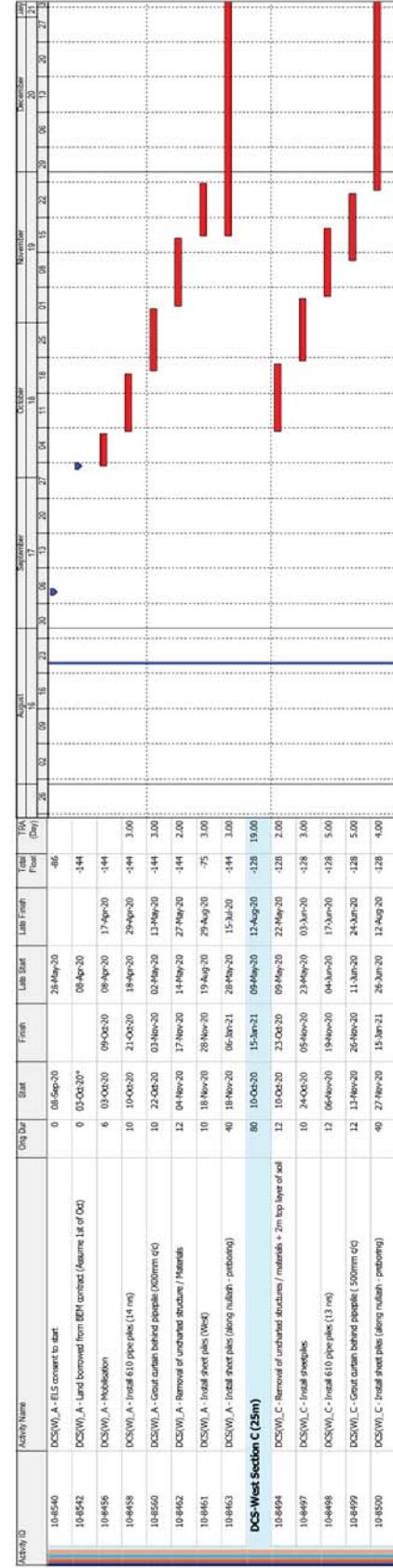
Activity ID	Activity Name	September										October										November									
		Day	Start	Finish	Last State	Last T/F finish	Total TBA (Day)	Total TBA (Hour)	Day	Start	Finish	Last State	Last T/F finish	Total TBA (Day)	Total TBA (Hour)	Day	Start	Finish	Last State	Last T/F finish	Total TBA (Day)	Total TBA (Hour)	Day	Start	Finish	Last State	Last T/F finish	Total TBA (Day)	Total TBA (Hour)		
7/7137	S11 - Initial Footbridge bearings	6	16-Oct-20	22-Oct-20	07-Nov-20	13-Nov-20	-4	1.00	11	18	23	30	08	13	20	27	04	11	18	25	01	08	15	22	29	08	13	20	27		
7/7138	S11 - Construction of the Staircase B	28	23-Oct-20	25-Nov-20	14-Nov-20	16-Nov-20	-4	4.00																							
7/7140	S11 - Remove Footwork and Formwork	12	26-Nov-20	09-Dec-20	21-Nov-20	04-Dec-20	-4	0.00																							
FB - E&M and L&I Installation		72	25-Nov-20	26-Feb-21	12-Dec-20	07-Mar-21	-37	0.00																							
FB - L&I A		72	25-Nov-20	26-Feb-21	12-Dec-20	07-Mar-21	-37	0.00																							
7/7142	L1A - Installation of LR	72	25-Nov-20	26-Feb-21	12-Dec-20	07-Mar-21	-37	0.00																							
FB - L&I B		72	25-Nov-20	26-Feb-21	12-Dec-20	07-Mar-21	-37	0.00																							
7/7152	L1B - Installation of LR	72	25-Nov-20	26-Feb-21	12-Dec-20	07-Mar-21	-37	0.00																							
FB - Miscellaneous Works		92	07-Nov-20	04-Mar-21	05-Dec-20	03-Apr-21	-20	17.00																							
7/7164	FB - Roof Insulation - Main Span	52	07-Nov-20	05-Mar-21	05-Dec-20	04-Apr-20	-26	4.00																							
7/7171	FB - Ringlock Systems for Main Span	46	07-Nov-20	05-Mar-21	05-Dec-20	03-Apr-21	-24	5.00																							
7/7168	FB - Piling Works - Main Span and Staircase A & B	52	05-Dec-20	06-Feb-21	17-Nov-20	19-Mar-21	-16	4.00																							
7/7166	FB - Head Insulation - Staircase A & B	52	24-Dec-20	04-Feb-21	17-Nov-20	19-Mar-21	-32	4.00																							
Section 11 - Structure of Bridge CRRE		102	10-Nov-20	15-Jan-21	05-Mar-20	13-Apr-20	-127	20.00																							
Sch_2 CRRE - Pre-drilling		152	30-Nov-20	21-Dec-20	06-Mar-20	27-Mar-20	-125	9.00																							
2/7060a	CRRE - Pre-drilling for K1-CRRE (4 mns) (CE-0061)	0	10-Nov-20	16-Jan-21	04-Mar-20	06-Apr-20	-5.00																								
2/7410	CRRE - Pre-drilling over Kai Tak River for K5-CRRE (1 m)	6	10-Dec-20	15-Dec-20	14-Mar-20	20-Mar-20	-125	2.00																							
2/7412	CRRE - Pre-drilling over Kai Tak River for K5-CRRE (1 m)	6	17-Dec-20	23-Dec-20	21-Mar-20	27-Mar-20	-125	2.00																							
Sch_3.10 Bridge CRRE Works		84	06-Dec-20	15-Jan-21	06-Mar-20	13-Apr-20	-127	20.00																							
CRRE - Piling Works		84	06-Dec-20	15-Jan-21	06-Mar-20	13-Apr-20	-127	20.00																							
3.10/7502	CRRE - Bored piles for ABUT A-K1-CRRE	56	06-Dec-20	10-Dec-20	06-Mar-20	11-Apr-20	-127	8.00																							
3.10/7501	CRRE - Bored piles for ABUT A-K1-CRRE (1 m)	30	07-Dec-20	13-Jan-21	10-Mar-20	16-Apr-20	-149	4.00																							
3.10/7500	CRRE - Bored piles for ABUT A-K1-CRRE (1 m)	28	11-Dec-20	15-Jan-21	13-Mar-20	13-Apr-20	-127	4.00																							
Piling Works - ABUT A-K4-CRRE		28	26-Nov-20	30-Dec-20	05-Mar-20	09-Mar-20	-144	4.00																							
3.10/7524	CRRE - Bored piles for ABUT A-K4-CRRE (1 m)	28	26-Nov-20	30-Dec-20	05-Mar-20	09-Mar-20	-144	4.00																							
Section 12 - Underpasses S21		102	10-Nov-20	15-Jan-21	05-Mar-20	21-Mar-20	-140	20.00																							
Sch_4.3 Slip Road Underpass S21		182	10-Jan-20	21-Mar-21	21-Mar-20	14-Mar-20	-38	58.00																							
S21 - ELS Works		141	10-Jan-20	10-Dec-20	21-Mar-20	17-Mar-20	-69	26.00																							
S21 - U-Trough Sections - South (CH1009-376 to CH1433-381)		80	22-Jan-20	26-Apr-20	21-Mar-20	21-Mar-20	-58	7.00																							
4/7715	S21 - Plate load test (P1) (CE/NA/0068, 0092)	6	23-Jan-20	11-Mar-20	21-Mar-20	21-Mar-20	-50	5.00																							
4/7716	S21 - Extrusion Down to 2nd waling & Strut	25	26-Jan-20	22-Aug-20	15-Jan-20	15-Jan-20	-400																								
4/77158	S21 - Replacement of 500mm node/ Additional Plate load test (P1)	12	24-Aug-20	05-Sep-20	21-Mar-20	02-Mar-20	-60																								
4/7720	S21 - Extrusion Down to Fixed Formation Level	23	27-Aug-20	22-Sep-20	15-Jan-20	13-Jan-20	-61	3.00																							
4/7717	S21 - Plate load test (P2)	4	07-Sep-20	10-Sep-20	17-Mar-20	20-Mar-20	-68																								
4/7719	S21 - Plate load test (P3)	4	23-Sep-20	26-Sep-20	17-Mar-20	21-Mar-20	-55																								
S21 - Box Section (CH1433-381 to CH205-300)		141	10-Jan-20	10-Dec-20	03-Mar-20	17-Mar-20	-69	10.00																							
4/7927	S21 - Purging test and spot:	0	10-Jan-20	20-Jan-20	03-Mar-20	02-Mar-20	-																								

**Central Kowloon Route - Kai Tak East (Month 16 Update) (Rev10 - CSD)
Three Month Rolling Programme**

Project ID: KTE/WP10_M16
Baseline: 3 Months Rolling Programme
Layout: Task Iter 3 Months Rolling Programme
Filter: Task Iter 3 Months Rolling Programme
Report: Report Iter 3 Months Rolling Programme

Page 16 of 19

Contract No. HY/2018/02
Environmental Monitoring & Auditing



Project ID:	KTE_WP10_M16	Review
Baseline:	24-Mar-20	Subsent CSD Project Review
Layout: 3 Months Rolling Programme	30-Mar-20	Meeting Summary - KTE
Filter: TASK Iter 1: 3 Months Rolling	30-Mar-20	Subsent CSD Project Review
March Programme Iter 1.5	31-Mar-20	Meeting Summary - KTE
Subsent CSD Programme Rev10	20-Apr-20	Meeting Summary - KTE
March Programme Iter 2.5	31-Apr-20	Meeting Summary - KTE

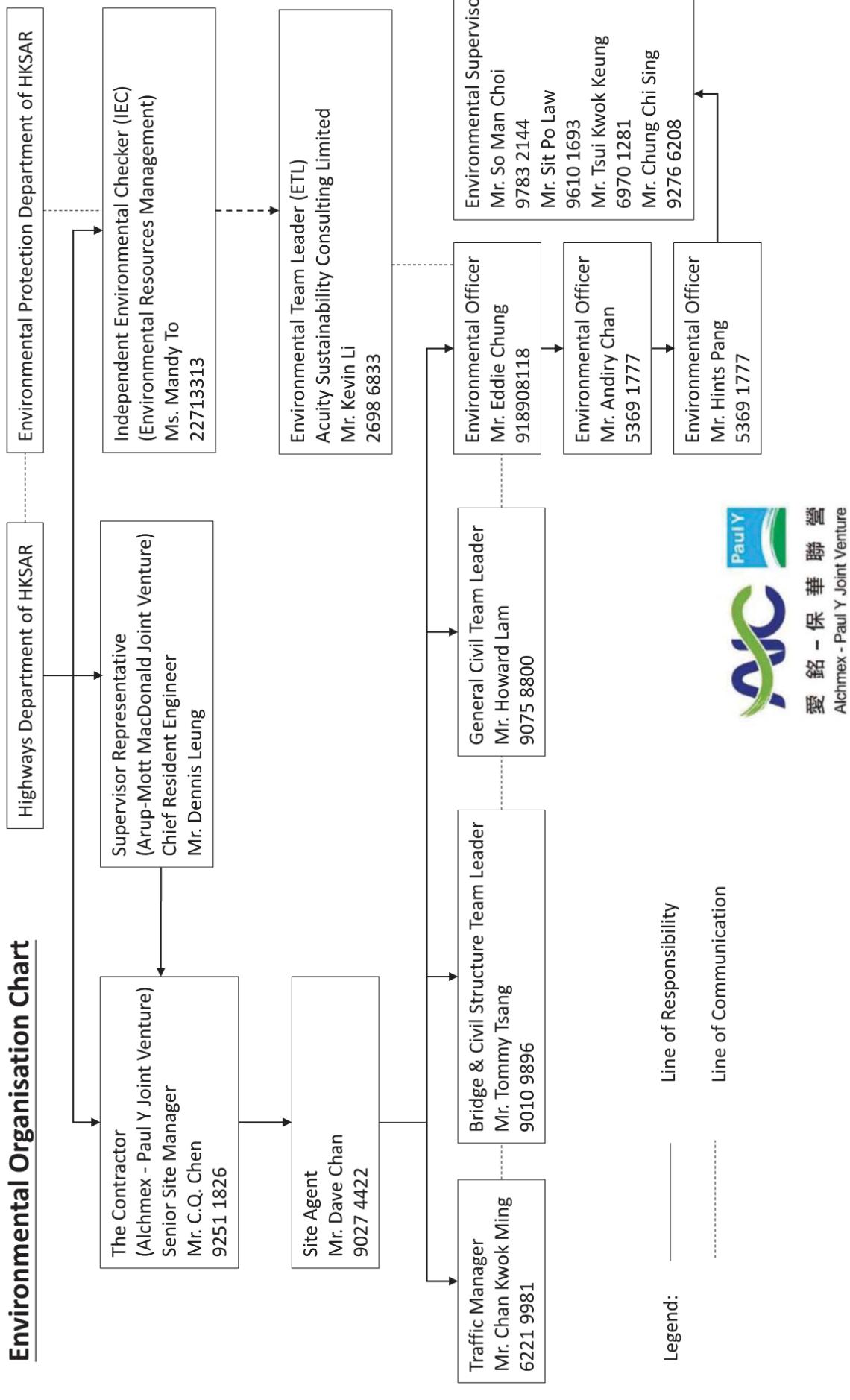
**Central Kowloon Route - Kai Tak East (Month 16 Update) (Rev10 - CSD)
Three Month Rolling Programme**

Page 19 of 19

Appendix C

Project Organization Chart

Environmental Organisation Chart



Appendix D

Dust Event-Action Plan (EAP)

EVENT	ACTION	IEC	ER	CONTRACTOR
ACTION LEVEL				
1.Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC and ER; 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 ER; 3. Advise the ER 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 ER; 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. Supervise 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 ER within 3 working days of notification; 2. Implement the agreed proposals; 3. Amend proposal if appropriate.
LIMIT LEVEL	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform ER, Contractor and	1. Check monitoring data submitted by ET; 2. Check Contractor's working method;	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor,	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC

EVENT	ACTION	IEC	ER	CONTRACTOR
ET				
	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 ER informed of the results.	3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ER on the effectiveness of the proposed remedial measures; 5. Supervise implementation of remedial measures.	3. Ensure remedial measures properly implemented. 4. Amend proposal if appropriate.	Within 3 working days of notification; Implement the agreed proposals; 4. Amend proposal if appropriate.
2.Exceedance for two or more consecutive samples	1. Notify IEC, ER, 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 ER to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring.	1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consultation 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 3 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 ER until the exceedance is abated.

Note:

ET – Environmental Team

IEC – Independent Environmental Checker

ER – Engineer's Representative

Appendix E

Noise Event-Action Plan (EAP)

EVENT	ET	IEC	ER	ACTION	CONTRACTOR
Action Level	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Notify IEC and Contractor; 3. Report the results of investigation to the IEC, ER and Contractor; 4. Discuss with the Contractor and formulate remedial measures; 5. Increase monitoring frequency to check mitigation effectiveness.	1. Review the analysed results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Require Contractor to propose remedial measures for the analysed noise problem; 4. Ensure remedial measures are properly implemented		

Note:

ET – Environmental Team

IEC – Independent Environmental Checker

ER – Engineer's Representative

Appendix F

Environmental Mitigation Implementation Schedule (EMIS)

**Environmental Mitigation Implementation Schedule –
Contract No. HY/2018/02 (Kai Tak East)**

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/or standards to be achieved	Implementation Status
Construction Dust Impact								
S4.3.10	D1	The contractor shall follow the procedures and requirements given in the Air Pollution Control (Construction Dust) Regulation	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction stage	<ul style="list-style-type: none"> APCO To control the dust impact To meet HKAQO and TM-EIA criteria 	<ul style="list-style-type: none"> Implemented
S4.3.10	D2	<ul style="list-style-type: none"> Mitigation measures in form of regular watering under a good site practice should be adopted. Watering once per hour on exposed worksites and haul road should be conducted to achieve dust removal efficiencies of 91.7%. While the above watering frequencies are to be followed, the extent of watering may vary depending on actual site conditions but should be sufficient to maintain an equivalent intensity of no less than 1.3 L/m² to achieve the dust removal efficiency. 	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction stage	<ul style="list-style-type: none"> APCO To control the dust impact To meet HKAQO and TM-EIA criteria 	<ul style="list-style-type: none"> Implemented
S4.3.10	D3	<ul style="list-style-type: none"> Proper watering at exposed spoil should be undertaken throughout the construction phase; Any excavated or stockpile of dusty material should be covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading; Any dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads; A stockpile of dusty material should not be 	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction stage	<ul style="list-style-type: none"> APCO To control the dust impact To meet HKAQO and TM-EIA criteria 	<ul style="list-style-type: none"> Implemented and rectified after observation.

**Environmental Mitigation Implementation Schedule –
Contract No. HY/2018/02 (Kai Tak East)**

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/or standards to be achieved	Implementation Status
		<ul style="list-style-type: none"> extended beyond the pedestrian barriers, fencing or traffic cones; The load of dusty materials on a vehicle leaving a construction site should be covered entirely by impermeous sheeting to ensure that the dusty materials do not leak from the vehicle. Where practicable, vehicle washing facilities with high pressure water jet should be provided at every discernible or designated vehicle exit point. The area where vehicle washing takes place and the road section between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores; When there are open excavation and reinstatement works, hoarding of not less than 2.4m high should be provided and properly maintained as far as practicable along the site boundary with provision for public crossing. Good site practice shall also be adopted by the Contractor to ensure the conditions of the hoardings are properly maintained throughout the construction period; The portion of any road leading only to construction site that is within 30m of a vehicle entrance or exit should be kept clear of dusty materials; Surfaces where any pneumatic or power-driven drilling, cutting, polishing or other mechanical breaking operation takes place should be sprayed with water or a dust suppression chemical 						

**Environmental Mitigation Implementation Schedule –
Contract No. HY/2018/02 (Kai Tak East)**

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/or standards to be achieved	Implementation Status
		<p>continuously;</p> <ul style="list-style-type: none"> Any area that involves demolition activities should be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities so as to maintain the entire surface wet; Any skip hoist for material transport should be totally enclosed by impervious sheeting; Every stock of more than 20 bags of cement or dry-pulverised fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides; Loading, unloading, transfer, handling or storage of bulk cement or dry PFA should be carried out in a totally enclosed system or facility, and any vent or exhaust should be fitted with an effective fabric filter or equivalent air pollution control system Exposed earth should be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shotcrete or other suitable surface stabilizer within six months after the last construction activity on the construction site or part of the construction site where the exposed earth lies. 						
S4.3.10	D6	Implement regular dust monitoring under EM&A programme during the construction stage.	Monitoring of dust impact	Contractor	Selected Rep. dust monitoring station	Construction stage	• TM-EIA • Implemented	Construction Noise (Airborne)

**Environmental Mitigation Implementation Schedule –
Contract No. HY/2018/02 (Kai Tak East)**

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/or standards to be achieved	Implementation Status
S5.4.1	N1	Implement the following good site practices: <ul style="list-style-type: none"> Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme; Machines and plant (such as trucks, cranes) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum; Plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs; Silencers or mufflers on construction equipment should be properly fitted and maintained during the construction works; Mobile plant should be sited as far away from NSRs as possible and practicable; Material stockpiles, mobile container site office and other structures should be effectively utilized, where practicable, to screen noise from on-site construction activities. 	Control construction airborne noise	Contractor	All construction sites	Construction stage	• Annex 5, TM-EIAO	• Implemented
S5.4.1	N2	Install temporary hoarding located on the site boundaries between noisy construction activities and NSRs. The conditions of hoardings shall be properly maintained throughout the construction period.	Reduce the construction noise levels at low-level zone of NSRs through partial screening	Contractor	All construction sites	Construction stage	• Annex 5, TM-EIAO	• Implemented
S5.4.1	N3	Install movable noise barriers (typical design is wooden framed barrier with a small-cantilevered on a skid footing with 25mm thick internal sound absorptive lining), acoustic mat or full enclosure, screen the noisy	Screen the noisy plant items to be used at all construction	Contractor	All construction sites where practicable	Construction stage	• Annex 5, TM-EIAO	• Implemented

**Environmental Mitigation Implementation Schedule –
Contract No. HY/2018/02 (Kai Tak East)**

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/or standards to be achieved	Implementation Status
S5.4.1	N4	plants including air compressors, generators and handheld breakers, etc.	sites					
S5.4.1	N5	Use 'Quiet plant'		Reduce the noise levels of plant items	Contractor	All construction sites where practicable	Construction stage	• Annex 5, TM-EIAO • Implemented and rectified after observation.
S5.4.1	N5	Loading/ unloading activities should be carried out inside the full enclosure of mucking out points.		Reduce the noise levels of loading/unloading activities	Contractor	Mucking out locations	Construction stage	• Annex 5, TM-EIAO • Implemented
S5.4.1	N6	Sequencing operation of construction plants where practicable.		Operate sequentially within the same work site to reduce the construction airborne noise	Contractor	All construction sites where practicable	Construction stage	• Annex 5, TM-EIAO • Implemented
S5.4.1	N7	Implement a noise monitoring programme under EM&A programme.		Monitor the construction noise levels at the selected representative locations	Contractor	Selected rep. noise monitoring station	Construction stage	• TM-EIAO • Implemented
Water Quality (Construction Phase)								

**Environmental Mitigation Implementation Schedule –
Contract No. HY/2018/02 (Kai Tak East)**

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/or standards to be achieved	Implementation Status
S6.9.1.1	W1	In accordance with the Practice Note for Professional Persons on Construction Site Drainage, Environmental Protection Department, 1994 (ProPECC PN1/94), construction phase mitigation measures shall include the following:	To minimize water quality impact from the construction site runoff and general construction activities	Contractor	All construction sites where practicable	Construction stage	<ul style="list-style-type: none"> • Water Pollution Control Ordinance • ProPECC PN 1/94. • TMEIAO • TM-DSS 	<ul style="list-style-type: none"> • Implemented and rectified after observation.

Construction Runoff

- 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 (both temporary and permanent drainage pipes and culverts), earth bunds or sand bag barriers should be provided on site to direct stormwater to silt removal facilities. The design of the temporary on-site drainage system will be undertaken by the contractor prior to the commencement of construction;
- The dikes or embankments for flood protection should be implemented around the boundaries of earthwork areas. Temporary ditches should be provided to facilitate the runoff discharge into an appropriate watercourse, through a silt/ sediment trap. The sediment/ silt traps should be incorporated in the permanent drainage channels to enhance deposition rates;
- The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94, which states that the retention time for silt/ sand traps should be 5 minutes under

**Environmental Mitigation Implementation Schedule –
Contract No. HY/2018/02 (Kai Tak East)**

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/or standards to be achieved	Implementation Status
		<p>maximum flow conditions. Sizes may vary depending upon the flow rate, but for a flow rate of 0.1 m³/s sedimentation basin of 30 m³ would be required and for a flow rate of 0.5 m³/s the basin would be 150 m³. The detailed design of the sand/ silt traps shall be undertaken by the contractor prior to the commencement of construction;</p> <ul style="list-style-type: none"> • All exposed earth areas should be completed and vegetated as soon as possible after earthworks have been completed, or alternatively, within 14 days of the cessation of earthworks where practicable. Exposed slope surfaces should be covered by tarpaulin or other means; • The overall slope of the site should be kept to a minimum to reduce the erosive potential of surface water flows, and all traffic areas and access roads protected by coarse stone ballast. An additional advantage accruing from the use of crushed stone is the positive traction gained during prolonged periods of inclement weather and the reduction of surface sheet flows; • 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 following rainstorms. Deposited silt and grit should be removed regularly and disposed of by spreading evenly over stable, vegetated areas; • Measures should be taken to minimize the ingress 						

**Environmental Mitigation Implementation Schedule –
Contract No. HY/2018/02 (Kai Tak East)**

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/or standards to be achieved	Implementation Status
		<p>of site drainage into excavations. If the excavation of trenches in wet periods is necessary, they should be dug and backfilled in short sections wherever practicable. Water pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities;</p> <ul style="list-style-type: none"> • Open stockpiles of construction materials (for example, aggregates, sand and fill material) of more than 50m³ should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system; • Manholes should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and storm runoff being directed into foul sewers; • Precautions be taken at any time of year when rainstorms are likely, actions to 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 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; • 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 site wheel washing 						

**Environmental Mitigation Implementation Schedule –
Contract No. HY/2018/02 (Kai Tak East)**

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/or standards to be achieved	Implementation Status
		<p>facilities should be provided at every construction site exit where practicable. Wash-water should have sand and silt settled out and removed at least on a weekly basis 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;</p> <ul style="list-style-type: none"> • Oil interceptors should be provided in the drainage system downstream of any oil/ fuel pollution sources. The oil interceptors should be emptied and cleaned regularly to prevent the release of oil and grease into the storm water drainage system after accidental spillage. A bypass should be provided for the oil interceptors to prevent flushing during heavy rain; • Construction solid waste, debris and rubbish on site should be collected, handled and disposed of properly to avoid water quality impacts; • All fuel tanks and storage areas should be provided with locks and sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank to prevent spilled fuel oils from reaching water sensitive receivers nearby; • Adopt best management practices; • All earth works should be conducted sequentially to limit the amount of construction runoff generated from exposed areas during the wet 						

**Environmental Mitigation Implementation Schedule –
Contract No. HY/2018/02 (Kai Tak East)**

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/or standards to be achieved	Implementation Status
S6.9.1.2	W2	Tunneling Works and Underground Works	<p>season (April to September) as far as practicable.</p> <ul style="list-style-type: none"> Cut-&-cover tunneling work should be conducted sequentially to limit the amount of construction runoff generated from exposed areas during the wet season (April to September) as far as practicable. Uncontaminated discharge should pass through sedimentation tanks prior to off-site discharge; The wastewater with a high concentration of SS should be treated (e.g. by sedimentation tanks with sufficient retention time) before discharge. Oil interceptors would also be required to remove the oil, lubricants and grease from the wastewater; Direct discharge of the bentonite slurry (as a result of D-wall) is not allowed. It should be reconditioned and reused wherever practicable. Temporary storage locations (typically a properly closed warehouse) should be provided on site for any unused bentonite that needs to be transported away after all the related construction activities area completed. The requirements in ProPECC PN 1/94 should be adhered to in the handling and disposal of bentonite slurries. 	To minimize construction water impact from tunneling works	All tunneling portion	Construction stage	<ul style="list-style-type: none"> Water Pollution Control Ordinance ProPECC PN 1/94 TM-DSS TM-EIAO 	• N/A

**Environmental Mitigation Implementation Schedule –
Contract No. HY/2018/02 (Kai Tak East)**

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/or standards to be achieved	Implementation Status
S6.9.1.3	W3	Sewage Effluent	<ul style="list-style-type: none"> Portable chemical toilets and sewage holding tanks are recommended for handling the construction sewage generated by the workforce. A licensed contractor should be employed to provide appropriate and adequate portable toilets and be responsible for appropriate disposal and maintenance. 	To minimize water quality sewage effluent	Contractor	All construction sites where practicable	Construction stage	<ul style="list-style-type: none"> Water Pollution Control Ordinance TM-DSS
S6.9.1.5	W4	Groundwater from Potential Contaminated Area:	<ul style="list-style-type: none"> No direct discharge of groundwater from contaminated areas should be adopted. A discharge license under the WPCO through the Regional Office of EPD for groundwater discharge should be applied. Prior to the excavation works within these potentially contaminated areas, the groundwater quality should be reviewed during the process of discharge license application. The compliance to the Technical Memorandum on Standards for Effluents Discharged into Drainage on Sewerage Systems, Inland and Coastal Waters (TM-DSS) and the existence of prohibited substance should be confirmed. If the review results indicated that the groundwater to be generated from the excavation works would be contaminated, the contaminated groundwater should be either properly treated in compliance with the requirements of the TM-DSS or properly 	To minimize groundwater quality impact from contaminated area	Contractor	Excavation areas where contamination is found	Construction stage	<ul style="list-style-type: none"> Water Pollution Control Ordinance TM-DSS TM-EIAO

**Environmental Mitigation Implementation Schedule –
Contract No. HY/2018/02 (Kai Tak East)**

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/or standards to be achieved	Implementation Status
		<p>recharged into the ground.</p> <ul style="list-style-type: none"> If wastewater treatment is deployed, the wastewater treatment unit shall deploy suitable treatment process (e.g. oil interceptor / activated carbon) to reduce the pollution level to an acceptable standard and remove any prohibited substances (e.g. TPH) to undetectable range. All treated effluent from wastewater treatment plant shall meet the requirements as stated in TM-DSS and should be discharged into the foul sewers. If groundwater recharging wells are deployed, recharging wells should be installed as appropriate for recharging the contaminated groundwater back into the ground. The recharging wells should be selected at places where the groundwater quality will not be affected by the recharge operation as indicated in the Section 2.3 of TM-DSS. The baseline groundwater quality shall be determined prior to the selection of the recharge wells, and submit a working plan (including the laboratory analytical results showing the quality of groundwater at the proposed recharge location(s) as well as the pollutant levels of groundwater to be recharged) to EPD for agreement. Pollution levels of groundwater to be recharged shall not be higher than pollutant levels of ambient groundwater at the recharge well. Prior to recharge, any prohibited substances such as TPH products should be removed as necessary by installing the petrol 						

**Environmental Mitigation Implementation Schedule –
Contract No. HY/2018/02 (Kai Tak East)**

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/or standards to be achieved	Implementation Status
S6.9.1.6	W6	<u>Accidental Spillage</u>	In order to prevent accidental spillage of chemicals, the following is recommended: <ul style="list-style-type: none"> All the tanks, containers, storage area should be bundled and the locations should be locked as far as possible from the sensitive watercourse and stormwater drains; The Contractor should register as a chemical waste producer if chemical wastes would be generated. Storage of chemical waste arising from the construction activities should be stored with suitable labels and warnings. Disposal of chemical wastes should be conducted in compliance with the requirements as stated in the Waste Disposal (Chemical Waste) (General) Regulation.	To minimize quality from water impact accidental spillage	Contractor	All construction site where practicable	Construction stage	<ul style="list-style-type: none"> Water Pollution Control Ordinance PROPECC PN 1/94 TM-EIAO TM-DSS
S7.4.1	W/M1	On-site sorting of C&D material	<ul style="list-style-type: none"> Geological assessment should be carried out by competent persons on site during excavation to identify materials which are not suitable to use as aggregate in structural concrete (e.g. volcanic rock, Aplitic dyke rock, etc.). Volcanic rock and Aplitic dyke rock should be separated at the source sites as far as practicable and stored at designated 	Separation of unsuitable rock from ending up at concrete batching plants and be turned into concrete for structural use	Contractor	All construction sites	Construction stage	<ul style="list-style-type: none"> DEVB (W) No. 6/2010 N/A

**Environmental Mitigation Implementation Schedule –
Contract No. HY/2018/02 (Kai Tak East)**

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/or standards to be achieved	Implementation Status
S7.5.1	WM2	Construction and Demolition Material	stockpile area preventing them from delivering to crushing facilities. The crushing plant operator should also be reminded to set up measures to prevent unsuitable rock from ending up at concrete batching plants and be turned into concrete for structural use. Details regarding control measures at source site and crushing facilities should be submitted by the Contractor for the Engineer to review and agree. In addition, site records should also be kept for the types of rock materials excavated and the traceability of delivery will be ensured with the implementation of Trip Ticket System and enforced by site supervisory staff as stipulated under DEVB TCI(W) No. 6/2010 for tracking of the correct delivery to the rock crushing facilities for processing into aggregates. Alternative disposal option for the reuse of volcanic rock and Aplite Dyke rock, etc. should be explored.	Good practice to minimize the waste generation and recycle the C&D materials as far as practicable so as to reduce the amount for final disposal	Contractor	All construction sites	Construction stage	<ul style="list-style-type: none"> • Land (Miscellaneous Provisions) Ordinance • Waste Disposal Ordinance • ETWB TCW No. 19/2005

**Environmental Mitigation Implementation Schedule –
Contract No. HY/2018/02 (Kai Tak East)**

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/or standards to be achieved	Implementation Status
S7.5.1	WM3	<ul style="list-style-type: none"> Implement a trip-ticket system for each works contract to ensure that the disposal of C&D materials are properly documented and verified; Implement an enhanced Waste Management Plan similar to ETWBTC (Works) No. 19/2005 – “Environmental Management on Construction Sites” to encourage on-site sorting of C&D materials and to minimize their generation during the course of construction. 						
	C&D Waste	<ul style="list-style-type: none"> Standard formwork or pre-fabrication should be used as far as practicable in order to minimize the arising of C&D materials. The use of more durable formwork or plastic facing for the construction works should be considered. Use of wooden hoardings should not be used, as in other projects. Metal hoarding should be used to enhance the possibility of recycling. The purchasing of construction materials will be carefully planned in order to avoid over ordering and wastage; The Contractor should recycle as much of the C&D materials as possible on-site. Public fill and C&D waste should be segregated and stored in different containers or skips to enhance reuse or recycling of materials and their proper disposal. Where practicable, concrete and masonry can be crushed and used as fill. Steel reinforcement bar can be used by scrap steel mills. Different areas of the 	Good practice to minimize the waste generation and recycle the C&D materials as far as practicable so as to reduce the amount for final disposal	site to contractor	All construction sites	Construction stage	<ul style="list-style-type: none"> Land (Miscellaneous Provisions) Ordinance Waste Disposal Ordinance ETWB TCW No. 19/2005 	

**Environmental Mitigation Implementation Schedule –
Contract No. HY/2018/02 (Kai Tak East)**

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/or standards to be achieved	Implementation Status
S7.5.1	WM4	<u>Excavated Contaminated Soils</u> • Details of the mitigation measures on handling of the contaminated soil shall be referred to Section on Land Contamination below.	sites should be considered for such segregation and storage.	Contractor	PBH4	Prior to commencement of construction works within the contaminated area	<ul style="list-style-type: none"> • Practice Guide (PG) for Investigation and Remediation of Contaminated Land • GN/GM for land contamination 	• Implemented
S7.5.1	WM5	<u>Land-based Sediment</u> • All construction plant and equipment shall be designed and maintained to minimize the risk of silt, sediments, contaminants or other pollutants being released into the water column or deposited in the locations other than designated location; • All vessels shall be sized such that adequate draft is maintained between vessels and the sea bed at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash; • Before moving the vessels which are used for transporting dredged material, excess material shall be cleaned from the decks and exposed fittings of vessels and the excess materials shall never be dumped into the sea except at the		Contractor	Along CKR alignment	Construction stage	<ul style="list-style-type: none"> • ETWB TCW No. 34/2002 	• Implemented

**Environmental Mitigation Implementation Schedule –
Contract No. HY/2018/02 (Kai Tak East)**

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/or standards to be achieved	Implementation Status
		<ul style="list-style-type: none"> • approved locations; • Adequate freeboard shall be maintained on barges to ensure that decks are not washed by wave action. • The Contractors shall monitor all vessels transporting material to ensure that no dumping outside the approved location takes place. The Contractor shall keep and produce logs and other records to demonstrate compliance and that journeys are consistent with designated locations and copies of such records shall be submitted to the engineers; • The Contractors shall comply with the conditions in the dumping licence. • All bottom dumping vessels (Hopper barges) shall be fitted with tight fittings seals to their bottom openings to prevent leakage of material; • The material shall be placed into the disposal pit by bottom dumping; • Contaminated marine mud shall be transported by spit barge of not less than 750m³ capacity and capable of rapid opening and discharge at the disposal site; • Discharge shall be undertaken rapidly and the hoppers shall be closed immediately. Material adhering to the sides of the hopper shall not be washed out of the hopper and the hopper shall remain closed until the barge returns to the disposal site. • For Type 3 special disposal treatment, sealing of 						

**Environmental Mitigation Implementation Schedule –
Contract No. HY/2018/02 (Kai Tak East)**

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/or standards to be achieved	Implementation Status
S7.5.1	WM6	Chemical Waste	<p>contaminant with geosynthetic containment before dropping designated mud pit would be a possible arrangement. A geosynthetic containment method is a method whereby the sediments are sealed in geosynthetic containers and, the containers would be dropped into the designated contaminated mud pit where they would be covered by further mud disposal and later by the mud pit capping at the disposal site, thereby fulfilling the requirements for fully confined mud disposal</p> <ul style="list-style-type: none"> • Chemical waste that is produced, as defined by Schedule 1 of the Waste Disposal (Chemical Waste) (General) Regulation, should be handled in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes; • Containers used for the storage of chemical wastes should be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed, have a capacity of less than 450 L unless the specification has been approved by EPD, and display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the regulation; • The storage area for chemical wastes should be clearly labelled and used solely for the storage of chemical waste, enclosed on at least 3 sides, have an impermeable floor and bunding of sufficient 	Control the chemical waste ensure proper storage, handling and disposal	Contractor	All construction sites	Construction stage	<ul style="list-style-type: none"> • Waste Disposal (Chemical Waste) (General) Regulation • Code of Practice on the Packaging, Labelling and Storage of Chemical Waste

**Environmental Mitigation Implementation Schedule –
Contract No. HY/2018/02 (Kai Tak East)**

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/or standards to be achieved	Implementation Status
S7.5.1	WM7	<p><u>General Refuse</u></p> <ul style="list-style-type: none"> • General refuse generated on-site should be stored in enclosed bins or compaction units separately from construction and chemical wastes; • A reputable waste collector should be employed by the Contractor to remove general refuse from the site, separately from construction and chemical wastes, on a daily basis to minimize odour, pest and litter impacts. Burning of refuse on construction sites is prohibited by law. • Aluminum cans are often recovered from the waste stream by individual collectors if they are segregated and made easily accessible. Separate labelled bins for their deposit should be provided if feasible; • Office wastes can be reduced through the recycling of paper if volumes are large enough to warrant 	<p>capacity to accommodate 110% of the volume of the largest container or 20% of the total volume of waste stored in that area, whichever is the greatest, have adequate ventilation, covered to prevent rainfall entering, and arranged so that incompatible materials are adequately separated;</p> <ul style="list-style-type: none"> • Disposal of chemical waste should be via a licensed waste collector, be to a facility licensed to receive chemical waste, such as the Chemical Waste Treatment Centre which also offers a chemical waste collection service and can supply the necessary storage containers, or be to a reuser of the waste, under approval from EPD. 	Contractor	All construction sites	Construction stage	• Waste Disposal Ordinance	• Implemented

**Environmental Mitigation Implementation Schedule –
Contract No. HY/2018/02 (Kai Tak East)**

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/or standards to be achieved	Implementation Status
Land Contamination								
S8.9 & Appendix 8.4	LC2	<u>Excavation of the Contaminated Soil</u>	<ul style="list-style-type: none"> Prior to commencement of the excavation works at the contamination zone, the zone should be clearly marked out on site and the surface levels recorded. Excavation of contaminated material should be undertaken using dedicated earth-moving plant. The excavated contaminated soils would be stockpiled at designated area on site and covered by sheet to prevent dispersion of contamination during stockpiling. The Contractor should pay attention to the selection of suitable groundwater lowering schemes and discharge points if the groundwater table is higher than the contaminated soils during excavation. The Contractor should also obtain a valid Water Pollution Control Ordinance (WPCO) discharge licence from EPD where applicable. 	The contaminated soil will be excavated for on-site reuse	PB/H4	Prior to commencement of construction works within the contaminated area	<ul style="list-style-type: none"> Practice Guide (PG) for Investigation and Remediation of Contaminated Land Guidance Notes for Contaminated Land Assessment and Remediation Manual for Use of Risk-Based Remediation Goals (RBRGs) for Contaminated Land Management 	<ul style="list-style-type: none"> N/A
S8.9 & Appendix 8.4	LC3		<ul style="list-style-type: none"> Following completion of the excavation to the specified depth, at least one sample from the base of the excavation and four samples evenly distributed along the boundary of the excavation shall be taken for a closure assessment testing. The acceptance criterion is shown below: 					<ul style="list-style-type: none"> N/A

**Environmental Mitigation Implementation Schedule –
Contract No. HY/2018/02 (Kai Tak East)**

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/ or standards to be achieved	Implementation Status						
		<table border="1"> <thead> <tr> <th>Locations</th> <th>Testing requirement</th> <th>Acceptance Criteria</th> </tr> </thead> <tbody> <tr> <td>PBH4</td> <td>PCBs</td> <td>RBRGs (Public Park)</td> </tr> </tbody> </table>	Locations	Testing requirement	Acceptance Criteria	PBH4	PCBs	RBRGs (Public Park)	<ul style="list-style-type: none"> If the results of analysis below the RBRGs (Public Park), no further excavation will be required. <p>If the analysis indicates presence of contamination (i.e. noncompliance of the acceptance criteria), further excavation shall be carried out in 0.5m increment vertically and/or horizontally depending on the location(s) of the sample(s) which has exceeded the acceptance criteria. Further sampling shall also be conducted for compliance testing. The process of excavation, sampling and compliance testing should continue until all contaminated materials are removed and should be supervised by Land Contamination Specialist.</p>	A Remediation Report (RR) to demonstrate adequate clean-up shall be prepared and submitted to EPD for endorsement prior to the commencement of any construction/development works within the sites. No construction/development works shall be carried out prior to the endorsement of the RR by EPD.				<ul style="list-style-type: none"> N/A
Locations	Testing requirement	Acceptance Criteria												
PBH4	PCBs	RBRGs (Public Park)												
Appendix 8.4	LC4							Hazard to Life						
S9.18	H8	The driver and his assistant should be physically healthy, experienced and have good safe driving records. The driver should hold a proper driving licence for the approved transport truck. Dedicated	To reduce the risk during explosives transport	the Contractor	Works areas at which explosives would be	Construction stage	-	<ul style="list-style-type: none"> N/A 						

**Environmental Mitigation Implementation Schedule –
Contract No. HY/2018/02 (Kai Tak East)**

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/or standards to be achieved	Implementation Status
S9.18	H9	training programme and regular road safety briefing sessions/ workshops should be provided to enhance their safe driving attitude and practice. Smoking should be strictly prohibited. Emergency response plans in case of road accident should be prepared and implemented. The driver and his assistant should be familiar with the emergency procedures including evacuation, and proper communication/ fire-fighting equipment should be provided to the driver and his assistant.			used			• N/A
Landscape & Visual								
S10.10.1 Table 10.11	LV3	<u>Good Site Management</u>		Minimize visual impact	Contractor	Within Project site	Construction stage	- • Implemented
<u>Screen Hoarding</u>								
S10.10.1 Table 10.11	LV4	Large temporary stockpiles of excavated material shall be covered with unobtrusive sheeting to prevent dust and dirt spreading to adjacent landscape areas and vegetation, and to create a neat and tidy visual appearance. Construction plant and building material shall be orderly and carefully stored in order to create a neat and tidy visual appearance.		Minimize visual impact	Contractor	Within Project site	Construction stage	- • Implemented
<u>Lighting Control during Construction</u>								
S10.10.1 Table 10.11	LV5	All lighting in the construction site shall be carefully controlled to minimize light pollution and night-time glare to nearby residencies and GLC.		Minimize visual impact	Contractor	Within Project site	Construction stage	- • Implemented

**Environmental Mitigation Implementation Schedule –
Contract No. HY/2018/02 (Kai Tak East)**

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/or standards to be achieved	Implementation Status
S10.10.1 Table 10.11	LV6	<u>Erosion Control</u>	The Contractor shall consider other security measures, which shall minimize the visual impacts.	Minimize landscape impact	Contractor	Within Project site	Construction stage	- • Implemented
S10.10.1 Table 10.11	LV7	<u>Tree Protection & Preservation</u>	<ul style="list-style-type: none"> The potential for soil erosion shall be reduced by minimizing the extent of vegetation disturbance on site and by providing a protective cover over newly exposed soil. 	Minimize landscape and visual impact	Contractor	Within Project site	Construction stage	<ul style="list-style-type: none"> 'Guidelines for Tree Risk Management and Assessment Arrangement on an Area Basis and on a Tree Basis', Greening, Landscape and Tree Management (GLTM) Section, DEVB Latest recommended horticultural practices from GLTM Section, DEVB

**Environmental Mitigation Implementation Schedule –
Contract No. HY/2018/02 (Kai Tak East)**

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/or standards to be achieved	Implementation Status
S10.10.1 Table 10.11	LV8	<u>Tree Transplantation</u> <ul style="list-style-type: none"> For trees unavoidably affected by the Project that have to be removed, where practical transportation will be chosen as the top priority method of removal. If this is not possible or practical compensatory planting will be provided for trees unavoidably felled (See LV10). For trees unavoidably affected by the Project works that are transplanted, transplantation must be carried out in accordance with ETWB TCW 2/2004 and 3/2006. 	Minimize landscape and visual impact	Contractor	Within Project site and designated off-site locations	Prior to Construction stage	<ul style="list-style-type: none"> ETWB 3/2006 Latest recommended horticultural practices from Greening, Landscape and Tree Management (GLTM) Section, DEVB ETWB 2/2004 	<ul style="list-style-type: none"> N/A
S10.10.1 Table 10.11	LV9	<u>Compensatory Planting</u> <ul style="list-style-type: none"> For trees unavoidably affected by the Project that have to be removed, where practical transportation will be chosen as the top priority method of removal but if this is not possible or practical compensatory planting will be provided for trees unavoidably felled. All felled trees shall be compensated for by planting trees to the satisfaction of relevant Government projects. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Felling Application process under ETWBTC 3/2006. Compensatory tree planting may be incorporated into public open spaces and along roadside amenity areas affected by the construction works 	Minimize visual impact and also enhance landscape	Contractor	Within Project site	Construction stage	<ul style="list-style-type: none"> ETWB 3/2006 Latest recommended horticultural practices from Greening, Landscape and Tree Management (GLTM) Section, DEVB ETWB 2/2004 	<ul style="list-style-type: none"> N/A

**Environmental Mitigation Implementation Schedule –
Contract No. HY/2018/02 (Kai Tak East)**

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/or standards to be achieved	Implementation Status
S10.10.1 Table 10.11	LV10	<p><u>Screen Planting</u></p> <ul style="list-style-type: none"> Tall screen/buffer trees, shrubs and climbers should be planted, in so far as is possible, to soften and screen proposed structures such as roads and central strip, vertical edges and buildings and to enhance streetscape greening effect where appropriate. Indiscriminate use of trees for screening must be avoided and the principle of 'right tree for the right place' must be followed. This detail will be provided at the Detailed Design stage. This measure may additionally form part of the compensatory planting and will improve and create a pleasant pedestrian environment. 	Minimize visual impact and also enhance landscape.	Contractor	Within Project Site	Construction Phase	<ul style="list-style-type: none"> Guidelines on Greening of Noise Barriers, issued April 2012, GLTMS, DevB TCM ETWB 2/2004 	• N/A
S10.10.1 Table 10.11	LV12	<u>Reinstatement</u>	Minimize landscape impact	Contractor	Within Project Site	Construction Phase	• N/A	• N/A
		<ul style="list-style-type: none"> All works areas, excavated areas and disturbed areas for tunnel construction and temporary road diversion or any other proposed works shall be reinstated to former conditions or better, with reasonable landscape treatment and to the satisfaction of the relevant Government departments. (Specific mitigation for disturbance to public open space is detailed separately under LV14) 						

**Environmental Mitigation Implementation Schedule –
Contract No. HY/2018/02 (Kai Tak East)**

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/or standards to be achieved	Implementation Status
Cultural Heritage Impact (Construction Phase)								
S11.4.4	CH1	The contractor should be alerted during the construction on the possibility of locating archaeological remains and as a precautionary measure, AMO shall be informed immediately in case of discovery of antiquities or supposed antiquities in the subject sites.	To preserve any cultural heritage items which may be removed and damaged by the excavation	Contractor	During construction works for cut and cover tunnels	Construction stage	• AMOs requirements	• Implemented
EM&A Project								
S13.2	EM1	An Independent Environmental Checker needs to be employed as per the EM&A Manual	Control Performance	EM&A Highways Department	All construction sites	Construction stage	• EIAO Guidance Note No. 4/2010 • TM-EIAO	• Implemented
S13.2-13.4	EM2	<ul style="list-style-type: none"> An Environmental Team needs to be employed as per the EM&A Manual; Prepare a systematic Environmental Management Plan to ensure effective implementation of the mitigation measures; An environmental impact monitoring needs to be implemented by the Environmental Team to ensure all the requirements given in the EM&A Manual are fully complied with. 	Perform environmental monitoring & auditing	Highways Department/ Contractor	All construction sites	Construction stage	• EIAO Guidance Note No. 4/2010 • TM-EIAO	• Implemented

Appendix G

Monitoring Schedule of the Reporting Month

August 2020

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
26	27	28	29	30	31	1
2	3	4 Impact Dust monitoring (E-A1)	5	6	7	8
9	10 Impact Dust monitoring (E-A1)	11	12	13	14	15 Impact Dust monitoring (E-A1)
16	17	18	19	20	21 Impact Dust monitoring (E-A1)	22
23	24	25	26	27 Impact Dust monitoring (E-A1)	28	29
30					31	

Appendix H

Calibration Certificates

(Air Monitoring)



SIBATA SCIENTIFIC TECHNOLOGY LTD.

1-1-62, Nakane, Soka, Saitama, 340-0005 Japan

TEL : 048-933-1582 FAX : 048-933-1591

CALIBRATION CERTIFICATE

Date: August 1st, 2020

Equipment Name	:	Digital Dust Indicator, Model LD-5R
Code No.	:	080000-72
Quantity	:	1 unit
Serial No.	:	882106
Sensitivity	:	0.001 mg/m ³
Sensitivity Adjustment	:	690
Scale Setting	:	July 22th, 2020

We hereby certify that the above mentioned instrument has been calibrated satisfactory.

Sincerely

SIBATA SCIENTIFIC TECHNOLOGY LTD.

Tong Zhang

Tong Zhang

Overseas & New Business Group

Overseas Sales Department





RECALIBRATION

DUE DATE:

October 10, 2020

Certificate of Calibration

Calibration Certification Information

Cal. Date:	October 10, 2019	Rootsmeter S/N:	438320	Ta:	296	°K
Operator:	Jim Tisch			Pa:	748.03	mm Hg
Calibration Model #:	TE-5028A	Calibrator S/N: 3702				

Run	Vol. Init (m ³)	Vol. Final (m ³)	ΔVol. (m ³)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H ₂ O)
1	1	2	1	1.3100	4.1	1.50
2	3	4	1	1.0240	6.7	2.50
3	5	6	1	0.9260	8.0	3.00
4	7	8	1	0.8620	9.4	3.50
5	9	10	1	0.6540	16.2	6.00

Data Tabulation

Vstd (m ³)	Qstd (x-axis)	$\sqrt{\Delta H \left(\frac{Pa}{Pstd} \right) \left(\frac{Tstd}{Ta} \right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H \left(Ta/Pa \right)}$ (y-axis)
0.9855	0.7523	1.2192	0.9945	0.7592	0.7704
0.9820	0.9590	1.5739	0.9910	0.9678	0.9946
0.9803	1.0586	1.7242	0.9893	1.0684	1.0895
0.9784	1.1351	1.8623	0.9874	1.1455	1.1768
0.9694	1.4823	2.4383	0.9783	1.4959	1.5409
QSTD	m=	1.66723	QA	m=	1.04399
	b=	-0.03281		b=	-0.02074
	r=	0.99991		r=	0.99991

Calculations

$$\begin{aligned} Vstd &= \Delta Vol((Pa - \Delta P)/Pstd)(Tstd/Ta) & Va &= \Delta Vol((Pa - \Delta P)/Pa) \\ Qstd &= Vstd/\Delta Time & Qa &= Va/\Delta Time \end{aligned}$$

For subsequent flow rate calculations:

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

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.

InnoTech Instrumentation Co. Ltd.

創 新 科 儀 有 限 公 司

HIVOL SAMPLER CALIBRATION DATA SHEET (TSP)

Site Information

Location:	Emax	Site ID:	Date:	22-Jul-2020	
Serial No:	1049	Model:	TE-5170X	Operator:	Polar Chan

Ambient Condition

Corrected Pressure (mm Hg):	757.0	Temperature (deg K):	303.0
-----------------------------	-------	----------------------	-------

Calibration Orifice

Model:	TE-5028A	Slope:	1.66723
Serial No.:	3702	Intercept:	-0.03281
Calibration Due Date:	10-Oct-20	Corr. Coeff:	0.99991

Calibration Data

Plate or Test #	In,H2O (in)	Qa, X-Axis (m ³ /min)	I, CFM (chart)	IC, Y-Axis (corrected)
1	1.95	0.849	32.4	32.03
2	2.34	0.928	34.0	33.61
3	2.72	0.999	35.1	34.74
4	3.06	1.058	36.2	35.85
5	3.30	1.098	37.0	36.61

Sampler Calibration Relationship (Qa on x-axis, IC on y-axis)

m= 18.1758 b= 16.6376 Corr. Coeff= 0.9995

Sampler set point(SSP) 39 CFM

Calculations

$$Q_{std} = 1/m[\text{Sqrt}(H_2O(Pa/P_{std})(T_{std}/T_a)) - b]$$

$$IC = I[\text{Sqrt}(Pa/P_{std})(T_{std}/T_a)]$$

Q_{std} = standard flow rate

IC = corrected chart response

I = actual chart response

m = calibrator Q_{std} slope

b = calibrator Q_{std} intercept

T_a = actual temperature during calibration (deg K)

Pa = actual pressure during calibration (mm Hg)

T_{std} = 298 deg K

P_{std} = 760 mm Hg

For subsequent calculation of sampler flow:

$$(1.21*m+b)/[\text{Sqrt}(298/Tav)(Pav/760)]$$

m = sampler slope

b = sampler intercept

I = chart response

Tav = average temperature

Pav = average pressure

Checked by: _____

Date: 22-Jul-20

InnoTech Instrumentation Co. Ltd.

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HIVOL SAMPLER CALIBRATION DATA SHEET (TSP)

Site Information

Location:	Emax	Site ID:	Date:	06-Aug-2020	
Serial No:	1049	Model:	TE-5170X	Operator:	Polar Chan

Ambient Condition

Corrected Pressure (mm Hg):	757.4	Temperature (deg K):	302.1
-----------------------------	-------	----------------------	-------

Calibration Orifice

Model:	TE-5028A	Slope:	1.66723
Serial No.:	3702	Intercept:	-0.03281
Calibration Due Date:	10-Oct-20	Corr. Coeff:	0.99991

Calibration Data

Plate or Test #	In,H2O (in)	Qa, X-Axis (m ³ /min)	I, CFM (chart)	IC, Y-Axis (corrected)
1	2.01	0.863	31.6	31.32
2	2.31	0.924	33.0	32.71
3	2.64	0.986	34.4	34.11
4	3.00	1.050	35.7	35.43
5	3.33	1.105	36.8	36.47

Sampler Calibration Relationship (Qa on x-axis, IC on y-axis)

$$m = \underline{21.3280} \quad b = \underline{12.9857} \quad \text{Corr. Coeff} = \underline{0.9992}$$

Sampler set point(SSP) $\underline{39 \text{ CFM}}$

Calculations

$$Q_{std} = 1/m[\sqrt{H_2O(Pa/Pstd)(Tstd/Ta)} - b]$$

m = sampler slope

$$IC = I[\sqrt{Pa/Pstd}(Tstd/Ta)]$$

b = sampler intercept

Qstd = standard flow rate

I = chart response

IC = corrected chart response

Tav = average temperature

m = calibrator Qstd slope

Pav = average pressure

b = calibrator Qstd intercept

Ta = actual temperature during calibration (deg K)

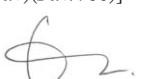
Pa = actual pressure during calibration (mm Hg)

Tstd = 298 deg K

Pstd = 760 mm Hg

For subsequent calculation of sampler flow:

$$(1.21*m+b)/[\sqrt{298/Tav}*(Pav/760)]$$

Checked by: 

Date: $\underline{6\text{-}Aug\text{-}20}$

InnoTech Instrumentation Co. Ltd.

創 新 科 儀 有 限 公 司

HIVOL SAMPLER CALIBRATION DATA SHEET (TSP)

Site Information

Location:	Emax	Site ID:	Date:	21-Aug-2020	
Serial No:	1049	Model:	TE-5170X	Operator:	Polar Chan

Ambient Condition

Corrected Pressure (mm Hg):	756.8	Temperature (deg K):	302.8
-----------------------------	-------	----------------------	-------

Calibration Orifice

Model:	TE-5028A	Slope:	1.66723
Serial No.:	3702	Intercept:	-0.03281
Calibration Due Date:	10-Oct-20	Corr. Coeff:	0.99991

Calibration Data

Plate or Test #	In,H2O (in)	Qa, X-Axis (m ³ /min)	I, CFM (chart)	IC, Y-Axis (corrected)
1	1.96	0.851	31.9	31.59
2	2.28	0.916	33.2	32.82
3	2.68	0.992	34.9	34.56
4	3.04	1.054	36.3	35.98
5	3.33	1.104	37.2	36.83

Sampler Calibtation Relationship (Qa on x-axis, IC on y-axis)

$$m = \underline{21.2201} \quad b = \underline{13.4897} \quad \text{Corr. Coeff} = \underline{0.9991}$$

Sampler set point(SSP) $\underline{40 \text{ CFM}}$

Calculations

Qstd = $1/m[\text{Sqrt}(H_2O(Pa/Pstd)(Tstd/Ta))-b]$

m = sampler slope

IC = $I[\text{Sqrt}(Pa/Pstd)(Tstd/Ta)]$

b = sampler intercept

Qstd = standard flow rate

I = chart response

Ic = corrected chart response

Tav = average temperature

m = calibrator Qstd slope

Pav = average pressure

b = calibrator Qstd intercept

Ta = actual temperature during calibration (deg K)

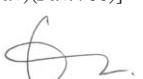
Pa = actual pressure during calibration (mm Hg)

Tstd = 298 deg K

Pstd = 760 mm Hg

For subsequent calculation of sampler flow:

$(1.21*m+b)/[\text{Sqrt}(298/Tav)(Pav/760)]$

Checked by: 

Date: 21-Aug-20

Appendix I

The Certification of Laboratory with HOKLAS Accredited Analytical Tests



Hong Kong Accreditation Service
香港認可處

Certificate of Accreditation
認可證書

This is to certify that
特此證明

ACUMEN LABORATORY AND TESTING LIMITED
浩科檢測中心有限公司

Lot 12, Tam Kon Shan Road, North Tsing Yi, New Territories, Hong Kong
香港新界青衣北担杆山路12路段

has been accepted by the HKAS Executive, on the recommendation of the Accreditation Advisory Board, as a
在認可諮詢委員會的建議下獲香港認可處執行機關接受為

HOKLAS Accredited Laboratory
「香港實驗所認可計劃」認可實驗所

This laboratory meets the requirements of ISO/IEC 17025:2005 and it has been accredited for performing specific tests or calibrations as listed in the scope of accreditation within the test category of

Environmental Testing

*此實驗所符合ISO/IEC 17025:2005所訂的要求
並獲認可進行載於認可範圍內下述測試類別中的指定測試或校正工作*

環境測試

This accreditation to ISO/IEC 17025:2005 demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (see joint IAF-ILAC-ISO Communiqué).
此項 ISO/IEC 17025:2005 的認可資格證明此實驗所具備指定範疇內所須的技術能力並實施一套實驗所質量管理體系(見國際認可論壇、國際實驗所認可合作組織及國際標準化組織的聯合公報)。

The common seal of the Hong Kong Accreditation Service is affixed hereto by the authority of the HKAS Executive
現經香港認可處執行機關授權在此蓋上香港認可處的印章

WONG Wang-wan, Executive Administrator
執行幹事 黃宏華
Issue Date : 16 July 2014
簽發日期：二零一四年七月十六日

Registration Number : HOKLAS 241
註冊號碼：



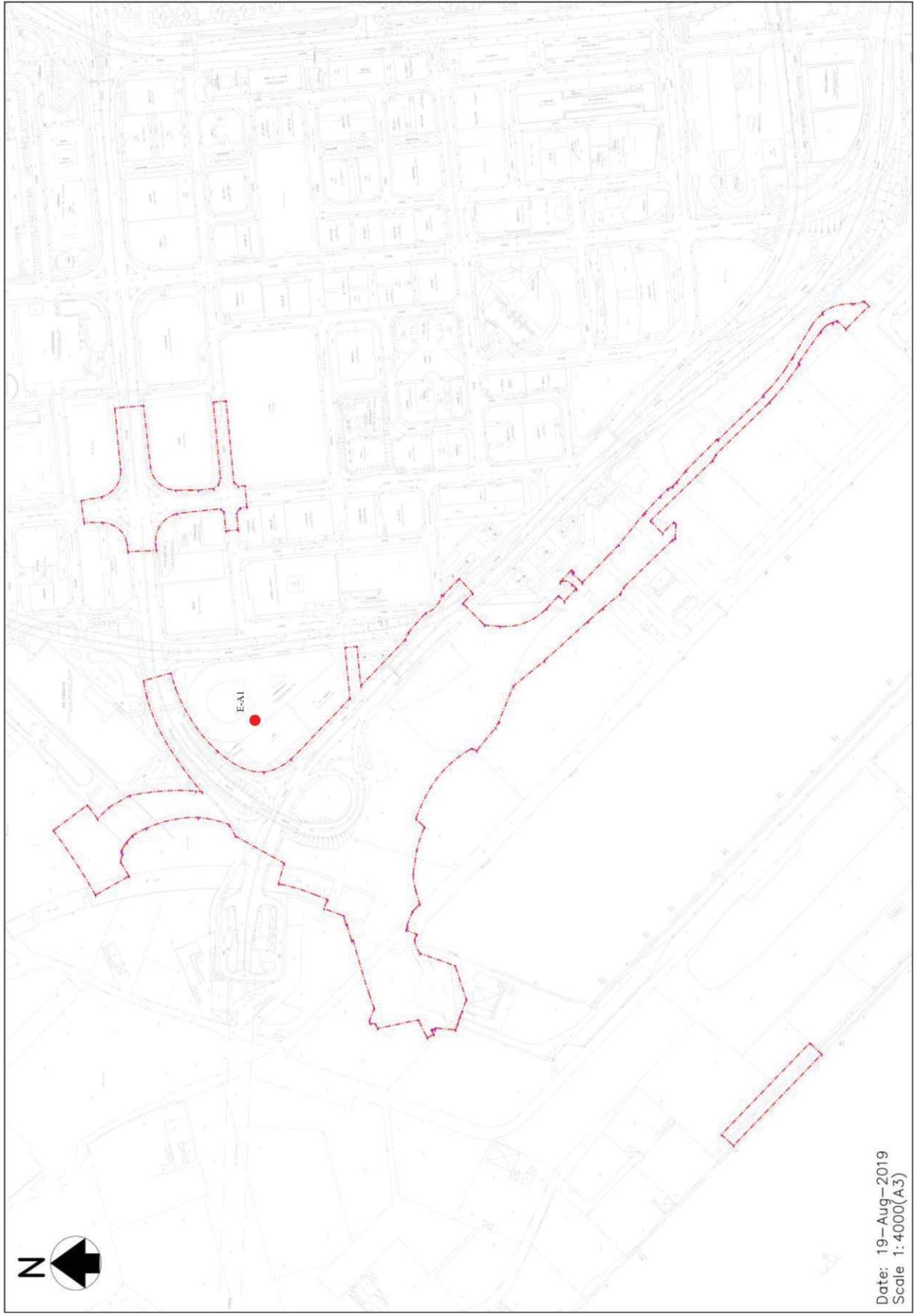
Date of First Registration : 16 July 2014
首次註冊日期：二零一四年七月十六日

This certificate is issued subject to the terms and conditions laid down by HKAS
本證書按照香港認可處訂立的條款及條件發出

L 001195

Appendix J

Location Plan of Air Quality Monitoring Station



Appendix K

Monitoring Data (Air Monitoring)

Location: Hong Kong International Trade and Exhibition Centre (E-A1)
Monitoring date: 4, 10 ,15, 21 and 27 Aug 2020
Parameter: TSP 1-hour
Other Factors: Nearby traffic

Date	1-hour TSP ($\mu\text{g}/\text{m}^3$)				
	Weather	Start Time	1 st Hour ($\mu\text{g}/\text{m}^3$)	2 nd Hour ($\mu\text{g}/\text{m}^3$)	3 rd Hour ($\mu\text{g}/\text{m}^3$)
04/08/2020	Cloudy	9:33	37	44	40
10/08/2020	Sunny	9:40	41	50	43
15/08/2020	Sunny	9:25	39	45	42
21/08/2020	Sunny	9:36	40	36	46
27/08/2020	Fine	11:30	54	47	51

Figure 1: Graphical Illustration of Measured 1-hour TSP ($\mu\text{g}/\text{m}^3$) Levels at E-A1



Location:

Hong Kong International Trade and Exhibition Centre (E-A1)

Monitoring date:
4, 10, 15, 21 and 27 Aug 2020

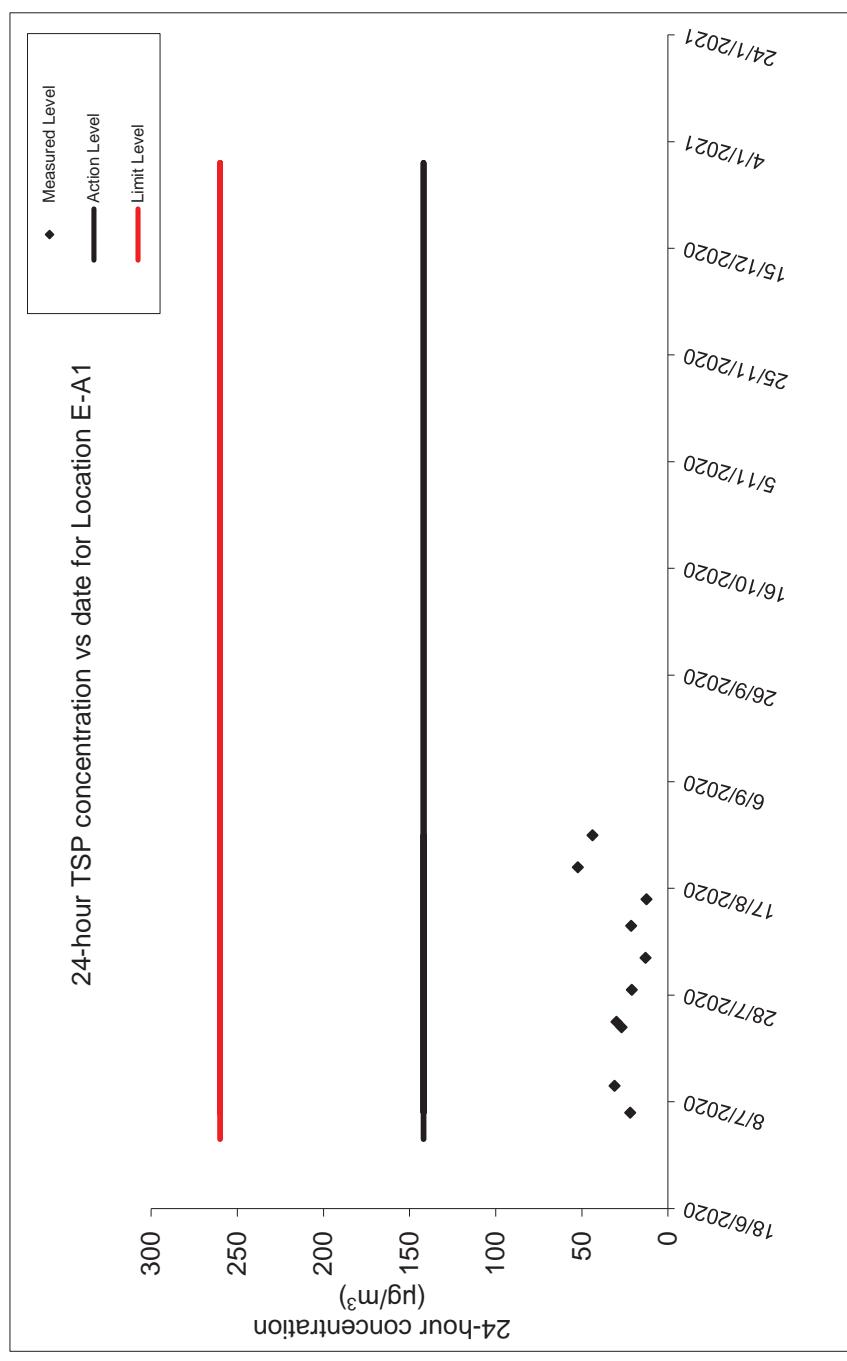
Parameter:
TSP 24-hour

Other Factors:
Nearby traffic

Date of Calibration:	22-Jul-20	Slope =	18.1758
Calibration due date:	5-Aug-20	Intercept =	16.6376
Date of Calibration:	6-Aug-20	Slope =	21.3280
Calibration due date:	20-Aug-20	Intercept =	12.9857
Date of Calibration:	21-Aug-20	Slope =	21.2201
Calibration due date:	4-Sep-20	Intercept =	13.4897

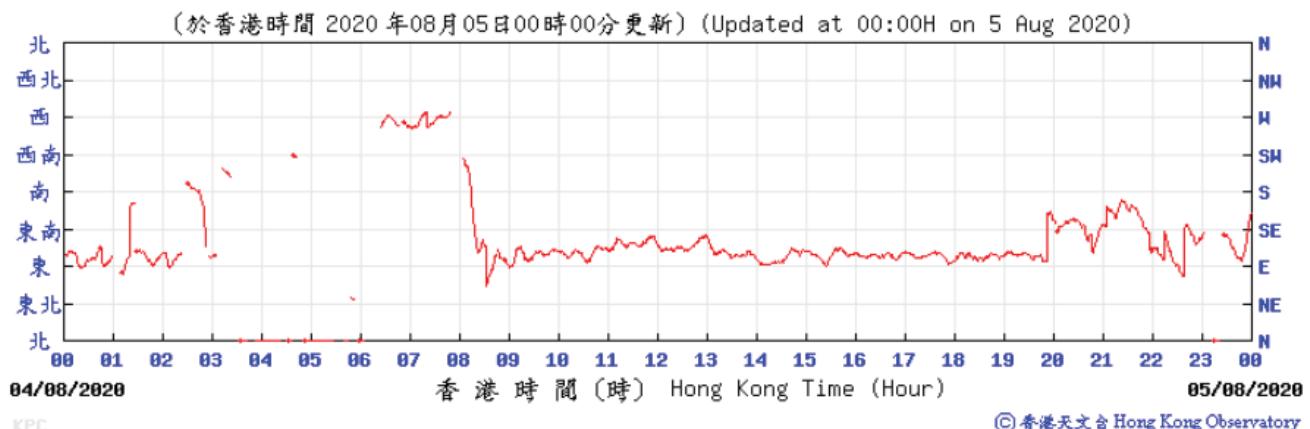
Start Date	Weather Condition	Elapse Time			Chart Reading			Avg Air Temp (°C)	Avg Atmospheric Pressure (mm hPa)	Flow Rate (m³/min)	Standard Air Volume (m³)	Filter Weight (g)	Particulate weight (g)	Conc. (µg/m³)
		Initial	Final	Actual (min)	Min	Max	Avg							
4/8/2020	Cloudy	2093.94	2117.94	1440.00	40	41	40.5	27.5	1004.0	1.28	1846	2.7338	2.7580	0.0242
10/8/2020	Sunny	2117.95	2141.95	1440.00	40	40	40.0	30.0	1004.3	1.23	1776	2.7661	2.8040	0.0379
15/8/2020	Sunny	2141.98	2165.98	1440.00	39	40	39.5	29.8	1008.6	1.22	1755	2.7187	2.7405	0.0218
21/8/2020	Sunny	2166.03	2190.03	1440.00	40	41	40.5	29.8	1009.0	1.25	1798	2.7644	2.8586	0.0942
27/8/2020	Fine	2190.10	2214.10	1440.00	41	41	41.0	28.5	1000.5	1.26	1814	2.7255	2.8049	0.0794

Figure 2: Graphical Illustration of Measured 24-hour TSP ($\mu\text{g}/\text{m}^3$) Levels at E-A1

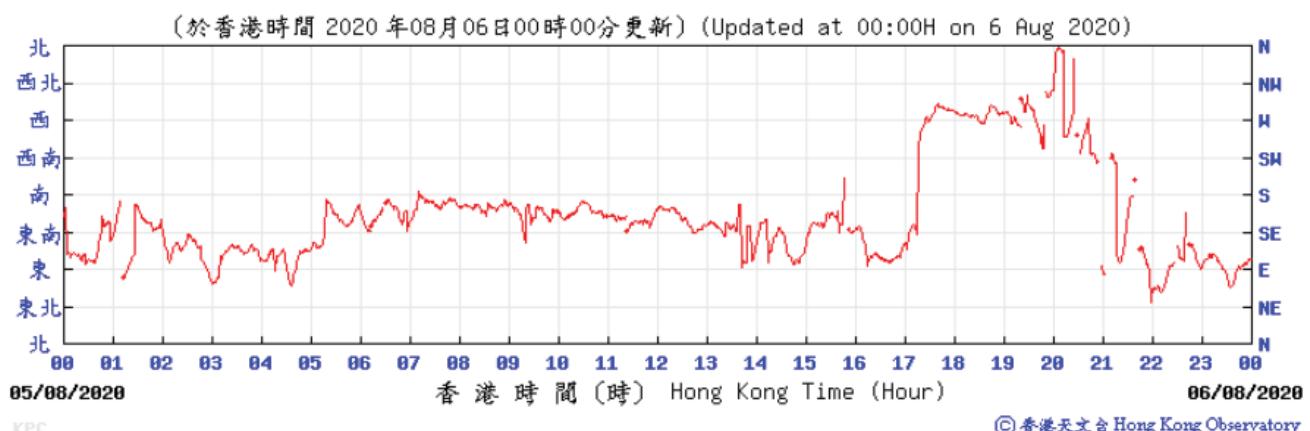


WIND DIRECTION DATA FOR 4, 5, 10, 11, 15, 16, 20, 21, 26 and 28 Aug 2020

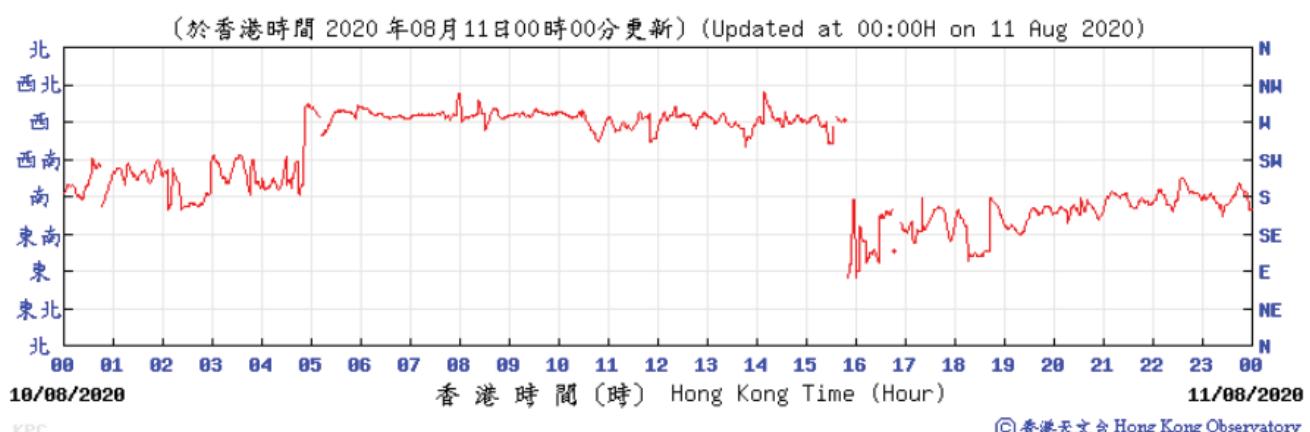
Wind Direction:



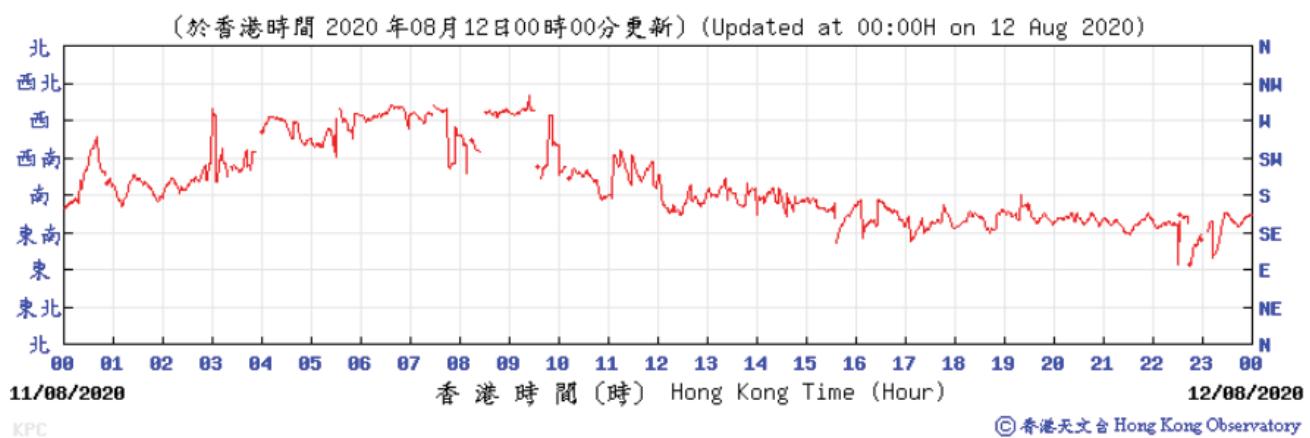
Wind Direction:



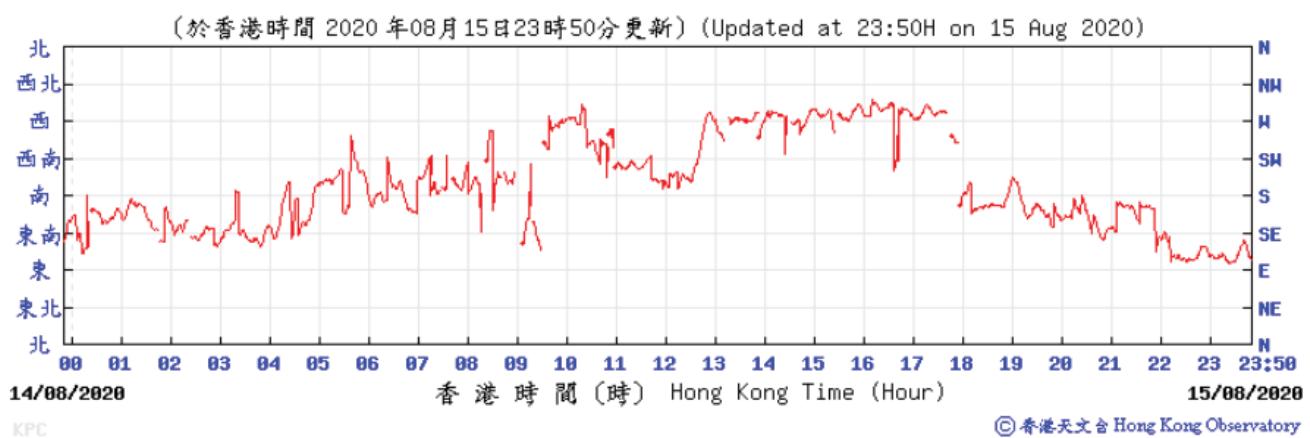
Wind Direction:



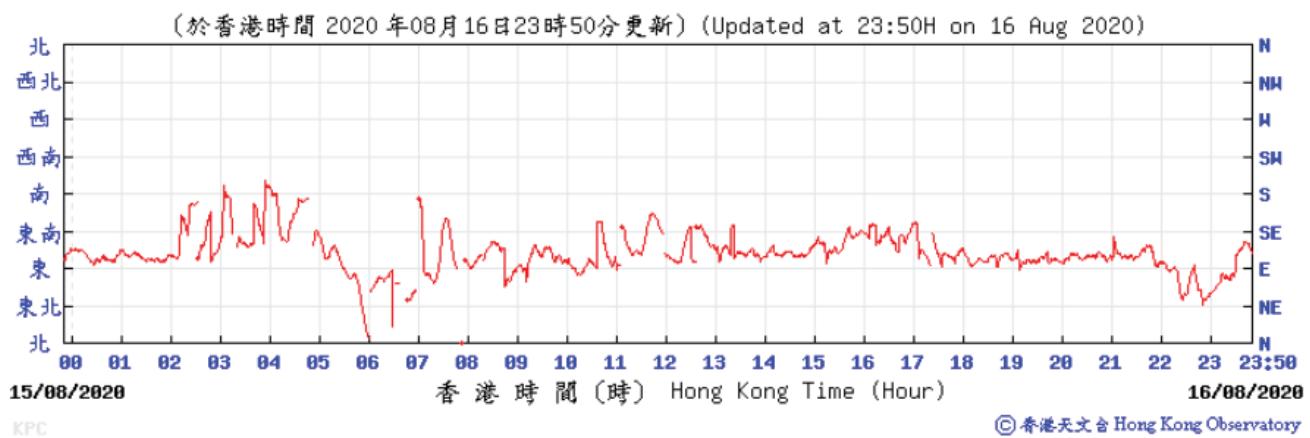
Wind Direction:



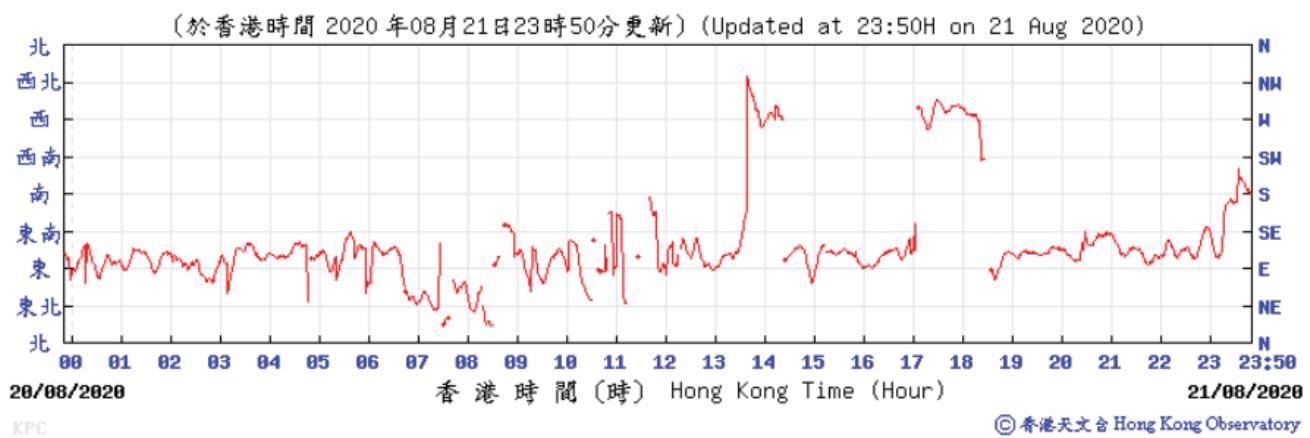
Wind Direction:



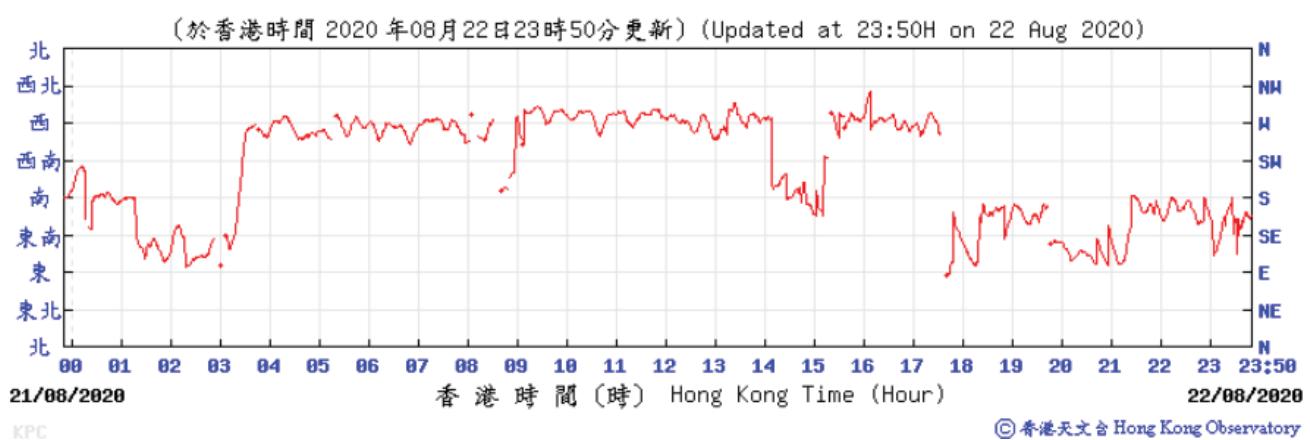
Wind Direction:



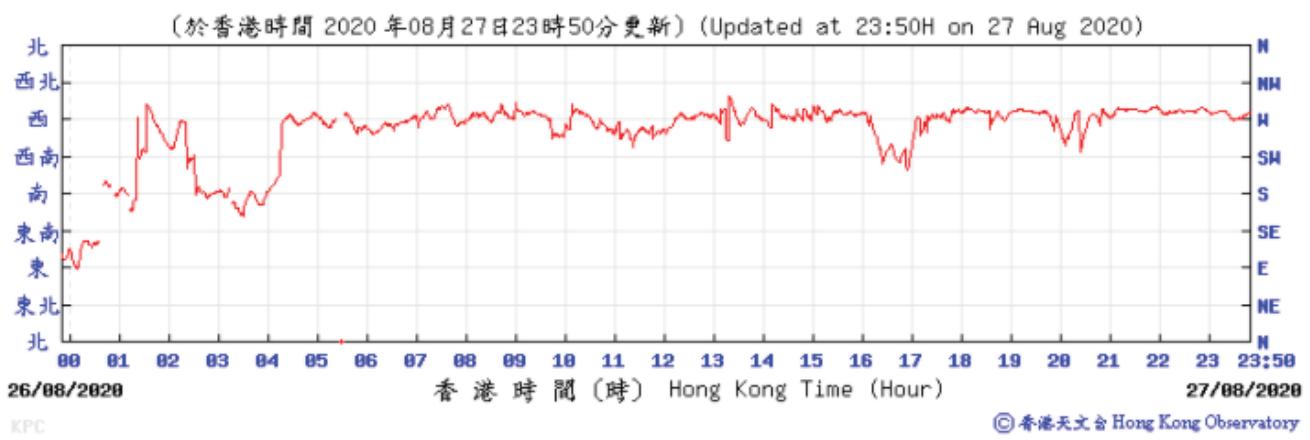
Wind Direction:



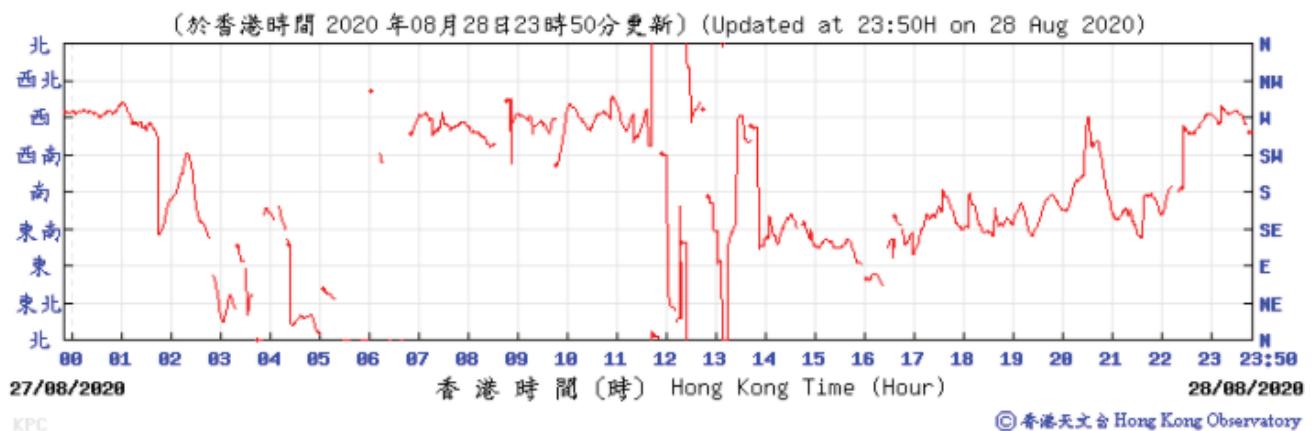
Wind Direction:



Wind Direction:

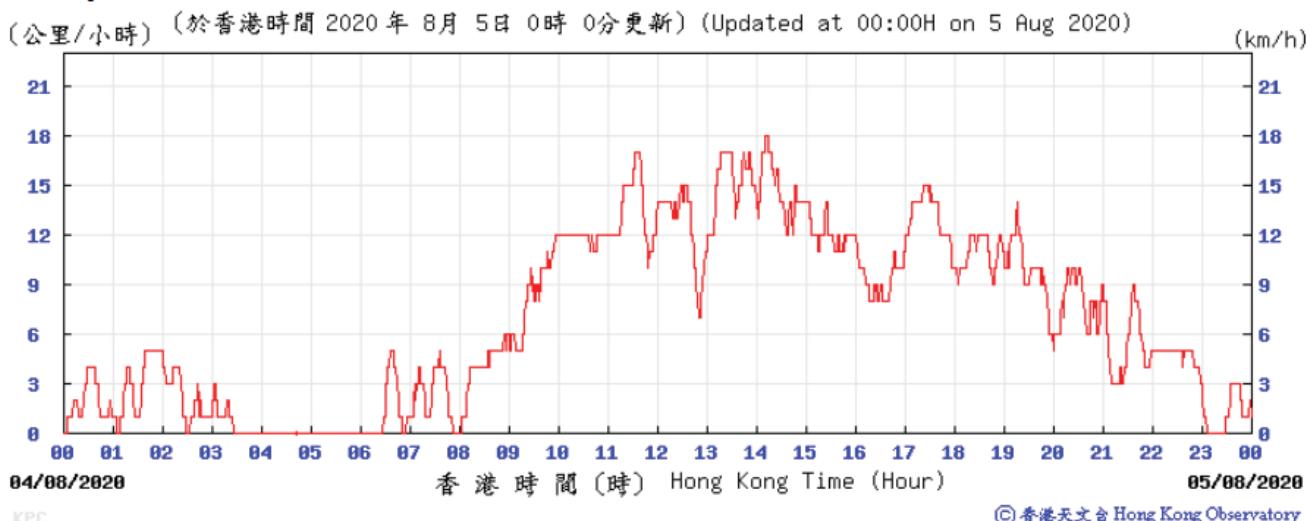


Wind Direction:

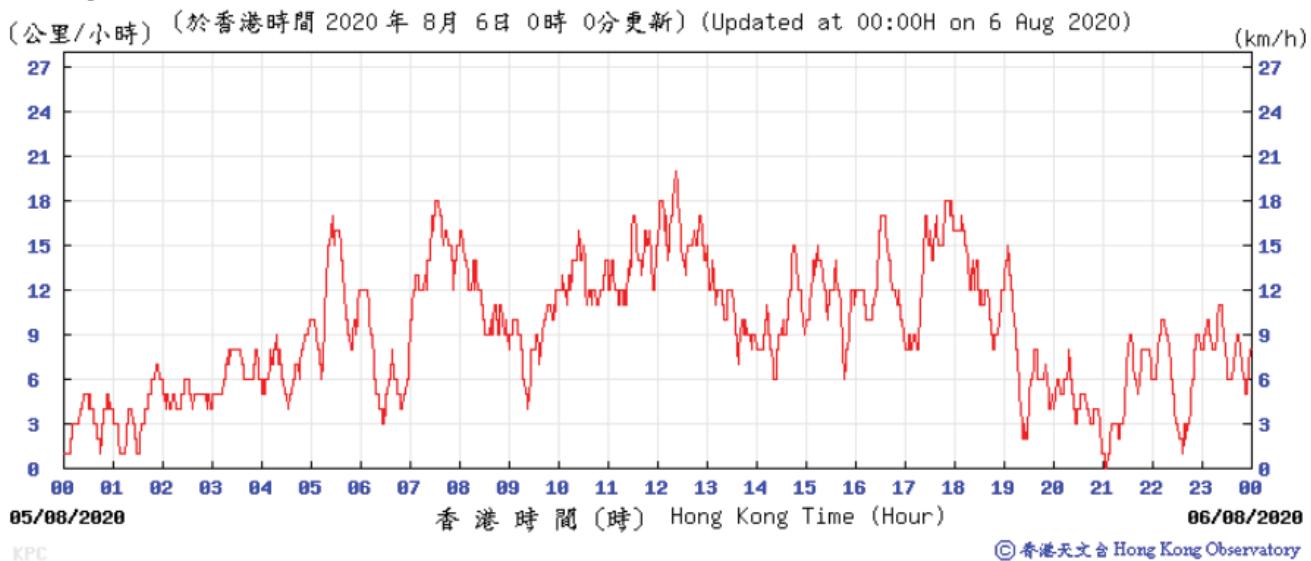


WIND SPEED DATA FOR 4, 5, 10, 11, 15, 16, 20, 21, 26 and 28 Aug 2020

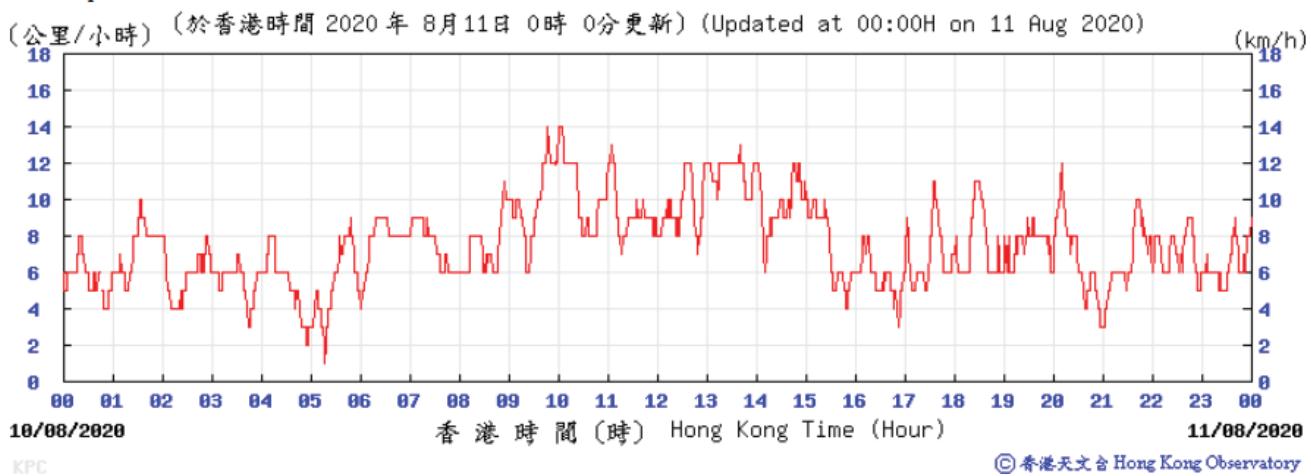
Wind Speed:



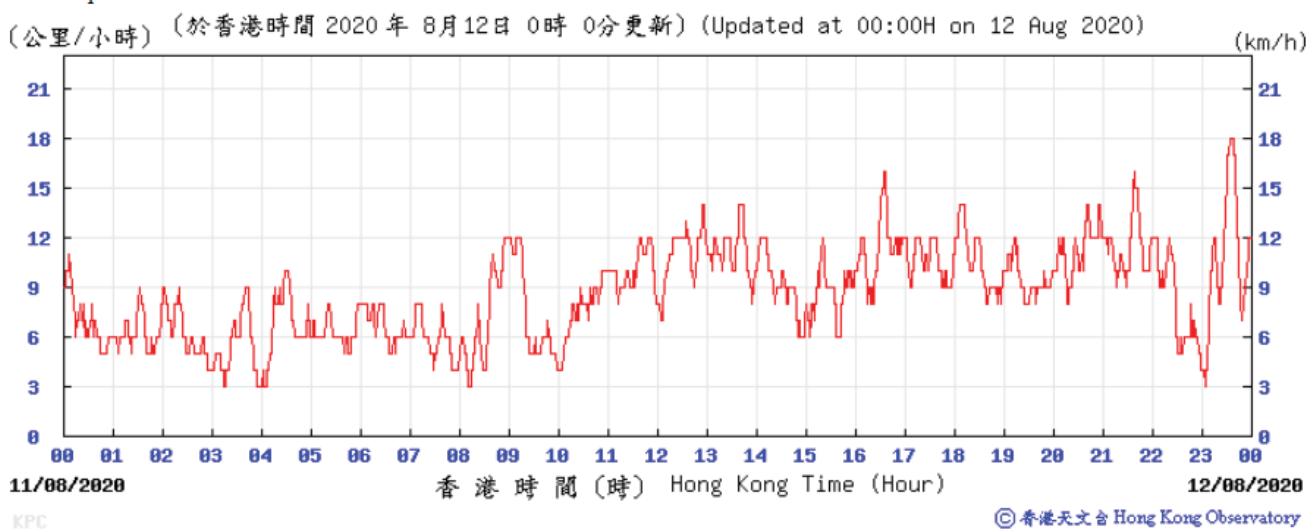
Wind Speed:



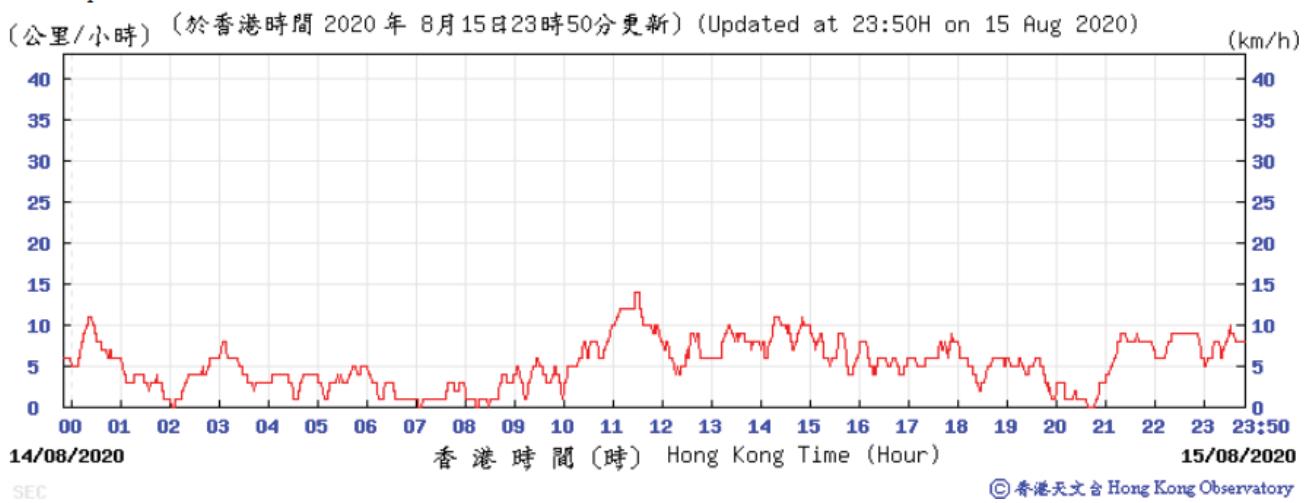
Wind Speed:



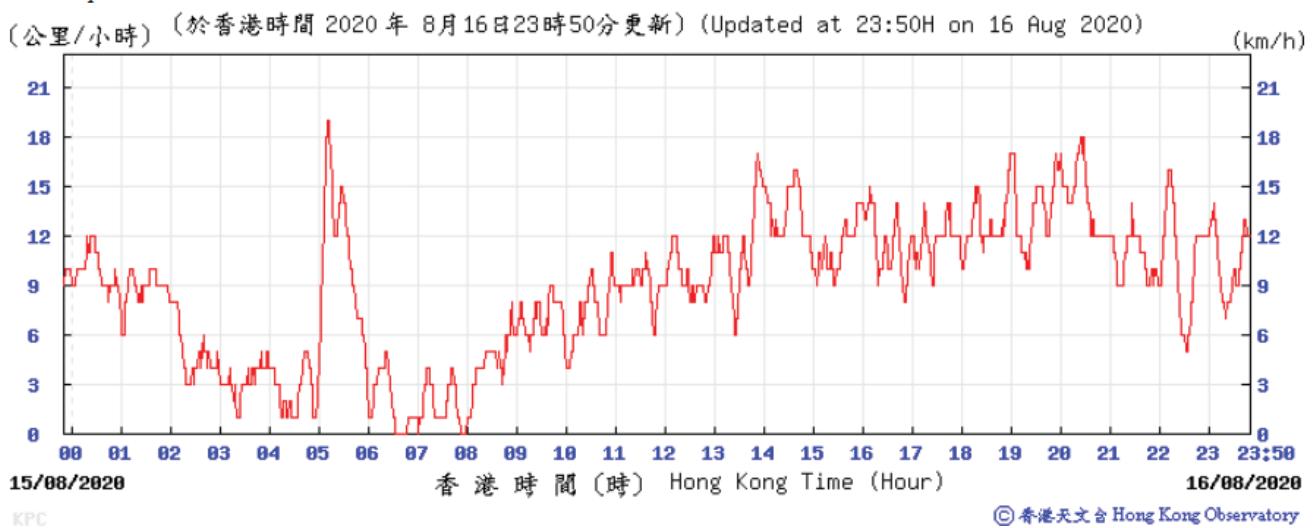
Wind Speed:



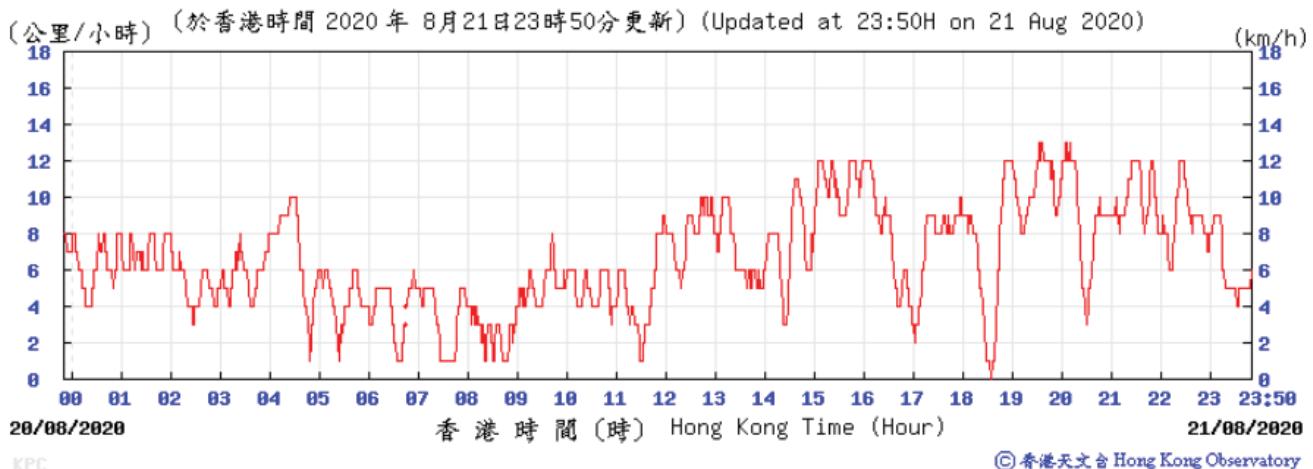
Wind Speed:



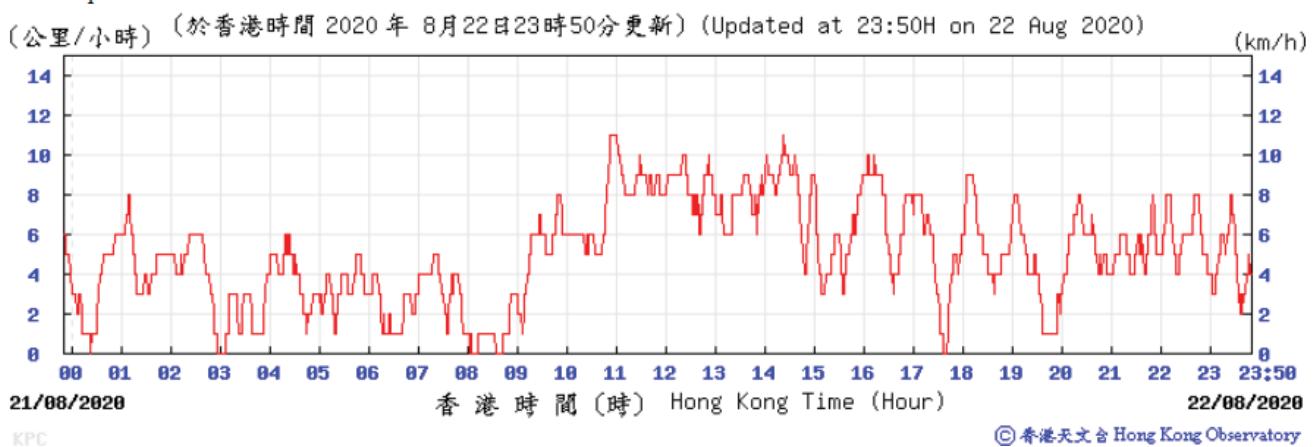
Wind Speed:



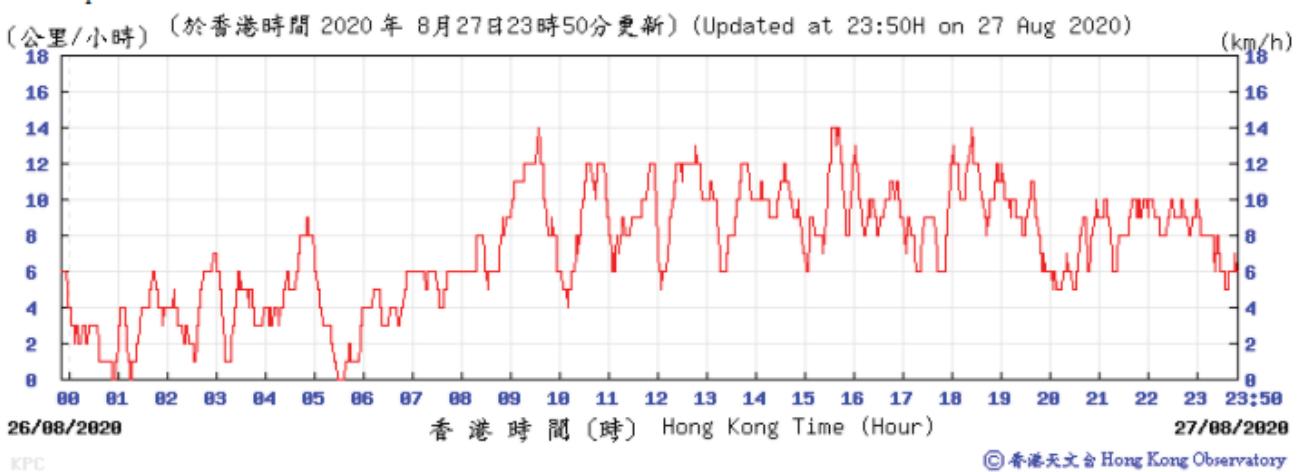
Wind Speed:



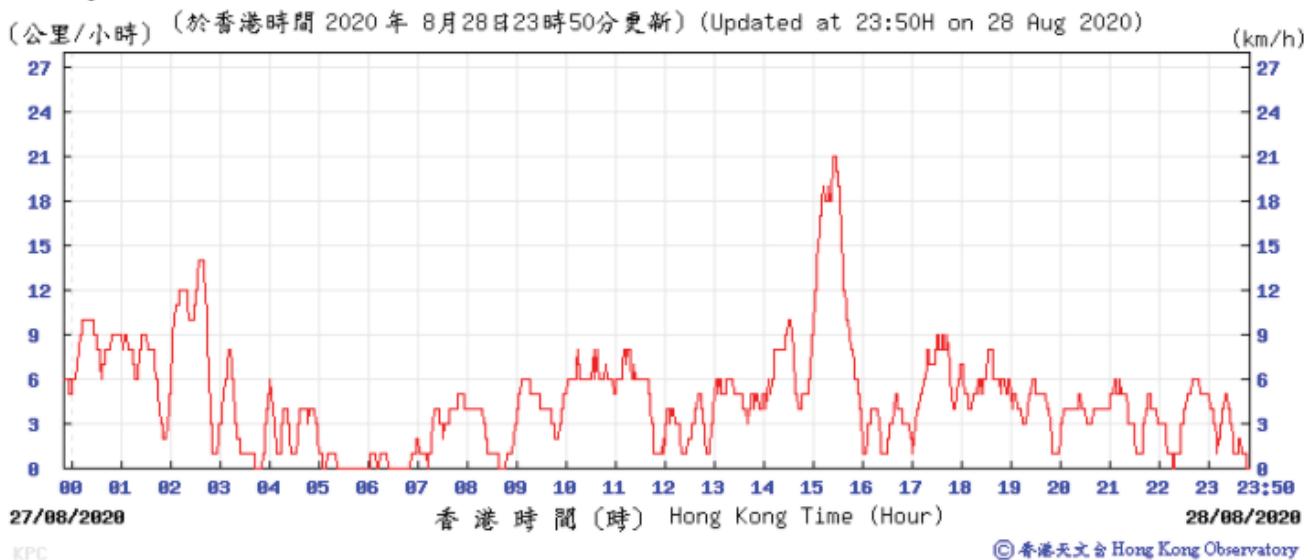
Wind Speed:



Wind Speed:



Wind Speed:



Appendix L

Waste Flow Table

Monthly Summary Waste Flow Table

Name of Department: Highways Department

Monthly Summary Waste Flow Table for Jul 2020

[to be submitted not later than the 15th day of each month following reporting month] (All quantities shall be rounded off to 1 decimal place.)

Month	(a)=(b)+(c)+(d)+(e)+(f)+(g)+(h)+(i)+(j)+(k) Total Quantity Generated (in 'tonnes)	Actual Quantities of Inert Construction Waste Generated Monthly					
		(b) Hard Rock and Large Broken Concrete (in 'tonnes)	(c) Reused in the Contract (in 'tonnes)	(d) Reused in other Projects (in 'tonnes)	(e) Disposed of as Public Fill (in 'tonnes)	(f) Imported Fill (in 'tonnes)	
Jan-20	3,242.73	0.00	0.00	0.00	3,208.12	0.00	
Feb-20	4,251.78	0.00	0.00	0.00	4,218.94	0.00	
Mar-20	5,312.07	0.00	140.00	0.00	5,155.25	0.00	
Apr-20	5,249.68	0.00	0.00	0.00	5,234.88	0.00	
May-20	4,693.57	0.00	0.00	0.00	4,664.85	0.00	
Jun-20	16,196.73	0.00	0.00	8,228.00	7,931.83	0.00	
Sub-total	38,946.55	0.00	140.00	8,228.00	30,413.87	0.00	
Jul-20	11,703.35	0.00	0.00	2,276.00	9,389.95	0.00	
Aug-20	11,355.38	0.00	0.00	0.00	11,316.50	0.00	
Sep-20	0.00	0.00	0.00	0.00	0.00	0.00	
Oct-20	0.00	0.00	0.00	0.00	0.00	0.00	
Nov-20	0.00	0.00	0.00	0.00	0.00	0.00	
Dec-20	0.00	0.00	0.00	0.00	0.00	0.00	
Total	62,005.28	0.00	140.00	10,504.00	51,169.32	0.00	
2019	7,473.53	190.0	140.00	0.00	6,643.48	0.00	
Accumulated Total	69,478.81	190.0	280.00	10,504.00	57,812.80	0.00	

Actual Quantities of <u>Non-inert</u> Construction Waste Generated Monthly						
Month	(g) Metals		(h) Paper/ cardboard packaging		(i) Plastics	
	generated	recycled	generated	recycled	generated	recycled
	(in '000kg)		(in '000kg)		(in '000kg)	
Jan-20	0.00	0.00	0.00	0.00	0.00	0.00
Feb-20	11.94	11.94	0.55	0.55	0.00	0.00
Mar-20	0.00	0.00	0.00	0.00	0.00	0.00
Apr-20	0.00	0.00	0.15	0.15	0.00	0.00
May-20	0.00	0.00	0.00	0.00	0.00	0.00
Jun-20	0.02	0.02	0.26	0.26	0.00	0.00
Sub-total	11.96	11.96	0.95	0.95	0.00	0.00
Jul-20	0.00	0.00	0.05	0.05	0.00	0.00
Aug-20	0.00	0.00	0.00	0.10	0.00	0.00
Sep-20	0.00	0.00	0.00	0.00	0.00	0.00
Oct-20	0.00	0.00	0.00	0.00	0.00	0.00
Nov-20	0.00	0.00	0.00	0.00	0.00	0.00
Dec-20	0.00	0.00	0.00	0.00	0.00	0.00
Total	11.96	11.96	1.00	1.10	0.00	0.00
2019	0.00	0.00	0.05	0.05	0.00	0.00
Accumulated Total	11.96	11.96	1.05	1.15	0.00	0.00

Appendix M

Statistics on Complaint, Notifications of Summons and Successful Prosecutions

Statistical Summary of Exceedances

Air Quality			
Location	Action Level	Limit Level	Total
E-A1	0	0	0

Statistical Summary of Environmental Complaints

Reporting Period	Environmental Complaint Statistics		
	Frequency	Cumulative	Complaint Nature
1 Aug 2020- 31 Aug 2020	0	1	N/A

Statistical Summary of Environmental Non-compliance

Reporting Period	Environmental Non-compliance Statistics		
	Frequency	Cumulative	Details
1 Aug 2020- 31 Aug 2020	0	0	N/A

Statistical Summary of Environmental Summons

Reporting Period	Environmental Summons Statistics		
	Frequency	Cumulative	Details
1 Aug 2020- 31 Aug 2020	0	0	N/A

Statistical Summary of Environmental Prosecution

Reporting Period	Environmental Prosecution Statistics		
	Frequency	Cumulative	Details
1 Aug 2020- 31 Aug 2020	0	0	N/A

Appendix N

Monitoring Schedule of the Coming Month

September 2020

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
30	31	1	2	3	4	5
			Impact Dust monitoring (E-A1)			
6	7	8	9	10	11	12
		Impact Dust monitoring (E-A1)				
13	14	15	16	17	18	19
	Impact Dust monitoring (E-A1)				Impact Dust monitoring (E-A1)	
20	21	22	23	24	25	26
					Impact Dust monitoring (E-A1)	
27	28	29	30	1	2	3
		Impact Dust monitoring (E-A1)				