



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 : 20 December 2016
Our Ref. : CHEC300/OUT/2016/12/04.01/018814

By Hand

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

Attn: Mr. Michael Tovey
The Engineer's Representative

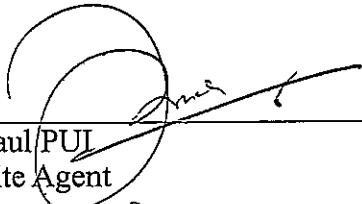
Dear Sir,

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 (Nov 2016)

Pursuant to the Condition 5.4 of the EP-353/2009/K, we are pleased to submit one soft copy and three copies of the certified Monthly EM&A Report (Rev.2) for November 2016 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/DW/mt

Encl.

19 December 2016

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. Michael Tovey

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 November 2016**

Reference is made to the Environmental Team's submission of Monthly Environmental Monitoring & Audit Report for November 2016 (Rev. 2) certified by the ET Leader (ET's ref.: "MCL/ED/0730/2016/C" dated 16 December 2016) and provided to us via e-mail on 19 December 2016.

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.

The ET Leader is reminded that it is the ET's responsibility to ensure the report be timely submitted to the Director of Environmental Protection as per Condition 5.4 of the EP.

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

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

Q:\Projects\HYDHZMBEEM00\02_Proj_Mgt\02_Corr\HYDHZMBEEM00_0_4860L.16.doc

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Website : www.materialab-consultant.com

Date 16 December 2016
Our Ref. MCL/ED/0730/2016/C

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

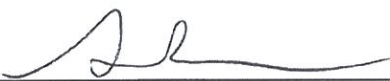
Dear Sir,

**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 November 2016 (Rev.2) for your verification.

Should you require further information, please do not hesitate to contact our Miss Scarlet Cheng at 3565 4156 or the undersigned at 3565 4115.

Yours faithfully,
for and on behalf of
MATERIALAB CONSULTANTS LIMITED



Arthur Cheng
Environmental Team Leader

AC/by

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

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Report No.: 0165/15/ED/0647

**MONTHLY ENVIRONMENTAL MONITORING & AUDIT
REPORT (Rev. 2)**

November 2016

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/0647

Prepared by: Scarlet Cheng

Reviewed by: Bong Yu

Certified by:


Arthur Cheng
Environmental Team Leader

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Report No.: 0165/15/ED/0647

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Report No.: 0165/15/ED/0647

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 15th Monthly EM&A Report for the Contract which summaries findings of the EM&A programme during the reporting period from 01 November 2016 to 30 November 2016 (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 01 November 2016 to 30 November 2016) (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 and 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 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: 03, 10, 17 and 25 November 2016.

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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 marine works conducted during the reporting period and therefore, no water quality impact monitoring result is reported.

There was no marine works conducted during the reporting period and therefore, no ecology monitoring result is reported.

Complaint Log

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

Log No.	Environmental Complaint Ref. No.	Date of Complaint Receipt	Description
003	ENPO-C0102	10 November 2016	Water

After investigation, it was concluded that the complaint was not related to Contract No. HY/2013/03.

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

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12. 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. Concealed Conduit works at Inbound and Outbound Vehicle Kiosk.

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Report No.: 0165/15/ED/0647

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 fifteenth 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 01 November 2016 to 30 November 2016 (reporting period) under Contract No. HY/2013/03 (from 01 November 2016 to 30 November 2016 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

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- system including traffic control and surveillance system (TCSS), etc.;
- 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. Re provisioning 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. Michael Tovey	3985 7470	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 (MaterialLab 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**:

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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. Michael Tovey	3985 7470	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. Site Investigation at Portion G & N;
2. Building at Portion A1, B, G, N, J, STP & Pumping Stations;
3. Piling at Portion C, STP, Area G (Bridge A1 & A9), Box Culvert B & C;
4. CUE Construction at Portion B, C & J;
5. Drainage & Sewerage Work at Portion B, H1, H2, J, P, G & A1;

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6. Radiation Screen Wall and Sign Gantry Footing at Portion B;
7. Sewerage Pumping Station, High Mast Lighting Foundation & Box Culvert C at Portion G;
8. Bridge Works at A1 to A9;
9. Site Foundation Works at Portion K;
10. Cover Walkway at Portion H1 & H2; and
11. Box Culvert D at Portion A1; Shuttle kiosk & Subway at Portion E.

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

1. Concealed Conduit works at CUE Vehicle Kiosk.
- 1.5.2 Refer to operation team confirmation and further checking, the reported construction works for box culverts, pumping stations and STP were confirmed land-based for Contract No. HY/2013/03 (includes the construction works of Contract No. HY/2013/06 within Contract No. HY/2013/03 works area). There was no work activities or construction works at the seafront or in contact with marine water during the reporting period for Contract No. HY/2013/03 (includes the construction works of Contract No. HY/2013/06 within Contract No. HY/2013/03 works area).

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Report No.: 0165/15/ED/0647

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 ($\mu\text{g}/\text{m}^3$)
1 hour TSP		
AMS6	360	500
AMS7	370	
24 hours TSP		
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 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.

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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
For the Time Period 0700-1900 hrs. on Normal Weekdays		
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 exceedances were recorded at stations NMS2 and NMS3B by the ET of Contract No. HY/2010/02 during the reporting period.

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4. WATER QUALITY MONITORING

- 4.1 There was no marine works conducted during the reporting period and therefore, no relevant monitoring result is reported. However, ET of the Contract shall closely monitor on the status of marine works, which shall conduct monitoring when marine works commence in the future.
- 4.2 The ET of the Contract is required to conduct impact water quality monitoring as part of EM&A programme if water quality monitoring is no longer covered by another ET of the HZMB project. The ETL shall review and obtain IEC, ENPO and EPD agreement on the contract specific water quality monitoring works at least a month before the commencement of any marine works.

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5. ECOLOGY MONITORING

- 5.1 There was no marine works conducted which impacted to the ecology during the reporting period and therefore, no relevant monitoring result is reported. However, ET of the Contract shall closely monitor on the status of marine works, which shall conduct monitoring when marine works commence in the future.
- 5.2 The ET of the Contract is required to conduct ecology monitoring as part of EM&A programme if ecology monitoring is no longer covered by another ET of the HZMB project. The ETL shall review and obtain IEC, ENPO, AFCD and EPD agreement on the contract specific marine ecology monitoring works at least a month before the commencement of any marine works.

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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 sites allocated to this Project are the Mud Pit CMP2 of the Confined Marine Sediment Disposal Facility to the South of The Brothers (or at the East of Sha Chau). As advised by CEDD in the memo dated 19 February 2016, from 00:00 on 22 March 2016 onward, the disposal space at CMP2 of the South of The Brothers is closed and all disposal of contaminated sediment is to be carried out at CMP Vd to the East of Sha Chau (ESC).

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. No 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 morn 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).

6.3 Quantity Disposed

6.3.1 No marine sediment extracted from bored piling from this Contract was disposed to allocated dumping site in November 2016. The summary of marine sediment disposed up to end November 2016 is shown in the following table:

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Table 6.1 Summary of Marine Sediment Disposed to Dumping Site

Month/Year	Quantity disposed (in'000m ³)			
	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
Sub-Total	11.016	16.928	12.052	39.996
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
Total	16.952	38.392	29.344	84.688

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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 03, 10, 17 and 25 November 2016 by the representatives of Engineer, Contractor, ET and IEC (IEC for 25 November 2016).
- 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 Oct 2016

- 1. CHEC is reminded to maintain proper housekeeping on site (CUE works area). Subsequently, proper housekeeping was maintained on site. The observation was closed on 03 November 2016.
- 2. CHEC is reminded to remove stagnant water on site (CUE works area). Subsequently, stagnant water was removed on site. The observation was closed on 03 November 2016.

28 Oct 2016

- 1. CHEC was reminded to increase watering for dust suppression on site. Subsequently, watering was increased on site. The observation was closed on 03 November 2016.
- 2. CHEC was reminded to clear the stagnant water accumulated at Building 037. Subsequently, stagnant water was cleared at Building 037. The observation was closed on 03 November 2016.
- 3. CHEC was reminded to remove the general refuse accumulated at Building 037. Subsequently, general refuse was removed at Building 037. The observation was closed on 03 November 2016.

03 Nov 2016

- 1. CHEC is reminded to properly maintain housekeeping on site (CUE). Subsequently, housekeeping was maintained properly on site. The observation was closed on 10 November 2016.
- 2. CHEC is reminded to properly maintain equipment (generator) on site (Box Culvert D). Subsequently, the equipment was properly maintained on site. The observation was closed on 10 November 2016.

10 Nov 2016

- 1. CHEC was reminded to maintain housekeeping practice at CUE works area. Subsequently, housekeeping practice was maintained at CUE works area. The observation was closed on 17 November 2016.

17 Nov 2016

- 1. CHEC is reminded to maintain proper housekeeping on site (Building 043). Subsequently, proper housekeeping was maintained on site. The observation was closed on 25 November 2016.

25 Nov 2016

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1. CHEC was reminded to provide drip tray for chemical containers at CUE works area. Follow-up actions for outstanding observation will be checked in the upcoming site inspections and reported in the coming reporting period.
2. CHEC was reminded to remove stagnant water accumulated at Building 037 and Bridge A7 area. Follow-up actions for outstanding observation will be checked in the upcoming site inspections and reported in the coming reporting period.
3. CHEC was reminded to enhance watering for dusty operation at Bridge A7 area. 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

03 Nov 2016

1. Nil findings.

10 Nov 2016

1. Nil findings.

17 Nov 2016

1. Nil findings.

25 Nov 2016

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 0.000 (in'000m³) of excavated marine sediment (from Contract No. HY/2013/03), 0.229 (in'000m³) of Inert C & D Wastes and 0.644 (in'000m³) of Non-inert C & D Wastes were generated (from Contract No. HY/2013/03) in this reporting period. No Inert C & D Wastes and 0.001 tonnes of paper/cardboard packaging were generated and recycled (from Contract No. HY/2013/06 within Contract No. HY/2013/03 works area) in this reporting period.
- 7.2.4 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.
- 7.2.5 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.
- 7.2.6 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.

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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.

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. 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 to demonstrate the conformance of the vessel to the proposed route in November 2016 would be provided to ER, ETL, IEC/ENPO for checking within the month of December 2016.

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, one floating concrete batching plant was operated on-site during the reporting period.

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 marine works conducted during the reporting period and therefore, no relevant monitoring result is reported.

7.5.5 There was no marine works conducted during the reporting period and therefore, no ecology monitoring result is reported.

7.6 Summary of Complaints, Notification of Summons and Successful Prosecution

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- 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 7.1**. The details of cumulative statistics of Environmental Complaints are provided in **Appendix H**.

Table 7.1: Summary of Environmental Complaints for the Reporting Month

Log No.	Environmental Complaint Ref. No.	Date of Complaint Receipt	Description
003	ENPO-C0102	10 November 2016	Water

- 7.6.2 The complaint was received by EPD from a member of the public on 09 November 2016 and was referred by EPD to the ENPO. Then the ENPO forwarded the complaint by email to the R.E. (AECOM Asia Co. Ltd.), the Contractor (China Harbour Engineering Co. Ltd.) and the ET (Materialab Consultants Ltd.) of Contract No. HY/2013/03 on 10 November 2016.

Details of Complaint

One complaint was forwarded by IEC on 10 November 2016, with the information provided by Mr. Alfred Lo from the EPD.

A member of the public complained about water quality pollution was observed behind a barge. A photo was taken on 07 November 2016 at 09:26 am from the footbridge near Tung Chung Pier, a barge named “長盛 308” travelled from Hong Kong Zhuhai Macao Bridge near Scenic Hill site boundary to Tung Chung Pier’s front sea area, turbid water was observed behind a barge which creates water quality pollution.

Investigation of Complaint

Date Complaint Investigated by Environmental Team: 10 November 2016

Summary of Investigation

Interview was conducted on 10 November 2016 with Mr. Marko Chan, Assistant Environmental Manager of the CHEC and site management. As confirmed with operation team of Contract No. HY/2013/03, the said barge (長盛 308) does not belong to Contract No. HY/2013/03. There was no barge belongs to Contract No. HY/2013/03 travelled from Hong Kong Zhuhai Macao Bridge near Scenic Hill site boundary to Tung Chung Pier’s front sea area during complained time (09:26 am of 07 November 2016).

Investigation Results

The ET of Contract No. HY/2013/03 concluded that the captioned complaint is not related to the construction site activities of our contract. Nevertheless, the contractor had been reminded to comply with the requirements stipulated in the Environmental Mitigation Implementation Schedule (EMIS) of the EM&A Manual, in particular:

Water Quality: W1 –

1. barges and hopper dredgers shall have tight fitting seals to their bottom openings to prevent leakage of material;
2. any pipe leakages shall be repaired quickly. Plant should not be operated with leaking pipes;

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3. loading of barges and hoppers shall be controlled to prevent splashing of dredged material to the surrounding water. Barges or hoppers shall not be filled to a level which will cause overflow of materials or pollution of water during loading or transportation;
4. excess material shall be cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessel is moved;
5. adequate freeboard shall be maintained on barges to reduce the likelihood of decks being washed by wave action;
6. all vessels shall be sized such that adequate clearance is maintained between vessels and the sea bed at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash; and
7. the works shall not cause foam, oil, grease, litter or other objectionable matter to be present in the water within and adjacent to the works site.

Follow up status (complaints)

During weekly site audit on 03 and 10 November 2016, ET confirmed the Contractor had provided workable and effective water quality mitigation measures, comprising well-maintained plants without effluent discharge into the sea for the time period between 0700 and 1900 hours on normal weekdays.

Recommendation to the Contractor

The Contractor was reminded to continue to fully maintain all water quality mitigation measures.

Follow up Status (Overall)

The captioned complaint is not valid and therefore, no additional follow-up action is needed. However, ET proposed recommendation to contractor in particular to the following aspect when there are marine construction activities.

Water Quality:

1. barges and hopper dredgers shall have tight fitting seals to their bottom openings to prevent leakage of material;
2. any pipe leakages shall be repaired quickly. Plant should not be operated with leaking pipes;
3. loading of barges and hoppers shall be controlled to prevent splashing of dredged material to the surrounding water. Barges or hoppers shall not be filled to a level which will cause overflow of materials or pollution of water during loading or transportation;
4. excess material shall be cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessel is moved;
5. adequate freeboard shall be maintained on barges to reduce the likelihood of decks being washed by wave action;
6. all vessels shall be sized such that adequate clearance is maintained between vessels and the sea bed at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash; and
7. the works shall not cause foam, oil, grease, litter or other objectionable matter to be present in the water within and adjacent to the works site.

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

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

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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 December 2016:

For Contract No. HY/2013/03

1. Site Investigation at Portion G & N;
2. Building at Portion A1, B, G, N, J, STP & Pumping Stations;
3. Piling at Portion C, STP, Area G (Bridge A1 & A9), Box Culvert B & C;
4. CUE Construction at Portion B, C & J;
5. Drainage & Sewerage Work, Water Main & Cable Duct at Portion B, H1, H2, J, P, G & A1;
6. Radiation Screen Wall and Sign Gantry Footing at Portion B, E, P, N;
7. Sewerage Pumping Station, High Mast Lighting Foundation & Box Culvert C at Portion G;
8. Bridge Works at A1 to A9;
9. Site Foundation Works at Portion K;
10. Cover Walkway at Portion H1 & H2;
11. Box Culvert D at Portion A1; Shuttle kiosk & Subway at Portion E; and
12. 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. Concealed Conduit works at Inbound and Outbound Vehicle Kiosk.

8.2 Environmental Site Inspection Schedule for the Coming Month

8.2.1 The tentative schedule for weekly site inspections for December 2016 is provided in **Appendix I**.

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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 marine works conducted during the reporting period and therefore, no water quality impact monitoring result is reported.
- 9.6 There was no marine works conducted during the reporting period and therefore, no ecology monitoring result is reported.
- 9.7 Environmental site inspections were carried out on 03, 10, 17 and 25 November 2016. 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 water quality pollution was observed behind a barge on 07 November 2016 at 09:26 am from the footbridge near Tung Chung Pier. A barge travelled from Hong Kong Zhuhai Macao Bridge near Scenic Hill site boundary to Tung Chung Pier's front sea area, turbid water was observed behind a barge which creates water quality pollution during the reporting period. After investigation, it was found that the complaint was not related to Contract No. HY/2013/03.
- 9.9 There were no notifications of summons or prosecutions received during the reporting period.

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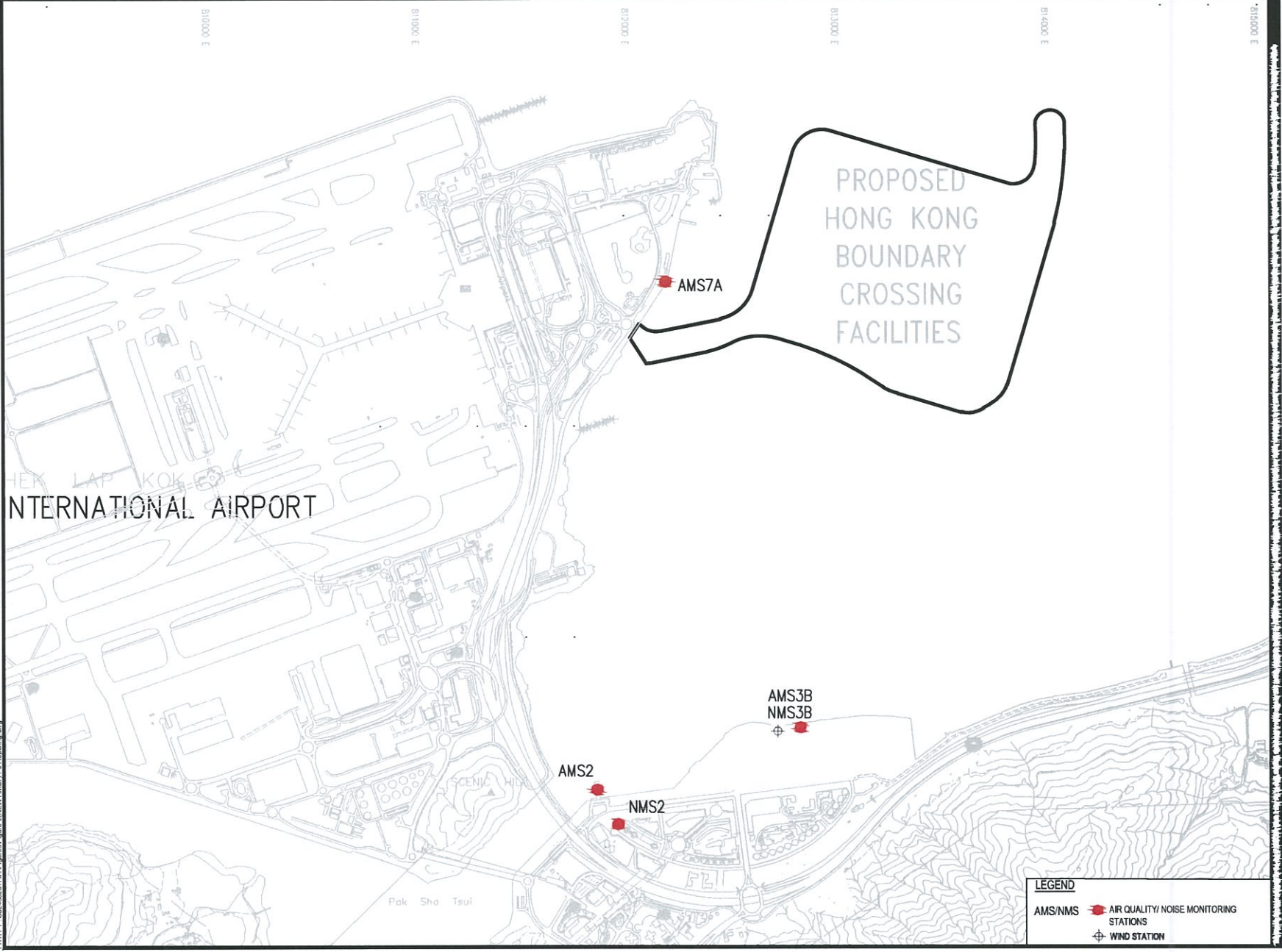
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Figure 1

Air Quality Monitoring Stations

ISO A3 297mm x 420mm
Checked
Project Management Initials
11/02/2015
P:\A3\15\1501\1501_01E\map\A3\Fig2\NEW_AMS7_FoR\Resourc.dwg



LEGEND

AMS/NMS  AIR QUALITY/ NOISE MONITORING STATIONS

 WIND STATION

HONG KONG - ZHUHAI - MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
- RECLAMATION WORKS
Project No.:

AIR QUALITY AND NOISE
MONITORING STATIONS
FOR HKBCF

Date: JANUARY 2015

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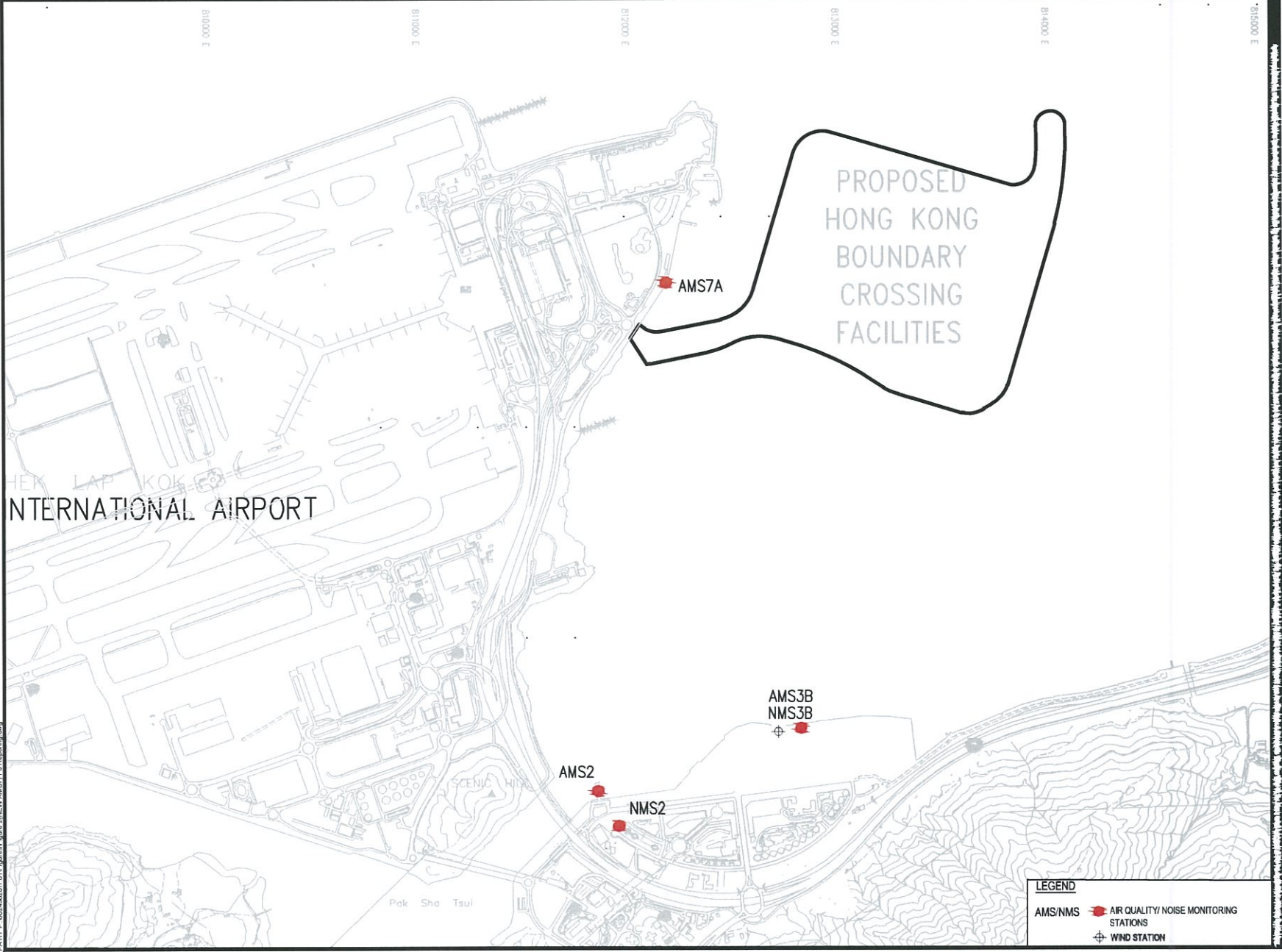
Email : mcl@fugro.com

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 bars above and below the text.

Report No.: 0165/15/ED/0647

Figure 2

Noise Monitoring Stations



LEGEND

AMS/NMS AIR QUALITY/ NOISE MONITORING STATIONS

WIND STATION

HONG KONG - ZHUHAI - MACAO BRIDGE
 HONG KONG BOUNDARY CROSSING FACILITIES
 - RECLAMATION WORKS

AIR QUALITY AND NOISE
 MONITORING STATIONS
 FOR HKBCF

Date: JANUARY 2015

Project No.:

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

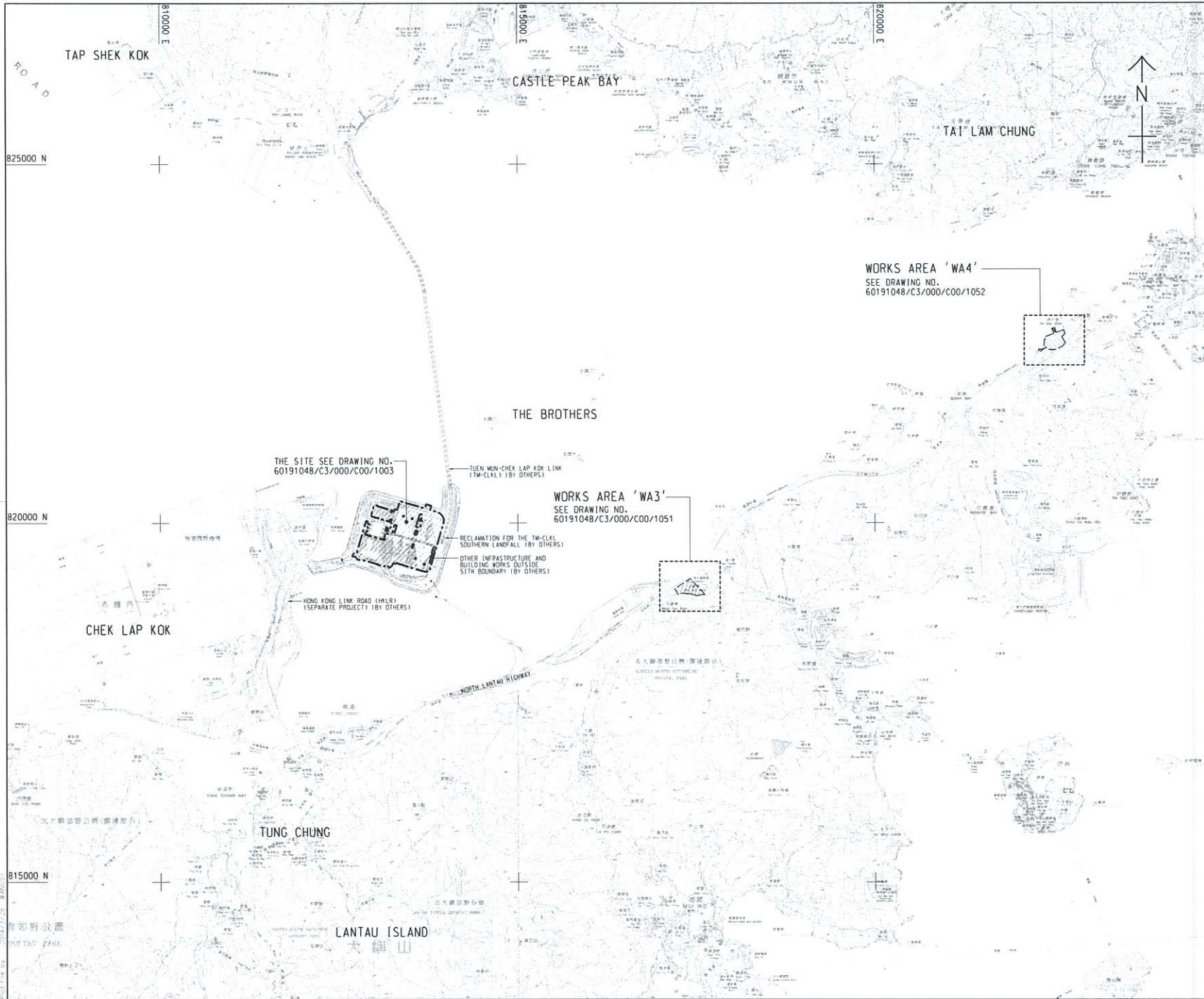
Email : mcl@fugro.com

Materialab

Report No.: 0165/15/ED/0647

Appendix A

Location of Works Areas



- NOTES:**
1. COORDINATES ARE RELATED TO HONG KONG METRIC GRID (1980).
 2. DIMENSIONS ARE IN MILLIMETER AND CHAINAGE ARE IN METRES UNLESS OTHERWISE SHOWN.
 3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NOS. 60191048/C3/000/C00/1051 TO 1053.



THE SITE SEE DRAWING NO. 60191048/C3/000/C00/1003

TUN MUN-CHEK LAP KOK LINK (TM-CKLK) (BY OTHERS)

WORKS AREA 'WA3'
SEE DRAWING NO. 60191048/C3/000/C00/1051

RECLAMATION FOR THE TM-CKLK SOUTHERN LANDFILL (BY OTHERS)
OTHER INFRASTRUCTURE AND BUILDING WORKS OUTSIDE SITE BOUNDARY (BY OTHERS)

HONG KONG LINK ROAD (HKLR) (SEPARATE PROJECT) (BY OTHERS)

WORKS AREA 'WA4'
SEE DRAWING NO. 60191048/C3/000/C00/1052

TENDER DRAWING		REV.	DATE
1	1	1	14
DESCRIPTION		SCALE	DATE
TENDER DRAWING		B/C/M/SCI	MAR.14

HIGHWAYS DEPARTMENT
港務局 道路工程處
Hong Kong - China, Macao Bridge-Hong Kong Project Management Office

HONG KONG-ZHUBAI-MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
VEHICLE CLEARANCE PLAZAS AND
ANCILLARY BUILDINGS AND FACILITIES

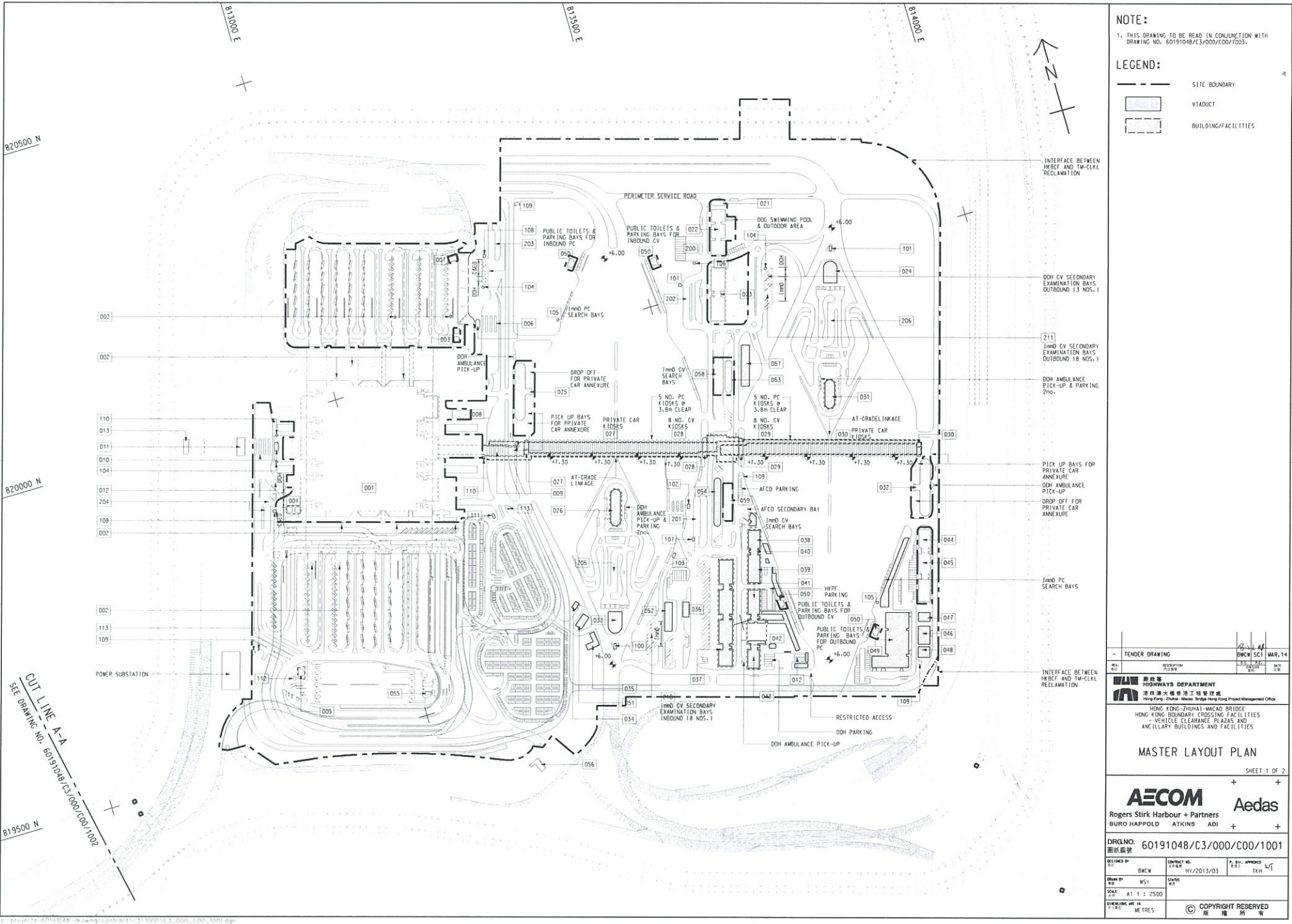
SITE LOCATION PLAN

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

DRG.NO. 60191048/C3/000/C00/1000
圖紙編號

DESIGNED BY DW	CHECKED BY WY	DATE HY/2013/03	APPROVED BY TKH
SCALE A1 : 1 : 25000		DRAWING UNIT METRES	

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NOTE:
 1. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NO. 60191048/C3/000/C00/1003.

LEGEND:
 --- SITE BOUNDARY
 [] VIADUCT
 [] BUILDING/FACILITIES

820500 N
 820000 N
 CUT LINE A-A
 SEE DRAWING NO. 60191048/C3/000/C00/1002
 819500 N



INTERFACE BETWEEN HRCF AND TM-CLKL RECLAMATION

DDH CV SECONDARY EXAMINATION BAYS OUTBOUND (3 NOS.)

DDH CV SECONDARY EXAMINATION BAYS OUTBOUND (8 NOS.)

DDH AMBULANCE PICK-UP & PARKING 2ND.

PICK UP BAYS FOR PRIVATE CAR ANNEXURE

DDH AMBULANCE PICK-UP

DROP OFF FOR PRIVATE CAR ANNEXURE

I/MD PC SEARCH BAYS

INTERFACE BETWEEN HRCF AND TM-CLKL RECLAMATION

TENDER DRAWING		REVISED	DATE
NO.	DESCRIPTION	BY	DATE

HONG KONG-ZHUHAI-MACAO BRIDGE
 HONG KONG BOUNDARY CROSSING FACILITIES
 - VEHICLE CLEARANCE PLAZAS AND
 ANCILLARY BUILDINGS AND FACILITIES

MASTER LAYOUT PLAN
 SHEET 1 OF 2

AECOM Aedas
 Rogers Stirk Harbour + Partners
 BURO HAPPOOLD ATKINS ADI

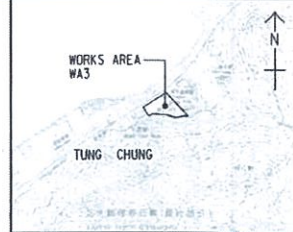
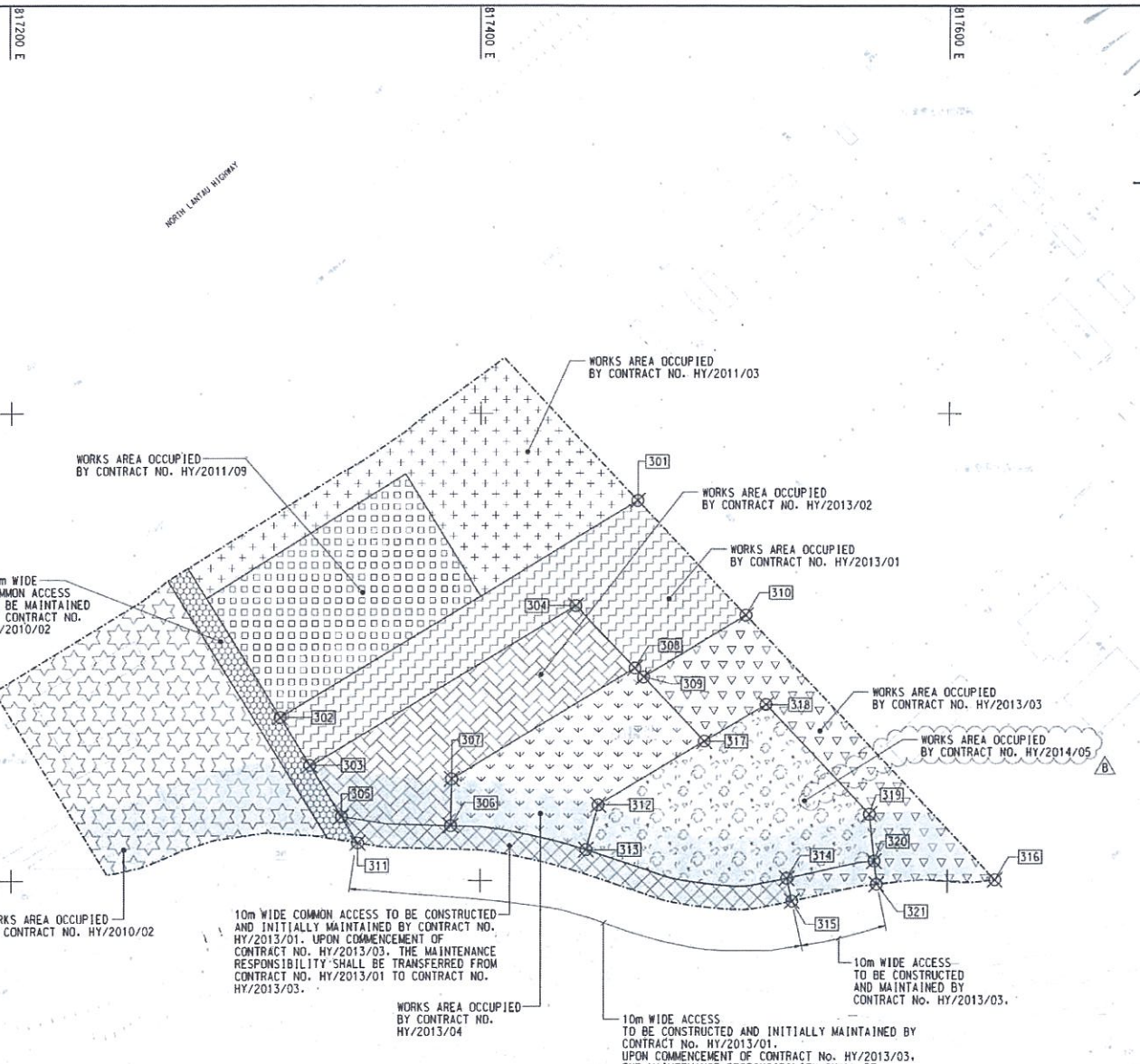
DRGNO: 60191048/C3/000/C00/1001
 圖紙編號

DESIGNED BY	BWCW	CHECKED BY	HY/2013/03	APPROVED BY	TKH
DRAWN BY	WSY	STATUS			

SCALE: 1:2500
 DIMENSIONS ARE IN METRES

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SETTING OUT POINT		
POINT	EASTING	NORTHING
301	817467.265	819162.683
302	817314.741	819069.828
303	817327.338	819049.295
304	817440.655	819117.611
305	817340.825	819027.314
306	817387.350	819023.403
307	817387.861	819043.396
308	817466.133	819091.047
309	817469.783	819087.181
310	817513.449	819113.764
311	817347.717	819016.082
312	817450.595	819032.307
313	817445.369	819013.157
314	817531.154	819001.065
315	817533.345	818991.306
316	817620.259	819000.620
317	817495.827	819059.596
318	817522.110	819075.388
319	817566.404	819028.472
320	817568.507	819008.526
321	817569.551	818998.621



LOCATION PLAN
SCALE 1 : 2500

NOTES:
1. COORDINATES ARE RELATED TO HONG KONG METRIC GRID (1980).
2. DIMENSIONS ARE IN MILLIMETER AND CHAINAGE ARE IN METRES UNLESS OTHERWISE SHOWN.

LEGEND:

WORKS AREA BOUNDARY	
[Symbol]	PORTION 3.1
[Symbol]	PORTION 3.2
[Symbol]	PORTION 3.3
[Symbol]	PORTION 3.4
[Symbol]	PORTION 3.5
[Symbol]	PORTION 3.6
[Symbol]	PORTION 3.7
[Symbol]	PORTION 3.8
[Symbol]	PORTION 3.9
[Symbol]	PORTION 3.10
[Symbol]	NON-BUILDING AREA 2200m ² (VEHICLE)

FOR CONSTRUCTION

C	WORKING DRAWING	19-JUL-14	BWCH SCI	MAY-15
B	TENDER ADDENDUM NO. 2	19-JUL-14	BWCH SCI	MAY-14
A	TENDER ADDENDUM NO. 1	19-JUL-14	BWCH SCI	APR-14
-	TENDER DRAWING	19-JUL-14	BWCH SCI	MAR-14

HONG KONG HIGHWAYS DEPARTMENT
 香港公路局
 HONG KONG-ZHUIHAI-MACAO BRIDGE
 香港-珠海-澳門大橋
 HONG KONG BOUNDARY CROSSING FACILITIES
 香港邊境過關設施
 - VEHICLE CLEARANCE PLAZAS AND
 ANCILLARY BUILDINGS AND FACILITIES

WORKS AREA WA3

AECOM Aedas
 Rogers Stirk Harbour + Partners
 BURO HAPPOLD ATKINS ADI

DRGNO. 60191048/C3/000/C00/1051C
 圖紙編號

DESIGNED BY BWCH	CHECKED BY NSY	DATE HY/2013/03	APPROVED BY TKH
SCALE A1 1 : 1000		WORKING DRAWING	
DIMENSIONS ARE IN METRES		COPYRIGHT RESERVED 版權所有	

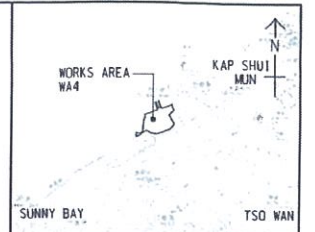
CONTROLLED DOCUMENT 不准翻印
 不准複印
 不准轉載
 不准外借

SETTING OUT POINT

POINT	EASTING	NORTHING
401	822408.151	822632.315
402	822640.593	822689.415
403	822515.608	822559.848
404	822610.940	822599.642
405	822629.428	822607.359
406	822526.988	822529.813
407	822618.348	822567.950
408	822542.232	822489.581
409	822584.983	822507.426
410	822606.866	822516.561
411	822560.278	822441.956
412	822602.949	822460.010
413	822621.914	822467.959
414	822624.130	822470.998
415	822651.725	822508.856
416	822644.758	822521.192

822400 E

822600 E



LOCATION PLAN
SCALE 1 : 25000

NOTES:

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

LEGEND:

WORKS AREA BOUNDARY	
[Symbol]	PORTION 4.1
[Symbol]	PORTION 4.2
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[Symbol]	PORTION 4.5
[Symbol]	PORTION 4.6
[Symbol]	PORTION 4.7
[Symbol]	PORTION 4.8
[Symbol]	PORTION 4.9

CONTROLLED DOCUMENT

FOR CONSTRUCTION

C	WORKING DRAWING	2014/4	MAY 15
B	TENDER ADDENDUM NO. 2	B/C/W	MAY 14
A	TENDER ADDENDUM NO. 1	B/C/W	APR 14
-	TENDER DRAWING	B/C/W	MAR 14

HONG KONG HIGHWAYS DEPARTMENT
香港公路局

HONG KONG-ZHAI-MACAO BRIDGE
HONG KONG BOUNDARY CROSSING FACILITIES
VEHICLE CLEARANCE PLAZAS AND
ANCILLARY BUILDINGS AND FACILITIES

WORKS AREA WA4

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

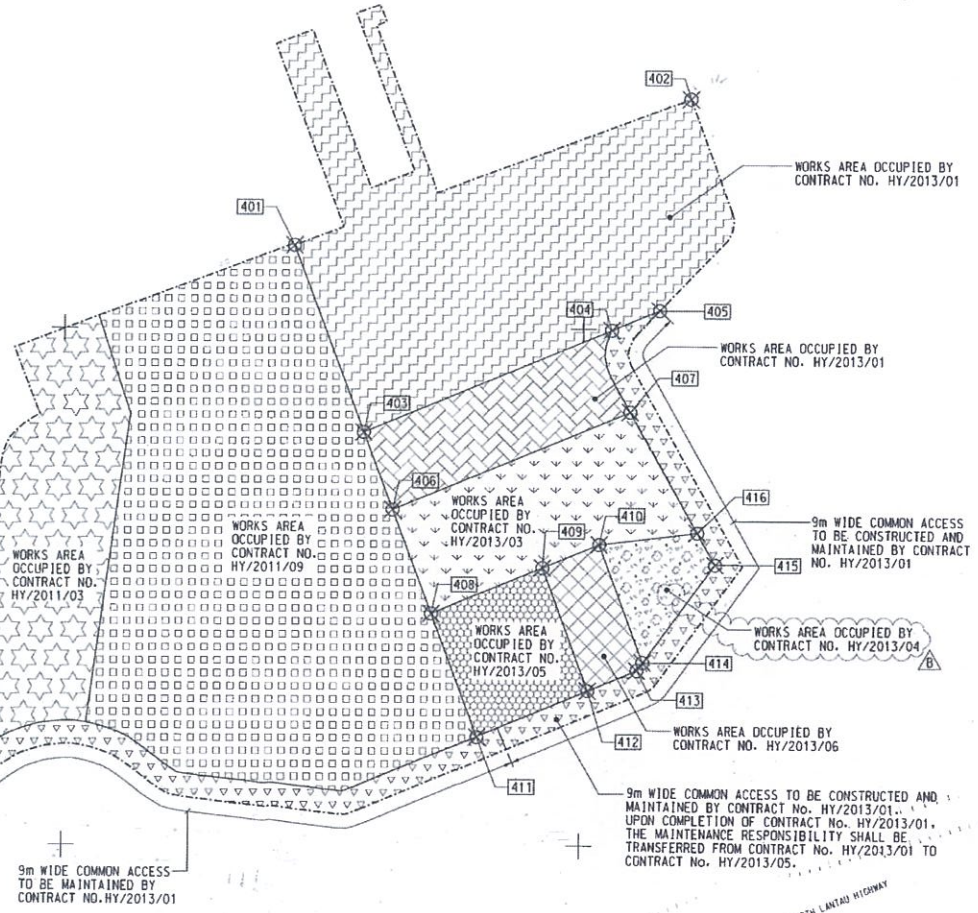
DRGNO. 60191048/C3/000/C00/1052C

DESIGNED BY	B/C/W	DATE	HY/2013/03	APPROVED BY	TKH
DRAWN BY	WST	SCALE	1 : 1000	WORKING DRAWING	
DIMENSIONS ARE IN METRES					

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822600 N

822400 N



9m WIDE COMMON ACCESS TO BE MAINTAINED BY CONTRACT NO. HY/2013/01

9m WIDE COMMON ACCESS TO BE CONSTRUCTED AND MAINTAINED BY CONTRACT NO. HY/2013/01. UPON COMPLETION OF CONTRACT NO. HY/2013/01, THE MAINTENANCE RESPONSIBILITY SHALL BE TRANSFERRED FROM CONTRACT NO. HY/2013/01 TO CONTRACT NO. HY/2013/05.

NORTH LANTAU HIGHWAY

Plot File by: 2014/5/5 WANGSY

MATERIALAB CONSULTANTS LIMITED

Room 723 & 725, 7/F, Block B,
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Tel : (852)-24508238
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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/0647

Appendix B

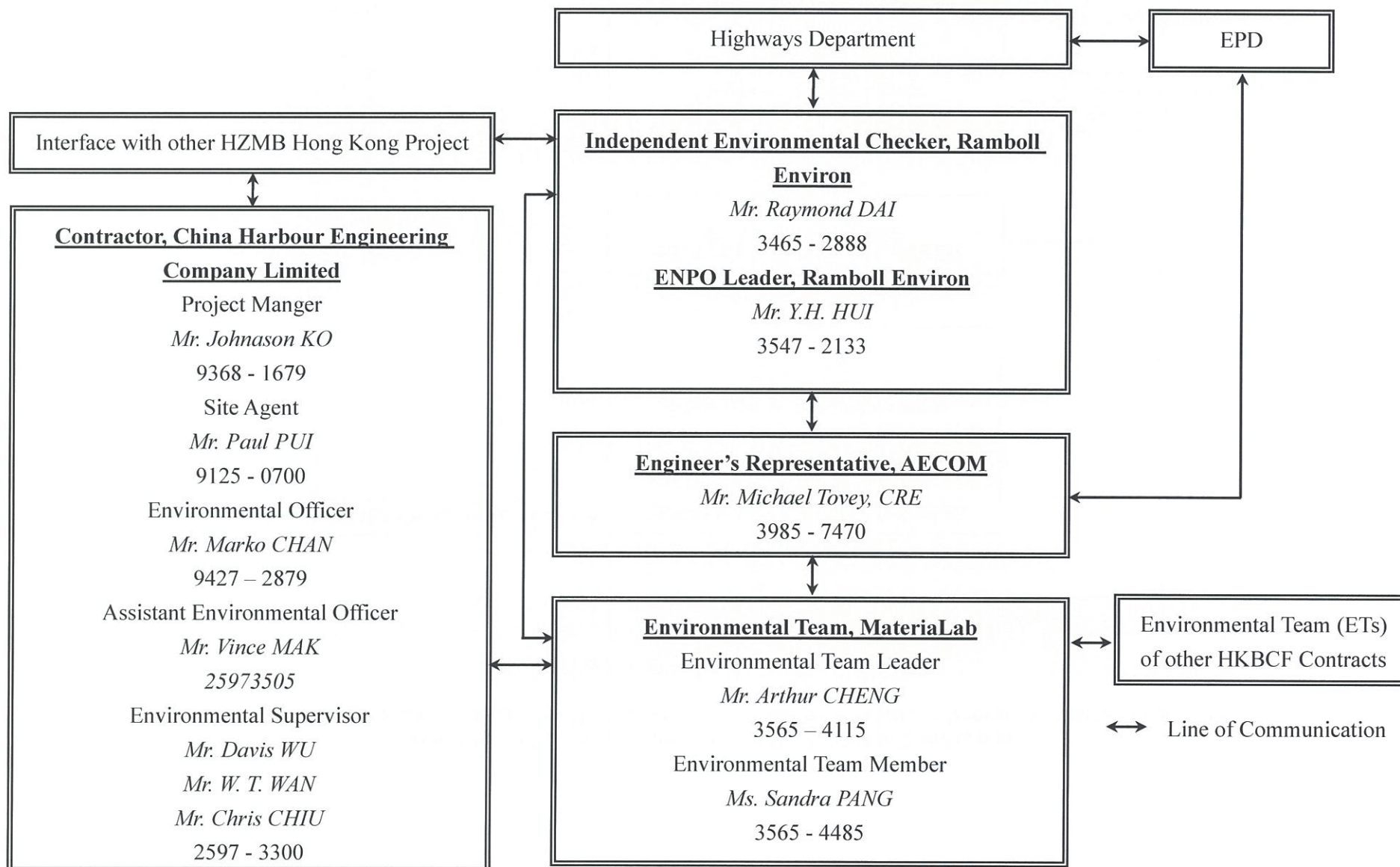
Project Organization for Environmental Works

CHINA HARBOUR ENGINEERING COMPANY LIMITED



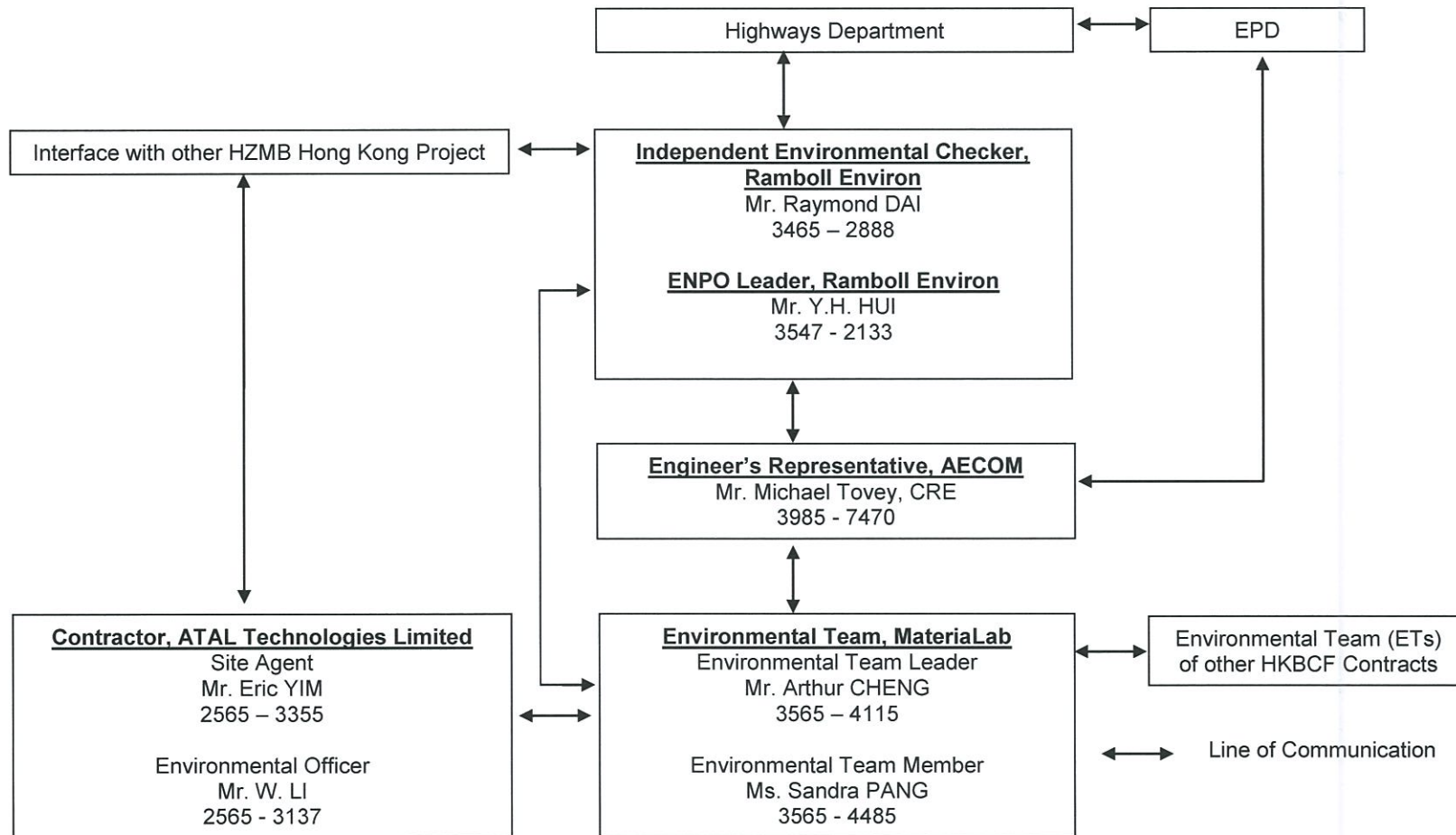
Contract No. HY/2013/03 Hong Kong-Zhuhai-Macao Bridge, Hong Kong Boundary Crossing Facilities – Vehicle Clearance Plazas and Ancillary Buildings and Facilities

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

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Hong Kong.

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

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Report No.: 0165/15/ED/0647

Appendix C

Construction Programme

Activity ID	Activity Name	2016		2017		
		Nov	Dec	Jan	Feb	Mar
HKBCF - VCP & Ancillary Buildings and Facilities, DWP Rev. 3A, DD 30 Nov. 16						
CONTRACT DATES						
Key Dates						
A1320	KD32 Achievement of Section IV(b) of the Works (646 days; 15 Jan. 17)					◆ KD32 Achievement of Section IV(b) of the Works (646 days)
A1330	KD33 Achievement of Section IV(c) of the Works (646 days; 15 Jan. 17)					◆ KD33 Achievement of Section IV(c) of the Works (646 days)
Site Access & Possession						
Possession of Portion of Site						
A0030	Possession of Portion B (<=100 days)		◆ Possession of Portion B (<=100 days)			
A0040	Possession of Portion C (<=100 days)			◆ Possession of Portion C (<=100 days)		
A0070	Possession of Portion F (<=220 days)				◆ Possession of Portion F (<=220 days)	
A0110	Possession of Portion J (<=320 days)		◆ Possession of Portion J (<=320 days)			
A0150	Possession of Portion N (<=345 days)		◆ Possession of Portion N (<=345 days)			
A0160	Possession of Portion P (<=502 days)		◆ Possession of Portion P (<=502 days)			
A0170	Possession of Portion Q (<=500 days)		◆ Possession of Portion Q (<=500 days)			
A0180	Possession of Portion R (<=610 days)				◆ Possession of Portion R (<=610 days)	
Access to Locations of the Site						
A0210	Contract Date for Access to Location 1.1 (490 days)		◆ Contract Date for Access to Location 1.1 (490 days)			
A0220	Contract Date for Access to Location 1.2 (405 days)		◆ Contract Date for Access to Location 1.2 (405 days)			
A0230	Contract Date for Access to Location 1.3 (488 days)		◆ Contract Date for Access to Location 1.3 (488 days)			
A0240	Contract Date for Access to Location 1.4 (488 days)		◆ Contract Date for Access to Location 1.4 (488 days)			
A0250	Contract Date for Access to Location 1.5 (580 days)		◆ Contract Date for Access to Location 1.5 (580 days)			
A0280	Contract Date for Access to Location 1.7A (610 days)			◆ Contract Date for Access to Location 1.7A (610 days)		
A0290	Contract Date for Access to Location 1.7B (610 days)			◆ Contract Date for Access to Location 1.7B (610 days)		
A0300	Contract Date for Access to Location 1.7C (610 days)			◆ Contract Date for Access to Location 1.7C (610 days)		
A0310	Contract Date for Access to Location 1.8 PCB (Basement level up to ground floor slab) (395 days)		◆ Contract Date for Access to Location 1.8 PCB (Basement level up to ground floor slab) (395 days)			
A0320	Contract Date for Access to Location 1.8 PCB (Ground Floor level or above) (515 days)		◆ Contract Date for Access to Location 1.8 PCB (Ground Floor level or above) (515 days)			
A0330	Contract Date for Access to External Area for Contract HY/2013/01 for ELV System Installation (570 days)		◆ Contract Date for Access to External Area for Contract HY/2013/01 for ELV System Installation (570 days)			
A0340	Contract Date for Access to External Area for Contract HY/2013/02 for ELV System Installation (560 days)		◆ Contract Date for Access to External Area for Contract HY/2013/02 for ELV System Installation (560 days)			
A0350	Contract Date for Access to External Area for Contract HY/2013/04 ELV System Installation (560 days)		◆ Contract Date for Access to External Area for Contract HY/2013/04 ELV System Installation (560 days)			
Section/Stage Subject to Excision						
A0770	Contract Date for Section VI (650 days, latest date when the Engineer may order)					◆ Contract Date for Section VI (650 days, latest date when the Engineer may order)
A0780	Contract Date for Section VII (650 days, latest date when the Engineer may order)					◆ Contract Date for Section VII (650 days, latest date when the Engineer may order)
PRELIMINARY						
Precast Yard for Bridge Segement						
A0630	Segment Manufacture					
PORTION A1						
Portion A1 Structures						
Bridge A9						
Bored Pile						
SA9120	Bored pile for A9 Bridge, 10 no.					
SA9140	Pile testing					
Pile Cap						
SA9210	Cap - A905					
SA9220	Cap - P904					
SA9230	Cap - P903					

■ Actual Work
■ Remaining Work
■ Critical
◆ Milestone

THREE MONTH ROLLING PROGRAMME
VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES
 Page 1 of 18

Date	Revision	Checked	Approved
30-Sep-16	3MRP updated as of 30 Sep. 2016	ZJ	
31-Oct-16	3MRP updated as of 30 Oct. 2016	ZJ	
30-Nov-16	3MRP updated as of 30 Nov. 2016	ZJ	

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

14-Dec-16

Activity ID	Activity Name	2016		2017		
		Nov	Dec	Jan	Feb	Mar
SA9240	Cap - P902					
SA9250	Cap - A901					
Pier & Abutment						
SA9310	Abutment A905					
SA9320	Pier P904					
SA9330	Pier P903					
SA9340	Pier P902					
SA9350	Abutment A901					
Structure Deck						
SA9400	Falsework for Deck A905 - P904					
SA9410	Deck on A905, P904 + Stressing					
SA9415	Falsework for Deck P904 - P903					
Retaining Wall W8-1						
SW8110	Construction of Retaining Wall W8-1 (U-shape, 4 bays)					
SW8120	Backfilling W8-1					
Retaining Wall W9-1						
SW9110	Construction of Retaining Wall W9-1 (U-shape, 4 bays)					
SW9120	Backfilling W9-1					
Box Culvert D						
Box Culvert D Construction						
SD0150	Box Culvert D Construction (Stage 2, Bay 36 - 38)					
SD0160	Box Culvert D Construction (Stage 3, Bay 39 - 42)					
SD0170	Box Culvert D Construction (Stage 4, Bay 19 - 21 & 24 - 32)					
SD0180	Box Culvert D Backfilling					
047 - Fresh Water Pumping Station, Portion A1 & A2						
A04720	Excavation + Blinding					
A04730	Pile Testing					
A04740	Water Tank Construction					
A04750	Pump House Construction					
049 - Sewage Treatment Plant, Portion A1 & A2						
A04946	Excavation to 0.0mPD/+4.9mPD					
A04950	Sheet Piling as ELS1 for Equalization Tanks					
A04960	Sheet Piling as ELS2 for Sludge Holding Tanks					
B04960	ELS1 + Blinding for Equalization Tanks					
B04970	Constructing Base Slab for Equalization Tanks					
B04980	Backfilling + Removing 3rd Strut of ELS1					
B04990	Constructing Wall Stem for Equalization Tanks					
C04910	Water-tightness Test for Equalization Tanks					
C04920	Backfilling + Removal of ELS1					
C04930	ELS2 + Blinding for Equalization Tanks					
C04940	Constructing Base Slab of Equalization Tanks					
C04950	Backfilling + Removal of ELS2					
C04960	Constructing Wall Stem of Sludge Holding Tanks					
C04970	Water-tightness Test for Sludge Holding Tanks					
C04990	Backfilling + Removal of ELS2					
D04910	ELS3 w/struts + Blinding for MBR Tanks					
D04920	Constructing Base Slab for MBR Tanks					
D04930	Constructing Wall Stem for MBR Tanks					
D04940	Water-tightness Test for MBR Tanks					
D04950	Backfilling + Removal of ELS3					

■ Actual Work
■ Remaining Work
■ Critical
◆ Milestone

THREE MONTH ROLLING PROGRAMME
VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES
 Page 2 of 18

Date	Revision	Checked	Approved
30-Sep-16	3MRP updated as of 30 Sep. 2016	ZJ	
31-Oct-16	3MRP updated as of 30 Oct. 2016	ZJ	
30-Nov-16	3MRP updated as of 30 Nov. 2016	ZJ	

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

14-Dec-16

Activity ID	Activity Name	2016		2017		
		Nov	Dec	Jan	Feb	Mar
D04955	Excavation + Blinding for Ground Slab					
D04960	Constructing Ground Slab for Transformer Room					
D04970	Transformer Room Construction					
Portion A1 Buildings						
012 - DOH Disinsection Area and Store Room 1, at Portion A1						
A01280	Other BS + E&M Installation					
036 - Weigh Station						
A03650	Ceiling/Wall Plaster & Painting					
A03660	Floor Screed					
A03665	External Wall Plaster & Tile					
A03670	BS for Office Accommodation (Stage 8)					
A03680	BS + E&M for Office Accommodation (Stage 9)					
A03690	Other BS + E&M Installation					
037 C&ED Tower Cum Inbound Cargo Examination Building (Portion A1 & B)						
A03738	DDA Submission/Approval for Curtain Wall/Metal Roof/Alum. Cladding					
A03740	Steel Frame Structure Installation					
A03742A	Mock-up Sample for Curtain Wall					
A03742B	Mock-up Sample for Cladding					
A03742C	Mock-up Sample for Mesh Screen Wall (SS41) & Balustrade					
A03742E	Mock-up Sample for Toilet Counter Top (WF24)					
A03742F	Mock-up Sample for External Wall Tiling					
A03744	Curtain Wall/Metal Roof/Aluminium Cladding Installation					
A03746	Blockwall Laying					
A03748	Wall/Ceiling Plastering/Tiling					
A03752	Floor Screed/Tiling					
A03756	Window/Door Frame Installation					
A03760	BS + E&M for AVCSS Cabling (KD18A)					
A03780	BS for Office Accommodation (KD9)					
A03785	BS for Office Accommodation (KD10)					
A03790	Other BS + E&M Installation					
Test & Commission						
B03790	Beam Plus Monthly Submission & Issue					
041 Fire Station Cum Ambulance Depot						
A04120	Super Structure, G/F to 1/F					
A04122	Super Structure, 1/F to 2/F (incl. parapet wall and planter wall)					
A04124	DDA Submission/Approval for Cladding & Curtain Wall					
A04126	Cladding & Curtain Wall Installation (incl. steel & metal works)					
A04132	Blockworks					
A04133	Ceiling & Wall Plastering/Wall Tiling					
A04140	BS for Office Accommodation (Stage 8)					
A04160	Other BS + E&M Installation					
042 Drill Tower						
A04260	Finishing					
A04270	BS for Office Accommodation (Stage 8)					
A04280	BS + E&M for Office Accommodation (Stage 9)					
A04290	Other BS + E&M Installation					
043 DOH Office + Store Room						
A04330	Super Structure					
A04340	Water Tanks for F.S./Sprinkler Pump Room					
A04360	DDA Submission for Cladding & Curtain Wall					

- Actual Work
- Remaining Work
- Critical
- Milestone

**THREE MONTH ROLLING PROGRAMME
VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES**

Date	Revision	Checked	Approved
30-Sep-16	3MRP updated as of 30 Sep. 2016	ZJ	
31-Oct-16	3MRP updated as of 30 Oct. 2016	ZJ	
30-Nov-16	3MRP updated as of 30 Nov. 2016	ZJ	

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

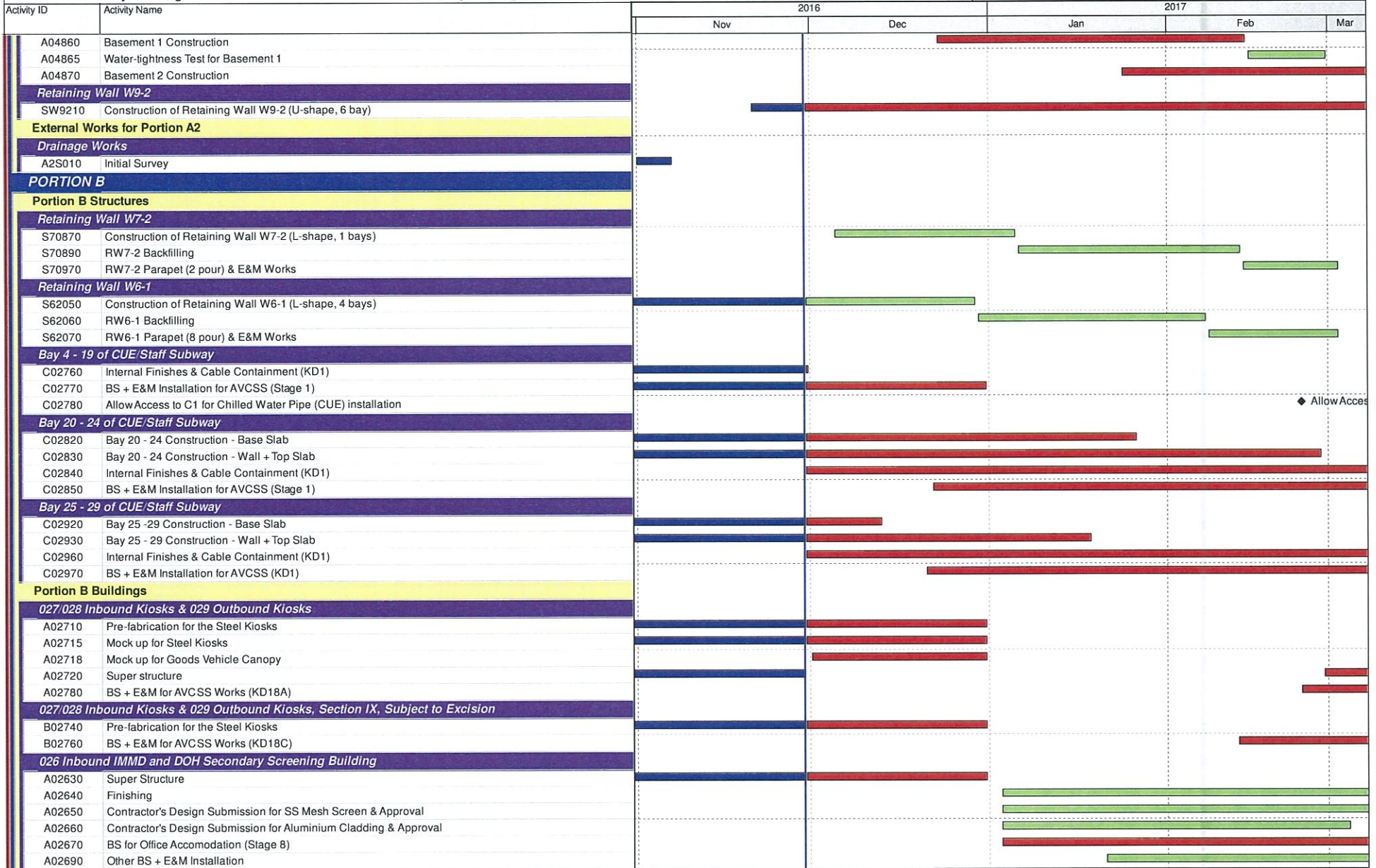
14-Dec-16

Activity ID	Activity Name	2016		2017		
		Nov	Dec	Jan	Feb	Mar
A04370	Cladding & Curtain Wall Installation (incl. steel & metal works)					
A04380	BS for Office Accommodation (Stage 8)					
B04310	Other BS + E&M Installation					
B04330	Stainless Steel Mesh Installation					
B04340	Metal Windows/Louvres/Doors/Railing etc. installation					
B04350	Blockworks					
B04360	Wall Plastering/Tiling					
C04310	C/S Wall Plastering					
052 - Transforms (Zone 4)						
A05235	Energisation by CLP					
A05250	Ceiling/Wall Painting Finish & Floor Screed					
A05260	External Wall Plaster & Wall (KD10)					
A05270	Main Switch/L.V. Switch Board Installation					
A05280	Genset Installation					
Completion of Fire Services Installation and Equipment (FCD)						
C05210	Approved Building Plans					
105 IMMDD Guard Booth, Portion A1 (Mock Up)						
B10500	Shop Drawings & Material Submission					
Facade Envelop Structure Installation						
B10580	Shop Drawing Submission and Approval					
B10590	Fabrication of F/C System					
External Works for Portion A1						
Drainage Works						
ED0020	Drainage Works (773m & 34MHs), Stage 1 (Western)					
ED0030	Sewerage (300m & 9MHs), Stage 1 (Western)					
ED5590	Drainage Works (774m & 35MHs), Stage 2 (Middle)					
ED5600	Sewerage (300m & 9MHs), Stage 2 (Middle)					
Waterpipe Laying						
EW5010	Fresh Water Main Laying (700 m), Stage 1 (Western)					
EW6010	Flushing Water Main Laying (322 m), Stage 1 (Western)					
EW6020	Fresh Water Main Laying (700 m), Stage 2 (Middle)					
EW6030	Flushing Water Main Laying (322 m), Stage 2 (Middle)					
Duct Laying for Utilities/Telecom Cabling, TCSS & Lighting						
EU5260	Duct & Cable Laying for Utilities/Telecom, CLP, BS & ELV					
EU5270	Duct & Cable Laying for TCSS & Lighting					
Road Furniture						
ER0800	ELV Installation					
PORTION A2						
Portion A2 Structures						
046 - Refuse Collection Point, Portion A2						
A04600	Excavation + Blinding (+ PL Test)					
A04610	Raft Foundation					
A04620	Superstructure w/2 water tank					
Test & Commission						
B04620	Submission & Issue of WW046 I, II, III (Inside Services & FS)					
048 - Reclaimed Water Pumping Station, Portion A2						
A04830	Sheet Piling as ELS for Basement 1					
A04840	Pile testing					
A04850	Excavation + Blinding for Basement 1					

■ Actual Work
■ Remaining Work
■ Critical
◆ Milestone

THREE MONTH ROLLING PROGRAMME
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HZMB HK Boundary Crossing Facilities - Vehicle Clearance Plazas and Ancillary Buildings and Facilities

14-Dec-16

Activity ID	Activity Name	2016		2017		
		Nov	Dec	Jan	Feb	Mar
Test & Commission						
B02620	Submission & Issue of WW046 I, II, III (Inside Services & FS)					
054 Inbound Fixed X-ray Building						
A05460	Finishing					
A05467	Energisation by CLP					
A05470	BS for Office Accommodation (Stage 8)					
A05480	BS + E&M for Office Accommodation (Stage 9)					
B05410	Lift Installation					
Completion of Fire Services Installation and Equipment (FCD)						
F05440	Approved Building Plans					
Waterworks Ordinance (WSD)						
G05410	Approval Letter and approved Drawings					
038 AFCD Office						
A03820	Substructure					
A03830	Super Structure; G/F to 1/F					
A03840	Super Structure; 1/F to 2/F (incl. parapet and planter wall)					
039 Police Main Building						
A03920	Substructure					
A03930	Super Structure; G/F to 1/F					
A03935	Super Structure; 1/F to 2/F (incl. parapet and planter wall)					
040 Incident Control Tower						
A04020	Substructure					
A04040	Super Structure					
A04050	Finishing (KD9)					
A04060	BS for Office Accommodation (Stage 8), & for TCSS works (KD14)					
Facade Cladding System						
B04010	Shop Drawing Submission and Approval					
B04020	Fabrication of F/C System					
Glass Wall						
C04010	Shop Drawing Submission and Approval					
C04020	Fabrication of Glass Wall					
102 HKPF UVSS Monitor Room						
A10220	Super Structure					
A10230	Finishing (False Ceiling) (KD9)					
A10240	BS for Office Accommodation (Stage 8)					
A10270	Other BS + E&M Installation					
Metal Canopy and Roof Installation						
B10210	Shop Drawing Submission and Approval					
B10212	Fabrication of MC/R					
103 Police Inspection Post						
A10310	Excavation + Blinding					
A10330	Raft Foundation					
A10340	Super Structure (Roof Slabs)					
A10350	Finishing (False Ceiling) (KD9)					
A10360	BS for Office Accommodation (Stage 8)					
HPL Composite Panel Cladding System						
B10310	Shop Drawing Submission and Approval					
057 Transformers (Zone 2)						
A05730	Superstructure					
A05740	Finishing					

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

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Activity ID	Activity Name	2016		2017		
		Nov	Dec	Jan	Feb	Mar
A05750	BS + E&M for Tx Room to CLP (Stage 4)			[Red bar]		
A05760	BS for Office Accomodation (Stage 8)			[Red bar]		
A05780	Other BS + E&M Installation			[Green bar]		
Completion of Fire Services Installation and Equipment (FCD)						
F05740	Provision of Approved Building Plans by the Engineer					◆ Provision of Approved Building Plans by the Engineer
DG License & EPD Generator Approval						
G05710	Approval Letter and approved Drawings					◆ Approval Letter and approved Drawings
107 - C&ED Mobile X-ray Operation Office (Cargo), Portion B						
C10710	Excavation + Blinding					
C10720	Raft Foundation	[Blue bar]	[Red bar]			
C10730	Superstructure (Roof Slabs)			[Red bar]		
113 - Field Kiosk for Access Control, Portion B						
B11320	Raft Foundation	[Blue bar]	[Red bar]			
B11330	Superstructure (Roof Beams & Slabs)			[Red bar]		
201 - Inbound Cargo Mobile X-ray Operation Area						
ER5740	Radiation Screen Wall Construction			[Green bar]		
205 - Inbound Private Car Mobile X-ray Operation Area						
ER5750	Radiation Screen Wall Construction			[Green bar]		
External Works for Portion B						
Works in Location 1.7A						
BB1480	ELV Works & T&C in Location 1.7A			[Red bar]		
Works in Location 1.7B						
BB1490	ELV Works & T&C in Location 1.7B			[Red bar]		
Drainage Works						
ED1540	Drainage Works (1130m & 60 MHs), Stage 1	[Blue bar]				
ED3580	Sewerage (275m & 8MHs), Stage 1	[Blue bar]				
ED5650	Drainage Works (1130m & 60MHs), Stage 2	[Blue bar]				
ED5660	Sewerage (300m & 8MHs), Stage 2	[Blue bar]				
ED5670	Drainage Works (1130m & 60MHs), Stage 3 (N/W)			[Red bar]		
ED5680	Sewerage (300m & 8MHs), Stage 3 (N/W)			[Red bar]		
Waterpipe Laying						
EW1550	Fresh Water Main Laying (472m), Stage 1 (S/W)	[Blue bar]	[Red bar]			
EW1560	Flushing Water Main Laying (460m), Stage 1 (S/W)	[Blue bar]	[Red bar]			
EW6080	Fresh Water Main Laying (500m), Stage 2 (S/E)			[Red bar]		
EW6090	Flushing Water Main Laying (460m), Stage 2 (S/E)			[Red bar]		
Duct Laying for Utilities/Telecom Cabling, TCSS & Lighting						
EU5300	Duct & Cable Laying for Utilities/Telecom, CLP, BS & ELV			[Red bar]		
EU5630	Access date s to Telephone Companies					◆ Access date s to Telephone Companies
Roadworks						
ER1640	Subbase (10000 ton), Stage 1 (N/W)			[Red bar]		
ER3590	Bitumen Pavement (14000 ton), Stage 1 (N/W)			[Green bar]		
ER3600	Rigid Pavement (594 m3), Footpath & EVA, Stage 1 (N/W)			[Green bar]		
ER5590	Subbase (11000 ton), Stage 2 (N/E)					[Red bar]
Sign Gantry ADS 306A & ADS 306B						
ES5230	Submission and approval for Sign Gantry	[Blue bar]				
ES5240	Fabrication & Delivery of Sign Gantries to Site			[Green bar]		
PORTION C						
Portion C Buildings						
010 - Inbound Coach Kiosk & Staff Subway Entrance						

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

14-Dec-16

Activity ID	Activity Name	2016		2017		
		Nov	Dec	Jan	Feb	Mar
A01010	Substructure and Staircase Construction			[Red bar]		
009 - Staff Subway Entrance (Bay 0 - 3) & Shuttle Bus Kiosks				[Red bar]		
A00940	Finishing		[Red bar]			
A00950	BS + E&M for AVCSS works (KD 1)		[Red bar]			
012 - DOH Disinsection Area and Store Room 1, at Portion C						
B01210	Excavation & Blinding			[Red bar]		
B01220	Raft Foundation			[Red bar]		
B01230	Superstructure				[Red bar]	
104 - DOH Secondary Screening Station, at Portion C						
A10420	Excavation & Blinding			[Red bar]		
A10430	Substructure			[Red bar]		
A10440	BS for Office Accomodation (Stage 8)				[Red bar]	
B10410	Other BS + E&M Installation				[Red bar]	
Facade Cladding System						
A10460	Shop Drawing Submission and Approval		[Red bar]			
A10465	Fabrication of F/C System			[Red bar]		
108 C&ED Mobile X-ray Machine Operation Office, Portion C						
A10805	Excavation & Blinding			[Red bar]		
A10810	Raft Foundation			[Red bar]		
A10840	Super Structure (Roof Beams & Slabs)				[Red bar]	
HPL Composite Panel Cladding System						
A10800	Shop Drawing Submission and Approval			[Red bar]		
A10815	Fabrication of HPL Cladding				[Red bar]	
110 IMMD Guard Booth (Type 2) East						
A11020	Excavation & Blinding			[Red bar]		
A11030	Substructure			[Red bar]		
A11080	Finishing				[Red bar]	
A11090	BS for Office Accomodation (Stage 8)				[Red bar]	
Facade Envelop Structure Installation						
A11040	Shop Drawing Submission and Approval		[Green bar]			
A11045	Fabrication of F/C System			[Green bar]		
111 Field Kiosk for Carpark Operator						
A11120	Excavation & Blinding			[Red bar]		
HPL Composite Panel Cladding System						
B11110	Shop Drawing Submission and Approval		[Green bar]			
B11120	Fabrication of HPL Cladding			[Green bar]		
113 - Field Kiosk for Access Control, Portion C						
C11310	Excavation & Blinding			[Red bar]		
C11320	Raft Foundation			[Red bar]		
C11330	Superstructure (Roof Beams & Slabs)				[Red bar]	
204 - Inbound Coach Exam Area & Mobile X-ray Operation						
ER5760	Radiation Screen Wall Construction			[Red bar]		
External Works for Portion C						
Works in Location 1, 2, 1, 8 & 011 - Emergency Generator Building						
BB1440	Works & T&C in Location 1.2		[Green bar]			
BB1460	ELV System Installation for Contract HY/2013/01		[Red bar]			
Drainage Works						
B00040	Initial Survey			[Red bar]		
SG2400	Drainage Works (400m & 18MHs), Stage 1 (Eastern)			[Red bar]		

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

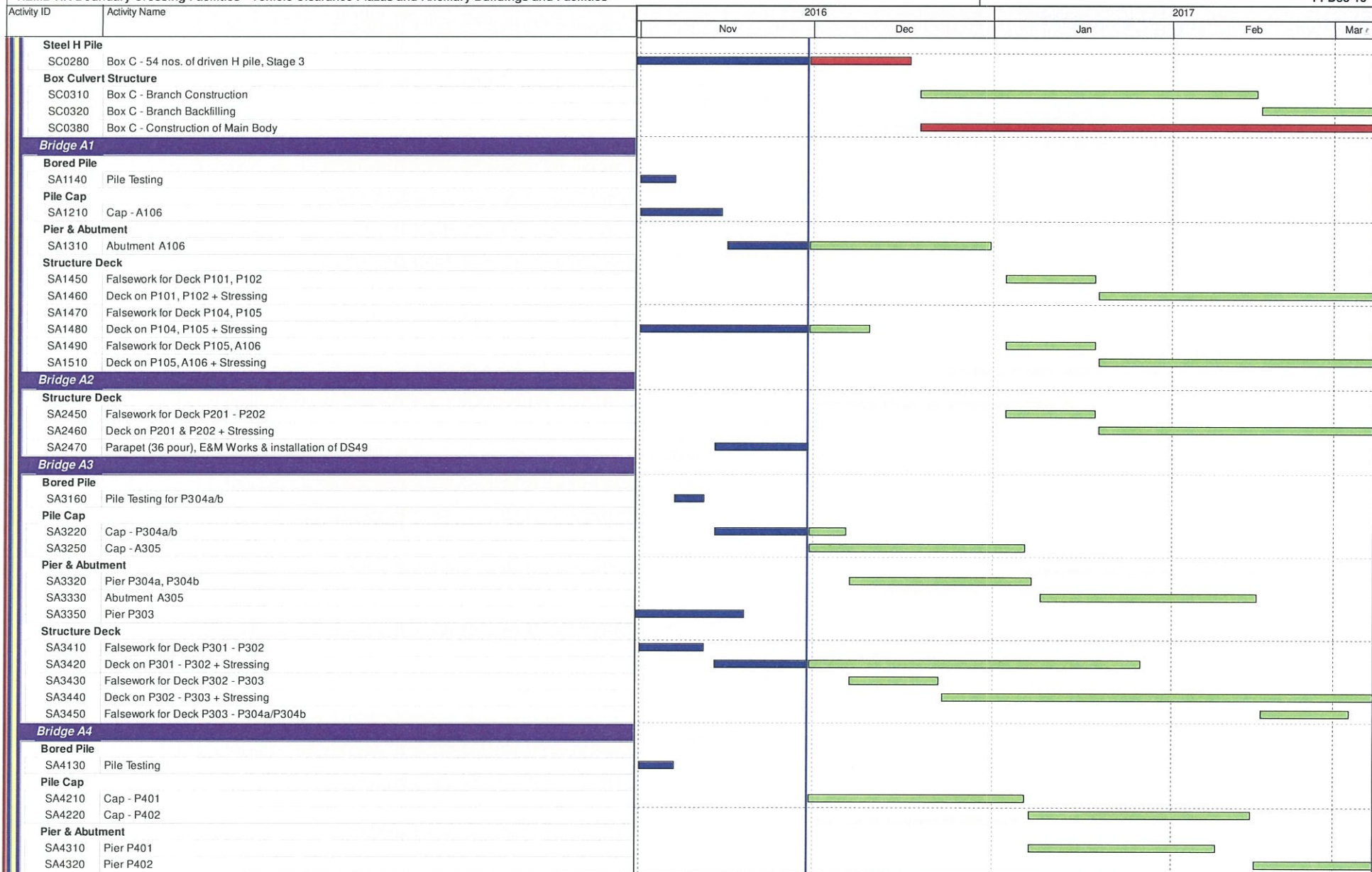
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Activity ID	Activity Name	2016		2017		
		Nov	Dec	Jan	Feb	Mar
SG3610	Sewerage (90m & 2MHs), Stage 1 (Eastern)			[Red bar]		
<i>Waterpipe Laying</i>						
SW2410	Fresh Water Main Laying (135m), Stage 1 (Eastern)				[Red bar]	
SW2420	Flushing Water Main Laying (50m), Stage 1 (Eastern)				[Red bar]	
<i>Duct Laying for Utilities/Telecom Cabling, TCSS & Lighting</i>						
SU5320	Duct & Cable Laying for Utilities/Telecom, CLP, BS & ELV				[Red bar]	
PORTION D						
Portion D Building						
<i>113 - Field Kiosk for Access Control, Portion D</i>						
C11360	Raft Foundation	[Blue bar]	[Red bar]			
C11370	Superstructure (Roof Beams & Slabs)			[Red bar]	[Red bar]	
D11340	BS for Office Accomodation (Stage 8)			[Red bar]	[Red bar]	
External Works for Portion D						
<i>Drainage Works</i>						
SG3640	Drainage Works (361m & 14MHs)			[Red bar]	[Red bar]	
SG3760	Sewerage (121m & 6MHs)			[Red bar]	[Red bar]	
<i>Waterpipe Laying</i>						
SW3650	Fresh Water Main Laying (108m)				[Red bar]	
<i>Duct Laying for Utilities/Telecom Cabling, TCSS & Lighting</i>						
B11480	ELV System Installation for Contract HY/2013/02		[Green bar]	[Green bar]	[Green bar]	
SU5340	Duct & Cable Laying for Utilities/Telecom, CLP, BS & ELV				[Green bar]	
SU5350	Duct & Cable Laying for TCSS & Lighting				[Red bar]	
<i>Works of Car Park Management System at Location 1.5, 1.6A & 1.6B</i>						
SR5540	Works & T&C for Car Park Management System at Location 1.5			[Red bar]	[Red bar]	
PORTION E						
006 - Shuttle Bus Kiosk & Staff Subway Entrance, at Portion E & M						
A00610	ELS + Blinding for Subway	[Blue bar]	[Red bar]			
A00620	Constructing base of Subway		[Red bar]	[Red bar]	[Red bar]	
A00630	Constructing wall stem + top slab of Subway			[Red bar]	[Red bar]	
External Works for Portion E						
<i>Drainage Works</i>						
B00060	Initial Survey	[Blue bar]				
SG3780	Drainage Works (99m & 5MHs)				[Red bar]	
SG3900	Sewerage (38m & 1 MH)				[Red bar]	
PORTION F						
External Works for Portion F						
<i>Drainage Works</i>						
B00070	Initial Survey			[Red bar]		
SG3930	Drainage Works (122m & 9MHs)			[Red bar]	[Red bar]	
SG4050	Sewerage (70m & 3MHs)			[Red bar]	[Red bar]	
<i>Waterpipe Laying</i>						
SW3940	Fresh Water Main Laying (205m)				[Red bar]	
<i>Duct Laying for Utilities/Telecom Cabling, TCSS & Lighting</i>						
SU5380	Duct & Cable Laying for Utilities/Telecom, CLP, BS & ELV				[Green bar]	
SU5390	Duct & Cable Laying for TCSS & Lighting				[Red bar]	
PORTION G, H1 & H2						
Portion G Structures						
<i>Box Culvert C</i>						

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VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES**

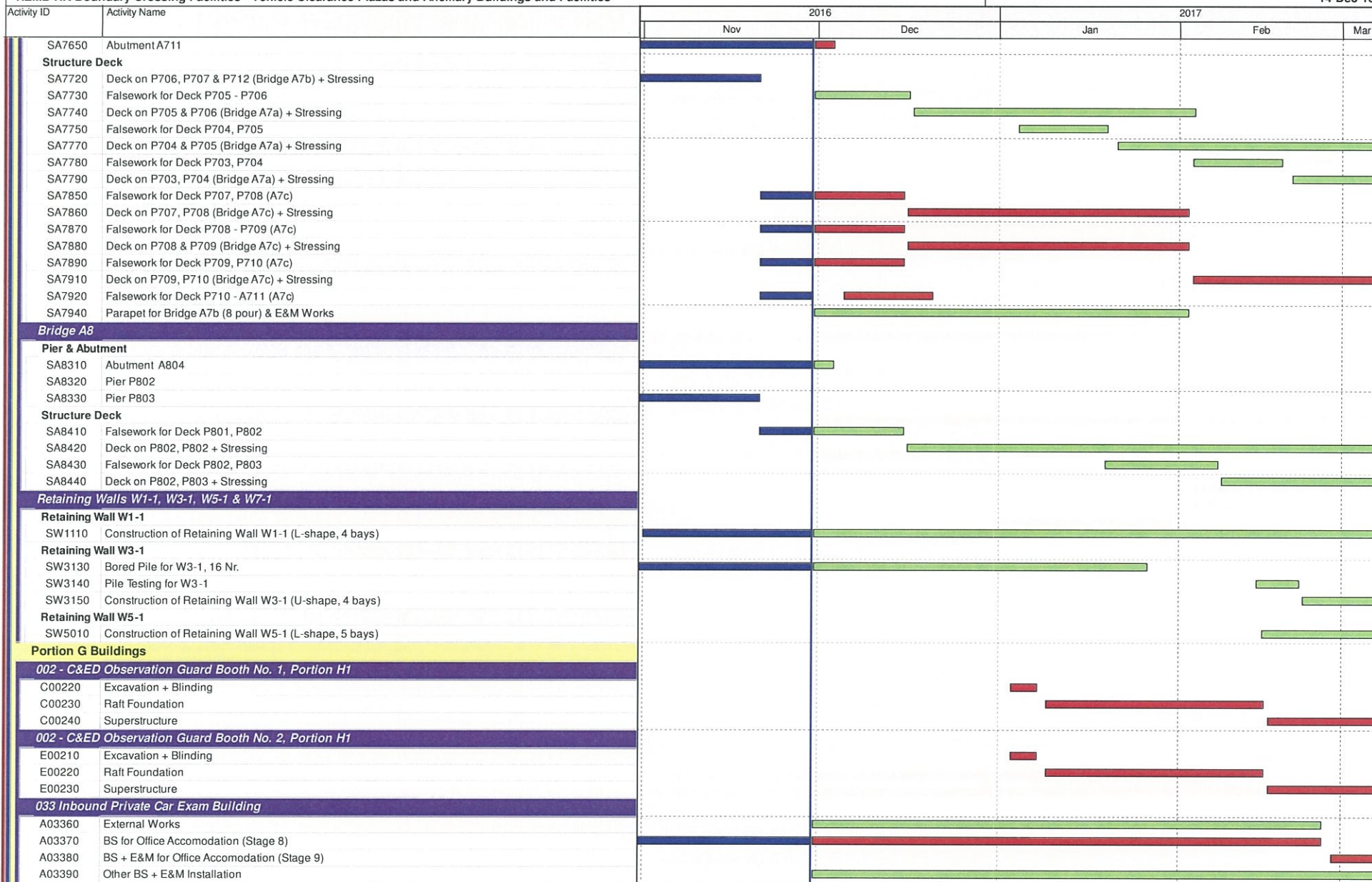
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Activity ID	Activity Name	2016		2017		
		Nov	Dec	Jan	Feb	Mar
Structure Deck						
SA4410	Falsework for Deck P502b, P401					
SA4420	Deck on P502b, P401 + Stressing					
Bridge A5						
Pile Cap						
SA5230	Cap - P503					
SA5240	Cap - P506					
SA5250	Cap - A501					
SA5260	Cap - P502a/b					
Pier & Abutment						
SA5310	Pier P504					
SA5320	Pier P505					
SA5330	Pier P503					
SA5340	Pier P506					
SA5350	Pier P507					
SA5360	Pier P502a/b					
SA5370	Abutment A501					
Structure Deck						
SA5410	Falsework for Deck P504 - P505					
SA5420	Deck on P504, P505 + Stressing					
SA5430	Falsework for Deck P503 - P504					
SA5440	Deck on P503, P504, + Stressing					
SA5450	Falsework for Deck P505 - P506					
SA5460	Deck on P505, P506 + Stressing					
SA5470	Falsework for Deck P502a, P502b, P503					
SA5510	Falsework for Deck P506 - P507					
Bridge A6						
Pier & Abutment						
SA6370	Abutment A607					
Structure Deck						
SA6410	Deck on P601, P602 + Stressing					
SA6430	Deck on P602, P603 + Stressing					
SA6450	Falsework for Deck P603 - P604					
SA6460	Deck on P603, P604 + Stressing					
SA6470	Falsework for Deck P604, P605					
SA6480	Deck on P604, P605 + Stressing					
SA6490	Falsework for Deck P605, P606					
SA6510	Deck on P605, P606 + Stressing					
Bridge A7a, A7b, A7c						
Bored Pile						
SA7230	Pile Testing for A701, P702, P703					
Pile Cap						
SA7360	Cap for P702					
SA7370	Cap for P703					
SA7380	Cap for A701					
Pier & Abutment						
SA7550	Pier P705					
SA7560	Pier P702					
SA7570	Pier P703					
SA7580	Abutment A701					

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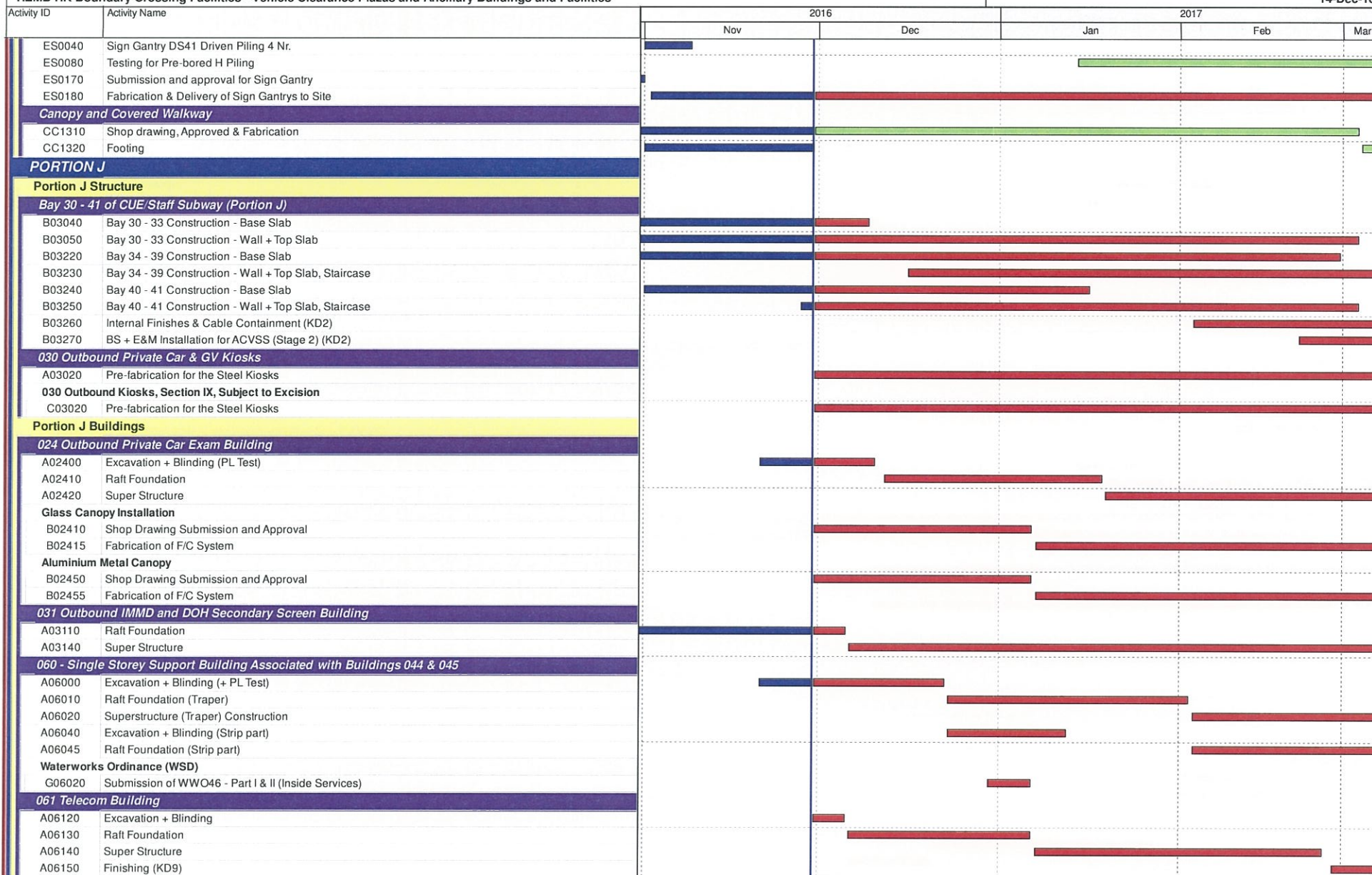
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		Nov	Dec	Jan	Feb	Mar
C03310	Submission & Issue of WW046 I, II, III (Inside Services & FS)					
Glass Canopy Installation						
B03300	Shop Drawing Submission and Approval					
B03305	Fabrication of Glass Canopy					
B03350	Casted-in Items Installation					
Aluminium Metal Canopy						
B03310	Shop Drawing Submission and Approval					
B03315	Fabrication of F/C System					
B03320	Casted-in Items Installation					
034 Satellite RCP South						
A03450	Finishing					
A03460	BS for Office Accommodation (Stage 8)					
A03470	BS + E&M for Office Accommodation (Stage 9)					
A03480	Other BS + E&M Installation					
Test & Commission						
C03410	Submission & Issue of WW046 I, II, III (Inside Services & FS)					
S S Facade Greenery System						
B03410	Shop Drawing Submission for Approval					
B03415	Fabrication of SS F/G System					
035 - Sewage Pumping Station, Portion G						
A03570	Constructing of Base Slab of Wet Well					
A03580	Constructing of Wall Stem of Wet Well					
A03590	Water-tightness Test for Wet Wells					
B03510	Backfilling + Removal of ELS					
B03520	ELS + Blinding for Basement Basement					
B03530	Constructing Base Slab of Basement					
B03540	Constructing Basement Wall & G/F Slab					
B03550	Water-tightness Test for Inlet Chamber					
B03560	Superstructure works					
051 Transformers (Zone 5)						
A05150	Finishing					
A05165	Energisation by CLP					
A05170	BS for Office Accommodations (KD9)					
A05190	Other BS + E & M Installation					
Completion of Fire Services Installation and Equipment (FCD)						
F05140	Approved Building Plans					
100 Inbound Traffic Control Kiosk						
A10050	Finishing					
HPL Composite Panel Cladding System						
B10010	Shop Drawing Submission and Approval					
B10015	Fabrication of F/C System					
112 Field Kiosk for Taxi Queuing Area						
A11230	Structure					
A11240	Finishing					
A11250	BS + E & M Installation					
External Works for Portion G, H1 & H2						
ELV Works within Portion H2 in the Hong Kong Side PT1						
EU1550	ELV Works within Portion H2 in the Hong Kong Side PT1 (KD19)					
Sign Gantry DS40, DS41 & DS75						
ES0020	Sign Gantry DS40 Pre-bored H Piling, 12 Nr.					

█ Actual Work
█ Remaining Work
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A06160	BS for Office Accommodations (KD9)					
Aluminium Metal Canopy						
B06110	Shop Drawing Submission and Approval					
B06115	Fabrication of Aluminium Cladding					
101 Outbound Traffic Control Kiosk						
A10100	Excavation + Blinding					
A10110	Raft Foundation					
A10130	Super Structure (Roof Beams & Slabs)					
A10140	Finishing					
A10150	BS + E&M for AVCSS Works (KD18A)					
A10160	BS + E&M for AVCSS Cabling (KD18B)					
A10170	BS for Office Accommodations (KD9)					
A10190	Other BS + E & M Installation					
C10110	Submission of WWO46 - Part I & II (Inside Services)					
HPL Composite Panel Cladding System						
B10110	Shop Drawing Submission and Approval					
B10120	Fabrication of HPL Cladding					
206 - Outbound Private Car Mobile X-ray Operation Area						
ER5780	Radiation Screen Wall Construction					
External Works for Portion J						
<i>Works in Location 1.7B</i>						
EU1500	ELV Works & T&C in Location 1.7B					
<i>Works in Location 1.7C</i>						
EU1530	ELV Works & T&C in Location 1.7C					
Drainage Works						
ED4220	Drainage Works (1700m & 86MHs), Stage 1 (Northern)					
ED4340	Sewerage (425m & 11MHs), Stage 1 (Northern)					
Waterpipe Laying						
EW4230	Fresh Water Main Laying (770m), Stage 1 (Northern)					
EW4240	Flushing Water Main Laying (431m), Stage 1 (Northern)					
Duct Laying for Utilities/Telecom Cabling, TCSS & Lighting						
EU5420	Duct & Cable Laying for Utilities/Telecom, CLP, BS & ELV					
EU5430	Duct & Cable Laying for TCSS & Lighting					
Sign Gantry DS104						
ES0140	Sign Gantry DS104 P-bored Piling, 8 Nr.					
ES5130	Testing for P-bored Piles					
ES5140	Submission and approval for Sign Gantry					
ES5150	Fabrication & Delivery of Sign Gantries to Site					
PORTION K, L, M, S & T						
Portion K Building						
002 - C&ED Observation Guard Booth No. 1, Portion K						
A00210	Excavation + Blinding					
A00220	Raft Foundation					
002 - C&ED Observation Guard Booth No. 2, Portion K						
B00210	Excavation + Blinding					
B00220	Raft Foundation					
Portion M Buildings						
108 - C&ED Mobile X-ray Operation Office, Portion M						
B10800	Excavation + Blinding					

- Actual Work
- Remaining Work
- Critical
- Milestone

**THREE MONTH ROLLING PROGRAMME
VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES**

Date	Revision	Checked	Approved
30-Sep-16	3MRP updated as of 30 Sep. 2016	ZJ	
31-Oct-16	3MRP updated as of 30 Oct. 2016	ZJ	
30-Nov-16	3MRP updated as of 30 Nov. 2016	ZJ	

Activity ID	Activity Name	2016		2017		
		Nov	Dec	Jan	Feb	Mar
B10810	Substructure (raft Foundation)					
B10840	Super Structure (Roof beams & Slabs)					
HPL Composite Panel Cladding System						
C10810	Shop Drawing Submission and Approval					
C10820	Fabrication of HPL Cladding					
104 DOH Screening Station, at Portion M						
C10400	Excavation + Blinding					
C10430	Structure (Raft Foundation)					
C10440	Finishing					
C10450	BS for Office Accommodations (KD9)					
Facade Envelop Structure Installation						
D10450	Shop Drawing Submission and Approval					
D10455	Fabrication of F/C System					
203 - Outbound Coach/Shuttle Bus Exam Area & Mobile X-ray Operation Area						
ER5770	Radiation Screen Wall Construction					
External Works						
Additional Works (Filling & RE Slope), SA1						
ED3120	Approval of RE Slope by GEO/AECOM					
ED3210	C1 Contractor to Completed cooling mains at east Portion (Stage1)					
ED3220	Removal of Access & Form another Temp. Access for Cooling Main					
ED3260	Consolidation of fill at the Platform					
ED3270	Remove surcharge at the edge of Platform (North, Portion S, KD32)					
ED3280	Remove surcharge at the Platform (East, Portion T, KD33)					
ED3310	C1 Contractor to Complete Footbridge Supports at the South Portion					
ED3320	Fill Platform from +11.5PD to near PCB (South)					
ED3330	Add surcharge to Platform at +14.5mPD near PCB (South)					
Construction of Slopes						
ED3510	Footing for the Planter Wall, RE slope (West)					
ED3520	Construct RE slope (West)					
ED3550	Construction of fill slope (North)					
Drainage Works						
ED4370	Drainage Works (1477m & 81MHs), Stage 1 (Eastern)					
ED4490	Sewerage (78m & 2MHs), Stage 1 (Eastern)					
Waterpipe Laying						
EW4380	Fresh Water Main Laying (608m), Stage 1 (Eastern)					
EW4390	Flushing Water Main Laying (13m), Stage 1 (Eastern)					
Duct Laying for Utilities/ Telecom Cabling, TCSS & Lighting						
EU5450	Duct & Cable Laying for TCSS & Lighting					
Canopy and Covered Walkway						
CC1400	Shop drawing, Approved & Fabrication					
PORTION N						
Portion N Structure						
Box Culvert B						
Bored Pile						
SB0560	Install H-piles					
SB0590	Box B - Bore Pile (20 nos.)					
Box Culvert Structure						
SB0710	Box B - Construction (Stage 1)					
SB0715	Handover from RC (1/11/16)					

■ Actual Work
■ Remaining Work
■ Critical
◆ Milestone

THREE MONTH ROLLING PROGRAMME
VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES
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30-Sep-16	3MRP updated as of 30 Sep. 2016	ZJ	
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Activity ID	Activity Name	2016		2017		
		Nov	Dec	Jan	Feb	Mar
SB0722	Box B - Temporary Works for Construction of Outfall Structure			[Red bar]		
Portion N Buildings						
104 DOH Screening Station, at Portion N						
Facade Envelop Structure Installation						
D10410	Shop Drawing Submission and Approval		[Green bar]			
D10415	Fabrication of F/C System			[Green bar]		
106 C&ED Detention Area Guard Booth						
A10600	Excavation + Blinding	[Red bar]				
A10610	Structure (Raft Foundation)		[Red bar]			
A10640	Finishing			[Red bar]		
E10640	BS for Office Accommodations (KD9)			[Red bar]		
E10660	Other BS + E & M Installation				[Green bar]	
Facade Envelop Structure Installation						
B10610	Shop Drawing Submission and Approval		[Green bar]			
B10615	Fabrication of F/C System			[Green bar]		
107 C&ED Mobile X-ray Operation Office, Portion N						
A10700	Excavation + Blinding		[Red bar]			
A10710	Substructure (Raft Foundation)			[Red bar]		
A10740	Super Structure				[Red bar]	
HPL Composite Panel Cladding System						
B10710	Shop Drawing Submission and Approval			[Green bar]		
B10720	Fabrication of HPL Composite Panel System				[Green bar]	
200 - Inbound/Outbound Vehicle Dectection Area						
ER5810	Construction of the Area and Access to the Interface Contractor			[Green bar]		
202 - Outbound Cargo Mobile X-ray Opearion Area						
ER5790	Radiation Screen Wall Construction		[Red bar]			
External Works for Portion N						
Works in Location 1.7A						
EU1540	ELV Works & T&C in Location 1.7A		[Red bar]			
Drainage Works						
AS0150	Initial Survey	[Red bar]				
ED4620	Drainage Works (964m & 56MHs), Stage 1 (Southern)		[Red bar]			
ED4650	Sewerage (383m & 12MHs), Stage 1 (Southern)		[Red bar]			
Duct Laying for Utilities/Telecom Cabling, TCSS & Lighting						
EU5470	Duct & Cable Laying for TCSS & Lighting			[Red bar]		
PORTION P						
Portion Structure						
Retaining Wall RW1						
RW1110	Construction of Retaining Wall RW1 (U-shape, 5 bays)		[Green bar]			
Portion P Buildings						
105 IMMD Guard Booth, Portion P						
A10510	Excavation + Blinding	[Red bar]				
A10520	Substructure (Raft Foundation)		[Red bar]			
A10530	On Grade Ground Slab			[Red bar]		
A10540	Finishing				[Red bar]	
E10500	BS for Office Accommodations (KD9)				[Red bar]	
E10510	BS + E&M for Office Accommodation (KD10)				[Red bar]	
E10520	Other BS + E & M Installation				[Green bar]	
Facade Envelop Structure Installation						

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VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES**

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Activity ID	Activity Name	2016		2017		
		Nov	Dec	Jan	Feb	Mar*
A10560	Shop Drawing Submission and Approval					
A10565	Fabrication of F/C System					
External Works for Portion P						
Drainage Works						
AS0160	Initial Survey					
ED4670	Drainage Works (2957m & 128MHs)					
ED4790	Sewerage (269m & 7MHs)					
Waterpipe Laying						
EW4680	Fresh Water Main Laying (1270m)					
EW4690	Flushing Water Main Laying (455m)					
PORTION Q						
External Works for Portion Q						
Duct Laying for Utilities/Telecom Cabling, TCSS & Lighting						
ED5570	Duct & Cable Laying for Utilities/Telecom, CLP, BS & ELV					
ED5580	Duct & Cable Laying for TCSS & Lighting					
EU1490	ELV System Installation for Contract HY/2013/04					
Roadworks						
AS0170	Initial Survey					
ER4920	Subbase (104 ton)					
ER4950	Bitumen Pavement (215 ton)					
Railing						
ER4890	Railing					
Road Furniture						
ER4900	Road Furniture					
PORTION R						
Portion R Building						
002 - C&ED Observation Guard Booth, Portion R						
D00210	Excavation + Blinding					
D00220	Raft Foundation					
D00230	Superstructure					
External Works for Portion R						
Drainage Works						
AS0180	Initial Survey					
Landscape Works						
A5170	Design and Procurement for Irrigation System					
A5180	Installation of Irrigation System					
A5190	All landscape Soft & Hard Works					

- Actual Work
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VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES**

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30-Sep-16	3MRP updated as of 30 Sep. 2016	ZJ	
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Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	2015												2016				2017				2018				2019	
						Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2					
Hong Kong-Zhuhai_Macao Bridge Hong Kong Boundary Crossin						1266	31-Jul-15 A	30-Jan-19	0																						
Key Dates						901	31-Jul-15 A	30-Jan-18	0																						
A1000	Acceptance of Contract	0	31-Jul-15 A			◆ Acceptance of Contract, 31-Jul-15 A																									
A1010	Commencement of Works	0	14-Aug-15*			◆ Commencement of Works, 14-Aug-15*																									
A1020	Excision of Phase 2 (Section II & III)	365	14-Aug-15	12-Aug-16	0	Excision of Phase 2 (Section II & III)																									
A1120	KD1 (Phase 1 / Section I) (28 Kiosks)	0	0	24-Jul-17*	0	◆ KD1 (Phase 1 / Section I) (28 Kiosks)																									
A1470	KD2 (Phase 2 / Section II) (2 Kiosks)	0	0	02-Oct-17*	0	◆ KD2 (Phase 2 / Section II) (2 Kiosks)																									
A1480	KD3 (Phase 2 / Section III) (42 Kiosks)	0	0	30-Jan-18*	0	◆ KD3 (Phase 2 / Section III) (42 Kiosks)																									
Interface Activities						430	14-Aug-15	16-Oct-16	128																						
A6860	Interface Management Plan Submission between C6 and C1	212	14-Aug-15	12-Mar-16	154	Interface Management Plan Submission between C6 and C1																									
A6865	Interface Management Plan between C6 and C1 reviewed by Engineer	14	13-Mar-16	26-Mar-16	154	□ Interface Management Plan between C6 and C1 reviewed by Engineer																									
A6870	Detailed Interface Document Submission between C6 and C1	30	27-Mar-16	25-Apr-16	154	□ Detailed Interface Document Submission between C6 and C1																									
A6875	Detailed Interface Document between C6 and C1 reviewed by Engineer	14	26-Apr-16	09-May-16	154	□ Detailed Interface Document between C6 and C1 reviewed by Engineer																									
A6880	Interface Management Plan Submission between C6 and C3	262	14-Aug-15	01-May-16	76	Interface Management Plan Submission between C6 and C3																									
A6885	Interface Management Plan between C6 and C3 reviewed by Engineer	14	02-May-16	15-May-16	76	□ Interface Management Plan between C6 and C3 reviewed by Engineer																									
A6890	Detailed Interface Document Submission between C6 and C3	30	16-May-16	14-Jun-16	76	□ Detailed Interface Document Submission between C6 and C3																									
A6895	Detailed Interface Document between C6 and C3 reviewed by Engineer	14	15-Jun-16	28-Jun-16	76	□ Detailed Interface Document between C6 and C3 reviewed by Engineer																									
A6900	Interface Management Plan Submission between C6 and C8	372	14-Aug-15	19-Aug-16	128	Interface Management Plan Submission between C6 and C8																									
A6905	Interface Management Plan between C6 and C8 reviewed by Engineer	14	20-Aug-16	02-Sep-16	128	□ Interface Management Plan between C6 and C8 reviewed by Engineer																									
A6910	Detailed Interface Document Submission between C6 and C8	30	03-Sep-16	02-Oct-16	128	□ Detailed Interface Document Submission between C6 and C8																									
A6915	Detailed Interface Document between C6 and C8 reviewed by Engineer	14	03-Oct-16	16-Oct-16	128	□ Detailed Interface Document between C6 and C8 reviewed by Engineer																									
Site and Facility Inspection						424	26-Apr-16	23-Jun-17	586																						
A4730	Pre Site and Facility Inspection by Contractor at Location 1 - Deg1	7	26-Apr-16*	02-May-16	154	□ Pre Site and Facility Inspection by Contractor at Location 1 - Deg1																									
A4740	Joint Site and Facility Inspection with Interface Contractor at Location 1 - Deg1	7	03-May-16	09-May-16	154	□ Joint Site and Facility Inspection with Interface Contractor at Location 1 - Deg1																									
A4760	Pre Site and Facility Inspection by Contractor at Location 2 - Deg1	7	25-Jun-16*	01-Jul-16	94	□ Pre Site and Facility Inspection by Contractor at Location 2 - Deg1																									
A4770	Joint Site and Facility Inspection with Interface Contractor at Location 2 - Deg1	7	02-Jul-16*	08-Jul-16	94	□ Joint Site and Facility Inspection with Interface Contractor at Location 2 - Deg1																									
A4772	Pre Site and Facility Inspection by Contractor at Location 2 - Deg2	7	14-Aug-16*	20-Aug-16	122	□ Pre Site and Facility Inspection by Contractor at Location 2 - Deg2																									
A4774	Joint Site and Facility Inspection with Interface Contractor at Location 2 - Deg2	7	21-Aug-16	27-Aug-16	122	□ Joint Site and Facility Inspection with Interface Contractor at Location 2 - Deg2																									
A4775	Joint Site and Facility Inspection with Interface Contractor at Location 2 for Server Installation	7	21-Aug-16*	27-Aug-16	122	□ Joint 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	7	03-Sep-16*	09-Sep-16	87	□ Pre Site and Facility Inspection by Contractor at Location 3 - Deg1																									
A4790	Joint Site and Facility Inspection with Interface Contractor at Location 3 - Deg1	7	10-Sep-16	16-Sep-16	87	□ Joint Site and Facility Inspection with Interface Contractor at Location 3 - Deg1																									
A4800	Pre Site and Facility Inspection by Contractor at Location 3 - Deg2	7	31-Jan-17*	06-Feb-17	0	□ Pre Site and Facility Inspection by Contractor at Location 3 - Deg2																									
A4810	Joint Site and Facility Inspection with Interface Contractor at Location 3 - Deg2	7	07-Feb-17	13-Feb-17	0	□ Joint Site and Facility Inspection with Interface Contractor at Location 3 - Deg2																									
A4820	Pre Site and Facility Inspection by Contractor at Location 3a - Deg1	7	03-Sep-16*	09-Sep-16	115	□ Pre Site and Facility Inspection by Contractor at Location 3a - Deg1																									
A4830	Joint Site and Facility Inspection with Interface Contractor at Location 3a - Deg1	7	10-Sep-16	16-Sep-16	115	□ Joint Site and Facility Inspection with Interface Contractor at Location 3a - Deg1																									
A4840	Pre Site and Facility Inspection by Contractor at Location 3a - Deg2	7	22-Nov-16*	28-Nov-16	70	□ Pre Site and Facility Inspection by Contractor at Location 3a - Deg2																									
A4850	Joint Site and Facility Inspection with Interface Contractor at Location 3a - Deg2	7	29-Nov-16	05-Dec-16	70	□ Joint Site and Facility Inspection with Interface Contractor at Location 3a - Deg2																									
A4851	Joint Site and Facility Inspection with Interface Contractor at Location 3a for Server Installation	7	29-Nov-16*	05-Dec-16	119	□ Joint 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	7	11-Jan-17*	17-Jan-17	20	□ Pre Site and Facility Inspection by Contractor at Location 4 - Deg1																									
A4870	Joint Site and Facility Inspection with Interface Contractor at Location 4 - Deg1	7	18-Jan-17	24-Jan-17	20	□ Joint Site and Facility Inspection with Interface Contractor at Location 4 - Deg1																									
A4880	Pre Site and Facility Inspection by Contractor at Location 4 - Deg2	7	10-Jun-17*	16-Jun-17	586	□ Pre Site and Facility Inspection by Contractor at Location 4 - Deg2																									
A4890	Joint Site and Facility Inspection with Interface Contractor at Location 4 - Deg2	7	17-Jun-17	23-Jun-17	586	□ Joint Site and Facility Inspection with Interface Contractor at Location 4 - Deg2																									
A4891	Pre Site and Facility Inspection by Contractor at Location 4a - Deg1	7	11-Jan-17*	17-Jan-17	41	□ Pre Site and Facility Inspection by Contractor at Location 4a - Deg1																									

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	Original Duration	Start	Finish	Total Float	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	7	18-Jan-17	24-Jan-17	41																					
A4900	Pre Site and Facility Inspection by Contractor at Location 4a - Deg2	7	21-Apr-17*	27-Apr-17	0																					
A4910	Joint Site and Facility Inspection with Interface Contractor at Location 4a - Deg2	7	28-Apr-17	04-May-17	0																					
A4920	Pre Site and Facility Inspection by Contractor at Location 5 - Deg1	7	15-Jun-16*	21-Jun-16	76																					
A4930	Joint Site and Facility Inspection with Interface Contractor at Location 5 - Deg1	7	22-Jun-16	28-Jun-16	76																					
A4940	Pre Site and Facility Inspection by Contractor at Location 5 - Deg2	7	02-Nov-16*	08-Nov-16	121																					
A4950	Joint Site and Facility Inspection with Interface Contractor at Location 5 - Deg2	7	09-Nov-16	15-Nov-16	121																					
A4960	Pre Site and Facility Inspection by Contractor at Location 6 - Deg1	7	03-Sep-16*	09-Sep-16	59																					
A4970	Joint Site and Facility Inspection with Interface Contractor at Location 6 - Deg1	7	10-Sep-16	16-Sep-16	59																					
A4980	Pre Site and Facility Inspection by Contractor at Location 6 - Deg2	7	23-Oct-16*	29-Oct-16	131																					
A4990	Joint Site and Facility Inspection with Interface Contractor at Location 6 - Deg2	7	30-Oct-16	05-Nov-16	131																					
A5000	Pre Site and Facility Inspection by Contractor at Location 7 - Deg1	7	26-Apr-16*	02-May-16	126																					
A5010	Joint Site and Facility Inspection with Interface Contractor at Location 7 - Deg1	7	03-May-16	09-May-16	126																					
A5020	Pre Site and Facility Inspection by Contractor at Location 8 - Deg1	7	03-Oct-16*	09-Oct-16	128																					
A5030	Joint Site and Facility Inspection with Interface Contractor at Location 8 - Deg1	7	10-Oct-16	16-Oct-16	128																					
A5040	Pre Site and Facility Inspection by Contractor at Location 8 - Deg2	7	02-May-17*	08-May-17	0																					
A5050	Joint Site and Facility Inspection with Interface Contractor at Location 8 - Deg2	7	09-May-17	15-May-17	0																					
A5060	Pre Site and Facility Inspection by Contractor at Location 9 - Deg1	7	01-Jan-17*	07-Jan-17	64																					
A5070	Joint Site and Facility Inspection with Interface Contractor at Location 9 - Deg1	7	08-Jan-17	14-Jan-17	64																					
A5080	Pre Site and Facility Inspection by Contractor at Location 9 - Deg2	7	21-May-17*	27-May-17	0																					
A5090	Joint Site and Facility Inspection with Interface Contractor at Location 9 - Deg2	7	28-May-17	03-Jun-17	0																					
A5100	Pre Site and Facility Inspection by Contractor at Location 10 - Deg1	7	22-Nov-16*	28-Nov-16	30																					
A5110	Joint Site and Facility Inspection with Interface Contractor at Location 10 - Deg1	7	29-Nov-16	05-Dec-16	30																					
A5120	Pre Site and Facility Inspection by Contractor at Location 10 - Deg2	7	31-Jan-17*	06-Feb-17	40																					
A5130	Joint Site and Facility Inspection with Interface Contractor at Location 10 - Deg2	7	07-Feb-17	13-Feb-17	40																					
A5140	Pre Site and Facility Inspection by Contractor at Location 11 - Deg1	7	03-Sep-16*	09-Sep-16	70																					
A5150	Joint Site and Facility Inspection with Interface Contractor at Location 11 - Deg1	7	10-Sep-16	16-Sep-16	70																					
A5160	Pre Site and Facility Inspection by Contractor at Location 11 - Deg2	7	22-Nov-16*	28-Nov-16	140																					
A5170	Joint Site and Facility Inspection with Interface Contractor at Location 11 - Deg2	7	29-Nov-16	05-Dec-16	140																					
A5180	Pre Site and Facility Inspection by Contractor at Location 12 - Deg1	7	03-Sep-16*	09-Sep-16	0																					
A5190	Joint Site and Facility Inspection with Interface Contractor at Location 12 - Deg1	7	10-Sep-16	16-Sep-16	0																					
A5200	Pre Site and Facility Inspection by Contractor at Location 12 - Deg2	7	22-Nov-16*	28-Nov-16	33																					
A5210	Joint Site and Facility Inspection with Interface Contractor at Location 12 - Deg2	7	29-Nov-16	05-Dec-16	33																					
A5220	Pre Site and Facility Inspection by Contractor at Location 13 - Deg1	7	22-Nov-16*	28-Nov-16	0																					
A5230	Joint Site and Facility Inspection with Interface Contractor at Location 13 - Deg1	7	29-Nov-16	05-Dec-16	0																					
A5240	Pre Site and Facility Inspection by Contractor at Location 13 - Deg2	7	31-Jan-17*	06-Feb-17	0																					
A5250	Joint Site and Facility Inspection with Interface Contractor at Location 13 - Deg2	7	07-Feb-17	13-Feb-17	0																					
A5260	Pre Site and Facility Inspection by Contractor at Location 14 - Deg1	7	01-Apr-17*	07-Apr-17	68																					
A5270	Joint Site and Facility Inspection with Interface Contractor at Location 14 - Deg1	7	08-Apr-17	14-Apr-17	68																					
A5300	Pre Site and Facility Inspection by Contractor at Location 15 - Deg1	7	03-Sep-16*	09-Sep-16	206																					
A5310	Joint Site and Facility Inspection with Interface Contractor at Location 15 - Deg1	7	10-Sep-16	16-Sep-16	206																					
A5320	Pre Site and Facility Inspection by Contractor at Location 15 - Deg2	7	22-Nov-16*	28-Nov-16	140																					
A5330	Joint Site and Facility Inspection with Interface Contractor at Location 15 - Deg2	7	29-Nov-16	05-Dec-16	140																					
A5340	Pre Site and Facility Inspection by Contractor at Location 16 - Deg1	7	03-Sep-16*	09-Sep-16	227																					
A5350	Joint Site and Facility Inspection with Interface Contractor at Location 16 - Deg1	7	10-Sep-16	16-Sep-16	227																					

Programme No.: HZMB-DWP Data Date: 14-Aug-15	<ul style="list-style-type: none"> 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)		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Date</th> <th>Revision</th> <th>Checked</th> <th>Approved</th> </tr> <tr> <td>14-Nov-16</td> <td>Rev: 0</td> <td>WC</td> <td>LC</td> </tr> </table>	Date	Revision	Checked	Approved	14-Nov-16	Rev: 0	WC	LC
Date	Revision	Checked	Approved									
14-Nov-16	Rev: 0	WC	LC									

Activity ID	Activity Name	Original Duration	Start	Finish	Total Float	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)	0	05-May-17*		0																		
A1170	Location 5(Common Utility Enclosure & Staff Subway)-Deg1 (320d)	0	29-Jun-16*		76																		
A1180	Location 5(Common Utility Enclosure & Staff Subway)-Deg2 (-)	0	16-Nov-16*		121																		
A1190	Location 6(Common Utility Enclosure & Staff Subway)-Deg1 (400d)	0	17-Sep-16*		59																		
A1200	Location 6(Common Utility Enclosure & Staff Subway)-Deg2 (-)	0	06-Nov-16*		131																		
A1210	Location 7(Common Utility Enclosure & Staff Subway)-Deg1 (270d)	0	10-May-16*		126																		
A1230	Location 8(Inbd Private Car Annex (025))-Deg1 (430d)	0	17-Oct-16*		128																		
A1240	Location 8(Inbd Private Car Annex (025))-Deg2 (580d)	0	16-May-17*		0																		
A1241	Location 8(Inbd Private Car Annex (025) Canopy)-Deg1 (430d)	0	17-Oct-16*		128																		
A1242	Location 8(Inbd Private Car Annex (025) Canopy)-Deg2 (580d)	0	16-May-17*		625																		
A1250	Location 9(Outbd Private Car Annex (032))-Deg1 (520d)	0	15-Jan-17*		64																		
A1260	Location 9(Outbd Private Car Annex (032))-Deg2 (660d)	0	04-Jun-17*		0																		
A1261	Location 9(Outbd Private Car Annex (032) Canopy)-Deg1 (520d)	0	15-Jan-17*		64																		
A1262	Location 9(Outbd Private Car Annex (032) Canopy)-Deg2 (660d)	0	04-Jun-17*		606																		
A1270	Location 10(Shuttle Bus Kiosks (006))-Deg1 (480d)	0	06-Dec-16*		30																		
A1280	Location 10(Shuttle Bus Kiosks (006))-Deg2 (550d)	0	14-Feb-17*		40																		
A1281	Location 10(Shuttle Bus Kiosks (006) Canopy)-Deg1 (480d)	0	06-Dec-16*		70																		
A1282	Location 10(Shuttle Bus Kiosks (006) Canopy)-Deg2 (550d)	0	14-Feb-17*		716																		
A1290	Location 11(Outbd Coach Kiosks (009))-Deg1 (400d)	0	17-Sep-16*		190																		
A1300	Location 11(Outbd Coach Kiosks (009))-Deg2 (480d)	0	06-Dec-16*		140																		
A1301	Location 11(Outbd Coach Kiosks (009) Canopy)-Deg1 (400d)	0	17-Sep-16*		190																		
A1302	Location 11(Outbd Coach Kiosks (009) Canopy)-Deg2 (480d)	0	06-Dec-16*		786																		
A1303	Location 11(Inbd Coach Kiosks (010))-Deg1 (400d)	0	17-Sep-16*		70																		
A1304	Location 11(Inbd Coach Kiosks (010))-Deg2 (480d)	0	06-Dec-16*		198																		
A1305	Location 11(Inbd Coach Kiosks (010) Canopy)-Deg1 (400d)	0	17-Sep-16*		220																		
A1306	Location 11(Inbd Coach Kiosks (010) Canopy)-Deg2 (480d)	0	06-Dec-16*		786																		
A1310	Location 12(Inbd Private Car Kiosks(027))-Deg1 (400d)	0	17-Sep-16*		34																		
A1311	Location 12(Inbd Private Car Kiosks(027))-Deg2 (480d)	0	06-Dec-16*		23																		
A1312	Location 12(Inbd Private Car Kiosks(027) Canopy)-Deg1 (400d)	0	17-Sep-16*		24																		
A1313	Location 12(Inbd Private Car Kiosks(027) Canopy)-Deg2 (480d)	0	06-Dec-16*		786																		
A1314	Location 12(Inbd GV Kiosks (028))-Deg1 (400d)	0	17-Sep-16*		0																		
A1315	Location 12(Inbd GV Kiosks (028))-Deg2 (480d)	0	06-Dec-16*		78																		
A1316	Location 12(Inbd GV Kiosks (028) Canopy)-Deg1 (400d)	0	17-Sep-16*		0																		
A1317	Location 12(Inbd GV Kiosks (028) Canopy)-Deg2 (480d)	0	06-Dec-16*		786																		
A1318	Location 12(Outbd GV Kiosks (029))-Deg1 (400d)	0	17-Sep-16*		48																		
A1319	Location 12(Outbd GV Kiosks (029))-Deg2 (480d)	0	06-Dec-16*		33																		
A1320	Location 12(Outbd GV Kiosks (029) Canopy)-Deg1 (400d)	0	17-Sep-16*		48																		
A1321	Location 12(Outbd GV Kiosks (029) Canopy)-Deg2 (480d)	0	06-Dec-16*		786																		
A1330	Location 13(Outbd Private Car Kiosks (030))-Deg1 (480d)	0	06-Dec-16*		0																		
A1340	Location 13(Outbd Private Car Kiosks (030))-Deg2 (550d)	0	14-Feb-17		0																		
A1341	Location 13(Outbd Private Car Kiosks (030) Canopy)-Deg1 (480d)	0	06-Dec-16*		0																		
A1342	Location 13(Outbd Private Car Kiosks (030) Canopy)-Deg2 (550d)	0	14-Feb-17*		716																		
A1350	Location 14(Future-Outbd/Inbd Private Car Kiosks)-Deg1 (610d)	0	15-Apr-17*		68																		
A1370	Location 15(Inbd Traffic Control Kiosk (100))-Deg1 (400d)	0	17-Sep-16*		206																		
A1380	Location 15(Inbd Traffic Control Kiosk (100))-Deg2 (480d)	0	06-Dec-16*		140																		

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						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	3	02-Nov-15*	04-Nov-15	1183																		
A4600	Excavation for underground drainage pipe	1	04-Nov-15*	04-Nov-15	1183																		
A4610	Evenly spread the asphalt scrap material by backhoe	3	05-Nov-15*	07-Nov-15	1180																		
A4620	Cast concrete for the u-channel and underground drainage pipe	1	05-Nov-15*	05-Nov-15	1182																		
A4630	Remove the u-channel framework	1	06-Nov-15*	06-Nov-15	1181																		
A4640	Installation of chain-link fencing along the site boundary	2	06-Nov-15*	07-Nov-15	1180																		
A4650	Installation of access doors	1	07-Nov-15*	07-Nov-15	1180																		
A4660	Excavation for drainage ditch	3	06-Nov-15*	09-Nov-15	1010																		
A4670	Cast concrete for the drainage ditch	1	10-Nov-15*	10-Nov-15	1177																		
A4680	Compact the asphalt scrap material	2	09-Nov-15*	10-Nov-15	1177																		
A4690	Land surveying	1	11-Nov-15*	11-Nov-15	1174																		
A4700	Inspection of chain-link fencing and access doors	1	12-Nov-15*	12-Nov-15	1174																		
A4710	Testing of drains	1	13-Nov-15*	13-Nov-15	1174																		
A4720	Completion of the works	0	14-Nov-15		1174																		
Detailed Design Specification		365	14-Aug-15	12-Aug-16	0	12-Aug-16, Detailed Design Specification																	
A1808	Preliminary System Proposal Submission	28	14-Aug-15	10-Sep-15	0	Preliminary System Proposal Submission																	
A1809	Engineer's agreement with preliminary system proposal	45	11-Sep-15	25-Oct-15	0	Engineer's agreement with preliminary system proposal																	
A1810	Draft Detailed Design Specification (DDS) Submission	48	26-Oct-15	12-Dec-15	0	Draft Detailed Design Specification (DDS) Submission																	
A1814	Draft Hardware Function Design Specification for Computer system and Network system (HFD)	48	26-Oct-15	12-Dec-15	0	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)	48	26-Oct-15	12-Dec-15	0	Draft Software Function Design Specification for Computer system and Network system (SFD)																	
A1820	Engineer's Review and Approval for Draft Detailed Design Specification (DDS)	60	13-Dec-15*	10-Feb-16	0	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)	60	13-Dec-15*	10-Feb-16	0	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)	60	13-Dec-15*	10-Feb-16	0	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 IMMDD (AVCS)	29	01-Feb-16*	29-Feb-16	0	Interface Requirements for CED (LBS, CED IT Server, Metro-Ethernet) and IMMDD (AVCS)																	
A1830	Final DDS Submission (AVCSS, VTS, VIDS)(Phase 1/Section I)	30	01-Mar-16	30-Mar-16	0	Final DDS Submission (AVCSS, VTS, VIDS)(Phase 1/Section I)																	
A1831	Development of System Security Plan	49	11-Feb-16	30-Mar-16	0	Development of System Security Plan																	
A1840	Engineer's Review and Approval for Final DDS Submission including System Security Plan (AVCSS)(Phase 1/Section I)	30	31-Mar-16	29-Apr-16	0	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)	60	30-Apr-16	28-Jun-16	0	Final DDS Submission (AVCSS)(Phase 2/Section II&III)																	
A1860	Engineer's Review and Approval for DDS Submission (AVCSS)(Phase 2/Section II&III)	45	29-Jun-16*	12-Aug-16	0	Engineer's Review and Approval for DDS Submission (AVCSS)(Phase 2/Section II&III)																	
Construction Design and Management		60	07-May-16	05-Jul-16	52	05-Jul-16, Construction Design and Management																	
A6920	Construction Health and Safety Plan Submission	30	07-May-16*	05-Jun-16	52	Construction Health and Safety Plan Submission																	
A6930	Construction Health and Safety Plan reviewed by Engineer	30	06-Jun-16	05-Jul-16	52	Construction Health and Safety Plan reviewed by Engineer																	
Supply/Manufacture Mock-up items		82	30-Apr-16	20-Jul-16	51	20-Jul-16, Supply/Manufacture Mock-up items																	
A4749	Preparation of Kiosk equipment Mock-up	68	30-Apr-16	06-Jul-16	51	Preparation of Kiosk equipment Mock-up																	
A4750	Installation of Kiosk equipment Mock-up	14	07-Jul-16	20-Jul-16	51	Installation of Kiosk equipment Mock-up																	
Supply/Manufacture prototypes		60	30-Apr-16	28-Jun-16	0	28-Jun-16, Supply/Manufacture prototypes																	
A2900	Manufacture LED Display Prototype (VID, ODB and XDB)	60	30-Apr-16	28-Jun-16	0	Manufacture LED Display Prototype (VID, ODB and XDB)																	
A2910	Manufacture All-In-One Panel Prototype (AIOP)	60	30-Apr-16	28-Jun-16	0	Manufacture All-In-One Panel Prototype (AIOP)																	
Software Design, Coding and Testing		407	11-Apr-16	22-May-17	0	22-May-17, Software Design, Coding and Testing																	

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						Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	
Coding						270	11-Apr-16	05-Jan-17	0	05-Jan-17, Coding									
A5460	CCS, SURCON, SYSCON, CDBS Development Stage 1	70	11-Apr-16*	19-Jun-16	0	CCS, SURCON, SYSCON, CDBS Development Stage 1													
A5500	VTS Development Stage 1	70	11-Apr-16*	19-Jun-16	0	VTS Development Stage 1													
A5510	VIDS Development Stage 1	64	11-Apr-16*	13-Jun-16	15	VIDS Development Stage 1													
A5540	CCS, SURCON, SYSCON, CDBS Development Stage 2	170	20-Jul-16	05-Jan-17	0	CCS, SURCON, SYSCON, CDBS Development Stage 2													
A5580	VTS Development Stage 2	170	20-Jul-16	05-Jan-17	0	VTS Development Stage 2													
A5590	VIDS Development Stage 2	162	28-Jul-16	05-Jan-17	0	VIDS Development Stage 2													
Software System Integration						388	30-Apr-16	22-May-17	0	22-May-17, Software System Integration									
A5520	Test Plan Documentation Submission	237	30-Apr-16	22-Dec-16	0	Test Plan Documentation Submission													
A5530	Engineer's Review and Approval for Test Plan Documentation Submission	14	23-Dec-16	05-Jan-17	0	Engineer's Review and Approval for Test Plan Documentation Submission													
A5600	Software System Integration Test	45	06-Jan-17	19-Feb-17	0	Software System Integration Test													
A5630	CCS/SYSCON/SURCON/CDBS/VTS/VIDS Software Enhancement	50	20-Feb-17	10-Apr-17	0	CCS/SYSCON/SURCON/CDBS/VTS/VIDS Software Enhancement													
A5640	Software User Acceptance Test (UAT)	42	11-Apr-17	22-May-17	0	Software User Acceptance Test (UAT)													
Prototype & Software Simulation Tests						133	30-Apr-16	09-Sep-16	0	09-Sep-16, Prototype & Software Simulation Tests									
A1910	Prototype Test Document	30	30-Apr-16	29-May-16	6	Prototype Test Document													
A2130	Engineer's Approval for Testing Document	15	30-May-16	13-Jun-16	6	Engineer's Approval for Testing Document													
A2920	CCWS with CDBS, SURCON and SYSCON (Software Simulation/ Software Integration Test)	30	20-Jun-16	19-Jul-16	0	CCWS with CDBS, SURCON and SYSCON (Software Simulation/ Software Integration Test)													
A2930	Vehicle Tracking System (VTS) (Software Simulation/ Software Integration Test)	30	20-Jun-16	19-Jul-16	0	Vehicle Tracking System (VTS) (Software Simulation/ Software Integration Test)													
A2950	LED Displays (VID, ODB and XDB)	29	29-Jun-16*	27-Jul-16	0	LED Displays (VID, ODB and XDB)													
A2960	All-In-One Panel (AIOP)	29	29-Jun-16*	27-Jul-16	0	All-In-One Panel (AIOP)													
A3020	Prototype Testing Report Submission	30	28-Jul-16	26-Aug-16	0	Prototype Testing Report Submission													
A4350	Engineer's Approval for Prototype Testing Report	14	27-Aug-16	09-Sep-16	0	Engineer's Approval for Prototype Testing Report													
Procurement - Phase 1 / Section I						242	30-Apr-16	27-Dec-16	0	27-Dec-16, Procurement - Phase 1 / Section I									
A3070	Procurement of Equipment for Phase 1/Section I	242	30-Apr-16	27-Dec-16	0	Procurement of Equipment for Phase 1/Section I													
A3080	Procurement of Cable and Accessories for Phase 1 /Section I	122	30-Apr-16	29-Aug-16	0	Procurement of Cable and Accessories for Phase 1 /Section I													
A3990	Procurement of All Servers and Workstations	242	30-Apr-16	27-Dec-16	0	Procurement of All Servers and Workstations													
Supply/Manufacture products for FAT						62	10-Sep-16	10-Nov-16	0	10-Nov-16, Supply/Manufacture products for FAT									
A2980	Supply/Manufacture LED Display (ODB, VID and XDB) for FAT	54	10-Sep-16	02-Nov-16	0	Supply/Manufacture LED Display (ODB, VID and XDB) for FAT													
A2990	Supply/Manufacture All-In-One Panel (AIOP) for FAT	62	10-Sep-16	10-Nov-16	0	Supply/Manufacture All-In-One Panel (AIOP) for FAT													
A3000	Supply/Manufacture off-the-shelf equipment for FAT	50	10-Sep-16	29-Oct-16	0	Supply/Manufacture off-the-shelf equipment for FAT													
Factory Acceptance Test (FAT)						94	10-Sep-16	12-Dec-16	0	12-Dec-16, Factory Acceptance Test (FAT)									
A2120	FAT Procedure Document	36	10-Sep-16	15-Oct-16	0	FAT Procedure Document													
A2121	Engineer's Approval for FAT Procedure Document	14	16-Oct-16	29-Oct-16	0	Engineer's Approval for FAT Procedure Document													
A3050	FAT for Licence Plate Recognition System (LPRS)	2	30-Oct-16	31-Oct-16	0	FAT for Licence Plate Recognition System (LPRS)													
A3060	FAT for PA/Intercom	2	01-Nov-16	02-Nov-16	0	FAT for PA/Intercom													
A3090	FAT for ODB	2	03-Nov-16	04-Nov-16	0	FAT for ODB													
A3100	FAT for XDB	2	03-Nov-16	04-Nov-16	0	FAT for XDB													
A3110	FAT for VID	2	03-Nov-16	04-Nov-16	0	FAT for VID													
A3120	FAT for Video Management System (VMS)	2	05-Nov-16	06-Nov-16	0	FAT for Video Management System (VMS)													
A3130	FAT for Vehicle Tracking System (VTS)	2	07-Nov-16	08-Nov-16	0	FAT for Vehicle Tracking System (VTS)													
A3140	FAT for Communication Network (CMN)	2	09-Nov-16	10-Nov-16	0	FAT for Communication Network (CMN)													
A3150	FAT for All-In-One Panel (AIOP)	2	11-Nov-16	12-Nov-16	0	FAT for All-In-One Panel (AIOP)													
A3160	FAT for AVCSS System Test	2	13-Nov-16	14-Nov-16	0	FAT for AVCSS System Test													
A4360	FAT Report Submission	14	15-Nov-16	28-Nov-16	0	FAT Report Submission													

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						Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	
A2093	VTWS Installation	49	14-Feb-17	03-Apr-17	0																		
A2094	VID WS Installation	49	14-Feb-17	03-Apr-17	0																		
A2096	SURCON, SYSCON, WS Tuning	49	04-Apr-17	22-May-17	0																		
Location 3a(Inbd Cargo Exam Bldg Main Server Room)		133	10-Jan-17	22-May-17	0																		
A3330	Cable Laying and termination in Location 3 and Location 3a	35	10-Jan-17	13-Feb-17	0																		
A3340	AVCSS Server Installation	30	04-Apr-17	03-May-17	0																		
A3350	VTWS Server Installation	30	04-Apr-17	03-May-17	0																		
A3360	Servers Tuning	19	04-May-17	22-May-17	0																		
Location 4(Outbd Cargo Exam Bldg (023) MDF Room)		21	14-Feb-17	06-Mar-17	0																		
A3410	Cable Laying and termination between CUE and Location 4	21	14-Feb-17	06-Mar-17	0																		
Location 4 and 4a(Outbd Cargo Exam Bldg (023) ROCARS Room)		77	07-Mar-17	22-May-17	0																		
A3370	Cable Laying and termination in Location 4 and 4a	35	07-Mar-17	10-Apr-17	0																		
A3380	AVCSS SYSCON, SURCON and Intercom Installation	14	05-May-17	18-May-17	0																		
A3390	VTWS Installation	14	05-May-17	18-May-17	0																		
A3400	SYSCON, SURCON, WS Tuning	4	19-May-17	22-May-17	0																		
Location 5(Common Utility Enclosure & Staff Subway)		131	13-Sep-16	21-Jan-17	68																		
A3430	Cable Laying between Location 5 and Location 7	28	13-Sep-16	10-Oct-16	0																		
A3440	Cable Laying between Location 5 and Location 6	28	15-Nov-16	12-Dec-16	0																		
A3480	ODB Switch Installation at EL Room 2-7	14	08-Jan-17	21-Jan-17	68																		
Location 6(Common Utility Enclosure & Staff Subway)		42	15-Nov-16	26-Dec-16	94																		
A3450	Cable Laying between Location 5 and Location 6	28	15-Nov-16	12-Dec-16	0																		
A3490	ODB Switch Installation at EL Room 8-9,11-12	14	13-Dec-16	26-Dec-16	94																		
Location 7(Common Utility Enclosure & Staff Subway)		28	13-Sep-16	10-Oct-16	0																		
A3470	Cable Laying between Location 5 and Location 7	28	13-Sep-16	10-Oct-16	0																		
Location 12(Inbd Private Car Kiosks,GV Kiosks (027,028,029))		195	17-Sep-16	31-Mar-17	0																		
Inbd Private Car Kiosks(027) - 9 nos (Phase 1)		134	11-Oct-16	22-Feb-17	0																		
A2452	Cable Containment in Kiosks	14	11-Oct-16	24-Oct-16	0																		
A2453	Cable Laying and termination	10	25-Oct-16	03-Nov-16	0																		
A2454	Cable Splicing, Testing and Labeling	65	04-Nov-16	07-Jan-17	0																		
A2460	AVCSS/DOH/MOM Kiosk Equipment Installation (9 nos)	45	08-Jan-17	21-Feb-17	0																		
A2470	ODB & XDB installation (9 nos)	16	06-Feb-17	21-Feb-17	0																		
A4380	Inbd Private Car Kiosk Installation Complete	0	22-Feb-17		0																		
Inbd Goods Vehicle Kiosks(028) - 5 nos (Phase 1)		195	17-Sep-16	31-Mar-17	0																		
A2532	Cable Containment in Kiosks	14	17-Sep-16	30-Sep-16	0																		
A2533	Cable Laying and termination	10	01-Oct-16	10-Oct-16	0																		
A2534	Cable Splicing, Testing and Labeling	134	11-Oct-16	21-Feb-17	0																		
A2540	AVCSS/DOH/MOM Kiosk Equipment Installation (5 nos)	37	22-Feb-17	30-Mar-17	0																		
A2550	A/OP Installation (5 nos)	37	22-Feb-17	30-Mar-17	0																		
A2560	ODB & XDB installation (5 nos)	37	22-Feb-17	30-Mar-17	0																		
A4390	Inbd Goods Vehicle Kiosks Installation Complete	0	31-Mar-17		0																		
Outbd Goods Vehicle Kiosks(029) - 5 nos (Phase 1)		147	04-Nov-16	31-Mar-17	0																		
A2572	Cable Containment in Kiosks	14	04-Nov-16	17-Nov-16	0																		
A2573	Cable Laying and termination	10	18-Nov-16	27-Nov-16	0																		
A2574	Cable Splicing, Testing and Labeling	41	28-Nov-16	07-Jan-17	0																		
A2580	AVCSS/DOH/MOM Kiosk Equipment Installation (5 nos)	37	08-Jan-17	13-Feb-17	0																		

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A4140	Outbound VID field equipment installation (8 VID)	32	03-Apr-17	04-May-17	0																	■ Outbound VID field equipment installation (8 VID);									
A4150	Outbound VTS field equipment installation (3 RFID + 3 Cameras)	16	11-Apr-17	26-Apr-17	0																	■ Outbound VTS field equipment installation (3 RFID + 3 Cameras)									
A4170	Outbound TLS field equipment installation (4 TLS)	8	27-Apr-17	04-May-17	0																	■ Outbound TLS field equipment installation (4 TLS)									
A4180	Outbound VID, VTS and TLS field equipment tuning	18	05-May-17	22-May-17	0																	■ Outbound VID, VTS and TLS field equipment tuning									
Underground Ducting between Inbd Cargo Exam Bldg (037) and CUE						35	08-Jan-17	11-Feb-17	0																	▼ 11-Feb-17, Underground Ducting between Inbd Cargo Exam Bldg (037) and CUE					
A3810	Cable Laying and termination (note: Access Date by C03)	35	08-Jan-17	11-Feb-17	0																	■ Cable Laying and termination (note: Access Date by C03)									
Underground Ducting between Inbd Cargo Exam Bldg (037) and Inbd Vehicle Clea						26	12-Feb-17	09-Mar-17	0																	▼ 09-Mar-17, Underground Ducting between Inbd Cargo Exam Bldg (037) and In					
A3830	Cable Laying and termination (note: Access Date by C03)	26	12-Feb-17	09-Mar-17	0																	■ Cable Laying and termination (note: Access Date by C03)									
Underground Ducting between CUE and Outbd Car Exam Bldg (023)						24	10-Mar-17	02-Apr-17	0																	▼ 02-Apr-17, Underground Ducting between CUE and Outbd Car Exam Bldg (0					
A3850	Cable Laying and termination (note: Access Date by C03)	24	10-Mar-17	02-Apr-17	0																	■ Cable Laying and termination (note: Access Date by C03)									
Underground Ducting Between Outbd Cargo Exam Bldg (023) and Outbd Vehicle i						24	03-Apr-17	26-Apr-17	0																	▼ 26-Apr-17, Underground Ducting Between Outbd Cargo Exam Bldg (023)					
A3870	Cable Laying and termination (note: Access Date by C03)	24	03-Apr-17	26-Apr-17	0																	■ Cable Laying and termination (note: Access Date by C03)									
Underground Ducting between CUE and Outbd Vehicle Clearance Plaza						26	27-Apr-17	22-May-17	0																	▼ 22-May-17, Underground Ducting between CUE and Outbd Vehicle Clea					
A3890	Cable Laying and termination (note: Access Date by C03)	26	27-Apr-17	22-May-17	0																	■ Cable Laying and termination (note: Access Date by C03)									
On-Site Test and Commissioning (Phase 1 / Section I)						128	15-Jan-17	22-May-17	0																	▼ 22-May-17, On-Site Test and Commissioning (Phase 1 / Section I)					
A2150	Testing & Commissioning Documents Submission (8 weeks before Testings carried out)	30	15-Jan-17*	13-Feb-17	84																	■ Testing & Commissioning Documents Submission (8 weeks before Testings carrie									
A2151	Engineer Approval for T&C Document	14	14-Feb-17	27-Feb-17	84																	■ Engineer Approval for T&C Document									
A2152	Joint Site Inspection for Permanent Power/Tele-communication for Initial on-site testing	14	17-Mar-17*	30-Mar-17	0																	■ Joint Site Inspection for Permanent Power/Tele-communication for Initial on-s									
A2153	Initial on-site Testing & Commissioning	53	31-Mar-17	22-May-17	0																	■ Initial on-site Testing & Commissioning									
Site Acceptance Test (Phase 1 / Section I)						94	17-Apr-17	19-Jul-17	0																	▼ 19-Jul-17, Site Acceptance Test (Phase 1 / Section I)					
A6601	Interface Readiness CED(LBS, CED IT, Metro-Ethernet) and IMMD (AVS)	36	17-Apr-17*	22-May-17	0																	■ Interface Readiness CED(LBS, CED IT, Metro-Ethernet) and IMMD (AV									
A6602	SAT for AVCSS	28	23-May-17	19-Jun-17	0																	■ SAT for AVCSS									
A6603	SAT for Location 18 (AVCSS SURCON and 55" LCD)	5	30-Jun-17	04-Jul-17	0																	■ SAT for Location 18 (AVCSS SURCON and 55" LCD)									
A6630	SAT Test Document Submission	30	20-Jun-17	19-Jul-17	0																	■ SAT Test Document Submission									
A6640	Software Manual Documentations Submission	30	20-Jun-17	19-Jul-17	0																	■ Software Manual Documentations Submission									
Security Risk Assessment and Audit						58	23-May-17	19-Jul-17	0																	▼ 19-Jul-17, Security Risk Assessment and Audit					
A6800	SRAA (Assessment)	9	23-May-17	31-May-17	0																	■ SRAA (Assessment)									
A6810	Fix per SRAA Assessment	40	01-Jun-17	10-Jul-17	0																	■ Fix per SRAA Assessment									
A6820	SRAA Audit	9	11-Jul-17	19-Jul-17	0																	■ SRAA Audit									
Operability Period Test (Phase 1 / Section I)						37	13-Jun-17	19-Jul-17	0																	▼ 19-Jul-17, Operability Period Test (Phase 1 / Section I)					
A5610	Joint Site Inspection for utilities, telecom connection and metro ethernet for OPT	7	13-Jun-17*	19-Jun-17	0																	■ Joint Site Inspection for utilities, telecom connection and metro ethernet									
A5620	Operability Period Test (OPT) Phase 1	15	20-Jun-17	04-Jul-17	0																	■ Operability Period Test (OPT) Phase 1									
A5650	Operability Period Test (OPT) Phase 2	15	05-Jul-17	19-Jul-17	0																	■ Operability Period Test (OPT) Phase 2									
Completion (Phase 1 /Section I)						5	20-Jul-17	24-Jul-17	0																	▼ 24-Jul-17, Completion (Phase 1 /Section I)					
A2230	AVCSS - Certificate of Completion (Phase 1/Section I)	5	20-Jul-17	24-Jul-17	0																	■ AVCSS - Certificate of Completion (Phase 1/Section I)									
A2231	Certificate of Completion Approval by Engineer	0		24-Jul-17	0																	◆ Certificate of Completion Approval by Engineer									
Training and Document (Phase 1 /Section I)						140	21-Feb-17	10-Jul-17	14																	▼ 10-Jul-17, Training and Document (Phase 1 /Section I)					
A2180	Training Materials & Documentation Submission	30	21-Feb-17*	22-Mar-17	14																	■ Training Materials & Documentation Submission									
A2190	Operation and Maintenance Training	110	23-Mar-17	10-Jul-17	14																	■ Operation and Maintenance Training									
Operation (Phase 1 /Section I)						0	25-Jul-17	25-Jul-17	0																	▼ 25-Jul-17, Operation (Phase 1 /Section I)					
A2240	Site Operation (Phase 1/Section I)	0		25-Jul-17	0																	◆ Site Operation (Phase 1/Section I), 25-Jul-17									
Engineering Support for Phase 1 / Section I						190	25-Jul-17	30-Jan-18	0																	▼ 30-Jan-18, Engineering Support for Phase 1 / S					

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- Actual Level of Effort
- Actual Work
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- Critical Remaining Work
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- 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	Original Duration	Start	Finish	Total Float	2015			2016				2017			2018				2019		
						Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2				
A2623	Cable Laying and termination	20	06-Mar-17	25-Mar-17	0																	
A2630	AVCSS/DOH/MOM Kiosk Equipment Installation (4 nos)	30	26-Mar-17	24-Apr-17	0																	
A4460	Shuttle Bus Kiosks Installation Complete	0	25-Apr-17		0																	
	Outbd Coach Kiosks (009) - 4 nos (Phase 2)	58	26-Mar-17	23-May-17	0																	
A2662	Cable Containment	15	26-Mar-17	09-Apr-17	0																	
A2663	Cable Laying and termination	15	10-Apr-17	24-Apr-17	0																	
A2670	AVCSS/DOH/MOM Kiosk Equipment Installation (4 nos)	28	25-Apr-17	22-May-17	0																	
A4470	Outbd Coach Kiosks Installation Complete	0	23-May-17		0																	
	Inbd Private Car Kiosks (027) - 12 nos (Phase 2)	208	26-Nov-16	22-Jun-17	0																	
A2742	Cable Containment	40	26-Nov-16	04-Jan-17	0																	
A2743	Cable Laying and termination	40	05-Jan-17	13-Feb-17	0																	
A2744	Cable Splicing, Testing and Labeling	8	14-Feb-17	21-Feb-17	0																	
A2750	AVCSS/DOH/MOM Kiosk Equipment Installation (12 nos)	84	22-Feb-17	16-May-17	0																	
A2760	Kiosk Equipment Configuration (12 nos)	36	17-May-17	21-Jun-17	0																	
A4490	Inbd Private Car Kiosks Installation Complete	0	22-Jun-17		0																	
	Outbd Private Car Kiosks (030) - 12 nos (Phase 2)	198	06-Dec-16	22-Jun-17	0																	
A2782	Cable Containment	40	06-Dec-16	14-Jan-17	0																	
A2783	Cable Laying and termination	40	15-Jan-17	23-Feb-17	0																	
A2784	Cable Splicing, Testing and Labeling	35	24-Feb-17	30-Mar-17	0																	
A2790	AVCSS/DOH/MOM Kiosk Equipment Installation (12 nos)	83	31-Mar-17	21-Jun-17	0																	
A4500	Outbd Private Car Kiosks Installation Complete	0	22-Jun-17		0																	
	Inbd Goods Vehicle Kiosks (028) - 3 nos (Phase 2)	85	21-Mar-17	14-Jun-17	1																	
A2822	Cable Containment	15	21-Mar-17	04-Apr-17	0																	
A2823	Cable Laying and termination	10	05-Apr-17	14-Apr-17	0																	
A2825	Kiosk Equipment Configuration (3 nos)	38	15-Apr-17	22-May-17	0																	
A2830	AVCSS/DOH/MOM Kiosk Equipment Installation (3 nos)	22	23-May-17	13-Jun-17	0																	
A4510	Inbd Goods Vehicle Kiosks Installation Complete	0	14-Jun-17		1																	
	Outbd Goods Vehicle Kiosks (029) - 3 nos (Phase 2)	133	24-Feb-17	07-Jul-17	0																	
A2862	Cable Containment	15	24-Feb-17	10-Mar-17	0																	
A2863	Cable Laying and termination	10	11-Mar-17	20-Mar-17	0																	
A2865	Cable Splicing, Testing and Labeling	86	21-Mar-17	14-Jun-17	0																	
A2870	AVCSS/DOH/MOM Kiosk Equipment Installation (3 nos)	22	15-Jun-17	06-Jul-17	0																	
A4520	Outbd Goods Vehicle Kiosks Installation Complete	0	07-Jul-17		0																	
	Inbd Coach Kiosks (010) - 4 nos (Phase 2)	73	25-Apr-17	07-Jul-17	0																	
A2702	Cable Containment	15	25-Apr-17	09-May-17	0																	
A2703	Cable Laying and termination	15	10-May-17	24-May-17	0																	
A2705	Kiosk Equipment Configuration (4 nos)	28	25-May-17	21-Jun-17	0																	
A2710	AVCSS/DOH/MOM Kiosk Equipment Installation (2 nos)	15	22-Jun-17	06-Jul-17	0																	
A2720	AVCSS/DOH/MOM Kiosk Equipment Installation (2 nos)	15	22-Jun-17	06-Jul-17	0																	
A4480	Inbd Coach Kiosks Installation Complete	0	07-Jul-17		0																	
	Underground Ducting between CUE and Shuttle Bus Kiosk (006)	40	05-Jan-17	13-Feb-17	0																	
A3970	Cable Laying and termination (note: Access Date by C03)	40	05-Jan-17	13-Feb-17	0																	
	Underground Ducting between PCB(001) and Inbd Coach Kiosks(010)	40	26-Nov-16	04-Jan-17	0																	
A3930	Cable Laying and termination (note: Access Date by C03)	40	26-Nov-16	04-Jan-17	0																	
	Test and Commissioning (Phase 2 / Section III)	203	07-Jul-17	25-Jan-18	0																	

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Report No.: 0165/15/ED/0647

Appendix D

Event / Action Plan

Appendix D –

Event / Action Plan for Air Quality and Noise Monitoring

Event / Action Plan for Air Quality

Event	Action			
	ET	IEC	ER	Contractor
Action Level				
1. Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform IEC and ER; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method.	1. Notify Contractor.	1. Rectify any unacceptable practice; 2. Amend working methods if appropriate.

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

Event	Action			
	ET	IEC	ER	Contractor
Limit Level				
1. Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures; 2. Inform ER, Contractor and EPD; 3. Repeat measurement to confirm finding; 4. Increase monitoring frequency to daily; 5. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results.	1. Check monitoring data submitted by ET; 2. Check Contractor's working method; 3. Discuss with ET and Contractor on possible remedial measures; 4. Advise the ER on the effectiveness of the proposed remedial measures; 5. Supervise implementation of remedial measures.	1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Ensure remedial measures properly implemented.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Amend proposal if appropriate.

Event	Action			
	ET	IEC	ER	Contractor
2. Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> 1. Notify IEC, ER, Contractor and EPD; 2. Identify source; 3. Repeat measurement to confirm findings; 4. Increase monitoring frequency to daily; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Arrange meeting with IEC and ER to discuss the remedial actions to be taken; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring. 	<ol style="list-style-type: none"> 1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; 3. Supervise the implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. In consultation with the IEC, agree with the Contractor on the remedial measures to be implemented; 4. Ensure remedial measures properly implemented; 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by the ER until the exceedances abated.

Event / Action Plan for Construction Noise Monitoring

Event	Action			
	ET	IEC	ER	Contractor
Action Level	<ol style="list-style-type: none"> 1. Notify IEC and Contractor; 2. Identify source, investigate the causes of exceedance and propose remedial measures; 3. Report the results of investigation to the IEC,ER and Contractor; 4. Discuss with the Contractor and formulate remedial measures; 5. Increase monitoring frequency to check mitigation effectiveness. 	<ol style="list-style-type: none"> 1. Review the analysed results submitted by the ET; 2. Review the proposed remedial measures by the Contractor and advise the ER accordingly; 3. Supervise the implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Require Contractor to propose remedial measures for the analysed noise problem; 4. Ensure remedial measures are properly implemented. 	<ol style="list-style-type: none"> 1. Submit noise mitigation proposals to IEC; 2. Implement noise mitigation proposals.

Event	Action			
	ET	IEC	ER	Contractor
Limit Level	<ol style="list-style-type: none"> 1. Inform IEC, ER, EPD and Contractor; 2. Identify source; 3. Repeat measurements to confirm findings; 4. Increase monitoring frequency; 5. Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; 6. Inform IEC, ER and EPD the causes and actions taken for the exceedances; 7. Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; 8. If exceedance stops, cease additional monitoring. 	<ol style="list-style-type: none"> 1. Discuss amongst ER, ET, and Contractor on the potential remedial actions; 2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; 3. Supervise the implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing; 2. Notify Contractor; 3. Require Contractor to propose remedial measures for the analysed noise problem; 4. Ensure remedial measures properly implemented; 5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Resubmit proposals if problem still not under control; 5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

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Appendix E

Waste Flow Table



Monthly Summary of Waste Flow Table for 2016 (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	Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Metals	Paper/ cardboard packaging	Plastics	Chemical Waste	Others, e.g. general refuse
		(see Note 1)						(see Note 2)		
	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000 Kg)	(in '000 Kg)	(in '000 Kg)	(in '000 Kg)	(in '000m ³)
Jan	0.000	0	0	0	0.000	0	0.992	0	0	0.073
Feb	0.000	0	0	0	0.000	0	0	0	0	0.093
Mar	0.087	0	0	0	0.087	0	0.392	0	0	0.200
Apr	0.184	0	0	0	0.184	0	0.411	0	0	0.224
May	0.203	0	0	0	0.203	0	0	0	0	0.293
Jun	0.244	0	0	0	0.244	0	0.413	0	0	0.322
Jul	2.429	0	0	0	2.429	0	0.419	0	0	0.312
Aug	0.057	0	0	0	0.057	0	0.340	0	0	0.288
Sept	0.000	0	0	0	0.000	0	0	0	0	0.327
Oct	0.379	0	0	0	0.379	0	0.400 ⁽³⁾	0	0	0.332
Nov	0.229	0	0	0	0.229	0	0	0	0	0.644
Dec										
Total	3.812	0.000	0.000	0.000	3.812	0.000	3.367	0.000	0.000	3.108

Notes:

- (1) Broken concrete for recycling into aggregates.
- (2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.
- (3) 0.400 (in '000 Kg) of paper/cardboard packaging was updated compared to previous monthly report.

Monthly Summary of Excavated Marine Sediment for 2016 (year)

Month	Total Quantity of Excavated Marine Sediment Generated in '000m ³	Reused in this contract in '000m ³	Reused in other Projects in '000m ³	Disposed of at CMP in '000m ³
Jan	1.950	0	0	1.950
Feb	2.328	0	0	2.328
Mar	2.464	0	0	2.464
Apr	5.602	0	0	5.602
May	0	0	0	0
Jun	4.584	0	0	4.584
Jul	10.728	0	0	10.728
Aug	1.544	0	0	1.544
Sep	6.816	0	0	6.816
Oct	2.376	0	0	2.376
Nov	0	0	0	0
Dec				
Total	38.392	0.000	0.000	38.392

Project name 工程項目名稱 :HKBCF-AVCSS HY/2013/06

Location 工程地點:Artificial Island of HKIAP

Year:2016

Month	Inert C&D Waste disposal 墮性廢物(in tonnes) (see Note 1)						Non-inert C&D Waste disposal / 非墮性廢物 (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.) / 墮性廢物(如泥, 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				
	(b)		(c)		(d)		(e)		(in tonnes)		(in tonnes)		(in tonnes)		(in litre)		(a)=(b+c+d+e)		
	Est./ 估計數量	Act./ (實際數量)	Est./ 估計數量	Act./ (實際數量)	Est./ 估計數量	Act./ (實際數量)	Est./ 估計數量	Act./ (實際數量)	Est./ 估計數量	Act./ (實際數量)	Est./ 估計數量	Act./ (實際數量)	Est./ 估計數量	Act./ (實際數量)	Est./ 估計數量	Act./ (實際數量)	Est./ 估計數量	Act./ (實際數量)	
January																			
February																			
March																			
April																			
May																			
June																			
July																			
August																			
September	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.002	0.002	N/A	N/A	0.002	0.002
October	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.002	0.002	N/A	N/A	0.002	0.002
November	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.001	0.001	N/A	N/A	0.001	0.001
December																			
Total	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.005	0.000	0.000	0.005	0.005

Notes: (1) The quantiles of C&D Materials, in tonne, was calculated by multiply the estimated volume, in m3, with the density of the soil, which is 1.5 gcm⁻³.

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Report No.: 0165/15/ED/0647

Appendix F

Environmental Licenses and Permits

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

(update: 05/12/2016)

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	Ref No. 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	Ref No. 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)	WT00022391-2015	Main Site Area	06-May-15	04-Sep-15	04-Sep-15	30-Sep-20	Superseded	
9	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	
10	Construction Noise Permit Pursuant to Section 8(6) of the Noise Control Ordinance	GW-RS0933-16	Main Site Area	18-Aug-16	01-Sep-16	05-Sep-16	31-Dec-16	Valid	
11	Construction Noise Permit Pursuant to Section 8(6) of the Noise Control Ordinance	GW-RS0960-16	Main Site Area	06-Sep-16	15-Sep-16	19-Sep-16	18-Dec-16	Valid	
12	Construction Noise Permit Pursuant to Section 8(6) of the Noise Control Ordinance	PP-RS0028-16	Portion A, G, H & N	15-Sep-16	29-Sep-16	03-Oct-16	02-Apr-17	Valid	
13	Permit issued Under the Dumping at Sea Ordinance	EP/MD/17-132	East of Sha Chau (CMP Vd)	03-Nov-16	30-Nov-16	05-Dec-16	04-Jan-17	To be Valid from 05-Dec-16	

14	Permit issued Under the Dumping at Sea Ordinance	EP/MD/17-140	East of Sha Chau (CMP Va) or South of Brothers (CMP2)	14-Nov-16	30-Nov-16	30-Nov-16	29-Dec-16	Valid	
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Environmental Permit / Licences Summary for Contract No. HY/2013/06 within the HY/2013/03 site works area

(update: 05/12/2016)

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.	#

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.

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Report No.: 0165/15/ED/0647

Appendix G

Implementation Schedule for Environmental Mitigation Measures (EMIS)

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

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Location of the measures	Implementation Status
Air Quality				
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"> 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 extend beyond the pedestrian barriers, fencing or traffic cones. The load of dusty materials on a vehicle leaving a construction site should be covered entirely by impervious sheeting to ensure that the dusty materials do not leak from the vehicle; Where practicable, vehicle washing facilities with high pressure water jet should be provided at every discernible or designated vehicle exit point. The area where vehicle washing takes place and the road section between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores; 	All construction sites	V
S5.5.6.2	A2	<ul style="list-style-type: none"> 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; The portion of any road leading only to construction site that is within 30m of a vehicle entrance or exit should be kept clear of dusty materials, Surfaces where any pneumatic or power-driven drilling, cutting, polishing or other mechanical breaking operation takes place should be sprayed with water or a dust suppression chemical continuously; Any area that involves demolition activities should be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities so as to maintain the entire surface wet; Where a scaffolding is erected around the perimeter of a building under construction, effective dust screens, sheeting or netting should be provided to enclose the scaffolding from the ground floor level of the building, or a canopy should be provided from the first floor level up to the highest level of the scaffolding; Any skip hoist for material transport should be totally enclosed by impervious sheeting; Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top 	All construction sites	V
S5.5.6.2	A2	<ul style="list-style-type: none"> Cement or dry PFA delivered in bulk should be stored in a closed silo fitted with an audible high level alarm which is interlocked with the material filling line and no overfilling is allowed; Loading, unloading, transfer, handling or storage of bulk cement or dry PFA should be carried out in a totally 	All construction sites	N/A

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Location of the measures	Implementation Status
		enclosed system or facility, and any vent or exhaust should be fitted with an effective fabric filter or equivalent air pollution control system; and <ul style="list-style-type: none"> 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 or part of the construction site where the exposed earth lies 		
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
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"> Loading, unloading, handling, transfer or storage of any dusty materials should be carried out in totally enclosed system; 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; Vents for all silos and cement/pulverised fuel ash (PFA) weighing scale should be fitted with fabric filtering system; The materials which may generate airborne dusty emissions should be wetted by water spray system; All receiving hoppers should be enclosed on three sides up to 3m above unloading point; All conveyor transfer points should be totally enclosed; All access and route roads within the premises should be paved and wetted; and 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 	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"> All road surface within the barging facilities will be paved; Dust enclosures will be provided for the loading ramp; Vehicles will be required to pass through designated wheels wash facilities; and Continuous water spray at the loading points 	All construction sites	V
Construction Noise (Air borne)				
S6.4.10	N1	1) Use of good site practices to limit noise emissions by considering the following: <ul style="list-style-type: none"> only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme; machines and plant (such as trucks, cranes) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum; plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs; silencers or mufflers on construction equipment should be properly fitted and maintained during the construction works; 	All construction sites	V

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Location of the measures	Implementation Status
		<ul style="list-style-type: none"> mobile plant should be sited as far away from NSRs as possible and practicable; material stockpiles, mobile container site office and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities. 		
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
Sediment				
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
Waste Management (Construction Waste)				
S8.3.8	WM1	<u>Construction and Demolition Material</u> The following mitigation measures should be implemented in handling the waste: <ul style="list-style-type: none"> Maintain temporary stockpiles and reuse excavated fill material for backfilling and reinstatement; Carry out on-site sorting; Make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate; Implement a trip-ticket system for each works contract to ensure that the disposal of C&D materials are properly documented and verified; and Implement an enhanced Waste Management Plan similar to E7WBTC (Works) No. 19/2005 - "Environmental Management on Construction Sites" to encourage on-site sorting of C&D materials and to minimize their generation during the course of construction. In addition, disposal of the C&D materials onto any sensitive locations such as agricultural lands, etc. should be avoided. The Contractor shall propose the final 	All construction sites	V

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Location of the measures	Implementation Status
		disposal sites to the Project Proponent and get its approval before implementation		
S8.3.9-S8.3.11	WM2	<p><u>C&D Waste</u></p> <ul style="list-style-type: none"> Standard formwork or pre-fabrication should be used as far as practicable in order to minimise the arising of C&D materials. The use of more durable formwork or plastic facing for the construction works should be considered. Use of wooden hoardings should not be used, as in other projects. Metal hoarding should be used to enhance the possibility of recycling. The purchasing of construction materials will be carefully planned in order to avoid over ordering and wastage. The Contractor should recycle as much of the C&D materials as possible on-site. Public fill and C&D waste should be segregated and stored in different containers or skips to enhance reuse or recycling of materials and their proper disposal. Where practicable, concrete and masonry can be crushed and used as fill. Steel reinforcement bar can be used by scrap steel mills. Different areas of the sites should be considered for such segregation and storage. 	All construction sites	V
S8.2.12-S8.3.15	WM3	<p><u>Chemical Waste</u></p> <ul style="list-style-type: none"> Chemical waste that is produced, as defined by Schedule 1 of the Waste Disposal (Chemical Waste) (General) Regulation, should be handled in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. Containers used for the storage of chemical wastes should be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed; have a capacity of less than 450 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. 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. 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. 	All construction sites	V
S8.3.16	WM4	<p><u>Sewage</u></p> <ul style="list-style-type: none"> 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 toilets. Night soil should be collected by licensed collectors regularly. 	All construction sites	V
S8.3.17	WM5	<p><u>General Refuse</u></p> <ul style="list-style-type: none"> General refuse generated on-site should be stored in enclosed bins or compaction units separately from construction and chemical wastes. A reputable waste collector should be employed by the Contractor to remove general refuse from the site, separately from construction and chemical wastes, on a daily basis to minimize odour, pest and litter impacts. Burning of refuse on construction sites is prohibited by 	All construction sites	V

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Location of the measures	Implementation Status
		<p>law.</p> <ul style="list-style-type: none"> • 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. • 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. • Training should be provided to workers about the concepts of site cleanliness and appropriate waste management procedure, including reduction, reuse and recycling of wastes. 		
Water Quality (Construction Phase)				
S9.11.1.7	W2	<p><u>Land Works</u></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"> • wastewater from temporary site facilities should be controlled to prevent direct discharge to surface or marine waters; • 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; • 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; • 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; • temporary access roads should be surfaced with crushed stone or gravel; • rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities; • measures should be taken to prevent the washout of construction materials, soil, silt or debris into any drainage system; • open stockpiles of construction materials (e.g. aggregates and sand) on site should be covered with tarpaulin or similar fabric during rainstorms; • 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 the drainage system, and to prevent storm run-off from getting into foul sewers; • discharges of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system; 	Land-based works area	V
S9.11.1.7	W2	<ul style="list-style-type: none"> • 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; • wheel wash overflow shall be directed to silt removal facilities before being discharged to the storm drain; • the section of construction road between the wheel 	Land-based works area	V

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Location of the measures	Implementation Status
		<p>washing bay and the public road should be surfaced with crushed stone or coarse gravel;</p> <ul style="list-style-type: none"> • wastewater generated from concreting, plastering, Internal decoration, cleaning work and other similar activities, shall be screened to remove large objects; • 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; • the contractors shall prepare an oil / chemical cleanup plan and ensure that leakages or spillages are contained and cleaned up immediately; • waste oil should be collected and stored for recycling or disposal, in accordance with the Waste Disposal Ordinance; • 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 • surface run-off from bunded areas should pass through oil/grease traps prior to discharge to the stormwater system. 		
Ecology (Construction Phase)				
S10.7	E4	<ul style="list-style-type: none"> • 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 	Land-based works areas	V
S10.7	E5	<ul style="list-style-type: none"> • Good site practices, including strictly following the permitted works hours, using quieter machines where practicable, and avoiding excessive lightings during night time 	Land-based works areas	V
S10.7	E8	<ul style="list-style-type: none"> • Control vessel speed • Skipper training • Predefined and regular routes for working vessels; avoid Brother Islands. 	Marine Traffic	V
Fisheries				
S11.7	F4	<ul style="list-style-type: none"> • Maritime Oil Spill Response Plan (MOSRP); • Contingency plan. 	HKBCF	V
Landscape & Visual (Detailed Design Phase)				
S14.3.3.1	LV1	<p>General design measures include:</p> <ul style="list-style-type: none"> • Roadside planting and planting along the edge of the HKBCF Island is proposed; • 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; • Protection measures for the trees to be retained during construction activities; • Optimizing the sizes and spacing of the bridge columns; • Fine-tuning the location of the bridge columns to avoid visually-sensitive locations; • Providing planting area around peripheral of HKBCF for tree planting screening effect; • Providing salt-tolerant native trees along the planter strip at affected seawall and newly reclaimed coastline; • 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 	HKBCF	V

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Location of the measures	Implementation Status
		transparent cover for elevated footbridges) to provide harmonious atmosphere of the HKBCF; and <ul style="list-style-type: none"> • 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. 		
Landscape & Visual (Construction Phase)				
S14.3.3.3	LV2	Mitigate both Landscape and Visual Impacts G1. Grass-hydroseed bare soil surface and stock pile areas. G2. Add planting strip and automatic irrigation system if appropriate at some portions of bridge footbridge to screen bridge and traffic. G3. Not applicable as this is for HKLR. 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 G5. Vegetation reinstatement and upgrading to disturbed areas G6. Maximizing new tree shrub and other vegetation planting to compensate tree felled and vegetation removed G7. Providing planting area around peripheral of HKBCF for tree planting screening effect; G8. Plant salt-tolerant native and shrubs etc along the planter strip at affected seawall. 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.	HKBCF	N/A
S14.3.3.3	LV3	<u>Mitigate Visual Impacts</u> V1. Minimize time for construction activities during construction period. 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.	HKBCF	N/A
EM&A				
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	1) An Environmental Team needs to be employed as per the EM&A Manual. 2) Prepare a systematic Environmental Management Plan to ensure effective implementation of the mitigation measures. 3) An environmental impact monitoring needs to be implementing by the Environmental Team to ensure all the requirements given in the EM&A Manual are fully complied with.	All construction sites	V

Legend: V = implemented;

x = not implemented;

N/A = not applicable

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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 bars above and below the text.

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Appendix H

Statistics on Environmental Complaints, Notification of Summons and Successful Prosecutions

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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	3	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

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Appendix I

Environmental Site Inspection Schedule

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Report No.: 0165/15/ED/0647

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 November 2016

Nov-2016						
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 Environmental Site Inspection	18	19
20	21	22	23	24	25 Environmental Site Inspection	26
27	28	29	30			

Tentative Environmental Site Inspection Schedule for December 2016

Dec-2016						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2 Environmental Site Inspection	3
4	5	6	7	8 Environmental Site Inspection	9	10
11	12	13	14	15 Environmental Site Inspection	16	17
18	19	20	21	22 Environmental Site Inspection	23	24
25	26 Public Holiday	27 Public Holiday	28	29 Environmental Site Inspection	30	31

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Report No.: 0165/15/ED/0647

**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 November 2016

Nov-2016						
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 Environmental Site Inspection	18	19
20	21	22	23	24	25 Environmental Site Inspection	26
27	28	29	30			

Tentative Environmental Site Inspection Schedule for December 2016

Dec-2016						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2 Environmental Site Inspection	3
4	5	6	7	8 Environmental Site Inspection	9	10
11	12	13	14	15 Environmental Site Inspection	16	17
18	19	20	21	22 Environmental Site Inspection	23	24
25	26 Public Holiday	27 Public Holiday	28	29 Environmental Site Inspection	30	31