

12 July 2017

By Fax (3468 2076) and By Post

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

Attention: Mr. Malcolm Sage

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/2014/05 – HZMB HKBCF – Remaining Ancillary Buildings and
Facilities
Monthly Environmental Monitoring & Audit Report for June 2017**

Reference is made to the Environmental Team's submission of Monthly Environmental Monitoring & Audit Report for June 2017 (Rev. 1) certified by the ET Leader (ET's ref.: "5140819/18.30/OC036/KC/EW" dated 12 July 2017) and provided to us via e-mail on 12 July 2017.

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

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)
	Atkins	Mr. Keith Chau	(By Fax: 2890 6343)
	LCWJV	Mr. Iain Hubert	(By Fax: 3621 0180)

Internal: DY, YH, ENPO Site

Your ref.
Our ref. 5140819/18.30/OC036/KC/EW

Date: 12 July 2017

By Post and e-mail (Stephen.Tsang@lcwjv.com)

Leighton – Chun Wo Joint Venture
39/F Sun Hung Kai Centre
30 Harbour Road
Hong Kong

Attn: Mr. Stephen Tsang

Dear Mr. Tsang,

**Contract No. HY/2014/05
Hong Kong – Zhuhai – Macao Bridge
Hong Kong Boundary Crossing Facilities –
Remaining Ancillary Buildings and Facilities
Certification of Monthly EM&A Report No. 16**

Atkins China Limited certifies, in the capacity of Environmental Team Leader, that the Monthly EM&A Report No. 16 for June 2017 (Revision 1) conforms the requirements provided in Condition 5.4 of the Environmental Permit No. EP-353/2009/K.

**Yours faithfully,
for and on behalf of
Atkins China Limited**



**Keith Chau
Environmental Team Leader**

cc.

1. AECOM – Mr. Malcolm Sage (By Fax.: 3468 2076)
2. IEC/ENPO – Mr. Raymond Dai & Mr. Y.H. Hui (By Fax.: 3465 2899)



路政署
HIGHWAYS DEPARTMENT

港珠澳大橋香港工程管理處
Hong Kong - Zhuhai - Macao Bridge
Hong Kong Project Management Office

Contract No. HY/2014/05

**Hong Kong-Zhuhai-Macao Bridge
Hong Kong Boundary Crossing Facilities – Remaining Ancillary
Buildings and Facilities**

**Monthly EM&A Report No. 16
(Covering the Period from 1 June 2017 to 30 June 2017)**

11 July 2017

Revision 1

Main Contractor



Leighton - Chun Wo
Joint Venture

Environmental Team

ATKINS

Contents

Executive Summary

1	Introduction	1
1.1	Basic Project Information	1
1.2	Project Organisation.....	2
1.3	Construction Programme	4
1.4	Construction Works Undertaken During the Reporting Period	4
2	Air Quality Monitoring.....	5
2.1	Monitoring Locations	5
2.2	Monitoring Requirements	5
2.3	Monitoring Results.....	6
3	Noise Monitoring.....	7
3.1	Monitoring Locations	7
3.2	Monitoring Requirements	7
3.3	Monitoring Results.....	7
4	Environmental Site Inspection and Audit	8
4.1	Site Inspection.....	8
4.2	Advice on the Solid and Liquid Waste Management Status.....	9
4.3	Environmental Licenses and Permits	10
4.4	Implementation Status of Environmental Mitigation Measures.....	10
4.5	Summary of Exceedance of the Environmental Quality Performance Limit	10
4.6	Summary of Complaints, Notification of Summons and Successful Prosecution	10
5	Future Key Issues	12
5.1	Construction Programme for the Coming Months	12
5.2	Environmental Site Inspection Schedule for the Coming Month.....	12
6	Conclusions.....	13
6.1	Conclusions.....	13

Figures

- Figure 2.1 Location of Air Quality Monitoring Stations
- Figure 3.1 Location of Noise Monitoring Stations

Appendices

- Appendix A Location of Works Areas
- Appendix B Project Organization for Environmental Works
- Appendix C Construction Programme
- Appendix D Event and Action Plan
- Appendix E Waste Flow Table
- Appendix F Environmental Licenses and Permits
- Appendix G Implementation Schedule for Environmental Mitigation Measures (EMIS)
- Appendix H Statistics on Environmental Complaints, Notification of Summons and Successful Prosecutions
- Appendix I Environmental Site Inspection Schedule

Executive Summary

This Monthly Environmental Monitoring and Audit (EM&A) Report is prepared for Contract No. HY/2014/05 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities (HZMB HKBCF) – Remaining 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 and Contract No. HY/2014/04 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Gantry Type X-ray Vehicle Inspection System within Contract No. HY/2014/05 works area) (hereafter referred to as “the Contract”) for the Highways Department of Hong Kong Special Administrative Region (HKSAR). Contract No. HY/2014/05 was awarded to Leighton – Chun Wo Joint Venture (construction works of Contract No. HY/2013/06 was awarded to ATAL Technologies Limited and Contract No. HY/2014/04 was awarded to Rapiscan Systems Pte Ltd within Contract No. HY/2014/05 works area) (hereafter referred to as “the Contractor”) and Atkins China Limited was appointed as the Environmental Team (ET) by the Contractor.

Contract No. HY/2014/05 (includes the construction works of Contract No. HY/2013/06 and Contract No. HY/2014/04 within Contract No. HY/2014/05 works area) is part of HZMB HKBCF Project which is a “Designated Project” under Schedule 2 of the Environmental Impact Assessment Ordinance (EIAO) (Cap 499) and Environmental Impact Assessment (EIA) Report (Register No. AEIAR-145/2009) was prepared for the Project. The current Environmental Permit (EP) No. EP-353/2009/K for HKBCF was issued on 11 April 2016. These documents are available through the EIA Ordinance Register. The construction works of the Contract No. HY/2014/05 commenced on 29 February 2016 while the construction works of the Contract No. HY/2013/06 and Contract No. HY/2014/04 within Contract No. HY/2014/05 works area commenced on 3 January 2017 and 13 February 2017 respectively.

Atkins China Limited 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 to the Contract.

This is the sixteenth monthly EM&A Report for the Contract No. HY/2014/05 which summarizes findings of the EM&A works during the reporting period from 1 to 30 June 2017 (includes the construction works of Contract No. HY/2013/06 and Contract No. HY/2014/04 within Contract No. HY/2014/05 works area).

Environmental Monitoring and Audit Progress

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 Nos. 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 the Contract No. HY/2014/05 (includes the construction works of Contract No. HY/2013/06 and Contract No. HY/2014/04 within Contract No. HY/2014/05 works area) during the reporting period are listed below:

Environmental Site Inspection: 7, 14, 21 and 28 June 2017

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 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 NMS2 and NMS3B by the Environmental Team of Contract No. HY/2010/02 during the reporting period.

Complaint Log

There was no complaint received in relation to the environmental impact during the reporting period.

For the dust nuisance complaint received by EPD on 31 May 2017 and sent to the ET on 1 June 2017, it was found that the nuisance of dust emissions from the haul road traffic near Buildings 044 and 045 was not related to Contract No. HY/2014/05 (including Contract No. HY/2013/06 HZMB HKBCF - Automatic Vehicle Clearance Support System and Contract No. HY/2014/04 HZMB HKBCF – Gantry Type X-ray Vehicle Inspection System within Contract No. HY/2014/05 works area). No follow up action by Contract No. HY/2014/05 was required.

Notifications of Summons and Successful Prosecutions

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

Reporting Change

There was no reporting change during the reporting period.

Future Key Issues

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

For Contract No. HY/2014/05

- Raft Foundation of Buildings 050A1 and 050A2
- Construction of RC Structure of Buildings 050H2, 050A1 and 050A2
- ABWF works (Internal Finishes) of Buildings 021, 022, 023, 025, 032, 044, 045, 050A1, 050A2, 050H1 and 050H2
- ABWF works (External Finishes) of Buildings 021, 022, 023, 025, 032, 044, 045, 050A1, 050H1, 050H2, 053, 058 and 059
- ABWF works (Roof Finishes) of Buildings 022, 023, 025, 032, 044, 045, 050A1, 050H1, 050H2, 053, 058 and 059
- MEP installation of Buildings 021, 022, 023, 025, 032, 044, 045, 053, 058 and 059
- Utilities and Drainage installation of Building 022, 032, 044, 045, 050A1, 050H1, 050H2, 053, 058 and 059
- Construction of Planter Box and Ramp of Building 023
- PV Installation and Steel Canopy of Building 023 and 025

For Contract No. HY/2013/06 within Contract No. HY/2014/05 works area

- Conceal Conduit Installation and Wiring at Buildings 023, 025 and 032

For Contract No. HY/2014/04 within Contract No. HY/2014/05 works area

- Cabling Works at Buildings 053 and 054
- Installation of Doors at Building 058 and 059

1 Introduction

1.1 Basic Project Information

1.1.1 This Monthly Environmental Monitoring and Audit (EM&A) Report is prepared for Contract No. HY/2014/05 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities (HZMB HKBCF) – Remaining 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 and Contract No. HY/2014/04 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Gantry Type X-ray Vehicle Inspection System within Contract No. HY/2014/05 works area) (hereafter referred to as “the Contract”) for the Highways Department of Hong Kong Special Administrative Region (HKSAR). Contract No. HY/2014/05 was awarded to Leighton – Chun Wo Joint Venture (construction works of Contract No. HY/2013/06 was awarded to ATAL Technologies Limited and Contract No. HY/2014/04 was awarded to Rapiscan Systems Pte Ltd within Contract No. HY/2014/05 works area) (hereafter referred to as “the Contractor”) and Atkins China Limited was appointed as the Environmental Team (ET) by the Contractor.

1.1.2 Contract No. HY/2014/05 (includes the construction works of Contract No. HY/2013/06 and Contract No. HY/2014/04 within Contract No. HY/2014/05 works area) is part of HZMB HKBCF which is a “Designated Project” under Schedule 2 of the Environmental Impact Assessment Ordinance (EIAO) (Cap 499). An Environmental Impact Assessment (EIA) Report (Register No. AEIAR-145/2009) was prepared for the Project. The current Environmental Permit (EP) No. EP-353/2009/K for HKBCF was issued on 11 April 2016. These documents are available through the EIA Ordinance Register. The construction works of the Contract No. HY/2014/05 commenced on 29 February 2016 while the construction works of the Contract No. HY/2013/06 and Contract No. HY/2014/04 within Contract No. HY/2014/05 works area commenced on 3 January 2017 and 13 February 2017 respectively. The works areas of the Contract are shown in **Appendix A**.

1.1.3 The proposed works under this Contract comprise the following:

For Contract No. HY/2014/05

(i) Construction of the following ancillary buildings and facilities including architectural and builder works, structural steel canopy, reinforced concrete frames, foundations, curtain wall facade, building services and electrical and mechanical works:

- Public Toilets at Vehicle Clearance Plaza (VCP);
- Customs and Excise Department (C&ED) Dangerous Good Store (Building 021);
- Customs Detective Dog Base Building (Building 022);
- C&ED Outbound Cargo Examination Building and Examination Platform (Building 023);
- Inbound Private Car Annexure (Building 025);
- Outbound Private Car Annexure (Building 032);
- E&M maintenance Building (Building 044);
- Highways Depot & Administration Building (Building 045);
- Outbound X-ray Building (Building 053);
- Outbound X-ray Scan Tunnel (Building 058); and
- Inbound X-ray Scan Tunnel (Building 059).

(ii) Construction of civil provisions, cable containment and power supply for the following systems:

- Automatic Vehicle Clearance Support System (AVCSS) installed by Contract No. HY/2013/06; and

- Gantry Type X-ray Vehicle Inspection System installed by Contract No. HY/2014/04.
- (iii) Supply and installation of Mobile X-ray Vehicle Inspection System and other standalone equipment;
- (iv) Construction of minor civil engineering works at the periphery of buildings;
- (v) Construction of minor Landscape hardworks and softworks; and
- (vi) Other works which are shown on Drawings or specified in the Specification or which may be ordered in accordance with the Contract.

For Contract No. HY/2013/06 within Contract No. HY/2014/05 works area

- (i) The Automatic Vehicle Clearance Support System amid to increasing traffic flow for Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities;
- (ii) Responsible for designs and develops a set of tailor-made computer monitoring and control systems to for daily security operation; and
- (iii) 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.

For Contract No. HY/2014/04 within Contract No. HY/2014/05 works area

- (i) The Gantry Type X-ray Vehicle Inspection System (GXRVIS) aims to provide an integrated, innovative, efficient and effective vehicle inspection system at the inbound and outbound boundary control points of Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities (HKBCF) for supporting the operations of Customs & Excise Department (C&ED);
- (ii) Design, supply, deliver to HKBCF, installation, test and commissioning and maintenance of two sets of Gantry Type X-ray Vehicle Inspection System and all related components necessary for the complete operation of the system; and
- (iii) Design, supply, install, test, commission and maintain of the Radioactive Threat Detection Systems integrated into the Gantry Type X-ray Vehicle Inspection Systems.

1.1.4 This is the sixteenth Monthly EM&A Report for the Contract No. HY/2014/05 which summarizes the findings of the EM&A programme during the reporting period from 1 to 30 June 2017. (includes the construction works of Contract No. HY/2013/06 and Contract No. HY/2014/04 within Contract No. HY/2014/05 works area).

1.2 Project Organisation

1.2.1 The project organization structure and lines of communication with respect to the on-site environmental management structure is shown in **Appendix B**. The key personnel contact names and numbers are summarized in **Table 1-1**.

Table 1-1 Contact Information of Key Personnel

Party	Position	Name	Telephone	Fax
<u>For Contract No. HY/2014/05</u>				
Engineer or Engineer's Representative (AECOM Asia Co. Ltd.)	Chief Registered Architect	Malcolm Sage	3958 7330	3468 2076
Environmental Project Office / Independent Environmental Checker	Environmental Project Office Leader	Y. H. Hui	3465 2888	3465 2899

Party	Position	Name	Telephone	Fax
(Ramboll Environ Hong Kong Limited)	Independent Environmental Checker	Raymond Dai	3465 2888	3465 2899
Contractor (Leighton – Chun Wo Joint Venture)	Site Agent	Albert Chan	3973 0514	3621 0180
	Environmental Officer	Stephen Tsang	3973 1806	3621 0180
Environmental Team (Atkins China Limited)	Environmental Team Leader	Keith Chau	2972 1721	2890 6343
24 hours complaint hotline	---	---	3958 7300	---
<u>For Contract No. HY/2013/06 within Contract No. HY/2014/05 works area</u>				
Engineer or Engineer's Representative (AECOM Asia Co. Ltd.)	Chief Registered Architect	Malcolm Sage	3958 7330	3468 2076
Environmental Project Office / Independent Environmental Checker (Ramboll Environ Hong Kong Limited)	Environmental Project Office Leader	Y. H. Hui	3465 2888	3465 2899
	Independent Environmental Checker	Raymond Dai	3465 2888	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 (Atkins China Limited)	Environmental Team Leader	Keith Chau	2972 1721	2890 6343
24 hours complaint hotline	---	---	6509 0375	---
<u>For Contract No. HY/2014/04 within Contract No. HY/2014/05 works area</u>				
Engineer or Engineer's Representative (AECOM Asia Co. Ltd.)	Chief Registered Architect	Malcolm Sage	3958 7330	3468 2076
Environmental Project Office / Independent Environmental Checker (Ramboll Environ Hong Kong Limited)	Environmental Project Office Leader	Y. H. Hui	3465 2888	3465 2899
	Independent Environmental Checker	Raymond Dai	3465 2888	3465 2899
Contractor (Rapiscan Systems Pte Ltd)	Site Agent	Ringo Yau	9833 1402	2707 0816
	Environmental Officer	Clarie Tsang	6371 1362	---
Environmental Team (Atkins China Limited)	Environmental Team Leader	Keith Chau	2972 1721	2890 6343

Party	Position	Name	Telephone	Fax
24 hours complaint hotline	---	---	9833 1420	---

1.3 Construction Programme

1.3.1 A copy of the Contractor's construction programme is provided in **Appendix C**.

1.4 Construction Works Undertaken During the Reporting Period

1.4.1 A summary of the construction activities undertaken during this reporting period is shown below:

For Contract No. HY/2014/05

- Construction of RC Structure of Buildings 023, 050A1, 050A2, 050H1 and 050H2
- ABWF works (Internal Finishes) of Buildings 021, 022, 023, 025, 032, 044, 045, 050A1, 050A2, 053, 058 and 059
- ABWF works (External Finishes) of Buildings 021, 022, 023, 025, 045, 050A1, 050H2, 058 and 059
- ABWF works (Roof Finishes) of Buildings 022, 023, 025, 032, 044, 045, 050H2, 053, 058 and 059
- MEP installation of Building 021, 022, 023, 025, 032, 044, 045, 053, 058 and 059
- Utilities and Drainage installation of Building 025, 032, 050A1, 050A2, 050H2, 053, 058 and 059

For Contract No. HY/2013/06 within Contract No. HY/2014/05 works area

- Conceal Conduit Installation Buildings 023, 025 and 032

For Contract No. HY/2014/04 within Contract No. HY/2014/05 works area

- Cabling Works at Buildings 053 and 054
- Installation of Extension Pieces and Door frames at Building 058
- Installation of Doors at Building 059

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.
- 2.1.2 The ET of the Contract or another ET of the HZMB project is required to conduct 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 Nos. HY/2010/02 and HY/2011/03. **Figure 2.1** shows the locations of the air monitoring stations.

Table 2-1 Construction Dust Monitoring Locations

ID	Location Description
AMS 6 ⁽¹⁾	Dragonair/CNAC (Group) Building
AMS 7 ⁽¹⁾	Hong Kong SkyCity Marriott Hotel

Remark:

(1) The ET of this Contract should conduct impact air quality monitoring at the AMS listed in the table as part of EM&A programme according to the latest notification from ENPO when the monitoring station(s) is/are no longer covered by another ET of the HZMB project.

2.2 Monitoring Requirements

- 2.2.1 The monitoring requirements, monitoring equipment, monitoring parameters, frequency and duration, monitoring methodology, monitoring schedule, meteorological information are detailed in the monthly EM&A Reports prepared for Contract Nos. HY/2010/02 and HY/2011/03.
- 2.2.2 The Action and Limit Levels for 1-hr TSP and 24-hr TSP are provided in **Table 2-2** and **Table 2-3**, respectively.

Table 2-2 Action and Limit Levels for 1-hour TSP

Monitoring Station	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
AMS 6 – Dragonair / CNAC (Group) Building (HKIA)	360	500
AMS 7 - Hong Kong SkyCity Marriott Hotel	370	

Table 2-3 Action and Limit Levels for 24-hour TSP

Monitoring Station	Action Level, $\mu\text{g}/\text{m}^3$	Limit Level, $\mu\text{g}/\text{m}^3$
AMS 6 – Dragonair / CNAC (Group) Building (HKIA)	173	260
AMS 7 - Hong Kong SkyCity Marriott Hotel	183	

- 2.2.3 The event and action plan is provided in **Appendix D**.
- 2.2.4 If exceedance(s) at these station(s) 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 Nos. 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 AMS7 recorded by the ET of Contract No. HY/2010/02 during the reporting period.

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 impact noise monitoring at NMS2 and NMS3B as part of EM&A programme if these noise monitoring stations are no longer covered under Contract No. HY/2010/02. **Figure 3.1** shows the locations of noise monitoring stations.

Table 3-1 Construction Noise Monitoring Locations

ID	Location Description
NMS2 ⁽¹⁾	Seaview Crescent
NMS3B ⁽¹⁾⁽²⁾	Site Boundary of Site Office Area at Works Area WA2

Remarks:

- (1) The ET of this Contract should conduct impact noise monitoring at the NMS listed in the table as part of EM&A programme according to the latest notification from ENPO when the monitoring station(s) is/are no longer covered by another ET of the HZMB project.
- (2) The Action and Limit Levels for schools will be applied for this alternative monitoring location.

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 Nos. 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

Parameter	Action Level	Limit Level
07:00 – 19:00 hours on normal weekdays	When one documented complaint is received	75 dB(A)*

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.

* Limit level is 70 dB(A) for schools and 65 dB(A) during school examination period.

- 3.2.3 The event and action plan is provided in **Appendix D**.
- 3.2.4 If exceedance(s) at these station(s) 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.

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.

4 Environmental Site Inspection and Audit

4.1 Site Inspection

- 4.1.1 Site Inspections were carried out on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures for the Contract No. HY/2014/05 (includes the construction works of Contract No. HY/2013/06 and Contract No. HY/2014/04 within Contract No. HY/2014/05 works area). During the reporting period, site inspections were carried out on 7, 14, 21 and 28 June 2017.
- 4.1.2 Particular observations for Contract No. HY/2014/05 and Contract No. HY/2013/06 and Contract No. HY/2014/04 within Contract No. HY/2014/05 works area during the site inspections and corrective actions undertaken by the Contractor are described in **Tables 4-1, 4-2 and 4-3**.

Table 4-1 Summary of Environmental Site Inspections for Contract No. HY/2014/05

Date of Audit	Observations	Actions Taken by Contractor / Recommendation	Date of Observations Closed
31 May 2017	1. General refuses were observed on the ground at Building 023 work area.	1. The general refuse was being cleared at Building 023 work area. The Contractor was reminded to clear rubbish regularly at the temporary dumping area of Building 023 works area.	7 June 2017
7 June 2017	1. Oil product was stored in a plastic bottle and found without proper drip tray at Building 058.	1. The oil container was removed at Building 058.	14 June 2017
14 June 2017	1. Chemical containers were found without drip tray at Building 025 and Building 023. 2. General refuse and construction waste was found in the works area near Building 053.	1a. The chemical containers were removed at Building 025 and Building 023. 2. The general refuse and construction waste was removed in the works area near Building 053.	21 June 2017
21 June 2017	1. A chemical container was found without drip tray at Building 058.	1. The chemical container was removed at Building 058.	28 June 2017
28 June 2017	No particular environmental issue was recorded during the site inspection.	Nil.	Nil.

Table 4-2 Summary of Environmental Site Inspections for Contract No. HY/2013/06 within Contract No. HY/2014/05 works area

Date of Audit	Observations	Actions Taken by Contractor / Recommendation	Date of Observations Closed
7 June 2017	No particular environmental issue was recorded during the site inspection.	Nil.	Nil.
14 June 2017	No particular environmental issue was recorded during the site inspection.	Nil.	Nil.
21 June 2017	No particular environmental issue was recorded during the site inspection.	Nil.	Nil.
28 June 2017	No particular environmental issue was recorded during the site inspection.	Nil.	Nil.

Table 4-3 Summary of Environmental Site Inspections for Contract No. HY/2014/04 within Contract No. HY/2014/05 works area

Date of Audit	Observations	Actions Taken by Contractor / Recommendation	Date of Observations Closed
7 June 2017	No particular environmental issue was recorded during the site inspection.	Nil.	Nil.
14 June 2017	No particular environmental issue was recorded during the site inspection.	Nil.	Nil.
21 June 2017	No particular environmental issue was recorded during the site inspection.	Nil.	Nil.
28 June 2017	No particular environmental issue was recorded during the site inspection.	Nil.	Nil.

4.1.1 The Contractor has rectified all observations as identified during environmental site inspections within this reporting month.

4.2 Advice on the Solid and Liquid Waste Management Status

4.2.1 The Contractor of Contract No. HY/2014/05 registered as a chemical waste producer. Sufficient numbers of receptacles were available for general refuse collection and sorting.

4.2.2 The Contractor of Contract No. HY/2014/05 was reminded that chemical waste should be properly treated and stored temporarily in designated chemical waste storage areas on site in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes.

- 4.2.3 The monthly summary of waste flow table for Contract No. HY/2014/05 (includes the construction works of Contract No. HY/2013/06 and Contract No. HY/2014/04 within Contract No. HY/2014/05 works area) are detailed in **Appendix E**.

4.3 Environmental Licenses and Permits

- 4.3.1 The valid environmental licenses and permits for Contract No. HY/2014/05 during the reporting period (includes the construction works of Contract No. HY/2013/06 and Contract No. HY/2014/04 within Contract No. HY/2014/05 works area) are summarized in **Appendix F**.
- 4.3.2 The Contractors of Contract No. HY/2013/06 and Contract No. HY/2014/04 were advised to register as a chemical waste producer when chemical waste will be expected to generate for the foreseeable future from the operations (For Registration as Waste Producer Pursuant to Waste Disposal (Chemical Waste) (General) Regulation).

4.4 Implementation Status of Environmental Mitigation Measures

- 4.4.1 In response to the site audit findings, the Contractors carried out corrective actions.
- 4.4.2 The Contractor conducts watering on all exposed soil within the Contract site and associated works areas 8 times per day when construction activities are being undertaken.
- 4.4.3 A summary of the Implementation Schedule of Environmental Mitigation Measures (EMIS) is presented in **Appendix G**. Most of the necessary mitigation measures were implemented properly.

4.5 Summary of Exceedance of the Environmental Quality Performance Limit

- 4.5.1 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.
- 4.5.2 There was no Action and Limit Level exceedance of 1-hr TSP level and 24-hr TSP level recorded at AMS7 by the Environmental Team of Contract No. HY/2010/02 during the reporting period.
- 4.5.3 There was no Action and Limit Level exceedance for noise recorded at NMS2 and NMS3B by the Environmental Team of Contract No. HY/2010/02 during the reporting period.

4.6 Summary of Complaints, Notification of Summons and Successful Prosecution

- 4.6.1 There was no complaint received in relation to the environmental impact during the reporting period. One complaint was received in relation to the environmental impact during the previous reporting period. A summary of environmental complaints is presented in Table 4-4. The details of cumulative statistics of Environmental Complaints are provided in **Appendix H**.

Table 4-4 A Summary of Environmental Complaints for the Previous Reporting Month

Environmental Complaint No.	Date of Complaint Received	Description of Environmental Complaints
004	31 May 2017	Air Quality

- 4.6.1 According to ENPO's email to the Environmental Team, Engineer's Representative and Contractor on 1 June 2017, it was noted that EPD had received a complaint regarding a dust emission from the haul road traffic near building 044 and 045.
- 4.6.2 Based on the Contractor information, the construction work at Buildings 044 and 045 were reinforced concrete structure works, internal finishing and pipe installation works. Only a small number of vehicles access for Buildings 044 and 045 on each day (less than 20 vehicles

- per day, exclude the water truck for watering spraying). The Contractor have provided guidelines to remind the site vehicles should travel within speed limit of 8 km/hr. As confirmed by the Contractor, the road access management adjacent to Buildings 044 and 045 is not under this contract. However, the Contractor have arranged the water truck for water spraying near the Buildings 044 and 045 to avoid the potential dust impact from the haul road.
- 4.6.3 Based on the investigation results, it was found that the nuisance of dust emissions from the haul road traffic near Buildings 044 and 045 was not related to Contract No. HY/2014/05 (includes Contract No. HY/2013/06 HZMB HKBCF - Automatic Vehicle Clearance Support System and Contract No. HY/2014/04 HZMB HKBCF – Gantry Type X-ray Vehicle Inspection System within Contract No. HY/2014/05 works area). No follow up action was required.
- 4.6.4 The Contractor have arranged the water truck for water spraying near the Buildings 044 and 045 to avoid the potential dust impact form haul road. The Contractor have also arranged a staff to supervise the haul road condition near Buildings 044 and 045. In case of any dust emissions from the haul road near Buildings 044 and 045, the Contractor should arrange the water truck or front-line staff to enhance the watering. The watering plan, which include the information of watering schedule, routing of trucks for watering and the location of water filling, was prepared and submitted to RE and ENPO. The Contractor was also reminded to implement all necessary mitigation as specified in EIA (Section 5.5.6.3), EM&A Manual (EM&A Log Ref: A3), EMP, Method Statements, General and Particular Specifications of this Project to minimize the potential dust impact during construction activities.
- 4.6.5 Statistics on environmental complaints, notifications of summons and successful prosecutions are summarized in **Appendix H**.

5 Future Key Issues

5.1 Construction Programme for the Coming Months

5.1.1 As informed by the Contractor, the major construction activities for July 2017 are summarized in **Table 5-1**.

Table 5-1 Construction Activities for July 2017

Site Area	Description of Activities
<u>For Contract No. HY/2014/05</u>	
Buildings 050A1 and 050A2	Raft Foundation
Buildings 050H2, 050A1 and 050A2	Construction of RC Structure
Buildings 021, 022, 023, 025, 032, 044, 045, 050A1, 050A2, 050H1 and 050H2	ABWF works (Internal Finishes)
Buildings 021, 022, 023, 025, 032, 044, 045, 050A1, 050H1, 050H2, 053, 058 and 059	ABWF works (External Finishes)
Buildings 022, 023, 025, 032, 044, 045, 050A1, 050H1, 050H2, 053, 058 and 059	ABWF works (Roof Finishes)
Buildings 021, 022, 023, 025, 032, 044, 045, 053, 058 and 059	MEP installation
Building 022, 032, 044, 045, 050A1, 050H1, 050H2, 053, 058 and 059	Utilities and Drainage installation
Building 023	Construction of Planter Box and Ramp
Building 023 and 025	PV Installation and Steel Canopy
<u>For Contract No. HY/2013/06 within Contract No. HY/2014/05 works area</u>	
Buildings 023, 025 and 032	Conceal Conduit Installation and Wiring
<u>For Contract No. HY/2014/04 within Contract No. HY/2014/05 works area</u>	
Buildings 053 and 054	Cabling Works
Buildings 058 and 059	Installation of Doors

5.2 Environmental Site Inspection Schedule for the Coming Month

5.2.1 The tentative schedule for weekly site inspections for July 2017 is provided in **Appendix I**.

6 Conclusions

6.1 Conclusions

- 6.1.1 The construction works of the Contract No. HY/2014/05 commenced on 29 February 2016, while the construction works of the Contract No. HY/2013/06 and Contract No. HY/2014/04 within Contract No. HY/2014/05 works area commenced on 3 January 2017 and 13 February 2017 respectively. The sixteenth Monthly EM&A Report for Contract No. HY/2014/05 summarizes findings of the EM&A works during the reporting period from 1 to 30 June 2017 (includes the construction works of Contract No. HY/2013/06 and Contract No. HY/2014/04 within Contract No. HY/2014/05 works area).
- 6.1.2 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.
- 6.1.3 There was no Action and Limit Level exceedance of 1-hr TSP level and 24-hr TSP level recorded at AMS7 by the Environmental Team of Contract No. HY/2010/02 during the reporting period.
- 6.1.4 There was no Action and Limit Level exceedance for noise recorded at NMS2 and NMS3B by the Environmental Team of Contract No. HY/2010/02 during the reporting period.
- 6.1.5 Environmental site inspections were carried out on 7, 14, 21 and 28 June 2017 for the Contract No. HY/2014/05 (includes the construction works of Contract No. HY/2013/06 and Contract No. HY/2014/04 within Contract No. HY/2014/05 works area). Recommendations on remedial actions were given to the Contractors for the deficiencies identified during the site inspections.
- 6.1.6 There was no complaint received in relation to the environmental impact during the reporting period. For the dust nuisance complaint received by EPD on 31 May 2017 and sent to the ET on 1 June 2017, it was found that the nuisance of dust emissions from the haul road traffic near Buildings 044 and 045 was not related to Contract No. HY/2014/05 (including Contract No. HY/2013/06 HZMB HKBCF - Automatic Vehicle Clearance Support System and Contract No. HY/2014/04 HZMB HKBCF – Gantry Type X-ray Vehicle Inspection System within Contract No. HY/2014/05 works area). No follow up action by Contract No. HY/2014/05 was required.
- 6.1.7 No notification of summons and successful prosecution was received during the reporting period.

FIGURES

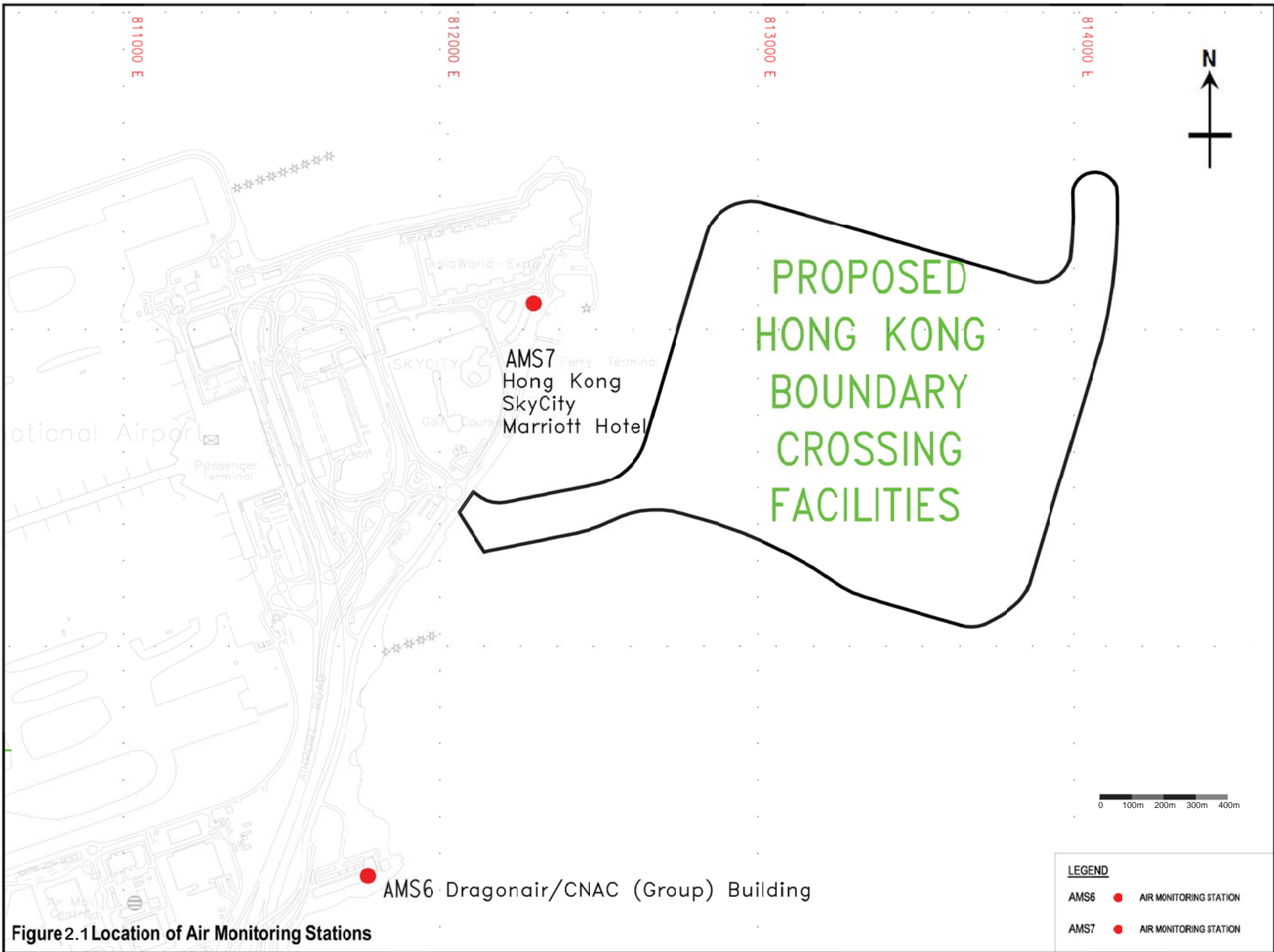


Figure 2.1 Location of Air Monitoring Stations

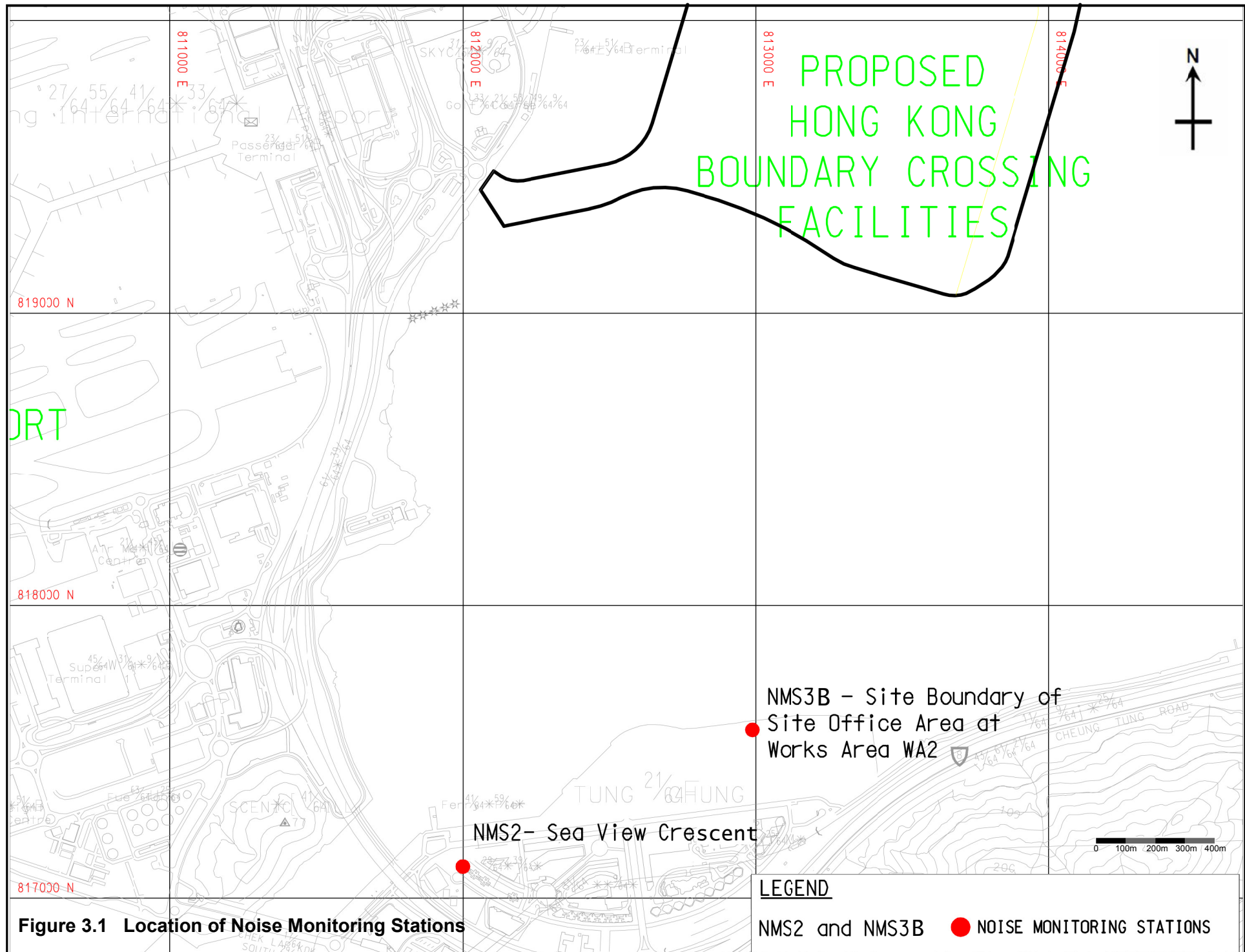


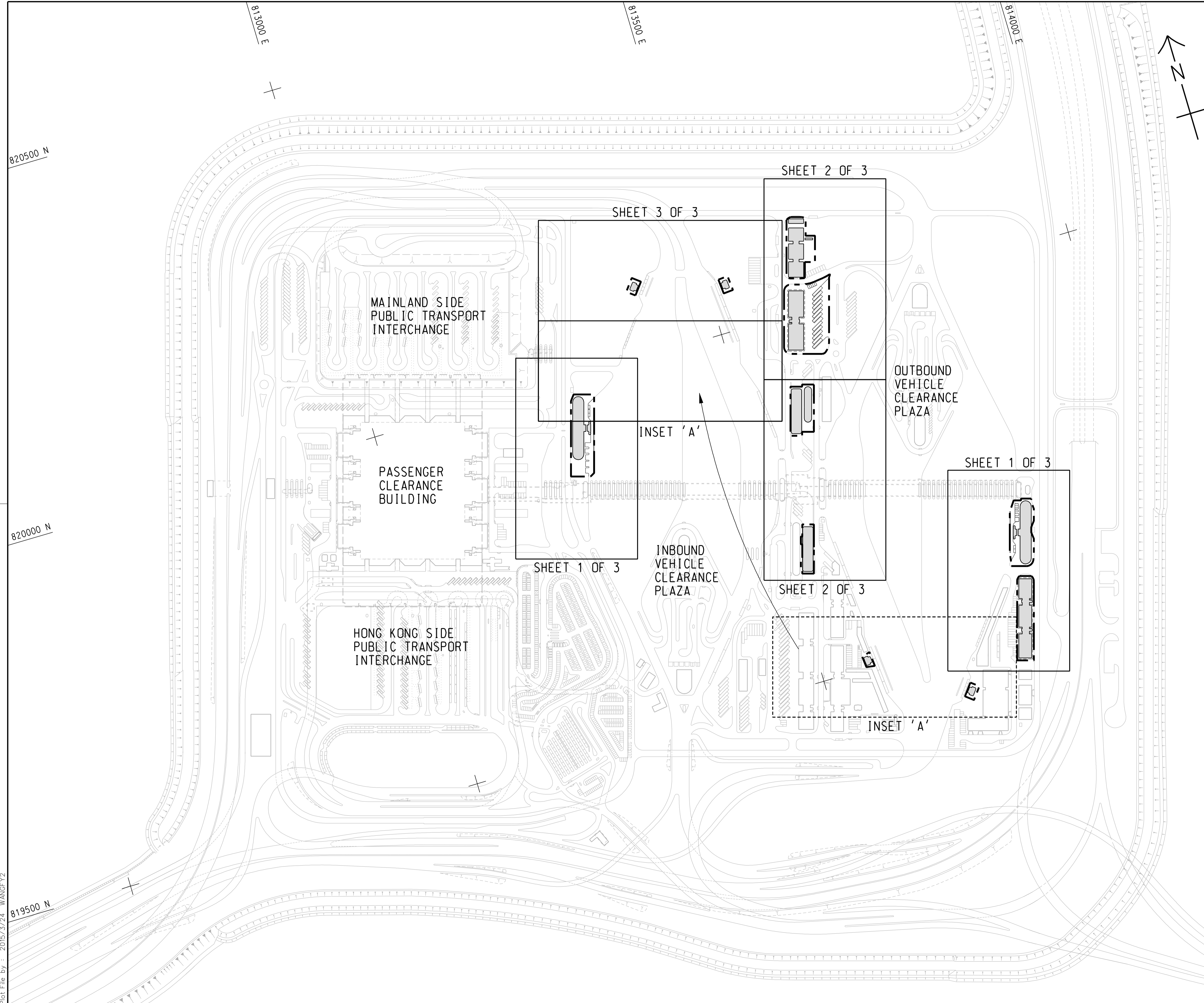
Figure 3.1 Location of Noise Monitoring Stations

LEGEND

NMS2 and NMS3B ● NOISE MONITORING STATIONS

APPENDIX A

Location of Works Areas



- TENDER DRAWING		BWCW SCI	MAR. 15
REV. 修改	DESCRIPTION 內容摘要	D.C. 審核	DATE 日期

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 路政署

 港珠澳大橋香港工程管理處
 Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office

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KEY PLAN

AECOM
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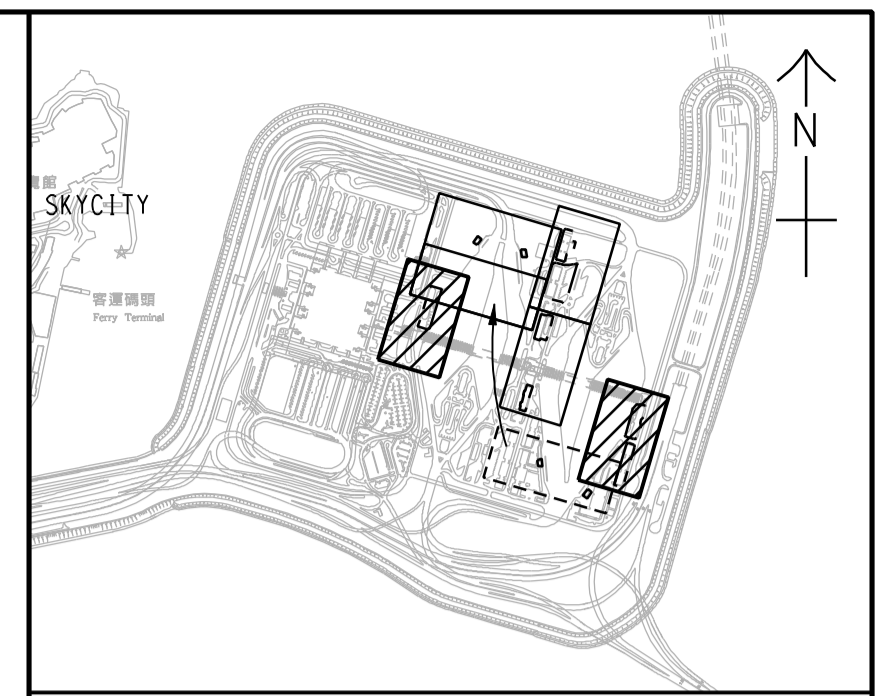
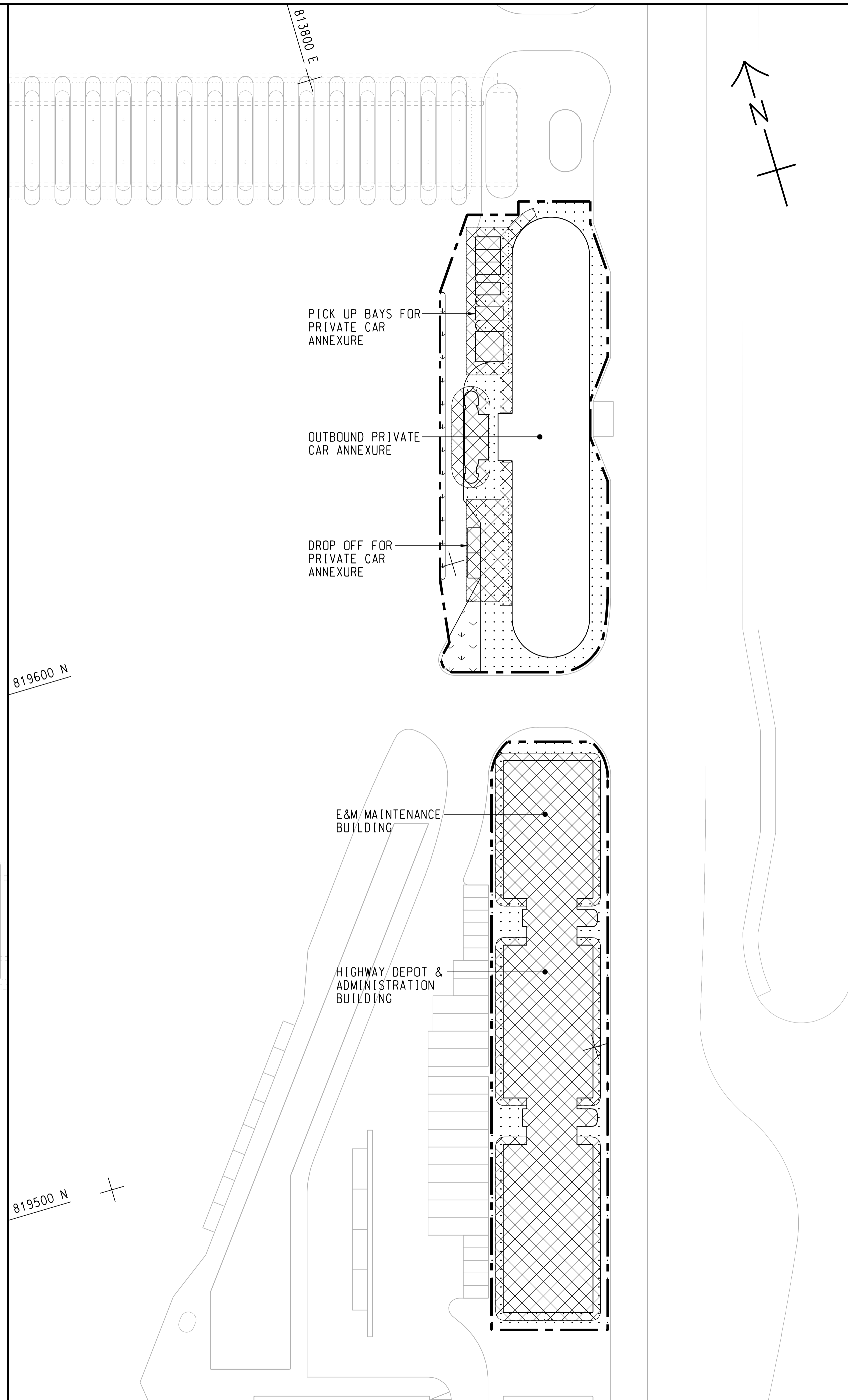
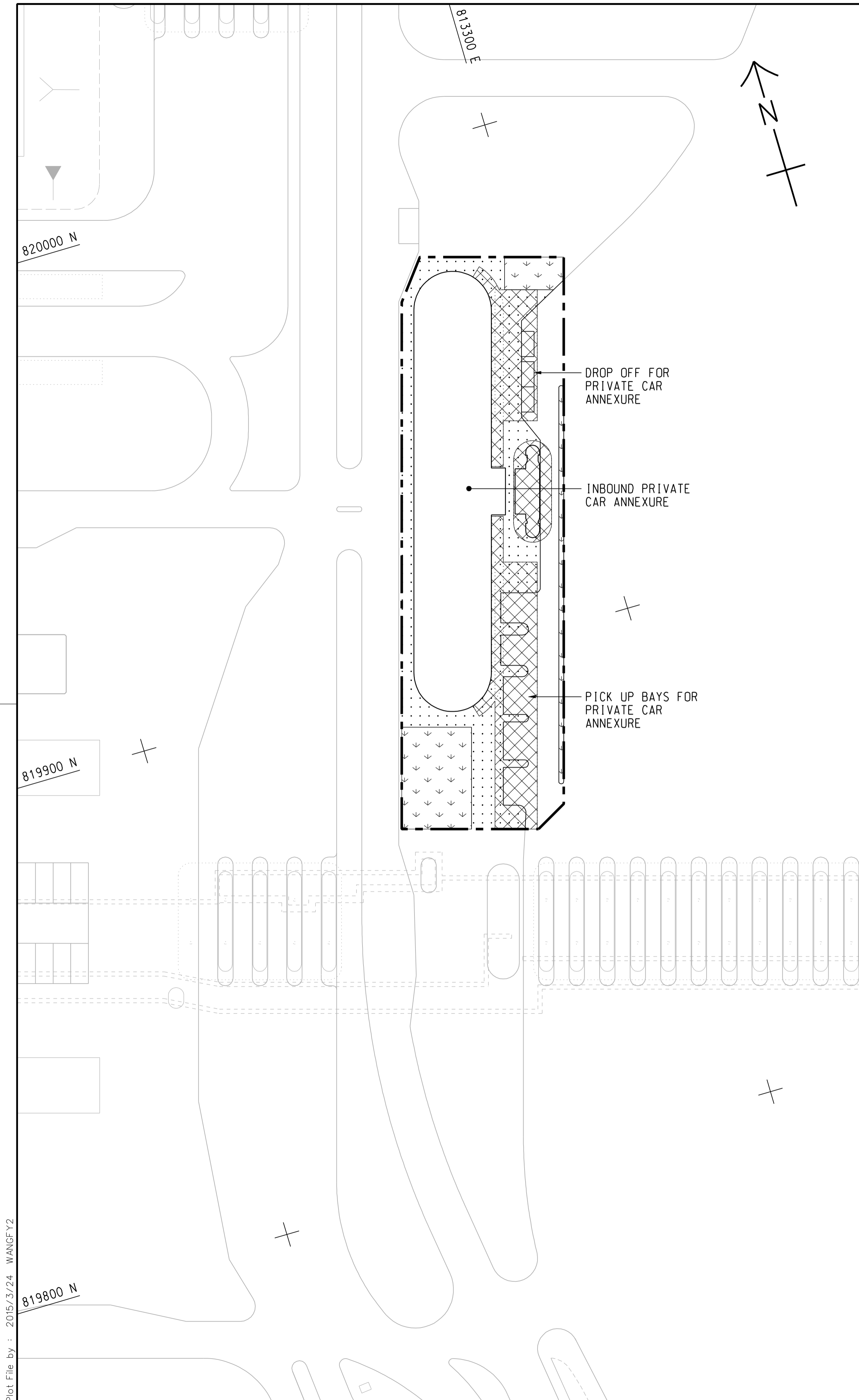
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 圖紙編號

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DRAWN BY 繪圖	WSY	STATUS 階段			

SCALE 比例 A1 1 : 2500
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KEY PLAN
SCALE 1 : 20000

NOTE :
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LEGEND:

	SITE BOUNDARY
	FOOTPATH (DETAILS REFER TO LANDSCAPE DETAIL DRAWINGS)
	CANOPY
	PLANTING AREA

REV. / 修改	DESCRIPTION / 內容摘要	DATE / 日期
-	TENDER DRAWING	BWCW SCI MAR.15

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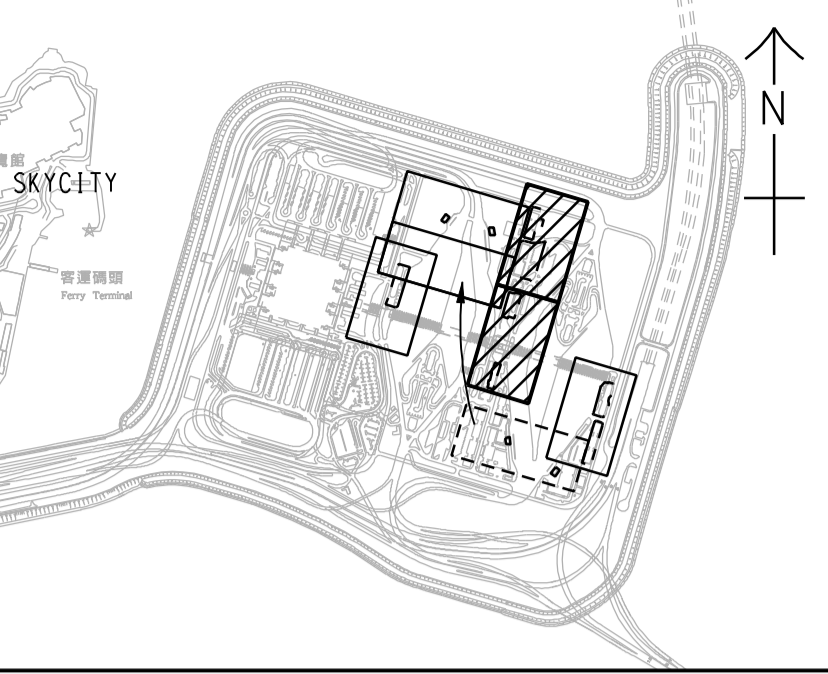
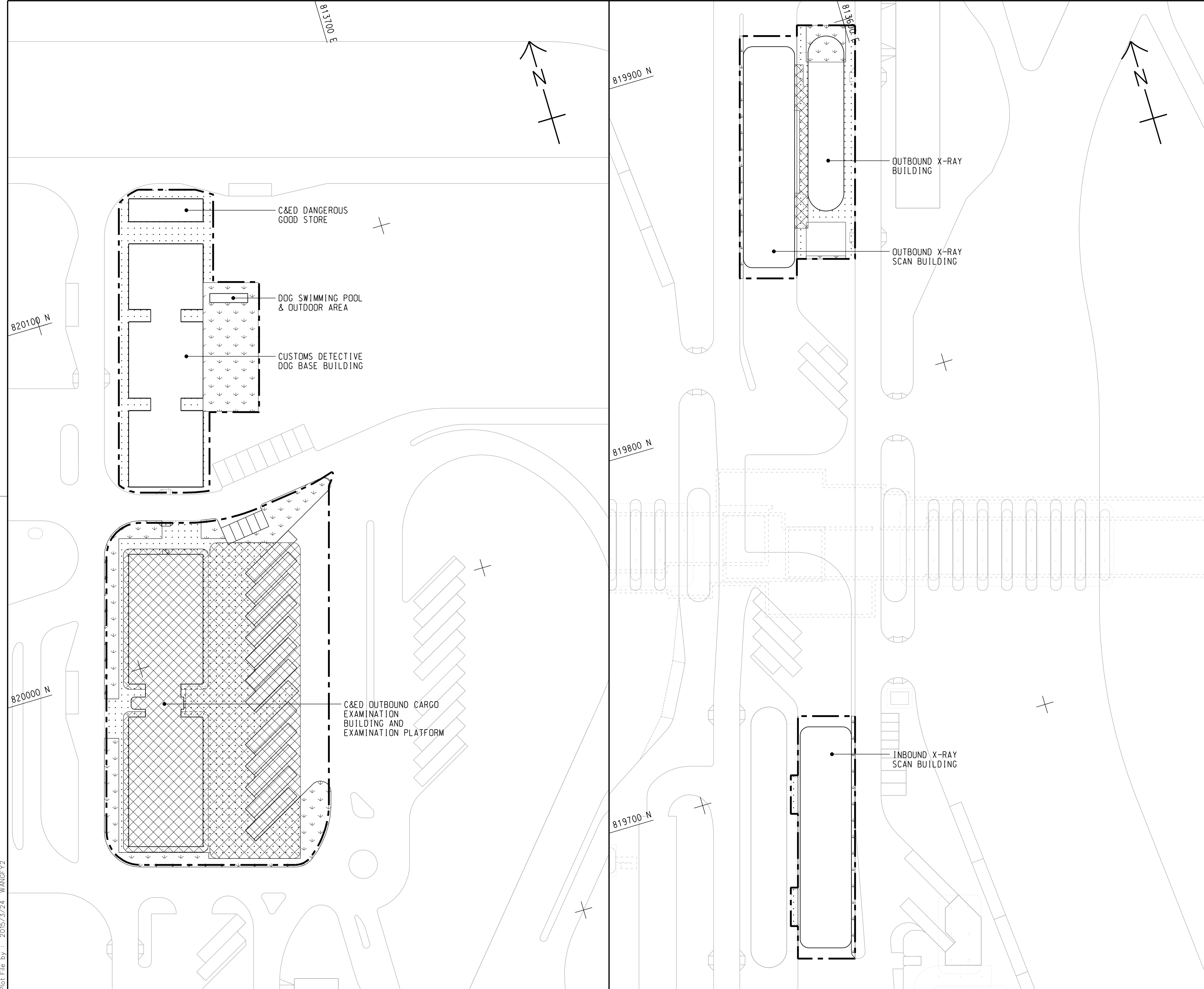
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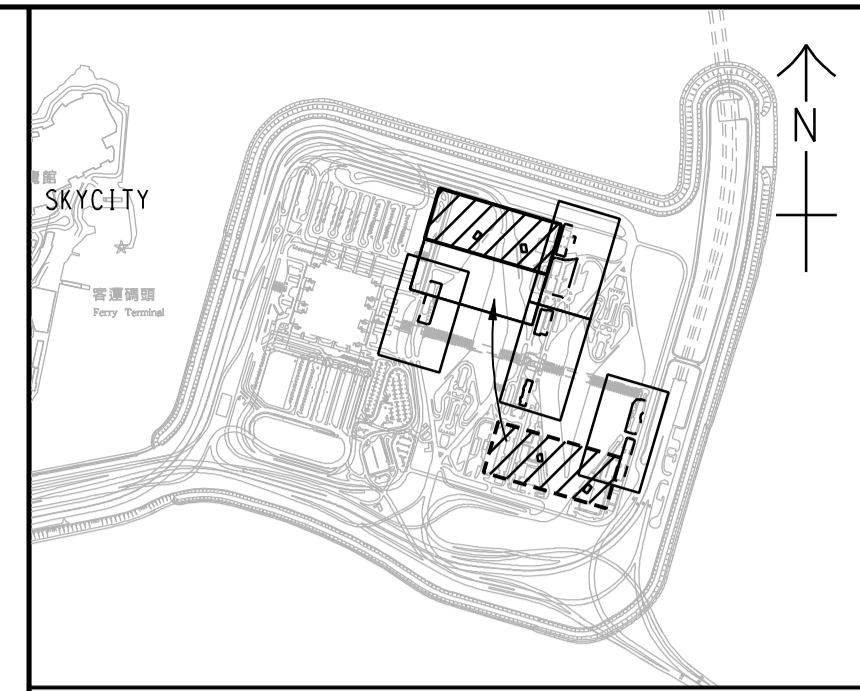
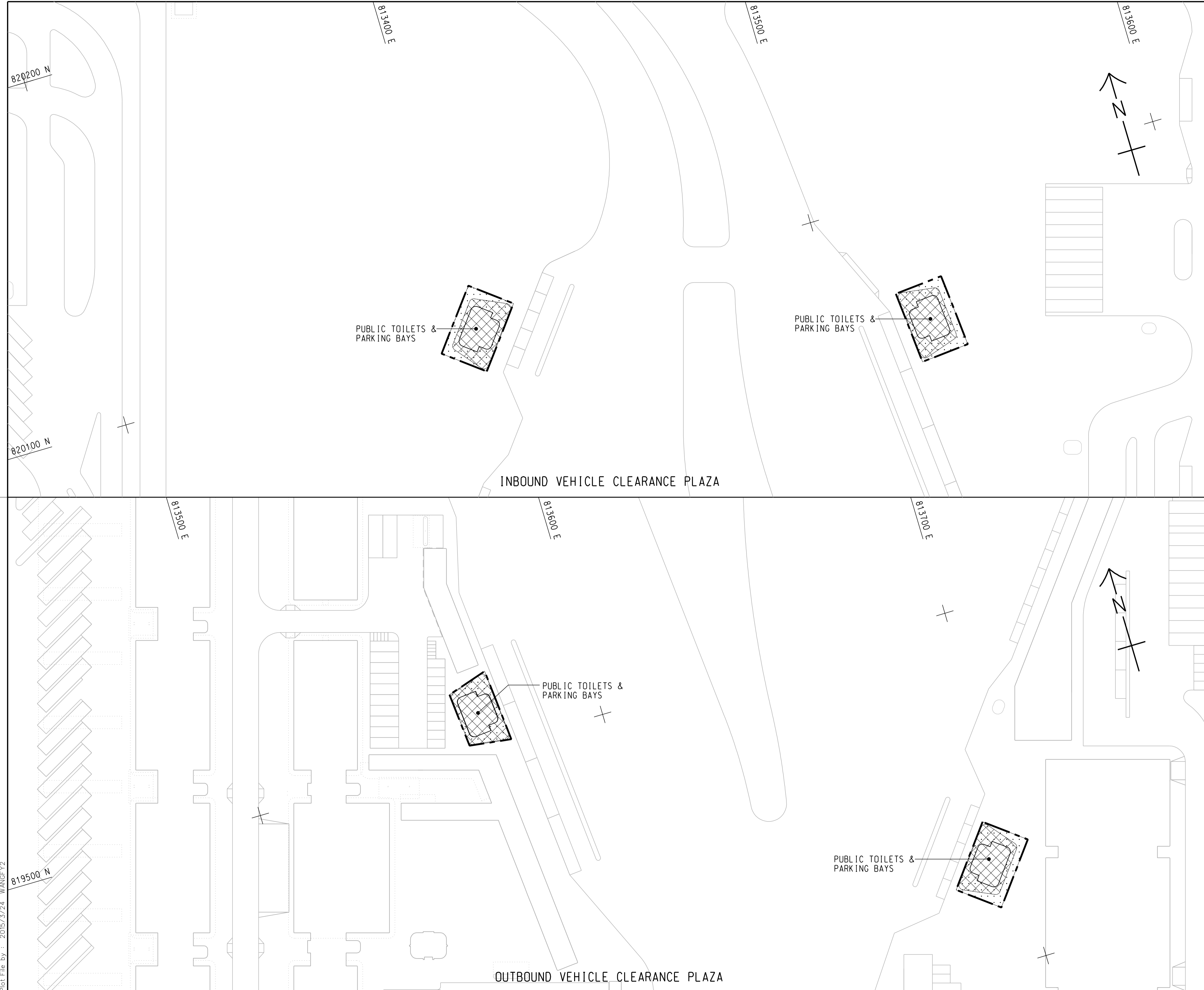
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BWCW	HY/2014/05	TKH

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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
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314	817531.154	819001.065
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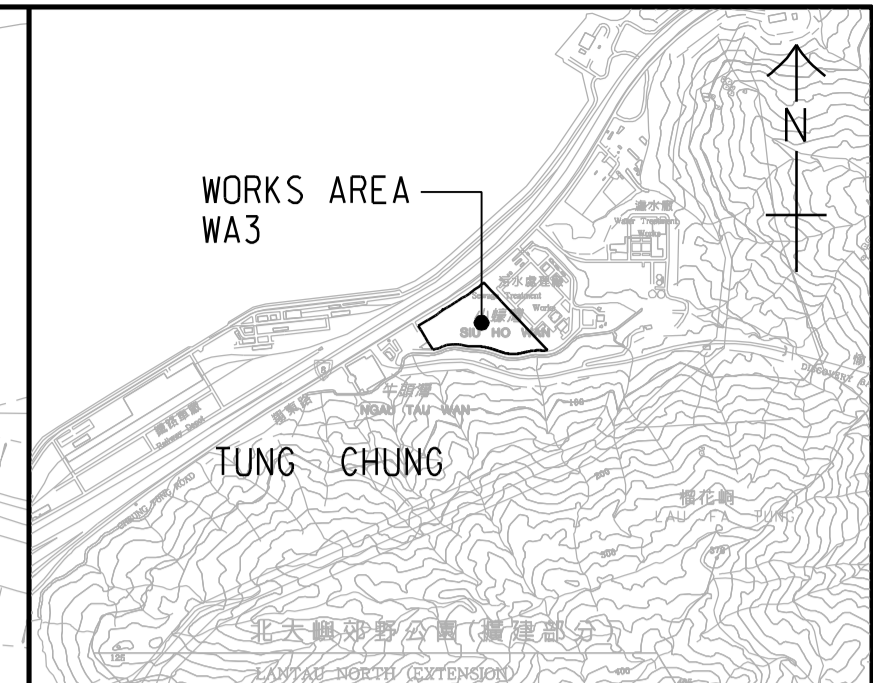
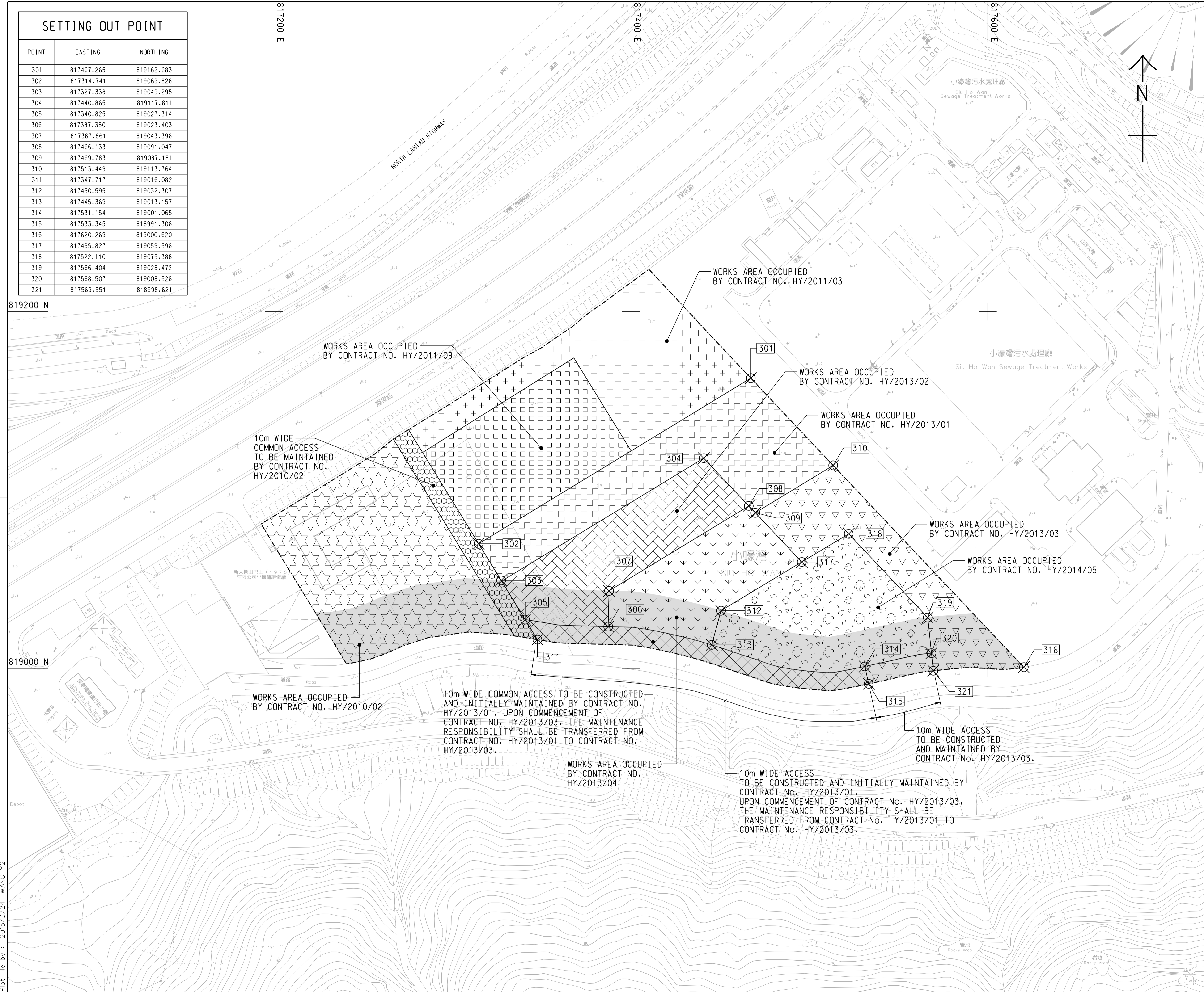
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LOCATION PLAN
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NOTES:

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

LEGEND:

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	PORTION 3.2
	PORTION 3.3
	PORTION 3.4
	PORTION 3.5
	PORTION 3.6
	PORTION 3.7
	PORTION 3.8
	PORTION 3.9
	PORTION 3.10
	NON-BUILDING AREA 8200m ² (WHOLE)

TENDER DRAWING	BWC SCI	MAR. 15
REV. 修改	DESCRIPTION 內容摘要	DATE 日期

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WORKS AREA WA3

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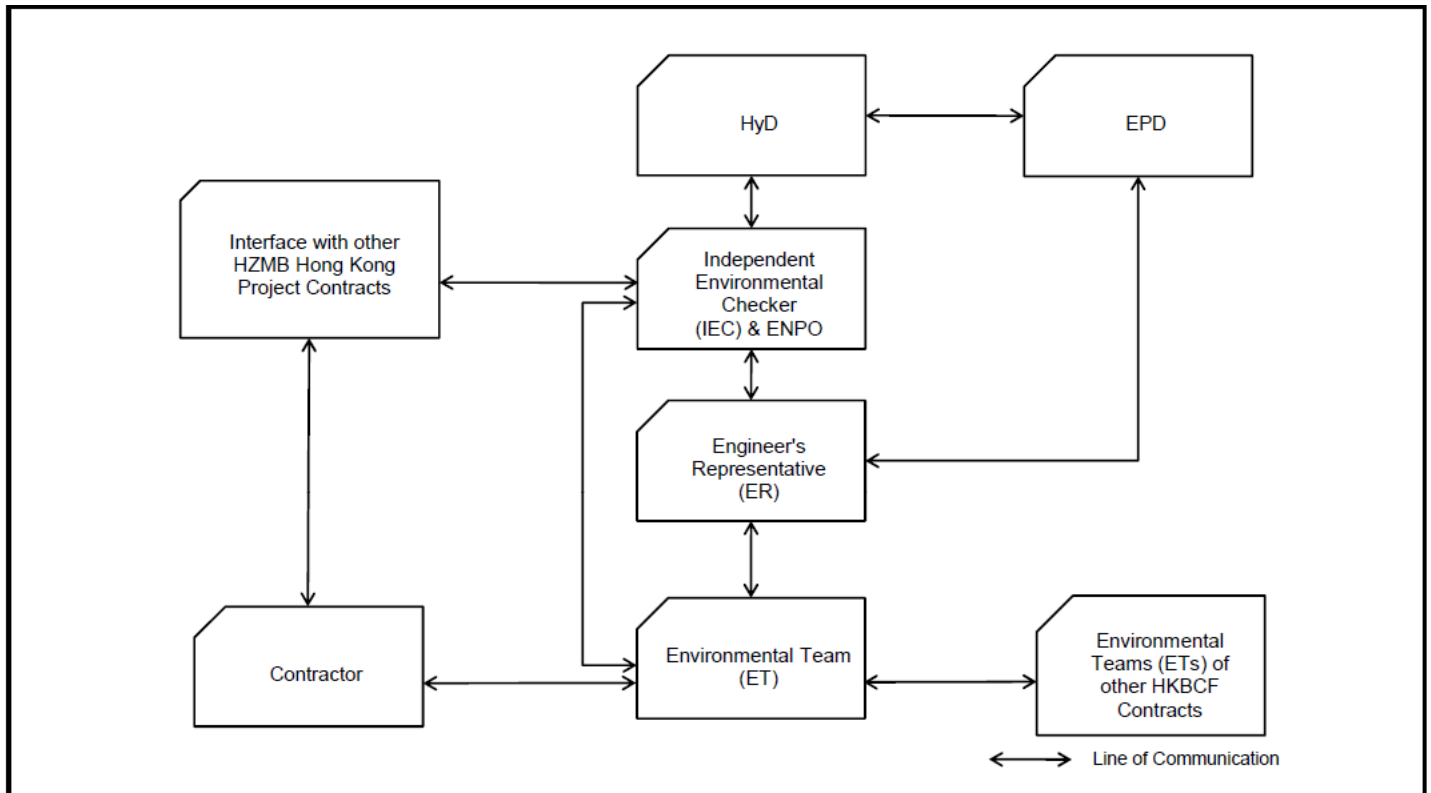
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APPENDIX B

Project Organization for Environmental Works

Project Organisation for Environmental Works



APPENDIX C

Construction Programme



Activity ID	Activity Name	June 2017				July 2017				August 2017				September 2017				October 2017	
		04	11	18	25	02	09	16	23	30	06	13	20	27	03	10	17	24	01
RAB6- Target Basement Programme Stated 01 July 2017																			
PROGRAMME SUMMARY		[Gantt bar: June 04 to Oct 08]																	
GENERAL/PRELIMINARIES		[Gantt bar: June 04 to Oct 08]																	
DESIGN AND ENGINEERING		[Gantt bar: June 04 to Oct 08]																	
PROCUREMENT, MANUFACTURING & DELIVERIES		[Gantt bar: June 04 to Oct 08]																	
CONSTRUCTION		[Gantt bar: June 04 to Oct 08]																	
Building 021 - C&ED Dangerous Goods Store		[Gantt bar: June 04 to Oct 08]																	
Raft		[Gantt bar: June 04 to Oct 08]																	
Structure		[Gantt bar: June 04 to Oct 08]																	
ABWF/E&M		[Gantt bar: June 04 to Oct 08]																	
Internal Finishes		[Gantt bar: June 04 to Oct 08]																	
Degree 1		[Gantt bar: June 04 to Oct 08]																	
RAB-21-0210	021 - MEP 1st Fix	[Gantt bar: June 04 to Oct 08]																	
RAB-KD4A10	021 - Projected achievement of Stage 4A of the Works	[Gantt bar: June 04 to Oct 08]																	
Degree 2		[Gantt bar: June 04 to Oct 08]																	
RAB-21-0290	021 - E&M 2nd Fix	[Gantt bar: June 04 to Oct 08]																	
RAB-21-0450	021 - Louver & Door Frame	[Gantt bar: June 04 to Oct 08]																	
RAB-21-0410	021 - Power On	[Gantt bar: June 04 to Oct 08]																	
RAB-KD4B10	KD4B - Projected achievement of Stage 4B of the Works	[Gantt bar: June 04 to Oct 08]																	
Degree 3		[Gantt bar: June 04 to Oct 08]																	
RAB-21-0510	021 - Wall & Ceiling Finish	[Gantt bar: June 04 to Oct 08]																	
RAB-21-0330	021 - MEP Final Fix	[Gantt bar: June 04 to Oct 08]																	
RAB-21-0460	021 - Floor Painting	[Gantt bar: June 04 to Oct 08]																	
RAB-21-0340	021 - Snagging and Remedials (Bldg. Internal)	[Gantt bar: June 04 to Oct 08]																	
RAB-21-0430	021 - Door Panel & Ironmongery	[Gantt bar: June 04 to Oct 08]																	
RAB-21-0520	021 - MEP Balance of Works	[Gantt bar: June 04 to Oct 08]																	
RAB-21-0345	KD4C - Projected achievement of Stage 4C of the Works	[Gantt bar: June 04 to Oct 08]																	
RAB-KD4C10	021 - End Users and MoM handover inspection	[Gantt bar: June 04 to Oct 08]																	
Roof Finishes		[Gantt bar: June 04 to Oct 08]																	
RAB-21-0270	021 - Install Railing 50m	[Gantt bar: June 04 to Oct 08]																	
RAB-21-0280	021 - Install Cat Ladder and Roof Hatch	[Gantt bar: June 04 to Oct 08]																	
External Finishes		[Gantt bar: June 04 to Oct 08]																	
Facade		[Gantt bar: June 04 to Oct 08]																	
RAB-21-0190	021 - Install External Louvers /Windows/Temp Doors	[Gantt bar: June 04 to Oct 08]																	
RAB-21-0320	021 - Snagging and Remedials (External)	[Gantt bar: June 04 to Oct 08]																	
At Grade		[Gantt bar: June 04 to Oct 08]																	
RAB-21-380	021 - Prepare Sub Grade	[Gantt bar: June 04 to Oct 08]																	
RAB-21-370	021 - Laying Geo Textile	[Gantt bar: June 04 to Oct 08]																	
RAB-21-390	021 - Lay Granular Sub-Base	[Gantt bar: June 04 to Oct 08]																	
RAB-21-400	021 - Laying Course	[Gantt bar: June 04 to Oct 08]																	
RAB-21-360	021 - Concrete Block Paving	[Gantt bar: June 04 to Oct 08]																	
RAB-21-560	021 - Grouting to Concrete Pavers	[Gantt bar: June 04 to Oct 08]																	
Utilities and Drainage		[Gantt bar: June 04 to Oct 08]																	
RAB-21-7290	021 - Construct Permanent Drainage, Manholes & Draw Pits	[Gantt bar: June 04 to Oct 08]																	
RAB-21-7300	021 - Utilites and Common Telecom Ducting	[Gantt bar: June 04 to Oct 08]																	
Testing & Commissioning		[Gantt bar: June 04 to Oct 08]																	
RAB-TC21-1000	021 - T&C (HVAC, FS, P&D, OTHERS)	[Gantt bar: June 04 to Oct 08]																	
Statutory Submissions & Approvals (Day 670 Completion)		[Gantt bar: June 04 to Oct 08]																	
BBE0		[Gantt bar: June 04 to Oct 08]																	

█ Remaining Level of Effort
 █ Actual Work
 █ Critical Remaining ...
█ Actual Level of Effort
 █ Remaining Work
 ◻ Finish Constraint

3-Month Rolling Programme Update, 01 July 2017

RAB5			
Date	Revision	Checked	Approved
01-Jul-17	3-Month Rolling Programme, 01 Jul-17 Update	SGJ	



Activity ID	Activity Name	June 2017				July 2017				August 2017				September 2017				October 2017		
		04	11	18	25	02	09	16	23	30	06	13	20	27	03	10	17	24	01	08
RAB-BEE-0100	021 - Registered Energy Assessor Inspection & Certification																			
RAB-BEE-0110	021 - Submit REA Certification to EDMS																			
RAB-BEE-0120	021 - EDMS Issue of Cert of Compliance Registration (COCR)																			
Dangerous Goods Licence																				
RAB-21-0300	021 - Submit License Applications																			
RAB-21-0350	021 - DG Licence Inspection & Processing																			
RAB-21-0360	021 - Issue DG Licence																			
Fire Servives Department (VAC)																				
RAB-FSD-810	021 - Submit Form 314 to FSD																			
RAB-FSD-820	021 - Submit Form 501 to FSD																			
RAB-FSD-300	021 - FSD Inspection Period																			
Engineer (AECOM)																				
Building 022 - Customs Detective Dog Base Building																				
Excavation																				
Raft Foundations																				
Structure																				
Walls & Columns																				
Roof Slab																				
North Structure																				
Cure and Strip																				
Middle Structure																				
Cure and Strip																				
South Structure																				
Cure and Strip																				
ABWF/E&M																				
Internal Finishes																				
North																				
Degree 1																				
RAB-22-8205	022 - Blockwork Walls & Partition																			
RAB-22-8215	022 - Plastering/Rendering																			
RAB-22-8225	022 - MEP 1st Fix																			
RAB-22-8665	022 - Screeding																			
RAB-22-8285	022 - Undercoat																			
RAB-22-0680	022 - Access for C3 Cable containment																			
RAB-22-0670	022 - Access to C3 Cabling Works***																			
RAB-22-0660	022 - ABWF and MEP works to Degree 1 (KD5A),																			
Degree 2																				
RAB-22-0855	022 - Frame for Wall Panel & Cladding																			
RAB-22-0895	022 - MEP 2nd Fix																			
RAB-22-0885	022 - Door Frame & Louvers																			
RAB-22-0910	022 - Power On																			
RAB-22-0860	022 - ABWF and MEP works to Degree 2 (KD5B)																			
RAB-22-0905	022 - Access for C3 Equipment Installation at ELV & MDP***																			
Degree 3																				
RAB-22-8535	022 - Floor Tiling + Floor Finishes (for Early Handover Rooms)																			
RAB-22-8395	022 - Wall Tiling																			
RAB-22-0865	022- Ceiling Frame																			
RAB-22-8255	022 - Ceiling Finish Compl.																			
RAB-22-8245	022 - Glazing																			
RAB-22-8365	022 - Floor Finish Other Than Act. No. RAB-22-8535																			
RAB-22-8275	022 - MEP Final Fix																			

█ Remaining Level of Effort
 █ Actual Work
 █ Critical Remaining ...
█ Actual Level of Effort
 █ Remaining Work
 ◊ Finish Constraint

3-Month Rolling Programme Update, 01 July 2017

RAB5			
Date	Revision	Checked	Approved
01-Jul-17	3-Month Rolling Programme, 01 Jul-17 Update	SGJ	



Activity ID	Activity Name	June 2017				July 2017				August 2017				September 2017				October 2017		
		04	11	18	25	02	09	16	23	30	06	13	20	27	03	10	17	24	01	08
RAB-22-0870	022 - MEP Balance of Works																			
RAB-22-8265	022 - Door Panel & Ironmongery																			
RAB-22-8545	022 - Early Handover Rooms Ready for End Users***																			
RAB-22-8295	022 - Snagging and Remedials (Bldg. Internal)																			
RAB-22-0980	022 - End Users and MOM Handover Inspection																			
RAB-22-0950	022 - ABWF and MEP works to Degree 3 (KD5C)																			
External Finishes																				
Facade																				
RAB-22-0470	022 - External Painting, Tiling & Cladding																			
RAB-22-0710	Snag Listing - Bldg. External & External Works																			
At Grade																				
RAB-22-2100	022 - Prepare Sub Grade																			
RAB-22-2110	022 - Laying Geo Textile																			
RAB-22-2120	022 - Lay Granular Sub-Base																			
RAB-22-2130	022 - Laying Course																			
RAB-22-2170	022 - Landscaping for Outdoor Excise Lawn																			
RAB-22-2140	022 - Concrete Block Paving																			
RAB-22-2150	022 - Concrete Paver Grouting Works																			
Roof Finishes - North																				
RAB-22-0400	022 - Top Screed																			
RAB-22-0460	022 - Install Roof Tiles																			
RAB-22-0530	022 - Install Railing																			
RAB-22-0540	022 - Install Cat Ladder and Roof Hatch																			
RAB-22-0720	022 - Make good external surfaces																			
Specialist Installations																				
RAB-22-0990	022 - Kennels Installation (42No)																			
RAB-22-1050	022 - Install HR and SPR Glass Reinforced Polyester Water Tanks (
RAB-22-0550	022 - Small Glass Canopy South Entrance																			
Window Wall																				
RAB-22-7020	022 - Complete Formwork Stripping to Roof Level																			
RAB-22-7030	022 - Install Primary Steelwork for Window Wall																			
RAB-22-7040	022 - Install Secondary Steelwork for Window Wall																			
RAB-22-7050	022 - Glazing to Window Wall																			
Dog Swimming Pool																				
RAB-22-0480	022 - Waterproofing																			
RAB-22-0600	022 - Tiling to Dog Swimming Pool																			
RAB-22-0490	022 - Backfill to ground level at Dog Swimming Pool																			
RAB-22-0640	022 - Plumbing and filtration systems																			
RAB-22-0630	022 - Metalworks and Railings																			
RAB-22-0700	022 - Snagging and Remedials - Dog Pool																			
Utilities and Drainage																				
RAB-22-8095	022 - Construct Permanent Drainage and Manholes																			
RAB-22-8135	022 - Install FS Water main																			
RAB-22-8115	022 - Install Flushing Water Mains																			
RAB-22-8105	022 - Install Fresh Water Mains																			
RAB-22-8125	022 - Utilites and Common Telecom Ducting																			
Testing & Commissioning																				
RAB-TC22-1000	022 - T&C (HVAC, FS, P&D, OTHERS)																			
Statutory Submissions & Approvals (Day 670 Completion)																				
BBE0																				

█ Remaining Level of Effort
 █ Actual Work
 █ Critical Remaining ...
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 █ Remaining Work
 ◻ Finish Constraint

3-Month Rolling Programme Update, 01 July 2017

RAB5			
Date	Revision	Checked	Approved
01-Jul-17	3-Month Rolling Programme, 01 Jul-17 Update	SGJ	



Activity ID	Activity Name	June 2017				July 2017				August 2017				September 2017				October 2017		
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RAB-BEE-120	022 - Registered Energy Assessor Inspection & Certification																			
RAB-BEE-130	022 - Submit REA Certification to EDMS																			
RAB-BEE-140	022 - EDMS Issue of Cert of Compliance Registration (COCR)																			
Water Supplies Department (WSD)																				
Commencement																				
Completion																				
RAB-WSD-804	022 - Submit WWO 46 Pt. IV																			
RAB-WSD-254	022 - WSD's Processing/Inspection/Meter Connection																			
RAB-WSD-264	022 - Permanent Water ON/WSD Issue WWO 46 Part V Cert & Wa																			
Fire Services Department (VAC)																				
RAB-FSD-850	022 - Submit Form 314																			
RAB-FSD-860	022 - Submit Form 501																			
Fire Services Water (FS)																				
Commencement																				
Completion																				
RAB-FSD-994	022 - Submit Form 314																			
RAB-FSD-895	022 - Submit WWO 46 Pt. IV, FS																			
RAB-FSD-984	022 - Submit WWO 46 Pt. V, FS																			
RAB-FSD-320	022 - Submit Form 501, FS																			
RAB-FSD-330	022 - FSD Inspection Period, FS																			
Engineer (AECOM)																				
RAB-22-2220	022 - Submit Building 022 As Built Drawings to Engineer																			
Building 023 - C&ED Outbound Cargo Examination Building and Examination PI																				
Excavation																				
Raft Foundations - Inspection Platform																				
Raft Foundations - Main Building																				
Structure																				
Ground Floor																				
Planters																				
RAB-23-6140	023 - Construct North Planter Box and Ramp																			
RAB-23-6230	023 - Construct South Planter Box and Ramp																			
Supporting Walls and Columns to +12.85mPD																				
First Floor																				
Cure and Strip																				
Supporting Walls and Columns to +17.1mPD																				
Roof																				
Cure and Strip																				
Supporting Walls and Columns to +19.1mPD																				
Lift Doghouse																				
Cure and Strip																				
ABWF/E&M																				
Internal Finishes																				
Ground Floor																				
Degree 1																				
RAB-23-5420	023 - Construct Blockwork Walls to G/F																			
RAB-23-5430	023 - Plastering & Undercoat, G/F																			
RAB-23-5470	023 - MEP 1st Fix, G/F																			
023 -23-5430	023 - Screeding, G/F																			
Degree 2																				
RAB-23-5860	023 - MEP 2nd Fix, G/F																			
RAB-23-5610	023 - Frame for Wall Panel & Cladding + Louver, G/F																			
RAB-23-5670	023 - Access to C3, C6 & C7 For Equip. Installation***, G/F																			

█ Remaining Level of Effort
 █ Actual Work
 █ Critical Remaining ...
█ Actual Level of Effort
 █ Remaining Work
 ◊ Finish Constraint

3-Month Rolling Programme Update, 01 July 2017

RAB5			
Date	Revision	Checked	Approved
01-Jul-17	3-Month Rolling Programme, 01 Jul-17 Update	SGJ	



Activity ID	Activity Name	June 2017				July 2017				August 2017				September 2017				October 2017		
		04	11	18	25	02	09	16	23	30	06	13	20	27	03	10	17	24	01	08
Degree 3																				
RAB-23-6320	023 - Ceiling Paint Finish, G/F																			
RAB-23-5930	023 - Wall Finish - Paint & Tile, G/F																			
RAB-23-6220	023 - Floor Finish Other Than Carpet, G/F																			
RAB-23-6380	023 - MEP Final Fix, G/F																			
RAB-23-6080	023 - Glazing, G/F																			
RAB-23-5760	023 - Ceiling Frame, G/F																			
RAB-23-6410	023 - Ceiling Plaster Board, G/F																			
RAB-23-5660	023 - Door Frame/Panel & Ironmongery, G/F																			
RAB-23-6180	023 - Floor Carpet Finish, G/F																			
RAB-23-6190	023 - Access to End Users, KD3C' - C3, C6 & C7 (Flr. Level Change)																			
First Floor																				
Degree 1																				
RAB-23-8055	023 - Construct Blockwork Walls, G/F - 1/F North (932m³), 1/F																			
RAB-23-8065	023 - Plastering & Undercoat, 1/F																			
RAB-23-8075	023 - MEP 1st Fix, 1/F																			
RAB-23-8215	023 - Screeding, 1/F																			
RAB-23-8345	023 - C3, C6 & C7 Cabling***, 1/F																			
Degree 2																				
RAB-23-8125	023 - MEP 2nd Fix, 1/F																			
RAB-23-8085	023 - Frame for Wall Panel & Cladding + Louver, 1/F																			
RAB-23-5790	023 - ABWF and MEP works to Degree 2 for others (KD3B) 1/F																			
RAB-23-8235	023 - Power On																			
RAB-23-8115	023 - Access for C3 for Equip. Instln***, 1/F, KD3D Target to Achieve																			
Degree 3																				
RAB-23-8135	023 - Ceiling Paint Finish, 1/F																			
RAB-23-8175	023 - Wall Finish - Paint & Tile, 1/F																			
RAB-23-8205	023 - Floor Finish Other Than Carpet, 1/F																			
RAB-23-8165	023 - MEP Final Fix, 1/F																			
RAB-23-8145	023 - Glazing, 1/F																			
RAB-23-8105	023 - Ceiling Frame, 1/F																			
RAB-23-8265	023 - MEP Balance of Works																			
RAB-23-8195	023 - Floor Carpet Finish, 1/F																			
RAB-23-8185	023 - Ceiling Plaster Board, 1/F																			
RAB-23-8155	023 - Door Panel/Ironmongery & Glass Baluster, 1/F																			
RAB-23-5970	023 - ABWF and MEP works to Degree 3 (KD3E)																			
RAB-23-2290	023 - Snag Listing & Remedial Works - Building Internal																			
RAB-23-8255	023 - ABWF and MEP works to Degree 3 - Remaining Area- 1/F																			
RAB-23-6040	023 - End Users and MOM Handover Inspection																			
RAB-23-8225	023 - Early Handover Rooms Ready to End Users***, KD3C Target t																			
Roof Level Dog House																				
RAB-23-6150	023 - ABWF and MEP works to Degree 1 R/F																			
RAB-23-6280	023 - ABWF and MEP works to Degree 2 R/F																			
RAB-23-6340	023 - ABWF and MEP works to Degree 3 R/F																			
External Finishes																				
Facade																				
RAB-23-5560	023 - External Render																			
RAB-23-5590	023 - External Tiling																			
RAB-23-5650	023 - External Painting																			
RAB-23-5990	023 - Dismantle Scaffolding																			

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 █ Actual Work
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 █ Remaining Work
 ◊ Finish Constraint

3-Month Rolling Programme Update, 01 July 2017

RAB5			
Date	Revision	Checked	Approved
01-Jul-17	3-Month Rolling Programme, 01 Jul-17 Update	SGJ	



Activity ID	Activity Name	June 2017				July 2017				August 2017				September 2017				October 2017		
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RAB-23-6160	023 - Make good external surfaces																			
At Grade																				
RAB-23-5740	023 - Prepare Sub Grade																			
RAB-23-5820	023 - Laying Geo Textile																			
RAB-23-5910	023 - Lay Granular Sub-Base																			
RAB-23-5940	023 - Laying Course																			
RAB-23-6050	023 - Concrete Block Paving																			
RAB-23-6110	023 - Grouting Works to Concrete Pavers																			
Window Wall																				
East																				
RAB-23-6810	023 - Install Primary Steelwork for Window Wall - E																			
RAB-23-6820	023 - Install Secondary Steelwork for Window Wall - E																			
RAB-23-6830	023 - Glazing to Window Wall - E																			
West																				
RAB-23-6840	023 - Install Primary Steelwork for Window Wall - W																			
RAB-23-6850	023 - Install Secondary Steelwork for Window Wall - W																			
RAB-23-6860	023 - Glazing to Window Wall - W																			
Roof Finishes																				
RAB-23-5500	023 - Leveling screed																			
RAB-23-5550	023 - Waterproof membrane																			
RAB-23-5620	023 - Top Screed																			
RAB-23-5920	023 - Install Railing																			
Green Roof																				
RAB-23-5720	023 - Install green Roof Irrigation Systems																			
RAB-23-5900	023 - Complete Green Roofing Works																			
Specialist Installations																				
RAB-23-6270	023 - Install Lift (1 nos)																			
RAB-23-6010	023 - Installation of Roller Shutter Header Boxes (x 3)																			
RAB-23-7310	023 - Install Glazed Entrance Canopy																			
RAB-23-6250	023 - Installation of Roller Shutter Curtain (x3)																			
PV Installation																				
RAB-23-6350	023 - Install Supporting Frame and PV panel																			
RAB-23-6360	023 - Cable containment and grid cable wiring																			
RAB-23-6390	023 - Sub-array junction box installation & Connection																			
RAB-23-6400	023 - DC cable wiring from PV panel to EL room																			
Steel Canopy																				
RAB-23-6170	023 - Install Steel Support Columns																			
RAB-23-6200	023 - Install Primary Steelwork																			
RAB-23-6240	023 - Install Secondary Steelwork																			
RAB-23-6290	023 - Install Metal Cladding Panels																			
RAB-23-6310	023 - Install Misc Metalworks																			
Utilities and Drainage																				
RAB-23-7975	023 - Construct Permanent Drainage, Manholes & Draw Pits																			
RAB-23-7985	023 - Utilities and Common Telecom Ducting																			
RAB-23-7995	023 - Install Flushing Water Mains																			
RAB-23-8005	023 - Install Fresh Water Mains																			
RAB-23-8015	023 - Install FS Water Mains																			
Testing & Commissioning																				
RAB-TC23-1000	023 - T&C (HVAC, FS, P&D, OTHERS)																			
RAB-TC23-1010	023 - T&C (Lift)																			

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 ◻ Finish Constraint

3-Month Rolling Programme Update, 01 July 2017

RAB5			
Date	Revision	Checked	Approved
01-Jul-17	3-Month Rolling Programme, 01 Jul-17 Update	SGJ	



Activity ID	Activity Name	June 2017				July 2017				August 2017				September 2017				October 2017		
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RAB-TC23-1015	023 - PV Self-test with Engineer																			
RAB-TC23-1020	023 - PV On-Grid inspection with CLP																			
Statutory Submissions & Approvals (Day 610 Completion)																				
BBE0																				
RAB-BEE-150	023 - Registered Energy Assessor Inspection & Certification																			
RAB-BEE-160	023 - Submit REA Certification to EDMS																			
RAB-BEE-170	023 - EDMS Issue of Cert of Compliance Registration (COCR)																			
EMSD - Building 023 Lift Inspection																				
RAB-FSD-170	023 - Submit EMSD Form 3 (Commencement of Lift Installation)																			
RAB-FSD-180	023 - Submit EMSD Form 5 (Completion of Lift Installation)																			
RAB-FSD-190	023 - EMSD Lift Inspection																			
Water Supplies Department (WSD)																				
Commencement																				
Completion																				
RAB-WSD-774	023 - Submit WWO 46 Pt. IV for Building 023																			
RAB-WSD-107	023 - WSD Inspection/Meter Connection																			
RAB-WSD-109	023 - Permanent Water ON/WSD Issue WWO 46 Part V - Water C																			
Fire Servives Department (VAC)																				
RAB-FSD-890	023 - Submit Form 314																			
RAB-FSD-900	023 - Submit Form 501																			
Fire Services Department (FSD)																				
Commencement																				
Completion																				
RAB-FSD-138	023 - Submit Form 314																			
RAB-FSD-108	023 - Submit WWO 46 Pt. IV for Building 023																			
RAB-FSD-112	023 - Issue WWO 46 Part V																			
RAB-FSD-122	023 - Submit Form 501																			
RAB-FSD-110	023 - FSD Inspection Period For Building 023																			
RAB-FSD-290	023 - Issuance of FS 172, FS Certificate of Compliance																			
Engineer (AECOM)																				
Building 025 - Inbound Private Car Annexure																				
Excavation																				
Raft Foundations																				
Structure																				
Walls & Columns																				
Roof Slab																				
Cure and Strip																				
ABWF/E&M INTERNAL FINISHES																				
INTERNAL FINISHING WORKS																				
Degree 1																				
RAB-25-7490	025 - Floor Screed																			
RAB-25-7400	025 - MEP 1st Fix																			
RAB-25-7390	025 - Plastering & Under Coat																			
Degree 2																				
RAB-25-7430	025 - MEP 2nd Fix																			
RAB-25-7450	025 - Frame for Wall Panel & Cladding																			
RAB-25-7570	025 - Raised Floor Pedestal																			
RAB-25-7560	025 - Access C3, C6 & C7 Equip. Installation***																			
RAB-25-7350	025 - Power On Available																			
RAB-KD6B10	KD6B - Projected achievement of Stage 6B of the Works																			
Degree 3																				
RAB-25-7470	025 - Ceiling Painting & Ceiling Sub-Frame																			

█ Remaining Level of Effort
 █ Actual Work
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 ◊ Finish Constraint

3-Month Rolling Programme Update, 01 July 2017

RAB5			
Date	Revision	Checked	Approved
01-Jul-17	3-Month Rolling Programme, 01 Jul-17 Update	SGJ	



Activity ID	Activity Name	June 2017				July 2017				August 2017				September 2017				October 2017			
		04	11	18	25	02	09	16	23	30	06	13	20	27	03	10	17	24	01	08	
RAB-25-7620	025 - Ceiling Panel	[Actual Work]				[Remaining Work]															
RAB-25-7480	025 - Floor Tiling	[Actual Work]				[Remaining Work]															
RAB-25-7460	025 - MEP Final Fix	[Actual Work]				[Critical Remaining]															
RAB-25-7610	025 - Wall Tiling	[Actual Work]				[Critical Remaining]															
RAB-25-7580	025 - Floor Painting					[Remaining Work]															
RAB-25-7440	025 - Door Frame/Wall Panel					[Remaining Work]															
RAB-25-7600	025 - Wall Paint Finish Coat					[Critical Remaining]															
RAB-25-7520	025 - Glazing					[Remaining Work]															
RAB-25-7630	025 - Early Handover Rooms Ready to End Users***, Target to Achieve																				
RAB-25-7370	025 - Snagging and Remedials									[Remaining Work]											
RAB-25-7550	025 - MEP Balance of Works									[Remaining Work]											
RAB-25-7510	025 - Plaster Board									[Remaining Work]											
RAB-25-7590	025 - Floor Carpet									[Critical Remaining]											
RAB-25-7375	KD6C - Projected achievement of Stage 6C of the Works																				
RAB-KD6C10	025 - End Users and MoM handover inspection																				
External Finishes																					
Facade																					
RAB-25-0420	025 - External Tiling	[Actual Work]								[Remaining Work]											
RAB-25-0360	025 - Install External Louvers /Windows/Doors					[Remaining Work]															
RAB-25-0450	025 - External Painting					[Remaining Work]															
RAB-25-0580	025 - Make good external surfaces									[Remaining Work]											
RAB-25-0570	025 - Dismantle Scaffolding									[Remaining Work]											
At Grade																					
RAB-25-6400	025 - Prepare Sub Grade									[Remaining Work]											
RAB-25-6390	025 - Laying Geo Textile									[Remaining Work]				[Remaining Work]							
RAB-25-6410	025 - Lay Granular Sub-Base													[Remaining Work]							
RAB-25-6420	025 - Laying Course													[Remaining Work]							
RAB-25-6380	025 - Concrete Block Paving													[Remaining Work]							
Roof Finishes																					
RAB-25-0530	025 - Install Roof Tiles - (1285m²)					[Remaining Work]															
RAB-25-0550	025 - Install Railing (222m)					[Remaining Work]															
RAB-25-0540	025 - Install Cat Ladders and Roof Hatch					[Remaining Work]															
Green Roof																					
RAB-25-0700	025 - Install Green Roof Irrigation Systems					[Remaining Work]															
RAB-25-0710	025 - Complete Green Roof Works					[Remaining Work]				[Remaining Work]											
Specialist Installations																					
RAB-25-610	025 - Construct Immigration Counters x 3													[Remaining Work]							
RAB-25-620	025 - Construct Health Department Screening Station x 1													[Remaining Work]							
Glazed Canopy																					
RAB-25-0480	025 - Install Steel Support Columns (14 No)	[Actual Work]				[Remaining Work]															
RAB-25-0490	025 - Install Primary Steelwork					[Remaining Work]															
RAB-25-0500	025 - Install Secondary Steelwork					[Remaining Work]															
RAB-25-0520	025 - Install Glazed Panels									[Remaining Work]											
IMMD Kiosk																					
RAB-25-0380	025 - Internal ABWF and MEP of IMMD Kiosk									[Remaining Work]				[Remaining Work]							
RAB-25-0350	025 - External Finishes to IMMD Kiosk													[Remaining Work]							
Utilities and Drainage																					
RAB-25-7250	025 - Construct Permanent Drainage, Manholes & Draw Pits	[Actual Work]				[Remaining Work]															
RAB-25-7260	025 - Utilities and Common Telecom Ducting					[Remaining Work]															
RAB-25-7270	025 - Install Flushing Water Mains					[Remaining Work]															

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 █ Actual Work
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 █ Remaining Work
 ◊ Finish Constraint

3-Month Rolling Programme Update, 01 July 2017

RAB5			
Date	Revision	Checked	Approved
01-Jul-17	3-Month Rolling Programme, 01 Jul-17 Update	SGJ	



Activity ID	Activity Name	June 2017				July 2017				August 2017				September 2017				October 2017		
		04	11	18	25	02	09	16	23	30	06	13	20	27	03	10	17	24	01	08
RAB-25-7280	025 - Install Fresh Water Mains																			
RAB-25-7290	025 - Install FS Water Main																			
Testing & Commissioning																				
RAB-TC25-1000	025 - T&C (HVAC, FS, P&D, OTHERS)																			
Statutory Submissions & Approvals (Day 670 Completion)																				
BBE0																				
RAB-BEE-180	025 - Registered Energy Assessor Inspection & Certification																			
RAB-BEE-190	025 - Submit REA Certification to EDMS																			
RAB-BEE-200	025 - EDMS Issue of Cert of Compliance Registration (COCR)																			
Water Supplies Department (WSD)																				
Commencement																				
Completion																				
RAB-WSD-744	025 - Submit WWO 46 Pt. IV																			
RAB-WSD-374	025 - WSD Inspection/Meter Connection																			
Fire Services Department (VAC)																				
RAB-FSD-930	025 - Submit Form 314, VAC																			
RAB-FSD-940	025 - Submit Form 501, VAC																			
Fire Service Water (FS)																				
Commencement																				
Completion																				
RAB-FSD-350	025 - Submit WWO 46 Pt. IV, FS																			
Engineer (AECOM)																				
Building 032 - Outbound Private Car Annexure																				
Excavation																				
Raft Foundations																				
Structure																				
Walls & Columns																				
Roof Slab																				
Cure and Strip																				
RAB-32-0690	032 - Cure and Strip False/Formwork, Water Tank																			
ABWF/E&M																				
Internal Finishes																				
Degree 1																				
RAB-32-0460	032 - Construct Blockwork Walls (2170m ²)																			
RAB-32-0720	032 - Plastering & Undercoat																			
RAB-32-0700	032 - Floor Screed																			
RAB-32-0510	032 - MEP 1st Fix																			
RAB-32-0820	023 - Access for C3 Cabling***																			
Degree 2																				
RAB-32-0560	032 - MEP 2nd Fix																			
RAB-32-0760	032 - Door & Window Frame + Louver																			
RAB-32-0840	032 - Access for C3, C6 & C7 Equip. Installation***																			
RAB-32-0660	032 - Power On																			
RAB-KD7B10	KD7B - Projected achievement of Stage 7B of the Works																			
Degree 3																				
RAB-32-0770	032 - Floor Tiling & Floor Finishes to Early handover Rooms																			
RAB-32-0750	032 - Ceiling Frame																			
RAB-32-0590	032 - MEP Final Fix																			
RAB-32-0790	032 - Glazing																			
RAB-32-0745	032 - Raised Floor																			
RAB-32-0870	032 - Ceiling Paint ffinish Coat & Ceiling Panel																			
RAB-32-0850	032 - Early Handover Rooms Ready to End Users***																			

█ Remaining Level of Effort
 █ Actual Work
 █ Critical Remaining ...
█ Actual Level of Effort
 █ Remaining Work
 ◊ Finish Constraint

3-Month Rolling Programme Update, 01 July 2017

RAB5			
Date	Revision	Checked	Approved
01-Jul-17	3-Month Rolling Programme, 01 Jul-17 Update	SGJ	



Activity ID	Activity Name	June 2017				July 2017				August 2017				September 2017				October 2017		
		04	11	18	25	02	09	16	23	30	06	13	20	27	03	10	17	24	01	08
RAB-32-0740	032 - MEP Balance of Work																			
RAB-32-0860	032 - Floor Painting																			
RAB-32-0800	032 - Door Panel & Ironmongery																			
RAB-32-0680	32 - Snagging and Remedials																			
Roof Finishes																				
RAB-32-0440	032 - Waterproof membrane																			
RAB-32-0540	032 - Install Cat Ladders and Roof Hatch																			
RAB-32-0470	032 - Roof Tiling																			
RAB-32-0550	032 - Install Railing																			
Green Roof																				
RAB-32-0620	032 - Install Green Roof Irrigation Systems																			
RAB-32-0650	032 - Complete Green Roof Works																			
External Finishes																				
Facade																				
RAB-32-0400	032 - External Render																			
RAB-32-0450	032 - External Painting																			
RAB-32-0360	032 - Install External Louvers /Windows/Doors																			
RAB-32-0420	032 - External Tiling																			
RAB-32-0580	032 - Make good external surfaces																			
RAB-32-0570	032 - Dismantle Scaffolding																			
At Grade																				
RAB-32-6460	032 - Prepare Sub Grade																			
RAB-32-6450	032 - Laying Geo Textile																			
RAB-32-6470	032 - Lay Granular Sub-Base																			
RAB-32-6480	032 - Laying Course																			
RAB-32-6440	032 - Concrete Block Paving																			
Specialist Installations																				
RAB-32-630	032 - Construct Immigration Counters x 3																			
RAB-32-640	032 - Construct Health Department Screening Station X 1																			
IMMD Kiosk																				
RAB-32-0380	032 - Internal ABWF and MEP of IMMD Kiosk																			
RAB-32-0350	032 - External Finishes to IMMD Kiosk																			
Glazed Canopy																				
RAB-32-0480	032 - Install Steel Support Columns (14 No)																			
RAB-32-0490	032 - Install Primary Steelwork																			
RAB-32-0500	032 - Install Secondary Steelwork																			
Utilities and Drainage																				
RAB-32-7290	032 - Construct Permanent Drainage and Manholes (Approx 150m)																			
RAB-32-7330	032 - Install FS Water Main																			
RAB-32-7300	032 - Utilities and Common Telecom Ducting																			
RAB-32-7310	032 - Install Flushing Water Mains																			
RAB-32-7320	032 - Install Fresh Water Mains																			
Testing & Commissioning																				
RAB-TC32-1000	032 - T&C (HVAC, FS, P&D, OTHERS)																			
Statutory Submissions & Approvals (Day 670 Completion)																				
BEO																				
RAB-BEE-210	032 - Registered Energy Assessor Inspection & Certification																			
RAB-BEE-220	032 - Submit REA Certification to EDMS																			
RAB-BEE-230	032 - EDMS Issue of Cert of Compliance Registration (COCR)																			
Water Supplies Department (WSD)																				
Commencement																				

█ Remaining Level of Effort
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 █ Remaining Work
 ◻ Finish Constraint

3-Month Rolling Programme Update, 01 July 2017

RAB5			
Date	Revision	Checked	Approved
01-Jul-17	3-Month Rolling Programme, 01 Jul-17 Update	SGJ	



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		04	11	18	25	02	09	16	23	30	06	13	20	27	03	10	17	24	01	08
Completion																				
RAB-WSD-714	032 - Submit WWO 46 Pt. IV																			
RAB-WSD-354	032 - WSD Issue WWO 46 Part V - Completion Cert of Plumbing & I																			
RAB-WSD-344	032 - WSD Inspection/Meter Connection																			
Fire Servives Department (HVAC)																				
RAB-FSD-960	032 - Submit Form 314, HVAC																			
RAB-FSD-970	032 - Submit Form 501, HVAC																			
Fire Water Service (FS)																				
Commencement																				
Completion																				
RAB-FSD-380	032 - Submit WWO 46 Pt. IV, FS																			
RAB-FSD-610	032 - Submit WWO 46 Pt. V, FS																			
RAB-FSD-580	032 - Submit Form 501, FS																			
Engineer (AECOM)																				
RAB-32-7250	032 - Submit Building 032 As Built Drawings to Engineer																			
Building 044 - E&M Maintenance Building																				
Excavation																				
Raft																				
Structure																				
Walls & Columns																				
Ground to First Floor																				
First Floor																				
Cure and Strip																				
First Floor to Second Floor																				
Second Floor																				
Cure and Strip																				
RAB-44-0280	044 - Cure and Strip False/Formwork for +16.85mPD Slab, 1/F - 2/F																			
Second Floor to Roof																				
RAB-44-0270	044 - Construct External Walls to +20.65mPD (South)																			
RAB-44-610	044 - Install SPR (37m³) and FS (36m³) RC Water Tanks																			
Roof Level																				
RAB-44-0330	044 - Construct Roof Floor upto +20.65mPD (242m²) (72m³)																			
Cure and Strip																				
RAB-44-0370	044 - Cure and Strip False/Formwork for +20.65mPD Slab, 2/F - R/F																			
ABWF/E&M																				
Ground Floor																				
Degree 1																				
RAB-44-1110	044 - Construct Blockwork Walls - G/F																			
RAB-44-1180	044 - Plastering & Undercoat - G/F																			
RAB-44-1185	044 - MEP 1st Fix - G/F																			
RAB-44-1190	044 - C3 & C8 Conduit Installation*** - G/F																			
RAB-44-1200	044 - C3 Cabling*** - G/F																			
RAB-44-1170	044 - Screed - G/F																			
Degree 2																				
RAB-44-9175	044 - MEP 2nd Fix - G/F																			
RAB-44-0770	044 - C3 Access for Equipment Installation																			
RAB-44-0760	044 - Door & Windor Frame + Louver - G/F																			
Degree 3																				
RAB-44-9285	044 - Wall Finish, Paint & Tile - G/F																			
RAB-44-9295	044 - Door Panel & Ironmongery - G/F																			
RAB-44-9245	044 - Ceiling Plaster Board Frame																			
RAB-44-9265	044 - Floor Tile Finish - G/F																			

█ Remaining Level of Effort
 █ Actual Work
 █ Critical Remaining ...
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 █ Remaining Work
 ◊ Finish Constraint

3-Month Rolling Programme Update, 01 July 2017

RAB5			
Date	Revision	Checked	Approved
01-Jul-17	3-Month Rolling Programme, 01 Jul-17 Update	SGJ	



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		04	11	18	25	02	09	16	23	30	06	13	20	27	03	10	17	24	01	08
RAB-44-9235	044 - Ceiling Panel Frame - G/F																			
RAB-44-9255	044 - Ceiling Paint - G/F																			
RAB-44-9395	044 - Ceiling Plaster Board																			
RAB-44-9185	044 - MEP Final Fix - G/F																			
RAB-44-9345	044 - Ceiling Panel - G/F																			
RAB-44-9275	044 - Glazing - G/F																			
RAB-44-9355	044 - Floor Paint Finish - G/F																			
First Floor																				
Degree 1																				
RAB-44-9315	044 - Construct Blockwork Walls - 1/F																			
RAB-44-9335	044 - Plastering & Undercoat - 1/F																			
RAB-44-9405	044 - C3, C6 & C8 Conduit Installation*** - 1/F																			
RAB-44-9305	044 - MEP 1st Fix - 1/F																			
RAB-44-9415	044 - Access for C3 Cabling*** - 1/F																			
RAB-44-9325	044 - Screed - 1/F																			
Degree 2																				
RAB-44-9365	044 - MEP 2nd Fix - 1/F																			
RAB-44-9455	044 - Door & Window Frame + Louver - 1/F																			
Degree 3																				
RAB-44-9555	044 - Wall Finish, Paint & Tile - 1/F																			
RAB-44-9505	044 - Door Panel & Ironmongery - 1/F																			
RAB-44-9565	044 - Floor Tile Finish - 1/F																			
RAB-44-9705	044 - Ceiling Plaster Board																			
RAB-44-9465	044 - Ceiling Paint Finish - 1/F																			
RAB-44-9385	044 - Ceiling Panel Frame - 1/F																			
RAB-44-9695	044 - Ceiling Plaster Board Frame																			
RAB-44-9375	044 - MEP Final Fix - 1/F																			
RAB-44-9495	044 - Ceiling Panel - 1/F																			
RAB-44-9485	044 - Glazing - 1/F																			
RAB-44-9475	044 - Floor Paint Finish - 1/F																			
Second Floor																				
Degree 1																				
RAB-44-9525	044 - Construct Blockwork Walls - 2/F																			
RAB-44-9755	044 - C3 & C8 Conduit Installation*** - 2/F																			
RAB-44-9545	044 - Plastering & Undercoat - 2/F																			
RAB-44-9765	044 - Access for C3 Cabling*** - 2/F																			
RAB-44-9535	044 - Screed - 2/F																			
RAB-44-9515	044 - MEP 1st Fix - 2/F																			
RAB-KD8A20	044 - Projected achievement of Stage 8A of the Works - 2/F																			
Degree 2																				
RAB-44-9575	044 - MEP 2nd Fix - 2/F																			
RAB-44-9665	044 - Door & Window Frame + Louver - 2/F																			
RAB-44-9605	044 - Power On - 2/F																			
RAB-44-0610	KD8B - Projected achievement of Stage 8B of the Works - 2/F																			
Degree 3																				
RAB-44-9595	044 - Wall Finish, Paint & Tile - 2/F																			
RAB-44-9635	044 - Ceiling Paint Finish - 2/F																			
RAB-44-9715	044 - Door Panel & Ironmongery - 2/F																			
RAB-44-9725	044 - Ceiling Plaster Board Frame - 2/F																			
RAB-44-9735	044 - Ceiling Plaster Board																			

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 █ Actual Work
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█ Actual Level of Effort
 █ Remaining Work
 ◊ Finish Constraint

3-Month Rolling Programme Update, 01 July 2017

RAB5			
Date	Revision	Checked	Approved
01-Jul-17	3-Month Rolling Programme, 01 Jul-17 Update	SGJ	



Activity ID	Activity Name	June 2017				July 2017				August 2017				September 2017				October 2017		
		04	11	18	25	02	09	16	23	30	06	13	20	27	03	10	17	24	01	08
RAB-44-9685	044 - Floor Tile Finish & Floor Finish to Early handover Rooms - 2/F																			
RAB-44-9675	044 - Glazing - 2/F																			
RAB-44-9645	044 - Ceiling Panel Frame - 2/F																			
RAB-44-9585	044 - MEP Final Fix - 2/F																			
RAB-44-9795	044 - MEP Balance of Works																			
RAB-44-9745	044 - Ceiling Panel - 2/F																			
RAB-44-9625	044 - Snagging and Remedials																			
RAB-44-9655	044 - Floor Finish Other Than Act. No. RAB-44-9685- 1/F																			
Roof Finishes																				
RAB-44-0420	044 - Leveling screed - (242m²)																			
RAB-44-0450	044 - Waterproof membrane - (242m²)																			
RAB-44-1150	044 - Insulation Board - (242m²)																			
RAB-44-0480	044 - Top Screed - (242m²)																			
RAB-44-0520	044 - Install Roof Tiles - (242m²)																			
RAB-44-0540	044 - Install Railing																			
RAB-44-0550	044 - Install Cat Ladder and Roof Hatch																			
Green Roof																				
RAB-44-0320	044 - Erect External Scaffolding																			
RAB-44-0350	044 - Leveling screed - (242m²)																			
RAB-44-0360	044 - Waterproof membrane - (242m²)																			
RAB-44-0390	044 - Top Screed - (242m²)																			
External Finishes																				
Facade																				
RAB-44-0430	044 - Install External Louvers /Windows/Doors																			
RAB-44-0470	044 - External Render																			
RAB-44-0530	044 - External Painting																			
RAB-44-0490	044 - External Tiling																			
RAB-44-0570	044 - Dismantle Scaffolding																			
At Grade																				
RAB-44-6520	044 - Prepare Sub Grade																			
Specialist Installations																				
RAB-44-0600	044 - Install Lift (1 nos)																			
RAB-44-1100	044 - Installation of Roller Shutter Header Box																			
RAB-44-2250	044 - Small Glass Canopy North Elevation																			
RAB-44-1090	044 - Installation of Roller Shutter Steel Curtain																			
Curtain Wall																				
East																				
RAB-44-6870	044 - Complete Formwork Stripping to Roof Level																			
RAB-44-6880	044 - Install Primary Steelwork for Window Wall - East																			
RAB-44-6890	044 - Install Secondary Steelwork for Window Wall - East																			
RAB-44-6900	044 - Glazing to Window Wall - East																			
West																				
RAB-44-6920	044 - Install Primary Steelwork for Window Wall - West																			
RAB-44-6930	044 - Install Secondary Steelwork for Window Wall - West																			
RAB-44-6940	044 - Glazing to Window Wall - West																			
Utilities and Drainage																				
RAB-44-7895	044 - Construct Permanent Drainage and Manholes (Approx 100m)																			
RAB-44-7935	044 - Install FS Water Main																			
RAB-44-7915	044 - Install Flushing Water Mains																			
RAB-44-7925	044 - Install Fresh Water Mains																			

█ Remaining Level of Effort
 █ Actual Work
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 █ Remaining Work
 ◊ Finish Constraint

3-Month Rolling Programme Update, 01 July 2017

RAB5			
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01-Jul-17	3-Month Rolling Programme, 01 Jul-17 Update	SGJ	



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RAB-44-7905	044 - Utilities and Common Telecom Ducting																			
Testing & Commissioning																				
RAB-TC44-1000	044 - T&C (HVAC, FS, P&D, OTHERS)																			
Statutory Submissions & Approvals																				
BBE0																				
RAB-BEE-240	044 - Registered Energy Assessor Inspection & Certification																			
RAB-BEE-250	044 - Submit REA Certification to EDMS																			
RAB-BEE-260	044 - EDMS Issue of Cert of Compliance Registration (COCR)																			
EMSD - Building 044 Lift Inspection																				
RAB-FSD-200	044 - Submit EMSD Form 3 (Commencement of Lift Installation)																			
Water Supplies Department (WSD)																				
Commencement																				
Completion																				
RAB-WSD-684	044 - Submit WWO 46 Pt. IV																			
RAB-WSD-314	044 WSD Inspection/Meter Connection																			
Fire Services Department (HVAC)																				
RAB-FSD-1020	044 - Submit Form 314 to FSD, HVAC																			
Fire Water Services (FS)																				
Commencement																				
Completion																				
RAB-FSD-116	044 - Submit WWO 46 Pt. IV, FS																			
RAB-FSD-120	044 WSD Issue WWO Part V																			
Engineer (AECOM)																				
RAB-44-7280	044 - Submit Building 044 As Built Drawings to Engineer																			
Building 045 - Highways Depot & Administration Building																				
Raft Foundation																				
Diesel Fuel Chamber																				
Structure G/F to R/F																				
G/F to 1/F Walls & Columns																				
1/F Slab																				
Cure and Strip																				
1/F to 2/F Walls & Columns																				
2/F Slab																				
Cure and Strip																				
2/f to R/F Walls & Columns																				
Roof Level Slab																				
RAB-45-0700	045 - Construct Roof Floor upto +20.65mPD Bay 3 (285m ²) (approx																			
RAB-45-1230	045 - Construct Roof Floor upto +20.65mPD Bay 4 (285m ²) (approx																			
Cure and Strip																				
RAB-45-0750	045 - Cure and Strip False/Formwork +20.65mPD Bay 3, 2/F-R/F																			
RAB-45-1240	045 - Cure and Strip False/Formwork +20.65mPD Bay 4, 2/F-R/F																			
ABWF/E&M																				
Ground Floor, South - G/F																				
Degree 1, G/F																				
RAB-45-0400	045 - C3 & C8 Conduit Installation, G/F***																			
RAB-45-0390	045 - Construct Blockwork Walls - G/F																			
RAB-45-9725	045 - MEP 1st Fix - G/F																			
RAB-45-9775	045 - Plastering & Undercoat - G/F																			
RAB-45-0440	045 - Access for C3 Cabling Works, G/F***																			
RAB-45-9765	045 - Screed - G/F																			
Degree 2, G/F																				
RAB-45-9805	045 - MEP 2nd Fix - G/F																			

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 █ Remaining Work
 ◊ Finish Constraint

3-Month Rolling Programme Update, 01 July 2017

RAB5			
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01-Jul-17	3-Month Rolling Programme, 01 Jul-17 Update	SGJ	



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		04	11	18	25	02	09	16	23	30	06	13	20	27	03	10	17	24	01	08	
RAB-45-9895	045 - Door & Window Frame + Louver - G/F					[Red bar]															
Degree 3, G/F																					
RAB-45-9935	045 - Wall Finish, Paint & Tile - G/F	[Blue bar]				[Red bar]															
RAB-45-10005	045 - Ceiling Paint - G/F	[Blue bar]				[Green bar]															
RAB-45-9945	045 - Door Panel & Ironmongery - G/F					[Green bar]															
RAB-45-9915	045 - Floor Finish (Paint & Tile) - G/F					[Red bar]															
RAB-45-9815	045 - MEP Final Fix - G/F					[Green bar]															
RAB-45-9925	045 - Glazing - G/F					[Green bar]															
RAB-45-10035	045 - Ceiling Plaster Board Frame & Ceiling Panel Frame - G/F					[Red bar]															
RAB-45-10055	045 - Ceiling Plaster Board & Ceiling Panel - G/F									[Green bar]											
First Floor, 1/F																					
Degree 1, 1/F																					
RAB-45-9965	045 - Construct Blockwork Walls - 1/F	[Blue bar]																			
RAB-45-9985	045 - Plastering & Undercoat - 1/F	[Blue bar]																			
RAB-45-9975	045 - Screed - 1/F	[Blue bar]				[Green bar]															
RAB-45-9955	045 - MEP 1st Fix - 1/F	[Blue bar]																			
RAB-45-9995	045 - C3, C6 & C8 Conduit Installation, 1/F***					[Red bar]															
RAB-45-10045	045 - Access for C3 Cabling Works, 1/F***																				
Degree 2, 1/F																					
RAB-45-10015	045 - MEP 2nd Fix - 1/F				[Blue bar]					[Red bar]											
RAB-45-10105	045 - Door & Window Frame + Louver - 1/F									[Red bar]											
RAB-45-10065	045 - Access to C3 Equipment Installation***																				
Degree 3, 1/F																					
RAB-45-10145	045 - Wall Finish, Paint & Tile - 1/F					[Green bar]															
RAB-45-10155	045 - Door Panel & Ironmongery - 1/F									[Green bar]											
RAB-45-10175	045 - Ceiling Paint - 1/F																				
RAB-45-10125	045 - Floor Finish (Paint & Tile) - 1/F									[Red bar]											
RAB-45-10285	045 - Glazing - 1/F									[Green bar]											
RAB-45-10025	045 - MEP Final Fix - 1/F									[Green bar]											
RAB-45-10205	045 - Ceiling Plaster Board Frame Ceiling Panel Frame - 1/F									[Red bar]											
RAB-45-10245	045 - Ceiling Plaster Board & Ceiling Panel - 1/F									[Green bar]											
RAB-45-10275	045 - Early Handover to End users***																				
Second Floor, 2/F																					
Degree 1, 2/F																					
RAB-45-0810	045 - Construct Blockwork Walls - 2/F					[Red bar]															
RAB-45-10195	045 - Plastering & Undercoat - 2/F					[Red bar]															
RAB-45-10185	045 - Screed - 2/F					[Green bar]															
RAB-45-10165	045 - MEP 1st Fix - 2/F					[Red bar]															
RAB-45-0830	045 - Access to C3, C6 & C8 Conduit Installation, 2/F***																				
RAB-45-0840	045 - Access for C3 Cabling Works, 2/F***																				
RAB-45-0900	045 - Projected achievement of Stage 8A of the Works - 2/F																				
Degree 2, 2/F																					
RAB-45-10225	045 - MEP 2nd Fix - 2/F					[Red bar]															
RAB-45-10315	045 - Door & Window Frame + Louver - 2/F									[Red bar]											
RAB-45-10255	045 - Power On - 2/F																				
RAB-45-10295	045 - Access for C3 Equip. Installation, 2/F***																				
RAB-45-0950	KD8B - Projected achievement of Stage 8B of the Works - 2/F																				
RAB-45-10405	045 - Early Handover Rooms Ready to End Users																				
Degree 3, 2/F																					
RAB-45-10395	045 - Ceiling Paint - 2/F									[Green bar]											

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 ◊ Finish Constraint

3-Month Rolling Programme Update, 01 July 2017

RAB5			
Date	Revision	Checked	Approved
01-Jul-17	3-Month Rolling Programme, 01 Jul-17 Update	SGJ	



Activity ID	Activity Name	June 2017				July 2017				August 2017				September 2017				October 2017		
		04	11	18	25	02	09	16	23	30	06	13	20	27	03	10	17	24	01	08
RAB-45-10335	045 - Floor Finish (Paint & Tile) - 2/F																			
RAB-45-10355	045 - Wall Finish, Paint & Tile - 2/F																			
RAB-45-10375	045 - Ceiling Plaster Board Frame & Ceiling Panel Frame - 2/F																			
RAB-45-10385	045 - Ceiling Plaster Board & Ceiling Panel - 2/F																			
RAB-45-10235	045 - MEP Final Fix - 2/F																			
RAB-45-10345	045 - Glazing - 2/F																			
RAB-45-0980	045 - Snagging and Remedials - 2/F																			
RAB-45-10365	045 - Door Panel & Ironmongery - 2/F																			
RAB-45-10305	045 - MEP Balance of Works																			
RAB-45-10265	045 - End Users and MoM handover inspection																			
RAB-45-0970	KD8C - Projected achievement of Stage 8C of the Works - 2/F																			
External Finishes																				
Bldg. External Finishes																				
Facade																				
RAB-45-0760	045 - Make good external surfaces																			
RAB-45-0630	045 - External Render																			
RAB-45-0620	045 - Install External Louvers /Windows/Doors																			
RAB-45-0690	045 - External Painting																			
RAB-45-0720	045 - Dismantle Scaffolding																			
At Grade																				
RAB-45-6580	045 - Prepare Sub Grade																			
RAB-45-6570	045 - Laying Geo Textile																			
RAB-45-6590	045 - Lay Granular Sub-Base																			
RAB-45-6600	045 - Laying Course																			
RAB-45-6560	045 - Concrete Block Paving																			
RAB-45-6610	045 - Grouting Works to Concrete Pavers																			
Roof Finishes -																				
RAB-45-0820	045 - Leveling screed																			
RAB-45-0860	045 - Waterproof membrane																			
RAB-45-0880	045 - Top Screed																			
RAB-45-0910	045 - Install Roof Tiles																			
RAB-45-0920	045 - Install Railing																			
RAB-45-0930	045 - Install Cat Ladder and Roof Hatch																			
Green Roof - Noth Side, 2/F Level																				
RAB-45-0600	045 - Leveling screed																			
RAB-45-0650	045 - Waterproof membrane																			
RAB-45-1210	045 - Insulation Board																			
RAB-45-0670	045 - Top Screed																			
RAB-45-0680	045 - Install green Roof Irrigation Systems																			
RAB-45-0740	045 - Complete Green Roofing Works																			
Specialist Installations																				
RAB-45-1125	045 - Install Genset and swtich board G/F																			
RAB-45-0590	045 - Install Lift (1 nos)																			
RAB-45-6000	045 - Small Glass Canopy North Elevation																			
Window Wall																				
East																				
RAB-45-6950	045 - Complete Formwork Stripping to Roof Level																			
RAB-45-6960	045 - Install Primary Steelwork for Window Wall																			
RAB-45-6970	045 - Install Secondary Steelwork for Window Wall																			
RAB-45-6980	045 - Glazing to Window Wall																			

█ Remaining Level of Effort
 █ Actual Work
 █ Critical Remaining ...
█ Actual Level of Effort
 █ Remaining Work
 ◊ Finish Constraint

3-Month Rolling Programme Update, 01 July 2017

RAB5			
Date	Revision	Checked	Approved
01-Jul-17	3-Month Rolling Programme, 01 Jul-17 Update	SGJ	



Activity ID	Activity Name	June 2017				July 2017				August 2017				September 2017				October 2017		
		04	11	18	25	02	09	16	23	30	06	13	20	27	03	10	17	24	01	08
West																				
RAB-45-6990	045 - Install Primary Steelwork for Window Wall																			
RAB-45-7000	045 - Install Secondary Steelwork for Window Wall																			
RAB-45-7010	045 - Glazing to Window Wall																			
Utilities and Drainage																				
RAB-45-7935	045 - Construct Permanent Drainage and Manholes (Approx 180m)																			
RAB-45-7945	045 - Utilites and Common Telecom Ducting																			
RAB-45-7975	045 - Install FS Water Main																			
RAB-45-7955	045 - Install Flushing Water Mains																			
RAB-45-7965	045 - Install Fresh Water Mains																			
Testing & Commissioning																				
RAB-TC45-1020	045 - T&C (HVAC, FS, P&D, OTHERS)																			
RAB-TC45-1030	045 - T&C, Lift																			
Statutory Submissions & Approvals (Day 670 Completion)																				
BBE0																				
RAB-BEE-270	045 - Registered Energy Assessor Inspection & Certification																			
RAB-BEE-280	045 - Submit REA Certification to EDMS																			
RAB-BEE-290	045 - EDMS Issue of Cert of Compliance Registration (COCR)																			
EMSD - Building 045 Lift Inspection																				
RAB-FSD-230	045 - Submit EMSD Form 3 (Commencement of Lift Installation)																			
RAB-FSD-240	045 - Submit EMSD Form 5 (Completion of Lift Installation)																			
Fuel Tank - DG License																				
RAB-FSD-660	045 - FSD Inspection & Approval																			
RAB-FSD-680	045 - FSD Issue License																			
Generator Set - EPD Permit																				
RAB-EPD-0100	045 - DG Storage Drwg. Ready for Submission																			
RAB-EPD-0110	045 - Submmit to EPD																			
RAB-EPD-0120	045 - EPD Issue Permit																			
RAB-EPD-0130	045 - Submission Form 501to EPD																			
RAB-EPD-0140	045 - EPD Approval																			
Generator Set - DG Licence																				
RAB-FSD-690	045- Genset Ready for DG Inspection																			
RAB-FSD-700	045 - Notify FSD for DG Inspection																			
RAB-FSD-710	045 - FSD (Vent) /FS Inspection/Process License																			
RAB-FSD-720	045 - DG Licence Issued																			
Water Supplies Department (WSD)																				
Commencement																				
Completion																				
RAB-WSD-654	045 - Submit WWO 46 Pt. IV																			
RAB-WSD-284	045 - WSD's Processing/Inspection/Meter Connection																			
RAB-WSD-294	045 - WSD Issue WWO 046 Part V, Plumbing Inst'n Cert & Connect																			
HVAC																				
FSD																				
Commencement																				
Completion																				
RAB-FSD-440	045 - Submit WWO 46 Pt. I V																			
RAB-FSD-600	045 - Submit WWO 46 Pt. V																			
Engineer (AECOM)																				
RAB-45-7310	045 - Submit Building 045 As Built Drawings to Engineer																			
Building 050 - Public Toilets Type 2																				
Public Toilet (Portion H1)																				

█ Remaining Level of Effort
 █ Actual Work
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█ Actual Level of Effort
 █ Remaining Work
 ◊ Finish Constraint

3-Month Rolling Programme Update, 01 July 2017

RAB5			
Date	Revision	Checked	Approved
01-Jul-17	3-Month Rolling Programme, 01 Jul-17 Update	SGJ	



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		04	11	18	25	02	09	16	23	30	06	13	20	27	03	10	17	24	01
Excavation																			
Raft																			
RAB-50-1330	050 H1 - Ground Slab																		
Structure																			
RAB-50-1060	050 H1 - Construct RC Walls & Columns (External and Internal)	[Actual Work]				[Critical Remaining]													
RAB-50-1070	050 H1 - Construct Roof Floor at +11.525mPD	[Actual Work]				[Critical Remaining]													
RAB-50-4310	050 H1 - Construct RC Support Columns for Aluminium Solar Shade					[Critical Remaining]													
RAB-50-1080	050 H1 - Cure and Strip False/Formwork									[Critical Remaining]									
ABWF/E&M																			
Internal Finishes																			
Degree 1																			
RAB-50-1110	050 H1 - Construct Blockwork Walls (126m²)									[Critical Remaining]									
RAB-50-1320	050 H1 - Screeding									[Critical Remaining]									
RAB-50-1340	050 H1 - Plastering & Undercoat									[Critical Remaining]									
RAB-50-1170	050 H1 - MEP 1st Fix									[Critical Remaining]									
RAB-KD9A40	050 H1 - Access for C3 Cabling Works													[Critical Remaining]					
RAB-KD9A10	KD9A - Projected achievement of Stage 9A of the Works													[Critical Remaining]					
Degree 2																			
RAB-50-1360	050 H1 - Louver / Door Frame													[Critical Remaining]					
RAB-50-1270	050 H1 - MEP 2nd Fix													[Critical Remaining]					
Degree 3																			
RAB-50-1310	050 H1 - Ceiling Frame													[Critical Remaining]					
RAB-50-1350	050 H1 - Wall Finish													[Critical Remaining]					
RAB-50-1370	050 H1 - Ceiling & Floor Finish													[Critical Remaining]					
Specialist installation																			
RAB-50-1240	050 H1 - Installation of Sanitaryware and Fixtures													[Critical Remaining]					
Roof Finishes																			
RAB-50-1100	050 H1 - Install Skylights (8No)									[Critical Remaining]									
RAB-50-1130	050 H1 - Leveling screed - 140m²									[Critical Remaining]									
RAB-50-1140	050 H1 - Waterproof membrane - 140m²									[Critical Remaining]									
RAB-50-1160	050 H1 - Top Screed - 140m²									[Critical Remaining]									
RAB-50-1180	050 H1 - Install Roof Tiles - 140m²									[Critical Remaining]									
RAB-50-1200	050 H1 - Install Railing - 49m									[Critical Remaining]									
RAB-50-1210	050 H1 - Install Cat Ladder and Roof Access Hatch									[Critical Remaining]									
RAB-50-4320	050 H1 - Install Aluminium Cladding									[Critical Remaining]									
RAB-50-4470	050 H1 - Installation of Aluminium Canopy									[Critical Remaining]									
External Finishes																			
RAB-50-1090	050 H1 - Erect External Scaffolding									[Critical Remaining]									
RAB-50-1120	050 H1 - Install External Louvers /Windows/Doors									[Critical Remaining]									
RAB-50-1150	050 H1 - External Render									[Critical Remaining]									
RAB-50-1190	050 H1 - External Tiling									[Critical Remaining]									
RAB-50-1220	050 H1 - External Painting									[Critical Remaining]									
RAB-50-1250	050 H1 - Dismantle Scaffolding									[Critical Remaining]									
Utilities and Drainage																			
RAB-50-8015	050 H1 - Construct Permanent Drainage and Manholes (Approx 20m)	[Actual Work]				[Critical Remaining]													
RAB-50-8035	050 H1 - Install Flushing Water Mains					[Remaining Work]													
RAB-50-8045	050 H1 - Install Fresh Water Mains					[Remaining Work]													
RAB-50-8025	050 H1 - Utilities and Common Telecom Ducting					[Remaining Work]													
Testing & Commissioning																			
Statutory Submissions & Approvals (Day 670 Completion)																			
BBO																			

█ Remaining Level of Effort
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 █ Remaining Work
 ◻ Finish Constraint

3-Month Rolling Programme Update, 01 July 2017

RAB5			
Date	Revision	Checked	Approved
01-Jul-17	3-Month Rolling Programme, 01 Jul-17 Update	SGJ	



Activity ID	Activity Name	June 2017				July 2017				August 2017				September 2017				October 2017				
		04	11	18	25	02	09	16	23	30	06	13	20	27	03	10	17	24	01	08		
Water Supplies Department (WSD)																						
Commencement																						
Completion																						
RAB-WSD-454	050 H1 - Submit WWO 46 Pt. IV																		◆			
Fire Services Department (VAC)																						
Engineer (AECOM)																						
Public Toilet (Portion H2)																						
Excavation																						
Raft																						
RAB-50-2320	050 H2 - Ground Slab	■				■																
Structure																						
RAB-50-2060	050 H2 - Construct RC Walls (External and Internal)					■																
RAB-50-4330	050 H2 - Construct Roof Floor at +11.525mPD					■																
RAB-50-2070	050 H2 - Construct RC Support Columns for Aluminium Solar Shade					■																
RAB-50-2080	050 H2 - Cure and Strip False/Formwork					■																
ABWF/E&M																						
Internal Finishes																						
Degree 1																						
RAB-50-2110	050 H2 - Construct Blockwork Walls (126m²)												■									
RAB-50-2170	050 H2 - MEP 1st Fix												■									
RAB-50-2330	050 H2 - Plastering & Undercoat												■									
RAB-50-2310	050 H2 - Screeding												■									
RAB-50-2390	050 H2 - Access for C3 Cabling Works												■									
RAB-KD10A10	050 H2 - Projected achievement of Stage 10A of the Works																		◆	◆		
Degree 2																						
RAB-50-2360	050 H2 - Louver / Door Frame												■									
RAB-50-2270	050 H2 - MEP 2nd Fix												■									
Degree 3																						
RAB-50-2340	050 H2 - Ceiling Frame												■									
Specialist installation																						
RAB-50-2240	050 H2 - Installation of Sanitaryware and Fixtures												■									
Roof Finishes																						
RAB-50-2100	050 H2 - Install Skylights (8No)												■									
RAB-50-2130	050 H2 - Leveling screed - 140m²												■									
RAB-50-2140	050 H2 - Waterproof membrane - 140m²												■									
RAB-50-2160	050 H2 - Top Screed - 140m²												■									
RAB-50-2180	050 H2 - Install Roof Tiles - 140m²												■									
RAB-50-2200	050 H2 - Install Railing - 49m												■									
RAB-50-2210	050 H2 - Install Cat Ladder and Roof Access Hatch												■									
RAB-50-4360	050 H2 - Install Aluminium Cladding												■									
External Finishes																						
RAB-50-2090	050 H2 - Erect External Scaffolding												■									
RAB-50-2120	050 H2 - Install External Louvers /Windows/Doors												■									
RAB-50-2150	050 H2 - External Render												■									
RAB-50-2190	050 H2 - External Tiling												■									
RAB-50-2220	050 H2 - External Painting												■									
Utilities and Drainage																						
RAB-50-7895	050 H2 - Construct Permanent Drainage and Manholes (Approx 20n	■				■																
RAB-50-7915	050 H2 - Install Flushing Water Mains					■																
RAB-50-7925	050 H2 - Install Fresh Water Mains					■																
RAB-50-7905	050 H2 - Utilities and Common Telecom Ducting					■																

■ Remaining Level of Effort
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 ■ Critical Remaining ...
■ Actual Level of Effort
 ■ Remaining Work
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3-Month Rolling Programme Update, 01 July 2017

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01-Jul-17	3-Month Rolling Programme, 01 Jul-17 Update	SGJ	



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		04	11	18	25	02	09	16	23	30	06	13	20	27	03	10	17	24	01
Testing & Commissioning																			
Statutory Submissions & Approvals (Day 670 Completion)																			
BBEO																			
Water Supplies Department (WSD)																			
Commencement																			
Completion																			
Fire Services Department (VAC)																			
Engineer (AECOM)																			
Public Toilet (Portion A1)																			
Excavation																			
RAB-50-3030	050 A1 - Underground Utilities and Drainage																		
Raft																			
RAB-50-3040	050 A1 - Construct Raft Foundation + Dwarf Wall																		
RAB-50-3050	050 A1 - Ground Slab																		
Structure																			
RAB-50-3060	050 A1 - Construct RC Walls (External and Internal)																		
RAB-50-3070	050 A1 - Construct Roof Floor at +11.525mPD (140m ²) (21m ³)																		
RAB-50-4340	050 A1 - Construct RC Support Columns for Aluminium Solar Shade																		
RAB-50-3080	050 A1 - Cure and Strip False/Formwork																		
ABWF/E&M																			
Internal Finishes																			
Degree 1																			
RAB-50-3110	050 A1 - Construct Blockwork Walls (126m ²)																		
RAB-50-3170	050 A1 - MEP 1st Fix																		
RAB-50-3310	050 A1 - Plastering & Undercoat																		
RAB-50-3320	050 A1 - Screeding																		
Degree 2																			
RAB-50-3360	050 A1 - Louver / Door Frame																		
RAB-50-3270	050 A1 - MEP 2nd Fix																		
Degree 3																			
Specialist installation																			
Roof Finishes																			
RAB-50-3100	050 A1 - Install Skylights (8No)																		
RAB-50-3130	050 A1 - Leveling screed - 140m ²																		
RAB-50-3140	050 A1 - Waterproof membrane - 140m ²																		
RAB-50-3160	050 A1 - Top Screed - 140m ²																		
RAB-50-3180	050 A1 - Install Roof Tiles - 140m ²																		
RAB-50-3200	050 A1 - Install Railing - 49m																		
RAB-50-3210	050 A1 - Install Cat Ladder and Roof Access Hatch																		
RAB-50-4370	050 A1 - Install Aluminium Cladding																		
External Finishes																			
RAB-50-3090	050 A1 - Erect External Scaffolding																		
RAB-50-3120	050 A1 - Install External Louvers /Windows/Doors																		
RAB-50-3150	050 A1 - External Render (From Bldg 050 H2)																		
RAB-50-3190	050 A1 - External Tiling																		
RAB-50-3220	050 A1 - External Painting																		
Utilities and Drainage																			
RAB-50-7935	050 A1 - Construct Permanent Drainage and Manholes																		
Testing & Commissioning																			
Statutory Submissions & Approvals (Day 670 Completion)																			
BBEO																			
Water Supplies Department (WSD)																			

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3-Month Rolling Programme Update, 01 July 2017

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Commencement																			
Completion																			
Fire Servives Department (VAC)																			
Engineer (Aecom)																			
Public Toilet (Portion A2)																			
Excavation																			
Raft																			
RAB-50-4050	050 A2 - Ground Slab																		
Structure																			
RAB-50-4060	050 A2 - Construct RC Walls (External and Internal)																		
RAB-50-4070	050 A2 - Construct Roof Floor at +11.525mPD (140m²) (21m³)																		
RAB-50-4350	050 A2 - Construct RC Support Columns for Aluminium Solar Shade																		
RAB-50-4080	050 A2 - Cure and Strip False/Formwork																		
ABWF/E&M																			
Internal Finishes																			
Degree 1																			
RAB-50-4110	050 A2 - Construct Blockwork Walls (126m²)																		
RAB-50-4170	050 A2 - MEP 1st Fix																		
RAB-50-4420	050 A2 - Plastering & Undercoat																		
RAB-50-4400	050 A2 - Screeding																		
RAB-50-4410	050 A2 - Access for C3 Cabling Works																		
RAB-KD12A10	KD12A - Projected achievement of Stage 12A of the Works																		
Degree 2																			
RAB-50-4440	050 A2 - Louver / Door Frame																		
RAB-50-4270	050 A2 - MEP 2nd Fix																		
Degree 3																			
Specialist installation																			
RAB-50-4240	050 A2 - Installation of Sanitaryware and Fixtures																		
Roof Finishes																			
RAB-50-4100	050 A2 - Install Skylights (8No)																		
RAB-50-4130	050 A2 - Leveling screed - 140m²																		
RAB-50-4140	050 A2 - Waterproof membrane - 140m²																		
RAB-50-4160	050 A2 - Top Screed - 140m²																		
RAB-50-4180	050 A2 - Install Roof Tiles - 140m²																		
RAB-50-4200	050 A2 - Install Railing - 49m																		
RAB-50-4210	050 A2 - Install Cat Ladder and Roof Access Hatch																		
RAB-50-4380	050 A2 - Install Aluminium Cladding																		
External Finishes																			
RAB-50-4090	050 A2 - Erect External Scaffolding																		
RAB-50-4120	050 A2 - Install External Louvers /Windows/Doors																		
RAB-50-4150	050 A2 - External Render																		
RAB-50-4190	050 A2 - External Tiling																		
Utilities and Drainage																			
RAB-50-7975	050 A2 - Construct Permanent Drainage and Manholes (Approx 20m)																		
RAB-50-7995	050 A2 - Install Flushing Water Mains																		
RAB-50-8005	050 A2 - Install Fresh Water Mains																		
RAB-50-7985	050 A2 - Utilites and Common Telecom Ducting																		
Testing & Commissioning																			
Statutory Submissions & Approvals (Day 670 Completion)																			
BBEO																			
Water Supplies Department (WSD)																			
Commencement																			

█ Remaining Level of Effort
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 ◊ Finish Constraint

3-Month Rolling Programme Update, 01 July 2017

RAB5			
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01-Jul-17	3-Month Rolling Programme, 01 Jul-17 Update	SGJ	



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		04	11	18	25	02	09	16	23	30	06	13	20	27	03	10	17	24	01
Completion																			
Fire Servives Department (VAC)																			
Engineer (AECOM)																			
Building 053 - Outbound X-Ray Building																			
Excavation																			
Raft																			
Structure																			
External Walls																			
To First Floor Level																			
Internal Structures																			
First Floor																			
Slabs																			
Cure and Strip																			
1/F - Roof Level																			
Staircases																			
Roof Floor																			
Slabs																			
Cure and Strip																			
ABWF/E&M																			
Ground Floor																			
Degree 1 - G/F																			
Degree 2 - G/F																			
RAB-53-7935	053 - MEP 2nd Fix, G/F	[Blue bar]				[Red bar]													
RAB-53-7895	053 - Frame for Wall Panel & Cladding, G/F	[Blue bar]				[Red bar]													
Degree 3 - G/F																			
RAB-53-0660	053 - Wall Tiling & Wall Painting Final Coat (2), G/F	[Blue bar]				[Red bar]													
RAB-53-0730	053 - MEP Final Fix, G/F	[Blue bar]				[Red bar]													
RAB-53-8135	053 - Ceiling Plaster Board Sub-Frame, G/F	[Blue bar]				[Red bar]													
RAB-53-0690	053 - Raised Floor System, G/F	[Blue bar]				[Red bar]				[Green bar]									
RAB-53-0710	053 - Door Panel & Ironmongery, G/F	[Blue bar]				[Red bar]				[Red bar]									
RAB-53-0700	053 - Glazing, G/F	[Blue bar]				[Red bar]				[Red bar]									
RAB-53-7915	053 - Ceiling Plaster Board, G/F	[Blue bar]				[Red bar]				[Red bar]									
RAB-53-8145	053 - Floor Carpet & Floor Vinyl, G/F	[Blue bar]				[Red bar]				[Red bar]				[Red bar]					
First Floor																			
Degree 1 - 1/F																			
Degree 2 - 1/F																			
RAB-53-8035	053 - MEP 2nd Fix, 1/F	[Blue bar]				[Red bar]													
RAB-53-8045	053 - Projected Achievement of Stage 1B	[Blue bar]				[Red bar]													
RAB-53-8005	053 - Access to C3 equipment Installatrimon***	[Blue bar]				[Red bar]													
RAB-53-8065	053 - Power On, 1/F	[Blue bar]				[Red bar]													
RAB-53-8015	053 - Frame for Wall Panel & Cladding, 1/F	[Blue bar]				[Red bar]				[Green bar]									
Degree 3 - 1/F																			
RAB-53-8155	053 - Wall Tiling & Wall Painting Final Coat (2), 1/F	[Blue bar]				[Red bar]													
RAB-53-8105	053 - MEP Final Fix, 1/F	[Blue bar]				[Red bar]													
RAB-53-8115	053 - End Users and MOM Handover Inspection.	[Blue bar]				[Red bar]				[Red bar]									
RAB-53-7985	053 - Ceiling Plaster Board Sub-Frame, 1/F	[Blue bar]				[Red bar]				[Green bar]									
RAB-53-8075	053 - Glazing, 1/F	[Blue bar]				[Red bar]				[Red bar]									
RAB-53-8085	053 - Door Panel & Ironmongery, 1/F	[Blue bar]				[Red bar]				[Red bar]									
RAB-53-8125	053 - Snagging and Remedials, 1/F	[Blue bar]				[Red bar]				[Green bar]									
RAB-53-8185	053 - Early handover to Enbd Users***	[Blue bar]				[Red bar]				[Red bar]									
RAB-53-8195	053 - MEP Balance of Works	[Blue bar]				[Red bar]				[Red bar]				[Red bar]					
RAB-53-8095	053 - Projected Achievement of Stage 1C, 1/F	[Blue bar]				[Red bar]				[Red bar]				[Red bar]					

█ Remaining Level of Effort
 █ Actual Work
 █ Critical Remaining ...
█ Actual Level of Effort
 █ Remaining Work
 ◊ Finish Constraint

3-Month Rolling Programme Update, 01 July 2017

RAB5			
Date	Revision	Checked	Approved
01-Jul-17	3-Month Rolling Programme, 01 Jul-17 Update	SGJ	



Activity ID	Activity Name	June 2017				July 2017				August 2017				September 2017				October 2017		
		04	11	18	25	02	09	16	23	30	06	13	20	27	03	10	17	24	01	08
RAB-53-7995	053 - Ceiling Plaster Board, 1/F																			
RAB-53-8165	053 - Floor Carpet & Floor Vinyl, 1/F																			
External Finishes																				
External Facade																				
RAB-53-0500	053 - External Painting																			
RAB-53-0440	053 - Install External Louvers /Windows/Doors																			
RAB-53-0640	053 - Make good external surfaces																			
RAB-53-0570	053 - Dismantle Scaffolding																			
At Grade																				
RAB-53-7615	053 - Prepare Sub Grade																			
RAB-53-7885	053 - Laying Geo Textile																			
RAB-53-7625	053 - Lay Granular Sub-Base																			
RAB-53-7635	053 - Laying Course																			
RAB-53-7695	053 - Concrete Block Paving																			
Roof Finishes																				
RAB-53-0460	053 - Waterproof Membrane - (490m²)																			
RAB-53-670	053 - Insulation Board - (490m²)																			
RAB-53-0490	053 - Top Screed - (490m²)																			
RAB-53-0520	053 - Install Roof Tiles - (490m²)																			
RAB-53-0530	053 - Install Railing - 105m																			
RAB-53-0540	053 - Install Cat Ladder and Roof Hatch																			
Spacialist Installations																				
RAB-53-0600	053 - Install Lift (1 nos)																			
Glazed Canopy																				
RAB-53-0620	053 - Construct high level Canopy at +9.95mPD																			
Utilities and Drainage																				
RAB-53-7595	053 - Construct Permanent Drainage and Manholes (Approx 135m)																			
RAB-53-7655	053 - Install FS Water Main																			
RAB-53-7610	053 - Install Flushing Water Mains																			
RAB-53-7620	053 - Install Fresh Water Mains																			
RAB-53-7605	053 - Utilites and Common Telecom Ducting																			
Testing & Commissioning																				
RAB-TC53-1040	053 - T&C (HVAC, FS, P&D, OTHERS)																			
RAB-TC53-1050	053 - T&C, Lift																			
Statutory Submissions & Approvals (Day 470 Completion)																				
BEO																				
RAB-BEE-420	053 - Registered Energy Assessor Inspection & Certification																			
RAB-BEE-430	053 - Submit REA Certification to EDMS																			
RAB-BEE-440	053 - EDMS Issue of Cert of Compliance Registration (COCR)																			
EMSD - Building 053 Lift Inspection																				
RAB-FSD-150	053 - Submit EMSD Form 5 (Completion of Lift Installation)																			
RAB-FSD-160	053 - EMSD Lift Inspection																			
RAB-FSD-090	053 - EMSD Lift Certificate Issued (Fire Lift)																			
Water Supplies Department (WSD)																				
Commencement																				
Completion																				
RAB-WSD-100	053 - Submit WWO 46 Pt. IV																			
RAB-WSD-102	053 - WSD's Processing/Inspection/Meter Connection																			
VAC																				
RAB-FSD-1140	053 - Submit Form 314																			
RAB-FSD-1150	053 - Submit Form 501																			

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3-Month Rolling Programme Update, 01 July 2017

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		04	11	18	25	02	09	16	23	30	06	13	20	27	03	10	17	24	01	08
FSD																				
Commencement																				
Completion																				
RAB-FSD-410	053 - Submit WWO 46 Pt. I V																			
RAB-FSD-670	053 - Submit Form 501																			
RAB-FSD-420	053 - FSD Inspection Period																			
RAB-FSD-430	053 - Issue Form 172, FS Compliance Cert.																			
Engineer (AECOM)																				
RAB-53-7460	053 - Submit Building 053 As Built Drawings to Engineer																			
Building 058 - Outbound X-Ray Scan Tunnel																				
Excavation																				
Raft																				
Structure																				
Walls																				
South																				
North																				
Roof Slabs																				
Cure and Strip																				
ABWF/E&M																				
Internal Finishes																				
Degree 1																				
Degree 2																				
RAB-58-0630	058 - MEP 2nd Fix																			
RAB-58-0680	058 - Install Louver & Door Frame (Door Frame by other)																			
RAB-KD1B10	KD1B - Projected achievement of Stage 1B of the Works Building 05																			
RAB-58-0640	058 - Power On																			
Degree 3																				
RAB-58-0650	058 - MEP Final Fix																			
RAB-58-0700	058 - Floor Finish (Epoxy Paint)																			
RAB-58-0660	058 - Snagging and Remedials, Bldg. Internal																			
RAB-58-0710	058 - Door Panel (By other)																			
RAB-KD1C10	KD1C - Projected achievement of Stage 1C of the Works Building 05																			
RAB-58-7520	058 - End Users and MoM handover inspection																			
Roof Finishes																				
RAB-58-0450	058 - Waterproof membrane - 885m ²																			
RAB-58-660	058 - insulation Board - 885m ²																			
RAB-58-0480	058 - Top Screed - 885m ²																			
RAB-58-0510	058 - Install Roof Tiles - 885m ²																			
RAB-58-0540	058 - Install Railing - 152m																			
RAB-58-0530	058 - Install Cat Ladder and Roof Hatch																			
External Finishes																				
Facade																				
RAB-58-0440	058 - External Tiling (630m ²)																			
RAB-58-0400	058 - Install External Louvers /Windows/Doors																			
RAB-58-0470	058 - External Painting																			
RAB-58-0560	058 - Dismantle Scaffolding																			
RAB-58-0620	058 - Make good external surfaces																			
At Grade																				
RAB-58-6760	058 - Prepare Sub Grade																			
RAB-58-6750	058 - Laying Geo Textile																			
Glazed Canopy																				
RAB-58-0600	058 - Construct high level canopy at +13.231mPD																			

█ Remaining Level of Effort
 █ Actual Work
 █ Critical Remaining ...
█ Actual Level of Effort
 █ Remaining Work
 ◻ Finish Constraint

3-Month Rolling Programme Update, 01 July 2017

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01-Jul-17	3-Month Rolling Programme, 01 Jul-17 Update	SGJ	



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		04	11	18	25	02	09	16	23	30	06	13	20	27	03	10	17	24	01	08
Utilities and Drainage																				
RAB-58-7550	058 - Construct Permanent Drainage and Manholes (Approx 100m)	[Actual Work]				[Critical Remaining]														
RAB-58-7560	058 - Utilites and Common Telecom Ducting					[Remaining Work]														
RAB-58-7590	058 - Install FS Water main									[Critical Remaining]										
RAB-58-7570	058 - Install Flushing Water Mains									[Critical Remaining]										
RAB-58-7580	058 - Install Fresh Water Mains									[Critical Remaining]										
Testing & Commissioning																				
RAB-TC58-1060	058 - T&C (HVAC, FS, P&D, OTHERS)									[Critical Remaining]				[Critical Remaining]						
Statutory Submissions & Approvals (Day 470 Completion)																				
BEO																				
RAB-BEE-450	058 - Registered Energy Assessor Inspection & Certification													[Critical Remaining]						
RAB-BEE-460	058 - Submit REA Certification to EDMS													◆						
RAB-BEE-470	058 - EDMS Issue of Cert of Compliance Registration (COCR)													[Critical Remaining]						
VAC (FSD)																				
Commencement																				
RAB-FSD-0280	058 - Submit Form 314					◆														
Completion																				
RAB-FSD-370	058 - Submit Form 046 Part IV					◆														
RAB-FSD-500	058 - Submit Form 046 Part V													◆						
Engineer (AECOM)																				
Building 059 - Inbound X-Ray Scan Tunnel																				
Excavation																				
Raft Foundations																				
Structure																				
Walls																				
West																				
East																				
Roof Slabs																				
Cure and Strip																				
ABWF/E&M																				
Internal Finishes																				
Degree 1																				
Degree 2																				
RAB-59-0630	059 - MEP 2nd Fix	[Actual Work]				[Critical Remaining]														
RAB-59-0680	059 - Install Louver & Door Frame (Door Frame by other)																			
RAB-KD2B10	KD2B - Projected achievement of Stage 2B of the Works					◆														
RAB-59-0640	059 - Power On					◆														
Degree 3																				
RAB-59-0660	059 - MEP Final Fix	[Actual Work]				[Critical Remaining]														
RAB-59-0700	059 - Floor Finish (Epoxy Paint)					[Critical Remaining]														
RAB-59-7560	059 - Snagging and Remedials					[Critical Remaining]														
RAB-KD2C10	KD2C - Projected achievement of Stage 2C of the Works									◆										
RAB-59-7550	059 - End Users and MoM handover inspection									◆										
Roof Finishes																				
RAB-59-0490	059 - Waterproof Membrane - 885m ²					[Critical Remaining]														
RAB-59-670	059 - Insulation Board - 885m ²					[Critical Remaining]														
RAB-59-0510	059 - Top Screed - 885m ²					[Critical Remaining]														
RAB-59-0540	059 - Install Roof Tiles - 885m ²					[Critical Remaining]				[Critical Remaining]										
RAB-59-0560	059 - Install Railing - 152m									[Critical Remaining]										
RAB-59-0550	059 - Install Cat Ladder and Roof Hatch									[Critical Remaining]										
External Finishes																				
Facade																				

■ Remaining Level of Effort
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3-Month Rolling Programme Update, 01 July 2017

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01-Jul-17	3-Month Rolling Programme, 01 Jul-17 Update	SGJ	



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		04	11	18	25	02	09	16	23	30	06	13	20	27	03	10	17	24	01	08	
RAB-59-0430	059 - External Render (630m ²)	[Actual Work]				[Critical Remaining]															
RAB-59-0480	059 - External Painting					[Critical Remaining]															
RAB-59-0450	059 - External Tiling (630m ²)					[Critical Remaining]															
RAB-59-0590	059 - Dismantle Scaffolding									[Critical Remaining]											
RAB-59-0650	059 - Make good external surfaces									[Critical Remaining]											
At Grade																					
RAB-59-6700	059 - Prepare Sub Grade									[Critical Remaining]											
RAB-59-6690	059 - Laying Geo Textile									[Critical Remaining]											
RAB-59-6710	059 - Lay Granular Sub-Base									[Critical Remaining]											
RAB-59-6720	059 - Laying Course									[Critical Remaining]											
RAB-59-6680	059 - Concrete Block Paving									[Critical Remaining]											
RAB-59-6730	059 - Grouting Works to Concrete Pavers									[Critical Remaining]											
RAB-59-0670	059 - Snagging and Remedials									[Critical Remaining]											
Glazed Canopy																					
RAB-59-0610	059 - Construct high level glazed canopy at +13.406mPD North									[Critical Remaining]											
RAB-59-0620	059 - Construct high level glazed canopy at +13.231mPD South									[Critical Remaining]											
Utilities and Drainage																					
RAB-59-7330	059 - Construct Permanent Drainage and Manholes (Approx 100m)	[Actual Work]				[Critical Remaining]															
RAB-59-7370	059 - Install FS Water Main					[Critical Remaining]															
RAB-59-7350	059 - Install Flushing Water Mains					[Critical Remaining]															
RAB-59-7360	059 - Install Fresh Water Mains					[Critical Remaining]															
RAB-59-7340	059 - Utilities and Common Telecom Ducting					[Critical Remaining]															
Testing & Commissioning																					
RAB-TC59-1000	059 - T&C (HVAC, FS, P&D, OTHERS)					[Critical Remaining]															
Statutory Submissions & Approvals (Day 470 Completion)																					
BBEO																					
RAB-BEE-480	059 - IRegistered Energy Assessor Inspection & Certification									[Critical Remaining]											
RAB-BEE-490	059 - ISubmit REA Certification to EDMS									[Critical Remaining]											
RAB-BEE-500	059 - IEDMS Issue of Cert of Compliance Registration (COCR)									[Critical Remaining]											
VAC																					
RAB-FSD-550	059 - Submit Form 314					[Finish Constraint]															
RAB-FSD-560	059 - Submit Form 501									[Finish Constraint]											
Fire Services Department (FSD)																					
Commencement																					
Completion																					
RAB-FSD-530	059 - Submit Form WWO 46 Part IV									[Finish Constraint]											
RAB-FSD-540	059 - Submit Form WWO 46 Part V									[Finish Constraint]											
RAB-FSD-740	059 - Submit Form 501 to FSD for FS Inspection (C8 Ready for FS I									[Finish Constraint]											
Engineer (AECOM)																					
RAB-59-7520	059 - Submit Building 059 As Built Drawings to Engineer									[Finish Constraint]											

█ Remaining Level of Effort
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3-Month Rolling Programme Update, 01 July 2017

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Date	Revision	Checked	Approved
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Activity ID	Activity Name	2015												2016				2017				2018				2019		
		Q2			Q3			Q4			Q1		Q2		Q3		Q4		Q1		Q2		Q3					
		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3					
Hong Kong-Zhuhai_Macao Bridge Hong Kong Boundary Crossing F																												
Key Dates																												
Interface Activities																												
Site and Facility Inspection																												
JS1200	Pre Site and Facility Inspection by Contractor at Location 4 - Deg2																											
JS1210	Joint Site and Facility Inspection with Interface Contractor at Location 4 - Deg2																											
JS1620	Pre Site and Facility Inspection by Contractor at Location 14 - Deg2																											
JS1630	Joint Site and Facility Inspection with Interface Contractor at Location 14 - Deg2																											
JS1760	Pre Site and Facility Inspection by Contractor at Location 18 - Deg1																											
JS1770	Joint Site and Facility Inspection with Interface Contractor at Location 18 - Deg1																											
JS1780	Pre Site and Facility Inspection by Contractor at Location 18 - Deg2																											
JS1790	Joint Site and Facility Inspection with Interface Contractor at Location 18 - Deg2																											
Access Dates																												
AD1000	Location 1(PCB (001) Basement)-Deg1 (270d)																											
AD1010	Location 1(PCB (001) Basement)-Deg2 (380d)																											
AD1020	Location 1(PCB (001) ELV Room (Grid Line E3))-Deg1 (270d)																											
AD1030	Location 1(PCB (001) ELV Room (Grid Line E3))-Deg2 (380d)																											
AD1040	Location 2(PCB (001) First Floor Main Server Room)-Deg1 (330d)																											
AD1050	Location 2(PCB (001) First Floor Main Server Room)-Deg2 (380d)																											
AD1060	Location 2(PCB (001) First Floor Main Server Room) - For Server Installation - Deg2 (380d)																											
AD1070	Location 2(PCB (001) Ground Floor ELV Room (Grid Line E3)) - Deg1 (330d)																											
AD1080	Location 2(PCB (001) Ground Floor DOH Port Health Control Room (Grid Line BD5)) - Deg1 (330d)																											
AD1090	Location 2(PCB (001) Ground Floor DOH Port Health Control Room (Grid Line BD5)) - Deg2 (380d)																											
AD1130	Location 3(Inbd Cargo Exam Bldg (037) Platform Control Room)-Deg2 (500d)																											
AD1150	Location 3(Inbd Cargo Exam Bldg (037) Inspector Offices 128,129,130,131,128,129,14)																											
AD1170	Location 3a(Inbd Cargo Exam Bldg (037) ROCARS Room)-Deg2 (480d)																											
AD1190	Location 3a(Inbd Cargo Exam Bldg (037) Main Server Room)-Deg2 (480d)																											
AD1200	Location 3a(Inbd Cargo Exam Bldg (037) Main Server Room) - For Server installation - Deg2 (480d)																											
AD1220	Location 4(Outbd Cargo Exam Bldg (023))-Deg2 (680d)																											
AD1240	Location 4a(Outbd Cargo Exam Bldg (023))-Deg2 (630d)																											
AD1270	Location 6(Common Utility Enclosure & Staff Subway)-Deg1 (400d)																											
AD1290	Location 7(Common Utility Enclosure & Staff Subway)-Deg1 (270d)																											
AD1300	Location 8(Inbd Private Car Annex (025))-Deg1 (430d)																											
AD1310	Location 8(Inbd Private Car Annex (025))-Deg2 (580d)																											
AD1320	Location 8(Inbd Private Car Annex (025) Canopy)-Deg1 (430d)																											
AD1330	Location 8(Inbd Private Car Annex (025) Canopy)-Deg2 (580d)																											
AD1340	Location 9(Outbd Private Car Annex (032))-Deg1 (520d)																											
AD1350	Location 9(Outbd Private Car Annex (032))-Deg2 (660d)																											
AD1360	Location 9(Outbd Private Car Annex (032) Canopy)-Deg1 (520d)																											
AD1370	Location 9(Outbd Private Car Annex (032) Canopy)-Deg2 (660d)																											
AD1501	Location 12(Inbd Private Car Kiosks(027))-Deg1 (400d) Phase 2																											
AD1510	Location 12(Inbd Private Car Kiosks(027))-Deg2 (480d) Phase 1																											
AD1511	Location 12(Inbd Private Car Kiosks(027))-Deg2 (480d) Phase 2																											
AD1521	Location 12(Inbd Private Car Kiosks(027) Canopy)-Deg1 (400d) Phase 2																											

Programme No.: HZMB-DWP Data Date: 14-Aug-15	<table border="0"> <tr> <td style="border-bottom: 2px solid blue; width: 15px;"></td> <td>Actual Level of Effort</td> <td style="border-bottom: 2px solid black; width: 15px;"></td> <td>summary</td> </tr> <tr> <td style="border-bottom: 2px solid green; width: 15px;"></td> <td>Primary Baseline</td> <td style="border-bottom: 2px solid red; width: 15px;"></td> <td></td> </tr> <tr> <td style="width: 15px;"></td> <td>Actual Work</td> <td style="width: 15px;"></td> <td></td> </tr> <tr> <td style="width: 15px;"></td> <td>Remaining Work</td> <td style="width: 15px;"></td> <td></td> </tr> <tr> <td style="width: 15px;"></td> <td>Critical Remaining Work</td> <td style="width: 15px;"></td> <td></td> </tr> <tr> <td style="border-bottom: 2px solid yellow; width: 15px;"></td> <td>Baseline Milestone</td> <td style="border-bottom: 2px solid black; width: 15px;"></td> <td></td> </tr> <tr> <td style="width: 15px;"></td> <td>Milestone</td> <td style="width: 15px;"></td> <td></td> </tr> </table>		Actual Level of Effort		summary		Primary Baseline				Actual Work				Remaining Work				Critical Remaining Work				Baseline Milestone				Milestone			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;"> <thead> <tr> <th>Date</th> <th>Revision</th> <th>Checked</th> <th>Approved</th> </tr> </thead> <tbody> <tr> <td>14-Nov-16</td> <td>Rev.: 0</td> <td>WC</td> <td>LC</td> </tr> <tr> <td>10-Mar-17</td> <td>Rev.: 1.0a</td> <td>WC</td> <td>LC</td> </tr> <tr> <td>5-May-17</td> <td>Rev.: 1.0b</td> <td>WC</td> <td>LC</td> </tr> </tbody> </table>	Date	Revision	Checked	Approved	14-Nov-16	Rev.: 0	WC	LC	10-Mar-17	Rev.: 1.0a	WC	LC	5-May-17	Rev.: 1.0b	WC	LC
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Activity ID	Activity Name	2015			2016				2017				2018				2019		
		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
				<div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"> <ul style="list-style-type: none"> ■ AD1530 Location 12(Inbd Private Car Kiosks(027) Canopy)-Deg2 (480d) Phase 1 ■ AD1531 Location 12(Inbd Private Car Kiosks(027) Canopy)-Deg2 (480d) Phase 2 ■ AD1540 Location 12(Inbd GV Kiosks (028))-Deg1 (400d) Phase 1 ■ AD1541 Location 12(Inbd GV Kiosks (028))-Deg1 (400d) Phase 2 ■ AD1550 Location 12(Inbd GV Kiosks (028))-Deg2 (480d) Phase 1 ■ AD1551 Location 12(Inbd GV Kiosks (028))-Deg2 (480d) Phase 2 ■ AD1560 Location 12(Inbd GV Kiosks (028) Canopy)-Deg1 (400d) Phase 1 ■ AD1561 Location 12(Inbd GV Kiosks (028) Canopy)-Deg1 (400d) Phase 2 ■ AD1570 Location 12(Inbd GV Kiosks (028) Canopy)-Deg2 (480d) Phase 1 ■ AD1571 Location 12(Inbd GV Kiosks (028) Canopy)-Deg2 (480d) Phase 2 ■ AD1580 Location 12(Outbd GV Kiosks (029))-Deg1 (400d) Phase 1 ■ AD1581 Location 12(Outbd GV Kiosks (029))-Deg1 (400d) Phase 2 ■ AD1590 Location 12(Outbd GV Kiosks (029))-Deg2 (480d) Phase 1 ■ AD1591 Location 12(Outbd GV Kiosks (029))-Deg2 (480d) Phase 2 ■ AD1600 Location 12(Outbd GV Kiosks (029) Canopy)-Deg1 (400d) Phase 1 ■ AD1601 Location 12(Outbd GV Kiosks (029) Canopy)-Deg1 (400d) Phase 2 ■ AD1610 Location 12(Outbd GV Kiosks (029) Canopy)-Deg2 (480d) Phase 1 ■ AD1611 Location 12(Outbd GV Kiosks (029) Canopy)-Deg2 (480d) Phase 2 ■ AD1620 Location 13(Outbd Private Car Kiosks (030))-Deg1 (480d) Phase 1 ■ AD1630 Location 13(Outbd Private Car Kiosks (030))-Deg2 (550d) Phase 1 ■ AD1640 Location 13(Outbd Private Car Kiosks (030) Canopy)-Deg1 (480d) Phase 1 ■ AD1650 Location 13(Outbd Private Car Kiosks (030) Canopy)-Deg2 (550d) Phase 1 ■ AD1660 Location 14(Future-Outbd/Inbd Private Car Kiosks)-Deg1 (610d) ■ AD1670 Location 14(Future-Outbd/Inbd Private Car Kiosks)-Deg2 (680d) ■ AD1700 Location 16(Outbd Traffic Control Kiosk (101))-Deg1 (400d) ■ AD1710 Location 16(Outbd Traffic Control Kiosk (101))-Deg2 (480d) ■ AD1740 Location 18(Outbd Private Car Exam Bldg(024))-Deg1 (-) ■ AD1750 Location 18(Outbd Private Car Exam Bldg(024))-Deg2 (670d) ■ AD1780 (by C03) Underground Ducting (UUD1.1) between CUE and Inbd Cargo Exam Bldg (0 ■ AD1790 (by C03) (UUD1.2) between Inbd Cargo Exam Bldg South (037[S]) and DOH Cargo C ■ AD1800 (by C03) (UUD2) between Inbd Cargo Exam Bldg North (037[N]) and Inbd Vehicle Cle ■ AD1810 (by C03) (UUD9.1) btw Inbd Cargo Exam Bldg S.(037[S]) & Inbd PC Exam Bldg(033) & ■ AD1820 (by C03) (UUD9.3) between Inbd Private Car Exam Bldg (033) and Inbd Vehicle Clear ■ AD1830 (by C03) (UUD9.2) between Inbd Private Car Exam Bldg (033) and Inbd Vehicle Clear ■ AD1840 (by C03) Underground Ducting (UUD3.1) between CUE to Outbd Cargo Exam Bldg (0 ■ AD1850 (by C03) (UUD3.2) btw Outbd Car Exam Bldg (023) and Outbd PC Exam Bldg (024) ai ■ AD1860 (byC03) (UUD4.1) between Outbd Private Car Exam Bldg (024) and Outbd Vehicle Cle ■ AD1870 (byC03) (UUD5) between Outbd Car Exam Bldg South (023[S]) and Outbd Vehicle Cle ■ AD1880 (by C03) Underground Ducting (UUD8) between CUE and Outbd PCA (032) ■ AD1910 (by C03) Inbound Vehicle Clearance Plaza ■ AD1920 (by C03) Outbound Vehicle Clearance Plaza </div> <div style="width: 35%; border-left: 1px dashed gray; padding-left: 5px;"> <ul style="list-style-type: none"> ◆ Location 12(Inbd Private Car Kiosks(027) Canopy)-Deg2 ◆ Location 12(Inbd Private Car Kiosks(027) Canopy)-D ◆ Location 12(Inbd GV Kiosks (028))-Deg1 (400d) Phase 1 ◆ Location 12(Inbd GV Kiosks (028))-Deg1 (400d) Phase ◆ Location 12(Inbd GV Kiosks (028))-Deg2 (480d) Phase ◆ Location 12(Inbd GV Kiosks (028))-Deg2 (480d) Pha ◆ Location 12(Inbd GV Kiosks (028) Canopy)-Deg1 (400d) ◆ Location 12(Inbd GV Kiosks (028) Canopy)-Deg1 (400 ◆ Location 12(Inbd GV Kiosks (028) Canopy)-Deg2 (480d ◆ Location 12(Inbd GV Kiosks (028) Canopy)-Deg2 (48 ◆ Location 12(Outbd GV Kiosks (029))-Deg1 (400d) Phase ◆ Location 12(Outbd GV Kiosks (029))-Deg1 (400d) Pha ◆ Location 12(Outbd GV Kiosks (029))-Deg2 (480d) Phase ◆ Location 12(Outbd GV Kiosks (029))-Deg2 (480d) P ◆ Location 12(Outbd GV Kiosks (029) Canopy)-Deg1 (400 ◆ Location 12(Outbd GV Kiosks (029) Canopy)-Deg1 (40 ◆ Location 12(Outbd GV Kiosks (029) Canopy)-Deg2 (48 ◆ Location 12(Outbd GV Kiosks (029) Canopy)-Deg2 (◆ Location 13(Outbd Private Car Kiosks (030))-Deg1 (48 ◆ Location 13(Outbd Private Car Kiosks (030))-Deg2 (55 ◆ Location 13(Outbd Private Car Kiosks (030) Canopy)-D ◆ Location 13(Outbd Private Car Kiosks (030) Canopy)-D ◆ Location 14(Future-Outbd/Inbd Private Car Kiosks)-Deg ◆ Location 14(Future-Outbd/Inbd Private Car Kiosks)-D ◆ Location 16(Outbd Traffic Control Kiosk (101))-Deg1 (40 ◆ Location 16(Outbd Traffic Control Kiosk (101))-Deg ◆ Location 18(Outbd Private Car Exam Bldg(024))-Deg1 ◆ Location 18(Outbd Private Car Exam Bldg(024))-Deg2 ◆ (by C03) Underground Ducting (UUD1.1) between CUE ◆ (by C03) (UUD1.2) between Inbd Cargo Exam Bldg Sou ◆ (by C03) (UUD2) between Inbd Cargo Exam Bldg North ◆ (by C03) (UUD9.1) btw Inbd Cargo Exam Bldg S.(037[S] ◆ (by C03) (UUD9.3) between Inbd Private Car Exam Bldg ◆ (by C03) (UUD9.2) between Inbd Private Car Exam Bldg ◆ (by C03) Underground Ducting (UUD3.1) between CUE ◆ (by C03) (UUD3.2) btw Outbd Car Exam Bldg (023) and ◆ (byC03) (UUD4.1) between Outbd Private Car Exam Bld ◆ (byC03) (UUD5) between Outbd Car Exam Bldg South (◆ (by C03) Underground Ducting (UUD8) between CUE a ◆ (by C03) Inbound Vehicle Clearance Plaza, 01-Jun-17* ◆ (by C03) Outbound Vehicle Clearance Plaza, 01-Jun-17* </div> </div>															

- Interfaces Provisions
- Mobilization Provisions
- WA4 Site Erection & Servicing

12-Aug-17, Interfaces Provisions
 22-Oct-17, Mobilization Provisions

Programme No.: HZMB-DWP Data Date: 14-Aug-15	<ul style="list-style-type: none"> ■ Actual Level of Effort ▶ summary ■ Primary Baseline ■ Actual Work ■ Remaining Work ■ Critical Remaining Work ◆ Baseline Milestone ◆ Milestone 	Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities - Automatic Vehicle Clearance Support System (AVCSS)	<table border="1"> <thead> <tr> <th>Date</th> <th>Revision</th> <th>Checked</th> <th>Approved</th> </tr> </thead> <tbody> <tr> <td>14-Nov-16</td> <td>Rev.: 0</td> <td>WC</td> <td>LC</td> </tr> <tr> <td>10-Mar-17</td> <td>Rev.: 1.0a</td> <td>WC</td> <td>LC</td> </tr> <tr> <td>5-May-17</td> <td>Rev.: 1.0b</td> <td>WC</td> <td>LC</td> </tr> </tbody> </table>	Date	Revision	Checked	Approved	14-Nov-16	Rev.: 0	WC	LC	10-Mar-17	Rev.: 1.0a	WC	LC	5-May-17	Rev.: 1.0b	WC	LC
Date	Revision	Checked	Approved																
14-Nov-16	Rev.: 0	WC	LC																
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Activity ID	Activity Name	2015			2016				2017				2018				2019		
		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
<ul style="list-style-type: none"> ■ Detailed Design Specification ■ Contruction Design and Management ■ Supply/Manufacture Mock-up items ■ Supply/Manufacture prototypes ■ Software Design, Coding and Testing <ul style="list-style-type: none"> ■ Coding ■ Software System Inetgration ■ Prototype & Software Simulation Tests ■ Procurement - Phase 1 / Section I ■ Supply/Manufacture products for FAT ■ Factory Acceptance Test (FAT) ■ Supply/Manufacture Equipment ■ Delivery and Bench Acceptance Test for Phase 1/ Section I ■ Installation - Phase 1 / Section I <ul style="list-style-type: none"> ■ Location 1(PCB (001) Basement) <ul style="list-style-type: none"> ■ EM1920 L1(001)B/F - Cable Laying and termination at Location 1 and Location 2 ■ Location 1(PCB (001) ELV Room (Grid Line E3)) <ul style="list-style-type: none"> ■ EM1940 L1(001)ELV Rm - Cable Laying and termination at Location 1 and Location 2 ■ Location 2(PCB (001) Ground Floor ELV Room (Grid Line E3)) <ul style="list-style-type: none"> ■ EM1960 L2(001)ELV Rm - Cable Laying and termination at Location 1 and Location 2 ■ Location 2(PCB (001) Ground Floor DOH Port Health Control Room (Grid Line BD5)) <ul style="list-style-type: none"> ■ EM1080 L2(001)Heath Ctrl Rm - Cable Laying and termination at Location 1 and Location 2 ■ EM1100 L2(001)Heath Ctrl Rm - Cable Splicing and Testing and Labeling ■ EM1120 L2(001)Health Ctrl Rm - Intercom and PA system Installation ■ EM1140 L2(001)Heath Ctrl Rm - Intercom and PA system tuning ■ Location 2(PCB (001) First Floor Main Server Room) <ul style="list-style-type: none"> ■ EM1000 L2(001)Main Server Rm - Cable Laying and termination at Location 1 and Location 2 ■ EM1020 L2(001)Main Server Rm - Cable Splicing and Testing and Labeling ■ EM1040 L2(001)Main Server Rm - AVCSS Network and Server Installation ■ EM1060 L2(001)Main Server Rm - AVCSS Network and Server Tuning ■ Location 3(Inbd Cargo Exam Bldg (037) MDF Room) ■ Location 3(Inbd Cargo Exam Bldg (037) ELV Room) ■ LLooccaattiioonn 33((Inbd Cargo Exam Bldg (037) Inspector Offices 128,129,130,131,12 <ul style="list-style-type: none"> ■ EM2020 L3(037)Inspec Offices - Cable Laying and termination in Location 3 and Location 3a ■ EM2040 L3(037)Inspec Offices - Cable Splicing and Testing and Labeling ■ EM2060 L3(037)Inspec Offices - AVCSS SURCON WS and 55" LCD Installation ■ EM2080 L3(037)Inspec Offices - VTS WS Installation ■ EM2100 L3(037)Inspec Offices - SURCON and WS Tuning ■ Location 3(Inbd Cargo Exam Bldg (037) Platform Control Room) <ul style="list-style-type: none"> ■ EM1160 L3(037)PLF Ctrl Rm - Cable Laying and termination in Location 3 and Location 3a ■ EM1180 L3(037)PLF Ctrl Rm - Cable Splicing and Testing and Labeling ■ EM1200 L3(037)PLF Ctrl Rm - AVCSS SYSCON WS and 55" TV Wall Installation ■ EM1220 L3(037)PLF Ctrl Rm - AVCSS SYSCON WS Tuning 		<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>01-Sep-17; Installation - Phase 1 / Section I</p> <p>22-Jun-17; Location:1(PCB (001);Basement)</p> <p>L1(001)B/F - Cable Laying and termination at Location</p> <p>22-Jun-17; Location:1(PCB (001);ELV Room (Grid Line</p> <p>L1(001)ELV Rm - Cable Laying and termination at Loca</p> <p>22-Jun-17; Location:2(PCB (001);Ground Floor ELV R</p> <p>L2(001)ELV Rm - Cable Laying and termination at Loca</p> <p>18-Aug-17; Location:2(PCB (001);Ground Floor DO</p> <p>L2(001)Heath Ctrl Rm - Cable Laying and termination</p> <p>L2(001)Heath Ctrl Rm - Cable Splicing and Testing and</p> <p>L2(001)Health Ctrl Rm - Intercom and PA system In</p> <p>L2(001)Health Ctrl Rm - Intercom and PA system tu</p> <p>21-Aug-17; Location:2(PCB (001) First Floor Main</p> <p>L2(001)Main Server Rm - Cable Laying and terminatio</p> <p>L2(001)Main Server Rm - Cable Splicing and Testing</p> <p>L2(001)Main Server Rm - AVCSS Network and Ser</p> <p>L2(001)Main Server Rm - AVCSS Network and Se</p> </div> <div style="width: 45%;"> <p>07-Aug-17; Location 3(Inbd Cargo Exam Bldg (037</p> <p>L3(037)Inspec Offices - Cable Laying and termination in</p> <p>L3(037)Inspec Offices - Cable Splicing and Testing and</p> <p>L3(037)Inspec Offices - AVCSS SURCON WS and 5</p> <p>L3(037)Inspec Offices - VTS WS Installation</p> <p>L3(037)Inspec Offices - SURCON and WS Tuning</p> <p>07-Aug-17; Location 3(Inbd Cargo Exam Bldg (037</p> <p>L3(037)PLF Ctrl Rm - Cable Laying and termination in</p> <p>L3(037)PLF Ctrl Rm - Cable Splicing and Testing and</p> <p>L3(037)PLF Ctrl Rm - AVCSS SYSCON WS and 55</p> <p>L3(037)PLF Ctrl Rm - AVCSS SYSCON WS Tuning</p> </div> </div>																	

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

- Actual Level of Effort
- Primary Baseline
- Actual Work
- Remaining Work
- Critical Remaining Work
- Baseline Milestone
- 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
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Activity ID	Activity Name	2015		2016				2017				2018				2019			
		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
				<div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"> <p>Location 3a(Inbd Cargo Exam Bldg (037) ROCARS Room)</p> <ul style="list-style-type: none"> EM1240 L3a(037) ROCARS Rm - Cable Laying and termination in Location 3 and Location 3a EM1260 L3a(037) ROCARS Rm - Cable Splicing and Testing and Labeling EM1280 L3a(037) ROCARS Rm - AVCSS SYSCON and SURCON and Intercom Installation EM1300 L3a(037) ROCARS Rm - VTS WS Installation EM1320 L3a(037) ROCARS Rm - VID WS Installation EM1340 L3a(037) ROCARS Rm - SURCON and SYSCON and WS Tuning <p>Location 3a(Inbd Cargo Exam Bldg (037) Main Server Room)</p> <ul style="list-style-type: none"> EM2120 L3a(037)Main Server Rm - Cable Laying and termination in Location 3 and Location 3a EM2140 L3a(037)Main Server Rm - Cable Splicing and Testing and Labeling EM2160 L3a(037)Main Server Rm - AVCSS Server Installation EM2180 L3a(037)Main Server Rm - VTS Server Installation EM2200 L3a(037)Main Server Rm - Servers Tuning <p>Location 4(Outbd Cargo Exam Bldg (023) MDF Room)</p> <p>Location 4a(Outbd Cargo Exam Bldg (023) ROCARS Room)</p> <ul style="list-style-type: none"> EM2240 L4a(023)ROCARS Rm - Cable Splicing and Testing and Labeling EM2260 L4a(023)ROCARS Rm - AVCSS SYSCON and SURCON and Intercom Installation EM2280 L4a(023)ROCARS Rm - VTS WS Installation EM2300 L4a(023)ROCARS Rm - SYSCON and SURCON and WS Tuning <p>Location 5(Common Utility Enclosure & Staff Subway)</p> <ul style="list-style-type: none"> EM2341 L5(CUE) - Cable Laying between Location 5 and Location 6 EM2361 L5(CUE) - Cable Laying between Location 5 and Location 7 EM2380 L5(CUE) - Cable Splicing and Testing and Labeling <p>Location 6(Common Utility Enclosure & Staff Subway)</p> <ul style="list-style-type: none"> EM2400 L6(CUE) - Cable Laying between Location 5 and Location 6 EM2420 L6(CUE) - Cable Splicing and Testing and Labeling <p>Location 7(Common Utility Enclosure & Staff Subway)</p> <ul style="list-style-type: none"> EM2440 L7(CUE) - Cable Laying between Location 5 and Location 7 EM2460 L7(CUE) - Cable Splicing and Testing and Labeling <p>Location 12(Inbd Private Car Kiosks,GV Kiosks (027,028,029))</p> <p>Inbd Private Car Kiosks(027) - 9 nos (Phase 1)</p> <ul style="list-style-type: none"> EM1500 L12(027)(9nos P1) - Cable Splicing and Testing and Labeling EM1520 L12(027)(9nos P1) - AVCSS/MOM Kiosk Equipment Installation (9 nos) EM1541 L12(027)(9nos P1) - XDB installation (18 nos) EM1542 L12(027)(9nos P1) - ODB installation (5 nos) EM1543 L12(027)(9nos P1) - ODB installation (2 nos) EM1544 L12(027)(9nos P1) - ODB installation (2 nos) EM1560 L12(027)(9nos P1) - Loop installation (45 nos) <p>Inbd Goods Vehicle Kiosks(028) - 5 nos (Phase 1)</p> <ul style="list-style-type: none"> EM1620 L12(028)(5nos P1) - Cable Laying and termination EM1640 L12(028)(5nos P1) - Cable Splicing and Testing and Labeling EM1660 L12(028)(5nos P1) - AVCSS/MOM Kiosk Equipment Installation (5 nos) EM1681 L12(028)(5nos P1) - XDB installation (10 nos) EM1682 L12(028)(5nos P1) - ODB installation (3 nos) EM1683 L12(028)(5nos P1) - ODB installation (2 nos) </div> <div style="width: 35%;"> <p>07-Aug-17, Location 3a(Inbd Cargo Exam Bldg (037) ROCARS Rm - Cable Laying and termination in Location 3 and Location 3a</p> <p>07-Aug-17, Location 3a(Inbd Cargo Exam Bldg (037) ROCARS Rm - Cable Splicing and Testing and Labeling</p> <p>07-Aug-17, Location 3a(Inbd Cargo Exam Bldg (037) ROCARS Rm - AVCSS SYSCON and SURCON and Intercom Installation</p> <p>07-Aug-17, Location 3a(Inbd Cargo Exam Bldg (037) ROCARS Rm - VTS WS Installation</p> <p>07-Aug-17, Location 3a(Inbd Cargo Exam Bldg (037) ROCARS Rm - VID WS Installation</p> <p>07-Aug-17, Location 3a(Inbd Cargo Exam Bldg (037) ROCARS Rm - SURCON and SYSCON and WS Tuning</p> <p>07-Aug-17, Location 3a(Inbd Cargo Exam Bldg (037) Main Server Rm - Cable Laying and termination in Location 3 and Location 3a</p> <p>07-Aug-17, Location 3a(Inbd Cargo Exam Bldg (037) Main Server Rm - Cable Splicing and Testing and Labeling</p> <p>07-Aug-17, Location 3a(Inbd Cargo Exam Bldg (037) Main Server Rm - AVCSS Server Installation</p> <p>07-Aug-17, Location 3a(Inbd Cargo Exam Bldg (037) Main Server Rm - VTS Server Installation</p> <p>07-Aug-17, Location 3a(Inbd Cargo Exam Bldg (037) Main Server Rm - Servers Tuning</p> <p>04-Aug-17, Location 4a(Outbd Cargo Exam Bldg (023) ROCARS Rm - Cable Splicing and Testing and Labeling</p> <p>04-Aug-17, Location 4a(Outbd Cargo Exam Bldg (023) ROCARS Rm - AVCSS SYSCON and SURCON and Intercom Installation</p> <p>04-Aug-17, Location 4a(Outbd Cargo Exam Bldg (023) ROCARS Rm - VTS WS Installation</p> <p>04-Aug-17, Location 4a(Outbd Cargo Exam Bldg (023) ROCARS Rm - SYSCON and SURCON and WS Tuning</p> <p>01-Sep-17, Location 5(Common Utility Enclosure & Staff Subway) - Cable Laying between Location 5 and Location 6</p> <p>01-Sep-17, Location 5(Common Utility Enclosure & Staff Subway) - Cable Laying between Location 5 and Location 7</p> <p>01-Sep-17, Location 5(Common Utility Enclosure & Staff Subway) - Cable Splicing and Testing and Labeling</p> <p>26-Aug-17, Location 6(Common Utility Enclosure & Staff Subway) - Cable Laying between Location 5 and Location 6</p> <p>01-Sep-17, Location 6(Common Utility Enclosure & Staff Subway) - Cable Splicing and Testing and Labeling</p> <p>01-Sep-17, Location 7(Common Utility Enclosure & Staff Subway) - Cable Laying between Location 5 and Location 7</p> <p>01-Sep-17, Location 7(Common Utility Enclosure & Staff Subway) - Cable Splicing and Testing and Labeling</p> <p>30-Aug-17, Location 12(Inbd Private Car Kiosks,GV Kiosks (027,028,029)) - Cable Splicing and Testing and Labeling</p> <p>24-Aug-17, Inbd Private Car Kiosks(027) - 9 nos (Phase 1) - Cable Splicing and Testing and Labeling</p> <p>30-Aug-17, Inbd Goods Vehicle Kiosks(028) - 5 nos (Phase 1) - Cable Splicing and Testing and Labeling</p> <p>24-Aug-17, Inbd Private Car Kiosks(027) - 9 nos (Phase 1) - AVCSS/MOM Kiosk Equipment Installation (9 nos)</p> <p>24-Aug-17, Inbd Private Car Kiosks(027) - 9 nos (Phase 1) - XDB installation (18 nos)</p> <p>24-Aug-17, Inbd Private Car Kiosks(027) - 9 nos (Phase 1) - ODB installation (5 nos)</p> <p>24-Aug-17, Inbd Private Car Kiosks(027) - 9 nos (Phase 1) - ODB installation (2 nos)</p> <p>24-Aug-17, Inbd Private Car Kiosks(027) - 9 nos (Phase 1) - ODB installation (2 nos)</p> <p>24-Aug-17, Inbd Private Car Kiosks(027) - 9 nos (Phase 1) - Loop installation (45 nos)</p> <p>30-Aug-17, Inbd Goods Vehicle Kiosks(028) - 5 nos (Phase 1) - Cable Laying and termination</p> <p>30-Aug-17, Inbd Goods Vehicle Kiosks(028) - 5 nos (Phase 1) - Cable Splicing and Testing and Labeling</p> <p>30-Aug-17, Inbd Goods Vehicle Kiosks(028) - 5 nos (Phase 1) - AVCSS/MOM Kiosk Equipment Installation (5 nos)</p> <p>30-Aug-17, Inbd Goods Vehicle Kiosks(028) - 5 nos (Phase 1) - XDB installation (10 nos)</p> <p>30-Aug-17, Inbd Goods Vehicle Kiosks(028) - 5 nos (Phase 1) - ODB installation (3 nos)</p> <p>30-Aug-17, Inbd Goods Vehicle Kiosks(028) - 5 nos (Phase 1) - ODB installation (2 nos)</p> </div> </div>															

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Hong Kong-Zhuhai-Macao Bridge
Hong Kong Boundary Crossing
Facilities - Automatic Vehicle
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Date	Revision	Checked	Approved
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Activity ID	Activity Name	2015			2016				2017				2018				2019		
		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Outbd Vehicle Clearance Plaza - 8 nos VID, 6 nos VTS, 4 nos TLS		<ul style="list-style-type: none"> EM3160 Outbound VID cabling from pillar box to VID field equipment EM3180 Outbound VTS cabling from pillar box to VTS field equipment EM3200 Outbound TLS cabling from pillar box to TLS field equipment EM3220 Outbound VID field equipment installation (8 VID) EM3240 Outbound VTS field equipment installation (3 RFID + 3 Cameras) EM3260 Outbound TLS field equipment installation (4 TLS) EM3280 Outbound VID and VTS and TLS field equipment tuning 																	
Underground Ducting (UUD1.1) between CUE and Inbd Cargo Exam Bldg (037)		<ul style="list-style-type: none"> UD1000 (UUD1.1 [CUE-037]) - Cable laying and termination 																	
(UUD1.2) between Inbd Cargo Exam Bldg South (037[S]) and DOH Cargo Clearance Bldg (023)		<ul style="list-style-type: none"> UD1060 (UUD1.2 [037[S]-043]) - Cable laying and termination 																	
Underground Ducting (UUD6) between CUE and Shuttle Bus Kiosk (006) and Inbd Private Car Exam Bldg (033)		<ul style="list-style-type: none"> UD1040 (UUD9.1 [037[S]-033-100]) - Cable laying and termination 																	
(UUD9.1) btw IB Cargo Exam Bldg South(037[S]) & IB PC Exam Bldg(033) & IB Traffic Control Bldg (023)		<ul style="list-style-type: none"> UD1010 (UUD2 [037[N]-IB VCP]) - Cable laying and termination 																	
(UUD2) between Inbd Cargo Exam Bldg North (037[N]) to Inbd VCP		<ul style="list-style-type: none"> UD1070 (UUD9.3 [033-IB VCP[W]]) - Cable laying and termination 																	
(UUD9.3) between Inbd Private Car Exam Bldg (033) and Inbd Vehicle Clearance Plaza		<ul style="list-style-type: none"> UD1020 (UUD9.2 [033-IB VCP[E]]) - Cable laying and termination 																	
(UUD9.2) between Inbd Private Car Exam Bldg (033) and Inbd Vehicle Clearance Plaza		<ul style="list-style-type: none"> UD1030 (UUD3.1 [CUE-023]) - Cable laying and termination 																	
Underground Ducting (UUD7) between PCB(001) and Inbd Coach Kiosks(010)		<ul style="list-style-type: none"> UD1050 (UUD3.2 [023-024-101]) - Cable laying and termination 																	
Underground Ducting (UUD3.1) between CUE and Outbd Cargo Exam Bldg (023)		<ul style="list-style-type: none"> UD1100 (UUD8 [CUE-032]) - Cable laying and termination 																	
(UUD3.2) btw OB Car Exam Bldg(023) & OB PC Exam Bldg(024) & OB Traffic Control Bldg (023)		<ul style="list-style-type: none"> UD1080 (UUD4.1 [024-OB VCP]) - Cable laying and termination 																	
Underground Ducting (UUD8) between CUE and Outbd PCA (032)		<ul style="list-style-type: none"> UD1090 (UUD5 [023[S]-OB VCP]) - Cable laying and termination 																	
(UUD4.1) between Outbd PC Exam Bldg (024) and Outbd Vehicle Clearance Plaza		<ul style="list-style-type: none"> UD1080 (UUD4.1 [024-OB VCP]) - Cable laying and termination 																	
(UUD5) between Outbd Car Exam Bldg (023[S]) and Outbd Vehicle Clearance Plaza		<ul style="list-style-type: none"> UD1090 (UUD5 [023[S]-OB VCP]) - Cable laying and termination 																	
Initial On-Site Test and Commissioning / Pre-SAT (Phase 1 / Section I)		<ul style="list-style-type: none"> Site Acceptance Test (Phase 1 / Section I) Security Risk Assessment and Audit Operability Period Test (Phase 1 / Section I) Completion (Phase 1 /Section I) Training and Document (Phase 1 /Section I) Operation (Phase 1 /Section I) Engineering Support for Phase 1 / Section I Procurement - Phase 2 / Section II Delivery and Bench Acceptance Test for Phase 2/Section II Installation - Phase 2 / Section II 																	

Programme No.: HZMB-DWP Data Date: 14-Aug-15		Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities - Automatic Vehicle Clearance Support System (AVCSS)	Date	Revision	Checked	Approved
			14-Nov-16	Rev.: 0	WC	LC
			10-Mar-17	Rev.: 1.0a	WC	LC
			5-May-17	Rev.: 1.0b	WC	LC




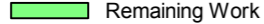



Activity ID	Activity Name	2015			2016				2017				2018				2019			
		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
Location 8(Inbd Private Car Annex (025)) (Phase 2)		30-Aug-17; Location 8(Inbd Private Car Annex (025)) (Phase 2)																		
EM3370	L8(025) - Cable Containment in Kiosks																			
EM3380	L8(025) - Cable Laying and termination																			
EM3400	L8(025) - Cable Splicing and Testing and Labeling																			
Location 9(Outbd Private Car Annex (032)) (Phase 2)		30-Aug-17; Location 9(Outbd Private Car Annex (032)) (Phase 2)																		
EM3500	L9(032) - Cable Containment in Kiosks																			
EM3520	L9(032) - Cable Laying and termination																			
Initial On-Site Test and Commissioning / Pre-SAT (Phase 2 / Section II)																				
Site Acceptance Test (Phase 2 / Section II)																				
Operability Period Test (Phase 2 / Section II)																				
Completion (Phase 2 / Section II)																				
Engineering Support for Phase 2 / Section II																				
Procurement for Phase2 / Section III																				
Delivery and Bench Acceptance Test for Phase2 / Section III																				
Installation - Phase 2 / Section III		09-Oct-17; Installation - Phase 2/ Section III																		
Location 10,11,12,13 (Vehicle Clearance Kiosks)		09-Oct-17; Location 10,11,12,13 (Vehicle Clearance Kiosks)																		
Location 12 Inbd Private Car Kiosks (027) - 12 nos (Phase 2)		09-Oct-17; Location 12 Inbd Private Car Kiosks (027) - 12 nos (Phase 2)																		
EM4440	L12(027)(12nos P2) - Cable Laying and termination																			
EM4460	L12(027)(12nos P2) - Cable Splicing and Testing and Labeling																			
EM4480	L12(027)(12nos P2) - AVCSS/DOH/MOM Kiosk Equipment Installation (12 nos)																			
Location 13 Outbd Private Car Kiosks (030) - 12 nos (Phase 2)		01-Sep-17; Location 13 Outbd Private Car Kiosks (030) - 12 nos (Phase 2)																		
EM4560	L13(030)(12nos P2) - Cable Containment in Kiosks																			
Location 12 Outbd Goods Vehicle Kiosks (029) - 3 nos (Phase 2)		31-Aug-17; Location 12 Outbd Goods Vehicle Kiosks (029) - 3 nos (Phase 2)																		
EM4880	L12(029)(3nos P2) - Cable Laying and termination																			
EM4900	L12(029)(3nos P2) - Cable Splicing and Testing and Labeling																			
EM4920	L12(029)(3nos P2) - AVCSS/DOH/MOM Kiosk Equipment Installation (3 nos)																			
EM4940	L12(029)(3nos P2) - ODB & XDB Installation (3 nos)																			
EM4960	L12(029)(3nos P2) - AIOP Installation (3 nos)																			
EM4980	L12(029)(3nos P2) - Loop Installation (15 nos)																			
Location 11 Outbd Coach Kiosks (009) - 4 nos (Phase 2)																				
Location 12 Inbd Goods Vehicle Kiosks (028) - 3 nos (Phase 2)		24-Aug-17; Location 12 Inbd Goods Vehicle Kiosks (028) - 3 nos (Phase 2)																		
EM4720	L12(028)(3nos P2) - Cable Laying and termination																			
EM4740	L12(028)(3nos P2) - Cable Splicing and Testing and Labeling																			
EM4760	L12(028)(3nos P2) - AVCSS/DOH/MOM Kiosk Equipment Installation (3 nos)																			
EM4780	L12(028)(3nos P2) - ODB & XDB Installation (3 nos)																			
EM4800	L12(028)(3nos P2) - AIOP Installation (3 nos)																			
EM4820	L12(028)(3nos P2) - Loop Installation (15 nos)																			
EM4840	L12(028)(3nos P2) - Kiosk Equipment Configuration (3 nos)																			
EM5120	L12(028)(3nos P2) - Inbd Goods Vehicle Kiosks Installation Complete																			
Location 10 Shuttle Bus Kiosks (006) - 4 nos (Phase 2)		30-Aug-17; Location 10 Shuttle Bus Kiosks (006) - 4 nos (Phase 2)																		
EM4000	L10(006)(4nos P2) - Cable Containment in Kiosks																			
Location 11 Inbd Coach Kiosks (010) - 2 nos (Phase 2)-1																				
Location 11 Inbd Coach Kiosks (010) - 2 nos (Phase 2)-2																				
Initial On-Site Test and Commissioning / Pre-SAT (Phase 2 / Section III)																				

Programme No.: HZMB-DWP Data Date: 14-Aug-15		Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities - Automatic Vehicle Clearance Support System (AVCSS)	Date	Revision	Checked	Approved
			14-Nov-16	Rev.: 0	WC	LC
			10-Mar-17	Rev.: 1.0a	WC	LC
			5-May-17	Rev.: 1.0b	WC	LC

Activity ID	Activity Name
	Site Acceptance Test (Phase 2 / Section III)
	Operability Period Test (Phase 2 / Section III)
	Completion (Phase 2 / Section III)
	Operation (Phase 2 / Section III)
	Defect Liability Period (DLP)
	Document Submission (Phase 2 / Section III)

2015			2016				2017				2018				2019		
Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3

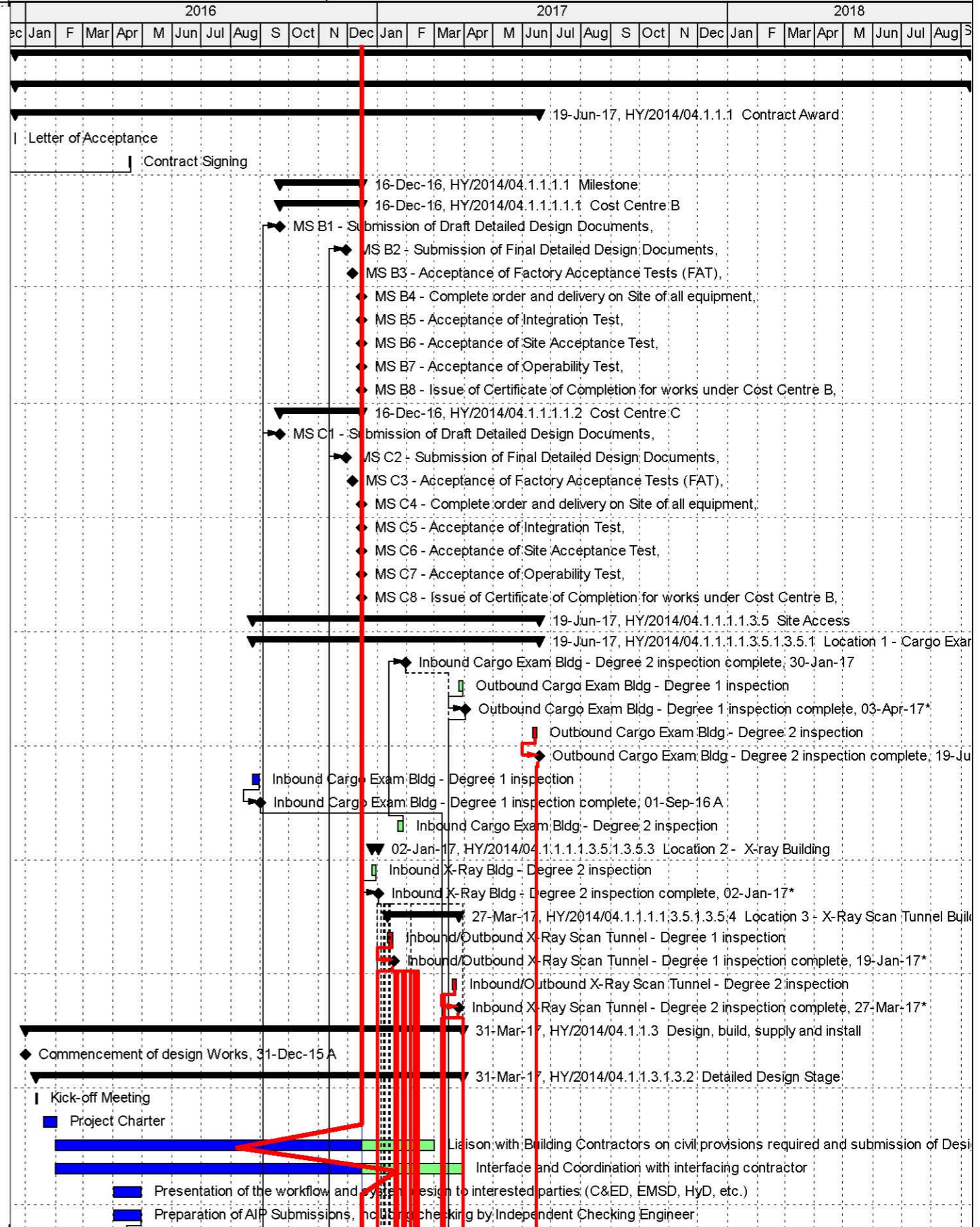
Programme No.: HZMB-DWP
Data Date: 14-Aug-15

-  Actual Level of Effort
-  Primary Baseline
-  Actual Work
-  Remaining Work
-  Critical Remaining Work
-  Baseline Milestone
-  Milestone

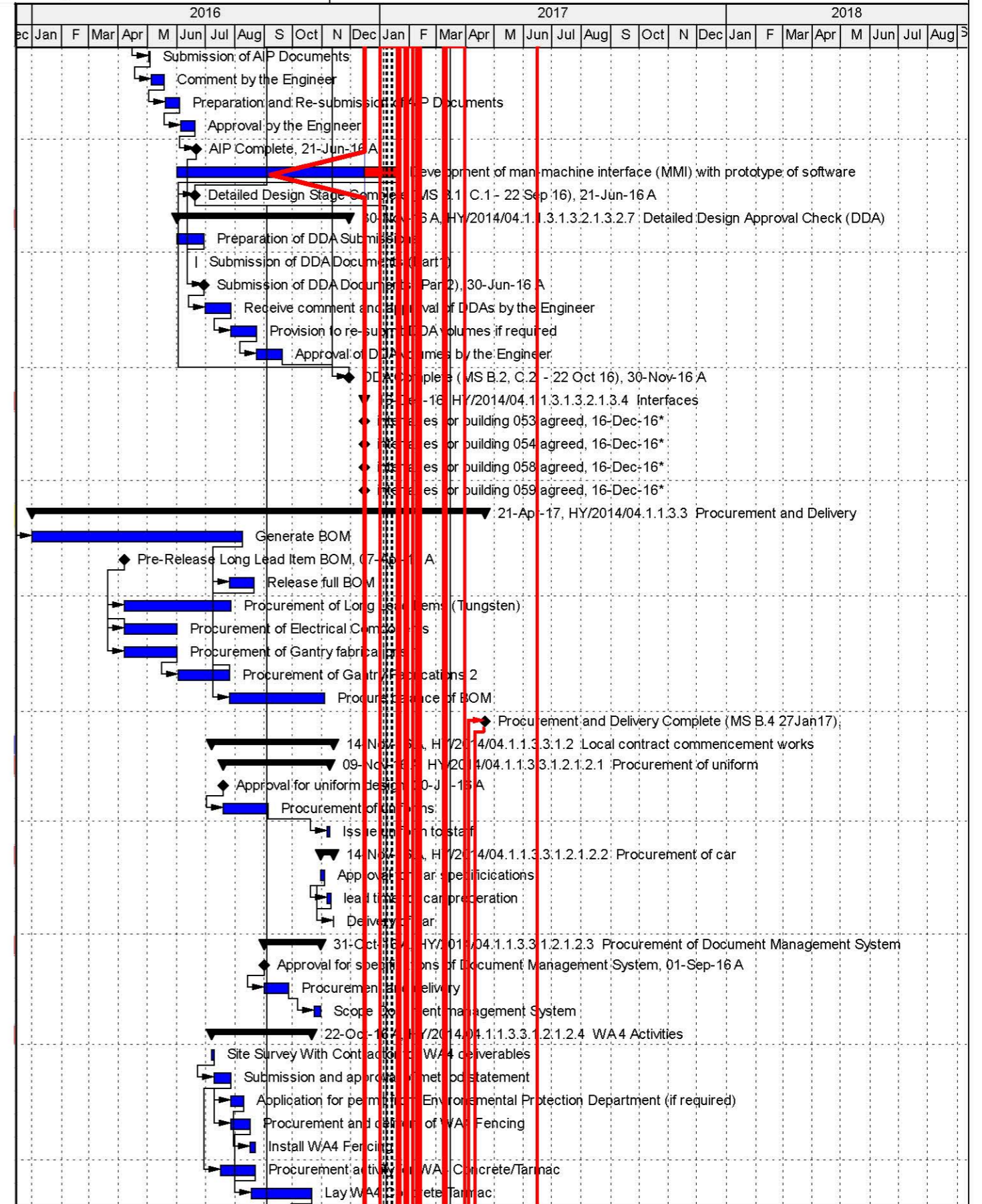
Hong Kong-Zhuhai-Macao Bridge
Hong Kong Boundary Crossing
Facilities - Automatic Vehicle
Clearance Support System (AVCSS)

Date	Revision	Checked	Approved
14-Nov-16	Rev.: 0	WC	LC
10-Mar-17	Rev.: 1.0a	WC	LC
5-May-17	Rev.: 1.0b	WC	LC

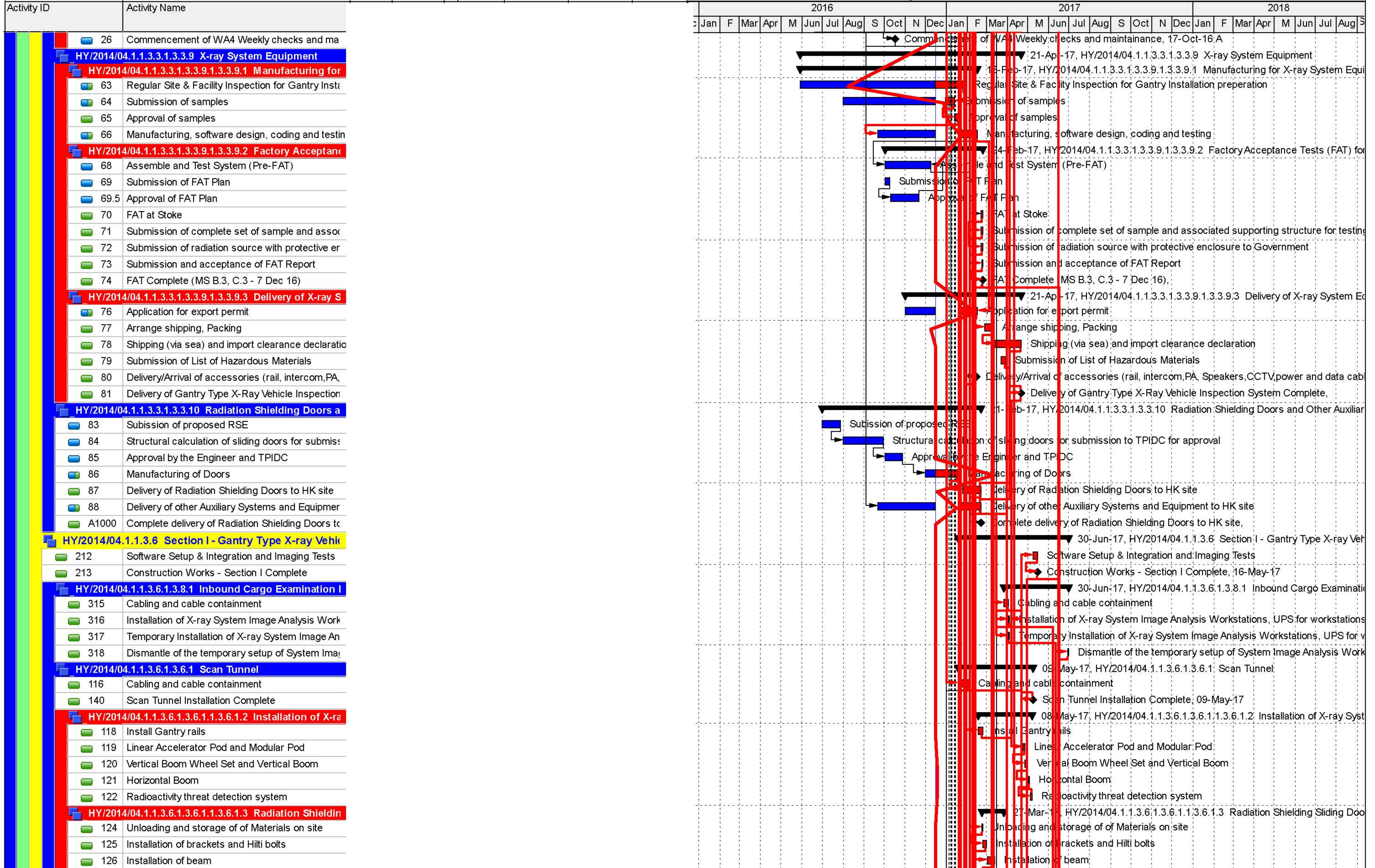
Activity ID	Activity Name
HY/2014/04 Hong Kong-Zhuhai-Macao Brid	
HY/2014/04.1 Contract No. HY/2014/04 Hong	
HY/2014/04.1.1.1 Contract Award	
3	Letter of Acceptance
4	Contract Signing
HY/2014/04.1.1.1.1 Milestone	
HY/2014/04.1.1.1.1.1 Cost Centre B	
A1C	MS B1 - Submission of Draft Detailed Design Do
A1C	MS B2 - Submission of Final Detailed Design Do
A1C	MS B3 - Acceptance of Factory Acceptance Test
A1C	MS B4 - Complete order and delivery on Site of a
A1C	MS B5 - Acceptance of Integration Test
A1C	MS B6 - Acceptance of Site Acceptance Test
A1C	MS B7 - Acceptance of Operability Test
A1C	MS B8 - Issue of Certificate of Completion for wc
HY/2014/04.1.1.1.1.2 Cost Centre C	
A1C	MS C1 - Submission of Draft Detailed Design Do
A11	MS C2 - Submission of Final Detailed Design Do
A11	MS C3 - Acceptance of Factory Acceptance Tes
A11	MS C4 - Complete order and delivery on Site of a
A11	MS C5 - Acceptance of Integration Test
A11	MS C6 - Acceptance of Site Acceptance Test
A11	MS C7 - Acceptance of Operability Test
A11	MS C8 - Issue of Certificate of Completion for wc
HY/2014/04.1.1.1.3.5 Site Access	
HY/2014/04.1.1.1.3.5.1.3.5.1 Location 1 - Cargo Exar	
100	Inbound Cargo Exam Bldg - Degree 2 inspection
102	Outbound Cargo Exam Bldg - Degree 1 inspection
103	Outbound Cargo Exam Bldg - Degree 1 inspectic
104	Outbound Cargo Exam Bldg - Degree 2 inspection
105	Outbound Cargo Exam Bldg - Degree 2 inspectic
97	Inbound Cargo Exam Bldg - Degree 1 inspection
98	Inbound Cargo Exam Bldg - Degree 1 inspection
99	Inbound Cargo Exam Bldg - Degree 2 inspection
HY/2014/04.1.1.1.3.5.1.3.5.3 Location 2 - X-ray Build	
107	Inbound X-Ray Bldg - Degree 2 inspection
108	Inbound X-Ray Bldg - Degree 2 inspection comp
HY/2014/04.1.1.1.3.5.1.3.5.4 Location 3 - X-Ray Scar	
110	Inbound/Outbound X-Ray Scan Tunnel - Degree
111	Inbound/Outbound X-Ray Scan Tunnel - Degree
112	Inbound/Outbound X-Ray Scan Tunnel - Degree
113	Inbound X-Ray Scan Tunnel - Degree 2 inspectic
HY/2014/04.1.1.3 Design, build, supply and install	
28	Commencement of design Works
HY/2014/04.1.1.3.1.3.2 Detailed Design Stage	
30	Kick-off Meeting
31	Project Charter
32	Liaison with Building Contractors on civil provisio
33	Interface and Coordination with interfacing contr
35	Presentation of the workflow and system design
36	Preparation of AIP Submissions, including checki



Activity ID	Activity Name
37	Submission of AIP Documents
38	Comment by the Engineer
39	Preparation and Re-submission of AIP Documents
40	Approval by the Engineer
41	AIP Complete
42	Development of man-machine interface (MMI) with prototype of software
51	Detailed Design Stage Complete (MS B.1, C.1 - 22-Sep-16)
HY/2014/04.1.1.3.3.2.1.3.2.7 Detailed Design Approval Check (DDA)	
44	Preparation of DDA Submissions
45	Submission of DDA Documents (Part1)
46	Submission of DDA Documents (Part2)
47	Receive comment and approval of DDAs by the Engineer
48	Provision to re-submit DDA volumes if required
49	Approval of DDA volumes by the Engineer
50	DDA Complete (MS B.2, C.2 - 22 Oct 16)
HY/2014/04.1.1.3.3.2.1.3.4 Interfaces	
91	interfaces for building 053 agreed
92	interfaces for building 054 agreed
93	interfaces for building 058 agreed
94	interfaces for building 059 agreed
HY/2014/04.1.1.3.3 Procurement and Delivery	
53	Generate BOM
54	Pre-Release Long Lead Item BOM
55	Release full BOM
56	Procurement of Long Lead Items (Tungsten)
57	Procurement of Electrical Components
58	Procurement of Gantry fabrications 1
59	Procurement of Gantry Fabrications 2
60	Procure balance of BOM
89	Procurement and Delivery Complete (MS B.4 27Jan17)
HY/2014/04.1.1.3.3.1.2 Local contract commencement works	
HY/2014/04.1.1.3.3.1.2.1.1 Procurement of uniform	
7	Approval for uniform design
8	Procurement of uniforms
9	Issue uniform to staff
HY/2014/04.1.1.3.3.1.2.1.2 Procurement of car	
11	Approval for car specifications
12	lead time for car preparation
13	Delivery of car
HY/2014/04.1.1.3.3.1.2.1.2.3 Procurement of Document Management System	
15	Approval for specifications of Document Management System
16	Procurement and delivery
17	Scope Document management System
HY/2014/04.1.1.3.3.1.2.1.2.4 WA 4 Activities	
19	Site Survey With Contractor for WA4 deliverables
20	Submission and approval of method statement
21	Application for permit from Environmental Protection Department (if required)
22	Procurement and delivery of WA4 Fencing
23	Install WA4 Fencing
24	Procurement activity for WA4 Concrete/Tarmac
25	Lay WA4 Concrete/Tarmac



■ Actual Level of Effort ■ Remaining Work ◆◆ Milestone
■ Actual Work ■ Critical Remaining Work ▼ summary

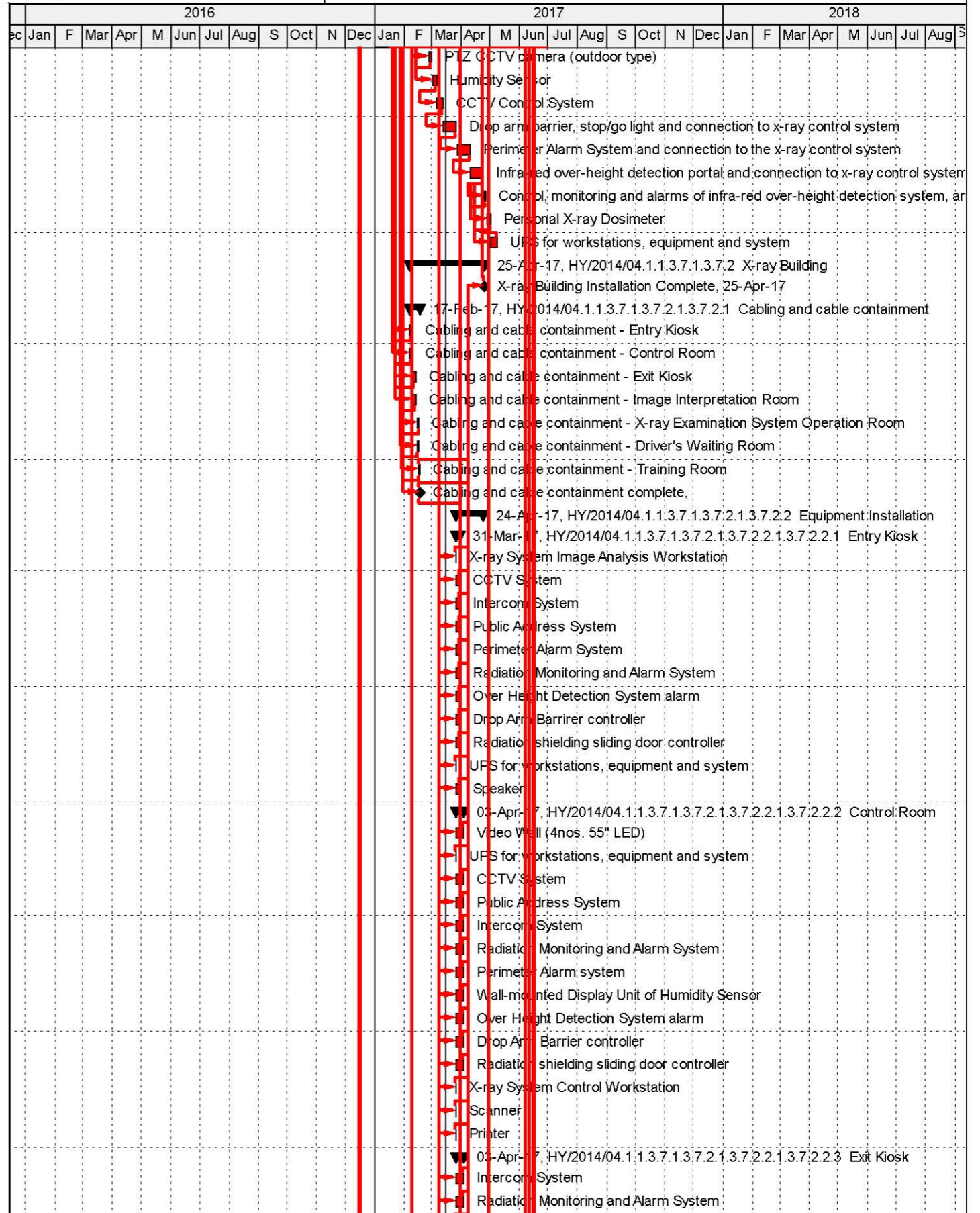


■ Actual Level of Effort
 ■ Remaining Work
 ■ Critical Remaining Work
 ◆ Milestone
 ▼ summary

Activity ID	Activity Name	2016												2017												2018											
		Jan	F	Mar	Apr	M	Jun	Jul	Aug	S	Oct	N	Dec	Jan	F	Mar	Apr	M	Jun	Jul	Aug	S	Oct	N	Dec	Jan	F	Mar	Apr	M	Jun	Jul	Aug	S			
	Printer																																				
	HY/2014/04.1.1.3.6.1.3.6.2.1.3.6.2.2.3 Exit Kiosk																																				
	Intercom System																																				
	Radiation Monitoring and Alarm System																																				
	X-ray System Image Analysis Workstation																																				
	Radiation shielding sliding door controller																																				
	CCTV System																																				
	Public Address System																																				
	UPS for workstations, equipment and system																																				
	HY/2014/04.1.1.3.6.1.3.6.2.1.3.6.2.2.4 Image Interpretation Kiosk																																				
	Intercom System																																				
	Radiation Monitoring and Alarm System																																				
	X-ray System Image Analysis Workstation																																				
	Printer																																				
	UPS for workstations, equipment and system																																				
	HY/2014/04.1.1.3.6.1.3.6.2.1.3.6.2.2.5 X-ray Examination Kiosk																																				
	Server																																				
	Server rack																																				
	UPS for workstations, equipment and system																																				
	HY/2014/04.1.1.3.6.1.3.6.2.1.3.6.2.2.6 Driver's Waiting Area																																				
	CCTV System																																				
	Intercom System																																				
	Radiation Monitoring and Alarm System																																				
	Speaker																																				
	UPS for workstations, equipment and system																																				
	HY/2014/04.1.1.3.6.1.3.6.2.1.3.6.2.2.7 Training room																																				
	Projector screen (Screen size 106")																																				
	Ceiling mounted projector																																				
	X-ray System Training Workstation																																				
	Radiation Monitoring and Alarm System																																				
	UPS for workstations, equipment and system																																				
	Training aids																																				
	Printer																																				
	HY/2014/04.1.1.3.7 Section II - Gantry Type X-ray Vehicle Inspection System																																				
	311 Software Setup & Integration and Imaging Tests																																				
	312 Construction Works - Section II Complete																																				
	HY/2014/04.1.1.3.7.1.3.7.1 Scan Tunnel																																				
	216 Cabling and cable containment																																				
	239 Scan Tunnel Installation Complete																																				
	HY/2014/04.1.1.3.7.1.3.7.1.1.3.7.1.2 Installation of X-ray System																																				
	218 Gantry rails																																				
	219 Linear Accelerator Pod and Modular Pod																																				
	220 Vertical Boom Wheel Set and Vertical Boom																																				
	221 Horizontal Boom																																				
	222 Radioactivity threat detection system																																				
	HY/2014/04.1.1.3.7.1.3.7.1.1.3.7.1.3 Radiation Shielding Sliding Door																																				
	224 Installation of brackets and Hilti bolts																																				
	225 Installation of beam																																				
	226 Installation of door box																																				
	227 Testing & commissioning																																				
	HY/2014/04.1.1.3.7.1.3.7.1.1.3.7.1.4 Installation of Auxiliary Systems																																				
	229 PTZ CCTV camera (indoor type)																																				

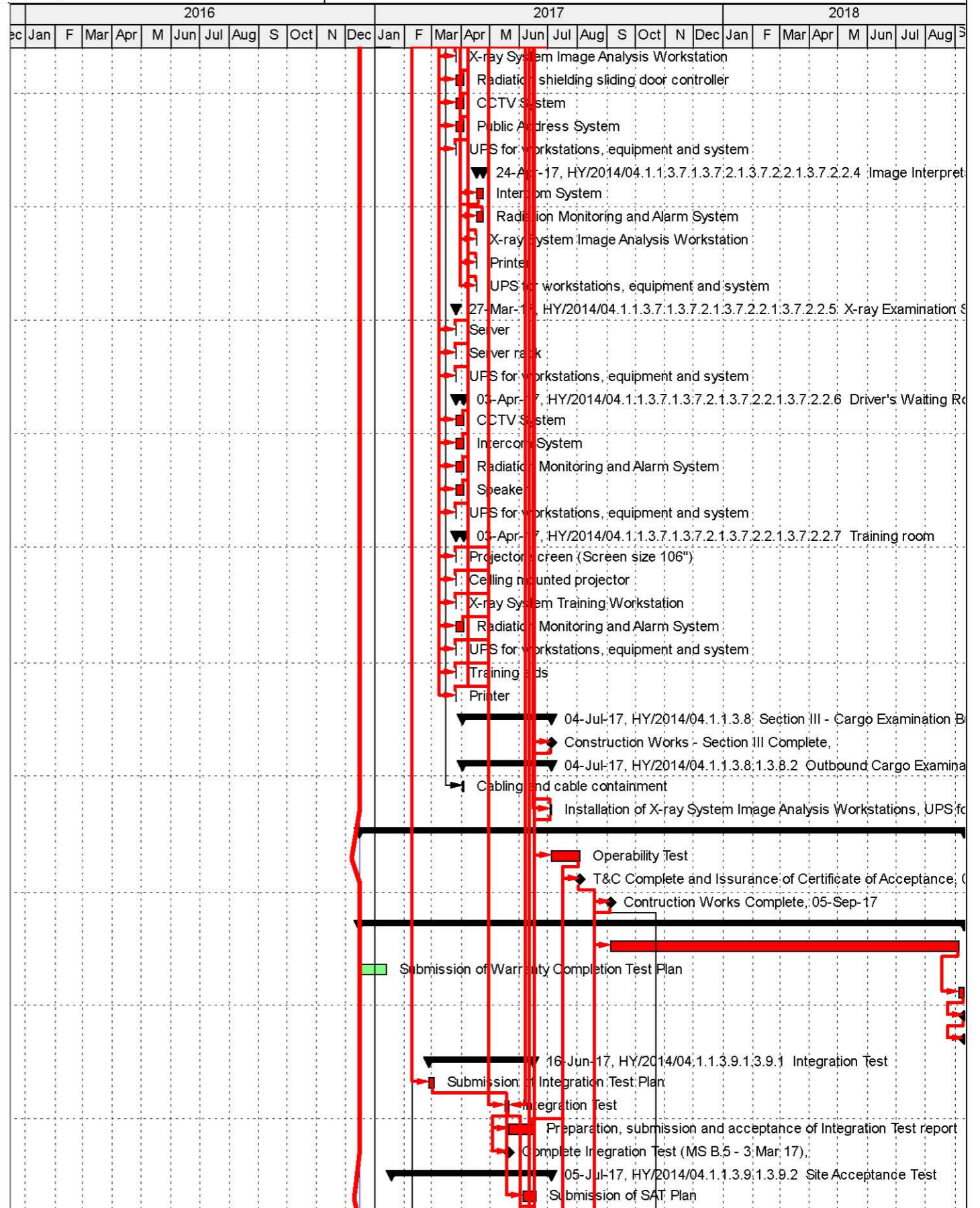
█ Actual Level of Effort
 █ Remaining Work
 █ Critical Remaining Work
 ◆ Milestone
 ▼ summary

Activity ID	Activity Name
230	PTZ CCTV camera (outdoor type)
231	Humidity Sensor
232	CCTV Control System
233	Drop arm barrier, stop/go light and connection to
234	Perimeter Alarm System and connection to the x-
235	Infra-red over-height detection portal and connec
236	Control, monitoring and alarms of infra-red over-l
237	Personal X-ray Dosimeter
238	UPS for workstations, equipment and system
HY/2014/04.1.1.3.7.1.3.7.2 X-ray Building	
310	X-ray Building Installation Complete
HY/2014/04.1.1.3.7.1.3.7.2.1.3.7.2.1 Cabling and cable	
242	Cabling and cable containment - Entry Kiosk
243	Cabling and cable containment - Control Room
244	Cabling and cable containment - Exit Kiosk
245	Cabling and cable containment - Image Interpret
246	Cabling and cable containment - X-ray Examinati
247	Cabling and cable containment - Driver's Waiting
248	Cabling and cable containment - Training Room
249	Cabling and cable containment complete
HY/2014/04.1.1.3.7.1.3.7.2.1.3.7.2.2 Equipment Install	
HY/2014/04.1.1.3.7.1.3.7.2.1.3.7.2.2.1.3.7.2.2.1 Entry	
242	X-ray System Image Analysis Workstation
243	CCTV System
244	Intercom System
245	Public Address System
246	Perimeter Alarm System
247	Radiation Monitoring and Alarm System
248	Over Height Detection System alarm
249	Drop Arm Barrier controller
250	Radiation shielding sliding door controller
251	UPS for workstations, equipment and system
252	Speaker
HY/2014/04.1.1.3.7.1.3.7.2.1.3.7.2.2.1.3.7.2.2.2 Conti	
253	Video Wall (4nos. 55" LED)
254	UPS for workstations, equipment and system
255	CCTV System
256	Public Address System
257	Intercom System
258	Radiation Monitoring and Alarm System
259	Perimeter Alarm system
260	Wall-mounted Display Unit of Humidity Sensor
261	Over Height Detection System alarm
262	Drop Arm Barrier controller
263	Radiation shielding sliding door controller
264	X-ray System Control Workstation
265	Scanner
266	Printer
HY/2014/04.1.1.3.7.1.3.7.2.1.3.7.2.2.1.3.7.2.2.3 Exit Kiosk	
267	Intercom System
268	Radiation Monitoring and Alarm System



█ Actual Level of Effort
 █ Remaining Work
 ◆◆ Milestone
█ Actual Work
 █ Critical Remaining Work
 ▼ summary

Activity ID	Activity Name
322	Construction Works - Section III Complete
320	Cabling and cable containment
321	Installation of X-ray System Image Analysis Workstations, UPS for workstations, equipment and system
335	Operability Test
336	T&C Complete and Issurance of Certificate of Acceptance, 05-Sep-17
345	Construction Works Complete, 05-Sep-17
359	Defect Liability Period
360	Submission of Warranty Completion Test Plan
361	Warranty Completion Test
362	DLP Complete and issuance of Defect Liability Certificate
363	Commencement of Maintenance Services
325	Submission of Integration Test Plan
326	Integration Test
327	Preparation, submission and acceptance of Integration Test report
327.5	Complete Inegration Test (MS B.5 - 3 Mar 17)
329	Submission of SAT Plan



█ Actual Level of Effort
 █ Remaining Work
 ◆◆ Milestone
█ Actual Work
 █ Critical Remaining Work
 ▼ summary

APPENDIX D

Event and Action Plan

Event/Action Plan for Air Quality

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

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.
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 Contractors 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.

APPENDIX E

Waste Flow Table

Monthly Summary Waste Flow Table for 2017



Month	Actual Quantities of Inert C&D Materials Generated Monthly						Actual Quantities of C&D Wastes Generated Monthly				
	a. Total Quantity Generated (see Note 8)	b. Hard Rock and Large Broken Concrete (see Note 9)	c. Reused in the Contract	d. Reused in Other Projects	e. Disposed as Public Fill (see Note 10)	f. Imported Fill	g. Metals (see Note 5)	h. Paper / Cardboard Packaging (see Note 5)	i. Plastics (see Note 3) (see Note 5)	j. Chemical Waste	k. Others, e.g. general refuse
	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m ³)
January	1.390	0.010	1.380	0.000	0.010	0.000	0.000	0.000	0.000	0.000	0.197
February	1.070	0.003	1.067	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.143
March	0.266	0.202	0.064	0.000	0.202	0.000	5.840	0.000	0.000	0.000	0.269
April	0.249	0.013	0.236	0.000	0.013	0.000	0.000	0.000	0.000	0.000	0.220
May	0.132	0.132	0.000	0.000	0.132	0.000	0.000	0.000	0.000	0.000	0.421
June	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.392
Sub-total	3.107	0.360	2.747	0.000	0.360	0.000	5.840	0.000	0.000	0.000	1.642
July											
August											
September											
October											
November											
December											
Total	3.107	0.360	2.747	0.000	0.360	0.000	5.840	0.000	0.000	0.000	1.642

Total C&D waste generated = a+b+f+g+h+i+j+k

Total C&D waste generated (excluded excavated material) = g+h+i+j+k

Total C&D waste recycled = c+d+g+h+i

% of recycled C&D waste = (Total C&D waste generated - Total C&D waste recycled) / Total C&D waste generated

- Notes:
- (1) The performance target are given in PS Clause 6(14)
 - (2) The waste flow table shall also include C&D materials that are not specified in the Contract to be imported for use at the Site
 - (3) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material
 - (4) The Contractor shall also submit the latest forecast of the amount of C&D materials expected to be generated from the Works, together with a break down of the nature where the total amount of C&D materials expected to be generated from the Works is equal to or exceeding 50,000m³.
 - (5) All recyclable materials, including metals, paper / cardboard packaging, plastics, etc. will be collected by registered collector for recycling.
 - (6) Conversion factors for reporting purpose:
 - in-situ: rock = 2.5 tonnes/m³; soil = 2.0 tonnes/m³
 - excavated: rock = 2.0 tonnes/m³; soil = 1.8 tonnes/m³; broken concrete and bitumen = 2.4 tonnes/m³
 - C&D Waste = 0.9 tonnes/m³; bentonite slurry = 2.8 tonnes/m³
 - (7) Numbers are rounded off to the nearest three decimal places
 - (8) The "Total Quantity Generated" equals to the sum of "Reuse in the Contract", "Reuse in Other Projects" and "Disposed as Public Fill"
 - (9) The "Hard Rock and Large Broken Concrete" were disposed as public fill
 - (10) The amount in "Disposed as Public Fill" included the "Hard Rock and Large Broken Concrete" disposed as public fill



ATAL Technologies Ltd.

Contract No. **HY/2013/06** HKBCF Automatic Vehicle Clearance Support System

Location: Artificial Island of HKIAP (C1 & C8 Area)

Ver: 1st
Date: Jun 2017

Monthly Summary Waste Flow Table for 2017

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, 石矢頭, 石, 填料等)		Others (e.g. general refuse, broken formwork etc.) 其他 (如垃圾, 廢板枋等)		Metals 金屬		Plastic 塑膠		Paper/cardboard packaging 廢紙/包裝紙類		Chemical Waste 化學廢物					
	(b)		(c)		(d)		(e)		(in tonnes)		(in tonnes)		(in tonnes)		(in litre)				(a)=(b+c+d+e)	
	Est. Qty. 估計數量	Act. Qty. 實際數量	Est. Qty. 估計數量	Act. Qty. 實際數量	Est. Qty. 估計數量	Act. Qty. 實際數量	Est. Qty. 估計數量	Act. Qty. 實際數量	Est. Qty. 估計數量	Act. Qty. 實際數量	Est. Qty. 估計數量	Act. Qty. 實際數量	Est. Qty. 估計數量	Act. Qty. 實際數量	Est. Qty. 估計數量	Act. Qty. 實際數量			Est. Qty. 估計數量	Act. Qty. 實際數量
January	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	0.002	0.002	0.000	0.000	0.000	0.000	
February	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002	0.000	0.000	0.000	0.000	
March	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002	0.002	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002	
April	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002	0.002	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002	
May	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.005	0.005	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.005	
June	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002	0.002	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002	
July																				
August																				
September																				
October																				
November																				
December																				
Total	0.000	0.000	0.000	0.000	0.000	0.000	0.011	0.011	0.011	0.011	0.000	0.000	0.004	0.004	0.000	0.000	0.011	0.011		

Notes: (1) The quantities 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 gm⁻³.

APPENDIX F

Environmental Licenses and Permits

Environmental License/ Permits /Notification Register

LCAL H2642

Contract No. HY/2014/05 – Hong Kong Zhuhai and Macao Bridge Hong Kong Boundary Crossing Facilities – Remaining Ancillary Buildings and Facilities

Item No.	Permit/License or Registration Application			Permit/License/ Notification/ Registration Description	Permit/License/ Registration Number	Issue/Start Date	Expiry Date	Issuing Office	Remark
	Work Area	Date	Reference						
1	All Areas	30 Jun 2015	N/A	Environmental Permit for Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities	EP-353/2009/I	17 Jul 15	N/A	EPD	Superseded by EP-353/2009/J
2	All Areas	18 Feb 2016	N/A	Environmental Permit for Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities	EP-353/2009/J	25 Feb 2016	N/A	EPD	Superseded by EP-353/2009/K
3	All Areas	24 Mar 2016	N/A	Environmental Permit for Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities	EP-353/2009/K	11 Apr 2016	N/A	EPD	-
4	All Areas	30 Dec 2015	N/A	Billing Account for disposal of construction waste	7024342	16 Feb 2016	N/A	EPD	-
5	All Areas	30 Dec 2015	RABF-LTR- EPD-000001	Notification that notifiable works are anticipated to commence (Form NA).	Acknowledge Receipt Ref. No. 397571	06 Jan 2016	N/A	EPD	-
6	All Areas	04 Jan 2016	RABF-LTR- EPD-000002	Registration as Chemical Waste Producer for disposal of spent batteries, used lubrication oil and surplus paint at RABF area	WPN 5213-951-L2846-02	19 Feb 2016	N/A	EPD	-

Environmental License/ Permits /Notification Register

LCAL H2642

Contract No. HY/2014/05 – Hong Kong Zhuhai and Macao Bridge Hong Kong Boundary Crossing Facilities – Remaining Ancillary Buildings and Facilities

Item No.	Permit/License or Registration Application			Permit/License/ Notification/ Registration Description	Permit/License/ Registration Number	Issue/Start Date	Expiry Date	Issuing Office	Remark
	Work Area	Date	Reference						
7	All Areas	25 Jan 2016	RABF-LTR- EPD-000003	CNP for the use of powered mechanical equipment for the purpose of carry out works from 19:00 to 23:00 and 23:00 to 07:00. (Non-designated area)	GW-RS0106-16	11 Feb 2016	10 Aug 2016	EPD	Superseded by GW-RS0476-16
8	All Areas	08 May 2016	RABF-LTR- EPD-000012	CNP for the use of powered mechanical equipment for the purpose of carry out works from 19:00 to 23:00 and 23:00 to 07:00. (Non-designated area)	GW-RS0476-16	19 May 2016	18 Nov 2016	EPD	Superseded by GW-RS0666-16
9	All Areas	16 Jun 2016	RABF-LTR- EPD-000015	CNP for the use of powered mechanical equipment for the purpose of carry out works from 19:00 to 23:00 and 23:00 to 07:00. (Non-designated area)	GW-RS0666-16	04 Jul 2016	03 Jan 2017	EPD	Superseded by GW-RS0907-16
10	All Areas	18 Aug 2016	RABF-LTR- EPD-000018	CNP for the use of powered mechanical equipment for the purpose of carry out works from 19:00 to 23:00 and 23:00 to 07:00. (Non-designated area)	GW-RS0907-16	01 Sep 2016	28 Feb 2017	EPD	Superseded by GW-RS1195-16

Environmental License/ Permits /Notification Register

LCAL H2642

Contract No. HY/2014/05 – Hong Kong Zhuhai and Macao Bridge Hong Kong Boundary Crossing Facilities – Remaining Ancillary Buildings and Facilities

Item No.	Permit/License or Registration Application			Permit/License/ Notification/ Registration Description	Permit/License/ Registration Number	Issue/Start Date	Expiry Date	Issuing Office	Remark
	Work Area	Date	Reference						
11	All Areas	16 Nov 2016	RABF-LTR-EPD-000020	CNP for the use of powered mechanical equipment for the purpose of carry out works from 19:00 to 23:00 and 23:00 to 07:00. (Non-designated area)	GW-RS1195-16	30 Nov 2016	29 May 2017	EPD	Superseded by GW-RS1315-16
12	All Areas	08 Dec 2016	RABF-LTR-EPD-000023	CNP for the use of powered mechanical equipment for the purpose of carry out works from 19:00 to 23:00 and 23:00 to 07:00. (Non-designated area)	GW-RS1315-16	22 Dec 2016	21 Jun 2017	EPD	Superseded by GW-RS0131-17
13	WA3	13 Jan 2017	RABF-LTR-EPD-000026	CNP for the use of powered mechanical equipment for the purpose of carry out works from 19:00 to 23:00. (Non-designated area)	GW-RS0070-17	27 Jan 2017	26 Jul 2017	EPD	-
14	All areas	03 Feb 2017	RABF-LTR-EPD-000028	CNP for the use of powered mechanical equipment for the purpose of carry out works from 19:00 to 23:00 and 23:00 to 07:00. (Non-designated area)	GW-RS0131-17	17 Feb 2017	16 Aug 2017	EPD	Superseded by GW-RS0306-17

Environmental License/ Permits /Notification Register

LCAL H2642

Contract No. HY/2014/05 – Hong Kong Zhuhai and Macao Bridge Hong Kong Boundary Crossing Facilities – Remaining Ancillary Buildings and Facilities

								Date: June 2017		Remark
Item No.	Permit/License or Registration Application			Permit/License/ Notification/ Registration Description	Permit/License/ Registration Number	Issue/Start Date	Expiry Date	Issuing Office		
	Work Area	Date	Reference							
15	All areas	20 Mar 2017	RABF-LTR-EPD-000035	CNP for the use of powered mechanical equipment for the purpose of carry out works from 19:00 to 23:00 and 23:00 to 07:00. (Non-designated area)	GW-RS0306-17	05 Apr 2017	02 Oct 2017	EPD	Superseded by GW-RS0435-17	
16	All areas	05 May 2017	RABF-LTR-EPD-000036	CNP for the use of powered mechanical equipment for the purpose of carry out works from 19:00 to 23:00 and 23:00 to 07:00. (Non-designated area)	GW-RS0435-17	20 May 2017	16 Nov 2017	EPD	-	

Environmental License/ Permits /Notification Register

Contract No. HY/2013/06 – Hong Kong Zhuhai and Macao Bridge Hong Kong Boundary Crossing Facilities – Automatic Vehicle Clearance Support System

Item No.	Permit/License or Registration Application			Permit/License/ Notification/ Registration Description	Permit/License/ Registration Number	Issue/Start Date	Expiry Date	Issuing Office	Remark
	Work Area	Date	Reference						
1	All Areas	24 Mar 2016	N/A	Environmental Permit for Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities	EP-353/2009/K	11 Apr 2016	N/A	EPD	-
2	Building 023, 025 and 032	31 Jul 2015	WFG14980	Billing Account for disposal of construction waste	7023015	20 Aug 2015	N/A	EPD	-
3.	N/A	N/A	N/A	Registration as Chemical Waste Producer for disposal chemical waste	N/A	N/A	N/A	N/A	#
4.	All Areas	18 May 2017	CNP-GW416290	CNP for the use of powered mechanical equipment for the purpose of carry out works from 19:00 to 00:00 and 00:00 to 07:00. (Non-designated area)	GW-RS0452-17	1 Jun 2017	30 Nov 2017	EPD	-

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.

Environmental License/ Permits /Notification Register

Contract No. HY/2014/04 – Hong Kong Zhuhai and Macao Bridge Hong Kong Boundary Crossing Facilities – Gantry Type X-ray Vehicle Inspection System

Date: June 2017									
Item No.	Permit/License or Registration Application			Permit/License/ Notification/ Registration Description	Permit/License/ Registration Number	Issue/Start Date	Expiry Date	Issuing Office	Remark
	Work Area	Date	Reference						
1	All Areas	24 Mar 2016	N/A	Environmental Permit for Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities	EP-353/2009/K	11 Apr 2016	N/A	EPD	-
2	All Areas	23 Aug 2016	N/A	Billing Account for disposal of construction waste	7025930	20 Sep 2016	N/A	EPD	(a)
3.	N.A.	N.A.	N.A.	Registration as Chemical Waste Producer for disposal chemical waste	N.A.	N.A.	N.A.	N.A.	(b)

Remarks:

(a) As informed by the Contractor of Contract No. HY/2014/04 on 5 May 2017, the billing account for disposal of construction waste should be 7025930.

(b) The Contractor of Contract No. HY/2014/04 was advised to register as a chemical waste producer when chemical waste is expected to generate for the foreseeable future from the operations.

APPENDIX G

Implementation Schedule for Environmental Mitigation Measures (EMIS)

**Contract No. HY/2014/05 – Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Remaining Ancillary Buildings and Facilities
Implementation Schedule for Environmental Mitigation Measures**

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to implement the measures?	What requirements or standards for the measures to achieve?	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	Good construction site practices to control the dust impact at the nearby sensitive receivers to within the relevant criteria.	Contractor	All construction sites	Construction stage	To control the dust impact to within the HKAQO and TM-EIA criteria (Ref. 1- hr and 24hr TSP levels are 500 $\mu\text{g}\text{m}^{-3}$ and 260 $\mu\text{g}\text{m}^{-3}$, respectively)	√
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 be 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; 	Good construction site practices to control the dust impact at the nearby sensitive receivers to within the relevant criteria.	Contractor	All construction sites	Construction stage	To control the dust impact to within the HKAQO and TM-EIA criteria (Ref. 1- hr and 24hr TSP levels are 500 $\mu\text{g}\text{m}^{-3}$ and 260 $\mu\text{g}\text{m}^{-3}$, respectively)	√

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to implement the measures?	What requirements or standards for the measures to achieve?	Implementation Status
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 and the 3 sides; 	Good construction site practices to control the dust impact at the nearby sensitive receivers to within the relevant criteria.	Contractor	All construction sites	Construction stage	To control the dust impact to within the HKAQO and TM-EIA criteria (Ref. 1- hr and 24hr TSP levels are 500 $\mu\text{g}\text{m}^{-3}$ and 260 $\mu\text{g}\text{m}^{-3}$, respectively)	√

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to implement the measures?	What requirements or standards for the measures to achieve?	Implementation Status
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 enclosed system or facility, and any vent or exhaust should be fitted with an effective fabric filter or equivalent air pollution control system; and 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. 	Good construction site practices to control the dust impact at the nearby sensitive receivers to within the relevant criteria.	Contractor	All construction sites	Construction stage	To control the dust impact to within the HKAQO and TM-EIA criteria (Ref. 1- hr and 24hr TSP levels are 500 $\mu\text{g}\text{m}^{-3}$ and 260 $\mu\text{g}\text{m}^{-3}$, respectively)	√
S5.5.6.4	A3	The Contractor should undertake proper watering on all exposed spoil (with at least 8 times per day) throughout the construction phase.	Control construction dust	Contractor	All construction sites	Construction stage	To control the dust impact	√
S5.5.6.5	A4	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.	Control construction dust	Engineer	All construction sites	Design Stage	Air Pollution Control (Construction Dust) Regulation	√
S5.5.6.5	A5	Implement regular dust monitoring under EM&A programme during the construction stage.	Monitor the 24 hr and 1hr TSP levels at the representative dust monitoring stations to ensure compliance with relevant criteria throughout the construction period.	Contractor	Selected representative dust monitoring station	Construction stage	<ul style="list-style-type: none"> Air Pollution Control (Construction Dust) Regulation To control the dust impact to within the HKAQO and TM-EIA criteria (Ref. 1- hr and 24hr TSP levels are 500 $\mu\text{g}\text{m}^{-3}$ and 260 $\mu\text{g}\text{m}^{-3}$, respectively) 	√ (The dust monitoring works under EM&A programme for the Contract are covered by Contract No. HY/2010/02 and Contract No. HY/2011/03.)

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to implement the measures?	What requirements or standards for the measures to achieve?	Implementation Status
S5.5.7.1	A6	<p>The following mitigation measures should be adopted to prevent fugitive dust emissions for concrete batching plant:</p> <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. 	Monitor the 24 hr and 1hr TSP levels at the representative dust monitoring stations to ensure compliance with relevant criteria throughout the construction period.	Contractor	Selected representative dust monitoring station	Construction stage	<ul style="list-style-type: none"> • Air Pollution Control (Construction Dust) Regulation • To control the dust impact to within the HKAQO and TM-EIA criteria (Ref. 1- hr and 24hr TSP levels are $500 \mu\text{g}\text{m}^{-3}$ and $260 \mu\text{g}\text{m}^{-3}$, respectively) 	N/A
S5.5.2.7	A7	<p>The following mitigation measures should be adopted to prevent fugitive dust emissions at barging point:</p> <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. 	Control construction dust	Contractor	All construction sites	Construction stage	Air Pollution Control (Construction Dust) Regulation	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to implement the measures?	What requirements or standards for the measures to achieve?	Implementation Status
Construction Noise (Air borne)								
S6.4.10	N1	<p>1) Use of good site practices to limit noise emissions by considering the following:</p> <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; 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. 	Control construction airborne noise by means of good site practices	Contractor	All construction sites	Construction stage	Noise Control Ordinance	√
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.	Reduce the construction noise levels at low-level zone of NSRs through partial screening.	Contractor	All construction sites	Construction stage	<ul style="list-style-type: none"> Noise Control Ordinance Annex 5, TM-EIA 	N/A
S6.4.12	N3	3) Install movable noise barriers (typically density @14kg/m ²), acoustic mat or full enclosure close to noisy plants including air compressor, generators, saw.	Screen the noisy plant items to be used at all construction sites	Contractor	For plant items listed in Appendix 6D of the EIA report at all construction sites	Construction stage	<ul style="list-style-type: none"> Noise Control Ordinance Annex 5, TM-EIA 75dB(A) for residential premises The movable barrier should achieve at least 5dB(A) and the full enclosure should be 	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to implement the measures?	What requirements or standards for the measures to achieve?	Implementation Status
S6.4.13	N4	4) Select "Quiet plants" which comply with the BS 5228 Part 1 or TM standards.	Reduce the noise levels of plant items	Contractor	For plant items listed in Appendix 6D of the EIA report at all construction sites	Construction stage	<ul style="list-style-type: none"> Noise Control Ordinance & its TM Annex 5, TM-EIA 	√
S6.4.14	N5	5) Sequencing operation of construction plants where practicable.	Operate sequentially within the same work site to reduce the construction airborne noise	Contractor	All construction sites where practicable	Construction stage	<ul style="list-style-type: none"> Noise Control Ordinance Annex 5, TM-EIA 	√
/	N6	6) Implement a noise monitoring under EM&A programme.	Monitor the construction noise levels at the selected representative locations	Contractor	Selected representative noise monitoring station	Construction stage	<ul style="list-style-type: none"> Noise Control Ordinance Annex 5, TM-EIA 75dB(A) for residential premises 	√ (The noise monitoring works under EM&A programme for the Contract are covered by Contract No. HY/2010/02.)
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.	Develop sediment disposal arrangement	Engineer	All construction sites	Design stage	<ul style="list-style-type: none"> Waste Disposal Ordinance ETW B TC 34/2002 	N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to implement the measures?	What requirements or standards for the measures to achieve?	Implementation Status
Waste Management (Construction Waste)								
S8.3.8	WM1	<p><u>Construction and Demolition Material</u></p> <p>The following mitigation measures should be implemented in handling the waste:</p> <ul style="list-style-type: none"> • Maintain temporary stockpiles and reuse excavated fill material for backfilling and reinstatement; • Carry out on-site sorting; • Make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate; • Adopt 'Selective Demolition' technique to demolish the existing structures and facilities with a view to recovering broken concrete effectively for recycling purpose, where possible; • Implement a trip-ticket system for each works contract to ensure that the disposal of C&D materials are properly documented and verified; and • Implement an enhanced Waste Management Plan similar to ETW BTC (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 disposal sites to the Project Proponent and get its approval before implementation. 	Good site practice to minimize the waste generation and recycle the C&D materials as far as practicable so as to reduce the amount for final disposal	Contractor	All construction sites	Construction stage	<ul style="list-style-type: none"> • Land (Miscellaneous Provisions) Ordinance • Waste Disposal Ordinance • ETW BTC 19/2005 	√

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to implement the measures?	What requirements or standards for the measures to achieve?	Implementation Status
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. 	Good site practice to minimize the waste generation and recycle the C&D materials as far as practicable so as to reduce the amount for final disposal	Contractor	All construction sites	Construction stage	<ul style="list-style-type: none"> Land (Miscellaneous Provisions) Ordinance Waste Disposal Ordinance ETWB TC 19/2005 	√
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 labelled and used solely for the storage of chemical waste; enclosed on at least 3 sides; have an impermeable floor and bunding of sufficient capacity to accommodate 110% of the volume of the largest container or 20 % of the total volume of waste stored in that area, whichever is the greatest; have adequate ventilation; covered to prevent rainfall entering; and arranged so that incompatible materials are adequately separated. 	Control the chemical waste and ensure proper storage, handling and disposal.	Contractor	All construction sites	Construction stage	<ul style="list-style-type: none"> Waste Disposal (Chemical Waste) General) Regulation Code of Practice on the Packaging, Labelling and Storage of Chemical Waste 	√

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to implement the measures?	What requirements or standards for the measures to achieve?	Implementation Status
		<ul style="list-style-type: none"> Disposal of chemical waste should be via a licensed waste collector; be to a facility licensed to receive chemical waste, such as the Chemical Waste Treatment Centre which also offers a chemical waste collection service and can supply the necessary storage containers; or be to a reuser of the waste, under approval from the EPD. 						√
S8.3.16	WM4	<u>Sewage</u> <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. 	Proper handling of sewage from worker to avoid odour, pest and litter impacts	Contractor	All construction sites	Construction stage	<ul style="list-style-type: none"> Waste Disposal Ordinance 	√
S8.3.17	WM5	<u>General Refuse</u> <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 law. 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. In addition, waste separation facilities for paper, aluminum cans, plastic bottles etc., should be provided. Training should be provided to workers about the concepts of site cleanliness and appropriate waste management procedure, including reduction, reuse and recycling of wastes. 	Minimize production of the general refuse and avoid odour, pest and litter impacts	Contractor	All construction sites	Construction stage	<ul style="list-style-type: none"> Waste Disposal Ordinance 	√

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to implement the measures?	What requirements or standards for the measures to achieve?	Implementation Status
Water Quality (Construction Phase)								
S.9.11.1.7	W2	<p><u>Land Works</u> 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; 	To control construction water quality	Contractor	Land-based works areas	Construction stage	TM-EIAO	√

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to implement the measures?	What requirements or standards for the measures to achieve?	Implementation Status
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 washing bay and the public road should be surfaced with crushed stone or coarse gravel; • 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. 	To control construction water quality	Contractor	Land-based works areas	Construction stage	TM-EIAO	√

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to implement the measures?	What requirements or standards for the measures to achieve?	Implementation Status
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 	Prevent Sedimentation from Land-based works areas	Contractor	Land-based works areas	During construction	TM-Water	√
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 	Prevent disturbance to terrestrial fauna and habitats	Contractor	Land-based works areas	During construction		√
S10.7	E8	<ul style="list-style-type: none"> Control vessel speed Skipper training Predefined and regular routes for working vessels; avoid Brother Islands. 	Minimise marine traffic disturbance on dolphins	Contractor	Marine Traffic	During construction		N/A
Fisheries								
S11.7	F4	<ul style="list-style-type: none"> Maritime Oil Spill Response Plan (MOSRP); Contingency plan. 	Minimise impacts on marine water quality impacts	Marine Department	HKBCF	During operation		N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to implement the measures?	What requirements or standards for the measures to achieve?	Implementation Status
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; • Maximizing new tree, shrub and other vegetation planting to compensate tree felled and vegetation removed; • 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 transparent cover for elevated footbridges) to provide harmonious atmosphere of the HKBCF; and • 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. 	Minimise visual & landscape impact	Detailed designer	HKBCF	Design Stage		N/A

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to implement the measures?	What requirements or standards for the measures to achieve?	Implementation Status
<i>Landscape & Visual (Construction Phase)</i>								
S14.3.3.3	LV2	<p>Mitigate both Landscape and Visual Impacts</p> <p>G1. Grass-hydroseed bare soil surface and stock pile areas.</p> <p>G2. Add planting strip and automatic irrigation system if appropriate at some portions of bridge footbridge to screen bridge and traffic.</p> <p>G3. Not applicable as this is for HKLR.</p> <p>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</p> <p>G5. Vegetation reinstatement and upgrading to disturbed areas</p> <p>G6. Maximizing new tree shrub and other vegetation planting to compensate tree felled and vegetation removed</p> <p>G7. Providing planting area around peripheral of HKBCF for tree planting screening effect;</p> <p>G8. Plant salt-tolerant native and shrubs etc along the planter strip at affected seawall.</p> <p>G9. Reserve of loose natural granite rocks for re-use. Provide new coastline to adopt "natural-look" by means of using armour rocks in the form of natural rock materials and planting strip area accommodating screen buffer to enhance "natural-look" of the new coastline.</p>	Minimise visual & landscape impact	Contractor	HKBCF	Construction stage		N/A
S14.3.3.3	LV3	<p><u>Mitigate Visual Impacts</u></p> <p>V1.Minimize time for construction activities during construction period.</p> <p>V2.Provide screen hoarding at the portion of the project site / works areas / storage areas near VSRs who have close low-level views to the Project during HKBCF construction.</p>						√ for V1. N/A for V2.

EIA Ref.	EM&A Log Ref	Recommended Mitigation Measures	Objectives of the Recommended Measures & Main Concerns to address	Who to implement the measures?	Location of the measures	When to implement the measures?	What requirements or standards for the measures to achieve?	Implementation Status
EM&A								
S15.2.2	EM1	An Independent Environmental Checker needs to be employed as per the EM&A Manual.	Control EM&A Performance	Project Proponent	All construction sites		<ul style="list-style-type: none"> EIAO Guidance Note No.4/2002 TM-EIAO 	√
S15.5 - S15.6	EM2	<ol style="list-style-type: none"> 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. 	Perform environmental monitoring & auditing	Contractor	All construction sites		<ul style="list-style-type: none"> EIAO Guidance Note No.4/2002 TM-EIAO 	√

Legends: √ = Implemented; X = Not implemented; N/A = Not applicable

APPENDIX H

Statistics on Environmental Complaints, Notification of Summons and Successful Prosecutions

Statistics on Environmental Complaints, Notifications of Summons and Successful Prosecutions

For Contract No. HY/2014/05

Reporting Period	Cumulative Statistics		
	Complaints	Notifications of Summons	Successful Prosecutions
This reporting period	0	0	0
From commencement date of contract to end of reporting month	4	0	0

For Contract No. HY/2013/06 within Contract No. HY/2014/05 works area

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

For Contract No. HY/2014/04 within Contract No. HY/2014/05 works area

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

APPENDIX I

Environmental Site Inspection Schedule

Contract No. HY/2014/05 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Remaining Ancillary Buildings and Facilities

Environmental Site Inspection Schedule for July 2017

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Time							1-Jul
Time	2-Jul	3-Jul	4-Jul	5-Jul	6-Jul	7-Jul	8-Jul
		Site Inspection					
Time	9-Jul	10-Jul	11-Jul	12-Jul	13-Jul	14-Jul	15-Jul
					Site Inspection		
Time	16-Jul	17-Jul	18-Jul	19-Jul	20-Jul	21-Jul	22-Jul
		Site Inspection					
Time	23-Jul	24-Jul	25-Jul	26-Jul	27-Jul	28-Jul	29-Jul
		Site Inspection					
Time	30-Jul	31-Jul					
		Site Inspection					

Contract No. HY/2013/06 (within Contract No. HY/2014/05 works area) Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Automatic Vehicle Clearance Support System

Environmental Site Inspection Schedule for July 2017

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Time							1-Jul
Time	2-Jul	3-Jul	4-Jul	5-Jul	6-Jul	7-Jul	8-Jul
		Site Inspection					
Time	9-Jul	10-Jul	11-Jul	12-Jul	13-Jul	14-Jul	15-Jul
					Site Inspection		
Time	16-Jul	17-Jul	18-Jul	19-Jul	20-Jul	21-Jul	22-Jul
		Site Inspection					
Time	23-Jul	24-Jul	25-Jul	26-Jul	27-Jul	28-Jul	29-Jul
		Site Inspection					
Time	30-Jul	31-Jul					
		Site Inspection					

Contract No. HY/2014/04 (within Contract No. HY/2014/05 works area) Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Gantry Type X-ray Vehicle Inspection System

Environmental Site Inspection Schedule for July 2017

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Time							1-Jul
Time	2-Jul	3-Jul	4-Jul	5-Jul	6-Jul	7-Jul	8-Jul
		Site Inspection					
Time	9-Jul	10-Jul	11-Jul	12-Jul	13-Jul	14-Jul	15-Jul
					Site Inspection		
Time	16-Jul	17-Jul	18-Jul	19-Jul	20-Jul	21-Jul	22-Jul
		Site Inspection					
Time	23-Jul	24-Jul	25-Jul	26-Jul	27-Jul	28-Jul	29-Jul
		Site Inspection					
Time	30-Jul	31-Jul					
		Site Inspection					