

**Vol. 3 of 3**

**FEP-02/457/2013/C**

**Central Kowloon Route**

**Yau Ma Tei East**

**Contract No. HY/2014/08**

**October 2018**



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## Build King - SKEC Joint Venture

Central Kowloon Route Contract HY/2014/08




Section of Yau Ma Tei East

Monthly EM&A Report No. 7

(Period from 1 to 31 October 2018)

Rev. 0

(8 November 2018)

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## EXECUTIVE SUMMARY

- A.1 Build King – SKEC Joint Venture (“Contractor”) commenced the construction works of Highway Department (HyD) Central Kowloon Route Contract No. HY/2014/08 – Section of Yau Ma Tei East (“The Project”) on 20 April 2018. This is the 7<sup>th</sup> monthly Environmental Monitoring and Audit (EM&A) report presenting the EM&A works carried out during the period from 1 October 2018 to 31 October 2018.
- A.2 A summary of the construction works that undertaken for the Project during the reporting month is listed below.

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### Construction Activities undertaken

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- Superstructure Works of New West Building of Methadone Clinic
- Building Services (BS) Works and Architectural Builders Works and Finishes (ABWF) Works of Methadone Clinic
- Predrilling Works at Zone E
- Guide Wall Construction at Zone E
- Diaphragm wall Construction at Zone E
- Demolition of existing YMTPS ancillary buildings
- Predrilling at Yau Ma Tei Police Station
- Prebored socket H-pile at temporary Public Library cum Jade Hawker Bazaar Building (TPLBJHB)
- ELS at Maternal and Child Health Centre (MCHC)
- Plate Load Test at Maternal and Child Health Centre (MCHC)
- Footing construction at Maternal and Child Health Centre (MCHC)
- Predrilling at Zone A
- Guide Wall Construction at Zone A
- Diaphragm wall at Zone A (Stage A/B)
- Predrilling Works at Zone C

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

**Regular construction noise monitoring during normal working hours**

W-N1A, W-N18, W-N25A, W-P11 6 times

**Construction dust (24-hour TSP) monitoring**

W-A1, W-A6 6 times

**Construction dust (1-hour TSP) monitoring**

W-A1, W-A6 18 times

- A.4 No construction work was conducted during time period other than normal working hours during this reporting month.

- A.5 Inert construction and demolition (C&D) materials and non-inert C&D materials were the wastes that generated from this Project. During October, 6250.1 tonnes inert C&D material was generated from the Project. No plastics and no paper/ cardboard packaging were generated and sent to recyclers for recycling during reporting period, respectively. About 65.9 tonnes of non-recyclable non-inert C&D materials, such as general refuse, were disposed of at landfill. 1.2 tonnes of chemical waste and no metal were generated during this reporting month.
- A.6 Bi-weekly inspection of the implementation of landscape and visual mitigation measures was conducted on 11 and 25 October 2018. Details of the audit findings and implementation status are presented in Section 5.
- A.7 Joint weekly site inspections were conducted by representatives of the Contractor, Engineer and Contractor's ET on 4,11,18,25 October 2018. Details of the audit findings and implementation status are presented in Section 5.
- A.8 No change has been made from the described in the approved EM&A, such as construction method, mitigation proposals and design changes.
- A.9 No exceedance of the Action and Limit Levels of regular construction noise monitoring was recorded during the reporting period.
- A.10 No exceedance of the Action and Limit Levels of 24-hour TSP and 1-hour TSP monitoring were recorded during the reporting period.
- A.11 One environmental complaint was received in the reporting month. After investigation, actions has been taken and further mitigation measures were implemented.
- A.12 No summon or prosecution was received in this reporting period.
- A.13 No reporting changes were revised in this reporting period.
- A.14 A summary of the construction activities to be undertaken in the in the next reporting month is listed below:

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**Construction Activities to be undertaken**

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- Architectural Builders Works and Finishes (ABWF) Works and E&M works for New West Building of Methadone Clinic
  - Guide wall and D-wall construction at Zone E (YMTAS)
  - Construction of strip beams and drainage works at MCHC
  - Predrilling at Zone A
  - Guide wall and D-wall construction at Zone A
  - Drain pipe diversion at Zone A
  - Predrilling works at Zone C
  - Jet Grouting Works at Zone C
-

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**Construction Activities to be undertaken**

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- Utilities Diversion at Zone C
  - Propping Works at YMTPS
  - Tam Grouting Works at YMTPS
  - Installation of instrumentation for all areas
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## 1. BASIC PROJECT INFORMATION

- 1.1. Central Kowloon Route (CKR) is a 4.7 km long dual 3-lane trunk road in Central Kowloon linking Yau Ma Tei Interchange in West Kowloon with the road network on Kai Tak Development and Kowloon Bay in East Kowloon.
- 1.2. The Central Kowloon Route – Design and Construction Environmental Impact Assessment Report (Register No.: AEIAR-171/2013) was approved with conditions by the Environmental Protection Department (EPD) on 11 July 2013. An Environmental Permit (EP 457/2013) was issued on 9 August 2013. Variations of EP (VEP) was subsequently applied for and the latest EP (EP-457/2013/C) was issued by EPD on 16 January 2017. A Further EP (FEP-02/457/2013/C) was issued by EPD on 5 March 2018.
- 1.3. The construction of the CKR had been divided into different sections. This Contract No. HY/2014/08 – Section of Yau Ma Tei East (YMTE) covers part of the construction activities located at Yau Ma Tei under the EP and FEP which includes:
  - Section of Yau Ma Tei East
    - i. Construction of Cut-and-Cover Tunnel in compliance with all statutory requirements and the requirements specified under the Contract while maintaining the traffic with all necessary provisions
    - ii. Construction and subsequent handover of Yau Ma Tei Access Shaft for facilitating the access and use by the contractor of Central Kowloon Route - Central Tunnel contract
    - iii. Demolition of existing buildings including Yau Ma Tei Multi-storey Carpark Building, Yau Ma Tei Specialist Clinic Extension Building and Yau Ma Tei Jade Hawker Bazaars
    - iv. Demolition and re-provisioning of Gascoigne Road Flyover(GRF) and the underpinning works for the existing Ferry Street Flyover and Yau Ma Tei Police Station New Wing Building
    - v. Construction of civil provisions and coordination with the contractor of Central Kowloon Route - Tunnel Electrical & Mechanical contract
    - vi. Design and construction of Noise Barrier Works
    - vii. Prepare TTA proposals, discuss at TMLG meeting and obtain its agreement and approval/ endorsement from relevant authorities at suitable times to enable the execution of the Works

The alignment and works area for the Contract No. HY/2014/08 - are shown in Appendix A.



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

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

**Construction Activities undertaken**

- Works of New West Building of Methadone Clinic
- BS Works and Architectural Builders Works and Finishes (ABWF) Works of Methadone Clinic
- Predrilling Works at Zone E
- Guide Wall Construction at Zone E
- Diaphragm wall Construction at Zone E
- Demolition of existing Yau Ma Tei Police Station (YMTPS) ancillary buildings
- Temporary propping installation in YMTPS
- Predrilling at YMTPS
- Prebored socket H-pile at temporary Public Library cum Jade Hawker Bazaar Building (TPLBJHB)
- Footing construction at Maternal and Child Health Centre (MCHC)
- Strip Beam at MCHC
- Predrilling at Zone A
- Guide Wall Construction at Zone A
- Diaphragm wall at Zone A (Stage A/B)
- Diaphragm wall at Zone A (Stage C)
- Predrilling Works at Zone C

- 1.5. There are no updates on the scope of works and construction methodologies.

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

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

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

Permit/ Licences/ Notification	Reference	Validity Period
<b>Environmental Permit</b>	EP-457/2013/C	Throughout the Contract
<b>Further Environmental Permit</b>	FEP-02/457/2013/C	Throughout the Contract
<b>Notification of Construction Works under the Air Pollution Control (Construction Dust) Regulation (Form NA)</b>	429806	Throughout the Contract
<b>Wastewater Discharge Licence</b>	WT00030660-2018	31 March 2023
<b>Chemical Waste Producer Registration</b>	WPN5213-225-B2526-01	Throughout the Contract

<b>Permit/ Licences/ Notification</b>	<b>Reference</b>	<b>Validity Period</b>
<b>Construction Noise Permit at Methadone Clinic</b>	GW-RE0252-18	13 April 2018 to 12 October 2018
<b>Construction Noise Permit at Portion 22 &amp; 22A</b>	GW-RE0444-18	25 June 2018 to 24 December 2018
<b>Construction Noise Permit at Portion 15 &amp; 18 (Renewal)</b>	GW-RE0484-18	9 July 2018 to 8 January 2019
<b>Construction Noise Permit for Power Changeover at Methadone Clinic</b>	GW-RE0652-18	6 October 2018 to 2 December 2018
<b>Construction Noise Permit at Zone E</b>	GW-RE0718-18	12 October 2018 to 11 January 2019
<b>Construction Noise Permit at Portion 22 &amp; 22A (1st renewal)</b>	GW-RE0713-18	12 October 2018 to 7 April 2019
<b>Construction Noise Permit at Methadone Clinic (1st renewal)</b>	GW-RE0716-18	19 October 2018 to 18 April 2019
<b>Billing Account for Disposal of Construction Waste</b>	7029997	Throughout the Contract

## 2. ENVIRONMENTAL STATUS

2.1. Environmental permit (EP) conditions under the EIAO, submission status under the EP and implementation status of mitigation measures had been reviewed and implemented on schedule. The status of required submissions under the EP (EP-457/2013/C) and FEP (FEP-02/457/2013/C) as of the reporting period for the Project are summarised in Table 2.1

Table 2.1 Summary of Status of Required Submission for EP-457/2013/C and FEP-02/457/2013/C for the Project

<b>EP/FEP Condition (EP-457/2013/C) (FEP-02/457/2013/C)</b>	<b>Submission</b>	<b>Submission date</b>
Condition 1.12	Notification of Commencement Date of Construction of the Project	20 Mar 2018
Condition 2.3	Community Liaison Group	23 Nov 2017
Condition 2.4	Management organisation of the main construction companies	9 Feb 2018
Condition 2.5	Construction Programme and EP Submission Schedule	26 Feb 2018
Condition 2.6	Design Drawing	26 Feb 2018
Condition 2.7	Cultural Heritage Mitigation Plan	9 Mar 2018
Condition 2.8	Landscape Mitigation Plan	9 Mar 2018
Condition 2.9	Construction Noise Mitigation Plan (CNMMP)	14 Mar 2018
Condition 3.3	Baseline Monitoring Report	6 Apr 2018
Condition 3.4	EM&A Monthly Report (September2018)	11 Oct 2018

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

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

<b>Construction activities undertaken</b>	<b>Remarks on progress</b>
• Works of New West Building of Methadone Clinic	• 100% completion
• BS Works and Architectural Builders Works and Finishes (ABWF) Works of Methadone Clinic	• 50% completion
• Predrilling Works at Zone E	• 95% completion
• Guide Wall Construction at Zone E	• 65% completion
• Diaphragm wall Construction at Zone E	• 22% completion
• Demolition of existing Yau Ma Tei Police Station (YMTPS) ancillary buildings	• 100% completion
• Temporary propping installation in YMTPS	• 100% completion
• Predrilling at YMTPS	• 90% completion
• Prebored socket H-pile at temporary Public Library cum Jade Hawker Bazaar Building (TPLBJHB)	• 63% completion
• Footing construction at Maternal and Child Health Centre (MCHC)	• 100% completion
• Strip Beam at MCHC	• 30% completion
• Predrilling at Zone A	• 92% completion
• Guide Wall Construction at Zone A	• 65% completion
• Diaphragm wall at Zone A (Stage A/B)	• 16% completion
• Diaphragm wall at Zone A (Stage C)	• 100% completion
• Predrilling Works at Zone C	• 93% completion

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

<b>Monitoring Location</b>	<b>Location ID</b>	<b>Latitude</b>	<b>Longitude</b>
Yau Ma Tei Catholic Primary School (Hoi Wang Road)	W-A1/ W-N1A	22.313357	114.16409
Man Cheong Building	W-A6	22.308185	114.166033
Hydan Place	W-N18	22.30858	114.170185
Prosperous Garden Block 1	W-N25A	22.309846	114.168072
The Coronation Tower 1	W-P11	22.309824	114.165616

### 3. MONITORING RESULTS

#### 3.1. Monitoring Parameters

##### Air Quality

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

##### Noise

- 3.1.4. Construction noise level shall be measured in terms of the A-weighted equivalent continuous sound pressure level ( $L_{eq}$ ).  $L_{eq}$  (30min) shall be used as the monitoring parameter for the time period between 0700 and 1900 hours on normal weekdays.
- 3.1.5. For all other time periods,  $L_{eq}$  (5min) shall be employed for comparison with the Noise Control Ordinance (NCO) criteria.
- 3.1.6. As supplementary information for data auditing, statistical results such as  $L_{10}$  and  $L_{90}$  shall also be obtained for reference.

#### 3.2. Monitoring Equipment

##### Air Quality

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

- 3.2.3. A summary of the equipment that was deployed for the 24- hour averaged monitoring is shown in Table 3.1. The TSP monitoring was conducted as per the schedule presented in Appendix G.
- 3.2.4. The equipment used for 1-hour TSP and 24-hour TSP measurement and calibration are summarised in Table 3.1

Table 3.1 Construction Dust Monitoring Equipment

Monitoring Parameter	Monitoring Equipment	Serial Number	Date of Calibration
1-hour TSP	TSI 8532 Laser Dust Monitor	8532120909	20 Dec 2017
1-hour TSP	TSI 8532 Laser Dust Monitor	8532114409	20 Dec 2017
24-hour TSP	TE-5170X High Volume Sampler	1050	26 Sep 2018, 13 Oct 2018, 30 Oct 2018
	TE-5170X High Volume Sampler	1049	26 Sep 2018, 13 Oct 2018, 30 Oct 2018
	TE-5025 Calibration Kit	3465	2 Feb 2018

### Noise

- 3.2.5. Sound level meter in compliance with the International Electrotechnical Commission Publications 651: 1979 (Type 1) and 804: 1985 (Type 1) specifications has been used for carrying out the noise monitoring. The sound level meter has been checked using an acoustic calibrator. The wind speed and other metrological data has been recorded from Hong Kong Observatory- King’s Park meteorological station, along with portable wind speed meter stand by as back up if malfunction occurred or data was not recorded from HKO.
- 3.2.6. An acoustic calibrator and sound level meter using for the monitoring is within the valid period and were calibrated per year. Valid calibration certificate of noise monitoring equipment is attached in Appendix I.
- 3.2.7. The details of equipment using for monitoring are listed in Table 3.2, as below:

Table 3.2 Monitoring Equipment Used in Monitoring

Monitoring Equipment	Serial Number	Date of Calibration
Nti XL2 Sound Level Meter	A2A-09696-E0	3 Nov 2017
Pulsar 105 Acoustic Calibrator	63705	11 Sep 2018

### 3.3. Monitoring Methodology and QA/QC results

#### Air Quality

- 3.3.1. The 1-hour TSP monitor, portable dust meters (TSI Dust Trak Aerosol Monitor Model 8532) was used for the impact monitoring. The 1-hour TSP meters provides a real time 1-hour TSP measurement based on 90° light scattering. Three 1-hour TSP level were logged per every six days.

3.3.2. The 24-hour TSP monitor, High Volume Samplers (Tisch TE 5170 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 1<sup>st</sup> 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 J;
- ◆ The airflow over time during sampling process was recorded by the HVS.

3.3.3. HVSs was 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.

3.3.4. Preparation of Filter Papers

- ◆ Glass fiber filters were labelled and sufficient filters that were clean and without pinholes were selected;
- ◆ All filters were equilibrated in the conditioning environment for 24 hours before weighing. The conditioning environment temperature was around 25°C and not varied by more than  $\pm 3^{\circ}\text{C}$ ; the relative humidity (RH) was 40%; and
- ◆ Acumen Laboratory and Testing Limited and ALS Technichem (HK) Pty Limited, as HOKLAS accredited laboratory, implemented comprehensive quality assurance and quality control programmes on the filters.

3.3.5. Field Monitoring

- ◆ The power supply was checked to ensure that the HVS was working properly;
- ◆ The filter holder and area surrounding the filter were cleaned;
- ◆ The filter holder was removed by loosening the foul bolts and a new filter, with stamped number upward, on a supporting screen was aligned carefully;
- ◆ The filter was properly aligned on the screen so that the gasket formed an airtight seal on the outer edges of the filter;
- ◆ The swing bolts were fastened to hold the filter holder down to the frame. The pressure applied should be sufficient to avoid air leakage at the edges;
- ◆ The shelter lid was closed and secured with an aluminum strip;
- ◆ The HVS was warmed- up for about 5 minutes to establish run- temperature conditions;

- ◆ A new flow rate record sheet was inserted into the flow recorder;
- ◆ The flow rates of the HVS was checked and adjusted to between  $1.22\text{-}1.37\text{m}^3\text{min}^{-3}$ , which was within the range specified in the EM&A Manual (i.e.  $0.6\text{-}1.7\text{m}^3\text{min}^{-3}$ );
- ◆ The programmable timer was set for a sampling period of 24 hours  $\pm$ hour, and the starting time, weather condition and filter number were recorded;
- ◆ The initial elapsed time was recorded;
- ◆ At the end of sampling, the sampled filter was removed carefully and folded in half so that only surfaces with collected particulate matter were in contact;
- ◆ The filter paper was placed in a clean plastic envelope and sealed; all monitoring information was recorded on a standard data sheet and
- ◆ The filters were sent to (Acumen Laboratory and Testing Ltd and ALS Technichem (HK) Pty Ltd) for analysis.

### 3.3.6. Maintenance and Calibration

- ◆ The HVS and their accessories were maintained in a good working condition. For example, motor brushes were replaced routinely and electrical wiring was checked to ensure a continuous power supply; and
- ◆ The flow rate of each HVS with mass flow controller was calibrated using an orifice calibrator, Initial calibrations of the dust monitoring equipment were conducted upon installation and prior to commissioning. Five- point calibration was carried out for HVS using TE-5025 Calibration Kit. HVS is calibrated bimonthly. The calibration records for the HVS is given in Appendix H.

### 3.3.7. Wind Data Monitoring

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

### Noise

3.3.8. All noise measurements by the meter were set to FAST response and on the A-weighted equivalent continuous sound pressure level (Leq) in decibels dB(A).  $L_{Aeq}(30\text{min})$  was used as the monitoring metric for the time period between 0700 –1900 hours on normal weekdays. The measured noise levels were logged every 5 minutes throughout the monitoring period.

3.3.9. Prior to the noise measurement, the accuracy of the sound level meter was checked using an acoustic calibrator generating a known sound pressure level at a known frequency. Checking was conducted before and after the monitoring. The calibration level before and after the noise measurement is agreed to within 1.0 dB.

3.3.10. Noise measurements should not be made in presence of fog, rain, wind with a steady speed exceeding  $5\text{ms}^{-1}$  or wind with gusts exceeding  $10\text{ms}^{-1}$ . The wind speed was checked with a portable wind speed meter capable of measuring with speeds in  $\text{ms}^{-1}$ .

## 3.4. Monitoring Locations

### Air Quality

- 3.4.1. During the site visit, both of the original proposed dust monitoring locations were rejected due to the condition at The Coronation was not favorable for monitoring and the access was declined by the management office of Hong Kong Community College (HKCC) of PolyU. Two alternative air monitoring stations Yau Ma Tei Catholic Primary School (Hoi Wang Road) and Man Cheong Building had been proposed by ET and approved by IEC. 2 designated air monitoring locations were identified and agreed with IEC and EPD. Details of air monitoring stations are described in Table 3.3. The location plan of air quality monitoring stations is shown in Appendix K.

Table 3.3 Location of the Dust Monitoring Stations

<b>Air Quality Monitoring Station</b>	<b>Dust Monitoring Station</b>
W-A1	Yau Ma Tei Catholic Primary School (Hoi Wang Road)
W-A6	Man Cheong Building

### Noise

- 3.4.2. During the site visit, one of the original proposed noise monitoring locations Tak Cheong Building was rejected by the president of the owner's corporation. Alternative noise monitoring station Hydan place had been proposed by ET and approved by IEC. 4 noise sensitive receivers designated noise monitoring locations were identified and agreed with IEC and EPD. The designated monitoring stations are identified and access was granted by the premises. The details of noise monitoring station are described in Table 3.4 and the location plan of noise monitoring station is shown in Appendix K.

Table 3.4 Noise Monitoring Stations

<b>Noise Monitoring Station</b>	<b>Identified Noise Monitoring Station</b>	<b>Type of Measurement</b>
W-N1A	Yau Ma Tei Catholic Primary School (Hoi Wang Road)	Façade
W-N18	Hydan Place	Façade
W-N25A	Prosperous Garden Block 1	Façade
W-P11	The Coronation Tower 1	Façade

### 3.5. Monitoring date, time, frequency and duration

- 3.5.1. A summary of impact monitoring duration, sampling parameter and frequency is presented in Table 3.5.



Table 3.5: Summary of Impact Monitoring Programme

Impact Monitoring	Duration	Sampling Parameter	Frequency
Dust	1-hour continuous measurement	1-hour TSP	3 times per six days
Dust	24-hour continuous sampling	24-hour TSP	Once per six days
Noise	30-minute continuous measurement	$L_{eq\ 30\ min}$ , $L_{10}$ and $L_{90}$ as reference.	Once $L_{eq\ 30\ min}$ from 0700 – 1900 per seven days

### 3.6. Result Summary

#### Air Quality

3.6.1. According to our field observations, the major dust source identified at the designated air quality monitoring station in the reporting month are summarised in Table 3.6

Table 3.6 Observation at Dust Monitoring Station

Monitoring Station	Major Dust Source
W-A1	Nearby traffic, construction work from West Kowloon Government Offices
W-A6	Nearby traffic

3.6.2. Air quality impact monitoring for the reporting month was carried out on 2,8,13,19,24 and 30 October 2018. The results for 1-hour TSP and 24-hour TSP are summarized in Table 3.7 and Table 3.8. The measurement data and details of influencing factors such as weather conditions and site observation are presented in Appendix L.

Table 3.7 Summary of 1-hour TSP Monitoring Results

Monitoring Location	Range( $\mu\text{g}/\text{m}^3$ )	Action Level( $\mu\text{g}/\text{m}^3$ )	Limit Level( $\mu\text{g}/\text{m}^3$ )
W-A1	39 – 77	319	500
W-A6	56 – 95	306	500

Table 3.8 Summary of 24-hour TSP Monitoring Results

Monitoring Location	Range( $\mu\text{g}/\text{m}^3$ )	Action Level( $\mu\text{g}/\text{m}^3$ )	Limit Level( $\mu\text{g}/\text{m}^3$ )
W-A1	34 – 49	167	260
W-A6	29 – 37	166	260

#### Noise

3.6.3. According to our field observations, the major noise source identified at the designated noise monitoring station in the reporting month are summarised in Table 3.9:

Table 3.9 Observation at Noise Monitoring Stations

Monitoring Station	Major Noise Source
W-N1A	Nearby traffic, construction work from West Kowloon Government Offices, school activities
W-N18	Nearby traffic
W-N25A	Nearby traffic
W-P11	Nearby traffic

3.6.4. The construction noise impact monitoring for the reporting month was carried out on 2,8,13,19,24 and 30 October 2018. The measurement data are shown in Appendix M and summarized in Tables 3.10:

Table 3.10 Summary of Noise Monitoring Results

Time Period	Monitoring location	Parameter	Range, dB(A)			Action Level	Limit Level#
			L <sub>eq</sub>	L <sub>10</sub>	L <sub>90</sub>		
Normal working hour from 0700-1900	W-N1A	L <sub>eq 30min</sub>	59.7– 62.6*	60.9-63.9	58.1–61.4	When one documented complaint is received	70dB(A) or 65 dB(A) during examination**
	W-N18		63.7 – 69.0	66.1 – 72.1	62.4 – 67.4		75dB(A)#
	W-N25A		64.2 – 70.7	66.4 – 74.7	63.2 – 69.1		
	W-P11		63.2 – 66.6	64.3 – 67.6	61.4 – 66.0		

Remarks: \* No examination was held in the reporting date.

# If works are to be carried out during restricted hours, the conditions stipulated in the construction noise permit by the Noise Control Authority have to be followed.

\*\* Reduce to 70dB(A) for schools and 65dB(A) during school examination periods.

### 3.7. Waste management

3.7.1. 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 3.11. Details of cumulative waste management data are presented as a waste flow table in Appendix N.

Table 3.11 Quantities of waste generated from the Project

Reporting period	Quantity					
	Inert C&D Materials (in 'tonnes)	Chemical Waste (in 'tonnes)	Non-inert C&D Materials			
			Others, e.g. General Refuse disposed at Landfill (in 'tonnes)	Recycled materials		
				Paper/card board (in 'tonnes)	Plastics (in 'tonnes)	Metals (in 'tonnes)
Oct-18	6250.1	1.2	65.9	0	0	0

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

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

Table 4.1 Environmental Complaint Handling Procedure

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

- 4.2. Should non-compliance of the criteria occur, action in accordance with the Action Plan in Appendix D and Appendix E shall be carried out.
- 4.3. No exceedance of the Action and Limit Levels of the regular construction noise was recorded during the reporting period
- 4.4. No exceedance of the Action and Limit Level of 1-hour TSP and 24-hour TSP monitoring was recording during the reporting period.
- 4.5. One environmental complaint was received on 19 October, 2018. As concluded from investigation on 5 November, 2018, actions have been taken after investigation. The interim report for the complaint is shown in Appendix Q. Further mitigation measures were implemented on site for precautionary purpose.
- 4.6. No notification of summons and prosecution was received in the reporting period.
- 4.7. Statistics on complaints, notifications of summons and successful prosecutions are summarized in Appendix O.

## 5. EM&A SITE INSPECTION

- 5.1. Site inspections were carried out on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures under the Contract. In the reporting period, four (4) site inspections were carried out on 4, 11, 18 and 25 October 2018, along with bi-weekly inspection of the implementation of landscape and visual mitigation measures conducted on 11 and 25 October 2018.
- 5.2. One joint site inspection with IEC also undertaken on 11 October 2018. Minor deficiencies were observed during weekly site inspection or joint site inspection. Key observations during the site inspections are summarized in Table 5.1.

Table 5.1 Site Observations

Date	Environmental Observations	Follow-up Status
4 Oct 2018	<u>Observation(s) and Recommendation(s)</u> 1. Housekeeping is required and chemical waste should be disposed properly in Zone A.	1. The site was kept clean and tidy in Zone A.
11 Oct 2018	<u>Observation(s) and Recommendation(s)</u> 1. Oil spillage was observed at portion 15A.	1. The oil spillage was cleaned up at Portion 15A.
18 Oct 2018	No Observations	-
25 Oct 2018	<u>Observation(s) and Recommendation(s)</u> 1. At portion 15, chemical waste storage cabinet was blocked by two gas cylinders. The chemical waste storage cabinet has no lock.	1. At portion 15, two gas cylinders was removed. The chemical waste storage cabinet was locked.

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

## 6. FUTURE KEY ISSUES

6.1. Work to be undertaken in the next reporting month are:

- Architectural Builders Works and Finishes (ABWF) Works and E&M works for New West Building of Methadone Clinic
- Guide wall and D-wall construction at Zone E (YMTAS)
- Construction of strip beams and drainage works at MCHC
- Predrilling at Zone A
- Guide wall and D-wall construction at Zone A
- Drain pipe diversion at Zone A
- Predrilling works at Zone C
- Jet Grouting Works at Zone C
- Utilities Diversion at Zone C
- Propping Works at YMTPS
- Tam Grouting Works at YMTPS
- Installation of instrumentation for all areas

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

6.2. The tentative schedule of regular construction noise monitoring, 1-hour TSP and 24-hour TSP monitoring in the next reporting period is presented in Appendix P. The regular construction noise monitoring, 1-hour TSP monitoring 24-hour TSP monitoring will be conducted at the same monitoring locations in the next reporting period.

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

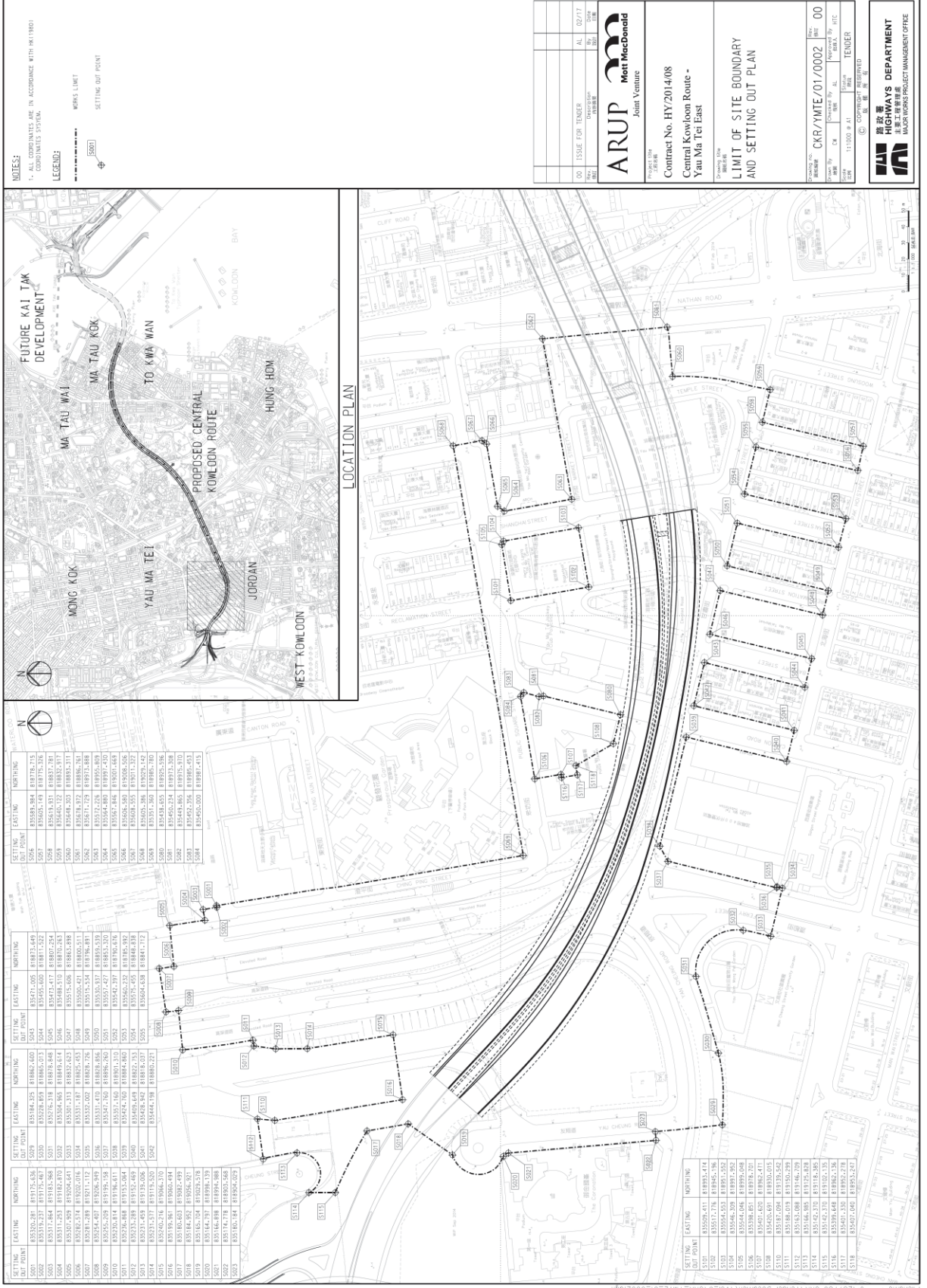
## **7. CONCLUSION AND RECOMMENDATIONS**

- 7.1. This 7<sup>th</sup> monthly EM&A Report presents the EM&A works undertaken during the period from 1 October 2018 to 31 October 2018 in accordance with the EM&A Manual and the requirement under EP- 457/2013/C and FEP-02/457/2013/C.
- 7.2. Air quality (including 1-hour TSP and 24-hour TSP) and noise impact monitoring were carried out in the reporting period. All monitoring results are satisfactory. No exceedance of the Action and Limit Level was recorded during the reporting period.
- 7.3. Weekly environmental site inspections were conducted during the reporting period. Joint site inspection with IEC were carried out on 11 October 2018. Minor deficiencies were observed during site inspection and were rectified within the specified deadlines. The environmental performance of the Project was therefore considered satisfactory.
- 7.4. One environmental complaint was received on 19 October, 2018. As concluded from investigation on 5 November, 2018, actions has been taken after investigation. The interim report for the compliant is shown in Appendix Q. Further mitigation measures were implemented on site for precautionary purpose.
- 7.5. Further mitigation measures were implemented on site for precautionary purpose.
- 7.6. No notification of summons or prosecution was received since commencement of the Contract.
- 7.7. 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/2014/08



# Appendix B

## Construction Programme

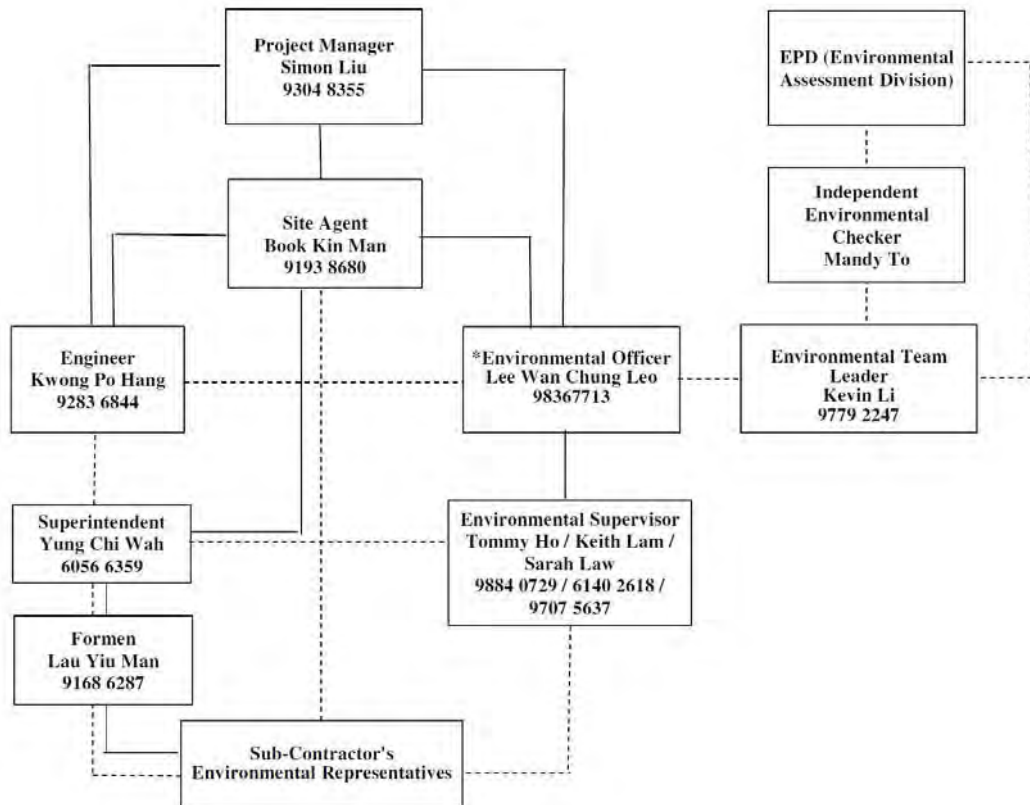
Contract No. HY/2014/08  
Environmental Monitoring & Auditing

Activity ID	Activity Name	Start	End	2018	2019	2020	2021	2022	2023	2024	2025
HY2014/08	Central Kowloon Route - You Ma Tei East Construction Programme - ET	27/02/2018	10/11/2025								
	<b>Construction Works</b>										
	Erection of Site Office	27/02/2018	30/11/2018								
	Demolish YMTSC Ext. and Construct Accessible Ramp and Refuse Collection Area for Methadone Clinic	100	20/04/18	29/01/18							
	Provision of Methadone Clinic	423	31/03/18	27/05/21							
	Reinstatement of Northern and Southern Parts of YMTMSCP	451	20/04/18	14/01/19							
	Reinstatement of YMTSC Maintenance Depot Area, Public Square SUKansai St Rest Garden, Access Road	577	13/03/21	10/06/22							
	Preservation and Protection of Existing Trees	1367	14/09/20	03/03/24							
	Establishment Works	2416	20/04/18	29/11/24							
	Construction of Full Enclosure F03, S04 and S05 at New GRF Westbound	306	30/11/24	30/11/25							
	Construction of Noise Enclosure F02 and C07	1426	20/04/18	26/09/23							
	Construction of Noise Enclosure S03, V06 and C08	964	15/06/21	25/09/23							
	Construction of You Ma Tei Access Shaft	614	20/04/18	24/06/19							
	Underpinning of Police Station	2442	20/04/18	25/06/24							
	Construction of Temporary You Ma Tei Public Library and Jade Hawker Bazaars	910	30/04/18	15/06/20							
	Construction Temporary Maternal and Child Health Centre	612	20/04/18	27/06/19							
	Construction of New Access Road to Fruit Market	108	20/04/18	05/08/18							
	Provision of At-Grade Road & Temporary Traffic Management	1813	03/05/18	19/09/20							
	Construction of C&C Tunnel Eastbound	1863	20/04/18	16/05/23							
	Construction of C&C Tunnel Westbound	1889	03/05/18	12/06/23							
	Stage C - C&C Tunnel Works within Portion 13 & 20A, CUL-16-sec of Portion 20B & 24	283	25/01/18	03/05/19							
	Demolition of Northern Part of Ex. YMT Multi-Storey Car Park Bldg.	221	05/09/20	25/04/21							
	Demolition of Southern Part of Ex. YMT Multi-Storey Car Park Bldg.	271	17/09/21	14/08/22							
	GRF Re-provisioning	2316	17/05/18	17/09/24							
	Breakthrough between CKR-YMT East and West Contract	43	05/06/20	21/01/20							
	Stage H - Completion of Diaphragm Walls and Roof Slabs within Portion 27 and 28	0	17/01/20	17/01/20							

# Appendix C

## Project Organization Chart

## Project O-Chart



— Line of Responsibility  
 - - - - Line of Communication  
 (\*) - person responsible for updating the EMP, WFT and summary table for timber

# Appendix D

## Dust Event-Action Plan (EAP)

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



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

Note:

ET – Environmental Team

IEC – Independent Environmental Checker

ER – Engineer's Representative

# Appendix E

## Noise Event-Action Plan (EAP)

<b>ACTION</b>				
<b>EVEN T</b>	<b>ET</b>	<b>IEC</b>	<b>ER</b>	<b>CONTRACTOR</b>
Action Level	<ol style="list-style-type: none"> <li>1. Identify source, investigate the causes of exceedance and propose remedial measures;</li> <li>2. Notify IEC and Contractor;</li> <li>3. Report the results of investigation to the IEC, ER and Contractor;</li> <li>4. Discuss with the Contractor and formulate remedial measures;</li> <li>5. Increase monitoring frequency to check mitigation effectiveness.</li> </ol>	<ol style="list-style-type: none"> <li>1. Review the analysed results submitted by the ET;</li> <li>2. Review the proposed remedial measures by the Contractor and advise the ER accordingly;</li> <li>3. Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Notify Contractor;</li> <li>3. Require Contractor to propose remedial measures for the analysed noise problem;</li> <li>4. Ensure remedial measures are properly implemented</li> </ol>	<ol style="list-style-type: none"> <li>1. Submit noise mitigation proposals to IEC;</li> <li>2. Implement noise mitigation proposals.</li> </ol>
Limit Level	<ol style="list-style-type: none"> <li>1. Identify source;</li> <li>2. Inform IEC, ER, EPD and Contractor;</li> <li>3. Repeat measurements to confirm findings;</li> <li>4. Increase monitoring frequency;</li> <li>5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented;</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss amongst ER, ET, and Contractor on the potential remedial actions;</li> <li>2. Review Contractors remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly;</li> <li>3. Supervise the implementation of remedial measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing;</li> <li>2. Notify Contractor;</li> <li>3. Require Contractor to propose remedial measures for the analysed noise problem;</li> <li>4. Ensure remedial measures properly implemented;</li> </ol>	<ol style="list-style-type: none"> <li>1. Take immediate action to avoid further exceedance;</li> <li>2. Submit proposals for remedial actions to IEC within 3 working days of notification;</li> <li>3. Implement the agreed proposals;</li> <li>4. Resubmit proposals if problem still not under control;</li> <li>5. Stop the relevant portion of works as determined by the ER</li> </ol>

EVENT	ACTION			
	ET	IEC	ER	CONTRACTOR
	<p>6. Inform IEC, ER and EPD the causes and actions taken for the exceedances;</p> <p>7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results;</p> <p>8. If exceedance stops, cease additional monitoring.</p>		<p>5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.</p>	<p>until the exceedance is abated.</p>

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/2014/08 (Yau Ma Tei 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
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 impact at the nearby sensitive receivers	Contractor	All construction sites	Construction stage	<ul style="list-style-type: none"> <li>• APCO</li> <li>• To control the dust impact To meet HKAQO and TM-EIA criteria</li> </ul>
S4.3.10	D2	<ul style="list-style-type: none"> <li>• Mitigation measures in form of regular watering under a good site practice should be adopted. Watering once per hour on exposed workites 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<sup>2</sup> to achieve the dust removal efficiency.</li> </ul>	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction stage	<ul style="list-style-type: none"> <li>• APCO</li> <li>• To control the dust impact To meet HKAQO and TM-EIA criteria</li> </ul>
S4.3.10	D3	<ul style="list-style-type: none"> <li>• Proper watering at exposed spoil should be undertaken throughout the construction phase;</li> <li>• 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;</li> <li>• Any dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads;</li> <li>• A stockpile of dusty material should not be extended beyond the pedestrian barriers, fencing or traffic cones;</li> <li>• The load of dusty materials on a vehicle leaving a construction site should be covered entirely by impervious sheeting to</li> </ul>	Minimize dust impact at the nearby sensitive receivers	Contractor	All construction sites	Construction stage	<ul style="list-style-type: none"> <li>• APCO</li> <li>• To control the dust impact To meet HKAQO and TM-EIA criteria</li> </ul>

Environmental Mitigation Implementation Schedule –  
Contract No. HY/2014/08 (Yau Ma Tei 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
		<p>ensure that the dusty materials do not leak from the vehicle.</p> <ul style="list-style-type: none"> <li>•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;</li> <li>•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;</li> <li>•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;</li> <li>•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;</li> <li>•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;</li> <li>• Any skip hoist for material transport should be totally enclosed by impervious sheeting;</li> <li>• 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;</li> </ul>					

Environmental Mitigation Implementation Schedule –  
Contract No. HY/2014/08 (Yau Ma Tei 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
S4.3.10	D6	<ul style="list-style-type: none"> <li>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</li> <li>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.</li> </ul>		Contractor	Selected rep. dust monitoring station	Construction stage	<ul style="list-style-type: none"> <li>TM-EIA</li> </ul>
Construction Noise (Airborne)							
S5.4.1	N1	<p>Implement the following good site practices:</p> <ul style="list-style-type: none"> <li>Only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme;</li> <li>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;</li> <li>Plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs;</li> <li>Silencers or mufflers on construction equipment should be properly fitted and maintained during the construction works;</li> <li>Mobile plant should be sited as far away from NSRs as possible and practicable;</li> </ul>	Control construction airborne noise	Contractor	All construction sites	Construction stage	<ul style="list-style-type: none"> <li>Annex 5, TM-EIAO</li> </ul>



Environmental Mitigation Implementation Schedule –  
Contract No. HY/2014/08 (Yau Ma Tei 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
		<ul style="list-style-type: none"> <li>Material stockpiles, mobile container site office and other structures should be effectively utilized, where practicable, to screen noise from on-site construction activities.</li> </ul>					
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	<ul style="list-style-type: none"> <li>Annex 5, TM-EIAO</li> </ul>
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.	Screen the noisy plant items to be used at all construction sites	Contractor	All construction sites where practicable	Construction stage	<ul style="list-style-type: none"> <li>Annex 5, TM-EIAO</li> </ul>
S5.4.1	N4	Use 'Quiet plant'	Reduce the noise levels of plant items	Contractor	All construction sites where practicable	Construction stage	<ul style="list-style-type: none"> <li>Annex 5, TM-EIAO</li> </ul>
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	<ul style="list-style-type: none"> <li>Annex 5, TM-EIAO</li> </ul>
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	<ul style="list-style-type: none"> <li>Annex 5, TM-EIAO</li> </ul>

Environmental Mitigation Implementation Schedule –  
Contract No. HY/2014/08 (Yau Ma Tei 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
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	<ul style="list-style-type: none"> <li>TM-EIAO</li> </ul>
<b>Water Quality (Construction Phase)</b>							
S6.9.1.1	W1	<p>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:</p> <p><u>Construction Runoff</u></p> <ul style="list-style-type: none"> <li>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;</li> <li>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;</li> <li>The design of efficient silt removal facilities should be based on the guidelines in Appendix A1 of ProPECC PN 1/94, which</li> </ul>	To minimize water quality impact from the construction site runoff and general construction activities	Contractor	All construction sites where practicable	Construction stage	<ul style="list-style-type: none"> <li>Water Pollution Control Ordinance</li> <li>ProPECC PN 1/94</li> <li>TM-EIAO</li> <li>TM-DSS</li> </ul>

Environmental Mitigation Implementation Schedule –  
Contract No. HY/2014/08 (Yau Ma Tei 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
		<p>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 m<sup>3</sup>/s a sedimentation basin of 30 m<sup>3</sup> would be required and for a flow rate of 0.5 m<sup>3</sup>/s the basin would be 150 m<sup>3</sup>. The detailed design of the sand/ silt traps shall be undertaken by the contractor prior to the commencement of construction;</p> <ul style="list-style-type: none"> <li>• 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;</li> <li>• 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;</li> <li>• 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;</li> <li>• 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;</li> </ul>					

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		<ul style="list-style-type: none"> <li>Open stockpiles of construction materials (for example, aggregates, sand and fill material) of more than 50m<sup>3</sup> 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;</li> <li>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;</li> <li>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;</li> <li>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;</li> <li>Oil interceptors should be provided in the drainage system downstream of any oil/ fuel pollution sources. The oil</li> </ul>					

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S6.9.1.2	W2	<p>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;</p> <ul style="list-style-type: none"> <li>Construction solid waste, debris and rubbish on site should be collected, handled and disposed of properly to avoid water quality impacts;</li> <li>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;</li> <li>Adopt best management practices;</li> <li>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.</li> </ul>	To minimize construction water quality impact from tunneling works	Contractor	All tunneling portion	Construction stage	<ul style="list-style-type: none"> <li>Water Pollution Control Ordinance</li> <li>ProPECC PN 1/94</li> <li>TM-DSS</li> <li>TM-EIAO</li> </ul>

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S6.9.1.3	W3	<ul style="list-style-type: none"> <li>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.</li> </ul> <p><u>Sewage Effluent</u></p> <ul style="list-style-type: none"> <li>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.</li> </ul>	To minimize water quality from sewage effluent	Contractor	All construction sites where practicable	Construction stage	<ul style="list-style-type: none"> <li>Water Control Ordinance</li> <li>TM-DSS</li> </ul>
S6.9.1.5	W4	<p><u>Groundwater from Potential Contaminated Area:</u></p> <ul style="list-style-type: none"> <li>No direct discharge of groundwater from contaminated areas should be adopted.</li> <li>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</li> </ul>	To minimize groundwater quality impact from contaminated area	Contractor	Excavation areas where contamination is found	Construction stage	<ul style="list-style-type: none"> <li>Water Control Ordinance</li> <li>TM-DSS</li> <li>TM-EIAO</li> </ul>

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		<p>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.</p> <ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>					

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S6.9.1.6	W6	<p><u>Accidental Spillage</u></p> <p>In order to prevent accidental spillage of chemicals, the following is recommended:</p> <ul style="list-style-type: none"> <li>All the tanks, containers, storage area should be bundled and the locations should be locked as far as possible from the sensitive watercourse and stormwater drains;</li> <li>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.</li> </ul> <p>Disposal of chemical wastes should be conducted in compliance with the requirements as stated in the Waste Disposal (Chemical Waste) (General) Regulation.</p>	To minimize water quality impact from accidental spillage	Contractor	All construction site where practicable	Construction stage	<ul style="list-style-type: none"> <li>Water Pollution Control Ordinance</li> <li>ProPECC PN 1/94</li> <li>TM-EIAO</li> <li>TM-DSS</li> </ul>
<b>Waste Management (Construction Waste)</b>							
S7.4.1	WM1	<p><u>On-site sorting of C&amp;D material</u></p> <ul style="list-style-type: none"> <li>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</li> </ul>	Separation of unsuitable rock from ending up at concrete batching plants and be turned into concrete for structural use	Contractor	All construction sites	Construction stage	<ul style="list-style-type: none"> <li>DEVB (W) No. 6/2010</li> </ul>



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S7.5.1	WM2	<p>Construction and Demolition Material</p> <ul style="list-style-type: none"> <li>• Maintain temporary stockpiles and reuse excavated fill material for backfilling and reinstatement;</li> <li>• Carry out on-site sorting;</li> <li>• Make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate;</li> <li>• Adopt 'selective demolition' technique to demolish the existing structures and facilities with a view to recovering broken concrete effectively for recycling purpose, where possible;</li> <li>• Implement a trip-ticket system for each works contract to ensure that the disposal of C&amp;D materials are properly documented and verified; and</li> <li>• 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&amp;D materials and to minimize their generation during the course of construction.</li> </ul>	<p>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.</p>	Contractor	All construction sites	Construction stage	<ul style="list-style-type: none"> <li>• Land (Miscellaneous Provisions) Ordinance</li> <li>• Waste Disposal Ordinance</li> <li>• ETWB TCW No. 19/2005</li> </ul>

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S7.5.1	WM3	<p><u>C&amp;D Waste</u></p> <ul style="list-style-type: none"> <li>Standard formwork or pre-fabrication should be used as far as practicable in order to minimize the arising of C&amp;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;</li> <li>The Contractor should recycle as much of the C&amp;D materials as possible on-site. Public fill and C&amp;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.</li> </ul>	<p>Good site practice to minimize the waste generation and recycle the C&amp;D materials as far as practicable so as to reduce the amount for final disposal</p>	Contractor	All construction sites	Construction stage	<ul style="list-style-type: none"> <li>Land (Miscellaneous Provisions) Ordinance</li> <li>Waste Disposal Ordinance</li> <li>ETWB TCW No. 19/2005</li> </ul>
S7.5.1	WM5	<p><u>Land-based Sediment</u></p> <ul style="list-style-type: none"> <li>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;</li> <li>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;</li> <li>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</li> </ul>	<p>To control pollution due to marine sediment</p>	Contractor	Along CKR alignment	Construction stage	<ul style="list-style-type: none"> <li>ETWB TCW No. 34/2002</li> </ul>

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		<p>locations;</p> <ul style="list-style-type: none"> <li>• Adequate freeboard shall be maintained on barges to ensure that decks are not washed by wave action.</li> <li>• 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;</li> <li>• The Contractors shall comply with the conditions in the dumping licence.</li> <li>• All bottom dumping vessels (Hopper barges) shall be fitted with tight fittings seals to their bottom openings to prevent leakage of material;</li> <li>• The material shall be placed into the disposal pit by bottom dumping;</li> <li>• Contaminated marine mud shall be transported by spit barge of not less than 750m<sup>3</sup> capacity and capable of rapid opening and discharge at the disposal site;</li> <li>• 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.</li> <li>• 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</li> </ul>					

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S7.5.1	WM6	<p>requirements for fully confined mud disposal.</p> <p><b>Chemical Waste</b></p> <ul style="list-style-type: none"> <li>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;</li> <li>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;</li> <li>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;</li> <li>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.</li> </ul>	Control the chemical waste and ensure proper storage, handling and disposal	Contractor	All construction sites	Construction stage	<ul style="list-style-type: none"> <li>Waste Disposal (Chemical Waste) (General) Regulation</li> <li>Code of Practice on the Packaging, Labelling and Storage of Chemical Waste</li> </ul>

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S7.5.1	WM7	<p><u>General Refuse</u></p> <ul style="list-style-type: none"> <li>General refuse generated on-site should be stored in enclosed bins or compaction units separately from construction and chemical wastes;</li> <li>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.</li> <li>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;</li> <li>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.</li> </ul>	Minimize production of the general refuse and avoid odour, pest and litter impacts	Contractor	All construction sites	Construction stage	<ul style="list-style-type: none"> <li>Waste Disposal Ordinance</li> </ul>
S8.9 & Appendix 8.4	LC2	<p><u>Excavation of the Contaminated Soil</u></p> <ul style="list-style-type: none"> <li>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.</li> <li>The excavated contaminated soils would be stockpiled at designated area on site and covered by sheet to prevent dispersion of contamination during stockpiling.</li> <li>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</li> </ul>	<p>Land Contamination</p> <p>The contaminated soil will be excavated for on-site reuse</p>	Contractor	PBH4	Prior to commencement of construction works within the contaminated area	<ul style="list-style-type: none"> <li>Practice Guide (PG) for Investigation and Remediation of Contaminated Land</li> <li>Guidance Notes for Contaminated Land Assessment and Remediation</li> <li>Guidance Manual for Use of</li> </ul>

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S8.9 & Appendix x 8.4	LC3	<p>during excavation. The Contractor should also obtain a valid Water Pollution Control Ordinance (WPCO) discharge licence from EPD where applicable.</p> <ul style="list-style-type: none"> <li>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:</li> </ul> <table border="1" data-bbox="790 1317 909 1948"> <thead> <tr> <th>Locations</th> <th>Testing requirement</th> <th>Acceptance Criteria</th> </tr> </thead> <tbody> <tr> <td>PBH4</td> <td>PCBs</td> <td>RBRGs (Public Park)</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>If the results of analysis below the RBRGs (Public Park), no further excavation will be required.</li> </ul> <p>If the analysis indicates presence of contamination (i.e. noncompliance of the acceptance criteria), further excavation shall be carried out in 0.5m increment vertically and/or horizontally depending on the location(s) of the sample(s) which has exceeded the acceptance criteria. Further sampling shall also be conducted for compliance testing. The process of excavation, sampling and compliance testing should continue until all contaminated materials are removed and should be supervised by a Land Contamination Specialist.</p> <ul style="list-style-type: none"> <li>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</li> </ul>	Locations	Testing requirement	Acceptance Criteria	PBH4	PCBs	RBRGs (Public Park)					Risk-Based Remediation Goals (RBRGs) for Contaminated Land Management
Locations	Testing requirement	Acceptance Criteria											
PBH4	PCBs	RBRGs (Public Park)											
Appendix x 8.4	LC4	<ul style="list-style-type: none"> <li>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</li> </ul>											

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		shall be carried out prior to the endorsement of the RR by EPD.					
Hazard to Life							
S9.18	H1	Blasting activities regarding transport and use of explosives should be supervised and audited by competent site staff to ensure full compliance with the blasting permit conditions.	To ensure that the risks from the proposed explosives handling and transport would be acceptable	Contractor	Works areas at which explosives would be used	Construction stage	<ul style="list-style-type: none"> <li>Dangerous Goods Ordinance</li> </ul>
S9.6, para.4	H2	Detonators shall not be transported in the same vehicle with other Category 1 Dangerous Goods.	To reduce the risk of explosion during the transport of cartridged emulsion	Contractor	-	Construction stage	<ul style="list-style-type: none"> <li>Dangerous Goods Ordinance</li> </ul>
S9.6, para.8	H3	The explosives delivery trucks should be approved by Mines Division and should meet the regulatory requirements for transport of explosives.	To comply with the requirements for approval of an explosives delivery vehicle	Contractor	-	Construction stage	<ul style="list-style-type: none"> <li>Dangerous Goods Ordinance</li> </ul>
S9.10, para.7 and S9.18	H4	Blast cover should be provided for shaft at HMT, and kept closed during blasting. Provision of blast doors or heavy duty blast curtains should be implemented at the shaft to prevent flyrock and control the air overpressure.	To ensure safe use of explosives	Contractor	Shaft	Construction stage	-
S9.16	H5	Only the required quantity of explosives for a particular blast should be transported to avoid the return.	To reduce risks during explosives transport	Contractor	Works areas at which explosives would be used	Construction stage	-

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S9.18	H7	The approved truck dedicated for transport of explosives should comply with the "Guidance Note on Requirements for Approval of an Explosives Delivery Vehicle" issued by CEDD Mines Division. The truck should be periodically inspected and properly maintained in good operation conditions. The fuel carried in the fuel tank should be minimized to reduce the duration of fire. Adequate fire fighting equipment shall be provided, inspected and replaced periodically (e.g. fire extinguishers).	To reduce the risk during explosives transport	Contractor	Works areas of which explosives would be used	Construction stage	<ul style="list-style-type: none"> <li>Dangerous Goods Ordinance</li> </ul>
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	-
S9.18	H10	Close liaison and communication among Mines Division, Contractors for transport of explosives, and working staff of the blasting should be established. In case of any change of work schedule leading to cancellation or variation of explosives required, relevant parties should be informed in time to avoid unused explosives at the work sites.	To reduce the risk during explosives transport	Contractor	Works areas at which explosives would be used	Construction stage	-
S9.18	H11	Close liaison and communication with Fire Services Department should be established to reduce the accidental detonation escalated from a fire. The contractors for transport of explosives should use the preferred transport routes as far as practicable.	To reduce the risk during explosives transport	Contractor	Works areas at which explosives would be used	Construction stage	-



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S9.18	H12	Contingency plan should be prepared for transport of explosives under severe weather conditions such as rainstorms and thunderstorms.	To reduce the risk during explosives transport	Contractor	Works areas at which explosives would be used	Construction stage	-
S9.18	H13	For explosive transport, all packages of explosives on the truck should be properly stored in the truck compartment as required. Packaging of the explosives should remain intact (i.e. damage free) until they are transferred to the blasting site.	To reduce the risk during explosives transport	Contractor	Works areas at which explosives would be used	Construction stage	-
S9.18	H14	Availability of a parking space should be ensured before commencement of transport of explosives. Location for loading and unloading of explosives should be as close as possible to the shaft. No hot work should be performed in the vicinity during the time of loading and unloading.	To reduce the risk during explosives transport	Contractor	Works areas at which explosives would be used	Construction stage	-
S9.18	H22	It is recommended to explore to minimize the use of the cartridged emulsion explosives and maximize the use of bulk emulsion explosive as far as practicable.	To reduce the risk during explosives transport	Contractor	Works areas at which explosives would be used	Construction stage	-
S9.18	H24	It is recommended to explore to use smaller explosive charges such as 'cast boosters' or 'mini-cast booster' instead of cartridged emulsion as primers for bulk emulsion. This option reduces the quantity of explosives required for transportation for the sections where bulk emulsion will be used.	To reduce the risk during explosives transport	Contractor	Works areas at which explosives would be used	Construction stage	-
Landscape & Visual							
S10.10.1 Table 10.11	LV3	<p><u>Good Site Management</u></p> <ul style="list-style-type: none"> <li>Large temporary stockpiles of excavated material shall be covered with unobtrusive sheeting to prevent dust and dirt</li> </ul>	Minimize visual impact	Contractor	Within Project site	Construction stage	-

Environmental Mitigation Implementation Schedule –  
Contract No. HY/2014/08 (Yau Ma Tei 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
		<p>spreading to adjacent landscape areas and vegetation, and to create a neat and tidy visual appearance.</p> <ul style="list-style-type: none"> <li>Construction plant and building material shall be orderly and carefully stored in order to create a neat and tidy visual appearance.</li> </ul>					
S10.10.1 Table 10.11	LV4	<p><u>Screen Hoarding</u></p> <ul style="list-style-type: none"> <li>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.</li> </ul>	Minimize visual impact	Contractor	Within Project site	Construction stage	-
S10.10.1 Table 10.11	LV5	<p><u>Lighting Control during Construction</u></p> <ul style="list-style-type: none"> <li>All lighting in the construction site shall be carefully controlled to minimize light pollution and night-time glare to nearby residences and GIC. The Contractor shall consider other security measures, which shall minimize the visual impacts.</li> </ul>	Minimize visual impact	Contractor	Within Project site	Construction stage	-
S10.10.1 Table 10.11	LV6	<p><u>Erosion Control</u></p> <ul style="list-style-type: none"> <li>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.</li> </ul>	Minimize landscape impact	Contractor	Within Project site	Construction stage	-
S10.10.1 Table 10.11	LV7	<p><u>Tree Protection &amp; Preservation</u></p> <ul style="list-style-type: none"> <li>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.</li> </ul>	Minimize landscape and visual impact	Contractor	Within Project site	Construction stage	<ul style="list-style-type: none"> <li>'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</li> </ul>

Environmental Mitigation Implementation Schedule –  
Contract No. HY/2014/08 (Yau Ma Tei 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
S10.10.1 Table 10.11	LV8	<p><u>Tree Transplantation</u></p> <ul style="list-style-type: none"> <li>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.</li> </ul>	Minimize landscape and visual impact	Contractor	Within Project site and designated off-site locations	Prior to Construction stage	<ul style="list-style-type: none"> <li>Latest recommended horticultural practices from GLTM Section, DEVB</li> <li>ETWB TCW 3/2006</li> <li>Latest recommended horticultural practices from Greening, Landscape and Tree Management (GLTM) Section, DEVB</li> <li>ETWB TCW 2/2004</li> </ul>
S10.10.1 Table 10.11	LV9	<p><u>Compensatory Planting</u></p> <ul style="list-style-type: none"> <li>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.</li> </ul>	Minimize visual impact and also enhance landscape	Contractor	Within Project site	Construction stage	<ul style="list-style-type: none"> <li>ETWB TCW 3/2006</li> <li>Latest recommended horticultural practices from Greening, Landscape and Tree Management (GLTM) Section,</li> </ul>

Environmental Mitigation Implementation Schedule –  
Contract No. HY/2014/08 (Yau Ma Tei 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
		<ul style="list-style-type: none"> <li>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.</li> </ul>					DEVB • ETWB TCW 2/2004
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	<ul style="list-style-type: none"> <li>AMOs requirements</li> </ul>
S12.6.1	CH3	<ul style="list-style-type: none"> <li>Protective covering should be provided for the buildings in the form of plastic sheeting;</li> <li>Buffer zones should be provided between the construction works and the external walls of the buildings and should be as large as site restrictions allow and be marked out by temporary fencing or hoarding;</li> <li>An underpinning scheme is required to transfer the existing column loadings to a deeper rock stratum. The supporting system includes cutting the existing ground floor slab to expose the existing pile caps and then construct transfer beams at both sides of the pile caps. The transfer beams will tie up with the existing caps. Loadings of the transfer beams will be transferred to the rock socket piles installed at the two ends of the beams;</li> <li>The AAA settlement and tilting limit should be 6/8/10 mm and 1/2000, 1/1500 and 1/1000;</li> </ul>	Protect the building from damage from construction works	Contractor	Yau Ma Tei Police Station (Old Wing) (CKR-01)	Prior to commencement of and during the construction phase	<ul style="list-style-type: none"> <li>Guidelines for Cultural Heritage Impact Assessment</li> <li>EIAO-TM Annex 10 and Annex 19</li> <li>AMO Proposed Vibration Limits</li> </ul>

Environmental Mitigation Implementation Schedule –  
Contract No. HY/2014/08 (Yau Ma Tei 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
S12.6.1		<ul style="list-style-type: none"> <li>Monitoring of vibration levels will be undertaken during the construction phase and the Alert, Alarm and Action (AAA) vibration limit will be set at 5/6/7.5 mm/s. The monitoring proposal should be sent to AMO for comment;</li> <li>Regular site inspections and monitoring works will be carried out by the contractor and the monitoring results will be submitted to the resident site staff of HyD to ensure compliance.</li> <li>Adopting diaphragm wall construction method;</li> <li>Grout curtain should be provided in front of the building;</li> <li>Recharging system should be installed as a contingency measure to mitigate the fluctuation of water table;</li> <li>the AAA settlement and tilting limit should be 6/8/10 mm and 1/2000, 1/1500 and 1/1000;</li> <li>Monitoring of vibration levels will be undertaken during the construction phase and the Alert, Alarm and Action (AAA) vibration limit will be set at 5/6/7.5 mm/s. The monitoring proposal should be sent to AMO for comment;</li> <li>Regular site inspections and monitoring works will be carried out by the contractor and the monitoring results will be submitted to the resident site staff of HyD to ensure compliance.</li> </ul>	Protect the building from damage from construction works	Contractor	Yau Ma Tei Police Station (Old Wing) (CKR-01)	Prior to commencement of and during the construction phase	<ul style="list-style-type: none"> <li>Guidelines for Cultural Heritage Impact Assessment</li> <li>EIAO-TM Annex 10 and Annex 19</li> <li>AMO Proposed Vibration Limits</li> </ul>
S12.6.1 Table 12.2		<ul style="list-style-type: none"> <li>The Alert, Alarm and Action (AAA) vibration limit will be set at 3/4/5 mm/s and a condition survey shall be carried out by the project proponent prior to the construction phase to confirm this assessment</li> <li>Vibration monitoring of the structure shall be employed during the construction phase to ensure that the level is not exceeded. The monitoring proposal should be sent to AMO for comment.</li> </ul>	Protect the building from damage from construction works	Contractor	Tin Hau Temple (CKR-02)	Prior to commencement of and during the construction phase	<ul style="list-style-type: none"> <li>Guidelines for Cultural Heritage Impact Assessment</li> <li>EIAO-TM Annex 10 and Annex 19</li> <li>AMO Proposed Vibration Limits</li> </ul>

Environmental Mitigation Implementation Schedule –  
Contract No. HY/2014/08 (Yau Ma Tei 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
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	<ul style="list-style-type: none"> <li>EIAO Guidance Note No. 4/2010</li> <li>TM-EIAO</li> </ul>
S13.2-1 3.4	EM2	<ul style="list-style-type: none"> <li>An Environmental Team needs to be employed as per the EM&amp;A Manual;</li> <li>Prepare a systematic Environmental Management Plan to ensure effective implementation of the mitigation measures;</li> <li>An environmental impact monitoring needs to be implemented by the Environmental Team to ensure all the requirements given in the EM&amp;A Manual are fully complied with.</li> </ul>	Perform environmental monitoring & auditing	Highways Department/ Contractor	All construction sites	Construction stage	<ul style="list-style-type: none"> <li>EIAO Guidance Note No. 4/2010</li> <li>TM-EIAO</li> </ul>

# Appendix G

## Monitoring Schedule of the Reporting Month

Contract No. HY/2014/08  
Environmental Monitoring & Auditing

Impact Monitoring Schedule for YMTE						
<b>Oct-18</b>						
Sun	Mon	Tue	Wed	Thur	Fri	Sat
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
		Impact Air monitoring for W-A6 &W-A1 Noise monitoring for W-N1A, W-P11 , W-N18 & W-N25A				
<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>
	Impact Air monitoring for W-A6 &W-A1 Noise monitoring for W-N1A, W-P11 , W-N18 & W-N25A					Impact Air monitoring for W-A6 &W-A1 Noise monitoring for W-N1A, W-P11 , W-N18 & W-N25A
<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>
					Impact Air monitoring for W-A6 &W-A1 Noise monitoring for W-N1A, W-P11 , W-N18 & W-N25A	
<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>
			Impact Air monitoring for W-A6 &W-A1 Noise monitoring for W-N1A, W-P11 , W-N18 & W-N25A			
<b>28</b>	<b>29</b>	<b>30</b>	<b>31</b>			
		Impact Air monitoring for W-A6 &W-A1 Noise monitoring for W-N1A, W-P11 , W-N18 & W-N25A				



# Appendix H

## Calibration Certificates

### (Air Monitoring)

TSI P/N 2800157

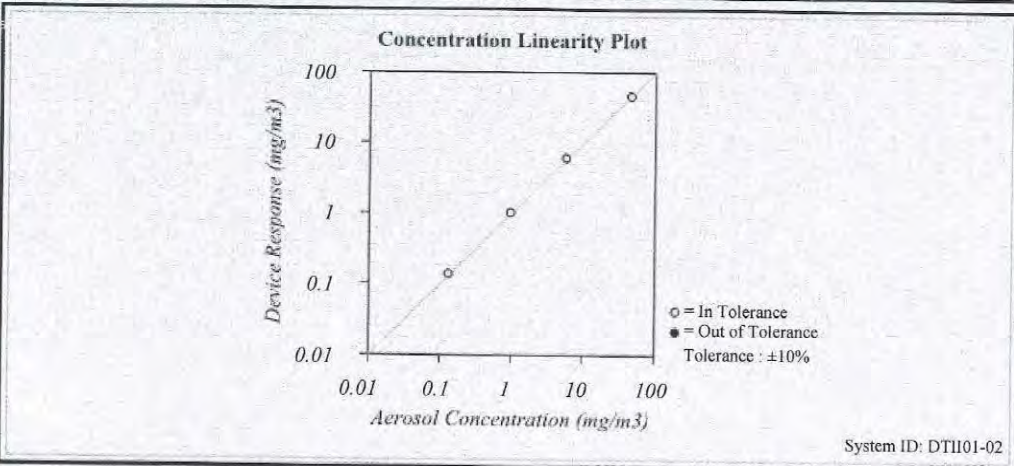


## CERTIFICATE OF CALIBRATION AND TESTING

TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA  
 Tel: 1-800-874-2811 1-651-490-2811 Fax: 1-651-490-3824 <http://www.tsi.com>

Environment Conditions			Model	8532
Temperature	74.8 (23.8)	°F (°C)	Serial Number	8532114409
Relative Humidity	26	%RH		
Barometric Pressure	29.22 (989.5)	inHg (hPa)		

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> As Left | <input checked="" type="checkbox"/> In Tolerance |
| <input type="checkbox"/> As Found           | <input type="checkbox"/> Out of Tolerance        |



FLOW AND PRESSURE VERIFICATION				SYSTEM DT1101-02			
Parameter	Standard	Measured	Allowable Range	Parameter	Standard	Measured	Allowable Range
Flow lpm	3.0	3.1	2.85 ~ 3.15	Pressure kPa	98.9	98.9	93.96 ~ 103.85

*TSI Incorporated does hereby certify that all materials, components, and workmanship used in the manufacture of this equipment are in strict accordance with the applicable specifications agreed upon by TSI and the customer and with all published specifications. All performance and acceptance tests required under this contract were successfully conducted according to required specifications. There is no NIST standard for optical mass measurements. Calibration of this instrument performed by TSI has been done using emery oil and has been nominally adjusted to respirable mass per standard ISO 12103-1, A1 test dust (Arizona dust). Our calibration ratio is greater than 1.2:1*


Measurement Variable	System ID	Last Cal.	Cal. Due	Measurement Variable	System ID	Last Cal.	Cal. Due
Temp/Humidity	E005656	03-07-17	03-31-18	Temp/Humidity	E005657	03-06-17	03-31-18
DC Voltage	E003314	05-03-17	05-31-18	DC Voltage	E003315	05-03-17	05-31-18
Photometer	E003319	07-27-17	01-31-18	Microbalance	M001324	11-02-16	11-30-18
1 um PSL	679755	n/a	n/a	3 um PSL	180387	n/a	n/a
10 um PSL	167947	n/a	n/a	Pressure	E003511	10-02-17	10-31-18
Flowmeter	E002471	04-20-17	04-30-18				

*Tommy*  
 \_\_\_\_\_  
 Calibrated

December 20, 2017

\_\_\_\_\_

TSI P/N 2300157



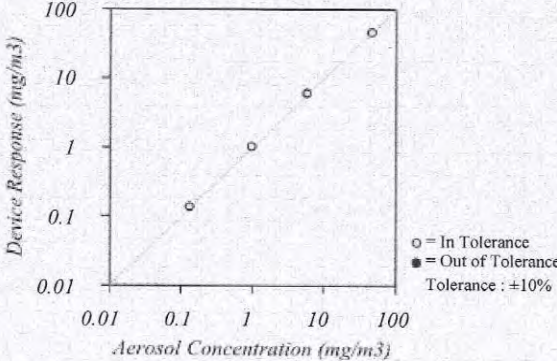
## CERTIFICATE OF CALIBRATION AND TESTING

TSI Incorporated, 500 Cardigan Road, Shoreview, MN 55126 USA  
 Tel: 1-800-874-2811 1-651-490-2811 Fax: 1-651-490-3824 <http://www.tsi.com>

Environment Conditions			<b>Model</b>		<b>8532</b>	
Temperature	74.76 (23.8)	°F (°C)	<b>Serial Number</b>		<b>8532120909</b>	
Relative Humidity	24.8	%RH				
Barometric Pressure	29.22 (989.5)	inHg (hPa)				

<input checked="" type="checkbox"/> As Left	<input checked="" type="checkbox"/> In Tolerance
<input type="checkbox"/> As Found	<input type="checkbox"/> Out of Tolerance

### Concentration Linearity Plot

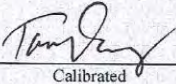


System ID: DTII01-02

FLOW AND PRESSURE VERIFICATION				SYSTEM DTII01-02			
Parameter	Standard	Measured	Allowable Range	Parameter	Standard	Measured	Allowable Range
Flow lpm	3.0	3.0	2.85 ~ 3.15	Pressure kPa	99.0	99.0	94.04 ~ 103.94

TSI Incorporated does hereby certify that all materials, components, and workmanship used in the manufacture of this equipment are in strict accordance with the applicable specifications agreed upon by TSI and the customer and with all published specifications. All performance and acceptance tests required under this contract were successfully conducted according to required specifications. There is no NIST standard for optical mass measurements. Calibration of this instrument performed by TSI has been done using emery oil and has been nominally adjusted to respirable mass per standard ISO 12103-1, A1 test dust (Arizona dust). Our calibration ratio is greater than 1.2:1

Measurement Variable	System ID	Last Cal.	Cal. Due	Measurement Variable	System ID	Last Cal.	Cal. Due
Temp/Humidity	E005656	03-07-17	03-31-18	Temp/Humidity	E005657	03-06-17	03-31-18
DC Voltage	E003314	05-03-17	05-31-18	DC Voltage	E003315	05-03-17	05-31-18
Photometer	E003319	07-27-17	01-31-18	Microbalance	M001324	11-02-16	11-30-18
1 um PSL	679755	n/a	n/a	3 um PSL	180387	n/a	n/a
10 um PSL	167947	n/a	n/a	Pressure	E003511	10-02-17	10-31-18
Flowmeter	E002471	04-20-17	04-30-18				

  
 \_\_\_\_\_  
 Calibrated

December 20, 2017  
 \_\_\_\_\_  
 Date



<b>RECALIBRATION DUE DATE:</b>
February 2, 2019

# Certificate of Calibration

Calibration Certification Information			
Cal. Date: February 2, 2018	Rootsmeter S/N: 438320	Ta: 294 °K	
Operator: Jim Tisch		Pa: 754.4 mm Hg	
Calibration Model #: TE-5025A	Calibrator S/N: <b>3465</b>		

Run	Vol. Init (m3)	Vol. Final (m3)	ΔVol. (m3)	ΔTime (min)	ΔP (mm Hg)	ΔH (in H2O)
1	1	2	1	1.4360	3.2	2.00
2	3	4	1	1.0140	6.4	4.00
3	5	6	1	0.9070	7.9	5.00
4	7	8	1	0.8680	8.8	5.50
5	9	10	1	0.7180	12.7	8.00

Data Tabulation					
Vstd (m3)	Qstd (x-axis)	$\sqrt{\Delta H \left( \frac{Pa}{Pstd} \right) \left( \frac{Tstd}{Ta} \right)}$ (y-axis)	Va	Qa (x-axis)	$\sqrt{\Delta H \left( \frac{Ta}{Pa} \right)}$ (y-axis)
1.0018	0.6977	1.4185	0.9958	0.6934	0.8829
0.9976	0.9838	2.0061	0.9915	0.9778	1.2486
0.9956	1.0977	2.2429	0.9895	1.0910	1.3959
0.9944	1.1456	2.3524	0.9883	1.1386	1.4641
0.9892	1.3777	2.8371	0.9832	1.3693	1.7657
<b>QSTD</b>	m=	<b>2.08721</b>	<b>QA</b>	m=	<b>1.30698</b>
	b=	<b>-0.04206</b>		b=	<b>-0.02618</b>
	r=	<b>0.99995</b>		r=	<b>0.99995</b>

Calculations	
Vstd= $\Delta Vol \left( \frac{Pa - \Delta P}{Pstd} \right) \left( \frac{Tstd}{Ta} \right)$	Va= $\Delta Vol \left( \frac{Pa - \Delta P}{Pa} \right)$
Qstd= $Vstd / \Delta Time$	Qa= $Va / \Delta Time$
For subsequent flow rate calculations:	
$Qstd = 1/m \left( \left( \sqrt{\Delta H \left( \frac{Pa}{Pstd} \right) \left( \frac{Tstd}{Ta} \right)} \right) - b \right)$	$Qa = 1/m \left( \left( \sqrt{\Delta H \left( \frac{Ta}{Pa} \right)} \right) - b \right)$

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**

<b>Location:</b>	YMT Catholic Primary School	<b>Site ID:</b>	W-A6	<b>Date:</b>	26-Sep-2018
<b>Serial No:</b>	1049	<b>Model:</b>	TE-5170X	<b>Operator:</b>	Chris

**Ambient Condition**

<b>Corrected Pressure (mm Hg):</b>	764.3	<b>Temperature (deg K):</b>	293.2
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**Calibration Orifice**

<b>Model:</b>	TE-5025	<b>Slope:</b>	2.08721
<b>Serial No.:</b>	3465	<b>Intercept:</b>	-0.04206
<b>Calibration Due Date:</b>	2-Feb-19	<b>Corr. Coeff:</b>	0.99995

**Calibration Data**

Plate or Test #	In,H2O (in)	Qa, X-Axis (m3/min)	I, CFM (chart)	IC, Y-Axis (corrected)
1	1.49	0.611	32.2	32.56
2	1.64	0.641	33.0	33.37
3	1.94	0.695	34.4	34.78
4	2.24	0.745	35.6	35.99
5	2.86	0.839	38.1	38.52

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

m= 25.9878                      b= 16.6897                      Corr. Coeff= 0.9999  
 Sampler set point(SSP)                      48                      CFM

**Calculations**

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

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

m = sampler slope

b = sampler intercept

I = chart response

Qstd = standard flow rate

Tav = average temperature

IC = corrected chart response

Pav = average pressure

I = actual chart response

m = calibrator Qstd slope

b = calibrator Qstd intercept

Ta = actual temperature during calibration (deg K)

Pa = actual pressure during calibration (mm Hg)

Tstd = 298 deg K

Pstd = 760 mm Hg

For subsequent calculation of sampler flow:

$(1.21 * m + b) / [\text{Sqrt}(298/T_{av})(P_{av}/760)]$

Checked by: Chris

Date: 26-Sep-18

**InnoTech Instrumentation Co. Ltd.**

創新科儀有限公司

**HIVOL SAMPLER CALIBRATION DATA SHEET (TSP)**

**Site Information**

Location:	YMT Catholic Primary School	Site ID:	W-A6	Date:	13/10//2018
Serial No:	1049	Model:	TE-5170X	Operator:	Chris

**Ambient Condition**

Corrected Pressure (mm Hg):	764.3	Temperature (deg K):	293.2
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**Calibration Orifice**

Model:	TE-5025	Slope:	2.08721
Serial No.:	3465	Intercept:	-0.04206
Calibration Due Date:	2-Feb-19	Corr. Coeff:	0.99995

**Calibration Data**

Plate or Test #	In,H2O (in)	Qa, X-Axis (m3/min)	I, CFM (chart)	IC, Y-Axis (corrected)
1	1.53	0.619	32.7	33.06
2	1.72	0.655	33.5	33.87
3	1.99	0.704	34.6	34.98
4	2.11	0.724	35.1	35.49
5	2.35	0.763	36.0	36.40

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

m=	<u>23.3187</u>	b=	<u>18.6018</u>	Corr. Coeff=	<u>0.9999</u>
Sampler set point(SSP)	<u>46</u>	CFM			

**Calculations**

$Qstd = 1/m[\text{Sqrt}(H2O(Pa/Pstd)(Tstd/Ta))-b]$   
 $IC = I[\text{Sqrt}(Pa/Pstd)(Tstd/Ta)]$

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:

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

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

Checked by: Chris

Date: 13/10//2018

**InnoTech** Instrumentation Co. Ltd.

創新科儀有限公司

**HIVOL SAMPLER CALIBRATION DATA SHEET (TSP)**

Site Information

Location:	YMT Catholic Primary School	Site ID:	W-A6	Date:	30-Oct-2018
Serial No.:	1049	Model:	TE-5170X	Operator:	Chris

Ambient Condition

Corrected Pressure (mm Hg):	764.3	Temperature (deg K):	293.2
-----------------------------	-------	----------------------	-------

Calibration Orifice

Model:	TE-5025	Slope:	2.08721
Serial No.:	3465	Intercept:	-0.04206
Calibration Due Date:	2-Feb-19	Corr. Coeff:	0.99995

Calibration Data

Plate or Test #	In, H <sub>2</sub> O (in)	Qa, X-Axis (m <sup>3</sup> /min)	I, CFM (chart)	IC, Y-Axis (corrected)
1	2.15	0.730	35.3	35.69
2	2.49	0.785	37.4	37.81
3	2.73	0.821	38.8	39.23
4	2.82	0.834	39.3	39.74
5	3.13	0.877	40.9	41.35

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

m=	38.7003	b=	7.4460	Corr. Coeff=	0.9999
Sampler set point(SSP)	54	CFM			

Calculations

$Q_{std} = 1/m[\sqrt{H_2O(P_a/P_{std})(T_{std}/T_a)} - b]$   
 $IC = I[\sqrt{P_a/P_{std}(T_{std}/T_a)}]$

Q<sub>std</sub> = standard flow rate  
 IC = corrected chart response  
 I = actual chart response

m = calibrator Q<sub>std</sub> slope  
 b = calibrator Q<sub>std</sub> intercept

T<sub>a</sub> = actual temperature during calibration (deg K)

P<sub>a</sub> = actual pressure during calibration (mm Hg)

T<sub>std</sub> = 298 deg K

P<sub>std</sub> = 760 mm Hg

For subsequent calculation of sampler flow:

$(1.21 * m + b) / [\sqrt{298/T_a} (P_{av}/760)]$

m = sampler slope  
 b = sampler intercept  
 I = chart response  
 T<sub>av</sub> = average temperature  
 P<sub>av</sub> = average pressure

Checked by: Chris

Date: 30-Oct-18

**InnoTech** Instrumentation Co. Ltd.

創新科儀有限公司

**HIVOL SAMPLER CALIBRATION DATA SHEET (TSP)**

**Site Information**

Location: Man Cheong Building	Site ID: W-A6	Date: 26-Sep-2018
Serial No: 1050	Model: TE-5170X	Operator: Chris

**Ambient Condition**

Corrected Pressure (mm Hg): 764.3	Temperature (deg K): 293.2
-----------------------------------	----------------------------

**Calibration Orifice**

Model: TE-5025	Slope: 2.08721
Serial No.: 3465	Intercept: -0.04206
Calibration Due Date: 2-Feb-19	Corr. Coeff: 0.99995

**Calibration Data**

Plate or Test #	In,H2O (in)	Qa, X-Axis (m3/min)	I, CFM (chart)	IC, Y-Axia (corrected)
1	1.44	0.601	33.0	33.37
2	1.52	0.617	33.4	33.77
3	1.68	0.648	34.0	34.38
4	2.17	0.734	35.7	36.10
5	2.68	0.813	37.3	37.71

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

m = 20.3366      b = 21.1795      Corr. Coeff = 0.9999  
 Sampler set point(SSP)      45 CFM

**Calculations**

$Q_{std} = 1/m[\sqrt{H_2O(P_a/P_{std})(T_{std}/T_a)} - b]$   
 $IC = I[\sqrt{P_a/P_{std})(T_{std}/T_a)}$

- m = sampler slope
- b = sampler intercept
- I = chart response
- T<sub>av</sub> = average temperature
- P<sub>av</sub> = average pressure

Q<sub>std</sub> = standard flow rate  
 IC = corrected chart response  
 I = actual chart response  
 m = calibrator Q<sub>std</sub> slope  
 b = calibrator Q<sub>std</sub> intercept  
 T<sub>a</sub> = actual temperature during calibration (deg K)  
 P<sub>a</sub> = actual pressure during calibration (mm Hg)  
 T<sub>std</sub> = 298 deg K  
 P<sub>std</sub> = 760 mm Hg

For subsequent calculation of sampler flow:  
 $(1.21 * m + b) / [\sqrt{298/T_{av}}(P_{av}/760)]$

Checked by: Chris

Date: 26-Sep-18



**InnoTech Instrumentation Co. Ltd.**

創新科儀有限公司

**HIVOL SAMPLER CALIBRATION DATA SHEET (TSP)**

**Site Information**

Location: Man Cheong Building	Site ID: W-A6	Date: 13-Oct-2018
Serial No: 1050	Model: TE-5170X	Operator: Chris

**Ambient Condition**

Corrected Pressure (mm Hg): 764.3	Temperature (deg K): 293.2
-----------------------------------	----------------------------

**Calibration Orifice**

Model: TE-5025	Slope: 2.08721
Serial No.: 3465	Intercept: -0.04206
Calibration Due Date: 2-Feb-19	Corr. Coeff: 0.99995

**Calibration Data**

Plate or Test #	In,H2O (in)	Qa, X-Axis (m3/min)	I, CFM (chart)	IC, Y-Axis (corrected)
1	1.47	0.607	33.2	33.57
2	1.62	0.637	33.8	34.17
3	1.73	0.657	34.2	34.58
4	1.99	0.704	35.1	35.49
5	2.04	0.712	35.3	35.69

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

m= 20.1150	b= 21.3560	Corr. Coeff= 0.9999
Sampler set point(SSP)	45 CFM	

**Calculations**

$Q_{std} = 1/m[\sqrt{(H_2O(P_a/P_{std})(T_{std}/T_a))} - b]$   
 $IC = I[\sqrt{(P_a/P_{std})(T_{std}/T_a)}]$

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

- 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:

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

Checked by: Chris

Date: 13-Oct-18

**InnoTech Instrumentation Co. Ltd.**

創新科儀有限公司

**HIVOL SAMPLER CALIBRATION DATA SHEET (TSP)**

Site Information

Location: Man Cheong Building	Site ID: W-A6	Date: 30-Oct-2018
Serial No: 1050	Model: TE-5170X	Operator: Chris

Ambient Condition

Corrected Pressure (mm Hg): 764.3	Temperature (deg K): 293.2
-----------------------------------	----------------------------

Calibration Orifice

Model: TE-5025	Slope: 2.08721
Serial No.: 3465	Intercept: -0.04206
Calibration Due Date: 2-Feb-19	Corr. Coeff: 0.99995

Calibration Data

Plate or Test #	In,H2O (in)	Qa, X-Axis (m3/min)	I, CFM (chart)	IC, Y-Axis (corrected)
1	1.63	0.639	33.8	34.17
2	1.72	0.655	34.1	34.48
3	1.97	0.700	35.0	35.39
4	2.09	0.720	35.4	35.79
5	2.24	0.745	35.9	36.30

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

$$m = \frac{20.0177}{\text{Sampler set point(SSP)}} \quad b = 21.3749 \quad \text{Corr. Coeff} = 0.9999$$

Calculations

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

$$IC = I[\sqrt{(P_a/P_{std})(T_{std}/T_a)}]$$

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:

$$(1.21 * m + b) / [\sqrt{(298/T_{av})(P_{av}/760)}]$$

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

Checked by: Chris

Date: 30-Oct-18

# Appendix I

## Calibration Certificates (Noise)



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

# Certificate of Calibration

## 校正證書

Certificate No. : C176148  
證書編號

ITEM TESTED / 送檢項目 ( Job No. / 序引編號 : IC17-1542 )      Date of Receipt / 收件日期 : 26 October 2017

Description / 儀器名稱 : Audio Analyzer  
Manufacturer / 製造商 : NTI  
Model No. / 型號 : XL2  
Serial No. / 編號 : A2A-09696-E0  
Supplied By / 委託者 : Acumen Environmental Engineering and Technologies Co., Ltd.  
Lot 11, Tam Kon Shan Road, North Tsing Yi, N.T.

### TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C      Relative Humidity / 相對濕度 : (55 ± 20)%  
Line Voltage / 電壓 : ---

### TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 3 November 2017

### TEST RESULTS / 測試結果

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

The test equipment used for calibration are traceable to National Standards via :

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Agilent Technologies / Keysight Technologies
- Rohde & Schwarz Laboratory, Germany
- Fluke Everett Service Center, USA

Tested By  
測試

  
K C Lee  
Engineer

Certified By  
核證

  
H C Chan  
Engineer

Date of Issue : 7 November 2017  
簽發日期

The test equipment used for calibration are traceable to the Nation Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.  
本證書所載校正項之測試儀器均可溯源至國際標準。為保護向本證書需者利益起見，未經本證書所書面批准，不得複製。

Sun Creation Engineering Limited - Calibration & Testing Laboratory  
c/o 4/F, Tsing Man Wan Exchange Building, 1 Hung On Lane, Tuen Mun, New Territories, Hong Kong.  
輝創工程有限公司 - 校正及檢測實驗室  
c/o 香港新界屯門鄉安里 1 號豐山閣四樓  
Tel: 電話: 2927 2606 Fax: 傳真: 2744 8986 E-mail: 電郵: estlab@suncreation.com Website: 網址: www.suncreation.com



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

# Certificate of Calibration

## 校正證書

Certificate No. : C176148  
證書編號

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours, and switched on to warm up for over 10 minutes before the commencement of the test.
- Self-calibration using the laboratory acoustic calibrator was performed before the test from 6.1.1.2 to 6.3.2.
- The results presented are the mean of 3 measurements at each calibration point.
- Test equipment :

Equipment ID	Description	Certificate No.
CL280	40 MHz Arbitrary Waveform Generator	C170048
CL281	Multifunction Acoustic Calibrator	PA160023

5. Test procedure : MA101N.

6. Results :

6.1 Sound Pressure Level

6.1.1 Reference Sound Pressure Level

6.1.1.1 Before Self-calibration

UUT Setting			Applied Value		UUT Reading (dB)
Range (dB)	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	
30 - 130	A	FAST	94.00	1	93.9

6.1.1.2 After Self-calibration

UUT Setting			Applied Value		UUT Reading (dB)	IEC 61672 Class 1 (dB)
Range (dB)	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
30 - 130	A	FAST	94.00	1	94.0	± 1.1

6.1.2 Linearity

UUT Setting			Applied Value		UUT Reading (dB)
Range (dB)	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	
30 - 130	A	FAST	94.00	1	94.0 (Ref.)
			104.00		104.0
			114.00		114.0

IEC 61672 Class 1 Spec. : ± 0.6 dB per 10 dB step and ± 1.1 dB for overall different.

The test equipment used for calibration are traceable to the Nation Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

本證書所載校正用之測試器材均可溯源至國際標準。局部翻印本證書者先須索閱院所書面批准。

Sun Creation Engineering Limited – Calibration & Testing Laboratory

c/o 4/F, Tung Shan Wan Exchange Building, 1 Tung On Lane, Tung Mun, New Territories, Hong Kong

輝創工程有限公司 – 校正及檢測實驗室

c/o 香港新界屯門新墟安山一號青洲高級國際樓

Tel/電話: 2927 2600 Fax/傳真: 2744 8996 E-mail/電郵: calllab@suncreation.com Website/網址: www.suncreation.com



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

# Certificate of Calibration 校正證書

Certificate No. : C176148  
證書編號

## 6.2 Time Weighting

UUT Setting			Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
30 - 130	A	FAST	94.00	1	94.0	Ref.
		SLOW			94.0	± 0.3

## 6.3 Frequency Weighting

### 6.3.1 A-Weighting

UUT Setting			Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
30 - 130	A	FAST	94.00	63 Hz	67.7	-26.2 ± 1.5
				125 Hz	77.8	-16.1 ± 1.5
				250 Hz	85.3	-8.6 ± 1.4
				500 Hz	90.7	-3.2 ± 1.4
				1 kHz	94.0	Ref.
				2 kHz	95.2	+1.2 ± 1.6
				4 kHz	95.0	+1.0 ± 1.6
				8 kHz	92.9	-1.1 (+2.1; -3.1)
12.5 kHz	89.7	-4.3 (+3.0; -6.0)				

### 6.3.2 C-Weighting

UUT Setting			Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
30 - 130	C	FAST	94.00	63 Hz	93.1	-0.8 ± 1.5
				125 Hz	93.8	-0.2 ± 1.5
				250 Hz	94.0	0.0 ± 1.4
				500 Hz	94.0	0.0 ± 1.4
				1 kHz	94.0	Ref.
				2 kHz	93.8	-0.2 ± 1.6
				4 kHz	93.2	-0.8 ± 1.6
				8 kHz	91.0	-3.0 (+2.1; -3.1)
12.5 kHz	87.7	-6.2 (+3.0; -6.0)				

The test equipment used for calibration are traceable to the Nation Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

本證書所載校準用之測試器材均可溯源至國際標準。局部複印本證書或將本證書所書面批語。

Sun Creation Engineering Limited - Calibration & Testing Laboratory

c/o 4/F, Tsing Shan Wan Exchange Building, 1 Bing On Lane, Tuen Mun, New Territories, Hong Kong.

輝創工程有限公司 - 校準及檢測實驗室

c/o 香港新界屯門鄉安里一號內1111號樓四樓

Tel: 電話: 2927 3606 Fax: 傳真: 2744 3986 E-mail: 電郵: callabor@suncreation.com Website: 網址: www.suncreation.com



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

# Certificate of Calibration

## 校正證書

Certificate No. : CI76148  
證書編號

Remarks : - Mfr's Spec. : IEC 61672 Class 2

- Uncertainties of Applied Value :

94 dB	: 63 Hz - 125 Hz	: ± 0.35 dB
	250 Hz - 500 Hz	: ± 0.30 dB
	1 kHz	: ± 0.20 dB
	2 kHz - 4 kHz	: ± 0.35 dB
	8 kHz	: ± 0.45 dB
	12.5 kHz	: ± 0.70 dB
104 dB	: 1 kHz	: ± 0.10 dB (Ref. 94 dB)
114 dB	: 1 kHz	: ± 0.10 dB (Ref. 94 dB)

- UUT Microphone Model No. : MA220 (ACO7052) & S/N : 62324

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

### Note :

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

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

The test equipment used for calibration are traceable to the Nation Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.

本證書所載按正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗室書面批准。

Sun Creation Engineering Limited - Calibration & Testing Laboratory

c/o 4/F. Tsing Shun Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong

輝創工程有限公司 - 校正及檢測實驗室

c/o 香港新界屯門興安里 駿奇山同層樓四樓

Tel: 電話: 2922 2606 Fax: 傳真: 2744 8986 E-mail: 電郵: call@suncreation.com Website: 網址: www.suncreation.com

Page 4 of 4



**MAXLAB**

## CALIBRATION CERTIFICATE

<i>Certificate Information</i>																
<b>Date of Issue</b>	11-Sep-2018															
<b>Certificate Number</b>	MLCN182166S															
<i>Customer Information</i>																
<b>Company Name</b>	Acuity Sustainability Consulting Limited															
<b>Address</b>	Unit 1908, Nos. 301-305 Castle Peak Road, Kwai Chung, N.T.															
<i>Equipment-under-Test (EUT)</i>																
<b>Description</b>	Acoustic Calibrator															
<b>Manufacturer</b>	Pulsar															
<b>Model Number</b>	105															
<b>Serial Number</b>	63705															
<b>Equipment Number</b>	--															
<i>Calibration Particular</i>																
<b>Date of Calibration</b>	11-Sep-2018															
<b>Calibration Equipment</b>	4231(MLTE008) / AV180068 / 13-May-20 1357(MLTE190) / MLEC18/05/02 / 25-May-19															
<b>Calibration Procedure</b>	MLCG00, MLCG15															
<b>Calibration Conditions</b>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">Laboratory</td> <td style="width: 30%;">Temperature</td> <td style="width: 50%;">23 °C ± 5 °C</td> </tr> <tr> <td></td> <td>Relative Humidity</td> <td>55% ± 25%</td> </tr> <tr> <td>EUT</td> <td>Stabilizing Time</td> <td>Over 3 hours</td> </tr> <tr> <td></td> <td>Warm-up Time</td> <td>Not applicable</td> </tr> <tr> <td></td> <td>Power Supply</td> <td>Internal battery</td> </tr> </table>	Laboratory	Temperature	23 °C ± 5 °C		Relative Humidity	55% ± 25%	EUT	Stabilizing Time	Over 3 hours		Warm-up Time	Not applicable		Power Supply	Internal battery
Laboratory	Temperature	23 °C ± 5 °C														
	Relative Humidity	55% ± 25%														
EUT	Stabilizing Time	Over 3 hours														
	Warm-up Time	Not applicable														
	Power Supply	Internal battery														
<b>Calibration Results</b>	Calibration data were detailed in the continuation pages. Calibration result was out of EUT specification.															
<i>Approved By &amp; Date</i>																
	K.O. Lo															
	11-Sep-2018															
<i>Statements</i>																
<ul style="list-style-type: none"> <li>* Calibration equipment used for this calibration are traceable to national / international standards.</li> <li>* The results on this Calibration Certificate only relate to the values measured at the time of the calibration and the uncertainties quoted will not include allowance for the EUT long term drift, variation with environmental changes, vibration and shock during transportation, overloading, mishandling, misuse, and the capacity of any other laboratory to repeat the measurement.</li> <li>* MaxLab Calibration Centre Limited shall not be liable for any loss or damage resulting from the use of the EUT.</li> <li>* The copy of this Certificate is owned by MaxLab Calibration Centre Limited. No part of this Certificate may be reproduced without the prior written approval of MaxLab Calibration Centre Limited.</li> </ul>																





Certificate No. MLCN182166S

<i>Calibration Data</i>				
EUT Setting	Standard Reading	EUT Error from Setting	Calibration Uncertainty	EUT Specification
94 dB	93.6 dB	-0.4 dB *	0.20 dB	± 0.2 dB

- END -

Calibrated By :  
Date :

Dan  
11-Sep-18

Checked By :  
Date :

K.O. Lo  
11-Sep-18

Page 2 of 2

# Appendix J

## 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

**ALS TECHNICHEM (HK) PTY LIMITED**

11/F., Chung Shun Knitting Centre, 1-3 Wing Yip Street, Kwai Chung, New Territories, Hong Kong  
香港新界葵涌永業街1-3號忠信針織中心11樓

*has been accepted by the HKAS Executive, on the recommendation of the Accreditation Advisory Board, as a*  
為香港認可處執行機關根據認可諮詢委員會建議而接受的

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

*This laboratory meets the requirements of ISO / IEC 17025 : 2005 – General requirements for the competence*  
此實驗所符合ISO / IEC 17025 : 2005 - 《測試及校正實驗所能力的通用規定》所訂的要求。  
*of testing and calibration laboratories and it has been accredited for performing specific tests or calibrations as*  
獲認可進行載於香港實驗所認可計劃《認可實驗所名冊》內下述測試類別中的指定  
*listed in the HOKLAS Directory of Accredited Laboratories within the test category of*  
測試或校正工作

**Environmental Testing**  
環境測試

*This laboratory is accredited in accordance with the recognised international Standard ISO / IEC 17025 : 2005.*  
本實驗所乃根據公認的國際標準 ISO / IEC 17025 : 2005 獲得認可。

*This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory*  
這項認可資格演示在指定範疇所需的技術能力及實驗所質量管理體系的運作  
*quality management system (see joint IAF-ILAC-ISO Communiqué).*  
(見國際認可論壇、國際實驗所認可合作組織及國際標準化組織的聯合公報)。

*The common seal of the Hong Kong Accreditation Service is affixed hereto by the authority of the HKAS Executive*  
香港認可處根據認可處執行機關的權限在此蓋上通用印章

CHAN Sing Sing, Terence, Executive Administrator  
執行幹事 陳成城  
Issue Date : 5 May 2009  
簽發日期：二零零九年五月五日

Registration Number : **HOKLAS 066**  
註冊號碼：

Date of First Registration : 15 September 1995  
首次註冊日期：一九九五年九月十五日



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

L 000552



Hong Kong Accreditation Service  
香港認可處

**Certificate of Accreditation**  
認可證書

*This is to certify that*  
特此證明

**ACUMEN LABORATORY AND TESTING LIMITED**

浩科檢測中心有限公司

**Lot 12, Tam Kon Shan Road, North Tsing Yi, New Territories, Hong Kong**

香港新界青衣北担杆山路12路段

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

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

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

**Environmental Testing**

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

**環境測試**

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

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

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

Registration Number : **HOKLAS 241**  
註冊號碼：



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

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

**L 001195**

# Appendix K

## Location Plan of Noise and Air Quality Monitoring Station

LEGEND:

- WORKS LIMIT
- DUST MONITORING LOCATION
- NOISE MONITORING LOCATION



DD	ISSUE FOR TENDER	AL	02/17
Rev.	Description	Date	By



Project Title  
**Central Kowloon Route -  
 Yau Ma Tei East**

Drawing title  
**APPENDIX A**

**LOCATION PLAN OF NOISE AND  
 DUST MONITORING STATIONS**

Drawing No.	CKR/YMTE/02/0001	Rev.	00
Drawn By	AL	Checked By	AL
Scale	1:2500 @ A1	Status	TENDER

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

# Appendix L

## Monitoring Data (Air Monitoring)

Location: Yau Ma Tei Catholic Primary School (Hoi Wang Road) ( W-A1)  
Monitoring date: 2,8,13,19,24 and 30 October 2018  
Parameter : TSP 1-hour  
Other Factors nearby traffic, construction work from West Kowloon Government Offices, school activities

Date	1-hour TSP ( $\mu\text{g}/\text{m}^3$ )				
	Weather	Start Time	1 <sup>st</sup> Hour ( $\mu\text{g}/\text{m}^3$ )	2 <sup>nd</sup> Hour ( $\mu\text{g}/\text{m}^3$ )	3 <sup>rd</sup> Hour ( $\mu\text{g}/\text{m}^3$ )
02/10/2018	Sunny	15:23	52	44	48
08/10/2018	Sunny	15:02	43	62	53
13/10/2018	Cloudy	11:42	39	48	43
19/10/2018	Sunny	12:50	77	72	65
24/10/2018	Sunny	13:26	55	63	71
30/10/2018	Sunny	9:08	45	52	54



Location: Man Cheong Building (W-A6)  
Monitoring date: 2,8,13,19,24 and 30 October 2018  
Parameter : TSP 1-hour  
Other Factors Nearby traffic

Date	1-hour TSP ( $\mu\text{g}/\text{m}^3$ )				
	Weather	Start Time	1 <sup>st</sup> Hour ( $\mu\text{g}/\text{m}^3$ )	2 <sup>nd</sup> Hour ( $\mu\text{g}/\text{m}^3$ )	3 <sup>rd</sup> Hour ( $\mu\text{g}/\text{m}^3$ )
02/10/2018	Sunny	15:57	75	70	83
08/10/2018	Sunny	15:30	68	59	56
13/10/2018	Cloudy	12:50	83	87	77
19/10/2018	Sunny	14:29	68	64	80
24/10/2018	Sunny	14:37	74	95	88
30/10/2018	Sunny	9:22	64	68	56

Location: Yau Ma Tei Catholic Primary School (Hoi Wang Road) (W-A1)

Monitoring date: 2,8,13,19,24 and 30 October 2018

Parameter : TSP 24-hour

Other Factors nearby traffic, construction work from West Kowloon Government Offices

Start Date	Weather Condition	Elapse Time			Chart Reading			Avg Air Temp (°C)	Avg Atmospheric Pressure (mm Hg)	Flow Rate (m <sup>3</sup> /min)	Standard Air Volume (m <sup>3</sup> )	Filter Weight (g)		Particulate weight (g)	Conc. (µg/m <sup>3</sup> )
		Initial	Final	Actual (min)	Min	Max	Avg					Initial	Final		
02/10/2018	Sunny	932.9	956.9	1440.00	48	48	48.0	27.2	1013.9	1.81	2610	2.7606	2.8653	0.1047	40
08/10/2018	Fine	957.1	981.1	1440.00	49	51	50.0	26.7	1014.2	2.06	2961	2.7139	2.8136	0.0997	34
13/10/2018	Cloudy	983.3	1007.3	1440.00	46	48	47.0	24.7	1017.5	1.90	2740	2.6784	2.784	0.1056	39
19/10/2018	Cloudy	1007.6	1031.6	1440.00	47	48	47.5	24.2	1017.2	1.93	2783	2.7304	2.8369	0.1065	38
24/10/2018	Sunny	1031.8	1055.8	1440.00	46	47	46.5	25.2	1016.8	1.41	2037	2.7364	2.8148	0.0784	38
30/10/2018	Sunny	1032.8	1056.8	1440.00	47	49	48.0	25.7	1014.8	1.46	2105	2.7677	2.8698	0.1021	49

Location: YMT Catholic Primary School

Date of Calibration:	26-Sep-18	Slop =	25.9878
Calibration due date:	11-Oct-18	Intercept =	16.6897
Date of Calibration:	13-Oct-18	Slop =	23.31387
Calibration due date:	28-Oct-18	Intercept =	18.6018
Date of Calibration:	30-Oct-18	Slop =	38.7003
Calibration due date:	14-Nov-18	Intercept =	7.4460

Location: Man Cheong Building (W-A6)  
Monitoring date: 2,8,13,19,24 and 30 October 2018  
Parameter : TSP 24-hour  
Other Factors nearby traffic

Start Date	Weather Condition	Elapse Time			Chart Reading			Avg Air Temp (°C)	Avg Atmospheric Pressure (mm Hg)	Flow Rate (m <sup>3</sup> /min)	Standard Air Volume (m <sup>3</sup> )	Filter Weight (g)		Particulate weight (g)	Conc. (µg/m <sup>3</sup> )
		Initial	Final	Actual (min)	Min	Max	Avg					Initial	Final		
02-10-2018	Sunny	1185.3	1209.3	1440.00	46	47	46.5	27.2	1013.9	2.00	2877	2.7389	2.8243	0.0854	30
08-10-2018	Fine	1211.7	1235.7	1440.00	47	48	47.5	26.7	1014.2	2.07	2976	2.7037	2.8041	0.1004	34
13-10-2018	Cloudy	1235.8	1259.8	1440.00	46	48	47.0	24.7	1017.5	2.07	2978	2.7477	2.8379	0.0902	30
19-10-2018	Cloudy	1260.1	1284.1	1440.00	45	47	46.0	24.2	1017.2	2.00	2885	2.7097	2.7946	0.0849	29
24-10-2018	Sunny	1284.2	1308.2	1440.00	46	47	46.5	25.2	1016.8	2.03	2923	2.7754	2.883	0.1076	37
30-10-2018	Sunny	1285.2	1309.2	1440.00	47	48	47.5	25.7	1014.8	2.10	3020	2.7257	2.8219	0.0962	32

# Appendix M

## Monitoring Data (Noise)

Location: Yau Ma Tei Catholic Primary School (Hoi Wang Road) (W-N1A)  
Monitoring date: 2,8,13,19,24 and 30 October 2018  
Parameter :  $L_{eq}$ ,  $L_{10}$ ,  $L_{90}$   
Other Factors Nearby traffic, construction work from West Kowloon Government Offices, school activities

Noise Monitoring data:

Date	Weather	Start Time - End Time	$L_{eq}$	$L_{10}$	$L_{90}$
02/10/2018	Sunny	15:57 - 16:27	60.7	62.1	59.7
08/10/2018	Sunny	15:30 - 16:00	60.3	61.3	59.1
13/10/2018	Cloudy	12:50 - 13:20	59.7	60.9	58.1
19/10/2018	Sunny	14:29 - 14:59	60.1	61.3	58.4
24/10/2018	Sunny	14:37 - 15:07	62.6	63.7	61.4
30/10/2018	Sunny	9:22 - 9:52	62.2	63.9	61.2

Location: Hydan Place (W-N18)  
Monitoring date: 2,8,13,19,24 and 30 October 2018  
Parameter :  $L_{eq}$ ,  $L_{10}$ ,  $L_{90}$   
Other Factors nearby traffic

Noise Monitoring data:

Date	Weather	Start Time	-	End Time	$L_{eq}$	$L_{10}$	$L_{90}$
02/10/2018	Sunny	16:32	-	17:02	63.8	66.7	62.9
08/10/2018	Sunny	16:05	-	16:35	63.7	66.1	62.4
13/10/2018	Cloudy	14:28	-	14:58	66.0	68.3	63.3
19/10/2018	Sunny	15:49	-	16:19	65.1	67.3	63.7
24/10/2018	Sunny	16:19	-	16:49	66.9	69.0	65.1
30/10/2018	Sunny	10:46	-	11:16	69.0	72.1	67.4

Location: Prosperous Garden Block 1 (W-N25A)  
Monitoring date: 2,8,13,19,24 and 30 October 2018  
Parameter :  $L_{eq}$ ,  $L_{10}$ ,  $L_{90}$   
Other Factors nearby traffic

Noise Monitoring data:

Date	Weather	Start Time	-	End Time	$L_{eq}$	$L_{10}$	$L_{90}$
02/10/2018	Sunny	17:45	-	18:15	65.0	66.4	64.2
08/10/2018	Sunny	17:20	-	17:50	64.2	66.8	63.2
13/10/2018	Cloudy	13:44	-	14:14	69.4	71.6	67.3
19/10/2018	Sunny	15:11	-	15:41	67.7	69.6	65.0
24/10/2018	Sunny	15:33	-	16:03	70.7	74.7	69.1
30/10/2018	Sunny	10:08	-	10:38	68.4	71.4	67.3

Location: The Coronation Tower 1 (W-P11)  
Monitoring date: 2,8,13,19,24 and 30 October 2018  
Parameter :  $L_{eq}$ ,  $L_{10}$ ,  $L_{90}$   
Other Factors Nearby traffic

Noise Monitoring data:

Date	Weather	Start Time	-	End Time	$L_{eq}$	$L_{10}$	$L_{90}$
02/10/2018	Sunny	17:05	-	17:35	66.6	67.2	66.0
08/10/2018	Sunny	16:40	-	17:10	65.1	66.2	62.9
13/10/2018	Cloudy	15:30	-	16:00	64.7	66.1	62.9
19/10/2018	Sunny	13:10	-	13:40	66.5	67.6	64.3
24/10/2018	Sunny	13:43	-	14:13	63.2	64.3	61.4
30/10/2018	Sunny	11:34	-	12:04	63.6	65.0	62.1



# Appendix N

## Waste Flow Table

**Monthly Summary Waste Flow Table**

**Name of Department:** Highways Department

**Contract No. / Works Order No.:** HY/2014/08

**Monthly Summary Waste Flow Table for October 2018**

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

Month	Actual Quantities of Inert Construction Waste Generated Monthly					
	(a)=(b)+(c)+(d)+(e)+(f)+(g)+(h)+(i)+(j)+(k) Total Quantity Generated (in 'tonnes)	(b) Hard Rock and Large Broken Concrete (in 'tonnes)	(c) Reused in the Contract (in 'tonnes)	(d) Reused in other Projects (in 'tonnes)	(e) Disposed of as Public Fill (in 'tonnes)	(f) Imported Fill (in 'tonnes)
Mar	585.9	0.0	0.0	0.0	542.8	0.0
Apr	3462.6	0.0	0.0	0.0	3394.0	0.0
May	956.5	0.0	0.0	0.0	925.7	0.0
Jun	633.8	0.0	0.0	0.0	594.8	0.0
Sub-total	5638.7	0.0	0.0	0.0	5457.2	0.0
Jul	5818.2	0.0	0.0	0.0	5790.4	0.0
Aug	12130.5	0.0	0.0	0.0	12106.9	0.0
Sep	4792.1	0.0	0.0	0.0	4726.5	0.0
Oct	6317.2	0.0	0.0	0.0	6250.1	0.0
Nov						
Dec						
Total	34696.7	0.0	0.0	0.0	34331.0	0.0

Actual Quantities of Non-inert Construction Waste Generated Monthly										
Month	(g) Metals (in '000kg)		(h) Paper/ cardboard packaging (in '000kg)		(i) Plastics (in '000kg)		(j) Chemical Waste (in '000kg)		(k) Others, e.g. General Refuse disposed at Landfill (in 'tonnes)	
	generated	recycled	generated	recycled	generated	recycled	generated	recycled	generated	recycled
	Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Apr	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	57.2
May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.8
Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39.0
Sub-total	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	170.2
Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.8
Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0	0.0	23.6
Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65.6
Oct	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	65.9
Nov										
Dec										
Total	11.4	0.0	0.0	0.0	0.0	0.0	1.21	0.0	0.0	353.1

# Appendix O

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

Statistical Summary of Exceedances

Air Quality			
Location	Action Level	Limit Level	Total
W-A1	0	0	0
W-A6	0	0	0
Noise			
Location	Action Level	Limit Level	Total
W-N1A	0	0	0
W-N18	0	0	0
W-N25A	0	0	0
W-P11	0	0	0

Statistical Summary of Environmental Complaints

Reporting Period	Environmental Complaint Statistics		
	Frequency	Cumulative	Complaint Nature
1 Oct 2018-31 Oct 2018	1	3	1.Compliant about no hoarding installed at 2.4m height and performance of Wetsep

Statistical Summary of Environmental Summons

Reporting Period	Environmental Summons Statistics		
	Frequency	Cumulative	Details
1 Oct 2018-31 Oct 2018	0	0	N/A

Statistical Summary of Environmental Prosecution

Reporting Period	Environmental Prosecution Statistics		
	Frequency	Cumulative	Details
1 Oct 2018-31 Oct 2018	0	0	N/A

# Appendix P

## Monitoring Schedule of the Coming Month

Contract No. HY/2014/08  
 Environmental Monitoring & Auditing

Impact Monitoring Schedule for YMFTE

Sun	Mon	Tue	Wed	Thur	Fri	Sat
				1	2	3
				8	9	10
4	5	6	7			
	Impact Air monitoring for W-A6 & W-A1 Noise monitoring for W-N1A, W-P11, W-N18 & W-N25A					Impact Air monitoring for W-A6 & W-A1 Noise monitoring for W-N1A, W-P11, W-N18 & W-N25A
11	12	13	14	15	16	17
					Impact Air monitoring for W-A6 & W-A1 Noise monitoring for W-N1A, W-P11, W-N18 & W-N25A	
18	19	20	21	22	23	24
				Impact Air monitoring for W-A6 & W-A1 Noise monitoring for W-N1A, W-P11, W-N18 & W-N25A		
25	26	27	28	29	30	
			Impact Air monitoring for W-A6 & W-A1 Noise monitoring for W-N1A, W-P11, W-N18 & W-N25A			

Contract No. HY/2014/08  
Environmental Monitoring & Auditing

Impact Monitoring Schedule for YMTE

Sun	Mon	Tue	Wed	Thur	Fri	Sat
						1
2	3	4	5	6	7	8
			Impact Air monitoring for W-A6 & W-A1 Noise monitoring for W-N1A, W-P11, W-N18 & W-N25A			
9	10	11	12	13	14	15
	Impact Air monitoring for W-A6 & W-A1 Noise monitoring for W-N1A, W-P11, W-N18 & W-N25A					Impact Air monitoring for W-A6 & W-A1 Noise monitoring for W-N1A, W-P11, W-N18 & W-N25A
16	17	18	19	20	21	22
					Impact Air monitoring for W-A6 & W-A1 Noise monitoring for W-N1A, W-P11, W-N18 & W-N25A	
23	24	25	26	27	28	29
			Impact Air monitoring for W-A6 & W-A1 Noise monitoring for W-N1A, W-P11, W-N18 & W-N25A			
30	31					



Contract No. HY/2014/08  
Environmental Monitoring & Auditing

Impact Monitoring Schedule for YVITE						
Sun	Mon	Tue	Wed	Thur	Fri	Sat
Jan-19						
		1	2	3	4	5
			Air monitoring for W-A6 & W-A1 Noise monitoring for W-N1A, W-P11, W-N18 & W-N25A			
6	7	8	9	10	11	12
			Impact Air monitoring for W-A6 & W-A1 Noise monitoring for W-N1A, W-P11, W-N18 & W-N25A			
13	14	15	16	17	18	19
		Impact Air monitoring for W-A6 & W-A1 Noise monitoring for W-N1A, W-P11, W-N18 & W-N25A				Impact Air monitoring for W-A6 & W-A1 Noise monitoring for W-N1A, W-P11, W-N18 & W-N25A
20	21	22	23	24	25	26
					Impact Air monitoring for W-A6 & W-A1 Noise monitoring for W-N1A, W-P11, W-N18 & W-N25A	
27	28	29	30	31		
				Impact Air monitoring for W-A6 & W-A1 Noise monitoring for W-N1A, W-P11, W-N18 & W-N25A		

# Appendix Q

## Interim Report for the Complaint

**Interim Report on Environmental Inspection by EPD on 19 October 2018**

Project	Central Kowloon Route, Yau Ma Tei East Section
EPD observation	<ol style="list-style-type: none"> <li>1) The performance of Wetsep was poor and the discharge storm manhole was blocked by materials. Storm manhole no. should be provided to EPD for reference.</li> <li>2) No hoarding (which should be no. less than 2.4m tall) was erected along the site boundary and no cover was provided for the stockpile</li> <li>3) No earth bund around site boundary area and wastewater from site runoff may easily come out the site from bottom of hoarding/ barrier to streets outside</li> </ol>
Parameter	Air and Water
BKSKJV Investigation finding	<ol style="list-style-type: none"> <li>1) Wetsep and discharge storm manhole shall be cleaned up and maintenance shall be carried out more frequently to avoid overflowing and leakage of silt water. Storm water manhole no. 4015894(T) is now used at Zone E.</li> <li>2) Installation of corrugated steel hoarding at Zone A &amp; Zone E was restricted by the construction activity of D-wall panel/ underground utilities diversion, presence of sheet piles, etc. thus temporary hoarding by using water barrier and plastic panel was used for now according to the approved TTA Drawing (Details refer to Appendix D). For temporary measures until installation of corrugated steel hoarding, the height for the hoarding will be raised for better environmental protection performance. (Details refer to Appendix A)</li> <li>3) Earth bund or dikes shall be provided around the site boundary for the area with possibility of leakage of wastewater from site runoff.</li> </ol>
Actions taken / to be taken	Refer to Appendix

# Appendix A

# Actions Taken

Photos from EPD	Actions Taken	Location	Description
		<p>Zone E</p>	<ul style="list-style-type: none"> <li>- Temporary hoarding made of water barrier, plastic panel and acoustic canvas with 2.4m high was erected</li> <li>- Earth bund was provided along site boundary</li> <li>- Corrugated steel hoarding will be erected after completion of D-wall panel/ underground utilities diversion.</li> </ul> <p>For the programme of hoarding erection at Zone E, please refer to the Appendix B. The actual date of hoarding erection will be subject to the progress of D-wall panel/ underground utilities diversion.</p>



Zone E

- Temporary hoarding made of water barrier, plastic panel and acoustic canvas with 2.4m high was erected.
- Earth bund was provided along site boundary
- Corrugated steel hoarding will be erected after completion of D-wall panel/ underground utilities diversion. For the programme of hoarding erection at Zone E, please refer to the Appendix B. The actual date of hoarding erection will be subject to the progress of D-wall panel/ underground utilities diversion.



Zone E

- Temporary hoarding made of water barrier, plastic panel and acoustic canvas with 2.4m high was erected.
- Corrugated steel hoarding will be erected after completion of D-wall panel/ underground utilities diversion. For the programme of hoarding erection at Zone E, please refer to the Appendix B. The actual date of hoarding erection will be subject to the progress of D-wall panel/ underground utilities diversion.



Zone A

- Temporary hoarding made of water barrier, plastic panel and acoustic canvas with 2.4m high was erected.
- Earth bund was provided along site boundary
- Corrugated steel hoarding will be erected after completion of backfilling works at Maternal and Child Health Centre. For the programme of hoarding erection at Zone A, please refer to the Appendix C. The actual date of hoarding erection will be subject to the progress of footing construction, backfilling and sheet piles removal.

Contract No. HY/2014/08  
Central Kowloon Route – Yau Ma Tei East



Zone A

Earth bund was provided along the site boundary.



Contract No. HY/2014/08  
Central Kowloon Route – Yau Ma Tei East



Zone E

- Mud and sediment of Weisep was cleaned up and maintenance will be carried out more frequently
- One additional sedimentation tank was provided to increase the capacity for water treatment



Zone E

Storm water manhole no. 4015894(T) is now used as the discharge point and the manhole is not blocked by materials.



Zone E

Chain-link fence was replaced by the corrugated steel hoarding.

Contract No. HY/2014/08  
Central Kowloon Route – Yau Ma Tei East



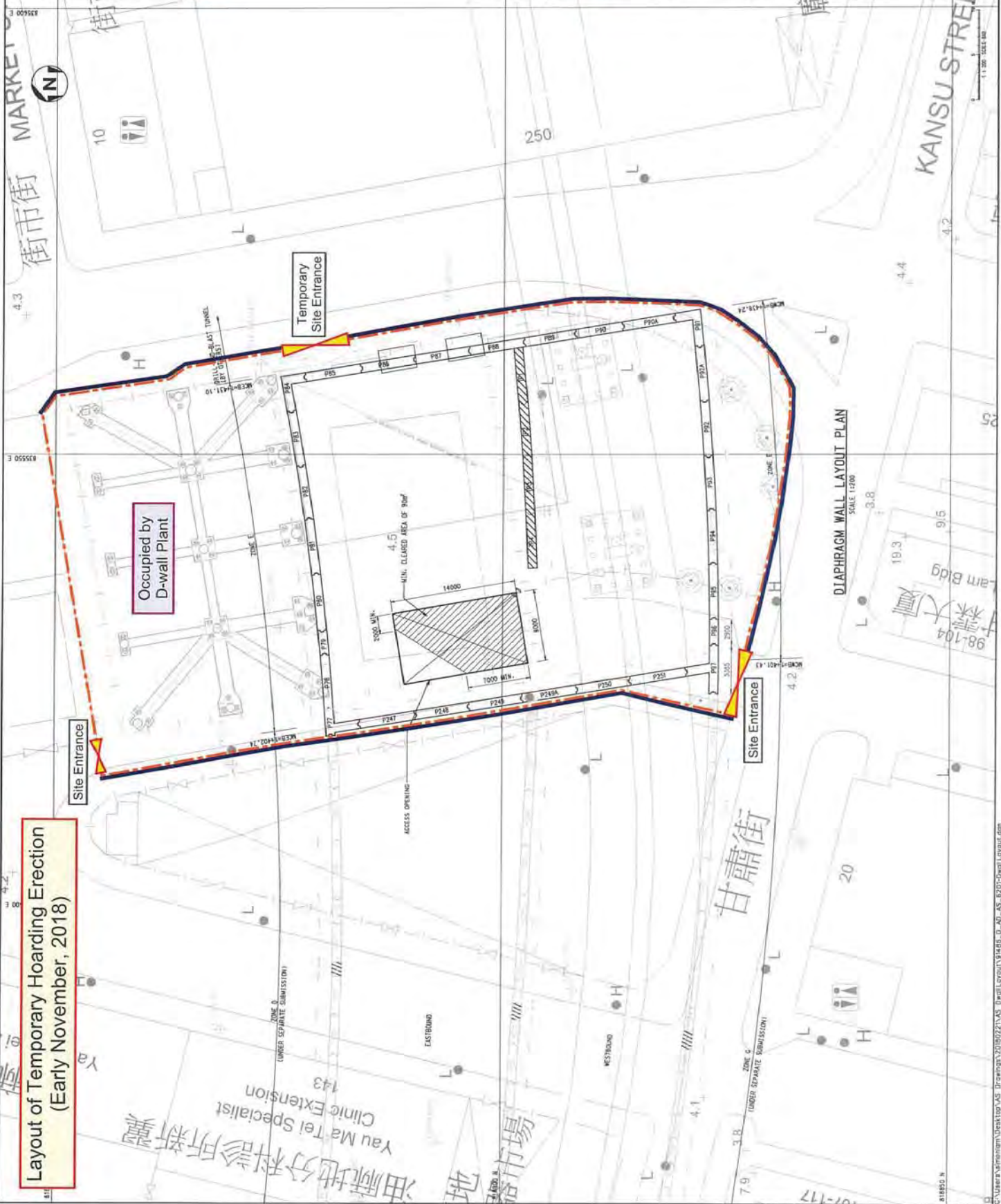
Zone E

In addition to spraying of water, inactive stockpile was covered properly with impervious sheeting to prevent dusty dispersion

# **Appendix B**

# **Drawings for Hoarding Erection at Zone E**

Layout of Temporary Hoarding Erection  
(Early November, 2018)



KEY PLAN  
SCALE 1:5000

TTA Stage

Temporary Hoarding



Rev	Description	By	Chk	Date

Client  
**HIGHWAYS DEPARTMENT**  
 路政處  
 MAINTENANCE PROJECT MANAGEMENT OFFICE  
 維修工程項目管理處

Contractor

Design and Drawings by  
**M&HARDT**  
 M&HARDT CONSULTANTS (HONG KONG) LIMITED  
 馬漢德建築師有限公司

Project  
 CONTRACT NO. HY/2014/08  
 CENTRAL KOWLOON ROUTE -  
 YAU MA TEI EAST

TTA  
 YAU MA TEI ACCESS SHAFT -  
 DIAPHRAGM WALL LAYOUT PLAN

SKETCH SUBMISSION			
Version	TZ	Drawn by	TM
Scale	1:20000	Drawn by	CC
Project No.	1:00003	Project No.	1:00003
Drawn by		Project No.	
SKETCH 0015			

Printed by: Minotom  
 Plot Date: 4/7/2018 3:55:23 PM  
 Plot Path: K:\STANDARD\MK905\T1\DM\PL\OT\CSWP\T1  
 K:\STANDARD\MK905\T1\DM\PL\OT\CSWP\T1



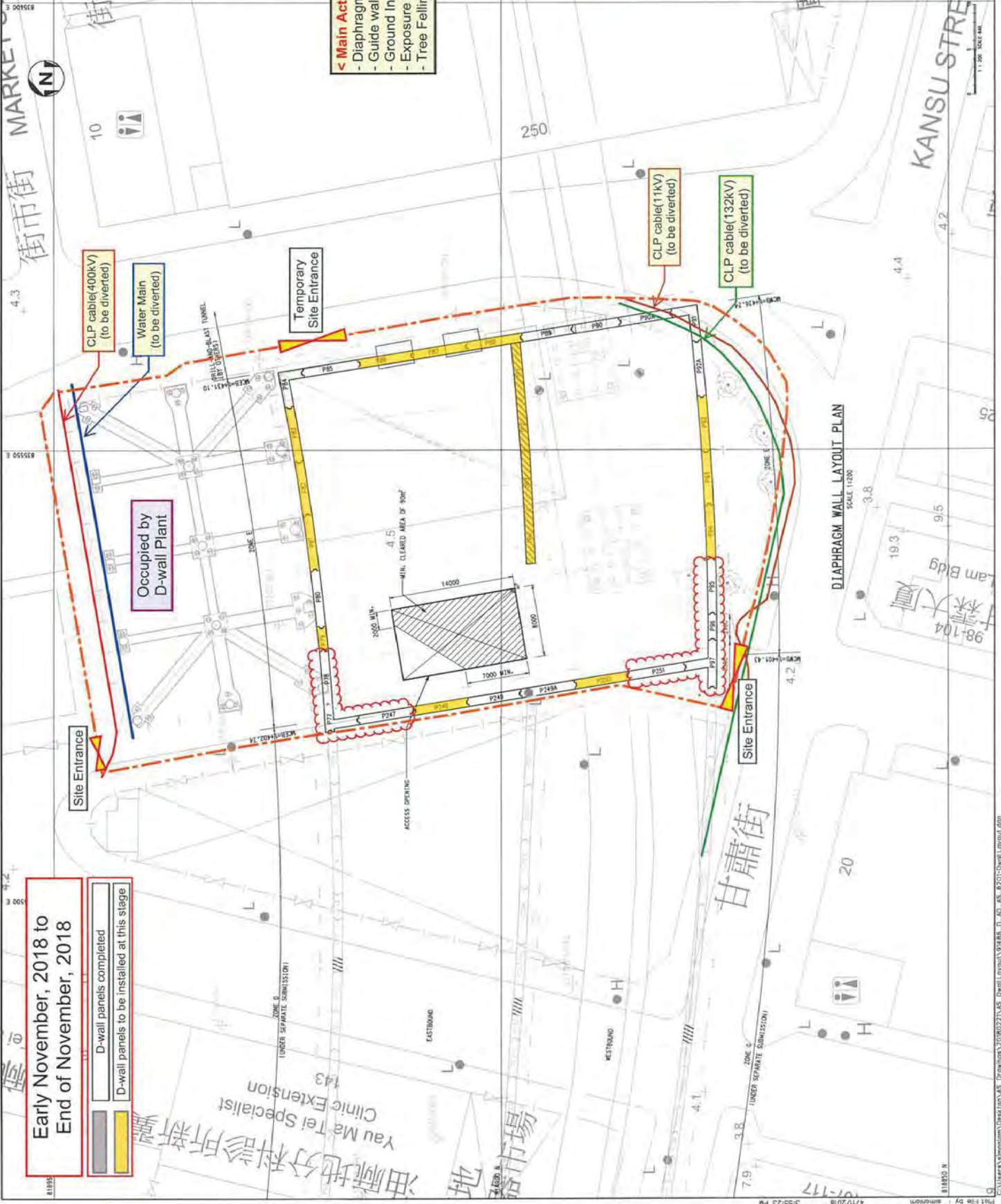
- KEY PLAN**  
SCALE 1:1,500
- TTA Stage
  - Guide Wall Work
  - Hoarding Erection
  - Hoarding completed

- < Main Activities >**
- Diaphragm Wall Works
  - Guide wall Works
  - Ground Investigation
  - Exposure of CLP Cables(11kV, 132kV)
  - Tree Felling

Client: **路政署 HIGHWAYS DEPARTMENT**  
 路政工程處 MAJOR WORKS PROJECT MANAGEMENT OFFICE  
 The Engineer

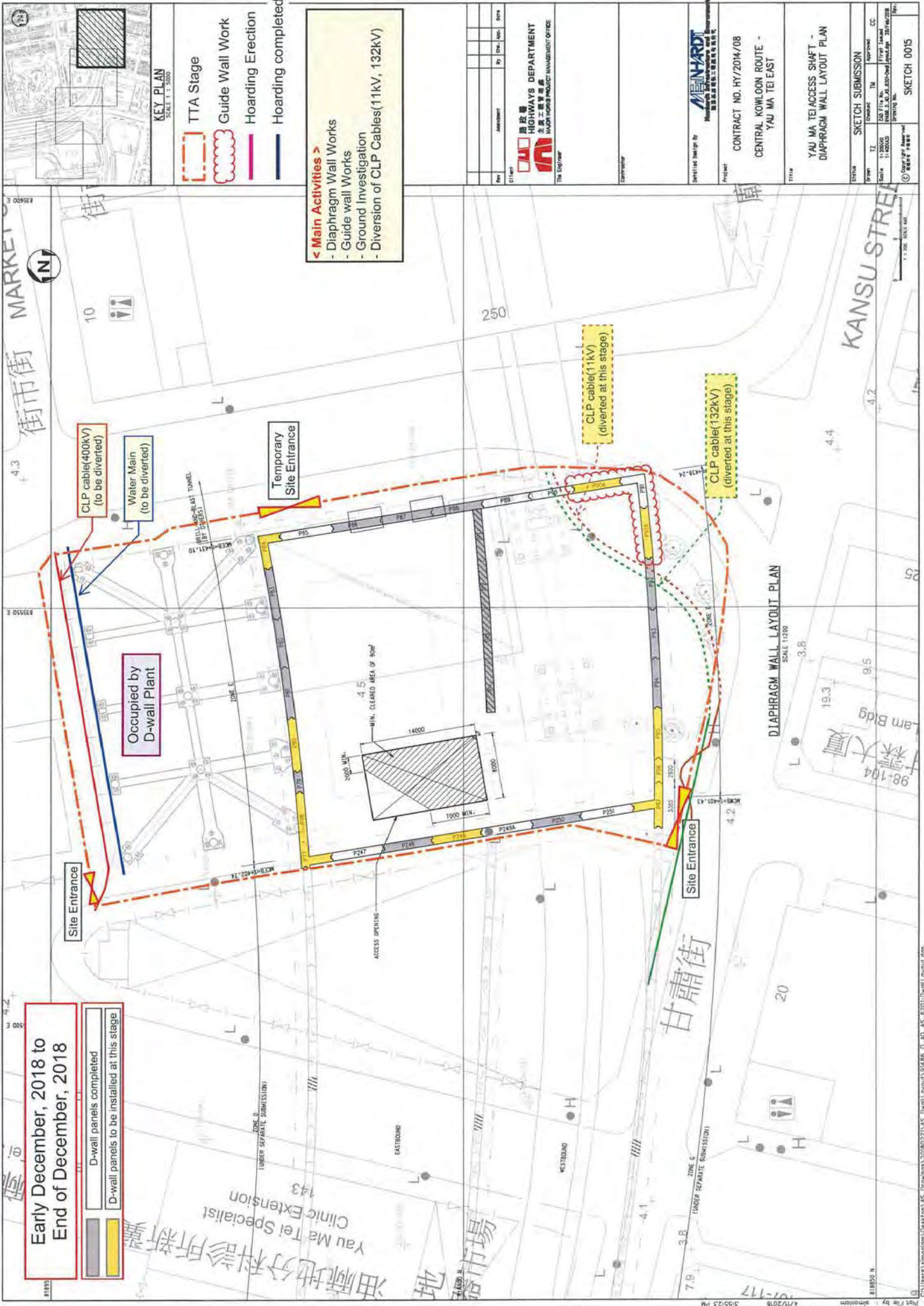
Contractor: **MEINHARDT**  
 德華建築師有限公司  
 CONTRACT NO. HY/2014/08  
 CENTRAL KOWLOON ROUTE - YAU MA TEI EAST

Project	CENTRAL KOWLOON ROUTE - YAU MA TEI EAST		
Drawn	TM	Reviewed	CC
Date	11/2018	Drawn Date	11/2018
Scale	1:1,500	Scale	1:1,500
Sheet No.	SKETCH 0015		



- Early November, 2018 to End of November, 2018**
- D-wall panels completed
  - D-wall panels to be installed at this stage

Pkg Title: K:\14488\YAU TEI EAST FROM SZO\CSWP\Misc\01\17/2018  
 Pkg Drawn: K:\14488\YAU TEI EAST FROM SZO\CSWP\Misc\01\17/2018  
 Pkg File By: 11/2018  
 C:\Users\ksham\OneDrive\OneDrive\Drawings\20180221\YAU TEI EAST\17/2018\Diaphragm Wall Layout.dgn



Early December, 2018 to  
End of December, 2018

D-wall panels completed  
D-wall panels to be installed at this stage

Site Entrance

CLP cable(400kV)  
(to be diverted)

Water Main  
(to be diverted)

Occupied by  
D-wall Plant

Temporary  
Site Entrance

**< Main Activities >**

- Diaphragm Wall Works
- Guide wall Works
- Ground Investigation
- Diversion of CLP Cables(11kV, 132kV)

**KEY PLAN**  
SCALE 1 : 2,000

- TTA Stage
- Guide Wall Work
- Hoarding Erection
- Hoarding completed



Rev	Amendment	By	Chk.	Date
<b>Client</b> 香港路政處 HIGHWAYS DEPARTMENT 香港工務局 MAJOR WORKS PROJECT MANAGEMENT OFFICE The Engineer				
<b>Contractor</b> MWH				
<b>Specialist Design By</b> MWH				
<b>Project</b> CONTRACT NO. HY/2014/08 CENTRAL KOWLOON ROUTE - YAU MA TEI EAST				
<b>Drawn</b> TZ <b>Checked</b> TM <b>Approved</b> CC Date: 11/09/2018 Scale: 1:10000 Drawing No.: 11000000 Project No.: 11000000 © Copyright Reserved 2018 MWH				
<b>Sketch Submission</b> YAU MA TEI ACCESS SHAFT - DIAPHRAGM WALL LAYOUT PLAN				
SKETCH 0015				

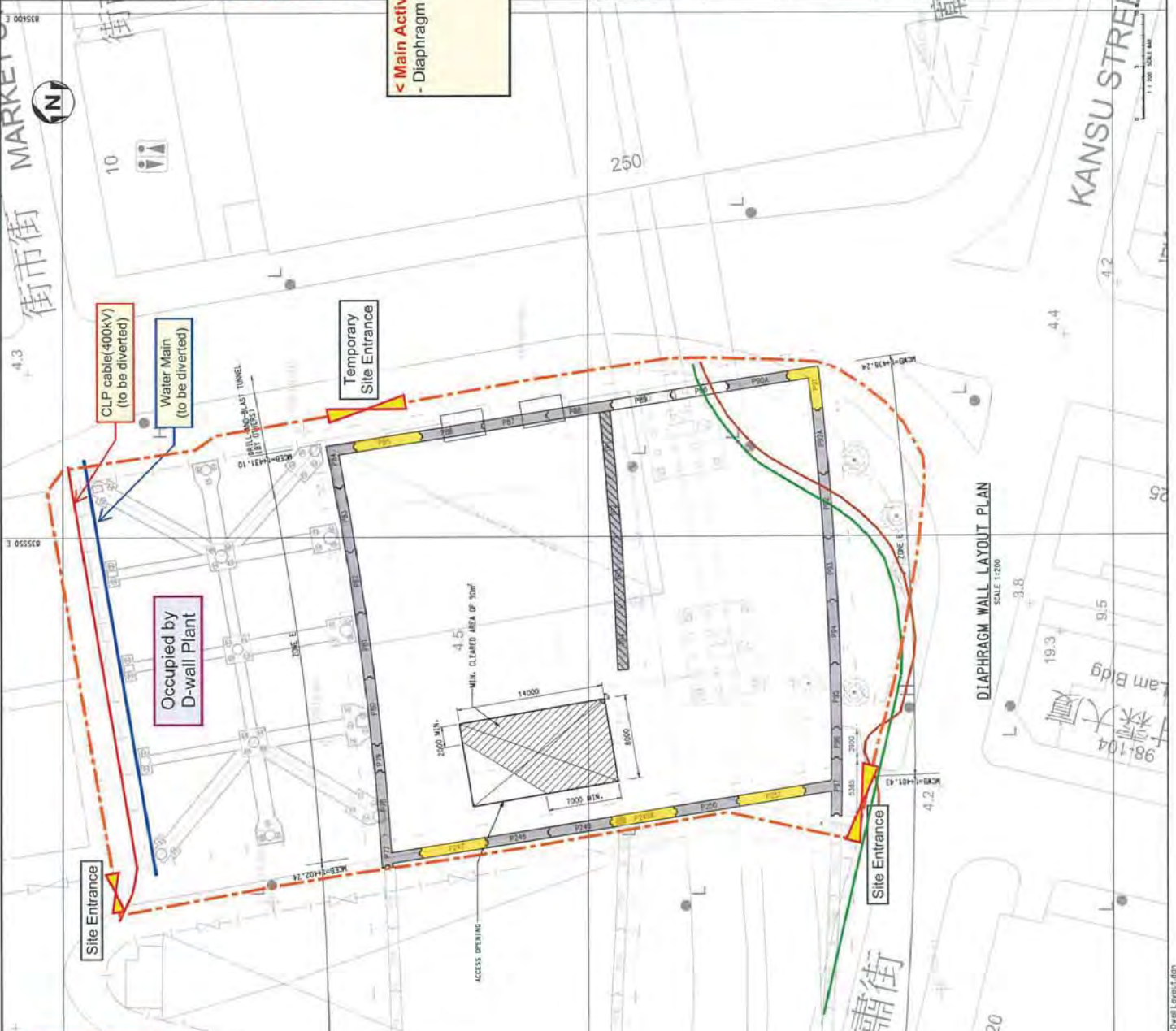
DIAPHRAGM WALL LAYOUT PLAN  
SCALE 1:2000

KANSU STREET  
SCALE 1:2000

甘肅街

Yau Ma Tei Specialist  
Clinic Extension

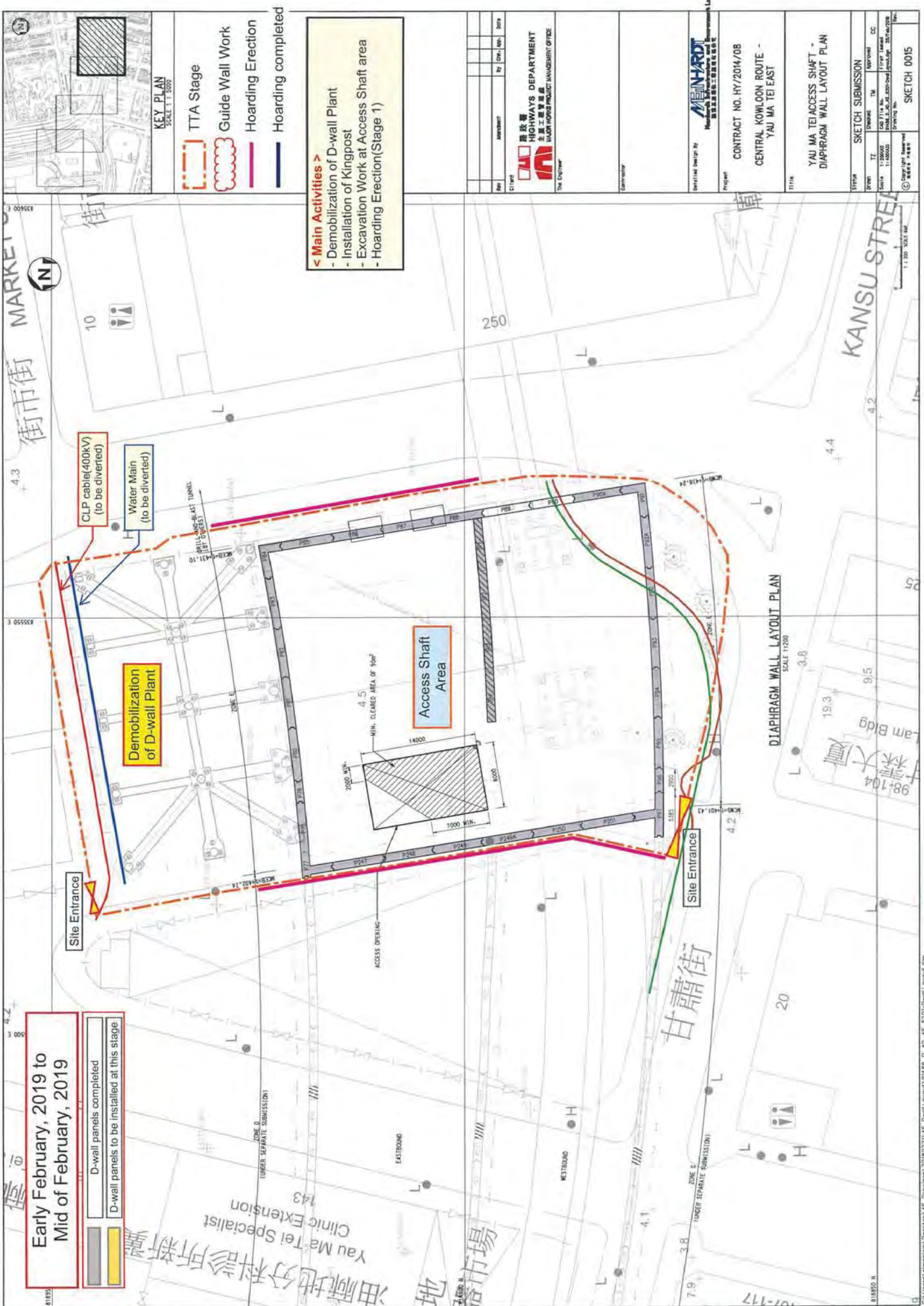
<p>KEY PLAN SCALE 1:1,500</p>		<p>TTA Stage Guide Wall Work Hoarding Erection Hoarding completed</p>
<p>&lt; Main Activities &gt; - Diaphragm Wall Works</p>		
<p>Contract No. HY/2014/08 CENTRAL KOWLOON ROUTE - YAU MA TEI EAST</p>	<p>Highways Department 交通工程處 TRANSPORT PLANNING MANAGEMENT OFFICE</p>	<p>MEINHARDT MEINHARDT ENGINEERING CONSULTANTS</p>
<p>Project Title YAU MA TEI ACCESS SHAFT - DIAPHRAGM WALL LAYOUT PLAN</p>	<p>Contract No. HY/2014/08</p>	<p>Project No. CC</p>
<p>Scale 1:1,500</p>	<p>Drawing No. SKETCH 0015</p>	<p>Revision 001</p>



Early January, 2019 to  
End of January, 2019

█	D-wall panels completed
█	D-wall panels to be installed at this stage





Early February, 2019 to Mid of February, 2019

- D-wall panels completed
- D-wall panels to be installed at this stage

Demobilization of D-wall Plant

Access Shaft Area

Site Entrance

Site Entrance

CLP cables(400kV) (to be diverted)

Water Main (to be diverted)

- < Main Activities >
- Demobilization of D-wall Plant
  - Installation of Kingpost
  - Excavation Work at Access Shaft area
  - Hoarding Erection(Stage 1)

- KEY PLAN SCALE 1:1,500
- TTA Stage
  - Guide Wall Work
  - Hoarding Erection
  - Hoarding completed



Author	By	Check	Date

路政署  
 HIGHWAYS DEPARTMENT  
 主要工程發展處  
 MAJOR PROJECTS MANAGEMENT OFFICE  
 The Engineer

Contracting Design By  

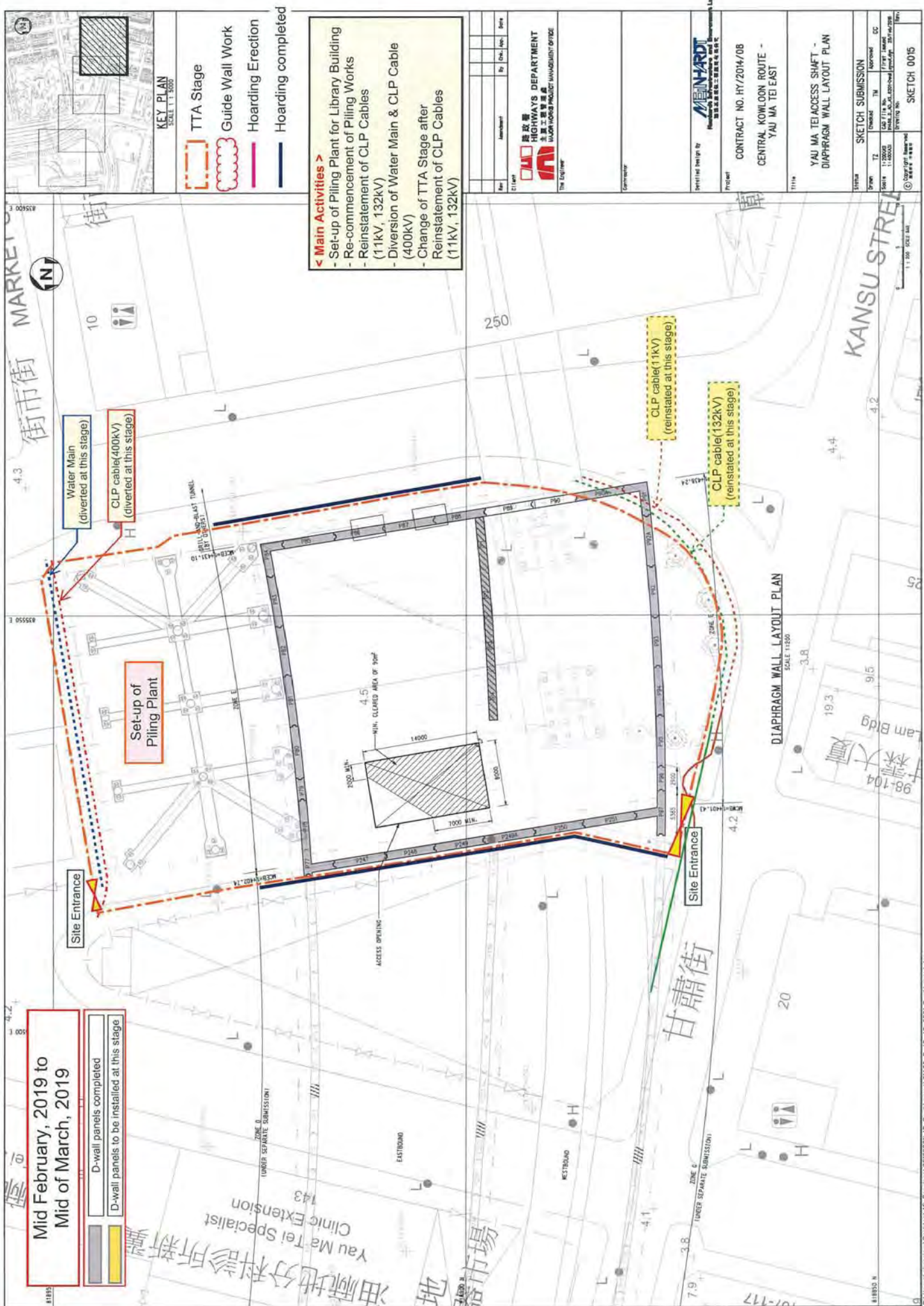
 MENHARDT  
 建築師事務所  
 ARCHITECTS

Project  
 CONTRACT NO. HY/2014/08  
 CENTRAL KOWLOON ROUTE -  
 YAU MA TEI EAST

Title  
 YAU MA TEI ACCESS SHAFT -  
 DIAPHRAGM WALL LAYOUT PLAN

System	SKETCH SUBMISSION
Drawn	TT
Checked	TM
Approved	CC
Scale	1:1,500
Drawn By	
Checked By	
Approved By	
Drawing No.	SKETCH 0015

DIAPHRAGM WALL LAYOUT PLAN SCALE 1:250



Mid February, 2019 to  
Mid of March, 2019

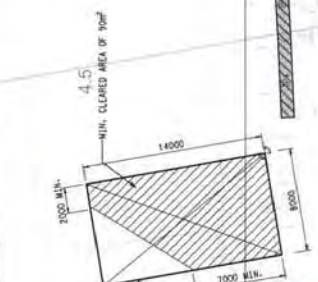
D-wall panels completed  
D-wall panels to be installed at this stage

Water Main  
(diverted at this stage)

CLP cable(400kV)  
(diverted at this stage)

Set-up of  
Piling Plant

Site Entrance



CLP cable(1kV)  
(reinstated at this stage)

CLP cable(132kV)  
(reinstated at this stage)

Site Entrance

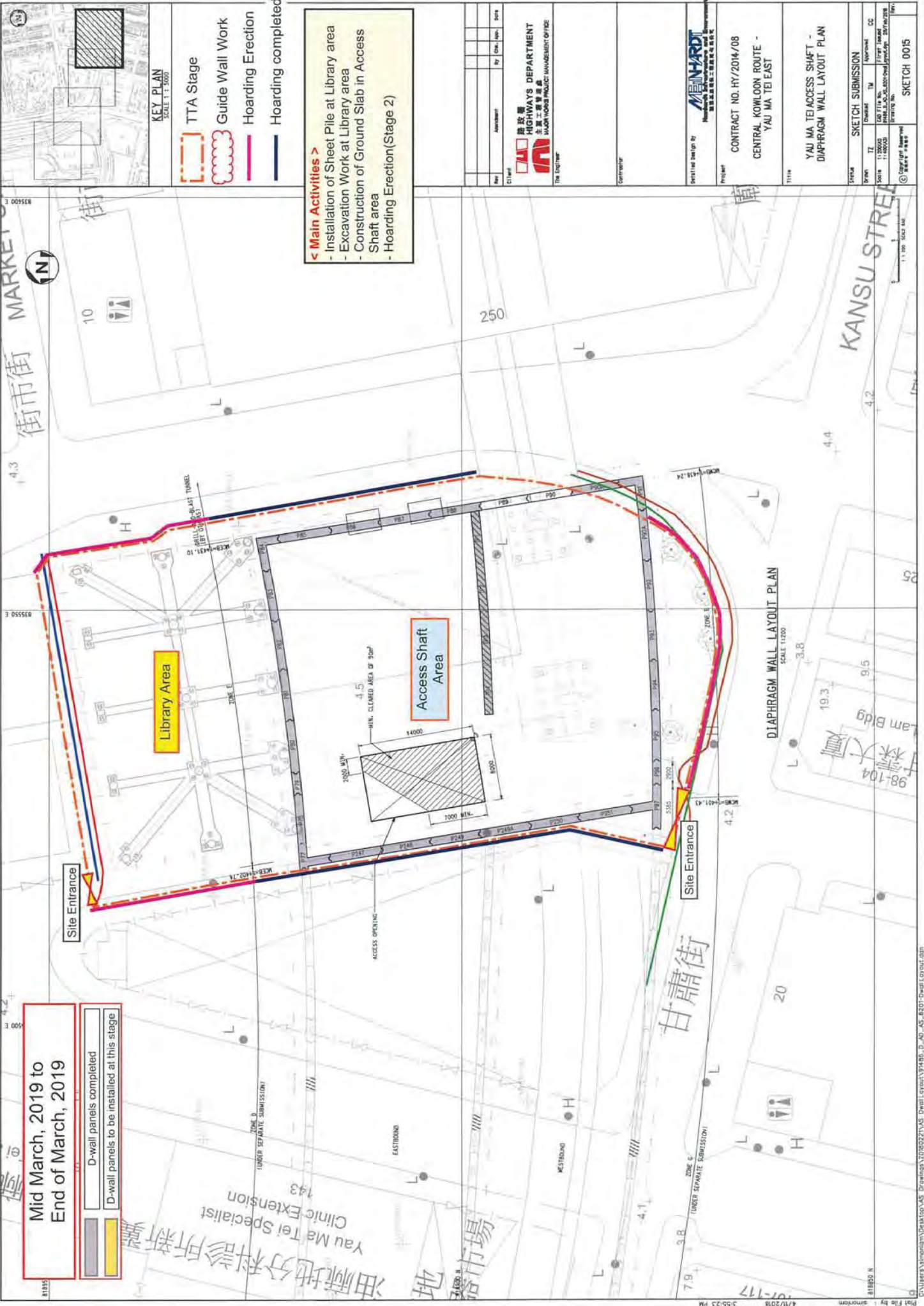
DIAPHRAGM WALL LAYOUT PLAN  
SCALE 1:1,500

CONTRACT NO. HY/2014/08  
CENTRAL KOWLOON ROUTE -  
YAU MA TEI EAST

YAU MA TEI ACCESS SHAFT -  
DIAPHRAGM WALL LAYOUT PLAN

SKETCH SUBMISSION

DRAWN BY: [Name]  
 CHECKED BY: [Name]  
 DATE: 11/03/2019  
 SCALE: 1:1,500  
 SHEET NO.: SKETCH 0015



Mid March, 2019 to  
End of March, 2019

D-wall panels completed  
D-wall panels to be installed at this stage

KEY PLAN  
SCALE 1:1,500

TTA Stage  
Guide Wall Work  
Hoarding Erection  
Hoarding completed

**< Main Activities >**

- Installation of Sheet Pile at Library area
- Excavation Work at Library area
- Construction of Ground Slab in Access Shaft area
- Hoarding Erection(Stage 2)

Author	By	Drawn	Scale
Checked			
Approved			

路政署  
 HIGHWAYS DEPARTMENT  
 公路工程署  
 MAJOR WORKS PROJECT MANAGEMENT OFFICE  
 The Engineer

MWHARDT  
 香港測量師學會會員  
 香港測量師學會會員

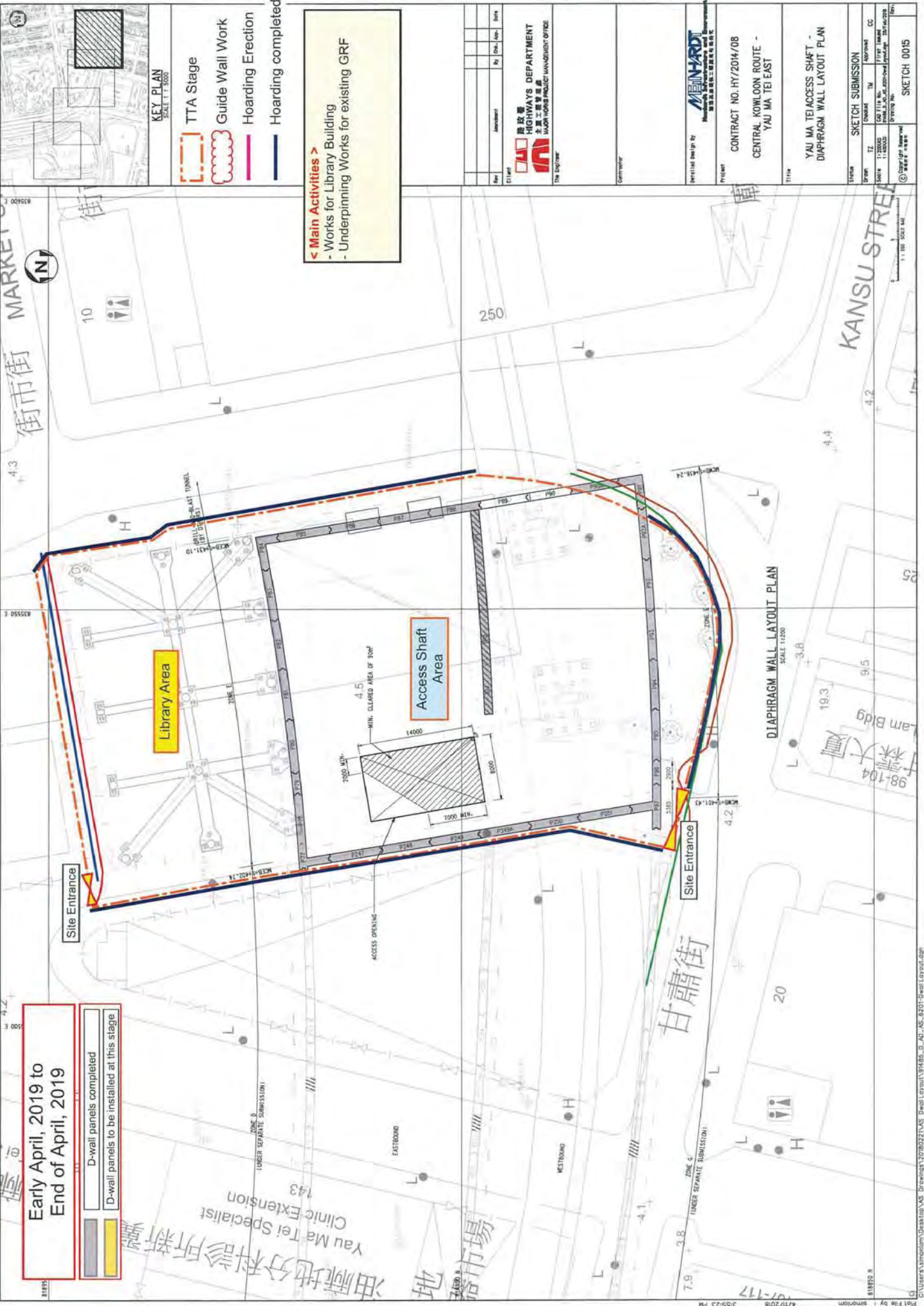
CONTRACT NO. HY/2014/08  
 CENTRAL KOWLOON ROUTE -  
 YAU MA TEI EAST

TITLE  
 YAU MA TEI ACCESS SHAFT -  
 DIAPHRAGM WALL LAYOUT PLAN

DRAWN BY: T2  
 CHECKED BY: TM  
 APPROVED BY: CC  
 DATE: 11/03/2018  
 PROJECT NO.: HY/2014/08  
 DRAWING NO.: SKETCH 00/15

SKETCH SUBMISSION

DIAPHRAGM WALL LAYOUT PLAN  
SCALE 1:200



Early April, 2019 to  
End of April, 2019

D-wall panels completed  
D-wall panels to be installed at this stage

KEY PLAN  
SCALE 1:1,500

TTA Stage  
Guide Wall Work  
Hoarding Erection  
Hoarding completed

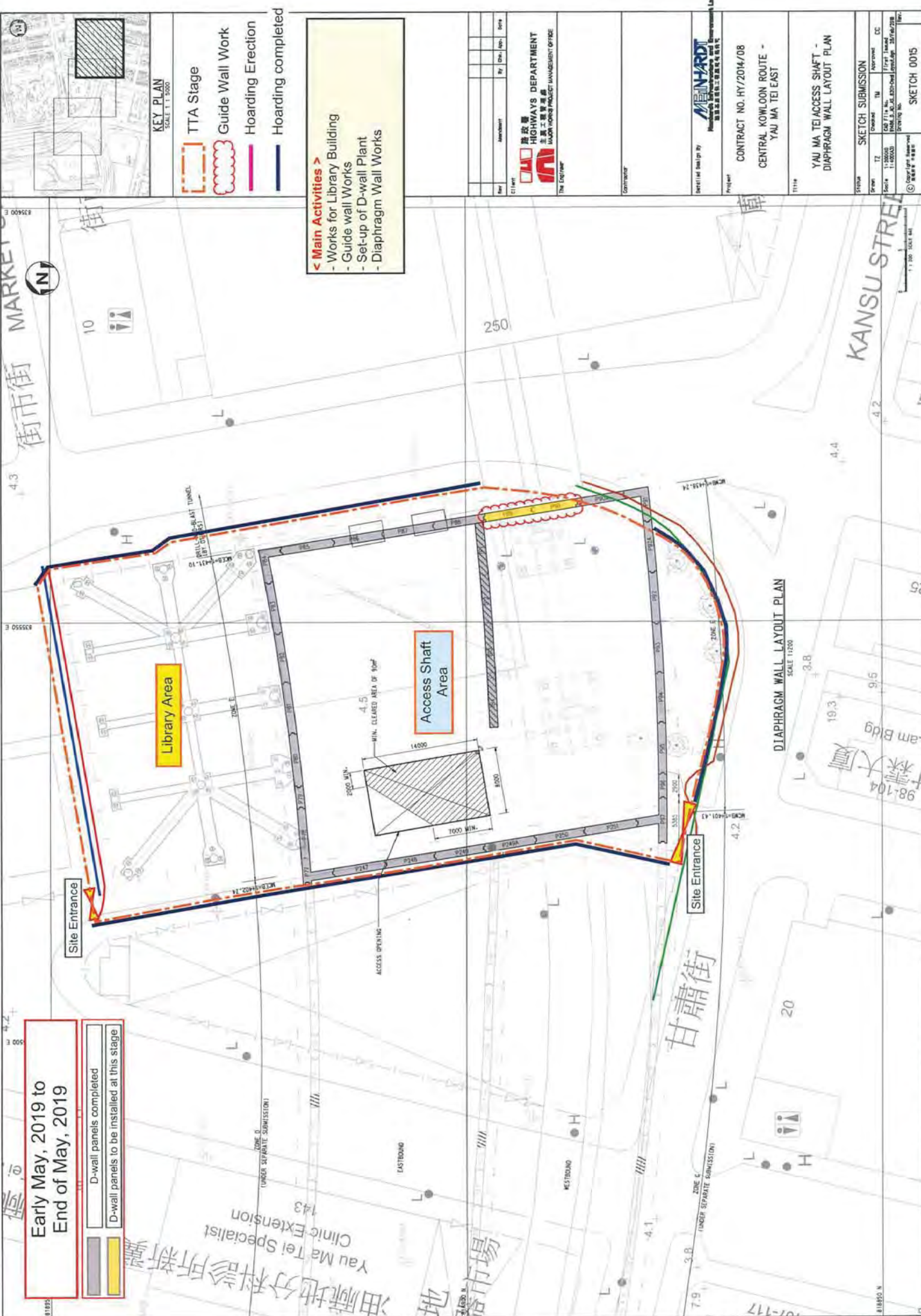
**< Main Activities >**  
 - Works for Library Building  
 - Underpinning Works for existing GRF

Client	路政署 HIGHWAYS DEPARTMENT 主要工程發展處 MAJOR WORKS DEVELOPMENT OFFICE The Engineer
Contractor	MWHARDT 香港土庫有限公司 HONG KONG TUNNEL & UNDERPASS LIMITED
Project	CONTRACT NO. HY/2014/08 CENTRAL KOWLOON ROUTE - YAU MA TEI EAST
Title	YAU MA TEI ACCESS SHAFT - DIAPHRAGM WALL LAYOUT PLAN
Version	SKETCH SUBMISSION
Drawn	TZ
Checked	TM
Approved	CC
Date	11/06/2018
Scale	1:1,500
Project No.	HY/2014/08
Drawing No.	SKETCH 0015

DIAPHRAGM WALL LAYOUT PLAN  
SCALE 1:200

Early May, 2019 to  
End of May, 2019

- D-wall panels completed
- D-wall panels to be installed at this stage



**KEY PLAN**  
SCALE 1:1 0000

- TTA Stage
- Guide Wall Work
- Hoarding Erection
- Hoarding completed

- < Main Activities >**
- Works for Library Building
  - Guide wall Works
  - Set-up of D-wall Plant
  - Diaphragm Wall Works

Client: **香港路 HIGHWAYS DEPARTMENT**  
**MAJOR WORKS PROJECT MANAGEMENT OFFICE**

Project: **CONTRACT NO. HY/2014/08**  
**CENTRAL KOWLOON ROUTE -**  
**YAU MA TEI EAST**

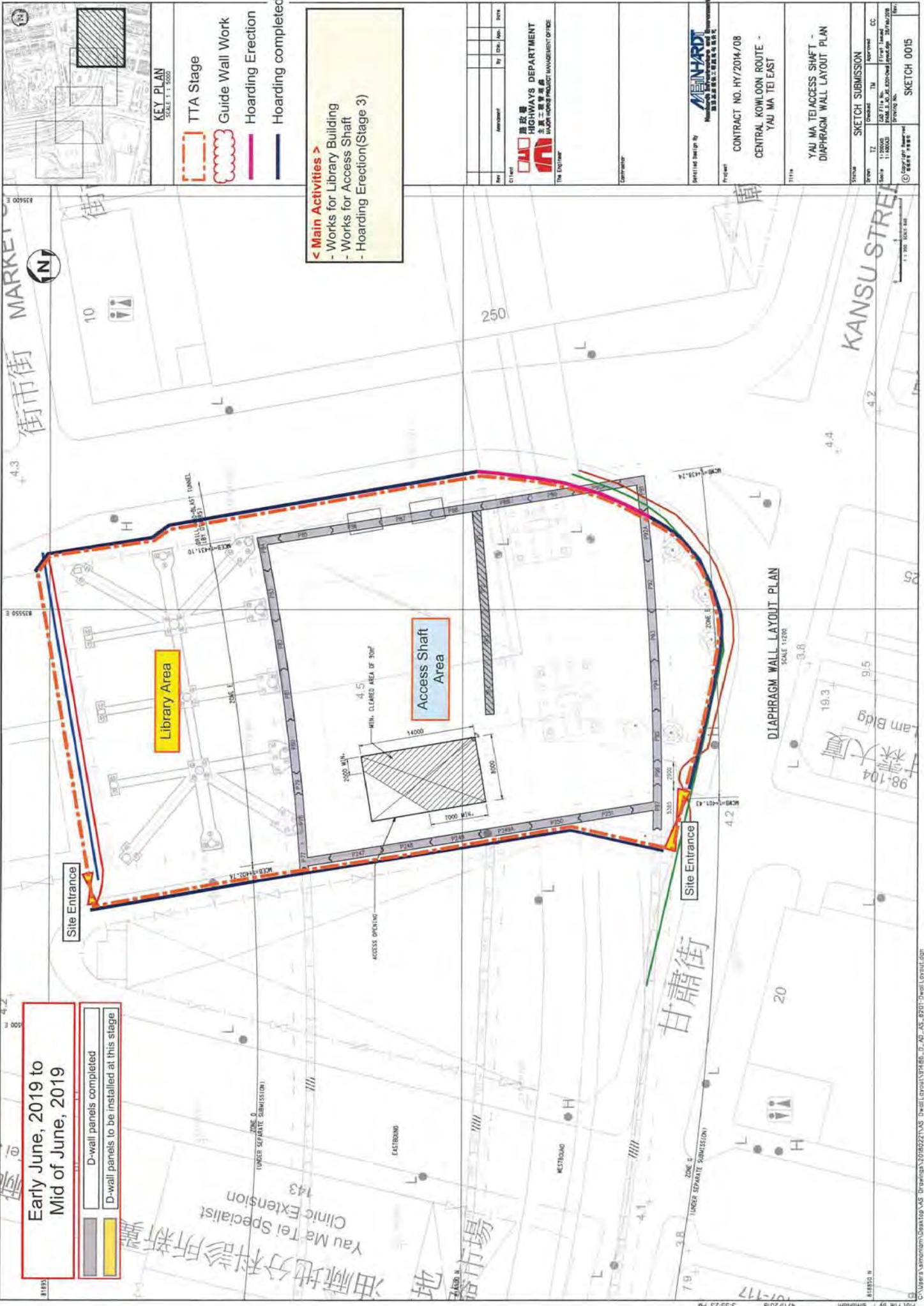
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 Scale: **1:10000**  
 Date: **25/FAR/2018**

SKETCH SUBMISSION

SKETCH 0015

**DIAPHRAGM WALL LAYOUT PLAN**  
SCALE 1:200

Path: K:\STANDARD\ARCHITECT\PROJECT\2014\08\HY2014\_08\_0101\DWG\Layout.dwg



Early June, 2019 to  
Mid of June, 2019

- D-wall panels completed
- D-wall panels to be installed at this stage

**< Main Activities >**

- Works for Library Building
- Works for Access Shaft
- Hoarding Erection(Stage 3)

**KEY PLAN**  
SCALE 1:1,000

- TTA Stage
- Guide Wall Work
- Hoarding Erection
- Hoarding completed

Client	香港路 HIGHWAYS DEPARTMENT 香港工務局 MAJOR WORKS PROJECT MANAGEMENT OFFICE The Engineer
Contractor	
Project	CONTRACT NO. HY/2014/08 CENTRAL KOWLOON ROUTE - YAU MA TEI EAST
Sheet No.	TT119
Revision	SKETCH SUBMISSION
Scale	1:1,000
Date	11/06/2019
Drawn by	CC
Checked by	CC
Approved by	CC
Project Manager	SKETCH 0015

DIAPHRAGM WALL LAYOUT PLAN  
SCALE 1:200

甘肅街

MARKET STREET  
街市街

KANSU STREET  
甘肅街

Yau Ma Tei Specialist  
Clinic Extension  
143

# Appendix C

# Drawings for Hoarding Erection at Zone A

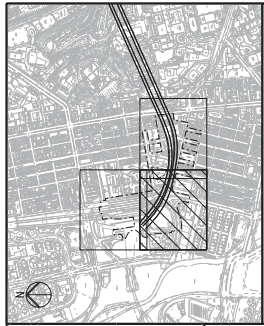
WIP Sep 2014  
FOR CONTINUATION  
SEE DRG. CR/1/MT/85/0501  
MATCH LINE

**Forthcoming Activities at Roundabouts of Yau Cheung Road:**

1. D-wall Construction (present to mid Jan)
2. Realignment of Yau Cheung Road (mid Jan to end of May) (refer to Appendix E for details of realignment of Yau Cheung Road)
4. Hoarding erection (early June to mid June)

**Forthcoming Activities at Maternal and Child Health Centre:**

1. Footing Construction (present to mid Nov)
2. Backfilling (mid Nov to mid Jan)
3. Sheet Piles Removal (mid Jan to early Feb)
4. Hoarding erection (early Feb to mid Feb)



KEY PLAN

NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH DRG. NO. CR/1/MT/85/0500.

Sheet Piles

Works Area of Maternal and Child Health Centre

Temporary hoarding erected and Corrugated steel Hoarding to be Erected

Existing Hoarding

Rev.	By	Date	Description
01	AL	04/17	TENDER APPENDUM NO.4
00	AL	02/17	ISSUE FOR TENDER



Project title  
Central Kowloon Route - Yau Ma Tei East

Contract No. HY/2014/08

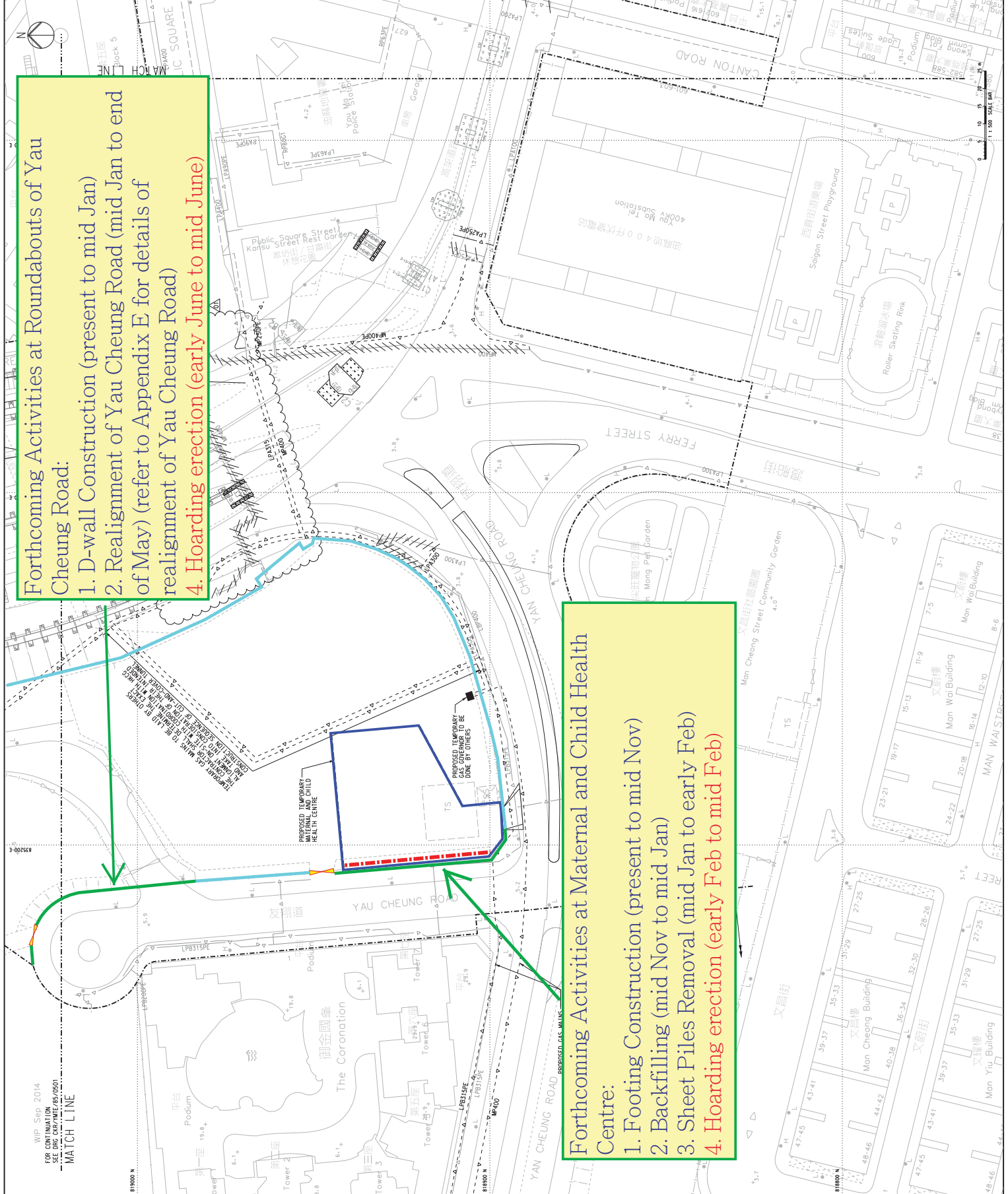
Proposed Gas Main Layout Plan

(SHEET 2 OF 3)

Drawn by	CM	Checked by	AL	Approved by	HTC
Scale	1:500 @ A1	Status	TENDER	Rev.	01



Highways Department  
Main Engineering Section  
MAJOR WORKS PROJECT MANAGEMENT OFFICE

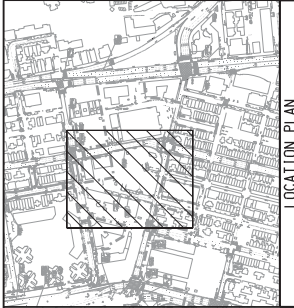




# Appendix D

## Approved TTA Drawings

(1) PMS Plan ID: Project Manager: Contract No.: HY201408	(2) Project Manager: Central Kowloon Route – You Ma Tei East	(3) Contract No.: HY201408	(4) Supervisor: ARUP Joint Venture	(5) Contractor: Build King - SKEC Joint Venture	(6) Traffic Consultant: MEINHARDT Mechanical Infrastructure and Environment Limited 專業機械及環境工程顧問有限公司 Tel: 2895-7174	(7) Drawing No.: 91486/D/G/T/0143-1 Rev.: C	<p>TTA FOR EXCAVATION FOR INSPECTION PIT PIEZOMETER (SP18) AT SHANGHAI STREET</p> <p>Date: 24 JUL 2018 Scale: 1:750 Case: - Bank: -</p>
Designed: NM	Drawn: MC	Checked: JC	Approved: SL	<p>Comments:</p> <p>C COMMENTS FROM TMLG INCORPORATED SEP 18</p> <p>B 1ST RE-ENDORSEMENT SEP 18</p> <p>A COMMENTS FROM TMLG INCORPORATED AUG 18</p> <p>Rev. Assessment</p>			
<p>(8) TTA Particulars:</p> <p>(A) Temp. NSR: <input checked="" type="checkbox"/> NI <input type="checkbox"/> 8-10/17-19 <input type="checkbox"/> 7-9 <input type="checkbox"/> 7-24 <input type="checkbox"/> 24</p> <p>Net Duration: _____ months/weeks/days</p> <p>(B) Temp. PIS Closure: <input checked="" type="checkbox"/> NI <input type="checkbox"/> Metered <input type="checkbox"/> Non-metered</p> <p>(C) Temp. NLT/NRT: <input type="checkbox"/> Total/ Metered: _____ / Non-metered months/weeks/days</p> <p>(D) Temp. Veh. Length Prohibition: <input type="checkbox"/> NI <input type="checkbox"/> NLT <input type="checkbox"/> NRT</p> <p>(E) Temp. Speed Limit (km/h): <input type="checkbox"/> NI <input type="checkbox"/> 80 <input type="checkbox"/> 70 <input type="checkbox"/> 50 <input type="checkbox"/> 27m <input type="checkbox"/> &gt;10m <input type="checkbox"/> &gt;8m <input type="checkbox"/> &gt;7m <input type="checkbox"/> &gt;5m</p> <p>(F) Implementation Hours/Days of Week: <input type="checkbox"/> 24hrs <input type="checkbox"/> 10-16 <input type="checkbox"/> 22-06 <input type="checkbox"/> Others: _____</p> <p>(G) Others/Remarks: _____</p>							
<p>(9) Traffic Assessments: <input type="checkbox"/> TIA <input type="checkbox"/> Junction Capacity <input type="checkbox"/> Queue Length <input type="checkbox"/> Report Ref. _____</p> <p>(10) Anticipated Programme: <input type="checkbox"/> Sweep Path <input type="checkbox"/> Others: _____</p> <p>Start: MJD/OCT 18 (End: LATE/OCT 18)</p> <p>Duration: _____ months/weeks/days</p> <p>(11) Remarks: <input checked="" type="checkbox"/> For Extension/Re-endorsement, Reason: DUE TO INCLEMENT WEATHER</p> <p><input type="checkbox"/> Last Meeting/Approval Date: _____</p> <p><input type="checkbox"/> Others: _____</p>							



**Notes:**

- ALL PROVIDERS SHOULD REFER TO THE CODE OF PRACTICE FOR THE LIGHTING, SIGNING AND GUARDING OF ROAD WORKS (HIGHWAYS DEPARTMENT).
- ALL SIGNS AND ROAD MARKINGS SHOULD COMPLY WITH DRAWING OTTAS-1110-1 (TRANSPORT DEPARTMENT). ALL AFFECTED VEHICULAR ACCESSES AND PEDESTRIAN ACCESSES SHOULD BE MAINTAINED DURING THE CONSTRUCTION PERIOD.
- ALL DIMENSIONS ARE MINIMUM CLEAR WIDTH SUBJECT TO ON-SITE ADJUSTMENT.
- ALL STREET FURNITURE TO BE TEMPORARILY REMOVED IF NECESSARY.
- WORKING LOCATIONS MAY BE ALTERED SUBJECT TO WORKS PROGRAMME AND ON-SITE CONDITIONS.
- FOR WORKS ARE LOCATED ON CARRIAGEWAY, LOADING/UNLOADING AREA WILL BE ARRANGED WITHIN THE WORKS AREA. FOR WORKS AREA LOCATED ON SIDEWALK, TEMPORARILY WORKING AREA WILL BE ARRANGED AS INDICATED.
- THE EXACT LOCATIONS AND DIMENSIONS OF THE PROPOSED TRAFFIC SIGN MAY BE ADJUSTED DUE TO THE ACTUAL SITE CONDITIONS AND THE AGREEMENT WITH TRAFFIC POLICE.

**Legends:**

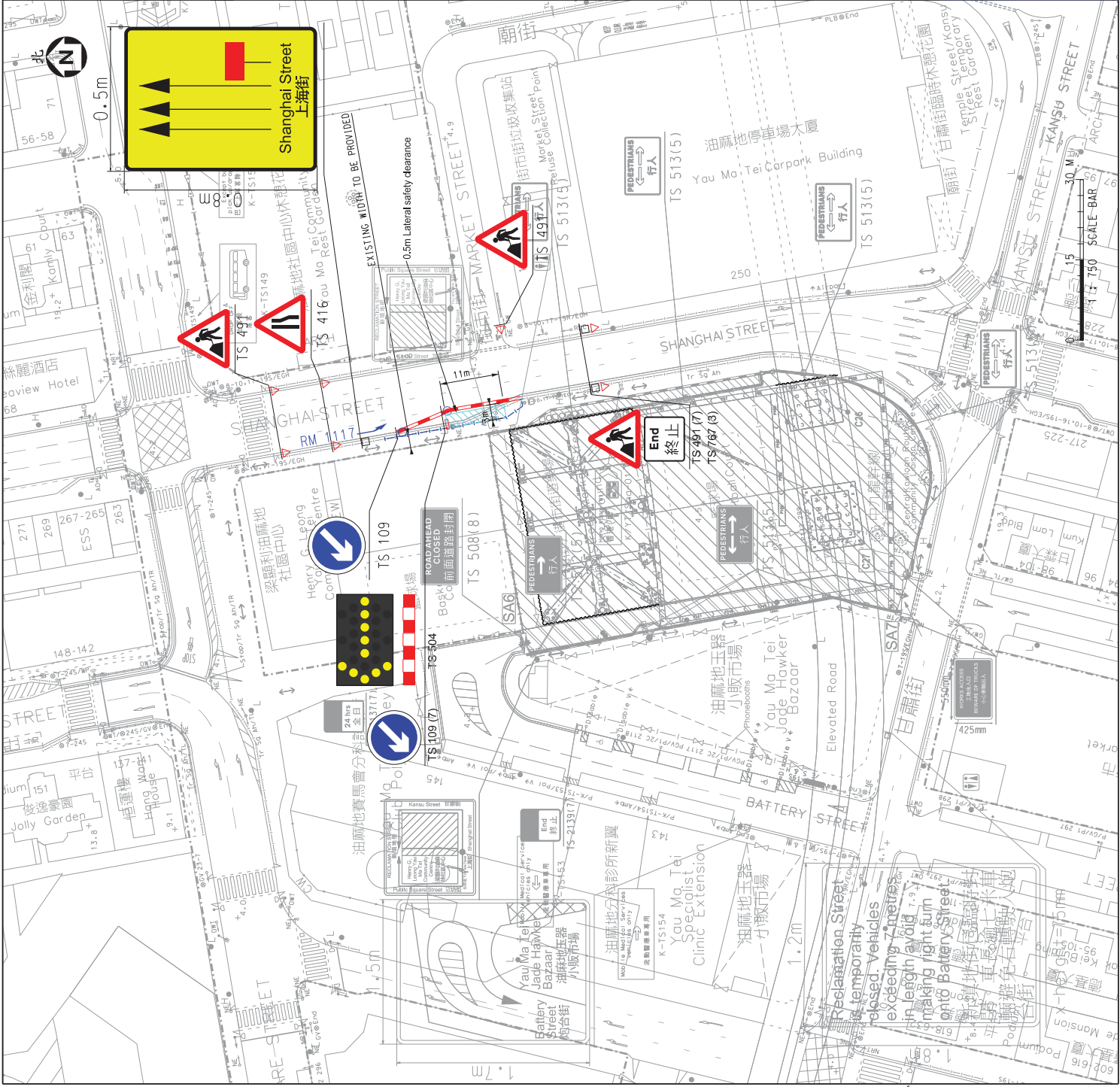
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	TEMPORARY TRAFFIC SIGN FOR THE SCHEME
	TRAFFIC CONE WITH FLASHING LIGHTS
	WATER FILLED BARRIER WITH FLASHING LANTERN FOR THIS SCHEME
	HOARDINGS FOR THIS SCHEME
	WORKS AREA FOR THIS SCHEME
	SITE ACCESS FOR THIS SCHEME
	REVOLVING FLASHING LANTERN FOR THIS SCHEME
	PEDESTRIAN OVERCROSSING
	TRAFFIC CONE WITH FLASHING LIGHTS
	WATER FILLED BARRIER FOR OTHER SCHEME
	PEDESTRIAN BARRIER/HOARDING FOR OTHER SCHEME
	WORKS AREA FOR OTHER SCHEME
	SITE ACCESS FOR OTHER SCHEME
	REVOLVING FLASHING LANTERN FOR OTHER SCHEME
	PEDESTRIAN BARRIER WITH FLASHING LIGHTS FOR OTHER SCHEME
	WATER FILLED BARRIER WITH FLASHING LANTERN AND AGRICULTURE PANELS FOR THIS SCHEME
	SHEET PILE

Signature: *Sauwat Lee*

Name: Lee Chi Kin  
Discipline: Civil Engineering  
Membership No.: MW0250767 (HKIE)  
Contract No.: 2859 1714

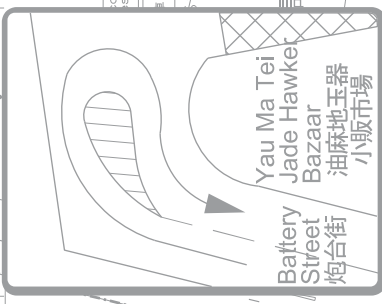
APPROVED DRAWING  
CONTRACT NO.: HY2014/08  
TMLG NO. on  
ENDORSED BY THE ENGINEER / ENGINEERS REPRESENTATIVE

DATE: \_\_\_\_\_

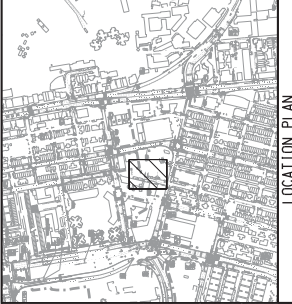
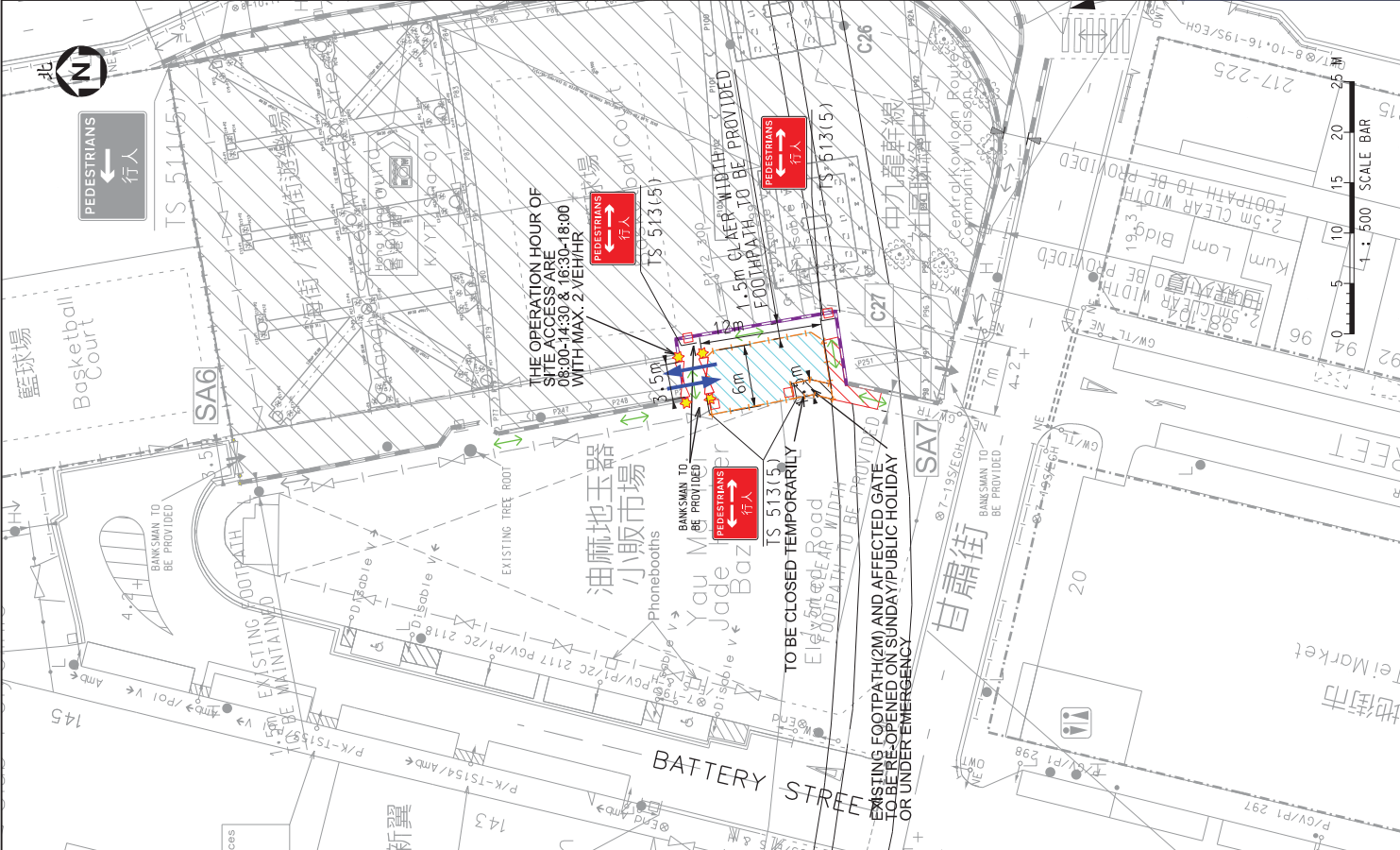


EXCAVATION PERMIT NO. KLVT/HYO/004015  
 PERMITTEE: HIGHWAYS DEPARTMENT  
 CONSULTANT: ARUP/MOTT MACDONALD JOINT VENTURE  
 NOMINATED PERMITTEE: BUILD KING-SKEC JOINT VENTURE

CONTACT PERSON CONTACT NO.  
 LUNG KAI LUN 27623625  
 CHAN Tsz PAN 28271823  
 BOON KIN MAN 91938860



Reclamation Street is temporarily closed. Vehicles exceeding 7 metres in length avoid making right turn onto Battery Street.  
 新填地街已臨時封閉。車長逾七米車輛避免右轉駛入炮台街。



**Notes:**

- ALL PROVISIONS SHOULD REFER TO THE CODE OF PRACTICE HIGHWAYS DEPARTMENT, AND GUIDING OF ROAD WORKS
- ALL SIGNS AND ROAD MARKINGS SHOULD COMPLY WITH PASSENGERS SHOULD BE MAINTAINED DURING THE
- ALL DIMENSIONS ARE MINIMUM CLEAR WIDTH SUBJECT TO ON-SITE ADJUSTMENT TO BE TEMPORARY REMOVED IF NECESSARY.
- PEDESTRIAN DECKING LOCATION MAY BE VARRIED SUBJECT TO NON-CARRIAGEWAY. LOADING/UNLOADING AREA WILL BE ARRANGED AS INDICATED. DIMENSIONS OF THE PROPOSED TRAFFIC SIGNS MAY BE ADJUSTED DUE TO THE ACTUAL SITE CONDITIONS AND THE AGREEMENT WITH TRAFFIC POLICE.
- BANKSMAN WILL BE PROVIDED TO FENCE OFF THE FOOTPATH THROUGH THE SITE ACCESS AND CLOSE THE SITE ACCESS BEFORE RE-OPEN THE FOOTPATH.
- PEDESTRIAN DECKING SHALL BE SET ASIDE TO WITNESS PRIOR TO THE OPERATION OF THE SITE ACCESSSES.

- Legends:**
- SITE BOUNDARY
  - TEMPORARY TRAFFIC SIGN FOR THIS SCHEME
  - TRAFFIC CONE WITH FLASHING LIGHTS
  - WATER FILLED BARRIER WITH FLASHING LANTERN FOR THIS SCHEME
  - HOARDINGS FOR THIS SCHEME
  - WORKS AREA FOR THIS SCHEME
  - SITE ACCESS FOR THIS SCHEME
  - REVOLVING FLASHING LANTERN FOR THIS SCHEME
  - PEDESTRIAN OVERBRIDGE
  - TEMPORARY TRAFFIC SIGN FOR OTHER SCHEME
  - TRAFFIC CONE WITH FLASHING LIGHTS FOR OTHER SCHEME
  - WATER FILLED BARRIER FOR OTHER SCHEME
  - PEDESTRIAN BARRIER/ HOARDING FOR OTHER SCHEME
  - WORKS AREA FOR OTHER SCHEME
  - SITE ACCESS FOR OTHER SCHEME
  - REVOLVING FLASHING LANTERN FOR OTHER SCHEME
  - PEDESTRIAN BARRIER WITH FLASHING LIGHTS FOR OTHER SCHEME
  - WATER FILLED BARRIERS WITH PLATE WITH FLASHING LANTERN
  - BECKING

Signature : *Sauwai Le*  
 Name : Lee Chi Kin  
 Discipline : Civil Engineering  
 Membership No : MM0250767 (HKIE.)  
 Contract No : 2859 1714

**APPROVED DRAWING**  
 CONTRACT NO. : HY/2014/08  
 TMLG NO. on  
 ENDORSED BY THE ENGINEER / ENGINEERS REPRESENTATIVE

(1) VPMS Plan ID:	(2) Project Manager:	(3) Contract No.:	(4) Supervisor:	(5) Consultant:	(6) Traffic Consultant:	(7) Drawing No.:	Rev.:
	黃漢偉 MACTHWAYS DEPARTMENT MACTHWAYS PROJECT MANAGEMENT OFFICE	HY/2014/08	Central Kowloon Route - Yau Ma Tei East	ARUP JOINT VENTURE MOTT MACDONALD	Build King SK E&C BUILD KING -SKEC JOINT VENTURE	91486/D/G/7/0169-1	A
Designed	Drawn	Checked	Approved	Title: TTA FOR GUIDE WALL CONSTRUCTION ALONG RECLAMATION STREET(STAGE 1)			
Author	Checker	Approver	Scale: 1:500				
Rev.	Comments	Submission	Approval	Date: 28 AUG 2018			
(8) TTA Particulars: (A) Temp. NSR: <input checked="" type="checkbox"/> NI <input type="checkbox"/> 6-0/17-49 <input type="checkbox"/> 7-19 <input type="checkbox"/> 7-24 <input type="checkbox"/> 24 Net Duration: _____ months/weeks/days <input checked="" type="checkbox"/> NI <input type="checkbox"/> Metered <input type="checkbox"/> Non-metered (B) Temp. PIS Closure: <input checked="" type="checkbox"/> NI <input type="checkbox"/> Metered <input type="checkbox"/> Non-metered <input type="checkbox"/> Total Metered: _____ /Non-metered Net Duration: _____ months/weeks/days (C) Temp. NLT/NRT: <input checked="" type="checkbox"/> NI <input type="checkbox"/> NLT <input type="checkbox"/> NRT Net Duration: _____ months/weeks/days (D) Temp. Veh. Length Prohibition: <input checked="" type="checkbox"/> NI <input type="checkbox"/> >10m <input type="checkbox"/> >8m <input type="checkbox"/> >7m <input type="checkbox"/> >5m Net Duration: _____ months/weeks/days (E) Temp. Speed Limit (km/h): <input checked="" type="checkbox"/> NI <input type="checkbox"/> 80 <input type="checkbox"/> 70 <input type="checkbox"/> 50 <input checked="" type="checkbox"/> NI <input type="checkbox"/> 60 <input type="checkbox"/> 40 <input type="checkbox"/> 30 Net Duration: _____ months/weeks/days (F) Implementation Hours/Days of Week: <input checked="" type="checkbox"/> 24hrs <input type="checkbox"/> 10-16 <input type="checkbox"/> 22-06 <input type="checkbox"/> Others: Days of Week: (G) Others/Remarks:							
(9) Traffic Assessments: <input type="checkbox"/> TIA <input type="checkbox"/> Junction Capacity <input type="checkbox"/> Queue Length <input type="checkbox"/> Swept Path <input type="checkbox"/> Others: Report Ref.							
(10) Anticipated Programme: Start: MID/OCT 18 (End: LATE/OCT 18) Duration: _____ months/weeks/days							
(11) Remarks: <input type="checkbox"/> For Extension/Re-endorsement. Reason: _____ <input type="checkbox"/> Last Meeting/Approval Date: _____ <input type="checkbox"/> Others: _____							

Excavation Permit No. 41XYHY00004013  
 Permittee: HIGHWAYS DEPARTMENT  
 Consultant: ARUP/MOTT MACDONALD JOINT VENTURE  
 Nominated Permittee: BUILD KING-SKEC JOINT VENTURE

Contact Person: LUNG KA LUN  
 Contact No.: 27622625  
 CHAN Tsz PAN 2827 823  
 BOCK KIN MAN 91836880

Contract No: HY2014/08  
 Project Manager: HIGHWAYS DEPARTMENT  
 MAJOR WORKS PROJECT MANAGEMENT OFFICE

Central Kowloon Route - Yau Ma Tei East

Supervisor: ARUP/MOTT MACDONALD JOINT VENTURE  
 Contact: Joint Venture

Contractor: Build King - SKEC JOINT VENTURE  
 Contact: BUILD KING - SKEC JOINT VENTURE

Traffic Consultant: WEINHARDT  
 Weinhart Infrastructure and Environment Limited  
 溫拿環境工程顧問有限公司  
 Contact: Sum Lam  
 Tel: 2695-7114

Drawing No: 91486/D/G/7/0169-2  
 Title: TTA FOR GUIDE WALL CONSTRUCTION ALONG RECLAMATION STREET(STAGE 2)

Rev: A  
 Date: 28 AUG 2018  
 Scale: 1:500  
 Case: -  
 Bank: -

Drawn	Checked	Approved
NM	JC	SL
Comments from TMLG Incorporated		
First Submission		
SEP 18		
Revised		
Submission		
SEP 18		
Date		

Remarks: -

Drawn	Checked	Approved
NM	JC	SL
Comments from TMLG Incorporated		
First Submission		
SEP 18		
Revised		
Submission		
SEP 18		
Date		

Notes:

- ALL PROVISIONS SHOULD REFER TO THE CODE OF PRACTICE FOR THE DESIGN AND CONSTRUCTION OF ROAD WORKS HIGHWAYS DEPARTMENT.
- ALL SIGNS AND ROAD MARKINGS SHOULD COMPLY WITH THE TRAFFIC SIGNS AND MARKINGS MANUAL.
- ALL AFFECTED VEHICULAR ACCESSES AND PEDESTRIAN PASSAGES SHOULD BE MAINTAINED DURING THE CONSTRUCTION PERIOD.
- ALL DIMENSIONS ARE MINIMUM CLEAR WIDTH SUBJECT TO ONE-SITE ADJUSTMENT.
- NECESSARY JURISDICTION TO BE TEMPORARILY REVIEWED IF NECESSARY.
- PEDESTRIAN DEVIATION MAY BE VERIFIED SUBJECT TO THE AGREEMENT WITH THE LOCAL POLICE.
- FOR WORKS ARE LOCATED ON CARPARKWAY.
- LOADING/UNLOADING AREA WILL BE ARRANGED WITHIN THE WORKS AREA TO AVOID OBSTRUCTION TO OTHER VEHICLES AND AS INSTRUCTED.
- THE EXCAVATION AREA AND DIMENSIONS OF THE PROPOSED GUIDE WALL SHALL BE VERIFIED WITH THE LOCAL POLICE. CONDITIONS AND THE AGREEMENT WITH TRAFFIC POLICE.
- BANKSMAN WILL BE PROVIDED TO FENCE OFF THE FOOTPATH THROUGH THE SITE ACCESS AND CLOSE THE SITE ACCESS BEFORE REOPEN THE FOOTPATH. AS A SAFE TO WITNESS PRIOR TO THE OPERATION OF THE SITE ACCESS.

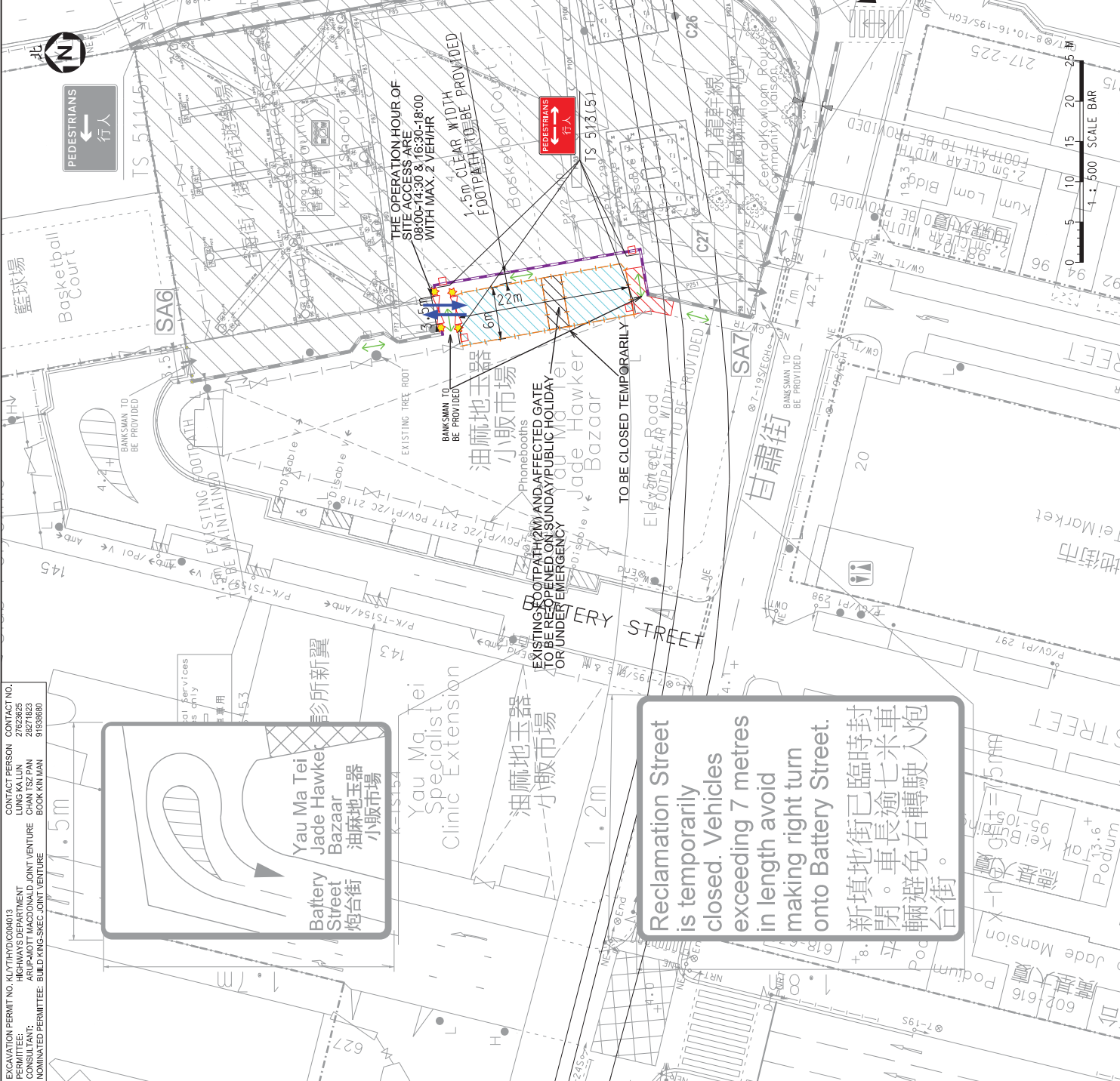
Legends:

- WORKS AREA FOR THIS SCHEME
- TRAFFIC CONE WITH FLASHING LIGHTS FOR THIS SCHEME
- WATER FILLED BARRIER WITH FLASHING LIGHTS FOR THIS SCHEME
- HOARDINGS FOR THIS SCHEME
- WORKS AREA FOR OTHER SCHEME
- PEDESTRIAN DEVIATION
- TEMPORARY TRAFFIC SIGN FOR OTHER SCHEME
- TRAFFIC CONE WITH FLASHING LIGHTS FOR OTHER SCHEME
- WATER FILLED BARRIER FOR OTHER SCHEME
- HOARDING FOR OTHER SCHEME
- WORKS AREA FOR OTHER SCHEME
- PEDESTRIAN BARRIER/BOARDING FOR OTHER SCHEME
- WORKS AREA FOR OTHER SCHEME
- TRAFIC CONE WITH FLASHING LIGHTS FOR OTHER SCHEME
- WATER FILLED BARRIER WITH FLASHING LIGHTS FOR OTHER SCHEME
- PEDESTRIAN BARRIER WITH FLASHING LIGHTS FOR OTHER SCHEME
- HOARDING WITH FLASHING LIGHTS FOR OTHER SCHEME
- BECKING FOR OTHER SCHEME

Signature: Samuel Au  
 Name: Lee Chi Kin  
 Discipline: Civil Engineering  
 Membership No: MM0250767 (HKIE)  
 Contact No: 2859 1714

APPROVED DRAWING  
 CONTRACT NO.: HY2014/08  
 TMLG NO. on  
 ENDORSED BY THE ENGINEER / ENGINEERS REPRESENTATIVE

Remarks:  
 For Extension/Re-endorsement, Reason: -  
 Last Meeting/Approval Date: -  
 Other: -

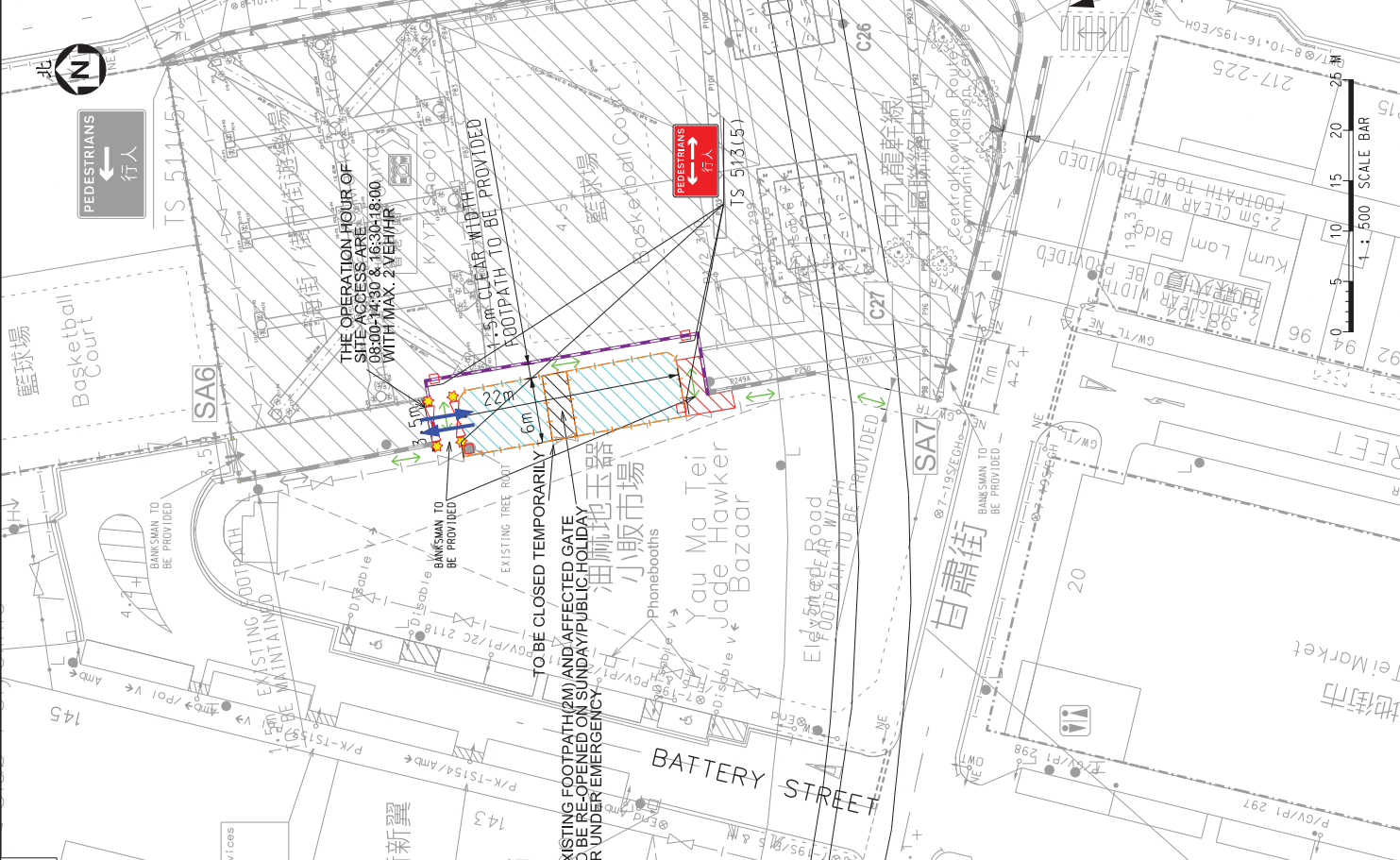


EXCAVATION PERMIT NO. KLXTHYC0004013 CONTACT PERSON CONTACT NO.  
PERMITTEE: HIGHWAYS DEPARTMENT LUNG KA LUN 27623625  
CONSULTANT: ARUP/MOTT MACDONALD JOINT VENTURE CHAN Tsz Pan 28271823  
NOMINATED PERMITTEE: BUILD KING-SKEC JOINT VENTURE BOOK KIN MAN 91936880

**Yau Ma Tei Jade Hawker Bazaar**  
油麻地玉器小販市場

Reclamation Street  
is temporarily closed. Vehicles exceeding 7 metres in length avoid making right turn onto Battery Street.

新填地街已臨時封閉。車長逾七米車輛避免右轉駛入炮台街。



(1) VPMS Plan ID: \_\_\_\_\_  
(2) Project Manager: **高路雲**  
HIGHWAYS DEPARTMENT  
交通工程處  
MAJOR WORKS PROJECT MANAGEMENT OFFICE

(3) Contract No.: HY2014/08  
**Central Kowloon Route - Yau Ma Tei East**

(4) Sponsor: **ARUP** Joint Venture  
**M M MOTT MACDONALD** Joint Venture

(5) Contractor: **Build King - SKEC JOINT VENTURE**

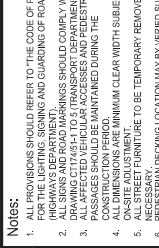
(6) Traffic Consultant: **MEINHARDT**  
Meinhardt Infrastructure and Environment Limited  
邁華德工程建築有限公司  
Tel: 2895-7174

(7) Drawing No.: 91486/D/G/T/0169-3  
Rev.: A

**NOTES:**

- ALL PROVISIONS SHOULD REFER TO THE CODE OF PRACTICE FOR THE DESIGNING AND GUIDING OF ROAD WORKS HIGHWAYS DEPARTMENT
- ALL SIGNS AND ROAD MARKINGS SHOULD COMPLY WITH THE TRAFFIC CONTROL CODE FOR VEHICLES AND PEDESTRIAN ACCESS
- ALL AFFECTED VEHICULAR ACCESS AND PEDESTRIAN PASSAGES SHOULD BE MAINTAINED DURING THE OPERATIONS
- ALL DIMENSIONS ARE MINIMUM CLEAR WIDTH SUBJECT TO ON-SITE ADJUSTMENT
- PEDESTRIAN SIGNAGE TO BE TEMPORARILY REMOVED IF NECESSARY
- PEDESTRIAN SIGNAGE TO BE RE-INSTALLED ON COMPLETION OF WORKS
- FOR WORKS TO BE LOCATED ON CARBONADO, LOAD UNLOADING AREA WILL BE ARRANGED WITHIN THE WORKS AREA FOR VEHICLES LOADED ON CARBONADO TO BE ARRANGED AS INDICATED
- THE EXACT LOCATION AND DIMENSIONS OF THE PROPOSED WORKS AREA WILL BE VERIFIED SUBJECT TO THE CONDITIONS AND AGREEMENT WITH TRAFFIC POLICE
- BANKSMAN WILL BE PROVIDED TO FENCE OFF THE FOOTPATH BEFORE THE SITE ACCESS AND CLOSE THE SITE ACCESS PRIOR TO THE OPERATION OF THE SITE ACCESS
- THE OPERATIONS WILL BE CONDUCTED IN A SAFE MANNER PRIOR TO THE OPERATION OF THE SITE ACCESS

**LOCATION PLAN**  
M.S.



Drawn	Checked	Approved	SL
NM	MC	JC	

Design Date: 28 AUG 2018  
Scale: 1:500  
Cases: \_\_\_\_\_

Design No.: 91486/D/G/T/0169-3  
Rev.: A

Comments from TMLC/INCORPORATED:  
SEP 18  
SEP 18  
Date

- (8) TTA Particulars:
- (A) Temp. NSR:  
 Nil  6-0/17-18  7-19  7-24  24
  - (B) Temp. PIS Closure:  
 Nil  Metered  Non-metered
  - (C) Temp. NLT/NRT:  
 Nil  NLT  NRT
  - (D) Temp. Veh. Length Prohibition:  
 Nil  >10m  >8m  >7m  >5m
  - (E) Temp. Speed Limit (km/h):  
 Nil  80  70  50
  - (F) Implementation Hours/Days of Week:  
 24hrs  10-16  22-06  Others:
  - (G) Others/Remarks: \_\_\_\_\_

- Legends:**
- SITE BOUNDARY
  - TEMPORARY TRAFFIC SIGN FOR THIS SCHEME
  - TRAFFIC CONE WITH FLASHING LIGHTS FOR THIS SCHEME
  - WATER FILLED BARRIER WITH FLASHING LANTERN FOR THIS SCHEME
  - HOBANDINGS FOR THIS SCHEME
  - WORKS AREA FOR THIS SCHEME
  - SITE ACCESS FOR THIS SCHEME
  - REVOLVING FLASHING LANTERN FOR THIS SCHEME
  - PEDESTRIAN OVERBROW
  - TEMPORARY TRAFFIC SIGN FOR OTHER SCHEME
  - TRAFFIC CONE WITH FLASHING LIGHTS FOR OTHER SCHEME
  - WATER FILLED BARRIER FOR OTHER SCHEME FOR OTHER SCHEME
  - WORKS AREA FOR OTHER SCHEME FOR OTHER SCHEME
  - REVOLVING FLASHING LANTERN FOR OTHER SCHEME
  - PEDESTRIAN BARRIER WITH FLASHING LIGHTS FOR OTHER SCHEME
  - WATER FILLED BARRIER WITH FLASHING LANTERN FOR OTHER SCHEME
  - PEDESTRIAN BARRIER BOARDING FOR OTHER SCHEME

(9) TTA Particulars:  
 Nil  6-0/17-18  7-19  7-24  24  
 Nil  Metered  Non-metered  
 Total: Metered: \_\_\_\_\_ / Non-metered: \_\_\_\_\_  
 Nil  NLT  NRT  
 Nil  >10m  >8m  >7m  >5m  
 Nil  80  70  50  
 Nil  24hrs  10-16  22-06  Others: \_\_\_\_\_

(10) Anticipated Programmes:  
Start: EAB/28/09/2018 (Est.: MID/NOV/18)  
Duration: \_\_\_\_\_ months/weeks/days

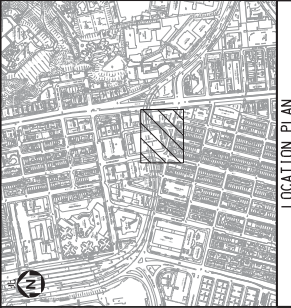
(11) Remarks:  
 For Extension/Re-enclosure, Reason: \_\_\_\_\_  
 Last Meeting/Approval Date: \_\_\_\_\_  
 Others: \_\_\_\_\_

Signature: *Sauwai Le*  
Name: Lee Chi Kin  
Discipline: Civil Engineering  
Membership No: MM0250167 (HKIE)  
Contract No: 2859 1714

**APPROVED DRAWING**  
CONTRACT NO.: HY2014/08  
TMLG NO. on  
ENDORSED BY THE ENGINEER / ENGINEERS REPRESENTATIVE

DATE: \_\_\_\_\_

(1) PMS Plan ID:		Central Kowloon Route – You Ma Tei East	
(2) Project Manager:		M M <b>ARUP</b> Joint Venture	
(3) Contract No.: HY201408		TtA FOR CABLE DIVERSION IN AT SHANGHAI STREET AND KANSU STREET FOOTPATH	
(4) Supervisor:		M M <b>ARUP</b> Joint Venture	
(5) Contractor:		Build King - SKEC Joint Venture	
(6) Traffic Consultant:		<b>WEINHARDT</b> Metrastr Infrastructure and Environment Limited 專業策劃及工程顧問有限公司 Tel: 2895-714	
(7) Drawing No.: 91486/D/GT/0175		Rev: -	
Designed:	NM	Drawn:	MC
Checked:	JC	Scale:	1:500
Approved:	SL	Case:	-
Date: 12 OCT 2018			
Rev:	FIRST SUBMISSION		DCT 18
Date:			
(8) TTA Particulars: (A) Temp. NSR: <input checked="" type="checkbox"/> NI <input type="checkbox"/> 8-0174-9 <input type="checkbox"/> 7-9 <input type="checkbox"/> 7-24 <input type="checkbox"/> 24 Net Duration: _____ months/weeks/days (B) Temp. PIS Closure: <input checked="" type="checkbox"/> NI <input type="checkbox"/> Metered <input type="checkbox"/> Non-metered (C) Temp. NLT/NRT: <input type="checkbox"/> Totaly Metered: _____ /Non-metered months/weeks/days Net Duration: _____ months/weeks/days (D) Temp. Veh. Length Prohibit.: <input checked="" type="checkbox"/> NI <input type="checkbox"/> NLT <input type="checkbox"/> NRT Net Duration: _____ months/weeks/days (E) Temp. Speed Limit (km/h): <input checked="" type="checkbox"/> NI <input type="checkbox"/> 80 <input type="checkbox"/> 70 <input type="checkbox"/> 50 <input type="checkbox"/> 20 <input type="checkbox"/> 10-16 <input type="checkbox"/> 22-06 <input type="checkbox"/> Other: _____ (F) Implementation Hours/Days of Week: Days of Week: _____ 24hrs _____ (G) Others/Remarks: _____			



**Notes:**  
 1. ALL PROVIDERS SHOULD REFER TO THE CODE OF PRACTICE FOR THE LIGHTING SIGNING AND GUARDING OF ROAD WORKS (HIGHWAYS DEPARTMENT).  
 2. ALL SIGNS AND ROAD MARKINGS SHOULD COMPLY WITH DRAWING OTTAS-H-105 (TRANSPORT DEPARTMENT).  
 3. ALL SPECIFIED ROAD ACCESSES AND PEDESTRIAN CROSSINGS SHOULD BE MAINTAINED DURING THE CONSTRUCTION PERIOD.  
 4. ALL DIMENSIONS ARE MINIMUM CLEAR WIDTH SUBJECT TO ON-SITE ADJUSTMENT.  
 5. ALL STREET FURNITURE TO BE TEMPORARILY REMOVED IF NECESSARY.  
 6. PEDESTRIAN LOCATIONS MAY BE REVERSED SUBJECT TO WORKS PROGRAMME AND ON-SITE CONDITIONS.  
 7. FOR WORKS ARE LOCATED ON CARRIAGEWAY, LOADING/UNLOADING AREA WILL BE ARRANGED WITHIN THE WORKS AREA. FOR WORKS AREA LOCATED ON PEDESTRIAN CROSSING, THE UNLOADING AREA WILL BE ARRANGED AS INDICATED.  
 8. THE EXACT LOCATIONS AND DIMENSIONS OF THE PROPOSED TRAFFIC SIGN MAY BE ADJUSTED DUE TO THE ACTUAL SITE CONDITIONS AND THE AGREEMENT WITH TRAFFIC POLICE.

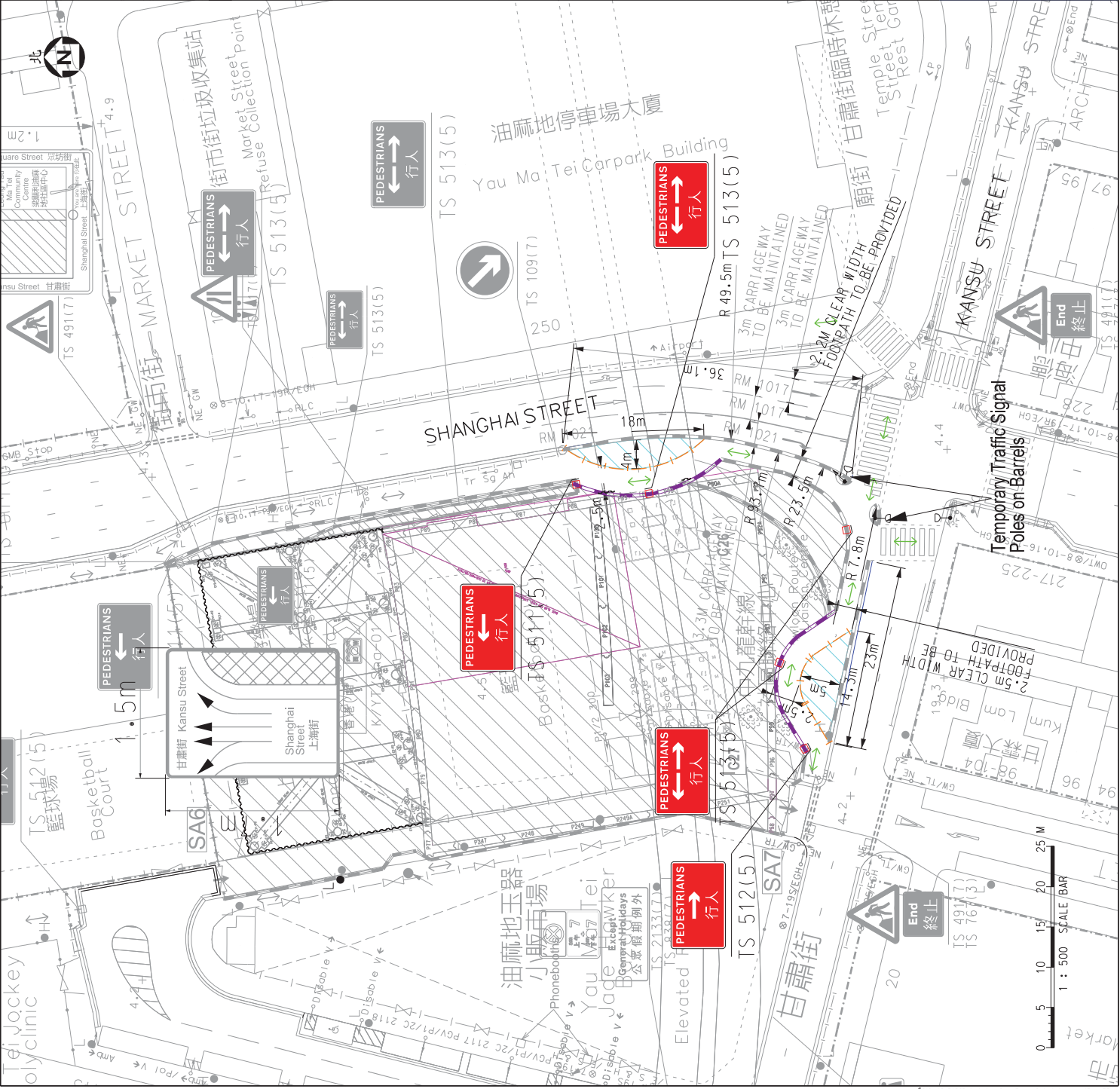
- Legends:**
- SITE BOUNDARY
  - TEMPORARY TRAFFIC SIGN FOR THIS SCHEME
  - TRAFFIC CONE WITH FLASHING LIGHTS
  - WATER FILLED BARRIER WITH FLASHING LANTERN
  - HOARDINGS FOR THIS SCHEME
  - WORKS AREA FOR THIS SCHEME
  - SITE ACCESS FOR THIS SCHEME
  - REVOLVING FLASHING LANTERN FOR THIS SCHEME
  - PEDESTRIAN DIVERSION
  - TEMPORARY TRAFFIC SIGN FOR OTHER SCHEME
  - TRAFFIC CONE WITH FLASHING LIGHTS FOR OTHER SCHEME
  - WATER FILLED BARRIER FOR OTHER SCHEME
  - PEDESTRIAN BARRIER/ HOARDING FOR OTHER SCHEME
  - WORKS AREA FOR OTHER SCHEME
  - SITE ACCESS FOR OTHER SCHEME
  - REVOLVING FLASHING LANTERN FOR OTHER SCHEME
  - PEDESTRIAN BARRIER WITH FLASHING LIGHTS FOR OTHER SCHEME
  - WATER FILLED BARRIER WITH FLASHING LANTERN AND AGRI-LEC PANELS FOR THIS SCHEME
  - TEMPORARY TRAFFIC LIGHTS FOR THIS SCHEME
  - TEMPORARY TRAFFIC LIGHTS FOR OTHER SCHEME

Signature: **Sauwat Le**  
 Name: Lee Chi Kin  
 Discipline : Civil Engineer  
 Membership No : MMO250767 (HK I.E.)  
 Contact No : 2859 1714

**APPROVED DRAWING**  
 CONTRACT NO.: HY2014/08  
 TMLG NO. on

ENDORSED BY THE ENGINEER / ENGINEERS REPRESENTATIVE

DATE:



(1) VPMS Plan ID: <b>MA</b>	(2) Project Manager: <b>MAK WONG</b> M WONG MAK WONG PROJECT MANAGEMENT OFFICE
(3) Contract No.: HY2014/08	Central Kowloon Route - You Ma Tei East
(4) Supervisor: <b>ARUP</b>	M M MOTT MACDONALD
Contact: Joint Venture	Joint Venture
(5) Contractor: <b>Build King SK E&amp;C</b>	<b>Build King - SKEC JOINT VENTURE</b>
Contact:	TEK
(6) Traffic Consultant: <b>MEINHARDT</b>	<b>MEINHARDT</b> Meinhardt Infrastructure and Environment Limited 德華道 匯豐大廈 17樓 德華有限公司 Tel: 2895-7174
(7) Drawing No.: 91486/D/G/T/0176	Rev: <b>A</b>

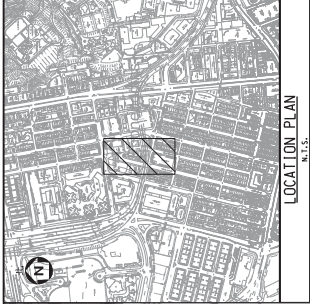
**TTA FOR DIAPHRAGM WALL CONSTRUCTION ALONG RECLAMATION STREET (STAGE 1)**

Date: 11 OCT 2018 Scales: 1:500 Cases: Bank: --

Designed	NM	CM	JC	Approved	SL

Rev.	Comments	From TMLG Incorporated	Comments	From TMLG Incorporated	Date
A		FIRST SUBMISSION			OCT 18
					OCT 18
					Date

(8) TTA Particulars:  
 (A) Temp. NSR:  NI  8-0174-9  7-9  7-24  24  
 Net Duration: \_\_\_\_\_ months/weekdays  
 (B) Temp. PIS Closure:  NI  Metered  Non-metered  
 PIS Meter Nos.: \_\_\_\_\_ /Non-metered  
 Total/L Metered: \_\_\_\_\_ /Non-metered  
 Net Duration: \_\_\_\_\_ months/weekdays  
 (C) Temp. NLT/NRT:  NI  NLT  
 Net Duration: \_\_\_\_\_ months/weekdays  
 (D) Temp. Veh. Length Prohibit.:  NI  >10m  >8m  >7m  >5m  
 Net Duration: \_\_\_\_\_ months/weekdays  
 (E) Temp. Speed Limit (km/h):  
 NI  80  70  50  
 Net Duration: \_\_\_\_\_ months/weekdays  
 (F) Implementation Hours/Days of Week:  
 Days of Week:  24hrs  10-16  22-06  Other:  
 (G) Others/Remarks: 07:00 - 19:00



**Notes:**

- ALL PROVIDERS SHOULD REFER TO THE CODE OF PRACTICE FOR THE LIGHTING SIGNING AND GUARDING OF ROAD WORKS (HIGHWAYS DEPARTMENT).
- ALL SIGNS AND ROAD MARKINGS SHOULD COMPLY WITH DRAWING OTTAS-11 TD5 (TRANSPORT DEPARTMENT).
- ALL FLEETING TRAFFIC LIGHTS SHOULD BE MAINTAINED DURING THE CONSTRUCTION PERIOD.
- ALL DIMENSIONS ARE MINIMUM CLEAR WIDTH SUBJECT TO ON-SITE ADJUSTMENT.
- ALL STREET FURNITURE TO BE TEMPORARILY REMOVED IF NECESSARY.
- WORKS LOCATION MAY BE REVISED SUBJECT TO WORKS PROGRAMME AND ON-SITE CONTROL.
- FOR WORKS ARE LOCATED ON CARRIAGEWAY LOADING/UNLOADING AREA WILL BE ARRANGED WITHIN THE WORKS AREA. FOR WORKS AREA LOCATED ON PEDESTRIAN WORKING AREA, THE SIGNING/ENCLOSING AREA WILL BE ARRANGED AS INDICATED.
- THE EXACT LOCATIONS AND DIMENSIONS OF THE PROPOSED TRAFFIC SIGN MAY BE ADJUSTED DUE TO THE ACTUAL SITE CONDITIONS AND THE AGREEMENT WITH TRAFFIC POLICE.

- Legends:**
- SITE BOUNDARY
  - TEMPORARY TRAFFIC SIGN FOR THIS SCHEME
  - WATER FILLED BARRIER WITH FLASHING LIGHTS FOR THIS SCHEME
  - WORKS AREA FOR THIS SCHEME
  - SITE ACCESS FOR THIS SCHEME
  - REVOLVING FLASHING LANTERN FOR THIS SCHEME
  - PEDESTRIAN BARRIER HOARDING FOR THIS SCHEME
  - WORKS AREA FOR OTHER SCHEME
  - REVOLVING FLASHING LANTERN FOR OTHER SCHEME
  - PEDESTRIAN BARRIER HOARDING FOR OTHER SCHEME
  - WORKS AREA FOR OTHER SCHEME
  - REVOLVING FLASHING LANTERN FOR OTHER SCHEME
  - PEDESTRIAN BARRIER WITH FLASHING LIGHTS FOR OTHER SCHEME
  - WATER FILLED BARRIER WITH FLASHING LANTERN AND APRILE PANELS FOR THIS SCHEME
  - TEMPORARY TRAFFIC LIGHTS FOR THIS SCHEME
  - BUFFER ZONE

Signature: *Sauwul Lee*  
 Name: Lee Chi Kin  
 Discipline: Civil Engineering  
 Membership No.: MM0250767 (HKIE)  
 Contract No.: 2859 1714

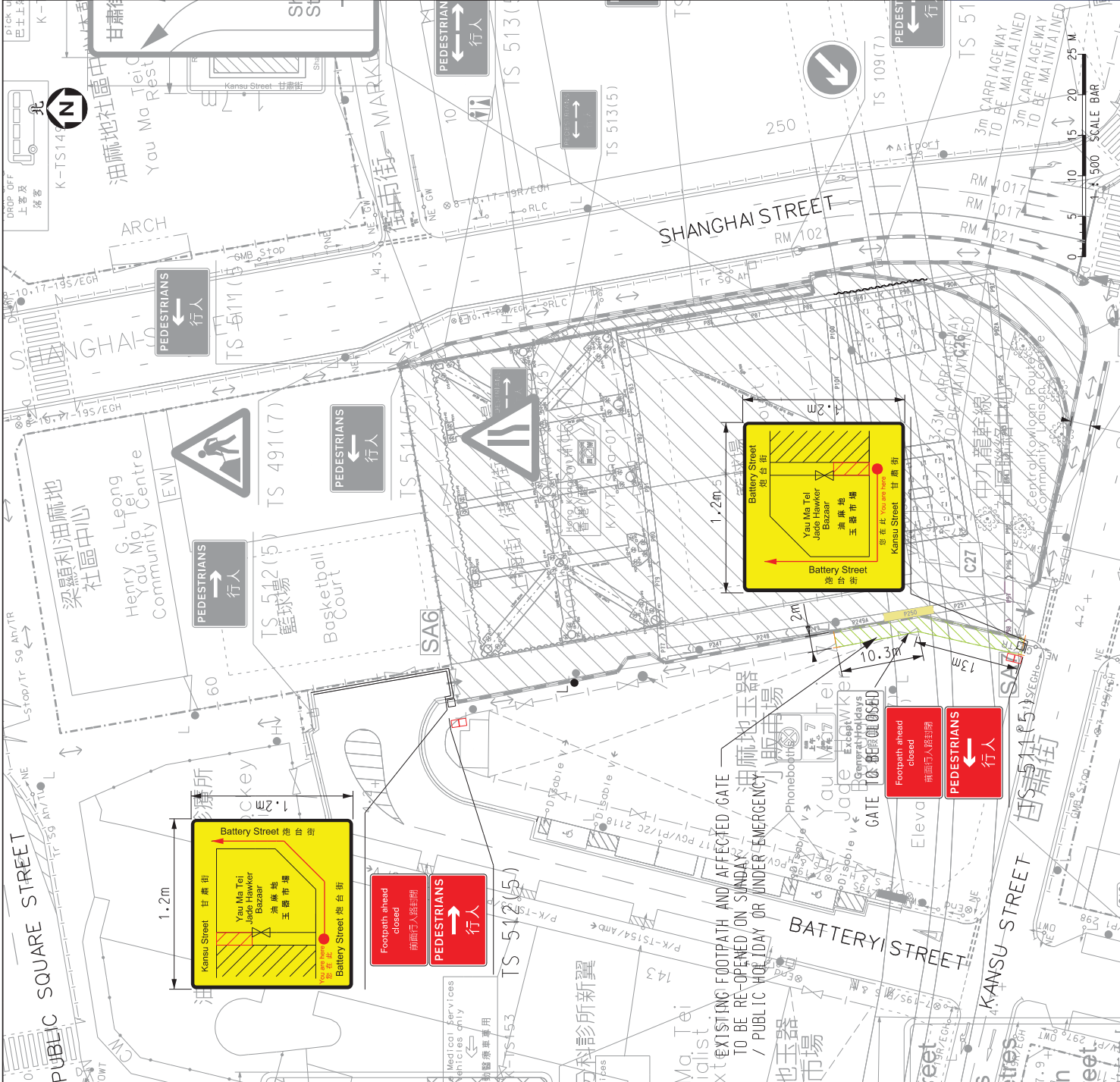
**APPROVED DRAWING**

CONTRACT NO.: HY2014/08

TM LG NO. on

ENDORSED BY THE ENGINEER / ENGINEERS REPRESENTATIVE

DATE: \_\_\_\_\_



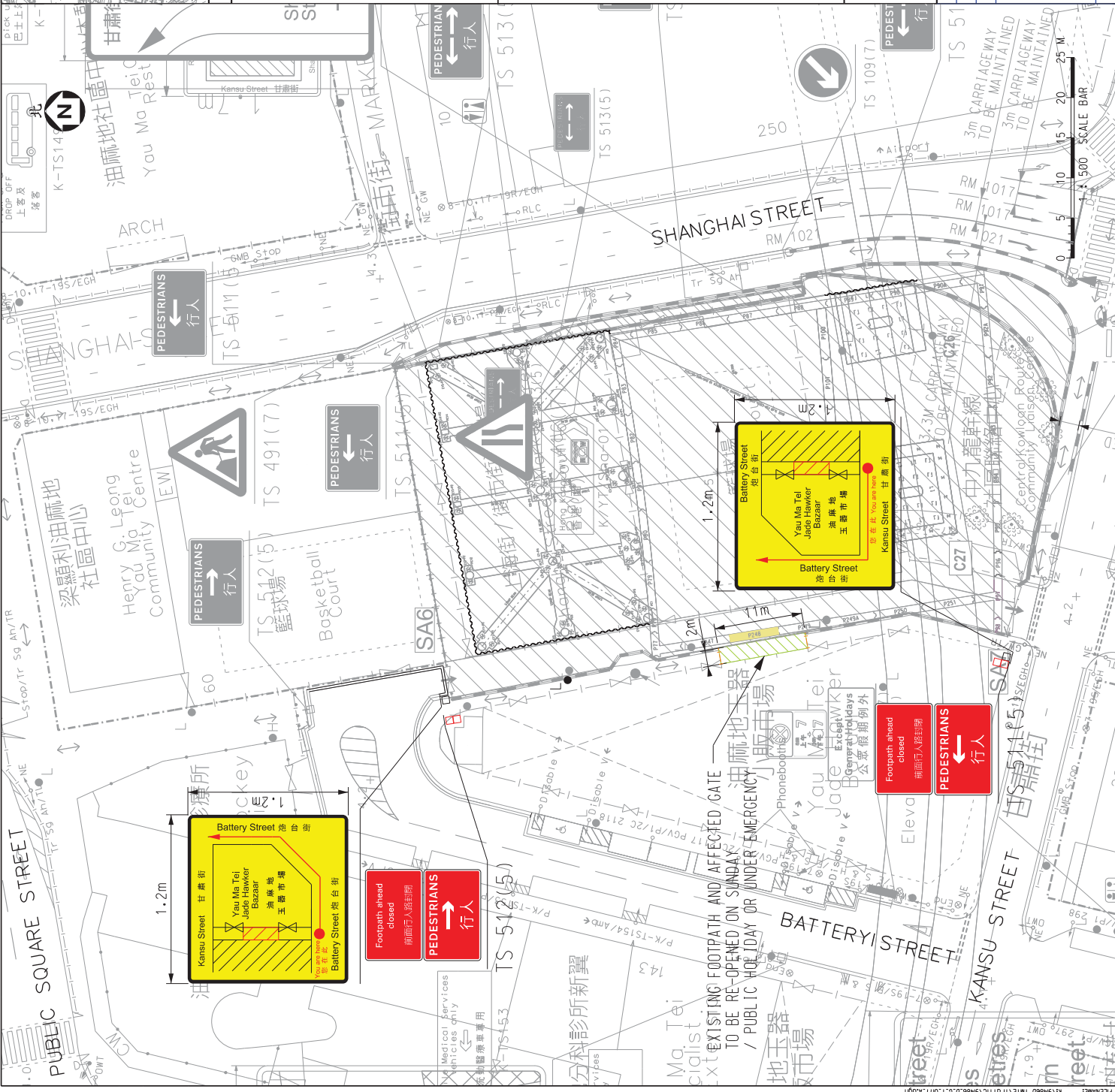
(1) VPMS Plan ID: \_\_\_\_\_  
 (2) Project Manager: **MAK CHUN WAYS DEPARTMENT**  
 馬克尊偉 經理  
 MAJOR WORKS PROJECT MANAGEMENT OFFICE  
 (3) Contract No: HY2014/08  
**Central Kowloon Route - You Ma Tei East**  
 (4) Supervisor: **ARUP**  
 JOINT VENTURE  
 Contact: \_\_\_\_\_  
 (5) Contractor: **BUILD KING - SKEC JOINT VENTURE**  
 BUILD KING - SKEC  
 Contact: \_\_\_\_\_  
 (6) Traffic Consultant: **MEINHARDT**  
 Meinhardt Infrastructure and Environment Limited  
 邁拿打 交通及環境工程顧問有限公司  
 Contact: Samuel Lee  
 Tel: 2895-1714  
 (7) Drawing No: **91486/D/G/T/0177**  
 Rev: **A**  
**TTA FOR DIAPHRAGM WALL CONSTRUCTION ALONG RECLAMATION STREET (STAGE 2)**  
 Date: 11 OCT 2018 Scale: 1:500 Cases: \_\_\_\_\_  
 Designed: \_\_\_\_\_ Drawn: \_\_\_\_\_ Checked: \_\_\_\_\_ Approved: \_\_\_\_\_  
 NM MC JC SL  
 A. COMMENTS FROM TMLG INCORPORATED  
 FIRST SUBMISSION  
 OCT 18  
 Rev. \_\_\_\_\_  
 (8) TTA Particulars:  
 (A) Temp. NSR:  Nil  6-0/17-49  7-9  7-24  24  
 Nil Duration: \_\_\_\_\_ months/weeks/days  
 (B) Temp. PIS Closure:  Nil  Metered  Non-metered  
 Nil Duration: \_\_\_\_\_ months/weeks/days  
 (C) Temp. NLT/NRT:  Nil  NLT  NRT  
 Nil Duration: \_\_\_\_\_ months/weeks/days  
 (D) Temp. Veh. Length Prohibition:  Nil  >10m  >8m  >7m  >5m  
 Nil Duration: \_\_\_\_\_ months/weeks/days  
 (E) Temp. Speed Limit (km/h): \_\_\_\_\_  
 Nil Duration: \_\_\_\_\_ months/weeks/days  
 (F) Implementation Hours/Days of Week:  
 24hrs  10-16  22-06  Other:  
 Days of Week: \_\_\_\_\_  
 (G) Others/Remarks: 07:00 - 19:00  
 (9) Traffic Assessments:  
 TIA  Junction Capacity  Queue Length  
 Swept Path  Other: Report Ref. \_\_\_\_\_  
 (10) Anticipated Programme:  
 Start: \_\_\_\_\_ MIDNOV 18 (Est: EARLY DEC 18)  
 Duration: \_\_\_\_\_ 3 \_\_\_\_\_ months/weeks/days  
 (11) Remarks:  
 For Extension/Re-endorsement. Reason: \_\_\_\_\_  
 Last Meeting/Approval Date: \_\_\_\_\_  
 Others: \_\_\_\_\_

(12) VPMS Plan ID: \_\_\_\_\_  
 (13) Project Manager: \_\_\_\_\_  
 (14) Contract No: \_\_\_\_\_  
 (15) Supervisor: \_\_\_\_\_  
 (16) Traffic Consultant: \_\_\_\_\_  
 (17) Drawing No: \_\_\_\_\_  
 Rev: \_\_\_\_\_  
 (18) TTA Particulars: \_\_\_\_\_  
 (19) Anticipated Programme: \_\_\_\_\_  
 (20) Remarks: \_\_\_\_\_

**LOCATION PLAN**  
 N.T.S.  
**Notes:**  
 1. ALL PROVIDERS SHOULD REFER TO THE CODE OF PRACTICE FOR THE LIGHTING, SIGNING AND GUARDING OF ROAD WORKS (HIGHWAYS DEPARTMENT).  
 2. ALL SIGNS AND ROAD MARKINGS SHOULD COMPLY WITH DRAWING OTTAS-11 (D5 (TRANSPORT DEPARTMENT)).  
 3. ALL PROPOSED VEHICULAR ACCESSES AND PEDESTRIAN ACCESSES SHOULD BE MAINTAINED DURING THE CONSTRUCTION PERIOD.  
 4. ALL DIMENSIONS ARE MINIMUM CLEAR WIDTH SUBJECT TO ON-SITE ADJUSTMENT.  
 5. ALL STREET FURNITURE TO BE TEMPORARILY REMOVED IF NECESSARY.  
 6. THE SIGNING SCHEME TO BE USED SHALL BE AS PERMITTED SUBJECT TO WORKS PROGRAMME AND ON-SITE CONSULTATION.  
 7. FOR WORKS ARE LOCATED ON CARRIAGEWAY, LOADING/UNLOADING AREA WILL BE ARRANGED WITHIN THE WORKS AREA. FOR WORKS AREA LOCATED ON PEDESTRIAN PATH, WORKS SHOULD BE CONFINED TO THE SIDE OF THE PATH. SIGNING ARRANGEMENTS WILL BE ARRANGED AS INDICATED.  
 8. THE EXACT LOCATIONS AND DIMENSIONS OF THE PROPOSED WORKS AREA SHALL BE ADJUSTED DUE TO THE ACTUAL SITE CONDITIONS AND THE AGREEMENT WITH TRAFFIC POLICE.

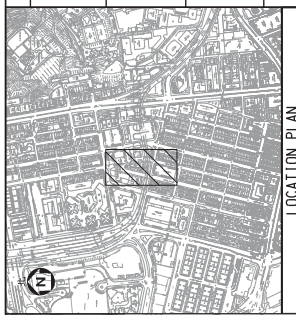
- Legends:**
- [Symbol] SITE BOUNDARY
  - [Symbol] TEMPORARY TRAFFIC SIGN FOR THIS SCHEME
  - [Symbol] WATER FILLED BARRIER WITH FLASHING LIGHTS FOR THIS SCHEME
  - [Symbol] WORKS AREA FOR THIS SCHEME
  - [Symbol] SITE ACCESS FOR THIS SCHEME
  - [Symbol] REVOLVING FLASHING LANTERN FOR THIS SCHEME
  - [Symbol] PERSIMMON DISK SIGN FOR OTHER SCHEME
  - [Symbol] TEMPORARY TRAFFIC SIGN FOR OTHER SCHEME
  - [Symbol] WATER FILLED BARRIER FOR OTHER SCHEME
  - [Symbol] PEDESTRIAN BARRIER HOARDING FOR OTHER SCHEME
  - [Symbol] WORKS AREA FOR OTHER SCHEME
  - [Symbol] SITE ACCESS FOR OTHER SCHEME
  - [Symbol] REVOLVING FLASHING LANTERN FOR OTHER SCHEME
  - [Symbol] PEDESTRIAN BARRIER WITH FLASHING LIGHTS FOR OTHER SCHEME
  - [Symbol] WATER FILLED BARRIER WITH FLASHING LANTERN AND ACYLIC PANELS FOR THIS SCHEME
  - [Symbol] TEMPORARY TRAFFIC LIGHTS FOR THIS SCHEME
  - [Symbol] BUFFER ZONE

**Signature: Samuel Lee**  
 Name: Lee Chi Kin  
 Discipline: Civil Engineering  
 Membership No: M00250767 (HKIE)  
 Contact No: 2859 1714  
**APPROVED DRAWING**  
 CONTRACT NO.: HY2014/08  
 TMLG NO. on  
**ENDORSED BY THE ENGINEER / ENGINEERS REPRESENTATIVE**  
 DATE: \_\_\_\_\_





(1) WPMS Plan ID:	(2) Project Manager:	(3) Contract No.:	(4) Supervisor:	(5) Contractor:	(6) Traffic Consultant:	(7) Drawing No.:	Rev.:	Scale:	Case:	Bank:	SL														
	MAKROWAYS DEPARTMENT 交通工程專業處 MAKROWAYS PROJECT MANAGEMENT OFFICE	Central Kowloon Route - You Ma Tei East	ARUP M M JOINT VENTURE	Build King - SKEC JOINT VENTURE	MEINHARDT Meinhardt Infrastructure and Environment Limited 專業環境工程顧問有限公司	91486/D/G/T/0178	A	1:500																	
<p><b>Title: TTA FOR DIAPHRAGM WALL CONSTRUCTION ALONG RECLAMATION STREET (STAGE 3)</b></p> <p>Designed: NM    Drawn: MC    Checked: JC    Approved: SL</p> <p>Date: 11 OCT 2018    Scale: 1:500    Case:    Bank:    SL</p> <p>Rev.:</p> <table border="1"> <tr> <th>Rev.</th> <th>Comments</th> <th>From TMLG</th> <th>Incorporated</th> <th>Oct 18</th> <th>Oct 18</th> <th>Date</th> </tr> <tr> <td>A</td> <td></td> <td>FIRST SUBMISSION</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>												Rev.	Comments	From TMLG	Incorporated	Oct 18	Oct 18	Date	A		FIRST SUBMISSION				
Rev.	Comments	From TMLG	Incorporated	Oct 18	Oct 18	Date																			
A		FIRST SUBMISSION																							
<p>(8) TTA Particulars:</p> <p>(A) Temp. NSR: <input type="checkbox"/> NI    <input type="checkbox"/> 6-0/17-19    <input type="checkbox"/> 7-19    <input type="checkbox"/> 7-24    <input type="checkbox"/> 24</p> <p>Net Duration: _____ months/weeks/days</p> <p>(B) Temp. PIS Closure: <input type="checkbox"/> NI    <input type="checkbox"/> Metered    <input type="checkbox"/> Non-metered</p> <p>PS Meter No.: _____ /Non-metered</p> <p>Total Metered: _____ /Non-metered</p> <p>Net Duration: _____ months/weeks/days</p> <p>(C) Temp. NLT/NRT: <input type="checkbox"/> NI    <input type="checkbox"/> NLT    <input type="checkbox"/> NRT</p> <p>Net Duration: _____ months/weeks/days</p> <p>(D) Temp. Veh. Length Prohibit.: <input type="checkbox"/> NI    <input type="checkbox"/> &gt;10m    <input type="checkbox"/> &gt;8m    <input type="checkbox"/> &gt;7m    <input type="checkbox"/> &gt;5m</p> <p>Net Duration: _____ months/weeks/days</p> <p>(E) Temp. Speed Limit (km/h): <input type="checkbox"/> NI    <input type="checkbox"/> 80    <input type="checkbox"/> 70    <input type="checkbox"/> 50</p> <p>Net Duration: _____ months/weeks/days</p> <p>(F) Implementation Hours/Days of Week: <input type="checkbox"/> 24hrs    <input type="checkbox"/> 10-16    <input type="checkbox"/> 22-06    <input checked="" type="checkbox"/> Others:</p> <p>Days of Week: _____</p> <p>(G) Others/Remarks: 07:00 - 19:00</p>																									
<p>(9) Traffic Assessments:</p> <p><input type="checkbox"/> TIA    <input type="checkbox"/> Junction Capacity    <input type="checkbox"/> Queue Length</p> <p><input type="checkbox"/> Swept Path    <input type="checkbox"/> Others: Report Ref. _____</p> <p>(10) Anticipated Programme:</p> <p>Start: EARLY DEC. 18    End: MIDD. DEC. 18</p> <p>Duration: _____ months/weeks/days</p> <p>(11) Remarks:</p> <p><input type="checkbox"/> For Extension/Re-enclosurement, Reason: _____</p> <p><input type="checkbox"/> Last Meeting/Approval Date: _____</p> <p><input type="checkbox"/> Others: _____</p>																									



**Notes:**

- ALL PROVIDERS SHOULD REFER TO THE CODE OF PRACTICE FOR THE LIGHTING, SIGNING AND GUARDING OF ROAD WORKS (HIGHWAYS DEPARTMENT).
- ALL SIGNS AND ROAD MARKINGS SHOULD COMPLY WITH DRAWING CTR/AS-11/105 (TRANSPORT DEPARTMENT).
- ALL PEDESTRIAN ACCESSES AND PEDESTRIAN ACCESSES SHOULD BE MAINTAINED DURING THE CONSTRUCTION PERIOD.
- ALL DIMENSIONS ARE MINIMUM CLEAR WIDTH SUBJECT TO ON-SITE ADJUSTMENT.
- ALL STREET FURNITURE TO BE TEMPORARILY REMOVED IF NECESSARY.
- WORKS LOCATIONS MAY BE REVISED SUBJECT TO WORKS PROGRAMME AND ON-SITE CONDITIONS.
- FOR WORKS TO BE LOCATED ON CARRIAGEWAY, LOADING/UNLOADING AREA WILL BE ARRANGED WITHIN THE WORKS AREA. FOR WORKS AREA LOCATED ON CARRIAGEWAY, TEMPORARY HOUSING AREA WILL BE ARRANGED AS INDICATED.
- TRAFFIC SIGNALS AND DIMENSIONS OF THE PROPOSED TRAFFIC SIGNALS MAY BE ADJUSTED DUE TO THE ACTUAL SITE CONDITIONS AND THE AGREEMENT WITH TRAFFIC POLICE.

- Legends:**
- TEMPORARY TRAFFIC SIGN FOR THIS SCHEME
  - TEMPORARY TRAFFIC SIGN FOR THIS SCHEME WITH FLASHING LIGHTS
  - WATER FILLED BARRIER WITH FLASHING LANTERN FOR THIS SCHEME
  - HANDINGS FOR THIS SCHEME
  - WORKS AREA FOR THIS SCHEME
  - SITE ACCESS FOR THIS SCHEME
  - REVOLVING FLASHING LANTERN FOR THIS SCHEME
  - PEDESTRIAN DIVERSION FOR THIS SCHEME
  - TEMPORARY TRAFFIC SIGN FOR OTHER SCHEME WITH FLASHING LIGHTS
  - TEMPORARY TRAFFIC SIGN FOR OTHER SCHEME
  - WATER FILLED BARRIER FOR OTHER SCHEME
  - PEDESTRIAN BARRIER HOARDING FOR OTHER SCHEME
  - WORKS AREA FOR OTHER SCHEME
  - SITE ACCESS FOR OTHER SCHEME
  - REVOLVING FLASHING LANTERN FOR OTHER SCHEME
  - PEDESTRIAN BARRIER WITH FLASHING LIGHTS FOR OTHER SCHEME
  - WATER FILLED BARRIER WITH FLASHING LANTERN AND ACYLIC PANELS FOR THIS SCHEME
  - TEMPORARY TRAFFIC LIGHTS FOR THIS SCHEME
  - BUFFER ZONE

**Signature:** Samuel Lee

**Name:** Lee Chi Kin

**Discipline:** Civil Engineering

**Membership No.:** MM0250767 (HKIE)

**Contact No.:** 2859 1714

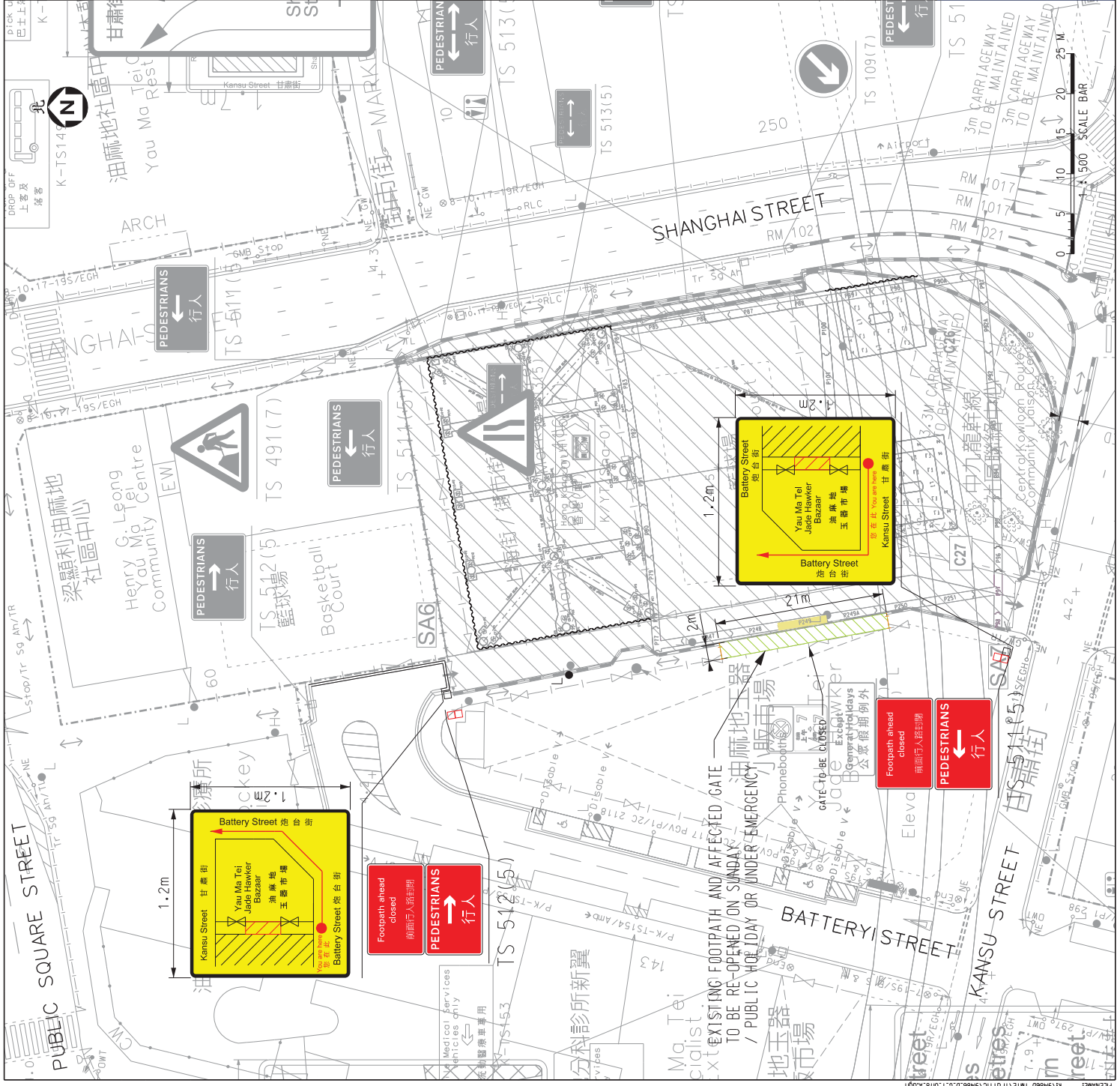
**APPROVED DRAWING**

**CONTRACT NO.:** HY2014/08

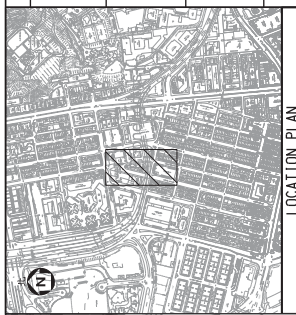
**TMLG NO.:** on

**ENDORSED BY THE ENGINEER / ENGINEERS REPRESENTATIVE**

**DATE:**



(1) WPMS Plan ID: _____	(2) Project Manager: <b>黃嘉鴻</b> M M MAJOR WORKS PROJECT MANAGEMENT OFFICE	(3) Contract No: HY2014/08 <b>Central Kowloon Route – You Ma Tei East</b>	(4) Supervisor: <b>ARUP</b> M M JOINT VENTURE	(5) Contractor: <b>Build King - SKEC JOINT VENTURE</b> BUILD KING - SKEC JOINT VENTURE	(6) Traffic Consultant: <b>MEINHARDT</b> Meinhardt Infrastructure and Environment Limited 專業基礎設施工程顧問有限公司 Tel: 2895-7174	(7) Drawing No: <b>91486/D/GT/0179</b> Rev: <b>A</b>	<b>TTA FOR DIAPHRAGM WALL CONSTRUCTION ALONG RECLAMATION STREET (STAGE 4)</b> Title: _____ Date: 11 OCT 2018 Scale: 1:500 Cases: _____ Bank: _____
Designed: _____	Drawn: _____	Checked: _____	Approved: _____	SL: _____	(8) TTA Particulars: (A) Temp, NSR: <input type="checkbox"/> NI <input type="checkbox"/> 8-0/17-19 <input type="checkbox"/> 7-19 <input type="checkbox"/> 7-24 <input type="checkbox"/> 24 Net Duration: _____ months/weeks/days (B) Temp, PIS Closure: <input type="checkbox"/> NI <input type="checkbox"/> Metered <input type="checkbox"/> Non-metered (C) Temp, NLT/NRT: <input type="checkbox"/> NI <input type="checkbox"/> NLT <input type="checkbox"/> NRT Net Duration: _____ months/weeks/days (D) Temp, Veh. Length Prohibit: <input type="checkbox"/> NI <input type="checkbox"/> >10m <input type="checkbox"/> >8m <input type="checkbox"/> >7m <input type="checkbox"/> >5m Net Duration: _____ months/weeks/days (E) Temp, Speed Limit (km/h): _____ Net Duration: _____ months/weeks/days (F) Implementation Hours/Days of Week: Days of Week: <input type="checkbox"/> 24hrs <input type="checkbox"/> 10-16 <input type="checkbox"/> 22-06 <input checked="" type="checkbox"/> Others: (G) Others/Remarks: 07:00 - 19:00		
(9) Traffic Assessments: <input type="checkbox"/> TIA <input type="checkbox"/> Junction Capacity <input type="checkbox"/> Queue Length <input type="checkbox"/> Swept Path <input type="checkbox"/> Others: Report Ref. _____			(10) Anticipated Programme: Start: _____ MIDD/DEC 18 (End: _____ LATE/DEC 18) Duration: _____ 2 months/weeks/days			(11) Remarks: <input type="checkbox"/> For Extension/Re-enclosure, Reason: _____ <input type="checkbox"/> Last Meeting/Approval Date: _____ <input type="checkbox"/> Others: _____	



**NOTES:**

- ALL PROVIDERS SHOULD REFER TO THE CODE OF PRACTICE FOR THE LIGHTING, SIGNING AND GUARDING OF ROAD WORKS (HIGHWAYS DEPARTMENT).
- ALL SIGNS AND ROAD MARKINGS SHOULD COMPLY WITH DRAWING OTTAS-11105 (TRANSPORT DEPARTMENT). ALL SPEED LIMIT SIGNS SHOULD BE MAINTAINED DURING THE CONSTRUCTION PERIOD.
- ALL DIMENSIONS ARE MINIMUM CLEAR WIDTH SUBJECT TO ON-SITE ADJUSTMENT.
- ALL STREET FURNITURE TO BE TEMPORARILY REMOVED IF NECESSARY.
- WORKS LOCATIONS TO BE MARKED BY SIGNS SUBJECT TO WORKS PROGRAMME AND ON-SITE CONSULTATION.
- FOR WORKS ARE LOCATED ON CARRIAGEWAY, LOADING/UNLOADING AREA WILL BE ARRANGED WITHIN THE WORKS AREA. FOR WORKS AREA LOCATED ON PEDESTRIAN AREA, THE EXACT LOCATIONS AND DIMENSIONS OF THE PROPOSED TRAFFIC SIGN MAY BE ADJUSTED DUE TO THE ACTUAL SITE CONDITIONS AND THE AGREEMENT WITH TRAFFIC POLICE.

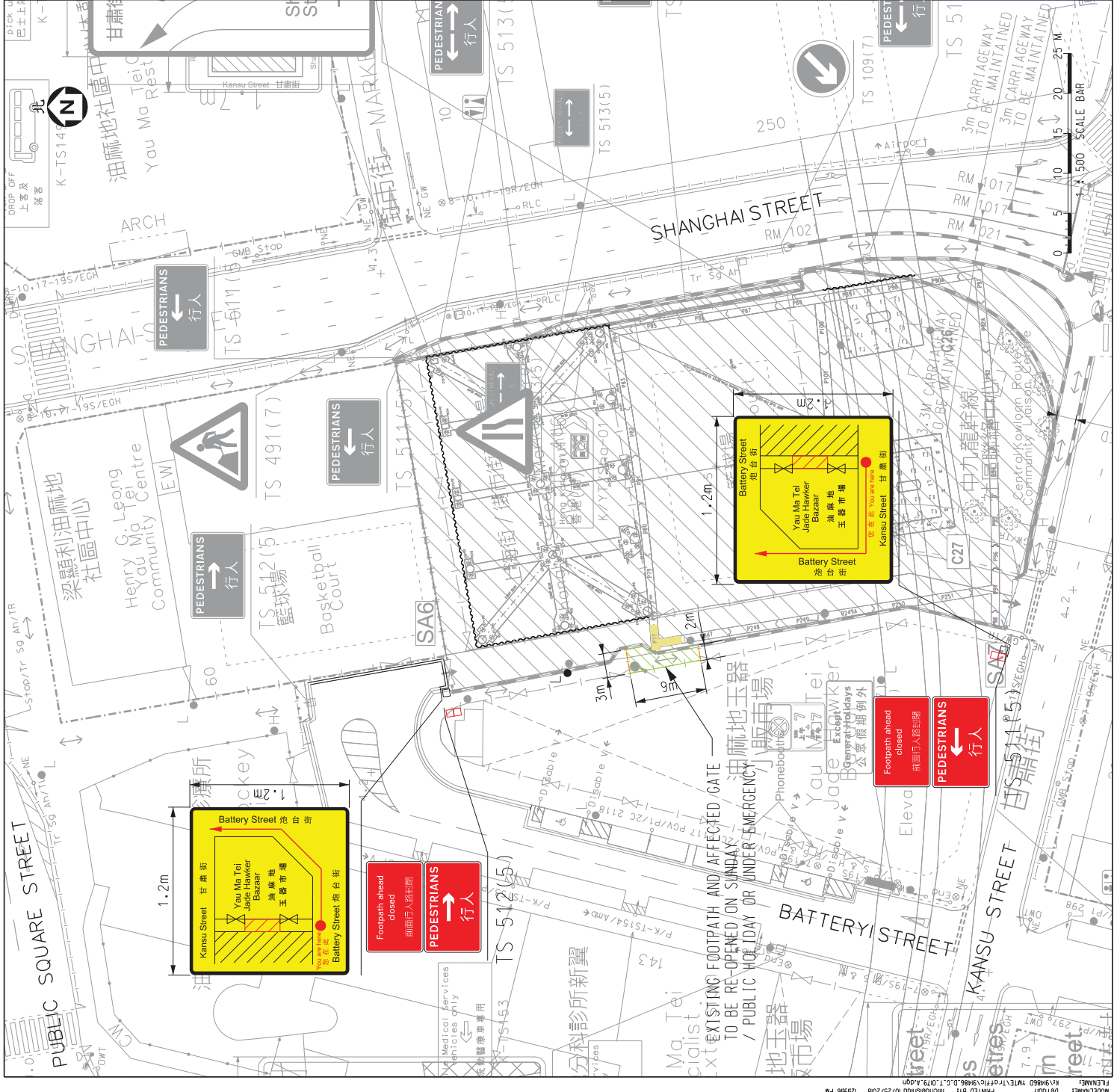
**Legends:**

	SITE BOUNDARY
	TEMPORARY TRAFFIC SIGN FOR THIS SCHEME
	WATER FILLED BARRIER WITH FLASHING LANTERN FOR THIS SCHEME
	HANDINGS FOR THIS SCHEME
	WORKS AREA FOR THIS SCHEME
	SITE ACCESS FOR THIS SCHEME
	REVOLVING FLASHING LANTERN FOR THIS SCHEME
	PEDESTRIAN OBSTRUCTION
	TEMPORARY TRAFFIC SIGN FOR OTHER SCHEME
	WATER FILLED BARRIER FOR OTHER SCHEME
	PEDESTRIAN BARRIER HOARDING
	WORKS AREA FOR OTHER SCHEME
	SITE ACCESS FOR OTHER SCHEME
	REVOLVING FLASHING LANTERN FOR OTHER SCHEME
	PEDESTRIAN BARRIER WITH FLASHING LIGHTS FOR OTHER SCHEME
	WATER FILLED BARRIER WITH FLASHING LANTERN AND ACRYLIC PANELS FOR THIS SCHEME
	TEMPORARY TRAFFIC LIGHTS FOR THIS SCHEME
	BUFFER ZONE

Signature: **Sauwal Lee**  
 Name: Lee Chi Kin  
 Discipline: Civil Engineering  
 Membership No: MM0250767 (HKIE)  
 Contact No: 2859 1714

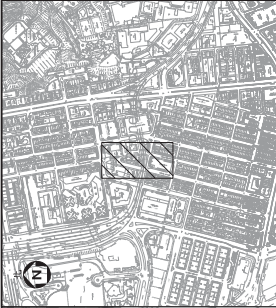
**APPROVED DRAWING**  
 CONTRACT NO.: HY2014/08  
 TMLG NO. on \_\_\_\_\_  
 ENDORSED BY THE ENGINEER / ENGINEERS REPRESENTATIVE \_\_\_\_\_

DATE: \_\_\_\_\_





(1) WPMS Plan ID:	(2) Project Manager:	(3) Contract No.:	(4) Supervisor:	(5) Contractor:	(6) Traffic Consultant:	(7) Drawing No.:	Rev.:
	黃嘉鴻 M M MAJOR WORKS PROJECT MANAGEMENT OFFICE	HY201408	Central Kowloon Route – You Ma Tei East	ARUP M M JOINT VENTURE JOINT VENTURE	Build King - SKEC JOINT VENTURE Build King - SKEC JOINT VENTURE	91486/D/G/T/0181	A
<p><b>Title: TTA FOR DIAPHRAGM WALL CONSTRUCTION ALONG RECLAMATION STREET (STAGE 6)</b></p> <p>Date: 11 OCT 2018 Scale: 1:500 Case: _____</p> <p>Designed: _____ Drawn: _____ Checked: _____ Approved: _____</p> <p>Author: _____</p> <p>Comments: _____</p> <p>Rev.:</p> <p>(8) TTA Particulars:</p> <p>(A) Temp. NSR: <input checked="" type="checkbox"/> Nil <input type="checkbox"/> 6-0/17-19 <input type="checkbox"/> 7-19 <input type="checkbox"/> 7-24 <input type="checkbox"/> 24</p> <p>Net Duration: _____ months/weeks/days</p> <p>(B) Temp. PIS Closure: <input checked="" type="checkbox"/> Nil <input type="checkbox"/> Metered <input type="checkbox"/> Non-metered</p> <p>Water Filled Barrier For Other Scheme: _____</p> <p>(C) Temp. NLT/NRT: <input checked="" type="checkbox"/> Nil <input type="checkbox"/> NLT <input type="checkbox"/> NRT</p> <p>Net Duration: _____ months/weeks/days</p> <p>(D) Temp. Veh. Length Prohibition: <input checked="" type="checkbox"/> Nil <input type="checkbox"/> &gt;10m <input type="checkbox"/> &gt;8m <input type="checkbox"/> &gt;7m <input type="checkbox"/> &gt;5m</p> <p>Net Duration: _____ months/weeks/days</p> <p>(E) Temp. Speed Limit (km/h): <input checked="" type="checkbox"/> Nil <input type="checkbox"/> 80 <input type="checkbox"/> 70 <input type="checkbox"/> 50</p> <p>Net Duration: _____ months/weeks/days</p> <p>(F) Implementation Hours/Days of Week: _____</p> <p>Days of Week: _____</p> <p>(G) Others/Remarks: _____</p>							



**Notes:**

- ALL PROVIDERS SHOULD REFER TO THE CODE OF PRACTICE FOR THE LIGHTING, SIGNING AND GUARDING OF ROAD WORKS (HIGHWAYS DEPARTMENT).
- ALL SIGNS AND ROAD MARKINGS SHOULD COMPLY WITH DRAWING CTTAS-11 T05 (TRANSPORT DEPARTMENT).
- ALL ACCESSIBLE VEHICULAR ACCESS AND PEDESTRIAN ACCESS SHOULD BE MAINTAINED DURING THE CONSTRUCTION PERIOD.
- ALL DIMENSIONS ARE MINIMUM CLEAR WIDTH SUBJECT TO ON-SITE ADJUSTMENT.
- ALL STREET FURNITURE TO BE TEMPORARILY REMOVED IF NECESSARY.
- WORKING LOCATIONS TO BE MARKED BY SIGNS SUBJECT TO WORKS PROGRAMME AND ON-SITE CONSULTATION.
- FOR WORKS TO BE LOCATED ON CARRIAGEWAY, LOADING/UNLOADING AREA WILL BE ARRANGED WITHIN THE WORKS AREA. FOR WORKS AREA LOCATED ON PEDESTRIAN PATH, WORKS AREA WILL BE ARRANGED AS INDICATED.
- THE EXACT LOCATIONS AND DIMENSIONS OF THE PROPOSED WORKS AREA WILL BE ADJUSTED DUE TO THE ACTUAL SITE CONDITIONS AND THE AGREEMENT WITH TRAFFIC POLICE.

**Legends:**

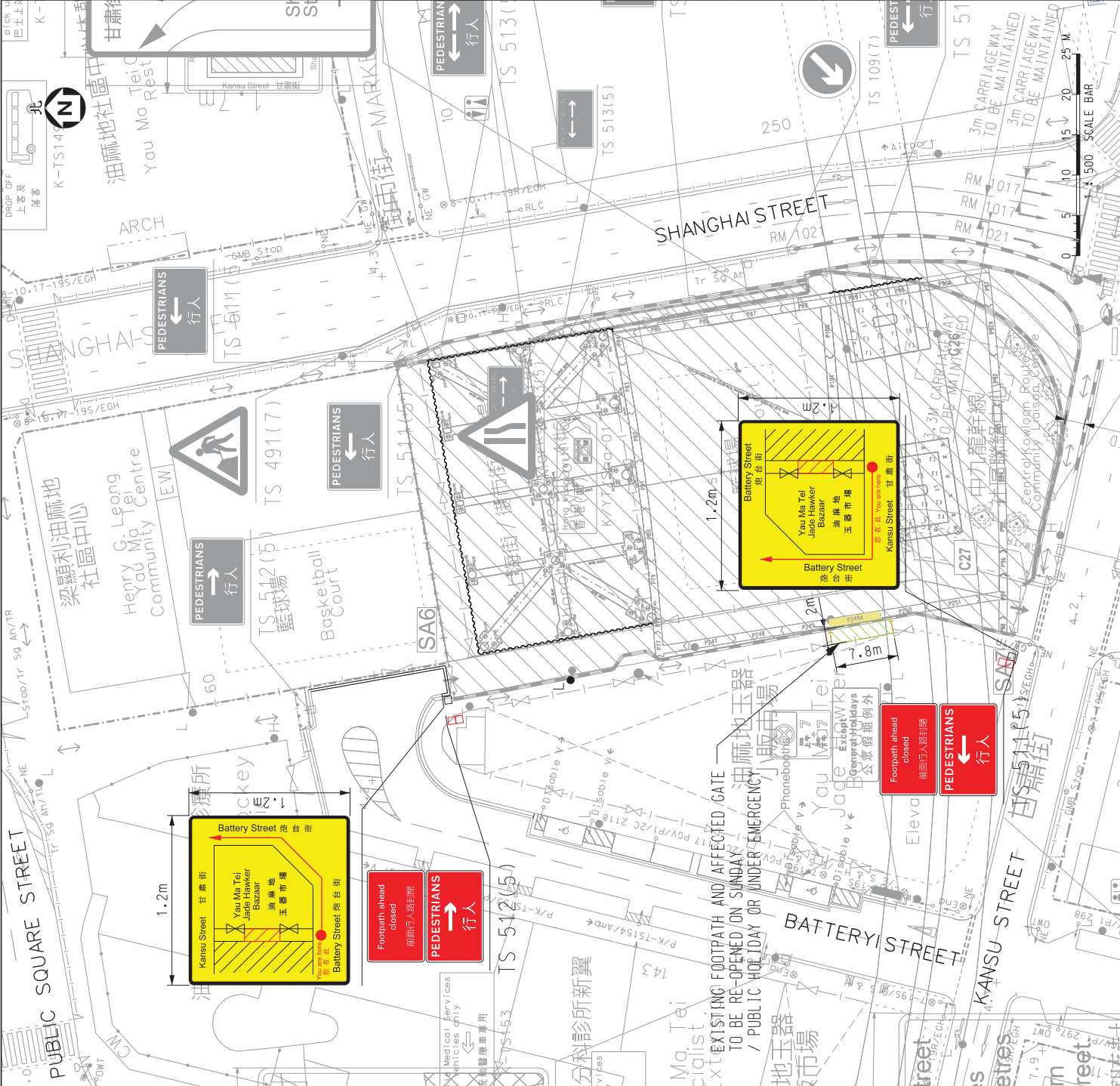
- TEMPORARY TRAFFIC SIGN FOR THIS SCHEME
- TEMPORARY TRAFFIC SIGN FOR THIS SCHEME WITH FLASHING LIGHTS
- WATER FILLED BARRIER WITH FLASHING LANTERN FOR THIS SCHEME
- HANDINGS FOR THIS SCHEME
- WORKS AREA FOR THIS SCHEME
- SITE ACCESS FOR THIS SCHEME
- REVOLVING FLASHING LANTERN FOR THIS SCHEME
- PEDESTRIAN OBSTRUCTION FOR THIS SCHEME
- TEMPORARY TRAFFIC SIGN FOR OTHER SCHEME WITH FLASHING LIGHTS
- TEMPORARY TRAFFIC SIGN FOR OTHER SCHEME
- WATER FILLED BARRIER FOR OTHER SCHEME
- PEDESTRIAN BARRIER HOARDING FOR OTHER SCHEME
- WORKS AREA FOR OTHER SCHEME
- SITE ACCESS FOR OTHER SCHEME
- REVOLVING FLASHING LANTERN FOR OTHER SCHEME
- PEDESTRIAN BARRIER WITH FLASHING LIGHTS FOR OTHER SCHEME
- WATER FILLED BARRIER WITH FLASHING LANTERN AND ACETYLENE PANELS FOR THIS SCHEME
- TEMPORARY TRAFFIC LIGHTS FOR THIS SCHEME
- BUFFER ZONE

Signature: **Sauwut Lee**

Name: Lee Chi Kin  
Discipline: Civil Engineering  
Membership No.: MM0250767 (HKIE)  
Contract No.: 2859 1714

APPROVED DRAWING  
CONTRACT NO.: HY2014/08  
TMLG NO. on  
ENDORSED BY THE ENGINEER / ENGINEERS REPRESENTATIVE

DATE: \_\_\_\_\_



# **Appendix E**

# **Realignment of Yau Cheung Road**

**NOTES:**

1. CO-ORDINATES ARE RELATIVE TO HONG KONG METRIC GRID (1980).
2. DIMENSIONS AND CHANGES ARE IN METRES UNLESS OTHERWISE STATED.
3. LEVELS ARE IN METRES RELATIVE TO PRINCIPAL DATUM (P.D. 1).
4. FOR SETTING OUT INFORMATION OF ALIGNMENTS SEE DRAWING NO. CR/AMTE/02/0029.
5. FOR LONGITUDINAL PROFILE OF ALIGNMENTS OF GRF SEE DRAWING NO. CR/AMTE/02/0041.

**LEGEND:**

- WORKS LIMIT**
- WORKS LIMIT
  - TUBULAR RAILING REFER TO HYD STANDARD DRAWING H2135
  - EXTENT OF TYPE K1 KERB - REFER TO HYD STANDARD DRAWINGS H101 AND H1118 - H1119
  - CPB EXTENT OF CONCRETE PROFILE BARRIER - REFER TO HYD STANDARD DRAWINGS H2101 TO H2106
  - T2 EXTENT OF TYPE 2 RAILINGS - REFER TO HYD STANDARD DRAWINGS H2130 TO H2134

**ARUP** Mott MacDonald  
Joint Venture

Project title  
工程名稱

Contract No. HY/2014/08  
Central Kowloon Route -  
Yau Ma Tei East

01	TENDER ADDENDUM NO. 4	AL	04/17
00	ISSUE FOR TENDER	AL	02/17
Rev.	Description	Rev.	Date
01		01	

Project title  
工程名稱

Contract No. HY/2014/08  
Central Kowloon Route -  
Yau Ma Tei East

Highway Layout Plan  
REALIGNED FERRY STREET/  
KANSU STREET  
(SHEET 1 OF 2)

Drawing No.	圖則編號	CR/AMTE/02/0013	Rev.	01
Drawn By	繪圖員	AL	Checked By	AL
Scale	比例	1:1000 @ A1	Status	TENDER
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**HIGHWAYS DEPARTMENT**  
主要工程署  
MAJOR WORKS PROJECT MANAGEMENT OFFICE

