

Our ref JFP/TK/bw/T355861/02/02/L034

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■ Terence.Kong@mottmac.com.hk

Your ref

Ramboll Environ Hong Kong Limited Room 2403, 24/F, Jubilee Centre 18 Fenwick Street Wanchai, Hong Kong

> 9 October 2015 By Email

Attn: Mr. Raymond Dai – Independent Environmental Checker

Dear Sir.

Contract No. HY/2013/04 Hong Kong-Zhuhai-Macao Bridge (HZMB)
Hong Kong Boundary Crossing Facilities – Infrastructure Works Stage II (Southern Portion)
Quarterly EM&A Report for July 2015 to September 2015

In accordance with Section 16.4 of the updated EM&A Manual for Hong Kong Boundary Crossing Facilities (Version 1.0) covering the captioned contract, we are pleased to submit the certified Quarterly EM&A Report for July 2015 to September 2015 for your verification.

Yours faithfully For MOTT MACDONALD HONG KONG LIMITED

Terence Kong

Environmental Team Leader

Encl.

cc. AECOM – Mr. Alfred Cheng (By Email)

China State Construction Engineering (Hong Kong) Ltd. – Mr. Gary Ng (By Email)



Ref.: HYDHZMBEEM00\_0\_3452L.15

9 October 2015

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. Alfred Cheng

Dear Sir,

Re: Agreement No. CE 48/2011 (EP)

**Environmental Project Office for the** 

HZMB Hong Kong Link Road, HZMB Hong Kong Boundary Crossing Facilities,

and Tuen Mun-Chek Lap Kok Link - Investigation

Contract No. HY/2013/04 - HZMB HKBCF - Infrastructure Works Stage II

(Southern Portion)

**Quarterly EM&A Report for July 2015 to September 2015** 

Reference is made to the Environmental Team's submission of the Quarterly Environmental Monitoring & Audit Report for July 2015 to September 2015 certified by the ET Leader (ET's ref.: "JFP/TK/bw/T355861/02/02/L034" dated 9 October 2015) and provided to us via e-mail on 9 October 2015.

We are pleased to inform you that we have no adverse comment on the captioned Quarterly EM&A Report for July 2015 to September 2015.

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

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

Kong with

Raymond Dai

Independent Environmental Checker

c.c. HyD Mr. Matthew Fung (By Fax: 3188 6614)
HyD Mr. Horace Hong (By Fax: 3188 6614)
MMHK Mr. Terence Kong (By Fax: 2827 1823)
CSCE Mr. Eddie Tang (By Fax: 2459 4336)

Internal: DY, YH, LP, CL, ENPO Site

Q:\Projects\HYDHZMBEEM00\02\_Proj\_Mgt\02\_Corr\HYDHZMBEEM00\_0\_3452L.15.doc

Contract No. HY/2013/04 HZMB HKBCF – Infrastructure Works Stage II (Southern Portion)
Quarterly EM&A Report for July 2015 to September 2015
October 2015 China State Construction Engineering (Hong Kong) Limited



Quarterly EM&A Report for July 2015 to September 2015

### Contents

Chapter	Title	Page
Executive	Summary	
1	Introduction	1
1.1	Basic Project Information	1
1.2	Project Organisation	1
1.3	Construction Programme	1
1.4	Construction Works undertaken during the Reporting Period	2
2	EM&A Requirements	3
2.1	Summary of EM&A Requirements	3
2.2	Monitoring Requirements	
2.3	Action and Limit Levels	
2.4	Event and Action Plans	4
2.5	Mitigation Measures	4
3	Environmental Monitoring and Audit	5
3.1	Air Quality Monitoring Results	5
3.2	Noise Monitoring Results	5
3.3	Implementation of Environmental Measures	
3.4	Advice on the Solid and Liquid Waste Management Status	
3.5	Environmental Licenses and Permits	6
4	Summary of Exceedances, Complaints, Notification of Summons and Successfu	I Prosecution 7
4.1	Summary of Exceedance of the Environmental Quality Performance Limit	7
4.2	Summary of Complaints, Notification of Summons and Successful Prosecution	
5	Comments, Recommendations and Conclusions	8
5.1	Comments	8
5.2	Recommendations	8
5.3	Conclusions	8
Tables		
Table 1.1:	Contact Information of Key Personnel	1
Table 2.1:	Construction Dust Monitoring Locations	
Table 2.2:	Action and Limit Levels for 1-hour TSP	
Table 2.3:	Action and Limit Levels for 24-hour TSP	
Table 2.4:	Action and Limit Level for Construction Noise	
Table 4.1:	Summary of Environmental Complaints for the Reporting Month	
Figures		
Figure 1	Location of Air Quality Monitoring Stations	

Location of Noise Monitoring Stations

Figure 2



Quarterly EM&A Report for July 2015 to September 2015

#### **Appendices**

Appendix A. Location of Works Areas

Appendix B. Project Organization for Environmental Works

Appendix C. Construction Programme Appendix D. Event and Action Plan

Appendix E. Implementation Schedule for Environmental Mitigation Measures (EMIS)

Appendix F. Site Audit Findings and Corrective Actions

Appendix G. Waste Flow Table

Appendix H. Environmental Licenses and Permits

Appendix I. Statistics on Environmental Complaints, Notification of Summons and Successful Prosecutions



Quarterly EM&A Report for July 2015 to September 2015

### **Executive Summary**

This Quarterly Environmental Monitoring and Audit (EM&A) Report is prepared for Contract No. HY/2013/04 "Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Infrastructure Works Stage II (Southern Portion)" (hereafter referred to as "the Contract") for the Highways Department of Hong Kong Special Administrative Region (HKSAR). The Contract was awarded to China State Construction Engineering (Hong Kong) Limited (hereafter referred to as "the Contractor") and Mott MacDonald Hong Kong Limited (MMHK) was appointed as the Environmental Team (ET) by the Contractor.

The Contract is part of the "Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities" (HZMB HKBCF) Project which is a "Designated Project" under Schedule 2 of the Environmental Impact Assessment (EIA) Ordinance (Cap. 499) and for which an EIA Report (Register No. AEIAR-145/2009) was prepared and approved. The current Environmental Permit (EP) for HKBCF, namely No. EP-353/2009/I, was issued on 17 July 2015. These documents are available through the EIA Ordinance Register. Commencement of the Contract took place on 13 March 2015 and the construction works commenced on 13 July 2015.

Mott MacDonald Hong Kong 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 for the Contract. This is the 1<sup>st</sup> Quarterly EM&A Report for the Contract which summaries findings of the EM&A works during the reporting period from 13 July to 30 September 2015 (the "reporting period").

#### **Environmental Monitoring and Audit Progress**

The monthly EM&A programme was undertaken in accordance with the Updated EM&A Manual for HKBCF (Version 1.0). It should be noted that the air quality and noise monitoring works for the Contract are covered by Contract No. HY/2010/02 "Hong Kong-Zhuhai-Macao Bridge HKBCF – Reclamation Works" and Contract No. HY/2011/03 "Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road – Section between Scenic Hill and HKBCF". The ET of the Contract or another ET of the HZMB project is required to conduct impact air quality monitoring at AMS6 and AMS7A and noise monitoring at NMS2 and NMS3B as part of EM&A programme if these monitoring stations are no longer covered under Contract Nos. HY/2010/02 and HY/2011/03. However, this is subject to ENPO's final decision on which ET should carry out the monitoring work at these stations.

The dates of site inspection during the reporting period are listed below:

16, 23 and 30 July, 5, 13, 20 and 25 August, and 2, 11, 17, 24 and 29 September 2015

#### 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 is reported in the monthly EM&A report prepared by Contract No. HY/2011/03.

There was no Action and Limit Level exceedance of 1-hr TSP level and 24-hr TSP level recorded at station AMS7A by the Environmental Team of Contract No. HY/2010/02 during the reporting period.

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



Quarterly EM&A Report for July 2015 to September 2015

#### Complaint Log

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

Log No.	Environmental Complaint Ref. No.	Date of Complaint Receipt	Description
001	ENPO-C0086	13 July 2015	Noise

After investigation, it was concluded that the complaint was not related to Contract No. HY/2013/04.

#### Notifications of Summons and Successful Prosecutions

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

#### **Reporting Changes**

There was no reporting change during the reporting period.



Quarterly EM&A Report for July 2015 to September 2015

### 1 Introduction

#### 1.1 Basic Project Information

This Quarterly Environmental Monitoring and Audit (EM&A) Report is prepared for Contract No. HY/2013/04 "Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Infrastructure Works Stage II (Southern Portion)" (hereafter referred to as "the Contract") for the Highways Department of Hong Kong Special Administrative Region (HKSAR). The Contract was awarded to China State Construction Engineering (Hong Kong) Limited (hereafter referred to as "the Contractor") and Mott MacDonald Hong Kong Limited (MMHK) was appointed as the Environmental Team (ET) by the Contractor.

The Contract is part of the "Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities" (HZMB HKBCF) Project which is a "Designated Project" under Schedule 2 of the Environmental Impact Assessment (EIA) Ordinance (Cap. 499) and for which an EIA Report (Register No. AEIAR-145/2009) was prepared and approved. The current Environmental Permit (EP) for HKBCF, namely No. EP-353/2009/I, was issued on 17 July 2015. These documents are available through the EIA Ordinance Register. Commencement of the Contract took place on 13 March 2015 and the construction works commenced on 13 July 2015. The works areas of the contract are shown in **Appendix A**.

This is the 1<sup>st</sup> Quarterly EM&A Report summarising the findings of EM&A activities conducted under the Contract from 13 July to 30 September 2015 (the "reporting period") and is submitted to fulfil Condition 5.4 of the EP.

#### 1.2 Project Organisation

The organisation chart and lines of communication with respect to the on-site environmental management structure together with the contact information of the key personnel are shown in **Appendix B**. The key personnel contact names and numbers are summarized in **Table 1.1**.

Table 1.1: Contact Information of Key Personnel

Party	Position	Name	Telephone	Fax
Engineer or Engineer's Representative (AECOM Asia Co. Ltd.)	Chief Resident Engineer	Alfred Cheng	3958 7471	3468 2076
Environmental Project Office / Independent Environmental Checker (Ramboll Environ Hong Kong Limited)	Environmental Project Office Leader	Y H Hui	3465 2888	3465 2899
	Independent Environmental Checker	Raymond Dai	3465 2888	3465 2899
	Environmental Site Supervisor	Ray Yan	5181 8165	3465 2899
Contractor	Site Agent	Eddie Tang	9863 7686	2459 4336
(China State Construction Engineering (Hong Kong) Limited)	Environmental Officer	Gary Ng	9475 6832	2459 4336
Environmental Team (Mott MacDonald Hong Kong Limited)	Environmental Team Leader	Terence Kong	2828 5919	2827 1823
24-hour Complaint Hotline	-	-	5236 7111	-

#### 1.3 Construction Programme

The Construction Works Programme of the Project is provided in **Appendix C**.



Quarterly EM&A Report for July 2015 to September 2015

#### 1.4 Construction Works undertaken during the Reporting Period

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

- 19 nos. predrilling holes completed on BCF Island;
- Site formation and setting up Contractor's accommodation, concrete base slab construction and setting up material storage area and stockpile area on BCF Island; and
- Bored piling works for Pile No. P2.

Quarterly EM&A Report for July 2015 to September 2015

### 2 EM&A Requirements

#### 2.1 Summary of EM&A Requirements

The monthly EM&A programme was undertaken in accordance with the Updated EM&A Manual for HKBCF (Version 1.0). It should be noted that the air quality and noise monitoring works for the Contract are covered by Contract No. HY/2010/02 "Hong Kong-Zhuhai-Macao Bridge HKBCF – Reclamation Works" and Contract No. HY/2011/03 "Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road – Section between Scenic Hill and HKBCF". The ET of the Contract or another ET of the HZMB project is required to conduct impact air quality monitoring at AMS6 and AMS7A and noise monitoring at NMS2 and NMS3B as part of EM&A programme if these monitoring stations are no longer covered under Contract Nos. HY/2010/02 and HY/2011/03. However, this is subject to ENPO's final decision on which ET should carry out the monitoring work at these stations.

A summary of air and noise monitoring locations are presented in **Table 2.1**. The location of air quality and noise monitoring stations are shown as in **Figure 1** and **Figure 2**, respectively.

Table 2.1: Construction Dust Monitoring Locations

<b>Environmental Monitoring</b>	Identification No.	Location Description
Air Quality	AMS6 <sup>(1)</sup>	Dragonair/CNAC (Group) Building
	AMS7A <sup>(1)</sup>	Chu Kong Air-Sea Union Transportation Co. Ltd
Noise	NMS2 <sup>(2)</sup>	Seaview Crescent
	NMS3B <sup>(2) (3)</sup>	Site Boundary of Site Office Area at Works Area WA2

#### Remarks:

- (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 latest notification from ENPO when the monitoring station(s) is/are no longer covered by another ET of the HZMB project.
- (2) 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
- (3) The Action and Limit Levels for schools will be applied for this alternative monitoring location.

#### 2.2 Monitoring Requirements

The monitoring requirements, monitoring equipment, monitoring parameters, frequency and duration, monitoring methodology, monitoring schedule, meteorological information are detailed in the monthly EM&A Reports prepared for Contract Nos. HY/2010/02 and HY/2011/03.

#### 2.3 Action and Limit Levels

The Action and Limit Levels for 1-hr TSP and 24-hr TSP are provided in **Table 2.2** and **Table 2.3** respectively.

Table 2.2: Action and Limit Levels for 1-hour TSP

Monitoring Station	Action Level, μg/m³	Limit Level, μg/m³
AMS6 - Dragonair / SNAC (Group) Building (HKIA)	360	500
AMS7A - Chu Kong Air-Sea Union Transportation Co. Ltd.	370	500



Quarterly EM&A Report for July 2015 to September 2015

Table 2.3: Action and Limit Levels for 24-hour TSP

Monitoring Station	Action Level, μg/m³	Limit Level, μg/m³
AMS6 - Dragonair / SNAC (Group) Building (HKIA)	173	260
AMS7A - Chu Kong Air-Sea Union Transportation Co. Ltd.	183	260

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

The Action and Limit Levels for construction noise are defined in Table 2.4.

Table 2.4: 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.

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

#### 2.4 Event and Action Plans

The event and action plans for air quality and noise are provided in **Appendix D**.

#### 2.5 Mitigation Measures

Environmental mitigation measures for the contract were recommended in the approved EIA Report. **Appendix E** lists the recommended mitigation measures and the implementation status.

<sup>\*</sup> Reduce to 70 dB(A) for schools and 65 dB(A) during school examination period.



Quarterly EM&A Report for July 2015 to September 2015

### 3 Environmental Monitoring and Audit

#### 3.1 Air Quality Monitoring Results

The monitoring results for AMS6 and AMS7A are reported in the monthly EM&A Reports (for July, August and September 2015) prepared for Contract Nos. HY/2011/03 and HY/2010/02 respectively.

Summary of Action and Limit Level exceedance of 1-hr TSP level and 24-hr TSP level at AMS6 is reported in the monthly EM&A Reports (for July, August and September 2015) prepared by Contract No. HY/2011/03.

There was no Action and Limit Level exceedance of 1-hr TSP level and 24-hr TSP level recorded at station AMS7A by the Environmental Team of Contract No. HY/2010/02 during the reporting period.

#### 3.2 Noise Monitoring Results

The monitoring results for NMS2 and NMS3B are reported in the monthly EM&A Reports (for July, August and September 2015) prepared for Contract No. HY/2010/02.

No noise exceedances were recorded at stations NMS2 and NMS3B by the ET of Contract No. HY/2010/02 during the reporting period.

#### 3.3 Implementation of Environmental Measures

In response to the site audit findings, the Contractor carried out corrective actions. Details of site audit findings and the corrective actions during the reporting period are presented in **Appendix F**.

A summary of the Implementation Schedule of Environmental Mitigation Measures (EMIS) is presented in **Appendix E**. Most of the necessary mitigation measures were implemented properly.

The Contractor waters 8 times per day on all exposed soil within the project site and associated works areas when construction activities are being undertaken.

#### 3.4 Advice on the Solid and Liquid Waste Management Status

The Contractor registered as a chemical waste producer for the Contract. Sufficient numbers of receptacles were available for general refuse collection and sorting.

There was no generation of excavated sediment for treatment during this reporting period. Excavated marine sediment will be treated using cement solidification/stabilization (Cement S/S) techniques and will be reused onsite for either backfilling or landscaping (e.g. berm material).

The summary of waste flow table is detailed in **Appendix G**.

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



Quarterly EM&A Report for July 2015 to September 2015

#### 3.5 **Environmental Licences and Permits**

The valid environmental licences and permits during the reporting period are summarized in Appendix H.



Quarterly EM&A Report for July 2015 to September 2015

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

#### 4.1 **Summary of Exceedance of the Environmental Quality Performance Limit**

Summary of Action and Limit Level exceedance of 1-hr TSP level and 24-hr TSP level at AMS6 is reported in the monthly EM&A Reports (for July, August and September 2015) prepared by Contract No. HY/2011/03.

There was no Action and Limit Level exceedance of 1-hr TSP level and 24-hr TSP level recorded at station AMS7A by the Environmental Team of Contract No. HY/2010/02 during the reporting period.

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

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

There was one complaint received in relation to the environmental impact during the reporting period. The summary of environmental complaints is presented in Table 4.1. The details of cumulative statistics of Environmental Complaints are provided in **Appendix I**.

Summary of Environmental Complaints for the Reporting Month Table 4.1:

Log No.	Environmental Complaint Ref. No.	Date of Complaint Receipt	Description
001	ENPO-C0086	13 July 2015	Noise

The complaint was in relation to construction noise nuisance in the vicinity of Tung Chung New Development Pier. According to the complainant, construction noise was generated at the HKBCF site near Hong Kong SkyCity Marriott Hotel during night-time period of the past 10 days. After investigation, it was concluded that the complaint was not relevant to Contract No. HY/2013/04. Nevertheless, the Contractor is reminded that no construction site activities during restricted hours are permitted without a valid construction noise permit issued for the specific works, and that application to EPD for such permit is required in advance.

No notification of summons or prosecutions was received during the reporting period.

Statistics on notifications of summons and successful prosecutions are summarized in Appendix I.



Quarterly EM&A Report for July 2015 to September 2015

# 5 Comments, Recommendations and Conclusions

#### 5.1 Comments

According to the environmental site inspections undertaken during the reporting period, the following recommendations were provided:

- The Contractor was reminded to provide water spraying for the haul road regularly to prevent fugitive dust emission.
- The Contractor was reminded to provide maintenance to a drilling machine to prevent emission of black smoke.
- The Contractor was reminded to provide drip trays for chemical containers.
- The Contractor was recommended to clear any soil contaminated by oil stain and handle it as chemical waste.
- The Contractor was reminded to clear the stagnant water regularly or implement measures for prevention of stagnant water accumulation to prevent mosquito breeding.

A summary of the Implementation Schedule of Environmental Mitigation Measures (EMIS) is presented in **Appendix E**. Most of the necessary mitigation measures were implemented properly.

#### 5.2 Recommendations

With implementation of the recommended environmental mitigation measures, the contract's environmental impacts were considered environmentally acceptable. The weekly environmental site inspections ensured that all the environmental mitigation measures recommended were effectively implemented.

The recommended environmental mitigation measures, as included in the EM&A programme, effectively minimize the potential environmental impacts from the contract. Also, the EM&A programme effectively monitored the environmental impacts from the construction activities and ensure the proper implementation of mitigation measures. No particular recommendation was advised for the improvement of the programme.

#### 5.3 Conclusions

Commencement of the Contract took place on 13 March 2015 and the construction works of the Contract commenced on 13 July 2015. This is the 1<sup>st</sup> Quarterly EM&A Report summarising the findings of EM&A activities conducted under the Contract from 13 July to 30 September 2015.

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 Reports (for July, August and September 2015) prepared by Contract No. HY/2011/03.

There was no Action and Limit Level exceedance of 1-hr TSP level and 24-hr TSP level recorded at station AMS7A by the Environmental Team of Contract No. HY/2010/02 during the reporting period.

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



Quarterly EM&A Report for July 2015 to September 2015

Environmental site inspection was carried out on 16, 23 and 30 July, 5, 13, 20 and 25 August, and 2, 11, 17, 24 and 29 September 2015. Recommendations on remedial actions were given to the Contractors for the deficiencies identified during the site inspections.

There was one complaint received in relation to the environmental impact during the reporting period. After investigation, it was found that the complaint was not related to the Contract.

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



Quarterly EM&A Report for July 2015 to September 2015

### Figures

Figure 1 Location of Air Quality Monitoring Stations

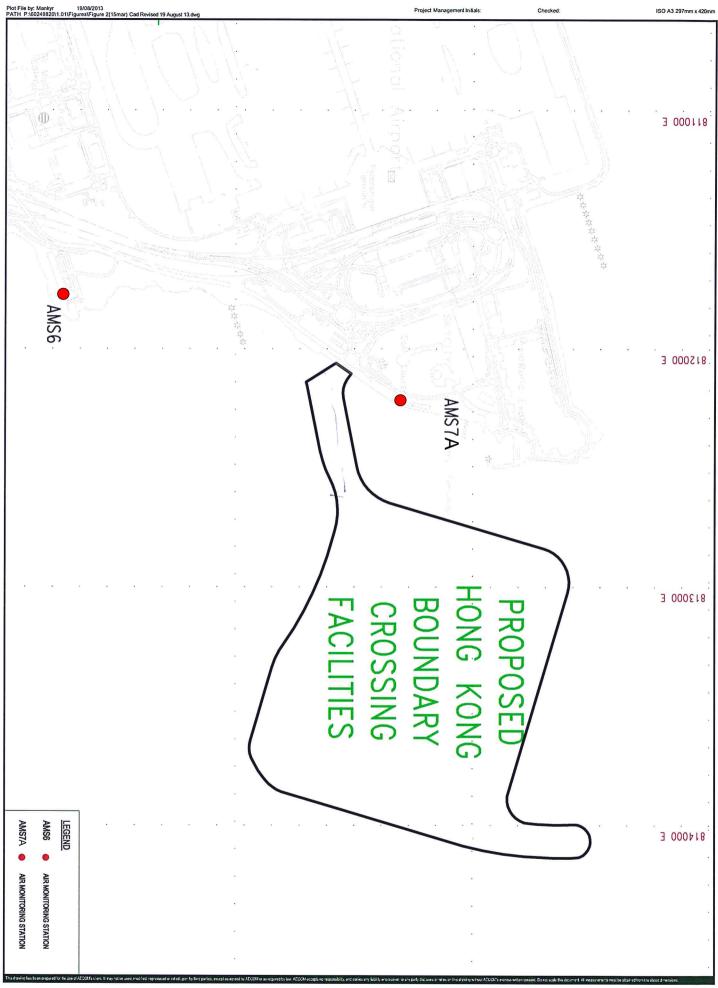


Figure 2 Location of Noise Quality Monitoring Stations

Plot File by: LAMMCL 15/03/2012 PATH P:#60249820#1.01#CAD#Drawing#Figure#Figure 2(15mor).dwg 817000 818000 819000 N 1 811000 E 812000 E NMS2- Sed View Cresent NMS2 and NMS3B 813000 E \_EGEND Works Area WA2 Area NOISE MONITORING STATIONS

Project Management Initials:

AGREEMENT NO. CE 13/2010(EE) HZMB HONG KONG BOUNDARY CROSSING FACILITIES (SUPERSTRUCTURE & INFRASTRUCTURE) — DESIGN AND CONSTRUCTION Project No.: — Date: JUL 2013

AIR QUALITY AND NOISE MONITORING STATIONS

**AECOM** 

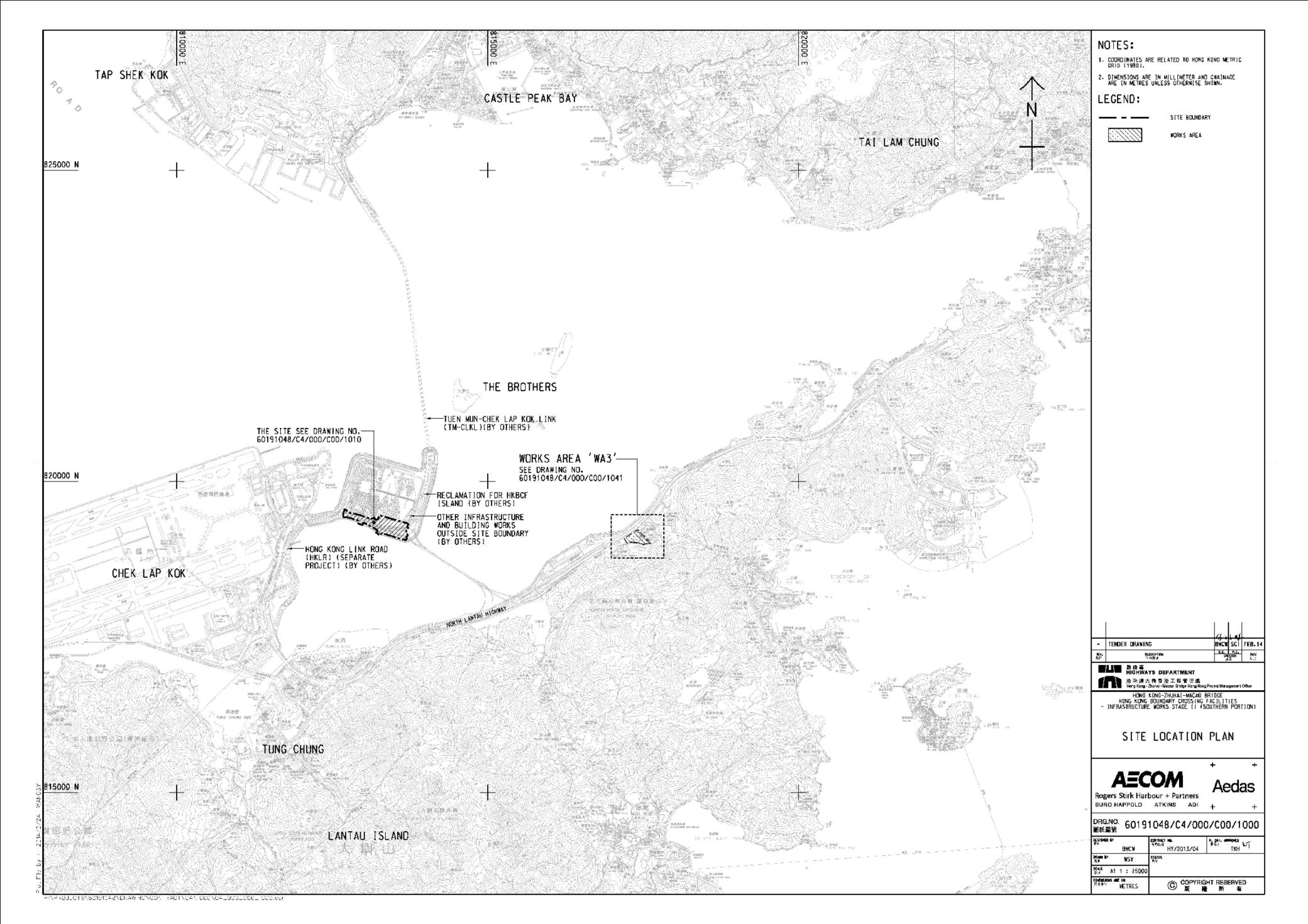
ISO A3 297mm x 420mm

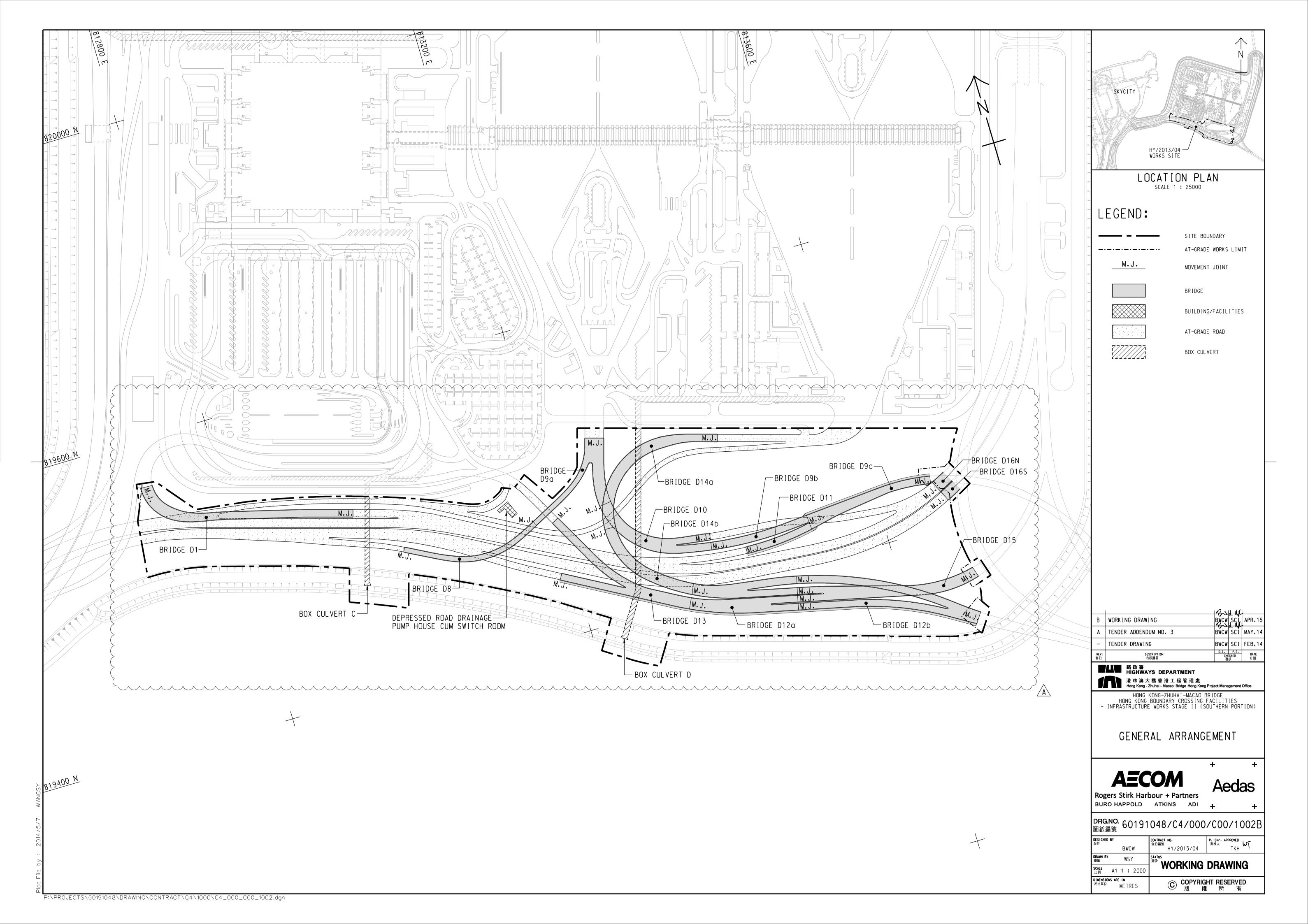
Figure 5-1

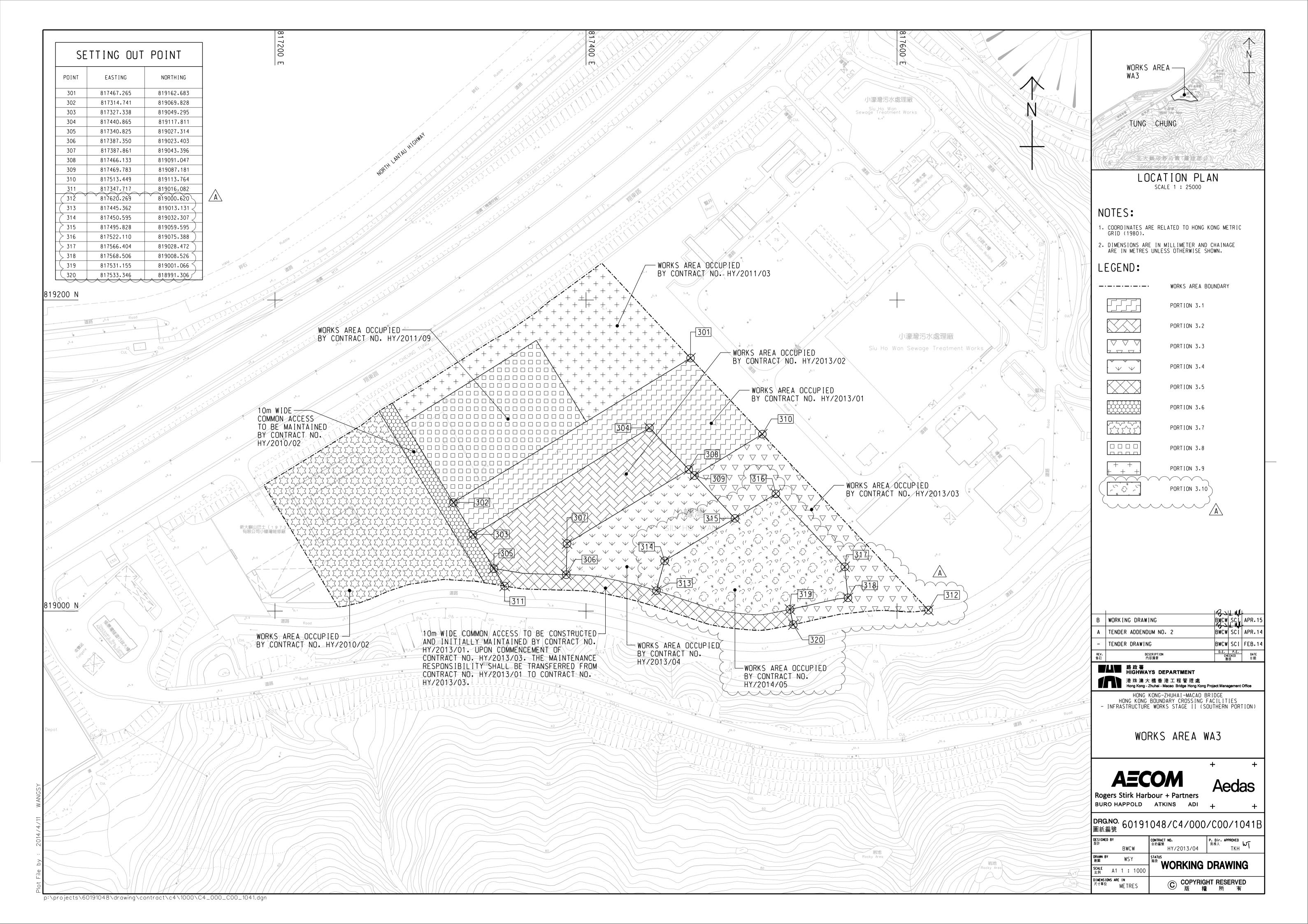


Quarterly EM&A Report for July 2015 to September 2015

### Appendix A. Location of Works Areas





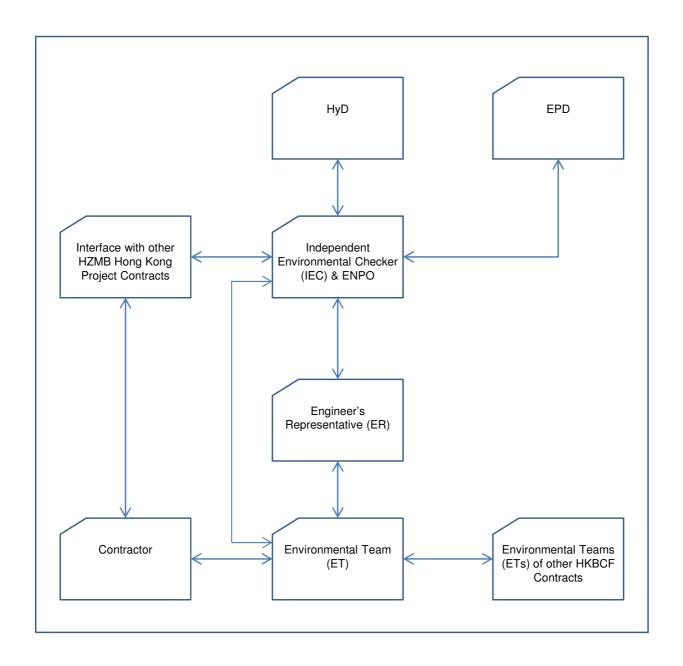




Quarterly EM&A Report for July 2015 to September 2015

# Appendix B. Project Organization for Environmental Works

### **Project Organisation for Environmental Works**





Quarterly EM&A Report for July 2015 to September 2015

# Appendix C. Construction Programme

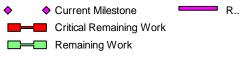
Print Date: 23-Apr-15 1	3:05	111	/2013/04 -	riong Kon	g Boundary Cro	ssilig i	aciii	ilies i	ııııasııı	ictur	e wc	JI NO	Stag	je ii	(30	utiit	<b>C</b> 111	ГО	lio	'')								Pag	e:1/:	24	
activity ID	Activity Name	Orig Dur Early Start	Early Finish	Total Ca	llendar Remarks	alula			2015				2016	. [ ]	a I I		-1		2017		I a I .				2018			.1-1	201		1 . 12
Hong Kong Bo	undary Crossing Facilities	s - Infrastructure Works Stage II (So				OND	JF	MAM	J Jul A S	OND	JF	MIAIN	I J Jul	AS	ON	D J	FIM	AM	J Jul	A	0 1	1 D	JFM	A M	J Jul A	SO	ND	JF	MIAIN	1 J Jul	A
Contract Key																															
CON.KD.0005	Letter of Acceptance (LOA)	0 27-Feb-15		0 CAL 1	- 7 day	27-Fe	b-15 💠																								
CON.KD.0010	Commencement Date	0 13-Mar-15		0 CAL 1	- 7 day 14 days from LOA	13-1	//ar-15 <b>&lt;</b>	<b>•</b>																							
CON.KD.0020	Completion of the whole of the Works (1	520) 0	10-May-19	0 CAL 1	- 7 day	-																							<b>♦</b>	10-May-	19
Possession Da	ates																														
CON.PD.1010	Site Possession of Portion A1 (61)	0 13-May-15		0 CAL 1	- 7 day		13-M	1ay-15 ♦																							
CON.PD.1020	Site Possession of Portion A2 (61)	0 13-May-15 <sup>7</sup>	:	0 CAL 1	- 7 day		13-M	1ay-15 ♦																							
CON.PD.1030	Site Possession of Portion A3 (476)	0 01-Jul-16*		0 CAL 1	- 7 day							01-Jul-	16 💠																		
CON.PD.1040	Site Possession of Portion A4 (627)	0 29-Nov-16	:	0 CAL 1	- 7 day									29-No	v-16 💠																
CON.PD.1050	Site Possession of Portion A5 (61)	0 13-May-15 <sup>3</sup>	:	0 CAL 1	- 7 day		13-M	May÷15 ♦														·									
CON.PD.1060	Site Possession of Portion A6 (61)	0 13-May-15	:	0 CAL 1	- 7 day		13-M	1ay-15 ♦																							
CON.PD.1070	Site Possession of Portion B1 (92)	0 13-Jun-15*		0 CAL 1	- 7 day			13-Jun-15	<b>♦</b>																						
CON.PD.1080	Site Possession of Portion B2 (123)	0 14-Jul-15*		0 CAL 1	- 7 day			14-Jul	15 💠																						
CON.PD.1090	Site Possession of Portion B3 (476)	0 01-Jul-16*		0 CAL 1	- 7 day							01-Jul-	16 💠																		
CON.PD.1100	Site Possession of Portion B4 (627)	0 29-Nov-16 <sup>3</sup>	:	0 CAL 1	- 7 day				·					29-No	v-16 💠					11	· † †					1					
CON.PD.1130	Site Possession of Portion B5 (123)	0 14-Jul-15*		0 CAL 1	· 7 day			14-Jul	15 💠																						
CON.PD.1140	Site Possession of Portion C1 (184)	0 13-Sep-15		0 CAL 1	· 7 day				13-Sep-15 💠																						
CON.PD.1150	Site Possession of Portion C2 (184)	0 13-Sep-15		0 CAL 1	· 7 day				13-Sep⊦15 <b>♦</b>																						
CON.PD.1160	Site Possession of Portion D1 (183)	0 12-Sep-15		0 CAL 1	- 7 day				12-Sep•15 ◆																						
CON.PD.1170	Site Possession of Portion D2 (488)	0 13-Jul-16*		0 CAL 1	- 7 day							13-Ju	ıl-16 <b>♦</b>																		
CON.PD.1180	Site Possession of Portion D3 (183)	0 12-Sep-15		0 CAL 1	- 7 day				12-Sep-15 💠																						
Contractual K	(ey Dates - Stage / Section C	Completion of the Works																													
CON.FOT.KD01	KD01 - Achievement of Stage 1A (525)	0	18-Aug-16*	0 CAL 1	- 7 day									<b>♦</b> 18- <i>1</i>	ug-16																
CON.FOT.KD02	KD02 - Achievement of Stage 1B (650)	0	21-Dec-16*	0 CAL 1	- 7 day											<b>♦</b> 21-I	Dec-16														
CON.FOT.KD03	KD03 - Achievement of Stage 2 (525)	0	18-Aug-16*	0 CAL 1	· 7 day									<b>♦</b> 18- <i>i</i>	ug-16																
CON.FOT.KD04	KD04 - Achievement of Stage 3 (465)	0	19-Jun-16*	0 CAL 1	- 7 day								<b>♦</b> 19-	Jun-16																	
CON.FOT.KD05	KD05 - Achievement of Stage 4 (615)	0	16-Nov-16*	0 CAL 1												16-Nov-1															
CON.FOT.KD06	KD06 - Achievement of Stage 5 (615)	0	16-Nov-16*	0 CAL 1											<b>♦</b> 11	16-Nov-1	16														
CON.FOT.KD07	KD07 - Achievement of Stage 6 (270)	0	07-Dec-15*	0 CAL1					ļļļ	<b>♦</b> (	07-Dec-15	·						ļļ			!							ļļļ			ļ
CON.FOT.KD08	KD08 - Completion of Section I of the Wo		15-May-17*	0 CAL 1															15-May												
CON FOT KD10	KD09 - Completion of Section III of the W		23-May-17*	0 CAL 1															23-Ma												
CON FOT KD11	KD10 - Completion of Section III of the W		23-May-17*	0 CAL 1											27 500	16		•	23-Ma	y-1/											
CON FOT KD12	KD11 - Completion of Section IV of the W		27-Sep-16*	0 CAL 1										,	27-Sep	-10			23-Ma	v-17											
CON.FOT.KD12	KD12 - Completion of Section V of the We KD13 - Completion of Section VI of the W		23-May-17* 19-Jun-16*	0 CAL 1					ļ		<del>   </del> -		<b>♦</b> 19-	Jun-16					2J-IVId	A ' '	ļļ							<del> </del>			
CON.FOT.KD13	KD13 - Completion of Section VII of the V		19-Juli-16	0 CAL 1									V 19-	Jan 10										<b>•</b> 1	0-May-18						
CON.FOT.KD14	KD15 - Completion of Section VIIIA of the		15-May-17*	0 CAL 1		_												•	15-May	-17				Ť							
CON.FOT.KD13	KD16 - Completion of Section VIIIB of the		10-May-18*	0 CAL 1		_																		<b>♦</b> 1	0-May-18						
CON.FOT.KD17	KD17 - Achievement of Stage 7 (718)	0	27-Feb-17*	0 CAL 1		_											<b>♦</b> 2	7-Feb-1													
CON.FOT.KD17A	KD17A - Completion of Section VIIIC of t		15-May-17*	0 CAL 1							<del>   </del> -							ļļ	15-May	-17											
CON.FOT.KD18	KD18 - Completion of Section VIIID of the		10-May-18*	0 CAL 1		-																		<b>♦</b> 1	0-May-18						
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nne styte	國建 架工程(春)		ent Milestone		R																Dat				Revisio	on	(IWP) Re	Ch	necked	Approv	/ed
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HY/2013/04 - Hong Kong Boundary Crossing Facilities Infrastructure Works Stage II (Southern Portion)

中国建築工程(音楽)有限公司 CHINA STATE CONSTRUCTION ENGINEERING (HONG KONG) LTD.

Data Date: 27-Feb-15

Print Date: 23-Apr-15 13:05



HY/2013/04 - Initial Works Programme (Rev. 01)

	Initial Works Programme (IWP) Rev. 0	1	
Date	Revision	Checked	Approved
29-Nov-14	Baseline Programme (IWP)	DML/WC	ET
22-Apr-15	Baseline Programme (IWP) Rev. 01	DML/WC	ET

Data Date: 27-Feb-15 HY/2013/04 - Hong Kong Boundary Crossing Facilities Infrastructure Works Stage II (Southern Portion) Print Date: 23-Apr-15 13:05 Page: 2 / 24 Orig Du Total Float 0 | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | CON.FOT.KD19 KD19 - Completion of Section IXA of the Works (1160) 15-May-18\* CAL 1 - 7 day CON.FOT.KD20 KD20 - Completion of Section IXB of the Works (1520) 10-May-19\* CAL 1 - 7 day Contractual Handover Dates to Employer ♦ 12-Jun-1 CON.HD.1190 Handover of Portion A1 (KD8+28 days) 12-Jun-17\* 0 CAL 1 - 7 day 💠 12-Jun-17 CAL 1 - 7 day CON.HD.1200 Handover of Portion A2 (KD8+28 days) 12-Jun-17\* 0 CON.HD.1210 Handover of Portion A3 (KD9+28 days) 20-Jun-17\* CAL 1 - 7 day ♦ 20-Jun-17 CON.HD.1220 Handover of Portion A4 (KD10+28 days) 20-Jun-17\* CAL 1 - 7 day ♦ 20-Jun-17 CON.HD.1240 Handover of Portion A5 (KD13+0 days) 19-Jun-16\* CAL 1 - 7 day ♦ 07-Jun-18 CON.HD.1250 Handover of Portion A6 (KD14+28 days) CAL 1 - 7 day 07-Jun-18\* CON.HD.1260 Handover of Portion B1 (KD8+28 days) 12-Jun-17\* CAL 1 - 7 day CON.HD.1270 Handover of Portion B2 (KD8+28 days) 12-Jun-17\* CAL 1 - 7 day 💠 12-Jun-17 ♦ 25-Oct-16 CON.HD.1280 Handover of Portion B3 (KD11+28 days) 25-Oct-16\* CAL 1 - 7 day CAL 1 - 7 day CON.HD.1290 ♦ 20-Jun-17 Handover of Portion B4 (KD12+28 days) 20-Jun-17\* CON.HD.1300 CAL 1 - 7 day Handover of Portion B5 (KD14+28days) 07-Jun-18\* CON.HD.1310 Handover of Portion C1 (KD8+28 days) 12-Jun-17\* CAL 1 - 7 day 🔷 12-Jun-17 CON.HD.1320 Handover of Portion C2 (KD13+0 days) 19-Jun-16\* CAL 1 - 7 day ◆ 19-Jun-16 CAL 1 - 7 day ♦ 12-Jun-17 CON.HD.1330 Handover of Portion D1 (KD8+28 days) 12-Jun-17\* CON.HD.1340 Handover of Portion D2 (KD8+28 days) 12-Jun-17\* CAL 1 - 7 day CON.HD.1350 Handover of Portion D3 (KD8+28 days) 12-Jun-17\* CAL 1 - 7 day ♦ 12-Jun-1. Contractor Planned Completion: Key Dates - Stage / Section Completion of the Works CAL 2 - 6 day ♦ 18-Aug 16 CON.SC.KD01 KD01 - Achievement of Stage 1A (525) 18-Aug-16\* ◆ 14-Dec-16 CON.SC.KD02 KD02 - Achievement of Stage 1B (650) 14-Dec-16\* CAL 2 - 6 day CON.SC.KD03 KD03 - Achievement of Stage 2 (525) 18-Aug-16\* CAL 2 - 6 day ♦ 18-Aug-16 CON.SC.KD04 KD04 - Achievement of Stage 3 (465) 11-Jun-16\* CAL 2 - 6 day 11-Jun-16 CON.SC.KD05 KD05 - Achievement of Stage 4 (615) 09-Nov-16\* CAL 2 - 6 day CON.SC.KD06 KD06 - Achievement of Stage 5 (615) CAL 2 - 6 day 16-Nov-16\* CON.SC.KD07 KD07 - Achievement of Stage 6 (270) 07-Dec-15\* CAL 2 - 6 day ♦ 07-Dec-15 ◆ 15-May-17 CON.SC.KD08 KD08 - Completion of Section I of the Works (795) 15-May-17\* CAL 2 - 6 day ◆ 23-May-17 CON.SC.KD09 KD09 - Completion of Section II of the Works (803) 23-May-17\* CAL 2 - 6 day ♦ 23-May-17 CON.SC.KD10 KD10 - Completion of Section III of the Works (803) 23-May-17\* CAL 2 - 6 day CON.SC.KD11 KD11 - Completion of Section IV of the Works (565) 27-Sep-16\* CAL 2 - 6 day ♦ 27-Sep-16 CON.SC.KD12 KD12 - Completion of Section V of the Works (803) 16-May-17\* CAL 2 - 6 day 16-May-17 CON.SC.KD13 CAL 2 - 6 day KD13 - Completion of Section VI of the Works (465) 18-Jun-16\* CON.SC.KD14 ♦ 10-May-18 KD14 - Completion of Section VII of the Works (1155) 10-May-18\* CAL 2 - 6 day CON.SC.KD15 KD15 - Completion of Section VIIIA of the Works (795) 15-May-17\* CAL 2 - 6 day ◆ 15-May-1 ♦ 10-May-18 CON.SC.KD16 KD16 - Completion of Section VIIIB of the Works (1155) 10-May-18\* CAL 2 - 6 day CON.SC.KD17 KD17 - Achievement of Stage 7 (718) 20-Feb-17\* CAL 2 - 6 day ♦ 20-Feb-17 CON.SC.KD17A KD17A - Completion of Section VIIIC of the Works (795) 15-May-17\* CAL 2 - 6 day CON.SC.KD18 KD18 - Completion of Section VIIID of the Works (1155) 10-May-18\* CAL 2 - 6 day ♦ 10-May-18 15-May-18 CON.SC.KD19 KD19 - Completion of Section IXA of the Works (1160) 15-May-18\* CAL 2 - 6 day CAL 2 - 6 day CON.SC.KD20 KD20 - Completion of Section IXB of the Works (1520) 10-May-19\* ♦ 10-May-19 **Preliminaries and General Requirements** Insurance CON.PR.1010 Arrange and Secure Professional Indemnity Insurances and submit copy to 60 27-Feb-15 27-Apr-15\* CAL 1 - 7 day within 60 days **Programme** 

HY/2013/04 - Hong Kong Boundary Crossing Facilities Infrastructure Works Stage II (Southern Portion) Page: 3 / 24 Print Date: 23-Apr-15 13:05 Total Float **Initial Works Programme** CON.PR.1020.10 Prepare & Submit Initial Works Programme (IWP) 7 27-Feb-15 05-Mar-15 CAL 1 - 7 day 7 days from LOA CON.PR.1020.20 Engineer's Approval 30 06-Mar-15 04-Apr-15 CAL 1 - 7 day **Provisional Programme for Piling Works** CON.PR.1030.10 Prepare Detailed Piling Schedule (refer to IWP) CAL 1 - 7 day 14 13-Mar-15 26-Mar-15 CON.PR.1030.20 Engineer's Approval 24 27-Mar-15 19-Apr-15 CAL 1 - 7 day **3 Months Rolling Programme** CON.PR.1040.10 Prepare 3 Months Rolling Programme 14 27-Feb-15 12-Mar-15 CAL 1 - 7 day 14 days from LOA CON.PR.1040.20 Engineer's Approval 24 13-Mar-15 05-Apr-15 CAL 1 - 7 day 0 **Detailed Works Programme** CON.PR.1050.10 Prepare Detailed Works Programme (DWP) 60 05-Apr-15 03-Jun-15 CAL 1 - 7 day CAL 1 - 7 day 30 04-Jun-15 03-Jul-15\* CON.PR.1050.20 Engineer's Approval Safety & Health CON.PR.1060.10 Draft Safety Plan 14 09-Mar-15 22-Mar-15\* CAL 1 - 7 day 14 days from LOA 0 CON.PR.1060.20 Finalized Safety Plan 21 23-Mar-15 12-Apr-15 30 CAL 1 - 7 day 35 days from LOA **Environmental Management Plan** CON.PR.1080.10 Draft Envirionmental Management Plan CAL 1 - 7 day 21 days from LOA 21 27-Feb-15 19-Mar-15 30 CON.PR.1080.20 Finalized EMP 24 20-Mar-15 12-Apr-15 30 CAL 1 - 7 day 45 days from LOA **Sub-Contractor Management Plan** CON.PR.1080.50 Prepare Sub-Contractor Management Plan 30 27-Feb-15 28-Mar-15 0 CAL 1 - 7 day 30 days from LOA CAL 1 - 7 day CON.PR.1080.60 Engineer's Approval 24 29-Mar-15 21-Apr-15\* 0 CON.PR.0130 Site Possession / Access to Works Area WA3 0 13-Mar-15 10 CAL 2 - 6 day CON.PR.0140 Survey / Setting Out 6 13-Mar-15 19-Mar-15 10 CAL 2 - 6 day CON.PR.0150 Engineer's Principal Site Office 45 20-Mar-15 16-May-15 11 CAL 2 - 6 day CON.PR.0150.10 Site Formation 3 20-Mar-15 CAL 2 - 6 day 23-Mar-15 CON.PR.0150.20 Foundation 5 24-Mar-15 28-Mar-15 CAL 2 - 6 day CON.PR.0150.30 Base Slah 5 30-Mar-15 08-Apr-15 10 CAL 2 - 6 day CON.PR.0150.40 10 09-Apr-15 20-Apr-15 10 CAL 2 - 6 day Structural Steel Erection CON.PR.0150.50 Roof and Wall Cladding 7 21-Apr-15 28-Apr-15 10 CAL 2 - 6 day CON.PR.0150.60 6 29-Apr-15 06-May-15 CAL 2 - 6 day CON.PR.0150.70 **Building Services** 8 07-May-15 15-May-15 10 CAL 2 - 6 day CON.PR.0150.80 Fit-Out and Office Furnitures CAL 2 - 6 day 8 07-May-15 15-May-15 CON.PR.0150.90 2 16-May-15 18-May-15 10 CAL 2 - 6 day CON.PR.0150.95 Handover to Engineer 18-May-15\* CAL 2 - 6 day ♦ 18-May-15 CON.PR.0160 Contractor's Site Office 45 08-Apr-15 01-Jun-15 CAL 2 - 6 day CAL 2 - 6 day CON.PR.0170 External Works - Paving, Drainage and Fencing 24 18-May-15 15-Jun-15\* **Procurement** Bridge Bearings PROC.MA.1610 CAL 2 - 6 day Detailed Design / Shop Drawings and Materials Submission 60 08-Apr-15 18-Jun-15 31 PROC.MA.1615 Engineer's Review / Approval 24 19-Jun-15 18-Jul-15 31 CAL 2 - 6 day PROC.MA.1650 CAL 2 - 6 day Production / Manufacturing / Facbrication 90 20-Jul-15 04-Nov-15 31 05-Nov-15 PROC.MA.1670 Materials Delivery (first delivery) 0 05-Nov-15 31 CAL 2 - 6 day Precast Concrete - Segments PROC.MA.1760 Moulds Detailed Design Preparation / Submission 48 08-Apr-15 04-Jun-15 CAL 2 - 6 day 11

HY/2013/04 - Hong Kong Boundary Crossing Facilities Infrastructure Works Stage II (Southern Portion) Page: 4 / 24 Print Date: 23-Apr-15 13:05 Total Float 0 | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | PROC.MA.1765 Engineer's Review / Approval 24 05-Jun-15 04-Jul-15 CAL 2 - 6 day PROC.MA.1770 48 06-Jul-15 29-Aug-15 11 CAL 2 - 6 day Mould Fabrication PROC.MA.1780 Cast Prototype / Inspection and Approval 24 31-Aug-15 CAL 2 - 6 day PROC.MA.2570 Production of Precast Segments (1101 nos @ 4 segments/ day) 276 29-Sep-15 02-Sep-16 11 CAL 2 - 6 day 1101 nos @ 4 segments / day 10-Nov-15 🔷 PROC.MA.2590 Materials Delivery (First Delivery) 0 10-Nov-15 11 CAL 2 - 6 day PROC.MA.2650 Materials Delivery (Last Delivery) 0 03-Sep-16 25 CAL 2 - 6 day E&M Works and Building Services for Pump House and Switch Room (Design, Supply and Install) PROC.SC.1285 Detailed Design and Material/ Equipment Submisison & Statutory Approval 200 08-Apr-15 04-Dec-15 83 CAL 2 - 6 day PROC.SC.1287 24 05-Dec-15 05-Jan-16 83 CAL 2 - 6 day Engineer's Review / Approval PROC.SC.1290 Procurement and Manufacturing of Materials 180 06-Jan-16 83 CAL 2 - 6 day 15-Aug-16 16-Aug-16 PROC.SC.1300 Materials Delivery (first delivery) 0 16-Aug-16 83 CAL 2 - 6 day Steel Structures for Sign Gantry / High Mast Structure & Other Signages PROC.MA.1990 Detailed Design / Material Submission 90 08-Apr-15 25-Jul-15 23 CAL 2 - 6 day 23 PROC.MA.1995 24 27-Jul-15 CAL 2 - 6 day Engineer's Review / Approval 22-Aug-15 PROC.MA.2010 Manufacture of Steel Structures 180 24-Aug-15 23 CAL 2 - 6 day PROC.MA.2020 Material Delivery (first delivery) 0 05-Apr-16 23 CAL 2 - 6 day PROC.MA.2840 Lighting Arrangement Detailed Design / Material Submission and Approval 72 08-Apr-15 04-Jul-15 139 CAL 2 - 6 day PROC.MA.2845 Engineer's Review / Approval 24 06-Jul-15 01-Aug-15 139 CAL 2 - 6 day PROC.MA.2850 Manufacture of Road and Bridge Lighting 220 03-Aug-15 29-Apr-16 139 CAL 2 - 6 day 139 PROC.MA.2860 Material Delivery (first delivery) 0 30-Apr-16 CAL 2 - 6 day **Irrigation System** PROC.SC.1180 Detailed Design / Material Submission 160 08-Apr-15 17-Oct-15 98 CAL 2 - 6 day PROC.SC.1185 Engineer's Review / Approval 24 19-Oct-15 16-Nov-15 98 CAL 2 - 6 day PROC.SC.1190 72 17-Nov-15 15-Feb-16 CAL 2 - 6 day Procurement and Shipment of Irrigation Materials/Equipment 98 Soft Landscaping PROC.SC.2760 Propose Nursery for Landscape Materials 48 08-Apr-15 04-Jun-15 166 CAL 2 - 6 day PROC.SC.2780 Joint Inspection and Engineer's approval 24 05-Jun-15 04-Jul-15 166 CAL 2 - 6 day PROC.SC.2790 224 06-Jul-15 166 CAL 2 - 6 day Landscape Materials Growing 06-Apr-16 PROC.SC.2810 Materials Delivery (first delivery) 0 07-Apr-16 166 CAL 2 - 6 day Construction / Installation Initial Works / Site Establishment & Maintenance Works Mobilisation and Site Establishment CONS.A1.0100 Site Possession / Access to Portion A1, A2, A5 & A6 0 13-May-15 CAL 2 - 6 day CONS.A1.0110 Mobilisation, Site Clearing and Site Set-up 15 13-May-15 30-May-15 CAL 2 - 6 day CONS.A1.0120 Install Temporary Facilities / Hygiene Facilities 36 01-Jun-15 14-Jul-15\* CAL 2 - 6 day **Gates and Haul Road Construction** CONS.A1.1010 0 13-May-15 18 CAL 2 - 6 day CONS.A1.1020 Survey/ Setting Out 6 13-May-15 19-May-15 18 CAL 2 - 6 day CONS.A1.1030 Construct Gate 1 at Haul Road 14 20-May-15 05-Jun-15 18 CAL 2 - 6 day CONS.B1.1010 Site Possession / Access to Portion B1 0 13-Jun-15 12 CAL 2 - 6 day 13-Jun-15 🔷 CONS.B1.1020 Mobilisation, Site Survey and Setting Out 6 13-Jun-15 19-Jun-15 12 CAL 2 - 6 day CONS.B1.1030 Construct Gate 3 and Temporary Haul Road 22 16-Jun-15 13-Jul-15 12 CAL 2 - 6 day 14-Jul-15 CONS.B2.1010 Site Possession / Access to Portion B2 & B5 0 14-Jul-15 CAL 2 - 6 day CONS.B2.1020 Site Survey / Setting out 6 14-Jul-15 20-Jul-15 CAL 2 - 6 day

HY/2013/04 - Hong Kong Boundary Crossing Facilities Infrastructure Works Stage II (Southern Portion) Print Date: 23-Apr-15 13:05 Page: 5 / 24 Total Float O N D J F M A M J JJJ A S O N D J F M A M J JJJ A S O N D J F M A M J JJJ A S O N D J F M A M J JJJ A S O N D J F M A M J JJJ A S O N D J F M A M J JJJ A S CONS.B2.1030 Construct Temporary Haul Road 41 21-Jul-15 05-Sep-15 CAL 2 - 6 day Preliminary Bored Pile and Load Testing at Abutment A1101 CONS.A1.0180 Commence Preliminary Bored Pile at Abutment A1101 0 13-May-15 CAL 1 - 7 day 3-May-15 💠 CONS.A1.0190 Mobilise Plant & Set-up Support 12 13-May-15 24-May-15 CAL 1 - 7 day CONS.A1.0195.10 Predrilling to Preliminary Bored Pile 5 20-May-15 24-May-15 CAL 1 - 7 day CONS.A1.0195.20 GI Report and Verification / Agreement to Founding Level 8 25-May-15 01-Jun-15 CAL 1 - 7 day CONS.A1.0200 Preliminary Bored Piling - Abutment A1101 (1 no. 2000mm dia x 42m) 14 02-Jun-15 15-Jun-15 CAL 1 - 7 day 1 no. x 14 days / 1 rig CONS.A1.0210 Pile Curing 28 16-Jun-15 13-Jul-15 CAL 1 - 7 day CAL 1 - 7 day CONS.A1.0220 Pile Load Testing & Submit Report 28 14-Jul-15 10-Aug-15 2 Preliminary Bored Pile and Load Testing at Abutment A106 CONS.A1.0400 Commence Preliminary Bored Pile at Abutment A106 0 13-Sep-15 CAL 1 - 7 day 13-Sep-15 🔷 CONS.A1.0410 Mobilise Plant & Set-up Support 12 13-Sep-15 24-Sep-15 CAL 1 - 7 day CAL 1 - 7 day CONS.A1.0415.10 Predrilling to Preliminary Bored Pile 5 25-Sep-15 29-Sep-15 CAL 1 - 7 day CONS.A1.0415.20 GI Report and Verification / Agreement to Founding Level 8 30-Sep-15 07-Oct-15 CONS.A1.0420 Preliminary Bored Piling - Abutment A106 (1 no. 2000mm dia x 52m) 14 08-Oct-15 21-Oct-15 CAL 1 - 7 day 1 no. x 14 days / 1 rig CONS.A1.0430 Pile Curing 28 22-Oct-15 18-Nov-15 CAL 1 - 7 day CONS.A1.0440 CAI 1 - 7 day Pile Load Testing and Submit Report 28 19-Nov-15 16-Dec-15 **Treatment for Bored Piling Excavated Materials** CONS.EX.1010 Set-up Stockpile for Excavated Marine Mud 24 26-May-15 23-Jun-15 63 CAL 2 - 6 day CONS.EX.1020 Pilot Test for Marine Mud Treatment 30 24-Jun-15 29-Jul-15 63 CAL 2 - 6 day CAL 2 - 6 day CONS.EX.1030 90 30-Jul-15 63 Solidification / Stabilisation / Approval Method 14-Nov-15 CONS.EX.1040 Set-up Treatment Facilities and Storage Yard 48 17-Oct-15 12-Dec-15 63 CAL 2 - 6 day CONS.EX.1050 Full Scale Solidification / Stabilization Treatment and Verification Testing 220 14-Dec-15 CAL 2 - 6 day 10-Sep-16 CONS.EX.1060 Decommissioning of Treatment Facilities 36 12-Sep-16 27-Oct-16 63 CAL 2 - 6 day Site Set Up at Portion C1 CONS.C1.1010 Site Possession / Access to Portion C1 and C2 0 14-Sep-15 CAL 2 - 6 day 15 CONS.C1.1020 Site Possession / Access to Portion D1 and D3 0 12-Sep-15 CAL 2 - 6 day 12-Sep-15 🔷 CONS.C1.1030 Site Set-Up 30 14-Sep-15 20-Oct-15 15 CAL 2 - 6 day **Barging Point for Materials / Segments Delivery** CONS.BP.5010 Prepare Design and Submit Proposal for an Alternative Barging Point 24 02-May-15 30-May-15 CAL 2 - 6 day CONS.BP.5020 12 01-Jun-15 13-Jun-15 CAL 2 - 6 day Engineer's Review and Approval (AIP) CONS.BP.5040 Statutory Approval - MD Vetting, Site Inspection and Approval 60 15-Jun-15 25-Aug-15 CAL 2 - 6 day CONS.BP.5050 CAL 2 - 6 day ♦ 25-Aug-15 Marine Department Issues Permit / Consent 25-Aug-15 CONS.BP.5060 Construct Barging Point 60 26-Aug-15 06-Nov-15 CAL 2 - 6 day CONS.BP.5070 Test and Commission 12 07-Nov-15 20-Nov-15 CAL 2 - 6 day **Box Culverts** Statutory for Box Culvert Outfall Construction CONS.OF.1010 Prepare Documents for Statutory Submission to Marine Department 60 20-Oct-15 31-Dec-15 33 CAL 2 - 6 day CONS.OF.1020 MD Vetting, Site Inspection and Approval 60 02-Jan-16 15-Mar-16 33 CAL 2 - 6 day ♦ 15-Mar-16 CONS.OF.1030 Marine Department Issues Permit / Consent 15-Mar-16 33 CAL 2 - 6 day Box Culvert D (Portion A1 & B1) Box Culvert D - (15 bays) CONS.A1.1040 Access to Portion A1 (Interface with Contract 03) 0 13-May-15 CAL 2 - 6 day 3-May-15 🔷 CONS.A1.1045 Survey / Setting Out 6 13-May-15 19-May-15 CAL 2 - 6 day CONS.A1.1050 30 13-May-15 17-Jun-15 Mobilisation and Plant Set Up CAL 2 - 6 day

Data Date: 27-Feb-15 HY/2013/04 - Hong Kong Boundary Crossing Facilities Infrastructure Works Stage II (Southern Portion) Page: 6 / 24 Print Date: 23-Apr-15 13:05 Total Float 0 | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | CONS.A1.1055.10 Predrilling at Portion A1 (30 nos) 40 20-May-15 08-Jul-15 CAL 2 - 6 day 30 nos x 5d / 4 rigs CONS.A1.1055.20 GI Report and Verification / Agreement to Founding Level 38 06-Jun-15 22-Jul-15 CAL 2 - 6 day CONS.A1.1060 Box Culvert D - Bored Piling Works (30 nos. 1200-1800mm dia x 63m + 90 18-Jun-15 05-Oct-15 CAL 2 - 6 day 30 nos x 18d / 6 rigs 0.65m Rock Socket) CONS.A1.1065 Pile Testing / Interface Coring Test 90 23-Jul-15 07-Nov-15 CAL 2 - 6 day CAL 2 - 6 day CONS.A1.1070 Install Dewatering Wells + Pump Test + Open Cut Excavation to formation 76 25-Aug-15 24-Nov-15 CONS.A1.1090 Pile Trimming and Pile Caps (15 nos) 72 17-Oct-15 13-Jan-16 CAL 2 - 6 day 15 Pilecaps x 8 days / 2 WF CONS.A1.1095.10 Box Culvert - Base Slab, Wall & Top Slab - Part 1 (8 bays) 86 06-Nov-15 20-Feb-16 & Top Slab 12 days) CAL 2 - 6 day 7 bays (Base Slab 8d,Walls10d & Top Slab 12 days) CONS.A1.1095.20 Box Culvert - Base Slab, Wall & Top Slab - Part 2 (7 bays) 76 25-Nov-15 27-Feb-16 CONS.A1.1100 Backfill / Reinstate and Connect UU and Road Works SOL101 and SOL102 76 07-Jan-16 12-Apr-16 CAL 2 - 6 day Box Culvert D - (3 bays and Outfall) CONS.B1.1150 Divert / Shift Haul Road to North 12 06-Oct-15 19-Oct-15 CAL 2 - 6 day CONS.B1.1160 Remove Rock Armour 14 20-Oct-15 05-Nov-15 CAL 2 - 6 day CONS.B1.1170 Construct Piling Platform 12 06-Nov-15 19-Nov-15 CAL 2 - 6 day CONS.B1.1180.10 Predrilling (6 nos) 15 20-Nov-15 07-Dec-15 CAL 2 - 6 day 6 nos x 5 days / 2 rigs CONS.B1.1180.20 GI Report and Verification / Agreement to Founding Level 15 04-Dec-15 21-Dec-15 CAL 2 - 6 day CONS.B1.1190 Box Culvert D - Bored Piling (6 nos 1200-1800mm dia x 63m +0.65m Rock 54 21-Dec-15 27-Feb-16 0 CAL 2 - 6 day 6 nos x 18 days / 2 rigs CONS.B1.1200 Pile Testing / Interface Coring Test 54 03-Feb-16 13-Apr-16 CAL 2 - 6 day CONS.B1.2110 Commence Works on Box Culvert Outfall 0 14-Apr-16 CAL 2 - 6 day CONS.B1.2115 Divert/Shift Haul Road ( on top of completed box culvert) 12 14-Apr-16 27-Apr-16 CAL 2 - 6 day CONS.B1.2130 Remove Piling Platform 14 28-Apr-16 16-May-16 CAL 2 - 6 day CAL 2 - 6 day CONS.B1.2140 Install Seawall Block & Rockfill near Seawall 20 17-May-16 08-Jun-16 CONS.B1.2150 General Fill 14 10-Jun-16 25-Jun-16 CAL 2 - 6 day CONS.B1.2180 Sheet Piling Works 20 27-Jun-16 20-Jul-16 CAL 2 - 6 day CONS.B1.2190 Install Dewatering Wells and Carry Out Pumping Test 24 21-Jul-16 17-Aug-16 CAL 2 - 6 day CAL 2 - 6 day Soft Excavation 600m3 /100m3 / day + 2 levels of struts at 12 CONS.B1.2200 ELS Works (2 levels of Strut) 36 18-Aug-16 30-Sep-16 CONS.B1.2210 Pile Trimming and Construction of Pile Caps 30 03-Oct-16 CAL 2 - 6 day 3 pilecaps x 8 days 07-Nov-16 CAL 2 - 6 day 3 bays (Base Slab 8d, Walls10d & Top Slab 12 days) CONS.B1.2220 Construct Box Culvert Outfall & Connect Drainage 27-Feb-17 CONS.B1.2230 Backfill, Remove Seawall Blocks & Reinstate Rock Armour 60 28-Feb-17 15-May-17 CAL 2 - 6 day CAL 2 - 6 day CONS.B1.2240 Complete Box Culvert D 15-May-17 Box Culvert C (Portion C1) **Prelimnary Driven Piles and Load Testing** CONS.C1.0450 Commence Preliminary Driven H Pile at Box Culvert C 0 13-Sep-15 0 CAL 1 - 7 day 13-Sep-15 🔷 CAL 1 - 7 day CONS.C1.0460 Mobilise Plant & Set-up Support 12 13-Sep-15 24-Sep-15 CONS.C1.0470.10 Predrilling (4 nos) 20 25-Sep-15 14-Oct-15 CAL 1 - 7 day 4 nos x 5 days / Pile - 1 rig CONS.C1.0470.20 GI Report and Verification / Agreement to Founding Level 8 15-Oct-15 22-Oct-15 CAL 1 - 7 day CONS C1 0480 Preliminary Driven H Pile (4 nos) 10 23-Oct-15 01-Nov-15 CAL 1 - 7 day 4 nos x 2.5 days / Pile - 1 rig CONS.C1.0500 Pile Load Testing and Submit Report 28 02-Nov-15 29-Nov-15 CAL 1 - 7 day Box Culvert C - Bay 4-8 CONS.C1.1040 Commence Box Culvert C at Portion C1 0 06-Nov-15 CAL 2 - 6 day 06-Nov-15 � CONS.C1.1045 Survey / Setting Out 6 06-Nov-15 12-Nov-15 CAL 2 - 6 day CONS.C1.1055.10 Predrilling (56 nos) 47 13-Nov-15 09-Jan-16 CAL 2 - 6 day 56 nos x 5 days / 6 Rig CONS.C1.1055.20 GI Report and Verification / Agreement to Founding Level 47 27-Nov-15 23-Jan-16 CONS.C1.1060 Driven H Piling Works (56 nos x 2.5 days per Pile / 3 rigs) 47 11-Dec-15 06-Feb-16 CAL 2 - 6 day 56 nos x 2.5 Days / 3 Driving Rig CONS.C1.1070 Excavate and Install Dewatering Wells+ Pump Test 47 28-Dec-15 24-Feb-16 CAL 2 - 6 day CAL 2 - 6 day 14 Pile Caps x 8 days / 2 Work CONS.C1.1090 Pile Trimming and Construction of Pile Caps 72 04-Feb-16 06-May-16

HY/2013/04 - Hong Kong Boundary Crossing Facilities Infrastructure Works Stage II (Southern Portion) Page: 7 / 24 Print Date: 23-Apr-15 13:05 Total Float 0 | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | CONS.C1.1100 Construct Box Culvert & Drainage Connection (5 bays) 72 07-Mar-16 04-Jun-16 CAL 2 - 6 day 76m or 5 Bays CONS.C1.1110 72 08-Apr-16 05-Jul-16 CAL 2 - 6 day Box Culvert C - Bay 1-3 and Outfall CONS.C1.1120 Divert / Shift Haul Road to North 14 11-Feb-16 26-Feb-16 2 CAL 2 - 6 day CONS.C1.1150 Remove Rock Armour 18 27-Feb-16 18-Mar-16 CAL 2 - 6 day CONS.C1.1160 Construct Piling Plaform 14 19-Mar-16 08-Apr-16 CAL 2 - 6 day CONS.C1.1170.10 Predrilling (36 nos) 45 09-Apr-16 02-Jun-16 CAL 2 - 6 day 36 nos x 5 days / 4 rigs CONS.C1.1170.20 GI Report and Verification / Agreement to Founding Level 45 23-Apr-16 17-Jun-16 CAL 2 - 6 day CONS.C1.1180 02-Jul-16 CAL 2 - 6 day 36 nos x 2.5 days / 3 rigs Piling Driving Works - Driven H-Pile (36 nos) 30 27-May-16 CONS.C1.8480 Commence Box Culvert C Outfall CAL 2 - 6 day 0 06-Jul-16 CONS.C1.8485 Divert /Shift Haul Road to North (on top of completed box culvert) 10 06-Jul-16 16-Jul-16 CAL 2 - 6 day CONS.C1.8490 Remove Piling Platform 12 18-Jul-16 30-Jul-16 CAL 2 - 6 day CONS.C1.8500 Seawall Block Installation near Seawall 18 01-Aug-16 20-Aug-16 CAL 2 - 6 day CAL 2 - 6 day CONS.C1.8510 12 22-Aug-16 General Fill 03-Sep-16 CONS.C1.8530 14 05-Sep-16 CAL 2 - 6 day CONS.C1.8540 Dewatering Wells + Pump Test 24 23-Sep-16 22-Oct-16 CAL 2 - 6 day CONS.C1.8550 ELS Works (2 layers of Strut) 36 24-Oct-16 03-Dec-16 CAL 2 - 6 day CONS.C1.8560 Pile Trimming and Construction of Pile Caps (9 Pilecaps) 32 05-Dec-16 13-Jan-17 CAL 2 - 6 day 9 Pile caps x 8 days / 2 WF CONS.C1.8570 Construct Box Culvert + Outfall & Drainage Connection (38m or 3 bays) 60 14-Jan-17 CAL 2 - 6 day 3 bays CONS.C1.8580 Backfill & Remove Sea Wall Blocks and Reinstate Rock Armour 35 29-Mar-17 15-May-17 CAL 2 - 6 day 15-May-17 CAL 2 - 6 day CONS.C1.8590 Complete Box Culvert C Bridge D1 in Portion C1, D1 and D3 (Interface with Contract HY/2013/03) CONS.C1.1130 Access to Portion C1, D1 & D3 0 14-Sep-15 CAL 2 - 6 day 14-Sep-15 🔷 CONS.C1.1140 CAL 2 - 6 day Survey / Setting Out 6 14-Sep-15 19-Sep-15 CONS.C1.2200.10 Predrilling (17 nos) CAL 2 - 6 day 17 nos x 5 days / 3 rigs 30 26-Sep-15 03-Nov-15 CONS.C1.2200.20 GI Report and Verification / Agreement to Founding Level 8 04-Nov-15 CAL 2 - 6 day 2 x 18 days and 15 nos x 14 days / 4 rigs CONS.C1.2210 D1 Bored Piling (17 nos. 1800-2000mm dia x 52m) ( 2 nos + 0.8m Rock 62 02-Dec-15 18-Feb-16 CONS.C1.2215 62 05-Jan-16 19-Mar-16 CAL 2 - 6 day Pile Testing CONS.C1.2220 Pile Trimming + Pile Caps (6 nos) 58 02-Feb-16 16-Apr-16 CAL 2 - 6 day 2 nos x 12 days + 4 nos x 8 days + 1 x 10 days + trimming CONS.C1.2225.10 Construct Pier 508 (Column + Pier head & Bearings) (KD4) 24 23-Feb-16 21-Mar-16 CONS.C1.2225.20 Pier P508 Curing 24 22-Mar-16 22-Apr-16 CAL 2 - 6 day CONS.C1.2225.30 CAL 2 - 6 day Bearing Installation, Final Inspection and Handover 40 23-Apr-16 11-Jun-16 CONS.C1.2226 Achievement of KD4 (465) 11-Jun-16 CAL 2 - 6 day CONS.C1.2230 Construct Abutment A106 30 09-Mar-16 16-Apr-16 CAL 2 - 6 day 1 no CONS.C1.2240 Pier Columns + Pier Head & Bearings P101-P105 60 22-Feb-16 06-May-16 CAL 2 - 6 day 5 nos x 12 days CONS.C1.2250 Bridge D1 - Erect Precast Segments + Stitching + Stressing (6 spans) 48 23-Apr-16 21-Jun-16 CAL 2 - 6 day 96 segments, 6 spans x 8 days / CONS.C1.2260 D1 Bridge Ancillary - Parapet/TCSS, Railing, MJ, Drainage & Bridge Lighting 48 22-Jun-16 17-Aug-16 CAL 2 - 6 day 288m / 3 moulds @ 5 days cycle CONS.C1.2265 D1 Bridge Ancillary - Parapet + Railing, MJ, Drainage, Bridge Lighting, 48 11-Oct-16 05-Dec-16 CAL 2 - 6 day 288m / 4 moulds @ 5 days cycle CAL 2 - 6 day CONS.C1.2270 D1 Final Asphalt Paving + Road Markings 12 13-Apr-17 29-Apr-17 CONS.C1.2280 29-Apr-17 CAL 2 - 6 day Completion of Bridge D1 11 Bridge D8 CONS.C1.2285 Site Possession / Access to Portion C1 0 14-Sep-15 CAL 2 - 6 day 14-Sep-15 🔷 CONS.C1.2288 Survey / Setting Out 12 14-Sep-15 26-Sep-15 CAL 2 - 6 day CONS.C1.2290.10 Predrilling (10 nos) 25 29-Sep-15 29-Oct-15 26 CAL 2 - 6 day 10 nos x 5 days / 2 rigs

Data Date: 27-Feb-15 HY/2013/04 - Hong Kong Boundary Crossing Facilities Infrastructure Works Stage II (Southern Portion) Page: 8 / 24 Print Date: 23-Apr-15 13:05 Total Float CONS.C1.2290.20 GI Report and Verification / Agreement to Founding Level 8 30-Oct-15 07-Nov-15 26 CAL 2 - 6 day CONS.C1.2300 D8 Bored Piling (10 nos.2000mm dia x 52m) 70 09-Dec-15 CAL 2 - 6 day 10 nos x 14 days / 2 rigs 05-Mar-16 CONS.C1.2305 70 14-Jan-16 12-Apr-16 CAL 2 - 6 day CONS.C1.2310 Pile Trimming + Pile Caps (5 nos) 56 19-Feb-16 28-Apr-16 CAL 2 - 6 day 5 nos x 8 days + 6 days CAL 2 - 6 day 4 nos x 12 days CONS.C1.2315 Pier Columns + Pier Head & Bearings 48 31-Mar-16 28-May-16 CONS.C1.2320 Construct Abutment A801 30 16-May-16 CAL 2 - 6 day 1 no 20-Jun-16 CONS.C1.2340 Bridge D8 - Erect Precast Segments + Stitching + Stressing (4 spans) 28-Jul-16 CAL 2 - 6 day 62 Segments, 4 spans x 8 days 32 21-Jun-16 CONS.C1.2350 D8 Bridge Ancillary - Parapet/TCSS, Railing, MJ, Drainage & Bridge Lighting 32 13-Jul-16 18-Aug-16 CAL 2 - 6 day 186m / 3 moulds @ 5 days cycle CONS.C1.2355 CAL 2 - 6 day 186m / 2 moulds @ 5 days cycle D8 Bridge Ancillary - Parapet + Railing, MJ, Drainage, Bridge Lighting, 46 18-Jan-17 15-Mar-17 CONS.C1.2360 D8 Final Asphalt Paving + Road Markings 12 29-Mar-17 12-Apr-17 CAL 2 - 6 day CONS.C1.2370 Completion of Bridge D8 12-Apr-17 23 CAL 2 - 6 day 13 May 15 🔷 Site Possession / Access to Portion A1 & A5 (61 days) CONS.A5.2010 0 13-May-15 16 CAL 2 - 6 day CONS.A5.2015 6 13-May-15 19-May-15 16 CAL 2 - 6 day Suvey / Setting out CONS.A5.2020.10 Predrilling - Portion A1 & A5 (12 nos) 30 20-May-15 25-Jun-15 16 CAL 2 - 6 day 12 nos x 5d / 2 rigs CONS.A5.2020.20 GI Report and Verification / Agreement to Founding Level 8 26-Jun-15 06-Jul-15 16 CAL 2 - 6 day CAL 2 - 6 day 12 nos x 14 d / 3 rigs CONS.A5.2030 D9a Bored Piling (12 nos.1800-2200mm dia x 47m) 56 14-Jul-15 16-Sep-15 10 CONS.A5.2035 Pile Testing 22-Oct-15 15 CAL 2 - 6 day 56 15-Aug-15 CONS.A5.2040 Pile Trimming + Pile Caps (2 nos) 48 17-Sep-15 CAL 2 - 6 day 2 pile caps CONS.A5.2050 Pier Columns + Pier Head & Bearings (4 nos. P904-P907) 48 02-Nov-15 29-Dec-15 15 CAL 2 - 6 day 4 nos x 12 days CONS.A5.2065 Bridge D9a - Erect Precast Segments + Stitching + Stressing (4 spans) 32 01-Mar-16 11-Apr-16 CAL 2 - 6 day 58 Segments, 4 Spans x 8 days CONS.A5.2070 D9a Bridge Ancillary - Parapet/TCSS, Railing, MJ, Drainage, Bridge Lighting, 25 12-Apr-16 11-May-16 CAL 2 - 6 day 85m / 2 moulds @ 5 days cycle CONS.A5.2080 D9a Bridge Ancillary - Parapet + Railing, MJ, Drainage, Bridge Lighting, 25 12-Dec-16 12-Jan-17 49 CAL 2 - 6 day 85m / 2 moulds @ 5 days cycle Signages Bridge D9a in Portion C1 & C2 0 14-Sep-15 14-Sep-15 🔷 CONS.C2.3010 Site Possession / Access to Portion C1 & C2 (184 days) CAL 2 - 6 day CONS.C2.3015 Survey / Setting Out 6 14-Sep-15 19-Sep-15 CAL 2 - 6 day CONS.C2.3020.10 Predrilling - Portion C1 & C2 (8 nos) 10-Oct-15 CAL 2 - 6 day 8 nos x 5d / 2 rigs 20 16-Sep-15 CONS.C2.3020.20 GI Report and Verification / Agreement to Founding Level 20 02-Oct-15 26-Oct-15 CAL 2 - 6 day CONS.C2.3030 D9a in Portion C1 & C2 Bored Piling (8 nos.1800-2200mm dia x 47m) 56 05-Oct-15 09-Dec-15 CAL 2 - 6 day 8 nos x 14 d / 2 rigs CONS.C2.3035 56 07-Nov-15 CAL 2 - 6 day Pile Testing 14-Jan-16 CONS.C2.3040 Pile Trimming + Pile Caps (3 nos) 36 10-Dec-15 CAL 2 - 6 day CONS C2 3050 Pier Columns + Pier Head & Bearings (3 nos P902, P903 +P805) 36 24-Dec-15 06-Feb-16 CAL 2 - 6 day 3 nos x 12d CAL 2 - 6 day 1 no CONS.C2.3070 Construct Abutment A901 30 04-Jan-16 06-Feb-16 CAL 2 - 6 day 30 segments, 2 spans, A901-P903 x 8 days / span CONS.C2.3080 Bridge D9a (C1 & C2) - Erect Precast Segments + Stitching + Stressing (2 16 11-Feb-16 29-Feb-16 CAL 2 - 6 day 87.5m / 2 Steel Mould @ 5 days CONS.C2.3085 D9a (C1 & C2) Bridge Ancillary - Parapet/TCSS, Railing, MJ, Drainage, Bridge 48 01-Mar-16 29-Apr-16 Lighting, & Sign Gantry CONS C2 3095 Completion of Works in Section VI (KD13) 31-May-16 15 CAL 2 - 6 day Bridge D9a (C1 & C2) - Erect Precast Segments + Stitching + Stressing (1 CONS.C2.3100 8 12-Apr-16 20-Apr-16 CAL 2 - 6 day 16 segments, 1 span, CONS.C2.3110 D9a Bridge Ancillary - Parapet/TCSS, Railing, MJ, Drainage, Bridge Lighting, 25 30-Apr-16 31-May-16 CAL 2 - 6 day 46m / 1 Steel Moulds @ 5 days cylce / 10m bay CONS.C2.3115 D9a Bridge Ancillary - Parapet + Railing, MJ, Drainage, Bridge Lighting, 25 12-Dec-16 12-Jan-17 CAL 2 - 6 day 46m / 1 Steel Moulds @ 5 days Signages cylce / 10m bay CONS.C2.3120 D9a Final Asphalt Paving + Road Markings 12 15-Mar-17 28-Mar-17 CAL 2 - 6 day CONS.C2.3130 Completion of Bridge D9a 28-Mar-17 35 CAL 2 - 6 day Bridge D9b

CONS.A1.1105

CONS.A1.1108

Access to Portion A1

Survey / Setting Out

CONS.A1.1110.10 Predrilling (8 nos incl. 4 nos for P910)

0 13-May-15

6 13-May-15

20 26-Jun-15 20-Jul-15

19-May-15

63

63

33

CAL 2 - 6 day

CAL 2 - 6 day

CAL 2 - 6 day 8 nos x 5 days / 2 rig

Data Date: 27-Feb-15 HY/2013/04 - Hong Kong Boundary Crossing Facilities Infrastructure Works Stage II (Southern Portion) Page: 9 / 24 Print Date: 23-Apr-15 13:05 Total Float CONS.A1.1110.20 GI Report and Verification / Agreement to Founding Level 8 21-Jul-15 29-Jul-15 33 CAL 2 - 6 day CONS.A1.1120 D9b Bored Piling (8 nos. 2000mm dia x 49m) including 4 for P910 CAL 2 - 6 day 8 nos x 14 days / 2 rig 56 11-Aug-15 16-Oct-15 23 CONS.A1.1125 56 22-Sep-15 CAL 2 - 6 day CONS.A1.1130 Pile Trimming + Pile Caps 38 30-Nov-15 15-Jan-16 77 CAL 2 - 6 day 4 nos x 8d + 6d Trimming CONS.A1.1140 Pier Columns + Pier Head & Bearings ( 4 nos. P908 & P909 + P910 x2) 48 16-Jan-16 15-Mar-16 77 CAL 2 - 6 day 4 nos x 12 days CONS.A1.1160 Bridge D9b - Erect Precast Segments + Stitching + Stressing (3 spans) 24 22-Jun-16 20-Jul-16 CAL 2 - 6 day 44 Segments, 3 spans x 8 days CONS.A1.1170 D9b Bridge Ancillary - Parapet/TCSS, Railing, MJ, Drainage & Bridge Lighting 33 12-Jul-16 cycle / 10m bay CONS.A1.1175 D9b Bridge Ancillary - Parapet + Railing, MJ, Drainage, Bridge Lighting, 33 03-Nov-16 10-Dec-16 CAL 2 - 6 day 132m / 2 steel moulds @ 5 days CONS.A1.1180 D9b Final Asphalt Paving + Road Markings 12 13-Feb-17 CAL 2 - 6 day 25-Feb-17 CONS.A1.1190 Bridge D9b complete 25-Feb-17 CAL 2 - 6 day Bridge D9c CONS.A1.1192 Site Possession / Access to Portion A1 & A2 0 13-May-15 26 CAL 2 - 6 day CONS.A1.1194 Survey / Setting Out 6 13-May-15 19-May-15 26 CAL 2 - 6 day CONS.A1.1200.10 Predrilling (8 nos) 12-Jun-15 26 CAL 2 - 6 day 8 nos x 5 days / 2 rigs 20 20-May-15 CONS.A1.1200.20 GI Report and Verification / Agreement to Founding Level 8 13-Jun-15 23-Jun-15 26 CONS.A1.1210 D9c Bored Piling (8 nos. 2000mm dia x 62m) 56 14-Jul-15 16-Sep-15 10 CAL 2 - 6 day 8 nos x 14 days / 2 rigs CONS.A1.1215 Pile Testing 56 20-Aug-15 27-Oct-15 10 CAL 2 - 6 day CONS.A1.1220 Pile Trimming + Pile Caps (3 nos) 36 13-Oct-15 CAL 2 - 6 day 3 nos x 8 days + 6 days for 24-Nov-15 26 CONS.A1.1230 Pier Columns + Pier Head & Bearings 36 11-Nov-15 22-Dec-15 CAL 2 - 6 day 3 nos x 12 days CONS.A1.1240 Bridge D9c - Construct Deck (Cast in Situ) (1 span, P910 to P911) 36 23-Dec-15 05-Feb-16 26 CAL 2 - 6 day 1 span (cast in-situ) CONS.A1.1250 Bridge D9c - Erect Precast Segments Pier P911 to Pier P913 + Stitching + 16 11-Mar-16 01-Apr-16 CAL 2 - 6 day 28 segments, 2 spans x 8 days CONS.A1.1260 D9c Bridge Ancillary - Parapet/TCSS, Railing, MJ, Drainage & Bridge Lighting 32 12-May-16 20-Jun-16 CAL 2 - 6 day 126m / 2 Steel moulds @ 7 day cycle/ 10m bay CONS.A1.1270 32 24-Sep-16 02-Nov-16 19 CAL 2 - 6 day 126m / 2 Steel moulds @ 7 day D9c Bridge Ancillary - Parapet + Railing, MJ, Drainage, Bridge Lighting, cycle/ 10m bay Bridge D9c in Portion A3 (Interface with Contract HY/2012/07) 02-Jul-16 💠 CONS.A3.1010 Site Possession / Access to Portion A3 0 02-Jul-16 11 CAL 2 - 6 day 12 02-Jul-16 15-Jul-16 CAL 2 - 6 day CONS.A3.1020 Mob/ Survey / Setting Out 11 CONS.A3.1030 Bridge D9c (A3) - Erect Precast Segments Pier P913 to Contract Interface CAL 2 - 6 day 14 segments, 1 span x 8 days 12 29-Jul-16 11-Aug-16 + Stitching + Stressing (1 span) CONS A3 1040 D9c Bridge Ancillary - Parapet/TCSS, Railing, MJ, Drainage & Bridge Lighting 35 12-Aug-16 23-Sep-16 CAL 2 - 6 day 41m 1 Steel Moulds @ 5 days 35 24-Sep-16 CAL 2 - 6 day 41m 1 Steel Moulds @ 5 days CONS.A3.1045 D9c Bridge Ancillary - Parapet + Railing, MJ, Drainage, Bridge Lighting, 05-Nov-16 CONS.A3.1050 15 28-Nov-16 Final Asphalt Paving + Road Markings 14-Dec-16 CONS.A3.1060 Completion of Works in Stage 1B (KD2) 14-Dec-16 CAL 2 - 6 day Bridge D10 CONS.A1.1284 Site Possession / Access to Portion A1 0 13-May-15 CAL 2 - 6 day 64 CONS.A1.1286 Survey / Setting Out 6 13-May-15 19-May-15 CAL 2 - 6 day CONS.A1.1290.10 Predrilling (16 nos) 09-Jul-15 CAL 2 - 6 day 14 nos x 5d / 2 rigs 06-Aug-15 CONS.A1.1290.20 GI Report and Verification / Agreement to Founding Level 8 07-Aug-15 15-Aug-15 24 CAL 2 - 6 day CONS.A1.1300 D10 Bored Piling (14 nos 1800-2200mm dia x 57m) (42m for Abutment) 66 14-Sep-15 02-Dec-15 CAL 2 - 6 day 14 nos x 14 days / 3 rigs CONS.A1.1305 66 22-Oct-15 09-Jan-16 CONS.A1.1310 Pile Trimming + Pile Caps 70 24-Nov-15 19-Feb-16 CAL 2 - 6 day 8 nos x 8 days + 6 days CONS.A1.1315 Abutment A1004 36 30-Jan-16 15-Mar-16 CAL 2 - 6 day CAL 2 - 6 day 8 nos x 12 days / 2 Teams CONS.A1.1320 Pier Columns + Pier Head & Bearings 01-Apr-16 48 30-Jan-16

CONS.A1.1340

CONS.A1.1350

CONS.A1.1355

CONS.A1.1360

Bridge D10 - Erect Precast Segments + Stitching + Stressing (8 spans)

D10 Bridge Ancillary - Parapet + Railing, MJ, Drainage, Bridge Lighting,

D10 Final Asphalt Paving + Road Markings

D10 Bridge Ancillary - Parapet/TCSS, Railing, MJ, Drainage, Bridge Lighting,

64 02-Apr-16

50 03-Jun-16

50 01-Dec-16

14 27-Feb-17 14-Mar-17

20-Jun-16

02-Aug-16

03-Feb-17

CAL 2 - 6 day 109 segments, 8 spans x 8 days / span CAL 2 - 6 day 195m / 2 Steel Moulds @ 5 days cycle / 10m bay

CAL 2 - 6 day 195m / 2 Steel Moulds @ 5 days cycle / 10m bay + median

CAL 2 - 6 day

Data Date: 27-Feb-15
Print Date: 23-Apr-15 13:05

HY/2013/04 - Hong Kong Boundary Crossing Facilities Infrastructure Works Stage II (Southern Portion)
Page: 10 / 24

Activity ID	Activity Name	Orig Dur Early Start	Early Finish	Total Float	Calenda	Remarks	OLN			2015	Alslol	NI D	J F M A	201				п м Г	20		6101	NI D	ılel	MINI	201				LELM	201		I A IS
CONS.A1.1370	Bridge D10 complete	0	14-Mar-17	47	CAL 2 - 6 day	,	O N	БЭ	FMA	VI J JUII	4 5 0	ND	J F M A	M J	Jul A	SON	БЭ		-Mar-17	Jul A	5 0	ND	JF	MIAII	MI J J	ui A S	UN	БЭ	FIM	I A I N	JJ	A
Bridge D11																																
CONS.A1.1375	Site Possession / Access to Portion A1 (61d)	0 13-May-15		118	CAL 2 - 6 day	,			13-May-15	•																						
CONS.A1.1378	Survey / Setting Out	6 19-Sep-15	25-Sep-15	10	CAL 2 - 6 day	1		-																						+		
CONS.A1.1380.10	Predrilling (4 nos)	20 26-Sep-15	22-Oct-15	10	CAL 2 - 6 day	7 nos x 5 days / 2 rigs	1				_																					
CONS.A1.1380.20	GI Report and Verification / Agreement to Founding Level	8 23-Oct-15	31-Oct-15	10	CAL 2 - 6 day	1	1				0																					
CONS.A1.1390	D11 Bored Piling (3 nos. 2000mm dia x 65) (52m for abutment)	42 02-Nov-15	19-Dec-15	10	CAL 2 - 6 day	3 nos x 14 days / 1 rig	1					<u> </u>																				
CONS.A1.1395	Pile Testing	42 04-Dec-15	25-Jan-16	72	CAL 2 - 6 day	,							_																			
CONS.A1.1400	Pile Trimming + Pile Caps ( 4 nos)	38 09-Jan-16	25-Feb-16	72	CAL 2 - 6 day	4 nos x 8 days + 6 days for																										
CONS.A1.1405	Abutment A1101	36 02-Feb-16	17-Mar-16	90	CAL 2 - 6 day	Trimming	-																									
CONS.A1.1410	Pier Columns + Pier Head & Bearings (3 nos, P1102 & P910 x 2)	36 26-Feb-16	12-Apr-16	72	CAL 2 - 6 day	3 nos x 12 days	-																									
CONS.A1.1430	Bridge D11 - Erect Precast Segments + Stitching + Stressing ( 2 spans)	16 11-Jul-16	28-Jul-16	0		31 Segements, 2 spans x 8 days																										
CONS.A1.1440	D11 Bridge Ancillary - Parapet/TCSS, Railing, MJ, Drainage, Bridge Lighting,	25 21-Jul-16	18-Aug-16	0		/span / 93m / 2 steel moulds @ 5 days /																										
	& Sign Gantry					cycle / 10m bay	<b></b>									,														ļļ	.  .	
CONS.A1.1445	D11 Bridge Ancillary - Parapet + Railing, MJ, Drainage, Bridge Lighting, Signages D11 Final Asphalt Paving + Poad Markings	25 19-Aug-16 12 11-Nov-16	19-Sep-16	23		93m / 2 steel moulds @ 5 days / cycle / 10m bay										_																
CONS.A1.1450	D11 Final Asphalt Paving + Road Markings	12 11-NOV-16	24-Nov-16	0	CAL 2 - 6 day												24-Nov	16														
CONS.A1.1460	Bridge D11 complete	0	24-Nov-16	135	CAL 2 - 6 day											•	24-NOV	16														
Bridge D12a																																
CONS.B1.1835	Site Possession / Access to Portion B1	0 13-Jun-15		0	CAL 2 - 6 day				13-Jun-	5 🔷																						
CONS.B1.1837	Site Survey and Setting Out	6 13-Jun-15	19-Jun-15	0	CAL 2 - 6 day	,				•																						
CONS.B1.1840.10	Predrilling (17 nos)	30 18-Jun-15	24-Jul-15	0	CAL 2 - 6 day	17 nos x 5 days / 3 rigs																										
CONS.B1.1840.20	GI Report and Verification / Agreement to Founding Level	30 04-Jul-15	07-Aug-15	0	CAL 2 - 6 day	1																										
CONS.B1.1850	D12a Bored Piling (17 nos. 2000mm dia x 60m + 1.0m Rock Socket)	77 18-Jul-15	17-Oct-15	0	CAL 2 - 6 day	17 nos x 18 days / 4 rigs					_																					
CONS.B1.1855	Pile Testing	77 20-Aug-15	20-Nov-15	0	CAL 2 - 6 day						+	•																				
CONS.B1.1860	Pile Trimming + Pile Caps	60 23-Sep-15	04-Dec-15	0	CAL 2 - 6 day	3 nos x 14 days + 1 x 8 days + 10 days trimming						_																		Til		
CONS.B1.1880	Pier Columns + Pier Head & Bearings	48 24-Oct-15	18-Dec-15	0	CAL 2 - 6 day	7 nos x 12 days / 2 Teams					+	<del>-</del>																				
CONS.B1.1890	Bridge D12a - Erect Precast Segments + Stitching + Stressing (6 spans)	48 30-Nov-15	27-Jan-16	0	CAL 2 - 6 day	95 Segments, 6 spans x 8 days / span							-																			
CONS.B1.1900	D12a Bridge Ancillary - Parapet/TCSS, Railing, MJ, Drainage, Bridge Lighting, & Sign Gantry	45 26-Jan-16	21-Mar-16	0	CAL 2 - 6 day	171m / 2 steel moulds @ 5 days cycle / 10m bay							-																			
CONS.B1.1905	D12a Bridge Ancillary - Parapet + Railing, MJ, Drainage, Bridge Lighting, Signages	45 15-Aug-16	08-Oct-16	3	CAL 2 - 6 day	171m / 2 steel moulds @ 5 days cycle / 10m bay	5								Ė	•																
CONS.B1.1910	D12a Final Asphalt Paving + Road Markings	12 14-Oct-16	27-Oct-16	0	CAL 2 - 6 day						1111			<del>   </del>		-			11											1		17
CONS.B1.1920	Bridge D12a complete	0	27-Oct-16	159	CAL 2 - 6 day	,										<b>◇</b> 27	-Oct-16															
Bridge D12b																																
CONS.B2.2015	Site Possession / Access to Portion B2 & B5	0 14-Jul-15		31	CAL 2 - 6 day	,			14-	ul-15 💠																						
CONS.B2.2018	Site Survey / Setting out	6 14-Jul-15	20-Jul-15	31	CAL 2 - 6 day	,				0																						
CONS.B2.2020.10	Predrilling (18 nos)	30 22-Aug-15	25-Sep-15	0	CAL 2 - 6 day	18 nos x 5 days / 3 rigs					-																					++-
CONS.B2.2020.20	GI Report and Verification / Agreement to Founding Level	30 05-Sep-15	12-Oct-15	0	CAL 2 - 6 day	,					-																					
CONS.B2.2030	D12b Bored Piling (18 nos. 2000mm dia x 64m + 3.3m Rock Socket)	65 19-Sep-15	07-Dec-15	0	CAL 2 - 6 day	18 nos x 18 days / 5 rigs					-	<u> </u>																				
CONS.B2.2035	Pile Testing	65 26-Oct-15	12-Jan-16	0	CAL 2 - 6 day	1							•																			
CONS.B2.2040	Pile Trimming + Pile Caps	72 23-Nov-15	20-Feb-16	0	CAL 2 - 6 day	9 nos x 8 days + 6 days							<b>-</b>																			
CONS.B2.2060	Pier Columns + Pier Head & Bearings	60 30-Dec-15	12-Mar-16	0		trimming 9 nos x 12 days / 2 teams																										
CONS.B2.2070	Bridge D12b - Erect Precast Segments + Stitching + Stressing (8 spans)	64 28-Jan-16	19-Apr-16	0		127 Segments, 8 spans x 8																										
CONS.B2.2080	D12b Bridge Ancillary - Parapet/TCSS, Railing, MJ, Drainage, Bridge Lighting,	45 22-Mar-16	19-May-16	0		days/ span 182m / 2 steel moulds @ 5 days																										
CONS.B2.2085	& Sign Gantry  D12b Bridge Ancillary - Parapet + Railing, MJ, Drainage, Bridge Lighting,	72 20-May-16	13-Aug-16	0		cycle / 10m bay 566m / 4 steel moulds @ 5 days	1 1																									
CONS.B2.2085	Final Paving, Road Markings and Signages	12 28-Sep-16	13-Aug-10	0	CAL 2 - 6 day	cycle / 10m bay									T																	
			13-001-10		OME 2 - 0 day									ļļļ																ļļ	.  .	4.4
	ast in-situ) in Portion B3 (Interface with Contract HY/201				0110									ا باه ادرا																		
CONS.B3.2110	Site Possession/Access to Portion B3	0 02-Jul-16		0	CAL 2 - 6 day								02	Jul-16 💠																		

Data Date: 27-Feb-15 Print Date: 23-Apr-15 13:05

#### HY/2013/04 - Hong Kong Boundary Crossing Facilities Infrastructure Works Stage II (Southern Portion)

Page : 11 / 24

Activity ID	Activity Name	Orig Dur	Early Start	Early Finish	Total	Calendar	Remarks				2015				2016					)17				201				2019	
CONS.B3.2120	Survey / Setting Out	6	02-Jul-16	08-Jul-16	Float 0	CAL 2 - 6 day		ON	D J F	M A M	J Jul A	S O N	D J F	I A M	Λ J Jul Λ	A S C	N D .	F M	A M J	Jul A	SON	D J	F M A	M J	Jul A S	SON	D J F	M A M	J Jul A
CONS.B3.2130	Bridge D12b (Portion B3) - Construct Deck (cast-in-situ) Pier P1210/P1214		05-Jul-16	15-Aug-16	0		1 span (cast in-situ)	+																					
CONS.B3.2130	interface with Other Contract  D12b Bridge Ancillary - Parapet/TCSS, Railing, MJ, Drainage, Bridge Lighting,		18-Aug-16	10-Sep-16	0		41m / 1 steel mould @ 5 days	-																					
	& Sign Gantry			· ·	0		cycle / 10m bay	1					ļļļ			<u>.</u>													·
CONS.B3.2145	D12b Bridge Ancillary - Parapet + Railing, MJ, Drainage, Bridge Lighting, Signages		24-Aug-16	19-Sep-16	0		41m / 1 steel mould @ 5 days cycle / 10m bay																						
CONS.B3.2150	D12b Final Paving, Road Markings and Signages	7	20-Sep-16	27-Sep-16	0	CAL 2 - 6 day										•													
CONS.B3.2160	Completion of Section IV (KD11) Works within Portion B3 including Bridge D12b	0		27-Sep-16	0	CAL 2 - 6 day	,									<b>•</b> 2	27-Sep-16												
Bridge D13 in F	Portion B1 and Portion C1																												
CONS.B1.1925	Site Possession / Access to Portion B1	0	13-Jun-15		27	CAL 2 - 6 day	,			13-Jun-15	>																		
CONS.B1.1926	Site Possession / Access to Portion C1	0	14-Sep-15		0	CAL 2 - 6 day				1	4-Sep-15	<b>♦</b>																	
CONS.B1.1928	Site Survey / Setting out Portion B1	6	13-Jun-15	19-Jun-15	27	CAL 2 - 6 day					0																		
CONS.B1.1929	Site Survey / Setting out Portion C1	6	14-Sep-15	19-Sep-15	0	CAL 2 - 6 day						•																	
CONS.B1.1930.10	Predrilling (15 nos) in Portion B1	25	24-Jul-15	21-Aug-15	0	CAL 2 - 6 day	15 nos x 5 days / 3 rigs				-																		
CONS.B1.1930.20	GI Report and Verification / Agreement to Founding Level - B1	8	22-Aug-15	31-Aug-15	37	CAL 2 - 6 day	,																						
CONS.B1.1932.10	Predrilling (6 nos) in Portion C1	15	21-Sep-15	09-Oct-15	0	CAL 2 - 6 day	6 nos x 5 days / 2 rigs	1-1-1				-			+									1-1-1					
CONS.B1.1932.20	GI Report and Verification / Agreement to Founding Level - C1	8	10-Oct-15	19-Oct-15	0	CAL 2 - 6 day	,	+				•																	
CONS.B1.1940	D13 Bored Piling (15 nos. 1800-2000mm dia x 52m) 4nos + 0.8m Rock	57	26-Sep-15	04-Dec-15	15	CAL 2 - 6 day	4 nos x 18 days and 11 nos x 1	4					•																
CONS.B1.1942	Socket - Portion B1 Pile Testing B1	57	02-Nov-15	09-Jan-16	15	CAL 2 - 6 day	days / 4 rigs	+																					
CONS.B1.1946	D13 Bored Piling (6 nos. 1800-2000mm dia x 47m-52m) - Portion C1	42	20-Oct-15	08-Dec-15	0		6 nos x 14 days / 2 rigs	+																					
CONS.B1.1948	Pile Testing C1		23-Nov-15	13-Jan-16	28	CAL 2 - 6 day																							:
CONS.B1.1950	Pile Trimming + Pile Caps - Portion B1		05-Dec-15	15-Feb-16	15		5 nos x 10 days +6 days	-																					
CONS.B1.1952			14-Jan-16	27-Feb-16	28		trimming	4																					
	Pile Trimming + Pile Caps - Portion C1						3 nos x 10 days +6 days trimming																						
CONS.B1.1954	Pier Columns + Pier Head & Bearings		20-Jan-16	31-Mar-16	15		9 nos x 12 days / 2 teams																						
CONS.B1.1960	Construct Abutment A1301 + A1307 - Portion C1		25-Feb-16	11-Apr-16	7		2 nos x 2 work fronts								<u>.ii.</u> i.														
CONS.B1.1980	Bridge D13 - Erect Precast Segments + Stitching + Stressing (9 spans)	66	20-Apr-16	09-Jul-16	0	CAL 2 - 6 day	129 Segments, 9 spans x 8 day /span	ys						T															
CONS.B1.1990	D13 Bridge Ancillary - Parapet/TCSS, Railing, MJ, Drainage, Bridge Lighting, & Sign Gantry	50	21-Jun-16	18-Aug-16	0	CAL 2 - 6 day	293m / 3 steel moulds @ 5 day cycle / 10m bay	ys								•													
CONS.B1.1995	D13 Bridge Ancillary - Parapet + Railing, MJ, Drainage, Bridge Lighting, Signages	50	19-Aug-16	20-Oct-16	6	CAL 2 - 6 day	293m / 3 steel moulds @ 5 day cycle / 10m bay	ys									1												
CONS.B1.2000	D13 Final Asphalt Paving, Road Markings & Signages	12	28-Oct-16	10-Nov-16	0	CAL 2 - 6 day											•												
CONS.B1.2010	Completion of Bridge D13	0		10-Nov-16	147	CAL 2 - 6 day											<b>♦</b> 10-Nov	-16											
Bridge D14a							1																						
CONS.A1.1464	Commence Bridge D14a / Portion A1	0	13-May-15		9	CAL 2 - 6 day			13-	May-15 ♦																			
CONS.A1.1466	Survey / Setting Out	6	13-May-15	19-May-15	9	CAL 2 - 6 day	,			0																			
CONS.A1.1470.10	Predrilling (12 nos)	30	19-May-15	24-Jun-15	9	CAL 2 - 6 day	12 nos x 5 days / 2 rigs																						
CONS.A1.1470.20	GI Report and Verification / Agreement to Founding Level	8	25-Jun-15	04-Jul-15	9	CAL 2 - 6 day	,				•																		
CONS.A1.1480	D14a Bored Piling (12 nos. 2000mm dia x 62m) 47m for Abutment	56	14-Jul-15	16-Sep-15	2	CAL 2 - 6 day	12 nos x 14 days / 3 rigs	1			-	-					+-+-												
CONS.A1.1485	Pile Testing	56	15-Aug-15	22-Oct-15	24	CAL 2 - 6 day	,	$\dashv \parallel \parallel$			-	-																	
CONS.A1.1490	Pile Trimming + Pile Caps	54	17-Sep-15	21-Nov-15	24	CAL 2 - 6 day	6 nos x 8 days + 6 days	$\dashv$				<u></u>																	
CONS.A1.1510	Pier Columns + Pier Head & Bearings	36	26-Oct-15	05-Dec-15	24	CAL 2 - 6 day	trimming 6 nos x 12 / 2 WF	+					•																
CONS.A1.1515	Construct Abutment A1401	30	01-Dec-15	07-Jan-16	11	CAL 2 - 6 day	,	+																					
CONS.A1.1520	Bridge D14a - Erect Precast Segments + Stitching + Stressing (5 spans)		21-Jan-16	10-Mar-16	0		75 Segments / 5 spans x 8 day	/s																					
CONS.A1.1530	D14a Bridge Ancillary - Parapet + Railing, MJ, Drainage, Bridge Lighting &		21-Oct-16	23-Dec-16	63		/ span 428m / 4 steel moulds @ 5 day																						
CONS.A1.1540	Signages D14a Final Asphalt Paving + Road Markings		15-Mar-17	28-Mar-17	0	CAL 2 - 6 day	/ cycle / 10m bay	$\exists$																					
CONS.A1.1540		0		28-Mar-17	35			$\perp$											28-Mar-17										
	Bridge D14a complete	0		20-IVIAI - I /	35	CAL 2 - 6 day													ZG TVICH = 17										
	Portion A1 and Portion B1		40 : :=			<b>A.</b>				1211 1																			
CONS.B1.1654	Access to Portion B1		13-Jun-15		57	CAL 2 - 6 day				13+Jun-15																			
CONS.B1.1656	Survey / Setting Out	6	13-Jun-15	19-Jun-15	57	CAL 2 - 6 day												<u> </u>											<u>.    </u>

Data Date: 27-Feb-15 HY/2013/04 - Hong Kong Boundary Crossing Facilities Infrastructure Works Stage II (Southern Portion) Page: 12 / 24 Print Date: 23-Apr-15 13:05 Total Float CONS.B1.1660.10 Predrilling (6 nos) 15 09-Jul-15 25-Jul-15 43 CAL 2 - 6 day 6 nos x 5 days / 2 rigs CONS.B1.1660.20 GI Report and Verification / Agreement to Founding Level 8 27-Jul-15 04-Aug-15 127 CAL 2 - 6 day CONS.B1.1670 D14b Bored Piling (6 nos. 2000-2200mm dia x 62m) (2nos +2.3m Rock 46 23-Dec-15 20-Feb-16 CAL 2 - 6 day 2 nos x 18 days + 4 nos x 14 CONS.B1.1675 Pile Testing / Coring Test for Socket Bored Pile 46 28-Jan-16 24-Mar-16 10 CAL 2 - 6 day CAL 2 - 6 day 3 nos x 8 days + 6 days CONS.B1.1680 Pile Trimming + Pile Caps 30 29-Mar-16 04-May-16 10 CONS.B1.1690 Pier Columns + Pier Head & Bearings 72 05-May-16 30-Jul-16 CAL 2 - 6 day 6 nos x 12 CONS.B1.1710 Bridge D14b - Erect Precast Segments + Stitching + Stressing (3 spans) 24 29-Jul-16 CAL 2 - 6 day 49 Segments @ 3 spans x 8 days / span CONS.B1.1720 D14b Bridge Ancillary - Parapet + Railing, MJ, Drainage, Bridge Lighting & 36 26-Aug-16 11-Oct-16 21 CAL 2 - 6 day 284m / 4 steel moulds @ 5 days CONS.B1.1730 D14b Final Asphalt Paving + Road Markings CAL 2 - 6 day 12 26-Jan-17 11-Feb-17 CONS.B1.1740 Bridge D14b complete 11-Feb-17 73 CAL 2 - 6 day Bridge D14c CONS.B1.1744 Site Possession / Access to Portion B1 0 13-Jun-15 72 CAL 2 - 6 day 13-Jun-15 🔷 72 CONS.B1.1746 Survey / Setting Out 6 13-Jun-15 19-Jun-15 CAL 2 - 6 day CONS.B1.1750.10 20 CAL 2 - 6 day 11 nos x 5 days / 3 rigs Predrilling (11 nos) 20 22-Aug-15 14-Sep-15 CONS.B1.1750.20 GI Report and Verification / Agreement to Founding Level 8 15-Sep-15 23-Sep-15 41 CONS.B1.1760 D14c Bored Piling (11 nos. 2000-2200mm dia x 67m + 2.3m Rock Socket) 66 17-Oct-15 06-Jan-16 23 CAL 2 - 6 day 11 nos x 18 days / 3 rigs CONS.B1.1765 Pile Testing 66 30-Nov-15 20-Feb-16 23 CAL 2 - 6 day CONS.B1.1770 Pile Trimming + Pile Caps 23 CAL 2 - 6 day 3 nos x 12 days + 6 days 48 21-Jan-16 19-Mar-16 CONS.B1.1790 Pier Columns + Pier Head & Bearings 48 22-Feb-16 21-Apr-16 CAL 2 - 6 day 4 nos x 12 days CONS.B1.1795 Bridge D14c - Construct Deck (cast in-situ) Pier P1409 to P1410 36 22-Apr-16 04-Jun-16 23 CAL 2 - 6 day 1 span (cast in-situ) CONS.B1.1800 Bridge D14c - Erect Precast Segments + Stitching + Stressing (4 spans) 32 26-Aug-16 05-Oct-16 CAL 2 - 6 day 60 Segments, 4 spans x 8 days CONS.B1.1810 D14c Bridge Ancillary - Parapet + Railing, MJ, Drainage, Bridge Lighting & 54 07-Nov-16 11-Jan-17 CAL 2 - 6 day 428m / 4 steel moulds @ 5 days CONS.B1.1820 D14c Final Asphalt Paving + Road Markings 12 12-Jan-17 CONS.B1.1830 Bridge D14c complete 25-Jan-17 85 CAL 2 - 6 day 4 25-Jan-17 Bridge D15 CONS.B5.2104 Site Possession/Access to Portion B5 0 14-Jul-15 68 CAL 2 - 6 day 14-Jul-15 🔷 CONS.B5.2106 Survey/ Site Setting Out 14-Jul-15 20-Jul-15 CAL 2 - 6 day CONS.B5.2110.10 Predrilling (11 nos) 30 10-Oct-15 14-Nov-15 CAL 2 - 6 day 11 nos x 5 days / 2 rigs CONS.B5.2110.20 12 16-Nov-15 28-Nov-15 CAL 2 - 6 day GI Report and Verification / Agreement to Founding Level CONS.B5.2120 D15 Bored Piling (11 nos. 2000mm dia x 65m + 3.3m Rock Socket) 50 09-Dec-15 11-Feb-16 CAL 2 - 6 day 11 nos x 18 days / 4 rigs CONS.B5.2125 50 25-Jan-16 29-Mar-16 CONS.B5.2130 Pile Trimming + Pile Caps 54 30-Mar-16 03-Jun-16 CAL 2 - 6 day 4 nos x 12 days + 6 days for trimming CONS.B5.2140 Pier Columns + Pier Head & Bearings 48 04-Jun-16 CAL 2 - 6 day 4 nos x 12 days 01-Aug-16 CONS.B5.2150 Bridge D15 - Construct Deck (cast in-situ) Pier P1501/P1502-1503 28-Sep-16 CAL 2 - 6 day 1 span x 36 days (cast in-situ) 36 16-Aug-16 CONS.B5.2160 Bridge D15 - Erect Precast Segments + Stictching + Stressing (4 spans) 32 06-Oct-16 12-Nov-16 CAL 2 - 6 day 64 Segments, 4 Spans x 8 days CONS.B5.2170 D15 Bridge Ancillary - Parapet/TCSS, Railing, MJ, Drainage, Bridge Lighting, 60 05-Nov-16 17-Jan-17 CAL 2 - 6 day 450m / 4 steel moulds @ 5 days cycle / 10m bay 12 17-May-17 31-May-17 D15 Final Asphalt Paving, Road Markings and Signages 280 CAL 2 - 6 day CONS.B5.2180 Bridge D15 in Portion B4 (Interface with Contract HY/2012/07) CONS.B4.2170 Site Possession/Access to Portion B4 0 29-Nov-16 25 CAL 2 - 6 day

CONS.B4.2180 Survey / Site Setting Out 6 29-Nov-16 05-Dec-16 25 CAL 2 - 6 day Bridge D15 - Erect Precast Segments on Falseworks at Portion B4 Interface CONS.B4.2190 8 06-Dec-16 14-Dec-16 25 CAL 2 - 6 day 14 segments, 1 Span x 8 days CONS.B4.2200 D15 Bridge Ancillary - Parapet/TCSS, Railing, MJ, Drainage, Bridge Lighting, 30 20-Jan-17 27-Feb-17 CAL 2 - 6 day 84m / 2 steel moulds @ 5 days & Sign Gantry CONS.B4.2210 D15 Final Asphalt Paving, Road Markings and Signages 12 29-Mar-17 12-Apr-17 CAL 2 - 6 day CONS.B4.2220 Inspection and Handover 24 13-Apr-17 16-May-17 CAL 2 - 6 day ♦ 16-May-17 CONS.B4.2230 Completion of Section V (KD12) Works within Portion B4 including Bridge 16-May-17 CAL 2 - 6 day

Data Date: 27-Feb-15 HY/2013/04 - Hong Kong Boundary Crossing Facilities Infrastructure Works Stage II (Southern Portion) Page: 13 / 24 Print Date: 23-Apr-15 13:05 Total Float O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J A S O N D J F M A M J J A S O N D J F M A M J J A S Bridge D16S and D16N and Abutment A1601 in Portion A6 CONS.A4.2230 Commence Works for Abutment A1601 0 04-Nov-15 CAL 2 - 6 day CONS.A4.2240 Survey / Site Setting Out 6 04-Nov-15 10-Nov-15 CAL 2 - 6 day CONS.A4.2250.10 Predrilling (4 nos) 20 16-Nov-15 08-Dec-15 CAL 2 - 6 day 4 nos x 5 d / 1 rig CAL 2 - 6 day CONS.A4.2250.20 GI Report and Verification / Agreement to Founding Level 8 09-Dec-15 17-Dec-15 CONS.A4.2260 D16N&S Bored Piling (4 nos x 1800mm dia) 56 18-Dec-15 27-Feb-16 CAL 2 - 6 day 4 nos x 14 days / 1 rig CONS.A4.2265 Pile Testing 56 02-Feb-16 14-Apr-16 CAL 2 - 6 day CONS.A4.2270 Pile Trimming + Pile Caps 40 15-Apr-16 02-Jun-16 CAL 2 - 6 day CAL 2 - 6 day CONS.A4.2280 Construct Abutment A1601 36 03-Jun-16 16-Jul-16 Bridge D16S and D16N in Portion A4 CONS.A4.2285 Site Possession / Site Access to Portion A4 0 29-Nov-16 CAL 2 - 6 day 29-Nov-16 CONS.A4.2290 Bridge D16S & D16N - Construct Deck (cast in-stu) 36 29-Nov-16 12-Jan-17 CAL 2 - 6 day 1 span cast in-situ 36 days D16N & D16S Bridge Ancillary - Parapet, MJ, Drainage, Bridge Lighting, TCSS CONS.A4.2300 26 18-Jan-17 20-Feb-17 CAL 2 - 6 day 38m / 1 steel moulds @ 5 days CAL 2 - 6 day CONS.A4.2310 Final Asphalt Paving, Road Markings and Signages 12 02-May-17 16-May-17 CONS.A4.2320 Inspection and Handover of Bridge D16 6 17-May-17 23-May-17 CAL 2 - 6 day CONS.A4.2330 Completion of Bridge D16N and D16S 23-May-17 CAL 2 - 6 day ◆ 23-May-17 Road Works, Drainage and U/G Utilities Road Works (East of Box Culvert D) **Road Formation and Drainage System** Road SOL 101 / 109 / 114 Road Formation and Drainage System 6 13-May-15 19-May-15 CONS.RW.1010 Survey/ Road Setting Out CAL 2 - 6 day CONS.RW.1020 Road Formation to Sub-grade (Cut & Fill) 75 20-May-15 18-Aug-15 CAL 2 - 6 day CONS.RW.1030 Excavate to invert level and install Drainage System (Drain Pipes & Catchpit/Manholes) + Testing & Interface Connection 150 06-Jun-15 03-Dec-15 12 CAL 2 - 6 day Installation of Underground Utilities CONS.RW.1060 Excavate and Install Fresh WM / Valves & fittings + Testing, Cleaning & 18-Jan-16 CAL 2 - 6 day 150 21-Jul-15 Flushing and Interface Connection CONS.RW.1070 Excavate and Install Common Telecom Ducting and Telecom Ducting by 25-Jan-16 CAL 2 - 6 day CONS.RW.1080 Excavate and Install ELV/ LV Ducting and Pillar Box for TCSS and Road 150 04-Aug-15 01-Feb-16 CAL 2 - 6 day Kerbing and Footings for Railing, Fencing, Signages and Road Lighting CONS.RW.1090 Excavate and Construct Footings for Road Lightings / Railing / Fencing and 120 08-Oct-15 03-Mar-16 CAL 2 - 6 day Signages CONS.RW.1100 Road Formation to Sub-base 90 20-Nov-15 10-Mar-16 CAL 2 - 6 day CONS.RW.1110 Construct Precast Road Kerbings 90 27-Nov-15 17-Mar-16 CAL 2 - 6 day Road Works to Road Base and Base Course CONS.RW.2140 Road Formation to Road Base 90 26-Jan-16 19-May-16 CAL 2 - 6 day CONS.RW.2150 Road Formation to Base Course 75 15-Mar-16 17-Jun-16 CAL 2 - 6 day Installation of Railing and Fencing + Road Lighting and Signages CONS.RW.2220 Install Road Railing and Fencing 75 12-May-16 10-Aug-16 CAL 2 - 6 day CONS.RW.2830 Install Road Ligting and Signages 75 11-Jun-16 07-Sep-16 CAL 2 - 6 day **Final Paving and Road Markings** CONS.RW.2690 Final Road Paving (Wearing Course) 24 25-Nov-16 22-Dec-16 CAL 2 - 6 day 13 CONS.RW.2720 Road Markings and Road Signages 22 23-Dec-16 20-Jan-17 CAL 2 - 6 day Portion A6 - Final Paving and Road Markings CONS.RW.2930 Road Clearing 6 17-Jan-18 23-Jan-18 CAL 2 - 6 day CONS.RW.2970 Final Road Paving (Wearing Course) 24 24-Jan-18 23-Feb-18 CAL 2 - 6 day Note: Late Final Paving due to CONS.RW.2980 Road Markings and Road Signages 16 24-Feb-18 14-Mar-18 CAL 2 - 6 day

Data Date: 27-Feb-15 HY/2013/04 - Hong Kong Boundary Crossing Facilities Infrastructure Works Stage II (Southern Portion) Page: 14 / 24 Print Date: 23-Apr-15 13:05 Total Float O N D J F M A M J J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S Road SOL 102 **Road Formation and Drainage System** CONS.RW.1970 Survey/ Road Setting Out 6 20-May-15 27-May-15 CAL 2 - 6 day CONS.RW.1980 Road Formation to Sub-grade (Cut & Fill) 60 28-May-15 07-Aug-15 CAL 2 - 6 day CAL 2 - 6 day CONS.RW.1990 Excavate to invert level and install Drainage System (Drain Pipes & 150 13-Jun-15 10-Dec-15 Catchpit/Manholes) + Testing & Interface Connection CONS.RW.2890 Excavate and Install Fresh WM / Valves & fittings + Testing, Cleaning & 150 14-Jul-15 11-Jan-16 Flushing and Interface Connection CONS.RW.2900 Excavate and Install Common Telecom Ducting and Telecom Ducting by 150 25-Jul-15 22-Jan-16 CAL 2 - 6 day CONS.RW.2910 Excavate and Install ELV/ LV Ducting and Pillar Box for TCSS and Road 150 08-Aug-15 05-Feb-16 CAL 2 - 6 day Kerbing and Footings for Railing, Fencing, Signages and Road Lighting CONS.RW.2080 | Excavate and Construct Footings for Road Lightings / Railing / Fencing and 120 13-Oct-15 08-Mar-16 CAL 2 - 6 day CONS.RW.2090 Road Formation to Sub-base 90 25-Nov-15 15-Mar-16 CAL 2 - 6 day CONS.RW.2100 Construct Precast Road Kerbings 90 02-Dec-15 22-Mar-16 CAL 2 - 6 day Road Works to Road Base and Base Course CONS.RW.2170 Road Formation to Road Base 90 26-Jan-16 19-May-16 CAL 2 - 6 day CONS.RW.2180 Road Formation to Base Course 75 31-Mar-16 30-Jun-16 0 CAL 2 - 6 day Installation of Railing and Fencing + Road Lighting and Signages CONS.RW.2240 Install Road Railing and Fencing 75 16-May-16 12-Aug-16 CAL 2 - 6 day CONS.RW.2840 Install Road Ligting and Signages 75 25-Jun-16 23-Sep-16 CAL 2 - 6 day Final Paving and Road Markings CAL 2 - 6 day CONS.RW.2700 Final Road Paving (Wearing Course) 22 23-Dec-16 20-Jan-17 CONS.RW.2730 Road Markings and Road Signages 18 21-Jan-17 14-Feb-17 13 CAL 2 - 6 day Portion A6 - Final Paving and Road Markings CONS.RW.2790 Road Clearing 6 15-Mar-18 21-Mar-18 CAL 2 - 6 day CAL 2 - 6 day Note: Late Final Paving due to CONS.RW.2920 Final Road Paving (Wearing Course) 24 22-Mar-18 23-Apr-18 CONS.RW.2990 Road Markings and Road Signages 14 24-Apr-18 10-May-18 CAL 2 - 6 day Road Formation and Drainage System CONS.RW.2000 Survey/ Road Setting Out 6 08-Aug-15 14-Aug-15 CAL 2 - 6 day CONS.RW.2010 Road Formation to Sub-grade (Cut & Fill) 36 15-Aug-15 25-Sep-15 CAL 2 - 6 day CONS.RW.2020 Excavate to invert level and install Drainage System (Drain Pipes & Catchpit/Manholes) + Testing & Interface Connection CAL 2 - 6 day **Installation of Underground Utilities** CONS.RW.2040 | Excavate and Install Fresh WM / Valves & fittings + Testing, Cleaning & 100 15-Oct-15 16-Feb-16 CAL 2 - 6 day Flushing and Interface Connection (3 lines) CONS.RW.2050 Excavate and Install Flush WM / Valves & fittings + Testing, Cleaning & 90 04-Nov-15 23-Feb-16 CAL 2 - 6 day Flushing and Interface Connection (1 line) CONS.RW.2060 Excavate and Install ELV/ LV Ducting and Pillar Box for TCSS 90 11-Nov-15 01-Mar-16 CAL 2 - 6 day Kerbing and Footings for Railing, Fencing, Signages and Road Lighting CAL 2 - 6 day CONS.RW.2110 Excavate and Construct Footings for Road Lightings / Railing / Fencing and 75 12-Dec-15 15-Mar-16 CONS.RW.2120 Road Formation to Sub-base 75 19-Dec-15 22-Mar-16 CAL 2 - 6 day CONS.RW.2130 Construct Precast Road Kerbings 75 29-Dec-15 01-Apr-16 CAL 2 - 6 day Road Works to Road Base and Base Course 14 CONS.RW.2200 Road Formation to Road Base 75 16-Feb-16 19-May-16 CAL 2 - 6 day CONS.RW.2210 Road Formation to Base Course 75 13-Apr-16 13-Jul-16 CAL 2 - 6 day Installation of Railing and Fencing + Road Lighting and Signages CONS.RW.2260 Install Road Railing and Fencing 60 17-Jun-16 26-Aug-16 CAL 2 - 6 day CAL 2 - 6 day CONS.RW.2850 Install Road Ligting and Signages 60 28-Jul-16 08-Oct-16

Data Date: 27-Feb-15 HY/2013/04 - Hong Kong Boundary Crossing Facilities Infrastructure Works Stage II (Southern Portion) Page: 15 / 24 Print Date: 23-Apr-15 13:05 Total Float O N D J F M A M J J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S **Final Paving and Road Markings** CONS.RW.2710 Final Road Paving (Wearing Course) 20 21-Jan-17 16-Feb-17 CAL 2 - 6 day CONS.RW.2740 Road Markings and Road Signages 16 17-Feb-17 CAL 2 - 6 day Road SOL 108 / 106 Adjacent to Road SOL 108 / 106 and Abutment A901 CONS.RW.2070 Excavate and Install Common Telecom Ducting and Telecom Ducting by 53 12-Apr-16 15-Jun-16 CAL 2 - 6 day Others + Backfilling CONS.RW.2160 Road Formation to subgrade + Drainage System 10 12-Apr-16 22-Apr-16 CAL 2 - 6 day CONS.RW.2190 Install TCSS/LV/ELV Ducting 10 23-Apr-16 05-May-16 CAL 2 - 6 day CONS.RW.2230 Excavate and Construct footing for Railing and Road lighting CAL 2 - 6 day 8 06-May-16 16-May-16 CONS.RW.2250 Road formation to Subbase 6 17-May-16 23-May-16 CAL 2 - 6 day CONS.RW.2370 Construct Precast Road Kerbings 6 24-May-16 30-May-16 CAL 2 - 6 day CONS.RW.2380 Road formation to Road base and Base course 8 31-May-16 08-Jun-16 CAL 2 - 6 day CONS.RW.2390 Install Road Lighting, Railing and Signages 4 10-Jun-16 14-Jun-16 CAL 2 - 6 day CONS.RW.2400 Final Road Paving and Road markings (KD13 - Completion of Section VI) CAL 2 - 6 day 4 15-Jun-16 18-Jun-16 Road Works (West of Box Culvet D) Road Formation and Drainage System Road SOL 101 / 105 **Road Formation and Drainage System** CONS.RW.2270 Survey/ Road Setting Out 6 14-Sep-15 19-Sep-15 CAL 2 - 6 day CONS.RW.2280 Road Formation to Sub-grade (Cut & Fill) 75 21-Sep-15 19-Dec-15 CAL 2 - 6 day 150 09-Oct-15 13-Apr-16 CAL 2 - 6 day CONS.RW.2290 Excavate to invert level and install Drainage System (Drain Pipes & Catchpit/Manholes) + Testing & Interface Connection Installation of Underground Utilities CONS.RW.2295 Excavate and Install HV Cable Ducting on Carriageway 66 18-Sep-15 07-Dec-15 CAL 2 - 6 day CONS.RW.2300 Handover area to CLP for HV Cable Laying 07-Dec-15 CAL 2 - 6 day CONS.RW.2310 | Excavate and Install Fresh WM / Valves & fittings + Testing, Cleaning & CAL 2 - 6 day 150 17-Nov-15 23-May-16 150 24-Nov-15 30-May-16 CAL 2 - 6 day CONS.RW.2320 Excavate and Install Common Telecom Ducting and Telecom Ducting by CONS.RW.2330 Excavate and Install ELV/ LV Ducting and Pillar Box for TCSS 150 01-Dec-15 06-Jun-16 CAL 2 - 6 day Kerbing and Footings for Railing, Fencing, Signages and Road Lighting CONS.RW.2340 Excavate and Construct Footings for Road Lightings / Railing / Fencing and 120 05-Feb-16 06-Jul-16 CAL 2 - 6 day CONS.RW.2350 Road Formation to Sub-base 90 22-Mar-16 13-Jul-16 CAL 2 - 6 day CONS.RW.2360 Construct Precast Road Kerbings 90 01-Apr-16 20-Jul-16 CAL 2 - 6 day Road Works to Road Base and Base Course CONS.RW.2570 Road Formation to Road Base CAL 2 - 6 day 90 31-May-16 14-Sep-16 CONS.RW.2580 Road Formation to Base Course 75 18-Jul-16 17-Oct-16 CAL 2 - 6 day Installation of Railing and Fencing + Road Lighting and Signages CONS.RW.2630 Install Road Railing and Fencing 90 27-Aug-16 14-Dec-16 CAL 2 - 6 day 75 19-Oct-16 17-Jan-17 CAL 2 - 6 day CONS.RW.2860 Install Road Lighting and Signages Final Paving and Road Markings CONS.RW.2660 Final Road Paving (Wearing Course) 24 18-Feb-17 17-Mar-17 CAL 2 - 6 day CONS.RW.2750 Road Markings and Road Signages 18 18-Mar-17 08-Apr-17 CAL 2 - 6 day 12 10-Apr-17 26-Apr-17 CAL 2 - 6 day CONS.RW.2780 Cleaning and Rectification Works 14 Road SOL 102 /106/111 Road Formation and Drainage System CONS.RW.2410 Survey/ Road Setting Out 6 21-Sep-15 26-Sep-15 CAL 2 - 6 day CAL 2 - 6 day CONS.RW.2420 Road Formation to Sub-grade (Cut & Fill) 48 29-Sep-15 25-Nov-15

Data Date: 27-Feb-15 HY/2013/04 - Hong Kong Boundary Crossing Facilities Infrastructure Works Stage II (Southern Portion) Page: 16 / 24 Print Date: 23-Apr-15 13:05 Total Float 0 | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | A | S | O | N | D | J | A | S | O | N | D | J | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | CONS.RW.2430 Excavate to invert level and install Drainage System (Drain Pipes & 150 19-Oct-15 22-Apr-16 CAL 2 - 6 day Catchpit/Manholes) + Testing & Interface Connection Installation of Underground Utilities CONS.RW.2940 Excavate and Install Fresh WM / Valves & fittings + Testing, Cleaning & 150 17-Nov-15 23-May-16 CAL 2 - 6 day Flushing and Interface Connection CONS.RW.2950 Excavate and Install Common Telecom Ducting and Telecom Ducting by 150 03-Dec-15 08-Jun-16 CAL 2 - 6 day CONS.RW.2960 Excavate and Install ELV/ LV Ducting and Pillar Box for TCSS CAL 2 - 6 day 150 19-Dec-15 25-Jun-16 Kerbing and Footings for Railing, Fencing, Signages and Road Lighting CONS.RW.2510 Excavate and Construct Footings for Road Lightings / Railing / Fencing and 120 27-Feb-16 25-Jul-16 CONS.RW.2520 Road Formation to Sub-base 90 21-Apr-16 08-Aug-16 CAL 2 - 6 day CONS.RW.2530 Construct Precast Road Kerbings CAL 2 - 6 day 90 06-May-16 22-Aug-16 Road Works to Road Base and Base Course CONS.RW.2590 Road Formation to Road Base 90 05-Jul-16 21-Oct-16 CAL 2 - 6 day CONS.RW.2600 Road Formation to Base Course 75 02-Sep-16 02-Dec-16 CAL 2 - 6 day Installation of Railing and Fencing + Road Lighting and Signages CONS.RW.2640 Install Road Railing and Fencing 90 13-Sep-16 03-Jan-17 CAL 2 - 6 day CONS.RW.2870 Install Road Lighting and Signages 75 02-Nov-16 03-Feb-17 CAL 2 - 6 day Final Paving and Road Markings 20 18-Mar-17 11-Apr-17 CAL 2 - 6 day CONS.RW.2670 Final Road Paving (Wearing Course) CONS.RW.2760 Road Markings and Road Signages 14 12-Apr-17 02-May-17 CAL 2 - 6 day Road Formation and Drainage System 6 19-Nov-15 25-Nov-15 CAL 2 - 6 day CONS.RW.2440 Survey/ Road Setting Out CONS.RW.2450 Road Formation to Sub-grade (Cut & Fill) 48 26-Nov-15 23-Jan-16 CAL 2 - 6 day CONS.RW.2460 Excavate to invert level and install Drainage System (Drain Pipes & Catchpit/Manholes) + Testing & Interface Connection 120 25-Jan-16 23-Jun-16 CAL 2 - 6 day CONS.RW.2470 | Excavate and Install Fresh WM / Valves & fittings + Testing, Cleaning & 11 120 25-Feb-16 22-Jul-16 CAL 2 - 6 day Flushing and Interface Connection (3 lines) CONS.RW.2480 Excavate and Install Flush WM / Valves & fittings + Testing, Cleaning & CAL 2 - 6 day 90 12-Apr-16 29-Jul-16 11 Flushing and Interface Connection (1 line) CONS.RW.2490 Excavate and Install ELV/ LV Ducting and Pillar Box for TCSS 90 19-Apr-16 05-Aug-16 11 CAL 2 - 6 day Kerbing and Footings for Railing, Fencing, Signages and Road Lighting CONS.RW.2540 Excavate and Construct Footings for Road Lightings / Railing / Fencing and 90 21-May-16 05-Sep-16 24 CAL 2 - 6 day CONS.RW.2550 Road Formation to Sub-base 60 05-Jul-16 12-Sep-16 CAL 2 - 6 day CONS.RW.2560 Construct Precast Road Kerbings 60 12-Jul-16 21-Sep-16 CAL 2 - 6 day Road Works to Road Base and Base Course CONS.RW.2610 Road Formation to Road Base 24 CAL 2 - 6 day 60 23-Aug-16 04-Nov-16 CONS.RW.2620 Road Formation to Base Course 48 07-Oct-16 02-Dec-16 24 CAL 2 - 6 day Installation of Railing and Fencing + Road Lighting and Signages CONS.RW.2650 Install Road Railing and Fencing 48 19-Nov-16 17-Jan-17 CAL 2 - 6 day 48 17-Dec-16 17-Feb-17 CAL 2 - 6 day CONS.RW.2880 Install Road Lighting and Signages **Final Paving and Road Markings** CONS.RW.2680 Final Road Paving (Wearing Course) 14 12-Apr-17 02-May-17 CAL 2 - 6 day CONS.RW.2770 Road Markings and Road Signages 10 04-May-17 15-May-17 CAL 2 - 6 day Road SOL 107 (Depressed Road) Stage 1- Depressed Road Works (West Side 1st Half) CONS.C1.5010 Commence Works on Depressed Road (1st half on the West side) 0 21-Sep-15 CAL 2 - 6 day 21-Sep-15 🔷 CONS.C1.5020 Survey / Setting out 6 21-Sep-15 26-Sep-15 CAL 2 - 6 day CAL 2 - 6 day CONS.C1.5030 Excavate to formation level 45 29-Sep-15 21-Nov-15

Data Date: 27-Feb-15 HY/2013/04 - Hong Kong Boundary Crossing Facilities Infrastructure Works Stage II (Southern Portion) Page: 17 / 24 Print Date: 23-Apr-15 13:05 Total Float 0 | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | CONS.C1.5040 Excavate and install Drainage Pipes and Construct Manholes & Backfill 45 27-Oct-15 17-Dec-15 CAL 2 - 6 day Excavate and Install Fresh Water Mains & Flush Water Main + Hydrotest, 54 18-Nov-15 22-Jan-16 CAL 2 - 6 day CONS.C1.5050 Clean & Flushing and Connection Construct U-Structure - Base Slab and Walls 72 04-Dec-15 03-Mar-16 CAL 2 - 6 day CONS.C1.5070 Construct Plain ad Ribbed Finishes to Walls 60 19-Jan-16 05-Apr-16 CAL 2 - 6 day 36 06-Apr-16 CAL 2 - 6 day CONS.C1.5080 Backfill and Compaction 19-May-16 CONS.C1.5090 Construct Footing for Road Lighting and Signages 24 20-May-16 17-Jun-16 CAL 2 - 6 day CONS.C1.5100 Install Ducting and Drawpits for Road Lighting 12 18-Jun-16 02-Jul-16 CAL 2 - 6 day Stage 2 - Depressed Road (East Side 2nd Half) Interface with Bridge D14a, D9a & D10 CONS.C1.8670 Commence Works on Depressed Road (2nd Half on the East Side) 0 04-Jul-16 CAL 2 - 6 day 04-Jul-16 💠 CONS.C1.8680 Survey / Setting out 6 04-Jul-16 09-Jul-16 CAL 2 - 6 day CONS.C1.8690 Excavate to formation level 45 09-Jul-16 30-Aug-16 CAL 2 - 6 day interface with erection of segments at D14a and D10 CONS.C1.8700 Excavate and install Drainage Pipes and Construct Manholes & Backfill 45 06-Aug-16 29-Sep-16 CAL 2 - 6 day CAL 2 - 6 day CONS.C1.8710 Excavate and Install Fresh Water Mains & Flush Water Main + Hydrotest 60 27-Aug-16 09-Nov-16 72 23-Sep-16 17-Dec-16 CAL 2 - 6 day CONS.C1.8720 Construct U-Structure - Base Slab and Walls CONS.C1.8730 Construct Plain ad Ribbed Finishes to Walls 60 07-Nov-16 18-Jan-17 CAL 2 - 6 day CONS.C1.8740 Backfill and Compaction 36 19-Jan-17 04-Mar-17 CAL 2 - 6 day CAL 2 - 6 day CONS.C1.8750 Construct Footing for Road Lighting and Signages 24 06-Mar-17 01-Apr-17 CONS.C1.8760 Install Ducting and Drawpits for Road Lighting 12 03-Apr-17 20-Apr-17 CAL 2 - 6 day CONS.C1.8770 Install Road Lighting and Signages + Cabling and Termination 12 21-Apr-17 06-May-17 CAL 2 - 6 day CONS.C1.8780 Road Paving and Road Markings 7 08-May-17 15-May-17 CAL 2 - 6 day Under Ground Utilties (Power, Water & Telecom) Work in Portion D1 and D2 CONS.RM.1010 Commence Works on Rising Main 0 21-Dec-15 CAL 2 - 6 day 21-Dec-15 CONS.RM.1020 Site Survey / Setting Out Sewerage Alignment 6 21-Dec-15 29-Dec-15 36 CAL 2 - 6 day CONS.RM.1030 Excavate to Invert Level & Install 2 Sewage Rising Main DN100 CHC & CHD 60 30-Dec-15 CAL 2 - 6 day 12-Mar-16 CONS.RM.1040 Construct Thrust Block 18 14-Mar-16 07-Apr-16 CAL 2 - 6 day CONS.RM.1050 Gravity Flow Testing 12 08-Apr-16 21-Apr-16 CAL 2 - 6 day CONS.RM.1060 Backfill 30 22-Apr-16 28-May-16 36 CAL 2 - 6 day CLP Cables and Telecom Crossing at Portion D2 and D1 CONS.RW.2800 Excavate and Install Common Telecom Ducting and Telecom Ducting by 60 13-Jul-16 22-Sep-16 CAL 2 - 6 day elecom Companies CONS.RW.2810 Excavate and Install CLP 11kv Cables 36 22-Sep-16 04-Nov-16 CAL 2 - 6 day CONS.RW.2820 Backfill and reinstate ground CAL 2 - 6 day 18 05-Nov-16 25-Nov-16 Portion A1 and A2 - Sub-Base Area CONS.A1.4430 Demobilisation of Temporary Facilities on Site 24 13-Jan-17 13-Feb-17 CAL 2 - 6 day CONS A1 4440 Site Survey / Site Clearing 12 14-Feb-17 27-Feb-17 CAL 2 - 6 day CAL 2 - 6 day CONS.A1.4450 Area to Formation Level 20 28-Feb-17 22-Mar-17 Sub-Base Material Topping (Area 29,963 m2 x 100mm thk Subbase) 40 23-Mar-17 15-May-17 CAL 2 - 6 day Pump House cum Switch Room Commence Pump House Cum Switch Room (2B+ GF) 0 04-Mar-16 CAL 2 - 6 day CONS.C1.5110 CONS.C1.5120 Mobilisation / Survey/ Setting Out 6 04-Mar-16 10-Mar-16 CAL 2 - 6 day CONS.C1.5125 CAL 2 - 6 day 20 10-Mar-16 06-Apr-16 CONS.C1.5130 Install Dewatering Wells + Pump Test 24 07-Apr-16 05-May-16 CAL 2 - 6 day CONS.C1.5140 ELS Works to Formation level (Basement 2) 54 06-May-16 11-Jul-16 CAL 2 - 6 day CONS.C1.5150 Blinding, Waterproofing and Base Slab 20 12-Jul-16 03-Aug-16 CAL 2 - 6 day

HY/2013/04 - Hong Kong Boundary Crossing Facilities Infrastructure Works Stage II (Southern Portion) Page: 18 / 24 Print Date: 23-Apr-15 13:05 Total Float 0 | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | CONS.C1.5160 Construct Walls and Slab to Upper Basement 24 04-Aug-16 31-Aug-16 CAL 2 - 6 day CONS.C1.5170 Construct Walls and Slab to Ground Level 24 01-Sep-16 30-Sep-16 CAL 2 - 6 day CONS.C1.5200 Construct Walls and Roof Slab 24 03-Oct-16 31-Oct-16 CAL 2 - 6 day Linked to KD6 CONS.C1.5205 ABWF & Building Services Works to Pump House / Switch Room 14 01-Nov-16 16-Nov-16 CAL 2 - 6 day CONS.C1.5210 CAL 2 - 6 day Achievement of Stage 5 (KD6) / Interface with C3 16-Nov-16 CONS.C1.5215 **Building Services Installation** 75 17-Nov-16 18-Feb-17 CAL 2 - 6 day CONS.C1.5220 MEP Installation for Pump House/Switch Room (By C3) 75 17-Nov-16 18-Feb-17 CAL 2 - 6 day CONS.C1.5235 ABWF Works + External Works 75 17-Nov-16 18-Feb-17 CAL 2 - 6 day CAL 2 - 6 day CONS.C1.5240 T&C and Statutory Permits/Certification (FS, BD) 60 20-Feb-17 06-May-17 **Prelimnary Driven H Piles and Load Testing** CONS.C1.0510 Commence Preliminary Driven H Pile for Sign Gantry 0 13-Sep-15 CAL 1 - 7 day 13-Sep-15 🔷 CONS.C1.0520 12 13-Sep-15 24-Sep-15 CAL 1 - 7 day Mobilise Plant & Set-up Support CONS.C1.0530.10 Pre-drilling (2 nos) 10 25-Sep-15 08-Oct-15 CAL 2 - 6 day 2 nos x 5 days CONS.C1.0530.20 GI Report and Verification / Agreement to Founding Level 8 09-Oct-15 17-Oct-15 CAL 2 - 6 day CONS.C1.0540 Preliminary Driven H Pile (2 nos) 5 18-Oct-15 22-Oct-15 0 CAL 1 - 7 day 2 nos x 2.5 days / Pile - 1 rig CAL 1 - 7 day CONS.C1.0550 Pile Load Testing and Submit Report 28 23-Oct-15 19-Nov-15 Sign Gantry Footings at Grade in Portion A1 DS303 (Driven H Pile) CONS.A1.4360 Commence Foundation / Footing for Sign Gantry 0 20-Nov-15 10 CAL 2 - 6 day 20-Nov-15 CAL 2 - 6 day CONS.A1.4370 Mobilise Plant + Survey / Setting Out 6 20-Nov-15 26-Nov-15 10 CONS.A1.4380.10 Predrilling (12 nos) 30 27-Nov-15 04-Jan-16 CAL 2 - 6 day 12 nos x 5 days / 2 rigs CONS.A1.4380.20 GI Report and Verification / Agreement to Founding Level 30 11-Dec-15 18-Jan-16 10 CONS.A1.4390 Piling Works - Driven H Pile (12 nos) 30 07-Jan-16 13-Feb-16 CAL 2 - 6 day 12 nos x 2.5 d / Driven H-Pile CAL 2 - 6 day CONS.A1.4410 Excavation, Pile Trimming + Cast Pile Caps (3 nos) 30 15-Feb-16 19-Mar-16 20 CONS.A1.4420 Backfill Foundation 12 21-Mar-16 20 CAL 2 - 6 day 07-Apr-16 Sign Gantry Footing at Grade in Portion C1 & Portion D1 DS302 (610mm dia. Prebored H Pile) CONS.D1.3380 0 12-Sep-15 CAL 2 - 6 day 112-Sep+15 |◆ Commence Foundation / Footing for Sign Gantry 14 CONS.D1.3390 Mobilisation/ Survey / Setting Out 10 12-Sep-15 23-Sep-15 CAL 2 - 6 day CONS.D1.3400.10 Predrilling for Prebored H Pile (8 nos) 20 24-Sep-15 19-Oct-15 CAL 2 - 6 day 8 nos x 5 days / 2 rigs CONS.D1.3400.20 GI Report and Verification / Agreement to Founding Level 8 20-Oct-15 29-Oct-15 36 CAL 2 - 6 day CONS.D1.3410 CAL 2 - 6 day 8 nos x 6 days / Pile - 1 rig Pre-bored Socket H-Pile (8 nos) 48 30-Oct-15 24-Dec-15 CONS.D1.3420 Pile Testing 48 02-Dec-15 29-Jan-16 CAL 2 - 6 day CONS.D1.3430 Excavation, Pile Trimming + Pile Caps ( 2 nos) 24 30-Jan-16 CAL 2 - 6 day CONS.D1.3440 Backfill Foundation 12 02-Mar-16 15-Mar-16 CAL 2 - 6 day GT408 (Driven H Pile) CONS.C1.4010 Commence Foundation / Footing for Sign Gantry 0 06-Nov-15 CAL 2 - 6 day CONS.C1.4020 Survey / Setting Out 2 06-Nov-15 07-Nov-15 CAL 2 - 6 day CONS.C1.4030.10 Predrilling (8 nos) 20 09-Nov-15 01-Dec-15 CAL 2 - 6 day 8 nos x 5 days / 2 rigs CONS.C1.4030.20 GI Report and Verification / Agreement to Founding Level 8 02-Dec-15 10-Dec-15 CAL 2 - 6 day CONS.C1.4040 Piling Works - Driven H Pile (8 nos) 20 11-Dec-15 06-Jan-16 CAL 2 - 6 day 8 nos x 2.5 days CONS.C1.4060 Excavation, Pile Trimming + Cast Pile Caps ( 2 nos) 20 07-Jan-16 29-Jan-16 CAL 2 - 6 day 6 30-Jan-16 05-Feb-16 CAL 2 - 6 day CONS.C1.4070 Backfill Foundation DS44 (Driven H Pile)

Data Date: 27-Feb-15

Data Date: 27-Feb-15 HY/2013/04 - Hong Kong Boundary Crossing Facilities Infrastructure Works Stage II (Southern Portion) Page: 19 / 24 Print Date: 23-Apr-15 13:05 Total Float O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J A S O N D J F M A M J J A S O N D J F M A M J J A S CONS.C1.4080 Commence Foundation / Footing for Sign Gantry 0 07-Jan-16 CAL 2 - 6 day CONS.C1.4090 2 07-Jan-16 08-Jan-16 CAL 2 - 6 day Survey / Setting Out CONS.C1.4100.10 Predrilling (8 nos) 20 09-Jan-16 CAL 2 - 6 day 8 nos x 5 days / 2 rigs CONS.C1.4100.20 GI Report and Verification / Agreement to Founding Level 8 02-Feb-16 13-Feb-16 CAL 2 - 6 day 20 15-Feb-16 08-Mar-16 CONS.C1.4110 Piling Works - Driven H Pile (8 nos) CAL 2 - 6 day 8 nos x 2.5 days CONS.C1.4130 Excavation, Pile Trimming + Cast Pile Caps ( 2 nos) 20 09-Mar-16 05-Apr-16 CAL 2 - 6 day CONS.C1.4140 Backfill Foundation 6 06-Apr-16 12-Apr-16 CAL 2 - 6 day CONS.C1.4150 Commence Foundation / Footing for Sign Gantry 0 02-Feb-16 CAL 2 - 6 day 02-Feb-16 **♦** 0 CONS.C1.4160 Survey / Setting Out 2 02-Feb-16 03-Feb-16 CAL 2 - 6 day CONS.C1.4170.10 Predrilling (8 nos) 20 04-Feb-16 01-Mar-16 CAL 2 - 6 day 8 nos x 5 days / 2 rigs CONS.C1.4170.20 GI Report and Verification / Agreement to Founding Level 8 02-Mar-16 10-Mar-16 CAL 2 - 6 day CAL 2 - 6 day 8 nos x 2.5 days CONS.C1.4180 Piling Works - Driven H Pile (8 nos) 20 11-Mar-16 07-Apr-16 CAL 2 - 6 day CONS.C1.4200 Excavation, Pile Trimming + Cast Pile Caps (2 nos) 20 08-Apr-16 30-Apr-16 CONS.C1.4210 Backfill Foundation 6 03-May-16 09-May-16 CAL 2 - 6 day ADS301 (Driven H Pile) Commence Foundation / Footing for Sign Gantry CAL 2 - 6 day CONS.C1.4220 0 02-Mar-16 CONS.C1.4230 Survey / Setting Out 2 02-Mar-16 03-Mar-16 CAL 2 - 6 day CONS.C1.4240.10 Predrilling (12 nos) 20 04-Mar-16 30-Mar-16 CAL 2 - 6 day 12 nos x 5 days / 3 rigs CONS.C1.4240.20 GI Report and Verification / Agreement to Founding Level 8 31-Mar-16 09-Apr-16 CAL 2 - 6 day CONS.C1.4250 30 11-Apr-16 CAL 2 - 6 day 12 nos x 2.5 days / Driven H-Pile Piling Works - Driven H Pile (12 nos) 17-May-16 CONS.C1.4270 Excavation, Pile Trimming + Cast Pile Caps (3 nos) 30 18-May-16 22-Jun-16 CAL 2 - 6 day CONS.C1.4280 Backfill Foundation 8 23-Jun-16 02-Jul-16 CAL 2 - 6 day FADS303 (Driven H Pile) CONS.C1.4290 Commence Foundation / Footing for Sign Gantry 0 31-Mar-16 CAL 2 - 6 day CONS.C1.4300 Survey / Setting Out 2 31-Mar-16 01-Apr-16 CAL 2 - 6 day CONS.C1.4310.10 Predrilling (8 nos) 20 02-Apr-16 26-Apr-16 CAL 2 - 6 day 8 nos x 5 days / 2 rigs CONS.C1.4310.20 GI Report and Verification / Agreement to Founding Level 8 27-Apr-16 06-May-16 CAL 2 - 6 day CONS.C1.4320 16 18-May-16 04-Jun-16 CAL 2 - 6 day 8 nos x 2.5 days Piling Works - Driven H Pile (8 nos) CONS.C1.4340 Excavation, Pile Trimming + Cast Pile Caps (2 nos) 20 06-Jun-16 CAL 2 - 6 day 29-Jun-16 CONS.C1.4350 Backfill Foundation 12 30-Jun-16 14-Jul-16 CAL 2 - 6 day **Erection of Sign Gantry and High Mast for TCSS Works** Erection of Sign Gantry & High Mast Structure and Associated Conduits for CAL 2 - 6 day KD1 and KD3 CONS.C1.4360 90 03-May-16 18-Aug-16 Retaining Walls Retaining Walls in Portion A1 & Portion A6 RW11 (42m / 3 bays) Commence RW11 Retaining Wall (42m / 3 bays) CAL 2 - 6 day 22-Jul-15 💠 CONS.A1.3320 0 22-Jul-15 CONS.A1.3330 Survey / Setting Out 6 22-Jul-15 28-Jul-15 CAL 2 - 6 day CONS.A1.3340 Excavate to formation level (open cut / slope) 18 29-Jul-15 18-Aug-15 CAL 2 - 6 day CONS.A1.3350 Cast Base & Wall Stem 3 bays (ribbed finish to 1m below F.G.L) 36 19-Aug-15 30-Sep-15 CAL 2 - 6 day 3 bays x 12 days CONS.A1.3360 Backfill to final ground level 24 16-Sep-15 15-Oct-15 CAL 2 - 6 day RW14A (29m / 2 bays) CONS.A1.3380 Commence RW14a Retaining Wall (29m / 2 bays) 0 02-Oct-15 11 CAL 2 - 6 day 02-Oct-15 💠

CONS.A1.3390

CONS.A1.3400

Survey / Setting Out

Excavate to formation level (open cut / slope)

5 02-Oct-15 07-Oct-15

12 05-Oct-15 17-Oct-15

CAL 2 - 6 day

CAL 2 - 6 day

Data Date: 27-Feb-15 HY/2013/04 - Hong Kong Boundary Crossing Facilities Infrastructure Works Stage II (Southern Portion) Page: 20 / 24 Print Date: 23-Apr-15 13:05 Total Float 0 | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | CONS.A1.3410 Cast Base & Wall Stem 2 bays (ribbed finish to 1m below F.G.L) 24 19-Oct-15 16-Nov-15 CAL 2 - 6 day 2 bays x 12 days CONS.A1.3420 Backfill to final ground level 12 17-Nov-15 30-Nov-15 11 CAL 2 - 6 day RW16N (15m / 1 bay) CONS.A1.3440 Commence RW16n Retaining Wall (29m / 2 bays) 0 18-Jul-16 0 CAL 2 - 6 day 18-Jul-16: 🔷 CONS.A1.3450 Survey / Setting Out 4 18-Jul-16 21-Jul-16 0 CAL 2 - 6 day CONS.A1.3460 Excavate to formation level (open cut / slope) 12 22-Jul-16 04-Aug-16 CAL 2 - 6 day CONS.A1.3470 Cast Base & Wall Stem 1 bay (ribbed finish to 1m below F.G.L) 20 05-Aug-16 CAL 2 - 6 day 1 bay x 18 days CONS.A1.3480 Install U/G Utilities - TCSS, ELV & LV Ducting 14 29-Aug-16 13-Sep-16 CAL 2 - 6 day Backfill to final ground level CAL 2 - 6 day CONS.A1.3490 12 14-Sep-16 29-Sep-16 RW16S (15m / 1 bay) CONS.A1.3500 Commence RW16s Retaining Wall (29m / 2 bays) 0 14-Sep-16 CAL 2 - 6 day 14-Sep-16 • CONS.A1.3510 Survey / Setting Out 4 14-Sep-16 20-Sep-16 CAL 2 - 6 day 12 20-Sep-16 04-Oct-16 CONS.A1.3520 Excavate to formation level (open cut / slope) CAL 2 - 6 day Cast Base & Wall Stem 1 bay (ribbed finish to 1m below F.G.L) CONS.A1.3530 20 05-Oct-16 CAL 2 - 6 day 1 bay x 12 days 28-Oct-16 CONS.A1.3540 Install U/G Utilities - TCSS, ELV & LV Ducting & Draw Pits 14 29-Oct-16 14-Nov-16 CAL 2 - 6 day CONS.A1.3550 Backfill to final ground level 12 15-Nov-16 28-Nov-16 CAL 2 - 6 day Retaining Walls in Portion C1 RW1 (51m / 4 bays) CONS.C2.3140 Commence RW1 Retaining Wall 0 17-Jun-16 32 CAL 2 - 6 day 17-Jun-16 💠 CONS.C2.3150 Survey / Setting Out 6 17-Jun-16 23-Jun-16 32 CAL 2 - 6 day CAL 2 - 6 day CONS.C2.3160 20 24-Jun-16 Excavate to formation level (open cut / slope) 18-Jul-16 80 CONS.C2.3170 Cast Base & Wall Stem 4 bays (ribbed finish to 1m below F.G.L) 48 09-Jul-16 02-Sep-16 CAL 2 - 6 day 4 bays x 12 days CONS.C2.3180 Backfill to final ground level and Reinstate Roads 30 03-Sep-16 12-Oct-16 80 CAL 2 - 6 day RW1a (176m / 11 bays) 06-Jul-16 🔷 CONS.C2.3200 Commence RW1a Retaining Wall 0 06-Jul-16 23 CAL 2 - 6 day CONS.C2.3210 Survey / Setting Out 6 06-Jul-16 12-Jul-16 23 CAL 2 - 6 day CONS.C2.3220 Excavate to formation level (open cut / slope) 60 13-Jul-16 22-Sep-16 CONS.C2.3230 Cast Base & Wall Stem (ribbed finish to 1m below F.G.L) 72 10-Aug-16 05-Nov-16 23 CAL 2 - 6 day 11 bays x 12 days / 2 WF CONS.C2.3240 Backfill to final ground level and Reinstate Roads 72 23-Sep-16 17-Dec-16 23 CAL 2 - 6 day 23 CONS.C2.3250 Install Railing for RW1 and RW1a 24 19-Dec-16 18-Jan-17 CAL 2 - 6 day RW8 (35m / 3 bays) CONS.C2.3320 Commence RW8 Retaining Wall 0 16-Oct-15 CAL 2 - 6 day 16-Oct-15 CAL 2 - 6 day CONS.C2.3330 Survey / Setting Out 5 16-Oct-15 22-Oct-15 CONS.C2.3340 Excavate to formation level (open cut / slope) 12 23-Oct-15 05-Nov-15 CAL 2 - 6 day CONS.C2.3350 Cast Base & Wall Stem 3 bays (ribbed finish to 1m below F.G.L) 36 06-Nov-15 CAL 2 - 6 day 3 bays x 12 days CONS.C2.3360 Backfill to final ground level & Reinstate Road 16 18-Dec-15 08-Jan-16 40 CAL 2 - 6 day RW13 (40m / 3 bays) CONS.C2.3260 Commence RW13 Retaining Wall 0 18-Dec-15 CAL 2 - 6 day CONS.C2.3270 Survey / Setting Out 3 18-Dec-15 21-Dec-15 CAL 2 - 6 day CONS.C2.3280 Excavate to formation level (open cut / slope) 10 22-Dec-15 05-Jan-16 CAL 2 - 6 day CONS.C2.3290 Cast Base & Wall Stem 3 bays (ribbed finish to 1m below F.G.L) 36 06-Jan-16 19-Feb-16 CAL 2 - 6 day 3 bays x 12 days 12 20-Feb-16 04-Mar-16 CAL 2 - 6 day CONS.C2.3300 Backfill to final ground level and Reinstate Road Landscaping and Irrigation System Landscaping - Water Meter W04 Zone AC4

Data Date: 27-Feb-15 HY/2013/04 - Hong Kong Boundary Crossing Facilities Infrastructure Works Stage II (Southern Portion) Page: 21 / 24 Print Date: 23-Apr-15 13:05 Total Float 0 | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | CONS.A1.8120 Commence Landscape Works in Zone AC4 0 22-Mar-16 CAL 2 - 6 day Area 32.410 m2 CONS.A1.8130 98 22-Mar-16 CAL 2 - 6 day 19,446 m3 / 200 m3 / day Top Soil to Landscaped Areas (600mm) 22-Jul-16 CONS.A1.8140 Install Irrigation System Main Lines (900mm dia) 60 17-Jun-16 CAL 2 - 6 day CONS.A1.8150 Install Lateral Irrigation Pipes & Sprinklers 60 23-Jul-16 04-Oct-16 CAL 2 - 6 day CONS.A1.8160 Irrigation Coverage Test 18 05-Oct-16 26-Oct-16 CAL 2 - 6 day CAL 2 - 6 day Area 32,410 m2 / 10 m2 / CONS.A1.8170 Soft Landscaping - Shrubs Planting / Ground Cover 81 27-Oct-16 04-Feb-17 CONS.A1.8180 Complete Landscape Works Zone AC4 04-Feb-17 CAL 2 - 6 day KD8 ♦ 04-Feb-17 Landscape Softworks in Portion A6 and B5 Commence Landscape Works in Zone AC4 in Portion A6 & B5 0 13-Mar-17\* CAL 2 - 6 day Area 13.890 m2 CONS.A1.8590 CONS.A1.8595 Clearing of unsuitable materials 36 13-Mar-17 27-Apr-17 CAL 2 - 6 day CONS.A1.8600 74 28-Apr-17 27-Jul-17 CAL 2 - 6 day 8,334 m3 / 100 m3 / day CONS.A1.8610 Install Irrigation System Main Lines (900mm dia) 70 28-Jul-17 19-Oct-17 CAL 2 - 6 day CAL 2 - 6 day CONS.A1.8620 Install Lateral Irrigation Pipes & Sprinklers 60 20-Oct-17 02-Jan-18 CAL 2 - 6 day CONS.A1.8630 12 03-Jan-18 Irrigation Coverage Test 16-Jan-18 CONS.A1.8640 Soft Landscaping - Shrubs Planting / Ground Cover 90 17-Jan-18 10-May-18 CAL 2 - 6 day Area 13,890 m2 / 10 m2 / CONS.A1.8650 Complete Landscape Works Zone AC4 (KD16) 10-May-18 CAL 2 - 6 day KD14 ♦ 10-May-18 Establishment Works for Landscape Softworks in Portion A6 and B5 365 11-May-18 CAL 1 - 7 day KD16 CONS.A1.8660 10-May-19 Zone BC4 CONS.A1.8200 Commence Landscape Works in Zone BC4 0 23-Jul-16 CAL 2 - 6 day Area 22,400 m2 CONS.A1.8210 Top Soil to Landscaped Areas 90 23-Jul-16 09-Nov-16 CAL 2 - 6 day 13,440 m3 / 150m3 / day Install Irrigation System Main Lines (900mm dia) 60 03-Oct-16 CAL 2 - 6 day CONS.A1.8220 12-Dec-16 CONS.A1.8230 Install Lateral Irrigation Pipes & Sprinklers 60 05-Nov-16 17-Jan-17 CAL 2 - 6 day CONS.A1.8240 Irrigation Coverage Test 12 18-Jan-17 CONS.A1.8250 Soft Landscaping - Shrubs Planting / Ground Cover 56 06-Feb-17 12-Apr-17 CAL 2 - 6 day Area 22,400 m2 / 10 m2 / Complete Landscape Works in Zone BC4 12-Apr-17 CAL 2 - 6 day CONS.A1.8260 Zone CC4 CONS.A1.8280 Commence Landscape Works in Zone CC4 0 10-Nov-16 17 CAL 2 - 6 day Area 7000 m2 CONS.A1.8290 Top Soil to Landscaped Areas 42 10-Nov-16 30-Dec-16 17 CAL 2 - 6 day 4200 m3 / 100 m2 / day Install Irrigation System Main Lines (900mm dia) 30 31-Dec-16 08-Feb-17 17 CAL 2 - 6 day CONS.A1.8300 CONS.A1.8310 Install Lateral Irrigation Pipes & Sprinklers 30 09-Feb-17 15-Mar-17 17 CAL 2 - 6 day CONS.A1.8320 6 16-Mar-17 22-Mar-17 CAL 2 - 6 day CONS.A1.8330 Soft Landscaping - Shrubs Planting / Ground Cover 20 13-Apr-17 11-May-17 CAL 2 - 6 day 7000 m2 / 10 m2 / 30 Workers Complete Landscape Works in Zone CC4 CAL 2 - 6 day ♦ 11-May-17 CONS.A1.8340 11-May-17 Zone DC4 CONS.A1.8360 Commence Landscape Works in DC4 0 31-Dec-16 CAL 2 - 6 day Area 130 m2 31-Dec-16 CONS A1 8370 Top Soil to Landscaped Areas 2 31-Dec-16 03-Jan-17 37 CAL 2 - 6 day 78 m3 12 04-Jan-17 17-Jan-17 75 CAL 2 - 6 day CONS.A1.8380 Install Irrigation System Main Lines (900mm dia) CONS.A1.8390 Install Lateral Irrigation Pipes & Sprinklers 12 18-Jan-17 03-Feb-17 CAL 2 - 6 day CONS.A1.8400 Irrigation Coverage Test 2 04-Feb-17 06-Feb-17 75 CAL 2 - 6 day CONS.A1.8410 Soft Landscaping - Shrubs Planting / Ground Cover 3 12-May-17 15-May-17 CAL 2 - 6 day 130 m2 / 10 m2 / 5 workers Complete Landscape Works in Portion C1 (West Section) 15-May-17 CONS.A1.8420 CAL 2 - 6 day Zone EC4 CONS.A1.8440 Commence Landscape Works in Zone EC4 0 04-Jan-17 37 CAL 2 - 6 day Area 2300 m2 04-Jan-17 💠 37 CAL 2 - 6 day 1380 m3 / 100 m3 / day CONS.A1.8450 Top Soil to Landscaped Areas 14 04-Jan-17 19-Jan-17 12 20-Jan-17 06-Feb-17 37 CONS.A1.8460 Install Irrigation System Main Lines CAL 2 - 6 day

Data Date: 27-Feb-15 HY/2013/04 - Hong Kong Boundary Crossing Facilities Infrastructure Works Stage II (Southern Portion) Print Date: 23-Apr-15 13:05 Page: 22 / 24 Total Float 0 | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D | J | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | T | A | CONS.A1.8470 Install Lateral Irrigation Pipes & Sprinklers 12 07-Feb-17 20-Feb-17 CAL 2 - 6 day CONS.A1.8480 6 21-Feb-17 27-Feb-17 37 CAL 2 - 6 day Irrigation Coverage Test CONS.A1.8490 Soft Landscaping - Shrubs Planting / Ground Cover 12 13-Apr-17 CAL 2 - 6 day 2300 m2 / 10 m2 / manday / 20 29-Apr-1 CONS.A1.8500 Complete Landscape Works in Portion C1 (West Section) 29-Apr-17 CAL 2 - 6 day Zone FC4 CONS.A1.8520 Commence Landscape Works in Zone FC4 0 20-Jan-17 41 CAL 2 - 6 day Area 1800 m2 CONS.A1.8530 Top Soil to Landscaped Areas 11 20-Jan-17 04-Feb-17 41 CAL 2 - 6 day 1080 m3 / 100 m3 /day CONS.A1.8540 Install Irrigation System Main Lines (900mm dia) 12 06-Feb-17 18-Feb-17 41 CAL 2 - 6 day CONS.A1.8550 04-Mar-17 CAL 2 - 6 day Install Lateral Irrigation Pipes & Sprinklers 12 20-Feb-17 41 CONS.A1.8560 3 06-Mar-17 08-Mar-17 CAL 2 - 6 day Irrigation Coverage Test CONS.A1.8570 Soft Landscaping - Shrubs Planting / Ground Cover 11 02-May-17 15-May-17 CAL 2 - 6 day 1800 m2 / 10 m2 / manday / 20 CAL 2 - 6 day CONS.A1.8580 Complete Landscape Works in Zone FC4 15-May-17 Water Meter W02 Zone BC4 CONS.C1.8200 Commence Landscape Works 0 21-Jul-16 CAL 2 - 6 day Area 15,470 m2 21-Jul-16 💠 CONS.C1.8210 Top Soil to Landscaped Areas 55 21-Jul-16 24-Sep-16 0 CAL 2 - 6 day 9,282 m3 / 200 m3 / day CAL 2 - 6 day CONS.C1.8220 Install Irrigation Main Line + Construct Swale 60 12-Aug-16 25-Oct-16 CONS.C1.8230 Install Lateral Irrigation Pipes / Sprinklers 18-Nov-16 CAL 2 - 6 day 60 06-Sep-16 CONS.C1.8240 Irrigation Coverage Test 14 19-Nov-16 05-Dec-16 CONS.C1.8250 Soft Landscaping - Shrubs Planting / Ground Cover 60 06-Dec-16 20-Feb-17 CAL 2 - 6 day 15,470 m2 / 10m2 / day / 26 CAL 2 - 6 day CONS.C1.8260 Complete Landscape Works in Zone BC4 W02 20-Feb-17 Zone BC4 in Portion D1 CONS.C1.8600 Commence Landscape Works in Portion D1 CAL 2 - 6 day Area 2,730 m2 26-Nov-16 CONS.C1.8610 Top Soil to Landscaped Areas 24 26-Nov-16 23-Dec-16 CAL 2 - 6 day 1638 m3 / 100 m3 / day 44 24-Dec-16 CAL 2 - 6 day CONS.C1.8620 Install Irrigation Main Line + Construct Swale 20-Feb-17 CONS.C1.8630 Install Lateral Irrigation Pipes / Sprinklers 30 14-Feb-17 CAL 2 - 6 day 20-Mar-17 CONS.C1.8640 Irrigation Coverage Test 6 21-Mar-17 27-Mar-17 CONS.C1.8650 Soft Landscaping - Shrubs Planting / Ground Cover 36 28-Mar-17 15-May-17 CAL 2 - 6 day 2730 m2 / 10m2 / day / 10 CONS.C1.8660 Complete Landscape Works in Portion D1 of Zone BC4 W02 15-May-17 0 CAL 2 - 6 day Zone CC4 CONS.C1.8270 Commence Landscape Works in Zone CC4 0 26-Sep-16 CAL 2 - 6 day Area 4,200 m2 CONS.C1.8280 Top Soil to Landscaped Areas 26 26-Sep-16 27-Oct-16 33 CAL 2 - 6 day 2,520 m3 / 100 m3 / day 33 CAL 2 - 6 day CONS.C1.8290 Install Irrigation Main Line 36 28-Oct-16 08-Dec-16 CONS.C1.8300 Install Lateral Irrigation Pipes / Sprinklers 36 18-Nov-16 31-Dec-16 33 CAL 2 - 6 day CONS.C1.8310 6 03-Jan-17 09-Jan-17 CAL 2 - 6 day CONS C1 8320 Soft Landscaping - Shrubs Planting / Ground Cover 28 21-Feb-17 24-Mar-17 CAL 2 - 6 day 4,200 m2 /10 m2 / 15 workers CONS.C1.8330 Complete Landscape Works in Zone 24-Mar-17 CAL 2 - 6 day ◆ 24-Mar-17 0 Zone EC4 CONS.C1.8340 Commence Landscape Works 0 28-Oct-16 CAL 2 - 6 day Area 2,400 m2 28-Oct-16 **♦** CONS.C1.8350 Top Soil to Landscaped Areas 15 28-Oct-16 14-Nov-16 64 CAL 2 - 6 day 1,440 m3 / 100 m3 / day CONS.C1.8360 Install Irrigation Main Line 24 15-Nov-16 12-Dec-16 64 CAL 2 - 6 day CONS.C1.8370 CAL 2 - 6 day Install Lateral Irrigation Pipes / Sprinklers 15 13-Dec-16 31-Dec-16 CONS.C1.8380 Irrigation Coverage Test 3 03-Jan-17 05-Jan-17 CAL 2 - 6 day CAL 2 - 6 day 2400 m2 / 10 m2 / 12 workers CONS.C1.8390 Soft Landscaping - Shrubs Planting / Ground Cover 20 25-Mar-17 21-Apr-17 ◆ 21-Apr-17 CONS.C1.8400 Complete Landscape Works in Zone EC4 W02 21-Apr-17 CAL 2 - 6 day

HY/2013/04 - Hong Kong Boundary Crossing Facilities Infrastructure Works Stage II (Southern Portion) Page: 23 / 24 Print Date: 23-Apr-15 13:05 Total Float Zone FC4 CONS.C1.8410 Commence Landscape Works 0 15-Nov-16 76 CAL 2 - 6 day Area 1,800 m2 CONS.C1.8420 12 15-Nov-16 CAL 2 - 6 day 1080 m3 / 100 m3 / day CONS.C1.8430 Install Irrigation Main Line 24 29-Nov-16 28-Dec-16 76 CAL 2 - 6 day Install Lateral Irrigation Pipes / Sprinklers CONS.C1.8440 12 29-Dec-16 12-Jan-17 76 CAL 2 - 6 day CONS.C1.8450 Irrigation Coverage Test 2 13-Jan-17 14-Jan-17 CAL 2 - 6 day CONS.C1.8460 Soft Landscaping - Shrubs Planting / Ground Cover 18 22-Apr-17 15-May-17 CAL 2 - 6 day 1800 m2 / 10 m2 / 10 workers CONS.C1.8470 Complete Landscape Works in Zone FC4 W02 15-May-17 CAL 2 - 6 day **Irrigation Water Tanks and Booster Pumps** CONS.C1.8790 Identify and Agree location with Engineer 12 21-Jul-16 03-Aug-16 CAL 2 - 6 day CONS.C1.8800 Construct Irrigation Water Tanks and Booster Pump Chamber 48 04-Aug-16 30-Sep-16 CAL 2 - 6 day CONS.C1.8810 MEP Works - Electrical and Mechanical Installation + T&C 36 03-Oct-16 14-Nov-16 CAL 2 - 6 day Establishment Period (1 year) CONS.C1.8190 Establishment of Landscape Works CAL 1 - 7 day 365 16-May-17 15-May-18 **Executive Summary Box Culverts Box Culvert D** BCD.ES.1010 Box Cullvert D - Bored Piling, Testing + Pile caps (Bay 1-15) 172 18-Jun-15 13-Jan-16 CAL 2 - 6 day BCD.ES.1020 Box Cullvert D - RC Box Structure + Backfilling (Bay 1-15) 126 06-Nov-15 12-Apr-16 CAL 2 - 6 day BCD.ES.1030 Box Cullvert D - Bored Piling + Pile Testing (Bay 1-3) 89 21-Dec-15 13-Apr-16 CAL 2 - 6 day CAL 2 - 6 day BCD.ES.1040 Box Cullvert D - Cofferdam + ELS (Bay 1-3 + Outflow) 140 14-Apr-16 30-Sep-16 BCD.ES.1050 Box Cullvert D - Pile Caps+ RC Box Structure (Bay 1-3 + Outflow) 180 03-Oct-16 15-May-17 CAL 2 - 6 day **Box Culvert C** BCC.ES.2010 Box Culvert C - Driven H Pile + Pile caps (Bay 4-9) 146 06-Nov-15 06-May-16 CAL 2 - 6 day BCC.ES.2020 Box Culvert C - Construct RC Box Structure (Bay 4-9) 96 07-Mar-16 05-Jul-16 CAL 2 - 6 day BCC.ES.2030 Box Culvert C - Driven H Pile + Load Testing (Bay 1-3) 69 09-Apr-16 02-Jul-16 CAL 2 - 6 day BCC.ES.2040 Box Cullvert C - Cofferdam + ELS (Bay 1-3 + Outflow) 126 06-Jul-16 CAL 2 - 6 day BCC.ES.2050 Box Cullvert C - Pilecaps + RC Box Structure (Bay 1-3 + Outflow) 127 05-Dec-16 15-May-17 CAL 2 - 6 day **Bridge Works Bridges in Portion A & B** BRG.ES.1010 Bridges in Portion A & B - Bored Piling + Pilecaps 309 20-May-15 03-Jun-16 CAL 2 - 6 day BRG.ES.1020 Bridges in Portion A & B - Column / Pier Head + Bearings 227 24-Oct-15 30-Jul-16 10 CAL 2 - 6 day BRG.ES.1030 CAL 2 - 6 day Bridges in Portion A & B - Decking / Segments Erection + Stitching 309 30-Nov-15 14-Dec-16 25 BRG.ES.1040 19 Bridges in Portion A & B - Parapet + Ancillary Works 274 01-Mar-16 03-Feb-17 CAL 2 - 6 day **Bridges in Portion C & D** BRG.ES.2010 Bridges in Portion C & D - Bored Piling + Pilecaps 172 26-Sep-15 28-Apr-16 0 CAL 2 - 6 day BRG.ES.2020 Bridges in Portion C & D - Column, Pier Head + Bearings 77 23-Feb-16 28-May-16 CAL 2 - 6 day BRG.ES.2030 Bridges in Portion C & D - Decking / Segments Erection + Stitching 79 23-Apr-16 28-Jul-16 CAL 2 - 6 day BRG.ES.2040 Bridges in Portion C & D - Parapet + Ancillary Works 218 22-Jun-16 15-Mar-17 CAL 2 - 6 day Road Works - East of Box Culvert D RDE.ES.1010 Road Works East of Box Culvert D - Road Formation + Drainage 275 20-May-15 22-Apr-16 CAL 2 - 6 day RDE.ES.1020 Road Works East of Box Culvert D - U/G Utilities 235 21-Jul-15 05-May-16 CAL 2 - 6 day RDE.ES.1030 Road Works East of Box Culvert D - Road Formation to Sub-base + Kerbing 147 20-Nov-15 23-May-16 CAL 2 - 6 day RDE.ES.1040 107 26-Jan-16 08-Jun-16 Road Works East of Box Culvert D - Road Formation to Base Course CAL 2 - 6 day

Data Date: 27-Feb-15

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Quarterly EM&A Report for July 2015 to September 2015

### Appendix D. Event and Action Plan

#### **Event/Action Plan for Air Quality**

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

	EVENT		ACTIO	ON	
		ET	IEC	ER	CONTRACTOR
L:	Exceedance for one sample	1. Identify source, investigate the causes of exceedance and propose remedial measures;  2. Inform ER, Contractor and EPD;  3. Repeat measurement to confirm finding;  4. Increase monitoring frequency to daily;  5. Assess effectiveness of	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	Confirm receipt of notification of failure in writing;     Notify Contractor;     Ensure remedial measures properly implemented.	1. Take immediate action to avoid further exceedance; 2. Submit proposals for remedial actions to IEC within 3 working days of notification; 3. Implement the agreed proposals; 4. Amend proposal if appropriate.
2.	Exceedance	Contractor's remedial actions and keep IEC, EPD and ER informed of the results.  1. Notify IEC, ER,	remedial measures; 5. Supervise implementation of remedial measures.  1. Discuss amongst	Confirm receipt of	Take immediate
	for two or more consecutive samples	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.	ER, ET, and Contractor on the potential remedial actions;  2. Review Contractor's remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly;  3. Supervise the implementation of remedial measures.	notification of failure in writing;  2. Notify Contractor;  3. In consultation with the IEC, agree with the Contractor on the remedial measures to be implemented;  4. Ensure remedial measures properly implemented;  5. If exceedance continues, consider what portion of the work is responsible and instruct the Contractor to stop that portion of work until the exceedance is abated.	action to avoid further exceedance;  2. Submit proposals for remedial actions to IEC within 3 working days of notification;  3. Implement the agreed proposals;  4. Resubmit proposals if problem still not under control;  5. Stop the relevant portion of works as determined by the ER until the exceedance is abated.

#### **Event / Action Plan for Construction Noise Monitoring**

EVENT		ACTION							
	ET	IEC	ER	CONTRACTOR					
Action Level	exceedance and propose remedial measures; 3. Report the results of investigation to the		notification of failure in writing; 2. Notify Contractor;	1. Submit noise mitigation proposals to IEC; 2. Implement noise mitigation proposals.					
Limit Level	<ol> <li>Inform IEC, ER, EPD and Contractor;</li> <li>Identify source;</li> <li>Repeat measurements to confirm findings;</li> <li>Increase monitoring frequency;</li> <li>Carry out analysis of Contractor's working procedures to determine possible mitigation to be implemented;</li> <li>Inform IEC, ER and EPD the causes and actions taken for the exceedances;</li> <li>Assess effectiveness of Contractor's remedial actions and keep IEC, EPD and ER informed of the results;</li> <li>If exceedance stops, cease additional monitoring.</li> </ol>	<ol> <li>Discuss amongst ER, ET, and Contractor on the potential remedial actions;</li> <li>Review Contractors remedial actions whenever necessary to assure their effectiveness and advise the ER accordingly;</li> <li>Supervise the implementation of remedial measures.</li> </ol>	notification of failure in writing;  2. Notify Contractor;  3. Require Contractor to propose remedial measures for the analysed noise problem;  4. Ensure remedial measures properly implemented;  5. If exceedance continues, consider what portion of the work is responsible	<ol> <li>Take immediate action to avoid further exceedance;</li> <li>Submit proposals for remedial actions to IEC within 3 working days of notification;</li> <li>Implement the agreed proposals;</li> <li>Resubmit proposals if problem still not under control;</li> <li>Stop the relevant portion of works as determined by the ER until the exceedance is abated.</li> </ol>					



Quarterly EM&A Report for July 2015 to September 2015

# Appendix E. Implementation Schedule for Environmental Mitigation Measures (EMIS)

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

	EM&A Log		Location of the	Implementation
EIA Ref.	Ref.	Recommended Mitigation Measures	measures	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	All construction sites	V
S5.5.6.2	A2	2) Proper watering of exposed spoil should be undertaken throughout the construction phase:	All construction sites	V
		<ul> <li>Any excavated or stockpile of dusty material should be covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading;</li> </ul>		
		• 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.		
		<ul> <li>The load of dusty materials on a vehicle leaving a construction site should be covered entirely by impervious sheeting to ensure that the dusty materials do not leak from the vehicle;</li> </ul>		
		<ul> <li>Where practicable, vehicle washing facilities with high pressure water jet should be provided at every discernible or designated vehicle exit point. The area where vehicle washing takes place and the road section between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores;</li> </ul>		
\$5.5.6.2	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;	All construction sites	V
		<ul> <li>The portion of any road leading only to construction site that is within 30m of a vehicle entrance or exit should be kept clear of dusty materials;</li> </ul>		
		<ul> <li>Surfaces where any pneumatic or power-driven drilling, cutting, polishing or other mechanical breaking operation takes place should be sprayed with water or a dust suppression chemical continuously;</li> </ul>		
		<ul> <li>Any area that involves demolition activities should be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities so as to maintain the entire surface wet;</li> </ul>		
		<ul> <li>Where a scaffolding is erected around the perimeter of a building under construction, effective dust screens, sheeting or netting should be provided to enclose the scaffolding from the ground floor level of the building, or a canopy should be provided from the first floor level up to the highest level of the scaffolding;</li> </ul>		
		Any skip hoist for material transport should be totally enclosed by impervious sheeting;		
		<ul> <li>Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top and the 3 sides</li> </ul>		
S5.5.6.2	A2	<ul> <li>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;</li> </ul>	All construction sites	V
		<ul> <li>Loading, unloading, transfer, handling or storage of bulk cement or dry PFA should be carried out in a totally enclosed system or facility, and any vent or exhaust should be fitted with an effective fabric filter or equivalent air pollution control system; and</li> </ul>		

	EM&A Log		Location of the	Implementation
EIA Ref.	Ref.	Recommended Mitigation Measures	measures	Status
		<ul> <li>Exposed earth should be properly treated by compaction, turfing, hydroseeding, vegetation planting or sealing with latex, vinyl, bitumen, shotcrete or other suitable surface stabiliser within six months after the last construction activity on the construction site or part of the construction site where the exposed earth lies.</li> </ul>		
S5.5.6.3	A3	3) The Contractor should undertake proper watering on all exposed spoil (with at least 8 times per day) throughout the construction phase.	All construction sites	V
S5.5.6.4	A4	4) Engineer to incorporate the controlled measures into the Particular Specification (PS) for the civil work. The PS should also draw the Contractor's attention to the relevant latest Practice Notes issued by EPD.	All construction sites	V
S5.5.6.4	A5	5) Implement regular dust monitoring under EM&A programme during the construction stage.	Selected representative dust monitoring station	N/A
S5.5.7.1	A6	The following mitigation measures should be adopted to prevent fugitive dust emissions for concrete batching plant:	Selected representative dust	N/A
		<ul> <li>Loading, unloading, handling, transfer or storage of any dusty materials should be carried out in totally enclosed system;</li> </ul>	monitoring station	
		<ul> <li>All dust-laden air or waste gas generated by the process operations should be properly extracted and vented to fabric filtering system to meet the emission limits for TSP;</li> </ul>		
		<ul> <li>Vents for all silos and cement/pulverised fuel ash (PFA) weighing scale should be fitted with fabric filtering system;</li> </ul>		
		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;		
		<ul> <li>All conveyor transfer points should be totally enclosed;</li> </ul>		
		<ul> <li>All access and route roads within the premises should be paved and wetted; and</li> </ul>		
		<ul> <li>Vehicle cleaning facilities should be provided and used by all concrete trucks before leaving the premises to wash off any dust on the wheels and/or body.</li> </ul>		
S5.5.2.7	A7	The following mitigation measures should be adopted to prevent fugitive dust emissions at barging point:	All construction sites	N/A
		<ul> <li>All road surface within the barging facilities will be paved;</li> </ul>		
		Dust enclosures will be provided for the loading ramp;		
		Vehicles will be required to pass through designated wheels wash facilities; and		
<u> </u>		Continuous water spray at the loading points.		
Construction		·	AII	.,
S6.4.10	N1	Use of good site practices to limit noise emissions by considering the following:	All construction sites	V
		<ul> <li>only well-maintained plant should be operated on-site and plant should be serviced regularly during the construction programme;</li> </ul>		
		<ul> <li>machines and plant (such as trucks, cranes) that may be in intermittent use should be shut down between work periods or should be throttled down to a minimum;</li> </ul>		
		<ul> <li>plant known to emit noise strongly in one direction, where possible, be orientated so that the noise is directed away from nearby NSRs;</li> </ul>		
		• silencers or mufflers on construction equipment should be properly fitted and maintained during the construction works;		
		<ul> <li>mobile plant should be sited as far away from NSRs as possible</li> </ul>		

	EM&A Log		Location of the	Implementation
EIA Ref.	Ref.	Recommended Mitigation Measures	measures	Status
		<ul> <li>and practicable;</li> <li>material stockpiles, mobile container site officer and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities.</li> </ul>		
S6.4.11	N2	2) Install temporary hoarding located on the site boundaries between noisy construction activities and NSRs. The conditions of the hoardings shall be properly maintained throughout the construction period.	All construction sites	N/A
S6.4.12	N3	3) Install movable noise barriers (typically density @14kg/m²), acoustic mat or full enclosure close to noisy plants including air compressor, generators, saw.	For plant items listed in Appendix 6D of the EIA report at all construction sites	N/A
S6.4.13	N4	4) Select "Quiet plants" which comply with the BS 5228 Part 1 or TM standards.	For plant items listed in Appendix 6D of the EIA report at all construction sites	V
S6.4.14	N5	5) Sequencing operation of construction plants where practicable.	All construction sites where practicable	V
	N6	6) Implement a noise monitoring under EM&A programme.	Selected representative noise monitoring station	N/A
Sediment				
S7.3	S1	1) The requirements as recommended in ETWB TC(W) 34/2002 Management of Dredged/Excavated Sediment shall be included in the Particular Specification as appropriate.	All construction sites	V
Waste Mana	agement (C	construction Noise)		
S8.3.8	WM1	Construction and Demolition Material	All construction sites	V
		The following mitigation measures should be implemented in handling the waste:		
		Maintain temporary stockpiles and reuse excavated fill material for backfilling and reinstatement;		
		Carry out on-site sorting;		
		Make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate;		
		<ul> <li>Adopt 'Selective Demolition' technique to demolish the existing structures and facilities with a view to recovering broken concrete effectively for recycling purpose, where possible;</li> </ul>		
		<ul> <li>Implement a trip-ticket system for each works contract to ensure that the disposal of C&amp;D materials are properly documented and verified; and</li> </ul>		
		• Implement an enhanced W aste Management Plan similar to ETWB TC(W) 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.		
		<ul> <li>In addition, disposal of the C&amp;D materials onto any sensitive locations such as agricultural lands, etc. should be avoided. The Contractor shall propose the final disposal sites to the Project Proponent and get its approval before implementation.</li> </ul>		
S8.3.9-	WM2	C&D Waste	All construction sites	N/A
\$8.3.11		<ul> <li>Standard formwork or pre-fabrication should be used as far as practicable in order to minimise the arising of C&amp;D materials. The use of more durable formwork or plastic facing for the construction works should be considered. Use of wooden hoardings should not be used, as in other projects. Metal hoarding should be used to enhance the possibility of recycling. The purchasing of construction</li> </ul>		

	EM&A			
EIA Ref.	Log	December ded Mitiration Macanina	Location of the	Implementation
EIA Kei.	Ref.	Recommended Mitigation Measures and wastage.	measures	Status
		<ul> <li>The Contractor should recycle as much of the C&amp;D materials as possible on-site. Public fill and C&amp;D waste should be segregated and stored in different containers or skips to enhance reuse or recycling of materials and their proper disposal. Where practicable, concrete and masonry can be crushed and used as fill. Steel reinforcement bar can be used by scrap steel mills. Different areas of the sites should be considered for such segregation and storage.</li> </ul>		
S8.2.12- S8.3.15	WM3	<ul> <li>Chemical Waste</li> <li>Chemical waste that is produced, as defined by Schedule 1 of the Waste Disposal (Chemical Waste) (General) Regulation, should be handled in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes.</li> <li>Containers used for the storage of chemical wastes should be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed; have a capacity of less than 450 liters unless the specification has been approved by the EPD; and display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the regulation.</li> <li>The storage area for chemical wastes should be clearly labelled and used solely for the storage of chemical waste; enclosed on at least 3 sides; have an impermeable floor and bunding of sufficient capacity to accommodate 110% of the volume of the largest container or 20 % of the total volume of waste stored in that area, whichever is the greatest; have adequate ventilation; covered to prevent rainfall entering; and arranged so that incompatible materials are adequately separated.</li> <li>Disposal of chemical waste should be via a licensed waste collector; be to a facility licensed to receive chemical waste, such as the Chemical Waste Treatment Centre which also offers a</li> </ul>	All construction sites	V
S8.3.16	WM4	chemical waste collection service and can supply the necessary storage containers; or be to a reuser of the waste, under approval from the EPD.  Sewage  • Adequate numbers of portable toilets should be provided for the	All construction sites	V
		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.		
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.	All construction sites	V
		<ul> <li>A reputable waste collector should be employed by the Contractor to remove general refuse from the site, separately from construction and chemical wastes, on a daily basis to minimize odour, pest and litter impacts. Burning of refuse on construction sites is prohibited by law.</li> </ul>		
		<ul> <li>Aluminium cans are often recovered from the waste stream by individual collectors if they are segregated and made easily accessible. Separate labelled bins for their deposit should be provided if feasible.</li> </ul>		
		<ul> <li>Office wastes can be reduced through the recycling of paper if volumes are large enough to warrant collection. Participation in a local collection scheme should be considered by the Contractor. In addition, waste separation facilities for paper, aluminium cans, plastic bottles etc., should be provided.</li> </ul>		

	EM&A Log		Location of the	Implementation
EIA Ref.	Ref.	Recommended Mitigation Measures cleanliness and appropriate waste management procedure,	measures	Status
		including reduction, reuse and recycling of wastes.		
Water Qual	ity (Constr	uction Phase)		
S9.11.1.7	W2	<u>Land Works</u> General construction activities on land should also be governed by standard good working practice. Specific measures to be written into the works contracts should include:	Land-based works areas	V
		<ul> <li>wastewater from temporary site facilities should be controlled to prevent direct discharge to surface or marine waters;</li> </ul>		
		<ul> <li>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;</li> </ul>		
		<ul> <li>storm drainage shall be directed to storm drains via adequately designed sand/silt removal facilities such as sand traps, silt traps and sediment basins. Channels, earth bunds or sand bag barriers should be provided on site to properly direct stormwater to such silt removal facilities. Catchpits and perimeter channels should be constructed in advance of site formation works and earthworks;</li> </ul>		
		<ul> <li>silt removal facilities, channels and manholes shall be maintained and any deposited silt and grit shall be removed regularly, including specifically at the onset of and after each rainstorm;</li> </ul>		
		<ul> <li>temporary access roads should be surfaced with crushed stone or gravel;</li> </ul>		
		<ul> <li>rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities;</li> </ul>		
		• measures should be taken to prevent the washout of construction materials, soil, silt or debris into any drainage system;		
		<ul> <li>open stockpiles of construction materials (e.g. aggregates and sand) on site should be covered with tarpaulin or similar fabric during rainstorms;</li> </ul>		
		<ul> <li>manholes (including any newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage</li> </ul>		

system, and to prevent storm run-off from getting into foul sewers;

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

• 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

• wheel wash overflow shall be directed to silt removal facilities

• wastewater generated from concreting, plastering, internal decoration, cleaning work and other similar activities, shall be

 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

• the Contractors shall prepare an oil / chemical cleanup plan and ensure that leakages or spillages are contained and cleaned up

• the section of construction road between the wheel washing bay and the public road should be surfaced with crushed stone or

system;

coarse gravel;

provided at every site exit;

before being discharged to the storm drain;

screened to remove large objects;

W PCO or collected for off site disposal;

	EM&A			
EIA Ref.	Log Ref.	Recommended Mitigation Measures	Location of the measures	Implementation Status
		immediately;		
		• waste oil should be collected and stored for recycling or disposal, in accordance with the Waste Disposal Ordinance;		
		<ul> <li>all fuel tanks and chemical storage areas should be provided with locks and be sited on sealed areas. The storage areas should be surrounded by bunds with a capacity equal to 110% of the storage capacity of the largest tank; and</li> </ul>		
		<ul> <li>surface run-off from bunded areas should pass through oil/grease traps prior to discharge to the stormwater system.</li> </ul>		
Ecology (C	onstruction	n Phase)		
S10.7	E4	Watering to reduce dust generation; prevention of siltation of freshwater habitats; Site runoff should be desilted, to reduce the potential for suspended sediments, organics and other contaminants to enter streams and standing freshwater	Land-based works areas	V
S10.7	E5	Good site practices, including strictly following the permitted works hours, using quieter machines where practicable, and avoiding excessive lightings during night time	Land-based works areas	V
S10.7	E8	Control vessel speed	Marine Traffic	N/A
		<ul><li>Skipper training</li><li>Predefined and regular routes for working vessels; avoid Brother Islands.</li></ul>		
Fisheries				
S11.7	F4	Maritime Oil Spill Response Plan (MOSRP);	HKBCF	V
		Contingency plan.		
Landscape	& Visual (D	Detailed Design Phase)		
S14.3.3.1	LV1	General design measures include:	HKBCF	V
		<ul> <li>Roadside planting and planting along the edge of the HKBCF Island is proposed;</li> </ul>		
		<ul> <li>Transplanting of mature trees in good health and amenity value where appropriate and reinstatement of areas disturbed during construction by compensatory hydro-seeding and planting;</li> </ul>		
		<ul> <li>Protection measures for the trees to be retained during construction activities;</li> </ul>		
		• Optimizing the sizes and spacing of the bridge columns; Fine- tuning the location of the bridge columns to avoid visually-sensitive locations;		
		<ul> <li>Maximizing new tree, shrub and other vegetation planting to compensate tree felled and vegetation removed;</li> </ul>		
		<ul> <li>Providing planting area around peripheral of HKBCF for tree planting screening effect;</li> </ul>		
		<ul> <li>Providing salt-tolerant native trees along the planter strip at affected seawall and newly reclaimed coastline;</li> </ul>		
		<ul> <li>For HKBCF, providing aesthetic architectural design on the related buildings (e.g. similar materials for PCB building facade to Airport buildings, roof planting and subtle materials for other facilities buildings and so on), and the related infrastructure (e.g. parapet planting and transparent cover for elevated footbridges) to provide harmonious atmosphere of the HKBCF; and</li> </ul>		
		<ul> <li>Fine-tuning the sizes of the structural members to minimize the bulkiness of buildings and adjustment of building arrangement to minimise disturbance to surrounding vegetation in the HKBCF.</li> </ul>		
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.	HKBCF	N/A

	EM&A		Location of the	Implementation
EIA Ref.	Log Ref.	Recommended Mitigation Measures	Location of the measures	Implementation Status
		G2. Add planting strip and automatic irrigation system if appropriate at some portions of bridge footbridge to screen bridge and traffic.		
		G3. Not applicable as this is for HKLR.		
		G4. For HKBCF, providing aesthetic architectural design on the related buildings (e.g. similar materials for PCB building facade to Airport buildings, roof planting and subtle materials for other facilities buildings and so on), and the related infrastructure (e.g. parapet planting and transparent cover for elevated footbridges) to provide harmonious atmosphere of the HKBCF		
		G5. Vegetation reinstatement and upgrading to disturbed areas		
		G6. Maximizing new tree shrub and other vegetation planting to compensate tree felled and vegetation removed		
		G7. Providing planting area around peripheral of HKBCF for tree planting screening effect;		
		G8. Plant salt-tolerant native and shrubs etc along the planter strip at affected seawall.		
		G9. Reserve of loose natural granite rocks for re-use. Provide new coastline to adopt "natural-look" by means of using armour rocks in the form of natural rock materials and planting strip area accommodating screen buffer to enhance "natural-look" of the new coastline.		
S14.3.3.3	LV3	Mitigate Visual Impacts		N/A
		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.		
EM&A				
S15.2.2	EM1	An Independent Environmental Checker needs to be employed as per the EM&A Manual.	All construction sites	V
S15.5 - S15.6	EM2	1) An Environmental Team needs to be employed as per the EM&A Manual.	All construction sites	V
		2) Prepare a systematic Environmental Management Plan to ensure effective implementation of the mitigation measures.		
		3) An environmental impact monitoring needs to be implementing by the Environmental Team to ensure all the requirements given in the EM&A Manual are fully complied with.		

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



Quarterly EM&A Report for July 2015 to September 2015

# Appendix F. Site Audit Findings and Corrective Actions



#### Appendix F – Site Audit Findings and Corrective Actions

Site inspections were carried out on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures for the Project. During the reporting period, 12 site inspections were carried out on 16, 23 and 30 July, 5, 13, 20 and 25 August, and 2, 11, 17, 24 and 29 September 2015.

Particular observations during the site inspections are described below.

#### 16 July 2015

a. Drip tray was not provided for some lubricant container. Subsequently, drip trays were provided. The observation was made on 16 July 2015 and closed on 30 July 2015.

#### 23 July 2015

a. No new observations were made.

#### 30 July 2015

a. Stagnant water pond following recent rainfall was observed at WA3. Subsequently, the stagnant water was reduced. The observation was closed on 5 August 2015.

#### 5 August 2015

No new observations were made.

#### 13 August 2015

a. Stagnant water was observed in a drip tray. Subsequently, the drip tray was removed. Also, tarpaulin sheet provided to prevent rain from entering the drip tray for a generator was not properly placed and should be improved. Subsequently, the tarpaulin sheet was rectified. The observation was closed on 20 August 2015.

#### 20 August 2015

- a. Some dark smoke emission was observed from a drilling machine. The engine oil was replaced and no further dark smoke emission was observed. The observation was closed on 25 August 2015.
- Part of a haul road was observed to be dry. Subsequently, the Contractor provided recorded records of water spraying for haul road and exposed areas 8 times per day for inspection. Haul road was observed to be wet during follow-up site inspection, and no dusty site activities were observed. The observation was closed on 2 September 2015.

#### 25 August 2015

a. No new observations were made.

#### 2 September 2015

Stagnant water was observed in some stored construction materials after earlier heavy rain.
 Subsequently, the stagnant water was cleared. The observation was closed on 11
 September 2015.

#### 11 September 2015

No new observations were made.

#### 17 September 2015

a. Some chemical containers were not stored in drip tray. Subsequently, chemical containers were removed from the observed works area. Also, affected soil was removed and was



placed in the chemical waste storage area in Works Area WA3. The observation was closed on 24 September 2015.

#### 24 September 2015

- a. The surface of a newly-acquired portion of the works area was dry. The Contractor was reminded to provide water spray for this portion in addition to the existing works area. Follow-up actions for the outstanding observation will be inspected during the upcoming site inspections and reported in the coming reporting period.
- b. Oil stain on bare ground was observed. Subsequently, the oil stain was cleared and affected soil was placed in the chemical waste storage area. The observation was closed on 29 September 2015.

#### 29 September 2015

No new observations were made.

The Contractor has rectified most of the observations as identified during environmental site inspections during the reporting month. Follow-up actions for outstanding observations will be inspected during the next site inspections.



Quarterly EM&A Report for July 2015 to September 2015

## Appendix G. Waste Flow Table

Name of Department: Highways Department

Contract No.: HY/2013/04

#### Monthly Summary Waste Flow Table for 2015 (Year)

	Actual Quantities of Inert C&D Materials Generated Monthly					Actual Quantities of C&D Wastes Generated Monthly					
Month	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fill	Imported Fill	Metals	Paper/ cardboard packaging	Plastics (Note 1)	Chemical Waste	Others, e.g. general refuse
	(in '000m³)	(in '000m <sup>3</sup> )	(in '000m <sup>3</sup> )	(in '000m³)	(in '000m <sup>3</sup> )	(in '000m³)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000kg)	(in '000m <sup>3</sup> )
Jan											
Feb											
Mar											
Apr											
May											
Jun											
Sub-total	0	0	0	0	0	0	0	0	0	0	0
Jul	0	0	0	0	0	0	0	0	0	0	0
Aug	0	0	0	0	0	0	0	0	0	0	0
Sep	0	0	0	0	0	0	0	0	0	0	0
Oct											
Nov											
Dec		•	·			·					-
Total	0	0	0	0	0	0	0	0	0	0	0

Note: (1) Plastics refer to plastic bottles / containers, plastic sheets / foam from packaging material



Quarterly EM&A Report for July 2015 to September 2015

# Appendix H. Environmental Licenses and Permits

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

Item No.	Type of Permit / Licence	Reference No.	Application Date	Date of Issue	Date of Expiry	Remark
1	Environmental Permit under EIAO	EP-353/2009/I	30 Jun 2015	17 Jul 2015	N/A	Issued
2	Construction Dust Notification (HKBCF Southern Portion)	387156	26 Mar 2015	1 Apr 2015	N/A	Notified
3	Construction Waste Disposal Account	7022038	16 Mar 2015	1 Apr 2015	N/A	Account approved
4	Registration as a Chemical Waste Producer (HKBCF Southern Portion)	Waste Producer Number (WPN): 5213-951-C3952-01	27 Mar 2015	27 Apr 2015	N/A	Registration completed
5	Discharge Licence under WPCO (Works Area WA3)	WT00022316-2015	1 Jun 2015	14 Aug 2015	31 Aug 2020	Issued
6	Construction Noise Permit	GW-RS0874-15	24 Jul 2015	7 Aug 2015	1 Feb 2016	Issued



Quarterly EM&A Report for July 2015 to September 2015

# Appendix I. Statistics on Environmental Complaints, Notification of Summons and Successful Prosecutions

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

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