

Ref.: HYDHZMBEEM00_0_6585L.18

15 June 2018

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 May 2018

Reference is made to the Environmental Team's submission of Monthly Environmental Monitoring & Audit Report for May 2018 (Rev. 2) certified by the ET Leader (ET's ref.: "5140819/18.30/OC053/KC/RL" dated 14 June 2018) and provided to us via e-mail on 14 June 2018.

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.

With respect to the landscape works observed, please be reminded that the ET shall regularly check with the Landscape Resident Site Staff on the latest status of landscape construction and/or establishment and implement the bi-weekly landscape monitoring accordingly as required by the approved EM&A Manual.

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 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)
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Internal: DY, YH, TM, HW, ENPO Site

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Ramboll Hong Kong Limited 英環香港有限公司 21/F, BEA Harbour View Centre, 56 Gloucester Road, Wanchai, Hong Kong Tel: 852.3465 2888 Fax: 852.3465 2899

www.Ramboll.com



香港九龍尖沙咀海港城 九倉電訊中心十三樓 13/F Wharf T&T Centre Harbour City Tsim Sha Tsui Kowloon Hong Kong

電話 Tel (852) 2972 1000 傳真 Fax (852) 2890 6343

info.hk@atkinsglobal.com www.atkinsglobal.com

Your ref. 5140819/18.30/OC053/KC/RL

Date: 14 June 2018

By Post and e-mail (Alfred.She@lcwjv.com)

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

Attn: Mr. Alfred She

Dear Mr. She,

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. 27

Atkins China Limited certifies, in the capacity of Environmental Team Leader, that the Monthly EM&A Report No. 27 for May 2018 (Revision 2) 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)



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. 27 (Covering the Period from 1 May 2018 to 31 May 2018)

14 June 2018

Revision 2

Main Contractor



Leighton - Chun Wo Joint Venture **Environmental Team**





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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 – 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/2013/06 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 twenty-seventh 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 31 May 2018 (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 air quality and noise monitoring works for the Contract are covered by Contract No. HY/2013/01 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities (HZMB HKBCF) – Passenger Clearance Building 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 AMS7B 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/2013/01 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:

2, 9, 14, 21 and 28 May 2018

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. No Action and Limit Level exceedance of 1-hr TSP level and 24-hr TSP level recorded at AMS7B by the Environmental Team of Contract No. HY/2013/01 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/2013/01 during the reporting period.





Complaint Log

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

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

- Testing and Commissioning Works of Buildings 023, 032, 044 and 045
- Landscape work at Building 058

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

• Buildings 023, 025 and 032 - Equipment set-up and Site Acceptance Test (SAT)

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

• Buildings 054, 058 and 059 - Testing





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 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





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- 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 twenty-seventh 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 31 May 2018. (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**.

Party	Position	Name	Telephone	Fax
For Contract No. HY/2014	/05			
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

 Table 1-1
 Contact Information of Key Personnel





Party	Position	Name	Telephone	Fax
(Ramboll Hong Kong Limited)	Independent Environmental Checker	Raymond Dai	3465 2888	3465 2899
Contractor	Site Agent	Albert Chan	3973 0514	3621 0180
(Leighton – Chun Wo Joint Venture)	Environmental Officer	Alfred She	39730484	3621 0180
Environmental Team (Atkins China Limited)	Environmental Team Leader	Keith Chau	2972 1721	2890 6343
24 hours complaint hotline			3958 7300	
For Contract No. HY/2013	8/06 within Contract N	No. HY/2014/05 wo	<u>rks 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 Hong Kong	Environmental Project Office Leader	Y. H. Hui	3465 2888	3465 2899
(Ramboll Hong Kong Limited)	Independent Environmental Checker	Raymond Dai	3465 2888	3465 2899
Contractor	Site Agent	Mr. Eric Yim	2565 3355	3162 5217
(ATAL Technologies Limited)	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	
For Contract No. HY/2014	/04 within Contract N	No. HY/2014/05 wo	<u>rks 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	Environmental Project Office Leader	Y. H. Hui	3465 2888	3465 2899
(Ramboll Hong Kong Limited)	Independent Environmental Checker	Raymond Dai	3465 2888	3465 2899
Contractor	Site Agent	Ringo Yau	9833 1402	2707 0816
(Rapiscan Systems Pte Ltd)	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: <u>For Contract No. HY/2014/05</u>
 - Remaining portion of roof cladding of Buildings 050H1, 050H2, 050A1, 050A2
 - Landscape works at Buildings 023, 032, 044 and 045

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

• Equipment set-up and SAT at Buildings 023, 025 and 032

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

• Testing at Buildings 054, 058 and 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/2011/03 Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road Section between Scenic Hill and HKBCF and Contract No. HY/2013/01 HZMB HKBCF Passenger Clearance Building.
- 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 AMS7B as part of EM&A programme if these air quality monitoring stations are no longer covered under Contract Nos. HY/2011/03 and HY/2013/01. **Figure 2.1** shows the locations of the air monitoring stations.

Table 2-1	Construction	Dust	Monitoring	Locations
	oonstruction	Dust	monitoring	Locations

ID	Location Description
AMS6(1)	Dragonair/CNAC (Group) Building
AMS7B ⁽²⁾	3RS site office

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) A proposal for re-location of AQM station (AMS7) for HZMB HKBCF Project was justified by the ET Leader for Contract No. HY/2013/01 on 22 January 2018; verified by the IEC on 24 January 2018; and submitted to EPD on 30 January 2018, and the AQM has been carrying out at the alternative AQM station with EPD's consent since 6 February 2018.

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/2011/03 and HY/2013/01.
- 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 2-2Action and Limit Levels for 1-hr TSP

Monitoring Station	Action Level, µg/m ³	Limit Level, µg/m³
AMS6 – Dragonair / CNAC (Group) Building (HKIA)	360	500
AMS7B – 3RS site office	370	500

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

Monitoring Station	Action Level, µg/m ³	Limit Level, µg/m³
AMS6 – Dragonair / CNAC (Group) Building (HKIA)	173	260
AMS7B – 3RS site office	183	200

- 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 AMS7B are reported in the monthly EM&A Reports prepared for Contract Nos. HY/2011/03 and HY/2013/01, 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. No Action and Limit Level exceedance of 1-hr TSP level and 24-hr TSP level recorded at AMS7B by the Environmental Team of Contract No. HY/2013/01 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/2013/01 HZMB HKBCF – Passenger Clearance Building. 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/2013/01. **Figure 3.1** shows the locations of noise monitoring stations.

Table 3-1 Construction Noise Monitoring Locations	Table 3-1	Construction	Noise N	Monitoring	Locations
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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 No. HY/2013/01.
- 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/2013/01. No noise exceedances were recorded at stations NMS2 and NMS3B by the ET of Contract No. HY/2013/01 during the reporting period.





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 2, 9, 14, 21 and 28 May 2018.
- 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**.

Date of Audit	Observations	Actions Taken by Contractor / Recommendation	Date of Observations Closed
2 May 2018	1. Some packing materials were observed near Building 032.	1. Packing materials were removed near Building 032.	9 May 2018
9 May 2018	 Deposited silt and water was observed accumulated in U- channel near Building 032. Chemical container was found without drip tray at Buildings 032, 044 and 045. 	 Deposited silt and water was cleaned in U-channel near Building 032. Chemical container was removed at Buildings 032, 044 and 045. 	14 May 2018
14 May 2018	1. No particular environmental issue was recorded during the site inspection.	N/A	N/A
21 May 2018	1. No particular environmental issue was recorded during the site inspection.	N/A	N/A
28 May 2018	1. No particular environmental issue was recorded during the site inspection.	N/A	N/A

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





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
2 May 2018	No particular environmental issue was recorded during the site inspection.	Nil.	Nil.
9 May 2018	No particular environmental issue was recorded during the site inspection.	Nil.	Nil.
14 May 2018	No particular environmental issue was recorded during the site inspection.	Nil.	Nil.
21 May 2018	No particular environmental issue was recorded during the site inspection.	Nil.	Nil.
28 May 2018	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
2 May 2018	No particular environmental issue was recorded during the site inspection.	Nil.	Nil.
9 May 2018	No particular environmental issue was recorded during the site inspection.	Nil.	Nil.
14 May 2018	No particular environmental issue was recorded during the site inspection.	Nil.	Nil.
21 May 2018	No particular environmental issue was recorded during the site inspection.	Nil.	Nil.
28 May 2018	No particular environmental issue was recorded during the site inspection.	Nil.	Nil.

4.1.3 Particular observations (Landscape works) for Contract No. HY/2014/05 during the site inspections and corrective actions undertaken by the Contractor are described in **Tables 4-4**. The landscape work of green roof for Contract No. HY/2014/05 was commenced on 11 December 2017. The implementation of mitigation measures for landscape and visual resources recommended in the EIA Report were monitored during the reporting period. Landscape and visual mitigation measures in accordance with the EP, EIA and EM&A Manual were implemented by the Contractor.





Table 4-4Summary of Environmental Site Inspections (Landscape works) for Contract No.
HY/2014/05 works area

Date of Audit Observations 9 May 2018 No particular environmental issue was recorded during the site inspection.		Actions Taken by Contractor / Recommendation	Date of Observations Closed				
9 May 2018	was recorded during the site	Nil.	Nil.				
21 May 2018	No particular environmental issue was recorded during the site inspection.	Nil.	Nil.				

4.1.4 The Contractor has rectified most of the observations as identified during environmental site inspections during 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. No Action and Limit Level exceedance of 1-hr TSP level and 24-hr TSP level recorded at AMS7B by the Environmental Team of Contract No. HY/2013/01 during the reporting period.





- 4.5.2 There was no Action and Limit Level exceedance for noise recorded at NMS2 and NMS3B by the Environmental Team of Contract No. HY/2013/01 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.
- 4.6.2 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 June 2018 are summarized in **Table 5-1**.

Table 5-1Construction Activities for May 2018

Site Area	Description of Activities						
For Contract No. HY/2014/05							
Buildings 023, 032, 044 and 045	Testing and Commissioning						
Building 058	Landscape works						
For Contract No. HY/2013/06 within Contract N	lo. HY/2014/05 works area						
Buildings 023, 025 and 032	Equipment set-up and SAT						
For Contract No. HY/2014/04 within Contract N	No. HY/2014/05 works area						
Buildings 054, 058 and 059	Testing						

5.2 Environmental Site Inspection Schedule for the Coming Month

5.2.1 The tentative schedule for weekly site inspections for June 2018 is provided in **Appendix I**.





6 Conclusions

6.1 Conclusions

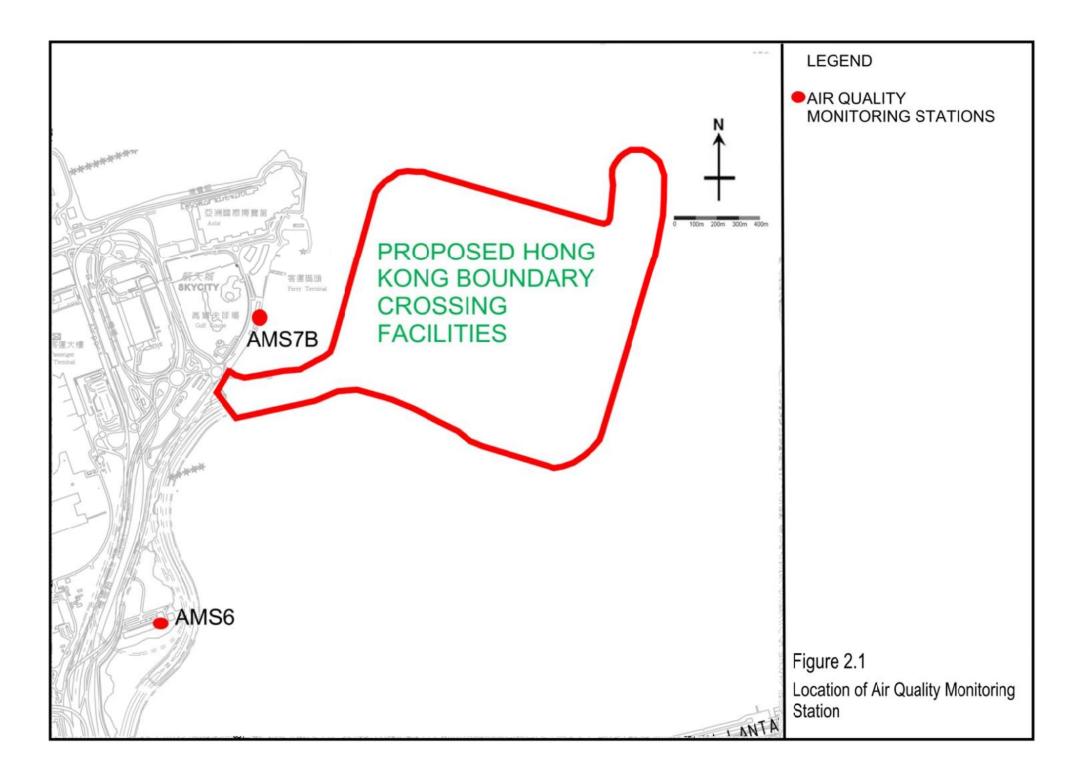
- 6.1.1 The construction works of the Contract No. HY/2014/05 commenced on 29 February 2016. while the construction works of the Contract No. HY/2013/06 and Contract No. HY/2014/04 within Contract No. HY/2014/05 works area commenced on 3 January 2017 and 13 February 2017 respectively. The twenty-seventh Monthly EM&A Report for Contract No. HY/2014/05 summarizes findings of the EM&A works during the reporting period from 1 to 31 May 2018 (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. No Action and Limit Level exceedance of 1-hr TSP level and 24-hr TSP level recorded at AMS7B by the Environmental Team of Contract No. HY/2013/01 during the reporting period.
- 6.1.3 There was no Action and Limit Level exceedance for noise recorded at NMS2 and NMS3B by the Environmental Team of Contract No. HY/2013/01 during the reporting period.
- 6.1.4 Environmental site inspections were carried out on 2, 9, 14, 21 and 28 May 2018 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 inspection.
- 6.1.5 There was no complaint received in relation to the environmental impact during the reporting period.
- 6.1.7 No notification of summons and successful prosecution was received during the reporting period.

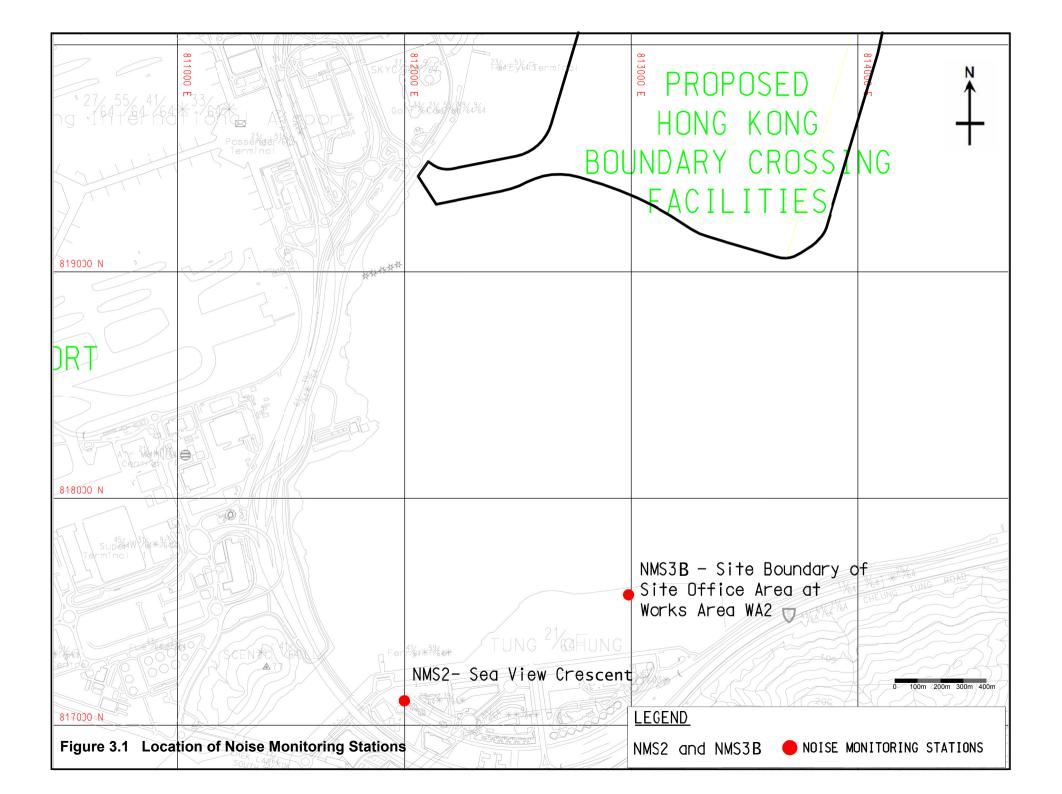




FIGURES





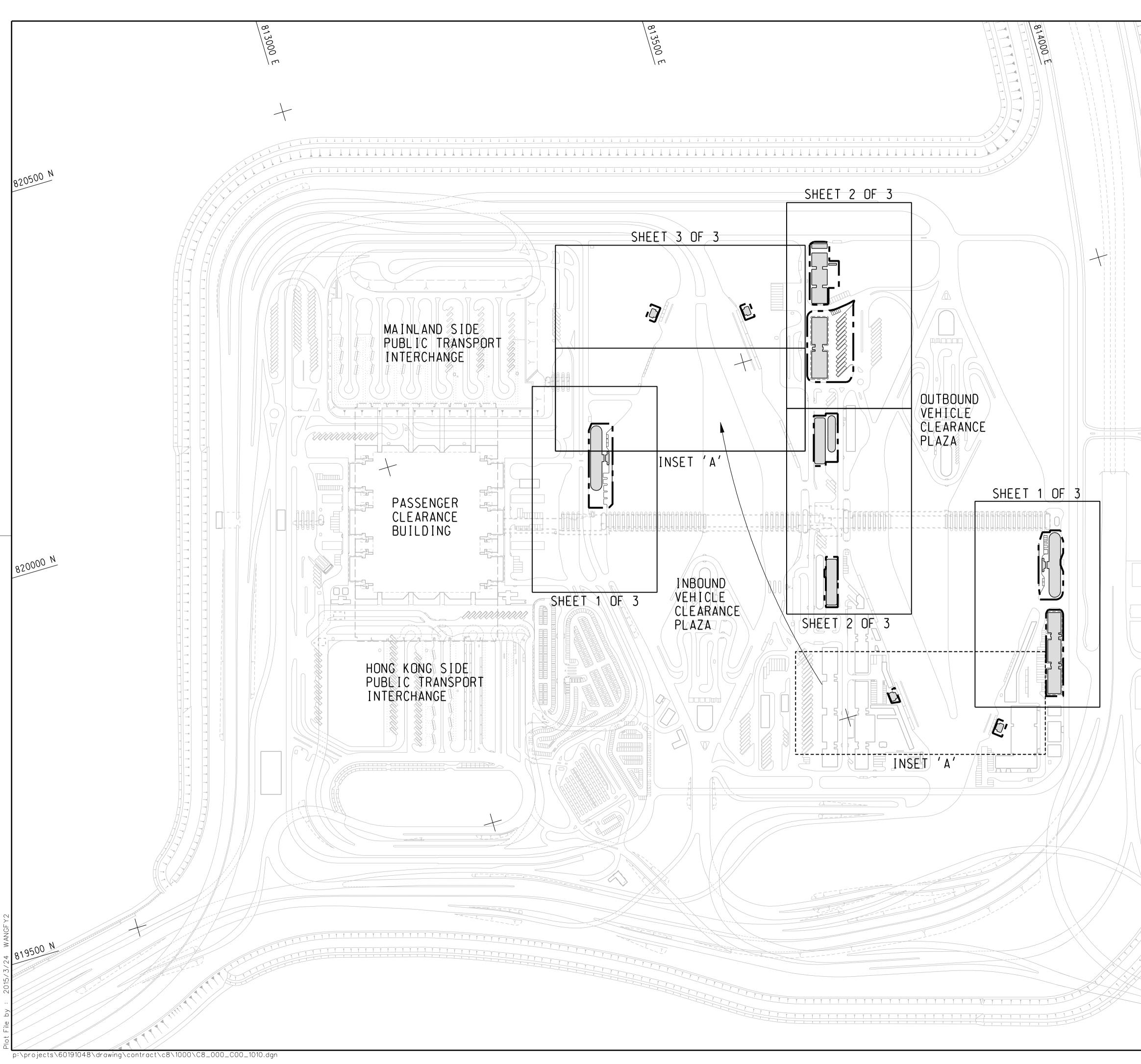




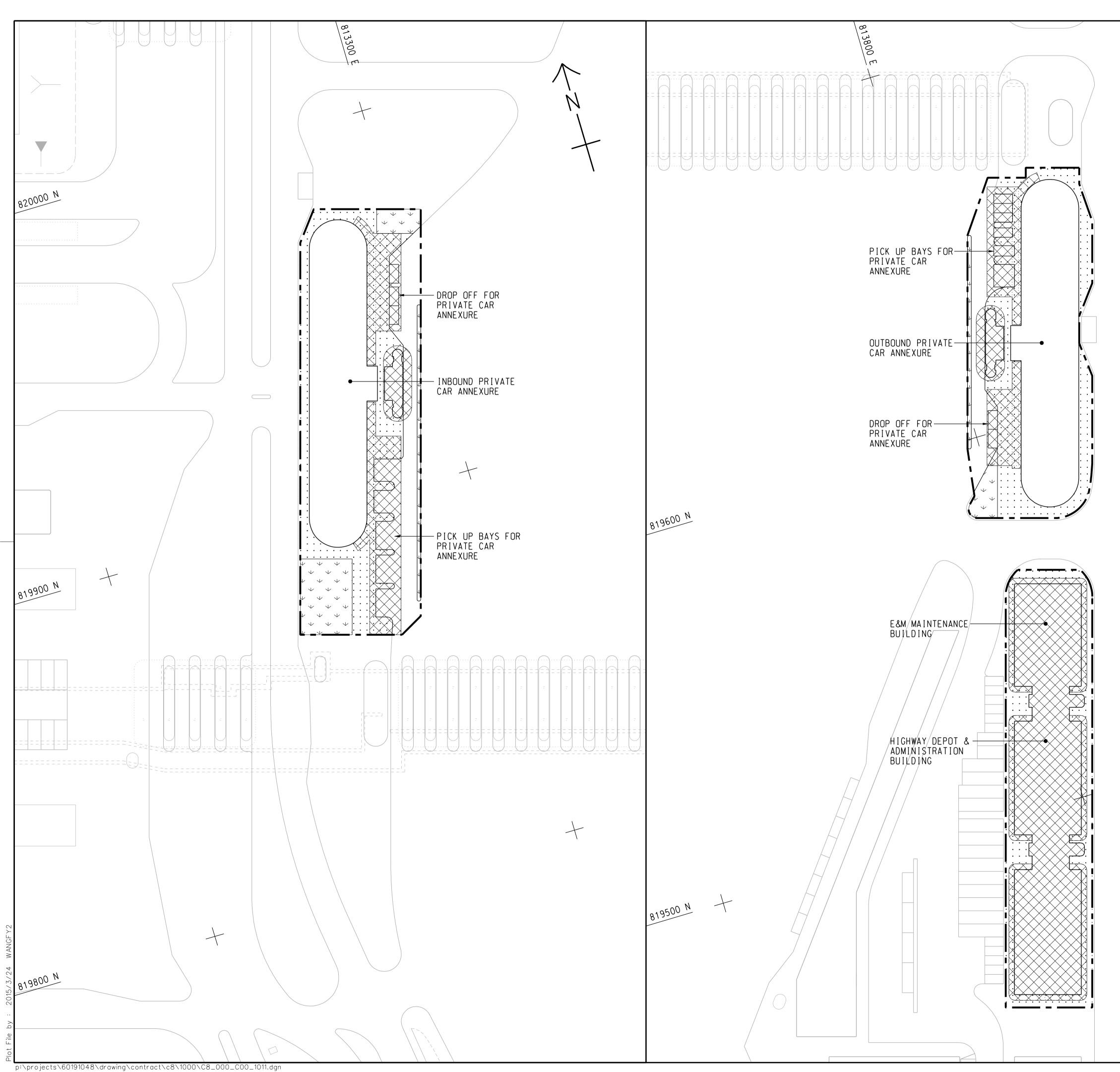


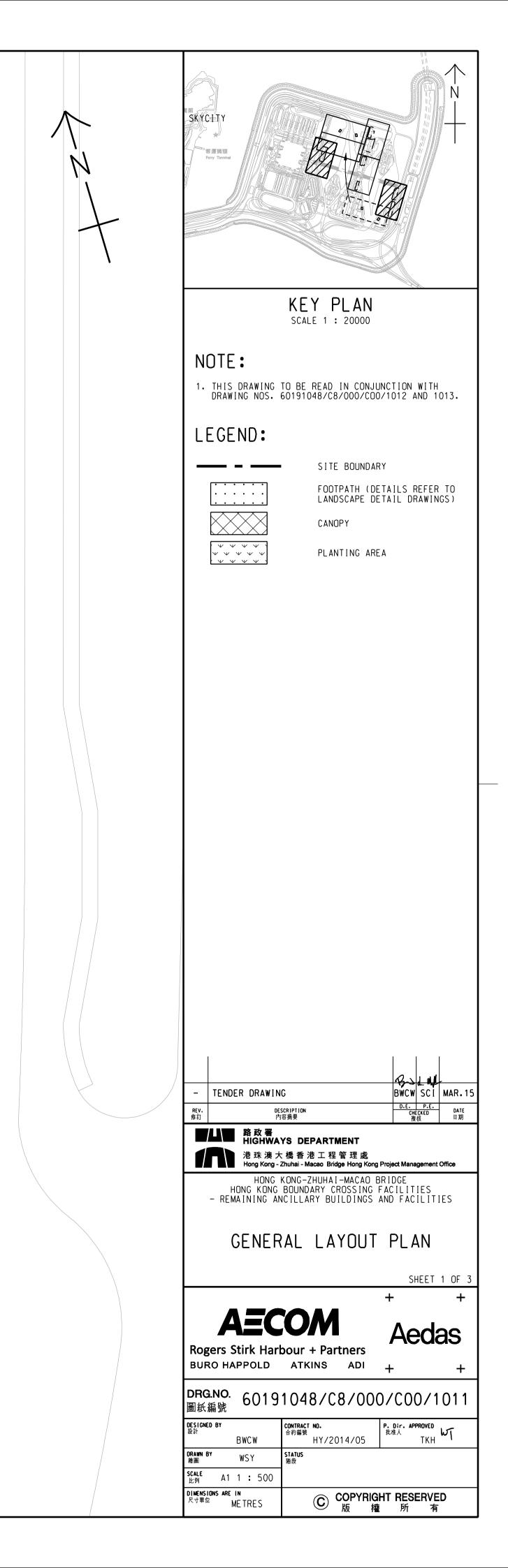
Location of Works Areas

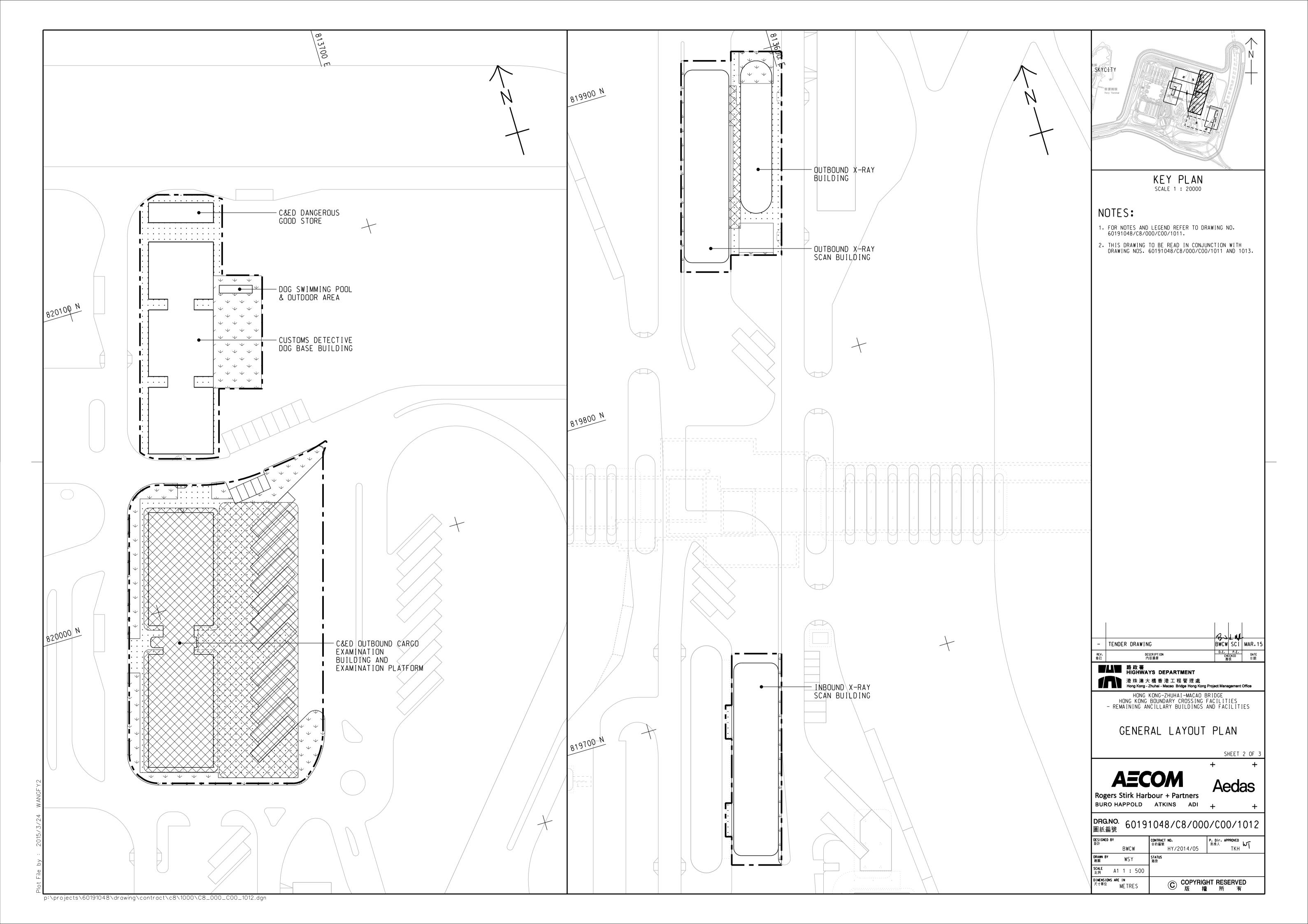


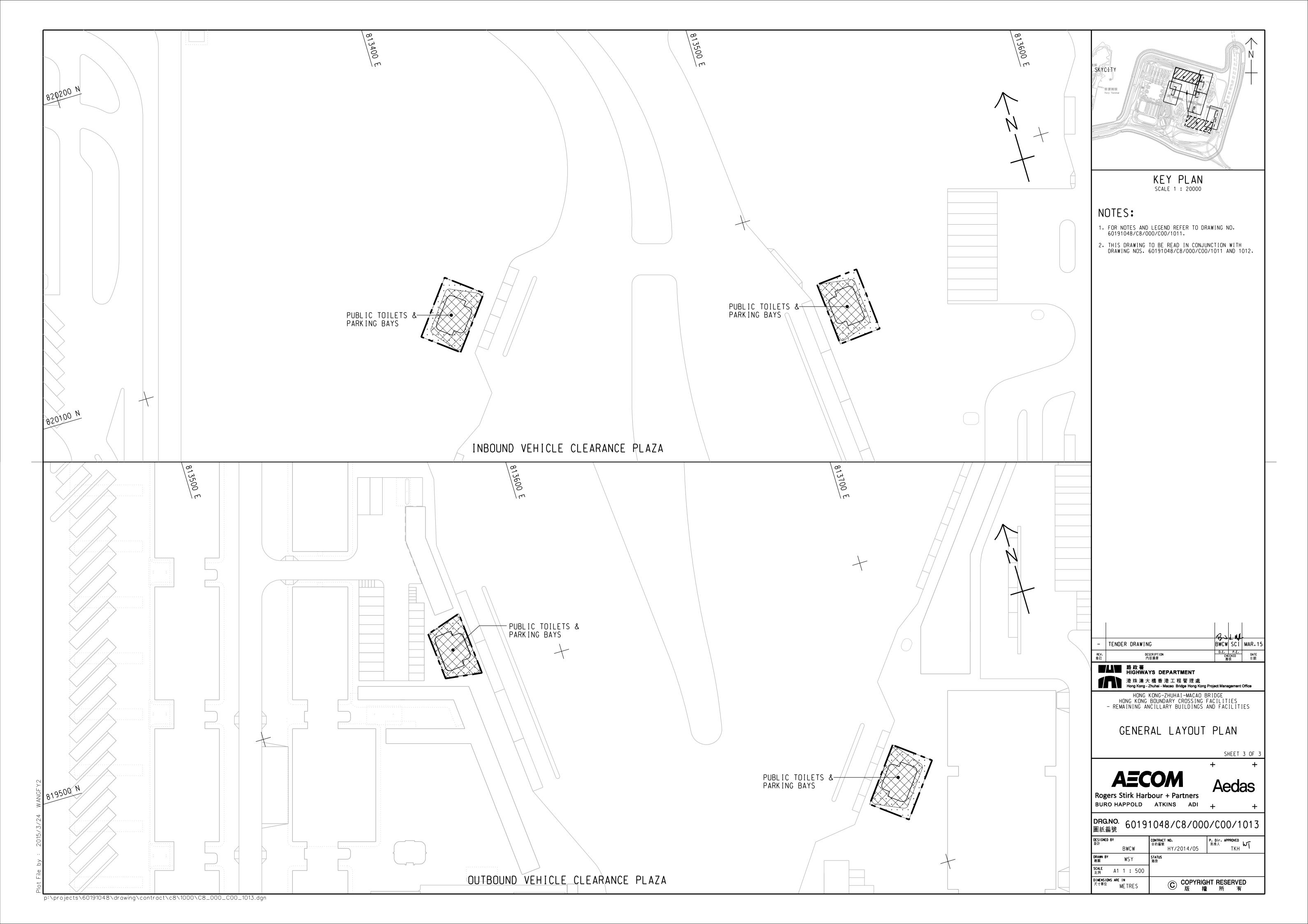


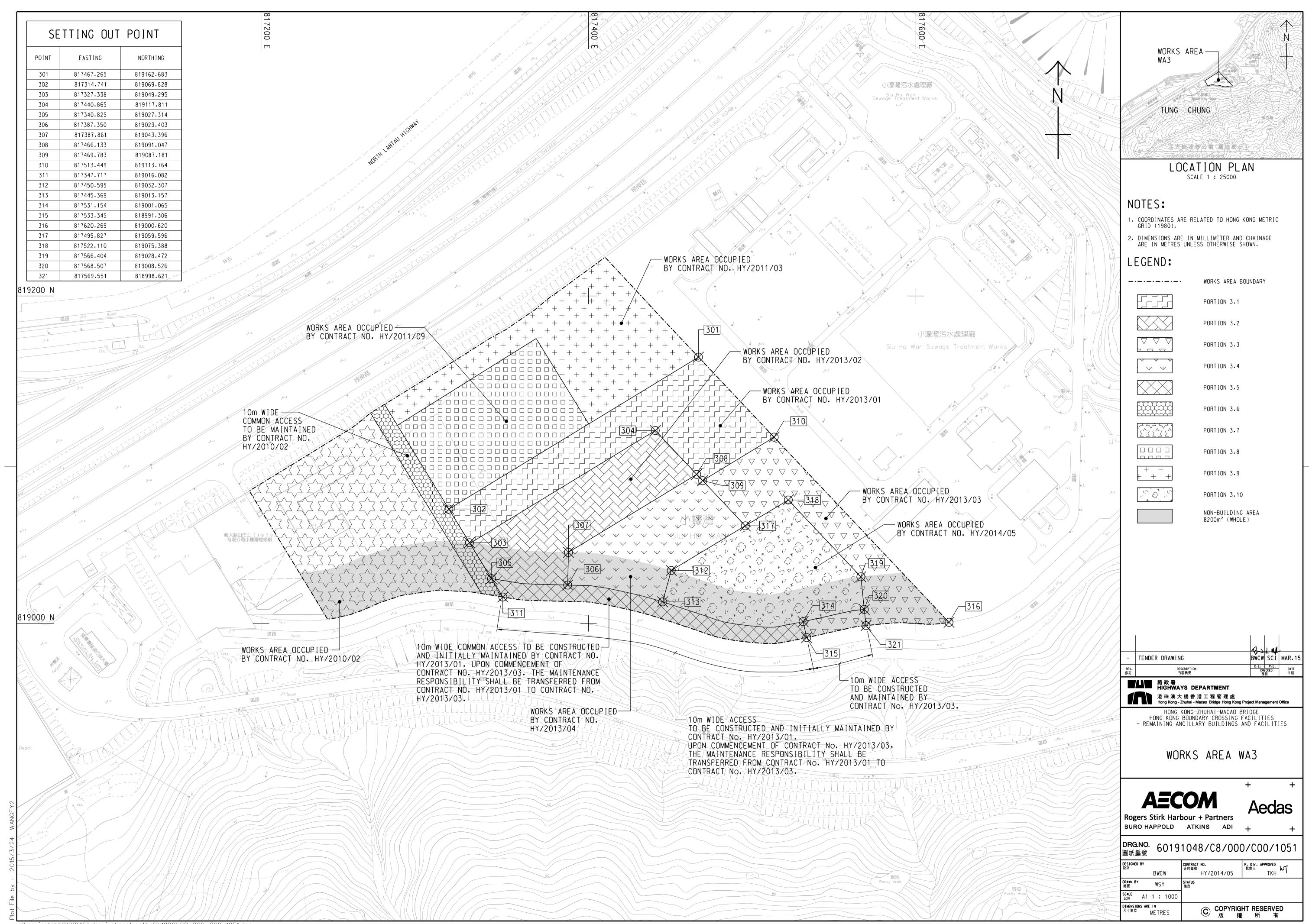
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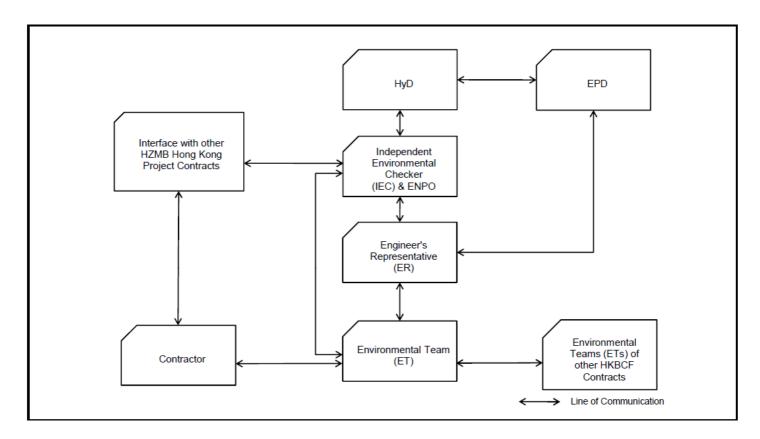


APPENDIX B

Project Organization for Environmental Works











Construction Programme



Provide Contract No. HY/2014/05 - Remaining Ancillary Building and Facilities Provide Contract No. HY/2014/05 - Remaining Ancillary Building and Facilities Number of provide Contract No. HY/2014/05 - Remaining Ancillary Building and Facilities Weight Contract No. HY/2014/05 - Remaining Ancillary Building and Facilities Weight Contract No. HY/2014/05 - Remaining Ancillary Building and Facilities Weight Contract No. HY/2014/05 - Remaining Ancillary Building and Facilities Weight Contract No. HY/2014/05 - Remaining Ancillary Building and Facilities Weight Contract No. HY/2014/05 - Remaining Ancillary Building and Facilities Weight Contract No. HY/2014/05 - Remaining Ancillary Building and Facilities Weight Contract No. HY/2014/05 - Remaining Ancillary Building and Facilities Weight Contract No. HY/2014/05 - Remaining Ancillary Building and Facilities Weight Contract No. HY/2014/05 - Remaining Ancillary Building and Facilities Weight Contract No. Hy/2014/05 - Remaining Ancillary Building and Facilities Weight Contract No. HY/2014/05 - Remaining Ancillary Building Ancillary Building Ancient Anc	Page 1 of																
vity ID	Activity Name		y 2018		Febr	uary 2018		March 201	8		April 2018	8		May 2018		June	2018
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HY/2014/05 HKZ	MB HKBCF - April. :	2018, Works Programme, Sta															
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GENERAL/PREL				1			1										
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		& DELIVERIES															
CONSTRUCTION	N																
	D Dangerous Goods Store																
	021 - End Users and MoM ha	andover inspection		, , ,													
								· 									
		ompletion)															
Fire Servives Depar	rtment (VAC)																
RAB-FSD-830	021 - Fire Certificate Obtaine	ed (Form 172) Handover, Building 021									•						
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	oms Detective Dog Base B	Building															
Structure																	
ABWF/E&M																	
Internal Finishes																	
Specialist Installation																	
Utilities and Drainag																	
Testing & Commissi		amplation															
Water Supplies Dep	ons & Approvals (Day 670 Co partment (WSD)	Simpletion)															
Fire Servives Depar																	
Fire Services Depar	rtment (FSD)						· 4										
RAB-FSD-340	022 - Fire Certificate Obtaine	ed (Form 172) Handover For Building 022											•				
Engineer (AECOM)																	
RAB-22-2230	022 - Engineer Inspection Pe											I					
RAB-22-2240	022 - Engineer Issue Occupa												•				
RAB-KD144		of Section V of the Works (670 days) Building 22															
	D Outbound Cargo Examin	ation Building and Examination Platforn															
Excavation	In on option Distform																
Raft Foundations - I																	
Raft Foundations - I Structure							·			-							
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ABWF/E&M								
North Internal Finishes								
External Finishes								
Facade				<i>444444444444</i>				
At Grade								
Foot Path								
RAB-23-5820	023 - Laying Geo Textile, North							
RAB-23-5940	023 - Sand Bedding, North							
RAB-23-6050	023 - Concrete Block Paving, North		- ¥777777777777777777777777777777777777					
	023 - Grouting Works to Concrete Pavers, North							
	023 - Make good external surfaces, North							
Pavement								
Roof Finishes								
Green Roof								
South								
Internal Finishes								
Ground Floor								
First Floor								
External Finishes								
Facade								
At Grade								
Foot Path RAB-23-6100	023 - Laying Geo Textile, South							
	023 - Sand Bedding, South							
	023 - Concrete Block Paving, South							
	023 - Grouting Works to Concrete Pavers, South							
	023 - Make good external surfaces, South							
Pavement				///////////////////////////////////////				
Window Wall								
Roof Finishes Roof Level Dog Hou								
Building 023								
Specialist Installatio								
Metal Canopy				//////////////////////////////////////				
	023 - Install Metal Cladding Panels							
tilities and Drainage								
esting & Commissio								
	ns & Approvals (Day 610 Completion)							
MSD - Building 023								
Vater Supplies Depa	artment (WSD)							
Commencement								
Completion								
Fire Servives Depart								
	023 - FSD Re-Inspection Period, Building 023							
	023 - Fire Certificate Obtained (Form 172) Handover, Building 023			(((((((((((((((((((
Fire Services Depart								
	023 - FSD Re-nspection Period For Building 023							
	023 - Fire Certificate Obtained (Form 172) Handover For Building 023							
Engineer (AECOM)								
	023 - Engineer Inspection Period							
	023 - Engineer Issue Occupation Permit			//////////////////////////////////////				
RAB-KD134	KD3 - Projected completion of Section III of the Works (610 days) Building 0							
 Remaining Level 	of Effort Actual Work Critical Remaining	3-Month Rolling Programme, 01 May 2018 Statused	Date 01-May-18		Revision Check amme, 01 May-18 Statused	ked Appro		
 Actual Level of Ef 								

	Con	tract No. HY/2	2014/05 - Remainir		Page 3 of 10									
ty ID Activit	y Name	y 2018 14 21 28	February 2018	25 04	March 2018	25	Ap 01 08	oril 2018 15	22	29 06	May 2018 13 20	27	June 2 03 10	2018
Building 025 - Inbound Priv	/ate Car Annexure													
Excavation				·										
Raft Foundations														
Structure														
External Walls														
Roof Slab														
Cure and Strip ABWF/E&M														
Internal Finishes														
Degree 1														
Degree 2														
Degree 3														
RAB-25-7290 025 -	End Users and MoM handover inspection													
External Finishes														
Facade						Į								
At Grade														
Road Works														
Foot Path														
	Snagging and Remedials													
Roof Finishes														
Green Roof														
Specialist Installations														
Glazed Canopy IMMD Kiosk														
	External Finishes to IMMD Kiosk			1		ł								
Jtilities and Drainage														
esting & Commissioning														
	T&C (HVAC, FS, P&D, OTHERS)			1		ł								
	pprovals (Day 670 Completion)													
Water Supplies Departmen														
Commencement														
Completion		·												
Fire Servives Department ((VAC)													
RAB-FSD-950 025 -	Fire Certificate Obtained (Form 172) Handover, Building 021									•				
Fire Services Department (
RAB-FSD-370 025 -	Fire Certificate Obtained (Form 172) Handover For Building 025									•				
Engineer (AECOM)														
	Engineer Inspection Period													
RAB-25-7240 025 -	Engineer Issue Occupation Permit									•				
RAB-KD124 KD6 -	Projected completion of Section VI of the Works (670 days) Building 0									٠				
uilding 032 - Outbound Pr	rivate Car Annexure													
xcavation														
aft Foundations														
structure														
External Walls														
Roof Slab														
Cure and Strip						Į								
BWF/E&M														
Roof Finishes						Į								
Green Roof														
External Finishes														
Facade														
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At Grade					-																	
Road Works															<i>"</i>							
Foot Path	022 Louing Coo Toutile & Sound Padding																					
RAB-32-6450 RAB-32-6440	032 - Laying Geo Textile + Sand Bedding						_															
	032 - Concrete Block Paving 032 - Grouting Works to Concrete Pavers																					
RAB-32-6490																						
RAB-32-0600	032 - Snagging and Remedials (KD7)														<i>"</i>							
Specialist Installat		_																				
RAB-32-0350	032 - External Finishes to IMMD Kiosk		1			:																
Glazed Canopy			-			-																
Utilities and Drainag	ne																					
Testing & Commiss																						
	ons & Approvals (Day 670 Completion)																					
Water Supplies De																						
Fire Services Depa																						
RAB-FSD-700	032 - FSD Re-Inspection Period For Building 032														// 							
RAB-FSD-400	032 - Fire Certificate Obtained (Form 172) Handover For Building 032														•							
RAB-32-7260	032 - Engineer Inspection Period					i i																
RAB-32-7270	032 - Engineer Issue Occupation Permit														•							
RAB-KD114	KD7 - Projected completion of Section VII of the Works (670 days) Building																					
Building 044 - E&M	Maintenance Building																					
Excavation						i.																
Raft																			Ĭ			
Structure ABWF/E&M																						
Ground Floor															<i></i>							
RAB-44-0410	044 - ABWF and MEP works to Degree 3 (KD8C)																					
First Floor																						
RAB-44-0560	044 - ABWF and MEP works to Degree 3 (KD8C)		1			1																
Second Floor						i.																
RAB-44-0620	044 - ABWF and MEP works to Degree 3 (KD8C)										*/*/*/*/*/*/*/											
RAB-KD8C20	KD8C - Projeted achievement of Stage 8C of the Works																					
RAB-44-0650	044 - End Users and MoM handover inspection																					
Roof Finishes																						
Green Roof																						
External Finishes]																
Facade						i.			_													
RAB-44-0590	044 - Make good external surfaces								I										Ĭ			
At Grade																						
RAB-44-6520	044 - Prepare Sub Grade														<i>[</i>]							
RAB-44-6510	044 - Laying Geo Textile																					
RAB-44-6530	044 - Sand Bedding																					
RAB-44-6500	044 - Concrete Block Paving									V////												
RAB-44-6550	044 - Grouting Works to Concrete Pavers																					
RAB-44-0630	044 - Snagging and Remedials														//							
Specialist Installat	ions																					
Window Wall Utilities and Draina																						
Testing & Commiss																						
RAB-TC44-1000	044 - T&C (HVAC, FS, P&D, OTHERS)																					
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		14 21 28	<u> </u>	11 18 25	01 08 15	22	29 06 13 20	0 27 03 10) 17
Statutory Submission									
EMSD - Building 044									
Water Supplies Depa Fire Services Depart									
	044 FSD Re-Inspection Period For Building 044								
	044 Fire Certificate Obtained (Form 172) Handover For Building 044				•••••••		•		
	044 Fire Certificate Obtained (Form 172) Handover For Building 044								
Engineer (AECOM) RAB-44-7290	044 - Engineer Inspection Period						n de la companya de l		
	044 - Submit Building 044 As Built Drawings to Engineer								
	044 - Engineer Issue Occupation Permit						•		
	KD8 - Projected completion of Section VIII of the Works (670 days) Building								
Building 045 - Highw	rays Depot & Administration Building								
Raft									
Structure									
ABWF/E&M									
South Section									
Ground Floor									
RAB-45-0640	045 - ABWF and MEP works to Degree 3 (KD8C), South								
First Floor									
RAB-45-0840	045 - ABWF and MEP works to Degree 3 (KD8C), South								
Second Floor (Sout									
RAB-45-0970	045 - ABWF and MEP works to Degree 3 (KD8C), South								
External Finishes S	South								
Roof Finishes Sou	uth								
Facade									
At Grade									
RAB-45-6580	045 - Prepare Sub Grade, South				•////////				
RAB-45-6570	045 - Laying Geo Textile, South								
RAB-45-6600	045 - Sand Bedding, South								
RAB-45-6560	045 - Concrete Block Paving, South								
RAB-45-6610	045 - Grouting Works to Concrete Pavers, South								
	045 - Snagging and Remedials, South								
Middle Section				_					
Ground Floor									
	045 - ABWF and MEP works to Degree 3 (KD8C), Middle								
First Floor									
	045 - ABWF and MEP works to Degree 3 (KD8C), Middle								
	045 - End Users and MoM handover inspection, Middle								
	KD8C - Projected achievement of Stage 8C of the Works (610 days), Midd						L		
							T		
External Finishes M									
Facade RAB-45-0890	045 - External Painting, Middle								
At Grade	045 Broporo Sub Crodo Middle								
	045 - Prepare Sub Grade, Middle	_							
	045 - Laying Geo Textile, Middle								
	045 - Sand Bedding, Middle	_							
	045 - Concrete Block Paving, Middle				V/////////////////////////////////////				
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Utilities and Drainag					1		
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	ons & Approvals (Day 670 Completion)					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
EMSD - Building 04							
U/G Fuel Tank					}		
Water Supplies Dep	partment (WSD)						
Generator Set - Des							
Fire Services Depar							
RAB-FSD-710	045 - FSD Re-Inspection Period For Building 045						
RAB-FSD-460	045 - Fire Certificate Obtained (Form 172) Handover of Building 045			\bullet	}		
Engineer (AECOM)	045 - Output Duilding 045 As Duilt Descriptions to Frankright						
RAB-45-7310	045 - Submit Building 045 As Built Drawings to Engineer			//////////////////////////////////////			
RAB-45-7320	045 - Engineer Inspection Period	_					
RAB-45-7330	045 - Engineer Issue Occupation Permit	_					
RAB-KD94	KD8 - Projected Completion of Section VIII of the Works (670 days) Building						
Building 050 - Publi							
Public Toilet (Portio	n H1)						
Excavation					}		
Raft							
Structure ABWF/E&M					1		
Internal Finishes							
Degree 1			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
RAB-KD9A10	KD9A - Projected achievement of Stage 9A of the Works						
Degree 2	, ,				1		
Degree 3							
RAB-50-1280	050 H1 - ABWF and MEP works to Degree 3 (KD9C)				1		
RAB-50-1290	050 H1 - Snagging and Remedials						
RAB-KD9C10	KD9C - Projected achievement of Stage 9C of the Works				1		
RAB-50-7460	050 H1 - End Users and MoM handover inspection			\bullet			
RAB-KD54	KD9 - Completion of Section IX of the Works (670 days) Building 50 (H1)				1		
Specialist installa	ation						
RAB-50-1240	050 H1 - Installation of Sanitaryware and Fixtures				1		
Roof Finishes					1		
RAB-50-4320	050 H1 - Install Aluminium Cladding						
RAB-50-1230	050 H1 - Installation of Aluminium Canopy				1		
External Finishes							
RAB-50-1260	050 H1 - Make good external surfaces						
At-Grade							
Utilities and Draina					1		
Testing & Commiss							
	050 H1 - T&C (HVAC, FS, P&D, OTHERS)						
	ions & Approvals (Day 670 Completion)						
Water Supplies De							
Completion							
RAB-WSD-474	050 H1 - Permanent Water ON/WSD Issue Water Certificate for Building 05						
Fire Services Depa	-						
RAB-FSD-720	050 H1 - FSD Re-Inspection Period For Building 050				1		
RAB-FSD-580	050 H1 - Fire Certificate Obtained (Form 172) Handover of Building 050						
Engineer (AECOM					1		
RAB-50-7340	050 H1 - Submit Building 050 H1 As Built Drawings to Engineer						
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Remaining Leve	l of Effort Actual Work Critical Remaining	3-Month Rolling Programme, 01 May 2018 Statused			imme, 01 May-18 Statused		лррі ОV

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/ ID	Activity Name	y 2018		February	2018		March 2018			April	2018			Ма	ay 2018		JI	une 2018	,
		14 21	28 (04 11	18 2	5 04	11 1	8 25	01	08	15	22	29	06	13 2	20 27	03	10 1	17
RAB-50-7350	050 H1 - Engineer Inspection Period			_		1		_						1					
RAB-50-7360	050 H1 - Engineer Issue Occupation Permit													♦					
Public Toilet (Portio	n_H2)																		
Excavation																			
_Raft Structure									-										
ABWF/E&M																			
Internal Finishes																			
Degree 1																			
Degree 2						; 							<u></u>						
RAB-KD10B10	KD10B - Projected achievement of Stage 10B of the Works												•						
Degree 3																			
RAB-50-2280	050 H2 - ABWF and MEP works to Degree 3 (KD10C)		1																
RAB-50-2290	050 H2 - Snagging and Remedials																		
RAB-KD10C10	KD10C - Projected achivement of Stage 10C of the Works								-										
RAB-50-7470	050 H2 - End Users and MoM handover inspection												•						
RAB-KD84	KD10 - Projected Completion of Section X of the Works (670 days) Building	9												۲					
Specialist installa																			
RAB-50-2240	050 H2 - Installation of Sanitaryware and Fixtures					1													
Roof Finishes			!			 			- (<u></u>	<u></u>					
RAB-50-2200	050 H2 - Install Railing - 49m		1			1 1													
RAB-50-4360	050 H2 - Install Aluminium Cladding		1			1													
RAB-50-2230	050 H2 - Installation of Aluminium Canopy																		
External Finishes																			
RAB-50-2260	050 H2 - Make good external surfaces								-										
Utilities and Draina																			
Testing & Commiss	050 H2 - T&C (HVAC, FS, P&D, OTHERS)					1													
	ons & Approvals (Day 670 Completion)																		
Water Supplies De																			
Commencement																			
Completion																			
RAB-WSD-444	050 H2 - Permanent Water ON/WSD Issue Water Certificate for Building (DE											•						
Fire Services Depa																			
RAB-FSD-730	050 H2 - FSD Re-Inspection Period For Building 050					; 			-										
RAB-FSD-550	050 H2 - Fire Certificate Obtained (Form 172) Handover of Building 050												•						
Engineer (AECOM																			
RAB-50-7370	050 H2 - Submit Building 050 H2 As Built Drawings to Engineer												•						
RAB-50-7380	050 H2 - Engineer Inspection Period													1					
RAB-50-7390	050 H2 - Engineer Issue Occupation Permit					; {			-					•					
Public Toilet (Portio	n A1)																		
Excavation Raft																			
_Raft Structure																			
ABWF/E&M																			
Internal Finishes									-										
Degree 1																			
Degree 2						- - - - -													
Degree 3						1													
RAB-50-3280	050 A1 - ABWF and MEP works to Degree 3 (KD11C)												.						
RAB-50-3290	050 A1 - Snagging and Remedials								V/////////////////////////////////////										
RAB-KD11C10	KD11C - Projected achievement of Stage 11C of the Works					1 1 1													
	of Effort Actual Work Critical Remaining						2018 Sta			Date				Revisior	<u> </u>		Checked	Δr	ppro

LEIGHTON 校正中面	Con	ntract No. H	Y/2014	/05 - R	emainin	g Anci	llary	Buildi	ng and	Facilit	ies									P	Page 8	8 of
ID	Activity Name	y 2018		Februar	y 2018		N	March 201	8		Ap	oril 2018			1	May 2018	3			June 2	2018	
		14 21	28 (04 11	18	25	04	11	18 25	01	08	15	22	29	06	13	20	27	03	10	17	
RAB-50-7480	050 A1 - End Users and MoM handover inspection													•								
RAB-KD64	KD11 - Projected Completion of Section XI of the Works (670 days) Building														۲							
Specialist installa														//								
RAB-50-3240	050 A1 - Installation of Sanitaryware and Fixtures						l															
Roof Finishes																						
RAB-50-4370	050 A1 - Install Aluminium Cladding																					
RAB-50-3230	050 A1 - Installation of Aluminium Canopy																					
External Finishes										{///////////////////////////////////			,,,, <u>,,,,,,,</u>	//								
RAB-50-3260	050 A1 - Make good external surfaces																					
Utilities and Draina																						
Testing & Commiss	sioning 050 A1 - T&C (HVAC, FS, P&D, OTHERS)																					
			1			1																
Water Supplies De	ions & Approvals (Day 670 Completion)													<i></i>				· · · · · · ·				
Commencement																						
Completion																						
Fire Services Depa	artment (FSD)																					
	050 A1 - FSD Re-Inspection Period For Building 050																					
RAB-FSD-520	050 A1 - Fire Certificate Obtained (Form 172) Handover of Building 050		!																			
Engineer (AECOM)																						
RAB-50-7400	050 A1 - Submit Building 050 H2 As Built Drawings to Engineer																					
RAB-50-7410	050 A1 - Engineer Inspection Period														1							
RAB-50-7420	050 A1 - Engineer Issue Occupation Permit	_													•							
Public Toilet (Portion																						11
Excavation																						
Raft																						
Structure																						
ABWF/E&M																						
Internal Finishes																						
Degree 1																						
Degree 2																						
Degree 3																						
RAB-50-4280	050 A2 - ABWF and MEP works to Degree 3 (KD12C)		!											//								
RAB-50-4290	050 A2 - Snagging and Remedials	_																				
RAB-KD12C10	KD12C - Projected achievement of Stage 12C of the Works (610 days)																					
RAB-50-7490	050 A2 - End Users and MoM handover inspection													•								
RAB-KD74	KD12 - Projected Completion of Section XII of the Works (670 days) Building														۲							
Specialist installa														//								
RAB-50-4240	050 A2 - Installation of Sanitaryware and Fixtures					1			_		///////////////////////////////////////	///////////////////////////////////////										
Roof Finishes																						
RAB-50-4380	050 A2 - Install Aluminium Cladding					1				V////////				<u> </u>								
RAB-50-4230	050 A2 - Installation of Aluminium Canopy						I					///////////////////////////////////////										
External Finishes										{///////				//					<i>44.</i>			ĮĮ,
RAB-50-4120	050 A2 - Install External Louvers /Windows/Doors									·····												
RAB-50-4260	050 A2 - Make good external surfaces																					
Utilities and Draina	ge																					
Testing & Commiss																						
	050 A2 - T&C (HVAC, FS, P&D, OTHERS)		'			J								//								
	ions & Approvals (Day 670 Completion)																					
Water Supplies De																						
Commencement																						
Completion														1112								
Completion Fire Services Depa	artment (FSD)		1																			
		3-Mon		ina Pro	gramme	e. 01 M	lav 20	018 St	atused		Da 01-May-		3-Month R		Revisi				Check	ed	Appr	oro

LEIGHTON 锭-荮	220	Сог	ntract No. H	Y/2014	/05 - Re	maining	Ancillar	y Buildin	g and F	acilities	S						Page 9 of
tivity ID	Activity Name		y 2018		February	2018		March 2018			April 201	8		May 2018		June	2018
				28 0)4 11		25 04		8 25	01	08 15		29 06		20 27	03 10	
RAB-FSD-290	050 A2 - FSD Re-Inspection Period	d For Building 050															
RAB-FSD-280	050 A2 - Fire Certificate Obtained	(Form 172) Handover of Building 050															
Engineer (AECOM)	<u>1</u>																
RAB-50-7430	050 A2 - Submit Building 050 H2 A	s Built Drawings to Engineer											•				
RAB-50-7440	050 A2 - Engineer Inspection Peric	bd											1				
RAB-50-7450	050 A2 - Engineer Issue Occupatio	on Permit											•				
Building 053 - Outbo	und X-Ray Building																
Excavation																	
Raft																	
Structure													/				
ABWF/E&M												•					
Glazed Canopy																	
Utilities and Drainage Testing & Commissio																	
	ns & Approvals (Day 470 Comple	etion)															
EMSD - Building 053																	
Water Supplies Depa																	
Commencement																	
Completion																	
Fire Services Depart													<i>[</i>]				
RAB-FSD-430	053 - Fire Certificate Obtained (Fo	orm 172) Handover For Building 053															
Engineer (AECOM)	_																
	053 - Engineer Inspection Period						1 1 1					V					
	053 - Engineer Issue Occupation F												*				
RAB-KD44	KD1 - Projected Completion of Sec	ction I of the Works (470 days) Building 05					1						•				
Building 058 - Outbou	und X-Ray Scan Tunnel																
Excavation																	
Raft																	
Structure																	
ABWF/E&M Glazed Canopy				!													
Utilities and Drainage	<u> </u>																
Testing & Commissio																	
	ns & Approvals (Day 470 Comple	etion)															
Fire Services Depart	<u>_</u>			, , ,			, , , ,										
	058 - FSD Re-Inspection Period F	or Building 058										l I					
RAB-FSD-104	058 - Fire Certificate Obtained (Fo	orm 172) Handover For Building 058															
Engineer (AECOM)																	
	058 - Engineer Inspection Period		_	1			- - - 					<u>IIIIIIIIIIIIIIIII</u>					
	058 - Engineer Issue Occupation F												•				
		ction I of the Works (470 days) Building 05															
	nd X-Ray Scan Tunnel																
Excavation																	
Raft Foundations																	
Structure													<i>A</i>				
ABWF/E&M Internal Finishes																	
Degree 1																	
Degree 2																	
Degree 3																	
	059 - End Users and MoM handov	/er inspection											•				
External Finishes																	
Facade																	
				•						•••••••••••••••••••			_		1	<u></u>	•••••••••••••••••••••••••••
Remaining Level of the second seco	of Effort Actual Work	Critical Remaining	3-Mont	h Rolli	ing Pro	gramme,	01 May	2018 Stat	tused		Date May-18	D Marth D	Rev		Ctoture 1	Checked	Approv
Actual Level of Eff	fort Remaining Wo	ork 🛆 Finish Constraint				,	,			101-	-iviav-18	13-Month R	olling Program	me, 01 May-18	Statused		

LEIGHTOP 枕 中面		Con	tract No.	HY/20	14/05	- Ren	naining	j An	cillary	y Buil	ding	and F	aciliti	es									Pa	ge 10	of 10
Activity ID	Activity Name		y 2018		Fe	ebruary 20	018			March 2	2018			Ap	oril 2018			ł	May 201	18			June 2	018	
			14 21	28	04	11	18	25	04	11	18	25	01	08	15	22	29	06	13	20	27	03	10	17	24
RAB-59-0480	059 - External Painting										-	-							•						
At Grade																									
RAB-59-6700	059 - Prepare Sub Grade							_																	
RAB-59-6690	059 - Laying Geo Textile																								
RAB-59-6720	059 - Sand Bedding																								
RAB-59-6680	059 - Concrete Block Paving																								
RAB-59-6730	059 - Grouting Works to Concrete Pavers		-																						
RAB-59-0650	059 - Make good external surfaces																								
Roof Finishes								-																	
Glazed Canopy																									
Utilities and Drain																									
Testing & Commis																	<i>.</i>								
	sions & Approvals (Day 470 Completion)																								
Fire Services Dep			_																						
RAB-FSD-490	059 - Fire Certificate Obtained (Form 172) Handover For B	building 059																							
Engineer (AECON								:																	
RAB-59-7530	059 - Engineer Inspection Period																								
RAB-59-7540	059 - Engineer Issue Occupation Permit																•								
RAB-KD24	KD2 - Projected Completion of Section II of the Works (470	days) Building 0		1				ł																	

Remaining Level of Effort	Critical Romaining		Date	Revision	Checked	Approved
Actual Level of Effort Actual Work	△ Finish Constraint	3-Month Rolling Programme, 01 May 2018 Statused	01-May-18	3-Month Rolling Programme, 01 May-18 Statused		

Hong Kong Key Dates Interface A Site and Fa JS1200 JS1210 JS1220			Q2	015 Q3	Q4	Q1	 016 Q3	Q4	Q1		201 2
Key Dates Interface A Site and Fa JS1200 JS1210	ctivities		QZ								×
Key Dates Interface A Site and Fa JS1200 JS1210	ctivities								1 1 1		-
Interface A Site and Fa JS1200 JS1210											
Site and Fa JS1200 JS1210											
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JS1200 JS1210	acility Inspection										
 JS1210	Pre Site and Facility Inspection by Contractor at Location 4 - Deg2										0
	Joint Site and Facility Inspection with Interface Contractor at Location 4 - Deg2		4-4-4-				 				
	Pre Site and Facility Inspection by Contractor at Location 14 - Deg2										0
	Joint Site and Facility Inspection with Interface Contractor at Location 14 - Deg2										0
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										0
JS1780	Pre Site and Facility Inspection by Contractor at Location 18 - Deg2		1 - 1 - J				 				1
JS1790	Joint Site and Facility Inspection with Interface Contractor at Location 18 - Deg2										0
Access Da											-
AD1000	Location 1(PCB (001) Basement)-Deg1 (270d)										Ş ļ
AD1010	Location 1(PCB (001) Basement)-Deg2 (380d)		+ - +				 		+		
AD1020	Location 1(PCB (001) ELV Room (Grid Line E3))-Deg1 (270d)										8
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 (;						 		+		
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)) -										<u>Ş</u> F
AD1090	Location 2(PCB (001) Ground Floor DOH Port Health Control Room (Grid Line BD5)) -										
aD1130	Location 3(Inbd Cargo Exam Bldg (037) Platform Control Room)-Deg2 (500d)										X
AD1150	Location 3(Inbd Cargo Exam Bldg (037) Inspector Offices 128,129,130,131,128,129,14						 		+		Į
aD1170	Location 3a(Inbd Cargo Exam Bldg (037) ROCARS Room)-Deg2 (480d)										Ş
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 -										8
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)										<mark>₹</mark> !
aD1290	Location 7(Common Utility Enclosure & Staff Subway)-Deg1 (270d)										8
AD1300	Location 8(Inbd Private Car Annex (025))-Deg1 (430d)			11		111			111		
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										8
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										18
gramme No.: HZM	MB-DWP Actual Level of Effort	Mary Hong Kong Zhubai Maaaa Pridaa								[Da
a Date: 14-Aug-1:										4-No	_
1 Date. 14-Aug-1	Actual Work	Hong Kong Boundary Crossing								0-Ma	
	Remaining Work	Facilities - Automatic Vehicle							5	-Мау	/-17
	Critical Remaining Work	Clearance Support System (AVCSS)									
	♦ Baseline Milestone										
	Baseline Milestone Milestone										

					Page 1	of 8
2017			2018		2019	
Q2 Q3	Q4	Q1 (Q2 Q3	Q4	Q1 Q2	2 Q3
	22	-Oct-17, 1	Jong Kong	-Zhuh	ai_Macao E	Bridge
23	Jun+17,	Site and	Facility Insp	ection		
	a					
					tractor at L	
	1 1 1				nterface Co	1 I I
Pre	Site and	Facility	nspection l	y Con	tractor at L	ocatio
l Joi	nt Site ai	nd Facility	Inspection	with Ir	nterface Co	ontract
Pre	Site and	Facility In	spection b	y Çonti	actor at Lo	cation
Joir	t Site an	d Facility	Inspection	with In	terface Co	ntracto
Pre	Site and	Facility In	spection b	v Conti	actor at Lo	cation
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		-17, Acce				
iYi⊾i i	1 1 1			117	(270d), 31	
				+ - +	eg2 (380d)	
🗧 Loca	tion 1(P	CB (001)	ELV Room	(Grid	Line E3))-E) peg1
😞 L	ocation 1	I(PCB (0	01) ELV Ro	om (G	rid Line E3))-Deo
👌 Loca	tion 2(P	CB (001)	First Floor	Main S	Server Roo	m)-De
8	ocation 2	(PCB (0	01) First FI	bor Ma	in Server F	Room)
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👌 Lo	cation 3a	a(Inbd Ca	rgo Exam	Bldg (0	37) Main S	erver
	ocation	4(Outbd	Cargo Exa	m Bldg	(023))-De	g2 (68
8	ocation	4a(Outbo	l Cargo Ex	am Bld	g (023))-D	eg2 (6
👌 Loca	tion 6(C	ommon L	tility Enclos	ure &	Staff Subw	ay)-D
🗴 Loc	ation 7(C	ommon	Jtility Enclo	sure &	Staff Subv	vay)-C
Š 🗶 L	ocation 8	(Inbd Pr	vate Car A	nnex ((25))-Deg1	(430
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👌 Loca	tion 12(I	nbd Priva	te Car Kio	sks(027	7))-Deg2 (4	180d)
8	ocation	12(Inbd	Private Car	Kiosks	s(027))-De	g2 (48
- F - 🖌 🕹 - F - I					27) Canop	
Date	R	evision	Chec	ked	Approv	ed

Date	Revision	Checked	Approved
Nov-16	Rev.: 0	WC	LC
Mar-17	Rev.: 1.0a	WC	LC
/lay-17	Rev.: 1.0b	WC	LC

vity ID	Activity Name		201	15				2016			201	7		201	8	2	2019
			Q2	Q3	Q4	Q1	Qź	2 (23 Q	4 Q	Q1 Q2	Q3 Q4	4 Q1	Q2	Q3 Q4	I Q1	Q2
AD1530	Location 12(Inbd Private Car Kiosks(027) Canopy)-Deg2 (480d) Phase 1											ocation 12					'''-
🔲 AD1531	Location 12(Inbd Private Car Kiosks(027) Canopy)-Deg2 (480d) Phase 2											👌 Locatio	n 12(Inl	bd Privat	te Car Kio	sks(027)) Canr
🔲 AD1540	Location 12(Inbd GV Kiosks (028))-Deg1 (400d) Phase 1										\$ 4	ocation 12	(Inbd G	V Kiosks	(028))-D	g1 (400	Jd) Ph
AD1541	Location 12(Inbd GV Kiosks (028))-Deg1 (400d) Phase 2										8	Location	12(Inbd	GV Kios	ks (028))	Deg1 (40	100d)
🔲 AD1550	Location 12(Inbd GV Kiosks (028))-Deg2 (480d) Phase 1										8	Location 1	2(Inbd	GV Kiosk	(028))-l)eg2 (48	80d) F
🔲 AD1551	Location 12(Inbd GV Kiosks (028))-Deg2 (480d) Phase 2											Location	12(Inb	d GV Kio	osks (028))-Deg2 (4	(480ď)
🔲 AD1560	Location 12(Inbd GV Kiosks (028) Canopy)-Deg1 (400d) Phase 1										- \$ L	ocation 12	(Inbd G	V Kiosks	(028) Ca	nopy)-De	/eg1 (/
🔲 AD1561	Location 12(Inbd GV Kiosks (028) Canopy)-Deg1 (400d) Phase 2											Location	12(Inbd	GV Kios	sks (028) (anopy)-	-Deg1
AD1570	Location 12(Inbd GV Kiosks (028) Canopy)-Deg2 (480d) Phase 1										8	Location 1	2(Inbd (GV Kiosk	(028) C	anopy)-C	Deg2
🔲 AD1571	Location 12(Inbd GV Kiosks (028) Canopy)-Deg2 (480d) Phase 2											Location	n 12(Inb	d GV Kio	osks (028)	Canopy)	/)-Deç
🔲 AD1580	Location 12(Outbd GV Kiosks (029))-Deg1 (400d) Phase 1									Li.		ocation 12	2(Outbd	GV Kios	ks (029))	Deg1 (40	100d)
🔲 AD1581	Location 12(Outbd GV Kiosks (029))-Deg1 (400d) Phase 2											Location	12(Outb	od GV Kio	osks (029))-Deg1 ((400d
🔲 AD1590	Location 12(Outbd GV Kiosks (029))-Deg2 (480d) Phase 1											Location 1	2(Outbo	d GV Kio	sks (029)	-Deg2 (4	(480d)
🔲 AD1591	Location 12(Outbd GV Kiosks (029))-Deg2 (480d) Phase 2											👌 Locatio	n 12(Ou	utbd GV	Kiosks (02	9))-Deg	ງ2 (48
🛑 AD1600	Location 12(Outbd GV Kiosks (029) Canopy)-Deg1 (400d) Phase 1											ocation 12	2(Outbd	GV Kios	ks (029) (anopy)-	-Deg1
🔲 AD1601	Location 12(Outbd GV Kiosks (029) Canopy)-Deg1 (400d) Phase 2										8	Location	12(Outb	d GV Kid	osks (029)	Canopy	y)-De
🛑 AD1610	Location 12(Outbd GV Kiosks (029) Canopy)-Deg2 (480d) Phase 1											Location 1	2(Outbo	d GV Kio	sks (029)	Canopy))+Deg
🔲 AD1611	Location 12(Outbd GV Kiosks (029) Canopy)-Deg2 (480d) Phase 2											🗴 Locatio	n 12(Ou	utbd GV	Kiosks (02	9) Cano	opy)-E
🔲 AD1620	Location 13(Outbd Private Car Kiosks (030))-Deg1 (480d) Phase 1											Location					
🔲 AD1630	Location 13(Outbd Private Car Kiosks (030))-Deg2 (550d) Phase 1											Location	13(Outb	od Private	e Car Kio	ks (030)))-De
🔲 AD1640	Location 13(Outbd Private Car Kiosks (030) Canopy)-Deg1 (480d) Phase 1										- i i i i 👗	Location		-i i i i	- i - i - i - i -		1 1 1
🔲 AD1650	Location 13(Outbd Private Car Kiosks (030) Canopy)-Deg2 (550d) Phase 1											Location	13(Outb	od Private	e Car Kios	ks (030)) Can
aD1660	Location 14(Future-Outbd/Inbd Private Car Kiosks)-Deg1 (610d)										_	Location 1					
🔲 AD1670	Location 14(Future-Outbd/Inbd Private Car Kiosks)-Deg2 (680d)											Location					
AD1700	Location 16(Outbd Traffic Control Kiosk (101))-Deg1 (400d)											ocation 16					
AD1710	Location 16(Outbd Traffic Control Kiosk (101))-Deg2 (480d)														affic Cont		
AD1740	Location 18(Outbd Private Car Exam Bldg(024))-Deg1 (-)				 			-!!!				Location					!!!
AD1750	Location 18(Outbd Private Car Exam Bldg(024))-Deg2 (670d)										- i i i i 🍸	Location			1 1 1 1	1 1 1	1 1 1
AD1780	(by C03) Underground Ducting (UUD1.1) between CUE and Inbd Cargo Exam Bldg (0										- : : : : X Y	by C03) U					
AD1790	(by C03) (UUD1.2) between Inbd Cargo Exam Bldg South (037[S]) and DOH Cargo C										X	oy ¢03) (L		1 1 1 1			
AD1800	(by C03) (UUD2) between Inbd Cargo Exam Bldg North (037[N]) and Inbd Vehicle Clei										- i i i 👗 i	oy C03) (L				1 I I I	
= AD1810	(by C03) (UUD9.1) btw Inbd Cargo Exam Bldg S.(037[S]) & Inbd PC Exam Bldg(033) {			!!!								oy C03) (U					
AD1820	(by C03) (UUD9.3) between Inbd Private Car Exam Bldg (033) and Inbd Vehicle Clear:										X .	oy C03) (L				1 1 1 1	1 1
AD1830	(by C03) (UUD9.2) between Inbd Private Car Exam Bldg (033) and Inbd Vehicle Cleara										- i i x i	oy C03) (t					
AD1840	(by C03) Underground Ducting (UUD3.1) between CUE to Outbd Cargo Exam Bldg (0											oy ¢03) U					
AD1850	(by C03) (UUD3.2) btw Outbd Car Exam Bldg (023) and Outbd PC Exam Bldg (024) a										- i i X i	oy C03) (L					
AD1860	(byC03) (UUD4.1) between Outbd Private Car Exam Bldg (024) and Outbd Vehicle Cle											oyC03) (U					
AD1870	(byC03) (UUD5) between Outbd Car Exam Bldg South (023[S]) and Outbd Vehicle Cle										- i i i Y i	oyC03) (U		1 1 1 1	1 1 1 1		1 1
AD1880	(by C03) Underground Ducting (UUD8) between CUE and Outbd PCA (032)										- i i X i	by C03) U					-
AD1910	(by C03) Inbound Vehicle Clearance Plaza										X - (by C03) In			1 -1 -1 -1	1.1.1.1	
AD1920	(by C03) Outbound Vehicle Clearance Plaza										- i i i X î	oy C03) O					- i - i -
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💾 WA4 Site I	Erection & Servicing																
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-		Hong Kong-Zhuhai-Macao Bridge									14-Nov-16	6 Rev	<i>ı</i> .: 0	WC		LC	
ta Date: 14-Aug-1	Actual Work	Hong Kong Boundary Crossing									10-Mar-17	7 Rev	<i>ı</i> .: 1.0a	WC		LC	
		Facilities - Automatic Vehicle									5-May-17	Rev	/.: 1.0b	WC)	LC	
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	1(PCB (001) Basement)												2	2-Jun-	17. Lo	cation	1.1(PC	CB (001) Base	ement)	
	0 L1(001)B/F - Cable Laying and termination at Location 1 and Location 2														1 1			ig;and;t	111		lioca
	1(PCB (001) ELV Room (Grid Line E3))												2	2-Jun-	17, Lo	cation	1(PC	CB (001) ELV	Room	Grid
	0 L1(001)ELV Rm - Cable Laying and termination at Location 1 and Location						+ - + - + - +							1(001)	ELV F	Rm - C	able I	Laving	andite	minatio	on at
	2(PCB (001) Ground Floor ELV Room (Grid Line E3))												7	2-Jun-	17, Lo	cation	1 2(PC	Laying a) Grou	ind Flo	or ĒĽ
EM1960	0 L2(001)ELV Rm - Cable Laying and termination at Location 1 and Location													2(001)	ELV F	Rm - C	able I	Laying	and te	rminatio	n at l
Location	2(PCB (001) Ground Floor DOH Port Health Control Room (Grid Lin	BD5))												▼ 18-/	Aµg∔1	7, Loc	ation	2(PCB	(001)	Ground	Floo
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EM1100														1 1 1	· I I I			Cable	1 1 1		1 1 7
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EM1140														u∷L2(0	001)H	eath C	Ctrl Rh	n - Inte 2(PCB	rcom a	and PA First Fi	syster
	2(PCB (001) First Floor Main Server Room)														1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1	1 1 1
EM1000					÷÷÷		+ - + - + - +											- Cable 1 - Cabl			
EM1020													<u></u>		í	1 1 1		r - Cabi Rm - Αγ		, , , , , , , , , , , , ,	
EM106																		Rm - A			
	3(Inbd Cargo Exam Bldg (037) MDF Room)																				
	3(Inbd Cargo Exam Bidg (037) ELV Room)																				
Location	3(Inbd Cargo Exam Bldg (037) Inspector Offices 128,129,130,131,1	8,129,14					+-+-+-+							07-A	ug-17	r, Loca	ation 3	B(Inbd C	Cargo	Exam E	ildg ((
🔲 EM2020	0 L3(037)Inspec Offices - Cable Laying and termination in Location 3 and Lo	tion 3a											ι	3(037)	Inspe	c Offic	xes-C	able La	aying a	and teri	ninati
EM2040																		Cable			
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EM210														L3(0 ▼ 07-A	37)lns uia-17	spec C	Offices	- SUR 3(Inbd (CON a	and WS	Tuni Nda (
	3(Inbd Cargo Exam Bldg (037) Platform Control Room) U3(037)PLF Ctrl Rm - Cable Laying and termination in Location 3 and Loc	on 3a											1_11	1 1 1	1.1	1 1 1	1 1 1	able La	1 1 1	1 1 1	1.1.1
EM1160														- r + r				able La		1 1 1	
EM1200																1 1 1		AVCSS			
EM1220							+-+-+-+										-''-	AVCS		'''-	
					: : :						<u>. : :</u> T	<u>: : :</u>	Date		Revi		<u> </u>	Checke			roved
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Location 3a(Inbd Cargo Exam Bldg (037) ROCARS Room)								
EM1240 L3a(037) ROCARS Rm - Cable Laying and termination in Location 3 and L	ocation 3a							
EM1260 L3a(037) ROCARS Rm - Cable Splicing and Testing and Labeling								
EM1280 L3a(037) ROCARS Rm - AVCSS SYSCON and SURCON and Intercom In	stallation					-1		
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								
Location 3a(Inbd Cargo Exam Bldg (037) Main Server Room)								
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								
Location 4(Outbd Cargo Exam Bldg (023) MDF Room)		· · · · · ·						
Location 4a(Outbd Cargo Exam Bldg (023) ROCARS Room)								
EM2240 L4a(023)ROCARS Rm - Cable Splicing and Testing and Labeling								
EM2260 L4a(023)ROCARS Rm - AVCSS SYSCON and SURCON and Intercom Ins	stallation							
EM2280 L4a(023)ROCARS Rm - VTS WS Installation								
EM2300 L4a(023)ROCARS Rm - SYSCON and SURCON and WS Tuning								
Location 5(Common Utility Enclosure & Staff Subway)								
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								
Location 6(Common Utility Enclosure & Staff Subway)			41 -111 -					
EM2400 L6(CUE) - Cable Laying between Location 5 and Location 6								
EM2420 L6(CUE) - Cable Splicing and Testing and Labeling								
Location 7(Common Utility Enclosure & Staff Subway)								
EM2440 L7(CUE) - Cable Laying between Location 5 and Location 7								
EM2460 L7(CUE) - Cable Splicing and Testing and Labeling			41111 -					
Location 12(Inbd Private Car Kiosks,GV Kiosks (027,028,029))								
Inbd Private Car Kiosks(027) - 9 nos (Phase 1)								
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)								
Inbd Goods Vehicle Kiosks(028) - 5 nos (Phase 1)								
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)			4!!!!-					
EM1683 L12(028)(5nos P1) - ODB installation (2 nos)								
Programme No.: HZMB-DWP Actual Level of Effort	Hong Kong-Zhuhai-Macao Bridge							14
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	L3a(037) R		SRm	- Cable	Lavin	g and	termina	atip
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	L5(C	CUE) -	Cable	Laying	betwe	en Loc	ation 5	and L	oca
	Ξ L	5(CUE) - Cat	le Lay	ing bet	ween l	ocatio	n 5 an	d Ļ
-		L5(CU 26-Aug	E) - Ca -17, Lo	able Sp ocation	blicing a 16(Con	and Te	sting ar Utility E	nd Lab nclosu	elin re d
	L6(C	CUE) -	Cable	Laying	betwe	en Loc	ation 5	and L	o¢a
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	U L12	(027)(9nos F	1) - XI	DB inst	allation	(18 nc	os)	
	L12	(027)(9	nos P	1) - OI)B insta	allation	(5 nos)	
	L12	(027)(9nos F	1) - O	DB inst	allation	n (2 nos	5)	
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Nov-16	Rev.: 0	WC	LC
Mar-17	Rev.: 1.0a	WC	LC
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Activity ID	Activity Name		2015	2016	2017	2018	2019
			Q2 Q3	Q4 Q1 Q2 Q3 Q4 Q			
	EM1700 L12(028)(5nos P1) - AIOP Installation (5 nos)					28)(5nos P1) - AIOP Install	
	EM1720 L12(028)(5nos P1) - Loop installation (25 nos)				L12	(028) (5nos P1) - Loop inst	allation (25 nos)
	Outbd Goods Vehicle Kiosks(029) - 5 nos (Phase 1)					Aug-17, Outbd Goods Vehi	
	EM1740 L12(029)(5nos P1) - Cable Containment in Kiosks)(5nos P1) - Cable Contair	
	EM1760 L12(029)(5nos P1) - Cable Laying and termination))(5hos P1) - Cable Laying	
	EM1780 L12(029)(5nos P1) - Cable Splicing and Testing and Labeling					9)(5nos P1) - Cable Splicir	
	EM1800 L12(029)(5nos P1) - AVCSS/MOM Kiosk Equipment Installation (5 nos)					9)(5nos P1) - AVC\$S/MON	
	EM1821 L12(029)(5nos P1) - XDB installation (5 nos)					9)(5nbs P1) - XDB installat	
	EM1822 L12(029)(5nos P1) - ODB installation (4 nos)		· ÷ - ÷ - ÷ - ÷ - ÷ - ÷		- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	029)(5nos P1) - ODB instal	- 1 - 1 - 1 - 1 - 1
	EM1823 L12(029)(5nos P1) - ODB installation (1 nos)					(029)(5nos P1) - ODB inst	
	EM1840 L12(029)(5nos P1) - AIOP Installation (5 nos)				■ L12(0)	29)(5nos P1) - AIOP Install Aug-17, Location 13(Outbo	ation (5 nos) Private Car Kiosks
	Location 13(Outbd Private Car Kiosks (030)) - 9 nos (Phase 1) EM2520 L13(030)(9nos P1) - Cable Containment in Kiosks						
	EM2520 L13(030)(9nos P1) - Cable Containment in Kiosks EM2540 L13(030)(9nos P1) - Cable Laying and termination				<u> </u>)30)(9nos P1) - Cable Con	
	EM2540 E13(030)(9nos P1) - Cable Eaving and termination EM2560 L13(030)(9nos P1) - Cable Splicing and Testing and Labeling		· · · · · · · · · · · · · · · · · · ·			030)(9nos P1) - Cable Lay	
	EM2500 L13(030)(9nos P1) - AVCSS/MOM Kiosk Equipment Installation (9 nos)				<u></u>	(030)(9nos P1) - Cable Sp	
	EM2601 L13(030)(9nos P1) - XVC33MOW Risk Equipment installation (9 nos)					030)(9nos P1) - AVC\$S/M0 030)(9nos P1) - XDB insta	
	EM2602 L13(030)(9nos P1) - ODB installation (7 nos)						
	Location 14(Future-Outbd/Inbd Private Car Kiosks) - 6+6 nos				▼ 08-Jul-	(030)(9nos P1) + ODB inst 17, Location 14(Future-Ou	tbd/Inbd Private Car
						able Laying and terminatio	
	Location 15(Inbd Traffic Control Kiosk (100))				➡ L14-C	able Laying and lei minalio	IT ALLELV ROOM IN C
	Location 16(Outbd Traffic Control Kiosk (100))				29-	Aug-17, Location 16(Outbo	J Traffic Control Kios
	EM2760 L16(101) - Cable Laying and termination					- Cable Laying and termina	
	EM2780 L16(101) - Cable Splicing and Testing and Labeling					- Cable Splicing and Testir	
	EM2800 L16(101) - AVCSS SYSCON and SURCON Installation			· · · · · · · · · · · · · · · · · · ·		(101) - AVCS\$ \$YSCON	- 5 - 5 - 5 - 5 - 5 - 6 - 6 - 6 - 6 - 6
	EM2820 L16(101) - VTS WS and 55" LCD Installation					(101) - VTS WS and 55" L	
	Location 17(Inbd Private Car Exam Bldg(033) Operational Office)						
	Location 18 (Outbd Private Car Exam Bldg(024) Operational Office)				▼ 07-Jul⊦	17, Location 18 (Outbd Priv	vate Car Exam Bldg(
	EM2940 L18(024) - Cable Laying and termination				1 18/02	4) - Cable Laying and term	ination
	EM2960 L18(024) - Cable Splicing and Testing and Labeling		· · · · · · · · · · · · · · · · · · ·	······································		4) - Cable Splicing and Tes	
	EM2980 L18(024) - AVCSS SURCON and 55" LCD Installation					4) - AVCSS SURCON and	
	EM3000 L18(024) - SURCON Tuning					4) - SURCON Tuning	
	Location 19 (DOH Cargo Clearance Bldg(043))					17, Location 19 (DOH Care	jo Clearance Bldg(0
	EM1360 L19(043) - Cable Laying and termination				L19(043) - Cable Laying and termin	nation
	EM1380 L19(043) - Cable Splicing and Testing and Labeling			;;-;-;-;-;-;-;-;-;-;-;-;-;-;-;-;-;-;-;) - Cable Splicing and Test	- i - i - i - i - i - i - i - i - i - i
	EM1400 L19(043) - PA and Intercom Installation				<u>.</u>	3) - PA and Intercom Instal	
	EM1420 L19(043) - PA and Intercom Tuning				L19(04	3) - PA and Intercom Tunir	າຕ
E in the	Inbd Vehicle Clearance Plaza - 8 nos VID, 7 nos VTS, 4 nos TLS					ug-17, Inbd Vehicle Clearar	
	EM3020 Inbound VID cabling from pillar box to VID field equipment				Inbound	VID cabling from pillar box	to VID field equipme
	EM3040 Inbound VTS cabling from pillar box to VTS field equipment				Inbound	I VTS cabling from pillar bo	x to VTS field equipr
	EM3060 Inbound TLS cabling from pillar box to TLS field equipment			· ·		nd TLS cabling from pillar b	
-	EM3080 Inbound VID field equipment installation (8 VID)			1 1 <td>🔲 Inbou</td> <td>nd VID field equipment inst</td> <td>allation (8 VID)</td>	🔲 Inbou	nd VID field equipment inst	allation (8 VID)
-	EM3100 Inbound VTS field equipment installation (4 RFID + 3 Cameras)					nd VTS field equipment inst	
-	EM3120 Inbound TLS field equipment installation (4 TLS)				🛚 Inbou	nd TLS field equipment ins	tallation (4 TLS)
-	EM3140 Inbound VID and VTS and TLS field equipment tuning			······································	🖡 Inbol	ind VID and VTS and TLS	field equipment tunir
						· · · · · · · · · · · · ·	
Programme	ne No.: HZMB-DWP Actual Level of Effort	summary Hong Kong-Zhuhai-Macao Bridge			Date	Revision Checked	
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e No.: HZMB-DWP : 14-Aug-15	Actual Level of Effort Summary Primary Baseline Actual Work	Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities - Automatic Vehicle	14-Nov- 10-Mar- 5-May-1
	 Remaining Work Critical Remaining Work Baseline Milestone Milestone 	Clearance Support System (AVCSS)	<u> </u>

Date	Revision	Checked	Approved
Nov-16	Rev.: 0	WC	LC
Mar-17	Rev.: 1.0a	WC	LC
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vity ID	Activity Name		2015 Q2 (0 Q3 C	4 Q1	 016 Q3	Q4	Q1 Q	2017 2 Q3 Q	24 Q1	2018 Q2 Q3	3 Q4	2019 Q1 Q2
E Outbd Vehi	cle Clearance Plaza - 8 nos VID, 6 nos VTS, 4 nos TLS						QT						ce Plaza - 8
EM3160	Outbound VID cabling from pillar box to VID field equipment								Outboun	nd VID cab	ling from pi	illar box t	to VID field (
🔲 EM3180	Outbound VTS cabling from pillar box to VTS field equipment												k to VT\$ field
🚍 EM3200	Outbound TLS cabling from pillar box to TLS field equipment										-		ox to TLS fie
🚍 EM3220	Outbound VID field equipment installation (8 VID)		+-+-+-					*	Outbc	ound VID f	ield equipm	ent insta	allation (8 VII
🔲 EM3240	Outbound VTS field equipment installation (3 RFID + 3 Cameras)								Dutbo	und VTS f	ield equipm	ient insta	allation (3 RF
💼 EM3260	Outbound TLS field equipment installation (4 TLS)								Outbc	ound TLS	field equipn	nent insta	allation (4 TI
📄 EM3280	Outbound VID and VTS and TLS field equipment tuning												ield equipme
💾 Undergrou	nd Ducting (UUD1.1) between CUE and Inbd Cargo Exam Bldg (03	<mark>7) </mark>						· · · · · · ·	₩ 13-Jun-1	17, Underg	round Duc	ting (UU	D1.1) betwe
	(UUD1.1 [CUE-037]) - Cable laying and termination								UUD1.1	(CUE-03	7]) - Cable	laying ar	nd terminatio
	etween Inbd Cargo Exam Bidg South (037[S]) and DOH Cargo Cle	arance Bl							₩ 27-Jun-1				
	(UUD1.2 [037[S]-043]) - Cable laying and termination								UUD1:	2 [037[S]-	043]) - Cab	le laying	and termina
	nd Ducting (UUD6) between CUE and Shuttle Bus Kiosk (006) and								T 12 Iul	17 /1110		'Chrbo' F	Exam Bldg S
	tw IB Cargo Exam Bldg South(037[S]) & IB PC Exam Bldg(033) &	B Traffic	+-+-+-			 		+		- +			
	(UUD9.1 [037[S]-033-100) - Cable laying and termination												laying and te argo Exam
	tween Inbd Cargo Exam Bldg North (037[N]) to Inbd VCP (UUD2 [037[N]-IB VCP]) - Cable laying and termination												
									■ (UUU) ▼ 09-A	i∠ [u37[[N]- .ug-17. (U	ів vCP]) - UD9.3) bet	vable la wéen Int	iying and ter bd Private C
	etween Inbd Private Car Exam Bldg (033) and Inbd Vehicle Cleara (UUD9.3 [033-IB VCP[W]) - Cable laying and termination								11111				e laying and
	etween Inbd Private Car Exam Bldg (033) and Inbd Vehicle Cleara					 		+					nbd Private (
	(UUD9.2 [033-IB VCP[E]) - Cable laying and termination												e laying and
	nd Ducting (UUD7) between PCB(001) and Inbd Coach Kiosks(01	n de la companya de l											s laying and
	nd Ducting (UUD3.1) between CUE and Outbd Cargo Exam Bldg (🗰 14-Jun-1	17, Underg	round Duc	ting (UU	D3.1) betwo
	(UUD3.1 [CUE-023]) - Cable laying and termination								(UUD3.1)	ICUE-02	31) - Cable	lavino ar	nd terminati
	tw OB Car Exam Bldg(023) & OB PC Exam Bldg(024) & OB Traffi	Control				 		*	🗮 28-Jun-	17, (UUD	3.2) btw OE	3 Car Ex	am Bldg(02
	(UUD3.2 [023-024-101]) - Cable laying and termination									2 1023-02	4-1011) - C	able lavir	ng and term
📕 Undergrou	nd Ducting (UUD8) between CUE and Outbd PCA (032)								T 13-Jun-1				
🔲 UD1100	(UUD8 [CUE-032]) - Cable laying and termination								(UUD8 [0	CUE-032]) - Cable la	ying and	termination
📕 (UUD4.1) b	etween Outbd PC Exam Bldg (024) and Outbd Vehicle Clearance	<mark>Plaza la seconda de la seconda de</mark>							🗮 13-Jul-	17, (UUD	4.1) betwee	en Outbo	d PC Exam I
UD1080	(UUD4.1 [024-OB VCP]) - Cable laying and termination							+	□ (UUD4	1.1 [024-O	B VCP]) - (çable lay	ying and tern
📕 (UUD5) bet	tween Outbd Car Exam Bldg (023[S]) and Outbd Vehicle Clearanc	Plaza							👿 27-Jun-1	17, (UUD	5) between	Outbd C	ar Exam Bl
UD1090	(UUD5 [023[S]-OB VCP]) - Cable laying and termination								(UUD5	[023[S]-OI	3 VCP]) - C	able lay	ing and term
Initial On-S	Site Test and Commissioning / Pre-SAT (Phase 1 / Sec	ion I)											
Site Accept	tance Test (Phase 1 / Section I)												
	isk Assessment and Audit		+-+			 		+ - + - + - + - + - + -		- + - + - + - +			
	v Period Test (Phase 1 / Section I)												
	n (Phase 1 /Section I)												
	nd Document (Phase 1 /Section I)												
Operation	(Phase 1 /Section I)												
🖶 Engineerin	g Support for Phase 1 / Section I												
Procureme	ent - Phase 2 / Section II												
	nd Bench Acceptance Test for Phase 2/Section II												
									3 0-	Aug-17 Ir	stallation -	Phase 2	2 / Section II
	I - Phase 2 / Section II									3 1 1			
rogramme No.: HZN	AB-DWP Actual Level of Effort	summary Hong Kong-Zhubai-Macao Bridge							Date	Revision	Che	ecked	Approve
ata Date: 14-Aug-15										ev.: 0	WC		LC
um Dute. 17-Aug-1.	Actual Work	Hong Kong Boundary Crossing Facilities - Automatic Vehicle								ev.: 1.0a	WC		LC
	Remaining Work							5-May	/-17 Re	ev.: 1.0b	WC		LC
	Critical Remaining Work	Clearance Support System (AVCSS)											
	♦ Baseline Milestone												
	♦ Milestone												
								1					

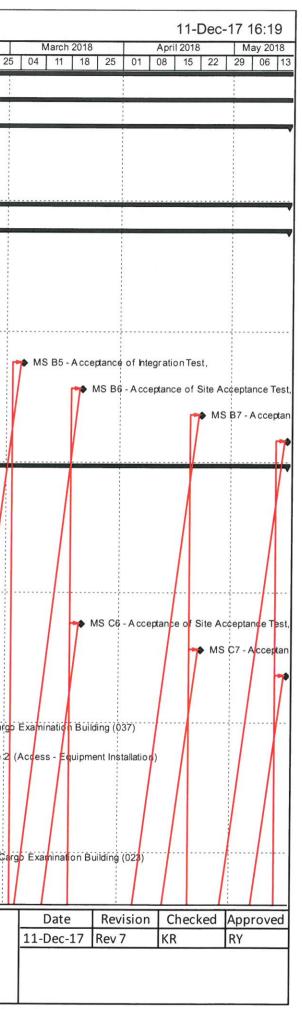
Contract No.: HY/20 ctivity ID			Detail Work Programme	2015			201	6	_	2017			2018		Page 7 of 2019
	Activity Name				Q3 Q4	Q1		0 Q3 Q	4 Q1		23 Q4	Q1	Q2 Q3	3 Q4	Q1 Q2
Location 8(I	Inbd Private Car Annex (025)) (Phase 2)														e Car Annex
💼 EM3370	L8(025) - Cable Containment in Kiosks									0	L8(025)	- Cable C	Containme	nt in Kiosl	(S
EM3380	L8(025) - Cable Laying and termination												Laying an		
EM3400	L8(025) - Cable Splicing and Testing and Labeling											25) - Cab	le Splicing	and Testi	ng and Labe ate Car Anno
	Outbd Private Car Annex (032)) (Phase 2)														
	L9(032) - Cable Containment in Kiosks			4 - 4 - 4 - 4 - 4		·							Containm		
	L9(032) - Cable Laying and termination	2 / Castien II)									□ L9(0;	32) - Cab	le Laying a	and termin	nation
	ite Test and Commissioning / Pre-SAT (Phase	27 Section II)													
	ance Test (Phase 2 / Section II)														
	Period Test (Phase 2 / Section II)														
Completion	n (Phase 2 / Section II)														
蜡 Engineering	g Support for Phase 2 / Section II														
🖶 Procureme	nt for Phase2 / Section III														
	d Bench Acceptance Test for Phase2 / Section	n III													
	- Phase 2 / Section III											-Oct-17,	Installation	i - Phase	2 / Section II
),11,12,13 (Vehicle Clearance Kiosks)									-	• 09	-Oct-17.	Location 1	0,11,12.1	3 (Vehicle C
	12 Inbd Private Car Kiosks (027) - 12 nos (Phase 2)								+-+-+-						ivate Car Ki
	0 L12(027)(12nos P2) - Cable Laying and termination										L12(02	27)(12nos	s P2) - Ca	ble Laying	and termina
🔤 EM4460	0 L12(027)(12nos P2) - Cable Splicing and Testing and Labeling										L12(0	27)(12nd	os P2) - C	able Splici	ng and Testi
🔲 📻 EM4480	0 L12(027)(12nos P2) - AVCSS/DOH/MOM Kiosk Equipment Insta	allation (12 nos)									💻 L1	2(027)(1	2nos P2)	AVCSS/I	DOH/MOM K
	13 Outbd Private Car Kiosks (030) - 12 nos (Phase 2)														vate Car Kio
	0 L13(030)(12nos P2) - Cable Containment in Kiosks										L13()30)(12h	os P2) - C	able Cont	ainment in k ods Vehicle
	12 Outbd Goods Vehicle Kiosks (029) - 3 nos (Phase 2) 0 L12(029)(3nos P2) - Cable Laying and termination											T 1 1 1			d terminatio
	0 L12(029)(3nos P2) - Cable Splicing and Testing and Labeling										1 1 1 1		-	1 1-1 -1 1	and Testing a
	0 L12(029)(3nos P2) - AVCSS/DOH/MOM Kiosk Equipment Instal	lation (3 nos)										- i i i i	- Î - I - I - I		MOM Kiosk I
	0 L12(029)(3nos P2) - ODB & XDB Installation (3 nos)			1 - 1 - 2 - 2 - 2					+-+-+-+-	친구 지수 지수 지수 있는		- 16 21 - 1 - 1 -			nstallation (3
	0 L12(029)(3nos P2) - AIOP Installation (3 nos)										_1 1 1 1	1 1 1 1	1 1 1 1		tion (3 nos)
🔲 🔲 EM4980	0 L12(029)(3nos P2) - Loop Installation (15 nos)														ition (15 nos
	11 Outbd Coach Kiosks (009) - 4 nos (Phase 2)														
	12 Inbd Goods Vehicle Kiosks (028) - 3 nos (Phase 2)			+ - + - +		·			+ - + - + - + - + - + - + - + - + - + -	4 - 2 - 2 - 2 - 2			!!! !		ls Vehicle Ki
	0 L12(028)(3nos P2) - Cable Laying and termination										1 1 1 1			1 1-1 -1 1	d terminatio
	0 L12(028)(3nos P2) - Cable Splicing and Testing and Labeling 0 L12(028)(3nos P2) - AVCSS/DOH/MOM Kosk Equipment Instal	lation (3 noc)										<u>``` I I I I</u>	- Î - I - I - I		and Testing a
	0 L12(028)(3nos P2) - AVC33/DOH/MOUN Nosk Equipment instal 0 L12(028)(3nos P2) - ODB & XDB Installation (3 nos)														//OM Kiosk E nstallation (3
	0 L12(028)(3nos P2) - AIOP Installation (3 nos)										_ 1 1 1 1	- (²) - 1 - 1	1 1 1 1		on (3 nos)
	0 L12(028)(3nos P2) - Loop Installation (15 nos)			+ - + - +		· -									tion (15 nos)
	0 L12(028)(3nos P2) - Kiosk Equipment Configuration (3 nos)											1.1.1			ent Configu
🔲 🗐 EM5120	0 L12(028)(3nos P2) - Inbd Goods Vehicle Kiosks Installation Com	plete									\$ L12(0	28)(3nos	P2) - Inb	d Goods \	/ehicle Kiosk
	10 Shuttle Bus Kiosks (006) - 4 nos (Phase 2)										🗰 30-A	ug-17, Lo	cation 10	Shuttle Bu	us Kiosks (00
	0 L10(006)(4nos P2) - Cable Containment in Kiosks									J - J - J	L10(0	06)(4nos	s P2) - Ca	ble Conta	inment in Ki
	11 Inbd Coach Kiosks (010) - 2 nos (Phase 2)-1														
	11 Inbd Coach Kiosks (010) - 2 nos (Phase 2)-2	2 / Section III)													
	ite Test and Commissioning / Pre-SAT (Phase														
Programme No.: HZM	1B-DWP Actual Level of Eff	ort summarv	Llong Kong Zhuhai Masaa Duidar							Date	F	Revision	Che	ecked	Approved
Data Date: 14-Aug-15		ort v v summdry	Hong Kong-Zhuhai-Macao Bridge							4-Nov-16	Rev		WC		LC
Data Date. 14-Aug-13	Actual Work		Hong Kong Boundary Crossing							D-Mar-17		: 1.0a	WC		LC
	Remaining Work		Facilities - Automatic Vehicle						5-	May-17	Rev	: 1.0b	WC		LC
	Critical Remaining	Work	Clearance Support System (AVCSS)												
	♦ ♦ Baseline Milestone														
	♦ Milestone														

Contract No.: HY	//2013/06	Detail Work Programme																	Page	e 8 of
tivity ID	Activity Name		20	15			2	2016				201	7			201	18		20	2019
			Q2	Q3	Q4	Q1	Q2	Q	3 Q4	4 Q	21 (ຊ2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
💾 Site Acco	eptance Test (Phase 2 / Section III)																			
蜡 Operabil	ity Period Test (Phase 2 / Section III)																			
ng Complet	ion (Phase 2 / Section III)																			
🔁 Operatio	on (Phase 2 / Section III)																			
🖶 Defect L	iability Period (DLP)																			
蜡 Docume	nt Submission (Phase 2 / Section III)																			

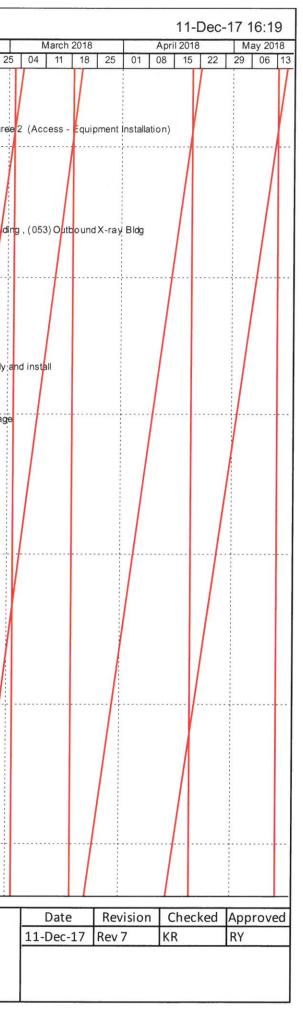
Programme No.: HZMB-DWP Data Date: 14-Aug-15 Actual Leve Primary Bas Actual Work Remaining V Critical Rem S Baseline Mil The Milestone	Work	 14-Nc 10-Mc 5-May
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Date	Revision	Checked	Approved
Nov-16	Rev.: 0	WC	LC
Mar-17	Rev.: 1.0a	WC	LC
1ay-17	Rev.: 1.0b	WC	LC

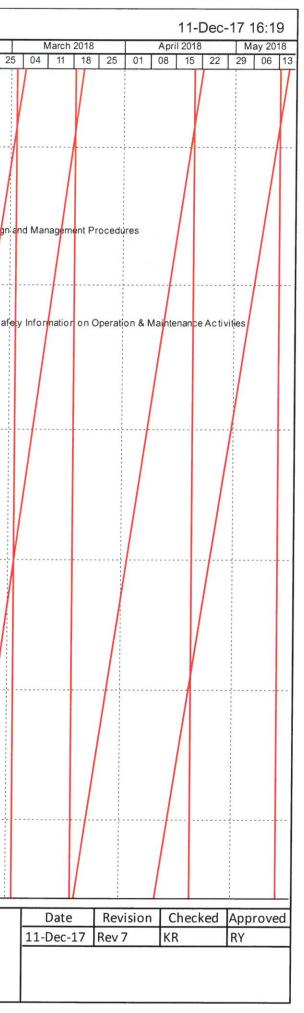
	ai-Macao Bridge Gantry Type X-Ray Vehicle	HZMB Overall
ID	Activity Name	IDecember 2017 January 2018 February 20 1 10 17 24 31 07 14 21 28 04 11 1
long Kong-Zh	uhai-Macao Bridge Gantry Type X-Ray Veh	
Contract No. H)	Y/2014/04 Hong Kong-Zhuhai-Macao Bridge Hong Kor	
Contract Awar	rd	
a 3	Letter of A cceptance	
— 4	Contract Signing	
Milestone		
Cost Centre	e B	
A1010	MS B1 - Submission of Draft Detailed Design Documents	
A 1020	MS B2 - Submission of Final Detailed Design Documents	
A1030	MS B3 - Acceptance of Factory Acceptance Tests (FAT)	
A 1040	MS B4 - Complete order and delivery on Site of all equipment	
📥 A1050	MS B5 - Acceptance of Integration Test	
A1060	MS B6 - Acceptance of Site Acceptance Test	
A1070	MS B7 - A cceptance of Operability Test	
A1080	MS B8 - Issue of Certificate of Completion for works under Cost	
	Centre B	
Cost Centre		
A 1090	MS C1 - Submission of Draft Detailed Design Documents	
👝 A1100	MS C2 - Submission of Final Detailed Design Documents	
— A1110	MS C3 - A cceptance of Factory Acceptance Tests (FAT)	
👝 A1120	MS C4 - Complete order and delivery on Site of all equipment	
😑 A1130	MS C5 - Acceptance of Integration Test	MS C5 - A cceptance of Integration Test,
😑 A1140	MS C6 - Acceptance of Site Acceptance Test	
😑 A1150	MS C7 - Acceptance of Operability Test	
🚍 A1160	MS C8 - Issue of Certificate of Completion for works under Cost Centre C	
Site Access		15-Jan-18, Site Access
Location 1	- Inbound Cargo Examination Building (037)	15-Jan-18, Location 1 - Inboun
= 100	Inbound Cargo Exam Bldg - Degree 2 (Access - Equipment Installation)	I Inbound Cargo Exam Bldg - De
97	Inbound Cargo Exam Bldg - Degree 1 inspection	
98	Inbound Cargo Exam Bldg - Degree 1 (Access - Wiring Works)	argo Exam Bldg - Degree 1 (Access - Wiring Works)
99	Inbound Cargo Exam Bldg - Degree 2 inspection	
Location 2	- Outbound Cargo Examination Building (023)	✓ 15-Jan-18, Location 2 - Outbo
1 02	Outbound Cargo Exam Bldg - Degree 1 inspection	
piscan	Actual Level of Effort Remai	(Particular Specification Preamble - Section E)
systems		1 of 14
An OS Systems Company	Actual Work \blacklozenge Milest	



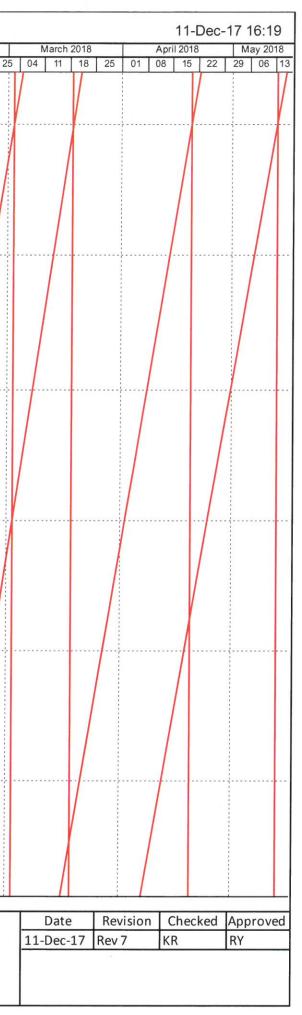
	i-Macao Bridge Gantry Type X-Ray Vehicle	HZMB Overall	
	Activity Name		oruary 2018
— 103	Outbound Cargo Exam Bldg - Degree 1 (Access - Wiring Works)	Outbound Cargo Exam Bldg - Degree 1 (Access - Wiri	
— 104	Outbound Cargo Exam Bldg - Degree 2 inspection		
— 105	Outbound Cargo Exam Bldg - Degree 2 (Access - Equipment	U Outbound Cargo Exam	am Bldg - D
Location 3 -	Installation) - Inbound X-ray Building (054)	Nov-17 A, Location 3 - Inbound X-ray Building (054)	
— 107	Inbound X-Ray Bldg - Degree 2 inspection - (Wiring Works)	und X-Ray Bldg - Degree 2 inspection - (Wiring Works))
— 108	Inbound X-Ray Bldg - Degree 2 (Access - Equipment Installation)	- Degree 2 (Access - Equipment Installation)	
Location 4 I	Inbound (059) / Outbound (058) X-ray Scan Building , (053) Out	Nov-17 A, Location 4 Inbound (059) / Outbound (058) X-r	ray Scan E
1 10	Inbound/Outbound X-Ray Scan Tunnel - Degree 1 inspection		
— 111	Inbound/Outbound X-Ray Scan Tunnel - Degree 1 (Access - Wiring Works & Equipment Installation)		
— 112	Outbound X-Ray Bldg - Degree 2 inspection - (Wiring Works)	bound X-Ray Bldg - Degree 2 inspection - (Wiring Works	(S)
— 113	Outbound X-Ray Bldg - Degree 2 (Access - Equipment	g - Degree 2 (Access - Equipment Installation)	
Design, build.	Installation) supply and install	19-Jan-18, Design	n, build, su
28	Commencement of design Works		
Detailed Desig	In Stage	19-Jan-18, Detaile	ed Design :
30	Kick-off Meeting		
— 31	Project Charter		
32	Liaison with Building Contractors on civil provisions required and		
	submission of Designs Affecting Structure Stability		
= 33	Interface and Coordination with interfacing contractor		
— 35	Presentation of the workflow and system design to interested parties (C&ED, EMSD, HyD, etc.)		1
— 36	Preparation of AIP S ubmissions, including checking by Independent Checking Engineer		
37	Submission of AIP Documents		
38	Comment by the Engineer		
— 39	Preparation and Re-submission of AIP Documents		
4 0	Approval by the Engineer		
— 41	AIP Complete		
4 2	Development of man-machine interface (MMI) with prototype of		
5 1	software Detailed Design Stage Complete (MS B.1, C.1 - 22 Sep 16)		
— A1170	Design submission and approval of Electrical Distribution for Gantry Equipment (Inbound(059) /Outbound (058) Scan tunnel		
Detailed Des	sign Approval Check (DDA)		
4 4	Preparation of DDA Submissions		
oiscan	Actual Level of Effort Remaining	Summary C7's formal access to the site = Degree 1/degree 2 completion (Particular Specification Preamble – Section E)	n date
systems		Nork 2 of 14	
An OfD Systems Company	Actual Work Mileston	2 of 14	



	-Macao Bridge Gantry Type X-Ray Vehicle	HZMB Overall	
D	Activity Name	December	, , , , , , , , , , , , , , , , , , , ,
— 45	Submission of DDA Documents (Part1)		17 24 31 07 14 21 28 04 11 18
— 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		
5 0	DDA Complete (MS B.2, C.2 - 22 Oct 16)		
Constructio	n Design and Management Procedures		19-Jan-18, Construction Desi
A1210	Review the Summarized Health & Safety Concerns, Hazard &		
A1220	Impact Summary, Pre-tender Health & Safety Plan Preparation and Submission of Construction Health & Safety	·······	
	Plan (Outlined Safety Management Plan 14 Elements per CSSM)		
💼 A1230	Review and update Health & Safety Information on Operation & Maintenance Activities	7	Review and update Health & S
91	interfaces for building 053 agreed		
92	interfaces for building 054 agreed		
93	interfaces for building 058 agreed	· · · · · · · · · · · · · · · · · · ·	
94	interfaces for building 059 agreed		
Procurement ar	nd 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)		
Local contract	commencement works		
Procurement	t of uniform		
7	Approval for uniform design		
8	Procurement of uniforms		
9	Issue uniform to staff		
Procurement	t of car		
piscan s y s t e m s An Old Systeme Conservy	Actual Level of Effort Remainin BL (IWP rev 2) Critical Re Actual Work \blacklozenge Milestone		te = Degree 1/degree 2 completion date fication Preamble – Section E) 3 of 14



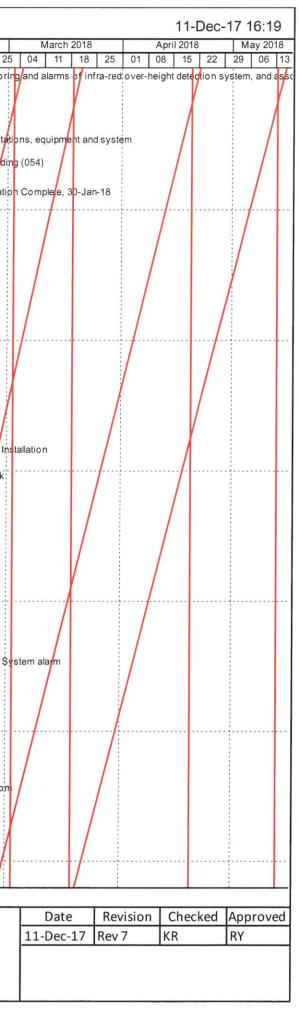
	ai-Macao Bridge Gantry Type X-Ray Vehicle		E-L - A
		December 2017 January 2018 3 10 17 24 31 07 14 21	February 20 28 04 11
11	Approval for car politicizations		
= 12	lead time for car preparation		
— 13	Delivery of car		••
Procurem	nent of Document Management System		
– 15	Approval for specifications of Document Management System		
— 16	Procurement and delivery		
17	Scope Document management System		
		· · · · · · · · · · · · · · · · · · ·	
WA 4 Acti			
— 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		
2 6	Commencement of WA4 Weekly checks and maintenance		
K-ray Syster	n Equipment		
Manufact	uring for X-ray System Equipment		
63	Regular Site & Facility Inspection for Gantry Installation		
64	preperation Submission of samples		
65	Approval of samples		
66	Manufacturing, software design, coding and testing		
Factory A	cceptance Tests (FAT) for X-ray System Equipment		
68	Assemble and Test System (Pre-FAT)		
69	Submission of FAT Plan		
69.5	Approval of FAT Plan		
7 0	FAT at Sto ke		
71	Submission of complete set of sample and associated supporting		1
70	structure for testing of X-ray imaging performance to Gov		
— 72	Submission of radiation source with protective enclosure to Government		
73	Submission and acceptance of FAT Report		
— 74	FAT Complete (MS B.3, C.3 - 7 Dec 16)		
iner	Actual Level of Effort Remai		
	🚺 💶 BL (IWP rev 2) 🛛 🗖 Critica	g Work (Particular Specification Preamble – Section 4 of 14	on E)
32 Systems Conta	🚽 🖌 Actual Work 🔶 🔶 Mileste	4 01 14	



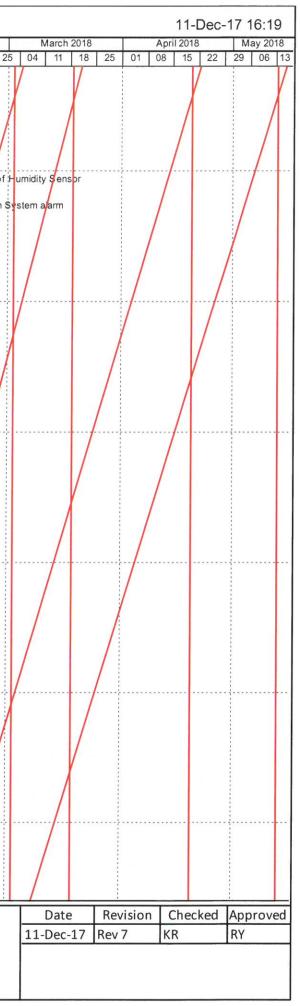
	hai-Macao Bridge Gantry Type X-Ray Vehicle	HZMB Overall		11-E	Dec-17 16
ID	Activity Name		Der 2017 January 2018 February 2018 17 24 31 07 14 21 28 04 11 18 25	March 2018 April 2018 5 04 11 18 25 01 08 15	Ma
Delivery	of X-ray System Equipment				22 23
— 76	Application for export permit	·····			
— 77	Arrange shipping, Packing				
- 78	Shipping (via sea) and import clearance declaration of Gantry				
- 78.5	Systems #1 Shipping (via sea) and import clearance declaration of Gantry				
79	Systems #2 Submission of List of Hazardous Materials				
- 80	Delivery/Arrival of accessories (rail, intercom, PA, Speakers,				
	CCTV,power and data cables)				
a 81	Delivery of Gantry #1 Type X-Ray Vehicle Inspection System Complete				
— 81.5	Delivery of Gantry #2 Type X-Ray Vehicle Inspection System Complete				
Radiation S	Shielding Doors and Other Auxiliary Systems and Equipment				
8 3	Submission of proposed RSE				
a 84	Structural calculation of sliding doors for submission to TPIDC for approval				
a 85	Approval by the Engineer and TPIDC				
— 86	Manufacturing of Doors				
87	Delivery of Radiation Shielding Doors to HK site				
8 8	Delivery of other Auxiliary Systems and Equipment to HK site				
👝 A1000	Complete delivery of Radiation Shielding Doors to HK site	·······			
Section I - G	antry Type X-ray Vehicle Inspection System for inbound u			23-Mar-18, Section I - G	antry Type)
212	Software Setup & Integration and Imaging Tests		Softward Se	tup & Integration and Imaging Tests	
213	Construction Works - Section I Complete			n Works - Section I Complete, 14-Feb-18	
A 1300	Permanent Power		Constructo	Tworks - Section I complete, 14-Feb-18	
	argo Examination Building (037)			23-Mar-18, Inbound Carg	E E E E E E E E E E E E
-				23-IMar-18, Inbound Carg	jo Examina
a 315	Cabling and cable containment				
a 316	Installation of X-ray System Image Analysis Workstations, UPS for workstations, equipment and system, Scanner and Printe		Installation of X-ray System mage An	nalysis Workstations, UPS for workstations,	equipment
a 317	Temporary Installation of X-ray System Image Analysis		Temporary Installation of X-ray Syste	m Image Analysis Workstations, JPS for wo	orkstations,
	Workstations, UPS for workstations, equipment and system, Scanner				
a 318	Dismantle of the temporary setup of System Image Analysis Workstations and associated equipment for Outbound Cargo			Dismantle of the tempora	iry setup of
😑 A1180	Exami Cabling and containment from Building (037) to Buildings (054),(059) & (058)	Building	gs (054).(059) & (058)		
— Scan Tunne			07-Feb-18, Scan T	unnel (059)	
116	Cabling and cable containment				
1 40	Scan Tunnel Installation Complete		Cabling and cable containment		
140			Scan Tunnel Install	lation Complete, 07-Feb-18	
	Actual Level of Effort Remaining Work	summary C7's formal access to the	site = Degree 1/degree 2 completion date	Date Revision Check	ed Appr
apisca	BL (IWP rev 2) Critical Remaining	(Particular Spe	ecification Preamble – Section E)	11-Dec-17 Rev 7 KR	RY
system			5 of 14		

	hai-Macao Bridge Gantry Type X-Ray Vehicle	HZME	3 Overall				1	1-Dec-17 16
ID	Activity Name		December 2017 10 17 24 3		uary 2018	March 2018	April 20	
📃 Installati	tion of X-ray System Equipment		10 17 24 3		11 10 23	04 11 18	23 01 08 1	3 22 25
— 118	Gantry Rails				······	······		
— 118.1	Hole Marking and Rebar Scanning							
— 118.2						/		
— 118.3						//		
— 118.4								
118.5								
— 118.6								
	909 908 909 909 909 909 909 909 909 909							
— 118.7								
— 118.8								
— 118.9						<u> </u>		
— 119	Linear Accelerator Pod and Modular Pod							
— 120	Vertical Boom Wheel Set and Vertical Boom				/ /			
— 121	Horizontal Boom							
— 122	Radioactivity threat detection system							
😑 A1240	0 Components installation, Wiring and drag Chain assembly							
Radiatio	on Shielding Sliding Door and Radiation Shielding Door		19-Dec-17	Radiation Shielding Sliding Door	and Radiation Shi	elding Door		
— 124	Unloading and storage of of Materials on site							/
— 125	Installation of Brackets and Hilti bolts							
— 126	Installation of Beam							
— 127	Installation of Door Box (Sliding & Swing Doors)							
127.5	Painting Works and clean up		Painting Work	s and clean up				
a 128	Testing & commissioning		Testing & c	ommissioning				
Installati	ion of other Auxiliary Systems and Equipment			06-	Feb 18, Installation	n of other Auxilia	ary Systems and Equi	ipment
— 130	PTZ CCTV camera (indoor type)							
— 131	PTZ CCTV camera (outdoor type)		utdoor type)					
— 132	Humidity Sensor			P Humidit	Sensor			
— 133	CCTV Control System							
— 134	Drop arm barrier, sto p/go light and connection to x-ray control			I Dropa	m barrier, stor/go	light and conne	ection to x-ray control	system
a 135	system Perimeter Alarm System and connection to the x-ray control						to the x-ray control sy	
— 136	system Infra-red over-height detection portal and connection to x-ray					/ /	and connection to x-ra	
	control system							
miner		aining Work summary	C7's formal access to the site = Degr		n date	Date 11-Dec-17		ecked Appr RY
pisca	BL (IWP rev 2) Critic	cal Remaining Work	(Particular Specification F 6 of		-	11-DCC-11		
An OSI Systems Com	Actual Work 🔶 🔶 Miles	stone	0.01					

	Activity Name		December 2017	January 2018 February 20
			10 17 24 31	1 07 14 21 28 04 11
= 137	Control, monitoring and alarms of infra-red over-height de system, and associated component	ection		Control, n
— 138	Personal X-ray Dosimeter			
= 139	UPS for workstations, equipment and system			UPS for v
X-ray Building				30-Jan-18, X-ray
= 211	X-ray Building Installation Complete			X-ray Building Ir
Cabling an	nd cable containment (054)			
— 143	Entry Kiosk			
— 144	Control Room			
— 145	Exit Kiosk			
— 146	Image Interpretation Room			
— 147	X-ray Examination System Operation Room			
1 48	Driver's Waiting Room	-		
-				
— 149	Training Room			
— 150	Cabling and cable containment complete			
Equipment	t Installation			29-Jan-18, Equi
Entry Ki	iosk			29-Jan-18, Entry
a 153	X-ray System Image Analysis Workstation		X-ray System	m Image Analysis Workstation
🖨 154	CCTV System		CCTV Syste	m
a 155	Intercom System		Intercom Sys	stem
a 156	Public Add ress System		Public Addre	uss System
— 157	Perimeter Alarm System		Perimeter Ala	arm System
— 158	Radiation Monitoring and Alarm System	-	ing and Alarm System	
— 159	Over Height Detection System alarm			Over Height Dete
— 160	Drop Arm Barrier controller			arrier controller
a 161	Radiation shielding sliding door controller			ielding sliding door controller
a 162	UPS for workstations, equipment and system		UPS for wor	kstations, equipment and system
a 163	Speaker		Speaker	
Control	Room			29-Jan-18, Contr
— 165	Video Wall (4nos. 55" LED)			
a 166	UPS for workstations, equipment and system		UPS for work	kstations, equipment and system
167	CCTV System		CCTV System	m
oiscar	Actual Level of Effort	Remaining Work summary	C7's formal access to the site = Degree (Particular Specification P	
<i>sigual</i>	El (IWP rev 2)	Critical Remaining Work	7 of 1	



	Activity Name		December 2017 January 2018 February 2018 10 17 24 31 07 14 21 28 04 11 18
🚍 168	Public Address System		Public Address System
= 169	Intercom System		Intercom System
— 170	Radiation Monitoring and Alarm System		ing and Alarm System
— 171	Perimeter Alarm system		Perimeter Alarm system
— 172	Wall-mounted Display Unit of Humidity Sensor		Wall-mounted Display Unit of
— 173	Over Height Detection System alarm		Over Height Detection
— 174	Drop Arm Barrier controller		Drop Arm Barrier controller
= 175	Radiation shielding sliding door controller		Radiation shielding sliding door controller
1 76	X-ray System Control Workstation		X-ray System Control Workstation
— 177	Scanner		Scanner
— 178	Printer		Printer
Exit Kios	k		18-Dec-17, Exit Kiosk
a 180	Intercom System		Intercom System
= 181	Radiation Monitoring and Alarm System		Radiation Monitoring and Alarm System
= 182	X-ray System Image Analysis Workstation		X-ray System Image Analysis Workstation
= 183	Radiation shielding sliding door controller		Radiation shielding sliding door controller
= 184	CCTV System		CCTV System
= 185	Public Address System		Public Address System
186	UPS for workstations, equipment and system		UPS for workstations, equipment and system
Image Inte	erpretation Room		18-Dec-17, Image Interpretation Room
a 188	Intercom System		Intercom System
= 189	Radiation Monitoring and Alarm System		pring and Alarm System
= 190	X-ray System Image Analysis Workstation		X-ray System Image Analysis Workstation
= 191	Printer		Printer Printer
= 192	UPS for workstations, equipment and system		UPS for workstations, equipment and system
X-ray Exa	mination System Operation Room		18-Dec-17, X-ray Examination System Operation Room
— 194	Server		
— 195	Server rack		
= 196	UPS for workstations, equipment and system		UPS for workstations, equipment and system
Driver's W	Vaiting Room		18-Dec-17, Driver's Waiting Room
— 198	CCTV System		CCTV Sysjem
= 199	Intercom System		Intercom System
	Actual Level of Effort	R 3 Worl	ess to the site = Degree 1/degree 2 completion date
scan	BL (IWP rev 2)	Critical Remaining Work	articular Specification Preamble – Section E) 8 of 14



ng Kong-Zhuhai	i-Macao Bridge Gantry Type X-Ray Vehicle	HZM	B Overall
ID	Activity Name		December 2017 January 2018 February 2018 10 17 24 31 07 14 21 28 04 11 18 2
200	Radiation Monitoring and Alarm System		Monitoring and Alarm System
— 201	Speaker		
— 202	UPS for workstations, equipment and system		UPS for workstations, equipment and system
Training	room		17-Jan-18, Training room
204	Projector screen (Screen size 106")		Projector screen (Screen size 10
— 205	Ceiling mounted projector		Ceiling mounted projector
— 206	X-ray System Training Workstation		X-ray System Training Works tati
— 207	Radiation Monitoring and Alarm System		h Monitoring and Alarm System
208	UPS for workstations, equipment and system		UPS for workstations, equipmen
2 09	Training aids		
210	Printer		Training aids
			Printer 16-Feb-
311	ntry Type X-ray Vehicle Inspection System for outboun		
	Software Setup & Integration and Imaging Tests		Software
312	Construction Works - Section II Complete		◆ Qonstru
A1270	Provide temporary Generator for Test and Commissioning		ator for Test and Commissioning
A 1290	Permanent Power		
Scan Tunnel (0			09-Feb-18, Sc
— 216	Cabling and cable containment		
= 239	Scan Tunnel Installation Complete		Scan Tunnel In
	of X-ray System Equipment		
— 218	Gantry Rails		
— 218.1	Hole Marking and Rebar Scanning		
— 218.2	Hole Drilling, base surface roughening & inspection		
218.3	Sole plates assembly, hold down bolt installation & resin curing		
218.4	Sole plates adjustments/leveling		
= 218.5	Rail assembly on top of sole plates & levelling		
— 218.6	Rail base support box enclosure, grouting & curing		
218.7	Rail alignment & torque tightening		
218.8	Rail welding & profiling		
2 18.9	Rail inspection		
— 219	Linear Accelerator Pod and Modular Pod		
220	Vertical Boom Wheel Set and Vertical Boom		
piscan s y s t e m s Ar O' System Consum	BL (IWP rev 2)	naining Work summary rical Remaining Work estone	C7's formal access to the site = Degree 1/degree 2 completion date (Particular Specification Preamble – Section E) 9 of 14

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	i-Macao Bridge Gantry Type X-Ray Vehicle	HZM	BOverall			
	Activity Name		December 20		February 2018 28 04 11 18 2	15
221	Horizontal Boom					T
222	Radioactivity threat detection system					
— A1260	Components installation Wiring and Drag Chain Assembly					
Radiation S	hielding Sliding Door and Radiation Shielding Door		15-	Dec-17, Radiation Shielding Slid	ing Door and Radiation SI	hiel
224	Installation of Brackets and Hilti bolts					
2 25	Installation of of Beam					
2 26	Installation of Door Box (Sliding & Swing Doors)					
226.5	Painting Works and Clean up		Pai	nting Works and Clean up		
227	Testing & commissioning					
Installation	of Auxiliary Systems and Equipment				08-Feb-18, Inst	alaí
229	PTZ CCTV camera (indoor type)					
2 30	PTZ CCTV camera (outdoor type)			CTV camera (outdoor type)		
2 31	Humidity Sensor			(under type)	Humidity Sensor	
2 32	CCTV Control System					
2 33	Drop arm barrier, sto p/go light and connection to x-ray control			Louates	CCTV Control S	/ste
233	System Perimeter Alarm System and connection to the x-ray control		x-ray contro	Isystem		
	system					
2 35	Infra-red over-height detection portal and connection to x-ray control system				Infra-red over-h	aigh
236	Control, monitoring and alarms of infra-red over-height detection system, and associated component				Control, monita	rng
2 37	Personal X-ray Dosimeter					
2 38	UPS for workstations, equipment and system				UPS for works	atio
X-ray Building	(053)				▼ 30-Jan-18, X-ray Buildi	ngi ((
310	X-ray Building Installation Complete				X-ray Building Installation	on C
Cabling and	cable containment (053)					
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 Interpretation Room					
246	Cabling and cable containment - X-ray Examination System Operation Room					
247	Cabling and cable containment - Driver's Waiting Room					
— 248	Cabling and cable containment - Training Room					
249	Cabling and cable containment complete					
Discan Systems	BL (IWP rev 2)	maining Work summary itical Remaining Work lestone	C7's formal access to the site (Particular Specifi	= Degree 1/degree 2 cc cation Preamble – Section 10 of 14		-

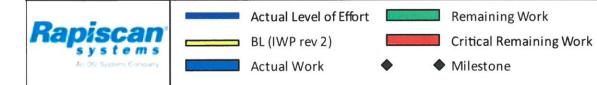
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25	04	11	18	25	01	08	15	22	29	06	13
Shie	elding D	Door									
nstala	ation o	f Auxi	iary S	Syster	ns and I	Equip	ment				
Syst	lem										
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	ons, e				d over-	neight	dete	ection	syster	n, and	as
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ation	Compl	ete, 3)-Jan-	-18							
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	11-	Dec-2	17	Rev	7	KR			RY		

Kong-Zhuh	ai-Macao Bridge Gantry Type X-Ray Vehicle	HZMB Overall	11-Dec-17 1
	Activity Name		December 2017 January 2018 February 2018 March 2018 April 2018 March 2018 March 2018 April 2018 March 2018 April 2018 March 2018 March 2018 April 2018 March 2018 April 2018 March 2018 April 2018 March 2018 April 2018 March 2018 March 2018 April 2018 March 2018 April 2018 March 2018 March 2018 April 2018 March 2018 March 2018 April 2018 March 2018 <th< th=""></th<>
Equipme	nt Installation		29-Jan-18, Equipment Installation
Entry H	Kiosk		29-Jan-18, Entry Kiosk
252	X-ray System Image Analysis Workstation		X-ray System Image Analysis Workstation
= 253	CCTV System		CCTV System
a 254	Intercom System		Intercom:System
a 255	Public Address System		Public Address System
a 256	Perimeter Alarm System		Perimeter Alarm System
a 257	Radiation Monitoring and Alarm System		
a 258	Over Height Detection System alarm		Over Height Detection System alarm
2 59			Drop Arm Barrier controller
a 260			Radiation shielding sliding door controller
a 261			UPS for workstations, equipment and system
a 262			Speaker
	al Room		18-Dec-17, Control Room
264	Video Wall (4nos. 55" LED)		
— 265	UPS for workstations, equipment and system		workstations, equipment and system
2 66	CCTV System		/stem
a 267			Public Address System
a 268			Intercom:System
— 269	Radiation Monitoring and Alarm System		
— 270	Perimeter Alarm system		Perimeter Alarm system
a 271	Wall-mounted Display Unit of Humidity Sensor		Wall-mounted Display Unit of Humidity Sensor
a 272			Over Height Detection System alarm
a 273	Drop Arm Barrier controller		Drop Arm Barrier controller
a 274	Radiation shielding sliding door controller		Radiation shielding sliding door controller
— 275	X-ray System Control Workstation		stem Control Workstation
a 276	Scanner		Scanner
a 277	Printer		Printer
Exit Kid	osk		18-Dec-17, Exit Kiosk
279	Intercom System		Intercom/System
a 280	Radiation Monitoring and Alarm System		
a 281	X-ray System Image Analysis Workstation		X-ray System Image Analysis Workstation
iscal			access to the site = Degree 1/degree 2 completion dateDateRevisionCheckedApple(Particular Specification Preamble – Section E)11-Dec-17Rev 7KRRY
ystem	5	aining Work	11 of 14
er OSI Systems Compi	🐡 🛛 🗖 Actual Work 🛛 🔶 Milestone		

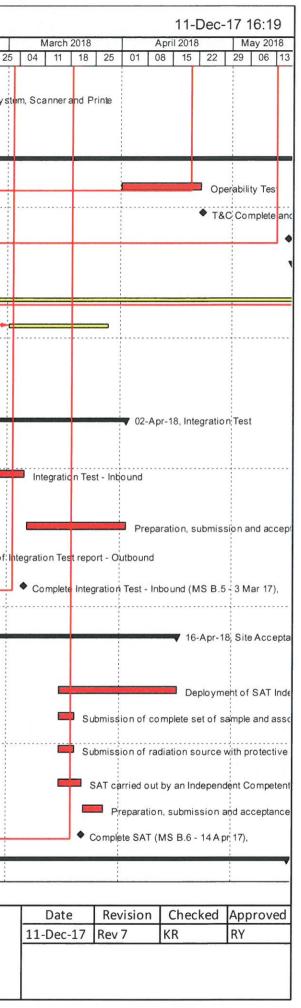
Kong-Zhuł	hai-Macao Bridge Gantry Type X-Ray Vehicle	HZME	3 Overall				11-Dec	-17 16:
	Activity Name		December 2017	January 2018 February 2018 31 07 14 21 28 04 11 18 25	March 201	and the second se	April 2018	May
a 282	2 Radiation shielding sliding door controller	-		shielding sliding door controller	04 11 18	8 25 01 0	08 15 22	29 0
— 283	3 CCTV System		CCTV Sy	stem				
a 284	4 Public Address System							
a 285	5 UPS for workstations, equipment and system		UPS for workst	ations, equipment and system				
	e Interpretation Room			7, Image Interpretation Room				
287			Intercom					
288			ring and Alarm Syste					
a 289								
				nage Analysis Workstation				
a 290			Printer					
a 291				ations, equipment and system				
💾 X-ray I	Examination System Operation Room		11-Dec-17, X-ra	y Examination System Operation Room				
— 293	3 Server							
a 294	4 Server rack							
a 295	5 UPS for workstations, equipment and system		UPS for workst	ations, equipment and system				
Driver	r's Waiting Room		18-Dec-17	7, Driver's Waiting Room				
😑 297	7 CCTV System		ССТУ БУ	stem				
2 98	3 Intercom System							
— 299	Radiation Monitoring and Alarm System							
— 300) Speaker							
= 301	1 UPS for workstations, equipment and system		UPS for workst	ations, equipment and system				
Trainin	ing room			10-Jan-18, Training room				
	Projector screen (Screen size 106")			Projector screen (Screen size 106")				
a 304			· · · · · · · · · · · · · · · · · · ·	Ceiling mounted projector				
a 305								
3 06				X-ray System Training Workstation				
		-						
a 307				UPS for workstations, equipment and system	n			
a 308				I Training aids				
a 309				Printer				
	Cargo Examination Building					▼ 23-Mar-18, Sec	ction III - Carg	go Exami
322	Construction Works - Section III Complete				•	Construction W	Norks Sectic	on III Con
A 1200	Application and approval of Supply Certificates for Permanent Power		val of Supply Certific	ates for Permanent Power				
Outbound C	Cargo Examination Building (023)		Examination Building	(023)				
	Actual Level of Effort	Pompining Work	C7's formal access to the site of	; ;]	Date	Revision	Checked	Annr
visca	273 ¹	Remaining Work summary	C7's formal access to the site = Deg (Particular Specification		11-Dec-17		KR	RY
system	15	Critical Remaining Work	12 0					
en OS/ Systema Comp	Actual Work 🔶 🔶	Milestone						

Rung-Znun	nai-Macao Bridge Gantry Type X-Ray Vehicle	HZMB Overall	
	Activity Name	December 2017	January 2018 February 2018 07 14 21 28 04 11 18 2
320	Cabling and cable containment		
321	Installation of X-ray System Image Analysis Workstations, UPS for workstations, equipment and system, Scanner and Printe	mage Analysis Workstati	ons, UPS for workstations, equipment and sys
A1190	Cabling and containment from Building (023) to Buildings (053),(058)		
-Site Testi	ng & Commissioning		
	Operability Test		
36	T&C Complete and Issurance of Certificate of Acceptance		
	Construction Works Complete		
Defect Liabi	ility Period for Construction Works		
359	Defect Liability Period		
360	Submission of Warranty Completion Test Plan		
361	Warranty Completion Test		
62	DLP Complete and issuance of Defect Liability Certificate		
363	Commencement of Maintenance Services		
Integration	Test		
325	Submission of Integration Test Plan		
326	Integration Test - Inbound		
26.1	Integration Test - Outbound	ration Test - Outbound	
327	Preparation, submission and acceptance of Integration Test report - Inbound		
327.1	Preparation, submission and acceptance of Integration Test report - Outbound		Preparation, submission and acceptance of I
327.5	Complete Integration Test - Inbound (MS B.5 - 3 Mar 17)		
327.6	Complete Integration Test - Outbound (MS C.5 - 3 Mar 17)	plete Integration Test - O	utbound (MS C.5 - 3 Mar 17),
Site Accept	ance Test		
329	Submission of SAT Plan		
330	Deployment of SAT Independent Competent Adviser		
331	Submission of complete set of sample and associated supporting structure for testing of X-ray imaging performance to Gov		
332	Submission of radiation source with protective enclosure to Government		
333	SAT carried out by an Independent CompetentAdvisor		
334	Preparation, submission and acceptance of SAT report		
334.5	Complete SAT (MS B.6 - 14 A pr 17)		
Training			

v summary



C7's formal access to the site = Degree 1/degree 2 completion date (Particular Specification Preamble – Section E) 13 of 14



	hai-Macao Bridge Gantry Type X-Ray Vehicle	· · · · · · · · · · · · · · · · · · ·	December 2017	January 2018	Feb
				31 07 14 21 2	_
338	Submission of Training Syllabus for approval				
339	Liaison with Engineer to confirm training schedule		o confirm training sch	edule	
= 340	Operator Training				
= 341	Trainer training				
a 342	Preventive maintenance training				
= 343	Comprehensive maintenance training				
3 44	Training Complete				
Other Doc	umentation				
a 347	Submission of WR1/WR1 (A) for all electrical installations				
a 348	Submission of draft O&M Manuals, Driver's Handbook, Catalog for Gantry and Record Drawings				
a 349	Submission of finalized O&M Manuals, Driver's Handbook, Catalog for Gantry and Record Drawings				
= 350	Submission of CD-ROM/DVD-ROM of O&M Manuals				
= 351	Submission of As-built Drawings				
= 352	Submission of Spare Parts and Special Tools Record				
= 353	Submission of Operator's Operating Instructions				
= 354	Submission of System Operation Instructions				
= 355	Submission of Software Manuals and Instruction Manual			25	
= 356	Submission of Equipment and Hardware Maintenance Instruction Manual				
357	Submission of Software License Installation Diskettes				

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Actual Level of Effort BL (IWP rev 2)

Remaining Work

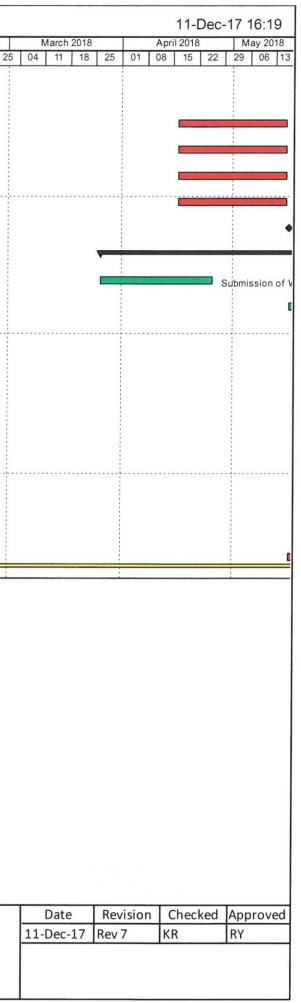
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Critical Remaining Work

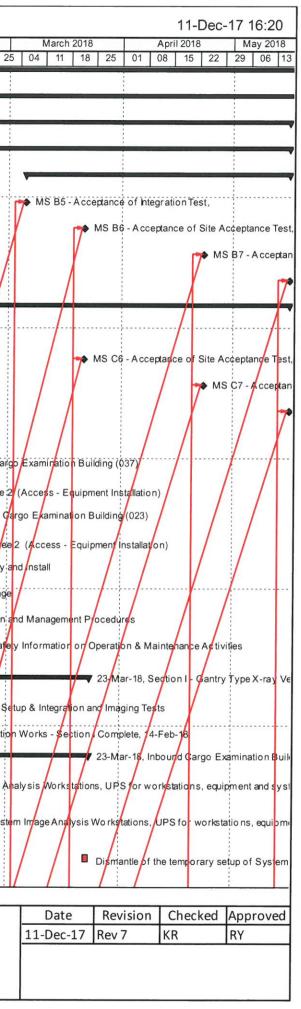
Actual Work

Milestone

C7's formal access to the site = Degree 1/degree 2 completion date (Particular Specification Preamble – Section E) 14 of 14



	ai-Macao Bridge Gantry Type X-Ray Vehicle	HZME	3 Overall	
ID	Activity Name		December 2017	January 2018 February 2018 31 07 14 21 28 04 11 18 2
ong Kong-Zl	huhai-Macao Bridge Gantry Type X-Ray Veh			
Contract No. H	IY/2014/04 Hong Kong-Zhuhai-Macao Bridge Hong Kor			
Contract Awa	ard			
Milestone				
Cost Cent	tre B			
😑 A1050	MS B5 - Acceptance of Integration Test		••••••••••••••••	
🚍 A1060	MS B6 - Acceptance of Site Acceptance Test			
🚍 A1070	MS B7 - Acceptance of Operability Test			
😑 A1080	MS B8 - Issue of Certificate of Completion for works under Cost Centre B			/
Cost Cent				
🚍 A1130	MS C5 - A cceptance of Integration Test		MS C5 - A cceptance	of Integration Test,
😑 A1140	MS C6 - Acceptance of Site Acceptance Test			
😑 A1150	MS C7 - Acceptance of Operability Test			
😑 A1160	MS C8 - Issue of Certificate of Completion for works under Cost Centre C			
Site Access				▼ 15-Jan-18, Site Access
Location 1	1 - Inbound Cargo Examination Building (037)			▼ 15-Jan-18, Location 1 Inbound Car
— 100	Inbound Cargo Exam Bldg - Degree 2 (Access - Equipment Installation)			Inbound Cargo Exam Bldg - Degree 2
Location 2	2 - Outbound Cargo Examination Building (023)			▼ 15-Jan-18, Location 2 - Outbound O
— 105	Outbound Cargo Exam Bldg - Degree 2 (Access - Equipment Installation)			Outbound Cargo Exam Bldg - Degree
Design, build	i, supply and install		-	19-Jan-18, Design, build, supply a
Detailed Des	ign Stage			19-Jan-18 Detailed Design Stage
Construct	tion Design and Management Procedures		· · · · · · · · · · · · · · · · · · ·	19-Jan-18, Construction Design
💼 A1230	Review and update Health & Safety Information on Operation & Maintenance Activities		7	Review and update Health & Safe
Section I - Ga	antry Type X-ray Vehicle Inspection System for inbound u			
212	Software Setup & Integration and Imaging Tests			Software Se
= 213	Construction Works - Section I Complete			
Inbound Car	go Examination Building (037)			
= 316	Installation of X-ray System Image Analysis Workstations, UPS for workstations, equipment and system, Scanner and Printe			Installation of X-ray System Image A
= 317	Temporary Installation of X-ray System Image Analysis Workstations, UPS for workstations, equipment and system, Scanner			Temporary Installation of X-ray Syste
= 318	Dismantle of the temporary setup of System Image Analysis Workstations and associated equipment for Outbound Cargo Exami			
	Actual Level of Effort Remain	ing Work summary	C7's formal access to the site = Deg	
pisca	BL (IWP rev 2) Critical	Remaining Work	(Particular Specification 1 o	
An OSI Systems Compa	Actual Work 🔶 Milesto	ne	10	



	the second se		
	Activity Name		December 2017 January 2018 February 2018 March 2018 10 17 24 31 07 14 21 28 04 11 18 25 04 11 18
📃 Scan Tunnel	(059)		10 17 24 31 07 14 21 28 04 11 18 25 04 11 18 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
116	Cabling and cable containment		Cabling and cable containment
— 140	Scan Tunnel Installation Complete		Scan Tunnel Installation Complete, 0
Radiation	Shielding Sliding Door and Radiation Shielding Door		19-Dec-17, Radiation Shielding Sliding Door and Radiation Shielding Door
127.5	Painting Works and clean up		Painting Works and clean up
a 128	Testing & commissioning		Testing & commissioning
	n of other Auxiliary Systems and Equipment		06-Feb-18, Installation of other Auxil
a 132	Humidity Sensor		Humidity Sensor
— 134	Drop arm barrier, sto p/go light and connection to x-ray control		
1 35	System Perimeter Alarm System and connection to the x-ray control		Drop arm barrier, stor do light and conn
	system		Perimeter Alarm System and connection
= 136	Infra-red over-height detection portal and connection to x-ray control system		Infra-red over-height detection portal
= 137	Control, monitoring and alarms of infra-red over-height detection system, and associated component		Control, monitoring and alarms of ini
— 139	UPS for workstations, equipment and system		
			UPS for workstations, equipment an
X-ray Buildin			30-Jan-18, X-ray Building (054)
= 211	X-ray Building Installation Complete		X-ray Building Installation Complete, 3D-Jan
Equipmen	t Installation		29-Jan-18, Equipment Installation
Entry K	iosk		29-Jan-18, Entry Kiosk
a 153	X-ray System Image Analysis Workstation		X-ray System Image Analysis Workstation
a 154	CCTV System		CCTV System
— 155	Intercom System		Intercom System
a 156	Public Address System		Public Address System
— 157	Perimeter Alarm System		Perimeter Alarm System
158	Radiation Monitoring and Alarm System		ng and Alarm System
— 159	Over Height Detection System alarm		Over Height Detection \$vstem alarm
— 160	Drop Arm Barrier controller		Drop Arm Barrier controller
— 161	Radiation shielding sliding door controller		Radiation shielding sliding door controller
a 162	UPS for workstations, equipment and system		UPS for workstations, equipment and system
	Speaker		
-			Speaker 20 km 10 Control Doc
Control			29-Jan-18, Control Room
a 166	UPS for workstations, equipment and system		UPS for workstations, equipment and system
a 167	CCTV System		CCTV System
piscar		ining Work Summary C7's for	ormal access to the site = Degree 1/degree 2 completion date (Particular Specification Preamble – Section F) Date 11-Dec-17
	BL (IWP rev 2)	al Remaining Work	(Particular Specification Preamble – Section E) 11-Dec-17

February 2018 28 04 11 18 25		March	2018		T	A	11 001				-
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	Tilme a'	11	18	25	01	08	15	22	29	06	13
O7-Feb-18, Scan ◆ Scan Tunnel Insta g Sliding Door and Radiation 06-Feb-18, Install Humidity \$ensor	llation (Shieldir	(059) Compl	lete, C br)7-Fet	-18						
Drop arm barrier, stop	/go ligh	t and c	onn	ection	to x-ra	ay cor	ntrol s	ystem			
Perimeter Alarm Syst	mand	conne	ction	to the	x-ray	contr	olsys	tem			
📕 Infra-red over-heig	nt detec	tion p	ortal	and co	nnecti	ion to	x-ra/	contro	Isyst	em	
Control, monitorin											ssc
UPS for workstati	ons, eq	uipme	nt and	dsyste	em						
30-Jan-18, X-ray Buildin											
X-ray Building Installation)-Jar	ъ-18							
✓ 29-Jan-18, Equipment Ins ✓ 29-Jan-18, Entry Kiosk;	tallation	1									
/orkstation											
Over Height Detection \$	stem ala	arm									
controller											
it and system											
🔻 29-Jan-18, Control Room											
t and system											
completion data		Date		Rev	/isior	nl	Chec	ked	App	rove	d
completion date ion E)		Dec-:		Rev		к			RY		1
				tak-2							

ong-znuna	i-Macao Bridge Gantry Type X-Ray Vehicle	HZMB Overall	11-Dec-17
	Activity Name	Fotal December 2017	January 2018 February 2018 March 2018 April 2018 M 31 07 14 21 28 04 11 18 25 04 11 18 25 01 08 15 22 29
= 168	Public Address System	-225 Public Add	
= 169	Intercom System	-225 Intercom:	System
— 170	Radiation Monitoring and Alarm System	ing and Alarm System	n
— 171	Perimeter Alarm system	-225 Perimeter	
= 172	Wall-mounted Display Unit of Humidity Sensor	-250	Wall-mounted Display Unit of Humidity Senspr
— 173	Over Height Detection System alarm	-255	Over Height Detection System alarm
— 174	Drop Arm Barrier controller		Barrier controller
— 175	Radiation shielding sliding door controller		shielding sliding door controller
— 176	X-ray System Control Workstation		
170177	Scanner		tem Control Workstation
	Alton (1, 0,0 Calif.	225 Scanner	
— 178	Printer	225 Printer	
Exit Kios		225 18-Dec-17.	, Exit Kiosk
a 180	Intercom System	225 Intercom S	ystem .
= 181	Radiation Monitoring and Alarm System	225 Radiation M	Monitoring and Alarm System
a 182	X-ray System Image Analysis Workstation	225 X-ray System	tem Image Analysis Workstation
= 183	Radiation shielding sliding door controller	225 Radiation s	shielding sliding door controller
a 184	CCTV System		tem
= 185	Public Address System	225 Public Addr	ress System
a 186	UPS for workstations, equipment and system	225 UPS for wo	orkstations, equipment and system
Image Int	terpretation Room	225 18-Dec-17,	Image Interpretation Room
— 188	Intercom System	225 Intercom Sy	ystem
— 189	Radiation Monitoring and Alarm System	oring and Alarm System	
= 190	X-ray System Image Analysis Workstation		em Image Analysis Workstation
191	Printer	225 Printer	
= 192	UPS for workstations, equipment and system		orkstations, equipment and system
	amination System Operation Room		X-ray Examination System Operation Room
1 96	UPS for workstations, equipment and system		
	Vaiting Room		orkstations, equipment and system Driver's Waiting Room
-10			
198	CCTV System	225 CCTV Syste	
= 199	Intercom System	25 IntercomSy	/stem
2 00	Radiation Monitoring and Alarm System	Monitoring and Alarm S	
2 02	UPS for workstations, equipment and system	25 UPS for wo	orkstations, equipment and system
	Actual Level of Effort Remaini	Work summary C7's formal access to the site = Degr	ree 1/degree 2 completion date Date Revision Checked App
scan	BI (IW/P rev 2)	maining Work (Particular Specification F	
stems	Actual Work Mileston	3 of	f 7

-	ai-Macao Bridge Gantry Type X-Ray Vehicle	HZMI	BOverall	11-Dec-17
)	Activity Name		December 2017	January 2018 February 2018 March 2018 April 2018 M 31 07 14 21 28 04 11 18 25 04 11 18 25 01 08 15 22 29
T raining	room			✓ 17-Jan-18, Training room
a 204	Projector screen (Screen size 106")			Projector screen (Screen size 106')
— 205	Ceiling mounted projector			Ceiling mounted projector
— 206	X-ray System Training Workstation			X-ray System Training Works tation
— 207	Radiation Monitoring and Alarm System		n Monitoring and Alar	
2 08	UPS for workstations, equipment and system			
				UPS for workstations, equipment and system
a 209	Training aids			Training aids
a 210	Printer			Printer Printer
Section II - Ga	ntry Type X-ray Vehicle Inspection System for outboun			16-Feb-18, Section II - Gantry Type X-ray Vehicle Inspection Sy
311	Software Setup & Integration and Imaging Tests			Software Setup & Integration and Imaging Tests
= 312	Construction Works - Section II Complete			Construction Works - Section II Complete, 16-Feb-18
_ Scan Tunnel	(058)			● 09-Feb-18, Scan Tunnel (058)
239	Scan Tunnel Installation Complete			◆ Scan Tunnel Iris allation Complete, 09-Feb-18
	Shielding Sliding Door and Radiation Shielding Door		15-Dec-17, Ra	Radiation Shielding Sliding Door and Radiation Shielding Door
226.5	Painting Works and Clean up		Painting Work	
	of Auxiliary Systems and Equipment			● 08-Feb-18, Instalation of Auxi lary Systems and Equipment
230	PTZ CCTV camera (outdoor type)		PTZ CCTV came	era (outdoor type)
= 231	Humidity Sensor			Humidity Sensor
232	CCTV Control System			CCTV Control System
= 235	Infra-red over-height detection portal and connection to x-ray control system			Infra-red over-height detection portal and connection to x-ray control sy
= 236	Control, monitoring and alarms of infra-red over-height detection system, and associated component			Control, monitoring and alarms of infra-red over-height detection system
= 238	UPS for workstations, equipment and system			UPS for workstations, equipment and system
X-ray Buildin	g (053)			30-Jan-18, X-ray Bullding (053)
= 310	X-ray Building Installation Complete			 X-ray Building Installation Complete, 3D-Jan-18
Equipment	Installation			29-Jan-18, Equipment Installation
Entry Ki	osk		· · · · · · · · · · · · · · · · · · ·	29-Jan-18, Entry Kiosk
252	X-ray System Image Analysis Workstation		X-ray System Ima	age Analysis Workstation
— 253	CCTV System		CCTV Syste	
2 54	Intercom System			
			Intercom Sy	
e 255	Public Address System		Public Addre	
a 256	Perimeter Alarm System		Perimeter A	Alarm System
				ree 1/degree 2 completion date Date Revision Checked App
piscar	31	emaining Work summary	C7's formal access to the site = Degr (Particular Specification F	
system		ritical Remaining Work	4 of	
An OSI Systems Company	🛛 🚺 Actual Work 🔶 🔶 N	Ailestone		

-	ai-Macao Bridge Gantry Type X-Ray Vehicle	HZMB O					11-	-Dec-17	7 16:
vity ID	Activity Name		December 2017	January 2018 February 2018 1 07 14 21 28 04 11 18	March 2		April 201		May 2
258	Over Height Detection System alarm			Over Height Detection					.0 1 0
— 259	Drop Arm Barrier controller		Drop Arm B	Barrier controller					
— 260	Radiation shielding sliding door controller		Radiation sl	hielding sliding door controller					
— 261	UPS for workstations, equipment and system		UPS for workstati	ions, equipment and system					
— 262	Speaker		Speaker						
Control			18-Dec-17,	Control Room					
265	UPS for workstations, equipment and system		workstations, equipmer	nt and system					
a 266	CCTV System			and system					
			ystem						
a 267	Public Address System		Public Addre						
a 268	Intercom System		Intercom Sy						
— 270	Perimeter Alarm system		Perimeter A	larm system					
— 271	Wall-mounted Display Unit of Humidity Sensor		Wall-mounte	ed Display Unit of Humidity Sensor					
a 272	Over Height Detection System alarm		Over Height	Detection System alarm					
— 273	Drop Arm Barrier controller		Drop Arm Ba	arrier controller					
2 74	Radiation shielding sliding door controller		Radiation sh	nielding sliding door controller					
275	X-ray System Control Workstation		stem Control Workstatio	on		-			
2 76	Scanner		Scanner						
277	Printer		Printer						
Exit Kio	sk		18-Dec-17, E	Exit Kiosk					
279	Intercom System		Intercom Sys	stem					
= 281	X-ray System Image Analysis Workstation			ge Analysis Workstation					
a 282	Radiation shielding sliding door controller			ielding sliding door controller					
283									
	CCTV System		CCTV Syste			1 1 1			
a 285	UPS for workstations, equipment and system			ons, equipment and system					
	nterpretation Room		18-Dec-17, Ir	mage Interpretation Room					
a 287	Intercom System		Intercom Sys	stem					
288	Radiation Monitoring and Alarm System		ing and Alarm System						
= 289	X-ray System Image Analysis Workstation		X-ray System Imag	ge Analysis Workstation					
😑 290	Printer		Printer						
🚍 291	UPS for workstations, equipment and system		UPS for workstatio	ons, equipment and system					
X-ray Ex	xamination System Operation Room		▼ 11-Dec-17, X-ray E	xamination System Operation Room					
295	UPS for workstations, equipment and system		UPS for workstatio	ons, equipment and system					
apiscar			C7's formal access to the site = Degree (Particular Specification P		Date 11-Dec-1		KR	ked A	Appro Y
system:	BL (IWP rev 2) Critical	Remaining Work	(Particular Specification P 5 of						<u>.</u>
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ong Kong-Zhuh	ai-Macao Bridge Gantry Type X-Ray Vehicle	HZN	/IB Overall	
ty ID	Activity Name		December 201	, , , , , , , , , , , , , , , , , , , ,
Driver'	s Waiting Room		10 17	24 31 07 14 21 28 04 11 18 25 04 11 Dec-17, Driver's Waiting Room
= 297	CCTV System			TV System
— 298	Intercom System			
— 300	Speaker			
— 301	UPS for workstations, equipment and system		UPS for	workstations, equipment and system
T rainin	g room			▼ 10-Jan-18, Training room
a 303	Projector screen (Screen size 106")			Projector screen (Screen size 106")
= 304	Ceiling mounted projector			Ceiling mounted projector
a 305	X-ray System Training Workstation			X-ray System Training Works tation
a 307	UPS for workstations, equipment and system			UPS for workstations, equipment and system
a 308	Training aids			Training aids
— 309	Printer			Printer
Section III - C	Cargo Examination Building			
322	Construction Works - Section III Complete			
	ng & Commissioning			
335	Operability Test			
3 36	T&C Complete and Issurance of Certificate of Acceptance			
3 45	Construction Works Complete			
	ity Period for Construction Works			
	Defect Liability Period			
a 360	Submission of Warranty Completion Test Plan			
a 361	Warranty Completion Test			le l
a 362	DLP Complete and issuance of Defect Liability Certificate			
a 363	Commencement of Maintenance Services			
Integration T				
326	Integration Test - Inbound			Integratic
— 327	Preparation, submission and acceptance of Integration Test report - Inbound			
327.1	Preparation, submission and acceptance of Integration Test report - Outbound			Preparation, submission and acceptance of Integration Tes
= 327.5	Complete Integration Test - Inbound (MS B.5 - 3 Mar 17)			Complete
3 27.6	Complete Integration Test - Outbound (MS C.5 - 3 Mar 17)		plete Integration	Test - Outbound (MS C.5 - 3 Mar 17),
Site Accepta	nce Test			
-	Actual Level of Effort Remain	ing Work summary	C7's formal access to the site =	Degree 1/degree 2 completion date Date
apiscal		Remaining Work		tion Preamble – Section E) 11-Dec-
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	hai-Macao Bridge Gantry Type X-Ray Vehicle	HZMB Overall			
)	Activity Name		December 2017 3 10 17 24	January 2018 31 07 14 21	Febr 28 04
= 330	Deployment of SAT Independent Competent Adviser		10 17 24	51 07 14 21	28 04
= 331	Submission of complete set of sample and associated supporting structure for testing of X-ray imaging performance to Gov				
= 332	Submission of radiation source with protective enclosure to Government				
= 333	SAT carried out by an Independent Competent Advisor				
= 334	Preparation, submission and acceptance of SAT report				
= 334.5	Complete SAT (MS B.6 - 14 A pr 17)				
Training					
a 340	Operator Training				
= 341	Trainer training				
= 342	Preventive maintenance training				
= 343	Comprehensive maintenance training				
— 344	Training Complete				
Other Docu	imentation				
= 347	Submission of WR1/WR1 (A) for all electrical installations				
= 348	Submission of draft O&M Manuals, Driver's Handbook, Catalog for Gantry and Record Drawings				
= 349	Submission of finalized O&M Manuals, Driver's Handbook, Catalog for Gantry and Record Drawings				
= 350	Submission of CD-ROM/DVD-ROM of O&M Manuals				
= 351	Submission of As-built Drawings				
= 352	Submission of Spare Parts and Special Tools Record				
= 353	Submission of Operator's Operating Instructions				
354	Submission of System Operation Instructions				
355	Submission of Software Manuals and Instruction Manual				
= 356	Submission of Equipment and Hardware Maintenance Instruction Manual				
= 357	Submission of Software License Installation Diskettes				

BL (IWP rev 2)

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Actual Level of Effort

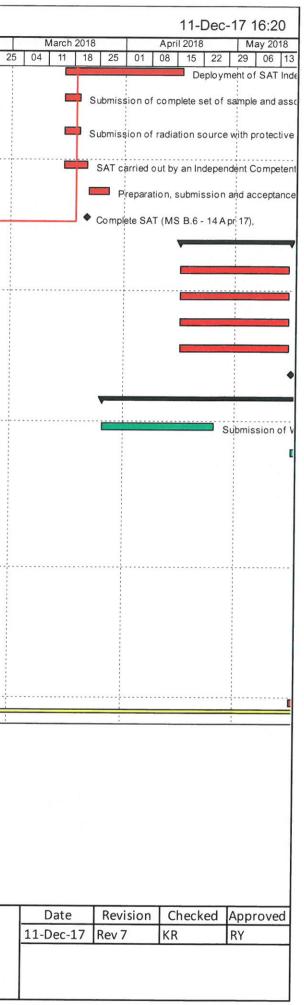
Remaining Work Critical Remaining Work

Milestone

v summary

C7's formal access to the site = Degree 1/degree 2 completion date (Particular Specification Preamble – Section E) 7 of 7

Actual Work





APPENDIX D

Event and Action Plan



Event/Action Plan for Air Quality

	EVENT		ACTI	ON	
		ET	IEC	ER	CONTRACTOR
-	CTION LEVEL			1	
1.	Exceedance for one sample	 Identify source, investigate the causes of exceedance and propose remedial measures; Inform IEC and ER; Repeat measurement to confirm finding; Increase monitoring frequency to daily. 	 Check monitoring data submitted by ET; Check Contractor's working method. 	1. Notify Contractor.	 Rectify any unacceptable practice; Amend working methods if appropriate.
2.	Exceedance for two or more consecutive samples	 Identify source; Inform IEC and ER; Advise the ER on the effectiveness of the proposed remedial measures; Repeat measurement s to confirm findings; Increase monitoring frequency to daily; Discuss with IEC and Contractor on remedial actions required; If exceedance continues, arrange meeting with IEC and ER; If exceedance stops, cease additional monitoring. 	 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. 	 Confirm receipt of notification of failure in writing; Notify Contractor; Ensure remedial measures properly implemented. 	 Submit proposals for remedial to ER within 3 working days of notification; Implement the agreed proposals; Amend proposal if appropriate.

	EVENT		ACTIO	ON	
		ET	IEC	ER	CONTRACTOR
LI	MIT LEVEL				
1.	Exceedance for one sample	 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. 	 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. 	 Confirm receipt of notification of failure in writing; Notify Contractor; Ensure remedial measures properly implemented. 	 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	 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. 	 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. 	 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. 	 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		
	ET	IEC	ER	CONTRACTOR
	 Notify IEC and Contractor; Identify source, investigate the causes of exceedance and propose remedial measures; Report the results of investigation to the IEC, ER and Contractor; Discuss with the Contractor and formulate remedial measures; Increase monitoring frequency to check mitigation effectiveness. 		notification of failure in writing; 2. Notify Contractor;	 Submit noise mitigation proposals to IEC; Implement noise mitigation proposals.
Limit Level	 Inform IEC, ER, EPD and Contractor; Identify source; Repeat measurements to confirm findings; Increase monitoring frequency; Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented; Inform IEC, ER and EPD the causes and actions taken for the exceedances; Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results; If exceedance stops, cease additional monitoring. 	remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly; 3. Supervise the	 Confirm receipt of notification of failure in writing; Notify Contractor; Require Contractor to propose remedial measures for the analysed noise problem; 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. 	 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.



APPENDIX E

Waste Flow Table



Name of Department: Highways Department

Contract No.: HY/2014/05



Monthly Summary Waste Flow Table for 2018

	Actu	al Quantities	of Inert C&D	Materials G	enerated Mo	nthly	Actual (Quantities of	C&D Wastes	Generated	Monthly
Month	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	0.053	0.053	0.000	0.000	0.053	0.000	0.000	0.000	0.000	0.000	0.515
February	0.010	0.010	0.000	0.000	0.010	0.000	0.000	0.000	0.000	0.000	0.232
March	0.017	0.017	0.000	0.000	0.017	0.000	0.000	0.000	0.000	0.000	0.358
April	0.187	0.187	0.000	0.000	0.187	0.000	0.000	0.000	0.000	0.000	0.319
May	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.165
June											
Sub-total	0.267	0.267	0.000	0.000	0.267	0.000	0.000	0.000	0.000	0.000	1.589
July											
August											
September											
October											
November											
December											
Total	0.267	0.267	0.000	0.000	0.267	0.000	0.000	0.000	0.000	0.000	1.589

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

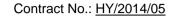
Total C&D waste generated (excluded excavated material) = g+h+i+j+k

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

 Monthly Summary Waste Flow Table for 2016 - Rev.00 - 22/01/2016
 page 1

Name of Department: Highways Department





	Forecast of Total Quantities of C&D Materials to be Generated from the Contract*											
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)		

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/m^3 ; bentonite slurry = 2.8 tonnes/m^3

(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

Monthly Summary Waste Flow Table for 2016 - Rev.00 - 22/01/2016



ATAL Technologies Ltd.

Contract No. **HY/2013/06** HKBCF Automatic Vehicle Clearence Support System Location: Artifical Island of HKBCF (**C8 Area**)

Monthly Summary Waste Flow Table for 2018

				disposal / 堕 (see Note 1				osal 生廢物		Waste to	o be recycle	d and returr	ned / 可再循	環利用或回	收的廢物			
Month	Pacl (e.g. ba 再用放	n the Work kage uckfilling) 仒工程 団填)	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		Total Quantity Generated 總生產量	
	(1)	(1	c)	(0	1)	(e)	(in to	nnes)	(in to	nnes)	(in to	nnes)	(in l	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	0.020	0.020	0.005	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.020	0.020
February	0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.015	0.005	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.015
March	0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.015	0.005	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.015
April	0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.015	0.005	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.015
Мау	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.010
June																		
July																		
August																		
September																		
October																		
November																		
December																		
Total	0.000	0.000	0.000	0.000	0.000	0.000	0.075	0.075	0.020	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.075	0.075

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



Gantry Type X-ray Vehicle Inspection System

Highways Department Monthly Summary of Waste Flow Table in 2018

	Actua		of Inert C&D	Materials G	enerated / In	nported	Actual Quan	tities of Othe	er C&D Mat	erials / Wast	es Generated
Month	Total Quantity Generated	Rocks and Large Broken	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/Card- board packaging	Plastic	Chemical Waste	Others. e.g. general refuse, plastic
	(in '000m ³)		(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000m ³)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)
Jan 2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Feb 2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mar 2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Apr 2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.3100
May 2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Jun 2018											
Half-year											
total											
Jul 2018											
Aug 2018											
Sep 2018											
Oct 2018											
Nov 2018											
Dec 2018											
Yearly Total											



APPENDIX F

Environmental Licenses and Permits



Environmental License/ Permits /Notification Register

							Date: May 20	018	
ltem No.	Permit/License or Registration Application			Permit/License/ Notification/	Permit/License/ Registration	Issue/Start Date	Expiry Date	Issuing Office	Remark
NO.	Work Area	Date	Reference	Registration Description	Registration Description Number		Dale		
1	All Areas	30 Jun 15	N/A	Environmental Permit to construct the Remaining Ancillary Buildings and Facilities and associated works of the Hong Kong Zhuhai and Macao Bridge Boundary Crossing Facilities	EP-353/2009/I	17 Jul 15	N/A	EPD	Superseded by EP-353/2009/J
2	All Areas	18 Feb 16	N/A	Environmental Permit to construct the Remaining Ancillary Buildings and Facilities and associated works of the Hong Kong Zhuhai and Macao Bridge Boundary Crossing Facilities	EP-353/2009/J	25 Feb 16	N/A	EPD	Superseded by EP-353/2009/K
3	All Areas	24 Mar 16	N/A	Environmental Permit to construct the Remaining Ancillary Buildings and Facilities and associated works of the Hong Kong Zhuhai and Macao Bridge Boundary Crossing Facilities	EP-353/2009/K	11 Apr 16	N/A	EPD	-
4	All Areas	30 Dec 15	N/A	Billing Account for disposal of construction waste	7024342	16 Feb 16	N/A	EPD	-

Environmental License/ Permits /Notification Register

							Date: May 20	018	
Item	Per	mit/License c Applica	or Registration ation	Permit/License/ Notification/	Permit/License/ Registration	Issue/Start Date	Expiry Date	Issuing Office	Remark
No.	Work Area	Date	Reference	Registration Description	Number	Date	Date		
5	All Areas	30 Dec 15	RABF-LTR- EPD- 000001	<u>Notification</u> that notifiable works are anticipated to commence (Form NA).	Acknowledge Receipt Ref. No. 397571	06 Jan 16	N/A	EPD	-
6	All Areas	04 Jan 16	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 16	N/A	EPD	-
7	All Areas	25 Jan 16	RABF-LTR- EPD- 000003	<u>CNP</u> 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. (Nondesignated area)	GW-RS0106-16	11 Feb 16	10 Aug 16	EPD	Superseded by GW-RS0476-16
8	All Areas	08 May 16	RABF-LTR- EPD- 000012	<u>CNP</u> 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. (Nondesignated area)	GW-RS0476-16	19 May 16	18 Nov 16	EPD	Superseded by GW-RS0666-16



Environmental License/ Permits /Notification Register

							Date: May 20	018	
Item	Per	mit/License c Applica	or Registration ation	Permit/License/ Notification/	Permit/License/ Registration	Issue/Start	Expiry	Issuing Office	Remark
No.	Work Area	Date	Reference	Registration Description	Number	Date	Date	Ū	
9	All Areas	16 Jun 16	RABF-LTR- EPD- 000015	<u>CNP</u> 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 16	03 Jan 17	EPD	Superseded by GW-RS0907-16
10	All Areas	18 Aug 16	RABF-LTR- EPD- 000018	<u>CNP</u> 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. (Nondesignated area)	GW-RS0907-16	01 Sep 16	28 Feb 17	EPD	Superseded by GW-RS1195-16
11	All Areas	16 Nov 16	RABF-LTR-EPD- 000020	<u>CNP</u> 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. (Nondesignated area)	GW-RS1195-16	30 Nov 16	29 May 17	EPD	Superseded by GW-RS1315-16
12	All Areas	08 Dec 16	RABF-LTR-EPD- 000023	<u>CNP</u> 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. (Nondesignated area)	GW-RS1315-16	22 Dec 16	21 Jun 17	EPD	Superseded by GW-RS0131-17

Environmental License/ Permits /Notification Register

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

	-			-	-		Date: May 20	018	
ltem No.		mit/License c Applica	or Registration ation	Permit/License/ Notification/	Permit/License/ Registration	Issue/Start Date	Expiry Date	Issuing Office	Remark
	Work Area	Date	Reference	Registration Description	Number				
13	WA3	13 Jan 17	RABF-LTR-EPD- 000026	<u>CNP</u> 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 17	26 Jul 17	EPD	Superseded by GW-RS0626-17
14	All areas	03 Feb 17	RABF-LTR-EPD- 000028	<u>CNP</u> 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 17	16 Aug 17	EPD	Superseded by GW-RS0306-17
15	All areas	20 Mar 17	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. (Nondesignated area)	GW-RS0306-17	05 Apr 17	02 Oct 17	EPD	Superseded by GW-RS0435-17
16	All areas	05 May 17	RABF-LTR-EPD- 000036	<u>CNP</u> 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 17	16 Nov 17	EPD	Superseded by GW-RS0710-17



LCAL H2642

Environmental License/ Permits /Notification Register

							Date: May 20)18	
ltem No.		mit/License c Applica	or Registration ation	Notification/	Permit/License/ Registration	Issue/Start Date	Expiry Date	Issuing Office	Remark
110.	Work Area	Date	Reference	Registration Description	Number	Date	Duit		
17	WA3	28 Jun 17	RABF-LTR-EPD- 000041	<u>CNP</u> for the use of powered mechanical equipment for the purpose of carry out works from 19:00 to 23:00. (Non-designated area)	GW-RS0626-17	27 Jul 17	26 Jan 18	EPD	Expired
18	All areas	03 Aug 17	RABF-LTR-EPD- 000042	<u>CNP</u> 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-RS0710-17	21 Aug 17	16 Feb 18	EPD	Expired
19	WA3	11 Jan 18	RABF-LTR-EPD- 000046	<u>CNP</u> for the use of powered mechanical equipment for the purpose of carry out works from 19:00 to 23:00. (Non-designated area)	GW-RS0050-18	27 Jan 18	26 Jul 18	EPD	-
20	All areas	31 Jan 18	RABF-LTR-EPD- 000048	<u>CNP</u> 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. (Nondesignated area)	GW-RS0112-18	17 Feb 18	16 Aug 18	EPD	-



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LCAL H2642

Environmental License/ Permits /Notification Register

Contract No. HY/2013/06 – Hong Kong Zhuhai and Macao Bridge - HKBCF – Automatic Vehicle Clearance Support System

	Date: 30 May 2018										
lte m	Permit/License or Registration Application			Permit/License/ Notification/	Permit/License/ Registration	Issue/Start Date	Expiry	Issuing Office	Remark		
No.	Work Area	Work Area Date Reference		Registration Description	5		Date				
1	HZMB-HK Boundary Crossing Facilities	31 July 2015	WFG14980	Disposal of Construction Waste Billing Account	7023015	20 August 2015		EPD			
2	HZMB-HK Boundary Crossing Facilities	14 Nov 2017	EP831/N09/R S1037-17	Construction Noise Permit	GW-RS1037-17	1 Dec 2017	30 May 2018	EPD			

Rapiscan Systems Pte Ltd (RS)



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: May 2	2018	
ltem	Permit/License or Registration Application			Permit/License/ Notification/	Permit/License/ Registration	Issue/Start	Expiry	Issuing Office	Remark
No.	Work Area	Date	Reference	Registration Description	Number	Date	Date		
1	All Areas	23 Aug 2016	N/A	Billing Account for disposal of construction waste	7025930	20 Sep 2016	N/A	EPD	
2	Building 058,059	27 Jul 2017	N/A	Construction Noise Permit(CNP)	GW-RS0640-17	6 Aug 2017	4 Feb 2018	EPD	



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	 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 µgm ⁻³ and 260 µgm ⁻³ , respectively)	\checkmark
S5.5.6.2	A2	 Proper watering of exposed spoil should be undertaken throughout the construction phase: Any excavated or stockpile of dusty material should be covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading; 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 µgm ⁻³ and 260 µgm ⁻³ , respectively)	V

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?	for the measures to achieve?	Implementation Status
S5.5.6.2	A2	 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; 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 µgm ⁻³ and 260 µgm ⁻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	 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 µgm ³ and 260 µgm ³ , respectively)	V
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	V
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	V
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	 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 µgm⁻³ and 260 µgm⁻³, respectively) 	V (The dust monitoring at AMS6 under EM&A Programme for the Contract is covered by Contract No. HY/2011/03 while the dust monitoring at AMS7B under EM&A Programme for the Contract is covered by Contract No. HY/2013/01.)

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	measures?	What requirements or standards for the measures to achieve?	Implementation Status
S5.5.7.1	A6	 The following mitigation measures should be adopted to prevent fugitive dust emissions for concrete batching plant: 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	 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 µgm⁻³ and 260 µgm⁻³, respectively) 	N/A
S5.5.2.7	A7	 The following mitigation measures should be adopted to prevent fugitive dust emissions at barging point: 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
Construct		(Air borne)						
S6.4.10	N1	 Use of good site practices to limit noise emissions by considering the following: 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 aminimum; 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 officer 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	 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	Noise Control Ordinance Annex 5, TM- EIA	N/A
\$6.4.12	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	 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	stage	 Noise Control Ordinance & its TM Annex 5, TM- EIA 	V
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	Noise Control Ordinance Annex 5, TM- EIA	V
1	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	 Noise Control Ordinance Annex 5, TM- EIA 75dB(A) for residential premises 	√ (The noise monitoring at NMS2 and NMS3B under EM&A programme for the Contract are covered by Contract No. HY/2013/01.)
Sediment	·			L	L		•	
S7.3	S1	 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	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 Man	agement (Construction Waste)		•				
S8.3.8	WM1	 Construction and Demolition Material The following mitigation measures should be implemented in handling the waste: Maintain temporary stockpiles and reuse excavated fill material for backfilling andreinstatement; 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	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
\$8.3.9- \$8.3.11	WM2	 <u>C&D Waste</u> 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 	Good site practice to minimize the waste generation and recycle the C&D materials as far as practicable so as to reduce the amount for final disposal	Contractor	All construction sites	Construction stage	 Land (Miscellaneous Provisions) Ordinance Waste Disposal Ordinance ETWB TC 19/2005 	V
		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.						
\$8.2.12- \$8.3.15	WM3	 <u>Chemical Waste</u> 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 	Control the chemical waste and ensure proper storage, handling and disposal.	Contractor	All construction sites	Construction stage	 Waste Disposal (Chemical Waste) General) Regulation Code of Practice on the Packaging, Labelling and Storage of Chemical Waste 	~
		that area, whichever is the greatest; have adequate ventilation; covered to prevent rainfall entering; and arranged so that incompatible materials are adequately separated.						

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
		 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. 						V
S8.3.16	WM4	 <u>Sewage</u> 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	Waste Disposal Ordinance	V
S8.3.17	WM5	 General Refuse 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 bylaw. 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	• 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 Qual	ity (Constr	uction Phase)						
Water Qual		 uction Phase) Land Works General construction activities on land should also be governed by standard good working practice. Specific measures to be written into the works contracts should include: wastewater from temporary site facilities should be controlled to prevent direct discharge to surface or marine waters; sewage effluent and discharges from on-site kitchen facilities shall be directed to Government sewer in accordance with the requirements of the W PCO 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; 	To control construction water quality	Contractor	Land-based works areas	Construction stage	TM-EIAO	
		 discharges of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system; 						

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	 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	ecommended Mitigation Measures the measures address implement the measures address measures?		Location of the measures	When toWhat requirementsimplementor standards forthethe measures tomeasures?achieve?		Implementation Status
Ecology (C	onstructio	n Phase)						
S10.7	E4	 Watering to reduce dust generation; prevention of siltation freshwater habitats; Site runoff should be desilted, to redu the potential for suspended sediments, organics and oth contaminants to enter streams and standing freshwater 	ce Land-based works areas	Contractor	Land-based works areas	During construction	TM-Water	V
S10.7	E5	Good site practices, including strictly following the permitt works hours, using quieter machines where practicable, a avoiding excessive lightings during night time		Contractor	Land-based works areas	During construction		V
S10.7	E8	 Control vessel speed Skipper training Predefined and regular routes for working vessels; avoid Broth Islands. 	Minimise marine traffic disturbance on dolphins er	Contractor	Marine Traffic	During construction		N/A
Fisheries	1			1				1
S11.7	F4	 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	 General design measures include: 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; Finetuning the location of the bridge columns to avoid visually-sensitivelocations; 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 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 buildings 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?	Implementatior Status
Landscape	& Visual (C	Construction Phase)						
S14.3.3.3	LV2	 Mitigate both Landscape and Visual Impacts G1. Grass-hydroseed bare soil surface and stock pile areas. G2. Add planting strip and automatic irrigation system if appropriate at some portions of bridge footbridge to screen bridge and traffic. (This mitigation measure is not applicable to the Contract.) G3. Not applicable as this is for HKLR. G4. For HKBCF, providing aesthetic architectural design on the related buildings (e.g. similar materials for PCB building facade to Airport buildings, roof planting and subtle materials for other facilities buildings and so on), and the related infrastructure (e.g. parapet planting and transparent cover for elevated footbridges) to provide harmonious atmosphere of the HKBCF. 	Minimise visual & landscape impact	Contractor	Buildings 023, 032, 044 and 045	Construction stage		√ Construction phase
		 G5. Vegetation reinstatement and upgrading to disturbed areas. G6. Maximizing new tree shrub and other vegetation planting to compensate tree felled and vegetation removed. G7. Providing planting area around peripheral of HKBCF for tree planting screening effect. (This mitigation measure is not applicable to the Contract.) 						
		 G8. Plant salt-tolerant native and shrubs etc along the planter strip at affected seawall. (This mitigation measure is not applicable to the Contract.) 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 enchance "natural-look" of the new coastline. (This mitigation measure is not applicable to the Contract.) 						
S14.3.3.3	LV3	Mitigate Visual Impacts V1. Minimize time for construction activities during construction period. V2. Provide screen hoarding at the portion of the project site / works areas / storage areas near VSRs who have close low-level views to the Project during HKBCF construction.						√ 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		EIAO Guidance Note No.4/2002 TM-EIAO	\checkmark
S15.5 - S15.6	EM2	 An Environmental Team needs to be employed as per the EM&A Manual. Prepare a systematic Environmental Management Plan to ensure effective implementation of the mitigation measures. 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		EIAO Guidance Note No.4/2002 TM-EIAO	V

Legends: $\sqrt{}$ = 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	6	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 Inspction Schedule for June 2018

	Monday	Tueday	Wednesday	Thursday	Friday	Saturday	Sunday
Time					1-Jun	2-Jun	3-Jun
Time	4-Jun	5-Jun	6-Jun	7-Jun	8-Jun	9-Jun	10-Jun
	Site Inspection						
Time	11-Jun	12-Jun	13-Jun	14-Jun	15-Jun	16-Jun	17-Jun
			Site Inspection				
Time	18-Jun	19-Jun	20-Jun	21-Jun	22-Jun	23-Jun	24-Jun
	Site Inspection						
Time	25-Jun	26-Jun	27-Jun	28-Jun	29-Jun	30-Jun	
	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 Inspction Schedule for June 2018

	Monday	Tueday	Wednesday	Thursday	Friday	Saturday	Sunday
Time					1-Jun	2-Jun	3-Jun
Time	4-Jun	5-Jun	6-Jun	7-Jun	8-Jun	9-Jun	10-Jun
	Site Inspection						
Time	11-Jun	12-Jun	13-Jun	14-Jun	15-Jun	16-Jun	17-Jun
			Site Inspection				
Time	18-Jun	19-Jun	20-Jun	21-Jun	22-Jun	23-Jun	24-Jun
	Site Inspection						
Time	25-Jun	26-Jun	27-Jun	28-Jun	29-Jun	30-Jun	
	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 Inspction Schedule for June 2018

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