# Vol. 5 of 5

# EP-457/2013/D

# Central Kowloon Route

# Kai Tak East

# Contract No. HY/2018/02

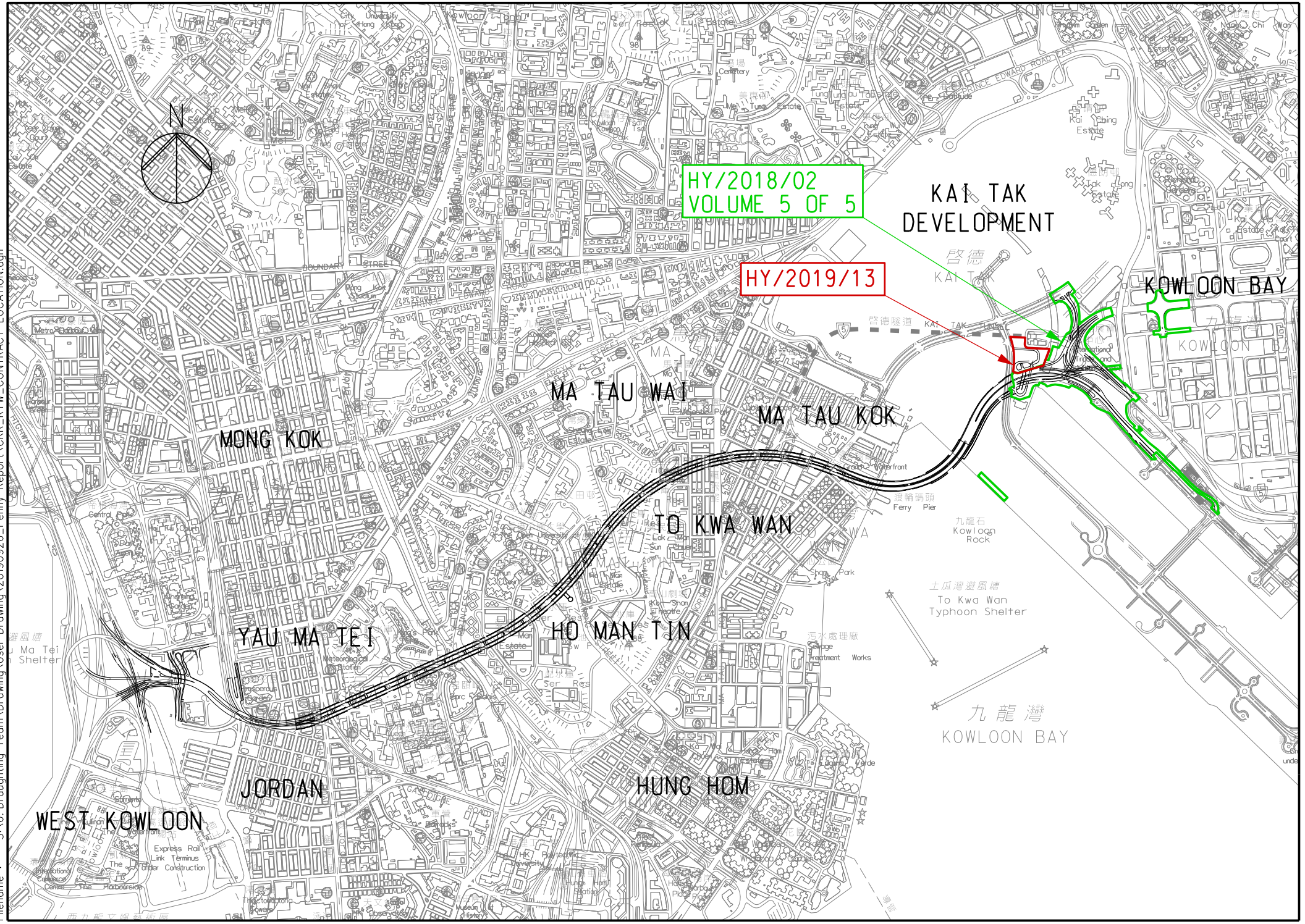
# &

# Buildings, Electrical and Mechanical Works

# Contract No. HY/2019/13

# (Kai Tak East Area)

# January 2023

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# Central Kowloon Route

# Kai Tak East

# Contract No. HY/2018/02

# Alchmex – Paul Y Joint Venture

Central Kowloon Route Contract HY/2018/02

Section of Kai Tak East

Monthly EM&A Report No. 41

(Period from 1 to 31 January 2023)

Rev. 1
(7 February 2023)

| | Name | Signature |
|---|---|---|
| Prepared by | Kako Ho<br>(Assistant Environmental Consultant) |  |
| Checked & Reviewed by | Tandy Tse<br>(Senior Environmental Consultant) |  |
| Approved & Certified by | Kevin W. M. Li<br>(Environmental Team Leader) |  |

路政署
HIGHWAYS DEPARTMENT
主要工程管理處
MAJOR WORKS PROJECT MANAGEMENT OFFICE

ERM

# Environmental Permit No. EP-457/2013/D

# Central Kowloon Route

# Independent Environmental Checker Verification

| | |
|---|---|
| **Works Contract:** | **Kai Tak East (HY/2018/02)** |

**Reference Document/Plan**

| | |
|---|---|
| Document/~~Plan~~ to be ~~Certified~~/ Verified: | Monthly EM&A Report No.41 (January 2023) |
| Date of Report: | 7 February 2023 (Rev. 1) |
| Date received by IEC: | 7 February 2023 |

**Reference EP Condition**

Environmental Permit Condition: 3.4

Submission of Monthly EM&A Report of the Project

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

**IEC Verification**

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

Ms Mandy To Date: 7 February 2023

Independent Environmental Checker

*Our ref: 0436942_IEC Verification Cert_KTE_Monthly EM&A Rpt No.41.docx*

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# 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 report is the 41st monthly Environmental Monitoring and Audit (EM&A) report presenting the EM&A works carried out during the period from 1 January 2023 to 31 January 2023.

A.2 A summary of major Construction activities provided by Contractor for the Project during the reporting month is listed below.

| **Construction Activities undertaken** |
|---|
| • S1, S3, S4, S9, CKRE, CKRW Bridge Construction |
| • Retaining Wall Construction at U-Turn & Portion 2B |
| • Excavation Work at Portion 3B |
| • Bored Pile at U-Turn |

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 | 7 times |
| **Construction dust (1-hour TSP) monitoring** | |
| E-A1 | 21 times |

A.4 Joint weekly site inspections were conducted by representatives of Environmental team (ET), Contractor and Engineer on 4, 11, 18 and 27 January 2023. A joint site inspection with Independent Environmental Checker (IEC) was undertaken on 11 January 2023. Details of the audit findings and implementation status are presented in Section 5.

A.5 Bi-weekly inspection of the implementation of landscape and visual mitigation measures by ET was conducted on 4 and 18 January 2023. Details of the audit findings and implementation status are presented in Section 5.

A.6 Details of waste management are presented in Section 4.

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

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

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

A.10 A summary of construction activities provided by the Contractor in next reporting month is listed below:

| **Construction Activities to be undertaken** |
| --- |
| • S1, S3, S4, S9 CKRE, CKRW Bridge Construction<br>• Retaining Wall Construction at U-Turn & Portion 2B<br>• Excavation Work at Portion 3B<br>• Bored Pile at U-turn |

# 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/D) was issued by EPD on 15 June 2021.

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.

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

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

Table 1.1 Summary of Construction Activities during the Reporting Month

| **Construction Activities undertaken** |
|---|
| • S1, S3, S4, S9, CKRE, CKRW Bridge Construction<br>• Retaining Wall Construction at U-Turn & Portion 2B<br>• Excavation Work at Portion 3B<br>• Bored Pile at U-Turn |

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 Environmental Licence, Notification, Permit and Documentations

| **Permit/ Licences/ Notification /Reference No.** | **Valid Period** | | **Status** | **Remark** |
|---|---|---|---|---|
| | From | To | | |
| **Environmental Permit** | | | | |
| EP-457/2013/D | 15-Jun-21 | -- | Valid | **-** |
| **Wastewater Discharge License** | | | | |
| WT00035029-2019 | 17-Dec-19 | 31-Dec-24 | Valid | - |
| **Notification of Construction Works under the Air Pollution Control (Construction Dust) Regulation** | | | | |
| 445001 | Apr-19 | Dec-23 | Notified | **-** |
| **Chemical Waste Producer Registration** | | | | |
| WPN5113-247-A2940-01 | 17-May-19 | -- | Valid | - |
| **Billing Account for Disposal of Construction Waste** | | | | |
| 7034073 | 15-Jun-19 | -- | Valid | **-** |
| **Construction Noise Permit** | | | | |
| GW-RE0874-22 | 17-Sep-22 | 16-Mar-23 | Valid | General Work at Area A |
| GW-RE0889-22 | 12-Sep-22 | 11-Mar-23 | Valid | Portion 2B |
| GW-RE0903-22 | 17-Sep-22 | 16-Mar-23 | Valid | General Work at Area B and Site Office |
| GW-RE1327-22 | 7-Dec-22 | 6-Mar-23 | Valid | Superseded by GW-RE0012-23 |
| GW-RE1466-22 | 10-Jan-23 | 28-Jun-23 | Valid | Kai Cheung U Turns |
| GW-RE0012-23 | 16-Jan-23 | 15-Mar-23 | Valid | Night Work at Kai Fuk & Kai Cheung Road |

# 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/D) as of the reporting period for the Project are summarised in **Table 2.1**.

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

| EP Condition (EP-457/2013/D) | Submission | Submission date |
|---|---|---|
| Condition 3.4 | Monthly EM&A Report (December 2022) | 13 January 2023 |

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

Table 2.2 Summary for the location of monitoring station

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

# 3. AIR QUALITY MONITORING RESULTS

Monitoring Parameters

3.1. 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.

3.2. 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.

3.3. 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.

Monitoring Equipment

3.4. 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).

3.5. The 1-hour TSP meter was calibrated by the manufacturer prior to purchasing. Zero response of the instrument was checked before and after each monitoring event. Operation of the 1-hour TSP meter followed manufacturer's Operation and Service Manual. The 24-hour TSP meter was calibrated against firmware 80570-8100-V1.0.4, annually. Operation of the 24-hour TSP meter followed manufacturer's Operation and Service Manual. Valid calibration certificate of dust monitoring equipment is attached in **Appendix H**.

3.6. A summary of the equipment that was deployed for the 24- hour averaged monitoring is shown in **Table 3.1**. The TSP monitoring was conducted as per the schedule presented in **Appendix G**.

3.7. The equipment used for 1-hour TSP and 24-hour TSP measurement and calibration are summarised in **Table 3.1**.

Table 3.1 Construction Dust Monitoring Equipment

| Monitoring Parameter | Monitoring Equipment | Serial Number | Date of Calibration |
|---|---|---|---|
| 1-hour TSP | LD-5R Digital Dust Indicator | 882150 | 27 March 2022 |
| 24-hour TSP | TE-5170X High Volume Sampler | 1049 | 24 December 2022 |
| | | | 6 January 2023 |
| | | | 19 January 2023 |
| | TE-5028A Calibration Kit | 3702 | 29 June 2022 |

Monitoring Methodology and QA/QC results

3.8. 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$^{o}$ light scattering. Three 1-hour TSP level were logged per every six days.

3.9. The 24-hour TSP monitor, High Volume Samplers (Tisch TE-5170x High Volume Air Sampler) were used for the impact monitoring. The 24-hour TSP monitoring consists of the following:

- The HVS was set at the monitoring location, with electricity supply connected and secured;
- HVS was calibrated before commencing the 1st measurement;
- The filter paper was weight and provided by HOKLAS lab (Acumen Laboratory and Testing Limited and ALS Technichem (HK) Pty Ltd) before and after the sampling. Certificate of HOKLAS accredited laboratory can be referred to **Appendix I**;
- The airflow over time during sampling process was recorded by the HVS.

3.10. 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.

3.11. 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.

3.12. 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 1.13-1.19 m3min-1, which was within the range specified in the EM&A Manual (i.e. 0.6- 1.7 m3min-1);
- 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) for analysis.

3.13. 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-5025A Calibration Kit and TE-5028A Calibration KIT. HVS is calibrated in fortnightly Intervals. The calibration records for the HVS is given in **Appendix H**.

3.14. 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.

Monitoring Locations

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

Table 3.2 Location of the Air Quality Monitoring Station

| Monitoring Station | Monitoring Location |
|---|---|
| E-A1 | Hong Kong International Trade and Exhibition Centre |

Monitoring Date, Time, Frequency and Duration

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

Table 3.3 Summary of Impact Monitoring Programme

| Impact Monitoring | Duration | 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 |

Result Summary

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

Table 3.4 Observation at Air Quality Monitoring Station

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

3.18. Air quality impact monitoring for the reporting month was carried out on 3, 6, 12, 18, 20, 26 and 28 January 2023 at E-A1.

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

Table 3.5 Summary of 1-hour TSP Monitoring Results

| Monitoring Location | Range ($\mu g/m^3$) | Action Level($\mu g/m^3$) | Limit Level($\mu g/m^3$) |
|---|---|---|---|
| E-A1 | 45.0 – 68.0 | 279 | 500 |

Table 3.6 Summary of 24-hour TSP Monitoring Results

| Monitoring Location | Range ($\mu g/m^3$) | Action Level ($\mu g/m^3$) | Limit Level ($\mu g/m^3$) |
|---|---|---|---|
| E-A1 | 25 – 69 | 142 | 260 |

# 4. WASTE MANAGEMENT

4.1. 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 4.1**. Details of cumulative waste management data are presented as a waste flow table in **Appendix L**.

Table 4.1 Quantities of Waste Generated from the Project

| Reporting period | Quantity | | | | | |
|---|---|---|---|---|---|---|
| | Inert C&D Materials (in '000tonnes) | Chemical Waste (in 'kg) | Non-inert C&D Materials | | | |
| | | | Others, e.g. General Refuse disposed at Landfill (in 'kg) | Recycled materials | | |
| | | | | Paper/ cardboard (in 'kg) | Plastics (in '000 kg) | Metals (in '000 kg) |
| Jan 2023 | 0.08 | 0.00 | 109020.00 | 20.00 | 0.00 | 0.00 |

# 5. SUMMARY OF COMPLAINTS, NOTIFICATION OF SUMMONS AND PROSECUTIONS

5.1. The Environmental Complaint Handling Procedure is shown in below **Table 5.1**.

Table 5.1 Environmental Complaint Handling Procedure

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

5.2. Should non-compliance of the criteria occur, action in accordance with the Event and Action Plan in **Appendix D** and **Appendix E** shall be carried out.

5.3. No exceedance of the Action and Limit Levels of 24-hour TSP and 1-hour TSP monitoring was recorded in the reporting month.

5.4. No complaint and non-compliance were received in the reporting month.

5.5. No notification of summons and successful prosecution was received in the reporting month.

5.6. Statistics on complaints, notifications of summons and successful prosecutions are summarized in **Appendix M**.

# 6. EM&A SITE INSPECTION

6.1. Site inspections were carried out on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures under the Contract. In the reporting period, 4 site inspections were carried out by the representative of ET, Contractor and Engineer on 4, 11, 18 and 27 January 2023, along with bi-weekly inspection of the implementation of landscape and visual mitigation measures conducted on 4 and 18 January 2023.

6.2. One joint site inspection with IEC was also undertaken on 11 January 2023. Minor deficiencies were observed during weekly site inspection. Key observations during the site inspections are summarized in **Table 6.1**.

Table 6.1 Site Observations

| Date | Environmental Observations | Follow-up Status |
|---|---|---|
| 4 Jan 2023 | NA | NA |
| 11 Jan 2023 | NA | NA |
| 18 Jan 2023 | NA | NA |
| 27 Jan 2023 | NA | NA |

6.3. The Contractor had rectified all observation identified during environmental site inspection in the reporting period.

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

# 7. FUTURE KEY ISSUES

7.1. The construction activities to be undertaken in the next reporting month are:

| **Construction Activities to be undertaken** |
|---|
| • S1, S3, S4, S9 CKRE, CKRW Bridge Construction<br>• Retaining Wall Construction at U-Turn & Portion 2B<br>• Excavation Work at Portion 3B<br>• Bored Pile at U-turn |

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

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

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

# 8. CONCLUSION AND RECOMMENDATIONS

8.1. This 41st monthly EM&A Report presents the EM&A works undertaken during the period from 1 January 2023 to 31 January 2023 in accordance with the EM&A Manual and the requirement under EP-457/2013/C and EP-457/2013/D.

8.2. 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.

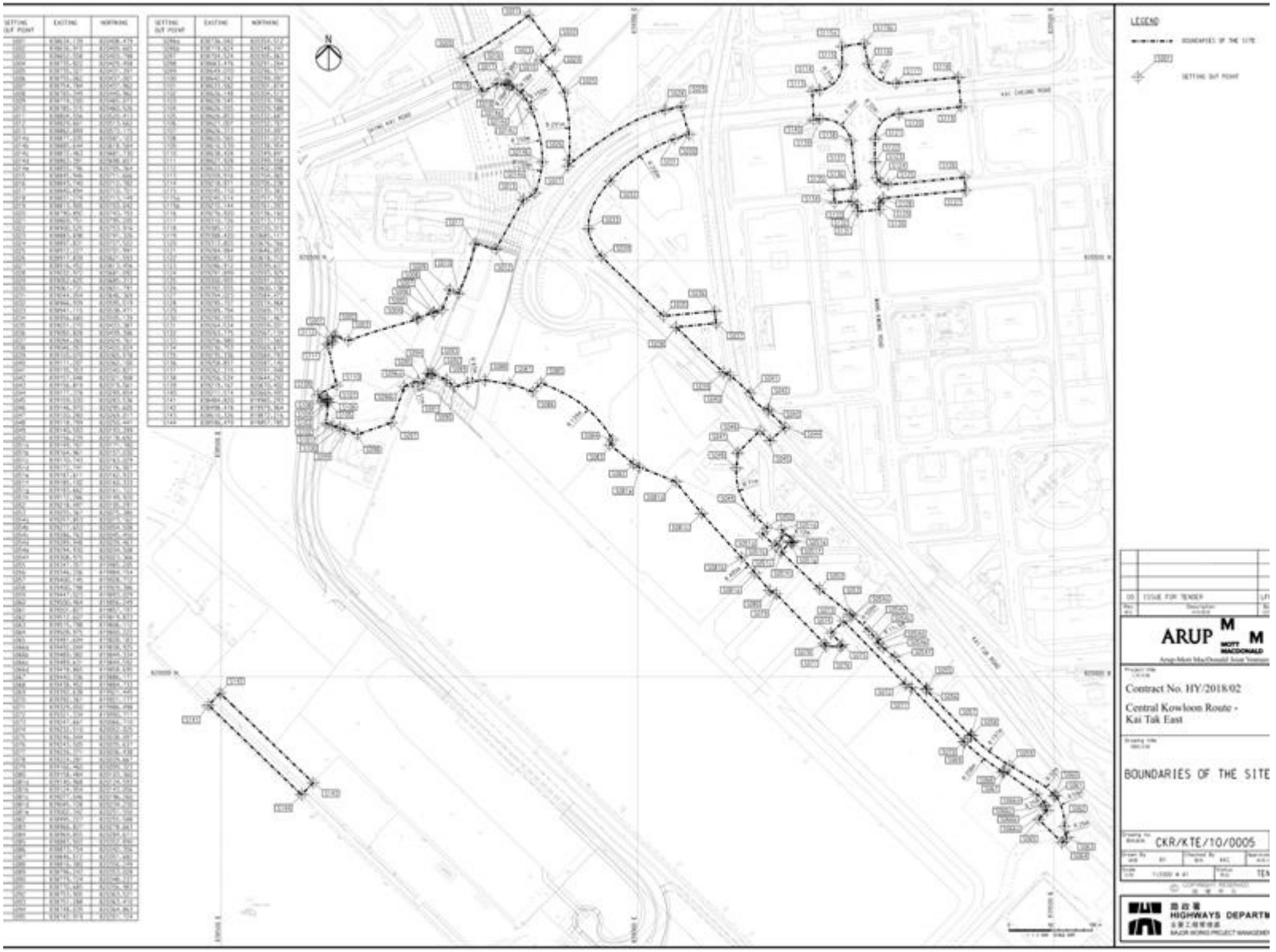
8.3. Weekly environmental site inspections by the representative of ET, Contractor and Engineer were conducted during the reporting period. One joint site inspection with IEC was carried out on 11 January 2023. Minor deficiency was observed during site inspection and was rectified within the specified deadlines. The environmental performance of the Project was therefore considered satisfactory.

8.4. No complaint and non-compliance situation were received in the reporting month.

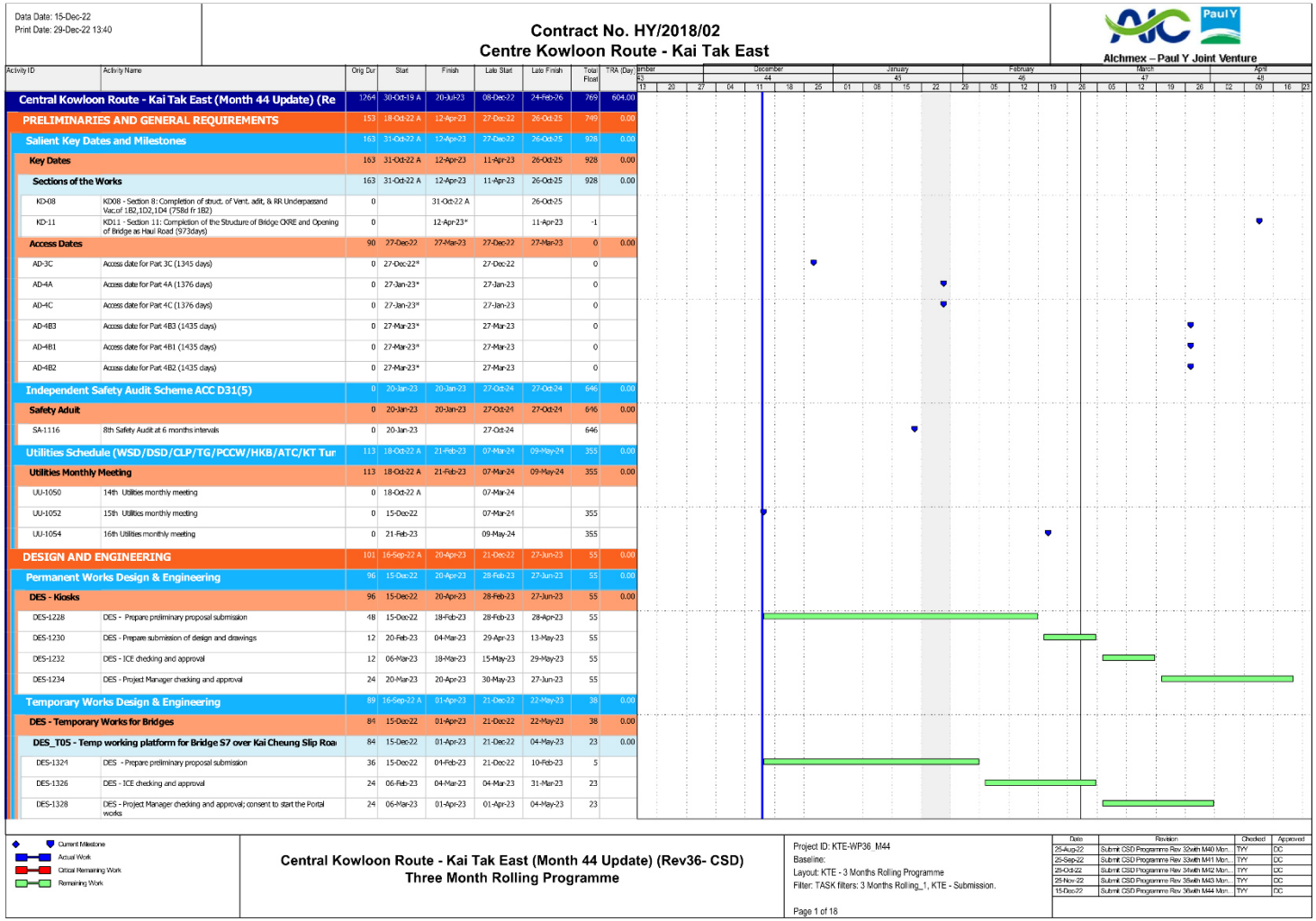
8.5. No notification of summons or prosecution was received since commencement of the Contract.

8.6. 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


LEGEND
BOUNDARIES OF THE SITE
SETTING OUT POINT
ISSUE FOR TENDER
ARUP
MOTT MACDONALD
Contract No. HY/2018/02
Central Kowloon Route -
Kai Tak East
BOUNDARIES OF THE SITE
CKR/KTE/10/0005
HIGHWAYS DEPARTMENT

# Appendix B
# Construction Programme



Data Date: 15-Dec-22
Print Date: 29-Dec-22 13:40

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

Alchmex – Paul Y Joint Venture

| Activity ID | Activity Name | Orig Dur | Start | Finish | Late Start | Late Finish | Total Float | TRA (Day) |
|---|---|---|---|---|---|---|---|---|
| Central Kowloon Route - Kai Tak East (Month 44 Update) (Re | | 1264 | 30-Oct-19 A | 20-Jul-23 | 08-Dec-22 | 24-Feb-26 | 769 | 604.00 |
| PRELIMINARIES AND GENERAL REQUIREMENTS | | 153 | 18-Oct-22 A | 12-Apr-23 | 27-Dec-22 | 26-Oct-25 | 749 | 0.00 |
| Salient Key Dates and Milestones | | 163 | 31-Oct-22 A | 12-Apr-23 | 27-Dec-22 | 26-Oct-25 | 928 | 0.00 |
| Key Dates | | 163 | 31-Oct-22 A | 12-Apr-23 | 11-Apr-23 | 26-Oct-25 | 928 | 0.00 |
| Sections of the Works | | 163 | 31-Oct-22 A | 12-Apr-23 | 11-Apr-23 | 26-Oct-25 | 928 | 0.00 |
| KD-08 | KD08 - Section 8: Completion of struct. of Vent. adit, & RR Underpassand Vac.of 1B2,1D2,1D4 (758d fr 1B2) | 0 | | 31-Oct-22 A | | 26-Oct-25 | | |
| KD-11 | KD11 - Section 11: Completion of the Structure of Bridge CKRE and Opening of Bridge as Haul Road (973days) | 0 | | 12-Apr-23* | | 11-Apr-23 | -1 | |
| Access Dates | | 90 | 27-Dec-22 | 27-Mar-23 | 27-Dec-22 | 27-Mar-23 | 0 | 0.00 |
| AD-3C | Access date for Part 3C (1345 days) | 0 | 27-Dec-22* | | 27-Dec-22 | | 0 | |
| AD-4A | Access date for Part 4A (1376 days) | 0 | 27-Jan-23* | | 27-Jan-23 | | 0 | |
| AD-4C | Access date for Part 4C (1376 days) | 0 | 27-Jan-23* | | 27-Jan-23 | | 0 | |
| AD-4B3 | Access date for Part 4B3 (1435 days) | 0 | 27-Mar-23* | | 27-Mar-23 | | 0 | |
| AD-4B1 | Access date for Part 4B1 (1435 days) | 0 | 27-Mar-23* | | 27-Mar-23 | | 0 | |
| AD-4B2 | Access date for Part 4B2 (1435 days) | 0 | 27-Mar-23* | | 27-Mar-23 | | 0 | |
| Independent Safety Audit Scheme ACC D31(5) | | 0 | 20-Jan-23 | 20-Jan-23 | 27-Oct-24 | 27-Oct-24 | 646 | 0.00 |
| Safety Adult | | 0 | 20-Jan-23 | 20-Jan-23 | 27-Oct-24 | 27-Oct-24 | 646 | 0.00 |
| SA-1116 | 8th Safety Audit at 6 months intervals | 0 | 20-Jan-23 | | 27-Oct-24 | | 646 | |
| Utilities Schedule (WSD/DSD/CLP/TG/PCCW/HKB/ATC/KT Tur | | 113 | 18-Oct-22 A | 21-Feb-23 | 07-Mar-24 | 09-May-24 | 355 | 0.00 |
| Utilities Monthly Meeting | | 113 | 18-Oct-22 A | 21-Feb-23 | 07-Mar-24 | 09-May-24 | 355 | 0.00 |
| UU-1050 | 14th Utilities monthly meeting | 0 | 18-Oct-22 A | | 07-Mar-24 | | | |
| UU-1052 | 15th Utilities monthly meeting | 0 | 15-Dec-22 | | 07-Mar-24 | | 355 | |
| UU-1054 | 16th Utilities monthly meeting | 0 | 21-Feb-23 | | 09-May-24 | | 355 | |
| DESIGN AND ENGINEERING | | 101 | 16-Sep-22 A | 20-Apr-23 | 21-Dec-22 | 27-Jun-23 | 55 | 0.00 |
| Permanent Works Design & Engineering | | 96 | 15-Dec-22 | 20-Apr-23 | 28-Feb-23 | 27-Jun-23 | 55 | 0.00 |
| DES - Kiosks | | 96 | 15-Dec-22 | 20-Apr-23 | 28-Feb-23 | 27-Jun-23 | 55 | 0.00 |
| DES-1228 | DES - Prepare preliminary proposal submission | 48 | 15-Dec-22 | 18-Feb-23 | 28-Feb-23 | 28-Apr-23 | 55 | |
| DES-1230 | DES - Prepare submission of design and drawings | 12 | 20-Feb-23 | 04-Mar-23 | 29-Apr-23 | 13-May-23 | 55 | |
| DES-1232 | DES - ICE checking and approval | 12 | 06-Mar-23 | 18-Mar-23 | 15-May-23 | 29-May-23 | 55 | |
| DES-1234 | DES - Project Manager checking and approval | 24 | 20-Mar-23 | 20-Apr-23 | 30-May-23 | 27-Jun-23 | 55 | |
| Temporary Works Design & Engineering | | 89 | 16-Sep-22 A | 01-Apr-23 | 21-Dec-22 | 22-May-23 | 38 | 0.00 |
| DES - Temporary Works for Bridges | | 84 | 15-Dec-22 | 01-Apr-23 | 21-Dec-22 | 22-May-23 | 38 | 0.00 |
| DES_T05 - Temp working platform for Bridge S7 over Kai Cheung Slip Roa | | 84 | 15-Dec-22 | 01-Apr-23 | 21-Dec-22 | 04-May-23 | 23 | 0.00 |
| DES-1324 | DES - Prepare preliminary proposal submission | 36 | 15-Dec-22 | 04-Feb-23 | 21-Dec-22 | 10-Feb-23 | 5 | |
| DES-1326 | DES - ICE checking and approval | 24 | 06-Feb-23 | 04-Mar-23 | 04-Mar-23 | 31-Mar-23 | 23 | |
| DES-1328 | DES - Project Manager checking and approval; consent to start the Portal works | 24 | 06-Mar-23 | 01-Apr-23 | 01-Apr-23 | 04-May-23 | 23 | |

November | December | January | February | March | April
43 | 44 | 45 | 46 | 47 | 48
13 20 27 04 11 18 25 01 08 15 22 29 05 12 19 26 05 12 19 26 12 09 16 23

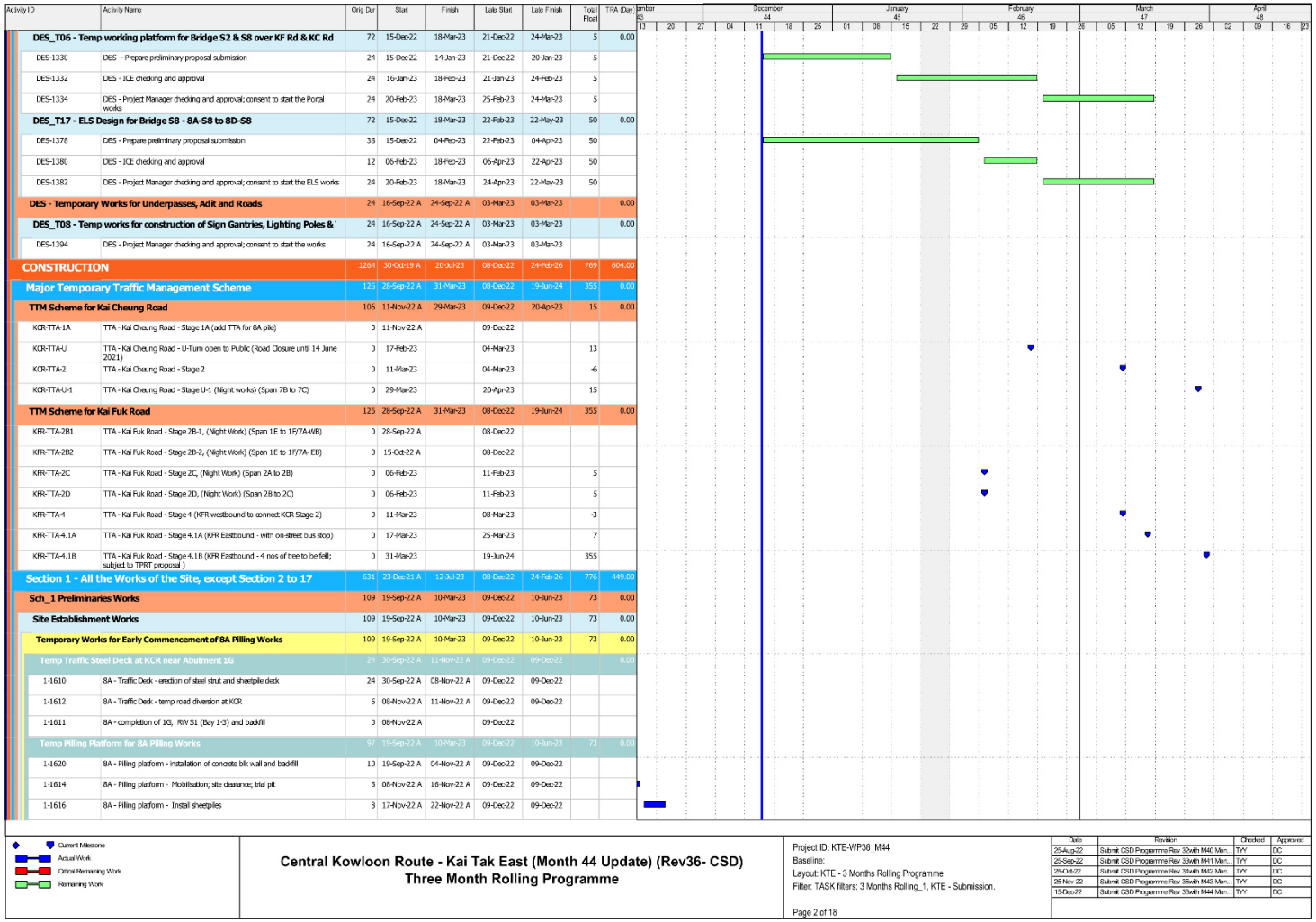
Current Milestone
Actual Work
Critical Remaining Work
Remaining Work

**Central Kowloon Route - Kai Tak East (Month 44 Update) (Rev36- CSD)**
**Three Month Rolling Programme**

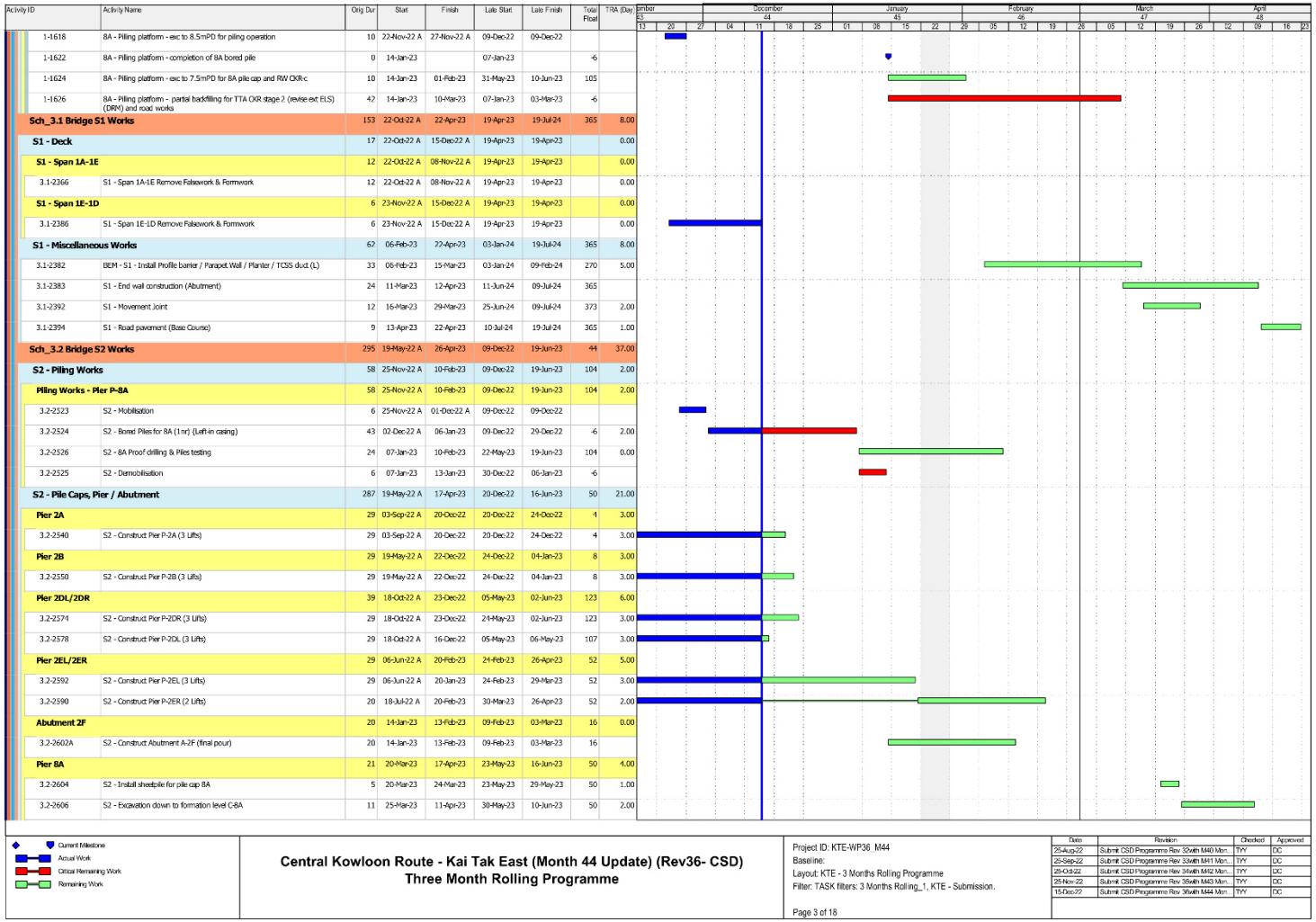
Project ID: KTE-WP36_M44
Baseline:
Layout: KTE - 3 Months Rolling Programme
Filter: TASK filters: 3 Months Rolling_1, KTE - Submission.

Page 1 of 18

| Date | Revision | Checked | Approved |
|---|---|---|---|
| 25-Aug-22 | Submit CSD Programme Rev 32with M40 Mon... | TYY | DC |
| 25-Sep-22 | Submit CSD Programme Rev 33with M41 Mon... | TYY | DC |
| 25-Oct-22 | Submit CSD Programme Rev 34with M42 Mon... | TYY | DC |
| 25-Nov-22 | Submit CSD Programme Rev 35with M43 Mon... | TYY | DC |
| 15-Dec-22 | Submit CSD Programme Rev 36with M44 Mon... | TYY | DC |



| Activity ID | Activity Name | Orig Dur | Start | Finish | Late Start | Late Finish | Total Float | TRA (Day |
|---|---|---|---|---|---|---|---|---|
| | **DES_T06 - Temp working platform for Bridge S2 & S8 over KF Rd & KC Rd** | 72 | 15-Dec-22 | 18-Mar-23 | 21-Dec-22 | 24-Mar-23 | 5 | 0.00 |
| DES-1330 | DES - Prepare preliminary proposal submission | 24 | 15-Dec-22 | 14-Jan-23 | 21-Dec-22 | 20-Jan-23 | 5 | |
| DES-1332 | DES - ICE checking and approval | 24 | 16-Jan-23 | 18-Feb-23 | 21-Jan-23 | 24-Feb-23 | 5 | |
| DES-1334 | DES - Project Manager checking and approval; consent to start the Portal works | 24 | 20-Feb-23 | 18-Mar-23 | 25-Feb-23 | 24-Mar-23 | 5 | |
| | **DES_T17 - ELS Design for Bridge S8 - 8A-S8 to 8D-S8** | 72 | 15-Dec-22 | 18-Mar-23 | 22-Feb-23 | 22-May-23 | 50 | 0.00 |
| DES-1378 | DES - Prepare preliminary proposal submission | 36 | 15-Dec-22 | 04-Feb-23 | 22-Feb-23 | 04-Apr-23 | 50 | |
| DES-1380 | DES - ICE checking and approval | 12 | 06-Feb-23 | 18-Feb-23 | 06-Apr-23 | 22-Apr-23 | 50 | |
| DES-1382 | DES - Project Manager checking and approval; consent to start the ELS works | 24 | 20-Feb-23 | 18-Mar-23 | 24-Apr-23 | 22-May-23 | 50 | |
| | **DES - Temporary Works for Underpasses, Adit and Roads** | 24 | 16-Sep-22 A | 24-Sep-22 A | 03-Mar-23 | 03-Mar-23 | | 0.00 |
| | **DES_T08 - Temp works for construction of Sign Gantries, Lighting Poles &'** | 24 | 16-Sep-22 A | 24-Sep-22 A | 03-Mar-23 | 03-Mar-23 | | 0.00 |
| DES-1394 | DES - Project Manager checking and approval; consent to start the works | 24 | 16-Sep-22 A | 24-Sep-22 A | 03-Mar-23 | 03-Mar-23 | | |
| **CONSTRUCTION** | | 1264 | 30-Oct-19 A | 20-Jul-23 | 08-Dec-22 | 24-Feb-26 | 769 | 604.00 |
| **Major Temporary Traffic Management Scheme** | | 126 | 28-Sep-22 A | 31-Mar-23 | 08-Dec-22 | 19-Jun-24 | 355 | 0.00 |
| **TTM Scheme for Kai Cheung Road** | | 106 | 11-Nov-22 A | 29-Mar-23 | 09-Dec-22 | 20-Apr-23 | 15 | 0.00 |
| KCR-TTA-1A | TTA - Kai Cheung Road - Stage 1A (add TTA for 8A pile) | 0 | 11-Nov-22 A | | 09-Dec-22 | | | |
| KCR-TTA-U | TTA - Kai Cheung Road - U-Turn open to Public (Road Closure until 14 June 2021) | 0 | 17-Feb-23 | | 04-Mar-23 | | 13 | |
| KCR-TTA-2 | TTA - Kai Cheung Road - Stage 2 | 0 | 11-Mar-23 | | 04-Mar-23 | | -6 | |
| KCR-TTA-U-1 | TTA - Kai Cheung Road - Stage U-1 (Night works) (Span 7B to 7C) | 0 | 29-Mar-23 | | 20-Apr-23 | | 15 | |
| **TTM Scheme for Kai Fuk Road** | | 126 | 28-Sep-22 A | 31-Mar-23 | 08-Dec-22 | 19-Jun-24 | 355 | 0.00 |
| KFR-TTA-2B1 | TTA - Kai Fuk Road - Stage 2B-1, (Night Work) (Span 1E to 1F/7A-WB) | 0 | 28-Sep-22 A | | 08-Dec-22 | | | |
| KFR-TTA-2B2 | TTA - Kai Fuk Road - Stage 2B-2, (Night Work) (Span 1E to 1F/7A- EB) | 0 | 15-Oct-22 A | | 08-Dec-22 | | | |
| KFR-TTA-2C | TTA - Kai Fuk Road - Stage 2C, (Night Work) (Span 2A to 2B) | 0 | 06-Feb-23 | | 11-Feb-23 | | 5 | |
| KFR-TTA-2D | TTA - Kai Fuk Road - Stage 2D, (Night Work) (Span 2B to 2C) | 0 | 06-Feb-23 | | 11-Feb-23 | | 5 | |
| KFR-TTA-4 | TTA - Kai Fuk Road - Stage 4 (KFR westbound to connect KCR Stage 2) | 0 | 11-Mar-23 | | 08-Mar-23 | | -3 | |
| KFR-TTA-4.1A | TTA - Kai Fuk Road - Stage 4.1A (KFR Eastbound - with on-street bus stop) | 0 | 17-Mar-23 | | 25-Mar-23 | | 7 | |
| KFR-TTA-4.1B | TTA - Kai Fuk Road - Stage 4.1B (KFR Eastbound - 4 nos of tree to be fell; subject to TPRT proposal ) | 0 | 31-Mar-23 | | 19-Jun-24 | | 355 | |
| **Section 1 - All the Works of the Site, except Section 2 to 17** | | 631 | 23-Dec-21 A | 12-Jul-23 | 08-Dec-22 | 24-Feb-26 | 776 | 449.00 |
| **Sch_1 Preliminaries Works** | | 109 | 19-Sep-22 A | 10-Mar-23 | 09-Dec-22 | 10-Jun-23 | 73 | 0.00 |
| **Site Establishment Works** | | 109 | 19-Sep-22 A | 10-Mar-23 | 09-Dec-22 | 10-Jun-23 | 73 | 0.00 |
| **Temporary Works for Early Commencement of 8A Pilling Works** | | 109 | 19-Sep-22 A | 10-Mar-23 | 09-Dec-22 | 10-Jun-23 | 73 | 0.00 |
| **Temp Traffic Steel Deck at KCR near Abutment 1G** | | 24 | 30-Sep-22 A | 11-Nov-22 A | 09-Dec-22 | 09-Dec-22 | | 0.00 |
| 1-1610 | 8A - Traffic Deck - erection of steel strut and sheetpile deck | 24 | 30-Sep-22 A | 08-Nov-22 A | 09-Dec-22 | 09-Dec-22 | | |
| 1-1612 | 8A - Traffic Deck - temp road diversion at KCR | 6 | 08-Nov-22 A | 11-Nov-22 A | 09-Dec-22 | 09-Dec-22 | | |
| 1-1611 | 8A - completion of 1G, RW S1 (Bay 1-3) and backfill | 0 | 08-Nov-22 A | | 09-Dec-22 | | | |
| **Temp Pilling Platform for 8A Pilling Works** | | 97 | 19-Sep-22 A | 10-Mar-23 | 09-Dec-22 | 10-Jun-23 | 73 | 0.00 |
| 1-1620 | 8A - Pilling platform - installation of concrete blk wall and backfill | 10 | 19-Sep-22 A | 04-Nov-22 A | 09-Dec-22 | 09-Dec-22 | | |
| 1-1614 | 8A - Pilling platform - Mobilisation; site clearance; trial pit | 6 | 08-Nov-22 A | 16-Nov-22 A | 09-Dec-22 | 09-Dec-22 | | |
| 1-1616 | 8A - Pilling platform - Install sheetpiles | 8 | 17-Nov-22 A | 22-Nov-22 A | 09-Dec-22 | 09-Dec-22 | | |



| Activity ID | Activity Name | Orig Dur | Start | Finish | Late Start | Late Finish | Total Float | TRA (Day) |
|---|---|---|---|---|---|---|---|---|
| 1-1618 | 8A - Piling platform - exc to 8.5mPD for piling operation | 10 | 22-Nov-22 A | 27-Nov-22 A | 09-Dec-22 | 09-Dec-22 | | |
| 1-1622 | 8A - Piling platform - completion of 8A bored pile | 0 | 14-Jan-23 | | 07-Jan-23 | | -6 | |
| 1-1624 | 8A - Piling platform - exc to 7.5mPD for 8A pile cap and RW CKR-c | 10 | 14-Jan-23 | 01-Feb-23 | 31-May-23 | 10-Jun-23 | 105 | |
| 1-1626 | 8A - Piling platform - partial backfilling for TTA CKR stage 2 (revise ext ELS) (CRK) and road works | 42 | 14-Jan-23 | 10-Mar-23 | 07-Jan-23 | 03-Mar-23 | -6 | |
| **Sch_3.1 Bridge S1 Works** | | 153 | 22-Oct-22 A | 22-Apr-23 | 19-Apr-23 | 19-Jul-24 | 365 | 8.00 |
| **S1 - Deck** | | 17 | 22-Oct-22 A | 15-Dec-22 A | 19-Apr-23 | 19-Apr-23 | | 0.00 |
| **S1 - Span 1A-1E** | | 12 | 22-Oct-22 A | 08-Nov-22 A | 19-Apr-23 | 19-Apr-23 | | 0.00 |
| 3.1-2366 | S1 - Span 1A-1E Remove Falsework & Formwork | 12 | 22-Oct-22 A | 08-Nov-22 A | 19-Apr-23 | 19-Apr-23 | | 0.00 |
| **S1 - Span 1E-1D** | | 6 | 23-Nov-22 A | 15-Dec-22 A | 19-Apr-23 | 19-Apr-23 | | 0.00 |
| 3.1-2386 | S1 - Span 1E-1D Remove Falsework & Formwork | 6 | 23-Nov-22 A | 15-Dec-22 A | 19-Apr-23 | 19-Apr-23 | | 0.00 |
| **S1 - Miscellaneous Works** | | 62 | 06-Feb-23 | 22-Apr-23 | 03-Jan-24 | 19-Jul-24 | 365 | 8.00 |
| 3.1-2382 | BEM - S1 - Install Profile barrier / Parapet Wall / Planter / TCSS duct (L) | 33 | 06-Feb-23 | 15-Mar-23 | 03-Jan-24 | 09-Feb-24 | 270 | 5.00 |
| 3.1-2383 | S1 - End wall construction (Abutment) | 24 | 11-Mar-23 | 12-Apr-23 | 11-Jun-24 | 09-Jul-24 | 365 | |
| 3.1-2392 | S1 - Movement Joint | 12 | 16-Mar-23 | 29-Mar-23 | 25-Jun-24 | 09-Jul-24 | 373 | 2.00 |
| 3.1-2394 | S1 - Road pavement (Base Course) | 9 | 13-Apr-23 | 22-Apr-23 | 10-Jul-24 | 19-Jul-24 | 365 | 1.00 |
| **Sch_3.2 Bridge S2 Works** | | 295 | 19-May-22 A | 26-Apr-23 | 09-Dec-22 | 19-Jun-23 | 44 | 37.00 |
| **S2 - Piling Works** | | 58 | 25-Nov-22 A | 10-Feb-23 | 09-Dec-22 | 19-Jun-23 | 104 | 2.00 |
| **Piling Works - Pier P-8A** | | 58 | 25-Nov-22 A | 10-Feb-23 | 09-Dec-22 | 19-Jun-23 | 104 | 2.00 |
| 3.2-2523 | S2 - Mobilisation | 6 | 25-Nov-22 A | 01-Dec-22 A | 09-Dec-22 | 09-Dec-22 | | |
| 3.2-2524 | S2 - Bored Piles for 8A (1 nr) (Left-in casing) | 43 | 02-Dec-22 A | 06-Jan-23 | 09-Dec-22 | 29-Dec-22 | -6 | 2.00 |
| 3.2-2526 | S2 - 8A Proof drilling & Piles testing | 24 | 07-Jan-23 | 10-Feb-23 | 22-May-23 | 19-Jun-23 | 104 | 0.00 |
| 3.2-2525 | S2 - Demobilisation | 6 | 07-Jan-23 | 13-Jan-23 | 30-Dec-22 | 06-Jan-23 | -6 | |
| **S2 - Pile Caps, Pier / Abutment** | | 287 | 19-May-22 A | 17-Apr-23 | 20-Dec-22 | 16-Jun-23 | 50 | 21.00 |
| **Pier 2A** | | 29 | 03-Sep-22 A | 20-Dec-22 | 20-Dec-22 | 24-Dec-22 | 4 | 3.00 |
| 3.2-2540 | S2 - Construct Pier P-2A (3 Lifts) | 29 | 03-Sep-22 A | 20-Dec-22 | 20-Dec-22 | 24-Dec-22 | 4 | 3.00 |
| **Pier 2B** | | 29 | 19-May-22 A | 22-Dec-22 | 24-Dec-22 | 04-Jan-23 | 8 | 3.00 |
| 3.2-2550 | S2 - Construct Pier P-2B (3 Lifts) | 29 | 19-May-22 A | 22-Dec-22 | 24-Dec-22 | 04-Jan-23 | 8 | 3.00 |
| **Pier 2DL/2DR** | | 39 | 18-Oct-22 A | 23-Dec-22 | 05-May-23 | 02-Jun-23 | 123 | 6.00 |
| 3.2-2571 | S2 - Construct Pier P-2DR (3 Lifts) | 29 | 18-Oct-22 A | 23-Dec-22 | 24-May-23 | 02-Jun-23 | 123 | 3.00 |
| 3.2-2578 | S2 - Construct Pier P-2DL (3 Lifts) | 29 | 18-Oct-22 A | 16-Dec-22 | 05-May-23 | 06-May-23 | 107 | 3.00 |
| **Pier 2EL/2ER** | | 29 | 06-Jun-22 A | 20-Feb-23 | 24-Feb-23 | 26-Apr-23 | 52 | 5.00 |
| 3.2-2592 | S2 - Construct Pier P-2EL (3 Lifts) | 29 | 06-Jun-22 A | 20-Jan-23 | 24-Feb-23 | 29-Mar-23 | 52 | 3.00 |
| 3.2-2590 | S2 - Construct Pier P-2ER (2 Lifts) | 20 | 18-Jul-22 A | 20-Feb-23 | 30-Mar-23 | 26-Apr-23 | 52 | 2.00 |
| **Abutment 2F** | | 20 | 14-Jan-23 | 13-Feb-23 | 09-Feb-23 | 03-Mar-23 | 16 | 0.00 |
| 3.2-2602A | S2 - Construct Abutment A-2F (final pour) | 20 | 14-Jan-23 | 13-Feb-23 | 09-Feb-23 | 03-Mar-23 | 16 | |
| **Pier 8A** | | 21 | 20-Mar-23 | 17-Apr-23 | 23-May-23 | 16-Jun-23 | 50 | 4.00 |
| 3.2-2604 | S2 - Install sheetpile for pile cap 8A | 5 | 20-Mar-23 | 24-Mar-23 | 23-May-23 | 29-May-23 | 50 | 1.00 |
| 3.2-2606 | S2 - Excavation down to formation level C-8A | 11 | 25-Mar-23 | 11-Apr-23 | 30-May-23 | 10-Jun-23 | 50 | 2.00 |

Current Milestone
Actual Work
Critical Remaining Work
Remaining Work

**Central Kowloon Route - Kai Tak East (Month 44 Update) (Rev36- CSD)**
**Three Month Rolling Programme**

Project ID: KTE-WP36_M44
Baseline:
Layout: KTE - 3 Months Rolling Programme
Filter: TASK filters: 3 Months Rolling_1, KTE - Submission.

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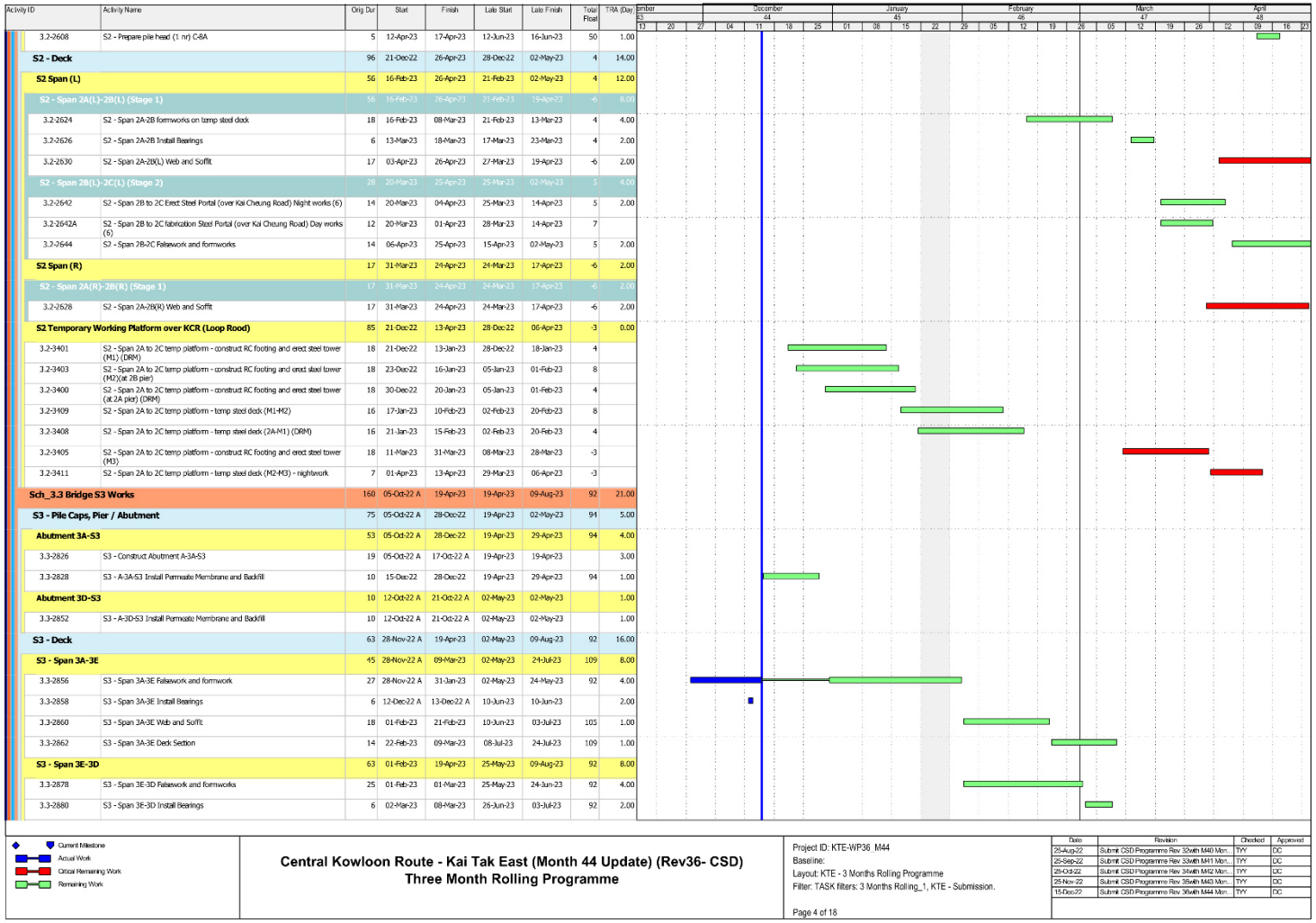
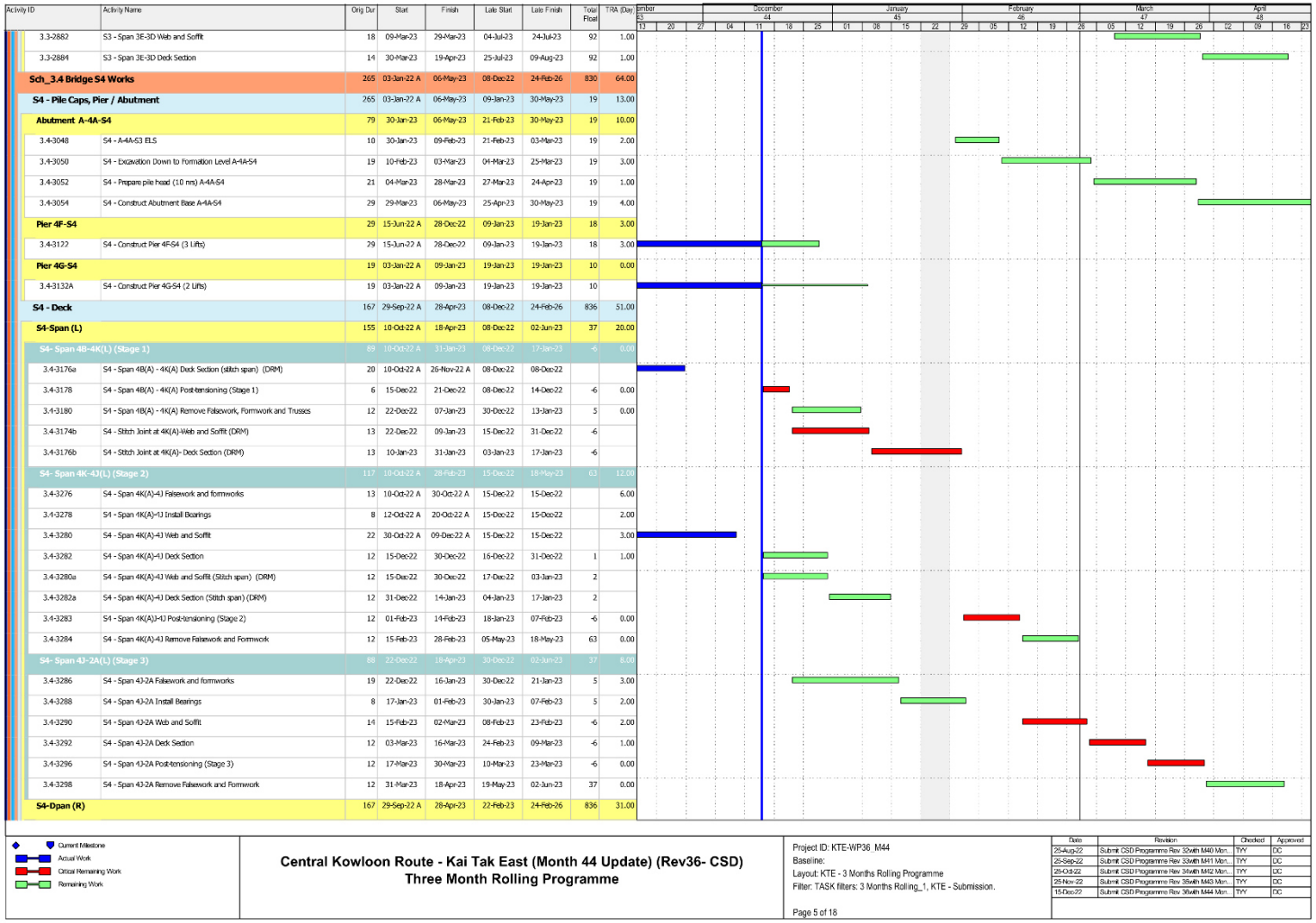
| Date | Revision | Checked | Approved |
|---|---|---|---|
| 25-Aug-22 | Submit CSD Programme Rev 32with M40 Mon... | TYY | DC |
| 25-Sep-22 | Submit CSD Programme Rev 33with M41 Mon... | TYY | DC |
| 25-Oct-22 | Submit CSD Programme Rev 34with M42 Mon... | TYY | DC |
| 25-Nov-22 | Submit CSD Programme Rev 35with M43 Mon... | TYY | DC |
| 15-Dec-22 | Submit CSD Programme Rev 36with M44 Mon... | TYY | DC |

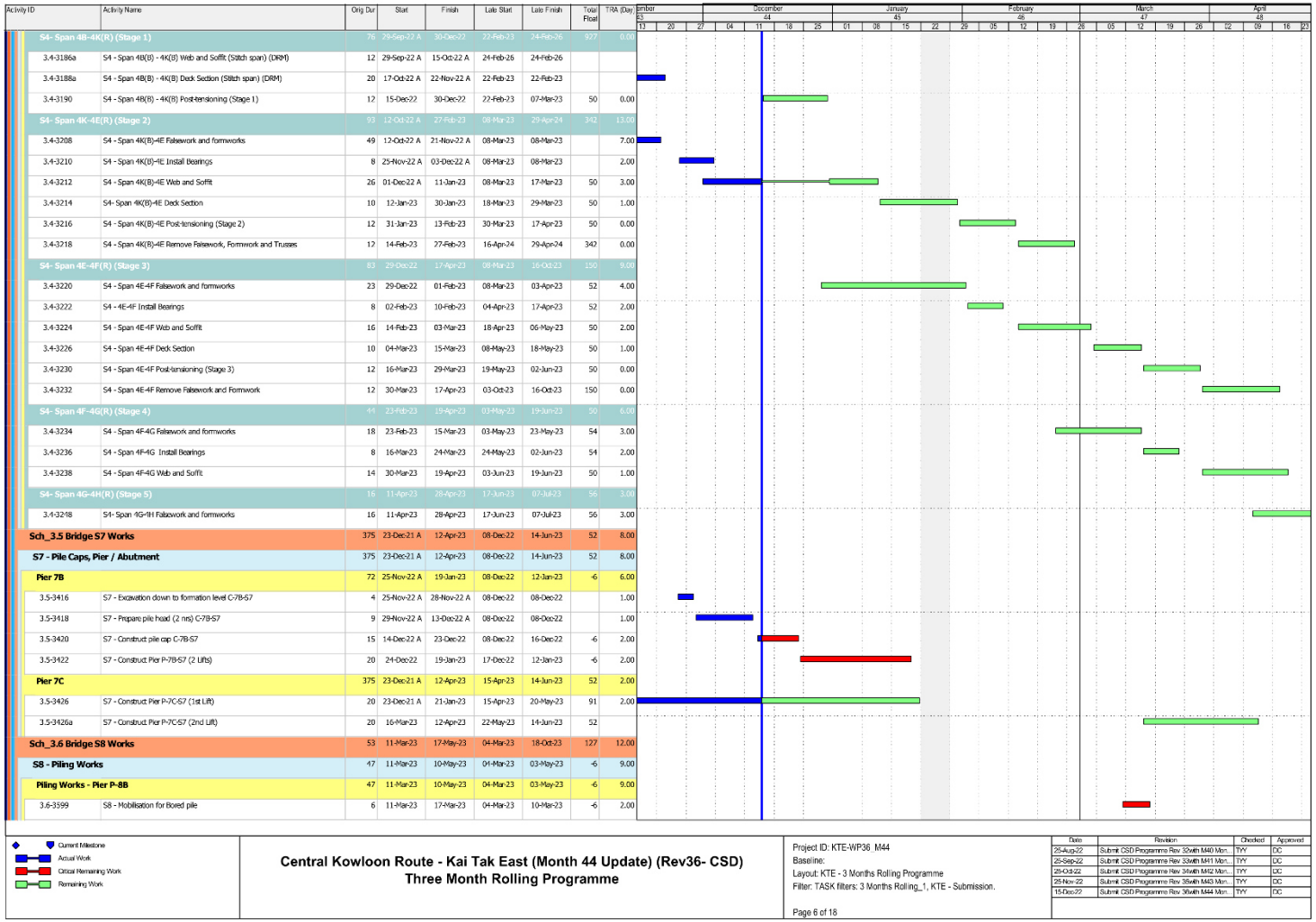


| Activity ID | Activity Name | Orig Dur | Start | Finish | Late Start | Late Finish | Total Float | TRA (Day) |
|---|---|---|---|---|---|---|---|---|
| 3.2-2608 | S2 - Prepare pile head (1 nr) C-8A | 5 | 12-Apr-23 | 17-Apr-23 | 12-Jun-23 | 16-Jun-23 | 50 | 1.00 |
| **S2 - Deck** | | 96 | 21-Dec-22 | 26-Apr-23 | 28-Dec-22 | 02-May-23 | 4 | 14.00 |
| **S2 Span (L)** | | 56 | 16-Feb-23 | 26-Apr-23 | 21-Feb-23 | 02-May-23 | 4 | 12.00 |
| **S2 - Span 2A(L)-2B(L) (Stage 1)** | | 56 | 16-Feb-23 | 26-Apr-23 | 21-Feb-23 | 19-Apr-23 | -6 | 8.00 |
| 3.2-2624 | S2 - Span 2A-2B formworks on temp steel deck | 18 | 16-Feb-23 | 08-Mar-23 | 21-Feb-23 | 13-Mar-23 | 4 | 4.00 |
| 3.2-2626 | S2 - Span 2A-2B Install Bearings | 6 | 13-Mar-23 | 18-Mar-23 | 17-Mar-23 | 23-Mar-23 | 4 | 2.00 |
| 3.2-2630 | S2 - Span 2A-2B(L) Web and Soffit | 17 | 03-Apr-23 | 26-Apr-23 | 27-Mar-23 | 19-Apr-23 | -6 | 2.00 |
| **S2 - Span 2B(L)-2C(L) (Stage 2)** | | 28 | 20-Mar-23 | 25-Apr-23 | 25-Mar-23 | 02-May-23 | 5 | 4.00 |
| 3.2-2642 | S2 - Span 2B to 2C Erect Steel Portal (over Kai Cheung Road) Night works (6) | 14 | 20-Mar-23 | 04-Apr-23 | 25-Mar-23 | 14-Apr-23 | 5 | 2.00 |
| 3.2-2642A | S2 - Span 2B to 2C fabrication Steel Portal (over Kai Cheung Road) Day works (6) | 12 | 20-Mar-23 | 01-Apr-23 | 28-Mar-23 | 14-Apr-23 | 7 | |
| 3.2-2644 | S2 - Span 2B-2C Falsework and formworks | 14 | 06-Apr-23 | 25-Apr-23 | 15-Apr-23 | 02-May-23 | 5 | 2.00 |
| **S2 Span (R)** | | 17 | 31-Mar-23 | 24-Apr-23 | 24-Mar-23 | 17-Apr-23 | -6 | 2.00 |
| **S2 - Span 2A(R)-2B(R) (Stage 1)** | | 17 | 31-Mar-23 | 24-Apr-23 | 24-Mar-23 | 17-Apr-23 | -6 | 2.00 |
| 3.2-2628 | S2 - Span 2A-2B(R) Web and Soffit | 17 | 31-Mar-23 | 24-Apr-23 | 24-Mar-23 | 17-Apr-23 | -6 | 2.00 |
| **S2 Temporary Working Platform over KCR (Loop Rood)** | | 85 | 21-Dec-22 | 13-Apr-23 | 28-Dec-22 | 06-Apr-23 | -3 | 0.00 |
| 3.2-3401 | S2 - Span 2A to 2C temp platform - construct RC footing and erect steel tower (M1) (DRM) | 18 | 21-Dec-22 | 13-Jan-23 | 28-Dec-22 | 18-Jan-23 | 4 | |
| 3.2-3403 | S2 - Span 2A to 2C temp platform - construct RC footing and erect steel tower (M2)(at 2B pier) | 18 | 23-Dec-22 | 16-Jan-23 | 05-Jan-23 | 01-Feb-23 | 8 | |
| 3.2-3400 | S2 - Span 2A to 2C temp platform - construct RC footing and erect steel tower (at 2A pier) (DRM) | 18 | 30-Dec-22 | 20-Jan-23 | 05-Jan-23 | 01-Feb-23 | 4 | |
| 3.2-3409 | S2 - Span 2A to 2C temp platform - temp steel deck (M1-M2) | 16 | 17-Jan-23 | 10-Feb-23 | 02-Feb-23 | 20-Feb-23 | 8 | |
| 3.2-3408 | S2 - Span 2A to 2C temp platform - temp steel deck (2A-M1) (DRM) | 16 | 21-Jan-23 | 15-Feb-23 | 02-Feb-23 | 20-Feb-23 | 4 | |
| 3.2-3405 | S2 - Span 2A to 2C temp platform - construct RC footing and erect steel tower (M3) | 18 | 11-Mar-23 | 31-Mar-23 | 08-Mar-23 | 28-Mar-23 | -3 | |
| 3.2-3411 | S2 - Span 2A to 2C temp platform - temp steel deck (M2-M3) - nightwork | 7 | 01-Apr-23 | 13-Apr-23 | 29-Mar-23 | 06-Apr-23 | -3 | |
| **Sch_3.3 Bridge S3 Works** | | 160 | 05-Oct-22 A | 19-Apr-23 | 19-Apr-23 | 09-Aug-23 | 92 | 21.00 |
| **S3 - Pile Caps, Pier / Abutment** | | 75 | 05-Oct-22 A | 28-Dec-22 | 19-Apr-23 | 02-May-23 | 94 | 5.00 |
| **Abutment 3A-S3** | | 53 | 05-Oct-22 A | 28-Dec-22 | 19-Apr-23 | 29-Apr-23 | 94 | 4.00 |
| 3.3-2826 | S3 - Construct Abutment A-3A-S3 | 19 | 05-Oct-22 A | 17-Oct-22 A | 19-Apr-23 | 19-Apr-23 | | 3.00 |
| 3.3-2828 | S3 - A-3A-S3 Install Permaste Membrane and Backfill | 10 | 15-Dec-22 | 28-Dec-22 | 19-Apr-23 | 29-Apr-23 | 94 | 1.00 |
| **Abutment 3D-S3** | | 10 | 12-Oct-22 A | 21-Oct-22 A | 02-May-23 | 02-May-23 | | 1.00 |
| 3.3-2852 | S3 - A-3D-S3 Install Permaste Membrane and Backfill | 10 | 12-Oct-22 A | 21-Oct-22 A | 02-May-23 | 02-May-23 | | 1.00 |
| **S3 - Deck** | | 63 | 28-Nov-22 A | 19-Apr-23 | 02-May-23 | 09-Aug-23 | 92 | 16.00 |
| **S3 - Span 3A-3E** | | 45 | 28-Nov-22 A | 09-Mar-23 | 02-May-23 | 24-Jul-23 | 109 | 8.00 |
| 3.3-2856 | S3 - Span 3A-3E Falsework and formwork | 27 | 28-Nov-22 A | 31-Jan-23 | 02-May-23 | 24-May-23 | 92 | 4.00 |
| 3.3-2858 | S3 - Span 3A-3E Install Bearings | 6 | 12-Dec-22 A | 13-Dec-22 A | 10-Jun-23 | 10-Jun-23 | | 2.00 |
| 3.3-2860 | S3 - Span 3A-3E Web and Soffit | 18 | 01-Feb-23 | 21-Feb-23 | 10-Jun-23 | 03-Jul-23 | 105 | 1.00 |
| 3.3-2862 | S3 - Span 3A-3E Deck Section | 14 | 22-Feb-23 | 09-Mar-23 | 08-Jul-23 | 24-Jul-23 | 109 | 1.00 |
| **S3 - Span 3E-3D** | | 63 | 01-Feb-23 | 19-Apr-23 | 25-May-23 | 09-Aug-23 | 92 | 8.00 |
| 3.3-2878 | S3 - Span 3E-3D Falsework and formworks | 25 | 01-Feb-23 | 01-Mar-23 | 25-May-23 | 24-Jun-23 | 92 | 4.00 |
| 3.3-2880 | S3 - Span 3E-3D Install Bearings | 6 | 02-Mar-23 | 08-Mar-23 | 26-Jun-23 | 03-Jul-23 | 92 | 2.00 |



| Date | Revision | Checked | Approved |
|---|---|---|---|
| 25-Aug-22 | Submit CSD Programme Rev 32with M40 Mon... | TYY | DC |
| 25-Sep-22 | Submit CSD Programme Rev 33with M41 Mon... | TYY | DC |
| 25-Oct-22 | Submit CSD Programme Rev 34with M42 Mon... | TYY | DC |
| 25-Nov-22 | Submit CSD Programme Rev 35with M43 Mon... | TYY | DC |
| 15-Dec-22 | Submit CSD Programme Rev 36with M44 Mon... | TYY | DC |

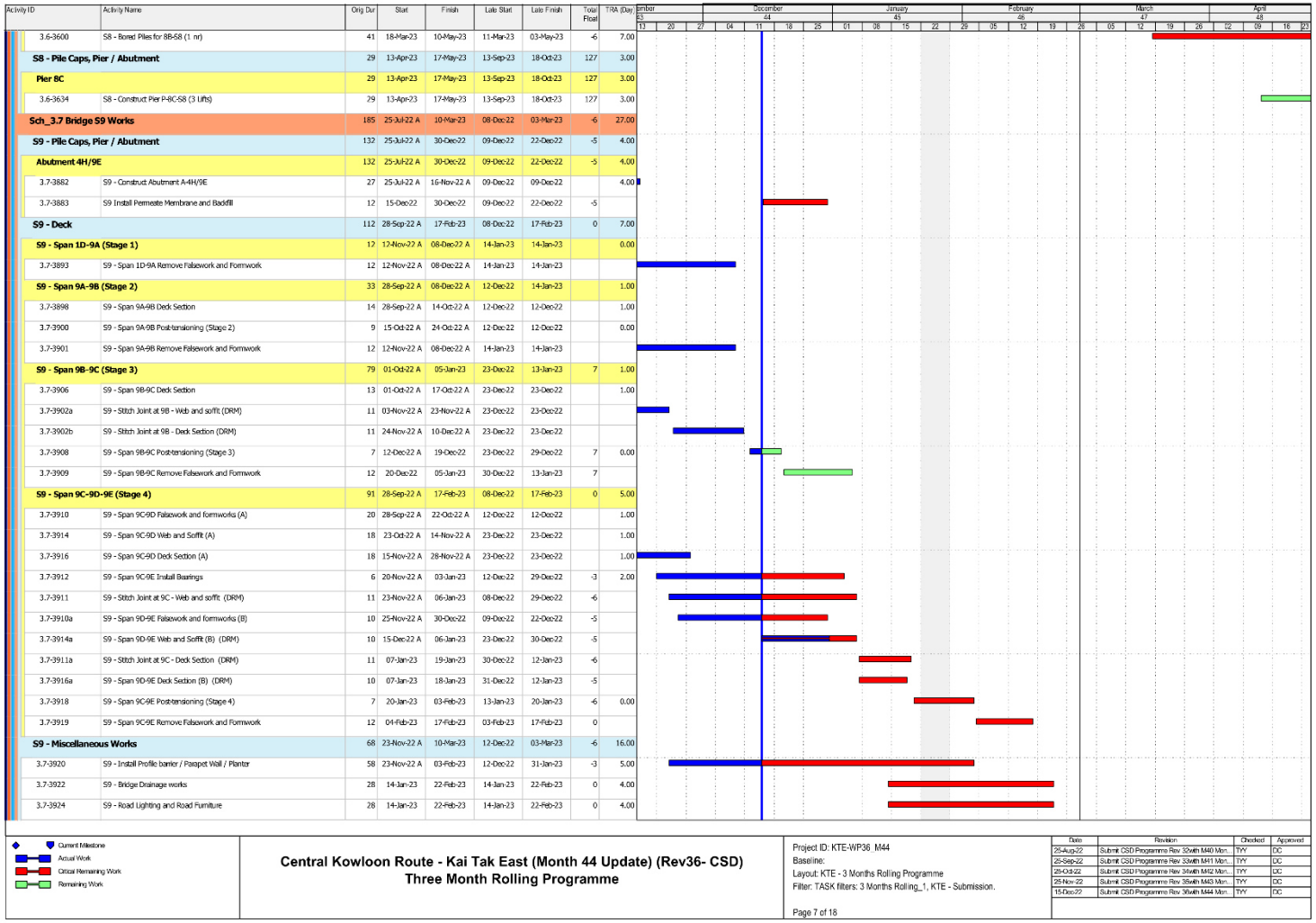

Activity ID
Activity Name
Orig Dur
Start
Finish
Late Start
Late Finish
Total Float
TRA (Day)
November
December
January
February
March
April
3.3-2882 S3 - Span 3E-3D Web and Soffit 18 09-Mar-23 29-Mar-23 04-Jul-23 24-Jul-23 92 1.00
3.3-2884 S3 - Span 3E-3D Deck Section 14 30-Mar-23 19-Apr-23 25-Jul-23 09-Aug-23 92 1.00
Sch_3.4 Bridge S4 Works 265 03-Jan-22 A 06-May-23 08-Dec-22 24-Feb-26 830 64.00
S4 - Pile Caps, Pier / Abutment 265 03-Jan-22 A 06-May-23 09-Jan-23 30-May-23 19 13.00
Abutment A-4A-S4 79 30-Jan-23 06-May-23 21-Feb-23 30-May-23 19 10.00
3.4-3048 S4 - A-4A-S3 ELS 10 30-Jan-23 09-Feb-23 21-Feb-23 03-Mar-23 19 2.00
3.4-3050 S4 - Excavation Down to Formation Level A-4A-S4 19 10-Feb-23 03-Mar-23 04-Mar-23 25-Mar-23 19 3.00
3.4-3052 S4 - Prepare pile head (10 nos) A-4A-S4 21 04-Mar-23 28-Mar-23 27-Mar-23 24-Apr-23 19 1.00
3.4-3054 S4 - Construct Abutment Base A-4A-S4 29 29-Mar-23 06-May-23 25-Apr-23 30-May-23 19 4.00
Pier 4F-S4 29 15-Jun-22 A 28-Dec-22 09-Jan-23 19-Jan-23 18 3.00
3.4-3122 S4 - Construct Pier 4F-S4 (3 Lifts) 29 15-Jun-22 A 28-Dec-22 09-Jan-23 19-Jan-23 18 3.00
Pier 4G-S4 19 03-Jan-22 A 09-Jan-23 19-Jan-23 19-Jan-23 10 0.00
3.4-3132A S4 - Construct Pier 4G-S4 (2 Lifts) 19 03-Jan-22 A 09-Jan-23 19-Jan-23 19-Jan-23 10
S4 - Deck 167 29-Sep-22 A 28-Apr-23 08-Dec-22 24-Feb-26 836 51.00
S4-Span (L) 155 10-Oct-22 A 18-Apr-23 08-Dec-22 02-Jun-23 37 20.00
S4- Span 4B-4K(L) (Stage 1) 89 10-Oct-22 A 31-Jan-23 08-Dec-22 17-Jan-23 -6 0.00
3.4-3176a S4 - Span 4B(A) - 4K(A) Deck Section (stitch span) (DRM) 20 10-Oct-22 A 26-Nov-22 A 08-Dec-22 08-Dec-22
3.4-3178 S4 - Span 4B(A) - 4K(A) Post-tensioning (Stage 1) 6 15-Dec-22 21-Dec-22 08-Dec-22 14-Dec-22 -6 0.00
3.4-3180 S4 - Span 4B(A) - 4K(A) Remove Falsework, Formwork and Trusses 12 22-Dec-22 07-Jan-23 30-Dec-22 13-Jan-23 5 0.00
3.4-3174b S4 - Stitch Joint at 4K(A)-Web and Soffit (DRM) 13 22-Dec-22 09-Jan-23 15-Dec-22 31-Dec-22 -6
3.4-3176b S4 - Stitch Joint at 4K(A)- Deck Section (DRM) 13 10-Jan-23 31-Jan-23 03-Jan-23 17-Jan-23 -6
S4- Span 4K-4J(L) (Stage 2) 117 10-Oct-22 A 28-Feb-23 15-Dec-22 18-May-23 63 12.00
3.4-3276 S4 - Span 4K(A)-4J Falsework and formworks 13 10-Oct-22 A 30-Oct-22 A 15-Dec-22 15-Dec-22 6.00
3.4-3278 S4 - Span 4K(A)-4J Install Bearings 8 12-Oct-22 A 20-Oct-22 A 15-Dec-22 15-Dec-22 2.00
3.4-3280 S4 - Span 4K(A)-4J Web and Soffit 22 30-Oct-22 A 09-Dec-22 A 15-Dec-22 15-Dec-22 3.00
3.4-3282 S4 - Span 4K(A)-4J Deck Section 12 15-Dec-22 30-Dec-22 16-Dec-22 31-Dec-22 1 1.00
3.4-3280a S4 - Span 4K(A)-4J Web and Soffit (Stitch span) (DRM) 12 15-Dec-22 30-Dec-22 17-Dec-22 03-Jan-23 2
3.4-3282a S4 - Span 4K(A)-4J Deck Section (Stitch span) (DRM) 12 31-Dec-22 14-Jan-23 04-Jan-23 17-Jan-23 2
3.4-3283 S4 - Span 4K(A)J-4J Post-tensioning (Stage 2) 12 01-Feb-23 14-Feb-23 18-Jan-23 07-Feb-23 -6 0.00
3.4-3284 S4 - Span 4K(A)-4J Remove Falsework and Formwork 12 15-Feb-23 28-Feb-23 05-May-23 18-May-23 63 0.00
S4- Span 4J-2A(L) (Stage 3) 88 22-Dec-22 18-Apr-23 30-Dec-22 02-Jun-23 37 8.00
3.4-3286 S4 - Span 4J-2A Falsework and formworks 19 22-Dec-22 16-Jan-23 30-Dec-22 21-Jan-23 5 3.00
3.4-3288 S4 - Span 4J-2A Install Bearings 8 17-Jan-23 01-Feb-23 30-Jan-23 07-Feb-23 5 2.00
3.4-3290 S4 - Span 4J-2A Web and Soffit 14 15-Feb-23 02-Mar-23 08-Feb-23 23-Feb-23 -6 2.00
3.4-3292 S4 - Span 4J-2A Deck Section 12 03-Mar-23 16-Mar-23 24-Feb-23 09-Mar-23 -6 1.00
3.4-3296 S4 - Span 4J-2A Post-tensioning (Stage 3) 12 17-Mar-23 30-Mar-23 10-Mar-23 23-Mar-23 -6 0.00
3.4-3298 S4 - Span 4J-2A Remove Falsework and Formwork 12 31-Mar-23 18-Apr-23 19-May-23 02-Jun-23 37 0.00
S4-Dpan (R) 167 29-Sep-22 A 28-Apr-23 22-Feb-23 24-Feb-26 836 31.00
Current Milestone
Actual Work
Critical Remaining Work
Remaining Work
Central Kowloon Route - Kai Tak East (Month 44 Update) (Rev36- CSD)
Three Month Rolling Programme
Project ID: KTE-WP36_M44
Baseline:
Layout: KTE - 3 Months Rolling Programme
Filter: TASK filters: 3 Months Rolling_1, KTE - Submission.
Page 5 of 18
Date
Revision
Checked
Approved
25-Aug-22 Submit CSD Programme Rev 32with M40 Mon... TYY DC
25-Sep-22 Submit CSD Programme Rev 33with M41 Mon... TYY DC
25-Oct-22 Submit CSD Programme Rev 34with M42 Mon... TYY DC
25-Nov-22 Submit CSD Programme Rev 35with M43 Mon... TYY DC
15-Dec-22 Submit CSD Programme Rev 36with M44 Mon... TYY DC



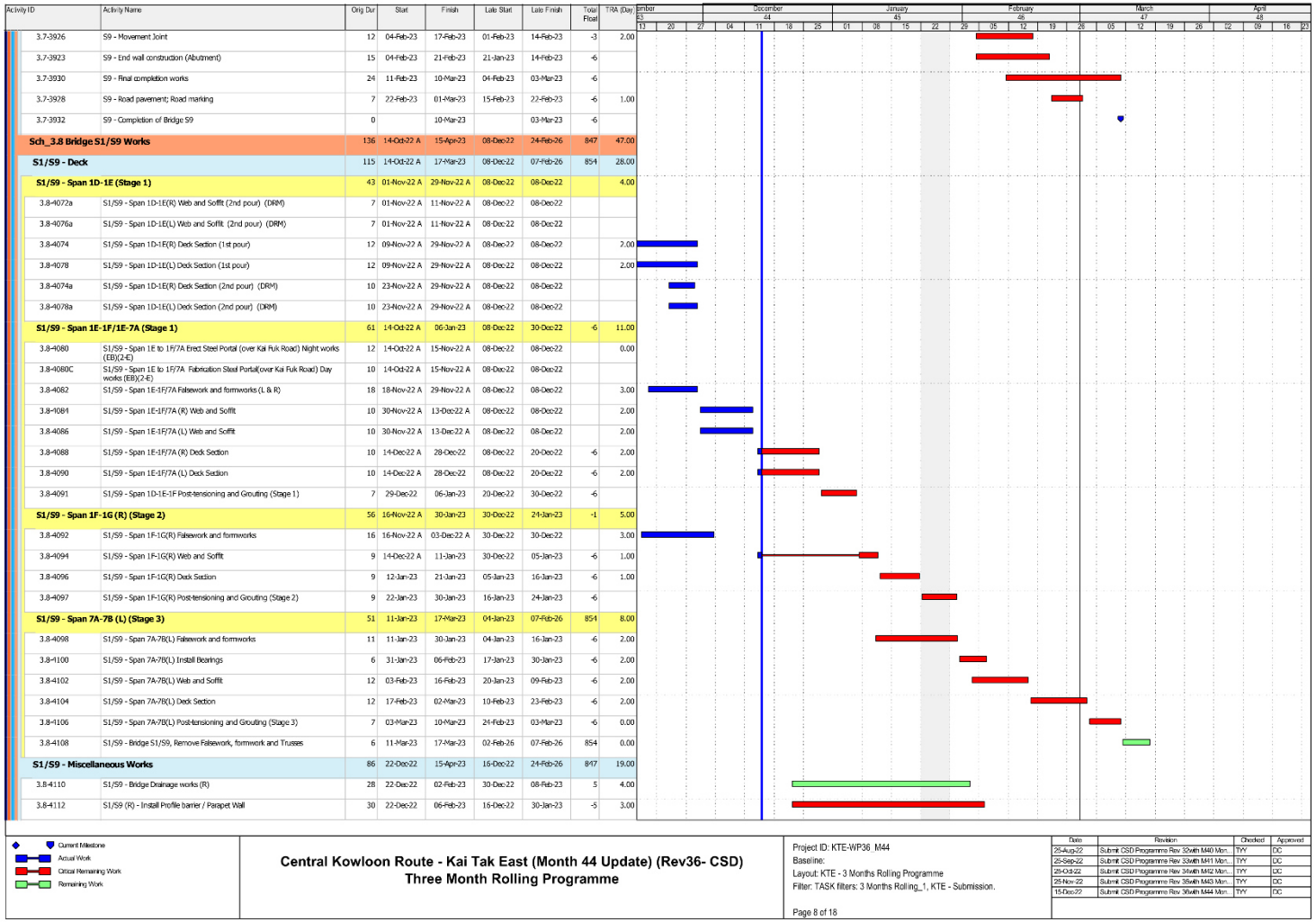
| Activity ID | Activity Name | Orig Dur | Start | Finish | Late Start | Late Finish | Total Float | TRA (Day) |
|---|---|---|---|---|---|---|---|---|
| S4- Span 4B-4K(R) (Stage 1) | | 76 | 29-Sep-22 A | 30-Dec-22 | 22-Feb-23 | 24-Feb-26 | 927 | 0.00 |
| 3.4-3186a | S4 - Span 4B(B) - 4K(B) Web and Soffit (Stitch span) (DRM) | 12 | 29-Sep-22 A | 15-Oct-22 A | 24-Feb-26 | 24-Feb-26 | | |
| 3.4-3188a | S4 - Span 4B(B) - 4K(B) Deck Section (Stitch span) (DRM) | 20 | 17-Oct-22 A | 22-Nov-22 A | 22-Feb-23 | 22-Feb-23 | | |
| 3.4-3190 | S4 - Span 4B(B) - 4K(B) Post-tensioning (Stage 1) | 12 | 15-Dec-22 | 30-Dec-22 | 22-Feb-23 | 07-Mar-23 | 50 | 0.00 |
| S4- Span 4K-4E(R) (Stage 2) | | 93 | 12-Oct-22 A | 27-Feb-23 | 08-Mar-23 | 29-Apr-24 | 342 | 13.00 |
| 3.4-3208 | S4 - Span 4K(B)-4E Falsework and formworks | 49 | 12-Oct-22 A | 21-Nov-22 A | 08-Mar-23 | 08-Mar-23 | | 7.00 |
| 3.4-3210 | S4 - Span 4K(B)-4E Install Bearings | 8 | 25-Nov-22 A | 03-Dec-22 A | 08-Mar-23 | 08-Mar-23 | | 2.00 |
| 3.4-3212 | S4 - Span 4K(B)-4E Web and Soffit | 26 | 01-Dec-22 A | 11-Jan-23 | 08-Mar-23 | 17-Mar-23 | 50 | 3.00 |
| 3.4-3214 | S4- Span 4K(B)-4E Deck Section | 10 | 12-Jan-23 | 30-Jan-23 | 18-Mar-23 | 29-Mar-23 | 50 | 1.00 |
| 3.4-3216 | S4 - Span 4K(B)-4E Post-tensioning (Stage 2) | 12 | 31-Jan-23 | 13-Feb-23 | 30-Mar-23 | 17-Apr-23 | 50 | 0.00 |
| 3.4-3218 | S4 - Span 4K(B)-4E Remove Falsework, Formwork and Trusses | 12 | 14-Feb-23 | 27-Feb-23 | 16-Apr-24 | 29-Apr-24 | 342 | 0.00 |
| S4- Span 4E-4F(R) (Stage 3) | | 83 | 29-Dec-22 | 17-Apr-23 | 08-Mar-23 | 16-Oct-23 | 150 | 9.00 |
| 3.4-3220 | S4 - Span 4E-4F Falsework and formworks | 23 | 29-Dec-22 | 01-Feb-23 | 08-Mar-23 | 03-Apr-23 | 52 | 4.00 |
| 3.4-3222 | S4 - 4E-4F Install Bearings | 8 | 02-Feb-23 | 10-Feb-23 | 04-Apr-23 | 17-Apr-23 | 52 | 2.00 |
| 3.4-3224 | S4 - Span 4E-4F Web and Soffit | 16 | 14-Feb-23 | 03-Mar-23 | 18-Apr-23 | 06-May-23 | 50 | 2.00 |
| 3.4-3226 | S4 - Span 4E-4F Deck Section | 10 | 04-Mar-23 | 15-Mar-23 | 08-May-23 | 18-May-23 | 50 | 1.00 |
| 3.4-3230 | S4 - Span 4E-4F Post-tensioning (Stage 3) | 12 | 16-Mar-23 | 29-Mar-23 | 19-May-23 | 02-Jun-23 | 50 | 0.00 |
| 3.4-3232 | S4 - Span 4E-4F Remove Falsework and Formwork | 12 | 30-Mar-23 | 17-Apr-23 | 03-Oct-23 | 16-Oct-23 | 150 | 0.00 |
| S4- Span 4F-4G(R) (Stage 4) | | 44 | 23-Feb-23 | 19-Apr-23 | 03-May-23 | 19-Jun-23 | 50 | 6.00 |
| 3.4-3234 | S4 - Span 4F-4G Falsework and formworks | 18 | 23-Feb-23 | 15-Mar-23 | 03-May-23 | 23-May-23 | 54 | 3.00 |
| 3.4-3236 | S4 - Span 4F-4G Install Bearings | 8 | 16-Mar-23 | 24-Mar-23 | 24-May-23 | 02-Jun-23 | 54 | 2.00 |
| 3.4-3238 | S4 - Span 4F-4G Web and Soffit | 14 | 30-Mar-23 | 19-Apr-23 | 03-Jun-23 | 19-Jun-23 | 50 | 1.00 |
| S4- Span 4G-4H(R) (Stage 5) | | 16 | 11-Apr-23 | 28-Apr-23 | 17-Jun-23 | 07-Jul-23 | 56 | 3.00 |
| 3.4-3218 | S4- Span 4G-4H Falsework and formworks | 16 | 11-Apr-23 | 28-Apr-23 | 17-Jun-23 | 07-Jul-23 | 56 | 3.00 |
| Sch_3.5 Bridge S7 Works | | 375 | 23-Dec-21 A | 12-Apr-23 | 08-Dec-22 | 14-Jun-23 | 52 | 8.00 |
| S7 - Pile Caps, Pier / Abutment | | 375 | 23-Dec-21 A | 12-Apr-23 | 08-Dec-22 | 14-Jun-23 | 52 | 8.00 |
| Pier 7B | | 72 | 25-Nov-22 A | 19-Jan-23 | 08-Dec-22 | 12-Jan-23 | -6 | 6.00 |
| 3.5-3416 | S7 - Excavation down to formation level C-7B-S7 | 4 | 25-Nov-22 A | 28-Nov-22 A | 08-Dec-22 | 08-Dec-22 | | 1.00 |
| 3.5-3418 | S7 - Prepare pile head (2 nos) C-7B-S7 | 9 | 29-Nov-22 A | 13-Dec-22 A | 08-Dec-22 | 08-Dec-22 | | 1.00 |
| 3.5-3420 | S7 - Construct pile cap C-7B-S7 | 15 | 14-Dec-22 A | 23-Dec-22 | 08-Dec-22 | 16-Dec-22 | -6 | 2.00 |
| 3.5-3422 | S7 - Construct Pier P-7B-S7 (2 Lifts) | 20 | 24-Dec-22 | 19-Jan-23 | 17-Dec-22 | 12-Jan-23 | -6 | 2.00 |
| Pier 7C | | 375 | 23-Dec-21 A | 12-Apr-23 | 15-Apr-23 | 14-Jun-23 | 52 | 2.00 |
| 3.5-3426 | S7 - Construct Pier P-7C-S7 (1st Lift) | 20 | 23-Dec-21 A | 21-Jan-23 | 15-Apr-23 | 20-May-23 | 91 | 2.00 |
| 3.5-3426a | S7 - Construct Pier P-7C-S7 (2nd Lift) | 20 | 16-Mar-23 | 12-Apr-23 | 22-May-23 | 14-Jun-23 | 52 | |
| Sch_3.6 Bridge S8 Works | | 53 | 11-Mar-23 | 17-May-23 | 04-Mar-23 | 18-Oct-23 | 127 | 12.00 |
| S8 - Piling Works | | 47 | 11-Mar-23 | 10-May-23 | 04-Mar-23 | 03-May-23 | -6 | 9.00 |
| Piling Works - Pier P-8B | | 47 | 11-Mar-23 | 10-May-23 | 04-Mar-23 | 03-May-23 | -6 | 9.00 |
| 3.6-3599 | S8 - Mobilisation for Bored pile | 6 | 11-Mar-23 | 17-Mar-23 | 04-Mar-23 | 10-Mar-23 | -6 | 2.00 |



| Date | Revision | Checked | Approved |
|---|---|---|---|
| 25-Aug-22 | Submit CSD Programme Rev 32with M40 Mon... | TYY | DC |
| 25-Sep-22 | Submit CSD Programme Rev 33with M41 Mon... | TYY | DC |
| 25-Oct-22 | Submit CSD Programme Rev 34with M42 Mon... | TYY | DC |
| 25-Nov-22 | Submit CSD Programme Rev 35with M43 Mon... | TYY | DC |
| 15-Dec-22 | Submit CSD Programme Rev 36with M44 Mon... | TYY | DC |



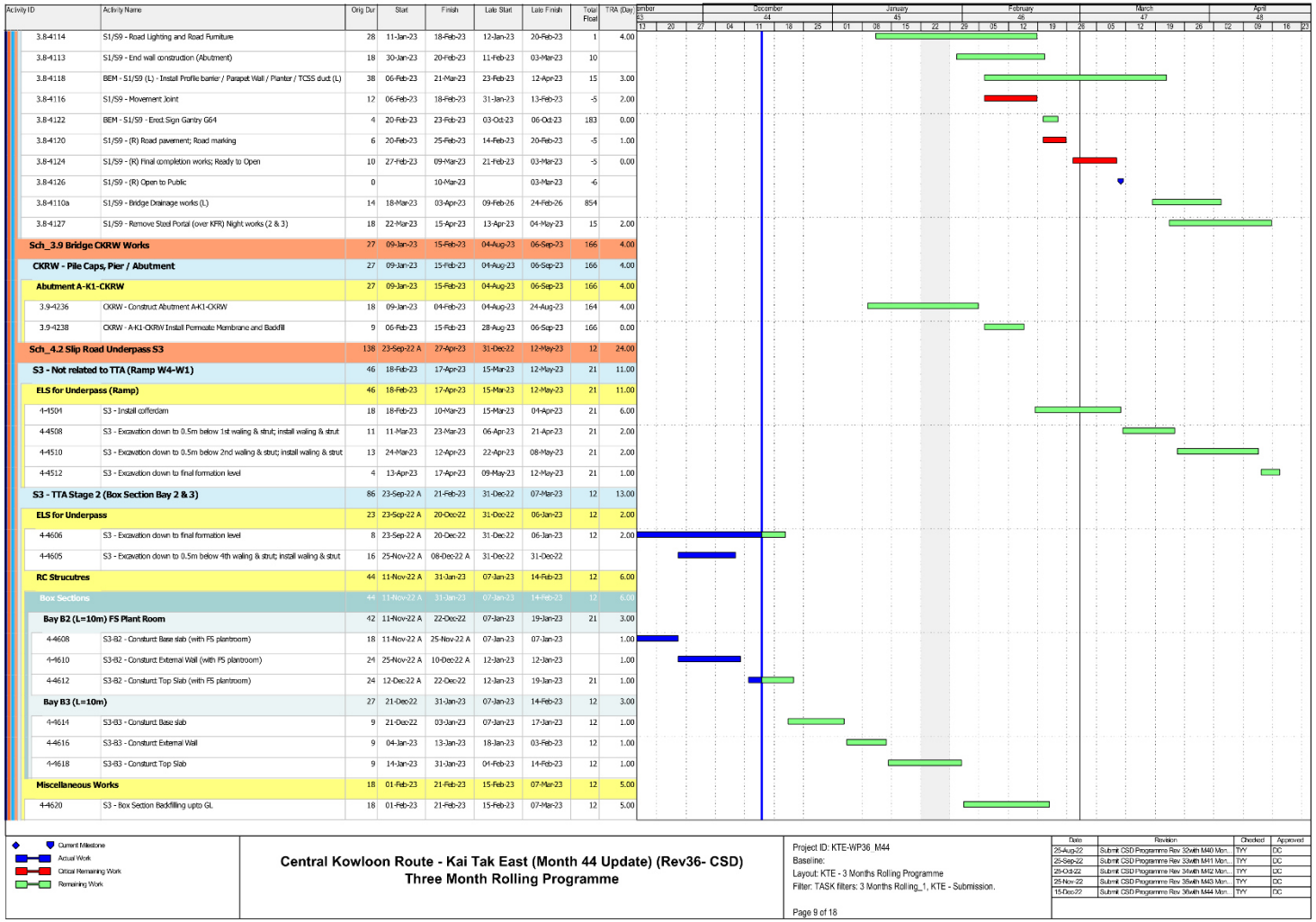
| Activity ID | Activity Name | Orig Dur | Start | Finish | Late Start | Late Finish | Total Float | TRA (Days) |
|---|---|---|---|---|---|---|---|---|
| 3.6-3600 | S8 - Bored Piles for 8B-S8 (1 nr) | 41 | 18-Mar-23 | 10-May-23 | 11-Mar-23 | 03-May-23 | -6 | 7.00 |
| **S8 - Pile Caps, Pier / Abutment** | | 29 | 13-Apr-23 | 17-May-23 | 13-Sep-23 | 18-Oct-23 | 127 | 3.00 |
| **Pier 8C** | | 29 | 13-Apr-23 | 17-May-23 | 13-Sep-23 | 18-Oct-23 | 127 | 3.00 |
| 3.6-3634 | S8 - Construct Pier P-8C-S8 (3 Lifts) | 29 | 13-Apr-23 | 17-May-23 | 13-Sep-23 | 18-Oct-23 | 127 | 3.00 |
| **Sch_3.7 Bridge S9 Works** | | 185 | 25-Jul-22 A | 10-Mar-23 | 08-Dec-22 | 03-Mar-23 | -6 | 27.00 |
| **S9 - Pile Caps, Pier / Abutment** | | 132 | 25-Jul-22 A | 30-Dec-22 | 09-Dec-22 | 22-Dec-22 | -5 | 4.00 |
| **Abutment 4H/9E** | | 132 | 25-Jul-22 A | 30-Dec-22 | 09-Dec-22 | 22-Dec-22 | -5 | 4.00 |
| 3.7-3882 | S9 - Construct Abutment A-4H/9E | 27 | 25-Jul-22 A | 16-Nov-22 A | 09-Dec-22 | 09-Dec-22 | | 4.00 |
| 3.7-3883 | S9 Install Permeate Membrane and Backfill | 12 | 15-Dec-22 | 30-Dec-22 | 09-Dec-22 | 22-Dec-22 | -5 | |
| **S9 - Deck** | | 112 | 28-Sep-22 A | 17-Feb-23 | 08-Dec-22 | 17-Feb-23 | 0 | 7.00 |
| **S9 - Span 1D-9A (Stage 1)** | | 12 | 12-Nov-22 A | 08-Dec-22 A | 14-Jan-23 | 14-Jan-23 | | 0.00 |
| 3.7-3893 | S9 - Span 1D-9A Remove Falsework and Formwork | 12 | 12-Nov-22 A | 08-Dec-22 A | 14-Jan-23 | 14-Jan-23 | | |
| **S9 - Span 9A-9B (Stage 2)** | | 33 | 28-Sep-22 A | 08-Dec-22 A | 12-Dec-22 | 14-Jan-23 | | 1.00 |
| 3.7-3898 | S9 - Span 9A-9B Deck Section | 14 | 28-Sep-22 A | 14-Oct-22 A | 12-Dec-22 | 12-Dec-22 | | 1.00 |
| 3.7-3900 | S9 - Span 9A-9B Post-tensioning (Stage 2) | 9 | 15-Oct-22 A | 24-Oct-22 A | 12-Dec-22 | 12-Dec-22 | | 0.00 |
| 3.7-3901 | S9 - Span 9A-9B Remove Falsework and Formwork | 12 | 12-Nov-22 A | 08-Dec-22 A | 14-Jan-23 | 14-Jan-23 | | |
| **S9 - Span 9B-9C (Stage 3)** | | 79 | 01-Oct-22 A | 05-Jan-23 | 23-Dec-22 | 13-Jan-23 | 7 | 1.00 |
| 3.7-3906 | S9 - Span 9B-9C Deck Section | 13 | 01-Oct-22 A | 17-Oct-22 A | 23-Dec-22 | 23-Dec-22 | | 1.00 |
| 3.7-3902a | S9 - Stitch Joint at 9B - Web and soffit (DRM) | 11 | 03-Nov-22 A | 23-Nov-22 A | 23-Dec-22 | 23-Dec-22 | | |
| 3.7-3902b | S9 - Stitch Joint at 9B - Deck Section (DRM) | 11 | 24-Nov-22 A | 10-Dec-22 A | 23-Dec-22 | 23-Dec-22 | | |
| 3.7-3908 | S9 - Span 9B-9C Post-tensioning (Stage 3) | 7 | 12-Dec-22 A | 19-Dec-22 | 23-Dec-22 | 29-Dec-22 | 7 | 0.00 |
| 3.7-3909 | S9 - Span 9B-9C Remove Falsework and Formwork | 12 | 20-Dec-22 | 05-Jan-23 | 30-Dec-22 | 13-Jan-23 | 7 | |
| **S9 - Span 9C-9D-9E (Stage 4)** | | 91 | 28-Sep-22 A | 17-Feb-23 | 08-Dec-22 | 17-Feb-23 | 0 | 5.00 |
| 3.7-3910 | S9 - Span 9C-9D Falsework and formworks (A) | 20 | 28-Sep-22 A | 22-Oct-22 A | 12-Dec-22 | 12-Dec-22 | | 1.00 |
| 3.7-3914 | S9 - Span 9C-9D Web and Soffit (A) | 18 | 23-Oct-22 A | 14-Nov-22 A | 23-Dec-22 | 23-Dec-22 | | 1.00 |
| 3.7-3916 | S9 - Span 9C-9D Deck Section (A) | 18 | 15-Nov-22 A | 28-Nov-22 A | 23-Dec-22 | 23-Dec-22 | | 1.00 |
| 3.7-3912 | S9 - Span 9C-9E Install Bearings | 6 | 20-Nov-22 A | 03-Jan-23 | 12-Dec-22 | 29-Dec-22 | -3 | 2.00 |
| 3.7-3911 | S9 - Stitch Joint at 9C - Web and soffit (DRM) | 11 | 23-Nov-22 A | 06-Jan-23 | 08-Dec-22 | 29-Dec-22 | -6 | |
| 3.7-3910a | S9 - Span 9D-9E Falsework and formworks (B) | 10 | 25-Nov-22 A | 30-Dec-22 | 09-Dec-22 | 22-Dec-22 | -5 | |
| 3.7-3914a | S9 - Span 9D-9E Web and Soffit (B) (DRM) | 10 | 15-Dec-22 A | 06-Jan-23 | 23-Dec-22 | 30-Dec-22 | -5 | |
| 3.7-3911a | S9 - Stitch Joint at 9C - Deck Section (DRM) | 11 | 07-Jan-23 | 19-Jan-23 | 30-Dec-22 | 12-Jan-23 | -6 | |
| 3.7-3916a | S9 - Span 9D-9E Deck Section (B) (DRM) | 10 | 07-Jan-23 | 18-Jan-23 | 31-Dec-22 | 12-Jan-23 | -5 | |
| 3.7-3918 | S9 - Span 9C-9E Post-tensioning (Stage 4) | 7 | 20-Jan-23 | 03-Feb-23 | 13-Jan-23 | 20-Jan-23 | -6 | 0.00 |
| 3.7-3919 | S9 - Span 9C-9E Remove Falsework and Formwork | 12 | 04-Feb-23 | 17-Feb-23 | 03-Feb-23 | 17-Feb-23 | 0 | |
| **S9 - Miscellaneous Works** | | 68 | 23-Nov-22 A | 10-Mar-23 | 12-Dec-22 | 03-Mar-23 | -6 | 16.00 |
| 3.7-3920 | S9 - Install Profile barrier / Parapet Wall / Planter | 58 | 23-Nov-22 A | 03-Feb-23 | 12-Dec-22 | 31-Jan-23 | -3 | 5.00 |
| 3.7-3922 | S9 - Bridge Drainage works | 28 | 14-Jan-23 | 22-Feb-23 | 14-Jan-23 | 22-Feb-23 | 0 | 4.00 |
| 3.7-3924 | S9 - Road Lighting and Road Furniture | 28 | 14-Jan-23 | 22-Feb-23 | 14-Jan-23 | 22-Feb-23 | 0 | 4.00 |

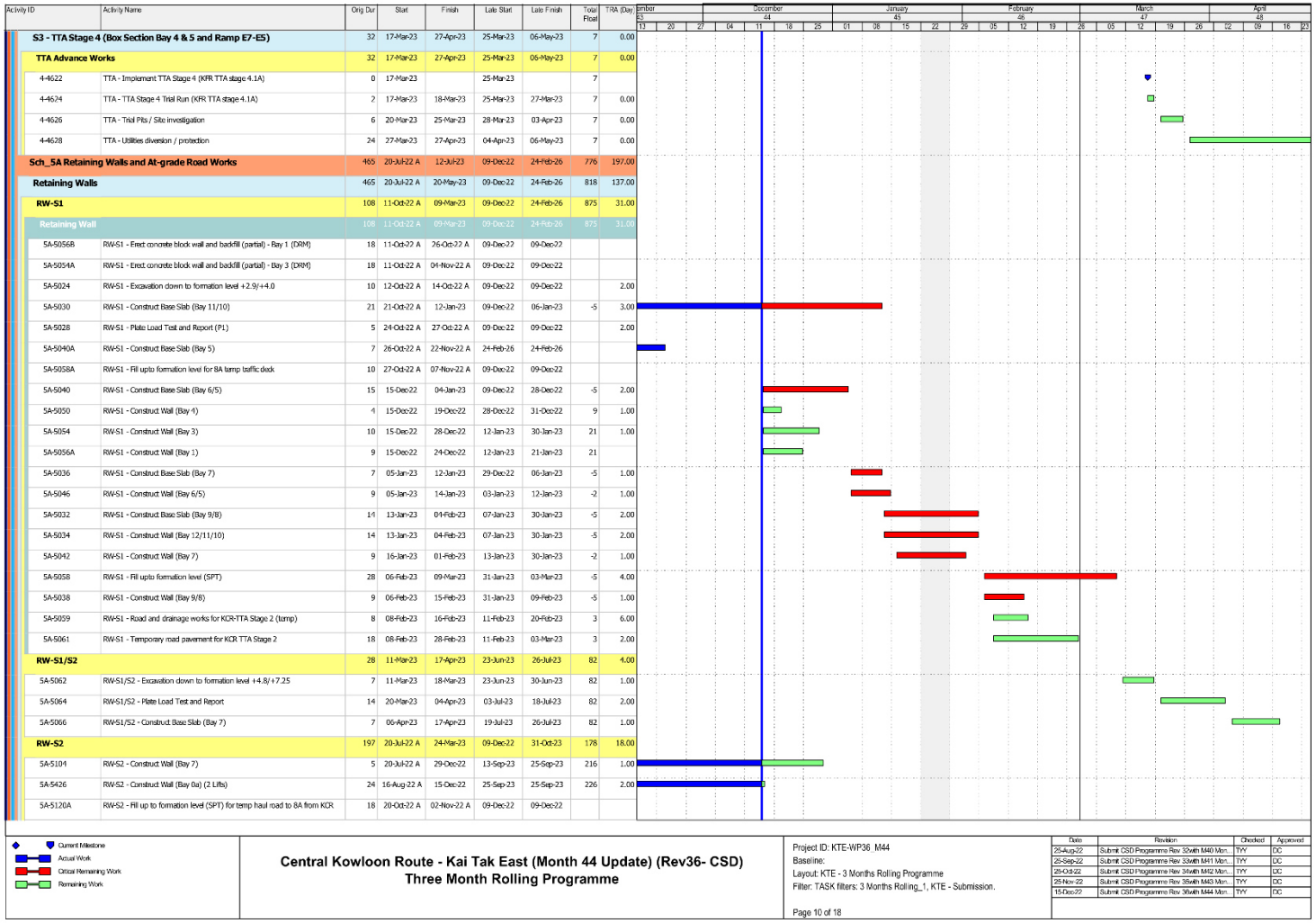


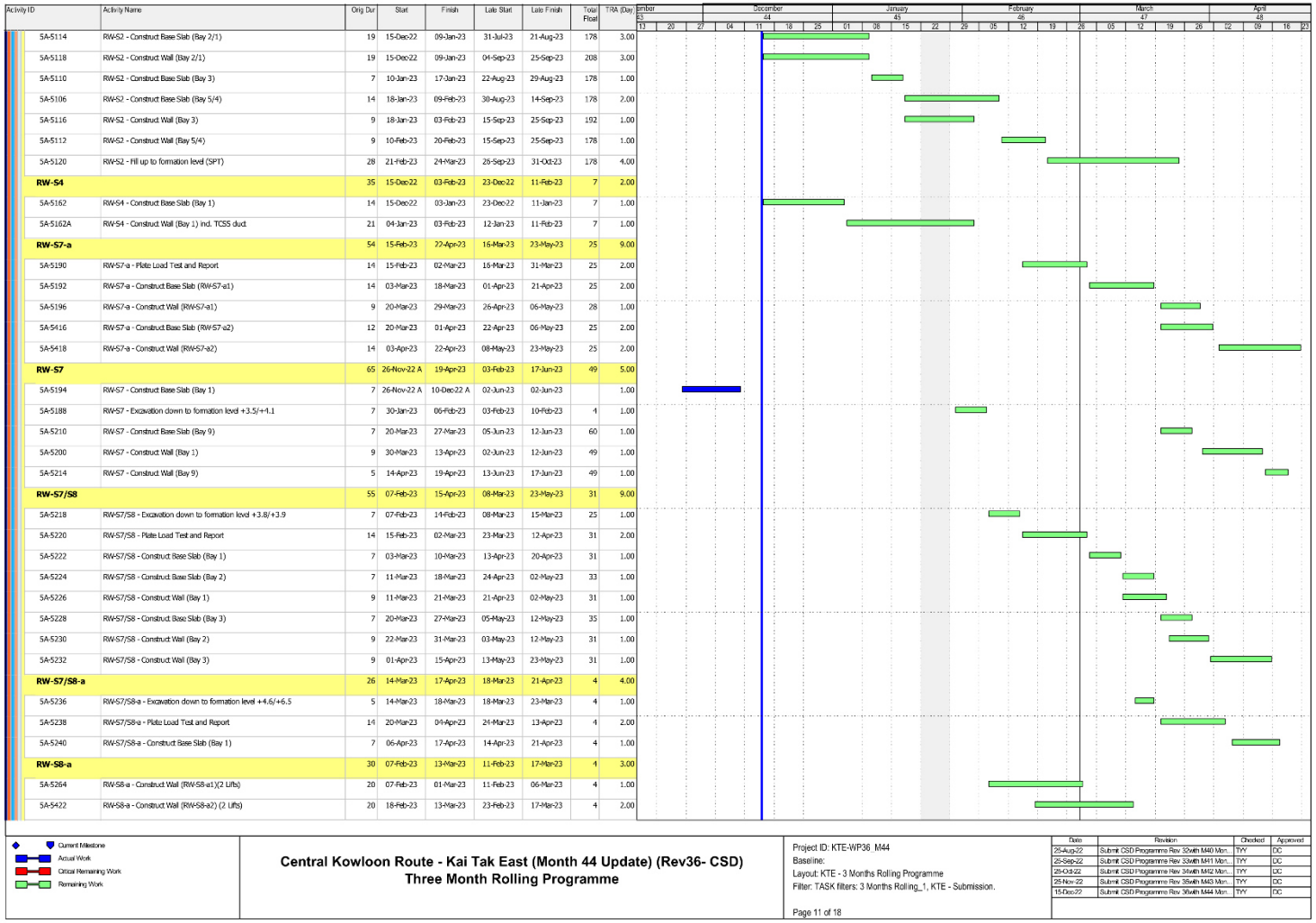
| Activity ID | Activity Name | Orig Dur | Start | Finish | Late Start | Late Finish | Total Float | TRA (Day) |
|---|---|---|---|---|---|---|---|---|
| 3.7-3926 | S9 - Movement Joint | 12 | 04-Feb-23 | 17-Feb-23 | 01-Feb-23 | 14-Feb-23 | -3 | 2.00 |
| 3.7-3923 | S9 - End wall construction (Abutment) | 15 | 04-Feb-23 | 21-Feb-23 | 21-Jan-23 | 14-Feb-23 | -6 | |
| 3.7-3930 | S9 - Final completion works | 24 | 11-Feb-23 | 10-Mar-23 | 04-Feb-23 | 03-Mar-23 | -6 | |
| 3.7-3928 | S9 - Road pavement; Road marking | 7 | 22-Feb-23 | 01-Mar-23 | 15-Feb-23 | 22-Feb-23 | -6 | 1.00 |
| 3.7-3932 | S9 - Completion of Bridge S9 | 0 | | 10-Mar-23 | | 03-Mar-23 | -6 | |
| **Sch_3.8 Bridge S1/S9 Works** | | 136 | 14-Oct-22 A | 15-Apr-23 | 08-Dec-22 | 24-Feb-26 | 847 | 47.00 |
| **S1/S9 - Deck** | | 115 | 14-Oct-22 A | 17-Mar-23 | 08-Dec-22 | 07-Feb-26 | 854 | 28.00 |
| **S1/S9 - Span 1D-1E (Stage 1)** | | 43 | 01-Nov-22 A | 29-Nov-22 A | 08-Dec-22 | 08-Dec-22 | | 4.00 |
| 3.8-4072a | S1/S9 - Span 1D-1E(R) Web and Soffit (2nd pour) (DRM) | 7 | 01-Nov-22 A | 11-Nov-22 A | 08-Dec-22 | 08-Dec-22 | | |
| 3.8-4076a | S1/S9 - Span 1D-1E(L) Web and Soffit (2nd pour) (DRM) | 7 | 01-Nov-22 A | 11-Nov-22 A | 08-Dec-22 | 08-Dec-22 | | |
| 3.8-4074 | S1/S9 - Span 1D-1E(R) Deck Section (1st pour) | 12 | 09-Nov-22 A | 29-Nov-22 A | 08-Dec-22 | 08-Dec-22 | | 2.00 |
| 3.8-4078 | S1/S9 - Span 1D-1E(L) Deck Section (1st pour) | 12 | 09-Nov-22 A | 29-Nov-22 A | 08-Dec-22 | 08-Dec-22 | | 2.00 |
| 3.8-4074a | S1/S9 - Span 1D-1E(R) Deck Section (2nd pour) (DRM) | 10 | 23-Nov-22 A | 29-Nov-22 A | 08-Dec-22 | 08-Dec-22 | | |
| 3.8-4078a | S1/S9 - Span 1D-1E(L) Deck Section (2nd pour) (DRM) | 10 | 23-Nov-22 A | 29-Nov-22 A | 08-Dec-22 | 08-Dec-22 | | |
| **S1/S9 - Span 1E-1F/1E-7A (Stage 1)** | | 61 | 14-Oct-22 A | 06-Jan-23 | 08-Dec-22 | 30-Dec-22 | -6 | 11.00 |
| 3.8-4080 | S1/S9 - Span 1E to 1F/7A Erect Steel Portal (over Kai Fuk Road) Night works (EB)(2-E) | 12 | 14-Oct-22 A | 15-Nov-22 A | 08-Dec-22 | 08-Dec-22 | | 0.00 |
| 3.8-4080C | S1/S9 - Span 1E to 1F/7A Fabrication Steel Portal(over Kai Fuk Road) Day works (EB)(2-E) | 10 | 14-Oct-22 A | 15-Nov-22 A | 08-Dec-22 | 08-Dec-22 | | |
| 3.8-4082 | S1/S9 - Span 1E-1F/7A Falsework and formworks (L & R) | 18 | 18-Nov-22 A | 29-Nov-22 A | 08-Dec-22 | 08-Dec-22 | | 3.00 |
| 3.8-4084 | S1/S9 - Span 1E-1F/7A (R) Web and Soffit | 10 | 30-Nov-22 A | 13-Dec-22 A | 08-Dec-22 | 08-Dec-22 | | 2.00 |
| 3.8-4086 | S1/S9 - Span 1E-1F/7A (L) Web and Soffit | 10 | 30-Nov-22 A | 13-Dec-22 A | 08-Dec-22 | 08-Dec-22 | | 2.00 |
| 3.8-4088 | S1/S9 - Span 1E-1F/7A (R) Deck Section | 10 | 14-Dec-22 A | 28-Dec-22 | 08-Dec-22 | 20-Dec-22 | -6 | 2.00 |
| 3.8-4090 | S1/S9 - Span 1E-1F/7A (L) Deck Section | 10 | 14-Dec-22 A | 28-Dec-22 | 08-Dec-22 | 20-Dec-22 | -6 | 2.00 |
| 3.8-4091 | S1/S9 - Span 1D-1E-1F Post-tensioning and Grouting (Stage 1) | 7 | 29-Dec-22 | 06-Jan-23 | 20-Dec-22 | 30-Dec-22 | -6 | |
| **S1/S9 - Span 1F-1G (R) (Stage 2)** | | 56 | 16-Nov-22 A | 30-Jan-23 | 30-Dec-22 | 24-Jan-23 | -1 | 5.00 |
| 3.8-4092 | S1/S9 - Span 1F-1G(R) Falsework and formworks | 16 | 16-Nov-22 A | 03-Dec-22 A | 30-Dec-22 | 30-Dec-22 | | 3.00 |
| 3.8-4094 | S1/S9 - Span 1F-1G(R) Web and Soffit | 9 | 14-Dec-22 A | 11-Jan-23 | 30-Dec-22 | 05-Jan-23 | -6 | 1.00 |
| 3.8-4096 | S1/S9 - Span 1F-1G(R) Deck Section | 9 | 12-Jan-23 | 21-Jan-23 | 05-Jan-23 | 16-Jan-23 | -6 | 1.00 |
| 3.8-4097 | S1/S9 - Span 1F-1G(R) Post-tensioning and Grouting (Stage 2) | 9 | 22-Jan-23 | 30-Jan-23 | 16-Jan-23 | 24-Jan-23 | -6 | |
| **S1/S9 - Span 7A-7B (L) (Stage 3)** | | 51 | 11-Jan-23 | 17-Mar-23 | 04-Jan-23 | 07-Feb-26 | 854 | 8.00 |
| 3.8-4098 | S1/S9 - Span 7A-7B(L) Falsework and formworks | 11 | 11-Jan-23 | 30-Jan-23 | 04-Jan-23 | 16-Jan-23 | -6 | 2.00 |
| 3.8-4100 | S1/S9 - Span 7A-7B(L) Install Bearings | 6 | 31-Jan-23 | 06-Feb-23 | 17-Jan-23 | 30-Jan-23 | -6 | 2.00 |
| 3.8-4102 | S1/S9 - Span 7A-7B(L) Web and Soffit | 12 | 03-Feb-23 | 16-Feb-23 | 20-Jan-23 | 09-Feb-23 | -6 | 2.00 |
| 3.8-4104 | S1/S9 - Span 7A-7B(L) Deck Section | 12 | 17-Feb-23 | 02-Mar-23 | 10-Feb-23 | 23-Feb-23 | -6 | 2.00 |
| 3.8-4106 | S1/S9 - Span 7A-7B(L) Post-tensioning and Grouting (Stage 3) | 7 | 03-Mar-23 | 10-Mar-23 | 24-Feb-23 | 03-Mar-23 | -6 | 0.00 |
| 3.8-4108 | S1/S9 - Bridge S1/S9, Remove Falsework, formwork and Trusses | 6 | 11-Mar-23 | 17-Mar-23 | 02-Feb-26 | 07-Feb-26 | 854 | 0.00 |
| **S1/S9 - Miscellaneous Works** | | 86 | 22-Dec-22 | 15-Apr-23 | 16-Dec-22 | 24-Feb-26 | 847 | 19.00 |
| 3.8-4110 | S1/S9 - Bridge Drainage works (R) | 28 | 22-Dec-22 | 02-Feb-23 | 30-Dec-22 | 08-Feb-23 | 5 | 4.00 |
| 3.8-4112 | S1/S9 (R) - Install Profile barrier / Parapet Wall | 30 | 22-Dec-22 | 06-Feb-23 | 16-Dec-22 | 30-Jan-23 | -5 | 3.00 |



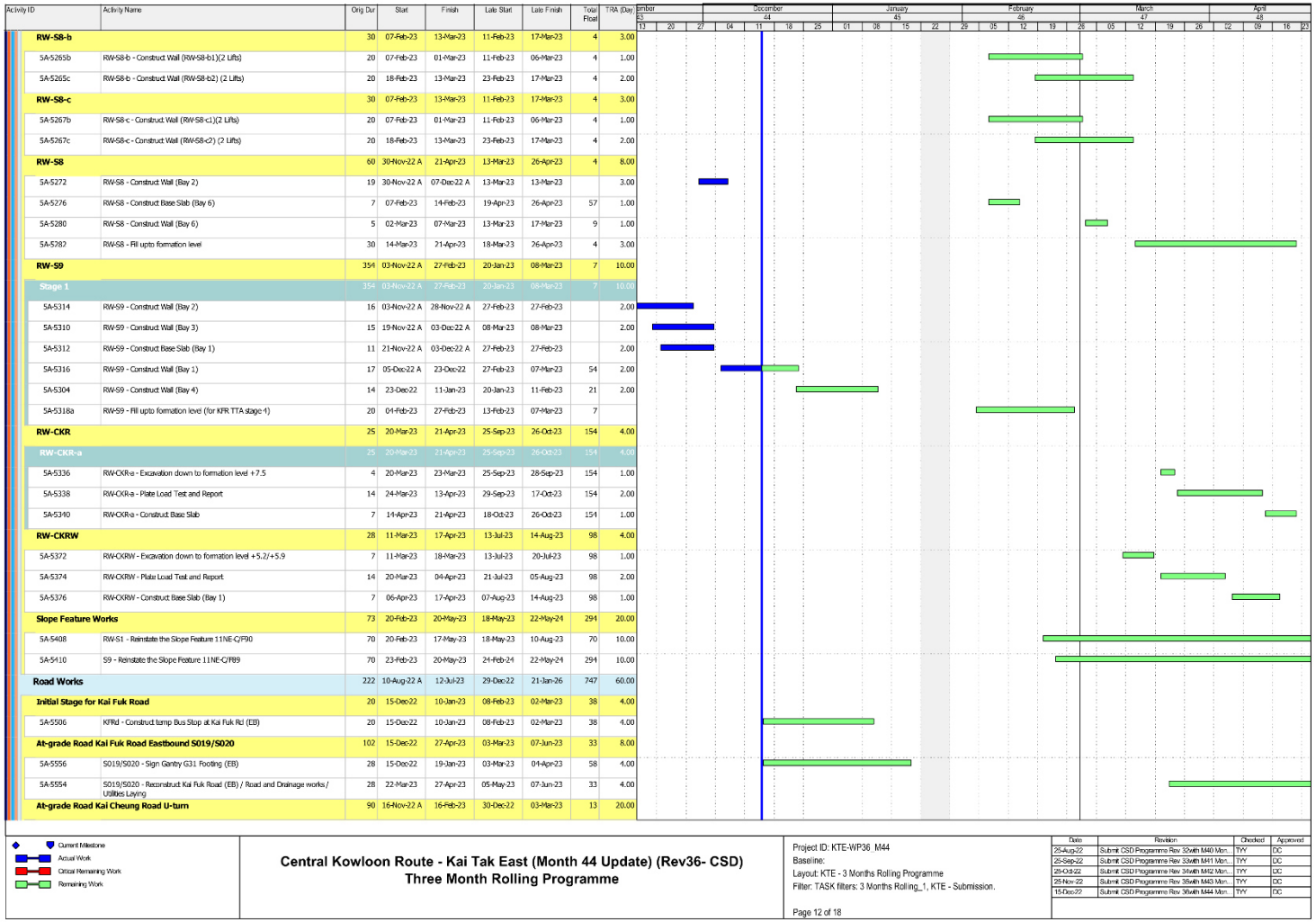
| Date | Revision | Checked | Approved |
|---|---|---|---|
| 25-Aug-22 | Submit CSD Programme Rev 32with M40 Mon... | TYY | DC |
| 25-Sep-22 | Submit CSD Programme Rev 33with M41 Mon... | TYY | DC |
| 25-Oct-22 | Submit CSD Programme Rev 34with M42 Mon... | TYY | DC |
| 25-Nov-22 | Submit CSD Programme Rev 35with M43 Mon... | TYY | DC |
| 15-Dec-22 | Submit CSD Programme Rev 36with M44 Mon... | TYY | DC |

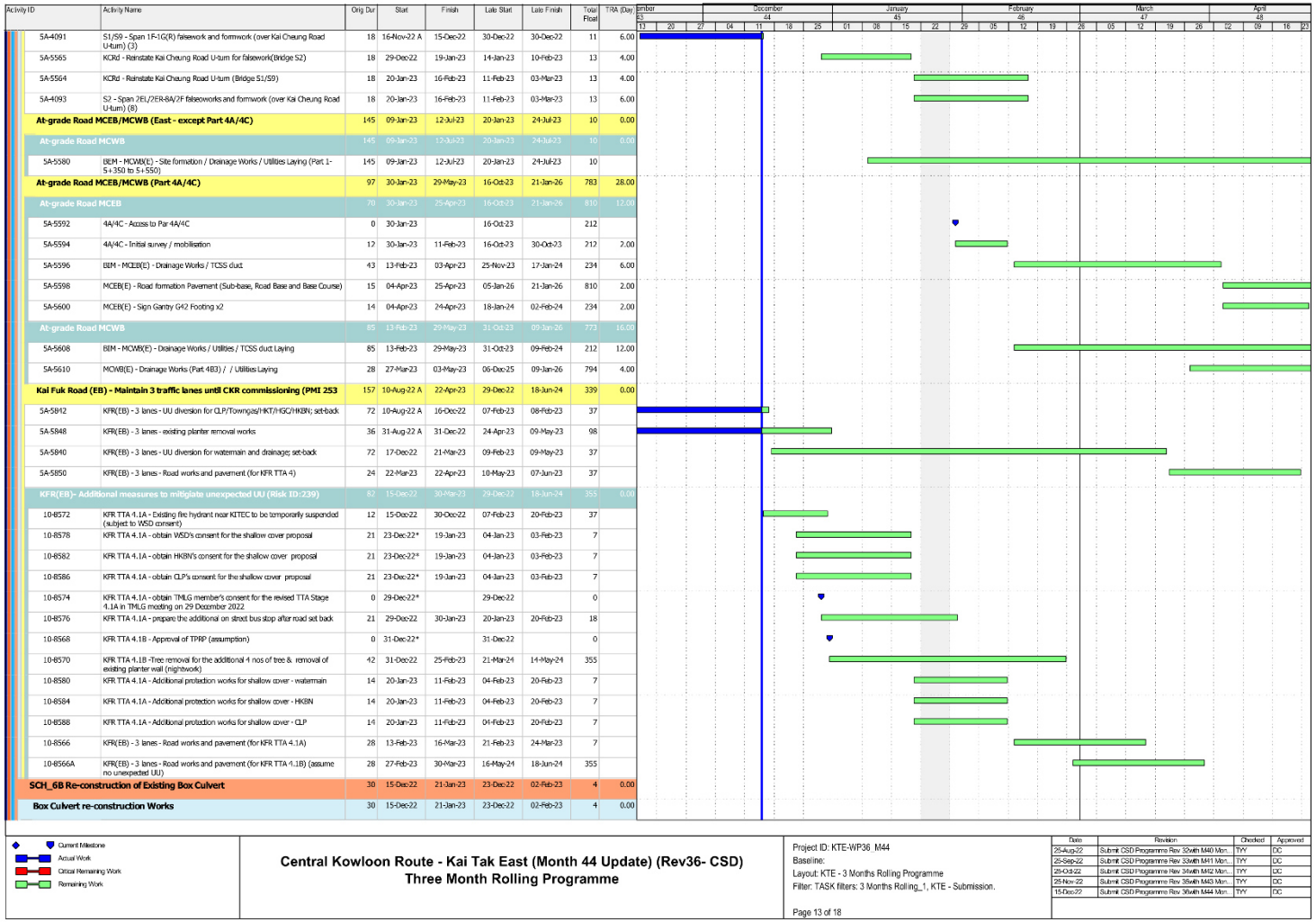

Activity ID
Activity Name
Orig Dur
Start
Finish
Late Start
Late Finish
Total Float
TRA (Day)
December
January
February
March
April
3.8-4114 S1/S9 - Road Lighting and Road Furniture 28 11-Jan-23 18-Feb-23 12-Jan-23 20-Feb-23 1 4.00
3.8-4113 S1/S9 - End wall construction (Abutment) 18 30-Jan-23 20-Feb-23 11-Feb-23 03-Mar-23 10
3.8-4118 BEM - S1/S9 (L) - Install Profile barrier / Parapet Wall / Planter / TCSS duct (L) 38 06-Feb-23 21-Mar-23 23-Feb-23 12-Apr-23 15 3.00
3.8-4116 S1/S9 - Movement Joint 12 06-Feb-23 18-Feb-23 31-Jan-23 13-Feb-23 -5 2.00
3.8-4122 BEM - S1/S9 - Erect Sign Gantry G64 4 20-Feb-23 23-Feb-23 03-Oct-23 06-Oct-23 183 0.00
3.8-4120 S1/S9 - (R) Road pavement; Road marking 6 20-Feb-23 25-Feb-23 14-Feb-23 20-Feb-23 -5 1.00
3.8-4124 S1/S9 - (R) Final completion works; Ready to Open 10 27-Feb-23 09-Mar-23 21-Feb-23 03-Mar-23 -5 0.00
3.8-4126 S1/S9 - (R) Open to Public 0 10-Mar-23 03-Mar-23 -6
3.8-4110a S1/S9 - Bridge Drainage works (L) 14 18-Mar-23 03-Apr-23 09-Feb-26 24-Feb-26 854
3.8-4127 S1/S9 - Remove Steel Portal (over KRR) Night works (2 & 3) 18 22-Mar-23 15-Apr-23 13-Apr-23 04-May-23 15 2.00
Sch_3.9 Bridge CKRW Works 27 09-Jan-23 15-Feb-23 04-Aug-23 06-Sep-23 166 4.00
CKRW - Pile Caps, Pier / Abutment 27 09-Jan-23 15-Feb-23 04-Aug-23 06-Sep-23 166 4.00
Abutment A-K1-CKRW 27 09-Jan-23 15-Feb-23 04-Aug-23 06-Sep-23 166 4.00
3.9-4236 CKRW - Construct Abutment A-K1-CKRW 18 09-Jan-23 04-Feb-23 04-Aug-23 24-Aug-23 164 4.00
3.9-4238 CKRW - A-K1-CKRW Install Permeate Membrane and Backfill 9 06-Feb-23 15-Feb-23 28-Aug-23 06-Sep-23 166 0.00
Sch_4.2 Slip Road Underpass S3 138 23-Sep-22 A 27-Apr-23 31-Dec-22 12-May-23 12 24.00
S3 - Not related to TTA (Ramp W4-W1) 46 18-Feb-23 17-Apr-23 15-Mar-23 12-May-23 21 11.00
ELS for Underpass (Ramp) 46 18-Feb-23 17-Apr-23 15-Mar-23 12-May-23 21 11.00
4-4504 S3 - Install cofferdam 18 18-Feb-23 10-Mar-23 15-Mar-23 04-Apr-23 21 6.00
4-4508 S3 - Excavation down to 0.5m below 1st waling & strut; install waling & strut 11 11-Mar-23 23-Mar-23 06-Apr-23 21-Apr-23 21 2.00
4-4510 S3 - Excavation down to 0.5m below 2nd waling & strut; install waling & strut 13 24-Mar-23 12-Apr-23 22-Apr-23 08-May-23 21 2.00
4-4512 S3 - Excavation down to final formation level 4 13-Apr-23 17-Apr-23 09-May-23 12-May-23 21 1.00
S3 - TTA Stage 2 (Box Section Bay 2 & 3) 86 23-Sep-22 A 21-Feb-23 31-Dec-22 07-Mar-23 12 13.00
ELS for Underpass 23 23-Sep-22 A 20-Dec-22 31-Dec-22 06-Jan-23 12 2.00
4-4606 S3 - Excavation down to final formation level 8 23-Sep-22 A 20-Dec-22 31-Dec-22 06-Jan-23 12 2.00
4-4605 S3 - Excavation down to 0.5m below 4th waling & strut; install waling & strut 16 25-Nov-22 A 08-Dec-22 A 31-Dec-22 31-Dec-22
RC Strucutres 44 11-Nov-22 A 31-Jan-23 07-Jan-23 14-Feb-23 12 6.00
Box Sections 44 11-Nov-22 A 31-Jan-23 07-Jan-23 14-Feb-23 12 6.00
Bay B2 (L=10m) FS Plant Room 42 11-Nov-22 A 22-Dec-22 07-Jan-23 19-Jan-23 21 3.00
4-4608 S3-B2 - Construct Base slab (with FS plantroom) 18 11-Nov-22 A 25-Nov-22 A 07-Jan-23 07-Jan-23 1.00
4-4610 S3-B2 - Construct External Wall (with FS plantroom) 24 25-Nov-22 A 10-Dec-22 A 12-Jan-23 12-Jan-23 1.00
4-4612 S3-B2 - Construct Top Slab (with FS plantroom) 24 12-Dec-22 A 22-Dec-22 12-Jan-23 19-Jan-23 21 1.00
Bay B3 (L=10m) 27 21-Dec-22 31-Jan-23 07-Jan-23 14-Feb-23 12 3.00
4-4614 S3-B3 - Construct Base slab 9 21-Dec-22 03-Jan-23 07-Jan-23 17-Jan-23 12 1.00
4-4616 S3-B3 - Construct External Wall 9 04-Jan-23 13-Jan-23 18-Jan-23 03-Feb-23 12 1.00
4-4618 S3-B3 - Construct Top Slab 9 14-Jan-23 31-Jan-23 04-Feb-23 14-Feb-23 12 1.00
Miscellaneous Works 18 01-Feb-23 21-Feb-23 15-Feb-23 07-Mar-23 12 5.00
4-4620 S3 - Box Section Backfilling upto GL 18 01-Feb-23 21-Feb-23 15-Feb-23 07-Mar-23 12 5.00
Current Milestone
Actual Work
Critical Remaining Work
Remaining Work
Central Kowloon Route - Kai Tak East (Month 44 Update) (Rev36- CSD)
Three Month Rolling Programme
Project ID: KTE-WP36_M44
Baseline:
Layout: KTE - 3 Months Rolling Programme
Filter: TASK filters: 3 Months Rolling_1, KTE - Submission.
Page 9 of 18
Date
Revision
Checked
Approved
25-Aug-22 Submit CSD Programme Rev 32with M40 Mon... TYY DC
25-Sep-22 Submit CSD Programme Rev 33with M41 Mon... TYY DC
25-Oct-22 Submit CSD Programme Rev 34with M42 Mon... TYY DC
25-Nov-22 Submit CSD Programme Rev 35with M43 Mon... TYY DC
15-Dec-22 Submit CSD Programme Rev 36with M44 Mon... TYY DC


Central Kowloon Route - Kai Tak East (Month 44 Update) (Rev36- CSD)
Three Month Rolling Programme
Current Milestone
Actual Work
Critical Remaining Work
Remaining Work
Project ID: KTE-WP36_M44
Baseline:
Layout: KTE - 3 Months Rolling Programme
Filter: TASK filters: 3 Months Rolling_1, KTE - Submission.
Page 10 of 18



| Activity ID | Activity Name | Orig Dur | Start | Finish | Late Start | Late Finish | Total Float | TRA (Day) |
|---|---|---|---|---|---|---|---|---|
| SA-5114 | RW-S2 - Construct Base Slab (Bay 2/1) | 19 | 15-Dec-22 | 09-Jan-23 | 31-Jul-23 | 21-Aug-23 | 178 | 3.00 |
| SA-5118 | RW-S2 - Construct Wall (Bay 2/1) | 19 | 15-Dec-22 | 09-Jan-23 | 04-Sep-23 | 25-Sep-23 | 208 | 3.00 |
| SA-5110 | RW-S2 - Construct Base Slab (Bay 3) | 7 | 10-Jan-23 | 17-Jan-23 | 22-Aug-23 | 29-Aug-23 | 178 | 1.00 |
| SA-5106 | RW-S2 - Construct Base Slab (Bay 5/4) | 14 | 18-Jan-23 | 09-Feb-23 | 30-Aug-23 | 14-Sep-23 | 178 | 2.00 |
| SA-5116 | RW-S2 - Construct Wall (Bay 3) | 9 | 18-Jan-23 | 03-Feb-23 | 15-Sep-23 | 25-Sep-23 | 192 | 1.00 |
| SA-5112 | RW-S2 - Construct Wall (Bay 5/4) | 9 | 10-Feb-23 | 20-Feb-23 | 15-Sep-23 | 25-Sep-23 | 178 | 1.00 |
| SA-5120 | RW-S2 - Fill up to formation level (SPT) | 28 | 21-Feb-23 | 24-Mar-23 | 26-Sep-23 | 31-Oct-23 | 178 | 4.00 |
| **RW-S4** | | 35 | 15-Dec-22 | 03-Feb-23 | 23-Dec-22 | 11-Feb-23 | 7 | 2.00 |
| SA-5162 | RW-S4 - Construct Base Slab (Bay 1) | 14 | 15-Dec-22 | 03-Jan-23 | 23-Dec-22 | 11-Jan-23 | 7 | 1.00 |
| SA-5162A | RW-S4 - Construct Wall (Bay 1) incl. TCSS duct | 21 | 04-Jan-23 | 03-Feb-23 | 12-Jan-23 | 11-Feb-23 | 7 | 1.00 |
| **RW-S7-a** | | 54 | 15-Feb-23 | 22-Apr-23 | 16-Mar-23 | 23-May-23 | 25 | 9.00 |
| SA-5190 | RW-S7-a - Plate Load Test and Report | 14 | 15-Feb-23 | 02-Mar-23 | 16-Mar-23 | 31-Mar-23 | 25 | 2.00 |
| SA-5192 | RW-S7-a - Construct Base Slab (RW-S7-a1) | 14 | 03-Mar-23 | 18-Mar-23 | 01-Apr-23 | 21-Apr-23 | 25 | 2.00 |
| SA-5196 | RW-S7-a - Construct Wall (RW-S7-a1) | 9 | 20-Mar-23 | 29-Mar-23 | 26-Apr-23 | 06-May-23 | 28 | 1.00 |
| SA-5416 | RW-S7-a - Construct Base Slab (RW-S7-a2) | 12 | 20-Mar-23 | 01-Apr-23 | 22-Apr-23 | 06-May-23 | 25 | 2.00 |
| SA-5418 | RW-S7-a - Construct Wall (RW-S7-a2) | 14 | 03-Apr-23 | 22-Apr-23 | 08-May-23 | 23-May-23 | 25 | 2.00 |
| **RW-S7** | | 65 | 26-Nov-22 A | 19-Apr-23 | 03-Feb-23 | 17-Jun-23 | 49 | 5.00 |
| SA-5194 | RW-S7 - Construct Base Slab (Bay 1) | 7 | 26-Nov-22 A | 10-Dec-22 A | 02-Jun-23 | 02-Jun-23 | | 1.00 |
| SA-5188 | RW-S7 - Excavation down to formation level +3.5/+4.1 | 7 | 30-Jan-23 | 06-Feb-23 | 03-Feb-23 | 10-Feb-23 | 4 | 1.00 |
| SA-5210 | RW-S7 - Construct Base Slab (Bay 9) | 7 | 20-Mar-23 | 27-Mar-23 | 05-Jun-23 | 12-Jun-23 | 60 | 1.00 |
| SA-5200 | RW-S7 - Construct Wall (Bay 1) | 9 | 30-Mar-23 | 13-Apr-23 | 02-Jun-23 | 12-Jun-23 | 49 | 1.00 |
| SA-5214 | RW-S7 - Construct Wall (Bay 9) | 5 | 14-Apr-23 | 19-Apr-23 | 13-Jun-23 | 17-Jun-23 | 49 | 1.00 |
| **RW-S7/S8** | | 55 | 07-Feb-23 | 15-Apr-23 | 08-Mar-23 | 23-May-23 | 31 | 9.00 |
| SA-5218 | RW-S7/S8 - Excavation down to formation level +3.8/+3.9 | 7 | 07-Feb-23 | 14-Feb-23 | 08-Mar-23 | 15-Mar-23 | 25 | 1.00 |
| SA-5220 | RW-S7/S8 - Plate Load Test and Report | 14 | 15-Feb-23 | 02-Mar-23 | 23-Mar-23 | 12-Apr-23 | 31 | 2.00 |
| SA-5222 | RW-S7/S8 - Construct Base Slab (Bay 1) | 7 | 03-Mar-23 | 10-Mar-23 | 13-Apr-23 | 20-Apr-23 | 31 | 1.00 |
| SA-5224 | RW-S7/S8 - Construct Base Slab (Bay 2) | 7 | 11-Mar-23 | 18-Mar-23 | 24-Apr-23 | 02-May-23 | 33 | 1.00 |
| SA-5226 | RW-S7/S8 - Construct Wall (Bay 1) | 9 | 11-Mar-23 | 21-Mar-23 | 21-Apr-23 | 02-May-23 | 31 | 1.00 |
| SA-5228 | RW-S7/S8 - Construct Base Slab (Bay 3) | 7 | 20-Mar-23 | 27-Mar-23 | 05-May-23 | 12-May-23 | 35 | 1.00 |
| SA-5230 | RW-S7/S8 - Construct Wall (Bay 2) | 9 | 22-Mar-23 | 31-Mar-23 | 03-May-23 | 12-May-23 | 31 | 1.00 |
| SA-5232 | RW-S7/S8 - Construct Wall (Bay 3) | 9 | 01-Apr-23 | 15-Apr-23 | 13-May-23 | 23-May-23 | 31 | 1.00 |
| **RW-S7/S8-a** | | 26 | 14-Mar-23 | 17-Apr-23 | 18-Mar-23 | 21-Apr-23 | 4 | 4.00 |
| SA-5236 | RW-S7/S8-a - Excavation down to formation level +4.6/+6.5 | 5 | 14-Mar-23 | 18-Mar-23 | 18-Mar-23 | 23-Mar-23 | 4 | 1.00 |
| SA-5238 | RW-S7/S8-a - Plate Load Test and Report | 14 | 20-Mar-23 | 04-Apr-23 | 24-Mar-23 | 13-Apr-23 | 4 | 2.00 |
| SA-5240 | RW-S7/S8-a - Construct Base Slab (Bay 1) | 7 | 06-Apr-23 | 17-Apr-23 | 14-Apr-23 | 21-Apr-23 | 4 | 1.00 |
| **RW-S8-a** | | 30 | 07-Feb-23 | 13-Mar-23 | 11-Feb-23 | 17-Mar-23 | 4 | 3.00 |
| SA-5264 | RW-S8-a - Construct Wall (RW-S8-a1)(2 Lifts) | 20 | 07-Feb-23 | 01-Mar-23 | 11-Feb-23 | 06-Mar-23 | 4 | 1.00 |
| SA-5422 | RW-S8-a - Construct Wall (RW-S8-a2) (2 Lifts) | 20 | 18-Feb-23 | 13-Mar-23 | 23-Feb-23 | 17-Mar-23 | 4 | 2.00 |


Activity ID
Activity Name
Orig Dur
Start
Finish
Late Start
Late Finish
Total Float
TRA (Day)
November
December
January
February
March
April
RW-S8-b
5A-5265b RW-S8-b - Construct Wall (RW-S8-b1)(2 Lifts)
5A-5265c RW-S8-b - Construct Wall (RW-S8-b2) (2 Lifts)
RW-S8-c
5A-5267b RW-S8-c - Construct Wall (RW-S8-c1)(2 Lifts)
5A-5267c RW-S8-c - Construct Wall (RW-S8-c2) (2 Lifts)
RW-S8
5A-5272 RW-S8 - Construct Wall (Bay 2)
5A-5276 RW-S8 - Construct Base Slab (Bay 6)
5A-5280 RW-S8 - Construct Wall (Bay 6)
5A-5282 RW-S8 - Fill upto formation level
RW-S9
Stage 1
5A-5314 RW-S9 - Construct Wall (Bay 2)
5A-5310 RW-S9 - Construct Wall (Bay 3)
5A-5312 RW-S9 - Construct Base Slab (Bay 1)
5A-5316 RW-S9 - Construct Wall (Bay 1)
5A-5304 RW-S9 - Construct Wall (Bay 4)
5A-5318a RW-S9 - Fill upto formation level (for KFR TTA stage 4)
RW-CKR
RW-CKR-a
5A-5336 RW-CKR-a - Excavation down to formation level +7.5
5A-5338 RW-CKR-a - Plate Load Test and Report
5A-5340 RW-CKR-a - Construct Base Slab
RW-CKRW
5A-5372 RW-CKRW - Excavation down to formation level +5.2/+5.9
5A-5374 RW-CKRW - Plate Load Test and Report
5A-5376 RW-CKRW - Construct Base Slab (Bay 1)
Slope Feature Works
5A-5408 RW-S1 - Reinstate the Slope Feature 11NE-C/F90
5A-5410 S9 - Reinstate the Slope Feature 11NE-C/F89
Road Works
Initial Stage for Kai Fuk Road
5A-5506 KFRd - Construct temp Bus Stop at Kai Fuk Rd (EB)
At-grade Road Kai Fuk Road Eastbound S019/S020
5A-5556 S019/S020 - Sign Gantry G31 Footing (EB)
5A-5554 S019/S020 - Reconstruct Kai Fuk Road (EB) / Road and Drainage works / Utilities Laying
At-grade Road Kai Cheung Road U-turn
Current Milestone
Actual Work
Critical Remaining Work
Remaining Work
Central Kowloon Route - Kai Tak East (Month 44 Update) (Rev36- CSD)
Three Month Rolling Programme
Project ID: KTE-WP36_M44
Baseline:
Layout: KTE - 3 Months Rolling Programme
Filter: TASK filters: 3 Months Rolling_1, KTE - Submission.
Page 12 of 18
Date
Revision
Checked
Approved
25-Aug-22 Submit CSD Programme Rev 32with M40 Mon... TYY DC
25-Sep-22 Submit CSD Programme Rev 33with M41 Mon... TYY DC
25-Oct-22 Submit CSD Programme Rev 34with M42 Mon... TYY DC
25-Nov-22 Submit CSD Programme Rev 35with M43 Mon... TYY DC
15-Dec-22 Submit CSD Programme Rev 36with M44 Mon... TYY DC



| Activity ID | Activity Name | Orig Dur | Start | Finish | Late Start | Late Finish | Total Float | TRA (Day) |
|---|---|---|---|---|---|---|---|---|
| 5A-4091 | S1/S9 - Span 1F-1G(R) falsework and formwork (over Kai Cheung Road U-turn) (3) | 18 | 16-Nov-22 A | 15-Dec-22 | 30-Dec-22 | 30-Dec-22 | 11 | 6.00 |
| 5A-5565 | KCRd - Reinstate Kai Cheung Road U-turn for falsework(Bridge S2) | 18 | 29-Dec-22 | 19-Jan-23 | 14-Jan-23 | 10-Feb-23 | 13 | 4.00 |
| 5A-5564 | KCRd - Reinstate Kai Cheung Road U-turn (Bridge S1/S9) | 18 | 20-Jan-23 | 16-Feb-23 | 11-Feb-23 | 03-Mar-23 | 13 | 4.00 |
| 5A-4093 | S2 - Span 2E1/2ER-8A/2F falseworks and formwork (over Kai Cheung Road U-turn) (8) | 18 | 20-Jan-23 | 16-Feb-23 | 11-Feb-23 | 03-Mar-23 | 13 | 6.00 |
| **At-grade Road MCEB/MCWB (East - except Part 4A/4C)** | | 145 | 09-Jan-23 | 12-Jul-23 | 20-Jan-23 | 24-Jul-23 | 10 | 0.00 |
| **At-grade Road MCWB** | | 145 | 09-Jan-23 | 12-Jul-23 | 20-Jan-23 | 24-Jul-23 | 10 | 0.00 |
| 5A-5580 | BIM - MCWB(E) - Site formation / Drainage Works / Utilities Laying (Part 1-5+350 to 5+550) | 145 | 09-Jan-23 | 12-Jul-23 | 20-Jan-23 | 24-Jul-23 | 10 | |
| **At-grade Road MCEB/MCWB (Part 4A/4C)** | | 97 | 30-Jan-23 | 29-May-23 | 16-Oct-23 | 21-Jan-26 | 783 | 28.00 |
| **At-grade Road MCEB** | | 70 | 30-Jan-23 | 25-Apr-23 | 16-Oct-23 | 21-Jan-26 | 810 | 12.00 |
| 5A-5592 | 4A/4C - Access to Par 4A/4C | 0 | 30-Jan-23 | | 16-Oct-23 | | 212 | |
| 5A-5594 | 4A/4C - Initial survey / mobilisation | 12 | 30-Jan-23 | 11-Feb-23 | 16-Oct-23 | 30-Oct-23 | 212 | 2.00 |
| 5A-5596 | BIM - MCEB(E) - Drainage Works / TCSS duct | 43 | 13-Feb-23 | 03-Apr-23 | 25-Nov-23 | 17-Jan-24 | 234 | 6.00 |
| 5A-5598 | MCEB(E) - Road formation Pavement (Sub-base, Road Base and Base Course) | 15 | 04-Apr-23 | 25-Apr-23 | 05-Jan-26 | 21-Jan-26 | 810 | 2.00 |
| 5A-5600 | MCEB(E) - Sign Gantry G42 Footing x2 | 14 | 04-Apr-23 | 24-Apr-23 | 18-Jan-24 | 02-Feb-24 | 234 | 2.00 |
| **At-grade Road MCWB** | | 85 | 13-Feb-23 | 29-May-23 | 31-Oct-23 | 09-Jan-26 | 773 | 16.00 |
| 5A-5608 | BIM - MCWB(E) - Drainage Works / Utilities / TCSS duct Laying | 85 | 13-Feb-23 | 29-May-23 | 31-Oct-23 | 09-Feb-24 | 212 | 12.00 |
| 5A-5610 | MCWB(E) - Drainage Works (Part 4B3) / / Utilities Laying | 28 | 27-Mar-23 | 03-May-23 | 06-Dec-25 | 09-Jan-26 | 794 | 4.00 |
| **Kai Fuk Road (EB) - Maintain 3 traffic lanes until CKR commissioning (PMI 253** | | 157 | 10-Aug-22 A | 22-Apr-23 | 29-Dec-22 | 18-Jun-24 | 339 | 0.00 |
| 5A-5842 | KFR(EB) - 3 lanes - UU diversion for CLP/Towngas/HKT/HGC/HKBN; set-back | 72 | 10-Aug-22 A | 16-Dec-22 | 07-Feb-23 | 08-Feb-23 | 37 | |
| 5A-5848 | KFR(EB) - 3 lanes - existing planter removal works | 36 | 31-Aug-22 A | 31-Dec-22 | 24-Apr-23 | 09-May-23 | 98 | |
| 5A-5840 | KFR(EB) - 3 lanes - UU diversion for watermain and drainage; set-back | 72 | 17-Dec-22 | 21-Mar-23 | 09-Feb-23 | 09-May-23 | 37 | |
| 5A-5850 | KFR(EB) - 3 lanes - Road works and pavement (for KFR TTA 4) | 24 | 22-Mar-23 | 22-Apr-23 | 10-May-23 | 07-Jun-23 | 37 | |
| **KFR(EB)- Additional measures to mitigate unexpected UU (Risk ID:239)** | | 82 | 15-Dec-22 | 30-Mar-23 | 29-Dec-22 | 18-Jun-24 | 355 | 0.00 |
| 10-8572 | KFR TTA 4.1A - Existing fire hydrant near KITEC to be temporarily suspended (subject to WSD consent) | 12 | 15-Dec-22 | 30-Dec-22 | 07-Feb-23 | 20-Feb-23 | 37 | |
| 10-8578 | KFR TTA 4.1A - obtain WSD's consent for the shallow cover proposal | 21 | 23-Dec-22* | 19-Jan-23 | 04-Jan-23 | 03-Feb-23 | 7 | |
| 10-8582 | KFR TTA 4.1A - obtain HKBN's consent for the shallow cover proposal | 21 | 23-Dec-22* | 19-Jan-23 | 04-Jan-23 | 03-Feb-23 | 7 | |
| 10-8586 | KFR TTA 4.1A - obtain CLP's consent for the shallow cover proposal | 21 | 23-Dec-22* | 19-Jan-23 | 04-Jan-23 | 03-Feb-23 | 7 | |
| 10-8574 | KFR TTA 4.1A - obtain TMLG member's consent for the revised TTA Stage 4.1A in TMLG meeting on 29 December 2022 | 0 | 29-Dec-22* | | 29-Dec-22 | | 0 | |
| 10-8576 | KFR TTA 4.1A - prepare the additional on street bus stop after road set back | 21 | 29-Dec-22 | 30-Jan-23 | 20-Jan-23 | 20-Feb-23 | 18 | |
| 10-8568 | KFR TTA 4.1B - Approval of TPRP (assumption) | 0 | 31-Dec-22* | | 31-Dec-22 | | 0 | |
| 10-8570 | KFR TTA 4.1B -Tree removal for the additional 4 nos of tree & removal of existing planter wall (nightwork) | 42 | 31-Dec-22 | 25-Feb-23 | 21-Mar-24 | 14-May-24 | 355 | |
| 10-8580 | KFR TTA 4.1A - Additional protection works for shallow cover - watermain | 14 | 20-Jan-23 | 11-Feb-23 | 04-Feb-23 | 20-Feb-23 | 7 | |
| 10-8584 | KFR TTA 4.1A - Additional protection works for shallow cover - HKBN | 14 | 20-Jan-23 | 11-Feb-23 | 04-Feb-23 | 20-Feb-23 | 7 | |
| 10-8588 | KFR TTA 4.1A - Additional protection works for shallow cover - CLP | 14 | 20-Jan-23 | 11-Feb-23 | 04-Feb-23 | 20-Feb-23 | 7 | |
| 10-8566 | KFR(EB) - 3 lanes - Road works and pavement (for KFR TTA 4.1A) | 28 | 13-Feb-23 | 16-Mar-23 | 21-Feb-23 | 24-Mar-23 | 7 | |
| 10-8566A | KFR(EB) - 3 lanes - Road works and pavement (for KFR TTA 4.1B) (assume no unexpected UU) | 28 | 27-Feb-23 | 30-Mar-23 | 16-May-24 | 18-Jun-24 | 355 | |
| **SCH_6B Re-construction of Existing Box Culvert** | | 30 | 15-Dec-22 | 21-Jan-23 | 23-Dec-22 | 02-Feb-23 | 4 | 0.00 |
| **Box Culvert re-construction Works** | | 30 | 15-Dec-22 | 21-Jan-23 | 23-Dec-22 | 02-Feb-23 | 4 | 0.00 |

Current Milestone
Actual Work
Critical Remaining Work
Remaining Work

**Central Kowloon Route - Kai Tak East (Month 44 Update) (Rev36- CSD)**
**Three Month Rolling Programme**

Project ID: KTE-WP36_M44
Baseline:
Layout: KTE - 3 Months Rolling Programme
Filter: TASK filters: 3 Months Rolling_1, KTE - Submission.

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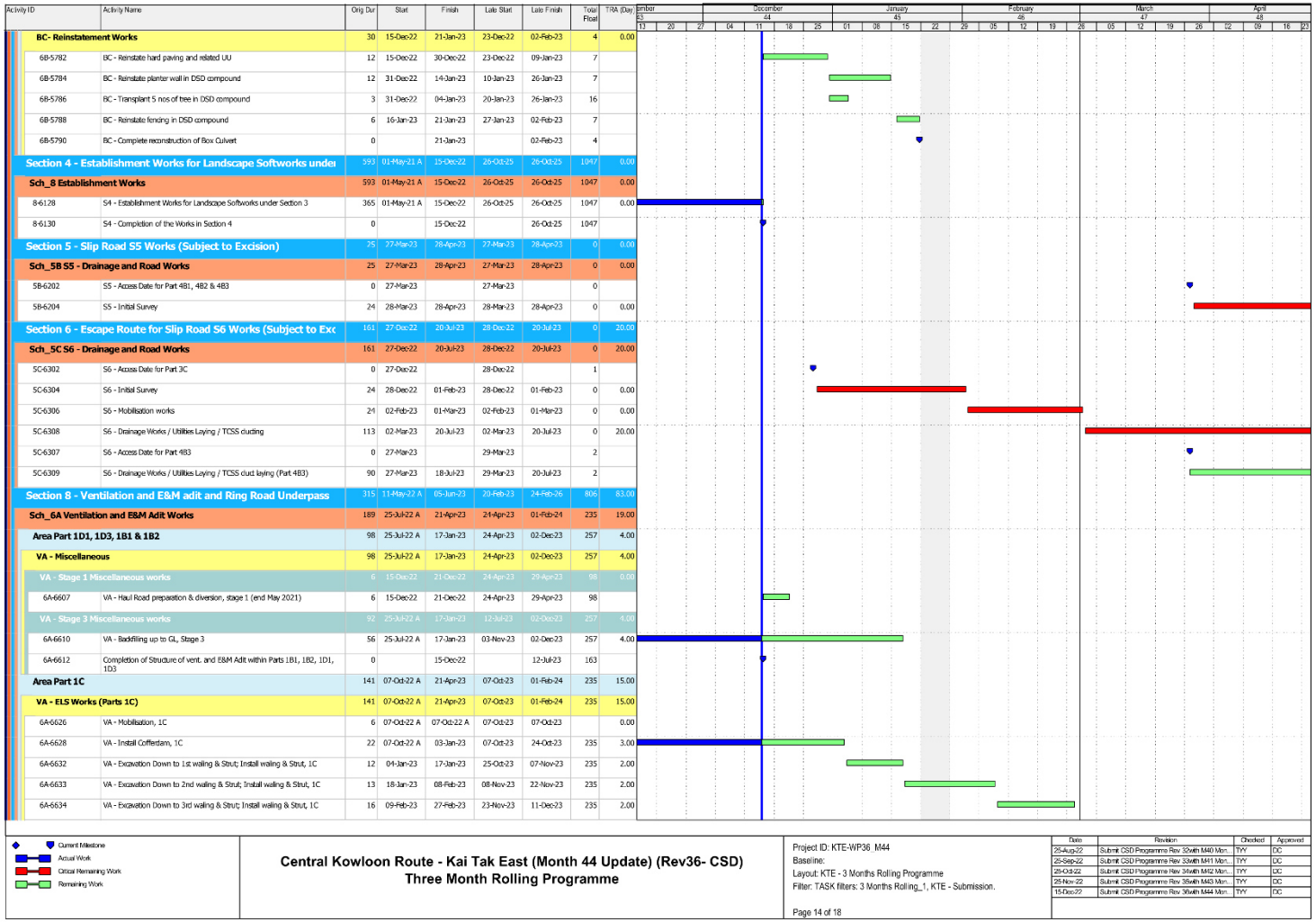
| Date | Revision | Checked | Approved |
|---|---|---|---|
| 25-Aug-22 | Submit CSD Programme Rev 32with M40 Mon... | TYY | DC |
| 25-Sep-22 | Submit CSD Programme Rev 33with M41 Mon... | TYY | DC |
| 25-Oct-22 | Submit CSD Programme Rev 34with M42 Mon... | TYY | DC |
| 25-Nov-22 | Submit CSD Programme Rev 35with M43 Mon... | TYY | DC |
| 15-Dec-22 | Submit CSD Programme Rev 36with M44 Mon... | TYY | DC |



| Activity ID | Activity Name | Orig Dur | Start | Finish | Late Start | Late Finish | Total Float | TRA (Day) |
|---|---|---|---|---|---|---|---|---|
| **BC- Reinstatement Works** | | 30 | 15-Dec-22 | 21-Jan-23 | 23-Dec-22 | 02-Feb-23 | 4 | 0.00 |
| 6B-5782 | BC - Reinstate hard paving and related UU | 12 | 15-Dec-22 | 30-Dec-22 | 23-Dec-22 | 09-Jan-23 | 7 | |
| 6B-5784 | BC - Reinstate planter wall in DSD compound | 12 | 31-Dec-22 | 14-Jan-23 | 10-Jan-23 | 26-Jan-23 | 7 | |
| 6B-5786 | BC - Transplant 5 nos of tree in DSD compound | 3 | 31-Dec-22 | 04-Jan-23 | 20-Jan-23 | 26-Jan-23 | 16 | |
| 6B-5788 | BC - Reinstate fencing in DSD compound | 6 | 16-Jan-23 | 21-Jan-23 | 27-Jan-23 | 02-Feb-23 | 7 | |
| 6B-5790 | BC - Complete reconstruction of Box Culvert | 0 | | 21-Jan-23 | | 02-Feb-23 | 4 | |
| **Section 4 - Establishment Works for Landscape Softworks under** | | 593 | 01-May-21 A | 15-Dec-22 | 26-Oct-25 | 26-Oct-25 | 1047 | 0.00 |
| **Sch_8 Establishment Works** | | 593 | 01-May-21 A | 15-Dec-22 | 26-Oct-25 | 26-Oct-25 | 1047 | 0.00 |
| 8-6128 | S4 - Establishment Works for Landscape Softworks under Section 3 | 365 | 01-May-21 A | 15-Dec-22 | 26-Oct-25 | 26-Oct-25 | 1047 | 0.00 |
| 8-6130 | S4 - Completion of the Works in Section 4 | 0 | | 15-Dec-22 | | 26-Oct-25 | 1047 | |
| **Section 5 - Slip Road S5 Works (Subject to Excision)** | | 25 | 27-Mar-23 | 28-Apr-23 | 27-Mar-23 | 28-Apr-23 | 0 | 0.00 |
| **Sch_5B S5 - Drainage and Road Works** | | 25 | 27-Mar-23 | 28-Apr-23 | 27-Mar-23 | 28-Apr-23 | 0 | 0.00 |
| 5B-6202 | S5 - Access Date for Part 4B1, 4B2 & 4B3 | 0 | 27-Mar-23 | | 27-Mar-23 | | 0 | |
| 5B-6204 | S5 - Initial Survey | 24 | 28-Mar-23 | 28-Apr-23 | 28-Mar-23 | 28-Apr-23 | 0 | 0.00 |
| **Section 6 - Escape Route for Slip Road S6 Works (Subject to Exc** | | 161 | 27-Dec-22 | 20-Jul-23 | 28-Dec-22 | 20-Jul-23 | 0 | 20.00 |
| **Sch_5C S6 - Drainage and Road Works** | | 161 | 27-Dec-22 | 20-Jul-23 | 28-Dec-22 | 20-Jul-23 | 0 | 20.00 |
| 5C-6302 | S6 - Access Date for Part 3C | 0 | 27-Dec-22 | | 28-Dec-22 | | 1 | |
| 5C-6304 | S6 - Initial Survey | 24 | 28-Dec-22 | 01-Feb-23 | 28-Dec-22 | 01-Feb-23 | 0 | 0.00 |
| 5C-6306 | S6 - Mobilisation works | 24 | 02-Feb-23 | 01-Mar-23 | 02-Feb-23 | 01-Mar-23 | 0 | 0.00 |
| 5C-6308 | S6 - Drainage Works / Utilities Laying / TCSS ducting | 113 | 02-Mar-23 | 20-Jul-23 | 02-Mar-23 | 20-Jul-23 | 0 | 20.00 |
| 5C-6307 | S6 - Access Date for Part 4B3 | 0 | 27-Mar-23 | | 29-Mar-23 | | 2 | |
| 5C-6309 | S6 - Drainage Works / Utilities Laying / TCSS duct laying (Part 4B3) | 90 | 27-Mar-23 | 18-Jul-23 | 29-Mar-23 | 20-Jul-23 | 2 | |
| **Section 8 - Ventilation and E&M adit and Ring Road Underpass** | | 315 | 11-May-22 A | 05-Jun-23 | 20-Feb-23 | 24-Feb-26 | 806 | 83.00 |
| **Sch_6A Ventilation and E&M Adit Works** | | 189 | 25-Jul-22 A | 21-Apr-23 | 24-Apr-23 | 01-Feb-24 | 235 | 19.00 |
| **Area Part 1D1, 1D3, 1B1 & 1B2** | | 98 | 25-Jul-22 A | 17-Jan-23 | 24-Apr-23 | 02-Dec-23 | 257 | 4.00 |
| **VA - Miscellaneous** | | 98 | 25-Jul-22 A | 17-Jan-23 | 24-Apr-23 | 02-Dec-23 | 257 | 4.00 |
| **VA - Stage 1 Miscellaneous works** | | 6 | 15-Dec-22 | 21-Dec-22 | 24-Apr-23 | 29-Apr-23 | 98 | 0.00 |
| 6A-6607 | VA - Haul Road preparation & diversion, stage 1 (end May 2021) | 6 | 15-Dec-22 | 21-Dec-22 | 24-Apr-23 | 29-Apr-23 | 98 | |
| **VA - Stage 3 Miscellaneous works** | | 92 | 25-Jul-22 A | 17-Jan-23 | 12-Jul-23 | 02-Dec-23 | 257 | 4.00 |
| 6A-6610 | VA - Backfilling up to GL, Stage 3 | 56 | 25-Jul-22 A | 17-Jan-23 | 03-Nov-23 | 02-Dec-23 | 257 | 4.00 |
| 6A-6612 | Completion of Structure of vent. and E&M Adit within Parts 1B1, 1B2, 1D1, 1D3 | 0 | | 15-Dec-22 | | 12-Jul-23 | 163 | |
| **Area Part 1C** | | 141 | 07-Oct-22 A | 21-Apr-23 | 07-Oct-23 | 01-Feb-24 | 235 | 15.00 |
| **VA - ELS Works (Parts 1C)** | | 141 | 07-Oct-22 A | 21-Apr-23 | 07-Oct-23 | 01-Feb-24 | 235 | 15.00 |
| 6A-6626 | VA - Mobilisation, 1C | 6 | 07-Oct-22 A | 07-Oct-22 A | 07-Oct-23 | 07-Oct-23 | | 0.00 |
| 6A-6628 | VA - Install Cofferdam, 1C | 22 | 07-Oct-22 A | 03-Jan-23 | 07-Oct-23 | 24-Oct-23 | 235 | 3.00 |
| 6A-6632 | VA - Excavation Down to 1st waling & Strut; Install waling & Strut, 1C | 12 | 04-Jan-23 | 17-Jan-23 | 25-Oct-23 | 07-Nov-23 | 235 | 2.00 |
| 6A-6633 | VA - Excavation Down to 2nd waling & Strut; Install waling & Strut, 1C | 13 | 18-Jan-23 | 08-Feb-23 | 08-Nov-23 | 22-Nov-23 | 235 | 2.00 |
| 6A-6634 | VA - Excavation Down to 3rd waling & Strut; Install waling & Strut, 1C | 16 | 09-Feb-23 | 27-Feb-23 | 23-Nov-23 | 11-Dec-23 | 235 | 2.00 |

Current Milestone
Actual Work
Critical Remaining Work
Remaining Work

**Central Kowloon Route - Kai Tak East (Month 44 Update) (Rev36- CSD)**
**Three Month Rolling Programme**

Project ID: KTE-WP36_M44
Baseline:
Layout: KTE - 3 Months Rolling Programme
Filter: TASK filters: 3 Months Rolling_1, KTE - Submission.

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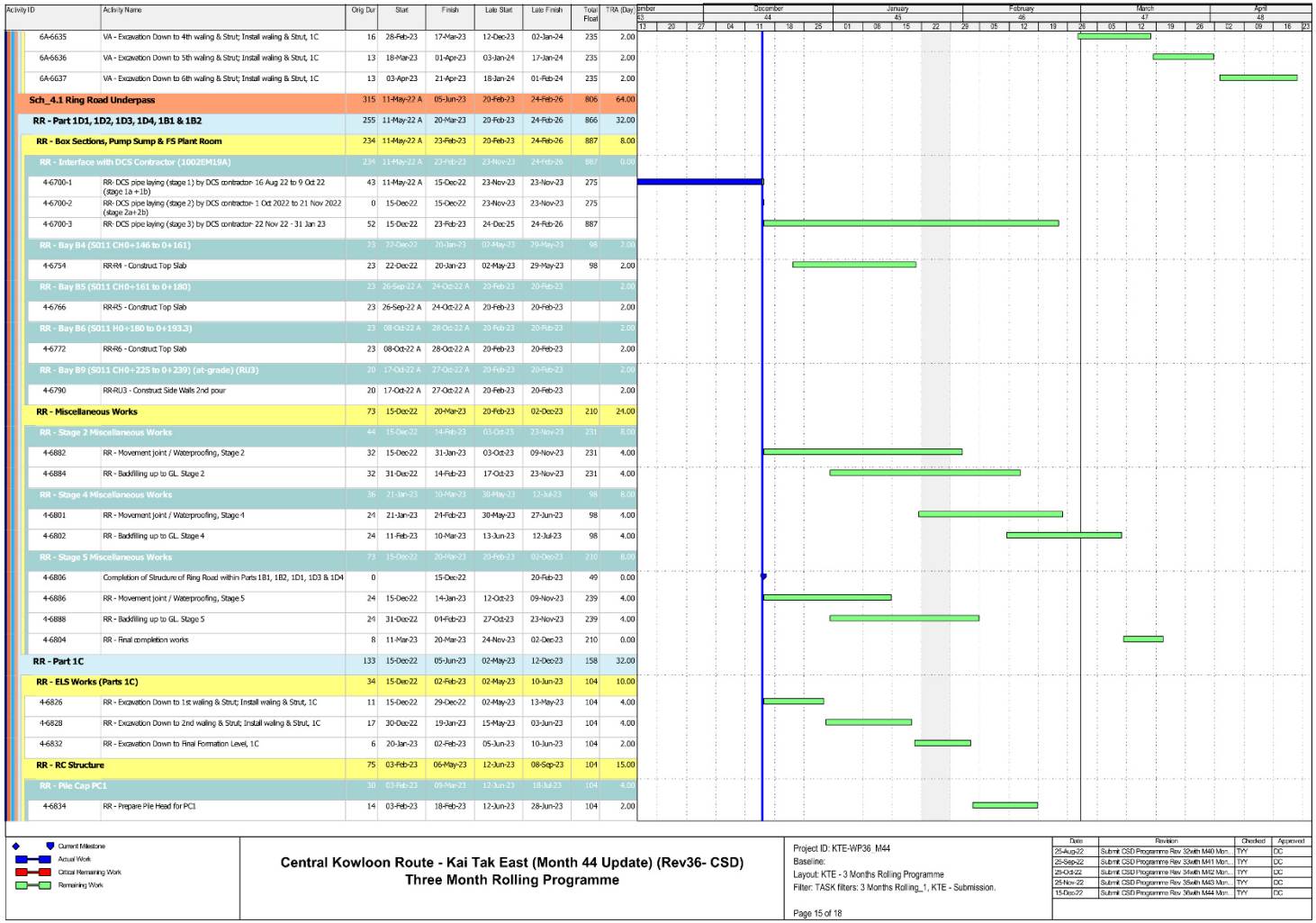
| Date | Revision | Checked | Approved |
|---|---|---|---|
| 25-Aug-22 | Submit CSD Programme Rev 32with M40 Mon... | TYY | DC |
| 25-Sep-22 | Submit CSD Programme Rev 33with M41 Mon... | TYY | DC |
| 25-Oct-22 | Submit CSD Programme Rev 34with M42 Mon... | TYY | DC |
| 25-Nov-22 | Submit CSD Programme Rev 35with M43 Mon... | TYY | DC |
| 15-Dec-22 | Submit CSD Programme Rev 36with M44 Mon... | TYY | DC |


Activity ID
Activity Name
Orig Dur
Start
Finish
Late Start
Late Finish
Total Float
TRA (Day)
November
December
January
February
March
April
6A-6635 VA - Excavation Down to 4th waling & Strut; Install waling & Strut, 1C 16 28-Feb-23 17-Mar-23 12-Dec-23 02-Jan-24 235 2.00
6A-6636 VA - Excavation Down to 5th waling & Strut; Install waling & Strut, 1C 13 18-Mar-23 01-Apr-23 03-Jan-24 17-Jan-24 235 2.00
6A-6637 VA - Excavation Down to 6th waling & Strut; Install waling & Strut, 1C 13 03-Apr-23 21-Apr-23 18-Jan-24 01-Feb-24 235 2.00
Sch_4.1 Ring Road Underpass 315 11-May-22 A 05-Jun-23 20-Feb-23 24-Feb-26 806 64.00
RR - Part 1D1, 1D2, 1D3, 1D4, 1B1 & 1B2 255 11-May-22 A 20-Mar-23 20-Feb-23 24-Feb-26 866 32.00
RR - Box Sections, Pump Sump & FS Plant Room 234 11-May-22 A 23-Feb-23 20-Feb-23 24-Feb-26 887 8.00
RR - Interface with DCS Contractor (1002EM19A) 234 11-May-22 A 23-Feb-23 23-Nov-23 24-Feb-26 887 0.00
4-6700-1 RR- DCS pipe laying (stage 1) by DCS contractor- 16 Aug 22 to 9 Oct 22 (stage 1a +1b) 43 11-May-22 A 15-Dec-22 23-Nov-23 23-Nov-23 275
4-6700-2 RR- DCS pipe laying (stage 2) by DCS contractor- 1 Oct 2022 to 21 Nov 2022 (stage 2a+ 2b) 0 15-Dec-22 15-Dec-22 23-Nov-23 23-Nov-23 275
4-6700-3 RR- DCS pipe laying (stage 3) by DCS contractor- 22 Nov 22 - 31 Jan 23 52 15-Dec-22 23-Feb-23 24-Dec-25 24-Feb-26 887
RR - Bay B4 (S011 CH0+146 to 0+161) 73 22-Dec-22 20-Jan-23 02-May-23 29-May-23 98 2.00
4-6754 RR-R4 - Construct Top Slab 23 22-Dec-22 20-Jan-23 02-May-23 29-May-23 98 2.00
RR - Bay B5 (S011 CH0+161 to 0+180) 23 26-Sep-22 A 24-Oct-22 A 20-Feb-23 20-Feb-23 2.00
4-6766 RR-R5 - Construct Top Slab 23 26-Sep-22 A 24-Oct-22 A 20-Feb-23 20-Feb-23 2.00
RR - Bay B6 (S011 H0+180 to 0+193.3) 23 08-Oct-22 A 28-Oct-22 A 20-Feb-23 20-Feb-23 2.00
4-6772 RR-R6 - Construct Top Slab 23 08-Oct-22 A 28-Oct-22 A 20-Feb-23 20-Feb-23 2.00
RR - Bay B9 (S011 CH0+225 to 0+239) (at-grade) (RU3) 20 17-Oct-22 A 27-Oct-22 A 20-Feb-23 20-Feb-23 2.00
4-6790 RR-RU3 - Construct Side Walls 2nd pour 20 17-Oct-22 A 27-Oct-22 A 20-Feb-23 20-Feb-23 2.00
RR - Miscellaneous Works 73 15-Dec-22 20-Mar-23 20-Feb-23 02-Dec-23 210 24.00
RR - Stage 2 Miscellaneous Works 44 15-Dec-22 14-Feb-23 03-Oct-23 23-Nov-23 231 8.00
4-6882 RR - Movement joint / Waterproofing, Stage 2 32 15-Dec-22 31-Jan-23 03-Oct-23 09-Nov-23 231 4.00
4-6884 RR - Backfilling up to GL Stage 2 32 31-Dec-22 14-Feb-23 17-Oct-23 23-Nov-23 231 4.00
RR - Stage 4 Miscellaneous Works 36 21-Jan-23 10-Mar-23 30-May-23 12-Jul-23 98 8.00
4-6801 RR - Movement joint / Waterproofing, Stage 4 24 21-Jan-23 24-Feb-23 30-May-23 27-Jun-23 98 4.00
4-6802 RR - Backfilling up to GL Stage 4 24 11-Feb-23 10-Mar-23 13-Jun-23 12-Jul-23 98 4.00
RR - Stage 5 Miscellaneous Works 73 15-Dec-22 20-Mar-23 20-Feb-23 02-Dec-23 210 8.00
4-6806 Completion of Structure of Ring Road within Parts 1B1, 1B2, 1D1, 1D3 & 1D4 0 15-Dec-22 20-Feb-23 49 0.00
4-6886 RR - Movement joint / Waterproofing, Stage 5 24 15-Dec-22 14-Jan-23 12-Oct-23 09-Nov-23 239 4.00
4-6888 RR - Backfilling up to GL Stage 5 24 31-Dec-22 04-Feb-23 27-Oct-23 23-Nov-23 239 4.00
4-6804 RR - Final completion works 8 11-Mar-23 20-Mar-23 24-Nov-23 02-Dec-23 210 0.00
RR - Part 1C 133 15-Dec-22 05-Jun-23 02-May-23 12-Dec-23 158 32.00
RR - ELS Works (Parts 1C) 34 15-Dec-22 02-Feb-23 02-May-23 10-Jun-23 104 10.00
4-6826 RR - Excavation Down to 1st waling & Strut; Install waling & Strut, 1C 11 15-Dec-22 29-Dec-22 02-May-23 13-May-23 104 4.00
4-6828 RR - Excavation Down to 2nd waling & Strut; Install waling & Strut, 1C 17 30-Dec-22 19-Jan-23 15-May-23 03-Jun-23 104 4.00
4-6832 RR - Excavation Down to Final Formation Level, 1C 6 20-Jan-23 02-Feb-23 05-Jun-23 10-Jun-23 104 2.00
RR - RC Structure 75 03-Feb-23 06-May-23 12-Jun-23 08-Sep-23 104 15.00
RR - Pile Cap PC1 30 03-Feb-23 09-Mar-23 12-Jun-23 18-Jul-23 104 4.00
4-6834 RR - Prepare Pile Head for PC1 14 03-Feb-23 18-Feb-23 12-Jun-23 28-Jun-23 104 2.00
Current Milestone
Actual Work
Critical Remaining Work
Remaining Work
Central Kowloon Route - Kai Tak East (Month 44 Update) (Rev36- CSD)
Three Month Rolling Programme
Project ID: KTE-WP36_M44
Baseline:
Layout: KTE - 3 Months Rolling Programme
Filter: TASK filters: 3 Months Rolling_1, KTE - Submission.
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Date
Revision
Checked
Approved
25-Aug-22 Submit CSD Programme Rev 32with M40 Mon... TYY DC
25-Sep-22 Submit CSD Programme Rev 33with M41 Mon... TYY DC
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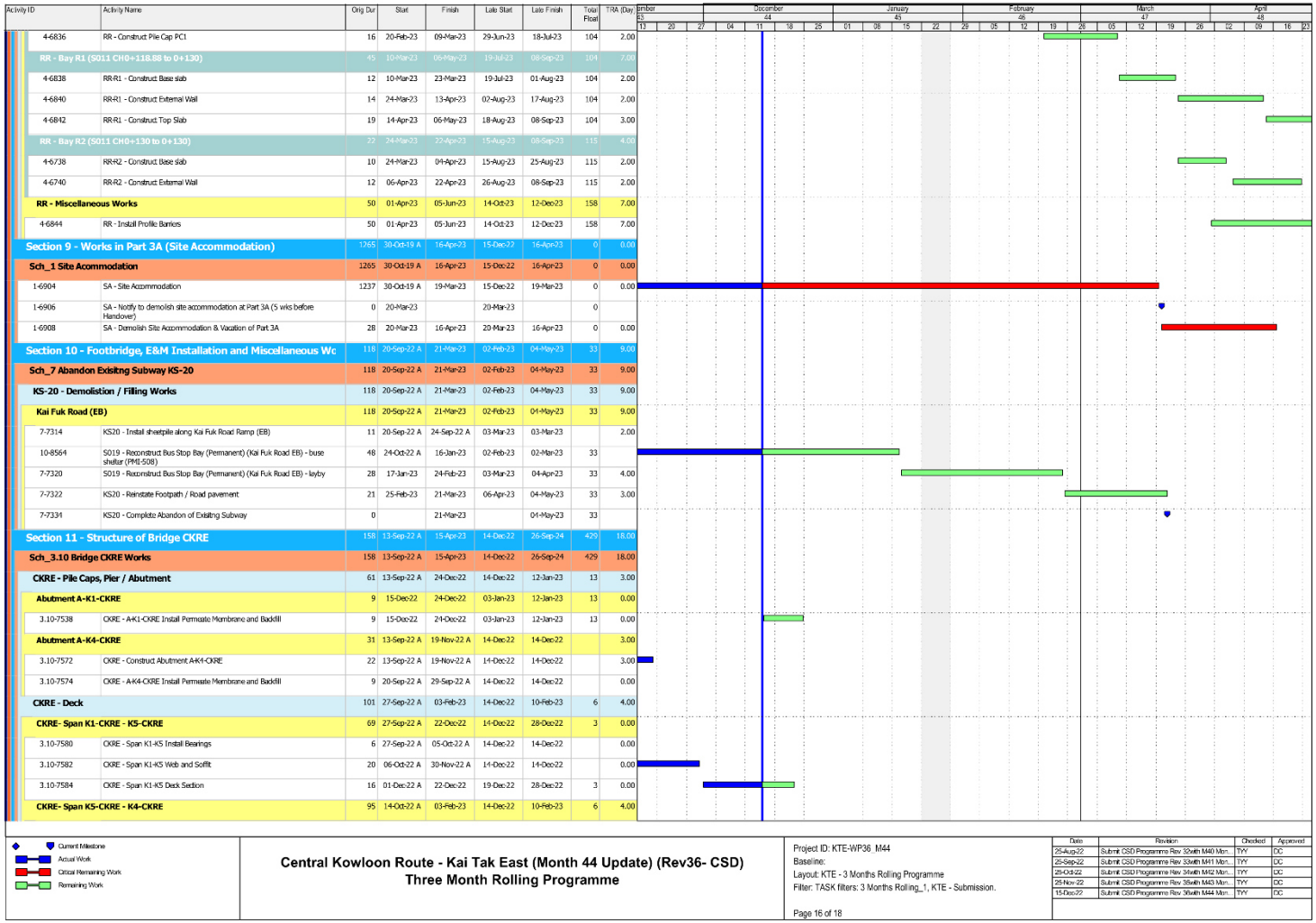
25-Nov-22 Submit CSD Programme Rev 35with M43 Mon... TYY DC
15-Dec-22 Submit CSD Programme Rev 36with M44 Mon... TYY DC


Activity ID
Activity Name
Orig Dur
Start
Finish
Late Start
Late Finish
Total Float
TRA (Day)
November
December
January
February
March
April
4-6836 RR - Construct Pile Cap PC1 16 20-Feb-23 09-Mar-23 29-Jun-23 18-Jul-23 104 2.00
RR - Bay R1 (S011 CH0+118.88 to 0+130) 45 10-Mar-23 06-May-23 19-Jul-23 08-Sep-23 104 7.00
4-6838 RR-R1 - Construct Base slab 12 10-Mar-23 23-Mar-23 19-Jul-23 01-Aug-23 104 2.00
4-6840 RR-R1 - Construct External Wall 14 24-Mar-23 13-Apr-23 02-Aug-23 17-Aug-23 104 2.00
4-6842 RR-R1 - Construct Top Slab 19 14-Apr-23 06-May-23 18-Aug-23 08-Sep-23 104 3.00
RR - Bay R2 (S011 CH0+130 to 0+130) 22 24-Mar-23 22-Apr-23 15-Aug-23 08-Sep-23 115 4.00
4-6738 RR-R2 - Construct Base slab 10 24-Mar-23 04-Apr-23 15-Aug-23 25-Aug-23 115 2.00
4-6740 RR-R2 - Construct External Wall 12 06-Apr-23 22-Apr-23 26-Aug-23 08-Sep-23 115 2.00
RR - Miscellaneous Works 50 01-Apr-23 05-Jun-23 14-Oct-23 12-Dec-23 158 7.00
4-6844 RR - Install Profile Barriers 50 01-Apr-23 05-Jun-23 14-Oct-23 12-Dec-23 158 7.00
Section 9 - Works in Part 3A (Site Accommodation) 1265 30-Oct-19 A 16-Apr-23 15-Dec-22 16-Apr-23 0 0.00
Sch_1 Site Acommodation 1265 30-Oct-19 A 16-Apr-23 15-Dec-22 16-Apr-23 0 0.00
1-6904 SA - Site Accommodation 1237 30-Oct-19 A 19-Mar-23 15-Dec-22 19-Mar-23 0 0.00
1-6906 SA - Notify to demolish site accommodation at Part 3A (5 wks before Handover) 0 20-Mar-23 20-Mar-23 0
1-6908 SA - Demolish Site Accommodation & Vacation of Part 3A 28 20-Mar-23 16-Apr-23 20-Mar-23 16-Apr-23 0 0.00
Section 10 - Footbridge, E&M Installation and Miscellaneous Wo 118 20-Sep-22 A 21-Mar-23 02-Feb-23 04-May-23 33 9.00
Sch_7 Abandon Exisitng Subway KS-20 118 20-Sep-22 A 21-Mar-23 02-Feb-23 04-May-23 33 9.00
KS-20 - Demolistion / Filling Works 118 20-Sep-22 A 21-Mar-23 02-Feb-23 04-May-23 33 9.00
Kai Fuk Road (EB) 118 20-Sep-22 A 21-Mar-23 02-Feb-23 04-May-23 33 9.00
7-7314 KS20 - Install sheetpile along Kai Fuk Road Ramp (EB) 11 20-Sep-22 A 24-Sep-22 A 03-Mar-23 03-Mar-23 2.00
10-8564 S019 - Reconstruct Bus Stop Bay (Permanent) (Kai Fuk Road EB) - buse shelter (PM1-508) 48 24-Oct-22 A 16-Jan-23 02-Feb-23 02-Mar-23 33
7-7320 S019 - Reconstruct Bus Stop Bay (Permanent) (Kai Fuk Road EB) - layby 28 17-Jan-23 24-Feb-23 03-Mar-23 04-Apr-23 33 4.00
7-7322 KS20 - Reinstate Footpath / Road pavement 21 25-Feb-23 21-Mar-23 06-Apr-23 04-May-23 33 3.00
7-7331 KS20 - Complete Abandon of Exisitng Subway 0 21-Mar-23 04-May-23 33
Section 11 - Structure of Bridge CKRE 158 13-Sep-22 A 15-Apr-23 14-Dec-22 26-Sep-24 429 18.00
Sch_3.10 Bridge CKRE Works 158 13-Sep-22 A 15-Apr-23 14-Dec-22 26-Sep-24 429 18.00
CKRE - Pile Caps, Pier / Abutment 61 13-Sep-22 A 24-Dec-22 14-Dec-22 12-Jan-23 13 3.00
Abutment A-K1-CKRE 9 15-Dec-22 24-Dec-22 03-Jan-23 12-Jan-23 13 0.00
3.10-7538 CKRE - A-K1-CKRE Install Permeate Membrane and Backfill 9 15-Dec-22 24-Dec-22 03-Jan-23 12-Jan-23 13 0.00
Abutment A-K4-CKRE 31 13-Sep-22 A 19-Nov-22 A 14-Dec-22 14-Dec-22 3.00
3.10-7572 CKRE - Construct Abutment A-K1-CKRE 22 13-Sep-22 A 19-Nov-22 A 14-Dec-22 14-Dec-22 3.00
3.10-7574 CKRE - A-K4-CKRE Install Permeate Membrane and Backfill 9 20-Sep-22 A 29-Sep-22 A 14-Dec-22 14-Dec-22 0.00
CKRE - Deck 101 27-Sep-22 A 03-Feb-23 14-Dec-22 10-Feb-23 6 4.00
CKRE- Span K1-CKRE - K5-CKRE 69 27-Sep-22 A 22-Dec-22 14-Dec-22 28-Dec-22 3 0.00
3.10-7580 CKRE - Span K1-K5 Install Bearings 6 27-Sep-22 A 05-Oct-22 A 14-Dec-22 14-Dec-22 0.00
3.10-7582 CKRE - Span K1-K5 Web and Soffit 20 06-Oct-22 A 30-Nov-22 A 14-Dec-22 14-Dec-22 0.00
3.10-7584 CKRE - Span K1-K5 Deck Section 16 01-Dec-22 A 22-Dec-22 19-Dec-22 28-Dec-22 3 0.00
CKRE- Span K5-CKRE - K4-CKRE 95 14-Oct-22 A 03-Feb-23 14-Dec-22 10-Feb-23 6 4.00
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Actual Work
Critical Remaining Work
Remaining Work
Central Kowloon Route - Kai Tak East (Month 44 Update) (Rev36- CSD)
Three Month Rolling Programme
Project ID: KTE-WP36_M44
Baseline:
Layout: KTE - 3 Months Rolling Programme
Filter: TASK filters: 3 Months Rolling_1, KTE - Submission.
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Date
Revision
Checked
Approved
25-Aug-22 Submit CSD Programme Rev 32with M40 Mon... TYY DC
25-Sep-22 Submit CSD Programme Rev 33with M41 Mon... TYY DC
25-Oct-22 Submit CSD Programme Rev 34with M42 Mon... TYY DC
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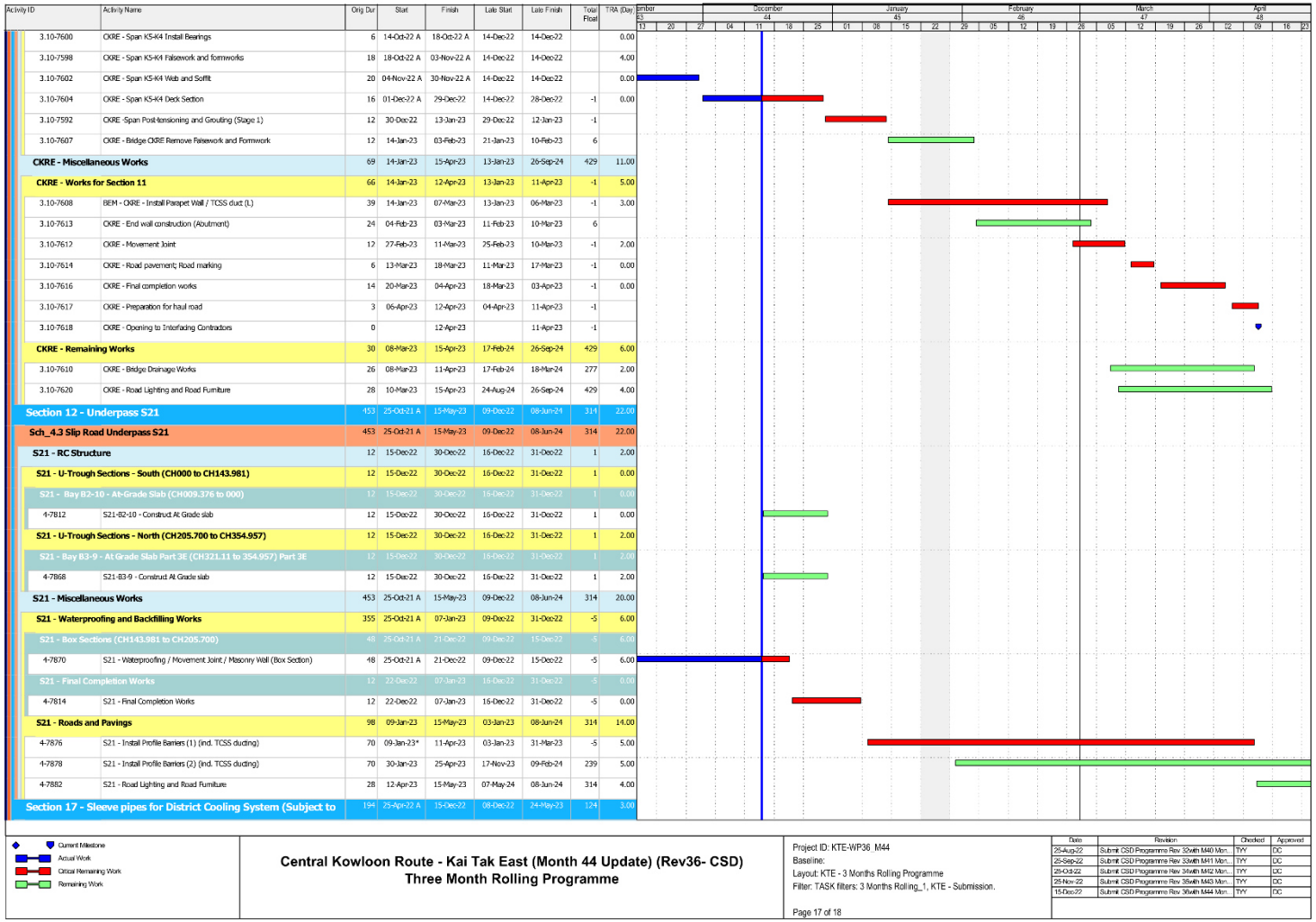
15-Dec-22 Submit CSD Programme Rev 36with M44 Mon... TYY DC


Activity ID
Activity Name
Orig Dur
Start
Finish
Late Start
Late Finish
Total Float
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November
December
January
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March
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3.10-7600 CKRE - Span K5-K4 Install Bearings 6 14-Oct-22 A 18-Oct-22 A 14-Dec-22 14-Dec-22 0.00
3.10-7598 CKRE - Span K5-K4 Falsework and formworks 18 18-Oct-22 A 03-Nov-22 A 14-Dec-22 14-Dec-22 4.00
3.10-7602 CKRE - Span K5-K4 Web and Soffit 20 04-Nov-22 A 30-Nov-22 A 14-Dec-22 14-Dec-22 0.00
3.10-7604 CKRE - Span K5-K4 Deck Section 16 01-Dec-22 A 29-Dec-22 14-Dec-22 28-Dec-22 -1 0.00
3.10-7592 CKRE -Span Post-tensioning and Grouting (Stage 1) 12 30-Dec-22 13-Jan-23 29-Dec-22 12-Jan-23 -1
3.10-7607 CKRE - Bridge CKRE Remove Falsework and Formwork 12 14-Jan-23 03-Feb-23 21-Jan-23 10-Feb-23 6
CKRE - Miscellaneous Works 69 14-Jan-23 15-Apr-23 13-Jan-23 26-Sep-24 429 11.00
CKRE - Works for Section 11 66 14-Jan-23 12-Apr-23 13-Jan-23 11-Apr-23 -1 5.00
3.10-7608 BEM - CKRE - Install Parapet Wall / TCSS duct (L) 39 14-Jan-23 07-Mar-23 13-Jan-23 06-Mar-23 -1 3.00
3.10-7613 CKRE - End wall construction (Abutment) 24 04-Feb-23 03-Mar-23 11-Feb-23 10-Mar-23 6
3.10-7612 CKRE - Movement Joint 12 27-Feb-23 11-Mar-23 25-Feb-23 10-Mar-23 -1 2.00
3.10-7614 CKRE - Road pavement; Road marking 6 13-Mar-23 18-Mar-23 11-Mar-23 17-Mar-23 -1 0.00
3.10-7616 CKRE - Final completion works 14 20-Mar-23 04-Apr-23 18-Mar-23 03-Apr-23 -1 0.00
3.10-7617 CKRE - Preparation for haul road 3 06-Apr-23 12-Apr-23 04-Apr-23 11-Apr-23 -1
3.10-7618 CKRE - Opening to Interfacing Contractors 0 12-Apr-23 11-Apr-23 -1
CKRE - Remaining Works 30 08-Mar-23 15-Apr-23 17-Feb-24 26-Sep-24 429 6.00
3.10-7610 CKRE - Bridge Drainage Works 26 08-Mar-23 11-Apr-23 17-Feb-24 18-Mar-24 277 2.00
3.10-7620 CKRE - Road Lighting and Road Furniture 28 10-Mar-23 15-Apr-23 24-Aug-24 26-Sep-24 429 4.00
Section 12 - Underpass S21 453 25-Oct-21 A 15-May-23 09-Dec-22 08-Jun-24 314 22.00
Sch_4.3 Slip Road Underpass S21 453 25-Oct-21 A 15-May-23 09-Dec-22 08-Jun-24 314 22.00
S21 - RC Structure 12 15-Dec-22 30-Dec-22 16-Dec-22 31-Dec-22 1 2.00
S21 - U-Trough Sections - South (CH000 to CH143.981) 12 15-Dec-22 30-Dec-22 16-Dec-22 31-Dec-22 1 0.00
S21 - Bay B2-10 - At-Grade Slab (CH009.376 to 000) 12 15-Dec-22 30-Dec-22 16-Dec-22 31-Dec-22 1 0.00
4-7812 S21-B2-10 - Construct At Grade slab 12 15-Dec-22 30-Dec-22 16-Dec-22 31-Dec-22 1 0.00
S21 - U-Trough Sections - North (CH205.700 to CH354.957) 12 15-Dec-22 30-Dec-22 16-Dec-22 31-Dec-22 1 2.00
S21 - Bay B3-9 - At Grade Slab Part 3E (CH321.11 to 354.957) Part 3E 12 15-Dec-22 30-Dec-22 16-Dec-22 31-Dec-22 1 2.00
4-7868 S21-B3-9 - Construct At Grade slab 12 15-Dec-22 30-Dec-22 16-Dec-22 31-Dec-22 1 2.00
S21 - Miscellaneous Works 453 25-Oct-21 A 15-May-23 09-Dec-22 08-Jun-24 314 20.00
S21 - Waterproofing and Backfilling Works 355 25-Oct-21 A 07-Jan-23 09-Dec-22 31-Dec-22 -5 6.00
S21 - Box Sections (CH143.981 to CH205.700) 48 25-Oct-21 A 21-Dec-22 09-Dec-22 15-Dec-22 -5 6.00
4-7870 S21 - Waterproofing / Movement Joint / Masonry Wall (Box Section) 48 25-Oct-21 A 21-Dec-22 09-Dec-22 15-Dec-22 -5 6.00
S21 - Final Completion Works 12 22-Dec-22 07-Jan-23 16-Dec-22 31-Dec-22 -5 0.00
4-7814 S21 - Final Completion Works 12 22-Dec-22 07-Jan-23 16-Dec-22 31-Dec-22 -5 0.00
S21 - Roads and Pavings 98 09-Jan-23 15-May-23 03-Jan-23 08-Jun-24 314 14.00
4-7876 S21 - Install Profile Barriers (1) (Ind. TCSS ducting) 70 09-Jan-23* 11-Apr-23 03-Jan-23 31-Mar-23 -5 5.00
4-7878 S21 - Install Profile Barriers (2) (Ind. TCSS ducting) 70 30-Jan-23 25-Apr-23 17-Nov-23 09-Feb-24 239 5.00
4-7882 S21 - Road Lighting and Road Furniture 28 12-Apr-23 15-May-23 07-May-24 08-Jun-24 314 4.00
Section 17 - Sleeve pipes for District Cooling System (Subject to 194 25-Apr-22 A 15-Dec-22 08-Dec-22 24-May-23 124 3.00
Current Milestone
Actual Work
Critical Remaining Work
Remaining Work
Central Kowloon Route - Kai Tak East (Month 44 Update) (Rev36- CSD)
Three Month Rolling Programme
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Date
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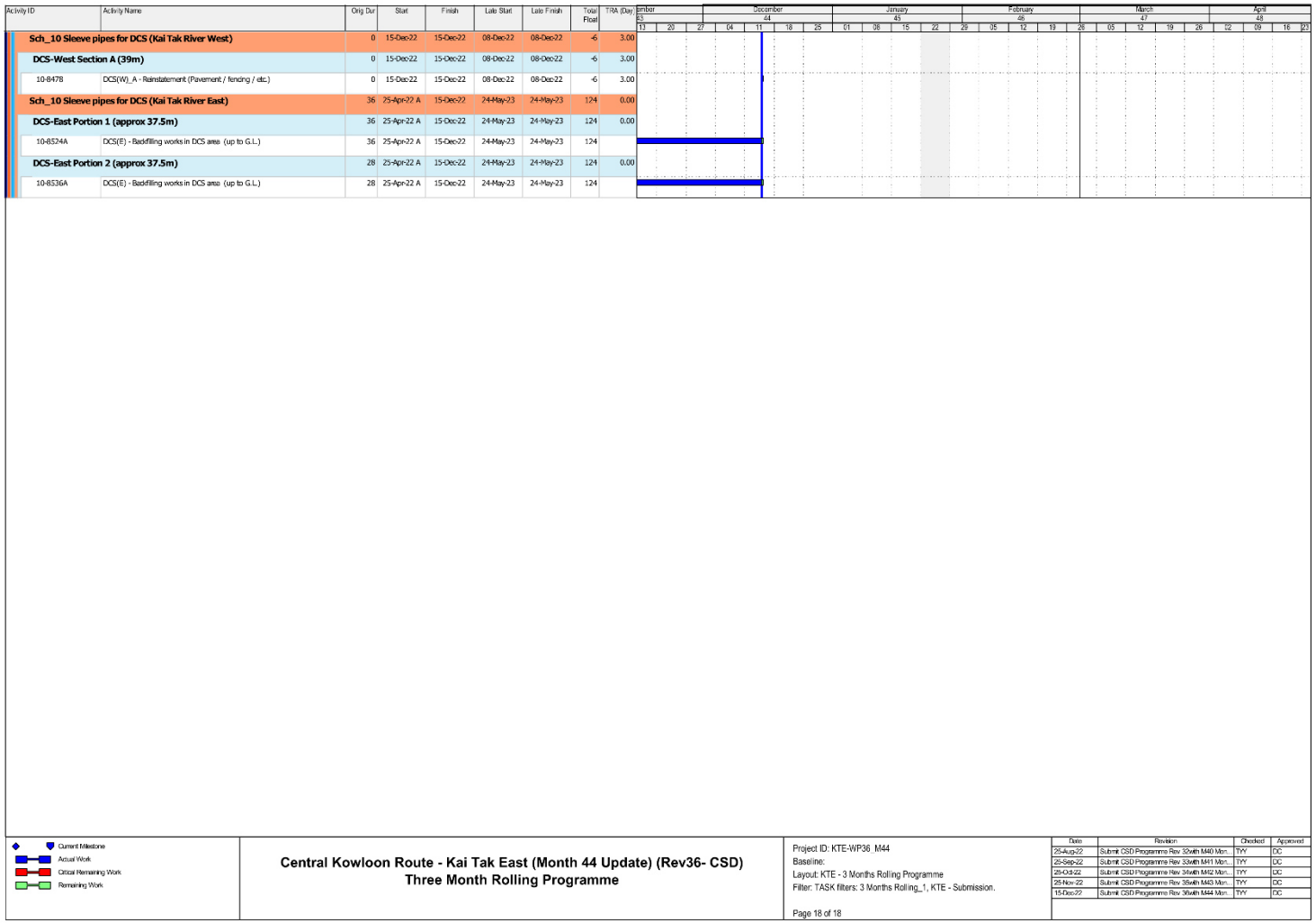
15-Dec-22 Submit CSD Programme Rev 36with M44 Mon... TYY DC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Late Start
Late Finish
Total Float
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Sch_10 Sleeve pipes for DCS (Kai Tak River West) 0 15-Dec-22 15-Dec-22 08-Dec-22 08-Dec-22 -6 3.00
DCS-West Section A (39m) 0 15-Dec-22 15-Dec-22 08-Dec-22 08-Dec-22 -6 3.00
10-8478 DCS(W)_A - Reinstatement (Pavement / fencing / etc.) 0 15-Dec-22 15-Dec-22 08-Dec-22 08-Dec-22 -6 3.00
Sch_10 Sleeve pipes for DCS (Kai Tak River East) 36 25-Apr-22 A 15-Dec-22 24-May-23 24-May-23 124 0.00
DCS-East Portion 1 (approx 37.5m) 36 25-Apr-22 A 15-Dec-22 24-May-23 24-May-23 124 0.00
10-8524A DCS(E) - Backfilling works in DCS area (up to G.L.) 36 25-Apr-22 A 15-Dec-22 24-May-23 24-May-23 124
DCS-East Portion 2 (approx 37.5m) 28 25-Apr-22 A 15-Dec-22 24-May-23 24-May-23 124 0.00
10-8536A DCS(E) - Backfilling works in DCS area (up to G.L.) 28 25-Apr-22 A 15-Dec-22 24-May-23 24-May-23 124
December
January
February
March
April
Current Milestone
Actual Work
Critical Remaining Work
Remaining Work
Central Kowloon Route - Kai Tak East (Month 44 Update) (Rev36- CSD)
Three Month Rolling Programme
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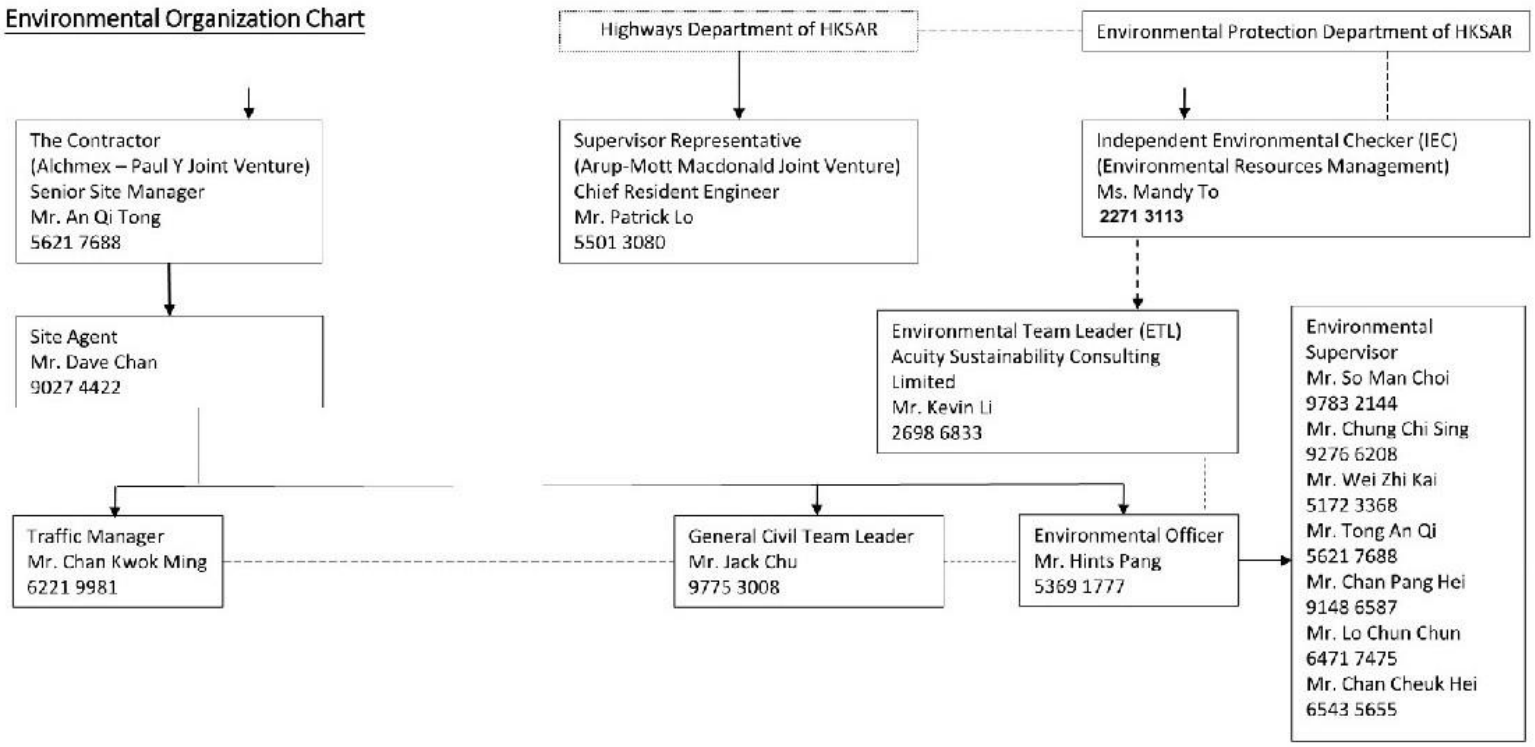
# Appendix C
# Project Organization Chart

## Environmental Organization Chart




愛銘－保華聯營
Alchmex - Paul Y Joint Venture

# Appendix D
# Dust Event-Action Plan (EAP) (Air Quality Monitoring)

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

| EVENT | ACTION | | | |
|---|---|---|---|---|
| | **ET** | **IEC** | **ER** | **CONTRACTOR** |
| | 3.Repeat measurement to confirm finding;<br>4. Increase monitoring frequency to daily;<br>5.Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results. | Contractor on possible remedial measures;<br>4.Advise the ER on the effectiveness of the proposed remedial measures;<br>5.Supervise implementation of remedial measures. | properly implemented. | of notification;<br>Implement the agreed proposals;<br>4.Amend proposal if appropriate. |
| Exceedance for two or more consecutive samples | 1.Notify IEC, ER, Contractor and EPD;<br>2. Identify source;<br>3.Repeat measurement to confirm findings;<br>4. Increase monitoring frequency to daily;<br>5.Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented;<br>6. Arrange meeting with IEC and ER to discuss the remedial actions to be taken;<br>7.Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results;<br>8. If exceedance stops, cease additional monitoring. | 1.Discuss amongst ER, ET, and Contractor on the potential remedial actions;<br>2.Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly;<br>3.Supervise the implementation of remedial measures. | 1.Confirm receipt of notification of failure in writing;<br>2. Notify Contractor;<br>3. In consultation with the IEC, agree with the Contractor on the remedial measures to be implemented;<br>4.Ensure remedial measures properly implemented;<br>5.If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated. | 1.Take immediate action to avoid further exceedance;<br>2.Submit proposals for remedial actions to IEC within 3 working days of notification;<br>3.Implement the agreed proposals;<br>4.Resubmit proposals if problem still not under control;<br>5.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

# Appendix E
# Noise Event-Action Plan (EAP) (Noise Monitoring)

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

Note:

ET – Environmental Team

IEC – Independent Environmental Checker

ER – Engineer's Representative

# Appendix F
# Environmental Mitigation Implementation Schedule (EMIS)

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

| EIA Ref. | EM&A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved | Implementation Status |
|---|---|---|---|---|---|---|---|---|
| Construction Dust Impact | | | | | | | | |
| S4.3.10 | D1 | The contractor shall follow the procedures and requirements given in the Air Pollution Control (Construction Dust) Regulation and Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation. | Minimize dust impact and adverse health effects at the nearby sensitive receivers | Contractor | All construction sites | Construction stage | • APCO<br>• To control the dust impact to meet HKAQO and TM-EIA criteria | Implemented |
| S4.3.10 | 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 $L/m^2$ to achieve the dust removal efficiency. | Minimize dust impact at the nearby sensitive receivers | Contractor | All construction sites | Construction stage | • APCO<br>• To control the dust impact to meet HKAQO and TM-EIA criteria | Implemented after reminder |
| xS4.3.10 | D3 | • Proper watering at exposed spoil should be undertaken throughout the construction phase;<br>• 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;<br>• Any dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads;<br>• A stockpile of dusty material should not be extended beyond the pedestrian barriers, fencing or traffic cones; | Minimize dust impact at the nearby sensitive receivers | Contractor | All construction sites | Construction stage | • APCO<br>• To control the dust impact to meet HKAQO and TM-EIA criteria | Implemented after reminder |

| EIA Ref. | EM& A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved | Implementation Status |
|---|---|---|---|---|---|---|---|---|
| | | • 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.<br>• 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;<br>• 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;<br>• 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;<br>• 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;<br>• Any area that involves demolition activities should be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities so as to maintain the entire surface wet;<br>• Any skip hoist for material transport should be totally enclosed by impervious sheeting; | | | | | | |

| EIA Ref. | EM&A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved | Implementation Status |
|---|---|---|---|---|---|---|---|---|
| | | • 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;<br>• 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<br>• Exposed earth should be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shotcrete or other suitable surface stabilizer within six months after the last construction activity on the construction site or part of the construction site where the exposed earth lies. | | | | | | |
| S4.3.10 | D6 | Implement regular dust monitoring under EM&A programme during the construction stage. | Monitoring of dust impact | Contractor | Selected rep. dust monitoring station | Construction stage | • TM-EIA | Implemented |
| Construction Noise (Airborne) | | | | | | | | |
| S5.4.1 | N1 | Implement the following good site practices:<br>• Only well-maintained plant should be operated on-site, and plant should be serviced regularly during the construction programme;<br>• 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;<br>• Plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs; | Control construction airborne noise | Contractor | All construction sites | Construction stage | • Annex 5, TM-EIAO | Implemented after reminder |

| EIA Ref. | EM&A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved | Implementation Status |
|---|---|---|---|---|---|---|---|---|
| | | • Silencers or mufflers on construction equipment should be properly fitted and maintained during the construction works;<br>• Mobile plant should be sited as far away from NSRs as possible and practicable;<br>• Material stockpiles, mobile container site office and other structures should be effectively utilized, where practicable, to screen noise from on-site construction activities. | | | | | | |
| S5.4.1 | N2 | Install temporary hoarding located on the site boundaries between noisy construction activities and NSRs. The conditions of hoardings shall be properly maintained throughout the construction period. | Reduce the construction noise levels at low-level zone of NSRs through partial screening | Contractor | All construction sites | Construction stage | • Annex 5, TM-EIAO | Implemented |
| S5.4.1 | N3 | Install movable noise barriers (typical design is wooden framed barrier with a small-cantilevered on a skid footing with 25mm thick internal sound absorptive lining), acoustic mat or full enclosure, screen the noisy plants including air compressors, generators and handheld breakers, etc. | Sreen the noisy plant items to be used at all construction sites | Contractor | All construction sites where practicable | Construction stage | • Annex 5, TM-EIAO | Implemented |
| 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 |
| S5.4.1 | N5 | Loading/ unloading activities should be carried out inside the full enclosure of mucking out points. | Reduce the noise levels of loading/ unloading activities | Contractor | Mucking out locations | Construction stage | • Annex 5, TM-EIAO | Implemented |
| S5.4.1 | N6 | Sequencing operation of construction plants where practicable. | Operate sequentially within the same work site to | 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 Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved | Implementation Status |
|---|---|---|---|---|---|---|---|---|
| | | | reduce the construction airborne noise | | | | | |
| S5.4.1 | N7 | Implement a noise monitoring programme under EM&A programme. | Monitor the construction noise levels at the selected representative locations | Contractor | Selected rep. noise monitoring station | Construction stage | • TM-EIAO | Implemented |
| Water Quality (Construction Phase) | | | | | | | | |
| 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:<br><br><u>Construction Runoff</u><br>• 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 sandbag 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;<br>• The dikes or embankments for flood protection should be implemented around the boundaries of earthwork areas. Temporary ditches should be provided to facilitate the runoff discharge into an appropriate watercourse, through a silt/ sediment trap. The sediment/ silt traps should be | 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<br>• ProPECC PN 1/94<br>• TM-EIAO<br>• TM-DSS | Implemented |

| EIA Ref. | EM& A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved | Implementation Status |
|---|---|---|---|---|---|---|---|---|
| | | incorporated in the permanent drainage channels to enhance deposition rates;<br>• 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 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;<br>• 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;<br>• 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;<br>• 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; | | | | | | |

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| | | • Measures should be taken to minimize the ingress 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;<br>• 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;<br>• 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;<br>• 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;<br>• 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 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 | | | | | | |

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| | | 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;<br>• 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;<br>• Construction solid waste, debris and rubbish on site should be collected, handled and disposed of properly to avoid water quality impacts;<br>• 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;<br>• Adopt best management practices;<br>• All earth works 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. | | | | | | |
| S6.9.1.2 | W2 | <u>Tunneling Works and Underground Works</u><br><br>• 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.<br>• Uncontaminated discharge should pass through sedimentation tanks prior to off-site discharge; | To minimize construction water quality impact from tunneling works | Contractor | All tunneling portion | Construction stage | • Water Pollution Control Ordinance<br>• ProPECC PN 1/94<br>• TM-DSS<br>• TM-EIAO | N/A |

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| | | • 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;<br>• 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. | | | | | | |
| S6.9.1.3 | W3 | Sewage Effluent<br><br>• 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<br>• TM-DSS | Implemented |
| S6.9.1.5 | W4 | Groundwater from Potential Contaminated Area:<br><br>• No direct discharge of groundwater from contaminated areas should be adopted.<br>• 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 | To minimize groundwater quality impact from contaminated area | Contractor | Excavation areas where contamination is found | Construction stage | • Water Pollution Control Ordinance<br>• TM-DSS<br>• TM-EIAO | Implemented |

| EIA Ref. | EM& A Log Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concerns to address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved | Implementation Status |
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| | | 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 recharged into the ground.<br>• 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.<br>• If groundwater recharging wells are deployed, recharging wells should be installed as appropriate for recharging the contaminated groundwater back into the ground. The recharging wells should be selected at places where the groundwater quality will not be affected by the recharge operation as indicated in the Section 2.3 of TM-DSS. The baseline groundwater quality shall be determined prior to the selection of the recharge wells, and submit a working plan (including the laboratory analytical results showing the quality of groundwater at the proposed recharge location(s) as well as the pollutant levels of groundwater to be recharged) to EPD for agreement. Pollution levels of groundwater to be recharged shall not be higher than pollutant levels of ambient groundwater at the recharge well. Prior to recharge, | | | | | | |

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| | | any prohibited substances such as TPH products should be removed as necessary by installing the petrol interceptor. | | | | | | |
| S6.9.1.6 | W6 | <u>Accidental Spillage</u><br><br>In order to prevent accidental spillage of chemicals, the following is recommended:<br>• 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;<br>• 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.<br>Disposal of chemical wastes should be conducted in compliance with the requirements as stated 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<br>• ProPECC PN 1/94<br>• TM-EIAO<br>• TM-DSS | Implemented |
| Waste Management (Construction Waste) | | | | | | | | |
| S7.4.1 | WM1 | <u>On-site sorting of C&D material</u><br><br>• 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 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 | Separation of unsuitable rock from ending up at concrete batching plants and be turned into concrete for structural use | Contractor | All construction sites | Construction stage | • DEVB (W) No. 6/2010 | N/A |

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| | | 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. | | | | | | |
| S7.5.1 | WM2 | Construction and Demolition Material<br>• Maintain temporary stockpiles and reuse excavated fill material for backfilling and reinstatement;<br>• Carry out on-site sorting;<br>• Make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate;<br>• Adopt 'selective demolition' technique to demolish the existing structures and facilities with a view to recovering broken concrete effectively for recycling purpose, where possible;<br>• Implement a trip-ticket system for each works contract to ensure that the disposal of C&D materials are properly documented and verified; and<br>• 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. | Good site practice to minimize the waste generation and recycle the C&D materials as far as practicable so as to reduce the amount for final disposal | Contractor | All construction sites | Construction stage | • Land (Miscellaneous Provisions) Ordinance<br>• Waste Disposal Ordinance<br>• ETWB TCW No. 19/2005 | Implemented |

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| S7.5.1 | WM3 | C&D Waste<br>• 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;<br>• The Contractor should recycle as much of the C&D materials as possible on-site. Public fill and C&D waste should be segregated and stored in different containers or skips to enhance reuse or recycling of materials and their proper disposal. Where practicable, concrete and masonry can be crushed and used as fill. Steel reinforcement bar can be used by scrap steel mills. Different areas of the sites should be considered for such segregation and storage. | Good site practice to minimize the waste generation and recycle the C&D materials as far as practicable so as to reduce the amount for final disposal | Contractor | All construction sites | Construction stage | • Land (Miscellaneous Provisions) Ordinance<br>• Waste Disposal Ordinance<br>• ETWB TCW No. 19/2005 | Implemented |
| S7.5.1 | WM4 | Excavated Contaminated Soils<br>• 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<br>• GN/GM for land contamination | Implemented |

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| S7.5.1 | WM5 | Land-based Sediment<br>• 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;<br>• 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;<br>• Before moving the vessels which are used for transporting dredged material, excess material shall be cleaned from the decks and exposed fittings of vessels and the excess materials shall never be dumped into the sea except at the approved locations;<br>• Adequate freeboard shall be maintained on barges to ensure that decks are not washed by wave action.<br>• 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;<br>• The Contractors shall comply with the conditions in the dumping license.<br>• All bottom dumping vessels (Hopper barges) shall be fitted with tight fittings seals to their bottom openings to prevent leakage of material;<br>• The material shall be placed into the disposal pit by bottom dumping; | To control pollution due to marine sediment | Contractor | Along CKR alignment | Construction stage | • ETWB TCW No. 34/2002 | Implemented |

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| | | • 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;<br>• 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.<br>• For Type 3 special disposal treatment, sealing of 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. | | | | | | |
| S7.5.1 | WM6 | Chemical Waste<br>• Chemical waste that is produced, as defined by Schedule 1 of the Waste Disposal (Chemical Waste) (General) Regulation, should be handled in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes;<br>• 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 | Control the chemical waste and ensure proper storage, handling and disposal | Contractor | All construction sites | Construction stage | • Waste Disposal (Chemical Waste) (General) Regulation<br>• Code of Practice on the Packaging, Labelling and Storage of Chemical Waste | Implemented after reminder |

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| | | Chinese in accordance with instructions prescribed in Schedule 2 of the regulation;<br>• 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 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;<br>• 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. | | | | | | |
| S7.5.1 | WM7 | <u>General Refuse</u><br>• General refuse generated on-site should be stored in enclosed bins or compaction units separately from construction and chemical wastes;<br>• 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.<br>• 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; | Minimize production of the general refuse and avoid odour, pest and litter impacts | Contractor | All construction sites | Construction stage | • Waste Disposal Ordinance | Implemented after reminder |

<table>
<tr><th>EIA Ref.</th><th>EM&A Log Ref.</th><th>Recommended Mitigation Measures</th><th>Objectives of the Recommended Measures & Main Concerns to address</th><th>Implementation Agent</th><th>Location / Timing</th><th>Implementation Stage</th><th>Requirements and/ or standards to be achieved</th><th>Implementation Status</th></tr>
<tr><td></td><td></td><td>• Office wastes can be reduced through the recycling of paper if volumes are large enough to warrant collection. Participation in a local collection scheme should be considered by the Contractor.</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td colspan="9">Land Contamination</td></tr>
<tr><td>S8.9 & Appendix 8.4</td><td>LC2</td><td><u>Excavation of the Contaminated Soil</u><br>• 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.<br>• The excavated contaminated soils would be stockpiled at designated area on site and covered by sheet to prevent dispersion of contamination during stockpiling.<br>• 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.</td><td rowspan="2">The contaminated soil will be excavated for on-site reuse</td><td rowspan="2">Contractor</td><td rowspan="2">PBH4</td><td rowspan="2">Prior to commencement of construction works within the contaminated area</td><td rowspan="2">• Practice Guide (PG) for Investigation and Remediation of Contaminated Land<br>• Guidance Notes for Contaminated Land Assessment and Remediation<br>• Guidance Manual for Use of Risk-Based Remediation Goals (RBRGs) for Contaminated Land Management</td><td>N/A</td></tr>
<tr><td>S8.9 & Appendix 8.4</td><td>LC3</td><td>• 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:<br><table><tr><th>Locations</th><th>Testing requirement</th><th>Acceptance Criteria</th></tr><tr><td>PBH4</td><td>PCBs</td><td>RBRGs (Public Park)</td></tr></table></td><td>N/A</td></tr>
</table>

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| | | • If the results of analysis below the RBRGs (Public Park), no further excavation will be required.<br>If the analysis indicates presence of contamination (i.e. noncompliance of the acceptance criteria), further excavation shall be carried out in 0.5m increment vertically and/or horizontally depending on the location(s) of the sample(s) which has exceeded the acceptance criteria. Further sampling shall also be conducted for compliance testing. The process of excavation,<br>sampling and compliance testing should continue until all contaminated materials are removed and should be supervised by a Land Contamination Specialist. | | | | | | |
| 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. | | | | | | N/A |
| Hazard to Life | | | | | | | | |
| S9.18 | H8 | The driver and his assistant should be physically healthy, experienced and have good safe driving records. The driver should hold a proper driving licence for the approved transport truck. Dedicated 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. | To reduce the risk during explosives transport | Contractor | Works areas at which explosives would be used | Construction stage | - | N/A |
| 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 |

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| Landscape & Visual | | | | | | | | |
| S10.10.1 Table 10.11 | LV3 | Good Site Management<br>• 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.<br>• 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 | Screen Hoarding<br>• 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<br>• All lighting in the construction site shall be carefully controlled to minimize light pollution and night-time glare to nearby residencies and GIC. The Contractor shall consider other security measures, which shall minimize the visual impacts. | Minimize visual impact | Contractor | Within Project site | Construction stage | - | Implemented |
| S10.10.1 Table 10.11 | LV6 | Erosion Control<br>• 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 | - | Implemented |
| S10.10.1 Table 10.11 | LV7 | Tree Protection & Preservation<br>• 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 | Implemented |

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| | | | | | | | Basis and on a Tree Basis', Greening, Landscape and Tree Management (GLTM) Section, DEVB<br>• Latest recommended horticultural practices from GLTM Section, DEVB | |
| S10.10.1 Table 10.11 | LV8 | Tree Transplantation<br>• 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<br>• Latest recommended horticultural practices from Greening, Landscape and Tree Management (GLTM) Section, DEVB<br>• ETWB TCW 2/2004 | N/A |
| S10.10.1 Table 10.11 | LV9 | Compensatory Planting<br>• 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 | Minimize visual impact and also enhance landscape | Contractor | Within Project site | Construction stage | • ETWB TCW 3/2006<br>• Latest recommended horticultural practices from | N/A |

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| | | 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.<br>• Compensatory tree planting may be incorporated into public open spaces and along roadside amenity areas affected by the construction works 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. | | | | | Greening, Landscape and Tree Management (GLTM) Section, DEVB<br>• ETWB TCW 2/2004 | |
| S10.10.1 Table 10.11 | LV10 | <u>Screen Planting</u><br>• 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<br>• ETWB TCW 2/2004 | N/A |
| S10.10.1 Table 10.11 | LV12 | <u>Reinstatement</u><br>• 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 | Minimize landscape impact | Contractor | Within Project Site | Construction Phase | • N/A | N/A |

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| | | relevant Government departments. (Specific mitigation for disturbance to public open space is detailed separately under LV14) | | | | | | |
| Cultural Heritage Impact (Construction Phase) | | | | | | | | |
| S11.4.4 | CH1 | The contractor should be alerted during the construction on the possibility of locating archaeological remains and as a precautionary measure, AMO shall be informed immediately in case of discovery of antiquities or supposed antiquities in the subject sites. | To preserve any cultural heritage items which may be removed and damaged by the excavation | Contractor | During construction works for cut and cover tunnels | Construction stage | • AMOs requirements | Implemented |
| EM&A Project | | | | | | | | |
| S13.2 | EM1 | An Independent Environmental Checker needs to be employed as per the EM&A Manual | Control EM&A Performance | Highways Department | All construction sites | Construction stage | • EIAO Guidance Note No. 4/2010<br>• TM-EIAO | Implemented |
| S13.2-13.4 | EM2 | • An Environmental Team needs to be employed as per the EM&A Manual;<br>• Prepare a systematic Environmental Management Plan to ensure effective implementation of the mitigation measures;<br>• 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<br>• TM-EIAO | Implemented |

# Appendix G
# Monitoring Schedule of the Reporting Month

Contract No.: HY/2018/02
Central Kowloon Route Section of Kai Take East

## Environmental Monitoring Schedule (January 2023)

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|---|---|---|---|---|---|---|
| 1 | 2 | 3<br>Impact Dust Monitoring (E-A1) | 4 | 5 | 6<br>Impact Dust Monitoring (E-A1) | 7 |
| 8 | 9 | 10 | 11 | 12<br>Impact Dust Monitoring (E-A1) | 13 | 14 |
| 15 | 16 | 17 | 18<br>Impact Dust Monitoring (E-A1) | 19 | 20<br>Impact Dust Monitoring (E-A1) | 21 |
| 22 | 23 | 24 | 25 | 26<br>Impact Dust Monitoring (E-A1) | 27 | 28<br>Impact Dust Monitoring (E-A1) |
| 29 | 30 | 31 | 1 | 2 | 3 | 4 |

# Appendix H
# Calibration Certificates
# (Air Monitoring)

ACUITY SUSTAINABILITY CONSULTING LIMITED

Website: www.acityhk.com
Unit E, 12/F, Ford Glory Plaza
Nos. 37-39 Wing Hong Street,
Cheung Sha Wan, Kowloon.
Tel.: (852) 2698 6833
Fax.: (852) 2698 9383

# Sibata LD-5R K-Factor Verification Test by Total Suspended Particulates HVS Test Report

| | | | |
|---|---|---|---|
| Verification Test Date: | 27-Mar-22 | to | 3-Apr-22 |
| Next Verification Test Date: | 4-Apr-23 | | |
| Unit-under-Test- Model No. | Sibata LD-5R | | |
| Unit-under-Test Serial No. | 882150 | | |
| Our Report Refrence No. | RPT-22-HVS-0001 | | |

| Standard Equipment Information | | | |
|---|---|---|---|
| Verification Equipment Type | | Tisch's TSP HVS | Tish HVS Calibrator |
| Standard Equipment Model No. | | TE-5170X | TE-5028A |
| Equipment serial no. | MFC | 1049 | 3702 |
| Last Calibration Date | | 22-Mar-22 | 3-Aug-21 |
| Next Calibration Date | | 21-Jun-22 | 4-Aug-22 |

| Verification Test No. | Date | Time | | | K-Factor | Counts/ Minute (R) | Total Counts (TC) | TSP Sample ID No. | Dust Concentration (ug/m3), (C) |
|---|---|---|---|---|---|---|---|---|---|
| | | Start-time | End-time | Elapsed Time (in min) | K-Factor (K=C/R) | x-axis | | | y axis |
| 1 | 27/3/2022 | 4945.81 | 4949.09 | 196.80 | 0.00087 | 58 | 11349 | R220486/1 | 50 |
| 2 | 27/3/2022 | 4949.09 | 4952.83 | 224.40 | 0.00078 | 68 | 15259 | R220486/2 | 53 |
| 3 | 27/3/2022 | 4952.83 | 4956.42 | 215.40 | 0.00077 | 62 | 13283 | R220486/3 | 47 |
| 4 | 3/4/2022 | 4991.80 | 4995.40 | 216.00 | 0.00042 | 53 | 11448 | R220538/1 | 22 |
| 5 | 3/4/2022 | 4995.40 | 4998.79 | 203.40 | 0.00040 | 58 | 11729 | R220538/2 | 23 |
| 6 | 3/4/2022 | 4998.79 | 5002.26 | 208.20 | 0.00060 | 61 | 12770 | R220538/3 | 37 |
| | | | | | 0.00064 | | | | |

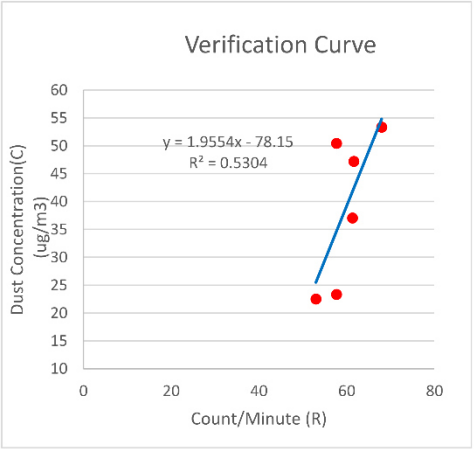
**K-Factor to be inputted in LD-5R (corrected 1 decimal point): 0.6**

By Linear Regression of y on x:

slope, mh= 1.9554
intercept,ch= -78.1505
*Correlation Coefficient,R= 0.7283

Verification Test Result: Strong Correlation, Results were accepted.

* If the Correlation Coefficient, R is <0.5. Checking and Re-verification are required.




Verified By: _____ Date: 14-04-2022

Field Supervisor

TISCH Environmental

| RECALIBRATION DUE DATE: |
|---|
| June 28, 2023 |

# Certificate of Calibration

| Calibration Certification Information | | | | |
|---|---|---|---|---|
| **Cal. Date:** | June 28, 2022 | **Rootsmeter S/N:** 438320 | **Ta:** 296 | °K |
| **Operator:** | Jim Tisch | | **Pa:** 755.1 | mm Hg |
| **Calibration Model #:** | TE-5025A | **Calibrator S/N:** 3465 | | |

| Run | Vol. Init (m3) | Vol. Final (m3) | ΔVol. (m3) | ΔTime (min) | ΔP (mm Hg) | ΔH (in H2O) |
|---|---|---|---|---|---|---|
| 1 | 1 | 2 | 1 | 1.4290 | 3.2 | 2.00 |
| 2 | 3 | 4 | 1 | 1.0130 | 6.4 | 4.00 |
| 3 | 5 | 6 | 1 | 0.9050 | 7.9 | 5.00 |
| 4 | 7 | 8 | 1 | 0.8590 | 8.8 | 5.50 |
| 5 | 9 | 10 | 1 | 0.7110 | 12.8 | 8.00 |

**Data Tabulation**

| Vstd (m3) | Qstd (x-axis) | $\sqrt{\Delta H\left(\frac{Pa}{Pstd}\right)\left(\frac{Tstd}{Ta}\right)}$ (y-axis) | Va | Qa (x-axis) | $\sqrt{\Delta H\left(Ta/Pa\right)}$ (y-axis) |
|---|---|---|---|---|---|
| 0.9961 | 0.6970 | 1.4144 | 0.9958 | 0.6968 | 0.8854 |
| 0.9918 | 0.9791 | 2.0003 | 0.9915 | 0.9788 | 1.2522 |
| 0.9899 | 1.0938 | 2.2364 | 0.9895 | 1.0934 | 1.4000 |
| 0.9887 | 1.1509 | 2.3456 | 0.9883 | 1.1506 | 1.4683 |
| 0.9834 | 1.3831 | 2.8289 | 0.9830 | 1.3826 | 1.7708 |
| **QSTD** | **m=** | **2.05924** | **QA** | **m=** | **1.28946** |
| | **b=** | **-0.01929** | | **b=** | **-0.01207** |
| | **r=** | **0.99998** | | **r=** | **0.99998** |

**Calculations**

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

**For subsequent flow rate calculations:**

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

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

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

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

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

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

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

**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:** | **24-Dec-2022** |
| **Serial No:** | **1049** | **Model:** | **TE-5170X** | **Operator:** | **Kate Wong** |

## Ambient Condition

| | | | |
|---|---|---|---|
| **Corrected Pressure (mm Hg):** | 765.9 | **Temperature (deg K):** | 290.1 |

## Calibration Orifice

| | | | |
|---|---|---|---|
| **Model:** | TE-5028A | **Slope:** | 1.03041 |
| **Serial No.:** | 3702 | **Intercept:** | -0.00231 |
| **Calibration Due Date:** | 7-Jan-23 | **Corr. Coeff:** | 0.99975 |

## Calibration Data

| Plate or Test # | In,H2O (in) | Qa, X-Axis (m3/min) | I, CFM (chart) | IC, Y-Axis (corrected) |
|---|---|---|---|---|
| 1 | 1.58 | 1.244 | 32.7 | 33.27 |
| 2 | 2.11 | 1.437 | 33.6 | 34.19 |
| 3 | 2.32 | 1.506 | 34.0 | 34.60 |
| 4 | 2.73 | 1.634 | 34.7 | 35.31 |
| 5 | 3.48 | 1.844 | 35.8 | 36.43 |

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

m= 5.2970 b= 26.6388 Corr. Coeff= 0.9994

Sampler set point(SSP) 32 CFM

**Calculations**

Qstd = 1/m[Sqrt(H2O(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

Qstd = standard flow rate
IC = corrected chart response
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)]

m = sampler slope
b = sampler intercept
I = chart response
Tav = average temperature
Pav = average pressure

Checked by: 黃雲海 Date: 24-Dec-22

**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:** | **06-Jan-2023** |
| **Serial No:** | **1049** | **Model:** | **TE-5170X** | **Operator:** | **Kate Wong** |

## Ambient Condition

| | | | |
|---|---|---|---|
| **Corrected Pressure (mm Hg):** | 767.0 | **Temperature (deg K):** | 293.0 |

## Calibration Orifice

| | | | |
|---|---|---|---|
| **Model:** | TE-5028A | **Slope:** | 1.64554 |
| **Serial No.:** | 3702 | **Intercept:** | -0.00368 |
| **Calibration Due Date:** | 20-Jan-23 | **Corr. Coeff:** | 0.99975 |

## Calibration Data

| Plate or Test # | In,H2O (in) | Qa, X-Axis (m3/min) | I, CFM (chart) | IC, Y-Axis (corrected) |
|---|---|---|---|---|
| 1 | 1.53 | 0.764 | 31.3 | 31.71 |
| 2 | 1.99 | 0.871 | 32.8 | 33.23 |
| 3 | 2.23 | 0.922 | 33.6 | 34.04 |
| 4 | 2.87 | 1.045 | 35.2 | 35.67 |
| 5 | 3.22 | 1.107 | 36.2 | 36.68 |

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

m= 14.3112 b= 20.7891 Corr. Coeff= 0.9996

Sampler set point(SSP) 38 CFM

**Calculations**

Qstd = 1/m[Sqrt(H2O(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

Qstd = standard flow rate
IC = corrected chart response
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)]

m = sampler slope
b = sampler intercept
I = chart response
Tav = average temperature
Pav = average pressure

Checked by: 黃雲清 Date: 6-Jan-23

**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:** | **19-Jan-2023** |
| **Serial No:** | **1049** | **Model:** | **TE-5170X** | **Operator:** | **Kate Wong** |

## Ambient Condition

| | | | |
|---|---|---|---|
| **Corrected Pressure (mm Hg):** | 766.8 | **Temperature (deg K):** | 289.3 |

## Calibration Orifice

| | | | |
|---|---|---|---|
| **Model:** | TE-5028A | **Slope:** | 1.03041 |
| **Serial No.:** | 3702 | **Intercept:** | -0.00231 |
| **Calibration Due Date:** | 2-Feb-23 | **Corr. Coeff:** | 0.99975 |

## Calibration Data

| Plate or Test # | In,H2O (in) | Qa, X-Axis (m3/min) | I, CFM (chart) | IC, Y-Axis (corrected) |
|---|---|---|---|---|
| 1 | 1.61 | 1.258 | 32.6 | 33.24 |
| 2 | 2.12 | 1.443 | 33.6 | 34.26 |
| 3 | 2.32 | 1.509 | 34.0 | 34.66 |
| 4 | 2.74 | 1.640 | 34.6 | 35.28 |
| 5 | 3.44 | 1.837 | 35.8 | 36.50 |

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

m= 5.5764 b= 26.2130 Corr. Coeff= 0.9992

Sampler set point(SSP) 32 CFM

**Calculations**

Qstd = 1/m[Sqrt(H2O(Pa/Pstd)(Tstd/Ta))-b]
IC = I[Sqrt(Pa/Pstd)(Tstd/Ta)]

Qstd = standard flow rate
IC = corrected chart response
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)]

m = sampler slope
b = sampler intercept
I = chart response
Tav = average temperature
Pav = average pressure

Checked by: 黃雲海 Date: 19-Jan-23

# Appendix I
# The Certification of Laboratory with HOKLAS Accredited Analytical Tests

Hong Kong Accreditation Service
香港認可處

# Certificate of Accreditation
# 認可證書

*This is to certify that*
*特此證明*

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

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

*is accredited by the Hong Kong Accreditation Service (HKAS) to ISO/IEC 17025:2017*
*for performing specific laboratory activities as listed in the scope of accreditation within the test category of*
*獲香港認可處根據ISO/IEC 17025:2017認可*
*進行載於認可範圍內下述測試類別中的指定實驗所活動*

**Environmental Testing**
**環境測試**

*This accreditation to ISO/IEC 17025:2017 demonstrates technical competence for a defined scope and the implementation of a management system relevant to laboratory operation (see joint IAF-ILAC-ISO Communiqué).*
*此項 ISO/IEC 17025:2017 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與實驗所運作相關的管理體系。*
*(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 HKAS 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*

SHUM Wai-leung, Executive Administrator
執行幹事 沈偉良
Issue Date : 2 December 2019
簽發日期：二零一九年十二月二日

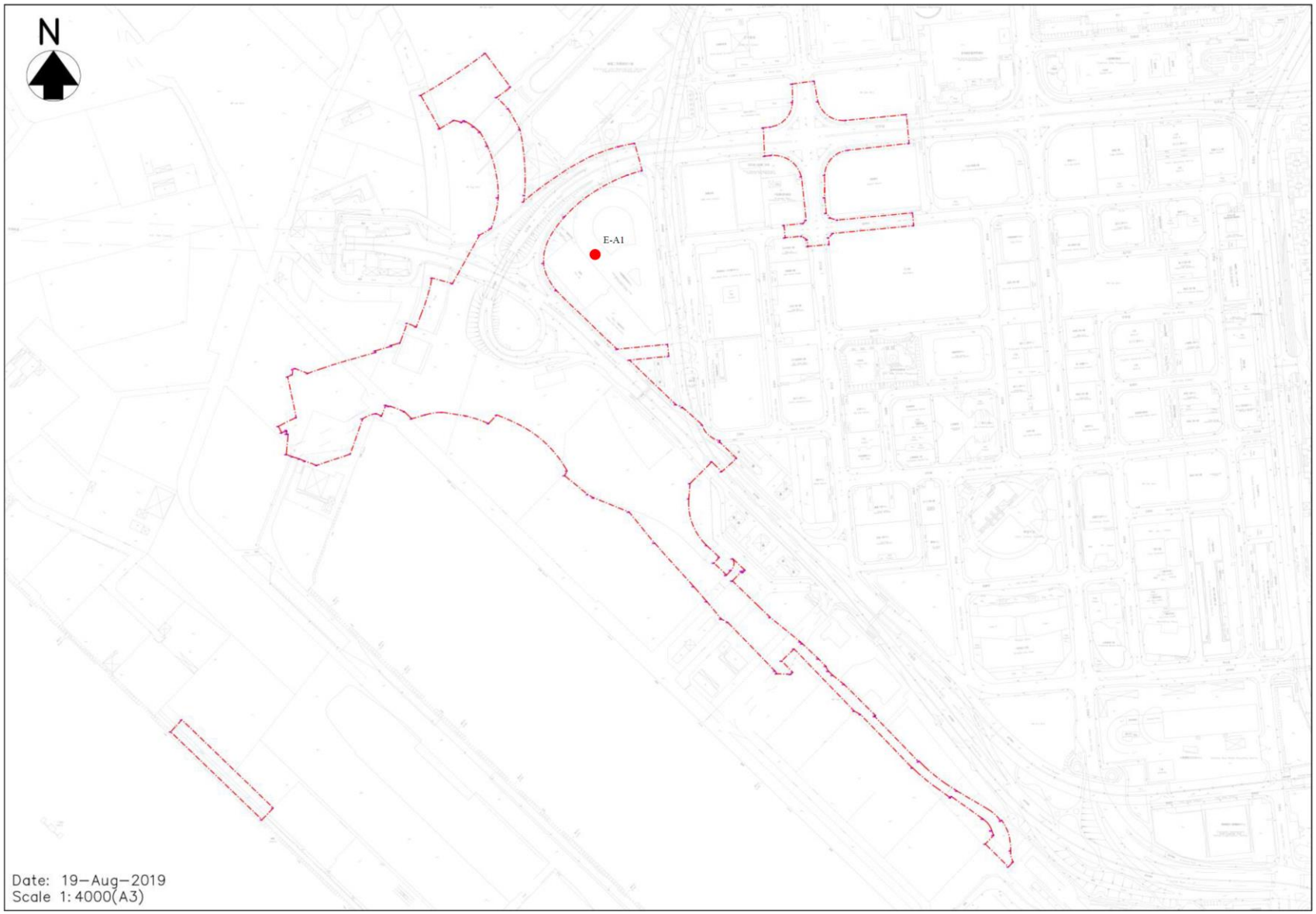
Registration Number : HOKLAS 241
註冊號碼：

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

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

L001875

# Appendix J
# Location Plan of Air Quality Monitoring Station

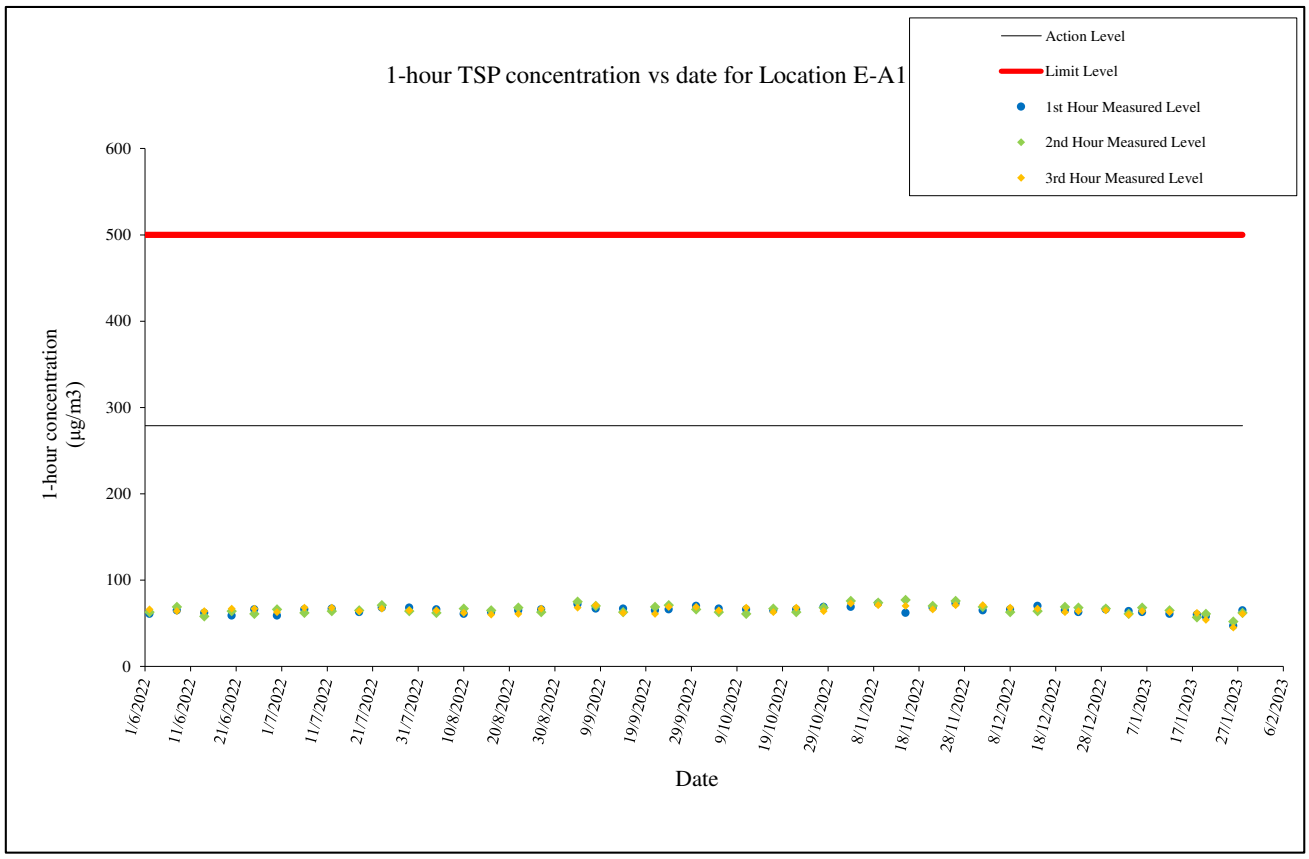

N
E-A1
Date: 19-Aug-2019
Scale 1: 4000(A3)

# Appendix K
# Monitoring Data (Air Monitoring)

Location: Hong Kong International Trade and Exhibition Centre (E-A1)
Monitoring date: 3, 6, 12, 18, 20, 26 and 28 January 2023
Parameter: TSP 1-hour
Other Factors: Nearby traffic

| Date | 1-hour TSP (μg/m³) | | | | |
|---|---|---|---|---|---|
| | Weather | Start Time | 1st hour (μg/m³) | 2nd hour (μg/m³) | 3rd hour (μg/m³) |
| 3/1/2023 | Fine | 12:12 | 64 | 61 | 60 |
| 6/1/2023 | Fine | 12:20 | 63 | 68 | 64 |
| 12/1/2023 | Fine | 12:18 | 61 | 65 | 63 |
| 18/1/2023 | Fine | 12:17 | 60 | 57 | 62 |
| 20/1/2023 | Fine | 10:49 | 58 | 61 | 54 |
| 26/1/2023 | Fine | 11:30 | 47 | 52 | 45 |
| 28/1/2023 | Fine | 12:16 | 65 | 62 | 61 |

Figure 1: Graphical Illustration of Measured 1-hour TSP (μg/m³) Levels at E-A1

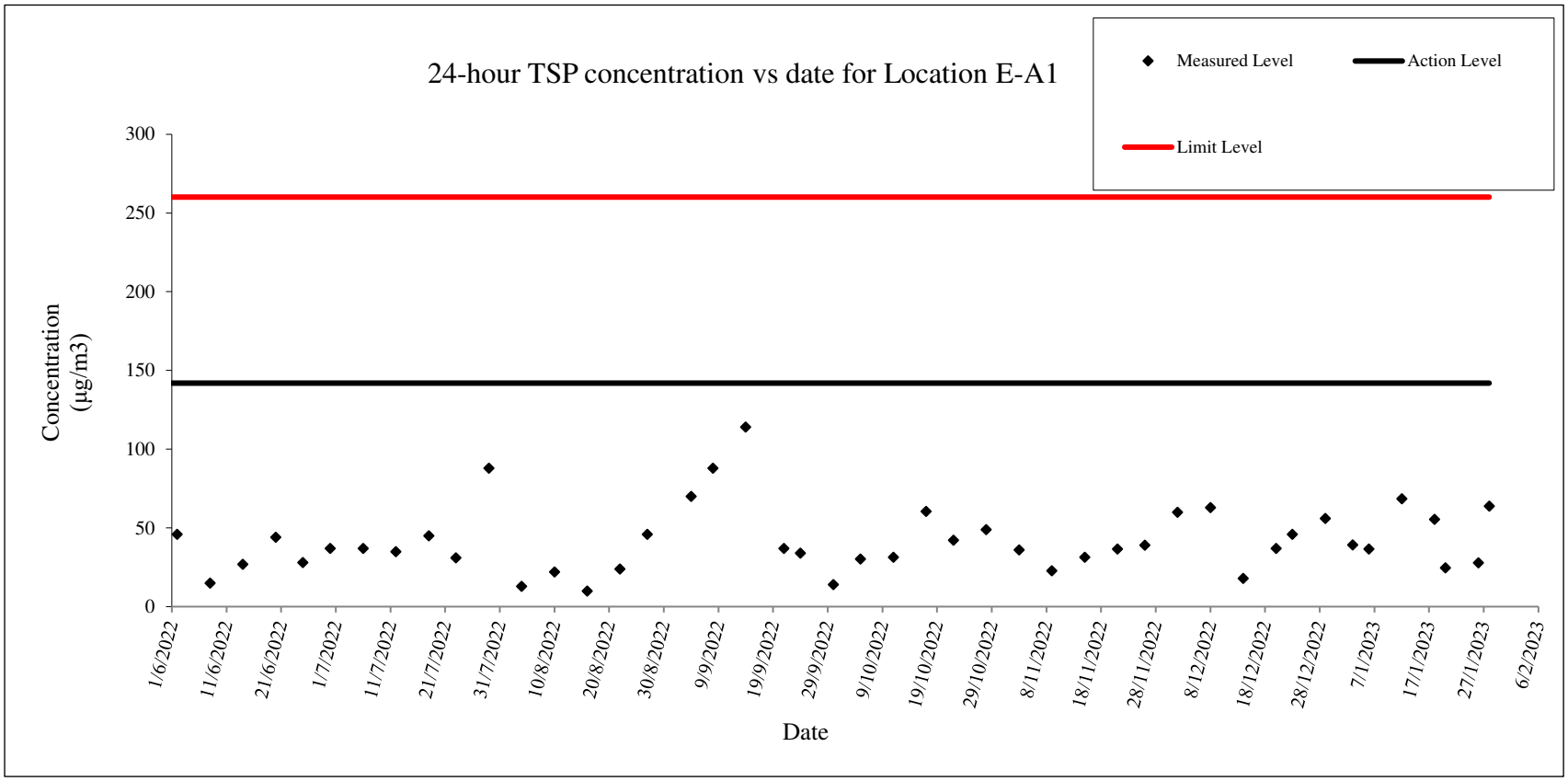


Location: Hong Kong International Trade and Exhibition Centre (E-A1)
Monitoring date: 3, 6, 12, 18, 20, 26 and 28 January 2023
Parameter: TSP 24-hour
Other Factors: Nearby traffic

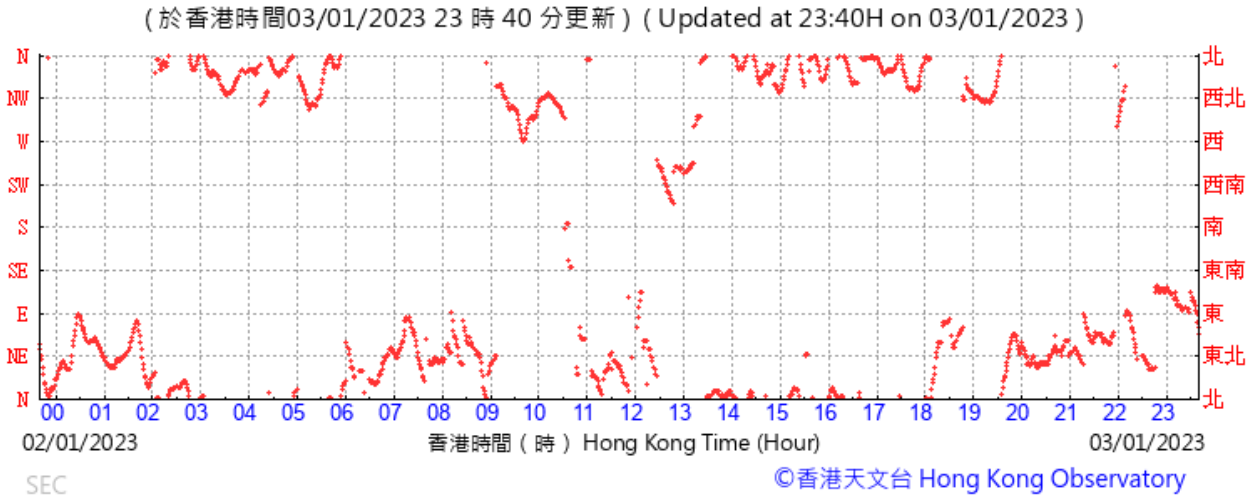
| | | | |
|---|---|---|---|
| Date of Calibration: | 24-Dec-22 | Slope = | 5.2970 |
| Calibration due date: | 7-Jan-23 | Intercept = | 26.6388 |
| Date of Calibration: | 6-Jan-23 | Slope = | 14.3112 |
| Calibration due date: | 20-Jan-23 | Intercept = | 20.7891 |
| Date of Calibration: | 19-Jan-23 | Slope = | 5.5764 |
| Calibration due date: | 2-Feb-23 | Intercept = | 26.2130 |

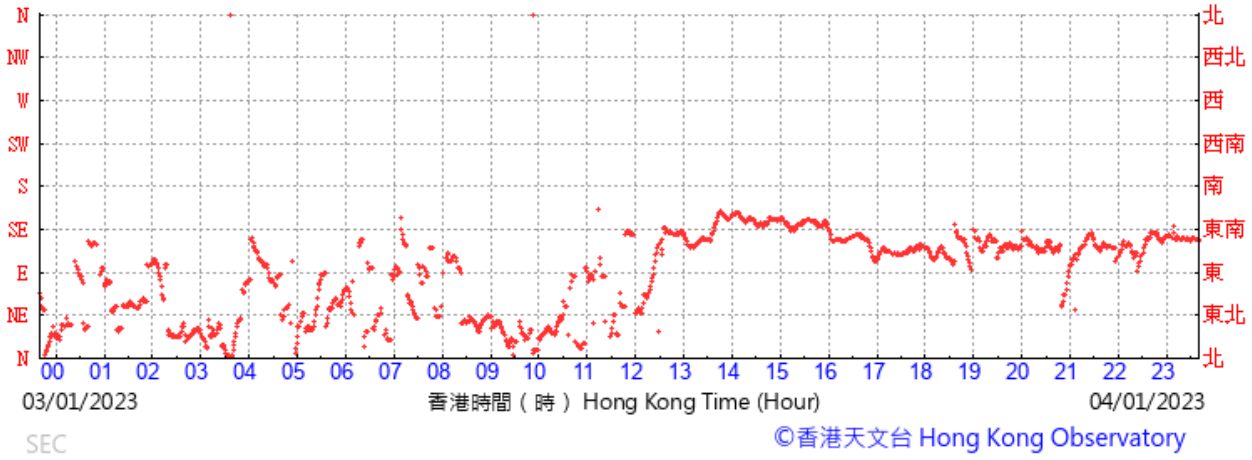
| Start Date | Weather Condition | Elapse Time | | | Chart Reading | | | Avg Air Temp | Avg Atmospheric Pressure | Flow Rate | Standard Air Volume | Filter Weight (g) | | Particulate weight | Conc. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Initial | Final | Actual (min) | Min | Max | Avg | ($^oC$) | (mm hPa) | ($m^3$/min) | ($m^3$) | Initial | Final | (g) | ($\mu g/m^3$) |
| 03/01/2023 | Fine | 6556.77 | 6580.77 | 1440.00 | 39 | 40 | 39.5 | 17.4 | 1023.6 | 2.60 | 3739 | 2.6731 | 2.8196 | 0.1465 | 39 |
| 06/01/2023 | Fine | 6580.77 | 6604.77 | 1440.00 | 38 | 41 | 39.5 | 19.5 | 1021.6 | 2.55 | 3678 | 2.7590 | 2.8936 | 0.1346 | 37 |
| 12/01/2023 | Fine | 6604.77 | 6628.77 | 1440.00 | 37 | 38 | 37.5 | 20.3 | 1012.8 | 1.19 | 1707 | 2.7761 | 2.8931 | 0.1170 | 69 |
| 18/01/2023 | Fine | 6628.77 | 6652.77 | 1440.00 | 39 | 40 | 39.5 | 15.2 | 1023.2 | 1.38 | 1986 | 2.7623 | 2.8725 | 0.1102 | 55 |
| 20/01/2023 | Fine | 6652.77 | 6676.77 | 1440.00 | 40 | 41 | 40.5 | 17.3 | 1020.5 | 2.71 | 3895 | 2.6570 | 2.7529 | 0.0959 | 25 |
| 26/01/2023 | Fine | 6676.77 | 6700.77 | 1440.00 | 38 | 40 | 39.0 | 15.6 | 1020.9 | 2.46 | 3535 | 2.6838 | 2.7820 | 0.0982 | 28 |
| 28/01/2023 | Fine | 6700.77 | 6724.77 | 1440.00 | 37 | 39 | 38.0 | 12.9 | 1023.9 | 2.32 | 3348 | 2.6662 | 2.8802 | 0.2140 | 64 |
| | | | | | | | | | | | | | | Min | 25 |
| | | | | | | | | | | | | | | Max | 69 |
| | | | | | | | | | | | | | | Average | 45 |

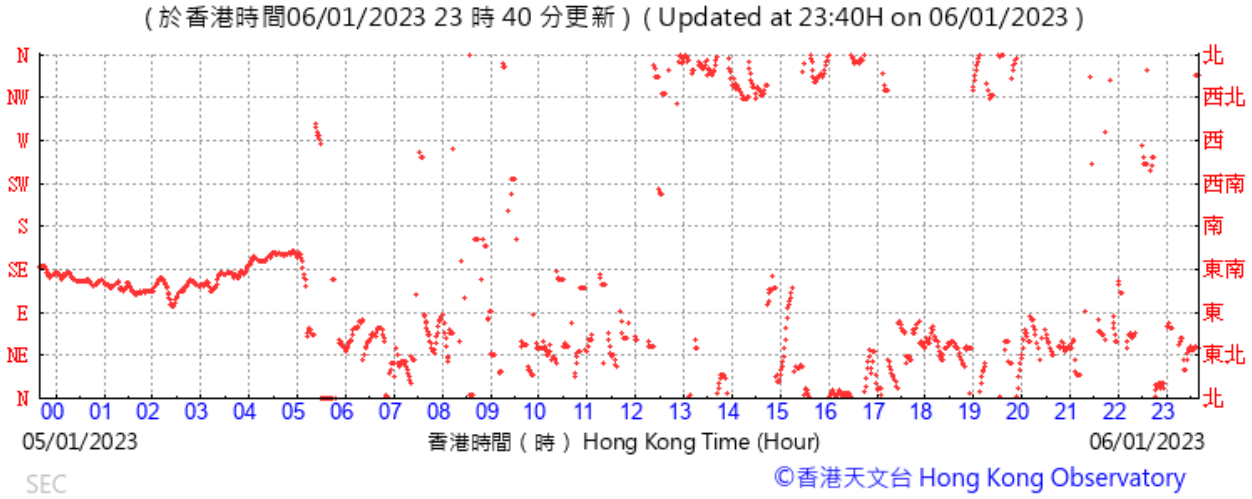
Figure 2: Graphical Illustration of Measured 24-hour TSP (μg/m$^3$) Levels at E-A1

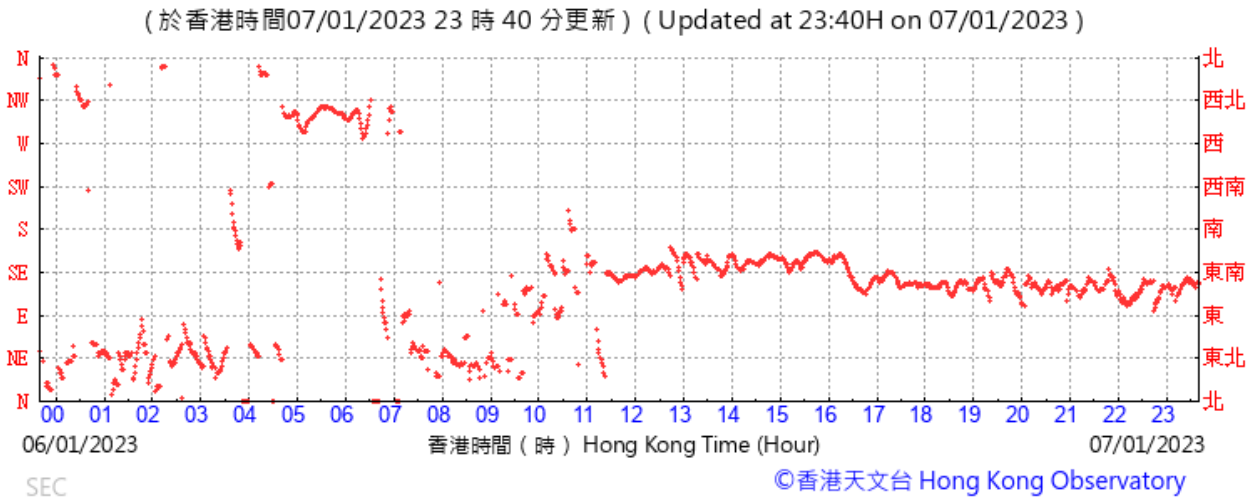


**WIND DIRECTION DATA FOR 3, 4, 6, 7, 12, 13, 18, 19, 20, 21, 26, 27, 28 and 29 Jan 2023**

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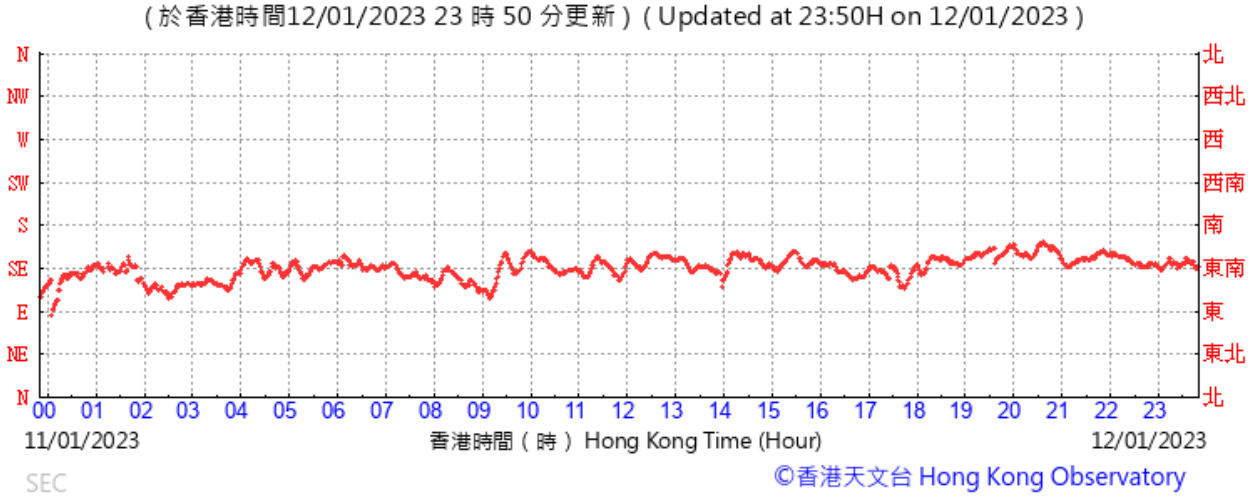
北 西北 西 西南 南 東南 東 東北 北
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23
06/01/2023
香港時間 (時) Hong Kong Time (Hour)
07/01/2023
SEC
©香港天文台 Hong Kong Observatory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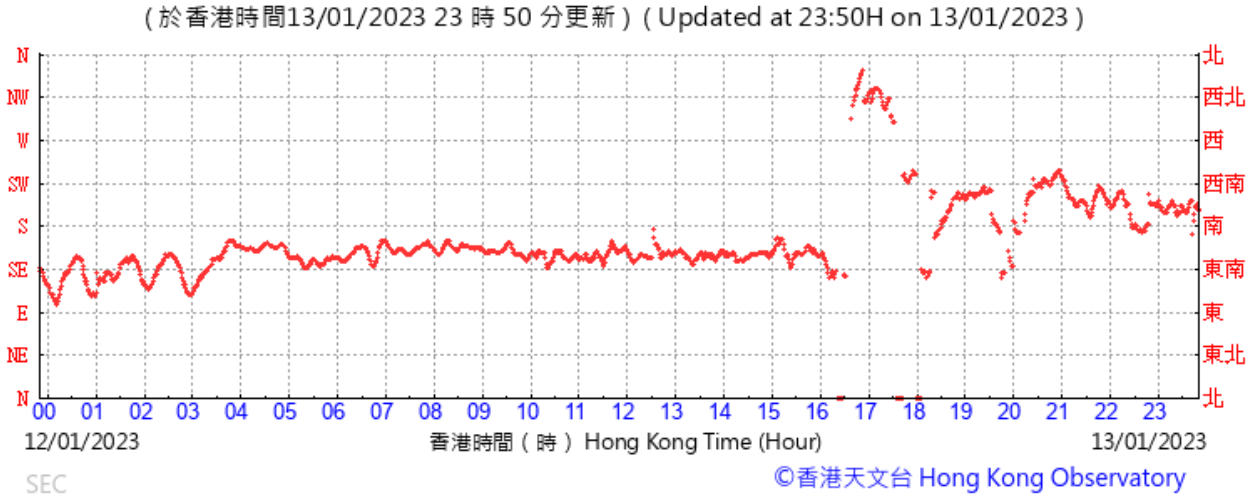
N NW W SW S SE E NE N
北 西北 西 西南 南 東南 東 東北 北
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23
11/01/2023
香港時間 (時) Hong Kong Time (Hour)
12/01/2023
SEC
©香港天文台 Hong Kong Observatory


(於香港時間13/01/2023 23 時 50 分更新) (Updated at 23:50H on 13/01/2023)
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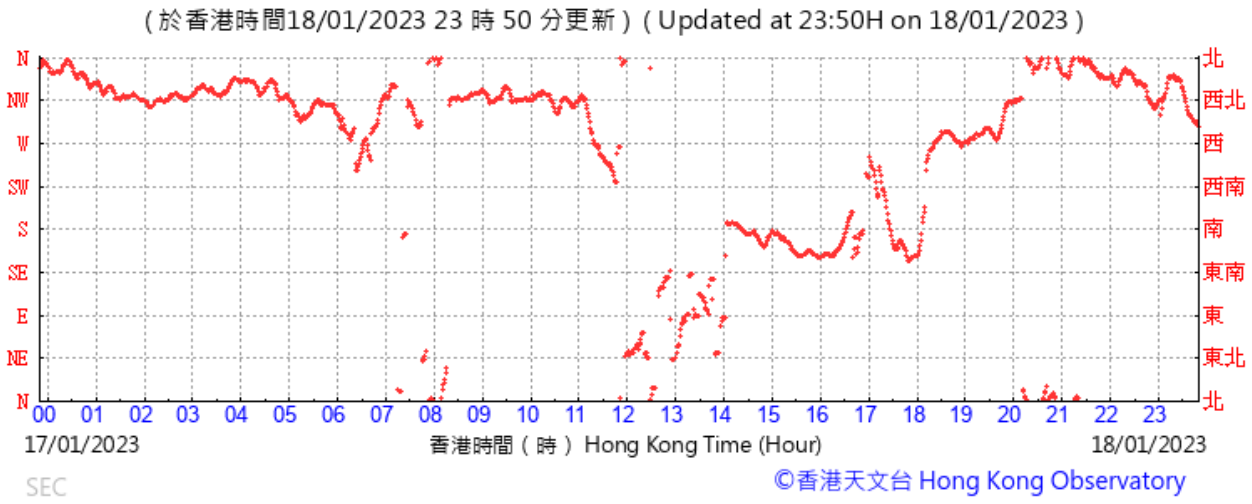
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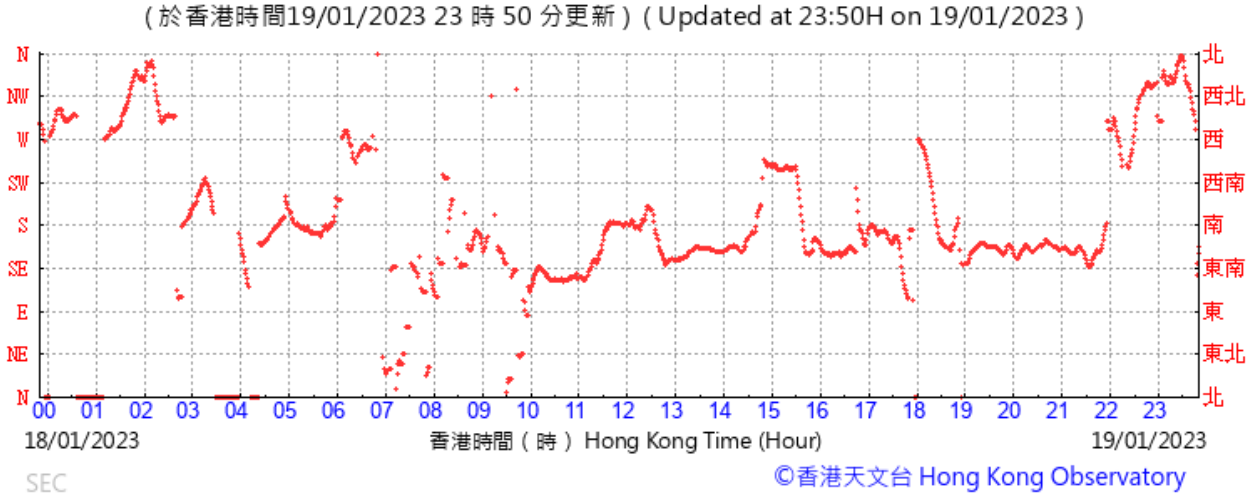
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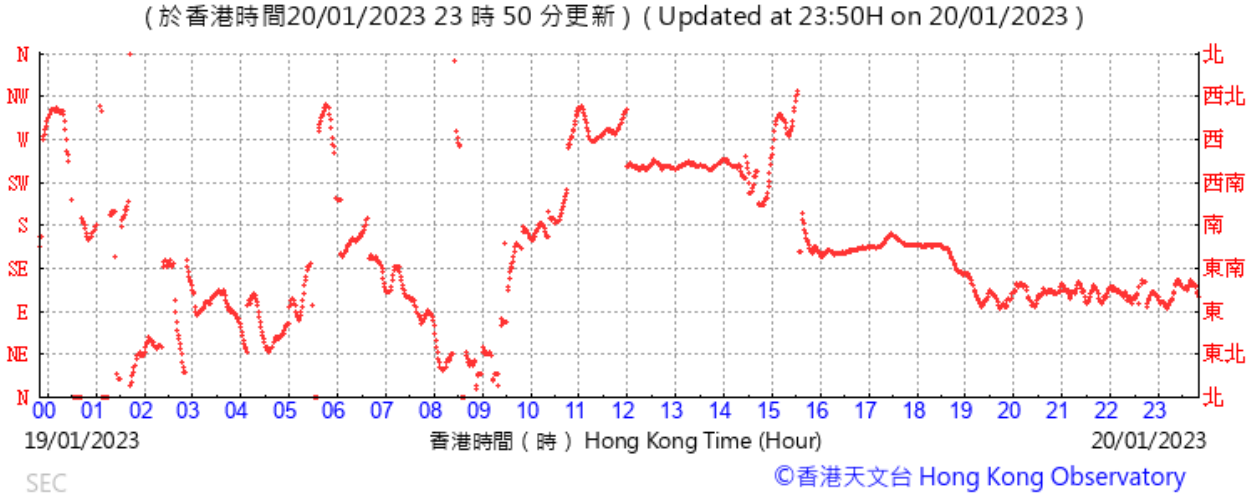
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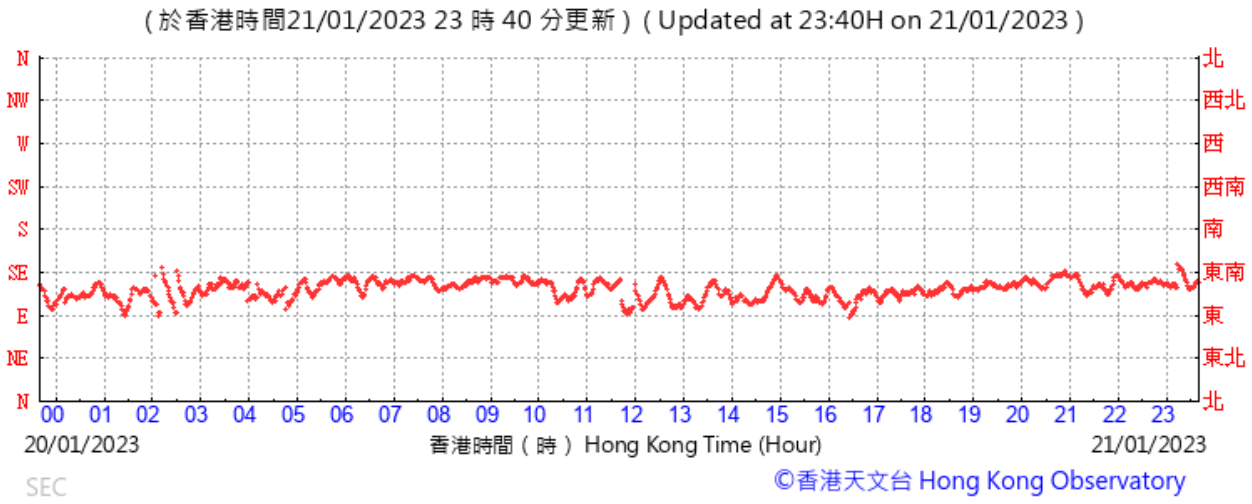
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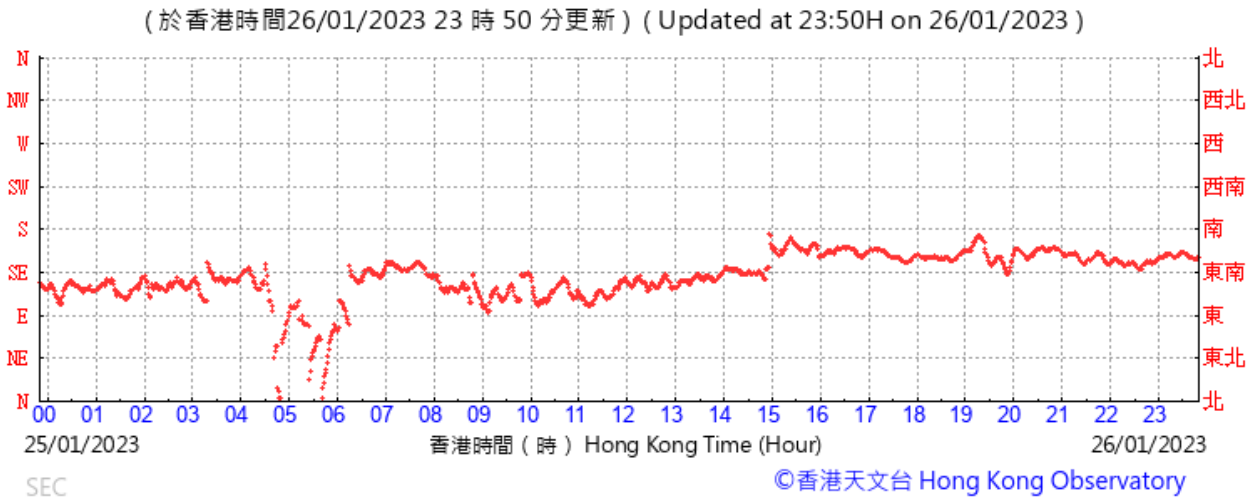
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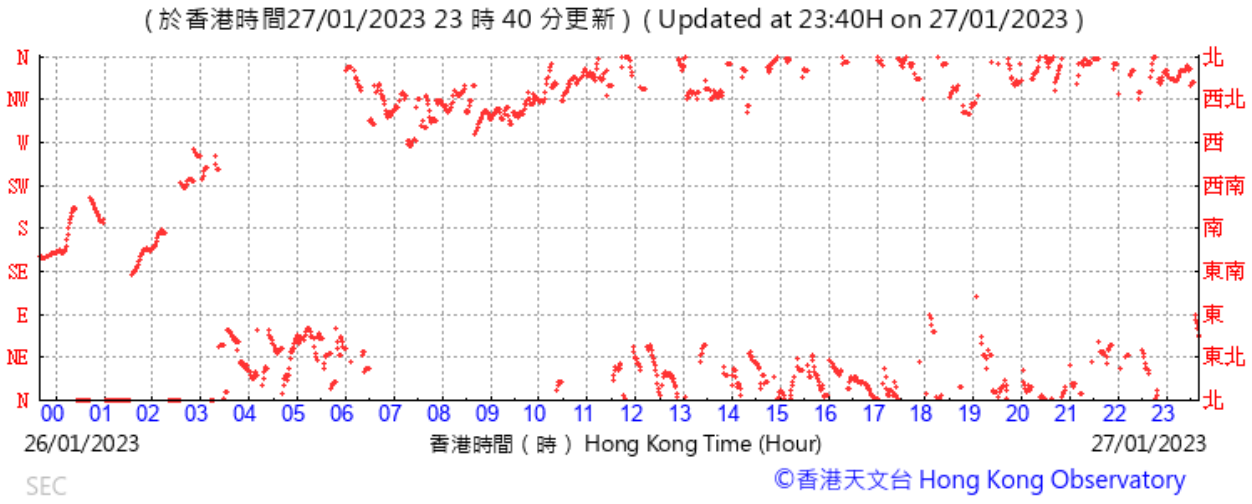
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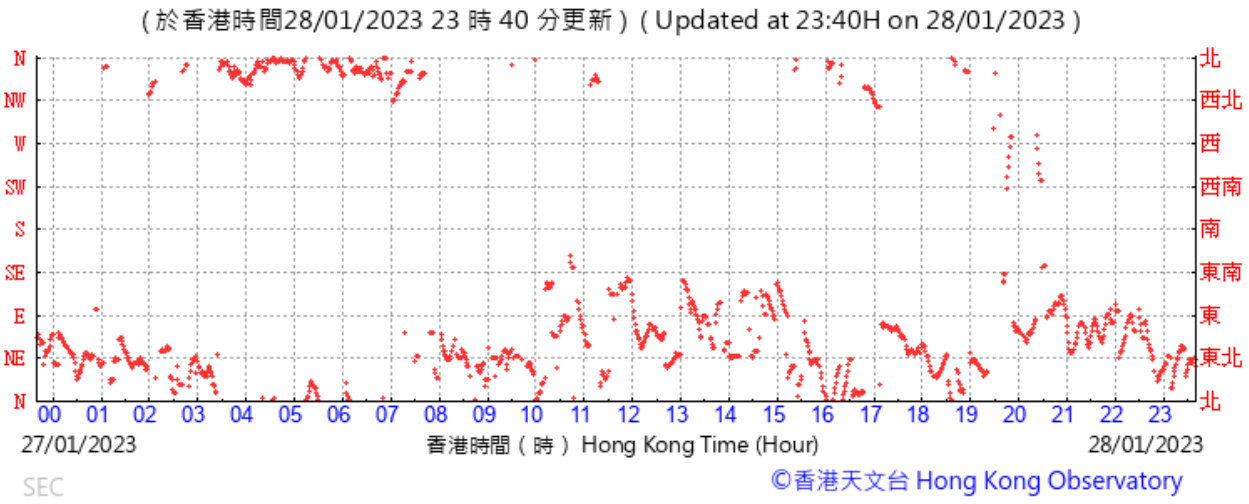
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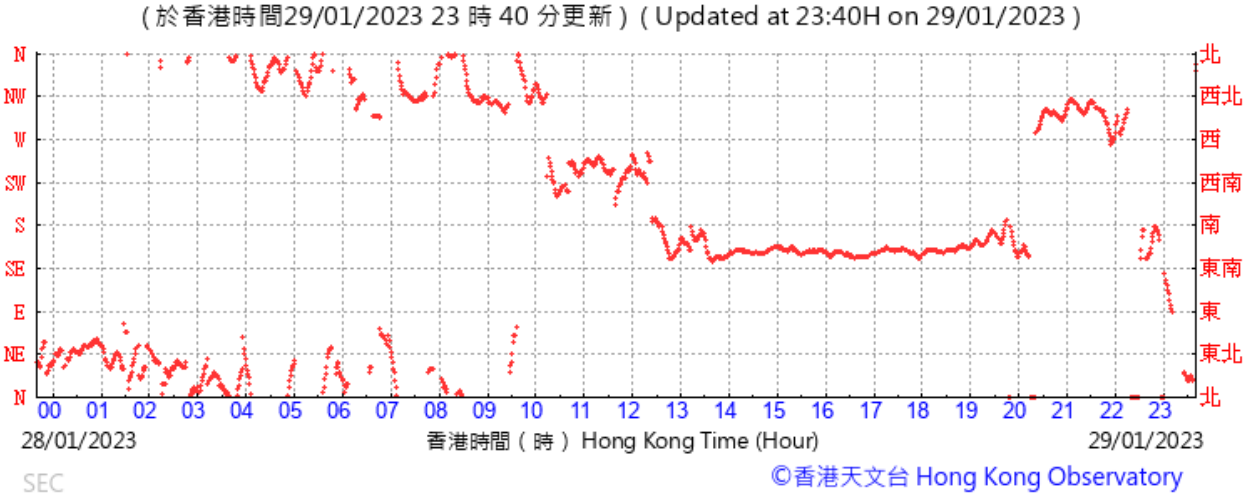
©香港天文台 Hong Kong Observatory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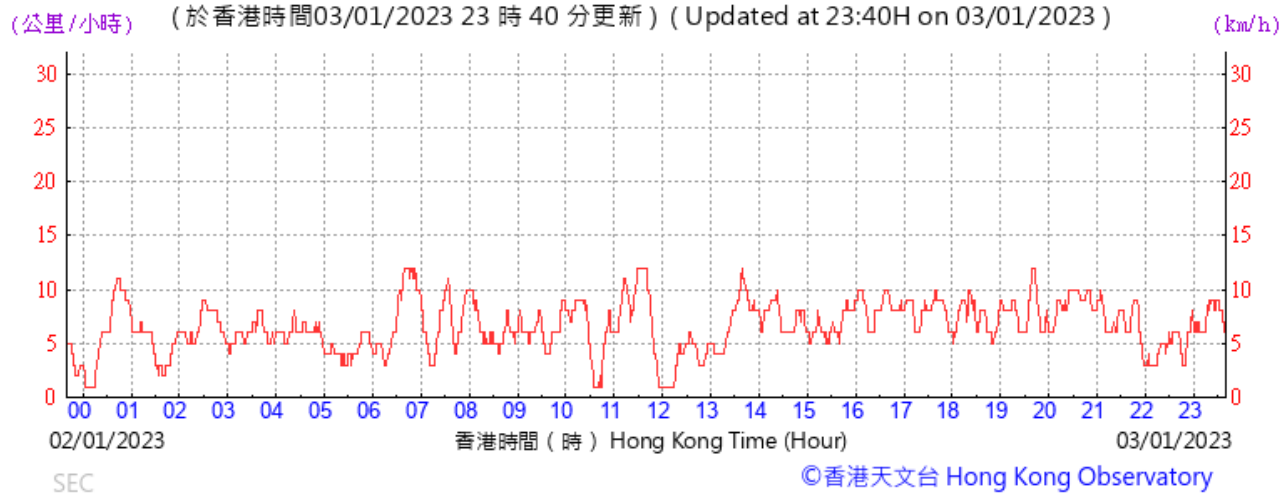
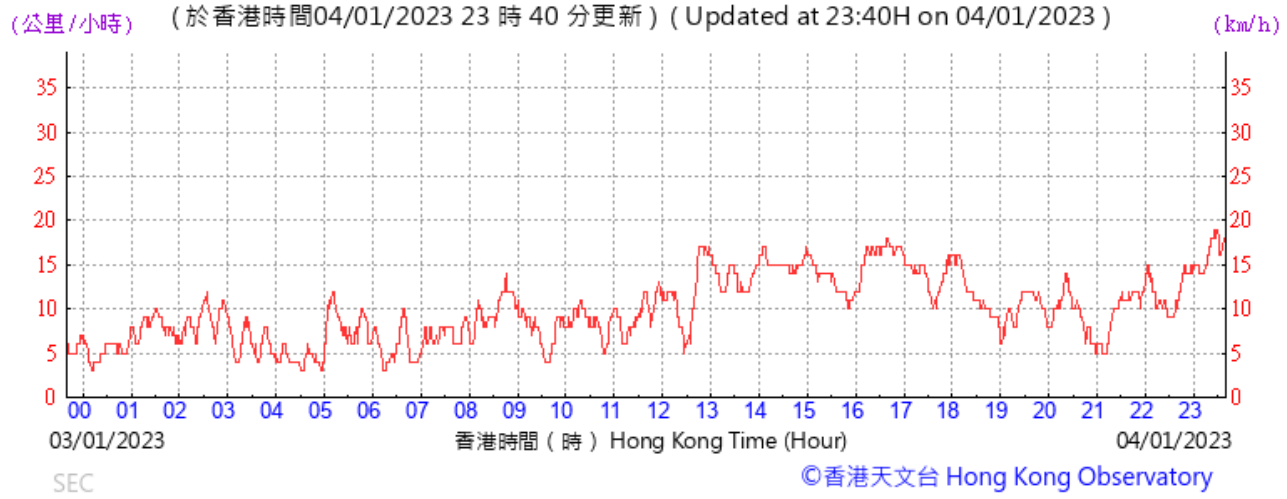
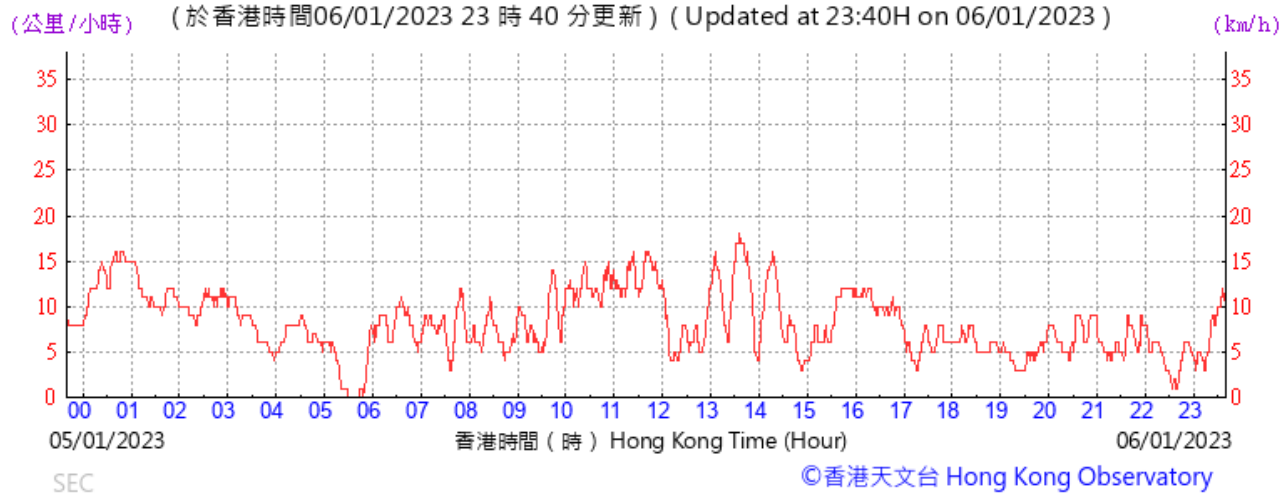
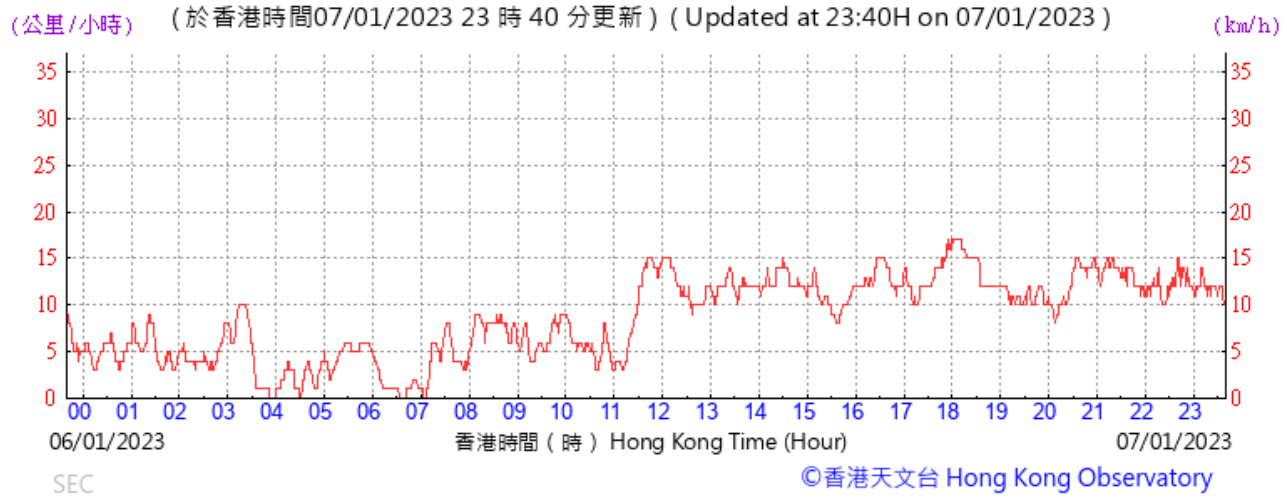
©香港天文台 Hong Kong Observatory

**WIND SPEED DATA FOR 3, 4, 6, 7, 12, 13, 18, 19, 20, 21, 26, 27, 28 and 29 Jan 2023**

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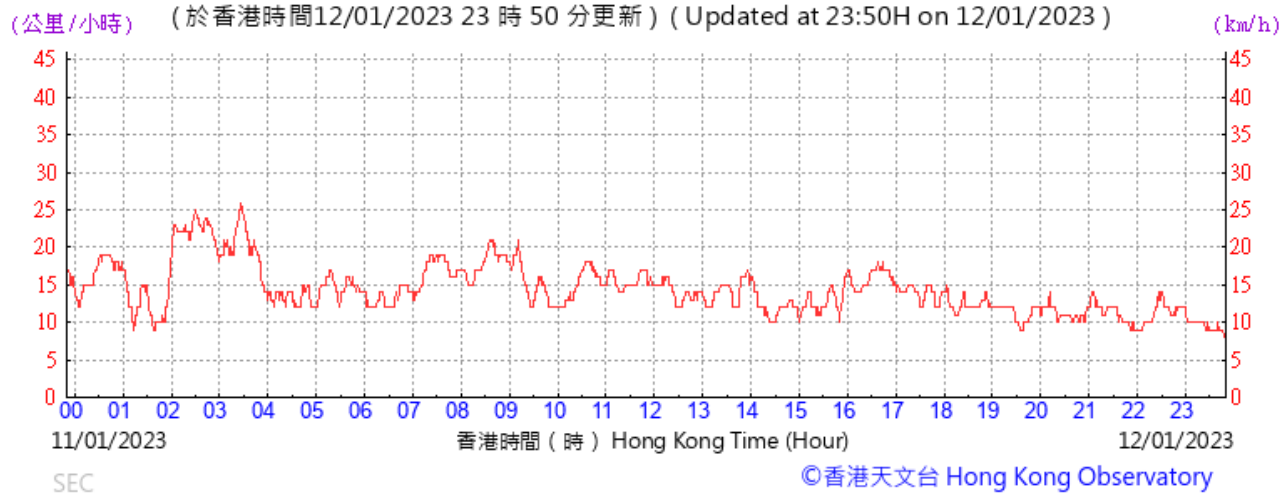
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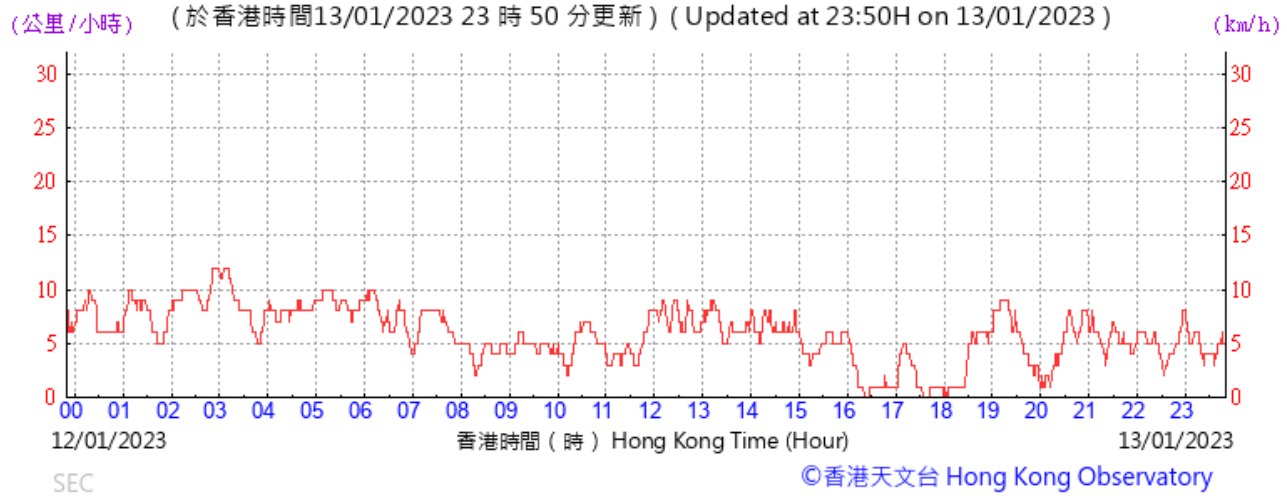
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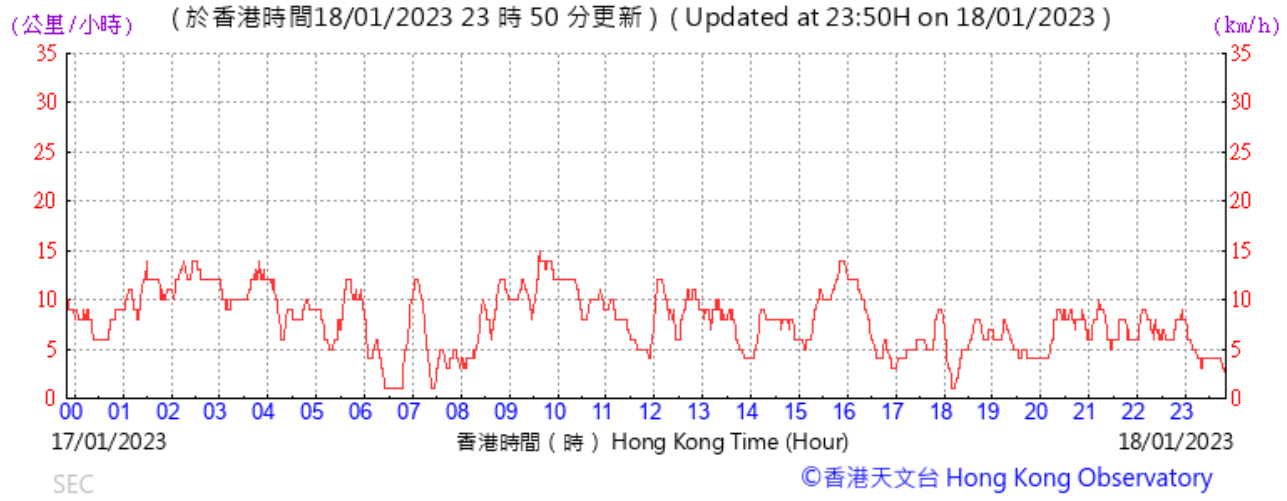
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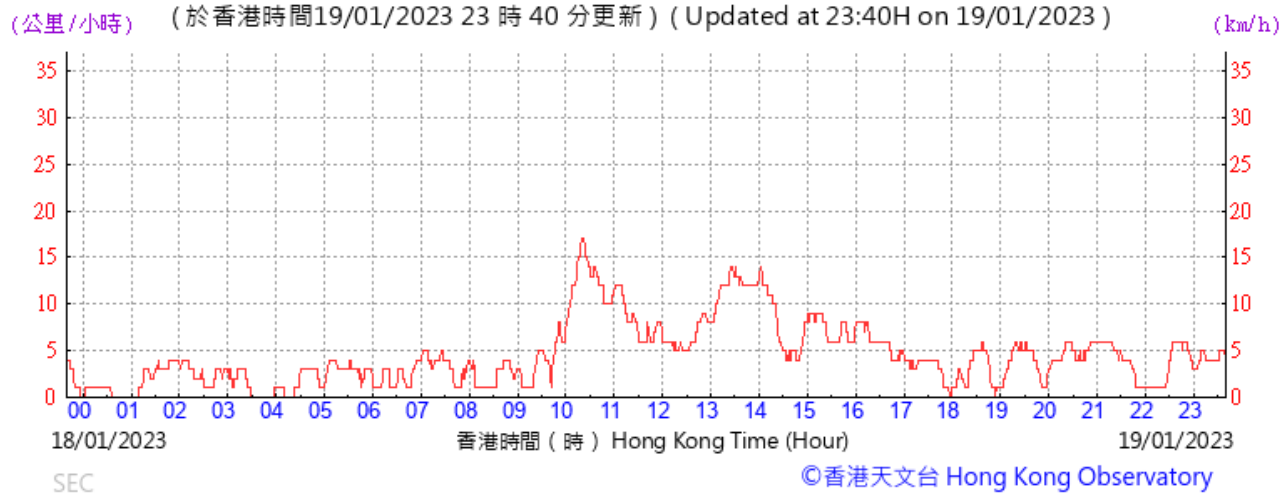
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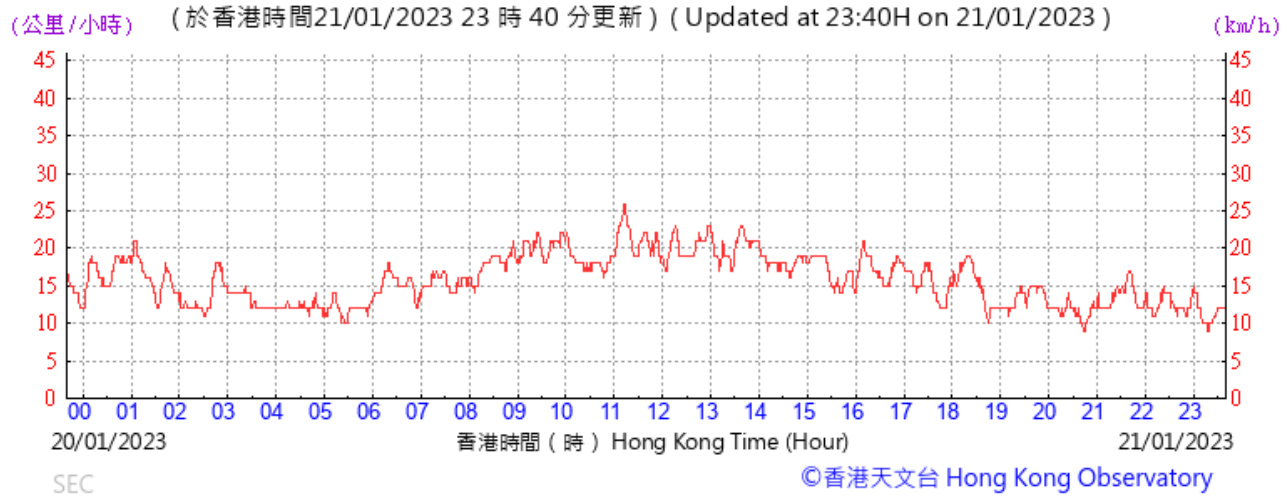
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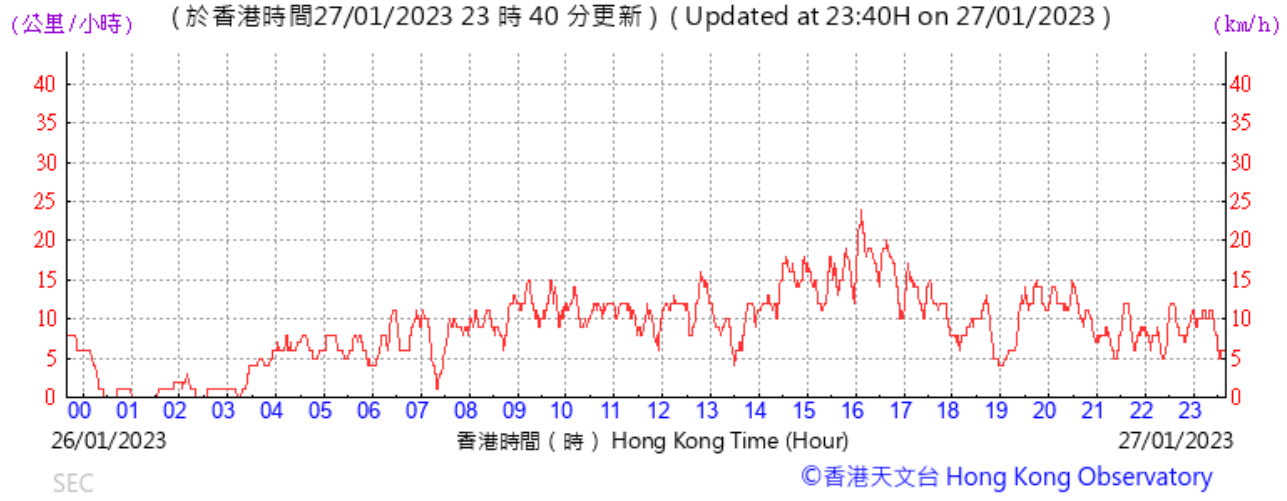
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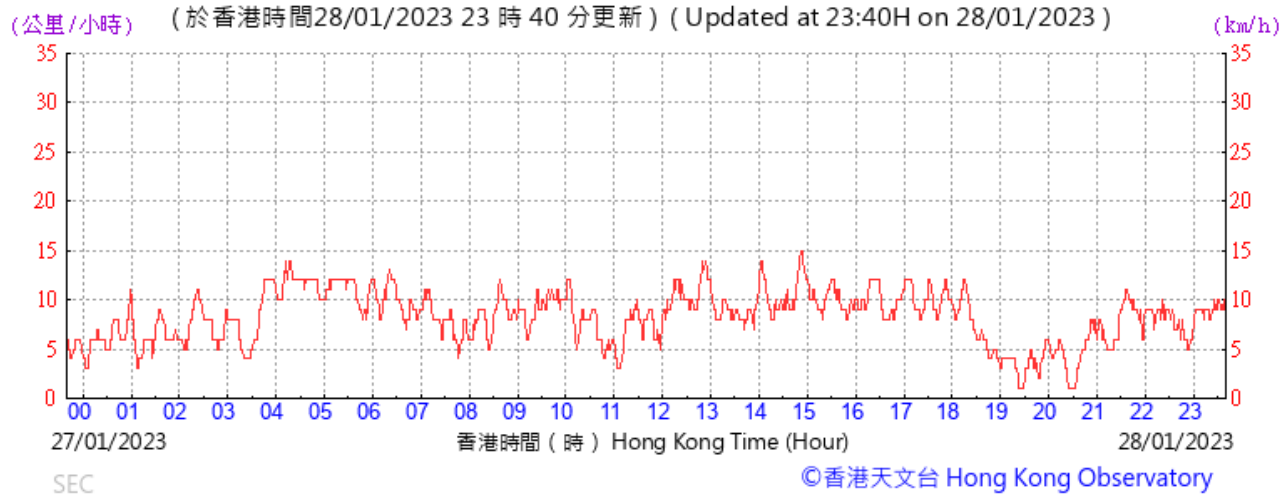
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香港時間 (時) Hong Kong Time (Hour)
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# Appendix L
# Waste Flow Table

愛銘－保華聯營
Alchmex - Paul Y Joint Venture

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

Name of Department: HyD

**Monthly Summary Waste Flow Table - Jan 2023**

| Month | Actual Quantities of Inert C&D Material Generated Monthly | | | | | | | | | | | | | Actual Quantities of C&D Waste Generated Monthly | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total Qty Generated | Hard Rock and Large Broken Concrete | Reused in the Contract | Reused in other Projects (KSZHJV) | Reused in other Projects (SFK) | Reused in other Projects (CWB) | Reused in other Projects (TKO-LTT) | Reused in other Projects (KTW) | Reused in other Projects (SFK-DH) | Reused in other Projects (Tapbo) | Disposal at Sorting Facility | Disposed as Public Fill | Imported Fill | Metals (Steel) | Metals (Aluminum) | Metals (Copper) | Paper/cardboard packaging | Plastics | Chemical Waste | Others, e.g. general refuse |
| | (in '000tonne) | (in '000tonne) | (in '000tonne) | (in '000tonne) | (in '000tonne) | (in '000tonne) | (in '000tonne) | (in '000tonne) | (in '000tonne) | (in '000tonne) | (in '000tonne) | (in '000tonne) | (in '000tonne) | (in 'kg) | (in 'kg) | (in 'kg) | (in 'kg) | (in 'kg) | (in 'kg) | (in 'kg) |
| **2019** | **7.12** | **0.34** | **0.14** | **NIL** | **NIL** | **NIL** | **NIL** | **0.00** | **NIL** | **NIL** | **NIL** | **7.88** | **0.00** | **22,570.00** | **0.00** | **0.00** | **50.00** | **0.00** | **0.00** | **500,000.00** |
| **2020** | **142.34** | **0.00** | **0.14** | **NIL** | **4.40** | **19.47** | | **10.50** | | | **0.62** | **104.95** | **1.11** | **207,420.00** | **48.00** | **0.00** | **1,284.00** | **0.00** | **0.00** | **419,060.00** |
| **2021** | **98.11** | **0.00** | **0.10** | **2.28** | **0.00** | **13.42** | **0.17** | **2.32** | **1.63** | **20.50** | **0.00** | **57.79** | **0.00** | **1028670.00** | **0.00** | **0.00** | **525.00** | **0.00** | **0.00** | **1100340.00** |
| **2022** | **13.34** | **0.00** | **1.35** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **11.99** | **0.00** | **141.03** | **0.00** | **0.00** | **715.00** | **0.00** | **80.00** | **1328300.00** |
| **Jan** | **0.08** | **0.00** | **0.40** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **20.00** | **0.00** | **0.00** | **109020.00** |
| **Total** | **260.99** | **0.34** | **2.13** | **2.28** | **4.40** | **32.89** | **0.17** | **12.83** | **1.63** | **20.50** | **0.62** | **182.61** | **1.11** | **1,258,801.03** | **48.00** | **0.00** | **2,594.00** | **0.00** | **80.00** | **3,456,720.00** |

# Appendix M
# Statistics on Complaint, Notifications of Summons and Successful Prosecutions

Statistical Summary of Exceedances

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

Statistical Summary of Environmental Complaints

| **Reporting Period** | **Environmental Complaint Statistics** | | |
|---|---|---|---|
| | **Frequency** | **Cumulative** | **Complaint Nature** |
| 1 January 2023 - 31 January 2023 | 0 | 2 | N/A |

Statistical Summary of Environmental Non-compliance

| **Reporting Period** | **Environmental Non-compliance Statistics** | | |
|---|---|---|---|
| | **Frequency** | **Cumulative** | **Details** |
| 1 January 2023 - 31 January 2023 | 0 | 0 | N/A |

Statistical Summary of Environmental Summons

| **Reporting Period** | **Environmental Summons Statistics** | | |
|---|---|---|---|
| | **Frequency** | **Cumulative** | **Details** |
| 1 January 2023 - 31 January 2023 | 0 | 0 | N/A |

Statistical Summary of Environmental Prosecution

| **Reporting Period** | **Environmental Prosecution Statistics** | | |
|---|---|---|---|
| | **Frequency** | **Cumulative** | **Details** |
| 1 January 2023 - 31 January 2023 | 0 | 0 | N/A |

# Appendix N
# Monitoring Schedule of the Coming Month

# Contract No.: HY/2018/02
# Central Kowloon Route Section of Kai Take East

## Tentative Environmental Monitoring Schedule (February 2023)

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|---|---|---|---|---|---|---|
| 29 | 30 | 31 | 1 | 2 | 3<br>Impact Dust Monitoring (E-A1) | 4 |
| 5 | 6 | 7 | 8 | 9<br>Impact Dust Monitoring (E-A1) | 10 | 11 |
| 12 | 13 | 14 | 15<br>Impact Dust Monitoring (E-A1) | 16 | 17 | 18 |
| 19 | 20 | 21<br>Impact Dust Monitoring (E-A1) | 22 | 23 | 24 | 25 |
| 26 | 27<br>Impact Dust Monitoring (E-A1) | 28 | 1 | 2 | 3 | 4 |

# Central Kowloon Route

# Buildings, Electrical and Mechanical Works

# Contract No. HY/2019/13

# (Kai Tak East Area)

**Gammon Construction Limited**

# Contract No. HY/2019/13
# Central Kowloon Route – Buildings, Electrical and Mechanical Works

## Monthly EM&A Report No. 28
## (January 2023)

Version 1.0

Date of Report: 8 January 2023

| | |
|---|---|
| Certified By |  |
| | (Environmental Team Leader: Ms. Betty Choi) |

REMARKS:

The information supplied and contained within this report is, to the best of our knowledge, correct at the time of printing.

CINOTECH accepts no responsibility for changes made to this report by third parties

**CINOTECH CONSULTANTS LTD**
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18 On Lai Street,
Shatin, NT, Hong Kong
Tel: (852) 2151 2083 Fax: (852) 3107 1388
Email: info@cinotech.com.hk

路政署
HIGHWAYS DEPARTMENT
主要工程管理處
MAJOR WORKS PROJECT MANAGEMENT OFFICE

ERM

# Environmental Permit No. EP-457/2013/D

# Central Kowloon Route

# Independent Environmental Checker Verification

| | |
|---|---|
| **Works Contract:** | **Buildings, Electrical and Mechanical Works (HY/2019/13)** |

**Reference Document/Plan**

| | |
|---|---|
| ~~Document~~/Plan to be ~~Certified~~/ Verified: | Monthly EM&A Report No.28 |
| Date of Report: | 7 February 2023 (Version 1.0) |
| Date received by IEC: | 7 February 2023 |

**Reference EP Condition**

Environmental Permit Condition: 3.4

Submission of Monthly EM&A Report of the Project

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

**IEC Verification**

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

Ms Mandy To Date: 8 February 2023

Independent Environmental Checker

*Our ref: 0436942_IEC Verification Cert_BEM_Monthly EM&A Rpt No.28_20230208.docx*

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# EXECUTIVE SUMMARY

## Introduction

1. This is the 28th Monthly Environmental Monitoring and Audit (EM&A) Report prepared by the Environmental Team (ET), Cinotech Consultants Ltd., for Contract No. HY/2019/13 "Central Kowloon Route – Buildings, Electrical and Mechanical Works". This report summarized the monitoring results and audit findings of the EM&A programme under the issued EP No. EP-457/2013/D, and in accordance with the EM&A programme in Kai Tak East Area during the reporting period from 1st January 2023 – 31st January 2023.

2. The major site activities undertaken in Kai Tak East Area in the reporting month included:
   - Excavation & sub-structure works.

## Environmental Monitoring Works

3. Environmental monitoring for the Project was performed in accordance with the EM&A Manual and the monitoring results were checked and reviewed. Joint weekly site inspections with the representative of ET, Engineer Representative and the Contractor were conducted on 3, 10, 17, 26 & 31 January 2023, whereas joint site inspection with the representative of IEC was conducted on 10 January 2023. The implementation of the environmental mitigation measures, Event and Action Plans and environmental complaint handling procedures were also checked.

4. A summary of the non-compliance (exceedance) during the reporting month (January 2023) and the investigation results and/or follow-up actions is provided below:

*Air Quality Monitoring*
- No Action/Limit Level exceedance for 1-hour TSP was recorded.
- No Action/Limit Level exceedance for 24-hour TSP was recorded.

*Landscape and Visual Monitoring*
- No non-conformity for landscape and visual was recorded.

## Complaint Handling, Prosecution and Public Engagement

5. Summary of complaint/summons/prosecution in the reporting month is tabulated in **Table I**.

**Table I Summary of Complaint/Summons/Prosecution in the Reporting Month**

| Event | Event Details | | Follow-up/ Remedial Actions | Status/ Remarks |
|---|---|---|---|---|
| | Number | Brief Description | | |
| Complaints Received | 0 | - | - | - |
| Notification of Summons and Prosecutions Received | 0 | - | - | - |

## Reporting Changes

6. There were no reporting changes during the reporting month.

## Future Key Issues

7. The key works or activities will be anticipated in the coming two months are as follows:
   - Excavation & sub-structure works.

# 1 INTRODUCTION

## Background

1.1 Central Kowloon Route (CKR) is a 4.7km long dual 3-lane trunk road across Central Kowloon linking Yau Ma Tei Interchange in West Kowloon and the road network at Kai Tak Development and Kowloon Bay in East Kowloon. The underground tunnel section will be about 3.9km long. In particular, an underground tunnel of about 370m long in Kowloon Bay to the north of To Kwa Wan Typhoon Shelter will be constructed.

1.2 The Environmental Impact Assessment Report for Central Kowloon Route – Design and Construction (Register No.: AEIAR-171/2013) was approved under the Environmental Impact Assessment Ordinance (EIAO) on 11 July 2013. An Environmental Permit (EP No.: EP-457/2013) was issued on 9 August 2013. Variations of Environmental Permit (VEP) was subsequently applied and an EP (EP No. EP-457/2013/C) was issued on 16 January 2017. The latest EP (EP No. EP-457/2013/D) was issued by Environmental Protection Department (EPD) on 15 June 2021.

1.3 The construction of the CKR had been divided into different sections. This Contract No. HY/2019/13 – Central Kowloon Route – Buildings, Electrical and Mechanical Works ("The Project") will include the architectural, civil and structural construction works of Yau Ma Tei Ventilation Building (YVB), Ho Man Tin Ventilation Building (HVB), Kai Tak Ventilation Building (KVB) and Central Kowloon Route Administration Building (ADB) for the CKR. The landscaping and electrical and mechanical (E&M) works within the building sites will be involved as well.

1.4 Cinotech Consultants Limited was assigned as the Environmental Team (ET) to undertake the EM&A works for the Project. The construction of this Contract was commenced on 12th December 2020.

## Purpose of the Report

1.5 This is the 28th Monthly EM&A Report which summarises the impact monitoring results and audit findings for the EM&A programme in Kai Tak East Area during the reporting period from 1st January 2023 – 31st January 2023. The Kai Tak East Area site layout plan for the Project is shown in **Figure 1.1**.

## Project Organizations

1.6 Different Parties with different levels of involvement in the project organization include:

- Project Proponent – Highways Department (HyD)
- Engineer Representative (ER) – Arup – Mott MacDonald Joint Venture (AMMJV)
- Environmental Team (ET) – Cinotech Consultants Limited (Cinotech)
- Independent Environmental Checker (IEC) – Environmental Resources Management – Hong Kong Limited (ERM)
- Contractor – Gammon Construction Limited (GCL)

1.7 The key contacts of the Project are shown in **Table 1.1**.

**Table 1.1 Key Project Contacts**

| Party | Role | Contact Person | Phone No. |
|---|---|---|---|
| AMMJV | Engineer Representative | Mr. Dennis Yu | 3695 0419 |
| Cinotech | Environmental Team | Ms. Betty Choi | 2151 2072 |
| ERM | Independent Environmental Checker | Ms. Mandy To | 2271 3113 |
| GCL | Contractor | Mr. Harry Lam | 9353 6141 |

1.8 The Organizational Structure for Environmental Management is shown in **Figure 1.2**.

### Construction Activities undertaken during the Reporting Month

1.9 The construction programme is presented in **Appendix A**.

1.10 The major site activities undertaken in the reporting month included:

- Excavation & sub-structure works.

### Summary of EM&A Requirements

1.11 The EM&A programme requires air quality monitoring, landscape and visual monitoring and environmental site audit. The EM&A requirements for each parameter are described in the following sections, including:

- Environmental requirements and mitigation measures, as recommended in the EM&A Manual under the EP.

1.12 The advice on the implementation status of environmental protection and pollution control/mitigation measures is summarized in Section 6 of this report.

### Statues of Environmental Licensing and Permitting

1.13 All permits/licenses obtained for the Project are summarized in **Table 1.2**.

**Table 1.2 Summary of Environmental Licensing and Permit Status**

| Permit / License No. | Valid Period | | Status |
|---|---|---|---|
| | From | To | |
| **Environmental Permit (EP)** | | | |
| EP-457/2013/D | 15 Jun 2021 | N/A | Valid |
| **Notification of Construction Works under Air Pollution Control Ordinance (APCO)** | | | |
| 457346 | 19 Jun 2020 | End of Project | Valid |
| **Billing Account for Construction Waste Disposal** | | | |
| 7037679 | 26 Jun 2020 | N/A | Valid |
| **Registration of Chemical Waste Producer – Kai Tak** | | | |
| 5211-286-G2347-54 | 15 Jul 2020 | N/A | Valid |
| **Wastewater Discharge Licence - Kai Tak** | | | |
| WT00037178-2020 | 18 Dec 2020 | 31 Dec 2025 | Valid |
| **Construction Noise Permit - Kai Tak Site (General Works [grouting, piling])** | | | |
| GW-RE0968-22 | 30 Sep 2022 | 29 Mar 2023 | Valid |
| **Construction Noise Permit for Works at 2nd office** | | | |
| GW-RE1014-22 | 3 Oct 2022 | 1 Apr 2023 | Valid |
| **Wastewater Discharge Licence at Kai Tak Site office** | | | |
| WT00041796-2022 | 20 Sep 2022 | 30 Sep 2027 | Valid |

# 2 AIR QUALITY

## Monitoring Requirements

2.1 As all of the air quality (1-hour TSP and 24-hour TSP) monitoring works in Kai Tak East Area are currently covered under the Contract No. HY/2018/02 (Central Kowloon Route - Kai Tak East), the corresponding monitoring parameters, equipment, methodology, results and established Action and Limit Levels could be referred to Section 3 of the EM&A report for Contract No. HY/2018/02 during this reporting month.

## Observations

2.2 No Action/Limit Level exceedance was recorded for all 1-hour TSP and 24-hour TSP monitoring in the reporting month.

2.3 Site audits were carried out on a weekly basis to monitor and audit the timely implementation of air quality mitigation measures within the site boundaries of this Project. The summary of site audits is shown in **Table 6.1** of this report.

# 3 NOISE

## Monitoring Requirements

3.1 As no Noise Sensitive Receiver (NSR) is located within 300m from the boundary of Kai Tak East Area, no construction noise monitoring is required in Kai Tak East Area for this Project.

## Observations

3.2 Site audits were carried out on a weekly basis to monitor and audit the timely implementation of construction noise mitigation measures within the site boundaries of this Project. The summary of site audits is shown in **Table 6.1** of this report.

# 4 WASTE MANAGEMENT

## Monitoring Requirements

4.1 Waste generated from this Project includes inert construction and demolition (C&D) materials and non-inert C&D materials. Inert C&D waste includes soil, broken rock, broken concrete and building debris, while non-inert C&D materials are made up of C&D waste which cannot be reused or recycled and has to be disposed of at the designated landfill sites.

## Results and Observations

4.2 The quantities of different types of waste generated in the reporting month are summarised in **Table 4.1**. Details of the amount of wastes generated by the major site activities of this Project during the reporting month is shown in **Appendix B**.

**Table 4.1 Quantities of Waste Generated from the Project**

| Quantity | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Inert C&D Materials | | Non-inert C&D Materials | | | | |
| Reporting Period | Total Quantity Generated (in '000$m^3$) | Disposed as Public Fill (in '000$m^3$) | Others, e.g. general refuse (in '000$m^3$) | Metals (in '000kg) | Paper/cardboard Packaging (in '000kg) | Plastics (in '000kg) | Chemical waste (in '000kg) |
| Jan 2023 | 1.576 | 1.576 | 0.087 | 0 | 0 | 0 | 0 |

4.3 Site audits were carried out on a weekly basis to monitor and audit to ensure that proper storage, transportation, and disposal practices of waste materials generated during construction activities, such as construction and demolition (C&D) materials and general refuse are being implemented. The summary of site audits is shown in **Table 6.1** of this report**.** The implementation status of the waste/chemical management measures in the reporting period are summarized in **Appendix C**.

# 5 LANDSCAPE AND VISUAL

## Monitoring Requirements

5.1 According to the EM&A Manual, site audits would be undertaken during the construction phase of the Project to check that the proposed landscape and visual mitigation measures are properly implemented and maintained as per their intended objectives. Site inspections of the implementation of landscape and visual mitigation measures would be undertaken at least once every two weeks during the construction period.

## Results and Observations

5.2 Bi-weekly inspection of the implementation of landscape and visual mitigation measures within the site boundaries of this Project was conducted on 3, 17 & 31 January 2023. The implementation status of the landscape and visual mitigation measures in the reporting period are summarized in **Appendix C**. The summary of observations and recommendations made for landscape and visual mitigation measures during site audits are shown in **Table 6.1** of this report.

5.3 No non-compliance of the landscape and visual impact was recorded in the reporting month.

# 6 ENVIRONMENTAL AUDIT

## Site Audits

6.1 Site audits were carried out on a weekly basis to monitor the timely implementation of proper environmental management practices and mitigation measures in the Project site.

6.2 Site audits were conducted on 3, 10, 17, 26 & 31 January 2023 in the reporting month. Joint site inspection with the representative of IEC was conducted on 10 January 2023. No non-compliance was observed during the site audit.

## Implementation Status of Environmental Mitigation Measures

6.3 According to Environmental Permit, the approved EIA Report (Register No.: AEIAR-171/2013), and the EM&A Manual of the Project, the mitigation measures detailed in the documents are recommended to be implemented during the construction phase. An Environmental Mitigation Implementation Schedule (EMIS) is provided in **Appendix C**.

6.4 The ET weekly site inspections were carried out during the reporting month and the observations and follow-up actions in Kai Tak East Area are summarized in **Table 6.1**.

**Table 6.1 Observations and Recommendations of Site Inspections**

| Parameters | Date | Observations | Follow-up Actions |
|---|---|---|---|
| ***Water Quality*** | 3 Jan 2023 | Ponding water should be removed at KVB site | Ponding water has been removed. |
| ***Air Quality*** | N/A | No environmental deficiency was identified in the reporting period. | N/A |
| ***Noise*** | N/A | No environmental deficiency was identified in the reporting period. | N/A |
| ***Waste / Chemical Management*** | 3, 10 & 17 Jan 2023 | Chemical waste should be placed at drip tray at KVB site. | Chemical waste has been removed or placed at trip tray. |
| ***Land Contamination*** | N/A | No environmental deficiency was identified in the reporting period. | N/A |
| ***Landscape and Visual*** | N/A | No environmental deficiency was identified in the reporting period. | N/A |
| ***Permits /Licences*** | N/A | No environmental deficiency was identified in the reporting period. | N/A |

## Implementation Status of Event and Action Plans

6.5 The Event and Action Plans for noise could be referred to **Appendix D** of the EM&A report in Contract No. HY/2018/02.

*Air Quality Monitoring*

- No Action/Limit Level exceedance for 1-hour TSP was recorded.
- No Action/Limit Level exceedance for 24-hour TSP was recorded.

*Landscape and Visual Monitoring*

- No non-conformity for landscape and visual was recorded.

**Summary of Complaint, Warning, Notification of any Summons and Successful Prosecution**

6.6 No environmental complaint and no warning, notifications of summons and successful prosecutions was received in the reporting month. The summary of environmental complaint, warning, summon and notification of successful prosecution for the Project is presented in **Appendix D**.

**Status of Required Submission under Environmental Permit**

6.7 Status of required submission under EP-457/2013/D during the reporting period are summarized in **Table 6.2**.

**Table 6.2 Status of Required Submission under Environmental Permit**

| EP Condition (EP-457/2013/D) | Submission | Submission Date |
|---|---|---|
| Condition 3.4 | Monthly EM&A Report (December) | 16 January 2023 |

# 7 FUTURE KEY ISSUES

7.1 Major site activities undertaken for the coming two months include:

- Excavation & Sub-structure Works.

7.2 Key environmental issues in the coming two months include:

- Stockpile accumulation on-site;
- Water spraying for dust generating activities and on haul road;
- Wastewater and runoff discharge from site;
- Coverage of open manholes to avoid dirty runoff to drainage system;
- Noise from operation of the equipment, especially for excavation works and machinery onsite;
- Accumulation of general refuse and construction waste on-site;
- Proper storage of construction materials on-site; and
- Storage of chemicals/fuel and chemical waste/waste oil on-site.

# 8 CONCLUSIONS AND RECOMMENDATIONS

## Conclusions

8.1 This is the 28th Monthly EM&A Report which presents the EM&A works undertaken in Kai Tak East Area during the reporting month from 1st January 2023 – 31st January 2023 in accordance with the EM&A Manual and the requirements under the EP.

*Air Quality Monitoring*

8.2 No Action/Limit Level exceedance was recorded for all 1-hour and 24-hour TSP monitoring in the reporting month.

*Landscape and visual*

8.3 No non-compliance was recorded in the reporting month.

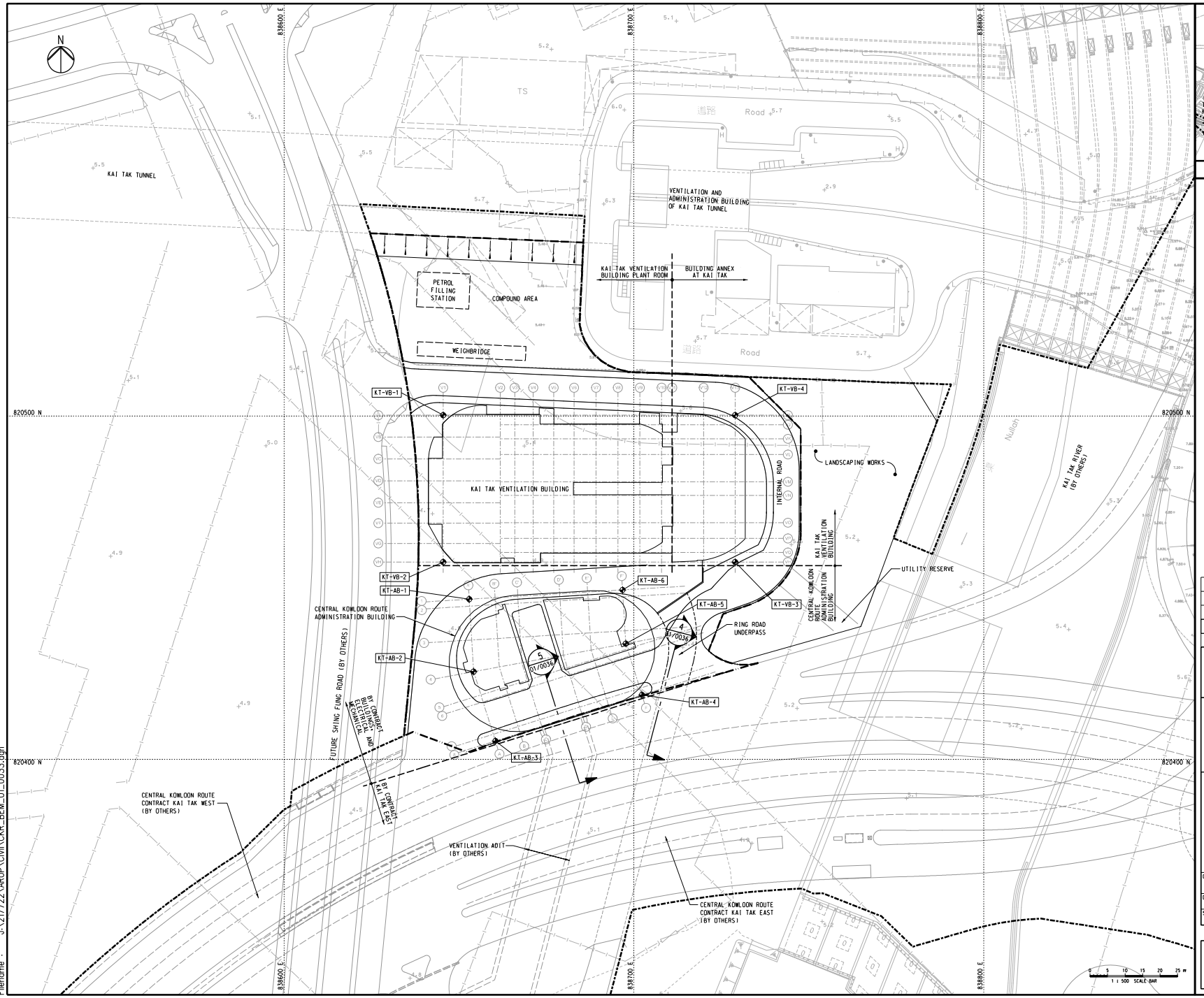
*Site Audit*

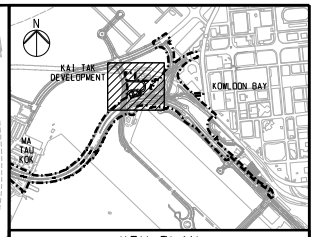
8.4 5 ET joint weekly environmental site inspections were conducted in the reporting month. Joint weekly site inspections with the representative of ET, Engineer Representative and the Contractor were conducted on 3, 10, 17, 26 & 31 January 2023, whereas joint site inspection with the representative of IEC was conducted on 10 January 2023. All environmental deficiencies observed during site inspections were rectified by the Contractor.

*Complaint, Notification of Summons and Successful Prosecution*

8.5 No environmental complaint and no notifications of summons and successful prosecutions were received in the reporting month.

# FIGURES




KEY PLAN

NOTES

1. FOR NOTES AND LEGEND, REFER TO DRAWING NO. CKR/BEM/01/0011.

LEGEND

BOUNDARIES OF THE SITE

BUILDING SITE BOUNDARY

SETTING OUT TABLE OF BUILDING GRID LINES

| SETTING OUT POINT | CO-ORDINATES | |
|---|---|---|
| | EASTING | NORTHING |
| KT-VB-1 | 838645.490 | 820500.230 |
| KT-VB-2 | 838645.490 | 820458.230 |
| KT-VB-3 | 838728.940 | 820458.230 |
| KT-VB-4 | 838728.940 | 820500.230 |
| KT-AB-1 | 838652.940 | 820447.607 |
| KT-AB-2 | 838654.192 | 820426.883 |
| KT-AB-3 | 838660.424 | 820407.065 |
| KT-AB-4 | 838702.302 | 820420.233 |
| KT-AB-5 | 838697.687 | 820434.911 |
| KT-AB-6 | 838696.760 | 820450.255 |

| Rev. 修訂 | Description 內容摘要 | By 改訂 | Date 日期 |
|---|---|---|---|
| 00 | ISSUE FOR TENDER | LFM | 09/19 |

ARUP MOTT MACDONALD

Arup-Mott MacDonald Joint Venture

Project title 工程名稱

Contract No. HY/2019/13

Central Kowloon Route - Buildings, Electrical and Mechanical

Drawing title 圖紙名稱

GENERAL LAYOUT PLAN
KAI TAK VENTILATION BUILDING AND CENTRAL KOWLOON ROUTE ADMINISTRATION BUILDING

| Drawing no. 圖紙編號 | 1.1 | Rev. 修訂 | 00 |
|---|---|---|---|
| Drawn By 繪圖 | RY | Checked By 核對 | KKC |
| Approved By 批准人 | EC | | |
| Scale 比例 | 1:500 @ A1 | Status 階段 | TENDER |



路政署 HIGHWAYS DEPARTMENT
主要工程管理處 MAJOR WORKS PROJECT MANAGEMENT OFFICE

Printed by : 10/2/2019
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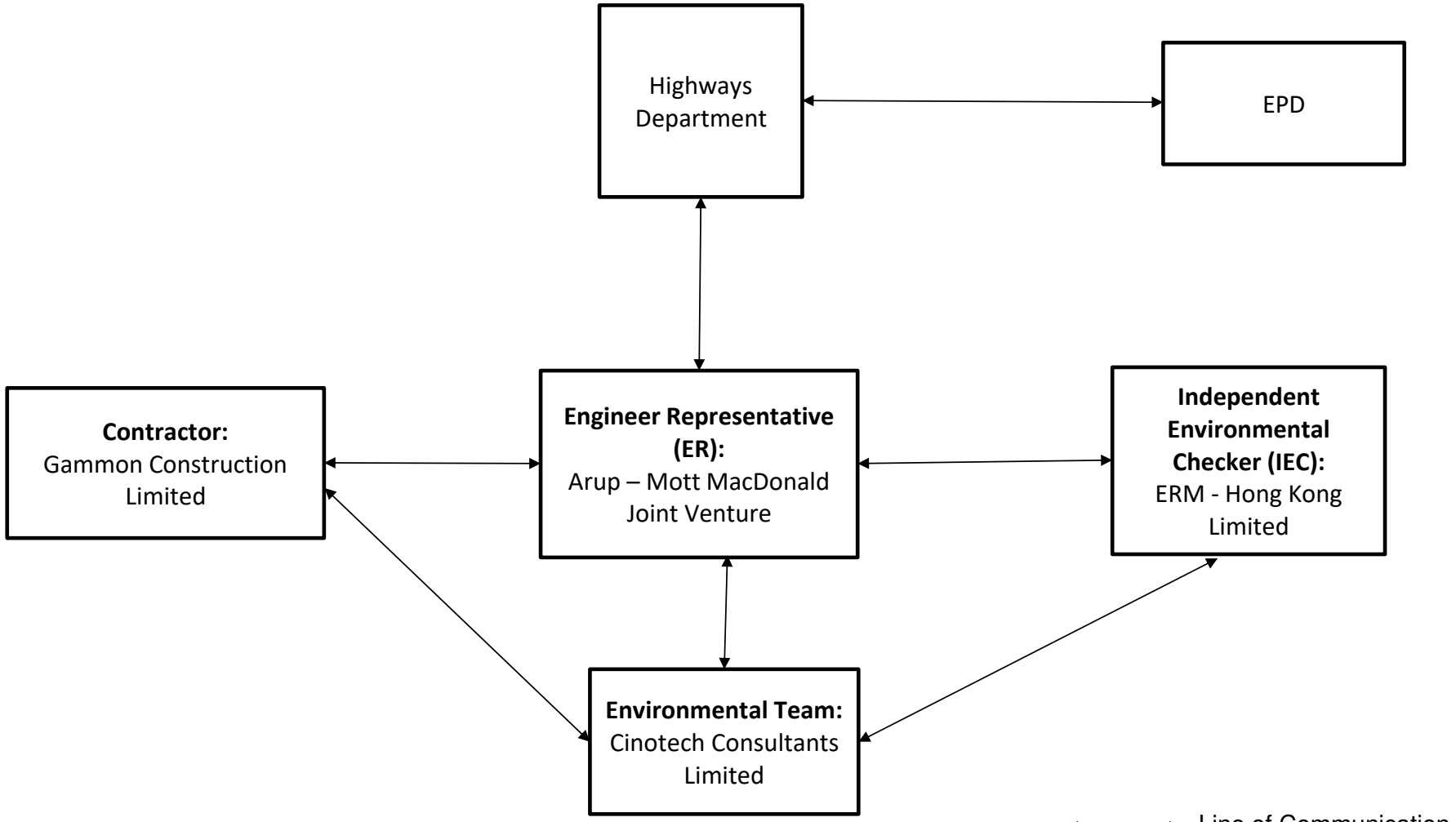



CINOTECH

Contract No. HY/2019/13
Central Kowloon Route – Buildings, Electrical and Mechanical Works

**Project Organisation For Environmental Monitoring and Audit**

| | | | |
|---|---|---|---|
| **SCALE** | N.T.S. | **DATE** | Nov 2020 |
| **CHECK** | BC | **DRAWN** | EH |
| **JOB NO.** | MA20024 | **FIGURE NO.** | 1.2 |

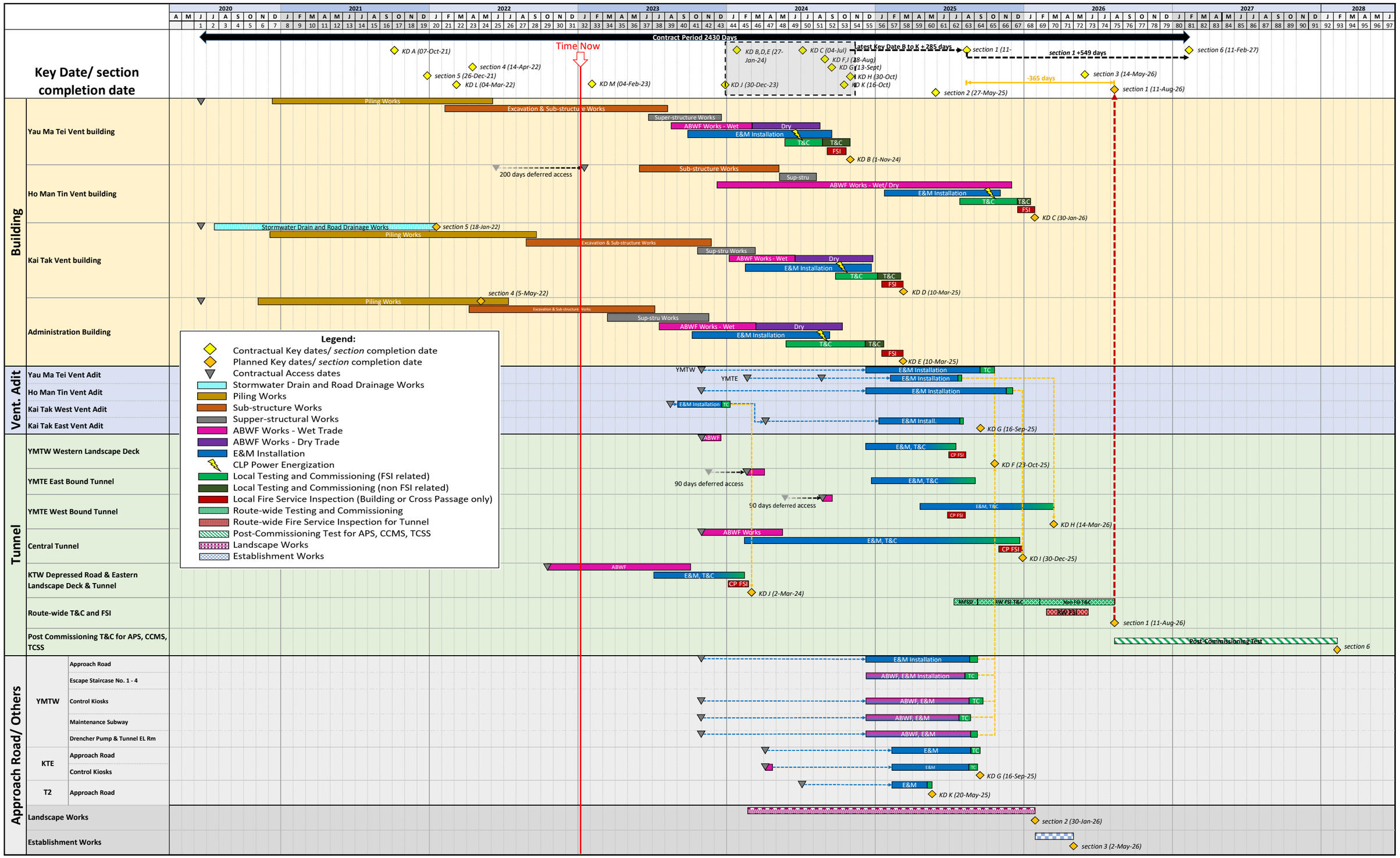
# APPENDIX A
# CONSTRUCTION PROGRAMME

Gammon

Ref. Detailed Programme (Dec-2022)

# Contract No. HY/2019/13
# Central Kowloon Route – Buildings, Electrical and Mechanical Works
# Summary Programme

路政署 HIGHWAYS DEPARTMENT 主要工程管理處 MAJOR WORKS PROJECT MANAGEMENT OFFICE



# APPENDIX B
# SUMMARY OF WASTE GENERATION AND DISPOSAL RECORDS

# Monthly Summary Waste Flow Table

[PS Clauses 25.24(11)S & 25.34(16)(a)] Annex 4 to Appendix C

Name of Department: HyD Contract No.: HY/2019/13

Central Kowloon Route - Buildings, Electrical and Mechanical Works

Kai Tak Site Area

## Monthly Summary Waste Flow Table for 2023 (year)

| | Actual Quantites of Inert C&D Materials Generated Monthly | | | | | | Actual Quantites of C&D Waste Generated Monthly | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Month | Total Quantity Generated (in '000m3) | Hard Rock and Large Broken Concrete (see Note 5) (in '000m3) | Reused in the Contract (see Note 5) (in '000m3) | Reused in other Projects (see Note 5) (in '000m3) | Disposed as Public Fill (see Note 5) (in '000m3) | Imported Fill (see Note 5) (in '000m3) | Metals (in '000kg) | Paper / cardboard packaging (in '000kg) | Plastics (see Note 3) (in '000kg) | Chemical Waste (see Note 5) (in '000kg) | Marine Sediment (see Note 7) (in '000m3) | Others, e.g. general refuse (see Note 5) (in '000m3) |
| Jan | 1.576 | 0.000 | 0.000 | 0.000 | 1.576 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.087 |
| Feb | | | | | | | | | | | | |
| Mar | | | | | | | | | | | | |
| Apr | | | | | | | | | | | | |
| May | | | | | | | | | | | | |
| Jun | | | | | | | | | | | | |
| **Sub-Total** | **1.576** | **0.000** | **0.000** | **0.000** | **1.576** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.087** |
| Jul | | | | | | | | | | | | |
| Aug | | | | | | | | | | | | |
| Sep | | | | | | | | | | | | |
| Oct | | | | | | | | | | | | |
| Nov | | | | | | | | | | | | |
| Dec | | | | | | | | | | | | |
| **Total (2023)** | **1.576** | **0.000** | **0.000** | **0.000** | **1.576** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.000** | **0.087** |
| **Total (whole)** | **70.514** | **0.000** | **0.782** | **2.615** | **67.117** | **0.000** | **0.000** | **0.000** | **0.000** | **1.080** | **0.000** | **0.884** |

Note:

(1) The performance targets are given in PS Clause 25.24

(2) The waste flow table shall also include C&D materails that are specified in the Contract to be imported for use at the Sites.

(3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging materials, and water barriers

(4) The summary table shall be submitted to the Project Manager monthly together with the Waste Flow Table for review and monitoring in accordance with the PS Clause 25.24

(5) Density values and Bulk Factors adopted:

| | | | |
|---|---|---|---|
| Hard Rock and Large Broken Concrete: | 2.4 T/m3 (in-situ) | Bulk Factor: | 1.25 |
| Soil / Fill: | 2.0 T/m3 (in-situ) | Bulk Factor: | 1.1 |
| Marine Sediment: | 1.7 T/m3 (in-situ) | Bulk Factor: | 1.3 |
| General Refuse: | 400 kg/m3 | | |
| Chemical Waste (mainly used lubricant): | 900 kg/m3 | | |
| Tree Trunk / Tree Stump: | 850 kg/m3 (in-situ) | Bulk Factor: | 1.1 |

(6) The reported and forecast volume figures are in "bulk" volume, with Bulk Factor applied as per Note (5)

(7) This figure refers to marine sediment disposed via dumping at sea. Treated Sediment for Reuse on-site will be categorized into "Reused in the Contract"

**APPENDIX C**
**ENVIRONMENTAL MITIGATION**
**IMPLEMENTATION SCHEDULE (EMIS)**

| EIA Ref. | EM&A Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concern to Address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved | Implementation Status |
|---|---|---|---|---|---|---|---|---|
| **Construction Dust Impact** | | | | | | | | |
| S4.3.10 | D1 | The contractor shall follow the procedures and requirements given in the Air Pollution Control (Construction Dust) Regulation | Minimize dust impact at the nearby sensitive receivers | Contractor | All construction sites | Construction stage | - APCO<br>- To control the dust impact to meet HKAQO and TM-EIA criteria | ^ |
| S4.3.10 | 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<br>- To control the dust impact to meet HKAQO and TM-EIA criteria | ^ |
| S4.3.10 | D3 | Proper watering at exposed spoil should be undertaken throughout the construction phase. | Minimize dust impact at the nearby sensitive receivers | Contractor | All construction sites | Construction stage | - APCO<br>- To control the dust impact to meet HKAQO and TM-EIA criteria | ^ |
| | | 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 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. | | | | | | ^ |

| EIA Ref. | EM&A Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concern to Address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved | Implementation Status |
|---|---|---|---|---|---|---|---|---|
| | | 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 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 | | | | | | ^ |
| | | Where a scaffolding is erected around the perimeter of a building under construction, effective dust screens, sheeting or netting should be provided to enclose the scaffolding from the ground floor level of the building, or a canopy should be provided from the first floor level up to the highest level of the scaffolding. | | | | | | N/A |
| | | 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 | | | | | | ^ |
| | | Cement or dry PFA delivered in bulk should be stored in a closed silo fitted with an audible high level alarm which is interlocked with the material filling line and no overfilling is allowed. | | | | | | N/A |
| | | 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. | | | | | | N/A |

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|---|---|---|---|---|---|---|---|---|
| | | 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. | | | | | | N/A |
| 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 | ^ |
| **Construction Noise (Airborne)** | | | | | | | | |
| S5.4.1 | N1 | Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme. | Control construction airborne noise | Contractor | All construction sites | Construction stage | - Annex 5, TM-EIAO | ^ |
| | | 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. | | | | | | N/A |
| S5.4.1 | N2 | Install temporary hoarding located on the site boundaries between noisy construction activities and NSRs. The conditions of hoardings shall be properly maintained throughout the construction period. | Reduce the construction noise levels at low-level zone of NSRs through partial screening | Contractor | All construction sites | Construction stage | - Annex 5, TM-EIAO | ^ |

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| S5.4.1 | N3 | Install movable noise barriers (typical design is wooden framed barrier with a small-cantilevered on a skid footing with 25mm thick internal sound absorptive lining), acoustic mat or full enclosure, screen the noisy plants including air compressors, generators and handheld breakers, etc. | Sreen the noisy plant items to be used at all construction sites | Contractor | All construction sites where practicable | Construction stage | - Annex 5, TM-EIAO | N/A |
| S5.4.1 | N4 | Use 'Quiet plants' | Reduce the noise levels of plant items | Contractor | All construction sites where practicable | Construction stage | - Annex 5, TM-EIAO | ^ |
| S5.4.1 | N5 | Loading/ unloading activities should be carried out inside the full enclosure of mucking out points. | Reduce the noise levels of loading/ unloading activities | Contractor | Mucking out locations | Construction stage | - Annex 5, TM-EIAO | ^ |
| 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 | ^ |
| S5.4.1 | N7 | Implement a noise monitoring programme under EM&A programme. | Monitor the construction noise levels at the selected representative locations | Contractor | Selected rep. noise monitoring station | Construction stage | - TM-EIAO | N/A |
| **Water Quality (Construction Phase)** | | | | | | | | |
| S6.9.1.1 | W1 | <u>Construction Runoff</u><br>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. | 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<br>- ProPECC PN 1/94<br>- TM-EIAO<br>- TM-DSS | ^ |

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| | | The dikes or embankments for flood protection should be implemented around the boundaries of earthwork areas. Temporary ditches should be provided to facilitate the runoff discharge into an appropriate watercourse, through a silt/ sediment trap. The sediment/ silt traps should be incorporated in the permanent drainage channels to enhance deposition rates. | | | | | | ^ |
| | | The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94, which states that the retention time for silt/ sand traps should be 5 minutes under 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. | | | | | | N/A |
| | | 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. | | | | | | N/A |
| | | 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 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. | | | | | | ^ |

| EIA Ref. | EM&A Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concern to Address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved | Implementation Status |
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| | | 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 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. | | | | | | ^ |

| EIA Ref. | EM&A Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concern to Address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved | Implementation Status |
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| | | 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 season (April to September) as far as practicable. | | | | | | ^ |
| S6.9.1.2 | W2 | <u>Tunneling Works and Underground Works</u><br>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. | To minimize construction water quality impact from tunneling works | Contractor | All tunneling portion | Construction stage | - Water Pollution Control Ordinance<br>- ProPECC PN 1/94<br>- TM-EIAO<br>- TM-DSS | N/A |
| | | Uncontaminated discharge should pass through sedimentation tanks prior to off-site discharge. | | | | | | N/A |
| | | 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. | | | | | | N/A |
| | | 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. | | | | | | N/A |
| S6.9.1.3 | W3 | <u>Sewage Effluent</u><br>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<br>- TM-DSS | ^ |

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| S6.9.1.5 | W4 | Groundwater from Potential Contaminated Area:<br>No direct discharge of groundwater from contaminated areas should be adopted. | To minimize groundwater quality impact from contaminated area | Contractor | Excavation areas where contamination is found | Construction stage | - Water Pollution Control Ordinance<br>- TM-EIAO<br>- TM-DSS | ^ |
| | | 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 recharged into the ground. | | | | | | ^ |
| | | If wastewater treatment is deployed, the wastewater treatment unit shall deploy suitable treatment process (e.g. oil interceptor / activated carbon) to reduce the pollution level to an acceptable standard and remove any prohibited substances (e.g. TPH) to undetectable range. All treated effluent from wastewater treatment plant shall meet the requirements as stated in TM-DSS and should be discharged into the foul sewers. | | | | | | ^ |
| | | If groundwater recharging wells are deployed, recharging wells should be installed as appropriate for recharging the contaminated groundwater back into the ground. The recharging wells should be selected at places where the groundwater quality will not be affected by the recharge operation as indicated in the Section 2.3 of TM-DSS. The baseline groundwater quality shall be determined prior to the selection of the recharge wells, and submit a working plan (including the laboratory analytical results showing the quality of groundwater at the proposed recharge location(s) as well as the pollutant levels of groundwater to be recharged) to EPD for agreement. Pollution levels of groundwater to be recharged shall not be higher than pollutant levels of ambient groundwater at the recharge well. Prior to recharge, any prohibited substances such as TPH products should be removed as necessary by installing the petrol interceptor. | | | | | | N/A |

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| S6.9.1.6 | W6 | Accidental Spillage<br>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. | To minimize water quality impact from accidental spillage | Contractor | All construction site where practicable | Construction stage | - Water Pollution Control Ordinance<br>- ProPECC PN 1/94<br>- TM-EIAO<br>- TM-DSS | ^ |
| | | The Contractor should register as a chemical waste producer if chemical wastes would be generated. Storage of chemical waste arising from the construction activities should be stored with suitable labels and warnings. | | | | | | ^ |
| | | Disposal of chemical wastes should be conducted in compliance with the requirements as stated in the Waste Disposal (Chemical Waste) (General) Regulation. | | | | | | ^ |
| **Waste Management (Construction Waste)** | | | | | | | | |
| S7.4.1 | WM1 | On-site sorting of C&D material<br>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 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. | Separation of unsuitable rock from ending up at concrete batching plants and be turned into concrete for structural use | Contractor | All construction sites | Construction stage | · DEVB (W) No. 6/2010 | ^ |

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| S7.5.1 | WM2 | Construction and Demolition Material<br>Maintain temporary stockpiles and reuse excavated fill material for backfilling and reinstatement. | Good site practice to minimize the waste generation and recycle the C&D materials as far as practicable so as to reduce the amount for final disposal | Contractor | All construction sites | Construction stage | · Land (Miscellaneous Provisions) Ordinance<br>· Waste Disposal Ordinance<br>· ETWB TCW No. 19/2005 | ^ |
| | | 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 recovering broken concrete effectively for recycling purpose, where possible. | | | | | | N/A |
| | | Implement a trip-ticket system for each works contract to ensure that the disposal of C&D materials are properly documented and verified. | | | | | | ^ |
| | | Implement an enhanced Waste Management Plan similar to ETWBTC (Works) No. 19/2005 – "Environmental Management on Construction Sites" to encourage on-site sorting of C&D materials and to minimize their generation during the course of construction. | | | | | | ^ |
| S7.5.1 | WM3 | C&D Waste<br>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. | Good site practice to minimize the waste generation and recycle the C&D materials as far as practicable so as to reduce the amount for final disposal | Contractor | All construction sites | Construction stage | · Land (Miscellaneous Provisions) Ordinance<br>· Waste Disposal Ordinance<br>· ETWB TCW No. 19/2005 | ^ |
| | | The Contractor should recycle as much of the C&D materials as possible on-site. Public fill and C&D waste should be segregated and stored in different containers or skips to enhance reuse or recycling of materials and their proper disposal. Where practicable, concrete and masonry can be crushed and used as fill. Steel reinforcement bar can be used by scrap steel mills. Different areas of the sites should be considered for such segregation and storage. | | | | | | N/A |

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| S7.5.1 | WM4 | Excavated Contaminated Soils<br>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 | · Practice Guide (PG) for Investigation and Remediation of Contaminated Land<br>· GN/GM for land contamination | ^ |
| S7.5.1 | WM5 | Land-based and Marine-based Sediment<br>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. | To control pollution due to marine sediment | Contractor | Along CKR alignment | Construction stage | · ETWB TCW No. 34/2002 | ^ |
| | | 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. | | | | | | N/A |
| | | Before moving the vessels which are used for transporting dredged material, excess material shall be cleaned from the decks and exposed fittings of vessels and the excess materials shall never be dumped into the sea except at the approved locations. | | | | | | N/A |
| | | Adequate freeboard shall be maintained on barges to ensure that decks are not washed by wave action. | | | | | | N/A |
| | | 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. | | | | | | N/A |
| | | 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. | | | | | | N/A |
| | | The material shall be placed into the disposal pit by bottom dumping. | | | | | | N/A |

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| | | 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. | | | | | | N/A |
| | | 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. | | | | | | N/A |
| | | For Type 3 special disposal treatment, sealing of 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. | | | | | | N/A |
| S7.5.1 | WM6 | Chemical Waste<br>Chemical waste that is produced, as defined by Schedule 1 of the Waste Disposal (Chemical Waste) (General) Regulation, should be handled in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. | Control the chemical waste and ensure proper storage, handling and disposal | Contractor | All construction sites | Construction stage | · Waste Disposal (Chemical Waste) (General) Regulation<br>· Code of Practice on the Packaging, Labelling and Storage of Chemical Waste | * |
| | | Containers used for the storage of chemical wastes should be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed, have a capacity of less than 450 L unless the specification has been approved by EPD, and display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the regulation. | | | | | | ^ |
| | | The storage area for chemical wastes should be clearly labelled and used solely for the storage of chemical waste, enclosed on at least 3 sides, have an impermeable floor and bunding of sufficient 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. | | | | | | ^ |

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| | | 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. | | | | | | ^ |
| S7.5.1 | WM7 | General Refuse<br>General refuse generated on-site should be stored in enclosed bins or compaction units separately from construction and chemical wastes. | Minimize production of the general refuse and avoid odour, pest and litter impacts | Contractor | All construction sites | Construction stage | · Waste Disposal Ordinance | ^ |
| | | 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 collection. Participation in a local collection scheme should be considered by the Contractor. | | | | | | ^ |
| **Land Contamination** | | | | | | | | |
| S8.9 & Appendix 8.4 | LC2 | Excavation of the Contaminated Soil<br>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 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<br>- Guidance Notes for Contaminated Land Assessment and Remediation<br>· Guidance Manual for Use of Risk-Based Remediation Goals (RBRGs) for Contaminated Land Management | N/A |
| | | The excavated contaminated soils would be stockpiled at designated area on site and covered by sheet to prevent dispersion of contamination during stockpiling. | | | | | | N/A |
| | | 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. | | | | | | N/A |

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| **Hazard to Life** | | | | | | | | |
| S9.18 | H8 | The driver and his assistant should be physically healthy, experienced and have good safe driving records. The driver should hold a proper driving licence for the approved transport truck. Dedicated 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. | To reduce the risk during explosives transport | Contractor | Works areas at which explosives would be used | Construction stage | / | ^ |
| 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 | / | ^ |
| **Landscape and Visual** | | | | | | | | |
| S10.10.1 Table 10.11 | LV3 | <u>Good Site Management</u><br>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. | Minimize visual impact | Contractor | Within Project site | Construction Phase | / | ^ |
| | | Construction plant and building material shall be orderly and carefully stored in order to create a neat and tidy visual appearance. | | | | | | ^ |
| S10.10.1 Table 10.11 | LV4 | <u>Screen Hoarding</u><br>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 Phase | / | ^ |
| S10.10.1 Table 10.11 | LV5 | <u>Lighting Control during Construction</u><br>All lighting in the construction site shall be carefully controlled to minimize light pollution and night-time glare to nearby residencies and GIC. The Contractor shall consider other security measures, which shall minimize the visual impacts. | Minimize visual impact | Contractor | Within Project site | Construction Phase | / | ^ |
| S10.10.1 Table 10.11 | LV6 | <u>Erosion Control</u><br>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 Phase | / | ^ |

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| S10.10.1<br>Table 10.11 | LV7 | Tree Protection & Preservation<br>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 Phase | · '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<br>· Latest recommended horticultural practices from GLTM Section, DEVB | N/A |
| S10.10.1<br>Table 10.11 | LV8 | Tree Transplantation<br>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 Phase | · ETWB TCW 3/2006<br>· Latest recommended horticultural practices from Greening, Landscape and Tree Management (GLTM) Section, DEVB<br>· ETWB TCW 2/2004 | N/A |
| S10.10.1<br>Table 10.11 | LV9 | Compensatory Planting<br>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. | Minimize visual impact and also enhance landscape | Contractor | Within Project site | Construction Phase | · ETWB TCW 3/2006<br>· Latest recommended horticultural practices from Greening, Landscape and Tree Management (GLTM) Section, DEVB<br>· ETWB TCW 2/2004 | N/A |

| EIA Ref. | EM&A Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concern to Address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved | Implementation Status |
|---|---|---|---|---|---|---|---|---|
| S10.10.1<br>Table 10.11 | LV10 | Screen Planting<br>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<br>· ETWB TCW 2/2004 | N/A |
| S10.10.1<br>Table 10.11 | LV11 | Green Roof<br>Roof greening will be established on ventilation and administration buildings to reduce exposure to untreated concrete surfaces and particularly mitigate visual impact to VSRs at high levels. | Minimize landscape and visual impact | Contractor | Within Project site | Construction Phase | / | N/A |
| S10.10.1<br>Table 10.11 | LV12 | Reinstatement<br>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 |
| S10.10.1<br>Table 10.11 | LV13 | Reprovising of Public Open Space<br>All areas of public open space affected by the Project will be reprovisioned either at the same location following the completion<br>of temporary works, or at a separate site, as agreed with relevant Government departments. Open space should be re-provisioned<br>in an enhanced manner. | Minimize landscape impact | Contractor | Within Project site | Construction Phase | Open space should be re-provided in an enhanced manner. | N/A |
| **Cultural Heritage Impact (Construction Phase)** | | | | | | | | |
| S11.4.4 | CH1 | The contractor should be alerted during the construction on the possibility of locating archaeological remains and as a precautionary measure, AMO shall be informed immediately in case of discovery of antiquities or supposed antiquities in the subject sites. | To preserve any cultural heritage items which may be removed and damaged by the excavation | Contractor | During construction works for cut and cover tunnels | During the Construction Phase | · AMOs requirements | N/A |

| EIA Ref. | EM&A Ref. | Recommended Mitigation Measures | Objectives of the Recommended Measures & Main Concern to Address | Implementation Agent | Location / Timing | Implementation Stage | Requirements and/ or standards to be achieved | Implementation Status |
|---|---|---|---|---|---|---|---|---|
| **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<br>· TM-EIAO | ^ |
| S13.2-13.4 | EM2 | An Environmental Team needs to be employed as per the EM&A Manual. | Perform environmental monitoring & auditing | Highways Department/ Contractor | All construction sites | Construction stage | · EIAO Guidance Note No. 4/2010<br>· TM-EIAO | ^ |
| | | 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. | | | | | | ^ |

| Remarks: EM&A Programme under EP-457/2013/D | |
|---|---|
| ^ | Compliance of mitigation measure; |
| N/A<br>N/A(1) | Not applicable at this stage;<br>Not observed; |
| * | Recommendation was made during site audit but improved/retified by the contractor; |
| # | Recommendation was made during site audit but not yet improved/retified by the contractor; |
| X | Non-compliance of mitigation measure; |
| ● | Non-compliance but rectified by the contractor. |

# APPENDIX D
# SUMMARIES OF ENVIRONMENTAL COMPLAINT, WARNING, SUMMON AND NOTIFICATION OF SUCCESSFUL PROSECUTION

## Contract No. HY/2019/13
## Central Kowloon Route – Buildings, Electrical and Mechanical Works

**Appendix D – Summary of Environmental Complaint, Warning, Summon and Notification of Successful Prosecution**

**Reporting Month**: January 2023

| Log Ref. | Location | Received Date | Details of Complaint/ warning/ summon and prosecution | Investigation/ Mitigation Action | Status |
|---|---|---|---|---|---|
| N/A | N/A | N/A | N/A | N/A | N/A |

**Remarks**: No environmental complaint and warning/summon and prosecution was received in the reporting period.