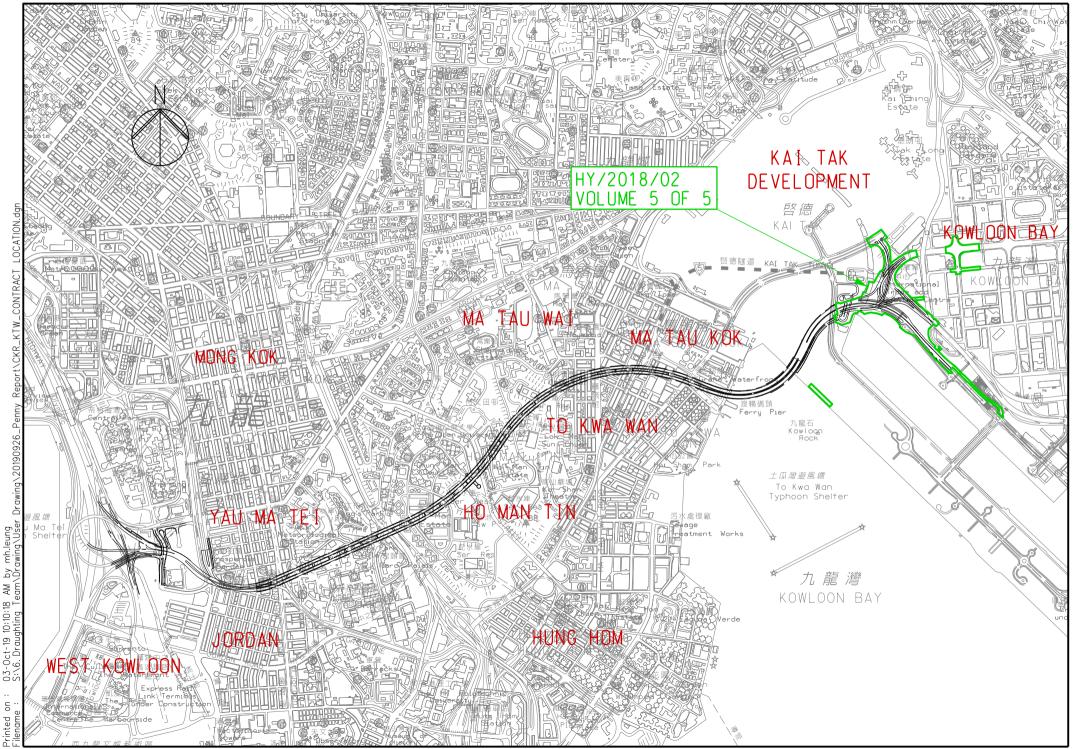
Vol. 5 of 5 EP-457/2013/C Central Kowloon Route Kai Tak East Contract No. HY/2018/02 January 2020



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Environmental Permit No. EP-457/2013/C

Central Kowloon Route

Independent Environmental Checker Verification

Works Contract: K	i Tak East (HY/2018/02)
-------------------	-------------------------

Reference Document/Plan

Document/ Plan to be -Certified / Verified:	Monthly EM&A Report No.5 (January 2020)
Date of Report:	7 February 2020 (Rev. 1)
Date received by IEC:	7 February 2020

Reference EP Condition

Environmental Permit Condition:

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.

3.4

IEC Verification

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

Mandy 20.

Ms Mandy To Independent Environmental Checker

Date:

11 February 2020

Our ref: 0436942_IEC Verification Cert_KTE_Monthly EM&A Rpt No.5.docx





Unit C, 11/F, Fory Glory Plaza, No. 37-39 Wing Hong Street Cheung Sha Wan, Kowloon. Hong Kong Tel.: (852) 2698 6833 Fax.: (852) 2333 1316

Alchmex – Paul Y Joint Venture

Central Kowloon Route Contract HY/2018/02

Section of Kai Tak East

Monthly EM&A Report No. 5

(Period from 1 to 31 January 2020)

Rev. 1

(7 February 2020)

		Name	Signature
Prepared by		Karen K. Y. Cheung	d.
Checked Reviewed by	&	Nelson T. H. Tsui	J.
Approved Certified by	&	Kevin W. M. Li (Environmental Team Leader)	K.

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. Environmental Mitigation Implementation Schedule (EMIS)
- F. Monitoring Schedules of the Reporting Month
- G. Calibration Certificate (Air Monitoring)
- H. The Certification of Laboratory with HOKLAS Accredited Analytical Tests
- I. Location Plan of Air Quality Monitoring Station
- J. Monitoring Data (Air Monitoring)
- K. Waste Flow Table
- L. Statistics on Complaint, Notifications of Summons and Successful Prosecutions
- M. 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 5th monthly Environmental Monitoring and Audit (EM&A) report presenting the EM&A works carried out during the period from 1 January 2020 to 31 January 2020.
- A.2 A summary of the construction works that undertaken for the Project during the reporting month is listed below.

Construction Activities undertaken

- Ground Investigation at Portion 1A & 2B
- Bored Pile at Portion 1A
- Foundation Work for the Foot Bridge at Kai Fuk Road
- Sheet Pilling Works for Adit at Area 1D3
- Sheet Pilling Works for Underpass at Portion 3B
- 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	15times

- A.4 No construction work was conducted during time period other than normal working hours during this reporting month.
- A.5 Inert construction and demolition (C&D) materials and non-inert C&D materials were the wastes that generated from this Project. During January 20209, 3208.2 tonnes inert C&D material was generated from the Project. 3208.2 tonnes inert C&D material was sent to public fill, no inert C&D waste was reused in the Contract. No paper, plastics, metal and cardboard packaging was generated and sent to recyclers for recycling during reporting period. About 34.6 tonnes of non-recyclable non-inert C&D materials, such as general refuse, were disposed of at landfill. No chemical waste was generated during this reporting month.
- A.6 Bi-weekly inspection of the implementation of landscape and visual mitigation measures was conducted on 2, 15 January 2020. Details of the audit findings and implementation status are presented in Section 5.
- A.7 Joint weekly site inspections were conducted by representatives of the Contractor, Engineer and Contractor's ET on 2, 8, 15, 22 January 2020. Joint weekly site inspection was cancelled on the week of 27 January 2020 due to temporary closure of the construction site for prevention of coronavirus outbreak. Details of the audit findings and implementation status are presented in Section 5.

- A.8 No change has been made from the described in the approved EM&A Manual, such as construction method, mitigation proposals and design changes.
- A.9 No exceedance of the Action and Limit Levels of 24-hour TSP and 1-hour TSP monitoring were recorded during the reporting month.
- A.10 No complaint or non-compliance was received in the reporting month.
- A.11 No summon or prosecution was received in this reporting month.
- A.12 No reporting changes were revised in this reporting month.
- A.13 A summary of the construction activities to be undertaken in the in the next reporting month is listed below:

Construction Activities to be undertaken

- Ground Investigation at Portion 1A & 2B.
- Bored Pile at Portion 1A.
- Foundation Work for the Foot Bridge at Kai Fuk Road.
- Sheet Piling Works for Audit at Area 1D3.
- Sheet Piling Works for Underpass at Portion 3B.

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 the major construction activities undertaken in this reporting period is shown in Table 1.1. The construction programme is presented in Appendix B.

Table 1.1 Summary of the construction Activities Undertaken during the Reporting Month.

Construction Activities undertaken

- Ground Investigation at Portion 1A & 2B
- Bored Pile at Portion 1A
- Foundation Work for the Foot Bridge at Kai Fuk Road
- Sheet Pilling Works for Adit at Area 1D3
- Sheet Pilling Works for Underpass at Portion 3B
 - 1.5. There are no updates on the scope of works and construction methodologies.
 - 1.6. The project organisational chart specifying management structure and contact details are shown in Appendix C.
 - 1.7. 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	Validity Period	
Environmental Permit	EP-457/2013/C	Throughout the Contract	
Notification of Construction Works under	445001		
the Air Pollution Control (Construction	445001	Throughout the Contract	
Dust) Regulation (Form NA) Chemical Waste Producer Registration	WPN5113-247-A2940-01	Throughout the Contract	
	GW-RE0898-19		
		11 November 2019 to	
	(Superseded by	4 February 2020	
	GW-RE1007-19)		
Construction Noise Permit at Kai Fuk Road	GW-RE1007-19		
(Central Divider Removal)	(Superseded by	18 December 2019 to 17 March 2020	
	GW-RE1086-19)	17 March 2020	
	GW-RE1086-19	10 January 2020 to	
	0 11 - NL1000-17	9 April 2020	
Construction Noise Permit at Junction of	GW-RE0908-19	16 November 2019 to	
Wang Kwong Road		12 January 2020	
	GW-RE0767-19		
	(Superseded by	2 October 2019 to 23 March 2020	
	GW-RE0957-19)	23 WIAICH 2020	
Construction Noise Permit at Area A	GW-RE0957-19		
	(Superseded by	26 November 2019 to 20 May 2020	
	GW-RE1073-19)	20 May 2020	
	GW-RE1073-19	7 January 2020 to	
		1 July 2020	
Construction Noise Permit at Kai Fuk Road	GW-RE0966-19	3 December 2019 to	
(Tree Trnasplant)		21 February 2020	
	GW-RE0856-19	30 October 2019 to	
Construction Noise Permit at Area B & Site	(Superseded by	23 April 2020	
Office	GW-RE1005-19)	r	
	GW-RE1005-19	13 December 2019 to	
		3 June 2020	
Construction Noise Permit at Kai Fuk Road	GW-RE1006-19`	20 December 2019 to	
(Tree Felling) Construction Noise Permit for Leon Pood		14 March 2020	
Construction Noise Permit for Loop Road Paving Work	GW-RE0060-20	30 January 2020 to 15 February 2020	
Billing Account for Disposal of Construction			
Waste	7034073	Throughout the Contract	

Notification, Permit and Documentations

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

EP Condition (EP-457/2013/C)	Submission	Submission date
Condition 1.12 Notification of Commencement Date of		26 Jul 2019
Condition 1.12	Construction of the Project	20 Jul 2019
Condition 2.4	Management organisation of the main	26 Jul 2019
Condition 2.4	construction companies	
Condition 2.5	Condition 2.5Construction Programme and EP Submission Schedule26 Jul 201	
Condition 2.5		
Condition 2.6Design Drawing26 Jul 2019		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 (December 2019)		14 Jan 2020

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

2.2. Details of the major construction activities undertaken in this reporting period are shown in Table 2.2.

Table 2.2 Summary of the construction Activities Undertaken during the Reporting Month.

Construction Activities undertaken

- Ground Investigation at Portion 1A & 2B
- Bored Pile at Portion 1A
- Foundation Work for the Foot Bridge at Kai Fuk Road
- Sheet Pilling Works for Adit at Area 1D3
- Sheet Pilling Works for Underpass at Portion 3B
 - 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 I. Co-ordinates of the monitoring location is shown in below:

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

Table 2.3 Summary for the location of the monitoring station

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 G.
- 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 F.
- 3.2.4. The equipment used for 1-hour TSP and 24-hour TSP measurement and calibration are summarised in Table 3.1

Monitoring Parameter	Monitoring Equipment	Serial Number	Date of Calibration	
1-hour TSP	LD-5R Digital Dust Indicator	851820	23 Aug 2019	
24-hour TSP	TE-5170X High Volume	1085	11, 29 Jan 2020	
	Sampler			
	TE-5025A Calibration Kit	3465	22 Jan 2019	
	TE-5028A Calibration Kit	3702A	10 Oct 2019	

Table 3.1 Construction Dust Monitoring Equipment

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 H;
 - 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 1.22-1.37 ^{m³min-3}, which was within the range specified in the EM&A Manual (i.e. 0.6- 1.7 ^{m³min-3});
- The programmable timer was set for a sampling period of 24 hours ±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-5025 Calibration Kit. HVS is calibrated bimonthly. The calibration records for the HVS is given in Appendix G.
- 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

<u>Air Quality</u>

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 I.

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.

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

Table 3	.3:	Summary	of In	npact]	Monito	ring	Programme
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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

	Dust Monitoring Station
Monitoring Station	Major Dust Source
E-A1	Nearby traffic

Table 3.4	Observation	at Dust	Monitoring	Station
10010 5.1	00000 valion	at Dust	monitoring	Diation

3.6.2. Air quality impact monitoring for the reporting month was carried out on 6, 11, 17, 23, 29 January 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 J.

Monitoring Location	Range(µg/m ³)	Action Level(µg/m3)	Limit Level(µg/m3)
E-A1	44 - 69	279	500
Ta	ble 3.6 Summary of 24-h	our TSP Monitoring Result	S
Monitoring Location	Range(µg/m ³)	Action Level(µg/m3)	Limit Level(µg/m3)
E-A1	17 - 103	142	260

Table 3.5 Summary of 1-hour TSP Monitoring Results

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 K.

			Ç	Juantity		
				Non-inert C&	D Materials	
			Others,			
			e.g.	Recy	ycled material	8
Denentine neried	Inert C&D	Chemical	General			
Reporting period	Materials	Waste	Refuse			
	(in 'tonnes)	(in'000 Kg)	disposed			
			at	Paper/card board	Plastics	Metals
			Landfill	(in '000 Kg)	(in '000 Kg)	(in '000 Kg)
			(in			
			'tonnes)			
Jan-2020	3208.2	0.0	34.6	0.0	0.0	0.0

Table 3.7	Quantities	of waste	generated	from	the Project
10010 J./	Quantities	or waste	zenerateu	nom	the r roject

4. SUMMARY OF COMPLAINTS, NOTIFICATION OF SUMMONS AND PROSECUTIONS

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

Iau	ble 4.1 Environmental Co	Simplaint Handling Procedure	
Complaint Received via	Project Hotline	Complaint Received via	1823 or from other
		government departments	
Contractor notify ER, ET	r and IFC	ER notify Contractor, ET	and IEC
Contractor notify ER, E1		ER notify Contractor, E1	
Contractor log complair	-	o the complaint database. Co	ontractor, ER and ET to
	conduct investig	gation of complaint	
If complaint is considere	d not valid	If complaint is found valid	ł
ET or ER to reply the con	mplainant if necessary	Contractor to identify an	nd implement remedial
		measures in consultation	-
			while the file, L1 and
		ER.	
		The ER, ET and IEC to 1	review the effectiveness
		of the Contractor's reme	edial measures and the
		updated situation; ET t	o undertake additional
		monitoring and audit to	verify the situation if
		necessary, and oversee that	at circumstances leading
		to the complaint do not	recur. ER to conduct
		further inspection as neces	ssary.
If the complaint is refer	red by the EPD, the Con	tractor to prepare interim re	port on the status of the
_	-	ipulated above, including the	
	-	or already taken, for submiss	
incustres and addition	-	-	
		igned by the EPD	
			1
	• ·	ults of the investigation, sub	•
address the complaint a	and updated situation inc	luding the effectiveness of the	he remedial measures,
supported by reg	ular and additional moni	toring results in the monthly	EM&A reports

Table 4.1 Environmental Complaint Handling Procedure

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

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, four (4) site inspections were carried out on 2, 8, 15, 22 January 2020, along with bi-weekly inspection of the implementation of landscape and visual mitigation measures conducted on 2, 15 January 2020. Joint weekly site inspection was cancelled on the week of 27 January 2020 due to temporary closure of the construction site for prevention of coronavirus outbreak.
- 5.2. One joint site inspection with IEC also undertaken on 22 January 2020. Minor deficiencies were observed during weekly site inspection. Key observations during the site inspections are summarized in Table 5.1.

Date	Environmental Observations	Follow-up Status
2 Jan 2020	No major observation was found.	-
8 Jan 2020	1. Oil stain was observed	1. Oil stain was removed.
	1. Excavated soil should be covered properly.	1. Excavated soil was covered
15 Jan 2020	2. Oil stain was observed.	properly.
		2. Oil stain was removed.
22 Jan 2020	1. Drip tray should be provided for generator.	1. Drip tray was provided for
22 Jan 2020		generator.

Table 5.1 Site Observations

- 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 E.

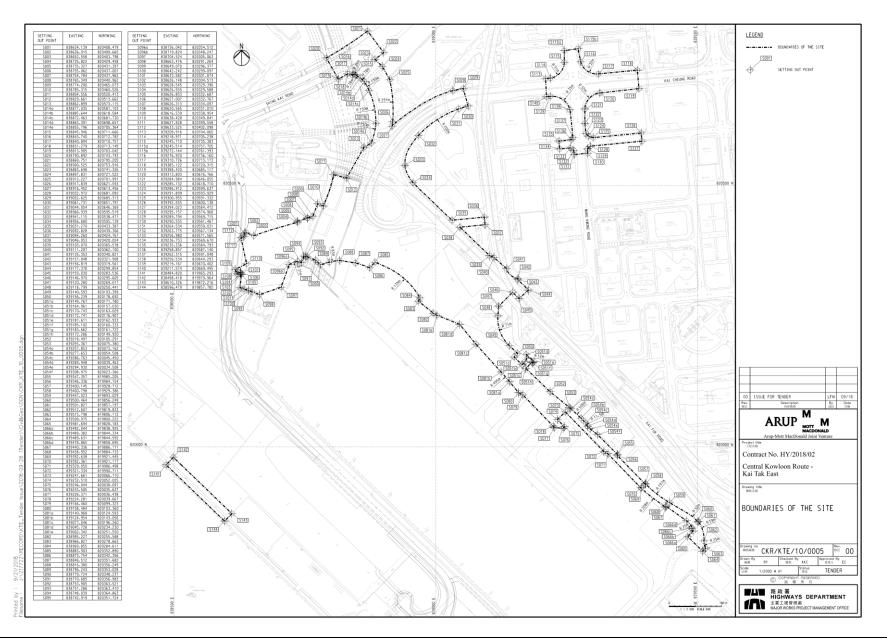
6. FUTURE KEY ISSUES

- 6.1. Work to be undertaken in the next reporting month are:
- Ground Investigation at Portion 1A & 2B.
- Bored Pile at Portion 1A.
- Foundation Work for the Foot Bridge at Kai Fuk Road.
- Sheet Piling Works for Audit at Area 1D3.
- Sheet Piling Works for Underpass at Portion 3B.
- 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 M.
- 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 5th monthly EM&A Report presents the EM&A works undertaken during the period from 1 January 2020 to 31 January 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 were conducted during the reporting period. Joint site inspection with IEC were carried out on 22 January 2020. Joint weekly site inspection was cancelled on the week of 27 January 2020 due to temporary closure of the construction site for prevention of coronavirus outbreak. 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 was 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



Appendix B Construction Programme

Data Date: 24-Dec-19 Print Date: 24-Dec-19	9 13:46			Centr	Cont e Kow	ract N Ioon					ast											Å	Ichmex	-Paul	Y Joint	Ventu	re
stivity ID	Activity Name	Orig Dur Early Start	Early Finish	Late Start	Late Finish	Total Float	(Day)			De	ember 8					January 9	_				Februa 10	ry .	_			March 11	
Central Kowlo	oon Route - Kai Tak East (Month 8 Upd	ate) 383 23-May-19 A	04-Sep-20	17-Dec-19	19-Dec-25	1553 32	25.50	24	01	08	15	22	29	0	5	12	19	26	(12	09	16	23	01	08	15	22
	RIES AND GENERAL REQUIREMENTS	94 24-Nov-19 A	24-Mar-20	12-Feb-20	15-Apr-20	15	0.00																				
	Dates and Milestones						0.00																				
Access Dates		0 24-Nov-19 A	24-Nov-19 A				0.00																				
AD-1B1	Access date for Part 1B1 (216 days)	0 24-Nov-19 A					•																				
AD-1B2	Access date for Part 1B2 (216 days)	0 24-Nov-19 A					-																				
Section Subject	ct to Excision	0 03-Mar-20	03-Mar-20	03-Mar-20	03-Mar-20	0	0.00																				
SE-\$13	PM's Notify to execute Section 13 of the Works (before 3 M	arch 2020) 0 03-Mar-20*		03-Mar-20		0																		•			
Independent	t Safety Audit Scheme ACC D31(5)	0 21-Jan-20	21-Jan-20	12-Feb-20	12-Feb-20	22	0.00																				
Safety Aduit		0 21-Jan-20	21-Jan-20	12-Feb-20	12-Feb-20	22	0.00																				
SA-1104	2nd Safety Audit at 6 months intervals	0 21-Jan-20		12-Feb-20		22											•										
	edule (WSD/DSD/CLP/TG/PCCW/HKB/A		24-Mar-20	18-Feb-20	15-Apr-20	15	0.00																				
Utilities Month		92 27-Nov-19 A	24-Mar-20	18-Feb-20	15-Apr-20	15	0.00																				
UU-1098	3rd Utilities monthly meeting	0 27-Nov-19 A				-		•																			
UU-1100	4th Utilities monthly meeting	0 24-Jan-20		18-Feb-20		15	_																				
UU-1102	5th Utilities monthly meeting	0 24-Mar-20		15-Apr-20		15																					•
		182 19-Od-19 A	20-Marc20	02-Jan-20	19-Dec-25	1643	0.00																				Ţ
	DENGINEERING	102 15 Oct 15 A					0.00																				
	Vorks Design & Engineering	130 25-Nov-19 A	2011ay-20	09-Jan-20	12-May-20	11	0.00																				
DES-1200	tural works for Footbridge				25-Feb-20		0.00														_ 1						
DES-1200	DES - Prepare preliminary proposal submission	60 25-Nov-19 A	12-Feb-20 26-Feb-20	09-Jan-20 26-Feb-20	10-Mar-20	11																					
	DES - Prepare submission of design and drawings	12 13-Feb-20				11	_																_				
DES-1206	DES - ICE checking and approval	12 27-Feb-20	11-Mar-20	11-Mar-20	24-Mar-20	11	_																-		_		
DES-1210	DES - Project Manager checking and approval	24 12-Mar-20	09-Apr-20	25-Mar-20	25-Apr-20	11	_																		-		
	DES - Prepare submission of details design	12 14-Apr-20	27-Apr-20	27-Apr-20	12-May-20	11																					
DES - E&M Wor		132 02-Dec-19 A	20-May-20	06-Mar-20	24-Jul-20	54	0.00																				
DES-1202	DES - Prepare preliminary proposal submission	60 02-Dec-19 A		06-Mar-20	27-Apr-20	54		-																			
DES-1208	DES - Prepare submission of design and drawings	12 20-Feb-20	04-Mar-20	28-Apr-20	13-May-20	54																					
DES-1212	DES - ICE checking and approval	12 05-Mar-20	18-Mar-20	14-May-20	27-May-20	54																					
DES-1214	DES - Project Manager, HyD, EMSD and PSD checking and	approval 48 19-Mar-20	20-May-20	28-May-20	24-Jul-20	54																				•	
	Design & Engineering						0.00																				
AD1 - Re-const	struction of Box Cuvlvert	0 24-Dec-19	24-Dec-19	05-Jun-21	05-Jun-21	420	0.00																				
Detailed Desig	gn for Re-construciton of Box Cuvlert	0 24-Dec-19	24-Dec-19	05-Jun-21	05-Jun-21	420	0.00																				
DES-0202	AD - Consent to start the works	0	24-Dec-19		05-Jun-21	420		<																			
AD-2 - Kai Tak	River Modification Works	83 03 -Feb -20	15-May-20	22-Jul-20	29-Oct-20	138	0.00																				
Detailed Desig	gn for Kai Tak River Modification Works	83 03- Feb -20	15-May-20	22-Jul-20	29-Oct-20	138	0.00			~																	
Current Mile	rk maining Work	Central Kow T	loon Ro hree Mo					8 Upc	date)			Base Layor Filter	ine: ut: 3 Mor	'E-WP01 hths Rolli ilters: 3 M	- ing Prog		KTE - Su	ubmission			25 Nov 2	19 Firs 2019 Sul 2019 Mo	bmit Revised rithly Program	Revision Accepted by . Programme Ime Update M Ime Update M	407	I A Vinc TST TST TST	

Activity ID	Activity Name	Orig Dur Early Start	Early Finish	Late Start	Late Finish	Total	TRA	December				January				February				March	
, í						Float	(Day)	24 01 08 15	22	29	05	9	19	26	02 09	10 16	23	01	08	11 15	22 2
DES-0158	CSD-D ICE Chedking and approval	13 03-Feb-20	17-Feb-20	22-Jul-20	05-Aug-20	138			Ν												
DES-0160	CSD-D Submit to PM & all relevant parties for review and approval	70 18-Feb-20	15-May-20	06-Aug-20	29-Oct-20	138															
Temporary W	Vorks Design & Engineering	161 22-Oct-19	4 18-May-20	02-Jan-20	19-Dec-25	1645	0.00														
DES - Tempora	ary Works for Bridges	155 02-Nov-19	A 18-May-20	02-Jan-20	31-May-21	304	0.00														
DES_T01 - Ter	emp. working platform & Watertight Cofferdam at Kia Ta	Riv: 48 23-Nov-19	A 05-Feb-20	02-Jan-20	05-Feb-20	0	0.00														
DES-1308	DES - ICE checking and approval	24 23-Nov-19	A 24-Dec-19 A																		
DES-1312	DES - Project Manager checking and approval; consent to start the wo	s 24 02-Jan-20	05-Feb-20	02-Jan-20	05-Feb-20	0				-			_		•						
DES_T02 - Ter	mp works for temp pre-grouting under Kai Tak River	98 17-Dec-19	A 23-Apr-20	21-May-20	07-Sep-20	113	0.00														
DES-1310	DES - Prepare preliminary proposal submission	48 17-Dec-19	A 20-Feb-20	21-May-20	10-Jul-20	113		-							-	-					
DES-1314	DES - ICE checking and approval	26 21-Feb-20	21-Mar-20	11-Jul-20	10-Aug-20	113											—				
DES-1316	DES - Project Manager checking and approval; consent to start the pre-grouting works	24 23-Mar-20	23-Apr-20	11-Aug-20	07-Sep-20	113															_
DES_T11 - ELS	S Design for Bridge S2 - 2F-S2	85 28-Dec-19	17-Apr-20	15-Jan-20	31-May-21	328	0.00														
DES-1342	DES - Prepare preliminary proposal submission	36 28-Dec-19	15-Feb-20	15-Jan-20	03-Mar-20	14				-					-	-					
DES-1344	DES - ICE checking and approval	25 17-Feb-20	16-Mar-20	29-Mar-21	30-Apr-21	328														-	
DES-1346	DES - Project Manager checking and approval; consent to start the W	s 24 17-Mar-20	17-Apr-20	03-May-21	31-May-21	328															
DES_T12 - EL	S Design for Bridge S1 - 1A-S1 to 1D-S1	84 13-Jan-20	02-May-20	05-Feb-20	19-May-20	14	0.00		1 T												
DES-1348	DES - Prepare preliminary proposal submission	36 13-Jan-20	29-Feb-20	05-Feb-20	17-Mar-20	14							-				-	1			
DES-1350	DES - ICE checking and approval	24 02-Mar-20	28-Mar-20	18-Mar-20	18-Apr-20	14															
DES-1352	DES - Project Manager checking and approval; consent to start the EL	works 24 30-Mar-20	02-May-20	20-Apr-20	19-May-20	14															
DES_T13 - EL	S Design for Bridge S3, CKRE & CKRW - 3A-3D / K1-K4	84 13-Jan-20	02-May-20	09-Mar-20	22-Mar-21	263	0.00														
DES-1354	DES - Prepare preliminary proposal submission	36 13-Jan-20	29-Feb-20	09-Mar-20	23-Apr-20	42						_						3			
DES-1356	DES - ICE checking and approval	24 02-Mar-20	28-Mar-20	19-Jan-21	22-Feb-21	263															
DES-1358	DES - Project Manager checking and approval; consent to start the EL	works 24 30-Mar-20	02-May-20	23-Feb-21	22-Mar-21	263															
DES_T14 - ELS	S Design for Bridge S4 - 4A-S4 to 4J-S4	36 18-Mar-20	05-May-20	13-May-20	23-Jun-20	42	0.00														
DES-1360	DES - Prepare preliminary proposal submission	36 18-Mar-20	05-May-20	13-May-20	23-Jun-20	42															
DES_T15 - ELS	S Design for Bridge S2 - 2A-S4 to 2EL-S2 & 2ER-S2	36 18-Mar-20	05-May-20	29-Jul-20	08-Sep-20	106	0.00		1												
DES-1366	DES - Prepare preliminary proposal submission	36 18-Mar-20	05-May-20	29-Jul-20	08-Sep-20	106															
DES_T18 - ELS	S Design for Bridge S1/S9 - 1E-S1/S9 to 1G-S1/S9	83 05-Feb-20	18-May-20	15-May-20	09-Nov-20	145	0.00														
DES-1384	DES - Prepare preliminary proposal submission	36 05-Feb-20	17-Mar-20	15-May-20	26-Jun-20	80									_			1		_	
DES-1386	DES - ICE checking and approval	23 18-Mar-20	17-Apr-20	27-Jun-20	24-Jul-20	80															
DES-1388	DES - Project Manager checking and approval; consent to start the EL	works 24 18-Apr-20	18-May-20	12-Oct-20	09-Nov-20	145												+			
DES_T27 - Te	emporary Slope Works for Bridge S9 Foundation works	72 02-Nov-19	A 04-Feb-20	08-Jul-20	08-Aug-20	152	0.00														
DES-1456	DES - Prepare preliminary proposal submission	36 02-Nov-19	A 13-Dec-19 A						L												
DES-1458	DES - ICE checking and approval	25 14-Dec-19	A 30-Dec-19	08-Jul-20	11-Jul-20	152					4										
DES-1460	DES - Project Manager checking and approval; consent to start the ski	works 24 31-Dec-19	04-Feb-20	13-Jul-20	08-Aug-20	152					j –		_								
DES - Tempora	ary Works for Underpasses, Adit and Roads	149 22-Od-19	4 05-May-20	10-Feb-20	19-Dec-25	1656	0.00		÷												
	ssign for Kai Cheung Temporary Loop Road	25 23-Nov-19	A 13-Jan-20	06-Jun-20	23-Jun-20	127	0.00														
DES-1398	DES - ICE checking and approval	24 23-Nov-19	A 12-Dec-19 A																		
									-		1										
Qurrent Mile									Pr	oject ID: KTE	E-WP01_M08	3			9	Date 0-Aug-19	First Programme	Revision Accepted by A	MMJV on 31	Chede A., Vincent	ed Approve
Actual Work		Central Kov						8 Update)		seline:	- hs Rolling Pr	ogramme			1	5-Nov-2019	Submit Revised Monthly Program	Programme		TST	PL PL
Bemaining			Three M	onth Ro	lling Pr	ograr	nme						TE - Submissi	on.	2	4-Dec-2019	Monthly Program	nme Update M	08	TST	PL
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L									I Pa	ge 2 01 11											

Activity ID	Activity Name	Ori	Dur Early Start	Early Finish	Late Start	Late Finish	Total	TRA	December				January			Feb	ruary				March	
							Float	(Day)	24 01 08 15	2	2 29	05	9	19 26	02	09	16	23	01	08	11	22 29
DES-1400	DES - Project Manager checking and approval; consent to start Kai Cheung Road temp Loop Road		24 16-Dec-19		06-Jun-20	23-Jun-20	127						•									
	S Design for Underpass S3		36 18-Mar-20		26-May-20	08-Jul-20		0.00														
DES-1408	DES - Prepare preliminary proposal submission (ELS for Box Section and Ramps)		36 18-Mar-20	05-May-20	26-May-20	08-Jul-20	53			Ν												
DES_T23 - EL	S Design for Underpass S21		71 22-Oct-19	23-Jan-20	10-Feb-20	07-Mar-20	32	0.00														
DES-1416	DES - ICE checking and approval		12 22-Oct-19	23-Dec-19 A																		
DES-1418	DES - Project Manager checking and approval; consent to start Underpass S	21	24 24-Dec-19	A 23-Jan-20	10-Feb-20	07-Mar-20	32							-								
DES_T24 - EL	S Design for Ventilation Adit & Ring Road Underpass		69 01-Nov-19	A 23-Jan-20	19-Feb-20	17-Mar-20	40	0.00														
DES-1422	DES - ICE checking and approval		24 01-Nov-19	A 24-Dec-19 A						>												
DES-1424	DES - Project Manager checking and approval; consent to start RR Underpa & Vent Adit	s	24 24-Dec-19	23-Jan-20	19-Feb-20	17-Mar-20	40						-	-								
DES_T26 - EL	S Design for 1350 drains pipes & Manholes		43 08-Nov-19	A 08-Jan-20	08-Dec-25	19-Dec-25	1745	0.00														
DES-1428	DES - ICE checking and approval		12 08-Nov-19	A 29-Nov-19 A					_ ``	\mathbf{S}												
DES-1430	DES - Project Manager checking and approval; consent to start ELS works	+	24 09-Dec-19	A 08-Jan-20	08-Dec-25	19-Dec-25	1745					-										
DES - Tempora	ary works for Kai Fuk Road Footbridge		113 26-Oct-19	16-Mar-20	18-Jan-20	23-Jun-20	79	0.00	· · · · · · · · · · · · · · · · · · ·													
DES_T04 - Te	mp working platform for Footbridge over Kai Fuk Road		74 26-Oct-19	23-Jan-20	27-May-20	23-Jun-20	118	0.00														
DES-1434	DES - ICE checking and approval		25 26-Oct-19	29-Nov-19 A					_	Ν												
DES-1436	DES - Project Manager checking and approval; consent to start the Portal	-	24 24-Dec-19	23-Jan-20	27-May-20	23-Jun-20	118							-								
DES_T19 - EL	works S Design for Kai Fuk Road Footbridge		88 25-Nov-19	4 16-Mar-20	18-Jan-20	08-Apr-20	19	0.00														
DES-1438	DES - Prepare preliminary proposal submission (ELS for Pilecaps & cross roa	d	36 25-Nov-19	A 16-Jan-20	18-Jan-20	14-Feb-20	19															
DES-1440	portal) DES - ICE checking and approval		21 17-Jan-20	17-Feb-20	15-Feb-20	10-Mar-20	19															
DES-1442	DES - Project Manager checking and approval; consent to start the ELS Wo	rks	24 18-Feb-20	16-Mar-20	11-Mar-20	08-Apr-20	19															
	ary works for Box Culvert		83 05-Feb-20		07-Jun-21	13-Sep-21	392															
	S Design for Reconstruction of Box Culvert		83 05-Feb-20		07-Jun-21	13-Sep-21	392															
DES-1450	DES - Prepare preliminary proposal submission	-	36 05-Feb-20	17-Mar-20	07-Jun-21	20-3ul-21	392			N							ļ					
DES-1450	DES - Freque premininary proposal submission DES - ICE checking and approval		23 18-Mar-20		21-Jul-21	16-Aug-21	392															
DES-1452	DES - ICE creating and approval DES - Project Manager checking and approval; consent to start the ELS Wo	due	24 18-Apr-20			13-Sep-21	392														-	
		ind .	80 19-0d-19	08-Jan-20	17-Aug-21	09-Jun-20	392	0.00														
	raffic Management (TTM)			29-Nov-19 A			119	0.00														
DES-1726								0.00														
	DES - Notify TD for commencement of works			29-Nov-19 A		00.1																
TTM for Kai Ful			60 28-Oct-19		28-May-20	09-Jun-20	119	0.00														
DES-1748	DES - Submit TTM Drawings to TMLG & Project Manager		24 28-Oct-19																			
DES-1750	DES - TMLG meeting		0	28-Nov-19 A					×													
DES-1752	DES - Approval of TTM by TMLG & Project Manager		24 29-Nov-19		28-May-20	30-May-20	119															
DES-1754	DES - Notify TD for commencement of works		8 30-Dec-19	08-Jan-20	01-Jun-20	09-Jun-20	119															
	INT, MANUFACTURING & DELIVERIES		287 01-Aug-19		24-Dec-19	29-Apr-21																
	of General Materials/Equipments/Services		72 10-Aug-19																			
PRO-1836	PRO - Supply and install EJ/MJ/bridge bearing subletting		72 10-Aug-19	A 30-Nov-19 A																		
Procurement	of Site Works		147 01-Aug-19	A 26-Mar-20	24-Dec-19	29-Apr-21	318	0.00														
PRO-1840	PRO - Award sub-contractor for ELS works		72 01-Aug-19	A 27-Dec-19	24-Dec-19	27-Dec-19	0				-											
																					1	
Current Mile		_										E-WP01_M08				30-Au			Revision Accepted by A	MMJV on 31		
Actual Work		Ce							h 8 Update)		Baseline: .ayout: 3 Mor	nths Rolling Pro	gramme			25 N	ov 2019 Mk		rme Update M		TST	PL PL
Bemaining	Work			Three M	onul KO	ning Pr	ogra	mme				ilters: 3 Months		- Submission		24-De	ao.2019 Mk	lonthly Program	rme Update M	18	TST	PL
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stivity ID	Activity Name	Orig Dur Early Start	Early Finish	Late Start	Late Finish	Total	TRA		December		_	January		February 10			March	
							(Day)	24 01	08 15	22	29 05	12 19	26 0	2 09 1	16 23	01 08	15	22 25
PRO-1850	PRO - Award sub-contractor for Concrete works	72 25-Od-19 A	20-Jan-20	20-Apr-20	15-May-20	88												
PRO-1846	PRO - Award sub-contractor for Road marking& Manholes Cover adjustment works	72 25-Od-19 A	31-Dec-19	18-Jun-20	23-Jun-20	137		1 8 8										
PRO-1854	PRO - Award sub-contractor for Landscape works	72 24-Dec-19	26-Mar-20	05-May-20	29-Jul-20	99												-
PRO-1852	PRO - Award sub-contractor for Prestressing concrete works	72 24-Dec-19	26-Mar-20	25-Jan-21	29-Apr-21	318		4									-	
Procurement of	f Lifts	222 24-0d-19 A	01-Aug-20	22-Feb-20	21-Sep-20	43	0.00											
Shop Drawings		72 24-Od-19 A	23-Jan-20	22-Feb-20	20-Mar-20	43	0.00											
PRO-1862	PRO - Lifts - Shop Drawings Development and Review	72 24-Od-19 A	23-Jan-20	22-Feb-20	20-Mar-20	43												
PRO-1864	PRO - Lifts - Obtain shop Drawings Approval	0	23-Jan-20		20-Mar-20	43						•	•					
Procurement / Fa	abrication	150 24-Jan-20	01-Aug-20	21-Mar-20	21-Sep-20	43	0.00											
PRO-1866	PRO - Issue PO for Procurement of Lifts	0 24-Jan-20		21-Mar-20		43							•					
PRO-1868	PRO - Procurement of Lifts	150 24-Jan-20	01-Aug-20	21-Mar-20	21-Sep-20	43												
Procurement of	f F&M System	72 25-Od-19 A	20-Jan-20	30-Jun-20	24-Jul-20	146	0.00											
Shop Drawings		72 25-0d-19 A	20-Jan-20	30-Jun-20	24-Jul-20		0.00											
PRO-1870	PRO - Award Sub-contractor (Mechanical System)	72 25-Od-19 A	20-Jan-20	30-Jun-20	24-Jul-20	146												
		143 29-0d-19 A	27.400.20	28-Feb-20	18-Jun-20	43	0.00											
	f Cladding and Glass Panels		2740120				0.00											
Shop Drawings		143 29-Od-19 A	27-Apr-20	28-Feb-20	18-Jun-20		0.00								_			
PRO-1880	PRO - Award Sub-contractor (Cladding and Glass Panels)	90 29-Od-19 A	20-Feb-20	28-Feb-20	21-Apr-20	48									-			
PRO-1882	PRO - Cladding and Glass Panels - Shop Drawings Development and Review	48 27 .Fe b-20	27-Apr-20	22-Apr-20	18-Jun-20	43												
Procurement of	f Sleeve Pipes		14- Feb -20				0.00											
PRO-1890	PRO - Issue PO for Procurement of Sleeve Pipes	0 24-Dec-19		19-Mar-20		65				2								
PRO-1892	PRO - Procurement of Sleeve Pipes	36 27-Dec-19	14-Feb-20	20-Mar-20	07-May-20	65					7							
CONSTRUCTIO	DN .	383 23-May-19 A	04-Sep-20	17-Dec-19	23-Mar-22	452 3	25.50											
Major Tempora	ary Traffic Management Scheme						0.00											
TTM Scheme for I	Kai Cheung Road	0 30-Nov-19 A	30-Nov-19 A				0.00											
KCR-TTA-1	TTA - Kai Cheung Road - Stage 1	0 30-Nov-19 A						•		/								
TTM Scheme for I	Kai Fuk Road	0 13 .Feb -20	13-Feb-20	24-Jun-20	24-Jun-20	107	0.00											
KFR-TTA-1	TTA - Kai Fuk Road - Stage 1	0 13 .Feb -20		24-Jun-20		107								•				
Section 1 - All t	the Works of the Site, except Section 2 & 17	383 23-May-19 A	04-Sep-20	27-Dec-19	23-Mar-22	452 2	35.00											
Sch_1 Preliminar		303 23-May-19 A	02-Jun-20	27-Dec-19	01-Sep-20	76 1	26.00											
Site Establishme		303 23-May-19 A	02-Jun-20	27-Dec-19	01-Sep-20	76 1	26.00											
Initial Works		214 23-May-19 A	12-Feb-20	14-May-20	23-Jun-20	107												
	SE - Hoarding, Fences & Signboards	60 23-May-19 A	31-Dec-19	14-May-20	19-May-20		0.00											
1-2018	SE - Temporary fil slope to extend Kai Cheung Road toward Kai Fuk Road	20 28-0d-19 A	31-Dec-19	14-May-20	19-May-20		6.00											
1-2018	SE - Temporary massive to extend has cheung koad toward has huk koad (downhill side) SE - Temporary road and drainage works for KCR TTA Stage 1	30 02-Jan-20	12-Feb-20	20-May-20	23-Jun-20		6.00											
									5									
	emolish Centre Divider (Nightwork)	84 21-Nov-19 A	18-Mar-20	07-Apr-20	23-Jun-20	77 :												
	1 - KCR demolish Centre Divider Stage 1 (50m) (Nightwork)		06-Dec-19 A				3.00											
	1 - KCR demolish Centre Divider Stage 2 (50m) (Nightwork)	11 30-Dec-19	11-Jan-20	07-Apr-20	22-Apr-20		3.00					-						
1-2028	1 - KCR demolish Centre Divider Stage 3 (50m) (Nightwork)	21 13-Jan-20	12-Feb-20	23-Apr-20	19-May-20	77	3.00											
														Date		Revision	Checker	d Approved
Current Milestor		Central Kowl	oon Boy	ito - Ka	i Tak E	aet (M	onth	8 Undate)		Project Baseline	D: KTE-WP01_N	108		30-Aug-19 15-Nov-2019		Accepted by AMMJV o		PL PL
Critical Remainin	ing Work		hree Mo					o opuale)		Layout:	3 Months Rolling			25 Nov 2019		me Update M07	TST	PL
Remaining Wor	dk		ince Mo		ing Ph	gram				Filter: T	ASK filters: 3 Mo	nths Rolling, KTE - Si	ubmission.	24-Dec2019	Moneny Program	ne update mus	151	12
										Page 4	of 11							

D	Activity Name	Orig Dur Early Start	Early Finish	Late Start	Late Finish	Total Float	TRA (Day)	December 8		Januar 9	у		February 10	N	arch 11	
1-2030	1 - KCR demolish Centre Divider Stage 4 (50m) (Nightwork)	15 13-Feb-20	29-Feb-20	20-May-20	05-Jun-20	77	3.00	01 08 15	22 29	05 12	19 26	02	09 16 23	01 08	15	
1-2032	1 - KCR demolish Centre Divider Stage 5 (50m) (Nightwork)	15 02-Mar-20	18-Mar-20	06-Jun-20	23-Jun-20	77	3.00		-						_	
	ad U-turn Section 1 (1350 driainpipe diversion)	124 30-Nov-19 A	09-May-20	27-Dec-19	22-May-20		39.00								_	
5A-5668	5A - TTA Cisoe Kai Cheung Road U-tum Section	0 30-Nov-19 A	004189-20	27 00215	221189-20		35.00	_								
5A-5670	SA - Mobilisation; site dearance: tree felling	9 30-Nov-19 A	10.0=10.0				4.00									
				27.0	20.0											
5A-5671	5A - Trial pits for HKT / UU detedion / CCTV for existing pipeline / Trial pits	14 11-Dec-19 A	28-Dec-19	27-Dec-19	30-Dec-19	1	0.00									
5A-5672	5A - Install sheetpiles for pipe trench and manholes	30 30-Dec-19	10-Feb-20	31-Dec-19	11-Feb-20	1										
5A-5674	5A - Excavation down to formation level; (indude install wailing and strut)	34 22-Jan-20	07-Mar-20	23-Jan-20	09-Mar-20	1	5.00									
5A-5676	5A - Construct addition MH (New SMH4047962)	15 12-Feb-20	28-Feb-20	13-Feb-20	29-Feb-20											
5A-5678	5A - Construct MH S470 and S475 (2 nos)	27 29-Feb-20	31-Mar-20	02-Mar-20	01-Apr-20	1	3.00									
5A-5680	5A - Laying 1350 drain pipes (~57m)	10 04-Mar-20	14-Mar-20	31-Mar-20	15-Apr-20	23	5.00									
5A-5682	5A - ELS for 300 drainpipes	12 09-Mar-20	21-Mar-20	21-Mar-20	03-Apr-20	11	2.00									-
5A-5684	5A - Install 300 drain pipes(~19m)	6 23-Mar-20	28-Mar-20	06-Apr-20	15-Apr-20	11	2.00									
5A-5686	5A - Backfilling and temp reinstatement	30 30-Mar-20	09-May-20	16-Apr-20	22-May-20	11	6.00									
5A-5688	5A - Connection to extg Box Culvert; Change over	10 01-Apr-20	16-Apr-20	18-Apr-20	29-Apr-20	11	2.00									
5A-5690	5A - Mass filing abandon pipelines / Demolite existing MHs	18 17-Apr-20	09-May-20	02-May-20	22-May-20	11	3.00									
Temporary ste	eel platform over Kai Tak River	90 06-Feb-20	27-May-20	06-Feb-20	01-Sep-20	81	36.00									
1-2318	SE - Temporary steel platform for 1B, 3B, CKRE & CKRW K2/K3 piles	60 06-Feb-20	20-Apr-20	19-Mar-20	03-Jun-20	36	12.00					-				
1-2316	SE - Temp steel platform for 1D, piles	60 06-Feb-20	20-Apr-20	06-Feb-20	20-Apr-20	0	12.00					-				
1-2320	SE - Temporary steel platform for 4B/4C piles	90 06-Feb-20	27-May-20	18-May-20	01-Sep-20		12.00									
	e-grouting works underneath Kai Tak River base slab	6 21-Apr-20	27-Apr-20	21-Apr-20	27-Apr-20											
1-2322	SE - Temporary pre-grouting for 1D-S1/S9-A (1 nr)	6 21-Apr-20	27-Apr-20	21-Apr-20	27-Apr-20	0										
		48 01-Apr-20	02-Jun-20	02-Apr-20	03-Jun-20		20.00									
1-2328	ing platfrom at KCR U-turn section	36 01-Apr-20	19-May-20	02-Apr-20	20-May-20		10.00									
	1 - Construct piling platform (8A-S8 & 2F-S2) ajacent to existing KCR abutment															
1-2330	1 - Construct piling platform (1G-S1/S9) ajacent to existing KCR abutment	36 20-Apr-20	02-Jun-20	21-Apr-20	03-Jun-20		10.00									
Sch_2 Ground		266 11-Od-19 A	14-May-20	10-Jan-20	23-Mar-22	547										
S1 - Pre-drillin		12 05-Mar-20	18-Mar-20	14-Apr-20	27-Apr-20		2.00									
2-2108	S1 - Pre-drilling over Kai Tak River for 1C-S1 & 1D-S1/S9-A (2 nrs)	12 05-Mar-20	18-Mar-20	14-Apr-20	27-Apr-20	30	2.00									
S2 - Pre-drillin	g	104 30-Nov-19 A	03-Apr-20	11-Sep-20	23-Mar-22	576	10.00									
2-2112	TTA - Stage 1	0 30-Nov-19 A						•								
2-2120	S2 - Predrilling for 2A (4 nrs)	20 14-Dec-19 A	17-Dec-19 A				2.00	-								
2-2114	S2 - UU detection / Trial hole / Utilities diversion / Protection of Existing Utilities	30 30-Dec-19	10-Feb-20	11-Sep-20	17-Oct-20	205	0.00		-			1	1			
2-2118	S2 - Predrilling for 2CL/2CR (4 nrs)	20 11-Feb-20	04-Mar-20	02-Sep-21	25-Sep-21	460	2.00							<u>+</u>		
2-2124	S2 - Predrilling for 2G (3 nrs)	16 11-Feb-20	28-Feb-20	19-Oct-20	06-Nov-20	205	2.00			>						
2-2122	S2 - Predrilling for 2DL/2DR (4 nrs)	20 05-Mar-20	27-Mar-20	03-Dec-21	28-Dec-21	516	2.00									
2-2116	S2 - Predrilling for 2B (4 nrs)	20 12-Mar-20	03-Apr-20	01-Mar-22	23-Mar-22	576	2.00									1
S3 - Pre-drillin	lg	33 06-Nov-19 A	16-Jan-20	10-Jan-20	06-Feb-20	12	3.00									
2-2138	S3 - Pre-drilling for 3A-S3, 3D-S3 (6nrs)	33 06-Nov-19 A	16-Jan-20	10-Jan-20	06-Feb-20	12	3.00									
																-
Current Miles	stone								Project ID: K	TE-WP01_M08			Date 30-Aug-19 First Programm	Revision Accepted by AMMJV on 31 A	Ched	
Actual Work		Central Kowl	oon Ro	ute - Ka	ai Tak E	ast (N	lonth	Update)	Baseline:				15-Nov-2019 Submit Revised	Programme	TST TST	-
-Critical Rema Remaining V	aining Work				lling Pro					nths Rolling Programme filters: 3 Months Rolling			25 Nov 2019 Monthly Program 24-Deo 2019 Monthly Program	mme Update M07 mme Update M08	TST	-
											, rene - outrimation.					
									Page 5 of 11							

Activity ID	Activity Name	Orig	Dur Early Start	Early Finish	Late Start	Late Finish	Total	TRA	December			Janua	ity		February			March	
		_	20 11-Od-19 A	28-Dec-19	14-Oct-20	16-Oct-20	Float 234		24 01 08 15	22	2 29 0	5 12	19 26	02	09 16	23	01 0	8 15	22 29
S4 - Pre-drilling																			
2-2146	S4 - Pre-drilling for 4A-S4, 4B-S4 (16 nrs)		88 11-Oct-19 A	28-Dec-19	14-Oct-20	16-Od-20	234					\rightarrow							
2-2152	S4 - Pre-drilling for 4E-S4, 4F-S4, 4G-S4, 43-S4 (15 nrs)		83 23-Nov-19 A	19-Dec-19 A				8.00											
S7 - Pre-drilling	i i i i i i i i i i i i i i i i i i i		24 30-Nov-19 A	31-Dec-19	07-Sep-20	11-Sep-20	204	0.00											
2-2158	TTA - Stage 1		0 30-Nov-19 A						•										
2-2160	S7 - UU detection / Trial hole / Utilities diversion / Protection of Existing Ut	lities	24 02-Dec-19 A	31-Dec-19	07-Sep-20	11-Sep-20	204	0.00		-	_								
S8 - Pre-drilling	1	2	04 28-Nov-19 A	14-Jan-20	22-Nov-21	09-Dec-21	559	4.00											
2-2174	S8 - Predriling for 8D-S8 (3 nrs)		16 28-Nov-19 A	11-Dec-19 A				2.00											
2-2176	S8 - Predriling for 8C-S8 (3 nr)		16 24-Dec-19	14-Jan-20	22-Nov-21	09-Dec-21	559	2.00				_							
S9 - Pre-drilling	1	1	01 03-Dec-19 A	23-Mar-20	20-Mar-20	17-Sep-20	145	12.00											
2-2188	S9 - Predrilling for 9B (3 nrs)		13 03-Dec-19 A	06-Dec-19 A				2.00	-										
2-2192	S9 - Predrilling for 9D-B (2 nrs)	-	10 07-Dec-19 A	10-Dec-19 A				1.00											
2-2186	S9 - Predrilling for 9A (3 nr)		13 17-Dec-19 A	27-Dec-19	20-Mar-20	21-Mar-20	66	2.00											
2-2190	S9 - Predrilling for 9C (3 nrs)		13 21-Dec-19 A	31-Dec-19	20-Jun-20	26-Jun-20	139												
2-2194	S9 - Predrilling for 4H/9E (8 nrs)		39 24-Dec-19	17-5eb-20	05-May-20	18-Jun-20	99									_			
2-2185	S9 - Temporary Slope works for Bridge S9		24 13-Feb-20	11-Mar-20	10-Aug-20	05-Sep-20	145												
												_							
2-2196	S9 - Predrilling for 9D-A (2 nrs)		10 12-Mar-20	23-Mar-20	07-Sep-20	17-Sep-20	145											·	
S1/S9 - Pre-dril	-		67 30-Nov-19 A	20-Feb-20	06-Feb-20	22-May-20	73	6.00											
2-2198	TTA - Stage 1		0 30-Nov-19 A						•										
2-2200	S1/S9 - UU detection / Trial hole / Utilities diversion / Protection of Existing Utilities	,	30 03-Dec-19 A	09-Jan-20	06-Feb-20	19-Feb-20	29	0.00				-							
2-2204	S1/S9 - Predriling for 1E (4 nrs)		20 28-Dec-19	21-Jan-20	08-Feb-20	02-Mar-20	29	2.00				_	<u> </u>						
2-2206	S1/S9 - Predriling for 1F/7A (6 nrs)		30 10-Jan-20	20-Feb-20	16-Apr-20	22-May-20	73	3.00				<u> </u>							
2-2208	S1/S9 - Predriling for 1D-B (2 nrs)		10 22-Jan-20	08-Feb-20	03-Mar-20	13-Mar-20	29	1.00											
CKRW - Pre-dril	lling		97 09-Jan-20	14-May-20	21-Mar-20	21-Jul-20	56	11.00											
2-2214	CKRW - Mobilisation Works		6 09-Jan-20	15-Jan-20	21-Mar-20	27-Mar-20	56	0.00				<u> </u>							
2-2216	CKRW - UU detection / Trial hole / Utilities diversion / Protection of Existing	,	36 16-Jan-20	04-Mar-20	28-Mar-20	15-May-20	56	6.00				•				_			
2-2218	Utilities CKRW - Pre-drilling for K1-CKRW, K4-CKRW (10 nrs)	-	55 05-Mar-20	14-May-20	16-May-20	21-Jul-20	56	5.00											
Sch_3.1 Bridge S	S1 Works	1	05 29-Oct-19 A	09-Mar-20	29-Feb-20	12-May-20	49	3.00		1									
S1 - Piling Work	ks	1	05 29-Oct-19 A	09-Mar-20	29-Feb-20	12-May-20	49	3.00											
Piling Works - A		1	05 29-Oct-19 A	09-Mar-20	29-Feb-20	12-May-20	49	3.00											
3.1-2300	S1 - Bored Piles for ABUT A-1A-S1 (3 nrs)		47 29-Oct-19 A	10-Feb-20	29-Feb-20	08-Apr-20	49			-									
3.1-2302	S1 - ABUT A-1A-S1 Proof drilling & Piles testing		24 11-Feb-20	09-Mar-20	09-Apr-20	12-May-20	49												
S1 - Cofferdam			24 06-Feb-20	04-Mar-20	02-Mar-20	28-Mar-20	21												
3.1-2316	S1 - Cofferdam for 1D, 1C piles		24 06-Feb-20	04-Mar-20	02-Mar-20	28-Mar-20	21												
			68 11-Feb-20	04-Mar-20	30-Mar-20	18-Mar-20	257			7									
Sch_3.3 Bridge S				,															
S3 - Piling Work			65 11-Feb-20	02-May-20	03-Sep-20	18-Mar-21	260												
Piling Works - A			65 11-Feb-20	02-May-20	03-Sep-20	18-Mar-21	260												
3.3-2800	S3 - Bored Piles for ABUT A-3A-S3 (3 nrs)		41 11-Feb-20	28-Mar-20	03-Sep-20	22-Oct-20	168	3.00											
 Current Milesto 	779										Project ID: KTE-WP01	1409			Date		Revision		edied Approved
Actual Work		Cen	tral Kowl	oon Ro	ute - Ka	ai Tak E	ast (Mon	th 8 Update)	B	laseline:				15-Nov-2019 S	ubmit Revised	Accepted by AMMJV Programme	TST	PL
Critical Remaining Wo		2.51				lling Pr					ayout: 3 Months Rolli				25 Nov 2019 N 24-Deo2019 N			TST	PL PL
						5				I F	ilter: TASK filters: 3 M	nonths Rolling	J, NIE - SUDMISSION.						
										P	age 6 of 11								

kotivity ID	Activity Name	Orig I	ur Early Start	Early Finish	Late Start	Late Finish	Total Float	TRA (Day)	December 8			January 9			February 10			March 11	
3.3-2802	S3 - ABUT A-3A-S3 Proof drilling & Piles testing		4 30-Mar-20	02-May-20	19-Feb-21	18-Mar-21	260	(Ley) 0.00	24 01 08 15	22	29 05	12 19	26	02 05	16	23	01	08 1	5 22 2
	n (Kai Tak River)		18 05-Mar-20	06-May-20	30-Mar-20	30-May-20		0.00											
3.3-2816	S3 - Cofferdam for 3C, K3, 4D piles		18 05-Mar-20	06-May-20	30-Mar-20	30-May-20	21	0.00											
			i3 28-Nov-19 A		08-Jan-20	28-Jul-21	330												
Sch_3.4 Bridge			3 28-Nov-19 A		08-Jan-20	28-Jul-21	330												
S4 - Piling Wor																			
Piling Works -			28-Nov-19 A		08-Jan-20	20-May-20	10	7.00											
3.4-3000	S4 - Bored Piles for ABUT A-4A-S4 (4 nrs)		70 28-Nov-19 A		08-Jan-20	12-Mar-20	10	4.00											
3.4-3002	S4 - Bored Piles for ABUT A-4A-54 (3 nrs)		i3 02-Mar-20	08-May-20	13-Mar-20	20-May-20	10	3.00											
Piling Works -	Pier P-4G-S4		10-Feb-20	22-May-20	14-Feb-20	27-May-20	4	3.00											
3.4-3040	S4 - Bored Piles for 4G-S4 (3 nr)		9 10-Feb-20	22-Apr-20	14-Feb-20	27-Apr-20	4	3.00		1						:			-
3.4-3044	S4 - 4G-S4 Proof drilling & Piles testing		23-Apr-20	22-May-20	28-Apr-20	27-May-20	4	0.00											
Piling Works -	Pier P-4J-S4	1. Sec.	23-Apr-20	12-Jun-20	08-Jun-21	28-Jul-21	330	1.00											
3.4-3042	S4 - Bored Piles for 43-S4 (1 nr)		23-Apr-20	12-Jun-20	08-Jun-21	28-Jul-21	330	1.00											
Sch_3.7 Bridge	S9 Works	2	28-Dec-19	04-Sep-20	23-Mar-20	05-Jan-21	99	20.00											
S9 - Piling Wor	rks	2	01 28-Dec-19	04-Sep-20	23-Mar-20	05-Jan-21	99	17.00											
Piling Works -	Pier P-9A		i9 28-Dec-19	13-Mar-20	23-Mar-20	28-Aug-20	136	3.00		÷.									
3.7-3800	S9 - Bored Piles for 9A (3 nr)		15 28-Dec-19	14-Feb-20	23-Mar-20	08-May-20	66	3.00							-				
3.7-3802	S9 - 9A Proof drilling & Piles testing		4 15-Feb-20	13-Mar-20	01-Aug-20	28-Aug-20	136	0.00										_	
Piling Works -	Pier P-9B		5 15-Feb-20	07-May-20	09-May-20	25-Sep-20	119	3.00											
3,7-3804	S9 - Bored Piles for 9B (3 nrs)		1 15-Feb-20	02-Apr-20	09-May-20	26-Jun-20	66	3.00											
3.7-3806	S9 - 9B Proof drilling & Piles testing		4 03-Apr-20	07-May-20	29-Aug-20	25-Sep-20	119	0.00											
Piling Works -			1 03-Apr-20	27-May-20	27-Jun-20	14-Aug-20	66	3.00											
3.7-3808	S9 - Bored Piles for 9C (3 nrs)		1 03-Apr-20		27-Jun-20		66	3.00											
						14-Aug-20										-			
	ABUT A-4H/9E		4 18-Feb-20	04-Sep-20	19-Jun-20	05-Jan-21	99	8.00											
3.7-3818	S9 - Bored Piles for 4H/9E (8 nrs)		4 18-Feb-20	04-Sep-20	19-Jun-20	05-Jan-21	99	8.00											
S9 - Pile Caps,	Pier / Abutment		.6 03-Apr-20	25-Apr-20	28-Sep-20	17-Oct-20	144	3.00											
Pier 9A			.6 03-Apr-20	25-Apr-20	28-5ep-20	17-Oct-20	144	3.00											
3.7-3822	S9 - Install sheetpile for pile cap 9A		5 03-Apr-20	09-Apr-20	28-Sep-20	05-Oct-20	144	1.00											
3.7-3824	S9 - Excavation down to formation level C-9A		14-Apr-20	25-Apr-20	06-Oct-20	17-Od-20	144	2.00											
Sch_3.8 Bridge	S1/S9 Works		10-Jan-20	02-May-20	14-Mar-20	24-Jul-20	69	6.00											
S1/S9 - Piling	Works		10-Jan-20	02-May-20	14-Mar-20	24-Jul-20	69	6.00											
Piling Works -	Pier P-1D-B		10-Feb-20	09-Apr-20	14-Mar-20	19-May-20	29	2.00											
3.8-4000	S1/S9 - Bored Piles for 1D-B (2 nrs)		10-Feb-20	11-Mar-20	14-Mar-20	18-Apr-20	29	2.00								:		•	
3.8-4002	S1/S9 - 1D-B Proof drilling & Piles testing		12-Mar-20	09-Apr-20	20-Apr-20	19-May-20	29	0.00										_	_
Piling Works -	Pier P-1E		10-Jan-20	02-May-20	08-Apr-20	24-Jul-20	69	4.00											
3.8-4004	S1/S9 - Bored Piles for 1E (4 nrs)		i2 10-Jan-20	28-Mar-20	08-Apr-20	24-Jun-20	69	4.00		1									
3.8-4006	S1/S9 - 1E Proof drilling & Piles testing		4 30-Mar-20	02-May-20	26-Jun-20	24-Jul-20	69	0.00											1
Sch_5A Retaini	ing Walls and At-grade Road Works		0 30-Nov-19 A	24-Jan-20	10-Mar-20	06-Jul-20	126	2.00											
_													1						
Current Miles Content Miles Actual Work Critical Remaining W	aining Work	Cen		rloon Ro Three Mo					n 8 Update)	Basel Layou Filter:	ct ID: KTE-WP01_M08 line: ut: 3 Months Rolling Prog : TASK filters: 3 Months I 7 of 11		bmission.		Date IO-Aug-19 Fin 5-Nov-2019 Su 15 Nov 2019 Mi 14-Dec-2019 Mi	ubmit Revised P onthly Program	ne Update M07	V on 31 A V TS	Checked Approved Incent PL ST PL ST PL ST PL

(ID	Activity Name	Orig Du	r Early Start	Early Finish	Late Start	Late Finish	Total Float	TR/ (Dey	December 8		20	00 1 07	Ja	nuary 9	1 00			February 10	1	0.		March 11	_
Retaining Wa	lls	50	0 30-Nov-19 A	24-Jan-20	10-Mar-20	06-Jul-20	126	2.0	24 01 08 15		2	28 05	12	19	26	02	05	16	23	01	08	15	-
RW-S1		50	30-Nov-19 A	24-Jan-20	10-Mar-20	06-Jul-20	126	2.0															
Advance Wo	rks	50	30-Nov-19 A	24-Jan-20	10-Mar-20	06-Jul-20		2.0		-													
5A-5014	TTA - Stage 1	(30-Nov-19 A						•														
5A-5016	RW-51 - General site dearance		02-Dec-19 A	21-Dec-19 A				0.0															
5A-5018	RW-S1 - Trial pits / Initial survey		02-Dec-19 A	07-Dec-19 A				0.0															
5A-5022	RW-S1 - Tree feling	_	03-Dec-19 A	21-Dec-19 A				0.0															
5A-5022	RW-S1 - Hitle Hamy RW-S1 - Utilities diversion / protection	-	24-Dec-19	08-Jan-20	10-Mar-20	21-Mar-20	57																
		_													_								
5A-5026	RW-52 - Initial site formation works for A-1G-51/S9	14		24-Jan-20	18-Jun-20	06-Jul-20	126	2.0				>			-								
	ang Kwong Road Junction Improvement Works			06-May-20			-6	11.5															
SCH_5D Wang	Kwong Road Junction Improvement Works	13	5 14-Nov-19 A	06-May-20	17-Dec-19	27-Apr-20	-6	11.5															
TTM Stage 1-	2 (WKR/LHS Junction - Fire Station)	4:	14-Nov-19 A	03-Jan-20	17-Dec-19	24-Dec-19	-6	3.0															
5D-5928	WKR-Stage1-2 - Fire hydrant relocation	12	14-Nov-19 A	27-Nov-19 A				0.5		Y													
5D-5930	WKR-Stage1-2 - UU parties draw pit and cable realignment works - CLP	12	21-Nov-19 A	04-Dec-19 A				0.0															
5D-5932	WKR-Stage1-2 - UU parties draw pit and cable realignment works - NWT	18	21-Nov-19 A	10-Dec-19 A				0.0															
5D-5934	WKR-Stage1-2 - UU parties draw pit and cable realignment works - HKCNW	18	21-Nov-19 A	11-Dec-19 A				0.0															
5D-5936	WKR-Stage1-2 - Relocation of Gully	1	12-Dec-19 A	19-Dec-19 A				0.5		l													
5D-5938	WKR-Stage1-2 - Road kerb installaiton	12	13-Dec-19 A	27-Dec-19	17-Dec-19	18-Dec-19	-6	0.5		-	-												
5D-5940	WKR-Stage1-2 - Traffic light / Sign post installation		28-Dec-19	02-Jan-20	19-Dec-19	23-Dec-19	-6	0.5			- _	-											
5D-5942	WKR-Stage1-2 - Road reinstatement		28-Dec-19	02-Jan-20	19-Dec-19	23-Dec-19	-6	0.5			_	_											
5D-5944	WKR-Stage1-2 - Railing installation	-	28-Dec-19	03-Jan-20	19-Dec-19	24-Dec-19	-6	0.5															
5D-5946	WKR-Stage1-2 - Completion of TTA Stage 1-2			03-Jan-20		24-Dec-19	-6					•											
	1 (WKR/LHS Junction - Kellett School)	55	04-Jan-20	18-Mar-20	27-Dec-19	11-Mar-20		5.0															
5D-5948	WR-Stage2-1 - Implement TTA Stage 2-1			101181-20	27-Dec-19	11-1-18-20	-0	5.0															
							-						_										
5D-5950	WKR-Stage2-1 - Planter removal			10-Jan-20	27-Dec-19	03-Jan-20	-6																
5D-5952	WKR-Stage2-1 - Setting up temporary traffic light		6 04-Jan-20	10-Jan-20	27-Dec-19	03-Jan-20	-6																
5D-5954	WKR-Stage2-1 - Trench excavation	12	04-Jan-20	17-Jan-20	28-Dec-19	11-Jan-20	-5	0.5						-									
5D-5956	WKR-Stage2-1 - Draw pit installation and duct laying for E&M / ATC	13	11-Jan-20	24-Jan-20	04-Jan-20	17-Jan-20	-6	0.5							•								
5D-5958	WKR-Stage2-1 - Realignment works for street lighting cable ducting	12	18-Jan-20	07-Feb-20	01-Feb-20	14-Feb-20	6	0.5						-			-						
5D-5960	WKR-Stage2-1 - Street lighting relocation	12	18-Jan-20	07-Feb-20	01-Feb-20	14-Feb-20	6	0.5						-			-						
5D-5962	WKR-Stage 2-1 - UU parties draw pit and cable realignment works - CLP	1	01-Feb-20	14-Feb-20	18-Jan-20	07-Feb-20	-6	0.0								-	-	-					
5D-5964	WKR-Stage 2-1 - UU parties draw pit and cable realignment works - HKTC		08-Feb-20	14-Feb-20	01-Feb-20	07-Feb-20	-6	0.0									-	-					
5D-5966	WKR-Stage 2-1 - UU parties draw pit and cable realignment works - WTT	18	08-Feb-20	28-Feb-20	01-Feb-20	21-Feb-20	-6	0.0		Ť							-			•			
5D-5968	WKR-Stage 2-1 - UU parties draw pit and cable realignment works - HGC	18	08-Feb-20	28-Feb-20	01-Feb-20	21-Feb-20	-6	0.0									-	_	_	-			
5D-5970	WKR-Stage 2-1 - UU parties draw pit and cable realignment works - NWT	18	08-Feb-20	28-Feb-20	01-Feb-20	21-Feb-20	-6	0.0									-	_	_	•			
5D-5972	WKR-Stage2-1 - Relocation of Gully	12	22-Feb-20	06-Mar-20	15-Feb-20	28-Feb-20	-6	0.5											-				
5D-5974	WKR-Stage2-1 - Road kerb installation	1	29-Feb-20	13-Mar-20	22-Feb-20	06-Mar-20	-6	0.5													_		
5D-5976	WKR-Stage2-1 - Traffic light / Sign post installation		07-Mar-20	13-Mar-20	29-Feb-20	06-Mar-20	-6	0.5															
										1			-		-	11		1					
Current Mile	rdone										Project ID	KTE-WP01_	M08				Ŀ	Date 10-Aug-19	Get Dave	Revision me Accepted b	ALB41/		hedied
Actual Work	·	Cent	ral Kow	loon Ro	ute - Ka	ai Tak E	ast (I	Non	h 8 Update)		Baseline:							5-Nov-2019	Submit Revis	ed Programme		TST	r
Critical Rem Remaining			т	hree Mo	onth Ro	lling Pr	ograi	nm				Months Rollin K filters: 3 M			ubmission					ramme Update ramme Update		TST	r r
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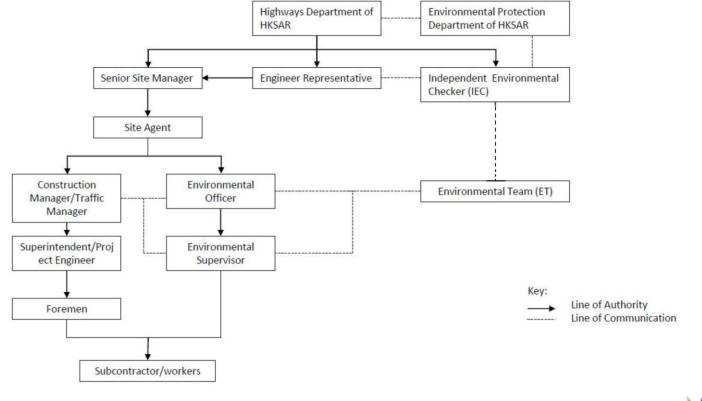
Activity ID	Activity Name	Orig Dur Early S	art Early Finish	Late Start	Late Finish	Total	TRA			Decer	nber				January			ŀ	ebruary			N	larch	
				20.51		Float	(Day)	24	01	08	15	22	29	05	12	19	6 0	2 09	10 16	23	01	08	11	22 29
5D-5978	WKR-Stage2-1 - Road reinstatement	6 07-Ma		29-Feb-20	06-Mar-20	-6																		
5D-5980	WKR-Stage2-1 - Railing installation	10 07-Ma		29-Feb-20	11-Mar-20	-6	0.50														'			
5D-5982	WKR-Stage2-1 - Completion of TTA Stage 2-1	0	18-Mar-20		11-Mar-20	-6																	•	
TTM Stage 2-3	2 (WKR/KCR Junction - Kellett School)	36 19-Ma	20 06-May-20	12-Mar-20	27-Apr-20	-6	3.50																	
5D-5984	WKR-Stage2-2 - Implement TTA Stage 2-2	0 19-Ma	20	12-Mar-20		-6																	•	
5D-5986	WKR-Stage2-2 - Planter removal	6 19-Ma	20 25-Mar-20	12-Mar-20	18-Mar-20	-6	0.00	1															-	-
5D-5988	WKR-Stage2-2 - Trench excavation	12 19-Ma	20 01-Apr-20	12-Mar-20	25-Mar-20	-6	0.50	1															-	
5D-5990	WKR-Stage2-2 - Realignment works for street lighting cable ducting	12 26-Ma	20 09-Apr-20	19-Mar-20	01-Apr-20	-6	0.50																	-
5D-5992	WKR-Stage2-2 - Street lighting / Pillar box relocation	6 02-Ap	20 09-Apr-20	26-Mar-20	01-Apr-20	-6	0.50																	
5D-5994	WKR-Stage2-2 - Fire Hydrant relocation	12 02-Ap	20 20-Apr-20	26-Mar-20	09-Apr-20	-6	0.50														-			
5D-5996	WKR-Stage 2-2 - UU parties draw pit and cable realignment works - CLP	12 02-Ap	20 20-Apr-20	26-Mar-20	09-Apr-20	-6	0.00																	
5D-5998	WKR-Stage2-2 - Planter reinstatement works	6 14-Ap	20 20-Apr-20	02-Apr-20	09-Apr-20	-6	0.50																	
5D-6000	WKR-Stage2-2 - Relocation of Gully	12 14-Ap	20 27-Apr-20	02-Apr-20	20-Apr-20	-6	0.50																	
5D-6002	WKR-Stage2-2 - Road kerb installation	12 21-Ap	20 06-May-20	14-Apr-20	27-Apr-20	-6	0.50																	
Section 8 - Ve	entilation and E&M adit and Ring Road Underpass	131 24-Nov	19 A 12-May-20	24-Dec-19	24-Jun-20	37	22.00						/											
Sch_6A Ventila	ation and E&M Adit Works	119 24-Nov	19 A 25-Apr-20	24-Dec-19	25-Apr-20	0	12.00																	
Area Part 1D1	l, 1D3, 1B1 & 1B2	119 24-Nov	19 A 25-Apr-20	24-Dec-19	25-Apr-20	0	12.00					/												
VA - Ground I	Investigation & Mobilisation	30 24-Nov	19 A 31-Dec-19	12-Mar-20	17-Mar-20	59	0.00																	
	Investigation & Mobilisation - Part 1B1, 1B2	30 24-Nov	19 A 31-Dec-19	12-Mar-20	17-Mar-20		0.00					//												
64-6508	Access to Parts 1B1, 1B2	0 24-Nov	19 A					,				/												
6A-6510	VA - Mobilisation Works, Parts 1B1, 1B2		19 A 30-Nov-19				0.00																	
6A-6512	VA - UU detection / Trial hole / Utilities diversion / Protection of extg Util. /	24 02-Dec			17-Mar-20	59																		
VA - ELS Worl	obtain as-built record for interface	107 09-Dec		24-Dec-19	25-Apr-20		12.00				1	1												
VA - ELS Stag		107 09-040	9.4 25-Apr-20	24.0ec19	25.400.20		12.00																	
6A-6516	VA - Mobilisation	16 09-Dec	9 A 28-Dec-19	24-Dec-19	28-Dec-19	0				/														
										ſ													_	
64-6518	VA - Install Cofferdam, Stage 1	61 30-De		30-Dec-19	17-Mar-20	0																		
6A-6520	VA - Excavation Down to 1st Waiing & Strut; Instali Waiing & Strut, 1D1&1D3			18-Mar-20	02-Apr-20	0																		
6A-6522	VA - Excavation Down to 2nd Walling & Strut; Install Walling & Strut, 1D1&1D3	16 03-Ap			25-Apr-20	0				- (
	Road Underpass	131 24-Nov			24-Jun-20		10.00			N														
	, 1D2, 1D3, 1D4, 1B1 & 1B2		19 A 12-May-20		24-Jun-20	37	10.00				$\setminus \perp$													
	Investigation & Mobilisation		19 A 14-Dec-19 A				6.00																	
											\sim													
4-6708	Access to Parts 1B1, 1B2	0 24-Nov	19 A																					
4-6710	RR - Mobilisation Works, Parts 1B1, 1B2	6 02-Dec	.9 A 07-Dec-19 A	L .			0.00		_															
4-6712	RR - UU detection / Trial hole / Utilities diversion / Protection of Existing Utilities	18 09-Dec	9 A 14-Dec-19 A	L .			6.00		1	_														
RR - ELS Worl	ks	42 18-Ma	20 12-May-20	07-May-20	24-Jun-20	37	4.00																	
RR - ELS Stag	ge 2	42 18-Ma	20 12-May-20	07-May-20	24-Jun-20		4.00																	
4-6718	RR - Install Cofferdam, Stage 2	42 18-Ma	20 12-May-20	07-May-20	24-Jun-20	37	4.00			- {													-	-
Current Mile													D: KTE-WPO	01_M08				30	Date Aug-19 F	First Programme	Revision Accepted by A	WWW on 31 A		d Approved PL
Actual Work		Central K							date)			Baseline Layout:	e: 3 Months Ro	olling Proc	gramme			25	Nov 2019 N	Submit Revised Aonthly Program	nme Update N		TST	PL PL
Remaining	Work		Three M	onth Ro	pling Pr	ogra	mme	•								E - Submissi	n.	24	Dec:2019 N	Aonthly Program	nme Update N	108	TST	PL
												Page 9	of 11											
												raye 9	21.11											

/ ID	Activity Name	Orig Du	r Early Start	Early Finish	Late Start	Late Finish	Total T Float (D	TRA Day)	December 8				January 9				Feb	ruary 10				larch 11	
Section 10 - F	Footbridge, E&M Installation and Miscellaneous Wo	132	19-Nov-19 A	08-May-20	24-Dec-19	20-Jun-20	37 19	0.00	24 01 08 15	22	29	05	12	19	26	02	09	16	23	01	08	15	22
Sch_7 FB - Pilin		132	19-Nov-19 A	08-May-20	24-Dec-19	20-Jun-20	37 13	8.00	····· \	-													
	rks (Main Span)	132	19-Nov-19 A	08-May-20	24-Dec-19	20-Jun-20	37 13	8.00															
PW Stage 1 - L		32	19-Nov-19 A	23-Jan-20	24-Dec-19	23-Jan-20	0 4	L.00															
7-7017	FB - Mobilisation	22	19-Nov-19 A	13-Dec-19 A																			
7-7018	FB - Install SHP For LB-FB1 (4 nos.)	32	14-Dec-19 A	23-Jan-20	24-Dec-19	23-Jan-20	0 4	.00		1				_									
PW Stage 1 - F			24-Jan-20	18-Feb-20	24-Jan-20	18-Feb-20	0 2																
7-7022	FB - Install SHP For PIER P-FB1 (2 nos.)		24-Jan-20	18-Feb-20	24-Jan-20	18-Feb-20	0 2							_									
PW Stage 1 - F			19-Feb-20	25-Mar-20	19-Feb-20	25-Mar-20	0 3																
7-7024	FB - Install SHP For PIER P-FB2 (4 nos.)		19-Feb-20	25-Mar-20	19-Feb-20	25-Mar-20	0 3											_					
			26-Mar-20	17-Apr-20	19-Heb-20	02-Jun-20	37 2											_					
PW Stage 1 - A																							
7-7008	FB - Install SHP For ABUT A-SB2 (2 nos.)		26-Mar-20	17-Apr-20	15-May-20	02-Jun-20	37 2		(_
PW Stage 1 -			i 18-Apr-20	08-May-20	03-Jun-20	20-Jun-20	37 2																
7-7012	FB - Install SHP For PIER P-SB1 (2 nos.)	16	18-Apr-20	08-May-20	03-Jun-20	20-Jun-20	37 2		\mathbf{V}														
FB - Piling Wor	rks (KITEC Portion)	75	19-Dec-19 A	29-Feb-20	27-Dec-19	29-Feb-20	0 0	0.00															
PW Stage 1 - L	LA-FB3	54	19-Dec-19 A	05-Feb-20	27-Dec-19	05-Feb-20	0 0	0.00															
7-7019	FB - Mobilisation	5	19-Dec-19 A	24-Dec-19 A				-															
7-7020	FB - Install SHP For LA-FB3 (4 nos.)	28	27-Dec-19	05-Feb-20	27-Dec-19	05-Feb-20	0 0	0.00		•		-			_	-							
PW Stage 1 - F	Pier P-FB3	21	06-Feb-20	29-Feb-20	06-Feb-20	29-Feb-20	0 0	0.00															
7-7016	FB - Install SHP For PIER P-FB3 (3 nos.)	21	06-Feb-20	29-Feb-20	06-Feb-20	29-Feb-20	0 0	0.00								-	-	-	_	I			
FB - Piling Wor	rks (Span D)	42	02-Mar-20	23-Apr-20	02-Mar-20	24-Apr-20	1 0	0.00															
PW Stage 2 - L	LC-FB2	28	02-Mar-20	02-Apr-20	02-Mar-20	02-Apr-20	0 0	0.00															
7-7032	FB - Install SHP For LC-FB2 (4 nos.)	28	02-Mar-20	02-Apr-20	02-Mar-20	02-Apr-20	0 0	0.00															
PW Stage 2 - F	Pier P-FD2	21	26-Mar-20	23-Apr-20	26-Mar-20	23-Apr-20	0 0	0.00				_											
7-7030	FB - Install SHP For PIER P-FD2 (2 nos.)		26-Mar-20	23-Apr-20	26-Mar-20	23-Apr-20	0 0			\vdash	_												_
PW Stage 2 -	. ,	14	03-Apr-20	23-Apr-20	03-Apr-20	23-Apr-20	0 0	0.00															
7-7028	FB - Install SHP For PIER P-FD1 (2 nos.)		03-Apr-20	23-Apr-20	03-Apr-20	23-Apr-20	0 0																
PW - Pile Testi			03-Apr-20	21-Apr-20	08-Apr-20	24-Apr-20	3 0		$\boldsymbol{\langle}$														
7-7026	FB- SHP Loading Test - Compression Test		03-Apr-20	21-Apr-20	08-Apr-20	24-Apr-20	3 0																
	in Span, Staricase A & B		03-Apr-20	06-May-20	09-Apr-20	15-May-20		5.00															
	ts, Pilecaps & Piers		03-Apr-20	06-May-20	09-Apr-20	15-May-20	8 6																
FB - KITEC Po	ortion		03-Apr-20	06-May-20	09-Apr-20	09-May-20	3 5	5.00															
								00.8															
7-7060	FB3-L- Install Sheetpiles	11	03-Apr-20	20-Apr-20	09-Apr-20	24-Apr-20	4 2	2.00			\searrow												
7-7062	FB3-L- Excavation; prepare Pile Head (4 nos.)	6	21-Apr-20	27-Apr-20	04-May-20	09-May-20	9 1	.00															
PIER P-FB3		11	22-Apr-20	06-May-20	25-Apr-20	09-May-20		2.00				-											
7-7050	P-FB3 - Install Sheetplies	11	22-Apr-20	06-May-20	25-Apr-20	09-May-20	3 2	.00									1		-				
FB - Main Spar	n Portion	7	22-Apr-20	29-Apr-20	08-May-20	15-May-20	12 1	.00		+													
Current Miler		_		_								-WP01_M0	8				30-A			Revision Accepted by Al	MMJV on 31		PL
Actual Work		Cent							n 8 Update)	Baseli		ns Rolling P	rogramme				25 N	ov 2019 M		rme Update Mil		TST	PL PL
Remaining V			Т	nree Mo	onth Ro	Iling Pro	ogramn	ne						KTE - Subm	nission.					rme Update Mi		TST	PL
										Page	10 of 11												
										гауе	10 01 11												

LDTTF81-L 7-7078 FB14 - Bizavation; prepare Pile H Section 11 - Structure of Bridge CKRE Sch_2 CKRE - Pre-drilling 2-7402 CKRE - Pre-drilling 2-7404 CKRE - Verderling for K4-CKRE 2-7406 CKRE - Piling Works CKRE - Piling Works Piling Works - ABUS Piling Works - ABUS Piling Works - ABUS Sch_3.10 Bridge CKRE Works CKRE - Piling Works Piling Works - ABUS Piling Works - ABUS Sch_3.10 F500 CKRE - Disc - Deced Piles for ABUT AK1 Section 12 - Underpass S21 Sch_4.3 Slip road Underpass S21 S21 - ELS Works	lities diversion / Protection of Existing 5) 5)	7 22.4pm 7 22-4pm 7 22-4pm 95 02-3m 6 02-3m 6 02-3m 6 02-3m 25 27-ftb 28 27-ftb 28 27-ftb 35 30-ftb 35 30-ftb 35 30-ftb	15-May-20 15-May-20 00 05-May-20 00 06-Jan-20 00 26-Feb-20 00 26-Mar-20 00 05-May-20 00 05-May-20 00 15-May-20 00 15-May-20	08-hisy-20 08-hisy-20 14-hisy-20 14-hisy-20 14-hisy-20 14-hisy-20 10-Jul-20 21-Aug-20 21-Aug-20 23-Oct-20 23-Oct-20	15+4ay-20 15-4ay-20 03-Dec20 23-Oct-20 20-4ar-20 20-4ag-20 18-5ep-20 23-Oct-20 03-Dec-20	Float 12 12 168 143 56 143 143 143 143 143 168	14.00	
7-7078 RB14 Excavation; prepare Pile Hi Soction 11 - Structure of Bridge CKRE Sch_2 CKRE - Pre-drilling 2-7402 OKE - Hobilistion Works 2-7404 OKE - Hobilistion Works 2-7405 OKE - Hobilistion Works 2-7406 OKE - Hobilistion Works 2-7408 OKE - Hobilistion Works Sch_3.10 Bridge CKRE Works CKRE - Piling Works Piling Works - ABUT A-K1-CKRE 3.10.7500 OKE - Bond Piles for ABUT A-K1-CKRE 3.10.7500 OKE - Bond Piles for ABUT A-K1-CKRE 3.10.7500 Soction 12 - Underpass S21 Sch_4.3 Silp road Underpass S21	lities diversion / Protection of Existing 5) 5)	104 02-3an- 95 02-3an- 6 02-3an- 36 09-3an- 25 27-Feb- 28 27-Har- 35 30-Har- 35 30-Har- 35 30-Har- 35 30-Har-	15-May-20 15-May-20 00 05-May-20 00 06-Jan-20 00 26-Feb-20 00 26-Mar-20 00 05-May-20 00 05-May-20 00 15-May-20 00 15-May-20	14-Mar-20 14-Mar-20 14-Mar-20 10-Jul-20 21-Aug-20 19-Sep-20 23-Oct-20	03-Dec-20 23-Oct-20 20-Mar-20 20-Aug-20 18-Sep-20 23-Oct-20 03-Dec-20	168 143 56 143 143 143	14.00 12.00 0.00 6.00 3.00 3.00	
Section 11 - Structure of Bridge CKRE Sch_2 CKRE - Pre-drilling 27402 OKE - Mobilisation Works 27404 OKE - Wobilisation Works 27405 OKE - Mobilisation Works 27406 OKE - Mobilisation Works 27408 OKE - Pre-drilling for K1-OKRE (5 Sch_3.10 Bridge CKRE Works CKRE - Pilling Works Pilling Works - ABUT A-K1-CKRE 3.10-7500 OKE - Bond Pillis for ABUT A-K1-CKRE 3.10-7500 OKE - Bond Pillis for ABUT A-K1-SCKRE 3.10-7500	lities diversion / Protection of Existing 5) 5)	104 02-3an- 95 02-3an- 6 02-3an- 36 09-3an- 25 27-Feb- 28 27-Har- 35 30-Har- 35 30-Har- 35 30-Har- 35 30-Har-	15-May-20 15-May-20 00 05-May-20 00 06-Jan-20 00 26-Feb-20 00 26-Mar-20 00 05-May-20 00 05-May-20 00 15-May-20 00 15-May-20	14-Mar-20 14-Mar-20 14-Mar-20 10-Jul-20 21-Aug-20 19-Sep-20 23-Oct-20	03-Dec-20 23-Oct-20 20-Mar-20 20-Aug-20 18-Sep-20 23-Oct-20 03-Dec-20	168 143 56 143 143 143	14.00 12.00 0.00 6.00 3.00 3.00	
Sch_2 CKRE - Pre-drilling 2:7402 CKRE - Mobilisation Works 2:7404 CKRE - Wobilisation Works 2:7406 CKRE - Pre-drilling for K1-CKRE (5 2:7408 CKRE - Pre-drilling for K1-CKRE (5 Sch_3.10 Bridge CKRE Works CKRE - Piling Works Piling Works - ABUT A-K1-CKRE 3.10:7500 CKRE - Bond Pile for ABUT A-K1 CKRE Soction 12 - Underprass 521 Sch_3.3 lip road Underpass 521	s) 3)	95 02-Jan- 6 02-Jan- 36 09-Jan- 25 27-Feb- 28 27-Har- 35 30-Har- 35 30-Har- 35 30-Har- 35 30-Har-	0 08-Jan-20 00 26-Feb-20 00 26-Mar-20 00 05-May-20 00 15-May-20 00 15-May-20	14-Mar-20 10-Jul-20 21-Aug-20 19-Sep-20 23-Oct-20	23-0ct-20 20-Mar-20 20-Aug-20 18-Sep-20 23-0ct-20 03-Dec-20	143 56 143 143 143	0.00 6.00 3.00 3.00	
2-7402 CXRE - Mobilisation Works 2-7404 CXRE - Widetedion / Trial hole / Unities 2-7406 CXRE - Predriling for K1-CXRE (5 2-7408 CXRE - Predriling for K1-CXRE (5 Sch3.10 Bridge CKRE Works CKRE - Piling Works Piling Works - ABUT A-K1-CKRE 3.10-7500 CXRE - Bond Pile for ABUT A-K1- Socction 12 - Underprass 521 Sch4.3 Silp road Underpass 521	s) 3)	6 02-3an- 36 09-3an- 25 27-Feb- 28 27-Har- 35 30-Har- 35 30-Har- 35 30-Har-	0 08-Jan-20 00 26-Feb-20 00 26-Mar-20 00 05-May-20 00 15-May-20 00 15-May-20	14-Mar-20 10-Jul-20 21-Aug-20 19-Sep-20 23-Oct-20	20-Mar-20 20-Aug-20 18-Sep-20 23-Oct-20 03-Dec-20	56 143 143 143	0.00 6.00 3.00 3.00	
2:7404 CKE - UU detedion / Trill hole / Utilities 2:7406 CKE - Fre-drilling for K1-CKE (5 2:7408 CKE - Fre-drilling for K4-CKE (5 Sch3.10 Bridge CKRE Works CKRE - Piling Works CKRE - Piling Works ABUT A-K1-CKRE 3:10:7500 CKRE - Bored Piles for ABUT A-K1 Section 12 - Underprass 521 Sch	s) 3)	36 09-Jan- 25 27-Feb- 28 27-Mar- 35 30-Mar- 35 30-Mar- 35 30-Mar-	26-Feb-20 26-Feb-20 26-Mar-20 0 26-Mar-20 0 05-May-20 0 15-May-20 0 15-May-20	10-Jul-20 21-Aug-20 19-Sep-20 23-Oct-20	20-Aug-20 18-Sep-20 23-Oct-20 03-Dec-20	143 143 143	6.00 3.00 3.00	
Utilities Unities 2:7406 ORE - Pre-dilling for K1-ORE (5 2:7408 ORE - Pre-dilling for K1-ORE (5 Sch_3.10 Bridge CKRE Works CKRE - Piling Works CKRE - Piling Works ABUT A-K1-CKRE 3.10:7500 CKRE - Bond Pile for ABUT A-K1 Section 12 - Underprass 521 Sch_4.3 Slip road Underpass 521	s) 3)	25 27-feb- 28 27-feb- 35 30-flar- 35 30-flar- 35 30-flar-	26-Mar-20 0 26-Mar-20 0 05-May-20 10 15-May-20 10 15-May-20	21-Aug-20 19-Sep-20 23-Oct-20	18-Sep-20 23-Oct-20 03-Dec-20	143 143	3.00 3.00	
2-7406 CKRE - Pie-drilling for KL-CKRE (S 2-7408 CKRE - Pie-drilling for KL-CKRE (S Sch3.10 Bridge CKRE Works CKRE - Pilling Works Pilling Works - ABUT A-KL-CKRE 3.10.7500 Soction 12 - Underpass S21 Sch_4.3 Slip road Underpass S21	s)	28 27-Mar- 35 30-Mar- 35 30-Mar- 35 30-Mar-	05-May-20 15-May-20 0 15-May-20	19-Sep-20 23-Oct-20	23-Oct-20 03-Dec-20	143	3.00	
Sch_3.10 Bridge CKRE Works CKRE - Piling Works Piling Works - ABUT A-K1-CKRE 3.107500 CKRE - Bond Pile for ABUT A-K1- Section 12 - Underpass 521 Sch_4.3 Silp road Underpass 521		35 30-Mar- 35 30-Mar- 35 30-Mar-	15-May-20	23-Oct-20	03-Dec-20			
CKRE - Piling Works - ABUT A-K1-CKRE Piling Works - ABUT A-K1-CKRE 3.107500 CKRE - Bored Pile for ABUT A-K1- Section 12 - Underpass 521 Sch_4.3 Silp road Underpass 521	RE (2 nn)	35 30-Mar-	0 15-May-20			168	2.00	
CKRE - Piling Works - ABUT A-K1-CKRE Piling Works - ABUT A-K1-CKRE 3.107500 CKRE - Bored Pile for ABUT A-K1- Section 12 - Underpass 521 Sch_4.3 Silp road Underpass 521	RE (2 nrs)	35 30-Mar-		23-Oct-20			2.00	
3.10-7500 OKRE - Bored Piles for ABUT Ark1- Section 12 - Underpass S21 Sch_4.3 Slip road Underpass S21	RE (2 ns)		0 15.May 20		03-Dec-20	168	2.00	
3.10-7500 OKRE - Bored Piles for ABUT Ark1- Section 12 - Underpass S21 Sch_4.3 Slip road Underpass S21	RE (2 nrs)	35 30-Marci	15-may-20	23-Oct-20	03-Dec-20	168	2.00	
Section 12 - Underpass S21 Sch_4.3 Slip road Underpass S21			0 15-May-20	23-Oct-20	03-Dec-20	168	2.00	
Sch_4.3 Slip road Underpass S21		128 11-Dec-1		28-Dec-19	25-May-20	0	15.00	
			9 A 25-May-20	28-Dec-19	25-May-20	0	15.00	
521 - ELS Works					20110/20			
		128 11-Dec-1		28-Dec-19	25-May-20	0	15.00	
4-7708 S21 - Mobilisation		6 11-Dec-1					0.00	
4-7710 S21 - Install Cofferdam		54 28-Dec-	.9 07-Mar-20	28-Dec-19	07-Mar-20	0	8.00	
4-7714 S21 - Excavation Down to 1st Wa	g & Strut; Install Walling & Strut	28 09-Mar-	14-Apr-20	09-Mar-20	14-Apr-20	0	3.00	
4-7716 S21 - Excavation Down to 2nd W	ng & Strut; Install Wailing & Strut	33 15-Apr-	25-May-20	15-Apr-20	25-May-20	0	4.00	
Section 13 - Cross-boundary disposal		96 03-Mar-	.0 30-Jun-20	03-Mar-20	30-Jun-20	0	0.00	
Sch_9A Preparatory work for Cross-Bounda	disposal of inert C&D Materia	96 03-Mar-	:0 30-Jun-20	03-Mar-20	30-Jun-20	0	0.00	
9A-8000 CBD - Prepare proposal for cross-b	ndary disposal of inert C&D materials	24 03-Mar-	0 30-Mar-20	03-Mar-20	30-Mar-20	0	0.00	
9A-8002 CBD - PM's review and approval		24 31-Mar-	0 04-May-20	02-Jun-20	30-Jun-20	48	0.00	
9A-8004 CBD - Liaision with related authorit	and grant the required permit and/or	72 31-Mar-	0 30-Jun-20	31-Mar-20	30-Jun-20	0	0.00	
Ikenses Section 17 - Sleeve pipes for District (oling System (Subject to	122 23-Nov-1	9 A 07-May-20	27-Dec-19	07-May-20	0	9.00	
DES_T20 - ELS Design for Installation of Sle		32 23-Nov-1	9 A 09-Jan-20	17-Feb-20	2 9-Fe b-20	38	0.00	
DES-8404 DES - Prepare submission of desig		12 23-Nov-1	9 A 24-Dec-19 A				0.00	
	approval; consent to start the DCS Sleeve	12 24-Dec-	.9 09-Jan-20	17-Feb-20	29-Feb-20	38	0.00	
pipes installation Sch_10 Sleeve pipes for DCS (Kai Tak River		101 27-Dec-		27-Dec-19	07-May-20	0	9.00	
10-8416 DCS - Mobilisation works (Western		7 27-Dec-		27-Dec-19	04-Jan-20	0	0.00	
· · · ·	de of Kall Tak River)							
10-8418 DCS - Install sheetpipes		42 06-Jan-		06-Jan-20	29-Feb-20	0	2.00	
10-8420 DCS - Excavation down to formati	level +1.4mPD	52 02-Mar-	07-May-20	02-Mar-20	07-May-20	0	7.00	

Appendix C Project Organization Chart

Environmental Organization Chart





Appendix D Dust Event-Action Plan (EAP)

	ACTION			
EVENT	ET	IEC	ER	CONTRACTOR
ACTION LEV	EL			
1.Exceedance for one sample	 Identify source, investigate the causes of exceedance and propose remedial measures; Inform IEC and ER; Repeat measurement to confirm finding; Increase monitoring frequency to daily. 	 Check monitoring data submitted by ET; Check Contractor's working method. 	1. Notify Contractor.	 Rectify any unacceptable practice; Amend working methods if appropriate.
2.Exceedance for two or more consecutive samples	 Identify source; Inform IEC and ER; Advise the ER on the effectiveness of the proposed remedial measures; Repeat measurements to confirm findings; Increase monitoring frequency to daily; Discuss with IEC and Contractor on remedial actions required; If exceedance continues, arrange meeting with IEC and ER; If exceedance stops, cease additional monitoring. 	 Check monitoring data submitted by ET; Check Contractor's working method; Discuss with ET and Contractor on possible remedial measures; Advise the ET on the effectiveness of the proposed remedial measures; Supervise Implementation of remedial measures. 	 Confirm receipt of notification of failure in writing; Notify Contractor; Ensure remedial measures properly implemented. 	 Submit proposals for remedial to ER within 3 working days of notification; Implement the agreed proposals; Amend proposal if appropriate.
LIMIT LEVEL	_			
1.Exceedance for one sample	 Identify source, investigate the causes of exceedance and propose remedial measures; Inform ER, Contractor and 	 Check monitoring data submitted by ET; Check Contractor's working method; 	 Confirm receipt of notification of failure in writing; Notify Contractor; 	 Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IEC

	ACTION			
EVENT	ET	IEC	ER	CONTRACTOR
	 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. 	 Discuss with ET and Contractor on possible remedial measures; Advise the ER on the effectiveness of the proposed remedial measures; Supervise implementation of remedial measures. 	3. Ensure remedial measures properly implemented.	 within 3 working days of notification; Implement the agreed proposals; 4. Amend proposal if appropriate.
2.Exceedance for two or more consecutive samples	 Notify IEC, ER, Contractor and EPD; Identify source; Repeat measurement to confirm findings; Increase monitoring frequency to daily; Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; Arrange meeting with IEC and ER to discuss the remedial actions to be taken; Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; If exceedance stops, cease additional monitoring. 	 Discuss amongst ER, ET, and Contractor on the potential remedial actions; Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; Supervise the implementation of remedial measures. 	 Confirm receipt of notification of failure in writing; Notify Contractor; In consultation with the IEC, agree with the Contractor on the remedial measures to be implemented; Ensure remedial measures properly implemented; 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. 	 Take immediate action to avoid further exceedance; Submit proposals for remedial actions to IEC within 3 working days of notification; Implement the agreed proposals; Resubmit proposals if problem still not under control; Stop the relevant portion of works as determined by the ER until the exceedance is abated.

Note:

ET – Environmental Team

ER – Engineer's Representative

IEC – Independent Environmental Checker

Acuity Sustainability Consulting Ltd.

Appendix E Environmental Mitigation Implementation Schedule (EMIS)

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommende d Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/ or standards to be achieved	Implementation Status
			Constru	ction Dust Impact				
\$4.3.10	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	 APCO To control the dust impact To meet HKAQO and TM-EIA criteria 	Implemented
\$4.3.10	D2	 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	 APCO To control the dust impact To meet HKAQO and TM-EIA criteria 	Implemented
S4.3.10	D3	 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 extended 	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction stage	 APCO To control the dust impact To meet HKAQO and TM-EIA criteria 	 Implemented and rectified after observation.

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommende d Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/ or standards to be achieved	Implementation Status
		 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 impervious 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 continuously; Any area that involves demolition activities should be 						

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommende d Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/ or standards to be achieved	Implementation Status
54.2.10		 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. 	Monitoring of	Contractor	Colocted ror			
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
			Construct	tion Noise (Airborn	e)			

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommende d 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: 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
\$5.4.1	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
\$5.4.1	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	Sreen the noisy plant items to be used at all	Contractor	All construction sites where practicable	Construction stage	• Annex 5, TM-EIAO	Implemented

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommende d Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/ or standards to be achieved	Implementation Status
		plants including air compressors, generators and handheld breakers, etc.	sites					
S5.4.1	N4	Use 'Quiet plant'	Reduce the noise levels of plant items	Contractor	All construction sites where practicable	Construction stage	• Annex 5, TM-EIAO	Implemented
\$5.4.1	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
\$5.4.1	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

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommende d 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: 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 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 	To minimize water quality impact from the construction site runoff and general construction activities	Contractor	All construction sites where practicable	Construction stage	 Water Pollution Control Ordinance ProPECC PN 1/94 TM-EIAO TM-DSS 	 Implemented and rectified after observation.

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommende d Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/ or standards to be achieved	Implementation Status
		 maximum flow conditions. Sizes may vary depending upon the flow rate, but for a flow rate of 0.1 m3/s a 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; 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 						

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommende d Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/ or standards to be achieved	Implementation Status
		 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; 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 						

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommende d Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/ or standards to be achieved	Implementation Status
		 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; 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 						

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommende d Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/ or standards to be achieved	Implementation Status
		season (April to September) as far as practicable.						
\$6.9.1.2	W2	 Tunneling Works and Underground Works 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 quality impact from tunneling works	Contractor	All tunneling portion	Construction stage	 Water Pollution Control Ordinance ProPECC PN 1/94 TM-DSS TM-EIAO 	• Implemented

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommende d 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 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 from sewage effluent	Contractor	All construction sites where practicable	Construction stage	 Water Pollution Control Ordinance TM-DSS 	Implemented
S6.9.1.5	W4	 Groundwater from Potential Contaminated Area: 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	 Water Pollution Control Ordinance TM-DSS TM-EIAO 	• Implemented

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommende d Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/ or standards to be achieved	Implementation Status
		 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 to be recharged shall not be higher than pollutant levels of groundwater at the recharge well. Prior to recharge, any prohibited substances such as TPH products should be removed as necessary by installing the petrol 						

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommende d Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/ or standards to be achieved	Implementation Status
		interceptor.						
\$6.9.1.6	W6	 Accidental Spillage In order to prevent accidental spillage of chemicals, the following is recommended: All the tanks, containers, storage area should be bunded 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 the Waste Disposal (Chemical Waste) (General) Regulation. 	To minimize water quality impact from accidental spillage	Contractor	All construction site where practicable	Construction stage	 Water Pollution Control Ordinance ProPECC PN 1/94 TM-EIAO TM-DSS 	Implemented
			Waste Manage	ement (Construction	Waste)			
S7.4.1 WM1		 On-site sorting of C&D material 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, Aplite dyke rock, etc.). Volcanic rock and Aplite 	Separation of unsuitable rock from ending up at concrete batching plants and be turned into concrete for	Contractor	All construction sites	Construction stage	• DEVB (W) No. 6/2010	Implemented

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommende d Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/ or standards to be achieved	Implementation Status
		dyke rock should be separated at the source sites as far as practicable and stored at designated 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 TC(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.	structural use					
\$7.5.1	WM2	 Construction and Demolition Material Maintain temporary stockpiles and reuse excavated fill material for backfilling and reinstatement; Carry out on-site sorting; Make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate; Adopt 'selective demolition' technique to demolish the existing structures and facilities with a view to 	Good site practice to minimize the waste generation and recycle the C&D materials as far as practicable so as to reduce the	Contractor	All construction sites	Construction stage	 Land (Miscellaneous Provisions) Ordinance Waste Disposal Ordinance ETWB TCW No. 19/2005 	Implemented

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommende d Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/ or standards to be achieved	Implementation Status
\$7.5.1	WM3	 recovering broken concrete effectively for recycling purpose, where possible; Implement a trip-ticket system for each works contract to ensure that the disposal of C&D materials are properly documented and verified; and 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. 	amount for final disposal Good site	Contractor	All	Construction stage	• Land	Implemented
57.5.1		 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 	practice to minimize the waste generation and recycle the C&D materials as far as practicable so as to reduce the amount for final		construction sites		 Land (Miscellaneous Provisions) Ordinance Waste Disposal Ordinance ETWB TCW No. 19/2005 	• implemented

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommende d Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/ or standards to be achieved	Implementation Status
		and used as fill. Steel reinforcement bar can be used by scrap steel mills. Different areas of the sites should be considered for such segregation and storage.						
S7.5.1	WM4	 Excavated Contaminated Soils Details of the mitigation measures on handling of the contaminated soil shall be referred to Section on Land Contamination below. 	The contaminated soil will be excavated for on-site reuse	Contractor	PBH4	Prior to commencement of construction works within the contaminated area	 Practice Guide (PG) for Investigation and Remediation of Contaminated Land GN/GM for land contamination 	Implemented
S7.5.1	WM5	 Land-based Sediment 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 sea except at the 	To control pollution due to marine sediment	Contractor	Along CKR alignment	Construction stage	• ETWB TCW No. 34/2002	• Implemented

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommende d Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/ or standards to be achieved	Implementation Status
		 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 						

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommende d Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/ or standards to be achieved	Implementation Status
		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.						
\$7.5.1	WM6	 <u>Chemical Waste</u> <u>Chemical waste</u> 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; <u>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;</u> 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 and ensure proper storage, handling and disposal	Contractor	All construction sites	Construction stage	 Waste Disposal (Chemical Waste) (General) Regulation Code of Practice on the Packaging, Labelling and Storage of Chemical Waste 	 Implemented, rectified after observation.

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommende d Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/ or standards to be achieved	Implementation Status
\$7.5.1	WM7	 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; 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. General Refuse 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 	refuse and avoid odour, pest and	Contractor	All construction sites	Construction stage	• Waste Disposal Ordinance	• Implemented

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommende d Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/ or standards to be achieved	Implementation Status
		collection. Participation in a local collection scheme should be considered by the Contractor.						
			Land Contamir	nation				
S8.9 & Appendix 8.4	LC2	 Excavation of the Contaminated Soil 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	Contractor	PBH4	Prior to commencement of construction works within the contaminated area	 Practice Guide (PG) for Investigation and Remediation of Contaminated Land Guidance Notes for Contaminated Land Assessment and Remediation Guidance Manual for Use of Risk-Based 	• Implemented
S8.9 & Appendix 8.4	LC3	• 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:					Remediation Goals (RBRGs) for Contaminated Land Management	Implemented

EIA Ref.	EM&A Log Ref.	Reco	Recommended Mitigation Measures Locations Testing		Objectives of the Recommende d Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/ or standards to be achieved	Implementation Status
		Locations								
		requirement Criteria								
		PBH4	PBH4 PCBs RBRGs (Public							
		Park)								
			• If the results of analysis below the RBRGs (Public Park), no further excavation will be required.							
		noncompliance excavation sh vertically an location(s) of acceptance of conducted for excavation, sampling and all contamina	ampling and compliance testing should continue until Il contaminated materials are removed and should be							
Appendix 8.4	LC4	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.							Implemented	
						Hazard to Life				
S9.18	H8	healthy, expo records. Th	thy, experienced and have good safe driving r rds. The driver should hold a proper driving e		risk during explosives	Contractor	Works areas at which explosives would be	Construction stage	-	Implemented

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommende d Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/ or standards to be achieved	Implementation Status
		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.			used			
S9.18	H9	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.	To reduce the risk during explosives transport	Contractor	Works areas at which explosives would be used	Construction stage	-	• N/A
			Lan	dscape & Visual				
S10.10.1 Table 10.11	LV3	 <u>Good Site Management</u> 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
S10.10.1 Table 10.11	LV4	 <u>Screen Hoarding</u> Decorative screen hoarding should be erected to screen the public from the construction area. It should be designed to be compatible with the existing urban context. 	Minimize visual impact	Contractor	Within Project site	Construction stage	-	Implemented
S10.10.1 Table 10.11	LV5	Lighting Control during Construction • All lighting in the construction site shall be carefully controlled to minimize light pollution and night-time glare to nearby residencies and GIC.	Minimize visual impact	Contractor	Within Project site	Construction stage	-	• N/A

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommende d Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/ or standards to be achieved	Implementation Status
		The Contractor shall consider other security measures, which shall minimize the visual impacts.						
S10.10.1 Table 10.11	LV6	 <u>Erosion Control</u> 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 impact	Contractor	Within Project site	Construction stage	-	• N/A
S10.10.1 Table 10.11	LV7	Tree Protection & Preservation • Carefully protected during construction. Tree protection measures will be detailed at the Tree Removal Application stage and plans submitted to the relevant Government Department for approval in due course in accordance with ETWB TC no. 3/2006.	Minimize landscape and visual impact	Contractor	Within Project site	Construction stage	 '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 	• Implemented

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommende d 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> • For trees unavoidably affected by the Project that have to be removed, where practical transplantation 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	 ETWB TCW 3/2006 Latest recommended horticultural practices from Greening, Landscape and Tree Management (GLTM) Section, DEVB ETWB TCW 2/2004 	• N/A
S10.10.1 Table 10.11	LV9	 <u>Compensatory Planting</u> 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	 ETWB TCW 3/2006 Latest recommended horticultural practices from Greening, Landscape and Tree Management (GLTM) Section, DEVB ETWB TCW 2/2004 	• N/A

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommende d Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/ or standards to be achieved	Implementation Status
		and therefore be part of the bigger wider planting plans. Onsite compensation planting is preferred but if necessary, additional receptor sites outside the Works Area shall be agreed separately with Government during the Tree Felling Application process.						
\$10.10.1 Table 10.11	LV10	 <u>Screen Planting</u> 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	 Guidelines on Greening of Noise Barriers, issued April 2012, GLTMS, DevB ETWB TCW 2/2004 	• N/A
S10.10.1 Table 10.11	LV12	Reinstatement • 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)	Minimize landscape impact	Contractor	Within Project Site	Construction Phase	• N/A	• N/A

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Objectives of the Recommende d Measures & Main Concerns to address	Implementation Agent	Location / Timing	Implementation Stage	Requirements and/ or standards to be achieved	Implementation Status
			Cultural Heritage	Impact (Construct	on 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 EM&A Performance	Highways Department	All construction sites	Construction stage	 EIAO Guidance Note No. 4/2010 TM-EIAO 	Implemented
S13.2-13.4	EM2	 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 F Monitoring Schedule of the Reporting Month

January 2020

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

Appendix G 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 28th, 2019

Equipment Name	: Digital Dust Indicator, Model LD-5R
Code No.	: 080000-72
Quantity	: 1 unit
Serial No.	: 851820
Sensitivity	: 0.001 mg/m3
Sensitivity Adjustment	: 640
Scale Setting	: August 23rd, 2019

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

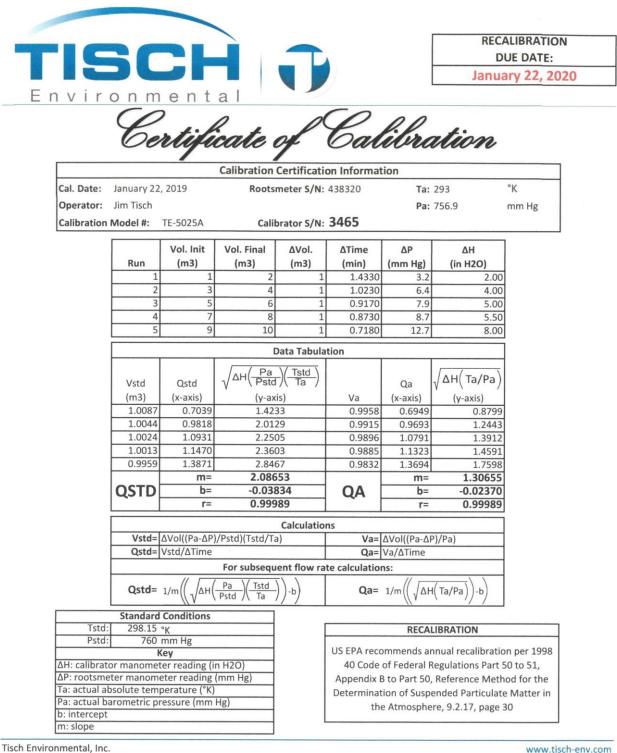
Sincerely

SIBATA SCIENTIFIC TECHNOLOGY LTD.

long Zhang

Tong Zhang Overseas & New Business Group Overseas Sales Department





145 South Miami Avenue

Village of Cleves, OH 45002

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

15	50	CH)		DL	LIBRATIO JE DATE: ber 10, 2020
vir	o n m	ent	al					
		2	cate	of	Cal	libri	ation	
		С	alibration C	Certificati	ion Inform	ation		
Cal. Date:	October 10	0, 2019	Roots	meter S/N:	438320	Ta:	296	°K
Operator:	Jim Tisch					Pat	748.03	mm Hg
Calibration		TE-5028A	Calib	orator S/N:	2702	, u.	10.00	
Calibration	widdel #:	1E-5028A	Calic	brator 5/N:	5702			
		Vol. Init	Vol. Final	ΔVol.	ΔTime	ΔΡ	ΔΗ	
	Run	(m3)	(m3)	(m3)	(min)	(mm Hg)	(in H2O)	
	1	1	2	1	1.3100	4.1	1.50	1
	2	2 3 4			1.0240	6.7	2.50	1
	3				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	J
			Data Tabula	tion]	
			/ / Do	V/ Tetel V				1
	Vstd	Vstd Qstd $\sqrt{\Delta H \left(\frac{Pa}{Pstd}\right)}$		<u>)(Tstd</u>) Ta		Qa	$\sqrt{\Delta H(Ta/Pa)}$	
	(m3)				Va	(x-axis)	(y-axis)	
	0.9855 0.7523 1.21				0.9945	0.7592	0.7704	
	0.9820 0.9590 1.57			39	0.9910	0.9678	0.9946	
	0.9803	0.9803 1.0586 1.72			0.9893	1.0684	1.0895	
	0.9784	1.1351	1.862		0.9874	1.1455	1.1768	
	0.9694	1.4823	2.438		0.9783	1.4959	1.5409	
	OCTO	m=	1.667		~	m=	1.04399	
	QSTD	b= r=	-0.032		QA	b= r=	-0.02074 0.99991	
	r= 0.999			51		1-	0.33331	1
			Calculation					
	Vstd= ΔVol((Pa-ΔP)/Pstd)(Tstd/T			a)	Va= ΔVol((Pa-ΔP)/Pa)			
	Qstd= Vstd/∆Time				Qa= Va/ΔTime			
For subsequent flow rate calculations:								
	Qstd=	1/m((√∆H(Pa (<u>Tstd</u> Pstd Ta))-b)	Qa=	1/m ((√∆H	l(Ta/Pa))-b)	
		Conditions						
Tstd:	298.15			[RECA	LIBRATION	
Pstd: 760 mm Hg				US EPA reco	mmends a	nnual recalibratio	on per 1998	
Key ΔH: calibrator manometer reading (in H2O)			n H2O)				Regulations Part	
		eter reading					Reference Meth	
Ta: actual at	solute tem	perature (°K)					ended Particulat	
Ta: actual absolute temperature (°K)			Hg)					
Pa: actual barometric pressure (mm Hg) b: intercept					the	e Atmosphe	re, 9.2.17, page 3	SU. I

Tisch Environmental, Inc. 145 South Miami Avenue Village of Cleves, OH 45002 www.tisch-env.com TOLL FREE: (877)263-7610 FAX: (513)467-9009

1

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:	11-Jan-2020
Serial No:	1085	Model:	TE-5170X	Operator:	Polar Chan

Ambient Condition

Corrected Pressure (mm Hg):765.3Temperature (deg K):291.0

Calibration Orifice

Model:	TE-5025	Slope:	2.08653
Serial No.:	3465	Intercept:	-0.03834
Calibration Due Date:	22-Jan-20	Corr. Coeff:	0.99989

Calibration Data

Plate or	In,H2O	Qa, X-Axis	I, CFM	IC, Y-Axis
Test #	(in)	(m3/min)	(chart)	(corrected)
1	1.74	0.660	30.0	30.46
2	2.12	0.727	31.1	31.58
3	2.38	0.769	31.8	32.29
4	2.68	0.815	32.5	33.00
5	3.28	0.900	33.9	34.42

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

m= 16.4881	b=	19.5866	Corr. Coeff=	0.9999
Sampler set point(SSP)	39	CFM		
	С	alculations		
Qstd = 1/m[Sqrt(H2O(Pa/Pstd)(Tstd/Ta))-b]		m = sampler slope		
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]		b = sampler intercept		
		I = chart response		
Qstd = standard flow rate		Tav = average temperature		
IC = corrected chart response		Pav = average pressure		
I = actual chart response				
m = calibrator Qstd slope				
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:	11-Ja	n-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:	29-Jan-2020
Serial No:	1085	Model:	TE-5170X	Operator:	Polar Chan

Ambient Condition

	Corrected Pressure (mm Hg):	765.3	Temperature (deg K):	291.0
--	-----------------------------	-------	----------------------	-------

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	In,H2O	Qa, X-Axis	I, CFM	IC, Y-Axis
Test #	(in)	(m3/min)	(chart)	(corrected)
1	1.68	0.809	30.5	30.97
2	2.22	0.927	32.1	32.60
3	2.41	0.965	32.6	33.10
4	2.76	1.032	33.5	34.02
5	3.24	1.116	34.6	35.14

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

m=	13.5805	b=	19.9948	Corr. Coeff=	1.0000
Sampler set point(SSP)		36	CFM		
		c	Calculations		
Qstd = 1/m[Sqrt(H	[2O(Pa/Pstd)(Tstd/Ta))-b]		m = sampler slope		
IC = I[Sqrt(Pa/Pstd	l)(Tstd/Ta)]		b = sampler intercept		
			I = chart response		
Qstd = standard flow rate			Tav = average temperature		
IC = corrected chart response			Pav = average pressure		
I = actual chart resp	oonse				
m = calibrator Qst	d slope				
b = calibrator Qstd	lintercept				
Ta = actual tempera	ature during calibration (deg K)				
Pa = actual pressur	e during calibration (mm Hg)				
Tstd = 298 deg K					
Pstd = 760 mm Hg					
For subsequent cale	culation of sampler flow:				
(1.21*m+b)/[Sqrt(2	298/Tav)(Pav/760)]				
	\bigwedge				
Checked by:	Φ_{2}		Date:	29-Ja	n-20

Appendix H 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-win, 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:

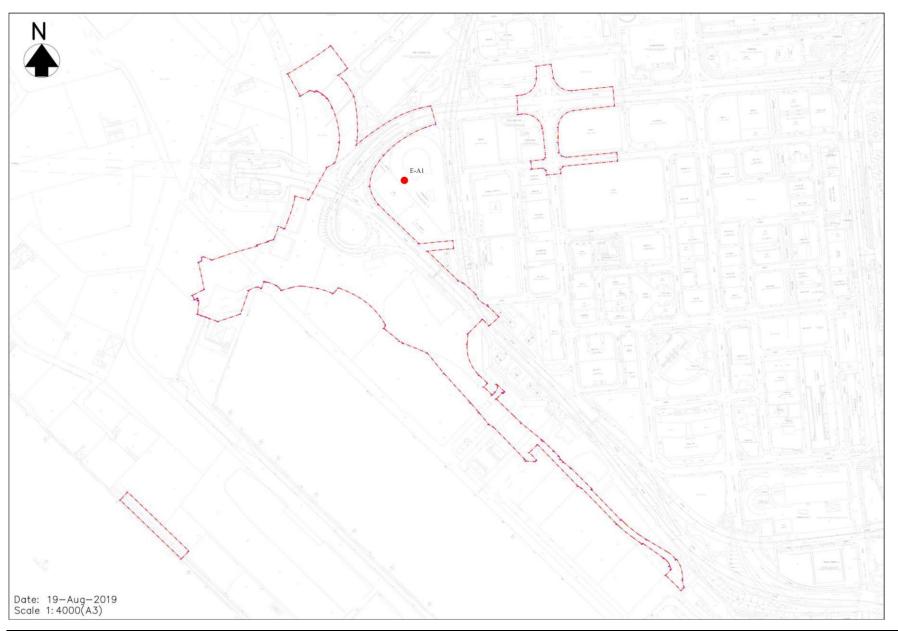
This certificate is issued subject to the terms and conditions laid down by HKAS 本證書按照言港認可處訂立的條款及條件發出



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

L 001195

Appendix I Location Plan of Air Quality Monitoring Station



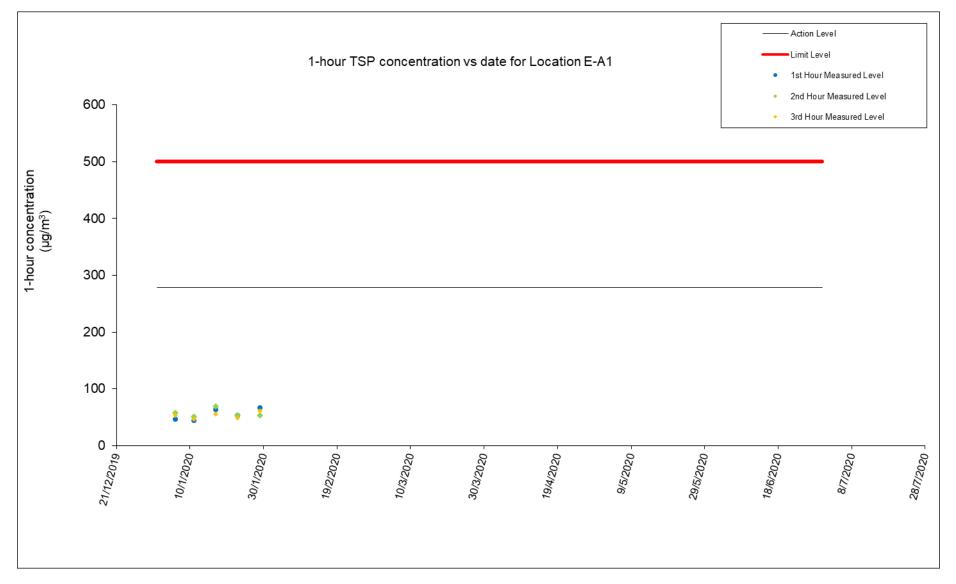
Acuity Sustainability Consulting Ltd.

Appendix J Monitoring Data (Air Monitoring)

Location:	Hong Kong International Trade and Exhibition Centre (E-A1)
Monitoring date:	6, 11, 17, 23, 29 January 2020
Parameter:	TSP 1-hour
Other Factors:	Nearby traffic

	1-hour TSP (μg/m³)					
Date	Weather	Start Time	1 st Hour (μg/m ³)	2 nd Hour (μg/m ³)	3 rd Hour (μg/m ³)	
06/01/2020	Sunny	11:20	47	58	53	
11/01/2020	Sunny	11:10	44	51	47	
17/01/2020	Sunny	11:30	64	69	56	
23/01/2020	Sunny	11:15	53	53	49	
29/01/2020	Cloudy	10:29	67	53	61	

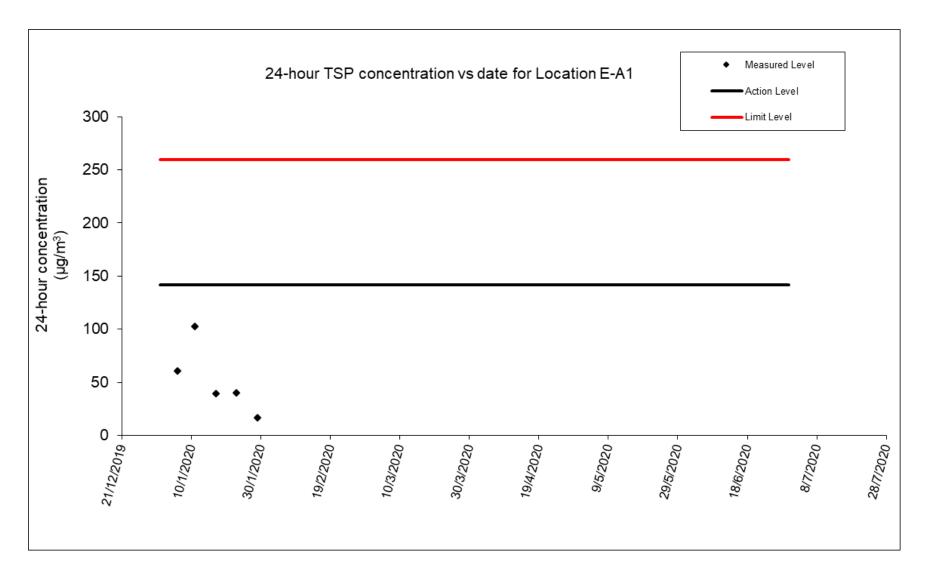
Figure 1: Graphical Illustration of Measured 1-hour TSP ($\mu g/m^3$) Levels at E-A1



Location:	Hong Kong International Trade and Exhibition Centre (E-A1)
Monitoring date:	6, 11, 17, 23, 29 January 2020
Parameter:	TSP 24-hour
Other Factors:	Nearby traffic

										Date of	Calibration:	27-Dec-19		Slop =	13.7150
										Calibrati	on due date:	10-Jan-20		Intercept =	24.0099
										Date of	Calibration:	11-Jan-20		Slop =	16.4881
										Calibrati	on due date:	25-Jan-20		Intercept =	19.5866
										Date of	Calibration:	29-Jan-20		Slop =	13.5805
										Calibrati	on due date:	12-Feb-20		Intercept =	19.9948
					Unart Reading		Avg Air	Avg		Standard			Particulate		
Start Date	Weather		Elapse Time		С	hart Reading	5	Tomn	Atmospheric Pressure	Flow Rate	Air Volume	Filter Weigh	nt (g)	weight	Conc.
Start Date	Weather Condition	Initial	Elapse Time Final	Actual (min)	C	hart Reading Max	Avg	Tomn		Flow Rate (m ³ /min)		Filter Weigh Initial	t (g) Final		Conc. (µg/m ³)
Start Date 6/1/2020			-				, 	Тетр	Pressure		Volume			weight	
	Condition	Initial	Final	(min)	Min	Max	Avg	Temp (°C)	Pressure (mm Hg)	(m ³ /min)	Volume (m ³)	Initial	Final	weight (g)	(µg/m ³)
6/1/2020	Condition Sunny	Initial 886.21	Final 910.21	(min) 1440.00	Min 40	Max 40	Avg 40.0	Temp (°C) 21.0	Pressure (mm Hg) 764.5	(m³/min)	Volume (m ³) 1733	Initial 2.7373	Final 2.8421	weight (g) 0.1048	(μg/m ³) 60
6/1/2020 11/1/2020	Condition Sunny Sunny	Initial 886.21 911.32	Final 910.21 935.32	(min) 1440.00 1440.00	Min 40 40	Max 40 42	Avg 40.0 41.0	Temp (° C) 21.0 20.9	Pressure (mm Hg) 764.5 761.5	(m³/min) 1.20 1.32	Volume (m ³) 1733 1902	Initial 2.7373 2.6973	Final 2.8421 2.8926	weight (g) 0.1048 0.1953	(μg/m ³) 60 103

Figure 2: Graphical Illustration of Measured 24-hour TSP (μ g/m³) Levels at E-A1



EXTRACT OF METEOROLOGICAL OBSERVATIONS FOR HONG KONG, JANUARY 2020

Date January	Number of hours of Reduced Visibility (hours)	Total Bright Sunshine (hours)	Daily Global Solar Radiation (MJ/m ²)	Total Evaporation (mm)	Prevailing Wind Direction (degrees)	Mean Wind Speed (km/h)
1	0	0.2	4.92	1.6	080	33.5
2	1	3.6	8.36	1.5	050	24.7
3	2	8.9	15.70	2.3	040	21.6
4	1	8.6	15.20	2.2	060	18.4
5	0	6.6	14.66	2.5	060	34.8
6	0	6.7	14.99	2.5	060	24.5
7	0	8.0	13.10	2.3	020	11.8
8	0	8.1	16.17	4.2	010	20.3
9	0	5.0	12.61	2.4	070	35.6
10	0	6.1	12.75	2.2	060	26.3
11	4	7.0	13.60	3.9	040	16.1
12	0	7.9	14.40	2.8	360	24.4
13	0	2.5	10.42	1.5	050	29.8
14	0	9.4	16.17	2.8	060	27.3
15	2	5.8	13.99	2.9	070	37.8
16	7	7.2	15.21	3.1	060	28.0
17	0	0.1	6.34	2.6	010	20.4
18	0	6.5	13.83	2.5	040	25.7
19	2	1.1	9.52	2.7	050	24.8
20	0	2.9	11.06	2.0	020	21.2
21	0	4.9	12.30	2.3	060	33.5
22	3	4.3	11.39	1.5	030	18.5
23	0	7.6	14.44	2.0	020	16.8

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

24	0	4.6	13.16	2.7	040	26.1
25	1	0.9	8.21	1.5	060	37.5
26	0	1.5	7.59	3.5	360	25.8
27	0	2.7	9.19	2.3	350	28.7
28	0	4.4	10.35	2.4	360	29.3
29	0	7.2	14.87	4.4	360	34.8
30	0	10.2	20.55	4.0	360	31.3
31	0	10.2	19.51	2.4	070	25.2
Mean/Total	23	170.7	12.73	79.5	060	26.3
Normal	221.9	143.0	10.17	71.3	060	25.3
Station	Hong Kong International Airport	King's Park			Waglar	n Island

Appendix K Waste Flow Table

Monthly Summary Waste Flow Table

Name of Department:Highways DepartmentMonthly Summary Waste Flow Table forJanuary 2020

Contract No. / Works Order No.: <u>HY/2018/02</u>

[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.)

			Actual Quantities of Inert Co	onstruction Waste Genera	ted Monthly	
Month		(b) Hard Rock and Large Broken Concrete	(c) Reused in the Contract	(d) Reused in other Projects	(e) Disposed of as Public Fill	(f) Imported Fill
	(in 'tonnes)	(in 'tonnes)	(in 'tonnes)	(in 'tonnes)	(in 'tonnes)	(in 'tonnes)
2019	7773.8	340.0	140.0	0.0	6793.7	0.0
Jan-20	3242.8	0.0	0.0	0.0	3208.2	0.0
Feb-20	0.0	0.0	0.0	0.0	0.0	0.0
Mar-20	0.0	0.0	0.0	0.0	0.0	0.0
Apr-20	0.0	0.0	0.0	0.0	0.0	0.0
May-20	0.0	0.0	0.0	0.0	0.0	0.0
Jun-20	0.0	0.0	0.0	0.0	0.0	0.0
Sub-total	3242.8	0.0	0.0	0.0	0.0	0.0
Jul-20	0.0	0.0	0.0	0.0	0.0	0.0
Aug-20	0.0	0.0	0.0	0.0	0.0	0.0
Sep-20	0.0	0.0	0.0	0.0	0.0	0.0
Oct-20	0.0	0.0	0.0	0.0	0.0	0.0
Nov-20	0.0	0.0	0.0	0.0	0.0	0.0
Dec-20	0.0	0.0	0.0	0.0	0.0	0.0
Total	3242.8	00	0.0	0.0	3208.2	0.0

	Actual Quantities of <u>Non-inert</u> Construction Waste Generated							ed Monthly	
Month		(g) (h) (i) Metals Paper/ cardboard packaging Plastics			(j) al Waste	(k) Others, e.g. General Refuse disposed at Landfill			
	(in '0	00kg)	(in '0	00kg)	(in '00	00kg)	(in '0	000kg)	(in 'tonnes)
	generated	recycled	generated	recycled	generated	recycled	generated	recycled	generated
2019	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	500.0
Jan-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.6
Feb-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mar-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Apr-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
May-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jun-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sub-total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.6
Jul-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Aug-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sep-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Oct-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nov-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dec-20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.6

Appendix L Statistics on Complaint, Notifications of Summons and Successful Prosecutions

	Statistical Summary of Exceedances						
	Air Quality						
Location	Location Action Level Limit Level Total						
E-A1 0 0 0							

Statistical Summary of Environmental Complaints

Donorting Doriod	Env	vironmental Complaint Statis	stics
Reporting Period	Frequency	Cumulative	Complaint Nature
1 January 2020- 31 January 2020	0	0	N/A

Statistical Summary of Environmental Non-compliance

Departing David	Enviro	onmental Non-compliance Sta	atistics
Reporting Period	Frequency	Cumulative	Details
1 January 2020- 31 January 2020	0	0	N/A

Statistical Summary of Environmental Summons

Departing Davied	En	vironmental Summons Statis	tics
Reporting Period	Frequency	Cumulative	Details
1 January 2020- 31 January 2020	0	0	N/A

Statistical Summary of Environmental Prosecution

Departing Daried	Env	ironmental Prosecution Stati	stics
Reporting Period	Frequency	Cumulative	Details
1 January 2020- 31 January 2020	0	0	N/A

Appendix M Monitoring Schedule of the Coming Month

February 2020

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

Dust monitoring (E-A1)