



中國港灣工程有限責任公司

香港代表： 振華工程有限公司

CHINA HARBOUR ENGINEERING COMPANY LIMITED  
HONG KONG REPRESENTATIVE: ZHEN HUA ENGINEERING CO., LTD.

Date : 16 September 2017  
Our Ref. : CHEC300/OUT/2017/09/04.05/031142

By Hand

AECOM Asia Company Limited  
8/F Grand Central Plaza  
Tower 2, 138 Shatin Rural Committee Road  
Shatin, Hong Kong

Attn: Mr. Ng Wang Shek  
The Engineer's Representative

Dear Sir,

Contract No. HY/2013/03  
Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities –  
Vehicle Clearance Plazas and Ancillary Buildings and Facilities  
EP Condition 5.4 – Monthly EM&A Report (August 2017)

Pursuant to the Condition 5.4 of the EP-353/2009/K, we are pleased to submit one soft copy and three hard copies of the certified Monthly EM&A Report (Rev.3) for August 2017 for your on-ward submission.

Thank you for your kind attention.

Yours faithfully,  
For and on behalf of  
China Harbour Engineering Co. Ltd.

Paul PUI  
Site Agent

PP/FH/MC/mt

Encl.



15 September 2017

By Fax (3468 2076) and By Post

AECOM Asia Co. Ltd.  
The PRE's Office  
5 Ying Hei Road, Tung Chung, Lantau  
Hong Kong

Attention: Mr. W.S. Ng

Dear Sir,

**Re: Agreement No. CE 48/2011 (EP)  
Environmental Project Office for the  
HZMB Hong Kong Link Road, HZMB Hong Kong Boundary Crossing Facilities,  
and Tuen Mun-Chek Lap Kok Link – Investigation**

**Contract No. HY/2013/03 – HZMB HKBCF – Vehicle Clearance Plazas and  
Ancillary Buildings and Facilities  
Monthly Environmental Monitoring & Audit Report for August 2017**

Reference is made to the Environmental Team's submission of Monthly Environmental Monitoring & Audit Report for August 2017 (Rev. 3) certified by the ET Leader (ET's ref.: "MCL/ED/0513/2017/D" dated 15 September 2017) and provided to us via e-mail on 15 September 2017.

We are pleased to inform you that we have no adverse comment on the captioned submission. We write to verify the captioned submission in accordance with Condition 5.4 of the Environmental Permit No. EP-353/2009/K.

It was noted that the marine travel route from HKBCF to WDII project for delivery of surcharge material, which was not included in the approved Marine Travel Route Plan, was conducted in July 2017 and continued in August 2017 and the associated marine travel route records missing for more than a month. The Engineer, ET Leader and Contractor are reminded to ensure the implementation of the approved Marine Travel Route Plan as per EP Condition 2.8, and update the plan for any new travel routes proposed and obtain the EPD's approval prior to implementation to comply with EP Condition 1.9.

Thank you very much for your attention and please feel free to contact the undersigned should you require further information.

Yours faithfully,  
For and on behalf of  
Ramboll Environ Hong Kong Limited



Raymond Dai  
Independent Environmental Checker

Q:\Projects\HYDZHMBEEM00\02\_Proj\_Mgt\02\_Corr\HYDZHMBEEM00\_0\_5828L.17.doc

c.c.	HyD	Mr. Vico Cheung	(By Fax: 3188 6614)
	HyD	Mr. Ken Woo	(By Fax: 3188 6614)
	MCL	Mr. Arthur Cheng	(By Fax: 2450 8032)
	CHEC	Mr. Johnason Ko	(By Fax: 2887 3014)

Internal: DY, YH, ENPO Site

## MATERIALAB CONSULTANTS LIMITED

# MaterialLab

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong  
Tel : +852-2450 8238  
Fax : +852-2450 8032  
E-mail : mcl@fugro.com.hk  
Website : www.materialab-consultant.com

Date 15 September 2017  
Our Ref. MCL/ED/0513/2017/D

Ramboll Environ Hong Kong Limited  
(formerly ENVIRON Hong Kong Limited)  
21/F, BEA Harbour View Centre  
56 Gloucester Road, Wan Chai  
Hong Kong

**BY HAND**

Attn.: Mr. Raymond Dai, IEC

Dear Sir,

**EP Condition 5.4 – Monthly EM&A Report for  
Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities –  
Vehicle Clearance Plazas and Ancillary Buildings and Facilities (Contract No. HY/2013/03)**

Pursuant to Condition 5.4 of the Environmental Permit (EP-353/2009/K) for the captioned project, we are pleased to submit the certified Monthly EM&A Report for August 2017 for your verification.

Should you require further information, please do not hesitate to contact our Miss Jamie Tam at 3565 4370 or the undersigned at 3565 4115.

Yours faithfully,  
for and on behalf of  
MATERIALAB CONSULTANTS LIMITED



Arthur Cheng  
Environmental Team Leader

AC/jt

c.c. AECOM – Mr. P.K. Lee, Mr. W.S. Ng, Mr. Dominic Mow  
RAMBOLL ENVIRON – Mr. Ray Yan, Mr. Andy Wong, Mr. Harris Wong  
CHEC – Mr. Marko Chan



**MATERIALAB CONSULTANTS LIMITED**

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com



Report No.: 0165/15/ED/0908

**MONTHLY ENVIRONMENTAL MONITORING & AUDIT  
REPORT**

**August 2017**

**Client:** China Harbour Engineering Co., Ltd.

**Project:** Contract No. HY/2013/03  
Hong Kong-Zhuhai-Macao Bridge  
Hong Kong Boundary Crossing Facilities -  
Vehicle Clearance Plazas and  
Ancillary Buildings and Facilities

**Report No.:** 0165/15/ED/0908

Prepared by: Jamie Tam

Reviewed by: Bong Yu

Certified by:

  
\_\_\_\_\_  
Arthur Cheng  
Environmental Team Leader

## **MATERIALAB CONSULTANTS LIMITED**

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com

The logo for MaterialLab, featuring the word "MaterialLab" in a bold, sans-serif font. The text is white and set against a dark, rectangular background that has a slight gradient and a thin white border.

Report No.: 0165/15/ED/0908

## **CONTENTS**

### **EXECUTIVE SUMMARY**

1. INTRODUCTION
  - 1.1 Background
  - 1.2 Project Description
  - 1.3 Project Organisation
  - 1.4 Construction Programme
  - 1.5 Construction Works undertaken during the Reporting Period
2. AIR QUALITY MONITORING
  - 2.1 Monitoring Locations
  - 2.2 Monitoring Requirements
  - 2.3 Monitoring Results
3. NOISE MONITORING
  - 3.1 Monitoring Locations
  - 3.2 Monitoring Requirements
  - 3.3 Monitoring Results
4. WATER QUALITY MONITORING
  - 4.1 Monitoring Locations
  - 4.2 Monitoring Requirements
  - 4.3 Monitoring Results
5. ECOLOGY MONITORING
  - 5.1 Monitoring Locations
  - 5.2 Monitoring Requirements
  - 5.3 Monitoring Results
6. DISPOSAL OF MARINE SEDIMENT EXTRACTED FROM BORED PILING WORKS
  - 6.1 Background
  - 6.2 Dumping Arrangements
  - 6.3 Quantity Disposed
7. ENVIRONMENTAL SITE INSPECTION AND AUDIT
  - 7.1 Site Inspection
  - 7.2 Advice on the Solid and Liquid Waste Management Status
  - 7.3 Environmental Licenses and Permits
  - 7.4 Implementation Status of Environmental Mitigation Measures
  - 7.5 Summary of Exceedance of the Environmental Quality Performance Limit



## **MATERIALAB CONSULTANTS LIMITED**

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com



Report No.: 0165/15/ED/0908

7.6 Summary of Complaints, Notification of Summons and Successful Prosecution

### 8. FUTURE KEY ISSUES

8.1 Construction Programme for the Coming Months

8.2 Environmental Site Inspection Schedule for the Coming Month

### 9. CONCLUSIONS

## **APPENDICES**

A Location of Works Areas

B Project Organization for Environmental Works

C Construction Program

D Event / Action Plan

E Waste Flow Table

F Environmental Licenses and Permits

G Implementation Schedule for Environmental Mitigation Measures (EMIS)

H Statistics on Environmental Complaints, Notification of Summons and Successful Prosecutions

I Environmental Site Inspection Schedule

## **FIGURES**

Figure 1 Air Quality Monitoring Stations

Figure 2 Noise Monitoring Stations

Figure 3 Water Quality Monitoring Stations

Figure 4 Ecological Monitoring Transect Line and Layout Map

## MATERIALAB CONSULTANTS LIMITED

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com



Report No.: 0165/15/ED/0908

### EXECUTIVE SUMMARY

This Monthly Environmental Monitoring and Audit (EM&A) Report is prepared for Contract No. HY/2013/03 "Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Vehicle Clearance Plazas and Ancillary Buildings and Facilities" (includes the construction works of Contract No. HY/2013/06 "Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Automatic Vehicle Clearance Support System" within Contract No. HY/2013/03 works area) (hereafter referred to as "the Contract") for the Highways Department of Hong Kong Special Administrative Region (HKSAR). Contract No. HY/2013/03 was awarded to China Harbour Engineering Co. Limited (construction works of Contract No. HY/2013/06 was awarded to ATAL Technologies Limited within Contract No. HY/2013/03 works area) (hereafter referred to as "the Contractor") and MaterialLab Consultants Limited (MCL) was appointed as the Environmental Team (ET) by the Contractor.

Contract No. HY/2013/03 (includes the construction works of Contract No. HY/2013/06 within Contract No. HY/2013/03 works area) is part of the "Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities" (HZMB HKBCF) Project which is a "Designated Project" under Schedule 2 of the Environmental Impact Assessment (EIA) Ordinance (Cap. 499) and for which an EIA Report (Register No. AEIAR-145/2009) was prepared and approved. The current Environmental Permit (EP) for HKBCF, namely No. EP-353/2009/K, was issued on 11 April 2016. These documents are available through the EIA Ordinance Register.

Commencement of Contract No. HY/2013/03 took place on 10 April 2015 while the construction works and the EM&A programme of Contract No. HY/2013/03 commenced on 29 August 2015 (commencement of Contract No. HY/2013/06 took place on 14 August 2015 while the construction works and the EM&A programme of Contract No. HY/2013/06 within Contract No. HY/2013/03 works area commenced on 13 September 2016).

MaterialLab Consultants Limited (MCL) has been appointed by the Contractor to implement the Environmental Monitoring & Audit (EM&A) programme for the Contract in accordance with the Updated EM&A Manual for HKBCF (Version 1.0) and will be providing environmental team services for the Contract.

This is the 24<sup>th</sup> Monthly EM&A Report for the Contract which summaries findings of the EM&A programme during the reporting period from 1 August 2017 to 31 August 2017 (includes the findings of the EM&A programme of Contract No. HY/2013/06 within Contract No. HY/2013/03 works area during the reporting period from 1 August 2017 to 31 August 2017) (the "reporting period"). The monthly EM&A programme was undertaken in accordance with the Updated EM&A Manual for HKBCF (Version 1.0). It should be noted that the air quality and noise monitoring works for the Contract are covered by Contract No. HY/2010/02 "Hong Kong-Zhuhai-Macao Bridge HKBCF – Reclamation Works" and Contract No. HY/2011/03 "Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road – Section between Scenic Hill and HKBCF". The ET of the Contract or another ET of the HZMB project is required to conduct impact air quality monitoring at AMS6 and AMS7, noise monitoring at NMS2 and NMS3B, water quality monitoring at the locations shown in **Figure 3** and ecological monitoring as shown in **Figure 4** as part of EM&A programme if these monitoring stations are no longer covered under Contract No. HY/2010/02 and HY/2011/03. However, this is subject to ENPO's final decision on which ET should carry out the monitoring work at these stations.

The dates of site inspection for Contract No. HY/2013/03 (includes Contract No. HY/2013/06 within Contract No. HY/2013/03 works area) during the reporting period are listed below:

Environmental Site Inspection: 3, 10, 18, 25 and 31 August 2017.

## MATERIALAB CONSULTANTS LIMITED

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com



Report No.: 0165/15/ED/0908

### Breaches of Action and Limit Levels

Summary of Action and Limit Level exceedance of 1-hr TSP level and 24-hr TSP level at AMS6 shall be referred to the monthly EM&A report prepared by Contract No. HY/2011/03.

There was no Action and Limit Level exceedance of 1-hr TSP level and 24-hr TSP level recorded at station AMS7 by the Environmental Team of Contract No. HY/2010/02 during the reporting period.

There was no Action and Limit Level exceedance for noise recorded at station NMS2 and station NMS3B by the Environmental Team of Contract No. HY/2010/02 during the reporting period.

There was no Action and Limit Level exceedance for water quality recorded at the monitoring stations shown at **Table 4.1** by the Environmental Team of Contract No. HY/2010/02 during the reporting period.

Ecological monitoring results at all transects are reported in the EM&A report prepared by Contract No. HY/2010/02.

### Complaint Log

There were one complaint received in relation to the environmental impact during the reporting period.

Log No.	Environmental Complaint Ref. No.	Date of Complaint Receipt	Description
011	ENPO-C0122	9 August 2017	Air pollution and water discharge

After investigation, all complaints were not related to Contract No. HY/2013/03 (including Contract No. HY/2013/06 within Contract No. HY/2013/03 works area).

### Notifications of Summons and Successful Prosecutions

There were no notifications of summons or prosecutions received during this reporting period.

### Reporting Changes

There was no reporting change during the reporting period.

### Future Key Issues

The future key issues to be undertaken in the upcoming month are:

For Contract No. HY/2013/03

1. Building at Portion A1, B, G, N, J, STP & Pumping Stations;
2. CUE Construction at Portion B, C & J;
3. Drainage & Sewerage Work, Water Main & Cable Duct at Portion B, H1, H2, J, P, G & A1;
4. Radiation Screen Wall at Portion B, E, P, N, M, C;
5. Sign Gantry Footing at Portion B;
6. Sewerage Pumping Station, High Mast Lighting Foundation & Box Culvert C at Portion G;
7. Bridge Works at A1 to A9;
8. Site Foundation Works at Portion K;
9. Cover Walkway at Portion H1 & H2;

## MATERIALAB CONSULTANTS LIMITED

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com

The logo for MaterialLab, featuring the word "MaterialLab" in a bold, sans-serif font. The text is white and set against a dark, rectangular background that has a slight 3D effect with a lighter top edge and a darker bottom edge.

Report No.: 0165/15/ED/0908

10. Box Culvert B at Portion N; Shuttle kiosk & Subway at Portion E;
11. Deployment, maintenance and inspection of silt curtain;
12. Construction of water outfall of box culvert; and
13. Marine sediment excavation activities from the land-based works and corresponding disposal at the designated disposal sites within Hong Kong as allocated by the Marine Fill Committee.

For Contract No. HY/2013/06 within Contract No. HY/2013/03 works area

1. Conduits, Wiring & display panel installation at Building 037, kiosk and CUE works area.

## MATERIALAB CONSULTANTS LIMITED

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com

The logo for MaterialLab, featuring the word "MaterialLab" in a bold, sans-serif font. The text is white and set against a black rectangular background with a thin white border.

Report No.: 0165/15/ED/0908

### 1. INTRODUCTION

#### 1.1 Background

- 1.1.1 MaterialLab Consultants Limited was commissioned by China Harbour Engineering Co. Limited (also referred to as “the Contractor”) to undertake the Environmental Team (ET) services (including environmental monitoring and audit (EM&A)) for Contract No. HY/2013/03 “Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Vehicle Clearance Plazas and Ancillary Buildings and Facilities” (includes the construction works of Contract No. HY/2013/06 “Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Automatic Vehicle Clearance Support System” within Contract No. HY/2013/03 works area) (“the Contract”) for the Highways Department of Hong Kong Special Administrative Region (HKSAR).
- 1.1.2 Contract No. HY/2013/03 (includes the construction works of Contract No. HY/2013/06 within Contract No. HY/2013/03 works area) is part of Hong Kong–Zhuhai–Macao Bridge Hong Kong Boundary Crossing Facilities (HKBCF) which is “Designated Projects”, under Schedule 2 of the Environmental Impact Assessment Ordinance (EIAO) (Cap 499) and for which an EIA Report (Register No. AEIAR-145-2009) was prepared and approved. The current Environmental Permit (EP) for HKBCF, namely No. EP- 353/2009/K, was issued on 11 April 2016. These documents are available through the EIA Ordinance. The general layout of the Project area is shown in **Appendix A**.
- 1.1.3 This is the twenty-fourth EM&A report to document the findings of site inspection activities and EM&A programme carried out by the Contractor of Contract No. HY/2013/03 (includes the construction works of Contract No. HY/2013/06 within Contract No. HY/2013/03 works area) from 1 August 2017 to 31 August 2017 (reporting period) under Contract No. HY/2013/03 (from 1 August 2017 to 31 August 2017 for the construction works of Contract No. HY/2013/06 within Contract No. HY/2013/03 works area) and is submitted to fulfil Condition 5.4 of the EP.

#### 1.2 Project Description

- 1.2.1 The works to be executed under Contract No. HY/2013/03 include the following major items:
- a. Cargo clearance facilities including kiosks for clearance of good vehicles, customs inspection platforms, X-ray building, etc.;
  - b. Passenger related facilities including processing kiosks and examination facilities for private cars and coaches, annexure for examination of accompanying passengers of private cars, etc.;
  - c. Accommodation/offices for the facilities (like fire station, police station, buildings for Immigration Department [ImmD], Hong Kong Customs and Excise Department [C&ED], Agriculture, Fisheries and Conservation Department [AFCD], Food and Environmental Hygiene Department [FEHD], Department of Health [DofH] etc.) of the Government departments providing services in connection with the HKBCF;
  - d. Provision of transport and miscellaneous facilities inside the HKBCF including public transport interchange (PTI), transport drop-off and pick-up areas, vehicle holding areas, passenger queuing areas, road networks, footbridges, fencing, sewerage and drainage systems, sewage treatment plant and treated effluent disposal facilities, water supply system, building services works, electronic system, and traffic control and information system including traffic control and surveillance system (TCSS), etc.;

## MATERIALAB CONSULTANTS LIMITED

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com

**MaterialLab**

Report No.: 0165/15/ED/0908

- e. Provision of roads connecting the BCF to the Hong Kong Link Road (HKLR), the Tuen Mun – Chek Lap Kok Link (TM-CLKL) and the Hong Kong International Airport (HKIA), expect the part of road works in HKIA entrusted to the HKLR project; and
- f. Reprovisioning of the affected HKIA's facilities, expect those affected by the Automated People Mover (APM) system such as the existing east rescue berth.

1.2.2 The works to be executed under Contract No. HY/2013/06 within Contract No. HY/2013/03 works area include the following major items:

- a. The Automatic Vehicle Clearance Support System amid to increasing traffic flow for Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities;
- b. Responsible for designs and develops a set of tailor-made computer monitoring and control systems to for daily security operation; and
- c. The Clearance Workstations at 72 vehicle clearance kiosks, Customs and Excise's inbound and outbound traffic control centers as well as a Vehicle Tracking System.

### 1.3 Project Organisation

1.3.1 The Project Organisation for Environmental Works of Contract No. HY/2013/03 is shown in **Appendix B**. The contact person and telephone numbers of key personnel for the captioned project are shown in **Table 1.1**:

Table 1.1 Contact Persons and Telephone Numbers of Key Personnel (for Contract No. HY/2013/03)

Party	Position	Contact Person	Telephone No.	Fax No.
Engineer or Engineer's Representative (AECOM Asia Co. Ltd.)	Chief Resident Engineer	Mr. W. S. Ng	3958 7400	3902 8800
Environmental Project Office / Independent Environmental Checker (Ramboll Environ Hong Kong Limited)	Environmental Project Office Leader	Mr. Y. H. Hui	3547 2133	3465 2899
	Independent Environmental Checker (IEC)	Mr. Raymond Dai	3465 2888	3465 2899
	Environmental Site Supervisor	Mr. Ray Yan	5181 8165	3465 2899
Contractor (China Harbour Engineering Co. Ltd)	Site Agent	Mr. Paul Pui	9125 0700	2512 0427
	Environmental Officer	Mr. Marko Chan	9427 2879	2512 0427
Environmental Team (Materialab Consultants Limited)	Environmental Team Leader (ETL)	Mr. Arthur Cheng	3565 4115	2450 8032
24-hr Complaint Hotline	--	--	5236 7111	--

1.3.2 The Project Organisation for Environmental Works of Contract No. HY/2013/06 within Contract No. HY/2013/03 works area is shown in **Appendix B**. The contact person and telephone numbers of key personnel for the captioned project are shown in **Table 1.2**:

## MATERIALAB CONSULTANTS LIMITED

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com



Report No.: 0165/15/ED/0908

Table 1.2 Contact Persons and Telephone Numbers of Key Personnel (for Contract No. HY/2013/06 within Contract No. HY/2013/03 works area)

Party	Position	Contact Person	Telephone No.	Fax No.
Engineer or Engineer's Representative (AECOM Asia Co. Ltd.)	Chief Resident Engineer	Mr. W. S. Ng	3958 7400	3902 8800
Environmental Project Office / Independent Environmental Checker (Ramboll Environ Hong Kong Limited)	Environmental Project Office Leader	Mr. Y. H. Hui	3547 2133	3465 2899
	Independent Environmental Checker (IEC)	Mr. Raymond Dai	3465 2888	3465 2899
	Environmental Site Supervisor	Mr. Ray Yan	5181 8165	3465 2899
Contractor (ATAL Technologies Limited)	Site Agent	Mr. Eric Yim	2565 3355	3162 5217
	Environmental Officer	Mr. W. Li	2565 3137	3162 5217
Environmental Team (MaterialLab Consultants Limited)	Environmental Team Leader (ETL)	Mr. Arthur Cheng	3565 4115	2450 8032
24-hr Complaint Hotline	--	--	6509 0375	--

1.3.3 The Contract HY/2013/03 has commenced on 10 April 2015. The commencement of construction works and the EM&A programme have commenced on 29 August 2015.

1.3.4 The Contract HY/2013/06 has commenced on 14 August 2015. The commencement of construction works and the EM&A programme have commenced on 13 September 2016 within Contract No. HY/2013/03 works area.

### 1.4 Construction Programme

1.4.1 The construction programme for Contract No. HY/2013/03 (includes the construction works of HY/2013/06 within Contract No. HY/2013/03 works area) are provided in **Appendix C**.

### 1.5 Construction Works Undertaken during the Reporting Period

1.5.1 The construction works of Contract No. HY/2013/03 commenced on 29 August 2015 (includes the construction works of Contract No. HY/2013/06 commenced on 13 September 2016 within Contract No. HY/2013/03 works area). During this reporting period, the following major site activities were commenced:

#### For Contract No. HY/2013/03

1. Building at Portion A1, B, G, N, J, STP & Pumping Stations;
2. CUE Construction at Portion B, C & J;
3. Drainage & Sewerage Work, Water Main & Cable Duct at Portion B, H1, H2, J, P, G & A1;
4. Radiation Screen Wall at Portion B, E P, N,M,C;
5. Sign Gantry Footing at Portion B;
6. Sewerage Pumping Station, High Mast Lighting Foundation & Box Culvert C at Portion G;
7. Bridge Works at A1 to A9;

## MATERIALAB CONSULTANTS LIMITED

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com



Report No.: 0165/15/ED/0908

8. Site Foundation Works at Portion K;
9. Cover Walkway at Portion H1 & H2;
10. Box Culvert B at Portion N; Shuttle kiosk & Subway at Portion E;
11. Deployment, maintenance and inspection of silt curtain;
12. Construction of water outfall of box culvert; and
13. Marine sediment excavation activities from the land-based works and corresponding disposal at the designated disposal sites within Hong Kong as allocated by the Marine Fill Committee.

For Contract No. HY/2013/06 within Contract No. HY/2013/03 works area

1. Conduits & Wiring installation at Building 037, kiosk and CUE works area.



## MATERIALAB CONSULTANTS LIMITED

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com



Report No.: 0165/15/ED/0908

## 2. AIR QUALITY MONITORING

### 2.1 Monitoring Locations

2.1.1 The air quality monitoring works for the Contract are covered by Contract No. HY/2010/02 "Hong Kong-Zhuhai-Macao-Bridge HKBCF – Reclamation Works" and Contract No. HY/2011/03 "Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road – Section between Scenic Hill and HKBCF". The ET of the Contract or another ET of the HZMB project is required to conduct impact air quality monitoring at AMS6 and AMS7 as part of EM&A programme if these air quality monitoring stations are no longer covered under Contract No. HY/2010/02 and HY/2011/03. **Figure 1** shows the locations of air monitoring stations.

Table 2.1 Air Quality Monitoring Location

Air Monitoring Station	Location
AMS6	Dragonair/CNAC (Group) Building (A80)
AMS7	Hong Kong SkyCity Marriott Hotel

### 2.2 Monitoring Requirements

2.2.1 The monitoring requirements, equipment, parameters, frequency and duration, methodology, schedule, and meteorological information are described in the monthly EM&A Reports prepared for Contract No. HY/2010/02 and HY/2011/03.

2.2.2 The Action and Limit levels for 1-hr TSP and 24-hr TSP are summarized in **Table 2.2**.

Table 2.2 Action and Limit Levels for Air Quality

Monitoring Station	Action Level ( $\mu\text{g}/\text{m}^3$ )	Limit Level ( $\mu\text{g}/\text{m}^3$ )
<b>1 hour TSP</b>		
AMS6	360	500
AMS7	370	
<b>24 hours TSP</b>		
AMS6	173	260
AMS7	183	

2.2.3 The event and action plan is provided in **Appendix D**.

2.2.4 If exceedance(s) at these stations is/are recorded by the ET of the Contract or referred by the other ET under the HZMB project to the Contract, the ET of the Contract will carry out an investigation and findings will be reported in the monthly EM&A Report.

### 2.3 Monitoring Results

2.3.1 The monitoring results for AMS6 and AMS7 are reported in the monthly EM&A Reports prepared for Contract No. HY/2011/03 and HY/2010/02 respectively.

2.3.2 Summary of Action and Limit Level exceedance of 1-hr TSP level and 24-hr TSP level at AMS6 shall be referred to the monthly EM&A report prepared by Contract No. HY/2011/03.

2.3.3 There was no Action and Limit Level exceedances of 1-hr TSP level and 24-hr TSP level recorded at station AMS7 by the Environmental Team of Contract No. HY/2010/02 during the reporting period.

## MATERIALAB CONSULTANTS LIMITED

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com



Report No.: 0165/15/ED/0908

### 3. NOISE MONITORING

#### 3.1 Monitoring Locations

- 3.1.1 The noise monitoring works for the Contract are covered by Contract No. HY/2010/02 "Hong Kong-Zhuhai-Macao Bridge HKBCF – Reclamation Works". The ET of the Contract or another ET of the HZMB project is required to conduct noise monitoring at NMS2 and NMS3B as part of EM&A programme if these monitoring stations are no longer covered under Contract No. HY/2010/02. **Figure 2** shows the locations of noise monitoring stations.

Table 3.1 Construction Noise Monitoring Location

ID No.	Description
NMS2	Seaview Crescent
NMS3B	Site Boundary of Site Office Area at WA2

#### 3.2 Monitoring Requirements

- 3.2.1 The monitoring requirements, monitoring equipment, monitoring parameters, frequency and duration, monitoring methodology and monitoring schedule are detailed in the monthly EM&A Reports prepared for Contract No. HY/2010/02.
- 3.2.2 The Action and Limit Levels for construction noise are defined in **Table 3.2**.

Table 3.2 Action and Limit Level for Construction Noise

Monitoring Station	Action Level	Limit Level
<b>For the Time Period 0700-1900 hrs. on Normal Weekdays</b>		
NMS2	When one documented complaint is received	75.0 dB (A) Leq (30 min.)
NMS3B		70.0 dB (A) Leq (30 min.)*

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

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

#### 3.3 Monitoring Results

- 3.3.1 The monitoring results for NMS2 and NMS3B are reported in the monthly EM&A Reports prepared for Contract No. HY/2010/02. No noise exceedance was recorded at stations NMS2 and NMS3B by the ET of Contract No. HY/2010/02 during the reporting period.

## MATERIALAB CONSULTANTS LIMITED

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com



Report No.: 0165/15/ED/0908

### 4. WATER QUALITY MONITORING

#### 4.1 Monitoring Locations

- 4.1.1 The water monitoring works for the Contract are covered by Contract No. HY/2010/02 "Hong Kong-Zhuhai-Macao-Bridge HKBCF – Reclamation Works". The ET of the Contract or another ET of the HZMB project is required to conduct impact water quality monitoring at the stations shown in **Table 4.1** and **Figure 3**.

Table 4.1 Water Quality Monitoring Stations

Station	Description	East	North
IS5	Impact Station (Close to HKBCF construction site)	811579	817106
IS(Mf)6	Impact Station (Close to HKBCF construction site)	812101	817873
IS7	Impact Station (Close to HKBCF construction site)	812244	818777
IS8	Impact Station (Close to HKBCF construction site)	814251	818412
IS(Mf)9	Impact Station (Close to HKBCF construction site)	813273	818850
IS10(N)	Impact Station (Close to HKBCF construction site)	812569	821475
IS(Mf)11	Impact Station (Close to HKBCF construction site)	813562	820716
IS(Mf)16	Impact Station (Close to HKBCF construction site)	814328	819497
IS17	Impact Station (Close to HKBCF construction site)	814539	820391
SR3	Sensitive receivers (San Tau SSSI)	810525	816456
SR4(N)	Sensitive receivers (Tai Ho)	814705	817859
SR5(N)	Control Station	812569	821475
SR6	Sensitive receivers (Sha Chau and Lung Kwu Chau Marine Park)	805837	821818
SR7	Sensitive receivers (Tai Mo Do)	814293	821431
SR10A <sup>(1)</sup>	Sensitive receivers(Ma Wan FCZ) 1	823741	823495
SR10B(N) <sup>(1)</sup>	Sensitive receivers(Ma Wan FCZ) 2	823683	823187
CS(Mf)3(N)	Control Station	808814	822355
CS(Mf)5	Control Station	817990	821129
CS4	Control Station	810025	824004
CS6	Control Station	817028	823992
CSA <sup>(2)</sup>	Control Station	818103	823064

Note:

<sup>(1)</sup> Additional monitoring station for ma Wan FCZ

<sup>(2)</sup> Additional control monitoring station for Ma Wan FCZ

#### Remarks:

The ET of the Contract should conduct impact water quality monitoring at the WQMs listed in the table as part of EM&A programme according to latest notification from ENPO if water quality monitoring is no longer covered by another ET of the HZMB project. The ET of the Contract shall communicate and share the monitoring data to the ET(s) of the other contracts if the water quality monitoring station(s) is/are as part of EM&A programme.

#### 4.2 Monitoring Requirements

- 4.2.1 The monitoring requirements, monitoring equipment, monitoring parameters, frequency and duration, monitoring methodology, monitoring schedule, meteorological information are detailed in the monthly EM&A Reports prepared by Contract No. HY/2010/02.
- 4.2.2 The event and action plan is provided in **Appendix D**.
- 4.2.3 The Action and Limit Levels for Water Quality are provided in **Table 4.2**.

## MATERIALAB CONSULTANTS LIMITED

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com

**Materialab**

Report No.: 0165/15/ED/0908

Table 4.2 Action and Limit Levels for Water Quality

Parameters	Action	Limit
DO in mg/L (Surface, Middle & Bottom)	Surface and Middle 5.0 Bottom 4.7	Surface and Middle = 4.2 (except 5 mg/L for FCZ) Bottom = 3.6
SS in mg/L (depth-averaged) at all monitoring stations and control stations	23.5 and 120% of upstream control station's SS at the same tide of the same day*	34.4 and 130% of upstream control station's SS at the same tide of the same day and 10mg/L for WSD Seawater intakes*
Turbidity in NTU (depth-averaged)	27.5 and 120% of upstream control station's turbidity at the same tide of the same day*	47.0 and 130% of upstream control station's turbidity at the same tide of the same day*

\* Remarks: Reference is made to EPD approval of adjustment of water quality assessment criteria issued and became effective on 18 February 2013.

Notes:

1. "depth-averaged" is calculated by taking the arithmetic means of reading of all three depths.
2. For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.
3. For turbidity, SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.
4. All the figures given in the table are used for reference only and the EPD may amend the figures whenever it is considered as necessary.
5. The 1%-ile of baseline data for dissolved oxygen (surface and middle) and dissolved oxygen (bottom) are 4.2mg/L and 3.6mg/L respectively.

4.2.4 If exceedance(s) at these stations is/are recorded by the ET of the Contract or referred by the other ET under the HZMB project to the Contract, the ET of the Contract will carry out an investigation and findings will be reported in the monthly EM&A Report.

### 4.3 Monitoring Results

4.3.1 The monitoring results for the monitoring stations showed in Table 4.1 are reported in the monthly EM&A Report prepared for Contract No. HY/2010/02. There was no Action and Limit Level exceedance recorded by the Environmental Team of Contract No. HY/2010/02 during the reporting period.

## MATERIALAB CONSULTANTS LIMITED

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com



Report No.: 0165/15/ED/0908

### 5. ECOLOGY MONITORING

#### 5.1 Monitoring Locations

5.1.1 The ecological monitoring works for the Contract are covered by Contract No. HY/2010/02 "Hong Kong-Zhuhai-Macao-Bridge HKBCF – Reclamation Works". The ET of the Contract or another ET of the HZMB project is required to conduct dolphin monitoring at 24 transects as part of EM&A programme if these transects are no longer covered under Contract No. HY/2010/02. The ecological monitoring should adopt line-transect vessel survey method. The survey follows pre-set and fixed transect lines in the two areas defined by AFCD as: Northeast Lantau survey area; and Northwest Lantau survey area. **Figure 4** shows the co-ordinates for the transect lines and layout map.

#### Remarks:

The ET of this Contract should conduct impact ecological monitoring as part of EM&A programme according to latest notification from ENPO when the monitoring transect(s) is/are no longer covered by another ET of the HZMB project.

#### 5.2 Monitoring Requirements

5.2.1 The monitoring requirements, monitoring equipment, monitoring parameters, frequency and duration, monitoring methodology, monitoring schedule, meteorological information are detailed in the monthly EM&A Reports prepared by Contract No. HY/2010/02.

5.2.2 The event and action plan is provided in **Appendix D**.

5.2.3 The Action and Limit Levels for Chinese White Dolphin Monitoring are provided in **Table 5.1(a)** & **Table 5.1(b)**.

**Table 5.1(a)** Action and Limit Levels for Chinese White Dolphin Monitoring - Approach to Define Action Level (AL) and Limit Level (LL)

	North Lantau Social Cluster	
	NEL	NWL
Action Level	(STG < 70% of baseline) & (ANI < 70% of baseline)	(STG < 70% of baseline) & (ANI < 70% of baseline)
Limit Level	[(STG < 40% of baseline) & (ANI < 40% of baseline)] AND [(STG < 40% of baseline) & (ANI < 40% of baseline)]	

For North Lantau Social Cluster, action level will be triggered if either NEL or NWL fall below the criteria; limit level will be triggered if both NEL and NWL fall below the criteria.

**Table 5.2(b)** Derived Value of Action Level (AL) and Limit Level (LL) for Chinese White Dolphin Monitoring

	North Lantau Social Cluster	
	NEL	NWL
Action Level	(STG < 4.2) & (ANI < 15.5)	(STG < 6.9) & (ANI < 31.3)
Limit Level	[(STG < 2.4) & (ANI < 8.9)] AND [(STG < 3.9) & (ANI < 17.9)]	

5.2.4 If exceedance(s) at these transects is/are recorded by the ET of the Contract or referred by the other ET under the HZMB project to the Contract, the ET of the Contract will carry out an investigation and findings will be reported in the monthly EM&A Report.

#### 5.3 Monitoring Result

5.3.1 The dolphin survey results for all transects are reported in the monthly EM&A Reports prepared by Contract No. HY/2010/02.

## MATERIALAB CONSULTANTS LIMITED

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com



Report No.: 0165/15/ED/0908

## 6. DISPOSAL OF MARINE SEDIMENT EXTRACTED FROM BORED PILING WORKS

### 6.1 Background

6.1.1 After the acceptance of the review of the approved Sediment Quality Report (SQR) for this Project under EPD letter dated 19 August 2015, an approval to dispose the marine sediment extracted from bored piling for this Project was then approved under memo from Secretary, Marine Fill Committee of CEDD dated 20 August 2015 for the disposal of marine sediment extracted from bored piling works. The disposal site allocated to this Project is the Mud Pit CMP Vd of the Confined Marine Sediment Disposal Facility to the East of Sha Chau (ESC) during this reporting period.

6.1.2 No extracted marine sediment was treated using cement solidification/stabilisation (Cement S/S) techniques under Contract No. HY/2013/03 during this reporting period. The marine sediment extracted from this Contract was disposed to the MFC allocated disposal sites directly without treatment during this reporting period. As a practical means, the disposal operation is managed by one contractor who is also responsible for applying dumping permit and its subsequent extension applications from EPD. Contract No. HY/2013/03 has been assigned to coordinate and arrange for disposal of extracted marine sediment from all three Contracts (Contract Nos. HY/2013/02, HY/2013/03 and HY/2013/04).

### 6.2 Dumping Arrangements

6.2.1 The barge for disposal of marine sediment was moored at the temporary loading and unloading at the east shore of the HKBCF Island, which has been being used by reclamation contractor (Contract No. HY/2010/02) for reclamation activities. In terms of safety consideration and to avoid mixing of sediment between contracts, each dumping date was allocated to one Contract. The quantity of marine sediment disposed on each date was from one Contract.

6.2.2 During dumping, Contractor of Contract No. HY/2013/03 is responsible for transporting the marine sediment from the site area of Contract No. HY/2013/03 to the barge. The estimated quantity of marine sediment in each truck is confirmed by Resident Site Staff of Contract Nos. HY/2013/02, HY/2013/03 and HY/2013/04. The trip tickets for transportation and disposal of marine sediment are collected and checked. Contract No. HY/2013/03 as the dumping permit holder is responsible for reporting to EPD the quantity disposed of as the condition stipulated in the dumping permit. The disposal site allocated to this Project is the Mud Pit CMP Vd of the Confined Marine Sediment Disposal Facility to the East of Sha Chau (ESC) during this reporting period.

### 6.3 Quantity Disposed

6.3.1 Marine sediment extracted from bored piling from this Contract was disposed to allocated dumping site in August 2017. All marine sediments extracted from HY/2013/02, HY/2013/03 and HY/2013/04 have been disposed off-site. The summary of marine sediment disposed up to end August 2017 is shown in the following table:

**MATERIALAB CONSULTANTS LIMITED**

Room 723 & 725, 7/F, Block B,  
 Profit Industrial Building,  
 1-15 Kwai Fung Crescent, Kwai Fong,  
 Hong Kong.

Tel : (852)-24508238  
 Fax : (852)-24508032  
 Email : mcl@fugro.com



Report No.: 0165/15/ED/0908

Table 6.1 Summary of Marine Sediment Disposed to Dumping Site

Month/Year	Quantity disposed (in'000m <sup>3</sup> )			
	HY/2013/02	HY/2013/03	HY/2013/04	Total
Jan 2016	1.272	1.950	0.800	4.022
Feb 2016	2.816	2.328	0.704	5.848
Mar 2016	0.600	2.464	3.942	7.006
Apr 2016	5.128	5.602	5.028	15.758
May 2016	0.000	0.000	0.000	0.000
Jun 2016	1.200	4.584	1.578	7.362
<b>Sub-Total</b>	<b>11.016</b>	<b>16.928</b>	<b>12.052</b>	<b>39.996</b>
Jul 2016	0.728	10.728	3.690	15.146
Aug 2016	1.784	1.544	4.428	7.756
Sep 2016	2.328	6.816	3.888	13.032
Oct 2016	1.096	2.376	5.286	8.758
Nov 2016	0.000	0.000	0.000	0.000
Dec 2016	1.568	4.960	2.538	9.066
Cat L in Dec 2016	0.000	2.792	3.570	6.362
<b>Sub-Total</b>	<b>18.520</b>	<b>46.144</b>	<b>35.452</b>	<b>100.116</b>
Jan 2017	0.000	0.656	6.552	7.208
Feb 2017	0.088	0.264	1.380	1.732
Mar 2017	0.000	0.000	0.000	0.000
Apr 2017	0.624	1.288	0.000	1.912
May 2017	0.000	1.440	0.000	1.440
June 2017	1.432	0.000	0.000	1.432
July 2017	0.000	0.000	0.000	0.000
August 2017	0.000	0.248	0.000	0.248
<b>Total</b>	<b>20.664</b>	<b>50.040</b>	<b>43.384</b>	<b>114.088</b>

Note: All sediments are in Type II disposal method except Cat L (in Type I)

## MATERIALAB CONSULTANTS LIMITED

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com



Report No.: 0165/15/ED/0908

### 7. ENVIRONMENTAL SITE INSPECTION AND AUDIT

#### 7.1 Site Inspection

- 7.1.1 Site audits were carried out by ET on weekly basis to monitor the implementation of proper environmental management practices and mitigation measures in the Project site.
- 7.1.2 The joint site audits for Contract No. HY/2013/03 (includes Contract No. HY/2013/06 within Contract No. HY/2013/03 works area) were conducted on 3, 10, 18, 25 and 31 August 2017 by the representatives of Engineer, Contractor, ET and IEC (IEC for 25 August 2017).
- 7.1.3 Particular observations during the site inspection and corrective actions undertaken by the Contractor are described below:

For Contract No. HY/2013/03

#### 27 July 2017

- 1. The Contractor was reminded to increase watering for dust suppression at Box Culvert B. Subsequently, watering was provided. The observation was closed on 3 August 2017.
- 2. The Contractor was reminded to provide a label for a NRMM found in Portion P. Subsequently, a label was provided to the NRMM found. The observation was closed on 3 August 2017.
- 3. The Contractor was reminded to remove stagnant water accumulated in Portion P. Subsequently, stagnant water was removed. The observation was closed on 3 August 2017.

#### 3 August 2017

- 1. The Contractor was reminded to provide a label for a NRMM found near building 030. Subsequently, a label was provided to the NRMM found. The observation was closed on 10 August 2017.
- 2. The Contractor was reminded to remove general waste accumulated at Building 061. Subsequently, general waste was removed. The observation was closed on 10 August 2017.

#### 10 August 2017

- 1. The Contractor was reminded to remove stagnant water accumulated at Building 049. Subsequently, stagnant water was removed. The observation was closed on 18 August 2017.
- 2. The Contractor was reminded to remove general waste accumulated at Building 037. Subsequently, general waste was removed. The observation was closed on 18 August 2017.
- 3. The Contractor was reminded to provide drip trays for chemical containers at Building 006. Subsequently, drip trays were provided. The observation was closed on 18 August 2017.

#### 18 August 2017

- 1. The Contractor was reminded to remove general waste accumulated at Box Culvert B. Subsequently, general waste was removed. The observation was closed on 25 August 2017.
- 2. The Contractor was reminded to provide watering for dust suppression on site. Subsequently, watering was provided. The observation was closed on 25 August 2017.



## MATERIALAB CONSULTANTS LIMITED

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com

**MaterialLab**

Report No.: 0165/15/ED/0908

### 25 August 2017

1. The Contractor was reminded to remove general waste accumulated at Building 049. Subsequently, general waste was removed. The observation was closed on 31 August 2017.
2. The Contractor was reminded to remove stagnant water accumulated at drip trays at Building 049. Subsequently, stagnant water was removed. The observation was closed on 31 August 2017.
3. The Contractor was reminded to provide a drip tray for the chemical container at Building 060. Subsequently, the chemical container was removed. The observation was closed on 31 August 2017.
4. The Contractor was reminded to provide watering for dusty material near Building 060 and 049. Subsequently, watering was provided. The observation was closed on 31 August 2017.

### 31 August 2017

1. The Contractor was reminded to remove or provide a drip tray for the chemical container in A6 Bridge. Follow-up actions for outstanding observation will be checked in the upcoming site inspections and reported in the coming reporting period.

For Contract No. HY/2013/06 within Contract No. HY/2013/03 works area

### 3 August 2017

1. Nil findings.

### 10 August 2017

1. Nil findings.

### 18 August 2017

1. Nil findings.

### 25 August 2017

1. Nil findings.

### 31 August 2017

1. Nil findings.

## **7.2 Advice on the Solid and Liquid Waste Management Status**

- 7.2.1 The Contractor of Contract No. HY/2013/03 registered as a chemical waste producer for the Contract. Sufficient numbers of receptacles were available for general refuse collection and sorting.
- 7.2.2 The monthly summary of waste flow table for Contract No. HY/2013/03 (includes Contract No. HY/2013/06 within Contract No. HY/2013/03 works area) are detailed in **Appendix E**.
- 7.2.3 Contract No. HY/2013/03 has been assigned to arrange for delivery of surplus filling materials from Contract No. HY/2013/03 to other projects, including Tuen Mun - Chek Lap Kok Link (TM-CLKL) project of HZMB, the Airport Authority Hong Kong's Three Runway (3RS) Project, Wan Chai Development Phase II project, Contract No. HY/2013/02 of HKBCF and Hong Kong Link Road (HKLR) project of HZMB. The estimated quantity of surplus filling materials is confirmed by Resident Site Staff of Contract No. HY/2013/03. The summary of surplus filling materials delivered to other projects up to the end of August 2017 is shown in **Table 7.1**.

## MATERIALAB CONSULTANTS LIMITED

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com



Report No.: 0165/15/ED/0908

Table 7.1 Summary of Surplus Filling Materials Delivered from Contract No. HY/2013/03 to other projects

Month/Year	Density (in tonnes/m <sup>3</sup> )	Quantity disposed (in '000m <sup>3</sup> )					Total
		To HY/2013/02	To TM-CLKL Project	To 3RS Project	To WDII Project	To HKLR Project	
May 2017	2.3	0	12.637	0	0	0	12.637
June 2017	2.63925	0	14.769	11.238	0	0	26.007
July 2017	/	0	4.651	38.207	10.606	0.760	54.224
August 2017	2.3	0.209	0	56.126	2.281	5.716	64.332
<b>Total</b>	/	0.209	32.266	105.571	12.887	6.476	157.200

Remarks:

- The variation in density is due to different compositions of surplus filling materials
- There may be discrepancies in the total quantities with the quantities of inert C&D materials stated in Appendix E and section 7.2.4, due to rounding errors
- No density was given for July 2017 due to the direct volume figures as provided and confirmed by the RSS

7.2.4 0.248 (in'000m<sup>3</sup>) of excavated marine sediment (from Contract No. HY/2013/03), 67.927 (in'000m<sup>3</sup>) of Inert C & D Wastes and 1.656 (in'000m<sup>3</sup>) of Non-inert C & D Wastes were generated (from Contract No. HY/2013/03) in this reporting period. 64.331 (in'000m<sup>3</sup>) of Inert C & D Wastes were reused in other projects and 3.596 (in'000m<sup>3</sup>) of Inert C & D Wastes was disposed as public fill. No Inert C & D Wastes and 0.030 (in tonnes) of Non-inert C & D Wastes were generated (from Contract No. HY/2013/06 within Contract No. HY/2013/03 works area) in this reporting period. 0.030 (in tonnes) metals were generated and recycled (from Contract No. HY/2013/06 within Contract No. HY/2013/03 works area) in this reporting period.

7.2.5 The excavated marine mud from the land-based works was disposed of at the designated disposal sites within Hong Kong as allocated by the Marine Fill Committee. The Contractor of Contract No. HY/2013/03 shall ensure no spilling and overflowing of materials during loading / unloading / transportation is allowed.

7.2.6 The Contractor was reminded that chemical waste containers should be properly treated and stored temporarily in designated chemical waste storage area on site in accordance with the Code of Practice on the Packing, Labelling and Storage of Chemical Waste.

7.2.7 Contractor of Contract No. HY/2013/03's site arrangement for disposal of bentonite slurry to Tseung Kwan O Area 137 Fill Bank was checked by ET and formal consent has been obtained from Tseung Kwan O Area 137 Fill Bank for receiving used bentonite slurry generated from Contract No. HY/2013/03.

### 7.3 Environmental Licenses and Permits

7.3.1 The valid environmental licenses and permits for Contract No. HY/2013/03 (includes Contract No. HY/2013/06 within Contract No. HY/2013/03 works area) during the reporting period are summarized in **Appendix F**. The Contractor of Contract No. HY/2013/06 was advised to register as a chemical waste producer when chemical waste is expected to generate for the foreseeable future from the operations (For Registration as Waste Producer Pursuant to Waste Disposal (Chemical Waste) (General) Regulation).

### 7.4 Implementation Status of Environmental Mitigation Measures

7.4.1 In response to the site audit findings, the Contractor carried out corrective actions.

## MATERIALAB CONSULTANTS LIMITED

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com

**Materialab**

Report No.: 0165/15/ED/0908

- 7.4.2 A summary of the Implementation Schedule of Environmental Mitigation Measures (EMIS) is presented in **Appendix G**. All necessary mitigation measures at this stage of works were implemented properly.
- 7.4.3 Implementation status of Regular Marine Travel Route Plan (RMTRP) was checked by ET. In general, the Contractor has complied with the plan. A route to WDII was scheduled which approval is pending. The Contractor is revising RMTRP with the route to WDII according to the comments given by IEC. The Contractor has been reminded to follow EP condition 1.9 to ensure the compliance in the submission of updated RMTRP prior to implementation and update RMTRP as soon as possible. Training of marine travel route for marine vessels operator was given to relevant staff and relevant records were kept properly. The marine traffic records and geographical plots of all the vessels tracks of July 2017 was provided to ER, ETL, IEC/ENPO for checking during August 2017, except one route to WDII which was arranged by the contractor of WDII. ET would keep following up on the full marine travel route record and statistics of July 2017. The marine traffic records and geographical plots of all the vessels tracks to demonstrate the conformance of the vessel to the proposed route in August 2017 would be provided to ER, ETL, IEC/ENPO for checking within the month of September 2017.
- 7.4.4 With respect to condition 3.26A of EP-353/2009/K approved by EPD on 11 April 2016, the numbers and operating periods of floating grout production facilities and floating concrete batching plants on-site to review on the compliance to this EP condition were checked. Under Contract No. HY/2013/03, no floating concrete batching plant was operated on-site during the reporting period.
- 7.4.5 As silt curtain was installed since May 2017, Dolphin Watching Plan (DWP) should be implemented. The status of silt curtain was reviewed by ET and there was no change on the status of silt curtain during the reporting period. Implementation status of DWP was checked by ET. The records of dolphin watching training, regular inspection of the silt curtains and visual inspection of waters surrounded by the silt curtain in August 2017 would be provided to ER, ETL, IEC/ENPO for checking within the month of September 2017.

## 7.5 Summary of Exceedance of the Environmental Quality Performance Limit

- 7.5.1 Summary of Action and Limit Level exceedance of 1-hr TSP level and 24-hr TSP level at AMS6 shall be referred to the monthly EM&A report prepared by Contract No. HY/2011/03.
- 7.5.2 There was no Action and Limit Level exceedance of 1-hr TSP level and 24-hr TSP level recorded at station AMS7 by the Environmental Team of Contract No. HY/2010/02 during the reporting period.
- 7.5.3 There was no Action and Limit Level exceedance for noise recorded at station NMS2 and station NMS3B by the Environmental Team of Contract No. HY/2010/02 during the reporting period.
- 7.5.4 There was no Action and Limit Level exceedance for water quality recorded at the monitoring stations shown at **Table 4.1** by the Environmental Team of Contract No. HY/2010/02 during the reporting period.
- 7.5.5 Ecological monitoring results at all transects are reported in the EM&A report prepared by Contract No. HY/2010/02.

## MATERIALAB CONSULTANTS LIMITED

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com



Report No.: 0165/15/ED/0908

### 7.6 Summary of Complaints, Notification of Summons and Successful Prosecution

7.6.1 There was one complaint received in relation to the environmental impact during the reporting period. The summary of environmental complaints is presented in **Table 7.2**. The details of cumulative statistics of Environmental Complaints are provided in **Appendix H**.

Table 7.2 Summary of Environmental Complaints for the Reporting Month

Log No.	Environmental Complaint Ref. No.	Date of Complaint Receipt	Description
011	ENPO-C0122	9 August 2017	Air pollution and water discharge

7.6.2 The complaint (ENPO-C0122) was received by EPD from a member of the public on 8 August 2017 and was referred by EPD to the ENPO. Then the ENPO forwarded the complaint by email to the ET (Materialab Consultants Ltd.) of the Contract No. HY/2013/03 on 9 August 2017.

#### Details of Complaint

One complaint was received by EPD on 8 August 2017, with the following information provided by EPD:

The complainant complained that there was uncovered stockpiles in the interface with Contract No. HY/2013/01 which belonged to HY/2013/03, resulting in a lot of dust spreading around affecting the health of workers. The complainant had reminded the subcontractor of HY/2013/03 to improve the situation of discharging underground water everywhere and uncovered stockpiles, but the situation did not improve.

#### Investigation of Complaint

Date Complaint Investigated by Environmental Team: 9 August 2017

#### Summary of Investigation

Site audit was conducted on 10 August 2017. The concerned location was visited. Watering was provided to the stockpiles in the interface with HY/2013/01. As confirmed by the contractor, stockpiles were sprayed with water regularly to maintain the entire surface wet and compacted and then were removed or backfilled as soon as possible where practicable. Due to airport height restriction, tarpaulin was not allowed to use for covering those stockpiles. Besides, ET did not find any discharge of underground water.

#### Investigation Results

The ET of Contract No. HY/2013/03 (including Contract No. HY/2013/06 within Contract No. HY/2013/03) concluded that the captioned complaint is not related to the construction activities of our contract. Nevertheless, ET has recommended the Contractor to remind workers to report dusty spots to contractor to ensure prompt response and necessary follow-up on dust suppression measures through the complaint hotline of HKBCF. The Contractor had also been reminded to comply with the requirements stipulated in the Environmental Mitigation Implementation Schedule (EMIS) of the EM&A Manual, in particular:

- Air Quality:

A2: Proper watering of exposed spoil should be undertaken throughout the construction phase:

Any excavated or stockpile of dusty material should be covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading;

## MATERIALAB CONSULTANTS LIMITED

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com

The logo for MaterialLab, featuring the word "MaterialLab" in a bold, sans-serif font. The text is white and set against a black rectangular background with horizontal lines above and below it.

Report No.: 0165/15/ED/0908

Any dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads;

A stockpile of dusty material should not extend beyond the pedestrian barriers, fencing or traffic cones.

A3: The Contractor should undertake proper watering on all exposed spoil (with at least 8 times per day) throughout the construction phase.

- **Water Quality (Construction Phase):**

W2: General construction activities on land should also be governed by standard good working practice. Specific measures to be written into the works contracts should include:

Wastewater from temporary site facilities should be controlled to prevent direct discharge to surface or marine waters;

Storm drainage shall be directed to storm drains via adequately designed sand/silt removal facilities such as sand traps, silt traps and sediment basins. Channels, earth bunds or sand bag barriers should be provided on site to properly direct storm water to such silt removal facilities. Catchpits and perimeter channels should be constructed in advance of site formation works and earthworks;

Rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities;

Discharges of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system.

### Follow up status (complaints)

During weekly site audit on 21 and 27 July, 3 and 10 August 2017, ET confirmed that the Contractor had provided workable and effective air and water quality mitigation measures on site.

### Recommendations to the Contractor

The Contractor had been reminded to fully implement all air and water quality mitigation measures. ET has also recommended the Contractor to remind workers to report dusty spots to contractor to ensure prompt response and necessary follow-up on dust suppression measures through the complaint hotline of HKBCF.

### Follow up Status (Overall)

ET has proposed recommendations to the Contractor, including reminding workers to report dusty spots to contractor to ensure prompt response and necessary follow-up on dust suppression measures through the complaint hotline of HKBCF, and reminded the Contractor on complying with the requirements stipulated in the Environmental Mitigation Implementation Schedule (EMIS) of the EM&A Manual to the Contractor. According to site audits conducted recently, ET confirmed and all mitigation measures stipulated in the EMIS had been implemented during site audit on 21 and 27 July, 3 and 10 August 2017, in particular to the following aspect:

- **Air Quality:**

A2: Proper watering of exposed spoil should be undertaken throughout the construction phase:

## MATERIALAB CONSULTANTS LIMITED

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com

**Materialab**

Report No.: 0165/15/ED/0908

Any excavated or stockpile of dusty material should be covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading;

Any dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads;

A stockpile of dusty material should not be extend beyond the pedestrian barriers, fencing or traffic cones.

A3: The Contractor should undertake proper watering on all exposed spoil (with at least 8 times per day) throughout the construction phase.

- Water Quality (Construction Phase):

W2: General construction activities on land should also be governed by standard good working practice. Specific measures to be written into the works contracts should include:

Wastewater from temporary site facilities should be controlled to prevent direct discharge to surface or marine waters;

Storm drainage shall be directed to storm drains via adequately designed sand/silt removal facilities such as sand traps, silt traps and sediment basins. Channels, earth bunds or sand bag barriers should be provided on site to properly direct storm water to such silt removal facilities. Catchpits and perimeter channels should be constructed in advance of site formation works and earthworks;

Rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities;

Discharges of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system.

7.6.3 There was no notification for summons or prosecutions received in relation to the environmental impact during this reporting period.

7.6.4 Statistics on environmental complaints, notifications of summons and successful prosecutions are provided in **Appendix H**.

## MATERIALAB CONSULTANTS LIMITED

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com



Report No.: 0165/15/ED/0908

### 8. FUTURE KEY ISSUES

#### 8.1 Construction Programme for the Coming Months

8.1.1 As informed by the Contractor, the following are the major construction activities anticipated in September 2017:

For Contract No. HY/2013/03

1. Building at Portion A1, B, G, N, J, STP & Pumping Stations;
2. CUE Construction at Portion B, C & J;
3. Drainage & Sewerage Work, Water Main & Cable Duct at Portion B, H1, H2, J, P, G & A1;
4. Radiation Screen Wall at Portion B, E, P, N, M, C;
5. Sign Gantry Footing at Portion B;
6. Sewerage Pumping Station, High Mast Lighting Foundation & Box Culvert C at Portion G;
7. Bridge Works at A1 to A9;
8. Site Foundation Works at Portion K;
9. Cover Walkway at Portion H1 & H2;
10. Box Culvert B at Portion N; Shuttle kiosk & Subway at Portion E;
11. Deployment, maintenance and inspection of silt curtain;
12. Construction of water outfall of box culvert; and
13. Marine sediment excavation activities from the land-based works and corresponding disposal at the designated disposal sites within Hong Kong as allocated by the Marine Fill Committee.

For Contract No. HY/2013/06 within Contract No. HY/2013/03 works area

1. Conduits, Wiring & display panel installation at Building 037, kiosk and CUE works area.

#### 8.2 Environmental Site Inspection Schedule for the Coming Month

8.2.1 The tentative schedule for weekly site inspections for September 2017 is provided in **Appendix I**.

## MATERIALAB CONSULTANTS LIMITED

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com

The logo for MaterialLab, featuring the word "MaterialLab" in a bold, sans-serif font. The text is white and is set against a dark, rectangular background that has a slight gradient and a thin white border.

Report No.: 0165/15/ED/0908

### 9. CONCLUSIONS

- 9.1 Commencement of Contract No. HY/2013/03 took place on 10 April 2015. The commencement date for construction works and the EM&A programme of Contract No. HY/2013/03 commenced on 29 August 2015 (commencement of Contract No. HY/2013/06 took place on 14 August 2015. The commencement date for construction works and the EM&A programme of Contract No. HY/2013/06 commenced on 13 September 2016 within Contract No. HY/2013/03 works area).
- 9.2 Summary of Action and Limit Level exceedance of 1-hr TSP level and 24-hr TSP level at AMS6 shall be referred to the monthly EM&A report prepared by Contract No. HY/2011/03.
- 9.3 There was no Action and Limit Level exceedance of 1-hr TSP level and 24-hr TSP level recorded at station AMS7 by the Environmental Team of Contract No. HY/2010/02 during the reporting period.
- 9.4 There was no Action and Limit Level exceedance for noise recorded at station NMS2 and station NMS3B by the Environmental Team of Contract No. HY/2010/02 during the reporting period.
- 9.5 There was no Action and Limit Level exceedance for water quality recorded at the monitoring stations shown at **Table 4.1** by the Environmental Team of Contract No. HY/2010/02 during the reporting period.
- 9.6 Ecological monitoring results at all transects are reported in the EM&A report prepared by Contract No. HY/2010/02.
- 9.7 Environmental site inspections were carried out on 3, 10, 18, 25 and 31 August 2017. Recommendations on remedial actions were given to the Contractor for the deficiencies identified during the site inspections.
- 9.8 There was one complaint received in relation to the environmental impact during the reporting period. After investigation, the complaint was not related to Contract No. HY/2013/03 (including Contract No. HY/2013/06 within Contract No. HY/2013/03).
- 9.9 There were no notifications of summons or prosecutions received during the reporting period.



**MATERIALAB CONSULTANTS LIMITED**

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

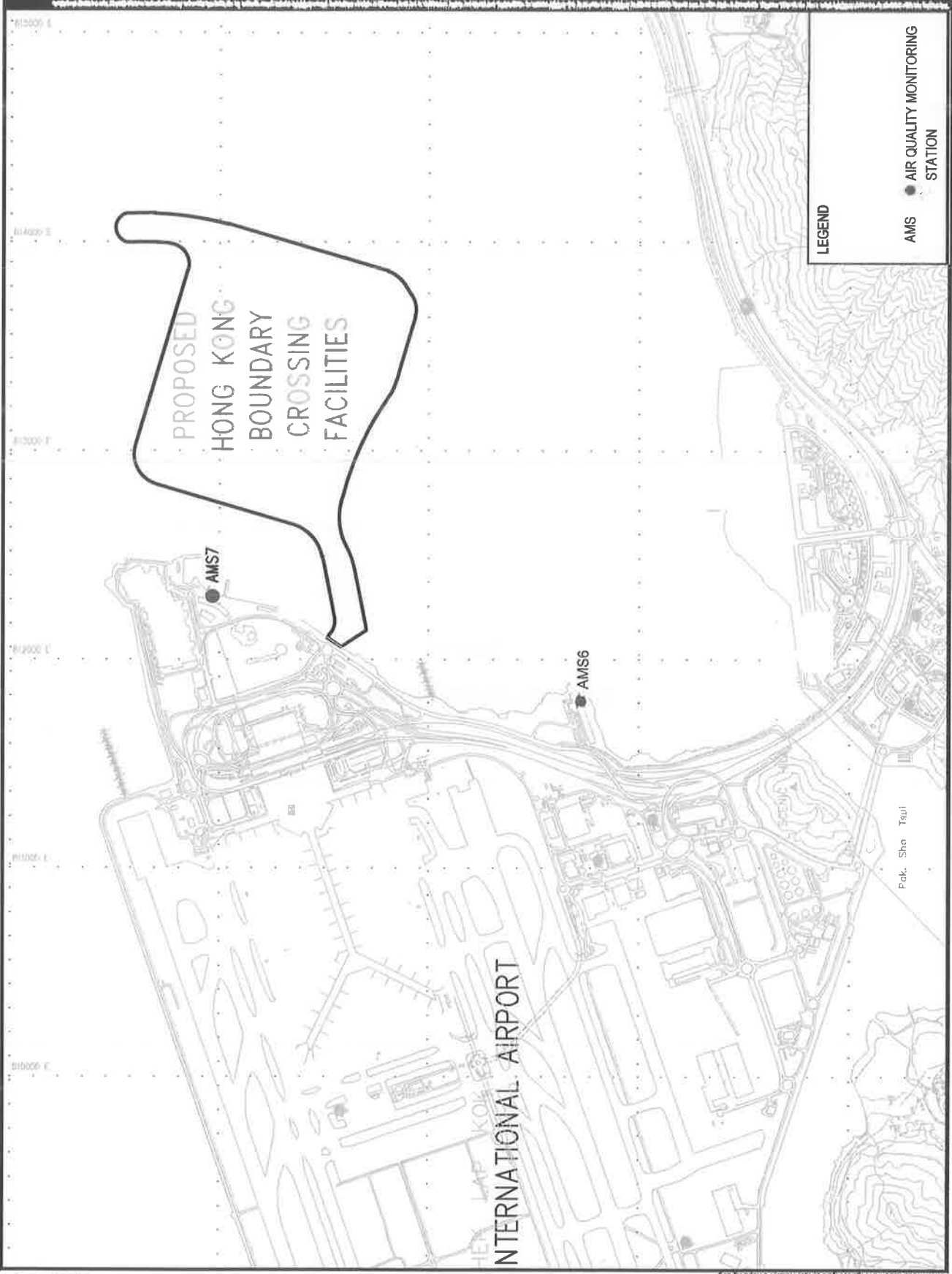
Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com



Report No.: 0165/15/ED/0908

**Figure 1**

**Air Quality Monitoring Stations**



## **MATERIALAB CONSULTANTS LIMITED**

Room 723 & 725, 7/F, Block B,

Profit Industrial Building,

1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238

Fax : (852)-24508032

Email : mcl@fugro.com

---

**MaterialLab**

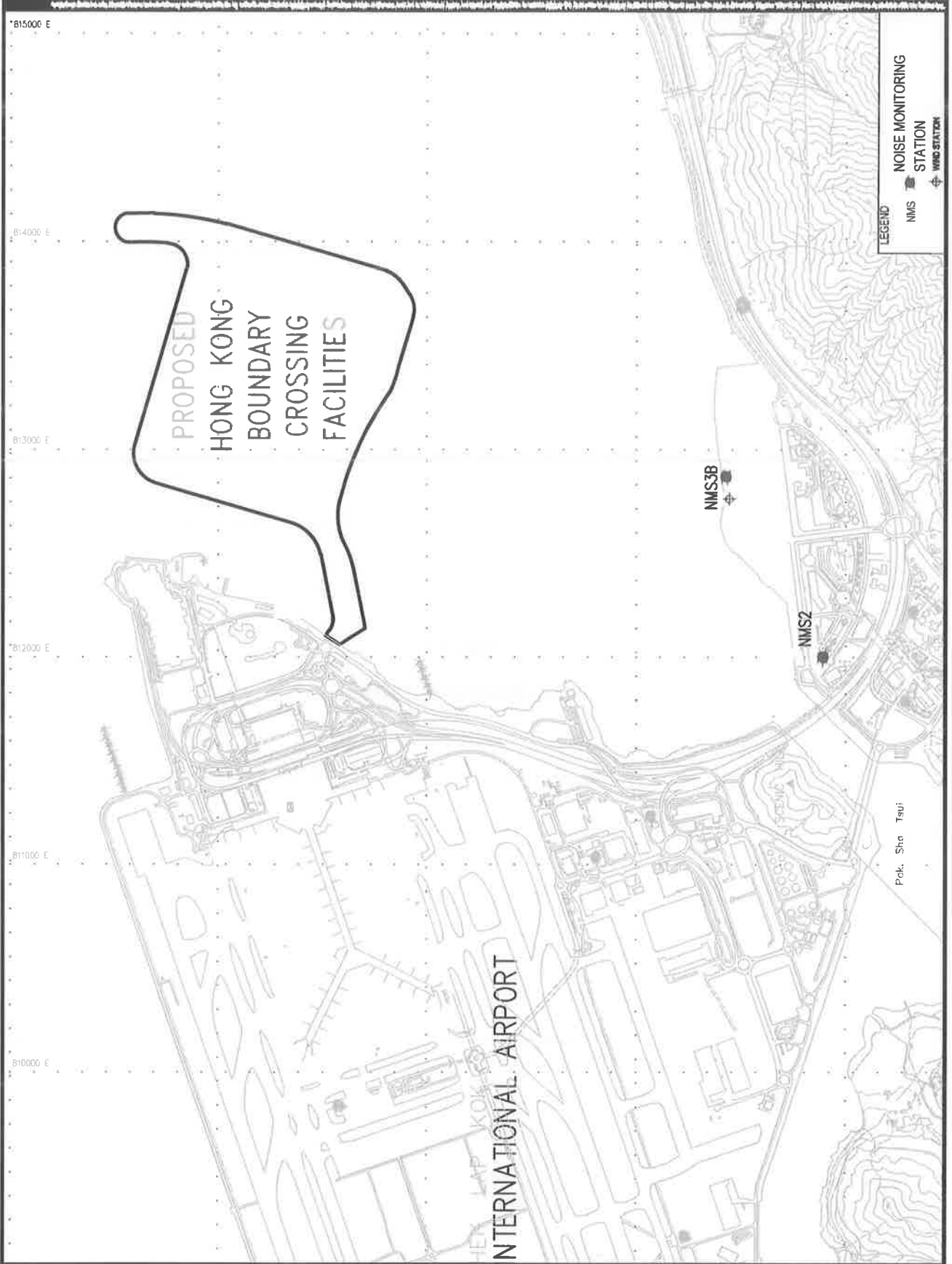
---

Report No.: 0165/15/ED/0908

---

### **Figure 2**

#### **Noise Monitoring Stations**



## **MATERIALAB CONSULTANTS LIMITED**

Room 723 & 725, 7/F, Block B,

Profit Industrial Building,

1-15 Kwai Fung Crescent, Kwai Fong,

Hong Kong.

Tel : (852)-24508238

Fax : (852)-24508032

Email : mcl@fugro.com

**Materialab**

Report No.: 0165/15/ED/0908

---

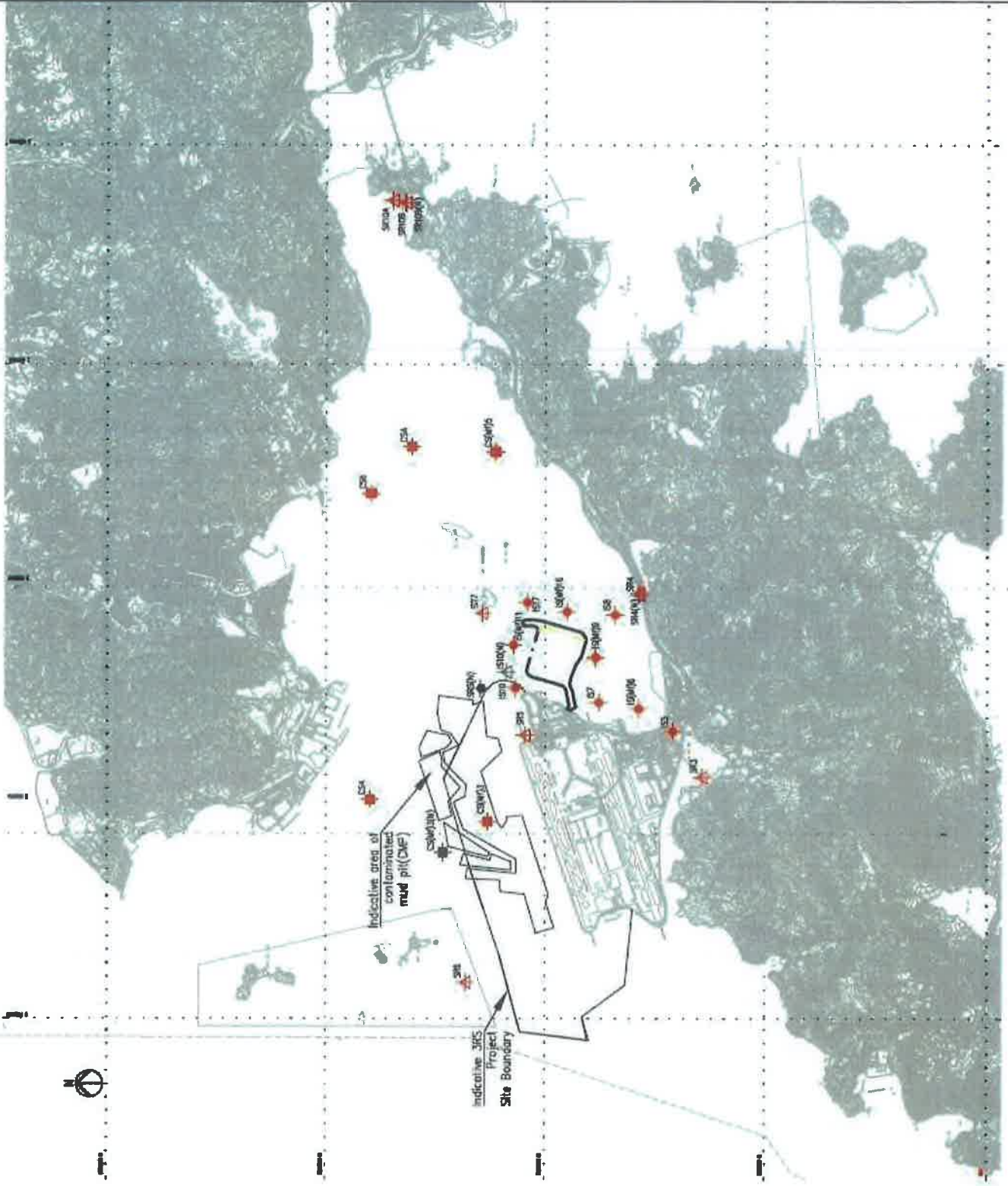
### **Figure 3**

#### **Water Quality Monitoring Stations**

- IS IMPACT STATIONS
- CS CONTROL / FAR FIELD STATIONS
- SP SENSITIVE RECEIVERS STATIONS
- IS IMPACT STATIONS (RELOCATED)
- SI SENSITIVE RECEIVERS STATIONS (RELOCATED)
- CS CONTROL / FAR FIELD STATIONS (RELOCATED)

SETTING OUT SCHEDULE

MONITORING STATIONS	UD-COORDINATES	
	EASTING	NORTHING
IS1	011076	027416
IS2	012108	027423
IS3	012844	027477
IS4	014024	027412
IS5	013273	027429
IS6	013288	027475
IS7	013361	027516
IS8	014328	027497
IS9	014338	027521
IS10	014325	027551
IS11	014705	027529
IS12	014342	027591
IS13	014837	027481
IS14	014383	027431
IS15	023744	027445
IS16	023583	027507
IS17	023604	027522
IS18	017708	027121
IS19	016023	027404
IS20	017488	027392
IS21	018113	027004
IS22	023277	027479
IS23	017488	027415
IS24	023619	027117



**MATERIALAB CONSULTANTS LIMITED**

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

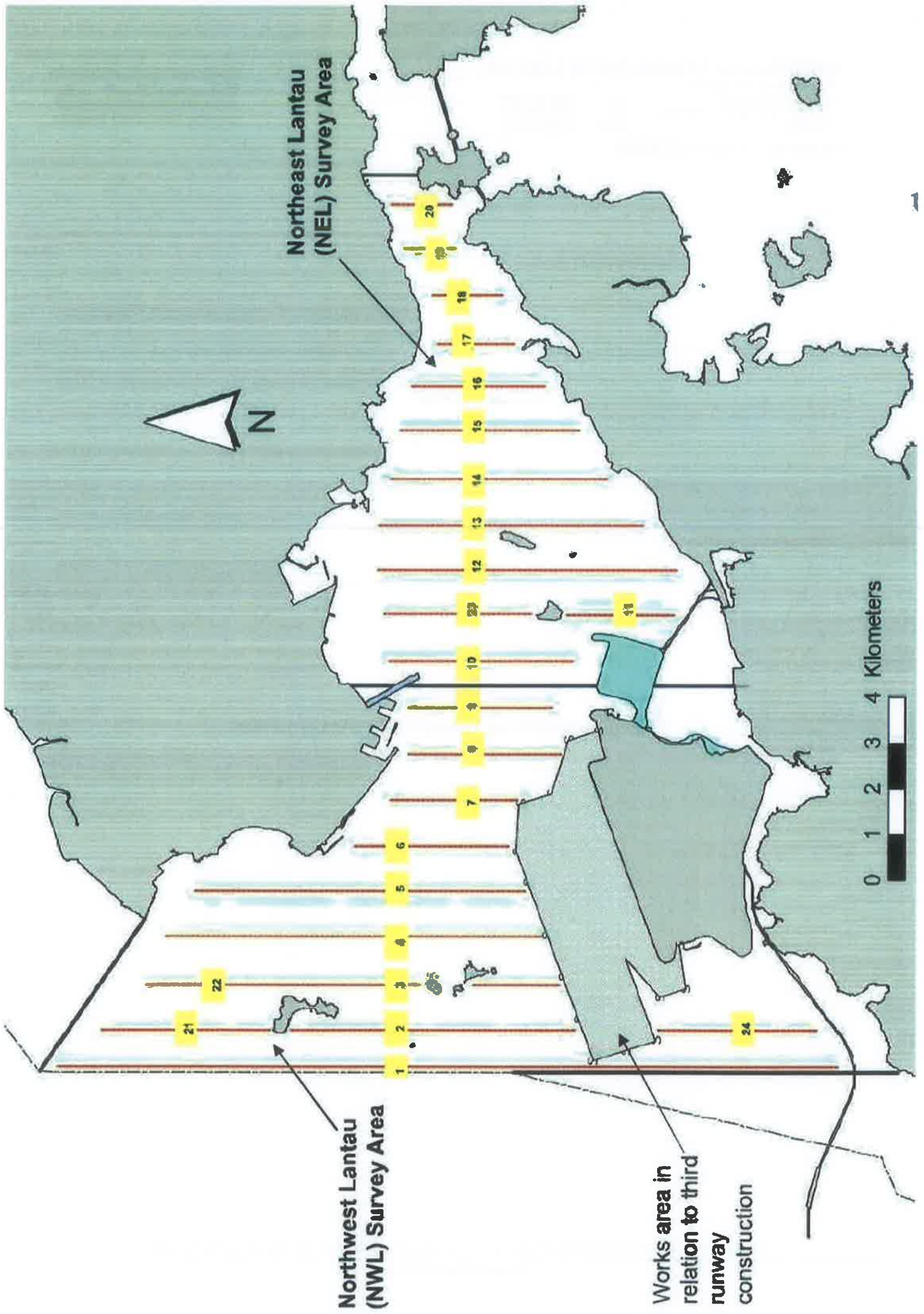
Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com



Report No.: 0165/15/ED/0908

**Figure 4**

**Ecological Monitoring Transect Line and Layout Map**



Northeast Lantau (NEL) Survey Area



Northwest Lantau (NWL) Survey Area

Works area in relation to third runway construction



## **MATERIALAB CONSULTANTS LIMITED**

Room 723 & 725, 7/F, Block B,

Profit Industrial Building,

1-15 Kwai Fung Crescent, Kwai Fong,

Hong Kong.

Tel : (852)-24508238

Fax : (852)-24508032

Email : mcl@fugro.com

---

**MaterialLab**

---

---

Report No.: 0165/15/ED/0908

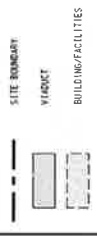
### **Appendix A**

#### **Location of Works Areas**



NOTE:  
1. THIS DRAWING TO BE READ IN CONJUNCTION WITH  
DRAWING NO. 60191048/C3/000/000/1001.

LEGEND:



DATE	DESCRIPTION
14/01/2008	ISSUE 14
14/01/2008	ISSUE 13
14/01/2008	ISSUE 12
14/01/2008	ISSUE 11
14/01/2008	ISSUE 10
14/01/2008	ISSUE 9
14/01/2008	ISSUE 8
14/01/2008	ISSUE 7
14/01/2008	ISSUE 6
14/01/2008	ISSUE 5
14/01/2008	ISSUE 4
14/01/2008	ISSUE 3
14/01/2008	ISSUE 2
14/01/2008	ISSUE 1

**TRAFFICWAYS DEPARTMENT**  
TRAFFICWAYS 交通工程處  
Hong Kong Police Force Traffic Management Centre  
HONG KONG POLICE FORCE TRAFFIC MANAGEMENT CENTRE  
- VEHICLE CLEARANCE PLACES AND  
AUXILIARY BUILDINGS AND FACILITIES

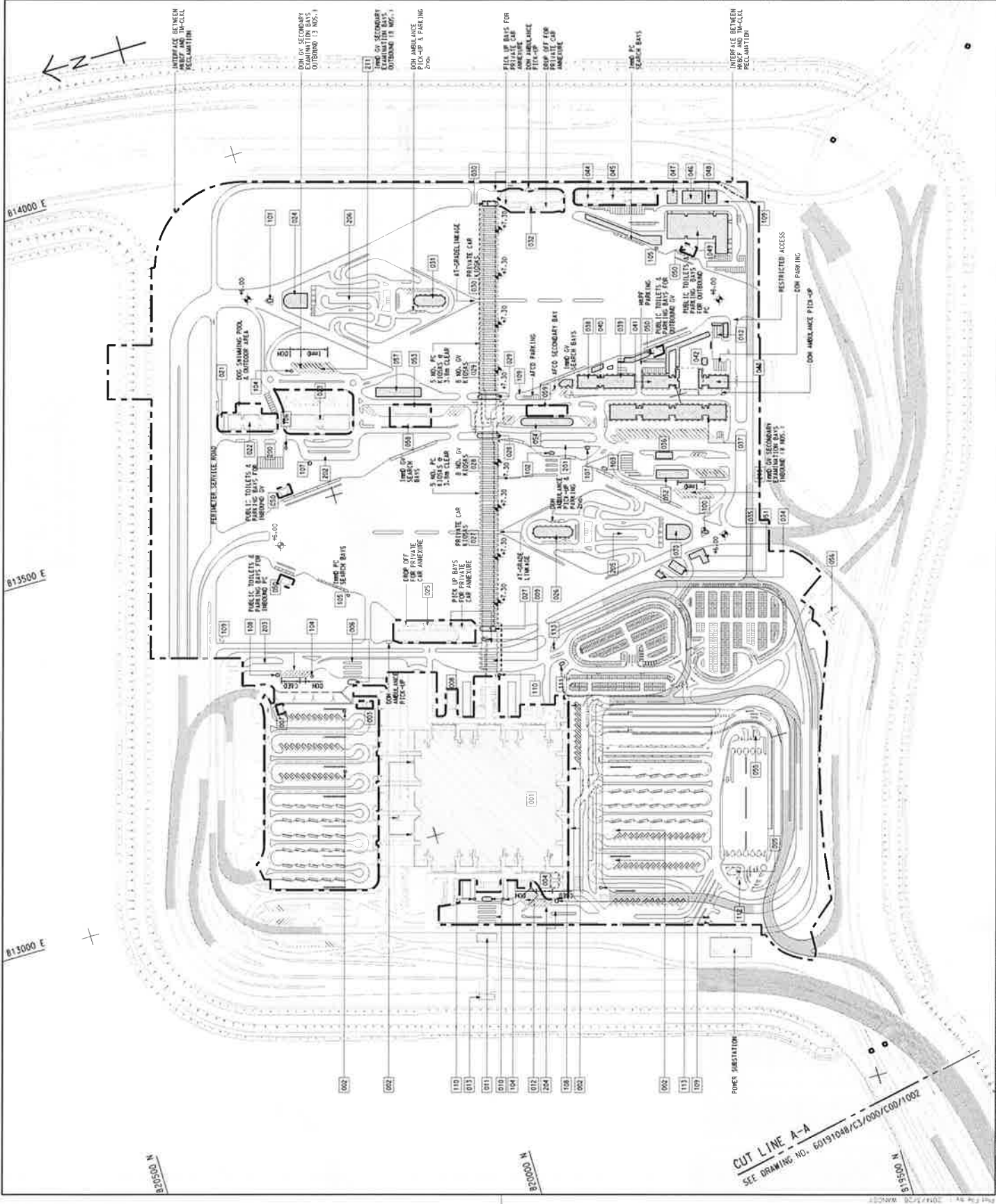
Figure 1-1  
Current Layout Plan

SHEET 1 OF 2

**AECOM**  
Rogers Stirk Harbour + Partners  
BURO HAPPOLD ATKINS ADI

PROJECT NO.	60191048/C3/000/000/1001
DATE	14/01/2008
SCALE	1:1000
PROJECT NAME	BACK
DESIGNER	RSY
DATE	14/01/2008
PROJECT NO.	60191048/C3/000/000/1001
DATE	14/01/2008
PROJECT NAME	BACK
DESIGNER	RSY
DATE	14/01/2008
PROJECT NO.	60191048/C3/000/000/1001
DATE	14/01/2008
PROJECT NAME	BACK
DESIGNER	RSY
DATE	14/01/2008

© COPYRIGHT RESERVED  
TRAFFICWAYS DEPARTMENT



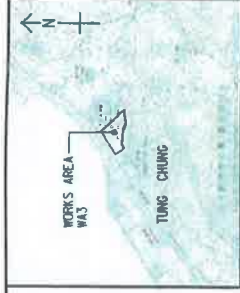
CUT LINE A-A  
SEE DRAWING NO. 60191048/C3/000/000/1001

Plot No.: 2014/200 WNC07  
Date: 14/01/2008

SETTING OUT POINT	
POINT	NORTHING
301	813467.285
302	813214.141
303	813227.538
304	813460.885
305	813460.825
306	813287.350
307	813287.861
308	814668.133
309	814668.783
310	813533.448
311	813247.717
312	814668.595
313	814668.368
314	813531.154
315	813533.345
316	813220.849
317	814668.827
318	813222.110
319	813665.404
320	813665.509
321	813665.531
322	813665.621

817200 E  
817400 E  
817600 E

819200 N  
819000 N



**NOTES:**

- COORDINATES ARE RELATED TO HONG KONG METRIC GRID 1980.
- DIMENSIONS ARE IN MILLIMETER AND CHANGE ARE IN METRES UNLESS OTHERWISE SHOWN.

**LEGEND:**

WORKS AREA BOUNDARY

PORTION 3.1  
PORTION 3.2  
PORTION 3.3  
PORTION 3.4  
PORTION 3.5  
PORTION 3.6  
PORTION 3.7  
PORTION 3.8  
PORTION 3.9  
PORTION 3.10

WORK-BUILDING AREA  
2200m<sup>2</sup> (WOLE1)

**FOR CONSTRUCTION**

C	WORKING DRAWING	NO. 14/41
D	TENDER ADDENDUM NO. 2	NO. 5/1
E	TENDER ADDENDUM NO. 1	NO. 5/1
F	TENDER DRAWING	NO. 5/1

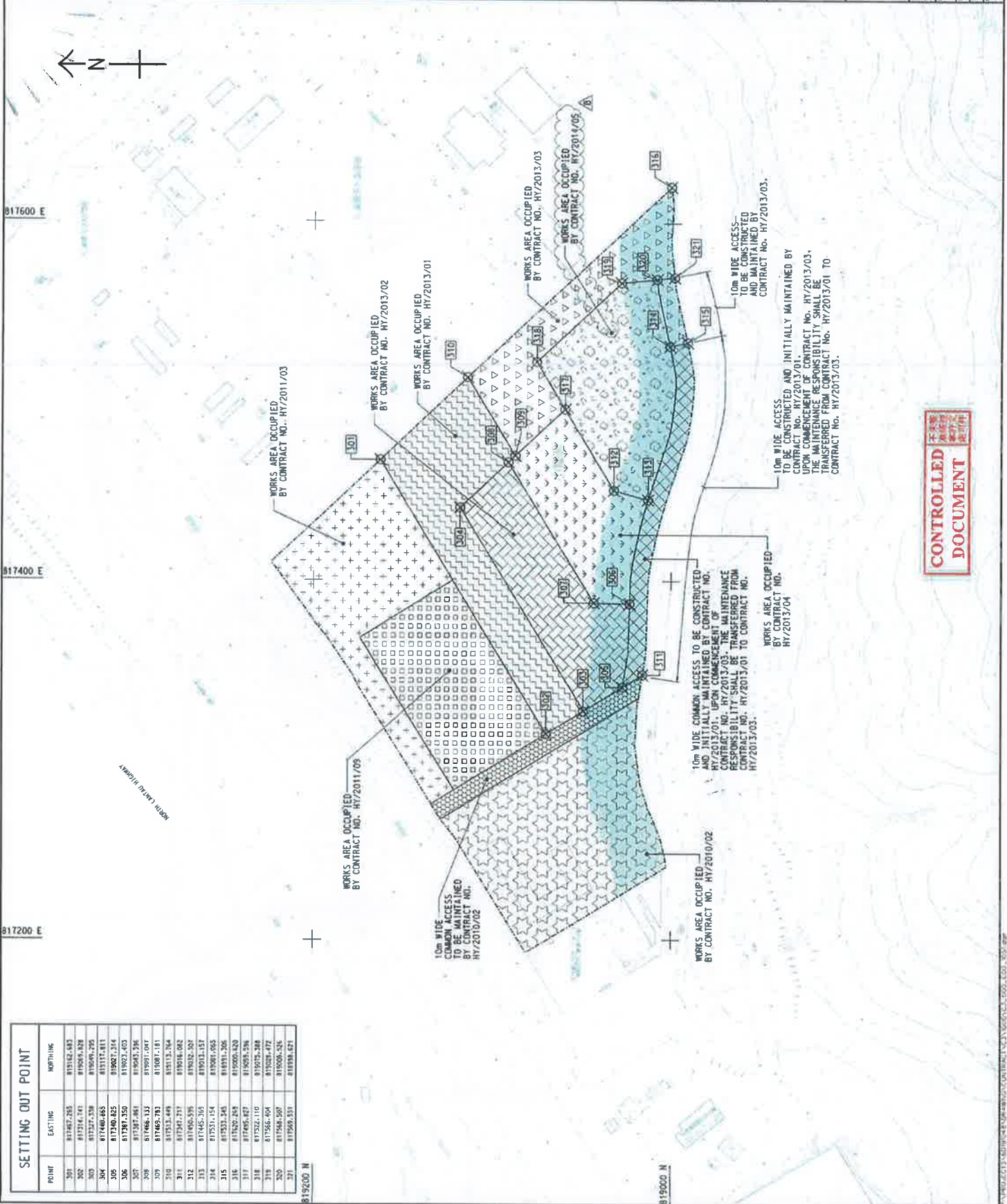
HONG KONG SAR GOVERNMENT  
BUILDINGS DEPARTMENT  
BUILDINGS AND OPERATIONS DIVISION  
PROJECT OFFICE  
SHEWAN TOMES BUILDINGS AND FACILITIES

**AECOM**  
Rogers Stark Harbour + Partners  
SUHO HARPOLO ATUNG AUI

**Aedas**

60191048/C3/000/C00/1051C

WORKING DRAWING  
CONTRACT NO. HY/2013/03



**CONTROLLED DOCUMENT**

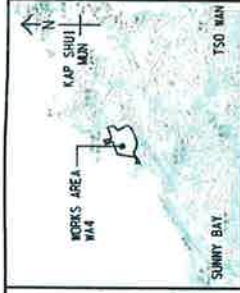
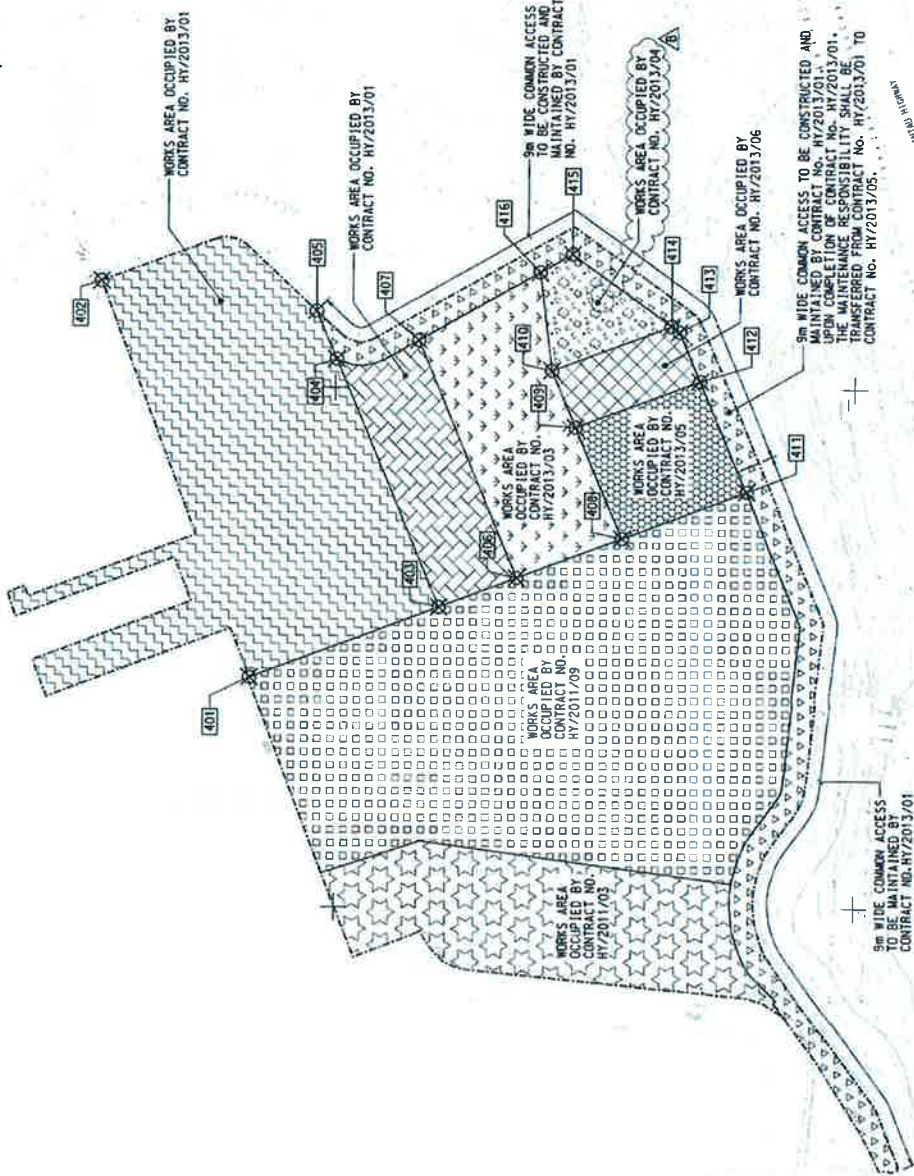
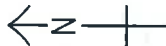
SETTING OUT POINT		
POINT	EASTING	NORTHING
401	822484.151	822632.215
402	822490.553	822599.415
403	822515.608	822555.848
404	822610.290	822579.442
405	822637.428	822607.259
406	822526.388	822529.813
407	822516.246	822567.950
408	822542.232	822483.581
409	822584.353	822507.428
410	822506.848	822516.561
411	822560.278	822441.058
412	822502.949	822460.010
413	822621.914	822467.559
414	822624.130	822470.398
415	822651.725	822508.865
416	822444.158	822521.192

822600 E

822400 E

822600 N

822400 N

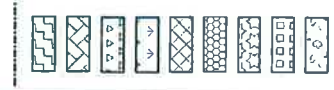


LOCATION PLAN  
SCALE 1:1,2000

NOTES:

1. DIMENSIONS ARE RELATED TO HONG KONG METRIC GRID 118803.
2. DIMENSIONS ARE IN MILLIMETER AND CENTIMETER ARE IN METRES UNLESS OTHERWISE SHOWN.

LEGEND:



**FOR CONSTRUCTION**

C	WORKING DRAWING	REVISED	NO. 1	DATE	15/01/15
B	TENDER ADDENDUM NO. 2	REVISED	NO. 1	DATE	15/01/14
A	TENDER ADDENDUM NO. 1	REVISED	NO. 1	DATE	15/01/14
	TENDER DRAWING	REVISED	NO. 1	DATE	15/01/14
		REVISED	NO. 1	DATE	15/01/14
		REVISED	NO. 1	DATE	15/01/14

TRAFFIC CONTROL DEPARTMENT  
 HONG KONG POLICE FORCE  
 TRAFFIC CONTROL DIVISION  
 TRAFFIC CONTROL OFFICERS  
 VEHICLE CLEARANCE PLANS AND  
 AUXILIARY BUILDINGS AND FACILITIES

**AECOM** Aedas  
 Rogers Shirk Harbour + Partners  
 Bruno Hainfeld Atong ADI

PROJECT NO. HY/2013/03  
 DRAWING NO. 60191048/C3/000/C00/1052C

DATE: 15/01/15  
 SCALE: 1:1000  
 SHEET NO. 1 OF 1

WORKING DRAWING  
 COPYRIGHT RESERVED

## **MATERIALAB CONSULTANTS LIMITED**

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com

The logo for MaterialLab, featuring the word "MaterialLab" in a bold, sans-serif font. The text is white and is set against a black rectangular background that has a horizontal bar above and below the text.

Report No.: 0165/15/ED/0908

---

### **Appendix B**

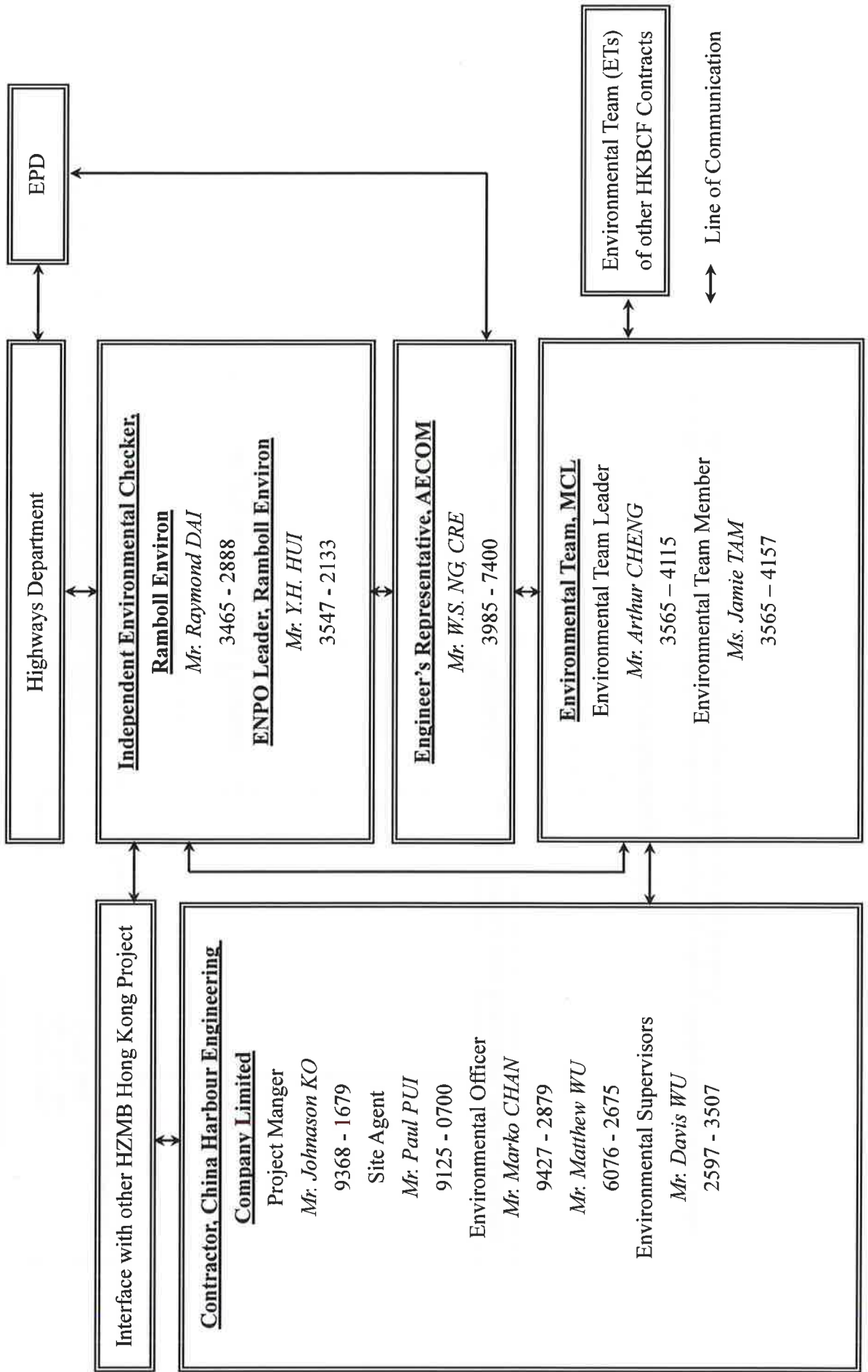
#### **Project Organization for Environmental Works**



# CHINA HARBOUR ENGINEERING COMPANY LIMITED

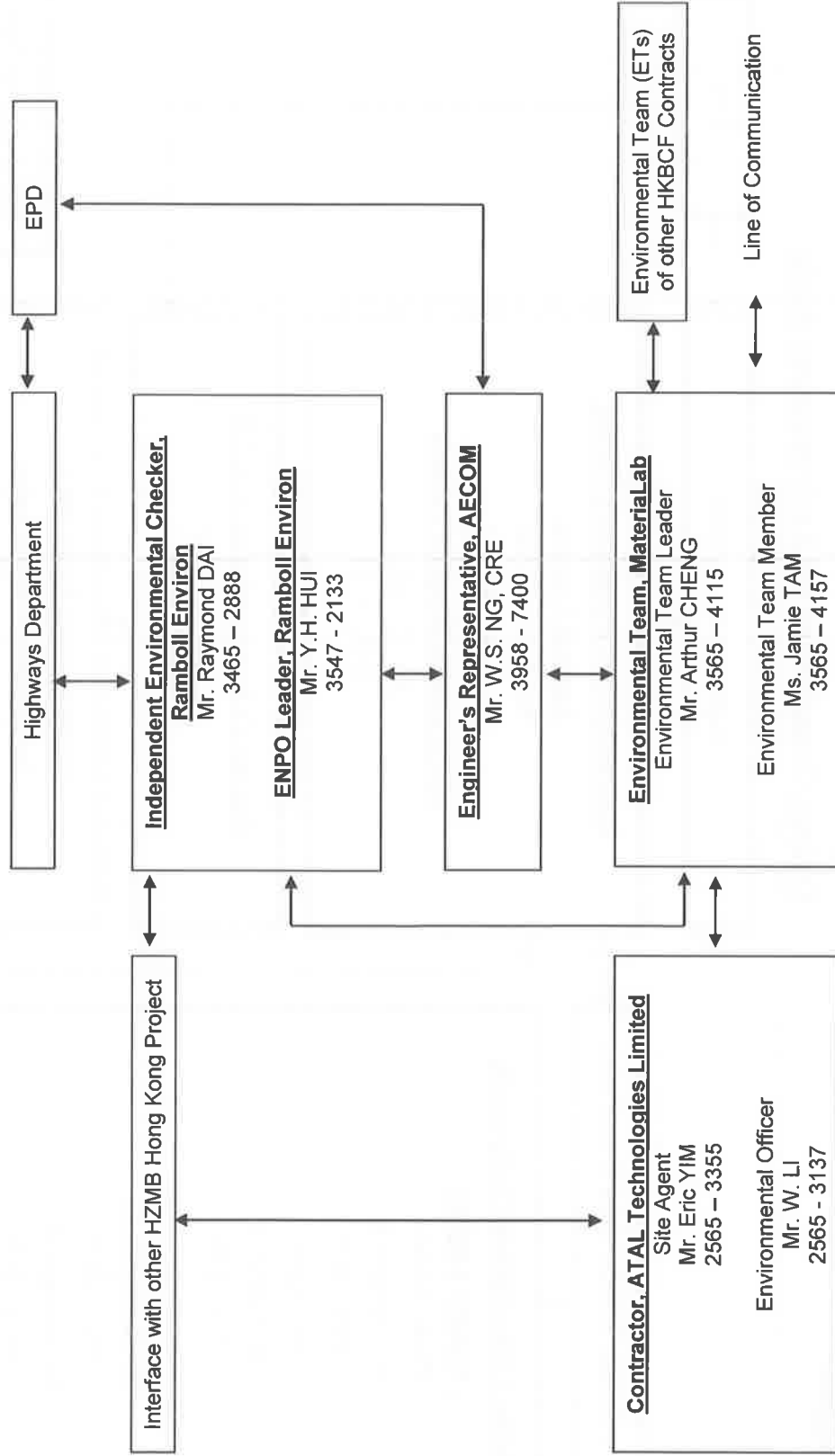
Contract No. HY/2013/03 Hong Kong-Zhuhai-Macao Bridge, Hong Kong Boundary Crossing  
Facilities – Vehicle Clearance Plazas and Ancillary Buildings and Facilities

## Projects Organization for Environmental Works



Contract No. HY/2013/06 (within Contract No. HY/2013/03 works area)  
 Hong Kong-Zhuhai-Macao Bridge, Hong Kong Boundary Crossing Facilities – Automatic Vehicle Clearance Support System

Projects Organization for Environmental Works





## **MATERIALAB CONSULTANTS LIMITED**

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com

**MaterialLab**

Report No.: 0165/15/ED/0908

### **Appendix C**

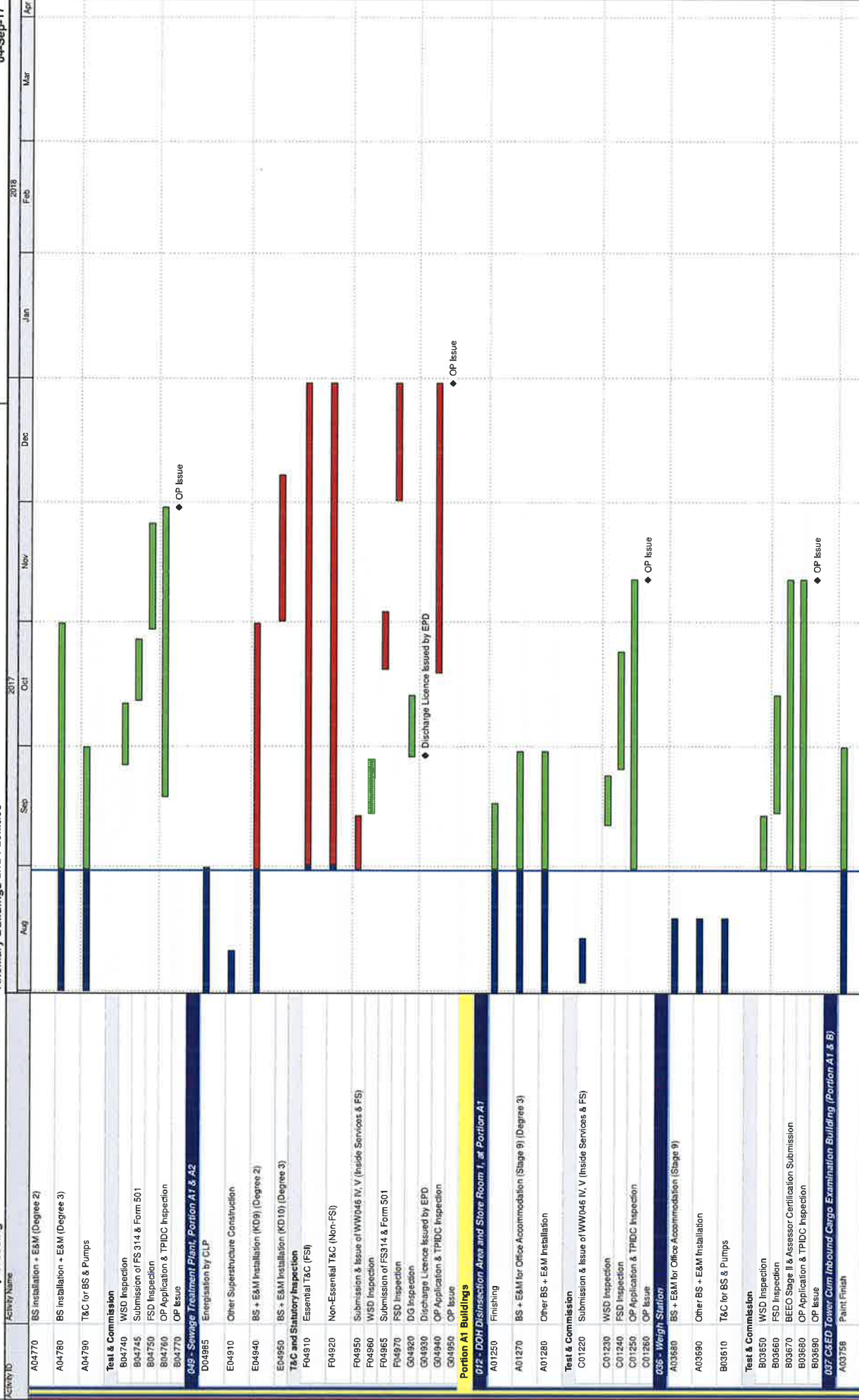
#### **Construction Programme**

Activity ID	Activity Name	2017	2018	2019	2020	2021	2022	2023	2024	
Activity ID	Activity Name	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
<p><b>Key Dates</b></p> <ul style="list-style-type: none"> <li>KD9 Achievement of Stage 8 of the Works (633 days: 01 Jan, 17 EOT 1)</li> <li>KD10 Achievement of Stage 9 of the Works (723 days: 01 Apr, 17 EOT 1)</li> <li>KD11 Achievement of Stage 10 of the Works (730 days: 08 Apr, 17)</li> <li>KD12 Achievement of Stage 11 of the Works (770 days: 18 May 17)</li> <li>KD13 Achievement of Stage 12 of the Works (554 days: 14 Oct, 16)</li> <li>KD14 Achievement of Stage 13 of the Works (548 days: 08 Oct, 16)</li> <li>KD15 Achievement of Stage 14 of the Works (548 days: 08 Oct, 16)</li> <li>KD16 Achievement of Stage 15 of the Works (548 days: 08 Oct, 16)</li> <li>KD17 Achievement of Stage 16 of the Works (548 days: 08 Oct, 16)</li> <li>KD18 Achievement of Stage 17 of the Works (490 days: 11 Aug, 16)</li> <li>KD18A Achievement of Stage 18 of the Works (478 days: 30 Jul, 16 EOT 1)</li> <li>KD18B Achievement of Stage 19 of the Works (558 days: 18 Oct, 16 EOT 1)</li> <li>KD18C Achievement of Stage 20 of the Works (670 days: 07 Feb, 17)</li> <li>KD18D Achievement of Stage 21 of the Works (745 days: 23 Apr, 17)</li> <li>KD18E Achievement of Stage 22 of the Works (835 days: 22 Jul, 17)</li> <li>KD18F Achievement of Stage 23 of the Works (730 days: 08 Apr, 17)</li> <li>KD18G Achievement of Stage 24 of the Works (770 days: 18 May 17)</li> <li>KD19 Achievement of Section IA of the Works (680 days: 17 Feb, 17)</li> <li>KD20 Achievement of Section IB of the Works (770 days: 18 May 17)</li> <li>KD21 Achievement of Section IIA of the Works (770 days: 18 May 17)</li> <li>KD22 Achievement of Section IIB of the Works (770 days: 18 May 17)</li> <li>KD23 Achievement of Section IIC of the Works (770 days: 18 May 17)</li> <li>KD24 Achievement of Section IID of the Works (675 days: 12 Feb, 17)</li> <li>KD25 Achievement of Section IV of the Works (965 days: 30 Nov, 17)</li> <li>KD26 Achievement of Section V of the Works (1331 days: 30 Nov, 16)</li> <li>KD28 Achievement of Section VII of the Works (966 days: 30 Nov, 17)</li> <li>KD29 Achievement of Section VIII of the Works (910 days: 05 Oct, 17)</li> <li>KD30 Achievement of Section IX of the Works (910 days: 05 Oct, 17)</li> <li>KD31 Achievement of Section X of the Works (790 days: 07 Jun, 17)</li> </ul>										
<p><b>CONTRACT DATES</b></p> <ul style="list-style-type: none"> <li>Contract Date for Access to External Area for Contract HY2013/01 for ELV System Installation (670 days)</li> <li>Contract Date for Access to External Area for Contract HY2013/02 for ELV System Installation (560 days)</li> <li>Contract Date for Access to External Area for Contract HY2013/04 ELV System Installation (560 days)</li> </ul>										
<p><b>Site Access &amp; Possession</b></p>										
<p><b>Access to Locations of the Site</b></p> <ul style="list-style-type: none"> <li>Contract Date for Access to External Area for Contract HY2013/01 for ELV System Installation (670 days)</li> <li>Contract Date for Access to External Area for Contract HY2013/02 for ELV System Installation (560 days)</li> <li>Contract Date for Access to External Area for Contract HY2013/04 ELV System Installation (560 days)</li> </ul>										
<p><b>PORTION A1</b></p>										
<p><b>Bridge 29</b></p>										
<p><b>Structure Deck</b></p> <ul style="list-style-type: none"> <li>SA9470 Parapet (38 pour) &amp; E&amp;M Works</li> <li>SA9480 Bituminous Paving (492 ton) (KD25)</li> <li>SW8120 Backfilling W8-1</li> <li>SW8130 Parapet W8-1 (16 pour) &amp; E&amp;M Works</li> <li>SW8140 RW8-1 Drainage system &amp; Cable Laying</li> <li>SW8150 Bituminous Paving W8-1 (347 ton) (KD25)</li> <li>SW9120 Backfilling W9-1</li> <li>SW9130 Parapet W9-1 (16 pour) &amp; E&amp;M Works</li> <li>SW9140 Drainage System &amp; Cable Laying</li> <li>SW9150 Bituminous Paving W9-1 (347 ton)</li> </ul>										
<p><b>047 - Fresh Water Pumping Station, Portion A1 &amp; A2</b></p>										

Date	Revision	Checked
30-Jun-17	Works Programme (DWP4), updated as of 30 June 2017	ZJ
31-Jul-17	Works Programme (DWP4), updated as of 31 July 2017	ZJ
31-Aug-17	Works Programme (DWP4), updated as of 31 Aug, 2017	ZJ

**HZMB HK Boundary Crossing Facilities - Vehicle Clearance Plazas and Ancillary Buildings and Facilities**

04-Sep-17



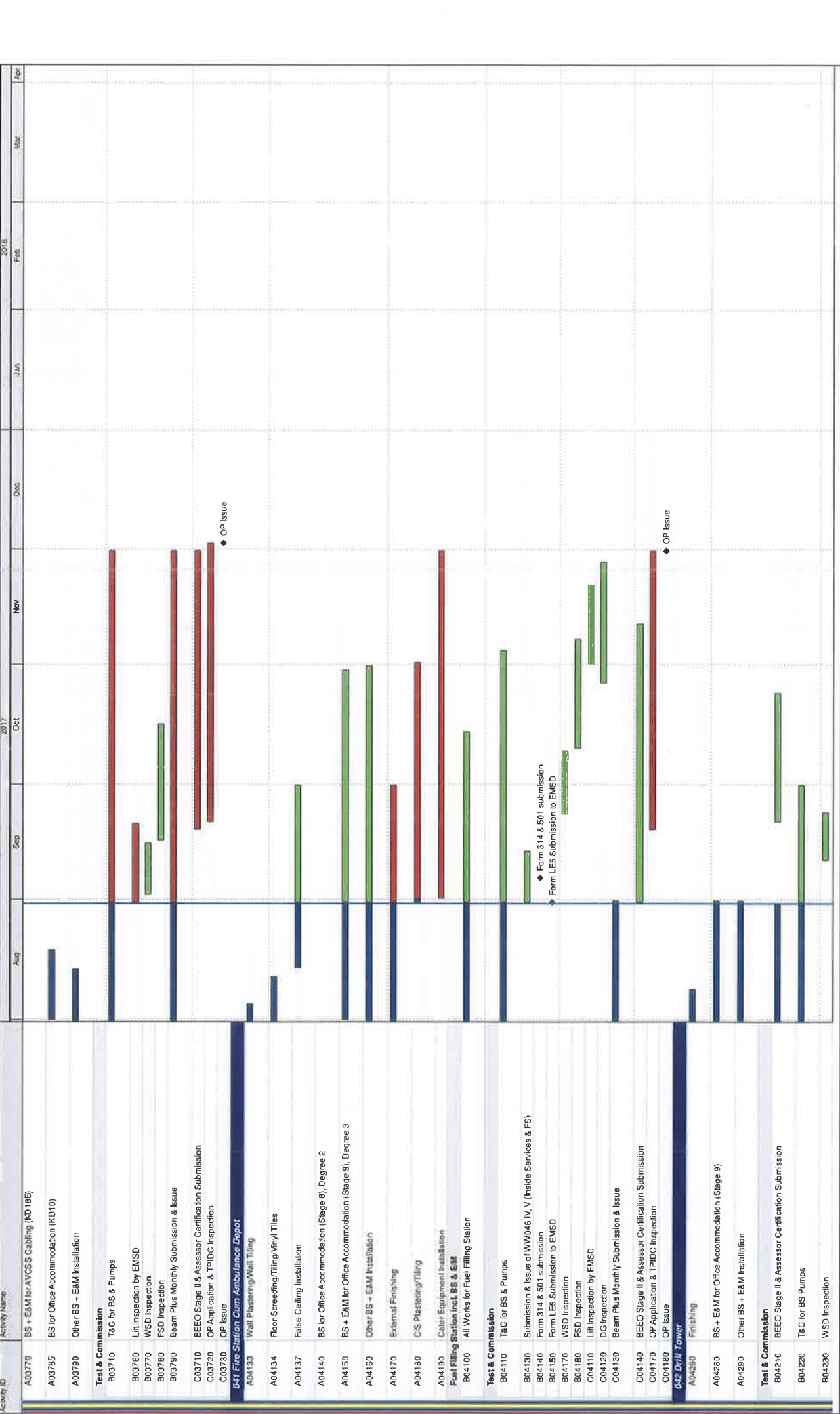
Date	Revision	Checked
30-Jun-17	Works Programme (DWP4), updated as of 30 June 2017	ZJ
31-Jul-17	Works Programme (DWP4), updated as of 31 July 2017	ZJ
31-Aug-17	Works Programme (DWP4), updated as of 31 Aug. 2017	ZJ

**WORKS PROGRAMME UPDATED 31 AUGUST 2017**

**VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES**

Page 2 of 27

**HZMB HK Boundary Crossing Facilities - Vehicle Clearance Plazas and Ancillary Buildings and Facilities**



Activity ID	Activity Name	2017	2018	Revision	Checked
A03770	BS + E&M for AVCS Cabling (KD18B)			30-Jun-17	ZJ
A03785	BS for Office Accommodation (KD10)			31-Jul-17	ZJ
A03790	Other BS + E&M Installation			31-Aug-17	ZJ
B03710	T&C for BS & Pumps				
B03750	Lit Inspection by EMSD				
B03770	WSD Inspection				
B03780	FSD Inspection				
B03790	Beam Plus Monthly Submission & Issue				
C03710	BEEO Stage II & Assessor Certification Submission				
C03720	OP Application & TPDC Inspection				
C03730	OP Issue				
A04133	041 Fire Station Cum Ambulance Depot Wall Plastering/Wall Tiling				
A04134	Floor Screeding/Tiling/Vinyl Tiles				
A04137	False Ceiling Installation				
A04140	BS for Office Accommodation (Stage 8), Degree 2				
A04150	BS + E&M for Office Accommodation (Stage 9), Degree 3				
A04160	Other BS + E&M Installation				
A04170	External Finishing				
A04180	C/S Plastering/Tiling				
A04190	Cater Equipment Installation				
A04190	Fuel Filling Station Incl. BS & E/M				
A04100	All Works for Fuel Filling Station				
B04110	T&C for BS & Pumps				
B04130	Submission & Issue of WW046 IV, V (Inside Services & FS)				
B04140	Form 314 & 501 submission				
B04150	Form LE5 Submission to EMSD				
B04170	WSD Inspection				
B04180	FSD Inspection				
C04110	Lit Inspection by EMSD				
C04120	DG Inspection				
C04130	Beam Plus Monthly Submission & Issue				
C04140	BEEO Stage II & Assessor Certification Submission				
C04170	OP Application & TPDC Inspection				
C04180	OP Issue				
A04280	042 Drill Tower Finishing				
A04280	BS + E&M for Office Accommodation (Stage 9)				
A04290	Other BS + E&M Installation				
B04210	BEEO Stage II & Assessor Certification Submission				
B04220	T&C for BS Pumps				
B04230	WSD Inspection				

**WORKS PROGRAMME UPDATED 31 AUGUST 2017**  
**VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES**  
 Page 3 of 27

Contract No. HY/2013/03

**HZMB HK Boundary Crossing Facilities - Vehicle Clearance Plazas and Ancillary Buildings and Facilities**

04-Sep-17

Activity ID	Activity Name	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
B04240	FSD Inspection									
B04250	OP Application & TPIDC Inspection									
B04260	OP Issue									
<b>043 DOH Office + Sign Room</b>										
A04370	Cladding & Curtain Wall Installation (ind., steel & metal works)									
A04390	BS + E&M for Office Accommodation (Stage 9)									
B04310	Other BS + E&M Installation									
B04330	Stainless Steel Mesh Installation									
B04340	Metal Windows/Louvers/Doors/Railing etc. Installation									
B04360	Wall Plastering/Tiling									
B04380	False Ceiling Installation & Painting									
B04390	Carpentry (Wooden Doors/Partitions/Lockers/Etc.)									
C04310	C/S Wall Plastering									
C04320	Paint Finishing to Walls									
<b>Test &amp; Commission</b>										
C04330	T&C for BS & Pumps									
C04350	Submission & Issue of WW/046 IV, V (Inside Services & FS)									
C04370	Form 314 & 501 submission									
D04310	WSD Inspection									
D04320	FSD Inspection									
D04330	Lift Inspection by EMSD									
D04340	DG Inspection									
D04350	BEEQ Stage II & Assessor Certification Submission									
D04380	OP Application & TPIDC Inspection									
D04390	OP Issue									
<b>052 - Transforms (Zone 4)</b>										
<b>Fuel Filling Station incl. BS &amp; E&amp;M</b>										
A05290	All Works for Fuel Filling Station									
<b>T&amp;C and Statutory Inspection</b>										
B05210	T&C for BS & Pumps									
B05230	DG Inspection									
B05270	Non-Essential T&C (Non-FSI)									
B05280	OP Application & TPIDC Inspection									
B05290	Provision of TPIDC's Completion Certificate (OP Issue)									
<b>Completion of Fire Services Installation and Equipment (FCD)</b>										
C05210	Approved Building Plans									
C05220	Application for FSI Inspection (FSI501) cw FSI Plan (FSI/G 14)									
C05230	Provision of Direct Link for Fire Alarm System by Chubb									
C05240	FSI Inspection									
C05250	Acceptance by FSD									
<b>105 IMMID Guard Booth, Portion A (Mock Up)</b>										
B10540	Finishing									
B10550	BS for Office Accommodations (KD9)									
B10560	BS + E&M for Office Accommodation (KD10)									
B10570	Other BS + E & M Installation									
C10540	T&C for BS & Pumps									
C10550	Form 314 & 501 Submission									
C10560	FS Inspection by FSD									
C10570	OP Application & TPIDC Inspection									

Activity	Date	Revision	Checked
30-Jun-17	Works Programme (DWP4), updated as of 30 June 2017		ZJ
31-Jul-17	Works Programme (DWP4), updated as of 31 July 2017		ZJ
31-Aug-17	Works Programme (DWP4), updated as of 31 Aug. 2017		ZJ

**WORKS PROGRAMME UPDATED 31 AUGUST 2017**  
**VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES**

**HZMB HK Boundary Crossing Facilities - Vehicle Clearance Plazas and Ancillary Buildings and Facilities**

04-Sep-17

Activity ID	Activity Name	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
C10580	OP Issue									
B10590	Facade Envelop Structure Installation Fabrication of FC System									
C10520	Steel Frame Installation									
C10530	Envelop Cladding and Roofing Panel Installation									
<b>210 - IrrmD G1 Secondary Examination Bays Inbound</b>										
ER5830	Construction of the Area and Access to the Interface Contractor External Works for Portion A1									
<b>Drainage Works</b>										
ED5580	Drainage Works (774m & 35MHs), Stage 2									
ED5600	Sewerage (600m & 9MHs), Stage 2									
ED5610	Drainage Works (773m & 34MHs), Stage 3									
ED5620	Sewerage (269m & 7MHs), Stage 3									
<b>Waterpipe Laying</b>										
EW5010	Fresh Water Main Laying (1650 m)									
EW6010	Flushing Water Main Laying (967 m)									
EW6180	Chilled Water Pipe Laying in Portion A1 (external)									
<b>Duct Laying for Utilities: Telecom Cabling, TCSS &amp; Lighting</b>										
EU5260	Duct & Cable Laying for Utilities/Telecom, CLP, BS & ELV									
EU5270	Duct & Cable Laying for TCSS & Lighting									
<b>Roadworks</b>										
ER1520	Subbase (8500 ton), Stage 1									
ER3540	Blumen Pavement (10000 ton), Stage 1									
ER3550	Rigid Pavement (900 m3), Footpath & EVA, Stage 1									
ER5530	Subbase (8829 ton), Stage 2 (Remaining)									
ER5540	Blumen Pavement (10055 ton), Stage 2 (Remaining)									
ER5550	Rigid Pavement (957 m3), Footpath & EVA, Stage 2 (Remaining)									
<b>Railing</b>										
ER0820	Railing									
<b>Road Furniture</b>										
ER0900	ELV Installation									
ER0930	Road Furniture									
<b>PORTION A2</b>										
<b>Portion A2 Structures</b>										
<b>046 - Refuse Collection Point, Portion A2</b>										
A04630	BS for Office Accommodations (Stage 8) (KD9)									
A04640	BS + E&M for Office Accommodations (Stage 9) (KD10)									
A04660	Other BS + E&M Installation									
<b>Test &amp; Commission</b>										
B04620	Submission & Issue of WW046 I, II, III (Inside Services & FS)									
B04630	Submission & Issue of WW046 IV, V (Inside Services & FS)									
B04650	T&C for BS & Pumps									
B04660	WSD Inspection									
B04670	FSD Inspection									
B04680	OP Application & TPDC Inspection									
B04690	OP Issue									
<b>045 - Reclaimed Water Pumping Station, Portion A2</b>										
B04820	BS for Office Accommodations (Stage 8) (KD9)									
B04830	BS + E&M for Office Accommodation (Stage 9) (KD10)									

Date	Revision	Checked	A
30-Jun-17	Works Programme (DWP4), updated as of 30 June 2017	ZJ	ZJ
31-Jul-17	Works Programme (DWP4), updated as of 31 July 2017	ZJ	ZJ
31-Aug-17	Works Programme (DWP4), updated as of 31 Aug. 2017	ZJ	ZJ

**WORKS PROGRAMME UPDATED 31 AUGUST 2017**  
**VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES**  
 Page 5 of 27

Actual Work  
 Remaining Work  
 Critical  
 Milestone

HZMB HK Boundary Crossing Facilities - Vehicle Clearance Plazas and Ancillary Buildings and Facilities

04-Sep-17

Activity Name	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
<b>Test &amp; Commission</b>									
B04840 Other BS + E&M Installation									
B04850 T&C for BS & Pumps & SWT									
B04870 DG Inspection									
B04890 Submission & Issue of WW046 W.V. (Inside Services & FS)									
C04810 Form 314 & 501 submission									
C04840 WSD Inspection									
C04850 FSD Inspection									
C04860 CP Application & TPDC Inspection									
C04870 CP Issue									
<b>Retaining Wall W9-2</b>									
SW9220 Backfilling for Retaining Wall W9-2									
SW9230 Parapet for Retaining Wall W9-2 (22 pour) & E&M Works									
SW9240 Retaining Wall W9-2 Drainage System & Cable Laying									
SW9250 Blumious Paving for Retaining Wall W9-2 (521 ton) (KD13)									
<b>External Works for Portion A2</b>									
<b>Drainage Works</b>									
E02280 Drainage Works (228m & 15MHs)									
E03560 Sewerage (322m & 3MHs)									
<b>Waterpipe Laying</b>									
EW2290 Fresh Water Main Laying (236m)									
EW2300 Flushing Water Main Laying (81m)									
<b>Duct Laying for Utilities/Telecom Cabling, TCSS &amp; Lighting</b>									
EU5280 Duct & Cable Laying for Utilities/Telecom, CLP, BS & ELV									
EU5290 Duct & Cable Laying for TCSS & Lighting									
EU5620 Access data to Telephone Companies									
<b>Roadworks</b>									
ERS560 Subbase (815 ton)									
ERS570 Blumion Pavement (1123 ton)									
ERS580 Concrete Block Paving for EVA									
<b>Railing</b>									
ER2850 Railing									
<b>Road Furniture</b>									
ER2340 ELV Installation									
ER2360 Road Furniture									
<b>PORTION B</b>									
<b>Portion B Structures</b>									
<b>Retaining Wall W7-2</b>									
S70910 C3-SS Slopeworks									
S70970 Retaining Wall W7-2 Parapet (2 pour) & E&M Works									
S70980 Retaining Wall W7-2 Drainage System & Cable Laying									
S70990 Retaining Wall W7-2 Blumious Paving (79 ton) (KD25)									
<b>Retaining Wall W6-1</b>									
S62070 Retaining Wall W6-1 Parapet (8 pour) & E&M Works									
S62080 Retaining Wall W6-1 Drainage System & Cable Laying									
S62210 Retaining Wall W6-1 Blumious Paving (347 ton) (KD25)									
<b>Bay 25 - 29 of CBE Staff Subway</b>									
C02960 Internal Finishes & Cable Containment									
C02970 BS + E&M Installation for AVCSS									
<b>Portion B Buildings</b>									
<b>027/028 Inbound Kiosks &amp; 029 Outbound Kiosks</b>									
A02720 Superstructure									
A02730 Construction of Subway Entrance									
A02740 Construction of Subway Tolls									
A02750 Finishing									

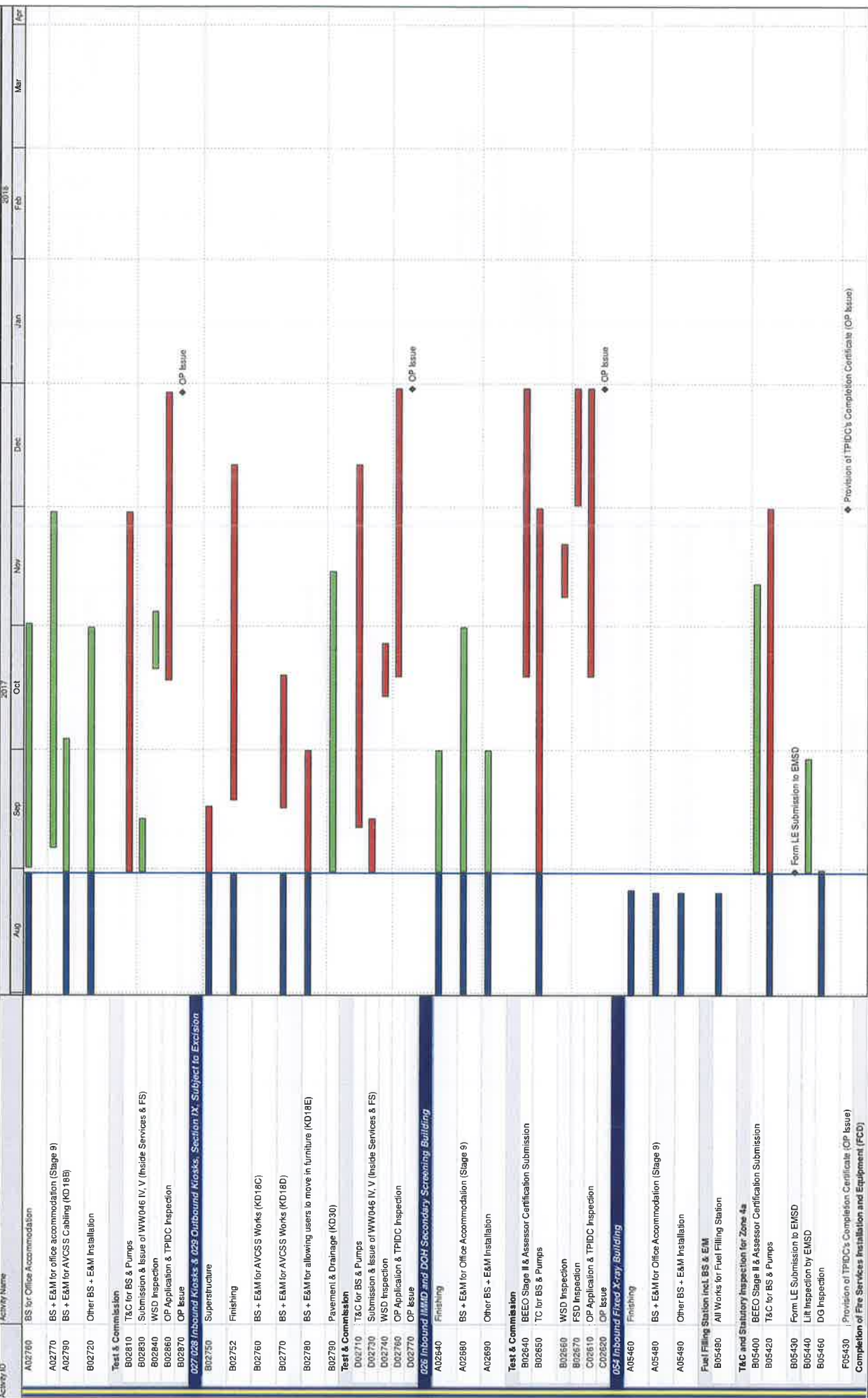
Date	Revision	Checked
30-Jun-17	Works Programme (DWP4), updated as of 30 June 2017	ZJ
31-Jul-17	Works Programme (DWP4), updated as of 31 July 2017	ZJ
31-Aug-17	Works Programme (DWP4), updated as of 31 Aug. 2017	ZJ

WORKS PROGRAMME UPDATED 31 AUGUST 2017  
 VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES  
 Page 6 of 27

- █ Actual Work
- █ Remaining Work
- █ Critical
- ◆ Milestone

**HZMB HK Boundary Crossing Facilities - Vehicle Clearance Plazas and Ancillary Buildings and Facilities**

04-Sep-17



Activity Name	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
A02760 BS for Office Accommodation	█								
A02770 BS + E&M for office accommodation (Stage 9)	█								
A02780 BS + E&M for AVCSS Cabling (KD18B)	█								
B02720 Other BS + E&M Installation	█								
<b>Test &amp; Commission</b>									
B02810 T&C for BS & Pumps									
B02830 Submission & Issue of WW046 IV, V (Inside Services & FS)									
B02840 WSD Inspection									
B02860 OP Application & TPIDC Inspection									
B02870 OP Issue									
<b>027/028 Inbound Kiosks &amp; 029 Outbound Kiosks, Section IX, Subject to Extension</b>									
B02750 Superstructure									
B02752 Finishing									
B02760 BS + E&M for AVCSS Works (KD18C)									
B02770 BS + E&M for AVCSS Works (KD18D)									
B02780 BS + E&M for allowing users to move in furniture (KD18E)									
B02790 Pavement & Drainage (KD30)									
<b>Test &amp; Commission</b>									
D02710 T&C for BS & Pumps									
D02730 Submission & Issue of WW046 IV, V (Inside Services & FS)									
D02740 WSD Inspection									
D02760 OP Application & TPIDC Inspection									
D02770 OP Issue									
<b>026 Inbound I/M/D and DCH Secondary Screening Building</b>									
A02640 Finishing									
A02680 BS + E&M for Office Accommodation (Stage 9)									
A02690 Other BS + E&M Installation									
<b>Test &amp; Commission</b>									
B02640 BECO Stage II & Assessor Certification Submission									
B02650 TC for BS & Pumps									
B02660 WSD Inspection									
B02670 FSD Inspection									
C00610 OP Application & TPIDC Inspection									
C02620 OP Issue									
<b>051 Inbound Fixed X-ray Building</b>									
A05460 Finishing									
A05480 BS + E&M for Office Accommodation (Stage 9)									
A05490 Other BS + E&M Installation									
Fuel Filling Station incl. BS & E&M									
B05490 All Works for Fuel Filling Station									
<b>T&amp;C and Statutory Inspection for Zone 4a</b>									
B05400 BECO Stage II & Assessor Certification Submission									
B05420 T&C for BS & Pumps									
B05430 Form LE Submission to EMSD									
B05440 Lit Inspection by EMSD									
B05460 DG Inspection									
F05430 Provision of TPIDC's Completion Certificate (CP Issue)									
<b>Completion of Fire Services Installation and Equipment (FCB)</b>									

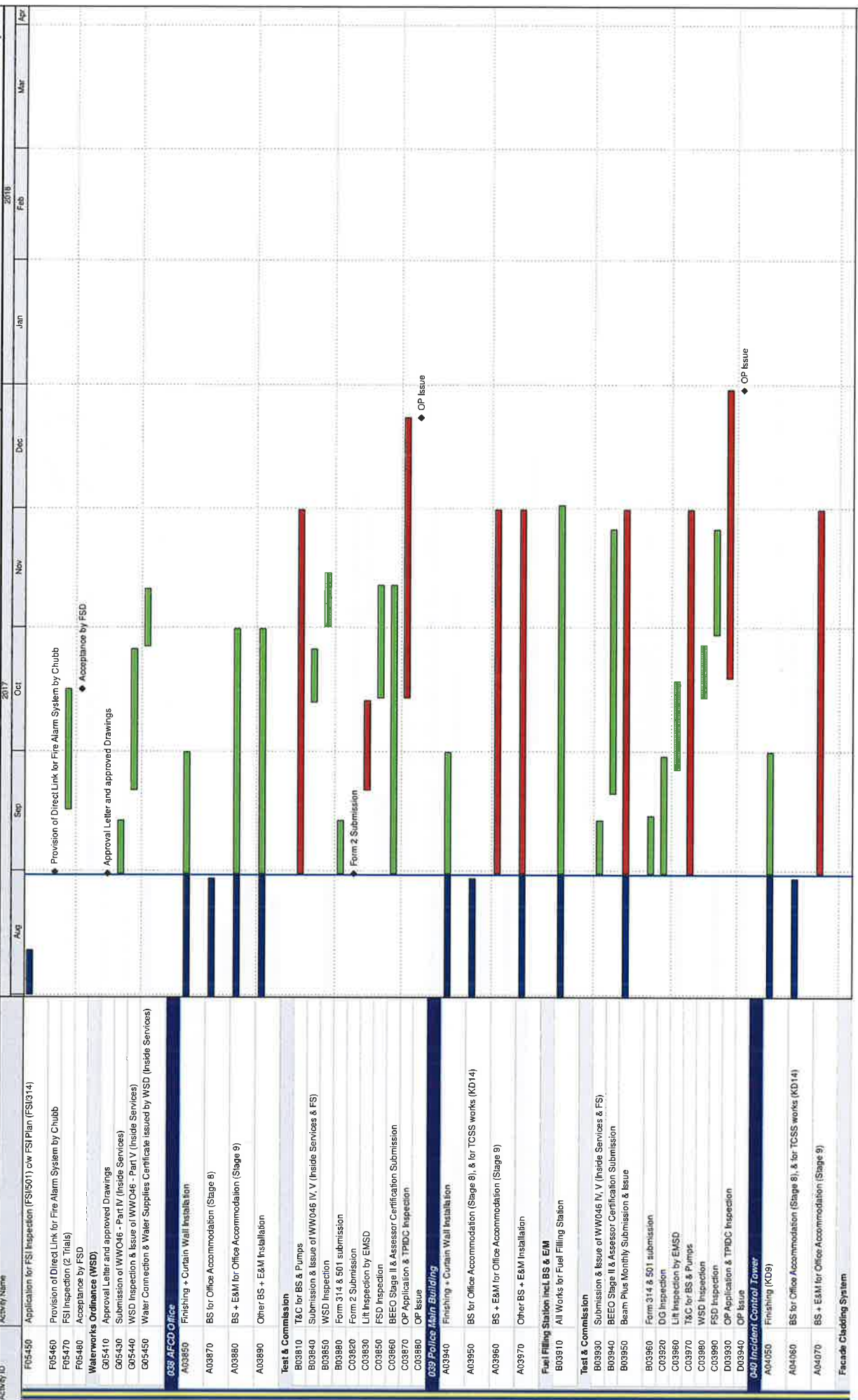
**WORKS PROGRAMME UPDATED 31 AUGUST 2017**  
**VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES**  
 Page 7 of 27

Date	Revision	Checked
30-Jun-17	Works Programme (DWP4), updated as of 30 June 2017	ZJ
31-Jul-17	Works Programme (DWP4), updated as of 31 July 2017	ZJ
31-Aug-17	Works Programme (DWP4), updated as of 31 Aug. 2017	ZJ



**HZMB HK Boundary Crossing Facilities - Vehicle Clearance Plazas and Ancillary Buildings and Facilities**

04-Sep-17



Actual Work	Remaining Work	Critical	Milestone
█	█	█	◆

Date	Revision	Checked	A.
30-Jun-17	Works Programme (DWP4), updated as of 30 June 2017	ZJ	
31-Jul-17	Works Programme (DWP4), updated as of 31 July 2017	ZJ	
31-Aug-17	Works Programme (DWP4), updated as of 31 Aug 2017	ZJ	

**WORKS PROGRAMME UPDATED 31 AUGUST 2017**  
**VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES**  
 Page 6 of 27

**HZMB HK Boundary Crossing Facilities - Vehicle Clearance Plazas and Ancillary Buildings and Facilities**



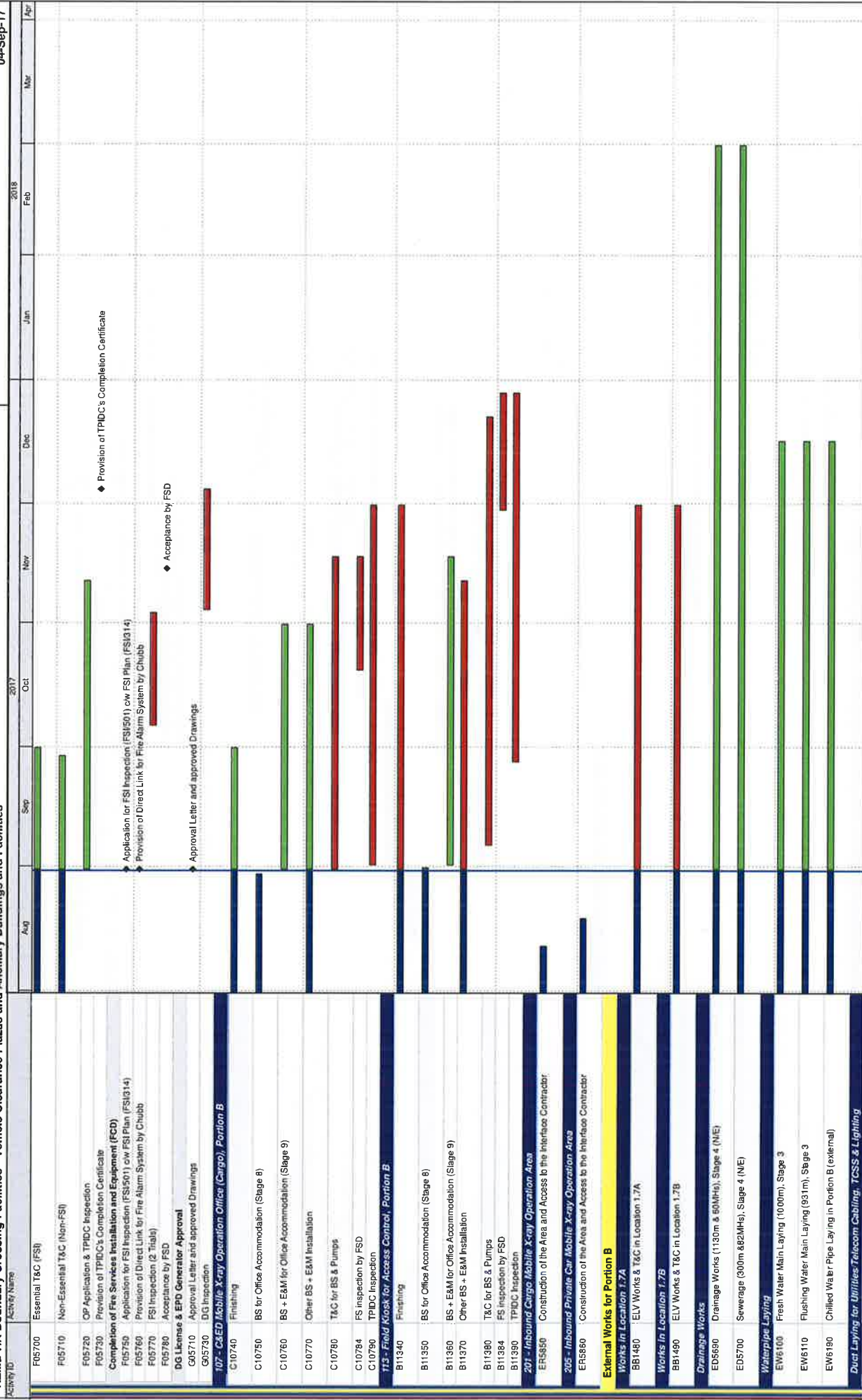
Activity Name	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
<b>102 HKPF UVSS Monitor Room</b>									
A10230 Finishing (False Ceiling) (KDR)									
A10240 BS for Office Accommodation (Stage 8)									
A10260 BS + E&M for Office Accommodation (Stage 9)									
A10270 Other BS + E&M Installation									
A10280 T&C for BS & Pumps									
C10220 WWO 46 Part IV, V Submission (inside Service + FS)									
C10230 Plumbing Inspection by WSD									
C10240 FSI Form 314 & 501 Submission									
C10250 FS Inspection by FSD									
C10260 TPIDC Inspection									
<b>Metal Canopy and Roof Installation</b>									
B10230 Steel Frame Installation									
B10240 Glass panel, metal cladding panel installation									
<b>103 Police Inspector Post</b>									
A10350 Finishing (False Ceiling) (KDR)									
A10360 BS for Office Accommodation (Stage 8)									
A10370 BS + E&M for Office Accommodation (Stage 9)									
A10380 Other BS + E&M Installation									
C10310 T&C for BS & Pumps									
C10330 WWO 46 Part IV, V Submission (inside Service + FS)									
C10340 WSD Inspection									
C10350 FS Inspection by FSD									
C10360 TPIDC Inspection									
<b>HPL Composite Panel Cladding System</b>									
B10340 Steel Frame Installation									
B10350 HPL Cladding Panel Installation									
<b>657 Transformers (Zones 2)</b>									
A05740 Finishing									
A05755 Energisation by CLP									
A05780 Other BS + E&M Installation									
Fuel Filling Station Incl. BS & E&M									
A05790 All Works for Fuel Filling Station									
<b>T&amp;C and Statutory Inspection for Zone 2a &amp; 2b</b>									
C05700 T&C for BS & Pumps									

Date	Revision	Checked	A.
30-Jun-17	Works Programme (DWP4), updated as of 30 June 2017	ZJ	ZJ
31-Jul-17	Works Programme (DWP4), updated as of 31 July 2017	ZJ	ZJ
31-Aug-17	Works Programme (DWP4), updated as of 31 Aug. 2017	ZJ	ZJ

**WORKS PROGRAMME UPDATED 31 AUGUST 2017**  
**VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES**  
 Page 9 of 27

**HZMB HK Boundary Crossing Facilities - Vehicle Clearance Plazas and Ancillary Buildings and Facilities**

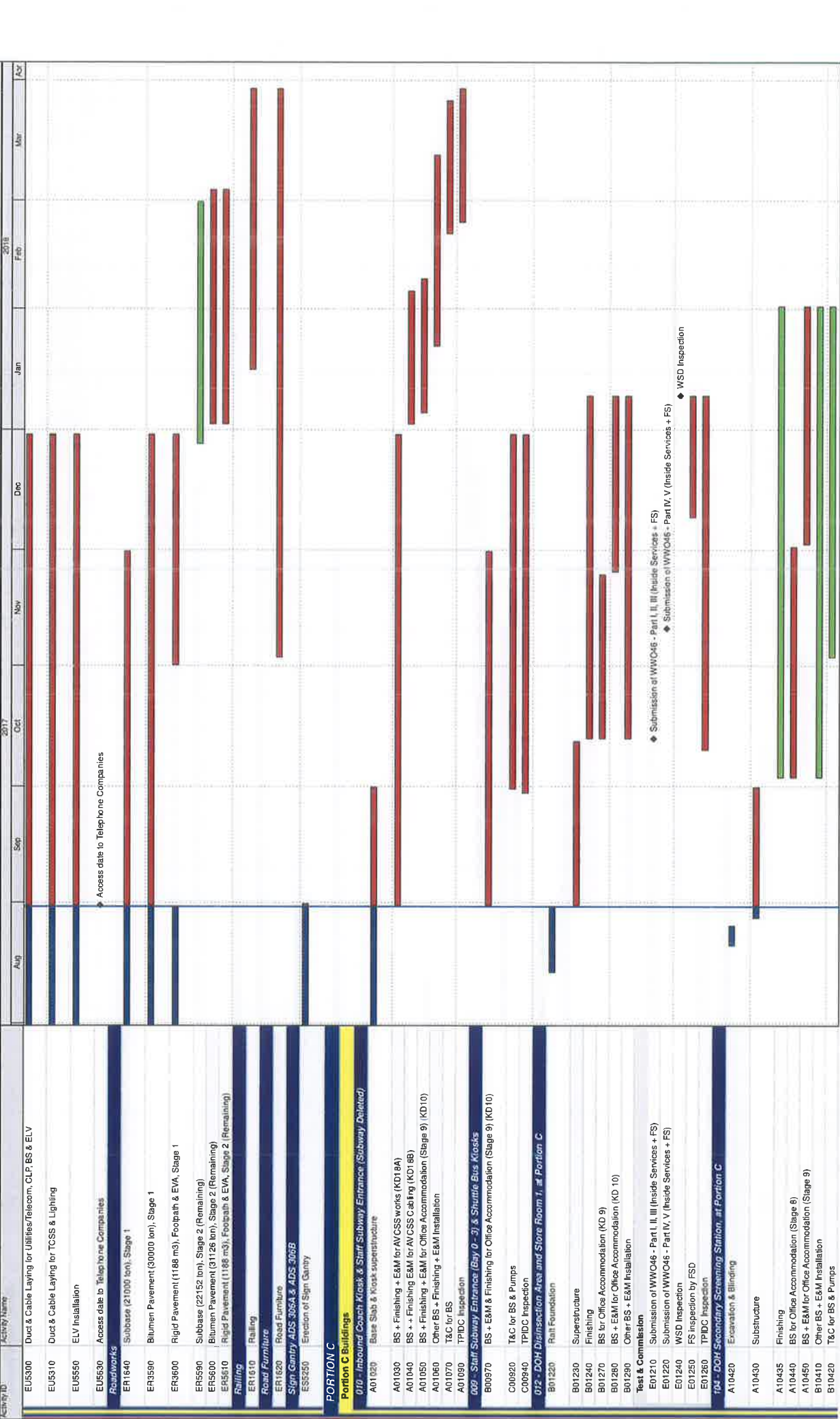
04-Sep-17



Date	Revision	Checked	A.
30-Jun-17	Works Programme (DWP4), updated as of 30 June 2017	ZJ	
31-Jul-17	Works Programme (DWP4), updated as of 31 July 2017	ZJ	
31-Aug-17	Works Programme (DWP4), updated as of 31 Aug. 2017	ZJ	

**WORKS PROGRAMME UPDATED 31 AUGUST 2017**  
**VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES**  
 Page 10 of 27

█ Actual Work  
█ Remaining Work  
█ Critical  
◆ Milestones



Date	Revision	Checked	A.
30-Jun-17	Works Programme (DWP4), updated as of 30 June 2017	ZJ	
31-Jul-17	Works Programme (DWP4), updated as of 31 July 2017	ZJ	
31-Aug-17	Works Programme (DWP4), updated as of 31 Aug. 2017	ZJ	

**WORKS PROGRAMME UPDATED 31 AUGUST 2017**

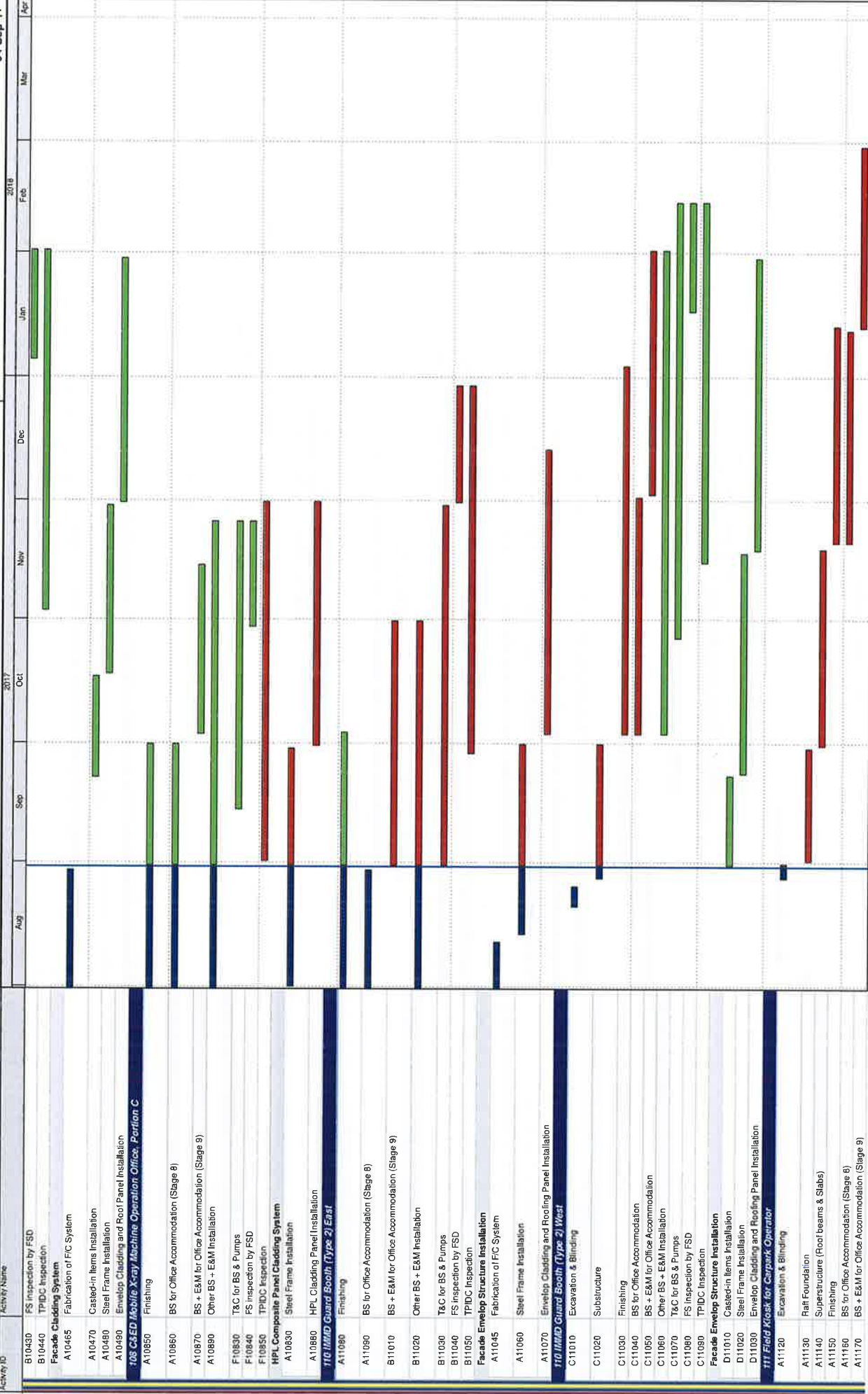
**VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES**

Page 11 of 27

■ Actual Work  
■ Remaining Work  
■ Critical  
◆ Milestone

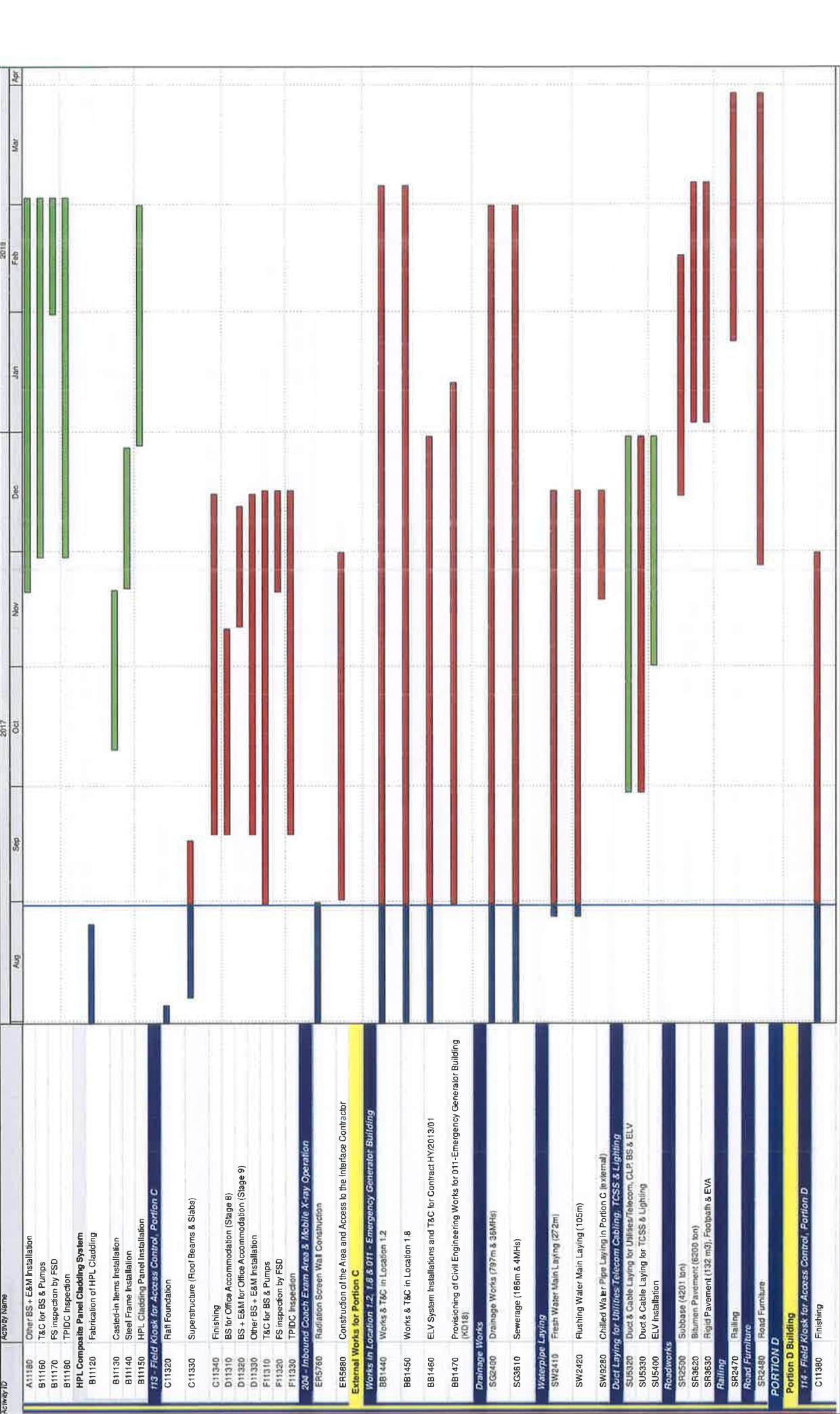
**HZMB HK Boundary Crossing Facilities - Vehicle Clearance Plazas and Ancillary Buildings and Facilities**

04-Sep-17



Activity Name	Date	Revision	Checked
WORKS PROGRAMME UPDATED 31 AUGUST 2017 VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES	30-Jun-17	Works Programme (DWP4), updated as of 30 June 2017	ZJ
	31-Jul-17	Works Programme (DWP4), updated as of 31 July 2017	ZJ
	31-Aug-17	Works Programme (DWP4), updated as of 31 Aug. 2017	ZJ

**HZMB HK Boundary Crossing Facilities - Vehicle Clearance Plazas and Ancillary Buildings and Facilities**



**WORKS PROGRAMME UPDATED 31 AUGUST 2017**

**VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES**

Page 13 of 27

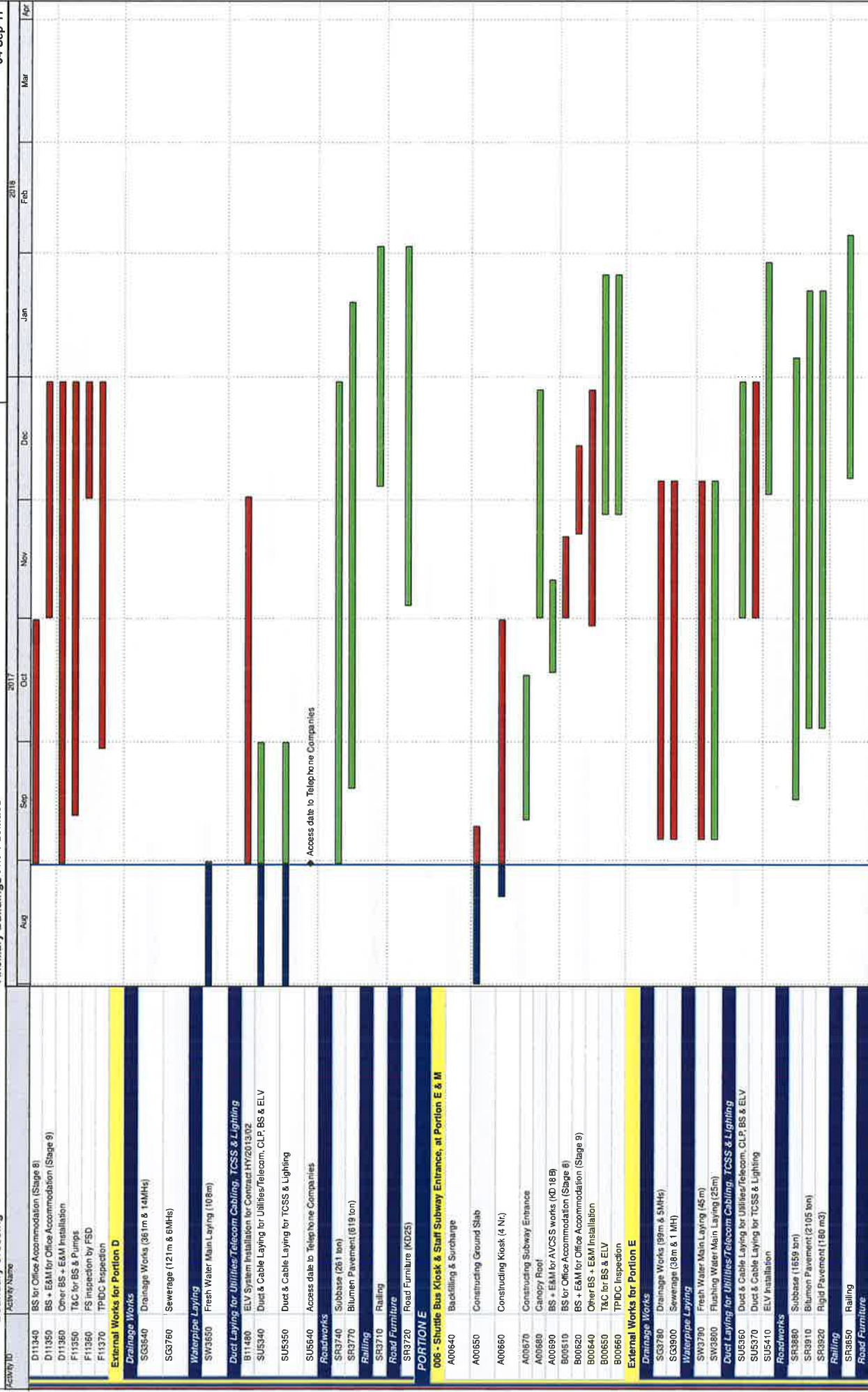
Date	Revision	Checked
30-Jun-17	Works Programme (DWP4), updated as of 30 June 2017	ZJ
31-Jul-17	Works Programme (DWP4), updated as of 31 July 2017	ZJ
31-Aug-17	Works Programme (DWP4), updated as of 31 Aug. 2017	ZJ

■ Actual Work  
■ Remaining Work  
■ Critical  
◆ Milestone

Contract No. HY2013/03

**HZMB HK Boundary Crossing Facilities - Vehicle Clearance Plazas and Ancillary Buildings and Facilities**

04-Sep-17



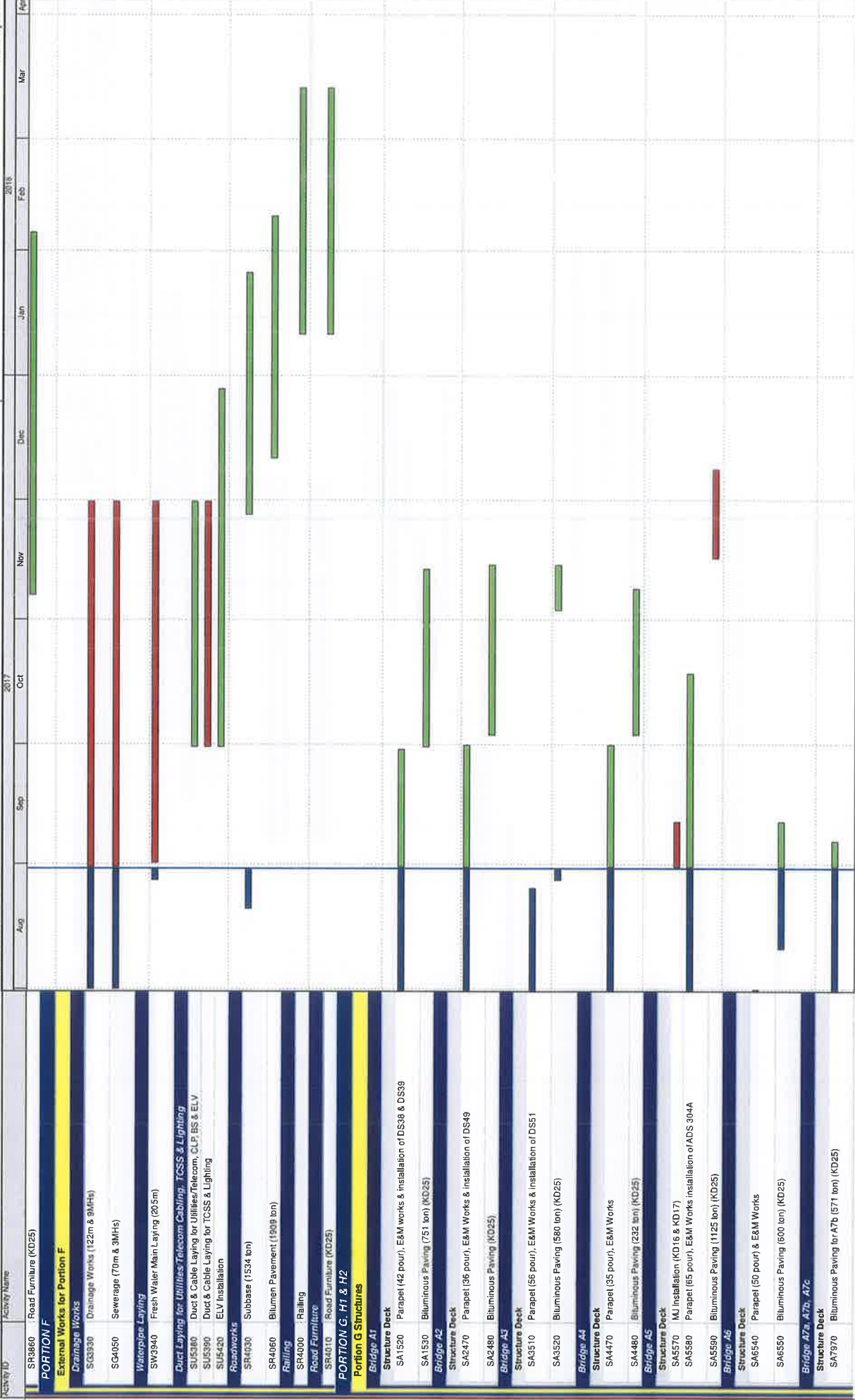
Date	Revision	Checked	A
30-Jun-17	Works Programme (DWP4), updated as of 30 June 2017	ZJ	
31-Jul-17	Works Programme (DWP4), updated as of 31 July 2017	ZJ	
31-Aug-17	Works Programme (DWP4), updated as of 31 Aug. 2017	ZJ	

**WORKS PROGRAMME UPDATED 31 AUGUST 2017**  
**VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES**  
 Page 14 of 27

- █ Actual Work
- █ Remaining Work
- █ Critical
- ◆ Milestone

**HZMB HK Boundary Crossing Facilities - Vehicle Clearance Plazas and Ancillary Buildings and Facilities**

04-Sep-17

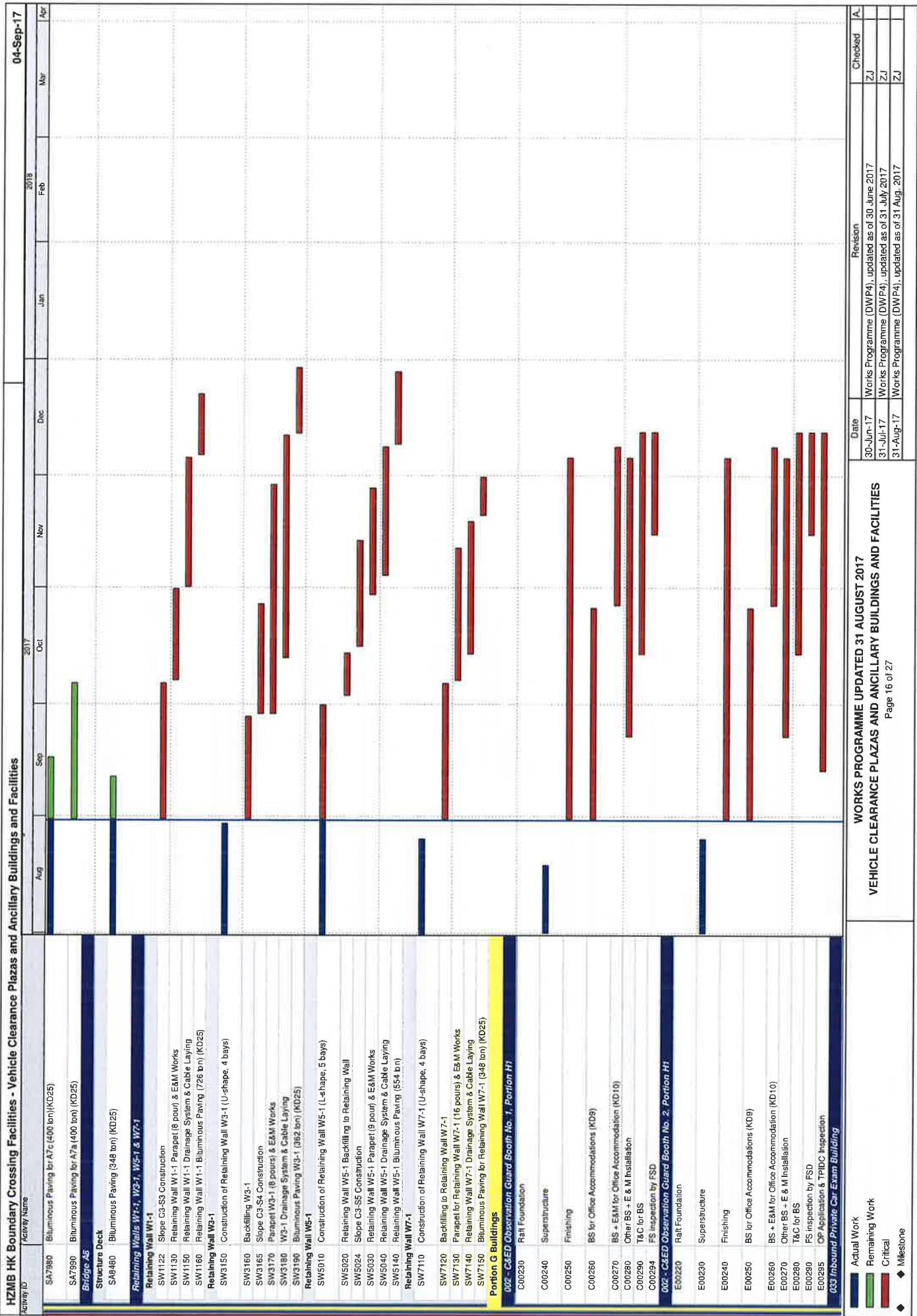


Actual Work	Remaining Work	Critical	Milestone
█	█	█	◆

WORKS PROGRAMME UPDATED 31 AUGUST 2017			
VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES			
Page 15 of 27			
Date	Revision	Checked	A.
30-Jun-17	Works Programme (OWP4), updated as of 30 June 2017	ZJ	
31-Jul-17	Works Programme (OWP4), updated as of 31 July 2017	ZJ	
31-Aug-17	Works Programme (OWP4), updated as of 31 Aug. 2017	ZJ	



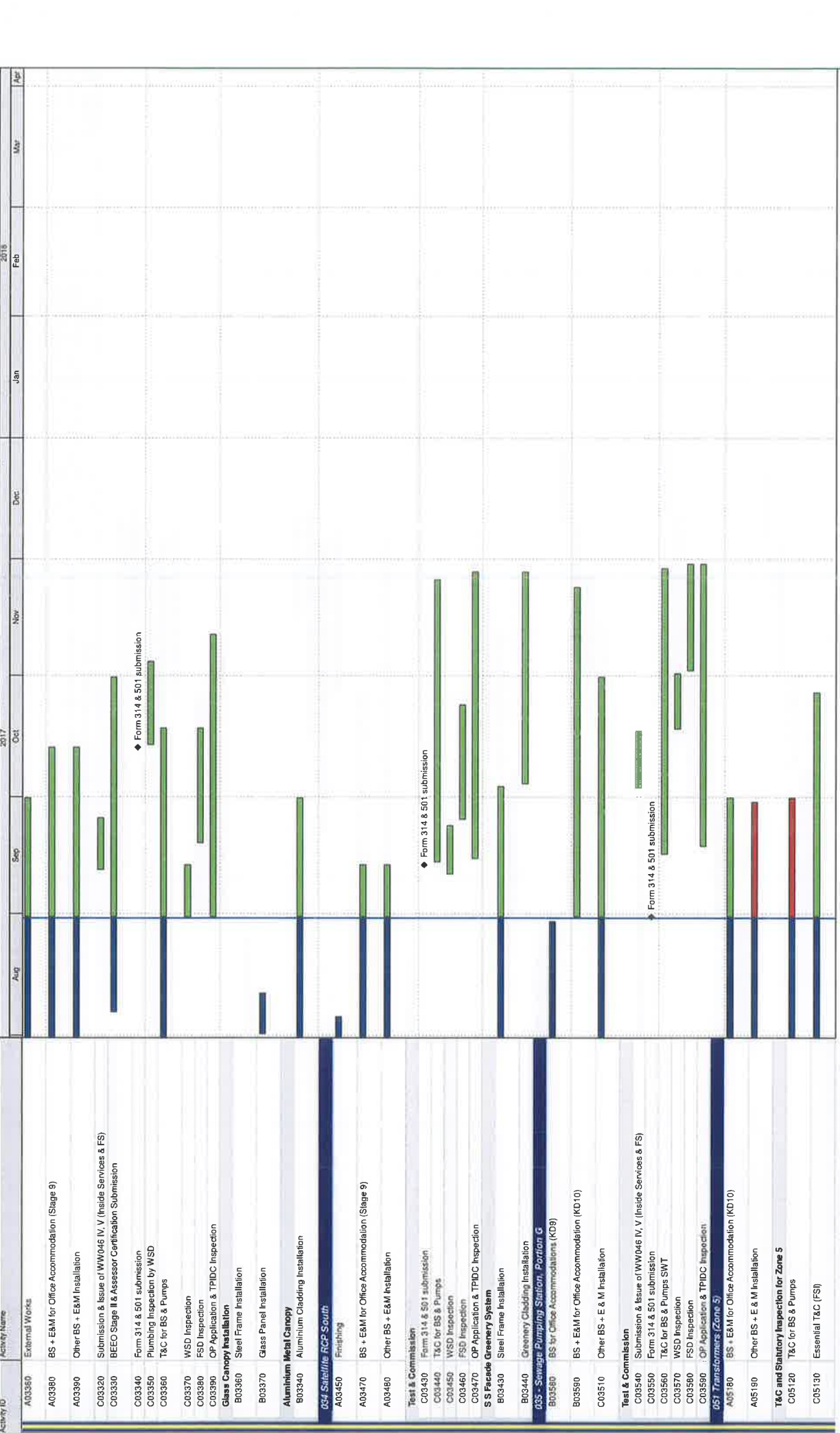


Date	Revision	Checked	A
30-Jun-17	Works Programme (DWP4), updated as of 30 June 2017	ZJ	
31-Jul-17	Works Programme (DWP4), updated as of 31 July 2017	ZJ	
31-Aug-17	Works Programme (DWP4), updated as of 31 Aug. 2017	ZJ	

**WORKS PROGRAMME UPDATED 31 AUGUST 2017**  
**VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES**  
Page 16 of 27

- █ Actual Work
- █ Remaining Work
- █ Critical
- ◆ Milestone

**HZMB HK Boundary Crossing Facilities - Vehicle Clearance Plazas and Ancillary Buildings and Facilities**



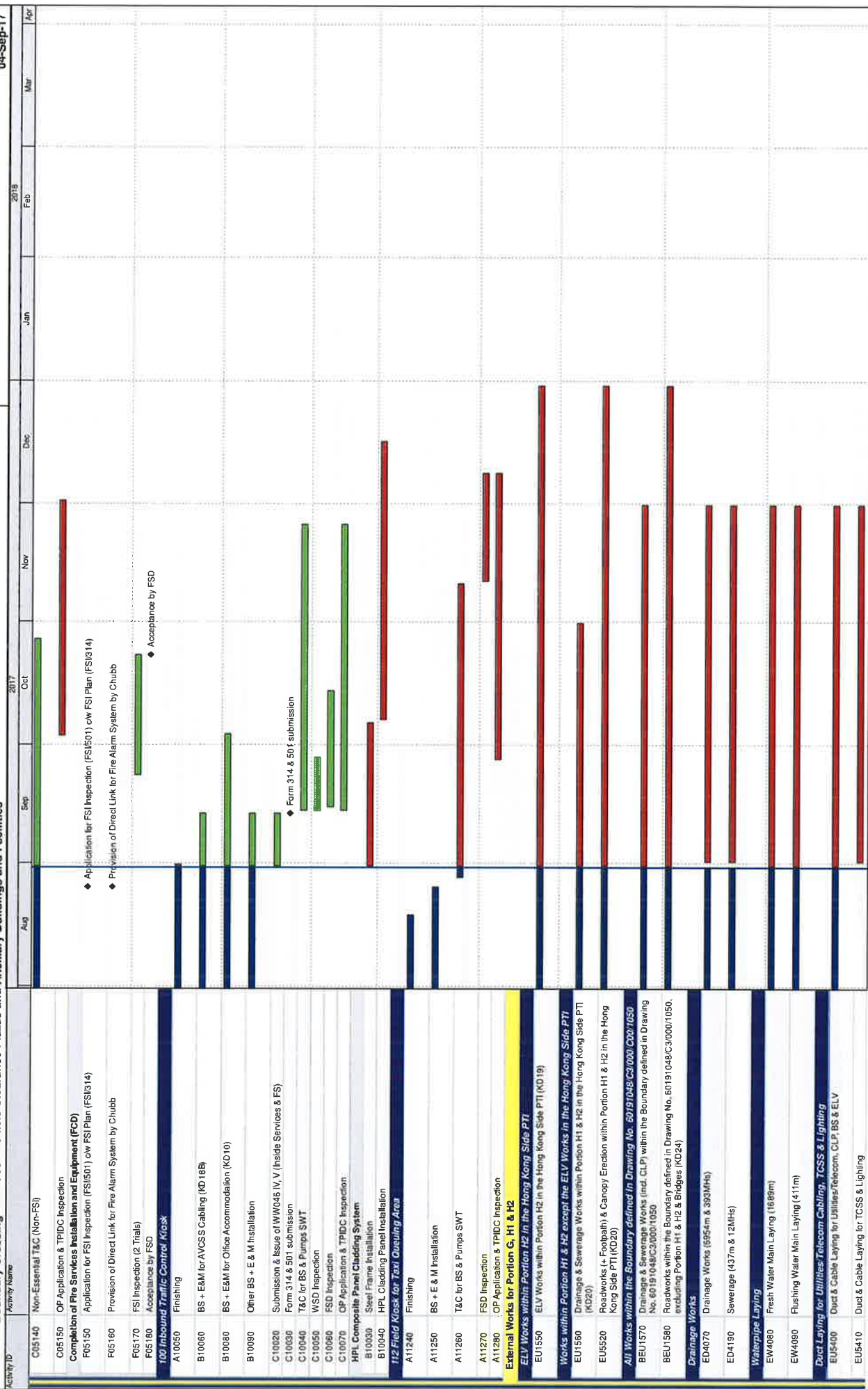
Activity ID	Activity Name	Actual Work	Remaining Work	Critical	Milestone
A03360	External Works	█			
A03380	BS + E&M for Office Accommodation (Stage 9)	█			
A03390	Other BS + E&M Installation	█			
C03420	Submission & Issue of WW046 IV, V (Inside Services & FS)	█			
C03330	BEEC Stage II & Assessor Certification Submission	█			
C03340	Form 314 & 501 submission	█			
C03350	Plumbing Inspection by WSD	█			
C03360	T&C for BS & Pumps	█			
C03370	WSD Inspection	█			
C03380	FSD Inspection	█			
C03390	OP Application & TPIDC Inspection	█			
B03360	Glass Canopy Installation	█			
B03370	Glass Panel Installation	█			
B03340	Aluminium Metal Canopy	█			
B03340	Aluminium Cladding Installation	█			
A03450	Finishing	█			
A03470	BS + E&M for Office Accommodation (Stage 9)	█			
A03480	Other BS + E&M Installation	█			
C03430	Form 314 & 501 submission	█			
C03440	T&C for BS & Pumps	█			
C03450	WSD Inspection	█			
C03460	FSD Inspection	█			
C03470	OP Application & TPIDC Inspection	█			
B03430	Steel Frame Installation	█			
B03440	Greenery Cladding Installation	█			
B03590	BS + E&M for Office Accommodation (KD10)	█			
C03510	Other BS + E & M Installation	█			
C03540	Submission & Issue of WW046 IV, V (Inside Services & FS)	█			
C03550	Form 314 & 501 submission	█			
C03560	T&C for BS & Pumps SWT	█			
C03570	WSD Inspection	█			
C03590	FSD Inspection	█			
C03590	OP Application & TPIDC Inspection	█			
A05180	BS + E&M for Office Accommodation (KD10)	█			
A05190	Other BS + E & M Installation	█			
C05120	T&C for BS & Pumps	█			
C05130	Essential T&C (FSI)	█			

**WORKS PROGRAMME UPDATED 31 AUGUST 2017**  
**VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES**

Date	Revision	Checked
30-Jun-17	Works Programme (DWP4), updated as of 30 June 2017	ZJ
31-Jul-17	Works Programme (DWP4), updated as of 31 July 2017	ZJ
31-Aug-17	Works Programme (DWP4), updated as of 31 Aug. 2017	ZJ

**HZMB HK Boundary Crossing Facilities - Vehicle Clearance Plazas and Ancillary Buildings and Facilities**

04-Sep-17

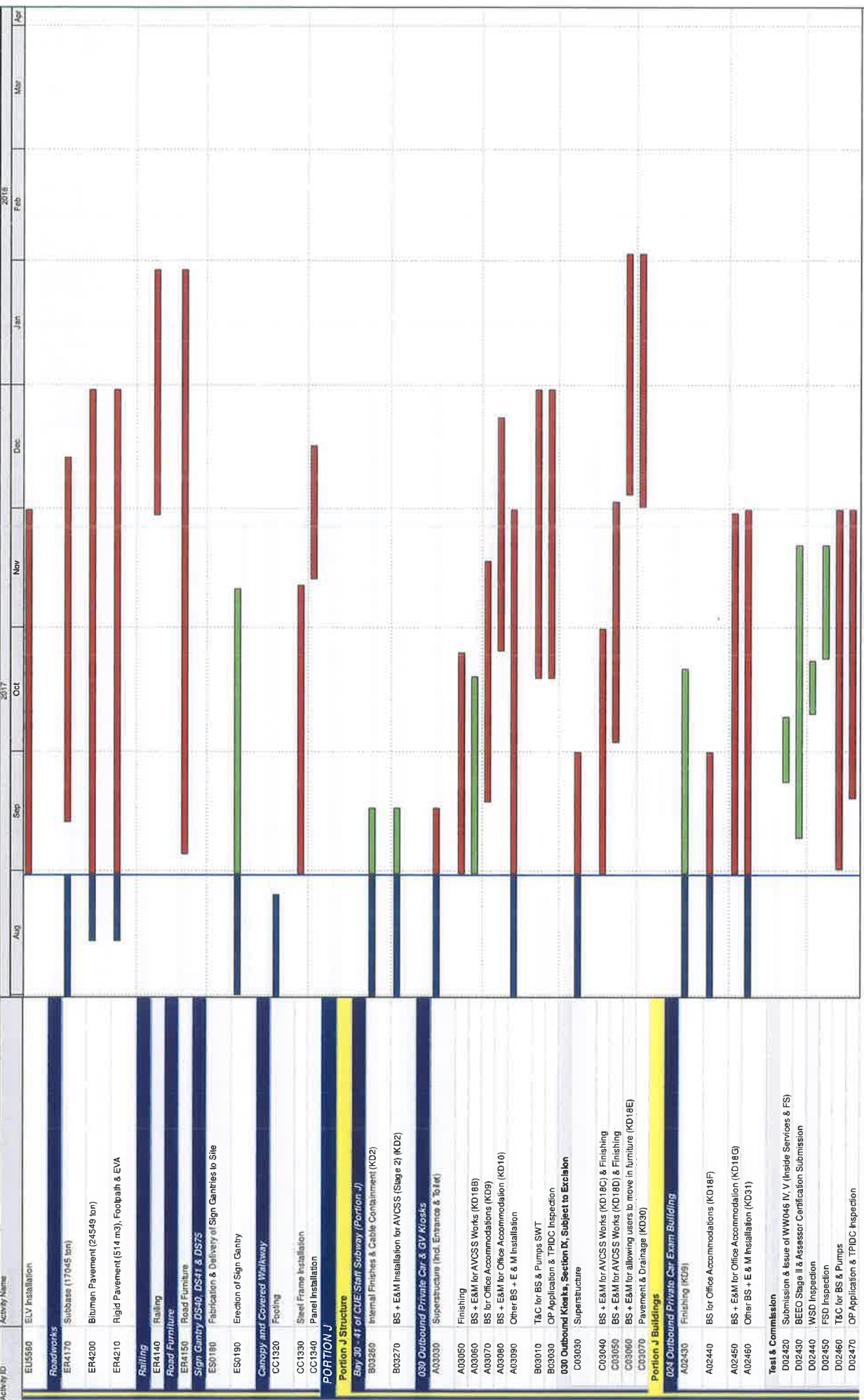


Activity ID	Activity Name	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
C05140	Non-Essential T&C (Non-FSI)									
C05150	OP Application & TPIDC Inspection									
<b>Completion of Fire Services Installation and Equipment (FCD)</b>										
F05150	Application for FSI Inspection (FSI/501) cw FSI Plan (FSI/314)									
F05160	Provision of Direct Link for Fire Alarm System by Chubb									
F05170	FSI Inspection (2 Trials)									
F05180	Acceptance by FSD									
<b>100 Inbound Traffic Control Kiosk</b>										
A10050	Finishing									
B10060	BS + E&M for AVCSS Cabling (KD 16B)									
B10080	BS + E&M for Office Accommodation (KD10)									
B10090	Other BS + E & M Installation									
C10020	Submission & Issue of WW006 IV, V (Inside Services & FS)									
C10030	Form 314 & 501 submission									
C10040	T&C for BS & Pumps SWT									
C10050	WSD Inspection									
C10060	FSD Inspection									
C10070	OP Application & TPIDC Inspection									
HPL Composite Panel Cladding System										
B10030	Steel Frame Installation									
B10040	HPL Cladding Panel Installation									
<b>112 Field Kiosk for Taxi Queuing Area</b>										
A11240	Finishing									
A11250	BS + E & M Installation									
A11260	T&C for BS & Pumps SWT									
A11270	FSD Inspection									
A11280	OP Application & TPIDC Inspection									
<b>External Works for Portion G, H1 &amp; H2</b>										
E11500	ELV Works within Portion H2 in the Hong Kong Side PTI (KD19)									
<b>Works within Portion H1 &amp; H2 except the ELV Works in the Hong Kong Side PTI (KD20)</b>										
E11560	Drainage & Sewerage Works within Portion H1 & H2 in the Hong Kong Side PTI (KD20)									
E11520	Roadworks (+ Footpath) & Canopy Erection within Portion H1 & H2 in the Hong Kong Side PTI (KD20)									
<b>All Works within the Boundary defined in Drawing No. 60191048/C3/000/1050</b>										
BEU1570	Drainage & Sewerage Works (incl. CLP) within the Boundary defined in Drawing No. 60191048/C3/000/1050									
BEU1580	Roadworks within the Boundary defined in Drawing No. 60191048/C3/000/1050, excluding Portion H1 & H2 & Bridges (KD24)									
<b>Drainage Works</b>										
ED4070	Drainage Works (6954m & 393MHS)									
ED4190	Sewerage (437m & 12MHS)									
<b>Waterpipe Laying</b>										
EW4080	Fresh Water Main Laying (16.89m)									
EW4090	Flushing Water Main Laying (411m)									
<b>Duct Laying for Utilities/Telecom Cabling, TCSS &amp; Lighting</b>										
EUS400	Duct & Cable Laying for Utilities/Telecom, CLP, BS & ELV									
EUS410	Duct & Cable Laying for TCSS & Lighting									

**WORKS PROGRAMME UPDATED 31 AUGUST 2017**  
**VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES**  
 Page 18 of 27

Date	Revision	Checked	IA
30-Jun-17	Works Programme (DWP4), updated as of 30 June 2017	ZJ	ZJ
31-Jul-17	Works Programme (DWP4), updated as of 31 July 2017	ZJ	ZJ
31-Aug-17	Works Programme (DWP4), updated as of 31 Aug. 2017	ZJ	ZJ

- Actual Work
- Remaining Work
- Critical
- Milestone



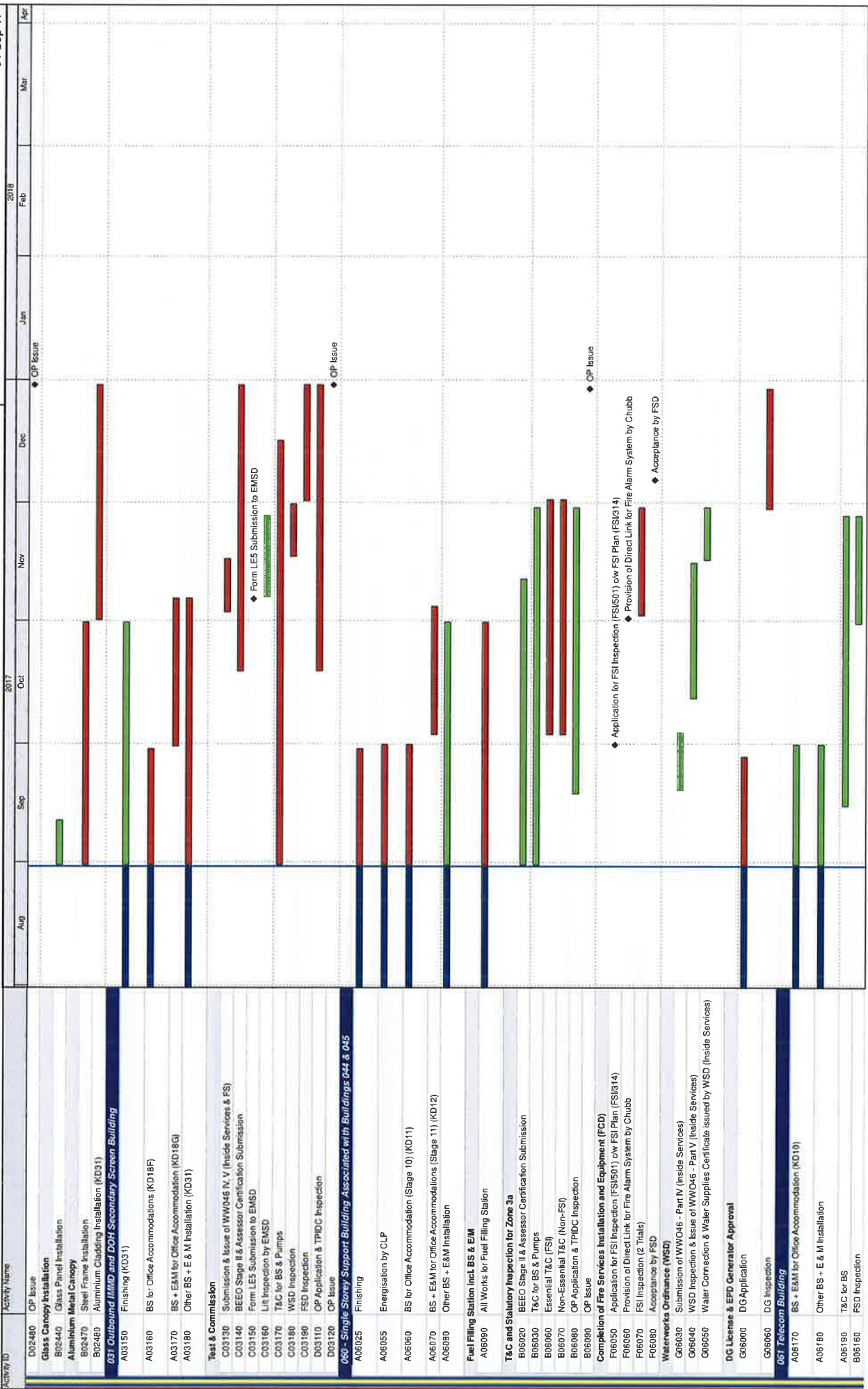
Date	Revision	Checked	A.
30-Jun-17	Works Programme (DW/P4), updated as of 30 June 2017	ZJ	
31-Jul-17	Works Programme (DW/P4), updated as of 31 July 2017	ZJ	
31-Aug-17	Works Programme (DW/P4), updated as of 31 Aug. 2017	ZJ	

WORKS PROGRAMME UPDATED 31 AUGUST 2017  
 VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES  
 Page 19 of 27

- █ Actual Work
- █ Remaining Work
- █ Critical
- ◆ Milestone

HZMB HK Boundary Crossing Facilities - Vehicle Clearance Plazas and Ancillary Buildings and Facilities

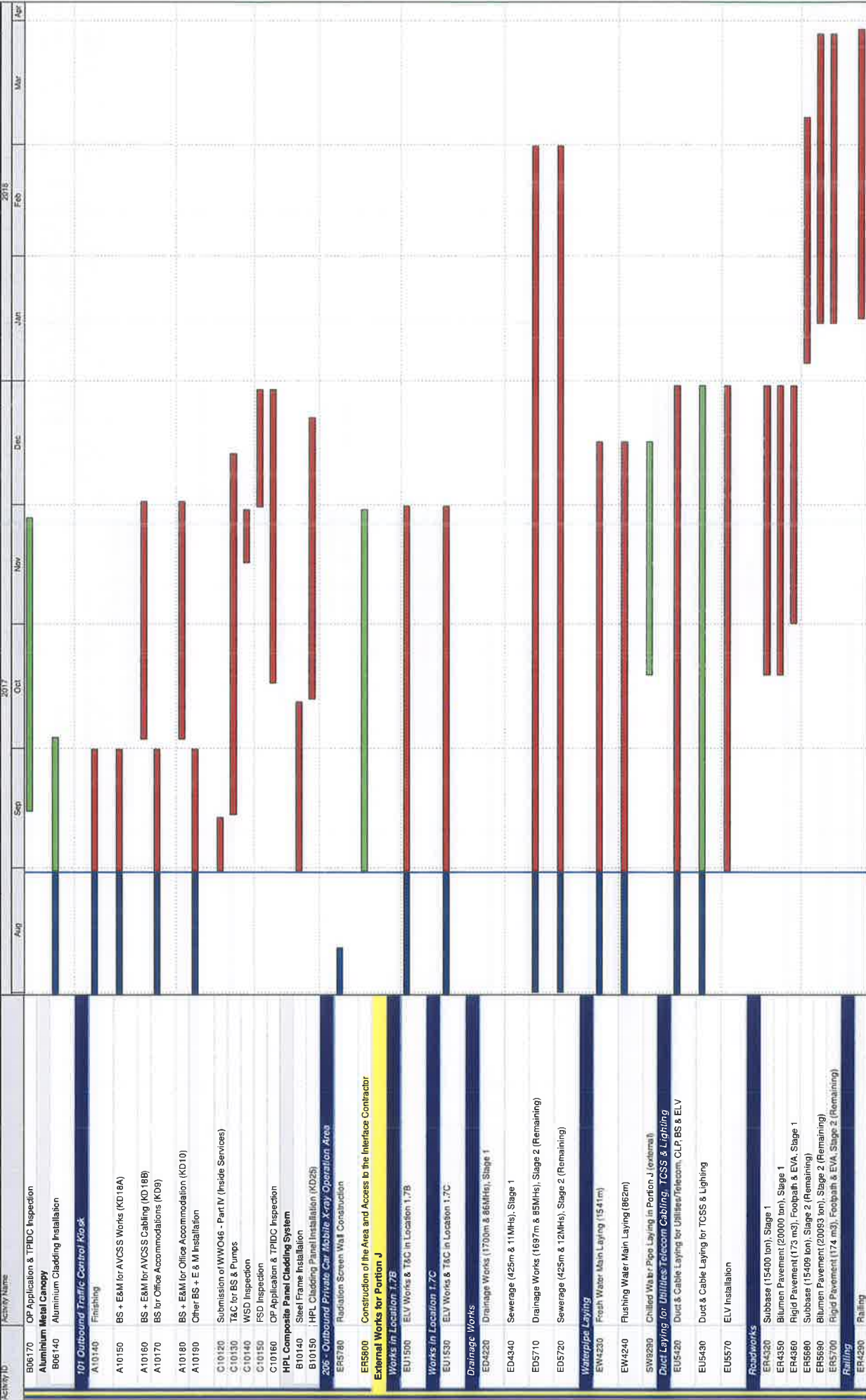
04-Sep-17



Activity Name	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
D02480 OP Issue									
Glass Canopy Installation									
B02440 Glass Panel Installation									
Aluminium Metal Canopy									
B02470 Steel Frame Installation									
B02480 Aluminium Cladding Installation (KD31)									
<b>031 Outbound IIMD and DOR Secondary Screen Building</b>									
A03150 Finishing (KD31)									
A03160 BS for Office Accommodations (KD18F)									
A03170 BS + E&M for Office Accommodation (KD18G)									
A03180 Other BS + E & M Installation (KD31)									
<b>Test &amp; Commission</b>									
C03130 Submission & Issue of WW046 IV (Inside Services & FSI)									
C03140 BEEO Stage II & Assessor Certification Submission									
C03150 Form LES Submission to EMSD									
C03160 LIT Inspection by EMSD									
C03170 T&C for BS & Pumps									
C03180 WSD Inspection									
C03190 FSD Inspection									
D03110 OP Application & TPIDC Inspection									
D03120 OP Issue									
<b>060 - Single Storey Support Building Associated with Buildings 044 &amp; 045</b>									
A06025 Finishing									
A06055 Energisation by CLP									
A06060 BS for Office Accommodation (Stage 10) (KD11)									
A06070 BS + E&M for Office Accommodations (Stage 11) (KD12)									
A06080 Other BS + E&M Installation									
<b>Fuel Filling Station incl BS &amp; EIM</b>									
A06090 All Works for Fuel Filling Station									
<b>T&amp;C and Statutory Inspection for Zone 3a</b>									
B06020 BEEO Stage II & Assessor Certification Submission									
B06030 T&C for BS & Pumps									
B06060 Essential T&C (FSI)									
B06070 Non-Essential T&C (Non-FSI)									
B06080 OP Application & TPIDC Inspection									
B06090 OP Issue									
<b>Completion of Fire Services Installation and Equipment (FCD)</b>									
F06050 Application for FSI Inspection (FSI501) c/w FSI Plan (FSI314)									
F06060 Provision of Direct Link for Fire Alarm System by Chubb									
F06070 FSI Inspection (2 Trials)									
F06080 Acceptance by FSD									
<b>Waterworks Ordinance (WSD)</b>									
G06030 Submission of WW046 - Part IV (Inside Services)									
G06040 WSD Inspection & Issue of WW046 - Part V (Inside Services)									
G06050 Water Connection & Water Supplies Certificate issued by WSD (Inside Services)									
<b>DG License &amp; EPD Generator Approval</b>									
G06000 DG Application									
G06060 DG Inspection									
<b>051 Vehicle Building</b>									
A06170 BS + E&M for Office Accommodation (KD10)									
A06180 Other BS + E & M Installation									
A06190 T&C for BS									
B06160 FSD Inspection									
<b>Legend</b>									
Actual Work									
Remaining Work									
Critical									
Milestone									

WORKS PROGRAMME UPDATED 31 AUGUST 2017  
 VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES  
 Page 20 of 27

Date	Revision	Checked
30-Jun-17	Works Programme (DWP4), updated as of 30 June 2017	ZJ
31-Jul-17	Works Programme (DWP4), updated as of 31 July 2017	ZJ
31-Aug-17	Works Programme (DWP4), updated as of 31 Aug. 2017	ZJ



Date	Revision	Checked
30-Jun-17	Works Programme (DWP4), updated as of 30 June 2017	ZJ
31-Jul-17	Works Programme (DWP4), updated as of 31 July 2017	ZJ
31-Aug-17	Works Programme (DWP4), updated as of 31 Aug. 2017	ZJ

**WORKS PROGRAMME UPDATED 31 AUGUST 2017**  
**VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES**

**HZMB HK Boundary Crossing Facilities - Vehicle Clearance Plazas and Ancillary Buildings and Facilities**

04-Sep-17

Activity ID	Activity Name	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
<b>Road Furniture</b>										
ER4300	Road Furniture									
<b>Sign Gantry DS1/4</b>										
ES5160	Erection of Sign Gantry									
<b>PORTION K, L, M, S &amp; T</b>										
<b>Portion K Building</b>										
<b>002 - CAED Observation Guard Booth No. 1, Portion K</b>										
A00230	Superstructure									
A00240	Finishing									
A00250	BS for Office Accommodations (Degree of Completion 2)									
A00260	BS + E&M for Office Accommodation (Degree of Completion 3)									
A00270	Other BS + E & M Installation									
A00280	T&C for BS & Pumps									
A00290	FSD Inspection									
A00295	OP Application & TPIDC Inspection									
<b>002 - CAED Observation Guard Booth No. 2, Portion K</b>										
B00230	Superstructure									
B00240	Finishing									
B00250	BS for Office Accommodations (Degree of Completion 2)									
B00260	BS + E&M for Office Accommodation (Degree of Completion 3)									
B00270	Other BS + E & M Installation									
B00280	T&C for BS & Pumps									
B00290	FSD Inspection									
B00295	OP Application & TPIDC Inspection									
<b>Portion M Buildings</b>										
<b>706 - CAED Mobile X-ray Operation Office, Portion M</b>										
B10850	Finishing									
B10860	BS for Office Accommodations (KD9)									
B10870	BS + E&M for Office Accommodation (KD10)									
B10880	Other BS + E & M Installation									
B10890	T&C for BS & Pumps									
C10800	FSD Inspection									
D10800	OP Application & TPIDC Inspection									
<b>HPL Composite Panel Cladding System</b>										
C10840	Steel Frame Installation									
C10850	HPL Cladding Panel Installation									
<b>104 - DOH Screening Station, at Portion M</b>										
C10440	Finishing									
C10450	BS for Office Accommodations (KD9)									
C10460	BS + E&M for Office Accommodation (KD10)									
C10470	Other BS + E & M Installation									
C10480	T&C for BS & Pumps									
C10480	FSD Inspection									
D10490	OP Application & TPIDC Inspection									
<b>Facade Envelop Structure Installation</b>										
D10470	Steel Frame Installation									
D10480	Envelope Cladding and Roofing Panel Installation									
<b>203 - Outbound Coach Shuttle Bus Exam Area &amp; Mobile X-ray Operation Area</b>										
ER5770	Radiation Screen Wall Construction									
ER5870	Construction of the Area and Access to the Interface Contractor									
<b>External Works</b>										
<b>Additional Works (Filling &amp; Re Slope), SA1</b>										

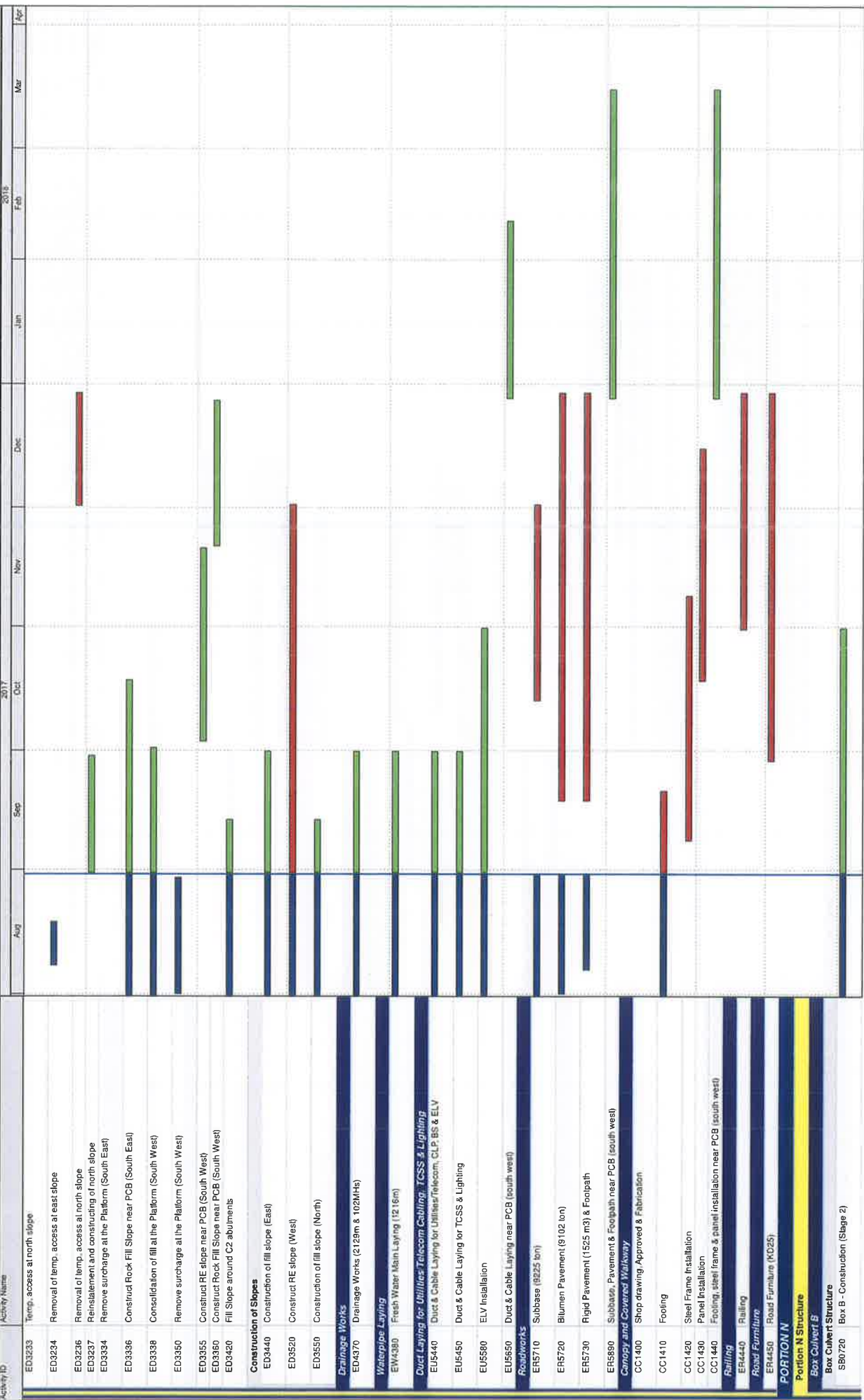
Actual Work	Remaining Work	Critical	Milestone
█	█	█	◆

**WORKS PROGRAMME UPDATED 31 AUGUST 2017**  
**VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES**  
 Page 22 of 27

Date	Revision	Checked
30-Jun-17	Works Programme (DW/P4), updated as of 30 June 2017	ZJ
31-Jul-17	Works Programme (DW/P4), updated as of 31 July 2017	ZJ
31-Aug-17	Works Programme (DW/P4), updated as of 31 Aug. 2017	ZJ

**HZMB HK Boundary Crossing Facilities - Vehicle Clearance Plazas and Ancillary Buildings and Facilities**

04-Sep-17



Activity ID	Activity Name	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
ED3233	Temp. access at north slope									
ED3234	Removal of temp. access at east slope									
ED3236	Removal of temp. access at north slope									
ED3237	Reinstatement and constructing of north slope									
ED3334	Remove surcharge at the Platform (South East)									
ED3336	Construct Rock Fill Slope near PCB (South East)									
ED3338	Consolidation of fill at the Platform (South West)									
ED3350	Remove surcharge at the Platform (South West)									
ED3355	Construct RE slope near PCB (South West)									
ED3360	Construct Rock Fill Slope near PCB (South West)									
ED3420	Fill Slope around C2 abutments									
<b>Construction of Slopes</b>										
ED3440	Construction of fill slope (East)									
ED3520	Construct RE slope (West)									
ED3550	Construction of fill slope (North)									
<b>Drainage Works</b>										
ED4370	Drainage Works (3120m & 102MHa)									
<b>Waterpipe Laying</b>										
EW4380	Fresh Water Main Laying (12.16m)									
<b>Duct Laying for Utilities Telecom Cabling, TCSS &amp; Lighting</b>										
EJ5440	Duct & Cable Laying for Utilities/Telecom, CLP, BS & ELV									
EJ5450	Duct & Cable Laying for TCSS & Lighting									
EJ5580	ELV Installation									
EJ5650	Duct & Cable Laying near PCB (south west)									
<b>Roadworks</b>										
ER5710	Subbase (B225 Ion)									
ER5720	Blumen Pavement (9102 ton)									
ER5730	Rigid Pavement (1525 m3) & Footpath									
ER5890	Subbase, Pavement & Footpath near PCB (south west)									
<b>Canopy and Covered Walkway</b>										
CC1400	Shop drawing Approved & Fabrication									
CC1410	Footing									
CC1420	Steel Frame Installation									
CC1430	Panel Installation									
CC1440	Footing, steel frame & panel installation near PCB (south west)									
<b>Railing</b>										
ER4440	Railing									
<b>Road Furniture</b>										
ER4450	Road Furniture (K025)									
<b>PORTION N</b>										
<b>Portion N Structure</b>										
<b>Box Culvert B</b>										
<b>Box Culvert Structure</b>										
SB0720	Box B - Construction (Stage 2)									

**WORKS PROGRAMME UPDATED 31 AUGUST 2017**  
**VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES**  
 Page 23 of 27

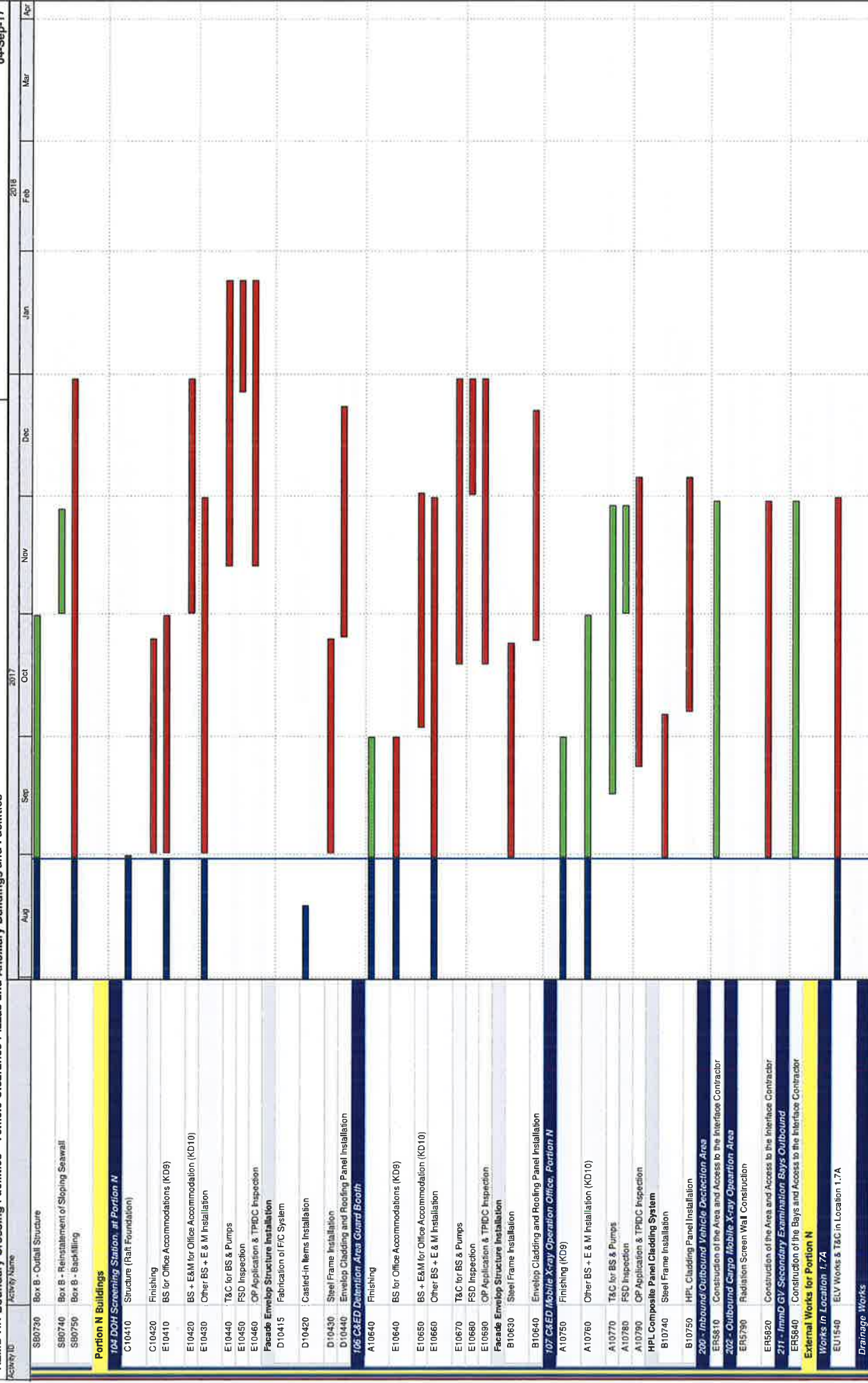
Date	Revision	Checked
30-Jun-17	Works Programme (OWP4), updated as of 30 June 2017	ZJ
31-Jul-17	Works Programme (OWP4), updated as of 31 July 2017	ZJ
31-Aug-17	Works Programme (OWP4), updated as of 31 Aug. 2017	ZJ

- Actual Work
- Remaining Work
- Critical
- Milestones



HZMB HK Boundary Crossing Facilities - Vehicle Clearance Plazas and Ancillary Buildings and Facilities

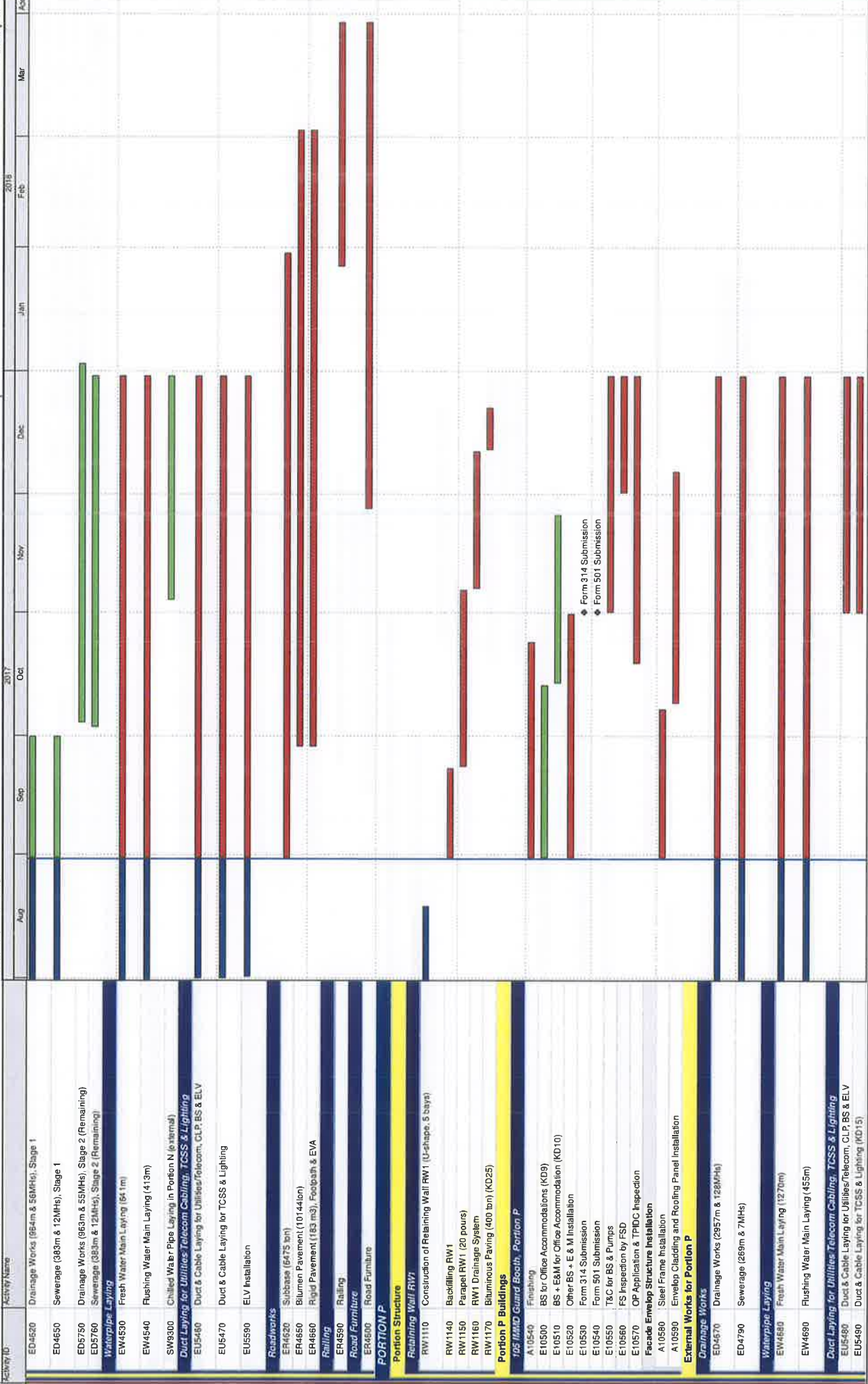
04-Sep-17



Activity	Date	Revision	Checked
WORKS PROGRAMME UPDATED 31 AUGUST 2017	30-Jun-17	Works Programme (DWP4), updated as of 30 June 2017	ZJ
VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES	31-Jul-17	Works Programme (DWP4), updated as of 31 July 2017	ZJ
Page 24 of 27	31-Aug-17	Works Programme (DWP4), updated as of 31 Aug. 2017	ZJ

**HZMB HK Boundary Crossing Facilities - Vehicle Clearance Plazas and Ancillary Buildings and Facilities**

04-Sep-17



Legend	Actual Work	Remaining Work	Critical	Milestones
█	Actual Work			
█	Remaining Work			
█	Critical			
◆	Milestones			

Revision	Date	Revision	Checked
1	30-Jun-17	Works Programme (DWP4), updated as of 30 June 2017	ZJ
2	31-Jul-17	Works Programme (DWP4), updated as of 31 July 2017	ZJ
3	31-Aug-17	Works Programme (DWP4), updated as of 31 Aug. 2017	ZJ

**WORKS PROGRAMME UPDATED 31 AUGUST 2017**  
**VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES**

**HZMB HK Boundary Crossing Facilities - Vehicle Clearance Plazas and Ancillary Buildings and Facilities**

04-Sep-17

Activity ID	Activity Name	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
EU5600	ELV Installation									
EU5640	Access date to Telephone Companies									
<b>Roadworks</b>										
ER4770	Subbase (18519 ton)									
ER4900	Blumen Pavement (23958 ton)									
ER4810	Rigid Pavement (220 m3), Footpath & EVA									
<b>Railing</b>										
ER4740	Railing									
<b>Road Furniture</b>										
ER4750	Road Furniture									
<b>PORTION Q</b>										
<b>External Works for Portion Q</b>										
ED5570	Duct & Cable Laying for Utilities/Telecom, CLP, BS & ELV									
ED5580	Duct & Cable Laying for TCSS & Lighting									
EU1490	ELV System Installation for Contract HY2013/04									
<b>Roadworks</b>										
AS0170	Initial Survey									
AS1810	C3-S1 Slope Construction									
AS1820	C3-S2 Slope Construction									
ER4920	Subbase (104 ton)									
ER4950	Blumen Pavement (215 ton)									
<b>Railing</b>										
ER4890	Railing									
<b>Road Furniture</b>										
ER4900	Road Furniture									
<b>PORTION R</b>										
<b>Portion R Building</b>										
D00230	Superstructure									
D00240	Finishing									
D00250	BS for Office Accommodations (KD9)									
D00260	BS + E&M for Office Accommodation (KD10)									
D00270	Other BS + E & M Installation									
D00280	T&C for BS & Pumps									
D00290	FSD Inspection									
D00295	OP Application & TPDC Inspection									
<b>External Works for Portion R</b>										
<b>Drainage Works</b>										
ED4960	Drainage Works (1040m & 70M4H)									
ED5090	Sewerage (272m & 7M4H)									
<b>Waterpipe Laying</b>										
EW4970	Fresh Water Main Laying (614m)									
EW4980	Flushing Water Main Laying (222m)									
<b>Duct Laying for Utilities/Telecom, TCSS &amp; Lighting</b>										
EU5500	Duct & Cable Laying for Utilities/Telecom, CLP, BS & ELV									
EU5510	Duct & Cable Laying for TCSS & Lighting									
EU5610	ELV Installation									
<b>Roadworks</b>										
ER5060	Subbase (1734 ton)									
ER5090	Blumen Pavement (6120m)									
ER5100	Rigid Pavement (687 m3)									
<b>Railing</b>										

Date	Revision	Checked	A
30-Jun-17	Works Programme (DWP4), updated as of 30 June 2017	ZJ	
31-Jul-17	Works Programme (DWP4), updated as of 31 July 2017	ZJ	
31-Aug-17	Works Programme (DWP4), updated as of 31 Aug. 2017	ZJ	

**WORKS PROGRAMME UPDATED 31 AUGUST 2017**  
**VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES**

- █ Actual Work
- █ Remaining Work
- █ Critical
- ◆ Milestone

**HZMB HK Boundary Crossing Facilities - Vehicle Clearance Plazas and Ancillary Buildings and Facilities**

04-Sep-17

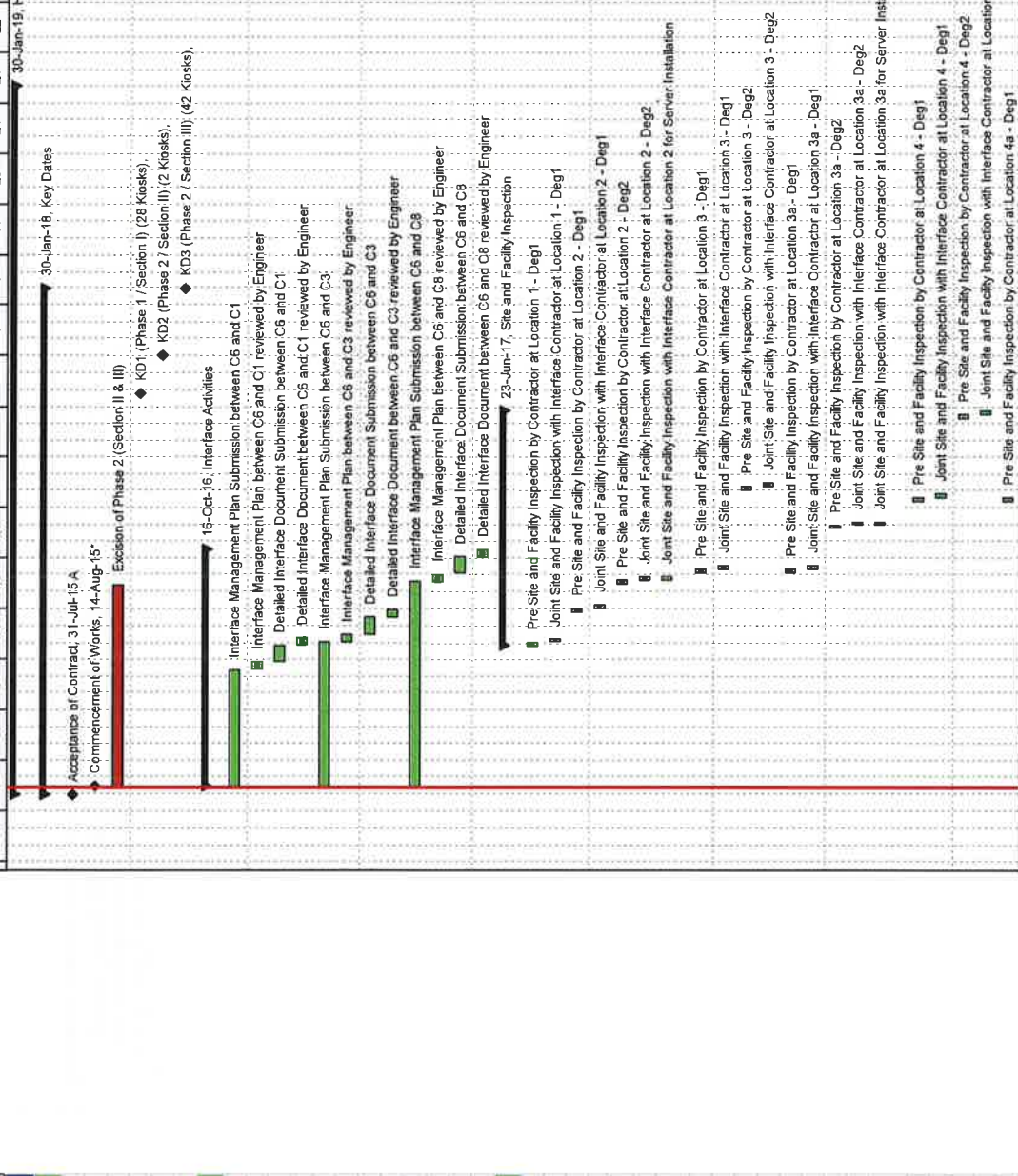
Activity ID	Activity Name	2017												2018												
		Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec								
ERS630	Railing																									
ERS640	Road Furniture																									
ERS640	Road Furniture (KD25)																									
A5170	Design and Procurement for Irrigation System																									
A5180	Installation of Irrigation System																									
A5190	All landscape Soft & Hard Works																									
A5200	All Establishment Works																									

Date	Revision	Checked
30-Jun-17	Works Programme (DWP4), updated as of 30 June 2017	ZJ
31-Jul-17	Works Programme (DWP4), updated as of 31 July 2017	ZJ
31-Aug-17	Works Programme (DWP4), updated as of 31 Aug. 2017	ZJ

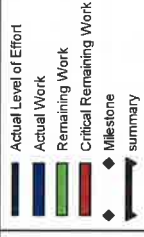
**WORKS PROGRAMME UPDATED 31 AUGUST 2017**  
**VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES**  
 Page 27 of 27

- Actual Work
- Remaining Work
- Critical
- Milestone

Activity ID	Activity Name
<b>Key Dates</b>	
A1000	Acceptance of Contract
A1010	Commencement of Works
A1020	Excision of Phase 2 (Section II & III)
A1120	KD1 (Phase 1 / Section I) (28 Kiosks)
A1470	KD2 (Phase 2 / Section II) (2 Kiosks)
A1480	KD3 (Phase 2 / Section III) (42 Kiosks)
<b>Interface Activities</b>	
A6860	Interface Management Plan Submission between C6 and C1
A6865	Interface Management Plan between C6 and C1 reviewed by Engineer
A6870	Detailed Interface Document Submission between C6 and C1
A6875	Detailed Interface Document between C6 and C1 reviewed by Engineer
A6880	Interface Management Plan Submission between C6 and C3
A6885	Interface Management Plan between C6 and C3 reviewed by Engineer
A6890	Detailed Interface Document Submission between C6 and C3
A6895	Detailed Interface Document between C6 and C3 reviewed by Engineer
A6900	Interface Management Plan Submission between C6 and C8
A6905	Interface Management Plan between C6 and C8 reviewed by Engineer
A6910	Detailed Interface Document Submission between C6 and C8
A6915	Detailed Interface Document between C6 and C8 reviewed by Engineer
<b>Site and Facility Inspection</b>	
A4730	Pre Site and Facility Inspection by Contractor at Location 1 - Deg1
A4740	Joint Site and Facility Inspection with Interface Contractor at Location 1 - Deg1
A4760	Pre Site and Facility Inspection by Contractor at Location 2 - Deg1
A4770	Joint Site and Facility Inspection with Interface Contractor at Location 2 - Deg1
A4772	Pre Site and Facility Inspection by Contractor at Location 2 - Deg2
A4774	Joint Site and Facility Inspection with Interface Contractor at Location 2 - Deg2
A4775	Pre Site and Facility Inspection with Interface Contractor at Location 2 for Server Installation
A4780	Pre Site and Facility Inspection by Contractor at Location 3 - Deg1
A4790	Joint Site and Facility Inspection with Interface Contractor at Location 3 - Deg1
A4800	Pre Site and Facility Inspection by Contractor at Location 3 - Deg2
A4810	Joint Site and Facility Inspection with Interface Contractor at Location 3 - Deg2
A4820	Pre Site and Facility Inspection by Contractor at Location 3a - Deg1
A4830	Joint Site and Facility Inspection with Interface Contractor at Location 3a - Deg1
A4840	Pre Site and Facility Inspection by Contractor at Location 3a - Deg2
A4850	Joint Site and Facility Inspection with Interface Contractor at Location 3a - Deg2
A4851	Pre Site and Facility Inspection with Interface Contractor at Location 3a for Server Installation
A4860	Pre Site and Facility Inspection by Contractor at Location 4 - Deg1
A4870	Joint Site and Facility Inspection with Interface Contractor at Location 4 - Deg1
A4880	Pre Site and Facility Inspection by Contractor at Location 4 - Deg2
A4890	Joint Site and Facility Inspection with Interface Contractor at Location 4 - Deg2
A4891	Pre Site and Facility Inspection by Contractor at Location 4a - Deg1



Programme No.: HZMB-DWP  
Data Date: 14-Aug-15



Hong Kong-Zhuhai-Macao Bridge  
Hong Kong Boundary Crossing  
Facilities - Automatic Vehicle  
Clearance Support System (AVCSS)



Date	Revision	Checked	Approved
14-Nov-16	Rev. 0	WC	LC

Activity ID	Activity Name	2015				2016				2017				2018				2019	
		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	
A4892	Joint Site and Facility Inspection with Interface Contractor at Location 4a - Deg1																		
A4900	Pre Site and Facility Inspection by Contractor at Location 4a - Deg2																		
A4910	Joint Site and Facility Inspection with Interface Contractor at Location 4a - Deg2																		
A4920	Pre Site and Facility Inspection by Contractor at Location 5 - Deg1																		
A4930	Joint Site and Facility Inspection with Interface Contractor at Location 5 - Deg1																		
A4940	Pre Site and Facility Inspection by Contractor at Location 5 - Deg2																		
A4950	Joint Site and Facility Inspection with Interface Contractor at Location 5 - Deg2																		
A4960	Pre Site and Facility Inspection by Contractor at Location 6 - Deg1																		
A4970	Joint Site and Facility Inspection with Interface Contractor at Location 6 - Deg1																		
A4980	Pre Site and Facility Inspection by Contractor at Location 6 - Deg2																		
A4990	Joint Site and Facility Inspection with Interface Contractor at Location 6 - Deg2																		
A5000	Pre Site and Facility Inspection by Contractor at Location 7 - Deg1																		
A5010	Joint Site and Facility Inspection with Interface Contractor at Location 7 - Deg1																		
A5020	Pre Site and Facility Inspection by Contractor at Location 8 - Deg1																		
A5030	Joint Site and Facility Inspection with Interface Contractor at Location 8 - Deg1																		
A5040	Pre Site and Facility Inspection by Contractor at Location 8 - Deg2																		
A5050	Joint Site and Facility Inspection with Interface Contractor at Location 8 - Deg2																		
A5060	Pre Site and Facility Inspection by Contractor at Location 9 - Deg1																		
A5070	Joint Site and Facility Inspection with Interface Contractor at Location 9 - Deg1																		
A5080	Pre Site and Facility Inspection by Contractor at Location 9 - Deg2																		
A5090	Joint Site and Facility Inspection with Interface Contractor at Location 9 - Deg2																		
A5100	Pre Site and Facility Inspection by Contractor at Location 10 - Deg1																		
A5110	Joint Site and Facility Inspection with Interface Contractor at Location 10 - Deg1																		
A5120	Pre Site and Facility Inspection by Contractor at Location 10 - Deg2																		
A5130	Joint Site and Facility Inspection with Interface Contractor at Location 10 - Deg2																		
A5140	Pre Site and Facility Inspection by Contractor at Location 11 - Deg1																		
A5150	Joint Site and Facility Inspection with Interface Contractor at Location 11 - Deg1																		
A5160	Pre Site and Facility Inspection by Contractor at Location 11 - Deg2																		
A5170	Joint Site and Facility Inspection with Interface Contractor at Location 11 - Deg2																		
A5180	Pre Site and Facility Inspection by Contractor at Location 12 - Deg1																		
A5190	Joint Site and Facility Inspection with Interface Contractor at Location 12 - Deg1																		
A5200	Pre Site and Facility Inspection by Contractor at Location 12 - Deg2																		
A5210	Joint Site and Facility Inspection with Interface Contractor at Location 12 - Deg2																		
A5220	Pre Site and Facility Inspection by Contractor at Location 13 - Deg1																		
A5230	Joint Site and Facility Inspection with Interface Contractor at Location 13 - Deg1																		
A5240	Pre Site and Facility Inspection by Contractor at Location 13 - Deg2																		
A5250	Joint Site and Facility Inspection with Interface Contractor at Location 13 - Deg2																		
A5260	Pre Site and Facility Inspection by Contractor at Location 14 - Deg1																		
A5270	Joint Site and Facility Inspection with Interface Contractor at Location 14 - Deg1																		
A5300	Pre Site and Facility Inspection by Contractor at Location 15 - Deg1																		
A5310	Joint Site and Facility Inspection with Interface Contractor at Location 15 - Deg1																		
A5320	Pre Site and Facility Inspection by Contractor at Location 15 - Deg2																		
A5330	Joint Site and Facility Inspection with Interface Contractor at Location 15 - Deg2																		
A5340	Pre Site and Facility Inspection by Contractor at Location 16 - Deg1																		
A5350	Joint Site and Facility Inspection with Interface Contractor at Location 16 - Deg1																		

Programme No. HZMB-DWP  
Data Date: 14-Aug-15



Hong Kong-Zhuhai-Macao Bridge  
Hong Kong Boundary Crossing  
Facilities - Automatic Vehicle  
Clearance Support System (AVCSS)



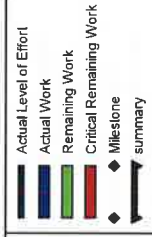
Date	Revision	Checked	Approved
14-Nov-16	Rev. 0	WC	LC

Detail Work Programme

Contract No.: HY/2013/06

Activity ID	Activity Name	2015			2016			2017			2018			2019		
		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
A5360	Pre Site and Facility Inspection by Contractor at Location 16 - Deg2															
A5370	Joint Site and Facility Inspection with Interface Contractor at Location 16 - Deg2															
A5375	Pre Site and Facility Inspection by Contractor at Location 17 - Deg1															
A5378	Joint Site and Facility Inspection with Interface Contractor at Location 17 - Deg1															
A5380	Pre Site and Facility Inspection by Contractor at Location 17 - Deg2															
A5390	Joint Site and Facility Inspection with Interface Contractor at Location 17 - Deg2															
A5395	Pre Site and Facility Inspection by Contractor at Location 18 - Deg1															
A5396	Joint Site and Facility Inspection with Interface Contractor at Location 18 - Deg1															
A5400	Pre Site and Facility Inspection by Contractor at Location 18 - Deg2															
A5410	Joint Site and Facility Inspection with Interface Contractor at Location 18 - Deg2															
A5420	Pre Site and Facility Inspection by Contractor at Location 19 - Deg1															
A5430	Joint Site and Facility Inspection with Interface Contractor at Location 19 - Deg1															
A5440	Pre Site and Facility Inspection by Contractor at Location 19 - Deg2															
A5450	Joint Site and Facility Inspection with Interface Contractor at Location 19 - Deg2															
A5470	Pre Site and Facility Inspection by Contractor at Inbound Vehicle Clearance Plaza															
A5480	Joint Site and Facility Inspection with Interface Contractor at Inbound Vehicle Clearance Plaza															
A5490	Pre Site and Facility Inspection by Contractor at Outbound Vehicle Clearance Plaza															
A5550	Joint Site and Facility Inspection with Interface Contractor at Outbound Vehicle Clearance Plaza															
<b>Access Dates</b>																
A1070	Location 1(PCB (001) Basement)-Deg1 (2700)															
A1081	Location 1(PCB (001) ELV Room (Grid Line E3))-Deg1 (2700)															
A1090	Location 2(PCB (001) First Floor Main Server Room)-Deg1 (3300)															
A1100	Location 2(PCB (001) First Floor Main Server Room)-Deg2 (3800)															
A1101	Location 2(PCB (001) First Floor Main Server Room) - For Server Installation															
A1102	Location 2(PCB (001) Ground Floor ELV Room (Grid Line E3)) - Deg1 (3300)															
A1103	Location 2(PCB (001) Ground Floor DOH Port Health Control Room (Grid Line B05)) - Deg1 (3300)															
A1104	Location 2(PCB (001) Ground Floor DOH Port Health Control Room (Grid Line B05)) - Deg2 (3800)															
A1110	Location 3(Inbd Cargo Exam Bldg (037) MDF Room)-Deg1 (4000)															
A1112	Location 3(Inbd Cargo Exam Bldg (037) ELV Room)-Deg1 (4000)															
A1114	Location 3(Inbd Cargo Exam Bldg (037) Platform Control Room)-Deg1 (4000)															
A1115	Location 3(Inbd Cargo Exam Bldg (037) Platform Control Room)-Deg2 (5000)															
A1116	Location 3(Inbd Cargo Exam Bldg (037) Inspector Offices 128,129,130,131,128,129,140,141)-Deg1 (4000)															
A1117	Location 3(Inbd Cargo Exam Bldg (037) Inspector Offices 128,129,130,131,128,129,140,141)-Deg2 (5000)															
A1130	Location 3a(Inbd Cargo Exam Bldg ROCARS Room)-Deg1 (-)															
A1131	Location 3a(Inbd Cargo Exam Bldg ROCARS Room)-Deg2 (4800)															
A1140	Location 3a(Inbd Cargo Exam Bldg Main Server Room)-Deg1 (-)															
A1141	Location 3a(Inbd Cargo Exam Bldg Main Server Room)-Deg2 (4800)															
A1142	Location 3a(Inbd Cargo Exam Bldg Main Server Room) - For Server installation															
A1150	Location 4(Outbd Cargo Exam Bldg (023))-Deg1 (5300)															
A1160	Location 4(Outbd Cargo Exam Bldg (023))-Deg2 (6800)															
A1161	Location 4a(Outbd Cargo Exam Bldg (023))-Deg1 (-)															

Programme No.: HZMB-DWP  
Data Date: 14-Aug-15



Hong Kong-Zhuhai-Macao Bridge  
Hong Kong Boundary Crossing  
Facilities - Automatic Vehicle  
Clearance Support System (AVCSS)



Date	Revision	Checked	Approved
14-Nov-16	Rev. 0	WC	LC

Activity ID	Activity Name	2015				2016				2017				2018				2019	
		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	
A1162	Location 4a(Outbd Cargo Exam Bldg (023))-Deg2 (630d)																		
A1170	Location 5(Common Utility Enclosure & Staff Subway)-Deg1 (320d)																		
A1180	Location 5(Common Utility Enclosure & Staff Subway)-Deg2 (-)																		
A1190	Location 6(Common Utility Enclosure & Staff Subway)-Deg1 (400d)																		
A1200	Location 6(Common Utility Enclosure & Staff Subway)-Deg2 (-)																		
A1210	Location 7(Common Utility Enclosure & Staff Subway)-Deg1 (270d)																		
A1230	Location 8(Inbd Private Car Annex (025))-Deg1 (430d)																		
A1240	Location 8(Inbd Private Car Annex (025))-Deg2 (580d)																		
A1241	Location 8(Inbd Private Car Annex (025) Canopy)-Deg1 (430d)																		
A1242	Location 8(Inbd Private Car Annex (025) Canopy)-Deg2 (580d)																		
A1250	Location 9(Outbd Private Car Annex (032))-Deg1 (520d)																		
A1260	Location 9(Outbd Private Car Annex (032))-Deg2 (660d)																		
A1261	Location 9(Outbd Private Car Annex (032) Canopy)-Deg1 (520d)																		
A1262	Location 9(Outbd Private Car Annex (032) Canopy)-Deg2 (660d)																		
A1270	Location 10(Shuttle Bus Kiosks (006))-Deg1 (480d)																		
A1280	Location 10(Shuttle Bus Kiosks (006))-Deg2 (550d)																		
A1281	Location 10(Shuttle Bus Kiosks (006) Canopy)-Deg1 (480d)																		
A1282	Location 10(Shuttle Bus Kiosks (006) Canopy)-Deg2 (550d)																		
A1290	Location 11(Outbd Coach Kiosks (009))-Deg1 (400d)																		
A1300	Location 11(Outbd Coach Kiosks (009))-Deg2 (480d)																		
A1301	Location 11(Outbd Coach Kiosks (009) Canopy)-Deg1 (400d)																		
A1302	Location 11(Outbd Coach Kiosks (009) Canopy)-Deg2 (480d)																		
A1303	Location 11(Inbd Coach Kiosks (010))-Deg1 (400d)																		
A1304	Location 11(Inbd Coach Kiosks (010))-Deg2 (480d)																		
A1305	Location 11(Inbd Coach Kiosks (010) Canopy)-Deg1 (400d)																		
A1306	Location 11(Inbd Coach Kiosks (010) Canopy)-Deg2 (480d)																		
A1310	Location 12(Inbd Private Car Kiosks(027))-Deg1 (400d)																		
A1311	Location 12(Inbd Private Car Kiosks(027))-Deg2 (480d)																		
A1312	Location 12(Inbd Private Car Kiosks(027) Canopy)-Deg1 (400d)																		
A1313	Location 12(Inbd Private Car Kiosks(027) Canopy)-Deg2 (480d)																		
A1314	Location 12(Inbd GV Kiosks (028))-Deg1 (400d)																		
A1315	Location 12(Inbd GV Kiosks (028))-Deg2 (480d)																		
A1316	Location 12(Inbd GV Kiosks (028) Canopy)-Deg1 (400d)																		
A1317	Location 12(Inbd GV Kiosks (028) Canopy)-Deg2 (480d)																		
A1318	Location 12(Outbd GV Kiosks (029))-Deg1 (400d)																		
A1319	Location 12(Outbd GV Kiosks (029))-Deg2 (480d)																		
A1320	Location 12(Outbd GV Kiosks (029) Canopy)-Deg1 (400d)																		
A1321	Location 12(Outbd GV Kiosks (029) Canopy)-Deg2 (480d)																		
A1330	Location 13(Outbd Private Car Kiosks (030))-Deg1 (480d)																		
A1340	Location 13(Outbd Private Car Kiosks (030))-Deg2 (550d)																		
A1341	Location 13(Outbd Private Car Kiosks (030) Canopy)-Deg1 (480d)																		
A1342	Location 13(Outbd Private Car Kiosks (030) Canopy)-Deg2 (550d)																		
A1350	Location 14(Future-Outbd/Inbd Private Car Kiosks)-Deg1 (610d)																		
A1370	Location 15(Inbd Traffic Control Kiosk (100))-Deg1 (480d)																		
A1380	Location 15(Inbd Traffic Control Kiosk (100))-Deg2 (480d)																		

Programme No.: HZMB-DWP  
Data Date: 14-Aug-15

Actual Level of Effort  
 Actual Work  
 Remaining Work  
 Critical Remaining Work  
 Milestone  
 summary

Hong Kong-Zhuhai-Macao Bridge  
Hong Kong Boundary Crossing  
Facilities - Automatic Vehicle  
Clearance Support System (AVCSS)



Date	Revision	Checked	Approved
14-Nov-16	Rev: 0	WC	LC



Detail Work Programme

Contract No.: HY/2013/06

Activity ID	Activity Name	2015				2016				2017				2018				2019	
		Q2	Q3	Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
A1390	Location 16(Outbd Traffic Control Kiosk (101))-Deg1 (400d)																		
A1400	Location 16(Outbd Traffic Control Kiosk (101))-Deg2 (480d)																		
A1410	Location 17(Inbd Private Car Exam Bldg(033))-Deg1 (-)																		
A1420	Location 17(Inbd Private Car Exam Bldg(033))-Deg2 (550d)																		
A1430	Location 18(Outbd Private Car Exam Bldg(024))-Deg1 (-)																		
A1440	Location 18(Outbd Private Car Exam Bldg(024))-Deg2 (670d)																		
A1450	Location 19(DOH Cargo Clearance Bldg(043))-Deg1 (-)																		
A1460	Location 19(DOH Cargo Clearance Bldg(043))-Deg2 (550d)																		
A1461	Underground Ducting between Inbd Cargo Exam Bldg (037) and DOH Cargo Clearance Bldg (043) and CUE																		
A1462	Underground Ducting between Inbd Cargo Exam Bldg (037) and Inbd Vehicle Clearance Plaza																		
A1463	Underground Ducting between CUE and Outbd Car Exam Bldg (023)																		
A1464	Underground Ducting between Outbd Cargo Exam Bldg (023) and Outbd Vehicle Clearance Plaza																		
A1465	Underground Ducting between CUE and Outbd Vehicle Clearance Plaza																		
A1466	Underground Ducting between CUE and Inbd P. Car Annex (025) and Shuttle Bus Kiosks (006)																		
A1467	Underground Ducting between PCB(001) and Inbd Coach Kiosks(010)																		
A1468	Underground Ducting between CUE and Outbd PCA (032)																		
A1478	Inbound Vehicle Clearance Plaza (Assume same as Location 3)																		
A1488	Outbound Vehicle Clearance Plaza (Assume same as Location 4 degree 1 + 51 day)																		
<b>Interfaces Provisions</b>																			
A7000	Inbound VID foundation and mounting structure (assume same as Access date of Inbound Vehicle Clearance Plaza)																		
A7010	Inbound VTS foundation and mounting poles (assume same as Access date of Inbound Vehicle Clearance Plaza)																		
A7020	Inbound TLS foundation and mounting poles (assume same as Access date of Inbound Vehicle Clearance Plaza)																		
A7030	Outbound VID foundation and mounting structure (assume same as Access date of Outbound Vehicle Clearance Plaza)																		
A7040	Outbound VTS foundation and mounting poles (assume same as Access date of Outbound Vehicle Clearance Plaza)																		
A7050	Outbound TLS foundation and mounting poles (assume same as Access date of Outbound Vehicle Clearance Plaza)																		
<b>WA4 Site Erection &amp; Servicing</b>																			
A1740	Possession of Site																		
A1750	Method Statement & Drawing																		
A1760	Place Order to prepare materials																		
A1770	Review, revise and approve method statement																		
A1780	Equipment mobilization and construction material delivered to the site																		
A1790	Set up the alignment and level of the u-channel																		
A1800	Trial pit excavation																		
A1801	Excavation for chain-link fence footing																		
A4540	Underground Utility detection																		
A4550	Delivery of asphalt and fencing materials																		
A4560	Trimming and leveling soil surface for paving asphalt material																		
A4570	Remove the vegetation and loose material on the soil surface by backhoe																		
A4580	Set out the alignment and level of the u-channel																		

Programme No.: HZMB-DWP  
Data Date: 14-Aug-15

- Actual Level of Effort
- Actual Work
- Remaining Work
- Critical Remaining Work
- Milestone
- summary

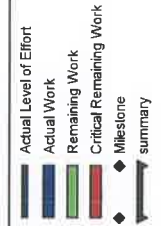
Hong Kong-Zhuhai-Macao Bridge  
Hong Kong Boundary Crossing  
Facilities - Automatic Vehicle  
Clearance Support System (AVCSS)



Date	Revision	Checked	Approved
14-Nov-16	Rev: 0	WC	LC

Activity ID	Activity Name	2015				2016				2017				2018				2019	
		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	
A4590	Installation of fencing post along the site boundary																		
A4600	Excavation for underground drainage pipe																		
A4610	Evenly spread the asphalt scrap material by backhoe																		
A4620	Cast concrete for the u-channel and underground drainage pipe																		
A4630	Remove the u-channel framework																		
A4640	Installation of chain-link fencing along the site boundary																		
A4650	Installation of access doors																		
A4660	Excavation for drainage ditch																		
A4670	Cast concrete for the drainage ditch																		
A4680	Compact the asphalt scrap material																		
A4690	Land surveying																		
A4700	Inspection of chain-link fencing and access doors																		
A4710	Testing of drains																		
A4720	Completion of the works																		
<b>Detailed Design Specification</b>																			
A1808	Preliminary System Proposal Submission																		
A1809	Engineer's agreement with preliminary system proposal																		
A1810	Draft Detailed Design Specification (DDS) Submission																		
A1814	Draft Hardware Function Design Specification for Computer system and Network system (HFD)																		
A1815	Draft Software Function Design Specification for Computer system and Network system (SFD)																		
A1820	Engineer's Review and Approval for Draft Detailed Design Specification (DDS)																		
A1823	Engineer's Review and Approval for Draft Hardware FDS for Computer system and Network system (HFD)																		
A1824	Engineer's Review and Approval for Draft Software FDS for Computer system and Network system (SFD)																		
A1829	Interface Requirements for CED (LBS, CED IT Server, Metro-Ethernet) and IMMD (AVCS)																		
A1830	Final DDS Submission (AVCSS,VTS,VIDS)(Phase 1/Section I)																		
A1831	Development of System Security Plan																		
A1840	Engineer's Review and Approval for Final DDS Submission including System Security Plan (AVCSS)(Phase 1/Section I)																		
A1850	Final DDS Submission (AVCSS)(Phase 2/Section II&III)																		
A1860	Engineer's Review and Approval for DDS Submission (AVCSS)(Phase 2/Section II&III)																		
<b>Construction Design and Management</b>																			
A6920	Construction Health and Safety Plan Submission																		
A6930	Construction Health and Safety Plan reviewed by Engineer																		
<b>Supply/Manufacture Mock-up items</b>																			
A4749	Preparation of Kiosk equipment Mock-up																		
A4750	Installation of Kiosk equipment Mock-up																		
<b>Supply/Manufacture prototypes</b>																			
A2900	Manufacture LED Display Prototype (VID, ODB and XDB)																		
A2910	Manufacture All-In-One Panel Prototype (AIOF)																		
<b>Software Design, Coding and Testing</b>																			

Programme No.: HZMB-DWP  
Data Date: 14-Aug-15



Hong Kong-Zhuhai-Macao Bridge  
Hong Kong Boundary Crossing  
Facilities - Automatic Vehicle  
Clearance Support System (AVCSS)



Date	Revision	Checked	Approved
14-Nov-16	Rev. 0	WC	LC

Activity ID	Activity Name	2015				2016				2017				2018				2019	
		Q2	Q3	Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
<b>Coding</b>																			
A5460	CCS, SURCON, SYSICON, CDBS Development Stage 1	05-Jan-17, Coding																	
A5500	VTS Development Stage 1	05-Jan-17, Coding																	
A5510	VIDS Development Stage 1	05-Jan-17, Coding																	
A5540	CCS, SURCON, SYSICON, CDBS Development Stage 2	05-Jan-17, Coding																	
A5580	VTS Development Stage 2	05-Jan-17, Coding																	
A5590	VIDS Development Stage 2	05-Jan-17, Coding																	
<b>Software System Integration</b>																			
A5520	Test Plan Documentation Submission	22-May-17, Software System Integration																	
A5530	Engineer's Review and Approval for Test Plan Documentation Submission	22-May-17, Software System Integration																	
A5600	Software System Integration Test	22-May-17, Software System Integration																	
A5630	CCS/SYSICON/SURCON/CDBS/VTS/VIDS Software Enhancement	22-May-17, Software System Integration																	
A5640	Software User Acceptance Test (UAT)	22-May-17, Software System Integration																	
<b>Prototype &amp; Software Simulation Tests</b>																			
A1910	Prototype Test Document	08-Sep-16, Prototype & Software Simulation Tests																	
A2130	Engineer's Approval for Testing Document	08-Sep-16, Prototype & Software Simulation Tests																	
A2920	CCWS with CDBS, SURCON and SYSICON (Software Simulation/ Software Integration Test)	08-Sep-16, Prototype & Software Simulation Tests																	
A2930	Vehicle Tracking System (VTS) (Software Simulation/ Software Integration Test)	08-Sep-16, Prototype & Software Simulation Tests																	
A2950	LED Displays (VID, ODB and XDB)	08-Sep-16, Prototype & Software Simulation Tests																	
A2960	All-In-One Panel (AIOP)	08-Sep-16, Prototype & Software Simulation Tests																	
A3020	Prototype Testing Report Submission	08-Sep-16, Prototype & Software Simulation Tests																	
A4350	Engineer's Approval for Prototype Testing Report	08-Sep-16, Prototype & Software Simulation Tests																	
<b>Procurement - Phase 1 / Section 1</b>																			
A3070	Procurement of Equipment for Phase 1/Section 1	27-Dec-16, Procurement - Phase 1 / Section 1																	
A3080	Procurement of Cable and Accessories for Phase 1 /Section 1	27-Dec-16, Procurement - Phase 1 / Section 1																	
A3990	Procurement of All Servers and Workstations	27-Dec-16, Procurement - Phase 1 / Section 1																	
<b>Supply/Manufacture products for FAT</b>																			
A2990	Supply/Manufacture LED Display (ODB, VID and XDB) for FAT	10-Nov-16, Supply/Manufacture products for FAT																	
A2990	Supply/Manufacture All-In-One Panel (AIOP) for FAT	10-Nov-16, Supply/Manufacture products for FAT																	
A3000	Supply/Manufacture off-the-shelf equipment for FAT	10-Nov-16, Supply/Manufacture products for FAT																	
<b>Factory Acceptance Test (FAT)</b>																			
A2120	FAT Procedure Document	12-Dec-16, Factory Acceptance Test (FAT)																	
A2121	Engineer's Approval for FAT Procedure Document	12-Dec-16, Factory Acceptance Test (FAT)																	
A3050	FAT for Licence Plate Recognition System (LPRS)	12-Dec-16, Factory Acceptance Test (FAT)																	
A3060	FAT for PK/Intercom	12-Dec-16, Factory Acceptance Test (FAT)																	
A3090	FAT for ODB	12-Dec-16, Factory Acceptance Test (FAT)																	
A3100	FAT for XDB	12-Dec-16, Factory Acceptance Test (FAT)																	
A3110	FAT for VID	12-Dec-16, Factory Acceptance Test (FAT)																	
A3120	FAT for Video Management System (VMS)	12-Dec-16, Factory Acceptance Test (FAT)																	
A3130	FAT for Vehicle Tracking System (VTS)	12-Dec-16, Factory Acceptance Test (FAT)																	
A3140	FAT for Communication Network (CMN)	12-Dec-16, Factory Acceptance Test (FAT)																	
A3150	FAT for All-In-One Panel (AIOP)	12-Dec-16, Factory Acceptance Test (FAT)																	
A3160	FAT for AVCSS System Test	12-Dec-16, Factory Acceptance Test (FAT)																	
A4360	FAT Report Submission	12-Dec-16, Factory Acceptance Test (FAT)																	

Programme No.: HZMB-DWP  
Data Date: 14-Aug-15

- Actual Level of Effort
- Actual Work
- Remaining Work
- Critical Remaining Work
- Milestone
- summary

Hong Kong-Zhuhai-Macao Bridge  
Hong Kong Boundary Crossing  
Facilities - Automatic Vehicle  
Clearance Support System (AVCSS)



Date	Revision	Checked	Approved
14-Nov-16	Rev. 0	WC	LC

Activity ID	Activity Name	2015				2016				2017				2018				2019	
		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	
A4370	Engineer's Approval for FAT Report Submission																		
<b>Supply/Manufacture Equipment</b>																			
A5830	Supply/Manufacture LED (ODB, VID and XDB) Display for installation																		
A6840	Supply/Manufacture AOP for installation																		
<b>Delivery and Bench Acceptance Test for Phase 1/ Section 1</b>																			
A6740	Material On-Site for Phase 1/Section 1																		
A6750	Material Bench Acceptance Test for Phase 1/Section 1																		
A6850	Cable On-Site for Phase 1/Section 1																		
A6960	AOP On-Site for Phase 1/Section 1																		
A6870	AOP Bench Acceptance Test for Phase 1/Section 1																		
A6980	LED (ODB, VID and XDB) On-Site for Phase 1/Section 1																		
A6990	LED (ODB, VID and XDB) Bench Acceptance Test for Phase 1/Section 1																		
<b>Installation - Phase 1/ Section 1</b>																			
<b>Location 1 (PCB (001) Basement)</b>																			
A3081	Cable Laying and termination at Location 1 and Location 2																		
A3101	Cable Laying and termination at Location 1 and Location 2																		
<b>Location 2 (PCB (001) Ground Floor ELV Room (Grid Line E3))</b>																			
A3121	Cable Laying and termination at Location 1 and Location 2																		
A2041	Cable Laying and termination at Location 1 and Location 2																		
A2042	Cable Testing																		
A2043	Intercom and PA system Installation																		
A2044	Intercom and PA system tuning																		
<b>Location 2 (PCB (001) First Floor Main Server Room)</b>																			
A2001	Cable Laying and termination at Location 1 and Location 2																		
A2002	Cable Testing																		
A2003	AVCSS Network and Server Installation																		
A2004	AVCSS Network and Server Tuning																		
<b>Location 3 (Inbd Cargo Exam Bldg (037) Inspector Offices 128,129,130,131,128,12</b>																			
A3241	Cable Laying and termination in Location 3 and Location 3a																		
A3242	AVCSS SURCON WS and 55" LCD Installation																		
A3243	VTS WS Installation																		
A3245	SURCON, WS Tuning																		
<b>Location 3 (Inbd Cargo Exam Bldg (037) ELV Room)</b>																			
A3210	Cable Laying and termination between Location 3 and CUE																		
<b>Location 3 (Inbd Cargo Exam Bldg (037) Platform Control Room)</b>																			
A2071	Cable Laying and termination in Location 3 and Location 3a																		
A2072	AVCSS SYSCON WS and 55" TV Wall Installation																		
A2074	AVCSS SYSCON WS Tuning																		
<b>Location 3 (Inbd Cargo Exam Bldg (037) MDF Room)</b>																			
A3190	Cable Laying and termination between Location 3 and CUE																		
<b>Location 3a (Inbd Cargo Exam Bldg (037) ROCARS Room)</b>																			
A2091	Cable Laying and termination in Location 3 and Location 3a																		
A2092	AVCSS SYSCON, SURCON and Intercom Installation																		

Programme No.: HZMB-DWP  
Data Date: 14-Aug-15

Hong Kong-Zhuhai-Macao Bridge  
Hong Kong Boundary Crossing  
Facilities - Automatic Vehicle  
Clearance Support System (AVCSS)

Actual Level of Effort

- Actual Work
- Remaining Work
- Critical Remaining Work
- Milestone
- summary

Date	Revision	Checked	Approved
14-Nov-16	Rev. 0	WC	LC

Activity ID	Activity Name	2015			2016			2017			2018			2019		
		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
A2093	VTS WS Installation															
A2094	VID WS Installation															
A2096	SURCON, SYSCON, WS Tuning															
<b>A3330</b>	<b>Location 3a(Inbd Cargo Exam Bldg Main Server Room)</b>															
A3330	Cable Laying and termination in Location 3 and Location 3a															
A3340	AVCSS Server Installation															
A3350	VTS Server Installation															
A3360	Servers Tuning															
<b>A3370</b>	<b>Location 4(Outbd Cargo Exam Bldg (023) MDF Room)</b>															
A3410	Cable Laying and termination between CUE and Location 4															
<b>A3370</b>	<b>Location 4 and 4a(Outbd Cargo Exam Bldg (023) ROCARS Room)</b>															
A3370	Cable Laying and termination in Location 4 and 4a															
A3380	AVCSS SYSCON, SURCON and Intercom Installation															
A3390	VTS WS Installation															
A3400	SYSCON, SURCON, WS Tuning															
<b>A3430</b>	<b>Location 5(Common Utility Enclosure &amp; Staff Subway)</b>															
A3430	Cable Laying between Location 5 and Location 7															
A3440	Cable Laying between Location 5 and Location 6															
A3480	ODB Switch Installation at EL Room 2-7															
<b>A3450</b>	<b>Location 6(Common Utility Enclosure &amp; Staff Subway)</b>															
A3450	Cable Laying between Location 5 and Location 6															
A3490	ODB Switch Installation at EL Room 8-9, 11-12															
<b>A3470</b>	<b>Location 7(Common Utility Enclosure &amp; Staff Subway)</b>															
A3470	Cable Laying between Location 5 and Location 7															
<b>A4380</b>	<b>Location 12(Inbd Private Car Kiosks (027,028,029))</b>															
A4380	Inbd Private Car Kiosks(027) - 9 nos (Phase 1)															
A4380	Cable Containment in Kiosks															
A4380	Cable Laying and termination															
A4380	Cable Splicing, Testing and Labeling															
A4380	AVCSS/DOH/MOM Kiosk Equipment Installation (9 nos)															
A4380	ODB & XDB installation (9 nos)															
A4380	Inbd Private Car Kiosk Installation Complete															
A4380	Inbd Private Car Kiosk Installation Complete															
A4380	Cable Containment in Kiosks															
A4380	Cable Laying and termination															
A4380	Cable Splicing, Testing and Labeling															
A4380	AVCSS/DOH/MOM Kiosk Equipment Installation (5 nos)															
A4380	ODB & XDB installation (5 nos)															
A4380	Inbd Goods Vehicle Kiosks Installation Complete															
A4380	Inbd Goods Vehicle Kiosks Installation Complete															
A4380	Cable Containment in Kiosks															
A4380	Cable Laying and termination															
A4380	Cable Splicing, Testing and Labeling															
A4380	AVCSS/DOH/MOM Kiosk Equipment Installation (5 nos)															

Programme No.: HZM/B-DWP  
Data Date: 14-Aug-15

Actual Level of Effort  
 Actual Work  
 Remaining Work  
 Critical Remaining Work  
 Milestone  
 summary

Hong Kong-Zhuhai-Macao Bridge  
Hong Kong Boundary Crossing  
Facilities - Automatic Vehicle  
Clearance Support System (AVCSS)



Date	Revision	Checked	Approved
14-Nov-16	Rev: 0	WC	LC

Activity ID	Activity Name	2015				2016				2017				2018				2019	
		Q2	Q3	Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
A2590	AICP Installation (5 nos)																		
A2600	ODB & XDB installation (5 nos)																		
A4400	Outbd Goods Vehicle Kiosks Installation Complete																		
<b>Location 13(Outbd Private Car Kiosks (030)) - 9 nos (Phase 1)</b>																			
A3562	Cable Containment in Kiosks																		
A3583	Cable Laying and termination																		
A3584	Cable Splicing, Testing and Labeling																		
A3590	AVCSS/DOH/MOM Kiosk Equipment Installation (9 nos)																		
A3600	ODB & XDB installation (9 nos)																		
A4410	Outbd Private Car Kiosks Installation Complete																		
<b>Location 14(Future-Outbd/Private Car Kiosks) - 6+6 nos</b>																			
A2441	Cable Laying and termination at ELV Room in CUE																		
<b>Location 16(Inbd Traffic Control Kiosk (100))</b>																			
A3651	Cable Laying and termination																		
A3652	AVCSS SYSCON, SURCON Installation																		
A3660	VTS WS and 55" LCD Installation																		
A3670	WSYCON, SURCON, WS Tuning																		
<b>Location 16(Outbd Traffic Control Kiosk (101))</b>																			
A3701	Cable Laying and termination																		
A3702	AVCSS SYSCON, SURCON Installation																		
A3710	VTS WS and 55" LCD installation																		
<b>Location 17(Inbd Private Car Exam Bldg(033) Operational Office)</b>																			
A3750	Cable Laying and termination																		
A3760	AVCSS SURCON and 55" LCD Installation																		
A3770	SURCON Tuning																		
<b>Location 18 (Outbd Private Car Exam Bldg(024) Operational Office)</b>																			
A3780	Cable Laying and termination																		
A3790	AVCSS SURCON and 55" LCD Installation																		
<b>Location 19 (DOH Cargo Clearance Bldg(043))</b>																			
A2111	Cable Laying and termination between Location 19 and CUE																		
A2112	Cable Laying in Location 19																		
A2113	PA and Intercom Installation																		
A2123	PA and Intercom Tuning																		
<b>Inbd Vehicle Clearance Plaza - 8 nos VID, 7 nos VTS, 4 nos TLS</b>																			
A4050	Inbound VID cabling from pillar box to VID field equipment																		
A4052	Inbound VTS cabling from pillar box to VTS field equipment																		
A4054	Inbound TLS cabling from pillar box to TLS field equipment																		
A4060	Inbound VID field equipment installation (8 VID)																		
A4062	Inbound VTS field equipment installation (4 RFID + 3 Cameras)																		
A4064	Inbound TLS field equipment installation (4 TLS)																		
A4066	Inbound VID, VTS and TLS field equipment tuning																		
<b>Outbd Vehicle Clearance Plaza - 8 nos VID, 6 nos VTS, 4 nos TLS</b>																			
A4110	Outbound VID cabling from pillar box to VID field equipment																		
A4120	Outbound VTS cabling from pillar box to VTS field equipment																		
A4130	Outbound TLS cabling from pillar box to TLS field equipment																		

Programme No.: HZMB-DWP  
Data Date: 14-Aug-15

- Actual Level of Effort
- Actual Work
- Remaining Work
- Critical Remaining Work
- Milestone
- summary

Hong Kong-Zhuhai-Macao Bridge  
Hong Kong Boundary Crossing  
Facilities - Automatic Vehicle  
Clearance Support System (AVCSS)



Date	Revision	Checked	Approved
14-Nov-16	Rev. 0	WC	LC

Detail Work Programme

Contract No.: HY/2013/06

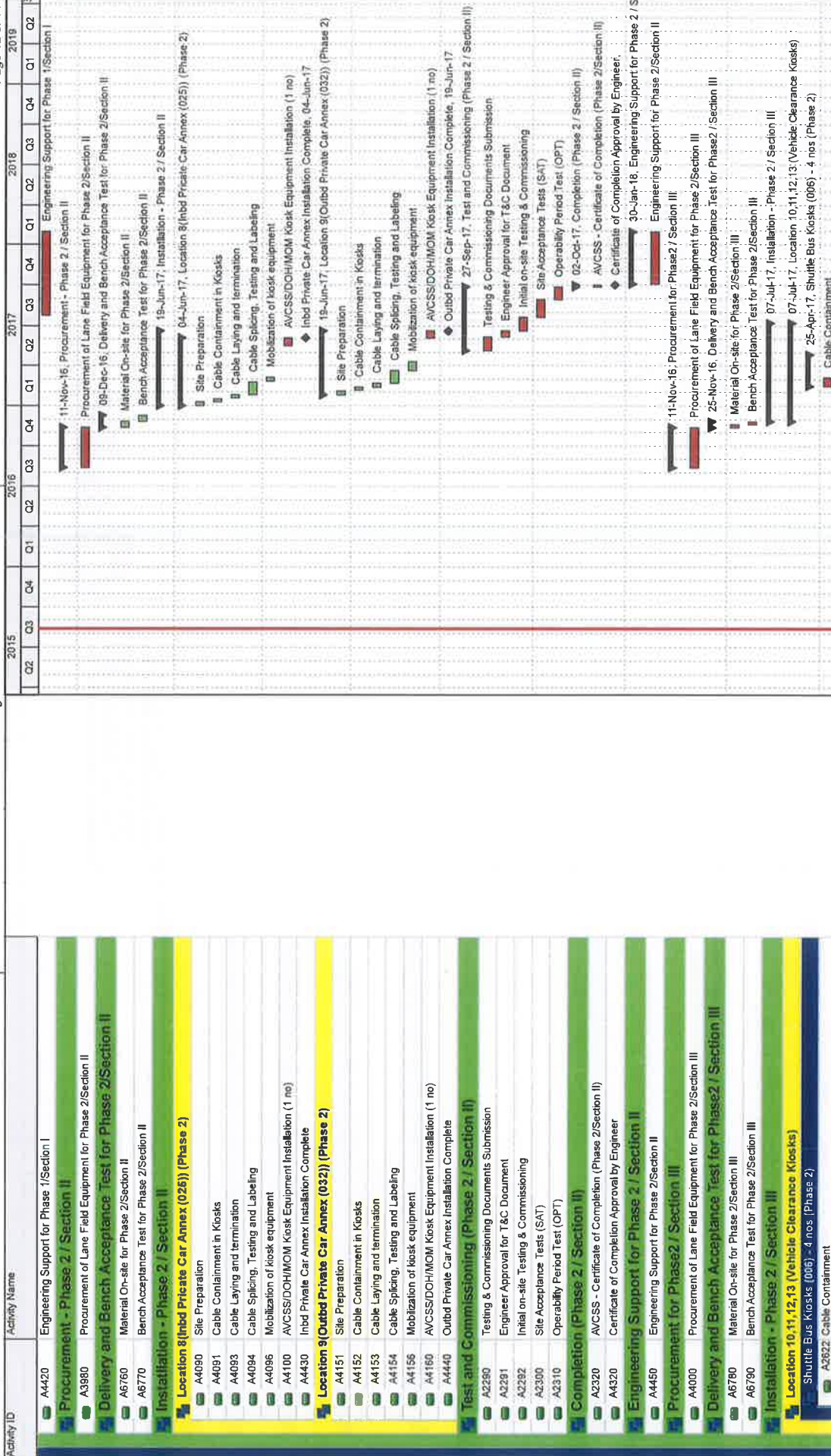
Activity ID	Activity Name	2015				2016				2017				2018				2019	
		Q2	Q3	Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
A4140	Outbound VID field equipment installation (8 VID)																		
A4150	Outbound VTS field equipment installation (3 RFID + 3 Cameras)																		
A4170	Outbound TLS field equipment installation (4 TLS)																		
A4180	Outbound VID, VTS and TLS field equipment tuning																		
A3810	Underground Ducting between Inbd Cargo Exam Bldg (037) and Outbd Vehicle Clearance Plaza																		
A3830	Underground Ducting between Inbd Cargo Exam Bldg (037) and Outbd Vehicle Clearance Plaza																		
A3850	Underground Ducting between CUE and Outbd Car Exam Bldg (023)																		
A3870	Underground Ducting between Outbd Cargo Exam Bldg (023) and Outbd Vehicle Clearance Plaza																		
A3890	Underground Ducting between CUE and Outbd Vehicle Clearance Plaza																		
A2150	On-Site Test and Commissioning (Phase 1 / Section I)																		
A2151	Testing & Commissioning Documents Submission (8 weeks before Testings carried out)																		
A2152	Engineer Approval for T&C Document																		
A2153	Joint Site Inspection for Permanent Power/Tele-communication for Initial on-site testing																		
A6601	Initial on-site Testing & Commissioning																		
A6602	Site Acceptance Test (Phase 1 / Section I)																		
A6603	Interface Readiness CED(LBS, CED IT, Metro-Ethernet) and IMMDD (AVS)																		
A6604	SAT for AVCSS																		
A6605	SAT for Location 18 (AVCSS SURCON and 55" LCD)																		
A6606	SAT Test Document Submission																		
A6607	Software Manual Documentations Submission																		
A6608	Security Risk Assessment and Audit																		
A6609	SRAA (Assessment)																		
A6610	Fix per SRAA Assessment																		
A6611	SRAA Audit																		
A5610	Operability Period Test (Phase 1 / Section I)																		
A5620	Joint Site Inspection for utilities, telecom connection and metro ethernet for OPT																		
A5630	Operability Period Test (OPT) Phase 1																		
A5640	Operability Period Test (OPT) Phase 2																		
A2230	Completion (Phase 1 / Section I)																		
A2231	AVCSS - Certificate of Completion (Phase 1/Section I)																		
A2180	Certificate of Completion Approval by Engineer																		
A2190	Training and Document (Phase 1 / Section I)																		
A2200	Training Materials & Documentation Submission																		
A2210	Operation and Maintenance Training																		
A2240	Operation (Phase 1 / Section I)																		
A2250	Site Operation (Phase 1/Section I)																		
A2260	Engineering Support for Phase 1 / Section I																		

Programme No.: HZMB-DWP  
Data Date: 14-Aug-15

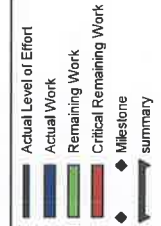
Hong Kong-Zhuhai-Macao Bridge  
Hong Kong Boundary Crossing  
Facilities - Automatic Vehicle  
Clearance Support System (AVCSS)



Date	Revision	Checked	Approved
14-Nov-16	Rev: 0	WC	LC



Programme No.: HZMB-DWP  
Data Date: 14-Aug-15



Hong Kong-Zhuhai-Macao Bridge  
Hong Kong Boundary Crossing  
Facilities - Automatic Vehicle  
Clearance Support System (AVCSS)



Date	Revision	Checked	Approved
14-Nov-16	Rev. 0	WC	LC



Activity ID	Activity Name	2015				2016				2017				2018				2019	
		Q2	Q3	Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
A2623	Cable Laying and termination																		
A2630	AVCSS/DOH/MOM Kiosk Equipment Installation (4 nos)																		
A4460	Shuttle Bus Kiosks Installation Complete																		
<b>Outbd Coach Kiosks (009) - 4 nos (Phase 2)</b>																			
A2662	Cable Containment																		
A2663	Cable Laying and termination																		
A2670	AVCSS/DOH/MOM Kiosk Equipment Installation (4 nos)																		
A4470	Outbd Coach Kiosks Installation Complete																		
<b>Inbd Private Car Kiosks (027) - 12 nos (Phase 2)</b>																			
A2742	Cable Containment																		
A2743	Cable Laying and termination																		
A2744	Cable Splicing, Testing and Labeling																		
A2750	AVCSS/DOH/MOM Kiosk Equipment Installation (12 nos)																		
A2760	Kiosk Equipment Configuration (12 nos)																		
A4490	Inbd Private Car Kiosks Installation Complete																		
<b>Outbd Private Car Kiosks (030) - 12 nos (Phase 2)</b>																			
A2782	Cable Containment																		
A2783	Cable Laying and termination																		
A2784	Cable Splicing, Testing and Labeling																		
A2790	AVCSS/DOH/MOM Kiosk Equipment Installation (12 nos)																		
A4500	Outbd Private Car Kiosks Installation Complete																		
<b>Inbd Goods Vehicle Kiosks (028) - 3 nos (Phase 2)</b>																			
A2822	Cable Containment																		
A2823	Cable Laying and termination																		
A2825	Kiosk Equipment Configuration (3 nos)																		
A2830	AVCSS/DOH/MOM Kiosk Equipment Installation (3 nos)																		
A4510	Inbd Goods Vehicle Kiosks Installation Complete																		
<b>Outbd Goods Vehicle Kiosks (029) - 3 nos (Phase 2)</b>																			
A2862	Cable Containment																		
A2863	Cable Laying and termination																		
A2865	Cable Splicing, Testing and Labeling																		
A2870	AVCSS/DOH/MOM Kiosk Equipment Installation (3 nos)																		
A4520	Outbd Goods Vehicle Kiosks Installation Complete																		
<b>Inbd Coach Kiosks (010) - 4 nos (Phase 2)</b>																			
A2702	Cable Containment																		
A2703	Cable Laying and termination																		
A2705	Kiosk Equipment Configuration (4 nos)																		
A2710	AVCSS/DOH/MOM Kiosk Equipment Installation (2 nos)																		
A2720	AVCSS/DOH/MOM Kiosk Equipment Installation (2 nos)																		
A4480	Inbd Coach Kiosks Installation Complete																		
<b>Underground Ducting between CUE and Shuttle Bus Kiosk (006)</b>																			
A3970	Cable Laying and termination (note: Access Date by C03)																		
<b>Underground Ducting between PCB(001) and Inbd Coach Kiosks(010)</b>																			
A3930	Cable Laying and termination (note: Access Date by C03)																		
<b>Test and Commissioning (Phase 2/ Section III)</b>																			

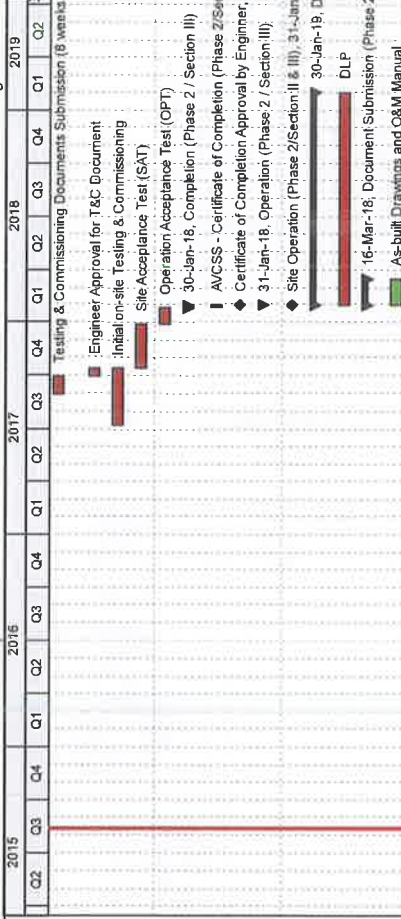
Programme No.: HZMB-DWP  
Data Date: 14-Aug-15

Hong Kong-Zhuhai-Macao Bridge  
Hong Kong Boundary Crossing  
Facilities - Automatic Vehicle  
Clearance Support System (AVCSS)

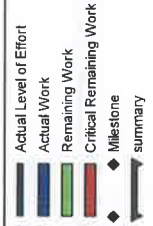


Date	Revision	Checked	Approved
14-Nov-16	Rev: 0	WC	LC

Activity ID	Activity Name
A2370	Testing & Commissioning Documents Submission (8 weeks before Testings carried out)
A2371	Engineer Approval for T&C Document
A2373	Initial on-site Testing & Commissioning
A2380	Site Acceptance Test (SAT)
A2390	Operation Acceptance Test (OPT)
<b>Completion (Phase 2 / Section III)</b>	
A2400	AVCSS - Certificate of Completion (Phase 2/Section III)
A4330	Certificate of Completion Approval by Engineer
<b>Operation (Phase 2 / Section III)</b>	
A2420	Site Operation (Phase 2/Section II & III)
<b>Defect Liability Period (DLP)</b>	
A2430	DLP
<b>Document Submission (Phase 2 / Section III)</b>	
A4340	As-built Drawings and O&M Manual



Programme No.: HZMB-DWP  
 Data Date: 14-Aug-15



Hong Kong-Zhuhai-Macao Bridge  
 Hong Kong Boundary Crossing  
 Facilities - Automatic Vehicle  
 Clearance Support System (AVCSS)



Date	Revision	Checked	Approved
14-Nov-16	Rev. 0	WC	LC

## **MATERIALAB CONSULTANTS LIMITED**

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com



Report No.: 0165/15/ED/0908

---

### **Appendix D**

#### **Event / Action Plan**

**Appendix D –**

**Event / Action Plan for Air Quality and Noise Monitoring and Water Quality Monitoring and Ecological Monitoring**

**Event / Action Plan for Air Quality**

Event	Action			
	ET	IEC	ER	Contractor
<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 finding;  4. Increase monitoring frequency to daily.	1. Check monitoring data submitted by ET;  2. Check Contractor's working method.	1. Notify Contractor.	1. Rectify any unacceptable practice;  2. Amend working methods if appropriate.

Event	Action			
	ET	IEC	ER	Contractor
2. Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> <li>1. Identify source;</li> <li>2. Inform IEC and ER;</li> <li>3. Advise the ER on the effectiveness of the proposed remedial measures;</li> <li>4. Repeat measurements to confirm findings;</li> <li>5. Increase monitoring frequency to daily;</li> <li>6. Discuss with IEC and Contractor on remedial actions required;</li> <li>7. If exceedance continues, arrange meeting with IEC and ER;</li> <li>8. If exceedance stops, cease additional monitoring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET;</li> <li>2. Check Contractor's working method;</li> <li>3. Discuss with ET and Contractor on possible remedial measures;</li> <li>4. Advise the ER on the effectiveness of the proposed remedial measures;</li> <li>5. Supervise 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. Ensure remedial measures properly implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Submit proposals for remedial to ER within 3 working days of notification;</li> <li>2. Implement the agreed proposals;</li> <li>3. Amend proposal if appropriate.</li> </ol>

Event	Action			
	ET	IEC	ER	Contractor
<b>Limit Level</b>				
1. Exceedance for one sample	<ol style="list-style-type: none"> <li>1. Identify source, investigate the causes of exceedance and propose remedial measures;</li> <li>2. Inform ER, Contractor and EPD;</li> <li>3. Repeat measurement to confirm finding;</li> <li>4. Increase monitoring frequency to daily;</li> <li>5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET;</li> <li>2. Check Contractor's working method;</li> <li>3. Discuss with ET and Contractor on possible remedial measures;</li> <li>4. Advise the ER on the effectiveness of the proposed remedial measures;</li> <li>5. Supervise 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. 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. Amend proposal if appropriate.</li> </ol>

Event	Action			
	ET	IEC	ER	Contractor
2. Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> <li>1. Notify IEC, ER, Contractor and EPD;</li> <li>2. Identify source;</li> <li>3. Repeat measurement to confirm findings;</li> <li>4. Increase monitoring frequency to daily;</li> <li>5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented;</li> <li>6. Arrange meeting with IEC and ER to discuss the remedial actions to be taken;</li> <li>7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results;</li> <li>8. If exceedance stops, cease additional monitoring.</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 Contractor's 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. In consultation with the IEC, agree with the Contractor on the remedial measures to be implemented;</li> <li>4. Ensure remedial measures properly implemented;</li> <li>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.</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 until the exceedances abated.</li> </ol>

Event / Action Plan for Construction Noise Monitoring

Event	Action			
	ET	IEC	ER	Contractor
Action Level	<ol style="list-style-type: none"> <li>1. Notify IEC and Contractor;</li> <li>2. Identify source, investigate the causes of exceedance and propose remedial measures;</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>



Event	Action			
	ET	IEC	ER	Contractor
Limit Level	<ol style="list-style-type: none"> <li>1. Inform IEC, ER, EPD and Contractor;</li> <li>2. Identify source;</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> <li>6. Inform IEC, ER and EPD the causes and actions taken for the exceedances;</li> <li>7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results;</li> <li>8. If exceedance stops, cease additional monitoring.</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 Contractor's 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> <li>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.</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 until the exceedance is abated.</li> </ol>

### Event / Action Plan for Water Quality

Event	ET Leader	IEC	ER	Contractor
Action level being exceeded by one sampling day	<ol style="list-style-type: none"> <li>1. Repeat in situ measurement on next day of exceedance to confirm findings</li> <li>2. Identify source(s) of impact</li> <li>3. Inform IEC, contractor and ER</li> <li>4. Check monitoring data, all plant, equipment and Contractor's working methods</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of noncompliance in writing</li> <li>2. Notify Contractor</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of noncompliance in writing</li> <li>2. Notify Contractor</li> </ol>	<ol style="list-style-type: none"> <li>1. Inform the ER and confirm notification of the noncompliance in writing</li> <li>2. Rectify unacceptable practice</li> <li>3. Amend working methods if appropriate</li> </ol>
Action level being exceeded by two or more consecutive sampling days	<ol style="list-style-type: none"> <li>1. Repeat in situ measurement to confirm findings</li> <li>2. Identify source(s) of impact</li> <li>3. Inform IEC, Contractor and ER</li> <li>4. Check monitoring data, all plant, equipment and Contractor's working methods</li> <li>5. Discuss mitigation measures with IEC, ER and Contractor</li> <li>6. Ensure mitigation measures are implemented</li> <li>7. Increase the monitoring frequency to daily until no exceedance of Action level</li> <li>8. Repeat measurement on next day of exceedance to confirm findings</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET and Contractor's working method</li> <li>2. Discuss with ET and Contractor on possible remedial actions</li> <li>3. Review the proposed mitigation measures submitted by Contractor and advise the ER accordingly</li> <li>4. Assess the effectiveness of the implemented mitigation measures</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of noncompliance in writing</li> <li>2. Discuss with IEC on the proposed mitigation measures</li> <li>3. Make agreement on mitigation measures to be implemented</li> <li>4. Ensure mitigation measures are properly implemented</li> <li>5. Assess the effectiveness of the implemented mitigation measures</li> </ol>	<ol style="list-style-type: none"> <li>1. Inform the Engineer and confirm notification of the noncompliance in writing</li> <li>2. Rectify unacceptable practice</li> <li>3. Check all plant and equipment and consider changes of working methods</li> <li>4. Discuss with ET and IEC on possible remedial actions and propose mitigation measures to IEC and ER within 3 working days of notification</li> <li>5. Implement the agreed mitigation measures</li> <li>6. Amend working methods if appropriate</li> </ol>

<b>Event</b>	<b>ET Leader</b>	<b>IEC</b>	<b>ER</b>	<b>Contractor</b>
Limit level being exceeded by one sampling day	<ol style="list-style-type: none"> <li>1. Repeat in-situ measurement to confirm findings</li> <li>2. Identify source(s) of impact</li> <li>3. Inform IEC, Contractor, ER and EPD</li> <li>4. Check monitoring data, all plant, equipment and Contractor's working methods</li> <li>5. Discuss mitigation measures with IEC, ER and Contractor</li> <li>6. Ensure mitigation measures are implemented</li> <li>7. Increase the monitoring frequency to daily until no exceedance of Limit level</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET and Contractor's working method</li> <li>2. Discuss with ET and Contractor on possible remedial actions</li> <li>3. Review the proposed mitigation measures submitted by Contractor and advise the ER accordingly</li> <li>4. Assess the effectiveness of the implemented mitigation measures</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing</li> <li>2. Discuss with IEC, ET and Contractor on the proposed mitigation measures</li> <li>3. Request Contractor to critically review the working methods</li> <li>4. Ensure mitigation measures are properly implemented</li> <li>5. Assess the effectiveness of the implemented mitigation measures</li> </ol>	<ol style="list-style-type: none"> <li>1. Inform the ER and confirm notification of the noncompliance in writing</li> <li>2. Rectify unacceptable practice</li> <li>3. Check all plant and equipment and consider changes of working methods</li> <li>4. Submit proposal of mitigation measures to ER within 3 working days of notification and discuss with ET, IEC and ER</li> <li>5. Implement the agreed mitigation measures</li> <li>6. Amend working methods if appropriate</li> </ol>
Limit level being exceeded by two or more consecutive sampling days	<ol style="list-style-type: none"> <li>1. Repeat in-situ measurement to confirm findings</li> <li>2. Identify source(s) of impact</li> <li>3. Inform IEC, contractor, ER and EPD</li> <li>4. Check monitoring data, all plant, equipment and Contractor's working methods</li> <li>5. Discuss mitigation measures with IEC, ER and Contractor</li> <li>6. Ensure mitigation measures are implemented</li> <li>7. Increase the monitoring frequency to daily until no exceedance of Limit level for two consecutive days</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET and Contractor's working method</li> <li>2. Discuss with ET and Contractor on possible remedial actions</li> <li>3. Review the Contractor's mitigation measures whenever necessary to assure their effectiveness and advise the ER accordingly</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm receipt of notification of failure in writing</li> <li>2. Discuss with IEC, ET and Contractor on the proposed mitigation measures</li> <li>3. Request Contractor to critically review the working methods</li> <li>4. Make agreement on the mitigation measures to be implemented</li> <li>5. Ensure mitigation measures are properly implemented</li> <li>6. Assess the effectiveness of the implemented mitigation measures</li> <li>7. Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the construction activities until no exceedance of Limit level</li> </ol>	<ol style="list-style-type: none"> <li>1. Inform the ER and confirm notification of the noncompliance in writing</li> <li>2. Take immediate action to avoid further exceedance</li> <li>3. Rectify unacceptable practice</li> <li>4. Check all plant and equipment and consider changes of working methods</li> <li>5. Submit proposal of mitigation measures to ER within 3 working days of notification and discuss with ET, IEC and ER</li> <li>6. Implement the agreed mitigation measures</li> <li>7. Resubmit proposals of mitigation measures if problem still not under control</li> <li>8. As directed by the engineer, to slow down or to stop all or part of the construction activities until no exceedance of Limit level</li> </ol>

## Event / Action Plan for Ecological Monitoring

Event	ET Leader	IEC	ER	Contractor
Action Level	<ol style="list-style-type: none"> <li>1. Repeat statistical data analysis to confirm findings;</li> <li>2. Review all available and relevant data, including raw data and statistical analysis results of other parameters covered in the EM&amp;A, to ascertain if differences are as a result of natural variation or previously observed seasonal differences;</li> <li>3. Identify source(s) of impact;</li> <li>4. Inform the IEC, ER/SOR and Contractor;</li> <li>5. Check monitoring data.</li> <li>6. Review to ensure all the dolphin protective measures are fully and properly implemented and advise on additional measures if necessary.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET and Contractor;</li> <li>2. Discuss monitoring results and finding with the ET and the Contractor.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss monitoring with the IEC and any other measures proposed by the ET;</li> <li>2. If ER/SOR is satisfied with the proposal of any other measures, ER/SOR to signify the agreement in writing on the measures to be implemented.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inform the ER/SOR and confirm notification of the non-compliance in writing;</li> <li>2. Discuss with the ET and the IEC and propose measures to the IEC and the ER/SOR;</li> <li>3. Implement the agreed measures.</li> </ol>

Event	ET Leader	IEC	ER	Contractor
Limit Level	<ol style="list-style-type: none"> <li>1. Repeat statistical data analysis to confirm findings;</li> <li>2. Review all available and relevant data, including raw data and statistical analysis results of other parameters covered in the EM&amp;A, to ascertain if differences are as a result of natural variation or previously observed seasonal differences;</li> <li>3. Identify source(s) of impact;</li> <li>4. Inform the IEC, ER/SOR and Contractor of findings;</li> <li>5. Check monitoring data;</li> <li>6. Repeat review to ensure all the dolphin protective measures are fully and properly implemented and advise on additional measures if necessary.</li> <li>7. If ET proves that the source of impact is caused by any of the construction activity by the works contract, ET to arrange a meeting to discuss with IEC, ER/SOR and Contractor the necessity of additional dolphin monitoring and/or any other potential mitigation measures (e.g., consider to modify the perimeter silt curtain or consider to control/temporarily stop relevant construction activity etc.) and submit to IEC a proposal of additional dolphin monitoring and/or mitigation measures where necessary.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check monitoring data submitted by ET and Contractor;</li> <li>2. Discuss monitoring results and findings with the ET and the Contractor;</li> <li>3. Attend the meeting to discuss with ET, ER/SOR and Contractor the necessity of additional dolphin monitoring and any other potential mitigation measures.</li> <li>4. Review proposals for additional monitoring and any other mitigation measures submitted by ET and Contractor and advise ER/SOR of the results and findings accordingly.</li> <li>5. Supervise / Audit the implementation of additional monitoring and/or any other mitigation measures and advise ER/SOR the results and findings accordingly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Attend the meeting to discuss with ET, IEC and Contractor the necessity of additional dolphin monitoring and any other potential mitigation measures.</li> <li>2. If ER/SOR is satisfied with the proposals for additional dolphin monitoring and/or any other mitigation measures submitted by ET and Contractor and verified by IEC, ER/SOR to signify the agreement in writing on such proposals and any other mitigation measures.</li> <li>3. Supervise the implementation of additional monitoring and/or any other mitigation measures.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inform the ER/SOR and confirm notification of the non-compliance in writing;</li> <li>2. Attend the meeting to discuss with ET, IEC and ER/SOR the necessity of additional dolphin monitoring and any other potential mitigation measures.</li> <li>3. Jointly submit with ET to IEC a proposal of additional dolphin monitoring and/or any other mitigation measures when necessary.</li> <li>4. Implement the agreed additional dolphin monitoring and/or any other mitigation measures.</li> </ol>

## **MATERIALAB CONSULTANTS LIMITED**

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com

The logo for MaterialLab, featuring the word "MaterialLab" in a bold, sans-serif font. The text is white and is set against a black rectangular background that has a horizontal bar above and below it, creating a stylized, framed effect.

Report No.: 0165/15/ED/0908

### **Appendix E**

#### **Waste Flow Table**



**Monthly Summary of Waste Flow Table for 2017 (year)**

Name of Person completing the Record: **Marko Chan**

Month	Actual Quantities of Inert C&D Materials Generated Monthly					Actual Quantities of Non-inert C&D Wastes Generated Monthly					
	Total Quantity Generated (in '000m <sup>3</sup> )	Broken Concrete (see Note 1) (in '000m <sup>3</sup> )	Reused in the Contract (in '000m <sup>3</sup> )	Reused in other Projects (in '000m <sup>3</sup> )	Disposed as Public Fill (in '000m <sup>3</sup> )	Metals (in '000 Kg)	Paper/ cardboard packaging (in '000 Kg)	Plastics (see Note 2) (in '000 Kg)	Chemical Waste (in '000 Kg)	Others, e.g. general refuse (in '000m <sup>3</sup> )	
Jan	0.000	0	0	0	0.000	0	0	0	0	0.580	
Feb	0.000	0	0	0	0.000	0	0	0	0	0.585	
Mar	0.000	0	0	0	0.000	0	0	0	0	0.999	
Apr	0.043	0	0	0	0.043	0	0	0	0	1.073	
May	12.682	0	0	12.637	0.045	0	0	0	0	1.321	
Jun	27.129	0	0	26.007	1.122	0	0	0	0	2.023	
Jul	54.710	0	0	54.224	0.486	0	0	0	0	1.448	
Aug	67.927	0	0	64.331	3.596	0	0	0	0	1.656	
Sept											
Oct											
Nov											
Dec											
<b>Total</b>	<b>162.491</b>	<b>0.000</b>	<b>0.000</b>	<b>157.199</b>	<b>5.292</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>9.685</b>	

Notes:

- (1) Broken concrete for recycling into aggregates.
- (2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.

### Monthly Summary of Excavated Marine Sediment for 2017 (year)

Month	Total Quantity of Excavated Marine Sediment Generated in '000m <sup>3</sup>	Reused in this contract in '000m <sup>3</sup>	Reused in other Projects in '000m <sup>3</sup>	Disposed of at CMP in '000m <sup>3</sup>
Jan	0.656	0.000	0.000	0.656
Feb	0.264	0.000	0.000	0.264
Mar	0.000	0.000	0.000	0.000
Apr	1.288	0.000	0.000	1.288
May	1.440	0.000	0.000	1.440
Jun	0.000	0.000	0.000	0.000
Jul	0.000	0.000	0.000	0.000
Aug	0.248	0.000	0.000	0.248
Sep				
Oct				
Nov				
Dec				
<b>Total</b>	<b>3.896</b>	<b>0.000</b>	<b>0.000</b>	<b>3.896</b>





ATAL Technologies Ltd.

Contract: HY/2013/06 HKBCF- Automatic Vehicle Clearance Support System

Location: Artificial Island of HKBCF (C3 Area)

Ver. 1st  
Date: Jan 2017

### Monthly Summary Waste Flow Table for 2017

Month	Inert C&D Waste disposal / 廢性廢物 (in tonnes) (see Note 1)				Non-inert C&D Waste disposal 非廢性廢物 (in tonnes)				Waste to be recycled and returned / 可再循環利用或回收的廢物								Total Quantity Generated 總生產量		
	Reused in the Work Package (e.g. backfilling) 再用於工程 (如回填)		Reused in other Projects 再用於其他工程		Inert Waste (e.g. soil, broken concrete, rubble, fill material etc.) 廢性廢物 (如泥, 石夾頭, 石, 填料等)		Others (e.g. general refuse, broken formwork etc) 其他 (如垃圾, 廢板枋等)		Metals 金屬		Plastic 塑膠		Paper/cardboard packaging 廢紙/包裝紙類		Chemical Waste 化學廢物		Est. Qty. 估計數量	Act. Qty. 實際數量	
	Est. Qty. 估計數量	Act. Qty. 實際數量	Est. Qty. 估計數量	Act. Qty. 實際數量	Est. Qty. 估計數量	Act. Qty. 實際數量	Est. Qty. 估計數量	Act. Qty. 實際數量	Est. Qty. 估計數量	Act. Qty. 實際數量	Est. Qty. 估計數量	Act. Qty. 實際數量	Est. Qty. 估計數量	Act. Qty. 實際數量	Est. Qty. 估計數量	Act. Qty. 實際數量			(a) = (b+c+d+e)
January	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	
February	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002	0.000	0.000	0.000	0.000	0.000	0.000	
March	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002	
April	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.005	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.005	
May	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.020	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.020	
June	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.020	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.020	
July	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.020	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.020	
August	0.000	0.000	0.000	0.000	0.000	0.000	0.030	0.030	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.030	0.030	
September																			
October																			
November																			
December																			
<b>Total</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.097</b>	<b>0.097</b>	<b>0.100</b>	<b>0.000</b>	<b>0.000</b>	<b>0.004</b>	<b>0.004</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.097</b>	<b>0.097</b>	

Notes: (1) The quantities of C&D Materials, in tonne, was calculated by multiply the estimated volume, in m<sup>3</sup>, with the density of the soil, which is 1.5 gcm<sup>-3</sup>.

## **MATERIALAB CONSULTANTS LIMITED**

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com

The logo for MaterialLab, featuring the word "MaterialLab" in a bold, sans-serif font. The text is centered between two thick, horizontal black bars.

Report No.: 0165/15/ED/0908

### **Appendix F**

#### **Environmental Licenses and Permits**

**Appendix F - Environmental Permit / Licences Summary for Contract No. HY/2013/03**

(update: 07/09/2017)

Item	Permit/Licence Registration	Permit No.	Work Area	Application Date	Issue Date	Valid Date		Status	Remark
						From	To		
1	Environmental Permit Pursuant to Environmental Impact Assessment Ordinance	EP-353/2009/K	HKBCF	24-Mar-16	11-Apr-16	11-Apr-16	Nil	Valid	
2	Notification Pursuant to Section 3(1) of The Air Pollution Control (Construction Dust) Regulation	RefNo. 387703	Main Site Area	15-Apr-15	15-Apr-15	15-Apr-15	Nil	Valid	
3	Notification Pursuant to Section 3(1) of The Air Pollution Control (Construction Dust) Regulation	RefNo. 387735	Works Area WA3	15-Apr-15	15-Apr-15	15-Apr-15	Nil	Valid	
4	Billing A/C for Construction Waste Disposal Pursuant to Section 6 & 9 of the Waste Disposal (Charges for Disposal of Construction waste) Regulation	A/C No. 7022228	Main Site Area, WA3 & 4	15-Apr-15	06-May-15	06-May-15	Nil	Valid	
5	Registration as Waste Producer Pursuant to Waste Disposal (Chemical Waste) (General) Regulation	5213-951-C1186-28	Main Site Area	28-Apr-15	01-Jun-15	01-Jun-15	Nil	Valid	
6	Registration as Waste Producer Pursuant to Waste Disposal (Chemical Waste) (General) Regulation	5213-974-C3597-03	Works Area WA4	28-Apr-15	01-Jun-15	01-Jun-15	Nil	Valid	
7	Water Discharge License Pursuant to Water Pollution Control Ordinance (Cap 358)	WT00022180-2015	Works Area WA3	29-Apr-15	04-Aug-15	03-Aug-15	31-Aug-20	Valid	
8	Water Discharge License Pursuant to Water Pollution Control Ordinance (Cap 358)	WT00025384-2016	Main Site Area	09-Mar-16	10-Nov-16	10-Nov-16	30-Sep-20	Valid	
9	Construction Noise Permit Pursuant to Section 8(6) of the Noise Control Ordinance	GW-RS0516-17	Main Site Area	31-May-17	14-Jun-17	19-Jun-17	18-Sep-17	Valid	
10	Construction Noise Permit Pursuant to Section 8(6) of the Noise Control Ordinance	GW-RS0632-17	Main Site Area	07-Jul-17	21-Jul-17	25-Jul-17	24-Nov-17	Valid	
11	Permit issued Under the Dumping at Sea Ordinance	EP/MD/18-037	East of Sha Chau (CMP Vd)	19-Jun-17	06-Jul-17	07-Jul-17	06-Aug-17	Valid until 06-Aug-17	
12	Permit issued Under the Dumping at Sea Ordinance	EP/MD/18-052	East of Sha Chau (CMP Vd)	25-Jul-17	07-Aug-17	09-Aug-17	31-Aug-17	Valid	
13	Specified Process License for Tar and Bitumen Works Pursuant to Section 14 of the Air Pollution Control Ordinance	L-15-039(1)	Temporary Asphalt Mixing Facility	05-Dec-16	16-Mar-17	16-Mar-17	15-Mar-19	Valid	

**Environmental Permit / Licences Summary for Contract No. HY/2013/06 within the HY/2013/03 site works area**

(update: 07/09/2017)

Item	Permit/Licence Registration	Permit No.	Work Area	Application Date	Issue Date	Valid Date		Status	Remark
						From	To		
1	Environmental Permit Pursuant to Environmental Impact Assessment Ordinance	EP-353/2009/K	HKBCF	24-Mar-16	11-Apr-16	11-Apr-16	Nil	Valid	
2	Billing A/C for Construction Waste Disposal Pursuant to Section 6 & 9 of the Waste Disposal (Charges for Disposal of Construction waste) Regulation	A/C No. 7023015	Main Site Area	07-Aug-15	20-Aug-15	20-Aug-15	Nil	Valid	
3	Registration as Waste Producer Pursuant to Waste Disposal (Chemical Waste) (General) Regulation	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	#
4	Construction Noise Permit Pursuant to Section 8(6) of the Noise Control Ordinance	GW-RS0452-17	HKBCF	4-May-17	18-May-17	1-June-17	30-Nov-17	Valid	

# The Contractor of Contract No. HY/2013/06 was advised to register as a chemical waste producer when chemical waste is expected to generate for the foreseeable future from the operations.

**MATERIALAB CONSULTANTS LIMITED**

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com



Report No.: 0165/15/ED/0908

---

**Appendix G**

**Implementation Schedule for Environmental Mitigation Measures (EMIS)**

# MATERIALAB CONSULTANTS LIMITED

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com



Report No.: 0165/15/ED/0908

## Appendix G – Implementation Schedule of Environmental Mitigation Measures (EMIS)

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Location of the measures	Implementation Status
<b>Air Quality</b>				
S5.5.6.1	A1	1) The contractor shall follow the procedures and requirements given in the Air Pollution Control (Construction Dust) Regulation	All construction sites	V
S5.5.6.2	A2	2) Proper watering of exposed spoil should be undertaken throughout the construction phase: <ul style="list-style-type: none"> <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 extend 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 ensure that the dusty materials do not leak from the vehicle;</li> <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> </ul>	All construction sites	V
S5.5.6.2	A2	<ul style="list-style-type: none"> <li>• When there are open excavation and reinstatement works, hoarding of not less than 2.4m high should be provided 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>• Where a scaffolding is erected around the perimeter of a building under construction, effective dust screens, sheeting or netting should be provided to enclose the scaffolding from the ground floor level of the building, or a canopy should be provided from the first floor level up to the highest level of the scaffolding;</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</li> </ul>	All construction sites	V
S5.5.6.2	A2	<ul style="list-style-type: none"> <li>• Cement or dry PFA delivered in bulk should be stored in a closed silo fitted with an audible high</li> </ul>	All construction sites	N/A

# MATERIALAB CONSULTANTS LIMITED

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com



Report No.: 0165/15/ED/0908

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Location of the measures	Implementation Status
		level alarm which is interlocked with the material filling line and no overfilling is allowed; <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; and</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 stabiliser within six months after the last construction activity on the construction site r part of the construction site where the exposed earth lies</li> </ul>		
S5.5.6.3	A3	3) The Contractor should undertake proper watering on all exposed spoil (with at least 8 times per day) throughout the construction phase.	All construction sites	V
S5.5.6.4	A4	4) Engineer to incorporate the controlled measures into the Particular Specification (PS) for the civil work. The PS should also draw the contractor's attention to the relevant latest Practice Notes issued by EPD.	All construction sites	V
S5.5.6.4	A5	5) Implement regular dust monitoring under EM&A programme during the construction stage.	Selected Representative dust monitoring station	V (Conducted by Contract No. HY/2010/02 and HY/2011/03)
S5.5.7.1	A6	The following mitigation measures should be adopted to prevent fugitive dust emissions for concrete batching plant; <ul style="list-style-type: none"> <li>• Loading, unloading, handling, transfer or storage of any dusty materials should be carried out in totally enclosed system;</li> <li>• All dust-laden air or waste gas generated by the process operations should be properly extracted and vented to fabric filtering system to meet the emission limits for TSP;</li> <li>• Vents for all silos and cement/pulverised fuel ash (PFA) weighing scale should be fitted with fabric filtering system;</li> <li>• The materials which may generate airborne dusty emissions should be wetted by water spray system;</li> <li>• All receiving hoppers should be enclosed on three sides up to 3m above unloading point;</li> <li>• All conveyor transfer points should be totally enclosed;</li> <li>• All access and route roads within the premises should be paved and wetted; and</li> <li>• Vehicle cleaning facilities should be provided and used by all concrete trucks before leaving the premises to wash off any dust on the wheels and/or body</li> </ul>	Selected Representative dust monitoring station	N/A
S5.5.2.7	A7	The following mitigation measures should be adopted to prevent fugitive dust emissions at barging point: <ul style="list-style-type: none"> <li>• All road surface within the barging facilities will be paved;</li> <li>• Dust enclosures will be provided for the loading ramp;</li> <li>• Vehicles will be required to pass through designated wheels wash facilities; and</li> <li>• Continuous water spray at the loading points</li> </ul>	All construction sites	V
<b>Construction Noise (Air borne)</b>				
S6.4.10	N1	1) Use of good site practices to limit noise emissions by considering the following: <ul style="list-style-type: none"> <li>• only well-maintained plant should be operated on-site and plant should be serviced regularly during</li> </ul>	All construction sites	V

# MATERIALAB CONSULTANTS LIMITED

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com

# MaterialLab

Report No.: 0165/15/ED/0908

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Location of the measures	Implementation Status
		<p>the construction programme;</p> <ul style="list-style-type: none"> <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> <li>material stockpiles, mobile container site officer and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.</li> </ul>		
S6.4.11	N2	2) Install temporary hoarding located on the site boundaries between noisy construction activities and NSRs. The conditions of the hoardings shall be properly maintained throughout the construction period.	All construction sites	V
S6.4.12	N3	3) Install movable noise barriers (typically density@14kg/m acoustic mat or full enclosure close to noisy plants including compressor, generators, saw.	For plant items listed in Appendix 6D of the EIA report at all construction sites	N/A
S6.4.13	N4	4) Select "Quiet plants" which comply with the BS 5228 Part 1 or TM standards.	For plant items listed in Appendix 6D of the EIA report at all construction site	V
S6.4.14	N5	5) Sequencing operation of construction plants where practicable	All construction sites where practicable	V
S5.1	N6	6) Implement a noise monitoring under EM&A programme.	Selected representative noise monitoring station	V (Conducted by Contract No. HY/2010/02)
<b>Sediment</b>				
S7.3	S1	1) The requirements as recommended in ETWB TC 34/2002 Management of Dredged/Excavated Sediment shall be included in the Particular Specification as appropriate.	All construction sites	V
<b>Waste Management (Construction Waste)</b>				
S8.3.8	WM1	<p><u>Construction and Demolition Material</u></p> <p>The following mitigation measures should be implemented in handling the waste:</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>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 E7WBTC (Works) No. 19/2005 - "Environmental Management on Construction Sites" to encourage on-site sorting of C&amp;D</li> </ul>	All construction sites	V



# MATERIALAB CONSULTANTS LIMITED

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com



Report No.: 0165/15/ED/0908

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Location of the measures	Implementation Status
		<p>materials and to minimize their generation during the course of construction.</p> <ul style="list-style-type: none"> <li>In addition, disposal of the C&amp;D materials onto any sensitive locations such as agricultural lands, etc. should be avoided. The Contractor shall propose the final disposal sites to the Project Proponent and get its approval before implementation</li> </ul>		
S8.3.9- S8.3.11	WM2	<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 minimise 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>	All construction sites	V
S8.2.12- S8.3.15	WM3	<p><u>Chemical Waste</u></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 liters unless the specification has been approved by the 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 labeled 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 chemical waste collection service and can supply the necessary storage containers; or be to a reuser of the waste, under approval from the EPD.</li> </ul>	All construction sites	V
S8.3.16	WM4	<p><u>Sewage</u></p> <ul style="list-style-type: none"> <li>Adequate numbers of portable toilets should be provided for the workers. The portable toilets should be maintained in a state which will not deter the workers from utilizing these portable</li> </ul>	All construction sites	V

# MATERIALAB CONSULTANTS LIMITED

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com

# MaterialLab

Report No.: 0165/15/ED/0908

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Location of the measures	Implementation Status
		toilets. Night soil should be collected by licensed collectors regularly.		
S8.3.17	WM5	<p><b>General Refuse</b></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>Aluminium 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> <li>Training should be provided to workers about the concepts of site cleanliness and appropriate waste management procedure, including reduction, reuse and recycling of wastes.</li> </ul>	All construction sites	V
<b>Water Quality ( Construction Phase)</b>				
S9.11.1.7	W2	<p><b>Land Works</b></p> <p>General construction activities on land should also be governed by standard good working practice. Specific measures to be written into the works contracts should include:</p> <ul style="list-style-type: none"> <li>wastewater from temporary site facilities should be controlled to prevent direct discharge to surface or marine waters;</li> <li>sewage effluent and discharges from on-site kitchen facilities shall be directed to Government sewer in accordance with the requirements of the WPCO or collected for disposal offsite. The use of soakaways shall be avoided;</li> <li>storm drainage shall be directed to storm drains via adequately designed sand/silt removal facilities such as sand traps, silt traps and sediment basins. Channels, earth bunds or sand bag barriers should be provided on site to properly direct stormwater to such silt removal facilities. Catchpits and perimeter channels should be constructed in advance of site formation works and earthworks;</li> <li>silt removal facilities, channels and manholes shall be maintained and any deposited silt and grit shall be removed regularly, including specifically at the onset of and after each rainstorm;</li> <li>temporary access roads should be surfaced with crushed stone or gravel;</li> <li>rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities;</li> <li>measures should be taken to prevent the washout of construction materials, soil, silt or debris into any drainage system;</li> <li>open stockpiles of construction materials (e.g. aggregates and sand) on site should be covered with tarpaulin or similar fabric during rainstorms;</li> <li>manholes (including any newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into</li> </ul>	Land-based works area	V

# MATERIALAB CONSULTANTS LIMITED

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com



Report No.: 0165/15/ED/0908

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Location of the measures	Implementation Status
		<p>the drainage system, and to prevent storm run-off from getting into foul sewers;</p> <ul style="list-style-type: none"> <li>discharges of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system;</li> </ul>		
S9.11.1.7	W2	<ul style="list-style-type: none"> <li>all vehicles and plant should be cleaned before they leave the construction site to ensure that no earth, mud or debris is deposited by them on roads. A wheel washing bay should be provided at every site exit;</li> <li>wheel wash overflow shall be directed to silt removal facilities before being discharged to the storm drain;</li> <li>the section of construction road between the wheel washing bay and the public road should be surfaced with crushed stone or coarse gravel;</li> <li>wastewater generated from concreting, plastering, internal decoration, cleaning work and other similar activities, shall be screened to remove large objects;</li> <li>vehicle and plant servicing areas, vehicle wash bays and lubrication facilities shall be located under roofed areas. The drainage in these covered areas shall be connected to foul sewers via a petrol interceptor in accordance with the requirements of the WPCO or collected for off site disposal;</li> <li>the contractors shall prepare an oil / chemical cleanup plan and ensure that leakages or spillages are contained and cleaned up immediately;</li> <li>waste oil should be collected and stored for recycling or disposal, in accordance with the Waste Disposal Ordinance;</li> <li>all fuel tanks and chemical storage areas should be provided with locks and be sited on sealed areas. The storage areas should be surrounded by bunds with a capacity equal to 110% of the storage capacity of the largest tank; and</li> <li>surface run-off from bunded areas should pass through oil/grease traps prior to discharge to the stormwater system.</li> </ul>	Land-based works area	V
S9.14	W3	Implement a water quality monitoring programme	Selected representative WQM stations	V (Conducted by Contract No. HY/2010/02)
<b>Ecology (Construction Phase)</b>				
S10.7	E4	<ul style="list-style-type: none"> <li>Watering to reduce dust generation; prevention of siltation of freshwater habitats; Site runoff should be desilted, to reduce the potential for suspended sediments, organics and other contaminants to enter streams and standing freshwater</li> </ul>	Land-based works areas	V
S10.7	E5	<ul style="list-style-type: none"> <li>Good site practices, including strictly following the permitted works hours, using quieter machines where practicable, and avoiding excessive lightings during night time</li> </ul>	Land-based works areas	V
S10.7	E6	<ul style="list-style-type: none"> <li>Dolphin Exclusion Zone</li> <li>Dolphin watching plan</li> </ul>	Marine works	V
S10.7	E7	<ul style="list-style-type: none"> <li>Decouple compressors and other equipment on working vessels</li> <li>Proposal on design and implementation of acoustic decoupling measures applied during dredging and reclamation works</li> <li>Avoidance of percussive piling</li> </ul>	Marine works	V
S10.7	E8	<ul style="list-style-type: none"> <li>Control vessel speed</li> <li>Skipper training</li> <li>Predefined and regular routes for working</li> </ul>	Marine Traffic	V (The Contractor was revising RMTRP according to the

# MATERIALAB CONSULTANTS LIMITED

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com



Report No.: 0165/15/ED/0908

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Location of the measures	Implementation Status
		vessels; avoid Brother Islands.		comments from IEC and has been reminded to comply with the submission of updated RMTRP prior to implementation.)
S10.10	E9	Vessel based dolphin monitoring	Northeast and Northwest Lantau	V (Conducted by Contract No. HY/2010/02)
<b>Fisheries</b>				
S11.7	F4	<ul style="list-style-type: none"> <li>Maritime Oil Spill Response Plan (MOSRP);</li> <li>Contingency plan.</li> </ul>	HKBCF	V
<b>Landscape &amp; Visual (Detailed Design Phase)</b>				
S14.3.3.1	LV1	<p>General design measures include:</p> <ul style="list-style-type: none"> <li>Roadside planting and planting along the edge of the HKBCF Island is proposed;</li> <li>Transplanting of mature trees in good health and amenity value where appropriate and reinstatement of areas disturbed during construction by compensatory hydro-seeding and planting;</li> <li>Protection measures for the trees to be retained during construction activities;</li> <li>Optimizing the sizes and spacing of the bridge columns;</li> <li>Fine-tuning the location of the bridge columns to avoid visually-sensitive locations;</li> <li>Providing planting area around peripheral of HKBCF for tree planting screening effect;</li> <li>Providing salt-tolerant native trees along the planter strip at affected seawall and newly reclaimed coastline;</li> <li>For HKBCF, providing aesthetic architectural design on the related buildings (e.g. similar materials for PCB building facade to Airport buildings, roof planting and subtle materials for other facilities buildings and so on), and the related infrastructure (e.g. parapet planting and transparent cover for elevated footbridges) to provide harmonious atmosphere of the HKBCF; and</li> <li>Fine-tuning the sizes of the structural members to minimize the bulkiness of buildings and adjustment of building arrangement to minimise disturbance to surrounding vegetation in the HKBCF.</li> </ul>	HKBCF	V
<b>Landscape &amp; Visual (Construction Phase)</b>				
S14.3.3.3	LV2	<p>Mitigate both Landscape and Visual Impacts</p> <ul style="list-style-type: none"> <li>G1. Grass-hydroseed bare soil surface and stock pile areas.</li> <li>G2. Add planting strip and automatic irrigation system if appropriate at some portions of bridge footbridge to screen bridge and traffic.</li> <li>G3. Not applicable as this is for HKLR.</li> <li>G4. For HKBCF, providing aesthetic architectural design on the related buildings (e.g. similar materials for PCB building facade to Airport buildings, roof planting and subtle materials for other facilities buildings and so on), and the related infrastructure (e.g. parapet planting and transparent cover for elevated footbridges) to provide harmonious atmosphere of the HKBCF</li> <li>G5. Vegetation reinstatement and upgrading to disturbed areas</li> <li>G6. Maximizing new tree shrub and other vegetation planting to compensate tree felled and vegetation removed</li> <li>G7. Providing planting area around peripheral of</li> </ul>	HKBCF	N/A

# MATERIALAB CONSULTANTS LIMITED

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com



Report No.: 0165/15/ED/0908

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Location of the measures	Implementation Status
		<p>HKBCF for tree planting screening effect;</p> <p>G8. Plant salt-tolerant native and shrubs etc along the planter strip at affected seawall.</p> <p>G9. Reserve of loose natural granite rocks for re-use, Provide new coastline to adopt "natural-look" by means of using armour rocks in the form of natural rock materials and planting strip area accommodating screen buffer to enhance "natural-look" of the new coastline.</p>		
S14.3.3.3	LV3	<p><u>Mitigate Visual Impacts</u></p> <p>V1. Minimize time for construction activities during construction period.</p> <p>V2. Provide screen hoarding at the portion of the project site / works areas / storage areas near VSRs who have close low-level views to the Project during HKBCF construction.</p>	HKBCF	N/A
<b>EM&amp;A</b>				
S15.2.2	EM1	An Independent Environmental Checker needs to be employed as per the EM&A Manual	All construction sites	V
S15.5 – S15.6	EM2	<p>1) An Environmental Team needs to be employed as per the EM&amp;A Manual.</p> <p>2) Prepare a systematic Environmental Management Plan to ensure effective implementation of the mitigation measures.</p> <p>3) An environmental impact monitoring needs to be implementing by the Environmental Team to ensure all the requirements given in the EM&amp;A Manual are fully complied with.</p>	All construction sites	V

Legend: V = implemented; x = not implemented; N/A = not applicable

## **MATERIALAB CONSULTANTS LIMITED**

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com



Report No.: 0165/15/ED/0908

---

### **Appendix H**

#### **Statistics on Environmental Complaints, Notification of Summons and Successful Prosecutions**

**MATERIALAB CONSULTANTS LIMITED**

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com

**MaterialLab**

Report No.: 0165/15/ED/0908

## Appendix H –

## Statistics on Environmental Complaints, Notifications of Summons and Successful Prosecutions

For Contract No. HY/2013/03

Reporting Period	Cumulative Statistics		
	Complaints	Notifications of Summons	Successful Prosecutions
This reporting period	1	0	0
From commencement date of construction to end of reporting month	11	0	0

For Contract No. HY/2013/06 within Contract No. HY/2013/03 works area

Reporting Period	Cumulative Statistics		
	Complaints	Notifications of Summons	Successful Prosecutions
This reporting period	0	0	0
From commencement date of construction to end of reporting month	0	0	0

## **MATERIALAB CONSULTANTS LIMITED**

Room 723 & 725, 7/F, Block B,  
Profit Industrial Building,  
1-15 Kwai Fung Crescent, Kwai Fong,  
Hong Kong.

Tel : (852)-24508238  
Fax : (852)-24508032  
Email : mcl@fugro.com

The logo for MaterialLab, featuring the word "MaterialLab" in a bold, sans-serif font. The text is white and is set against a black rectangular background that has horizontal lines above and below it.

Report No.: 0165/15/ED/0908

---

### **Appendix I**

#### **Environmental Site Inspection Schedule**



**MATERIALAB CONSULTANTS LIMITED**

Room 723 & 725, 7/F, Block B,  
 Profit Industrial Building,  
 1-15 Kwai Fung Crescent, Kwai Fong,  
 Hong Kong.

Tel : (852)-24508238  
 Fax : (852)-24508032  
 Email : mcl@fugro.com



Report No.: 0165/15/ED/0908

**Contract No. HY/2013/03**  
**HZMB HKBCF – Vehicle Clearance Plazas and Ancillary Buildings and Facilities**  
**Weekly Environmental Site Inspection Schedule**

**Environmental Site Inspection Schedule for August 2017**

August-2017						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3 Environmental Site Inspection	4	5
6	7	8	9	10 Environmental Site Inspection	11	12
13	14	15	16	17	18 Environmental Site Inspection	19
20	21	22	23	24	25 Environmental Site Inspection	26
27	28	29	30	31 Environmental Site Inspection		

**Tentative Environmental Site Inspection Schedule for September 2017**

September-2017						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8 Environmental Site Inspection	9
10	11	12	13	14 Environmental Site Inspection	15	16
17	18	19	20	21	22 Environmental Site Inspection	23
24	25	26	27	28 Environmental Site Inspection	29	30

**MATERIALAB CONSULTANTS LIMITED**

Room 723 & 725, 7/F, Block B,  
 Profit Industrial Building,  
 1-15 Kwai Fung Crescent, Kwai Fong,  
 Hong Kong.

Tel : (852)-24508238  
 Fax : (852)-24508032  
 Email : mcl@fugro.com



Report No.: 0165/15/ED/0908

**Contract No. HY/2013/06 (within Contract No. HY/2013/03 works area)  
 HZMB HKBCF – Automatic Vehicle Clearance Support System  
 Weekly Environmental Site Inspection Schedule**

**Environmental Site Inspection Schedule for August 2017**

August-2017						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3 Environmental Site Inspection	4	5
6	7	8	9	10 Environmental Site Inspection	11	12
13	14	15	16	17	18 Environmental Site Inspection	19
20	21	22	23	24	25 Environmental Site Inspection	26
27	28	29	30	31 Environmental Site Inspection		

**Tentative Environmental Site Inspection Schedule for September 2017**

September-2017						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8 Environmental Site Inspection	9
10	11	12	13	14 Environmental Site Inspection	15	16
17	18	19	20	21	22 Environmental Site Inspection	23
24	25	26	27	28 Environmental Site Inspection	29	30