



中國港灣工程有限責任公司

香港代表： 振華工程有限公司

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

Date : 04 January 2018
Our Ref. : CHEC300/OUT/2018/01/04.05/034725

By Fax (3922 9797) & By Hand

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

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


Dear Sir,

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

Pursuant to the Condition 5.4 of the EP-353/2009/K, we are pleased to submit one soft copy and three copies of the certified Quarterly EM&A Report (Rev.1) for June 2017 to August 2017 for your on-ward submission.

Thank you for your kind attention.

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



Paul PUI
Site Agent

PP/FH/MC/HSW/DW/mt


Encl.

3 January 2018

By Fax (3468 2076) and By Post

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

Attention: Mr. W.S. Ng

Dear Sir,

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


**Contract No. HY/2013/03 – HZMB HKBCF – Vehicle Clearance Plazas and
Ancillary Buildings and Facilities
Quarterly EM&A Report No.8 for June 2017 to August 2017**

Reference is made to the Environmental Team's submission of Quarterly Environmental Monitoring & Audit Report No.8 for June 2017 to August 2017 certified by the ET Leader (ET's ref.: "MCL/ED/0005/2018/C" dated 3 January 2018) and provided to us via e-mail on 3 January 2018.

We are pleased to inform you that we have no adverse comment on the captioned report. We write to verify the captioned submission in accordance with Section 16.4.1 of the Updated EM&A Manual (2011).

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

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



Raymond Dai
Independent Environmental Checker

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

Internal: DY, YH, ENPO Site

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

Date 03 January 2018
Our Ref. MCL/ED/0005/2018/C

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

BY HAND

Attn.: Mr. Raymond Dai, IEC

Dear Sir,

**Quarterly EM&A Report for June 2017 to August 2017
Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities –
Vehicle Clearance Plazas and Ancillary Buildings and Facilities (Contract No. HY/2013/03)**

Pursuant to 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 June 2017 to August 2017 for your verification.

Should you require further information, please do not hesitate to contact our Mr. Vincent Lu at 3565 4371 or the undersigned at 3565 4115.

Yours faithfully,
for and on behalf of
MATERIALAB CONSULTANTS LIMITED



Arthur Cheng
Environmental Team Leader

AC/vl

Encl.

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

MATERIALAB CONSULTANTS LIMITED

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

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

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Report No.: 0165/15/ED/0921

QUARTERLY ENVIRONMENTAL MONITORING & AUDIT REPORT (Rev.1)

June 2017 to August 2017

Client: China Harbour Engineering Co., Ltd.

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

Report No.: 0165/15/ED/0921

Prepared by: Vincent Lu

Reviewed by: Bong Yu

Certified by:

A handwritten signature in blue ink, appearing to be "Arthur Cheng".

Arthur Cheng
Environmental Team Leader

MATERIALAB CONSULTANTS LIMITED

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

Tel : (852)-24508238
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MATERIALAB CONSULTANTS LIMITED

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

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

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

Tel : (852)-24508238
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Report No.: 0165/15/ED/0921

EXECUTIVE SUMMARY

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

Contract No. HY/2013/03 (includes the construction works of Contract No. HY/2013/06 within Contract No. HY/2013/03 works area) is part of the “Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities” (HZMB HKBCF) Project which is a “Designated Project” under Schedule 2 of the Environmental Impact Assessment (EIA) Ordinance (Cap. 499) and for which an EIA Report (Register No. AEIAR-145/2009) was prepared and approved. The current Environmental Permit (EP) for HKBCF, namely No. EP-353/2009/K, was issued on 11 April 2016. These documents are available through the EIA Ordinance Register. Commencement of Contract No. HY/2013/03 took place on 10 April 2015 while the construction works and the EM&A programme of Contract No. HY/2013/03 commenced on 29 August 2015 (commencement of Contract No. HY/2013/06 took place on 14 August 2015 while the construction works and the EM&A programme of Contract No. HY/2013/06 within Contract No. HY/2013/03 works area commenced on 13 September 2016).

MaterialLab Consultants Limited (MCL) has been appointed by the Contractor to implement the Environmental Monitoring & Audit (EM&A) programme for the Contract in accordance with the Updated EM&A Manual for HKBCF (Version 1.0) and will be providing environmental team services for the Contract. This is the 8th Quarterly EM&A Report for the Contract which summaries findings of the EM&A works during the reporting period from 01 June 2017 to 31 August 2017 (includes the findings of the EM&A programme of Contract No. HY/2013/06 within Contract No. HY/2013/03 works area during the reporting period from 01 June 2017 to 31 August 2017) (the “reporting period”).

Environmental Monitoring and Audit Progress

The EM&A programme was undertaken in accordance with the Updated EM&A Manual for HKBCF (Version 1.0). It should be noted that the air quality and noise monitoring works for the Contract are covered by Contract No. HY/2010/02 “Hong Kong-Zhuhai-Macao Bridge HKBCF – Reclamation Works” and Contract No. HY/2011/03 “Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road – Section between Scenic Hill and HKBCF”. The ET of the Contract or another ET of the HZMB project is required to conduct impact air quality monitoring at AMS6 and AMS7, noise monitoring at NMS2 and NMS3B, water quality monitoring at the locations shown in **Figure 3** and ecological monitoring as shown in **Figure 4** and **Figure 5** as part of EM&A programme if these monitoring stations are no longer covered under Contract Nos. HY/2010/02 and HY/2011/03. However, this is subject to ENPO’s final decision on which ET should carry out the monitoring work at these stations.

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

MATERIALAB CONSULTANTS LIMITED

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

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

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Environmental Site Inspection:

- 01, 08, 15, 22 and 30 June 2017
- 06, 13, 21 and 27 July 2017
- 03, 10, 18, 25 and 31 August 2017

Breaches of Action and Limit Levels

Summary of Action and Limit Level exceedance of 1-hr TSP level and 24-hr TSP level at AMS6 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 AMS7 by the Environmental Team of Contract No. HY/2010/02 during the reporting period.

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

There were two Action and Limit Level exceedances for water quality recorded at the monitoring stations shown at **Table 2.2** by the Environmental Team of Contract No. HY/2010/02 during the reporting period.

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

Complaint Log

There were four complaints received in relation to the environmental impact during the reporting period.

Log No.	Environmental Complaint Ref. No.	Date of Complaint Receipt	Description
009	ENPO-C0119	1 June 2017	Air pollution
010	ENPO-C0120	2 June 2017	Air pollution
011	ENPO-C0121	6 June 2017	Air pollution
012	ENPO-C0122	9 August 2017	Air pollution and water discharge

After investigation, Complaint No. 010, 011 and 012 were not related to Contract No. HY/2013/03.

Notifications of Summons and Successful Prosecutions

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

Reporting Changes

There was no reporting change during the reporting period.

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1. INTRODUCTION

1.1 Basic Project Information

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

1.1.2 Contract No. HY/2013/03 (includes the construction works of Contract No. HY/2013/06 within Contract No. HY/2013/03 works area) is part of the “Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities” (HZMB HKBCF) Project which is a “Designated Project” under Schedule 2 of the Environmental Impact Assessment (EIA) Ordinance (Cap. 499) and for which an EIA Report (Register No. AEIAR-145/2009) was prepared and approved. The current Environmental Permit (EP) for HKBCF, namely No. EP-353/2009/K, was issued on 11 April 2016. These documents are available through the EIA Ordinance Register. Commencement of Contract No. HY/2013/03 took place on 10 April 2015 while the construction works and the EM&A programme of Contract No. HY/2013/03 commenced on 29 August 2015 (commencement of Contract No. HY/2013/06 took place on 14 August 2015 while the construction works and the EM&A programme of Contract No. HY/2013/06 within Contract No. HY/2013/03 works area commenced on 13 September 2016). The works areas of the contract are shown in **Appendix A**.

1.1.3 This is the 8th Quarterly EM&A Report summarising the findings of EM&A activities conducted under Contract No. HY/2013/03 from 01 June 2017 to 31 August 2017 (from 01 June 2017 to 31 August 2017 for the construction works of Contract No. HY/2013/06 within Contract No. HY/2013/03 works area) (the “reporting period”) and is submitted to fulfil Condition 16.4 of the Updated EM&A Manual for HKBCF.

1.2 Project Organisation

1.2.1 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** and **Table 1.2**.

MATERIALAB CONSULTANTS LIMITED

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

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

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Table 1.1 Contact Information of Key Personnel (for Contract No. HY/2013/03)

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

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

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

1.3 Construction Programme

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

1.4 Construction Works undertaken during the Reporting Period

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

MATERIALAB CONSULTANTS LIMITED

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

Tel : (852)-24508238
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Report No.: 0165/15/ED/0921

For Contract No. HY/2013/03

June 2017

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

July 2017

1. Building at Portion A1, B, G, N, J, STP & Pumping Stations;
2. CUE Construction at Portion B, C & J;
3. Drainage & Sewerage Work, Water Main & Cable Duct at Portion B, H1, H2, J, P, G & A1;
4. Radiation Screen Wall at Portion B, E P, N,M,C;
5. Sign Gantry Footing at Portion B;
6. Sewerage Pumping Station, High Mast Lighting Foundation & Box Culvert C at Portion G;
7. Bridge Works at A1 to A9;
8. Site Foundation Works at Portion K;
9. Cover Walkway at Portion H1 & H2;
10. Box Culvert B at Portion N; Shuttle kiosk & Subway at Portion E;
11. Deployment, maintenance and inspection of silt curtain; and
12. Construction of water outfall of box culvert.

August 2017

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

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

MATERIALAB CONSULTANTS LIMITED

Room 723 & 725, 7/F, Block B,
Profit Industrial Building,
1-15 Kwai Fung Crescent, Kwai Fong,
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June 2017

1. Conduit & display panel installation at Building 037 and CUE works area.

July 2017

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

August 2017

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

Report No.: 0165/15/ED/0921

2. EM&A REQUIREMENTS

2.1 Summary of EM&A Requirements

2.1.1 The EM&A programme was undertaken in accordance with the Updated EM&A Manual for HKBCF (Version 1.0). It should be noted that the air quality and noise monitoring works for the Contract are covered by Contract No. HY/2010/02 "Hong Kong-Zhuhai-Macao Bridge HKBCF – Reclamation Works" and Contract No. HY/2011/03 "Hong Kong-Zhuhai-Macao Bridge Hong Kong Link Road – Section between Scenic Hill and HKBCF". The ET of the Contract or another ET of the HZMB project is required to conduct impact air quality monitoring at AMS6 and AMS7 and noise monitoring at NMS2 and NMS3B, water quality monitoring at the locations shown in **Figure 3** and ecological monitoring as shown in **Figure 4** as part of EM&A programme if these monitoring stations are no longer covered under Contract 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 ET of the Contract or another ET of the HZMB project is required to conduct impact ecological monitoring at 24 transects as part of EM&A programme if these transects are no longer covered under Contract No. HY/2010/02. The impact ecological monitoring should adopt line-transect vessel survey method. The survey follows pre-set and fixed transect lines in the two areas defined by AFCD as: Northeast Lantau survey area and Northwest Lantau survey area. The co-ordinates for the transect lines and layout map are shown as in **Figure 4**.

2.1.2 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 Air Quality and Noise Monitoring Locations

Environmental Monitoring	Identification No.	Location Description
Air Quality	AMS6(1)	Dragonair/CNAC (Group) Building (A80)
	AMS7(1)	Hong Kong SkyCity Marriott Hotel
Noise	NMS2(2)	Seaview Crescent
	NMS3B(2) (3)	Site Boundary of Site Office Area at 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.

2.1.3 A summary of water quality monitoring stations are presented in **Table 2.2**. The location of water quality monitoring stations are shown as in **Figure 3**.

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Table 2.2 Water Quality Monitoring Stations

Station	Description	East	North
IS5	Impact Station (Close to HKBCF construction site)	811579	817106
IS(Mf)6	Impact Station (Close to HKBCF construction site)	812101	817873
IS7	Impact Station (Close to HKBCF construction site)	812244	818777
IS8	Impact Station (Close to HKBCF construction site)	814251	818412
IS(Mf)9	Impact Station (Close to HKBCF construction site)	813273	818850
IS10(N)	Impact Station (Close to HKBCF construction site)	812942	820881
IS(Mf)11	Impact Station (Close to HKBCF construction site)	813562	820716
IS(Mf)16	Impact Station (Close to HKBCF construction site)	814328	819497
IS17	Impact Station (Close to HKBCF construction site)	814539	820391
SR3	Sensitive receivers (San Tau SSSI)	810525	816456
SR4(N)	Sensitive receivers (Tai Ho)	814705	817859
SR5(N)	Control Station	812569	821475
SR6	Sensitive receivers (Sha Chau and Lung Kwu Chau Marine Park)	805837	821818
SR7	Sensitive receivers (Tai Mo Do)	814293	821431
SR10A ⁽¹⁾	Sensitive receivers(Ma Wan FCZ) 1	823741	823495
SR10B(N) ⁽¹⁾	Sensitive receivers(Ma Wan FCZ) 2	823683	823187
CS(Mf)3(N)	Control Station	808814	822355
CS(Mf)5	Control Station	817990	821129
CS4	Control Station	810025	824004
CS6	Control Station	817028	823992
CSA ⁽²⁾	Control Station	818103	823064

Note:

⁽¹⁾ Additional monitoring station for ma Wan FCZ

⁽²⁾ Additional control monitoring station for Ma Wan FCZ

Remarks:

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

2.2 Monitoring Requirements

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

2.3 Action and Limit Levels

2.3.1 The Action and Limit Levels for 1-hr TSP and 24-hr TSP are provided in **Table 2.3** and **Table 2.4** respectively.

Table 2.3 Action and Limit Levels for 1-hour TSP

Monitoring Station	Action Level (µg/m³)	Limit Level (µg/m³)
AMS6	360	500
AMS7	370	

Table 2.4 Action and Limit Levels for 24-hour TSP

Monitoring Station	Action Level (µg/m³)	Limit Level (µg/m³)
AMS6	173	260
AMS7	183	

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2.3.2 The Action and Limit Levels for construction noise are defined in **Table 2.5**.

Table 2.5 Action and Limit Level for Construction Noise

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

Notes:

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

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

2.3.3 The Action and Limit Levels for Water Quality are provided in **Table 2.6**.

Table 2.6 Action and Limit Levels for Water Quality

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

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

Notes:

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

2.3.4 The Action and Limit Levels for Ecological Monitoring are provided in **Table 2.7** and **Table 2.8**.

Table 2.7 Action and Limit Levels for Ecological Monitoring - Approach to Define Action Level (AL) and Limit Level (LL)

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

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

Table 2.8 Derived Value of Action Level (AL) and Limit Level (LL) for Ecological Monitoring

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

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

MATERIALAB CONSULTANTS LIMITED

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

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

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

2.4 Event and Action Plans

2.4.1 The event and action plans are provided in **Appendix D**.

2.5 Mitigation Measures

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

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3. ENVIRONMENTAL MONITORING AND AUDIT

3.1 Air Quality Monitoring Results

- 3.1.1 The monitoring results for AMS6 and AMS7 are reported in the monthly EM&A Reports (for June 2017, July 2017 and August 2017) prepared for Contract Nos. HY/2011/03 and HY/2010/02 respectively.
- 3.1.2 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 June 2017, July 2017 and August 2017) prepared by Contract No. HY/2011/03.
- 3.1.3 There was no Action and Limit Level exceedance of 1-hr TSP level and 24-hr TSP level recorded at station AMS7 by the Environmental Team of Contract No. HY/2010/02 during the reporting period.

3.2 Noise Monitoring Results

- 3.2.1 The monitoring results for NMS2 and NMS3B are reported in the monthly EM&A Reports (for June 2017, July 2017 and August 2017) prepared for Contract No. HY/2010/02.
- 3.2.2 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 Water Quality Monitoring Results

- 3.3.1 The monitoring results for the monitoring stations shown in **Table 2.2** were reported in the monthly EM&A Report (for June 2017, July 2017 and August 2017) prepared for Contract No. HY/2010/02. There were two Action Level exceedances of suspended solids recorded at station SR3 during mid-ebb tide on 12 July 2017 and station IS7 during mid-flood tide on 14 July 2017. After investigation, it was concluded that the two exceedances were not relevant to Contract No. HY/2013/03.

3.4 Ecology Monitoring Results

- 3.4.1 The dolphin survey results for all transects were reported in the monthly EM&A Reports (for June 2017, July 2017 and August 2017) prepared by Contract No. HY/2010/02. There was no Action and Limit Level exceedance recorded by the Environmental Team of Contract No. HY/2010/02 during the reporting period (June 2017 to August 2017).

3.5 Implementation of Environmental Measures

- 3.5.1 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**.
- 3.5.2 A summary of the Implementation Schedule of Environmental Mitigation Measures (EMIS) is presented in **Appendix E**. All necessary mitigation measures at this stage of works were implemented properly.

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

3.6 Advice on the Solid and Liquid Waste Management Status

- 3.6.1 The Contractor of Contract No. HY/2013/03 registered as a chemical waste producer for the Contract. Sufficient numbers of receptacles were available for general refuse collection and sorting.
- 3.6.2 No extracted marine sediment was treated using cement solidification/stabilisation (Cement S/S) techniques under Contract No. HY/2013/03 during this reporting period. The marine sediment extracted from this Contract was disposed to the Marine Fill Committee (MFC) allocated disposal sites directly without treatment during this reporting period. As a practical mean, the disposal operation is managed by one contractor who is also responsible for applying dumping permit and its subsequent extension applications from EPD. Contract No. HY/2013/03 has been assigned to coordinate and arrange for disposal of extracted marine sediment from all three Contracts (Contract Nos. HY/2013/02, HY/2013/03 and HY/2013/04).
- 3.6.3 The barge for disposal of marine sediment was morn at the temporary loading and unloading at the east shore of the HKBCF Island, which has been being used by reclamation contractor (Contract No. HY/2010/02) for reclamation activities. In terms of safety consideration and to avoid mixing of sediment between contracts, each dumping date was allocated to one Contract. The quantity of marine sediment disposed on each date was from one Contract.

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

3.6.5 Marine sediment extracted from bored piling from this Contract was disposed to allocated dumping site during this reporting period. As confirmed by RSS, all marine sediments extracted from HY/2013/02, HY/2013/03 and HY/2013/04 have been completed with the last batch disposal on 30 August 2017. The summary of marine sediment disposed during this reporting period is shown in the following table:

Table 3.1 Summary of Marine Sediment Disposed to Dumping Site

Month/Year	Quantity disposed (in '000m ³)			
	HY/2013/02	HY/2013/03	HY/2013/04	Total
June 2017	1.432	0.000	0.000	1.432
July 2017	0.000	0.000	0.000	0.000
August 2017	0.000	0.248	0.000	0.248
Total	1.432	0.248	0.000	1.680

3.6.6 The summary of waste flow table for Contract No. HY/2013/03 (includes Contract No. HY/2013/06 within Contract No. HY/2013/03 works area) is detailed in **Appendix G**.

3.6.7 Contract No. HY/2013/03 has been assigned to arrange for delivery of surplus filling materials from Contract No. HY/2013/03 to other projects, including Tuen Mun - Chek Lap Kok Link (TM-CLKL) project of HZMB, the Airport Authority Hong Kong's Three Runway (3RS) Project, Wan Chai Development Phase II project, Contract No. HY/2013/02 of HKBCF and Hong Kong Link Road (HKLR) project of HZMB. The estimated quantity of surplus filling materials is confirmed by Resident Site Staff of Contract No. HY/2013/03. The summary of surplus filling materials delivered to other projects up to the end of August 2017 is shown in **Table 3.2**.

Table 3.2 Summary of Surplus Filling Materials Delivered from Contract No. HY/2013/03 to other projects

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

Remarks:

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

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

MATERIALAB CONSULTANTS LIMITED

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

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

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obtained from Tseung Kwan O Area 137 Fill Bank for receiving used bentonite slurry generated from Contract No. HY/2013/03.

3.7 Environmental Licences and Permits

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

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4. SUMMARY OF EXCEEDANCES, COMPLAINTS, NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTION

4.1 Summary of Exceedance of the Environmental Quality Performance Limit

- 4.1.1 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 June, July and August 2017) prepared by Contract No. HY/2011/03.
- 4.1.2 There was no Action and Limit Level exceedance of 1-hr TSP level and 24-hr TSP level recorded at station AMS7 by the Environmental Team of Contract No. HY/2010/02 during the reporting period.
- 4.1.3 There was no Action and Limit Level exceedance for noise recorded at station NMS2 and station NMS3B by the Environmental Team of Contract No. HY/2010/02 during the reporting period.
- 4.1.4 There were two Action and Limit Level exceedances of suspended solids recorded at station SR3 during mid-ebb tide on 12 July 2017 and station IS7 during mid-flood tide on 14 July 2017. The investigation reports (including the causes of exceedance, action taken and recommendation for mitigation) for Action or Limit Level Non-compliance were provided in **Appendix I**.

Regarding the exceedance on 12 July 2017, marine-based construction works were undertaken in Box Culvert B and there was one derrick lighter delivered sand to the work site of Three Runway Project on 12 July 2017 under Contract No. HY/2013/03. Both marine-based construction works and the route of marine transportation were far away from the concerned WQM station SR3. There was no notification of exceedance received at the WQM stations closer to the marine-based construction works areas, such as IS(Mf)11, IS10, IS17 and SR7. Besides, the SS exceedance was recorded at 13:49. The derrick lighter was deposited at HKBCF from morning until 16:00. Therefore, it was unlikely to generate any suspended solids to cause the SS exceedance recorded at the concerned WQM station SR3 during mid-ebb tide on 12 July 2017. Besides, the water quality mitigation measures as mentioned in EM&A Manual and EP were fully implemented in Contract No. HY/2013/03. Hence, the exceedance on 12 July 2017 was not related to Contract No. HY/2013/03.

Regarding the exceedance on 14 July 2017, marine-based construction works were undertaken in Box Culvert B and there were two derrick lighters delivered sand to the work site of Three Runway Project on 14 July 2017 under Contract No. HY/2013/03. Both marine-based construction works and the routes of marine transportation were undertaken in the north side of HKBCF while the concerned WQM station IS7 was in the south-west side. As the concerned monitoring station was far away from both marine-based construction works and the routes of marine transportation and there was no notification of exceedance received at the WQM stations closer to the works areas, such as IS(Mf)11, IS10, IS17 and SR7, it was unlikely to generate any suspended solids to cause the SS exceedance recorded at the concerned WQM station IS7 during mid-flood tide on 14 July 2017. Besides, the water quality mitigation measures as mentioned in EM&A Manual and EP were fully implemented in Contract No. HY/2013/03. Hence, the exceedance on 14 July 2017 was not related to Contract No. HY/2013/03.

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After investigation, it was concluded that the exceedances were not related to Contract No. HY/2013/03 due to the above reasons. There was no Action and Limit Level exceedance recorded on other monitoring dates at the monitoring stations shown as shown at **Table 4.1** by the Environmental Team of Contract No. HY/2010/02 during the reporting period.

Although the exceedances were not relevant to Contract No. HY/2013/03, the Contractor was reminded to continue to fully maintain all water quality mitigation measures and ensure the silt curtain is fully maintained to prevent any water quality impact to seawater.

4.1.5 Ecological monitoring results at all transects are reported in the EM&A report (for the reporting period) prepared by Contract No. HY/2010/02.

4.2 Summary of Complaints, Notification of Summons and Successful Prosecution

4.2.1 There were four complaints 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 J**.

Table 4.1 Summary of Environmental Complaints for the Reporting Period

Log No.	Environmental Complaint Ref. No.	Date of Complaint Receipt	Description
009	ENPO-C0119	1 June 2017	Air pollution
010	ENPO-C0120	2 June 2017	Air pollution
011	ENPO-C0121	6 June 2017	Air pollution
012	ENPO-C0122	9 August 2017	Air pollution and water discharge

(a) 1 June 2017 (Log No. 009)

The complaint was received by EPD from a member of the public on 31 May 2017. The complainant complained that as there was no watering for dust suppression on the road next to Building 044 and 045 on the artificial island of HZMB, a lot of dust was raised when vehicles passed by causing serious nuisance.

After investigation, the ET of Contract No. HY/2013/03 (including Contract No. HY/2013/06 within Contract No. HY/2013/03) concluded that the captioned complaint is not related to the construction activities of Contract No. HY/2013/03. Nevertheless, the Contractor had been reminded to discuss and reach a written agreement with the Contractor of Buildings 044 and 045 about the responsibility of maintaining the road next to Buildings 044 and 045. The Contractor had also been reminded to fulfil the conditions set out in the EP, in particular:

- Condition 3.23:

The Permit Holder shall undertake watering at least 8 times per day on all exposed soil within the Project site and associated work areas throughout the construction phase.

The Contractor had also been reminded to comply with the requirements stipulated in the Environmental Mitigation Implementation Schedule (EMIS) of the EM&A Manual, in particular:

- Air Quality:

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

(b) 2 June 2017 (Log No. 010)

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The complaint was received by EPD from a member of the public on 2 June 2017. The complainant complained that as there was no watering on the construction site of passenger clearance building on the artificial island of HZMB, resulting in a lot of dust spreading around which affected the health of workers. The complainant required EPD to conduct site inspection and reply.

After investigation, the ET of Contract No. HY/2013/03 (including Contract No. HY/2013/06 within Contract No. HY/2013/03) concluded that the captioned complaint is not related to the construction activities of our contract. Nevertheless, ET has recommended the Contractor to remind workers to report dusty spots to contractor to ensure prompt response and necessary follow-up on dust suppression measures through the complaint hotline. The Contractor had also been reminded to fulfil the conditions set out in the EP, in particular:

- Condition 3.23:

The Permit Holder shall undertake watering at least 8 times per day on all exposed soil within the Project site and associated work areas throughout the construction phase.

The Contractor had also been reminded to comply with the requirements stipulated in the Environmental Mitigation Implementation Schedule (EMIS) of the EM&A Manual, in particular:

- Air Quality:

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

(c) 6 June 2017 (Log No. 011)

The complaint was received by EPD from a member of the public on 6 June 2017. The complainant complained that as there was no watering on the construction site of passenger clearance building on the artificial island of HZMB, resulting in a lot of dust spreading around which affected the health of workers. The complainant required EPD to follow and reply.

After investigation, the ET of Contract No. HY/2013/03 (including Contract No. HY/2013/06 within Contract No. HY/2013/03) concluded that the captioned complaint is not related to the construction activities of our contract. Nevertheless, ET has recommended the Contractor to remind workers to report dusty spots to contractor to ensure prompt response and necessary follow-up on dust suppression measures through the complaint hotline. The Contractor had been reminded to fulfil the conditions set out in the EP, in particular:

- Condition 3.23:

The Permit Holder shall undertake watering at least 8 times per day on all exposed soil within the Project site and associated work areas throughout the construction phase.

The Contractor had also been reminded to comply with the requirements stipulated in the Environmental Mitigation Implementation Schedule (EMIS) of the EM&A Manual, in particular:

- Air Quality:

A3: The Contractor should undertake proper watering on all exposed spoil (with at least 8 times per day) throughout the construction phase. The complaint was still under investigation. Details will be reported in the coming reporting period.

(d) 9 August 2017 (Log No. 012)

The complaint was received by EPD from a member of the public on 8 August 2017. The complainant complained that there was uncovered stockpiles in the interface with Contract No. HY/2013/01 which belonged to HY/2013/03, resulting in a lot of dust spreading around

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affecting the health of workers. The complainant had reminded the subcontractor of HY/2013/03 to improve the situation of discharging underground water everywhere and uncovered stockpiles, but the situation did not improve.

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

- Air Quality:

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

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

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

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

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

- Water Quality (Construction Phase):

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

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

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

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

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

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

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

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5. COMMENTS, RECOMMENDATIONS AND CONCLUSIONS

5.1 5Comments

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

For Contract No. HY/2013/03

1. CHEC was reminded to remove general and construction waste accumulated on site;
2. CHEC was reminded to remove stagnant water accumulated on site;
3. CHEC was reminded to increase watering for dust suppression on site;
4. CHEC was reminded to improve housekeeping on site;
5. CHEC was reminded to provide a label for a NRMM on site;
6. CHEC was reminded to provide a drip tray for the chemical container on site;

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

- No recommendation.

5.1.2 A summary of the Implementation Schedule of Environmental Mitigation Measures (EMIS) is presented in **Appendix E**. All necessary mitigation measures at this stage of works were implemented properly.

5.2 Recommendations

5.2.1 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.

5.2.2 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

5.3.1 Commencement of Contract No. HY/2013/03 took place on 10 April 2015 and the construction works of Contract No. HY/2013/03 commenced on 29 August 2015 (commencement of Contract No. HY/2013/06 took place on 14 August 2015 and the construction works of Contract No. HY/2013/06 commenced on 13 September 2016 within Contract No. HY/2013/03 works area). This is the 8th Quarterly EM&A Report summarising the findings of EM&A activities conducted under Contract No. HY/2013/03 from 01 June 2017 to 31 August 2017 (includes the findings of EM&A activities conducted under Contract No. HY/2013/06 within Contract No. HY/2013/03 works area from 01 June 2017 to 31 August 2017).

5.3.2 Summary of Action and Limit Level exceedance of 1-hr TSP level and 24-hr TSP level at AMS6 shall be referred to the monthly EM&A Reports (for June, July and August 2017) prepared by Contract No. HY/2011/03.

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

MATERIALAB CONSULTANTS LIMITED

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

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

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- 5.3.4 There was no Action and Limit Level exceedance for noise recorded at station NMS2 and station NMS3B by the Environmental Team of Contract No. HY/2010/02 during the reporting period.
- 5.3.5 There were two Action and Limit Level exceedances of suspended solids recorded at station SR3 during mid-ebb tide on 12 July 2017 and station IS7 during mid-flood tide on 14 July 2017. After investigation, it was concluded that the two exceedances were not relevant to Contract No. HY/2013/03.
- 5.3.6 Ecological monitoring results at all transects are reported in the EM&A report prepared by Contract No. HY/2010/02.
- 5.3.7 Environmental site inspection was carried out on 01, 08, 15, 22 and 30 June 2017, 06, 13, 21 and 27 July 2017, 03, 10, 18, 25 and 31 August 2017 (includes Contract No. HY/2013/06 within Contract No. HY/2013/03 works area). Recommendations on remedial actions were given to the Contractors for the deficiencies identified during the site inspections.
- 5.3.8 There were four complaints received in relation to the environmental impact during the reporting period. After investigation, all the complaints were not related to Contract No. HY/2013/03.
- 5.3.9 There were no notifications of summons or prosecutions received during the reporting period.

MATERIALAB CONSULTANTS LIMITED

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

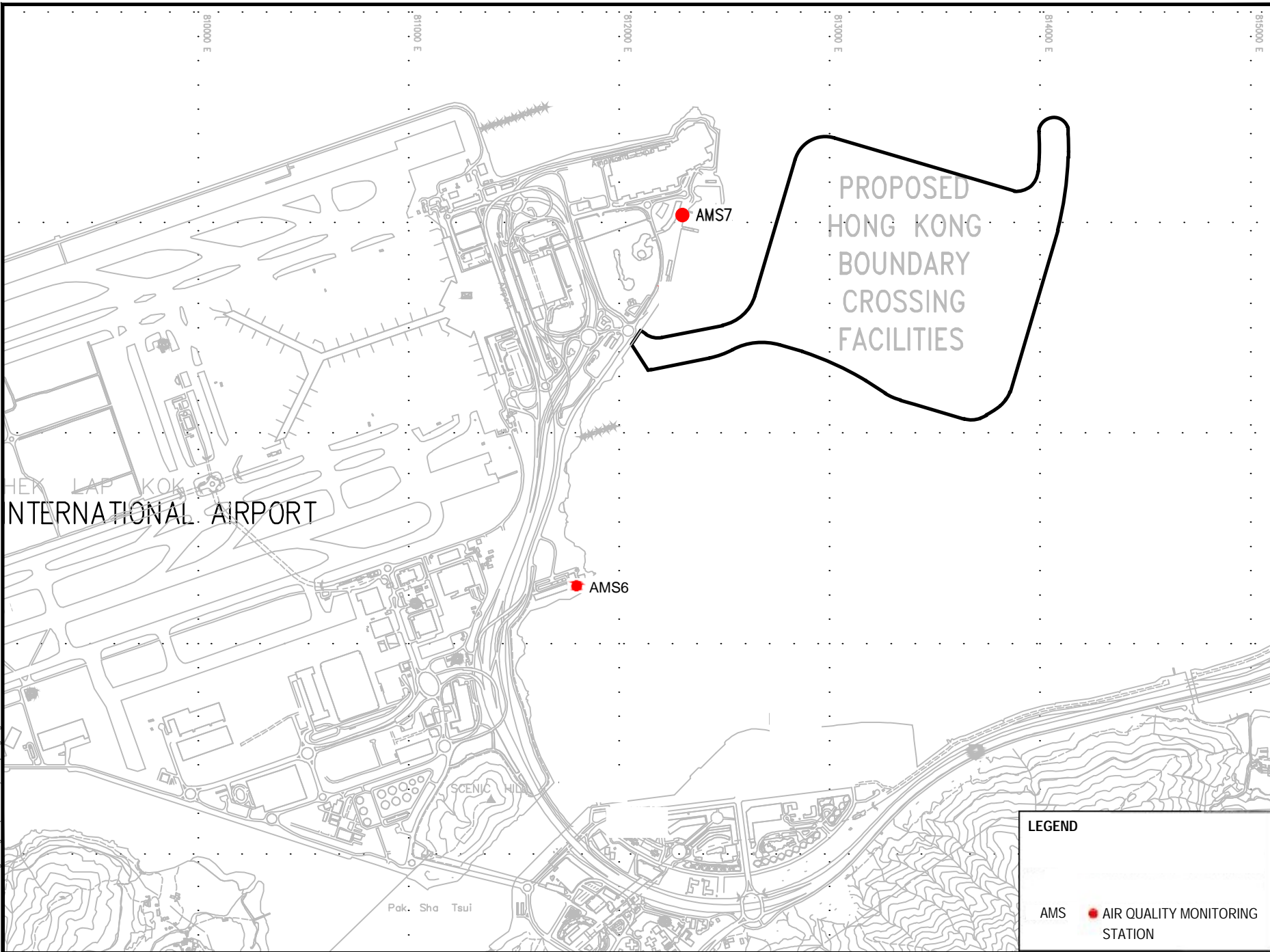
Tel : (852)-24508238
Fax : (852)-24508032
Email : mcl@fugro.com

MaterialLab

Report No.: 0165/15/ED/0921

Figure 1

Air Quality Monitoring Stations



LEGEND

AMS ● AIR QUALITY MONITORING STATION

MATERIALAB CONSULTANTS LIMITED

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

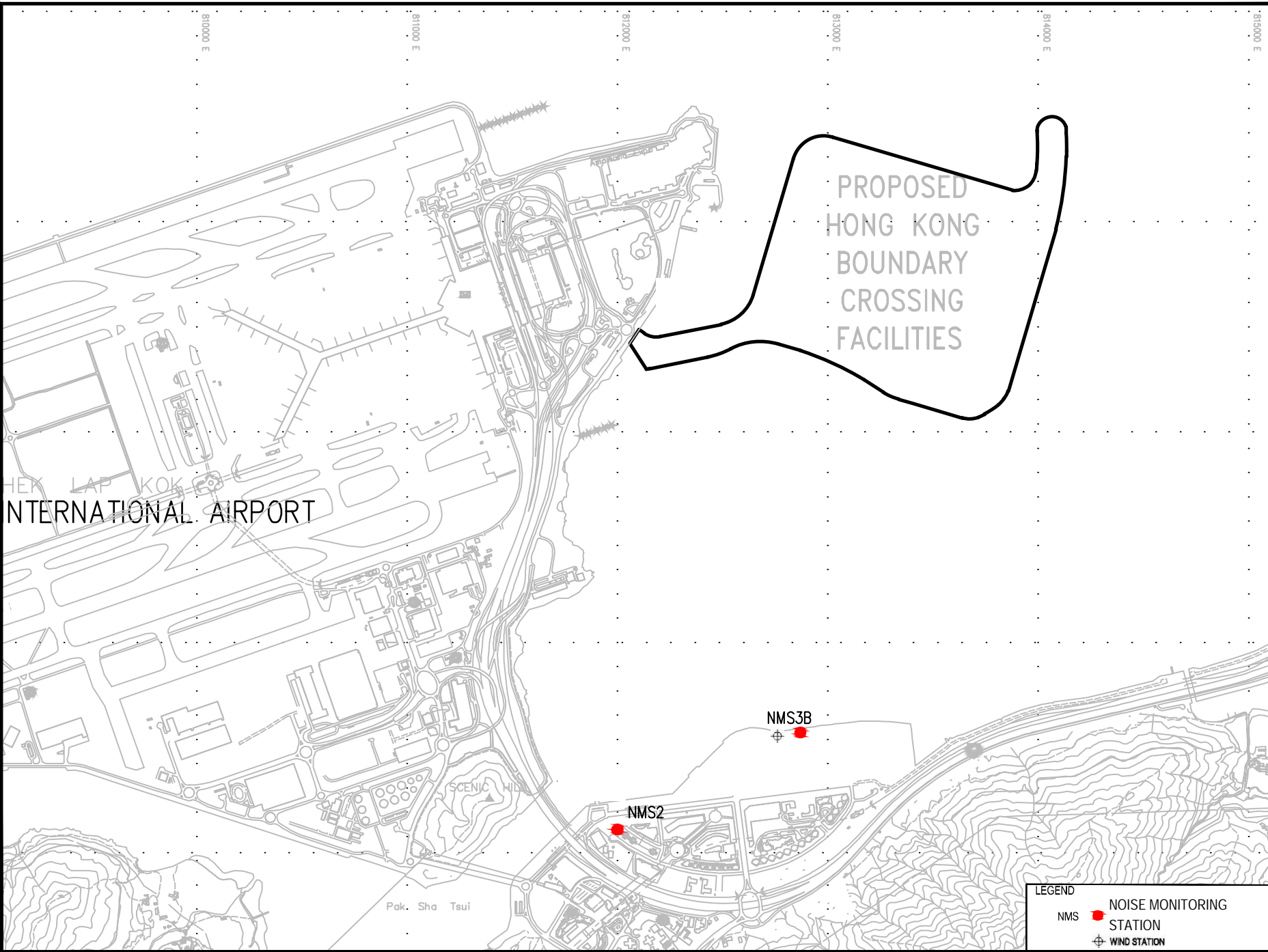
Tel : (852)-24508238
Fax : (852)-24508032
Email : mcl@fugro.com

MaterialLab

Report No.: 0165/15/ED/0921

Figure 2

Noise Monitoring Stations



LEGEND

- NMS ■ NOISE MONITORING STATION
- ⊕ WIND STATION

MATERIALAB CONSULTANTS LIMITED

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

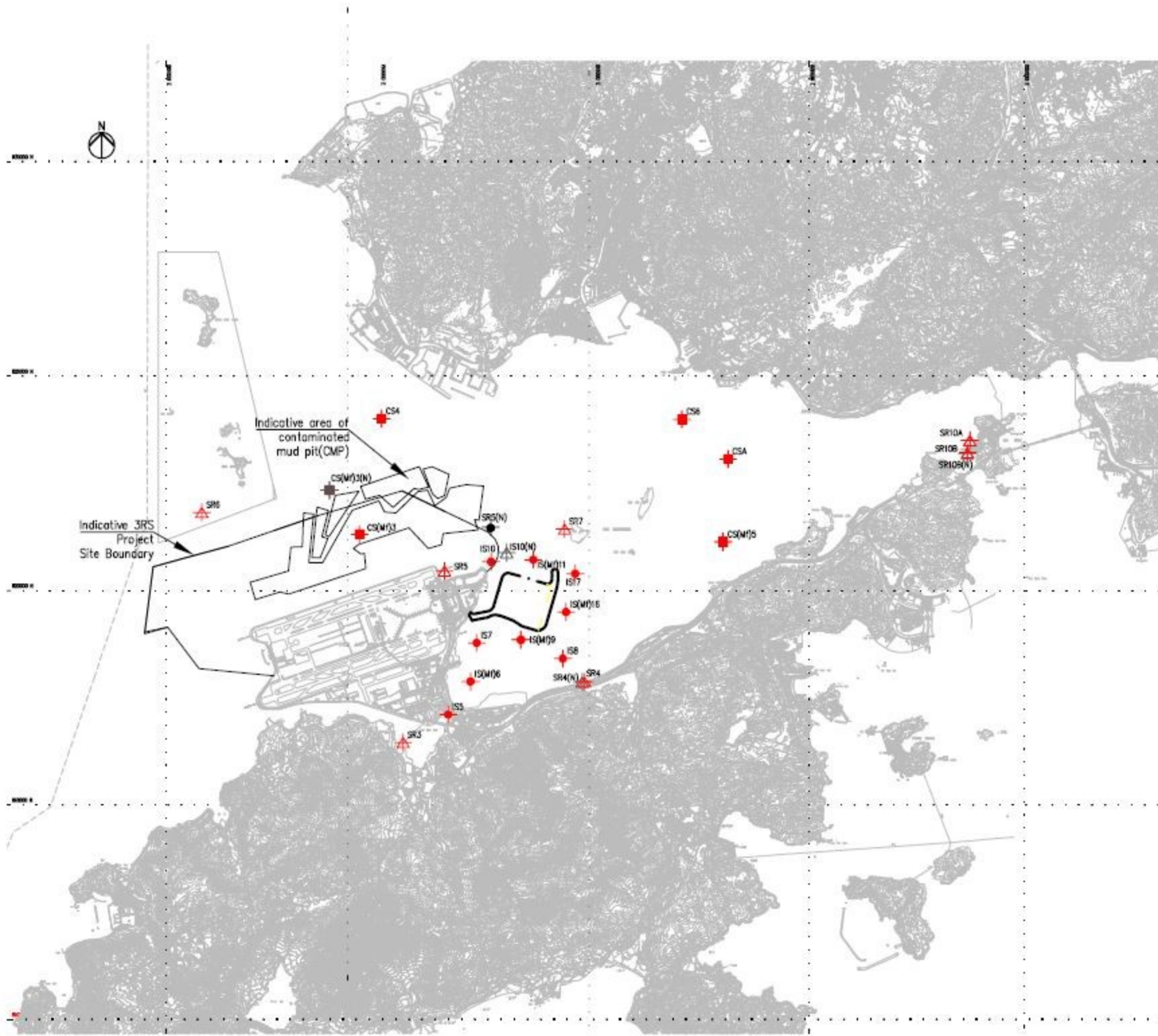
Tel : (852)-24508238
Fax : (852)-24508032
Email : mcl@fugro.com

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Figure 3

Water Quality Monitoring Stations



- LEGEND**
- IS IMPACT STATIONS
 - CS CONTROL / FAR FIELD STATIONS
 - SR SENSITIVE RECEIVERS STATIONS
 - IS IMPACT STATIONS (RELOCATED)
 - SR SENSITIVE RECEIVERS STATIONS (RELOCATED)
 - CS CONTROL / FAR FIELD STATIONS (RELOCATED)

SETTING OUT SCHEDULE

MONITORING STATIONS	CO-ORDINATES	
	EASTING	NORTHING
IS5	811579	817106
IS(M)6	812101	817873
IS7	812244	818777
IS8	814251	818412
IS(M)9	813273	818850
SR5(N)	812569	821475
IS(M)11	813362	820716
IS(M)16	814328	819497
IS17	814539	820391
SR3	810525	816456
SR4(N)	814705	817859
IS10(N)	812942	820881
SR6	805837	821818
SR7	814293	821431
SR10A	823741	823495
SR10B(N)	823683	823187
CS(M)3(N)	808814	822355
CS(M)5	817990	821129
CS4	810025	824004
CS6	817028	823992
CSA	818103	823064
IS10	812577	820670
SR5	811489	820455
CS(M)3	809989	821117

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Hong Kong.

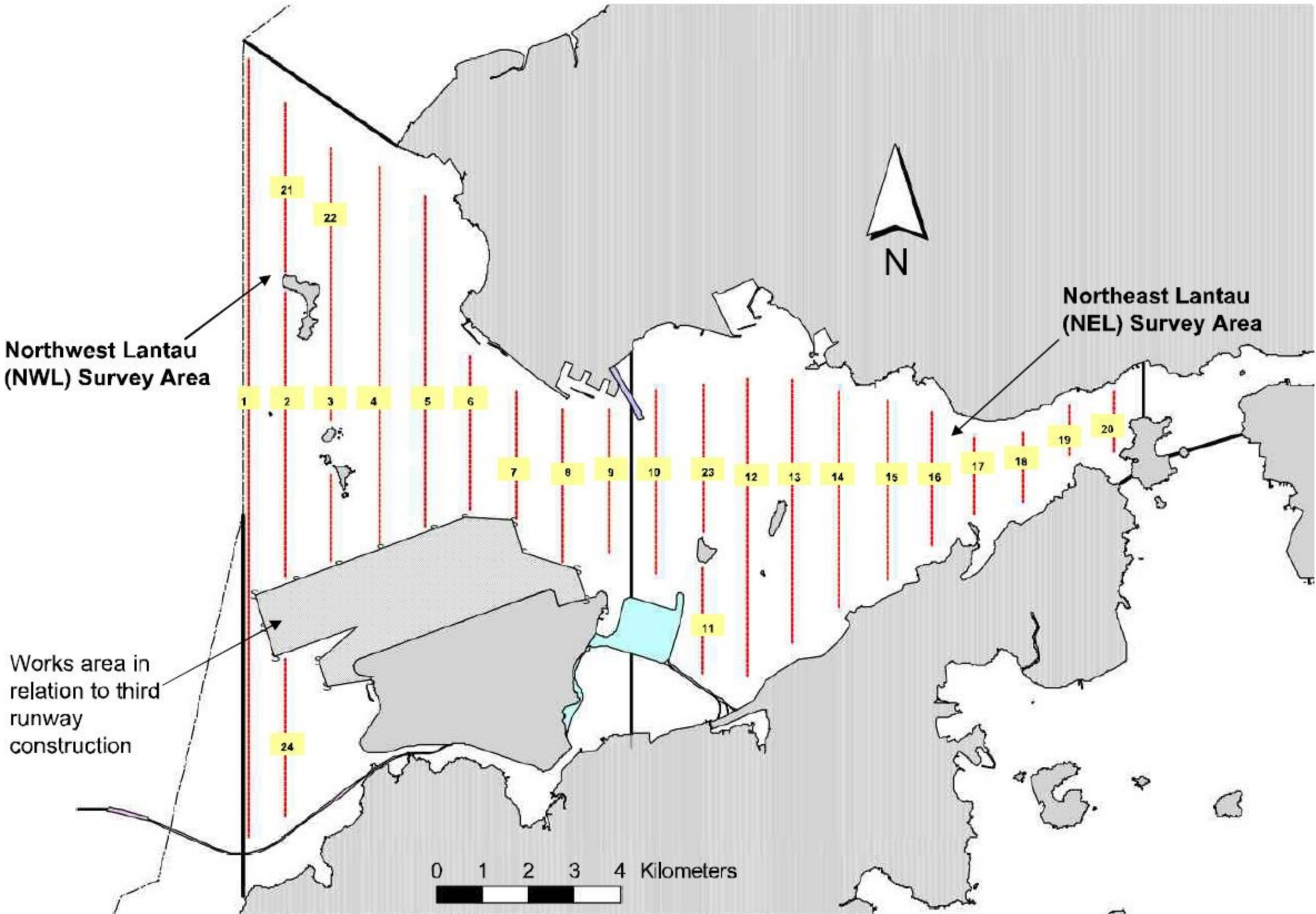
Tel : (852)-24508238
Fax : (852)-24508032
Email : mcl@fugro.com

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Figure 4

Ecological Monitoring Transect Line and Layout Map



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Profit Industrial Building,
1-15 Kwai Fung Crescent, Kwai Fong,
Hong Kong.

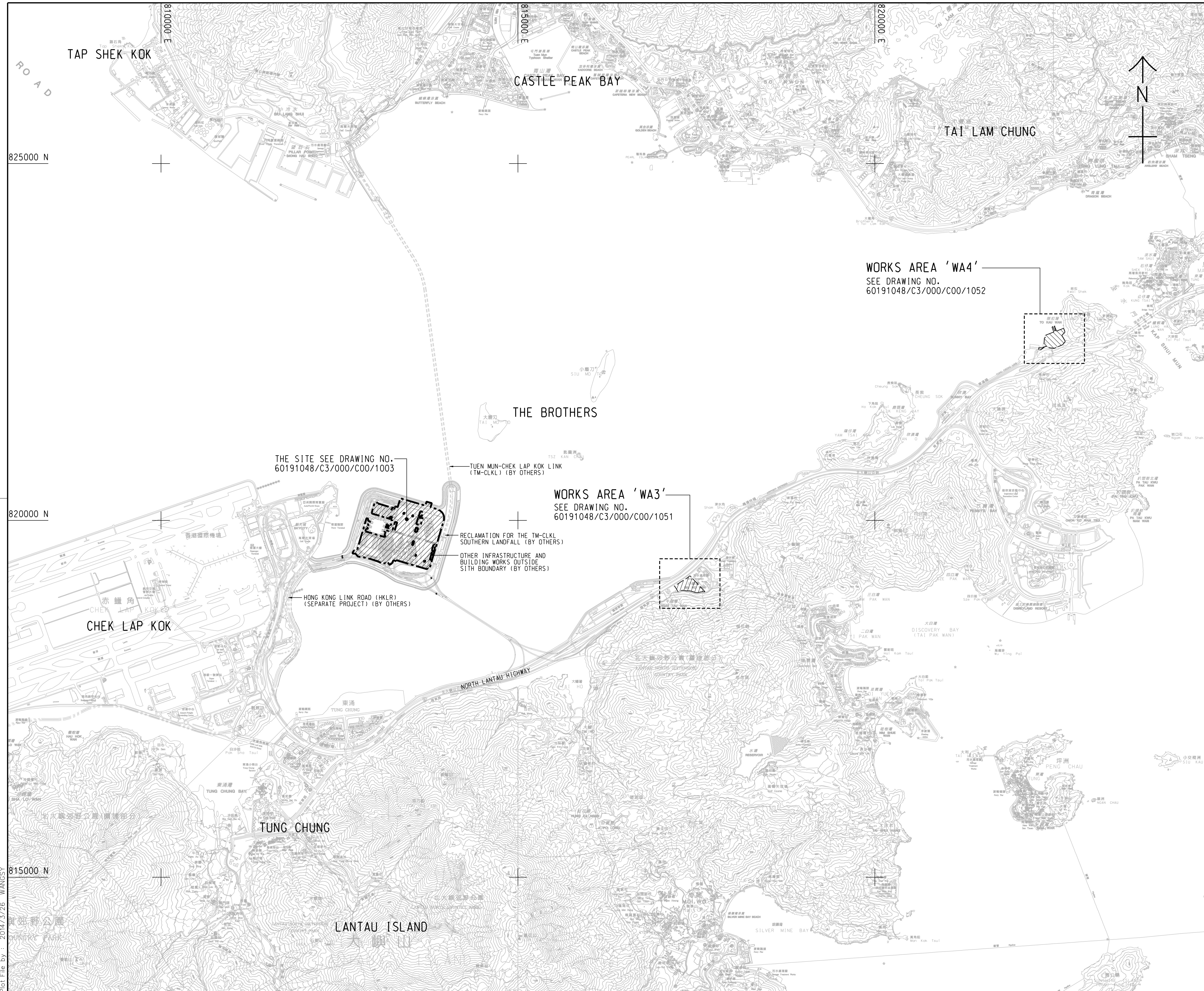
Tel : (852)-24508238
Fax : (852)-24508032
Email : mcl@fugro.com

Materialab

Report No.: 0165/15/ED/0921

Appendix A

Location of Works Areas



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

LEGEND:

- SITE BOUNDARY
- ▨ WORKS AREA

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

TUEN MUN-CHEK LAP KOK LINK (TM-CLKL) (BY OTHERS)

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

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

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

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

- TENDER DRAWING		BSC	SCI	MAR. 14
REV. 修改	DESCRIPTION 內容摘要	D.C. 查核	C.C. 日期	DATE 日期

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

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

SITE LOCATION PLAN

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

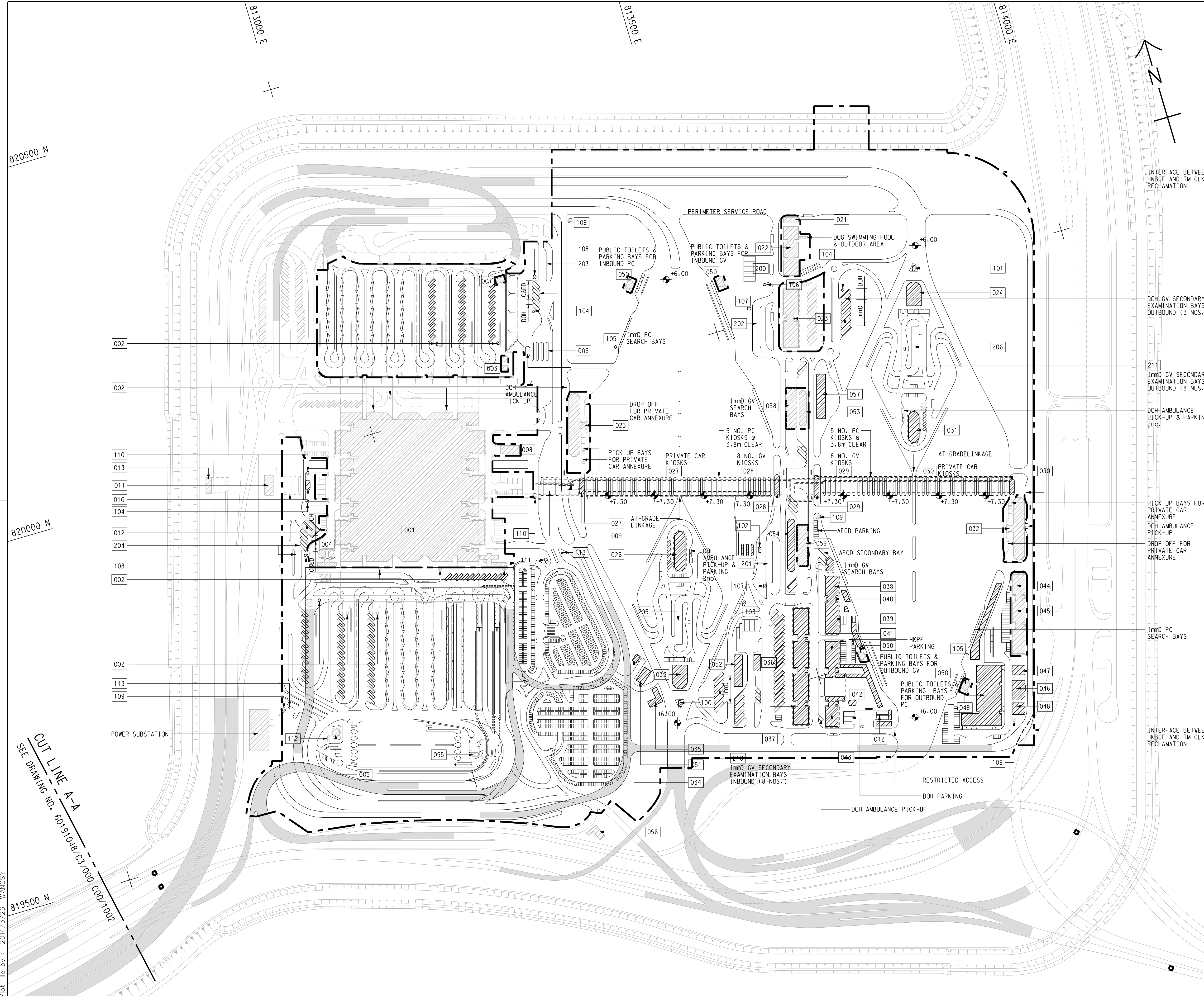
DRG. NO. 60191048/C3/000/C00/1000
圖紙編號

DESIGNED BY 設計	CONTRACT NO. 合約編號	P. Dir. APPROVED 批准人
BWCW	HY/2013/03	TKH

DRAWN BY 繪圖	STATUS 階段
WSY	

SCALE 比例 A1 1 : 25000
 DIMENSIONS ARE IN 尺寸單位 METRES
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Plot File by : 2014/3/26 WANGSY



NOTE:

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

LEGEND:

- SITE BOUNDARY
- VIADUCT
- BUILDING/FACILITIES

INTERFACE BETWEEN HKBCF AND TM-CLKL RECLAMATION

DOH GV SECONDARY EXAMINATION BAYS OUTBOUND (3 NOS.)

1mm0 GV SECONDARY EXAMINATION BAYS OUTBOUND (8 NOS.)

DOH AMBULANCE PICK-UP & PARKING 2no.

PICK UP BAYS FOR PRIVATE CAR ANNEXURE

DOH AMBULANCE PICK-UP

1mm0 PC SEARCH BAYS

INTERFACE BETWEEN HKBCF AND TM-CLKL RECLAMATION

CUT LINE A-A
SEE DRAWING NO. 60191048/C3/000/C00/1002

Plot File by : 2014/3/26 WANGSY

- TENDER DRAWING		BWC SCI	MAR. 14
REV. 修改	DESCRIPTION 内容摘要	D.C. 设计/校核	DATE 日期

路政署 HIGHWAYS DEPARTMENT
港珠澳大桥香港工程管理处
Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office

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

Figure 1-1
Current Layout Plan

SHEET 1 OF 2

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

DRG. NO. 60191048/C3/000/C00/1001
圖紙編號

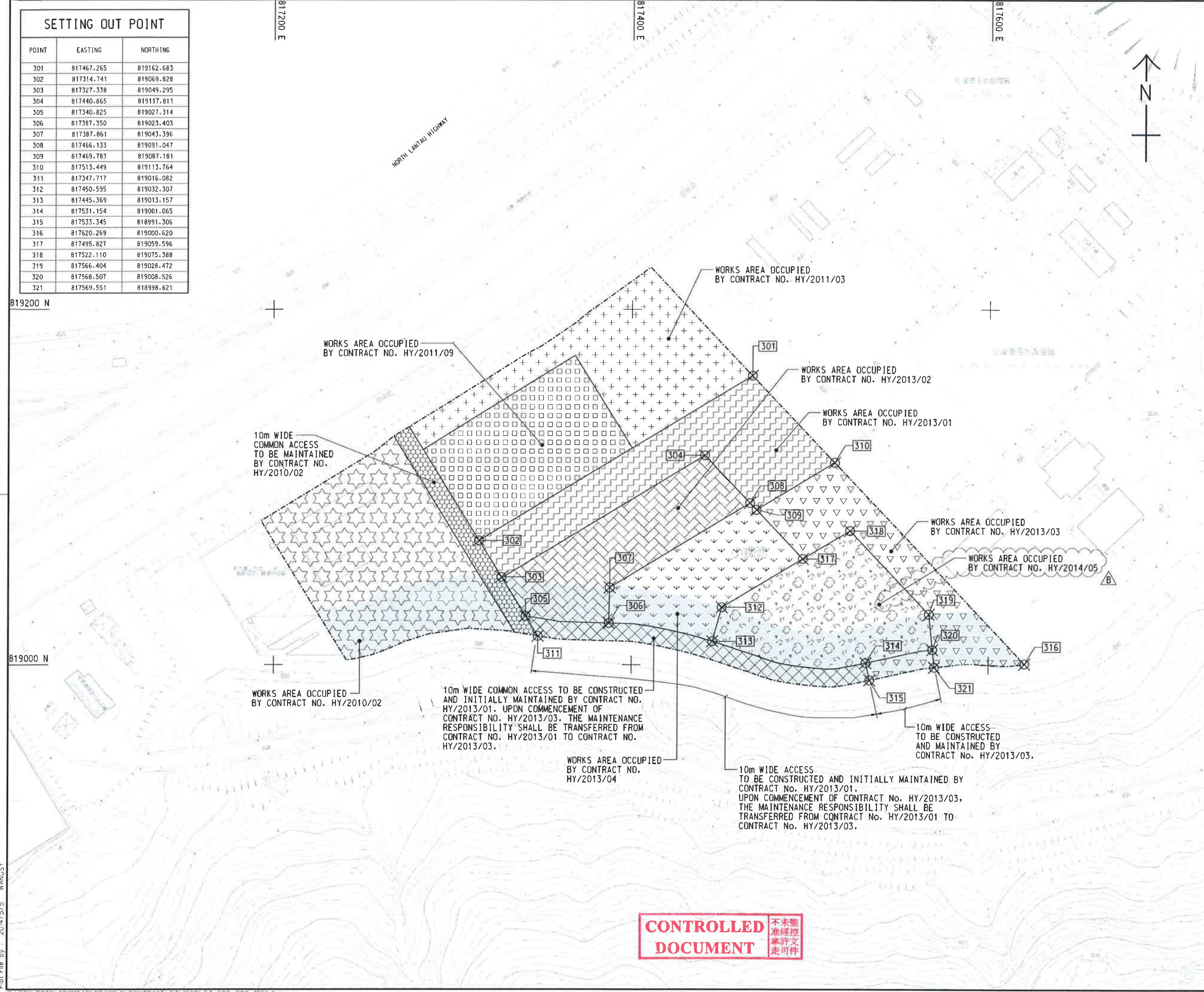
DESIGNED BY 设计	CONTRACT NO. 合約編號	P. DIR. APPROVED 批准人
BWCW	HY/2013/03	TKH

DRAWN BY 繪圖	STATUS 階段
WSY	初步

SCALE 比例 A1 1 : 2500
DIMENSIONS ARE IN 尺寸單位 METRES

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SETTING OUT POINT		
POINT	EASTING	NORTHING
301	817467.265	819162.683
302	817314.741	819069.828
303	817327.338	819049.295
304	817440.865	819117.811
305	817340.825	819027.314
306	817387.350	819023.403
307	817387.861	819043.396
308	817466.133	819091.047
309	817469.783	819087.181
310	817513.449	819113.764
311	817347.717	819016.082
312	817450.595	819032.307
313	817445.369	819013.157
314	817531.154	819001.065
315	817533.345	818991.306
316	817620.269	819000.620
317	817495.827	819059.596
318	817522.110	819075.388
319	817566.404	819028.472
320	817568.507	819008.526
321	817569.551	818998.621



NOTES:

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

LEGEND:

	WORKS AREA BOUNDARY
	PORTION 3.1
	PORTION 3.2
	PORTION 3.3
	PORTION 3.4
	PORTION 3.5
	PORTION 3.6
	PORTION 3.7
	PORTION 3.8
	PORTION 3.9
	PORTION 3.10
	NON-BUILDING AREA 8200m ² (WHOLE)

FOR CONSTRUCTION

C	WORKING DRAWING	BWCW SCI	MAY. 15
B	TENDER ADDENDUM NO. 2	BWCW SCI	MAY. 14
A	TENDER ADDENDUM NO. 1	BWCW SCI	APR. 14
-	TENDER DRAWING	BWCW SCI	MAR. 14
REV.	DESCRIPTION	REV.	DATE
01	ISSUED FOR CONSTRUCTION	01	15/05/15

HONG KONG HIGHWAYS DEPARTMENT
 香港路政處
 香港、珠海、澳門大橋工程管理局
 Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office

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

WORKS AREA WA3

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

DRG. NO. 60191048/C3/000/C00/1051C
 圖紙編號

DESIGNED BY 設計	CONTRACT NO. 合約編號	A. BY APPROVED 審核人
BWCW	HY/2013/03	TKH
DRAWN BY 圖則	STATUS 圖則	
WSY	WORKING DRAWING	
SCALE 比例		
A1 : 1000		
DIMENSIONS ARE IN 尺寸單位		
METRES		

CONTROLLED DOCUMENT
 不准未經核准
 准許文
 走可作

Plot File by 2014/5/5 WANGSY

SETTING OUT POINT

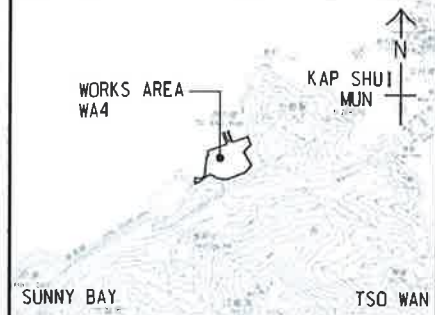
POINT	EASTING	NORTHING
401	822488.151	822632.315
402	822640.593	822689.415
403	822515.608	822559.848
404	822610.940	822599.642
405	822629.428	822607.359
406	822526.988	822529.813
407	822618.348	822567.950
408	822542.232	822489.581
409	822584.983	822507.426
410	822606.866	822516.561
411	822560.278	822441.956
412	822602.949	822460.010
413	822621.914	822467.959
414	822624.130	822470.998
415	822651.725	822508.856
416	822644.758	822521.192

822600 N

822400 N

822400 E

822600 E



LOCATION PLAN
SCALE 1 : 25000

NOTES:

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

LEGEND:

WORKS AREA BOUNDARY	DESCRIPTION
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[Symbol]	PORTION 4.3
[Symbol]	PORTION 4.4
[Symbol]	PORTION 4.5
[Symbol]	PORTION 4.6
[Symbol]	PORTION 4.7
[Symbol]	PORTION 4.8
[Symbol]	PORTION 4.9

CONTROLLED DOCUMENT
不准隨意
准許文
本許文
走可作

FOR CONSTRUCTION

REV. NO.	DESCRIPTION	DATE	BY	CHECKED
C	WORKING DRAWING	MAY. 15	BWCW	SCI
B	TENDER ADDENDUM NO. 2	MAY. 14	BWCW	SCI
A	TENDER ADDENDUM NO. 1	APR. 14	BWCW	SCI
-	TENDER DRAWING	MAR. 14	BWCW	SCI

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

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

WORKS AREA WA4

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

DRG. NO. 60191048/C3/000/C00/1052C
圖紙編號

DESIGNED BY	CONTRACT NO.	DATE	APPROVED BY
BWCW	HY/2013/03		TKH
WSY			
WORKING DRAWING			
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1-15 Kwai Fung Crescent, Kwai Fong,
Hong Kong.

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

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

Report No.: 0165/15/ED/0921

Appendix B

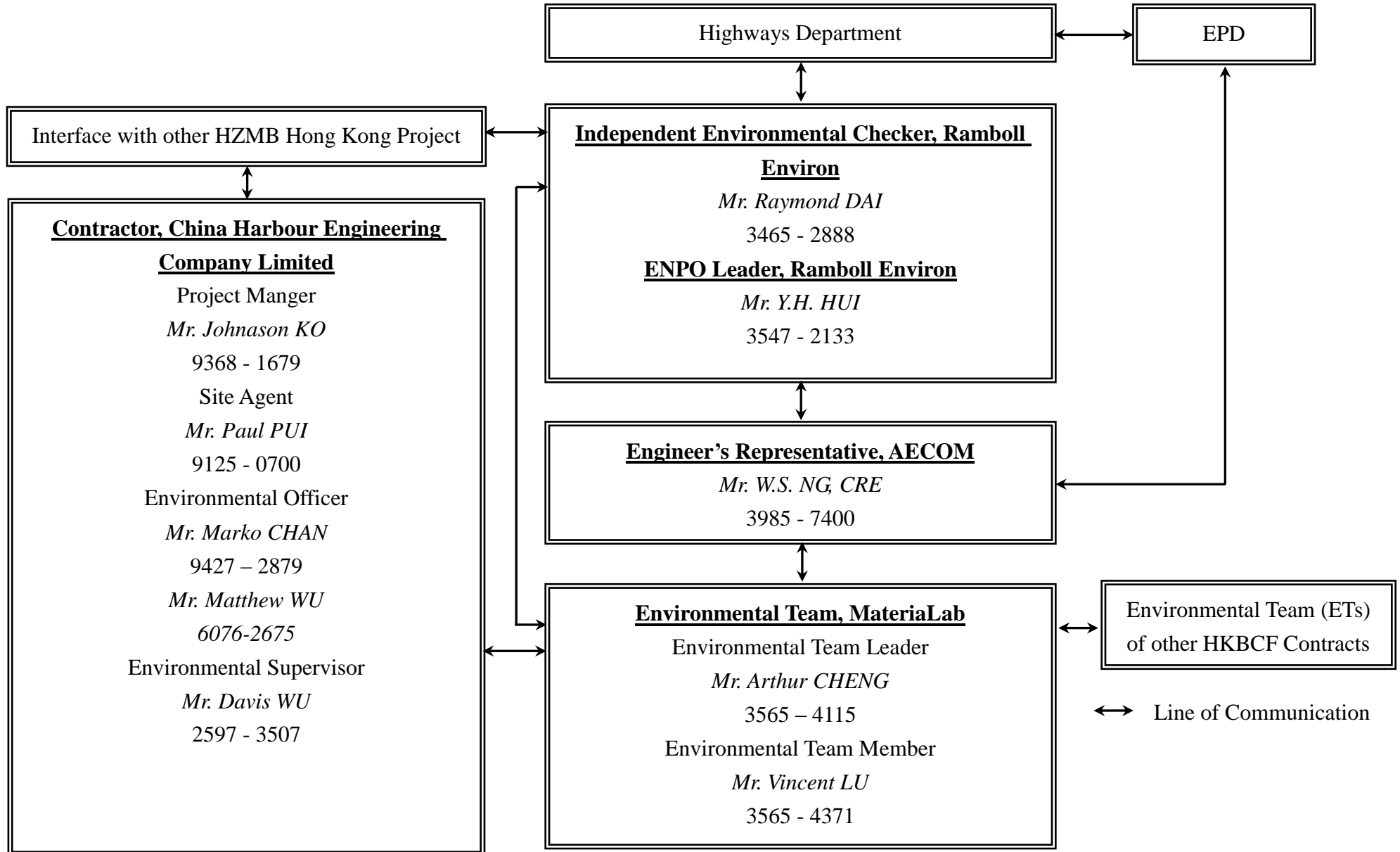
Project Organization for Environmental Works

CHINA HARBOUR ENGINEERING COMPANY LIMITED



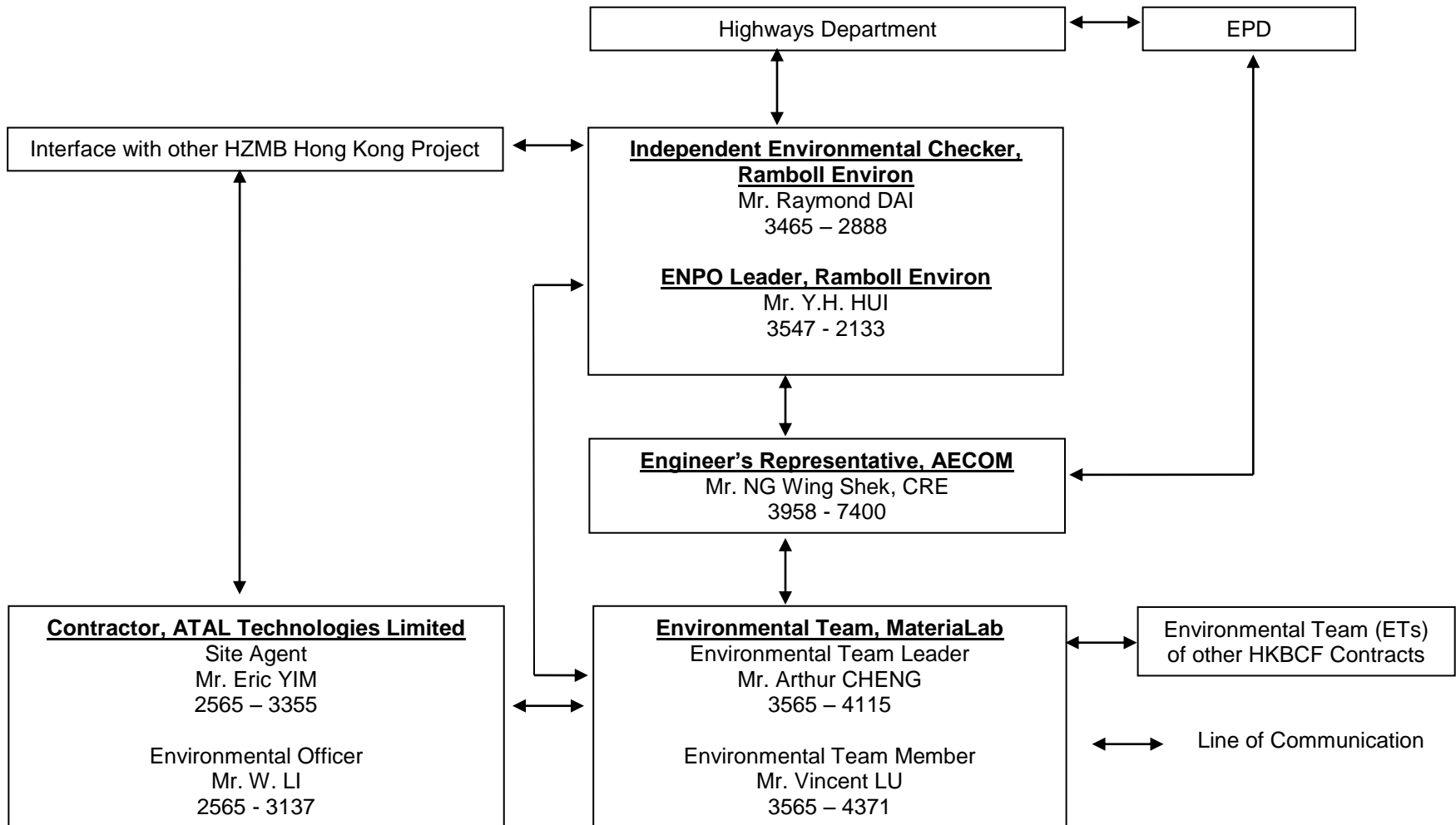
Contract No. HY/2013/03 Hong Kong-Zhuhai-Macao Bridge, Hong Kong Boundary Crossing Facilities – Vehicle Clearance Plazas and Ancillary Buildings and Facilities

Projects Organization for Environmental Works



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

Projects Organization for Environmental Works



MATERIALAB CONSULTANTS LIMITED

Room 723 & 725, 7/F, Block B,
Profit Industrial Building,
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Tel : (852)-24508238
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Report No.: 0165/15/ED/0921

Appendix C



















































Construction Programme


Activity ID		Activity Name		2017				
		Jun	Jul	Aug	Sep	Oct		
HKBCF - VCP & Ancillary Buildings and Facilities, DWP04 (+ DRMS 2), UD								
CONTRACT DATES								
Key Dates								
A1020	KD2 Achievement of Stage 2 of the Works (460 days; 12 Jul. 16)	◆ KD2 Achievement of Stage 2 of the Works (460 days; 12 Jul. 16)						
A1110	KD11 Achievement of Stage 10 of the Works (730 days; 08 Apr. 17)					◆ KD11A		
A1160	KD16 Achievement of Stage 15 of the Works (548 days; 08 Oct. 16)			◆ KD16 Achievement of Stage 15 of the Works (548 days; 08 Oct. 16)				
A1170	KD17 Achievement of Stage 16 of the Works (548 days; 08 Oct. 16)			◆ KD17 Achievement of Stage 16 of the Works (548 days; 08 Oct. 16)				
A1180C	KD18C Achievement of Stage 20 of the Works (670 days; 07 Feb. 17)				◆ KD18C Achievement of Stage 20 of the Works (670 days; 07 Feb. 17)			
A1180F	KD18F Achievement of Stage 23 of the Works (730 days; 08 Apr. 17)				◆ KD18F Achievement of Stage 23 of the Works (730 days; 08 Apr. 17)			
Site Access & Possession								
Possession of Portion of Site								
A0040	Possession of Portion C (<=100 days)		◆ Possession of Portion C (<=100 days)					
A0070	Possession of Portion F (<=220 days)	◆ Possession of Portion F (<=220 days)						
A0170	Possession of Portion Q (<=500 days)		◆ Possession of Portion Q (<=500 days)					
A0180	Possession of Portion R (<=610 days)		◆ Possession of Portion R (<=610 days)					
Access to Locations of the Site								
A0280	Contract Date for Access to Location 1.7A (610 days)		◆ Contract Date for Access to Location 1.7A (610 days)					
A0290	Contract Date for Access to Location 1.7B (610 days)		◆ Contract Date for Access to Location 1.7B (610 days)					
A0300	Contract Date for Access to Location 1.7C (610 days)		◆ Contract Date for Access to Location 1.7C (610 days)					
A0330	Contract Date for Access to External Area for Contract HY/2013/01 for ELV System Installation (570 days)		◆ Contract Date for Access to External Area for Contract HY/2013/01 for ELV System Installation (570 days)					
A0340	Contract Date for Access to External Area for Contract HY/2013/02 for ELV System Installation (560 days)				◆ Contract Date for Access to External Area for Contract HY/2013/02 for ELV System Installation (560 days)			
A0350	Contract Date for Access to External Area for Contract HY/2013/04 ELV System Installation (560 days)		◆ Contract Date for Access to External Area for Contract HY/2013/04 ELV System Installation (560 days)					
PORTION A1								
Portion A1 Structures								
Bridge A9								
Structure Deck								
SA9420	Deck on P904, P903 + Stressing							
SA9440	Deck on P903 & P902 + Stressing							
SA9460	Deck on P902 & A901 + Stressing							
SA9470	Parapet (38 pour) & E&M Works							
Retaining Wall W8-1								
SW8120	Backfilling W8-1							
SW8130	Parapet W8-1 (16 pour) & E&M Works							
SW8140	RW8-1 Drainage system & Cable Laying							
SW8150	Bituminous Paving W8-1 (347 ton) (KD25)							
Retaining Wall W9-1								
SW9120	Backfilling W9-1							
SW9130	Parapet W9-1 (16 pour) & E&M Works							
SW9140	Drainage System & Cable Laying							
SW9150	Bituminous Paving W9-1 (347 ton)							
047 - Fresh Water Pumping Station, Portion A1 & A2								
A04760	Parapet Wall at Roof Slab							
A04770	BS installation + E&M (Degree 2)							
A04780	BS installation + E&M (Degree 3)							
A04790	T&C for BS & Pumps							
Test & Commission								

- Actual Work
- Remaining Work
- Critical
- ◆ Milestone

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

Date	Revision	Checked	Approved
30-Apr-17	3MRP updated as of 30 Apr. 2017	ZJ	
31-May-17	3MRP updated as of 31 May 2017	ZJ	
30-Jun-17	3MRP updated as of 30 June 2017	ZJ	

Activity ID	Activity Name	2017				
		Jun	Jul	Aug	Sep	Oct
B04730	Submission & Issue of WW046 IV, V (Inside Services & FS)					
B04740	WSD Inspection					
B04760	OP Application & TPIDC Inspection					
049 - Sewage Treatment Plant, Portion A1 & A2						
B04990	Constructing Wall Stem for Equalization Tanks					
C04910	Water-tightness Test for Equalization Tanks					
D04985	Energisation by CLP					
E04910	Other Superstructure Construction					
E04940	BS + E&M Installation (KD9) (Degree 2)					
T&C and Statutory Inspection						
F04910	Essential T&C (FSI)					
F04920	Non-Essential T&C (Non-FSI)					
F04950	Submission & Issue of WW046 IV, V (Inside Services & FS)					
F04960	WSD Inspection					
G04920	DG Inspection					
G04930	Discharge Licence Issued by EPD					◆ Discharge
Portion A1 Buildings						
012 - DOH Disinsection Area and Store Room 1, at Portion A1						
A01250	Finishing					
A01270	BS + E&M for Office Accommodation (Stage 9) (Degree 3)					
A01280	Other BS + E&M Installation					
Test & Commission						
C01220	Submission & Issue of WW046 IV, V (Inside Services & FS)					
C01230	WSD Inspection					
C01240	FSD Inspection					
C01250	OP Application & TPIDC Inspection					
C01260	OP Issue					◆ OP Issue
036 - Weigh Station						
A03680	BS + E&M for Office Accommodation (Stage 9)					
A03690	Other BS + E&M Installation					
B03610	T&C for BS & Pumps					
Test & Commission						
B03630	Submission & Issue of WW046 IV, V (Inside Services & FS)					
B03640	Form 314 & 501 submission					◆ Form 314 & 501 submission
B03650	WSD Inspection					
B03660	FSD Inspection					
B03670	BEEO Stage II & Assessor Certification Submission					
B03680	OP Application & TPIDC Inspection					
B03690	OP Issue					◆ OP Issue
037 C&ED Tower Cum Inbound Cargo Examination Building (Portion A1 & B)						
A03742C	Mock-up Sample for Mesh Screen Wall (SS41) & Balustrade					
A03758	Paint Finish					
A03770	BS + E&M for AVCSS Cabling (KD18B)					
A03785	BS for Office Accommodation (KD10)					
A03790	Other BS + E&M Installation					
Test & Commission						
B03710	T&C for BS & Pumps					
B03730	Submission & Issue of WW046 IV, V (Inside Services & FS)					
B03740	Form LE5 Submission to EMSD					◆ Form LE5 Submission to EMSD
B03750	Form 314 & 501 submission					◆ Form 314 & 501 submission

 Actual Work
 Remaining Work
 Critical
 Milestone

THREE MONTH ROLLING PROGRAMME
VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES
 Page 2 of 25

Date	Revision	Checked	Approved
30-Apr-17	3MRP updated as of 30 Apr. 2017	ZJ	
31-May-17	3MRP updated as of 31 May 2017	ZJ	
30-Jun-17	3MRP updated as of 30 June 2017	ZJ	

Activity ID	Activity Name	2017				
		Jun	Jul	Aug	Sep	Oct
B03760	Lift Inspection by EMSD					
B03770	WSD Inspection					
B03780	FSD Inspection					
B03790	Beam Plus Monthly Submission & Issue					
C03710	BEEO Stage II & Assessor Certification Submission					
C03720	OP Application & TPIDC Inspection					
041 Fire Station Cum Ambulance Depot						
A04133	Wall Plastering/Wall Tiling					
A04134	Floor Screeding/Tiling/Vinyl Tiles					
A04137	False Ceiling Installation					
A04140	BS for Office Accommodation (Stage 8), Degree 2					
A04150	BS + E&M for Office Accommodation (Stage 9), Degree 3					
A04160	Other BS + E&M Installation					
A04170	External Finishing					
A04180	C/S Plastering/Tiling					
A04190	Cater Equipment Installation					
Fuel Filling Station incl. BS & E/M						
B04100	All Works for Fuel Filling Station					
Test & Commission						
B04110	T&C for BS & Pumps					
B04130	Submission & Issue of WW046 IV, V (Inside Services & FS)					
B04140	Form 314 & 501 submission					
B04150	Form LE5 Submission to EMSD					
B04160	DG application					
B04170	WSD Inspection					
B04180	FSD Inspection					
C04130	Beam Plus Monthly Submission & Issue					
C04140	BEEO Stage II & Assessor Certification Submission					
042 Drill Tower						
A04260	Finishing					
A04280	BS + E&M for Office Accommodation (Stage 9)					
A04290	Other BS + E&M Installation					
Test & Commission						
B04210	BEEO Stage II & Assessor Certification Submission					
B04220	T&C for BS Pumps					
B04230	WSD Inspection					
B04240	FSD Inspection					
B04250	OP Application & TPIDC Inspection					
043 DOH Office + Store Room						
A04370	Cladding & Curtain Wall Installation (incl. steel & metal works)					
A04390	BS + E&M for Office Accommodation (Stage 9)					
B04310	Other BS + E&M Installation					
B04330	Stainless Steel Mesh Installation					
B04340	Metal Windows/Louvres/Doors/Railing etc. installation					
B04360	Wall Plastering/Tiling					
B04370	Floor Screeding/Tiling					
B04380	False Ceiling Installation & Painting					
B04390	Carpentry (Wooden Doors/Partition/Lockers/Etc.)					
C04310	C/S Wall Plastering					
C04320	Paint Finishing to Walls					

- █ Actual Work
- █ Remaining Work
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- ◆ Milestone

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30-Jun-17	3MRP updated as of 30 June 2017	ZJ	

Activity ID	Activity Name	2017				
		Jun	Jul	Aug	Sep	Oct
Test & Commission						
C04330	T&C for BS & Pumps					
C04340	Submission & Issue of WW046 I, II, III (Inside Services & FS)					
C04350	Submission & Issue of WW046 IV, V (Inside Services & FS)					
C04360	Form 2 Submission					
C04370	Form 314 & 501 submission					
D04310	WSD Inspection					
D04320	FSD Inspection					
D04330	Lift Inspection by EMSD					
D04340	DG Inspection					
D04350	BEE0 Stage II & Assessor Certification Submission					
D04380	OP Application & TPIDC Inspection					
052 - Transforms (Zone 4)						
A05235	Energisation by CLP					
Fuel Filling Station incl. BS & E/M						
A05290	All Works for Fuel Filling Station					
T&C and Statutory Inspection						
B05210	T&C for BS & Pumps					
B05220	DG application					
B05230	DG Inspection					
B05270	Non-Essential T&C (Non-FSI)					
B05280	OP Application & TPIDC Inspection					
Completion of Fire Services Installation and Equipment (FCD)						
C05210	Approved Building Plans					
C05220	Application for FSI Inspection (FSI/501) c/w FSI Plan (FSI/314)					
C05240	FSI Inspection					
105 IMM D Guard Booth, Portion A1 (Mock Up)						
B10520	Substructure (Raft Foundation)					
B10530	On Grade Ground Slab					
B10540	Finishing					
B10550	BS for Office Accommodations (KD9)					
B10560	BS + E&M for Office Accommodation (KD10)					
B10570	Other BS + E & M Installation					
C10540	T&C for BS & Pumps					
Facade Envelop Structure Installation						
B10590	Fabrication of F/C System					
C10510	Casted-in Items Installation					
C10520	Steel Frame Installation					
C10530	Envelop Cladding and Roofing Panel Installation					
210 - ImmD GV Secondary Examination Bays Inbound						
ER5830	Construction of the Area and Access to the Interface Contractor					
External Works for Portion A1						
Drainage Works						
ED5590	Drainage Works (774m & 35MHs), Stage 2					
ED5600	Sewerage (300m & 9MHs), Stage 2					
ED5610	Drainage Works (773m & 34MHs), Stage 3					
ED5620	Sewerage (269m & 7MHs), Stage 3					
Waterpipe Laying						
EW5010	Fresh Water Main Laying (1660 m)					
EW6010	Flushing Water Main Laying (967 m)					

█ Actual Work
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		Jun	Jul	Aug	Sep	Oct
EW6180	Chilled Water Pipe Laying in Portion A1 (external)					
Duct Laying for Utilities/Telecom Cabling, TCSS & Lighting						
EU5260	Duct & Cable Laying for Utilities/Telecom, CLP, BS & ELV					
EU5270	Duct & Cable Laying for TCSS & Lighting					
Roadworks						
ER1520	Subbase (8500 ton), Stage 1 (Western)					
ER3540	Bitumen Pavement (10000 ton), Stage 1 (Western)					
ER3550	Rigid Pavement (900 m3), Footpath & EVA, Stage 1 (Western)					
Road Furniture						
ER0800	ELV Installation					
ER0830	Road Furniture					
PORTION A2						
Portion A2 Structures						
046 - Refuse Collection Point, Portion A2						
A04620	Superstructure w/2 water tank					
A04630	BS for Office Accommodations (Stage 8) (KD9)					
A04640	BS + E&M for Office Accommodations (Stage 9) (KD10)					
A04660	Other BS + E&M Installation					
Test & Commission						
B04620	Submission & Issue of WW046 I, II, III (Inside Services & FS)					
B04650	T&C for BS & Pumps					
B04680	OP Application & TPIDC Inspection					
048 - Reclaimed Water Pumping Station, Portion A2						
B04820	BS for Office Accommodations (Stage 8) (KD9)					
B04830	BS + E&M for Office Accommodation (Stage 9) (KD10)					
B04840	Other BS + E&M Installation					
Test & Commission						
B04850	T&C for BS & Pumps & SWT					
B04860	DG Application					
B04880	Submission & Issue of WW046 I, II, III (Inside Services & FS)					
B04890	Submission & Issue of WW046 IV, V (Inside Services & FS)					
C04810	Form 314 & 501 submission					
C04860	OP Application & TPIDC Inspection					
Retaining Wall W9-2						
SW9210	Construction of Retaining Wall W9-2 (U-shape, 6 bay)					
SW9220	Backfilling for Retaining Wall W9-2					
SW9230	Parapet for Retaining Wall W9-2 (22 pour) & E&M Works					
External Works for Portion A2						
Drainage Works						
ED2280	Drainage Works (228m & 15MHs)					
ED3560	Sewerage (322m & 9MHs)					
Waterpipe Laying						
EW2290	Fresh Water Main Laying (236m)					
EW2300	Flushing Water Main Laying (91m)					
Duct Laying for Utilities/Telecom Cabling, TCSS & Lighting						
EU5280	Duct & Cable Laying for Utilities/Telecom, CLP, BS & ELV					
EU5290	Duct & Cable Laying for TCSS & Lighting					
PORTION B						
Portion B Structures						

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		Jun	Jul	Aug	Sep	Oct
Retaining Wall W7-2						
S70890	Retaining Wall W7-2 Backfilling	Actual Work				
S70910	C3-S6 Slopeworks		Remaining Work			
S70970	Retaining Wall W7-2 Parapet (2 pour) & E&M Works			Remaining Work		
S70980	Retaining Wall W7-2 Drainage System & Cable Laying				Remaining Work	
Retaining Wall W6-1						
S62060	Retaining Wall W6-1 Backfilling	Actual Work				
S62070	Retaining Wall W6-1 Parapet (8 pour) & E&M Works		Remaining Work			
S62080	Retaining Wall W6-1 Drainage System & Cable Laying			Remaining Work		
S62210	Retaining Wall W6-1 Bituminous Paving (347 ton) (KD25)				Remaining Work	
Bay 25 - 29 of CUE/Staff Subway						
C02960	Internal Finishes & Cable Containment	Actual Work	Remaining Work			
C02970	BS + E&M Installation for AVCSS	Actual Work	Remaining Work			
Portion B Buildings						
027/028 Inbound Kiosks & 029 Outbound Kiosks						
A02720	Superstructure	Actual Work	Critical			
A02730	Construction of Subway Entrance	Actual Work	Remaining Work			
A02740	Construction of Subway Toilets			Remaining Work		
A02750	Finishing			Remaining Work		
A02760	BS for Office Accommodation		Remaining Work			
A02770	BS + E&M for office accommodation (Stage 9)				Remaining Work	
A02780	BS + E&M for AVCSS Works (KD18A)	Actual Work	Remaining Work			
A02790	BS + E&M for AVCSS Cabling (KD18B)		Remaining Work			
B02720	Other BS + E&M Installation			Critical		
Test & Commission						
B02810	T&C for BS & Pumps				Critical	
B02830	Submission & Issue of WW046 IV, V (Inside Services & FS)				Remaining Work	
B02860	OP Application & TPIDC Inspection					Critical
027/028 Inbound Kiosks & 029 Outbound Kiosks, Section IX, Subject to Excision						
B02750	Superstructure	Actual Work	Critical			
B02760	BS + E&M for AVCSS Works (KD18C)	Actual Work	Critical			
B02770	BS + E&M for AVCSS Works (KD18D)		Critical			
B02780	BS + E&M for allowing users to move in furniture (KD18E)		Critical			
B02790	Pavement & Drainage (KD30)			Remaining Work		
Test & Commission						
D02710	T&C for BS & Pumps			Remaining Work		
D02730	Submission & Issue of WW046 IV, V (Inside Services & FS)			Remaining Work		
D02740	WSD Inspection				Remaining Work	
D02760	OP Application & TPIDC Inspection				Remaining Work	
026 Inbound IMMD and DOH Secondary Screening Building						
A02640	Finishing	Actual Work	Remaining Work			
A02670	BS for Office Accommodation (Stage 8)	Actual Work	Remaining Work			
A02680	BS + E&M for Office Accommodation (Stage 9)		Remaining Work			
A02690	Other BS + E&M Installation	Actual Work	Remaining Work			
Test & Commission						
B02630	Submission & Issue of WW046 IV, V (Inside Services & FS)	Actual Work				
B02640	BEE0 Stage II & Assessor Certification Submission				Remaining Work	
B02650	TC for BS & Pumps			Remaining Work		
B02660	WSD Inspection				Remaining Work	
C02610	OP Application & TPIDC Inspection				Remaining Work	

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30-Jun-17	3MRP updated as of 30 June 2017	ZJ	

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		Jun	Jul	Aug	Sep	Oct
054 Inbound Fixed X-ray Building						
A05460	Finishing					
A05467	Energisation by CLP					
A05480	BS + E&M for Office Accommodation (Stage 9)					
A05490	Other BS + E&M Installation					
Fuel Filling Station incl. BS & E/M						
B05490	All Works for Fuel Filling Station					
T&C and Statutory Inspection for Zone 4a						
B05400	BEEO Stage II & Assessor Certification Submission					
B05420	T&C for BS & Pumps					
B05460	DG Inspection					
Completion of Fire Services Installation and Equipment (FCD)						
F05450	Application for FSI Inspection (FSI/501) c/w FSI Plan (FSI/314)					
F05460	Provision of Direct Link for Fire Alarm System by Chubb					
Waterworks Ordinance (WSD)						
G05410	Approval Letter and approved Drawings					
G05430	Submission of WWO46 - Part IV (Inside Services)					
G05440	WSD Inspection & Issue of WWO46 - Part V (Inside Services)					
038 AFCD Office						
A03850	Finishing + Curtain Wall Installation					
A03870	BS for Office Accommodation (Stage 8)					
A03880	BS + E&M for Office Accommodation (Stage 9)					
A03890	Other BS + E&M Installation					
Test & Commission						
B03810	T&C for BS & Pumps					
B03830	Submission & Issue of WW046 I, II, III (Inside Services & FS)					
B03880	Form 314 & 501 submission					
C03820	Form 2 Submission					
C03830	Lift Inspection by EMSD					
C03850	FSD Inspection					
C03860	BEEO Stage II & Assessor Certification Submission					
039 Police Main Building						
A03940	Finishing + Curtain Wall Installation					
A03950	BS for Office Accommodation (Stage 8), & for TCSS works (KD14)					
A03960	BS + E&M for Office Accommodation (Stage 9)					
A03970	Other BS + E&M Installation					
Fuel Filling Station incl. BS & E/M						
B03910	All Works for Fuel Filling Station					
Test & Commission						
B03920	Submission & Issue of WW046 I, II, III (Inside Services & FS)					
B03930	Submission & Issue of WW046 IV, V (Inside Services & FS)					
B03940	BEEO Stage II & Assessor Certification Submission					
B03950	Beam Plus Monthly Submission & Issue					
B03960	Form 314 & 501 submission					
C03920	DG Inspection					
C03950	Form 2 Submission					
C03960	Lift Inspection by EMSD					
C03970	T&C for BS & Pumps					
C03980	WSD Inspection					
C03990	FSD Inspection					

■ Actual Work
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		Jun	Jul	Aug	Sep	Oct
D03930	OP Application & TPIDC Inspection					
040 Incident Control Tower						
A04050	Finishing (KD9)					
A04060	BS for Office Accommodation (Stage 8), & for TCSS works (KD14)					
A04070	BS + E&M for Office Accommodation (Stage 9)					
Facade Cladding System						
B04040	Steel Frame Installation					
B04050	Cladding Panel Installation					
Glass Wall						
C04020	Fabrication of Glass Wall					
C04040	Steel Frame Installation					
Test & Commission						
D04010	Form 314 & 501 submission					
D04030	T&C for BS & Pumps					
D04040	Form 2 Submission					
D04050	Lift Inspection by EMSD					
D04070	FSD Inspection					
D04080	OP Application & TPIDC Inspection					
102 HKPF UVSS Monitor Room						
A10230	Finishing (False Ceiling) (KD9)					
A10240	BS for Office Accommodation (Stage 8)					
A10260	BS + E&M for Office Accommodation (Stage 9)					
A10270	Other BS + E&M Installation					
A10290	T&C for BS & Pumps					
C10210	WWO 46 Part I, II, III Submission (inside Service + FS)					
C10220	WWO 46 Part IV, V Submission (inside Service + FS)					
C10230	Plumbing Inspection by WSD					
C10260	TPIDC Inspection					
Metal Canopy and Roof Installation						
B10230	Steel Frame Installation					
B10240	Glass panel, metal cladding panel installation					
103 Police Inspection Post						
A10350	Finishing (False Ceiling) (KD9)					
A10360	BS for Office Accommodation (Stage 8)					
A10370	BS + E&M for Office Accommodation (Stage 9)					
A10380	Other BS + E&M Installation					
C10310	T&C for BS & Pumps					
C10320	WWO 46 Part I, II, III Submission (inside Service + FS)					
C10330	WWO 46 Part IV, V Submission (inside Service + FS)					
C10340	WSD inspection					
C10360	TPIDC Inspection					
HPL Composite Panel Cladding System						
B10320	Fabrication of HPL Cladding					
B10330	Casted-in Items Installation					
B10340	Steel Frame Installation					
B10350	HPL Cladding Panel Installation					
057 Transformers (Zone 2)						
A05740	Finishing					
A05755	Energisation by CLP					
A05770	BS + E&M for Office Accommodation (Stage 9)					

- █ Actual Work
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		Jun	Jul	Aug	Sep	Oct
A05780	Other BS + E&M Installation	[Actual Work]		[Remaining Work]		
Fuel Filling Station incl. BS & E/M						
A05790	All Works for Fuel Filling Station	[Actual Work]		[Remaining Work]		
T&C and Statutory Inspection for Zone 2a & 2b						
C05700	T&C for BS & Pumps	[Critical]				
F05700	Essential T&C (FSI)	[Critical]				
F05710	Non-Essential T&C (Non-FSI)	[Critical]				
F05720	OP Application & TPIDC Inspection	[Critical]				
Completion of Fire Services Installation and Equipment (FCD)						
F05750	Application for FSI Inspection (FSI/501) c/w FSI Plan (FSI/314)	◆ Application for FSI Inspection (FSI/501) c/w FSI Plan (FSI/314)				
F05760	Provision of Direct Link for Fire Alarm System by Chubb	◆ Provision of Direct Link for Fire Alarm System by Chubb				
F05770	FSI Inspection (2 Trials)	[Remaining Work]				
DG License & EPD Generator Approval						
G05710	Approval Letter and approved Drawings	◆ Approval Letter and approved Drawings				
G05730	DG Inspection	[Remaining Work]				
107 - C&ED Mobile X-ray Operation Office (Cargo), Portion B						
C10740	Finishing	[Actual Work]		[Remaining Work]		
C10750	BS for Office Accommodation (Stage 8)	[Actual Work]		[Remaining Work]		
C10760	BS + E&M for Office Accommodation (Stage 9)	[Remaining Work]				
C10770	Other BS + E&M Installation	[Critical]				
C10780	T&C for BS & Pumps	[Remaining Work]				
C10790	TPIDC Inspection	[Critical]				
113 - Field Kiosk for Access Control, Portion B						
B11340	Finishing	[Actual Work]		[Remaining Work]		
B11350	BS for Office Accommodation (Stage 8)	[Actual Work]		[Remaining Work]		
B11360	BS + E&M for Office Accommodation (Stage 9)	[Remaining Work]				
B11370	Other BS + E&M Installation	[Critical]				
B11380	T&C for BS & Pumps	[Critical]				
B11390	TPIDC Inspection	[Critical]				
201 - Inbound Cargo Mobile X-ray Operation Area						
ER5850	Construction of the Area and Access to the Interface Contractor	[Remaining Work]				
205 - Inbound Private Car Mobile X-ray Operation Area						
ER5860	Construction of the Area and Access to the Interface Contractor	[Remaining Work]				
External Works for Portion B						
Works in Location 1.7A						
BB1480	ELV Works & T&C in Location 1.7A	[Critical]				
Works in Location 1.7B						
BB1490	ELV Works & T&C in Location 1.7B	[Critical]				
Drainage Works						
ED5690	Drainage Works (1130m & 60MHs), Stage 4 (N/E)	[Critical]				
ED5700	Sewerage (300m & 82MHs), Stage 4 (N/E)	[Critical]				
Waterpipe Laying						
EW6100	Fresh Water Main Laying (1000m), Stage 3	[Critical]				
EW6110	Flushing Water Main Laying (931m), Stage 3	[Critical]				
EW6190	Chilled Water Pipe Laying in Portion B (external)	[Remaining Work]				
Duct Laying for Utilities/Telecom Cabling, TCSS & Lighting						
EU5300	Duct & Cable Laying for Utilities/Telecom, CLP, BS & ELV	[Critical]				
EU5310	Duct & Cable Laying for TCSS & Lighting	[Critical]				
EU5550	ELV Installation	[Critical]				
EU5630	Access date to Telephone Companies	◆ Access date to Telephone Companies				

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		Jun	Jul	Aug	Sep	Oct
Roadworks						
ER1640	Subbase (21000 ton), Stage 1					
ER3590	Bitumen Pavement (30000 ton), Stage 1					
ER3600	Rigid Pavement (1188 m3), Footpath & EVA, Stage 1					
ER5590	Subbase (22152 ton), Stage 2					
ER5600	Bitumen Pavement (31126 ton), Stage 2					
ER5610	Rigid Pavement (1188 m3), Footpath & EVA, Stage 2					
Road Furniture						
ER1620	Road Furniture					
Sign Gantry ADS 306A & ADS 306B						
ES5240	Fabrication & Delivery of Sign Gantries to Site					
PORTION C						
Portion C Buildings						
010 - Inbound Coach Kiosk & Staff Subway Entrance (Subway Deleted)						
A01020	Base Slab & Kiosk superstructure					
A01030	BS + E&M for AVCSS works (KD18A)					
009 - Staff Subway Entrance (Bay 0 - 3) & Shuttle Bus Kiosks						
B00920	Kiosk superstructure					
B00930	BS + E&M for AVCSS works (KD18A)					
B00940	BS + E&M for AVCSS Cabling (KD18B)					
B00970	BS + E&M for Office Accommodation (Stage 9) (KD10)					
C00920	T&C for BS & Pumps					
C00940	TPIDC Inspection					
012 - DOH Disinsection Area and Store Room 1, at Portion C						
B01210	Excavation & Blinding					
B01220	Raft Foundation					
B01230	Superstructure					
B01240	Finishing					
B01270	BS for Office Accommodation (KD 9)					
B01290	Other BS + E&M Installation					
Test & Commission						
E01210	Submission of WWO46 - Part I, II, III (Inside Services + FS)					
E01260	TPIDC Inspection					
104 - DOH Secondary Screening Station, at Portion C						
A10420	Excavation & Blinding					
A10430	Substructure					
A10435	Finishing					
A10440	BS for Office Accommodation (Stage 8)					
B10410	Other BS + E&M Installation					
B10420	T&C for BS & Pumps					
B10440	TPIDC Inspection					
Facade Cladding System						
A10465	Fabrication of F/C System					
A10470	Casted-in Items Installation					
A10480	Steel Frame Installation					
108 C&ED Mobile X-ray Machine Operation Office, Portion C						
A10810	Raft Foundation					
A10840	Superstructure (Roof Beams & Slabs)					
A10850	Finishing					

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30-Jun-17	3MRP updated as of 30 June 2017	ZJ	

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A10860	BS for Office Accommodation (Stage 8)			[Green Bar]		
A10890	Other BS + E&M Installation			[Green Bar]		
F10830	T&C for BS & Pumps				[Green Bar]	
F10850	TPIDC Inspection				[Red Bar]	
HPL Composite Panel Cladding System						
A10815	Fabrication of HPL Cladding	[Blue Bar]	[Red Bar]			
A10820	Casted-in Items Installation			[Red Bar]		
A10830	Steel Frame Installation				[Red Bar]	
110 IMMD Guard Booth (Type 2) East						
A11080	Finishing	[Blue Bar]	[Green Bar]			
A11090	BS for Office Accommodation (Stage 8)			[Green Bar]		
B11010	BS + E&M for Office Accommodation (Stage 9)				[Green Bar]	
B11020	Other BS + E&M Installation			[Green Bar]		
B11030	T&C for BS & Pumps			[Green Bar]		
B11050	TPIDC Inspection			[Green Bar]		
Facade Envelop Structure Installation						
A11045	Fabrication of F/C System			[Red Bar]		
A11050	Casted-in Items Installation		[Green Bar]			
A11060	Steel Frame Installation				[Red Bar]	
110 IMMD Guard Booth (Type 2) West						
C11010	Excavation & Blinding		[Red Bar]			
C11020	Substructure		[Red Bar]			
C11030	Finishing			[Green Bar]		
C11040	BS for Office Accommodation			[Red Bar]		
C11060	Other BS + E&M Installation			[Red Bar]		
C11070	T&C for BS & Pumps				[Red Bar]	
C11090	TPIDC Inspection				[Red Bar]	
Facade Envelop Structure Installation						
D11010	Casted-in Items Installation		[Red Bar]			
D11020	Steel Frame Installation			[Red Bar]		
D11030	Envelop Cladding and Roofing Panel Installation				[Red Bar]	
111 Field Kiosk for Carpark Operator						
A11120	Excavation & Blinding		[Blue Bar]			
A11130	Raft Foundation		[Red Bar]			
A11140	Superstructure (Roof beams & Slabs)			[Red Bar]		
A11150	Finishing				[Green Bar]	
A11160	BS for Office Accommodation (Stage 8)				[Red Bar]	
A11180	Other BS + E&M Installation				[Red Bar]	
B11160	T&C for BS & Pumps				[Red Bar]	
B11180	TPIDC Inspection				[Red Bar]	
HPL Composite Panel Cladding System						
B11120	Fabrication of HPL Cladding	[Blue Bar]	[Red Bar]			
B11130	Casted-in Items Installation			[Red Bar]		
B11140	Steel Frame Installation				[Red Bar]	
113 - Field Kiosk for Access Control, Portion C						
C11310	Excavation & Blinding	[Blue Bar]				
C11320	Raft Foundation		[Blue Bar]	[Red Bar]		
C11330	Superstructure (Roof Beams & Slabs)			[Red Bar]		
C11340	Finishing				[Red Bar]	
D11310	BS for Office Accommodation (Stage 8)				[Red Bar]	

█ Actual Work
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30-Jun-17	3MRP updated as of 30 June 2017	ZJ	

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		Jun	Jul	Aug	Sep	Oct
D11330	Other BS + E&M Installation					
F11310	T&C for BS & Pumps					
F11330	TPIDC Inspection					
204 - Inbound Coach Exam Area & Mobile X-ray Operation						
ER5760	Radiation Screen Wall Construction					
ER5880	Construction of the Area and Access to the Interface Contractor					
External Works for Portion C						
Works in Location 1.2, 1.8 & 011 - Emergency Generator Building						
BB1440	Works & T&C in Location 1.2					
BB1450	Works & T&C in Location 1.8					
BB1460	ELV System Installations and T&C for Contract HY/2013/01					
BB1470	Provisioning of Civil Engineering Works for 011-Emergency Generator Building (KD18)					
Drainage Works						
B00040	Initial Survey					
SG2400	Drainage Works (797m & 36MHs)					
SG3610	Sewerage (186m & 4MHs)					
Waterpipe Laying						
SW2410	Fresh Water Main Laying (272m)					
SW2420	Flushing Water Main Laying (105m)					
SW9280	Chilled Water Pipe Laying in Portion C (external)					
Duct Laying for Utilities/Telecom Cabling, TCSS & Lighting						
SU5320	Duct & Cable Laying for Utilities/Telecom, CLP, BS & ELV					
SU5330	Duct & Cable Laying for TCSS & Lighting					
SU5400	ELV Installation					
Roadworks						
SR2500	Subbase (4201 ton)					
SR3620	Bitumen Pavement (6200 ton)					
SR3630	Rigid Pavement (132 m3), Footpath & EVA					
Road Furniture						
SR2480	Road Furniture					
PORTION D						
Portion D Building						
114 - Field Kiosk for Access Control, Portion D						
C11370	Superstructure (Roof Beams & Slabs)					
C11380	Finishing					
D11340	BS for Office Accommodation (Stage 8)					
D11350	BS + E&M for Office Accommodation (Stage 9)					
D11360	Other BS + E&M Installation					
F11350	T&C for BS & Pumps					
F11370	TPIDC Inspection					
External Works for Portion D						
Drainage Works						
SG3640	Drainage Works (361m & 14MHs)					
SG3760	Sewerage (121m & 6MHs)					
Waterpipe Laying						
SW3650	Fresh Water Main Laying (108m)					
Duct Laying for Utilities/Telecom Cabling, TCSS & Lighting						
B11480	ELV System Installation for Contract HY/2013/02					

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30-Jun-17	3MRP updated as of 30 June 2017	ZJ	

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		Jun	Jul	Aug	Sep	Oct
SU5340	Duct & Cable Laying for Utilities/Telecom, CLP, BS & ELV					
SU5350	Duct & Cable Laying for TCSS & Lighting					
SU5640	Access date to Telephone Companies			◆ Access date to Telephone Companies		
Roadworks						
SR3740	Subbase (261 ton)					
SR3770	Bitumen Pavement (619 ton)					
Road Furniture						
SR3720	Road Furniture (KD25)					
PORTION E						
006 - Shuttle Bus Kiosk & Staff Subway Entrance, at Portion E & M						
A00640	Backfilling & Surcharge					
A00650	Constructing Ground Slab					
A00660	Constructing Kiosk (4 Nr.)					
A00670	Constructing Subway Entrance					
A00690	BS + E&M for AVCSS works (KD18B)					
B00640	Other BS + E&M Installation					
External Works for Portion E						
Drainage Works						
SG3780	Drainage Works (99m & 5MHs)					
SG3900	Sewerage (38m & 1 MH)					
Waterpipe Laying						
SW3790	Fresh Water Main Laying (45m)					
SW3800	Flushing Water Main Laying (25m)					
Duct Laying for Utilities/Telecom Cabling, TCSS & Lighting						
SU5360	Duct & Cable Laying for Utilities/Telecom, CLP, BS & ELV					
SU5370	Duct & Cable Laying for TCSS & Lighting					
Roadworks						
SR3880	Subbase (1659 ton)					
SR3910	Bitumen Pavement (2105 ton)					
SR3920	Rigid Pavement (180 m3)					
Road Furniture						
SR3860	Road Furniture (KD25)					
PORTION F						
External Works for Portion F						
Drainage Works						
B00070	Initial Survey					
SG3930	Drainage Works (122m & 9MHs)					
SG4050	Sewerage (70m & 3MHs)					
Waterpipe Laying						
SW3940	Fresh Water Main Laying (205m)					
Duct Laying for Utilities/Telecom Cabling, TCSS & Lighting						
SU5380	Duct & Cable Laying for Utilities/Telecom, CLP, BS & ELV					
SU5390	Duct & Cable Laying for TCSS & Lighting					
SU5420	ELV Installation					
Roadworks						
SR4030	Subbase (1534 ton)					
SR4060	Bitumen Pavement (1909 ton)					
PORTION G, H1 & H2						

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Activity ID		Activity Name		2017				
				Jun	Jul	Aug	Sep	Oct
Portion G Structures								
Box Culvert C								
Box Culvert Structure								
SC0320	Box C - Branch Backfilling			[Actual Work]				
SC0390	Box C - Back filling			[Actual Work]		[Remaining Work]		
Bridge A1								
Structure Deck								
SA1460	Deck on P101, P102 + Stressing	[Actual Work]						
SA1520	Parapet (42 pour), E&M works & installation of DS38 & DS39	[Actual Work]		[Actual Work]		[Remaining Work]		
SA1530	Bituminous Paving (751 ton) (KD25)					[Remaining Work]		
Bridge A2								
Structure Deck								
SA2460	Deck on P201 & P202 + Stressing	[Actual Work]		[Actual Work]				
SA2470	Parapet (36 pour), E&M Works & installation of DS49	[Actual Work]		[Actual Work]		[Remaining Work]		
SA2480	Bituminous Paving (KD25)					[Remaining Work]		
Bridge A3								
Structure Deck								
SA3510	Parapet (56 pour), E&M Works & installation of DS51	[Actual Work]		[Actual Work]		[Remaining Work]		
SA3520	Bituminous Paving (580 ton) (KD25)					[Remaining Work]		
Bridge A4								
Structure Deck								
SA4440	Deck on P401, P402 + Stressing	[Actual Work]						
SA4460	Deck on P304b, P401, P402 + Stressing	[Actual Work]						
SA4470	Parapet (35 pour), E&M Works	[Actual Work]		[Actual Work]		[Remaining Work]		
SA4480	Bituminous Paving (232 ton) (KD25)					[Remaining Work]		
Bridge A5								
Structure Deck								
SA5540	Deck on A501 & P502a + Stressing	[Actual Work]						
SA5560	Deck on P507 & P508a, P508b + Stressing	[Actual Work]		[Actual Work]				
SA5570	MJ Installation (KD16 & KD17)			[Actual Work]				
SA5580	Parapet (65 pour), E&M Works installation of ADS 304A			[Actual Work]		[Remaining Work]		
Bridge A6								
Structure Deck								
SA6540	Parapet (50 pour) & E&M Works	[Actual Work]						
Bridge A7a, A7b, A7c								
Structure Deck								
SA7940	Parapet for Bridge A7b (8 pour) & E&M Works	[Actual Work]						
SA7950	Parapet for Bridge A7c (38 pour) & E&M Works	[Actual Work]		[Actual Work]		[Remaining Work]		
SA7960	Parapet for Bridge A7a (48 pour) & E&M Works	[Actual Work]		[Actual Work]		[Remaining Work]		
SA7970	Bituminous Paving for A7b (571 ton) (KD25)					[Remaining Work]		
SA7980	Bituminous Paving for A7c (400 ton)(KD25)					[Remaining Work]		
SA7990	Bituminous Paving for A7a (400 ton) (KD25)					[Remaining Work]		
Bridge A8								
Structure Deck								
SA8470	Parapet (26 Pour) & E&M works	[Actual Work]		[Actual Work]		[Remaining Work]		
SA8480	Bituminous Paving (348 ton) (KD25)					[Remaining Work]		
Retaining Walls W1-1, W3-1, W5-1 & W7-1								
Retaining Wall W1-1								
SW1110	Construction of Retaining Wall W1-1 (L-shape, 4 bays)	[Actual Work]						

- █ Actual Work
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		Jun	Jul	Aug	Sep	Oct
SW1120	Retaining Wall W1-1 Backfilling					
SW1122	Slope C3-S3 Construction					
SW1130	Retaining Wall W1-1 Parapet (8 pour) & E&M Works					
Retaining Wall W3-1						
SW3150	Construction of Retaining Wall W3-1 (U-shape, 4 bays)					
SW3160	Backfilling W3-1					
SW3165	Slope C3-S4 Construction					
SW3170	Parapet W3-1 (8 pours) & E&M Works					
SW3180	W3-1 Drainage System & Cable Laying					
Retaining Wall W5-1						
SW5010	Construction of Retaining Wall W5-1 (L-shape, 5 bays)					
SW5020	Retaining Wall W5-1 Backfilling to Retaining Wall					
Retaining Wall W7-1						
SW7110	Construction of Retaining Wall W7-1 (U-shape, 4 bays)					
SW7120	Backfilling to Retaining Wall W7-1					
Portion G Buildings						
002 - C&ED Observation Guard Booth No. 1, Portion H1						
C00220	Excavation + Blinding					
C00230	Raft Foundation					
C00240	Superstructure					
C00250	Finishing					
C00260	BS for Office Accommodations (KD9)					
002 - C&ED Observation Guard Booth No. 2, Portion H1						
E00210	Excavation + Blinding					
E00220	Raft Foundation					
E00230	Superstructure					
E00240	Finishing					
E00250	BS for Office Accommodations (KD9)					
E00295	OP Application & TPIDC Inspection					
033 Inbound Private Car Exam Building						
A03330	Finishing					
A03360	External Works					
A03370	BS for Office Accommodation (Stage 8)					
A03380	BS + E&M for Office Accommodation (Stage 9)					
A03390	Other BS + E&M Installation					
C03310	Submission & Issue of WW046 I, II, III (Inside Services & FS)					
C03330	BEEO Stage II & Assessor Certification Submission					
C03360	T&C for BS & Pumps					
C03390	OP Application & TPIDC Inspection					
Glass Canopy Installation						
B03305	Fabrication of Glass Canopy					
B03360	Steel Frame Installation					
B03370	Glass Panel Installation					
Aluminium Metal Canopy						
B03330	Steel Frame Installation					
B03340	Aluminium Cladding Installation					
034 Satellite RCP South						
A03450	Finishing					
A03470	BS + E&M for Office Accommodation (Stage 9)					
A03480	Other BS + E&M Installation					

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30-Jun-17	3MRP updated as of 30 June 2017	ZJ	

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		Jun	Jul	Aug	Sep	Oct
Test & Commission						
C03420	Submission & Issue of WW046 IV, V (Inside Services & FS)	Actual Work				
C03430	Form 314 & 501 submission			Milestone		
C03440	T&C for BS & Pumps			Remaining Work		
C03450	WSD Inspection		Remaining Work			
C03460	FSD Inspection				Remaining Work	
C03470	OP Application & TPIDC Inspection				Remaining Work	
S S Facade Greenery System						
B03415	Fabrication of SS F/G System			Remaining Work		
B03430	Steel Frame Installation			Remaining Work		
B03440	Greenery Cladding Installation				Remaining Work	
035 - Sewage Pumping Station, Portion G						
A03590	Water-tightness Test for Wet Wells	Actual Work				
B03550	Water-tightness Test for Inlet Chamber	Actual Work				
B03580	BS for Office Accommodations (KD9)		Remaining Work			
B03590	BS + E&M for Office Accommodation (KD10)			Remaining Work		
C03510	Other BS + E & M Installation	Actual Work				
Test & Commission						
C03530	Submission & Issue of WW046 I, II, III (Inside Services & FS)		Critical			
C03550	Form 314 & 501 submission			Milestone		
C03560	T&C for BS & Pumps SWT				Remaining Work	
C03590	OP Application & TPIDC Inspection				Critical	
051 Transformers (Zone 5)						
A05150	Finishing	Actual Work	Remaining Work			
A05165	Energisation by CLP	Actual Work	Remaining Work			
A05190	Other BS + E & M Installation	Actual Work	Remaining Work			
T&C and Statutory Inspection for Zone 5						
C05120	T&C for BS & Pumps	Actual Work	Remaining Work			
C05130	Essential T&C (FSI)	Actual Work	Remaining Work			
C05140	Non-Essential T&C (Non-FSI)	Actual Work	Remaining Work			
C05150	OP Application & TPIDC Inspection	Actual Work			Remaining Work	
Completion of Fire Services Installation and Equipment (FCD)						
F05150	Application for FSI Inspection (FSI/501) c/w FSI Plan (FSI/314)					Milestone
F05160	Provision of Direct Link for Fire Alarm System by Chubb					Milestone
100 Inbound Traffic Control Kiosk						
A10050	Finishing	Actual Work				
A10070	BS + E&M for AVCSS Works (KD18A)	Actual Work				
B10060	BS + E&M for AVCSS Cabling (KD18B)	Actual Work	Remaining Work			
B10070	BS for Office Accommodations (KD9)	Actual Work	Remaining Work			
B10080	BS + E&M for Office Accommodation (KD10)	Actual Work		Remaining Work		
B10090	Other BS + E & M Installation	Actual Work	Remaining Work			
C10010	Submission & Issue of WW046 I, II, III (Inside Services & FS)	Actual Work				
C10020	Submission & Issue of WW046 IV, V (Inside Services & FS)				Remaining Work	
C10030	Form 314 & 501 submission					Milestone
C10040	T&C for BS & Pumps SWT				Remaining Work	
C10070	OP Application & TPIDC Inspection				Remaining Work	
HPL Composite Panel Cladding System						
B10015	Fabrication of F/C System	Actual Work	Critical			
B10020	Casted-in Items Installation			Critical		
B10030	Steel Frame Installation	Actual Work			Critical	

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30-Jun-17	3MRP updated as of 30 June 2017	ZJ	

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		Jun	Jul	Aug	Sep	Oct
112 Field Kiosk for Taxi Queuing Area						
A11240	Finishing					
A11250	BS + E & M Installation					
A11260	T&C for BS & Pumps SWT					
A11270	FSD Inspection					
A11280	OP Application & TPIDC Inspection					
External Works for Portion G, H1 & H2						
ELV Works within Portion H2 in the Hong Kong Side PTI						
EU1550	ELV Works within Portion H2 in the Hong Kong Side PTI (KD19)					
Works within Portion H1 & H2 except the ELV Works in the Hong Kong Side PTI						
EU1560	Drainage & Sewerage Works within Portion H1 & H2 in the Hong Kong Side PTI (KD20)					
All Works within the Boundary defined in Drawing No. 60191048/C3/000/C00/1050						
BEU1570	Drainage & Sewerage Works (incl. CLP) within the Boundary defined in Drawing No. 60191048/C3/000/1050					
BEU1580	Roadworks within the Boundary defined in Drawing No. 60191048/C3/000/1050, excluding Portion H1 & H2 & Bridges (KD24)					
Drainage Works						
ED4070	Drainage Works (6954m & 393MHs)					
ED4190	Sewerage (437m & 12MHs)					
Waterpipe Laying						
EW4080	Fresh Water Main Laying (1689m)					
EW4090	Flushing Water Main Laying (411m)					
Duct Laying for Utilities/Telecom Cabling, TCSS & Lighting						
EU5400	Duct & Cable Laying for Utilities/Telecom, CLP, BS & ELV					
EU5410	Duct & Cable Laying for TCSS & Lighting					
EU5560	ELV Installation					
Roadworks						
ER4170	Subbase (17045 ton)					
ER4200	Bitumen Pavement (24549 ton)					
ER4210	Rigid Pavement (514 m3), Footpath & EVA					
Road Furniture						
ER4150	Road Furniture					
Sign Gantry DS40, DS41 & DS75						
ES0180	Fabrication & Delivery of Sign Gantries to Site					
ES0190	Erection of Sign Gantry					
Canopy and Covered Walkway						
CC1320	Footing					
CC1330	Steel Frame Installation					
PORTION J						
Portion J Structure						
Bay 30 - 41 of CUE/Staff Subway (Portion J)						
B03260	Internal Finishes & Cable Containment (KD2)					
B03270	BS + E&M Installation for AVCSS (Stage 2) (KD2)					
030 Outbound Private Car & GV Kiosks						
A03020	Pre-fabrication for the Steel Kiosks					
A03030	Superstructure (Incl. Entrance & Toilet)					
A03050	Finishing					
A03060	BS + E&M for AVCSS Works (KD18B)					
A03070	BS for Office Accommodations (KD9)					

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30-Jun-17	3MRP updated as of 30 June 2017	ZJ	

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A03080	BS + E&M for Office Accommodation (KD10)					
A03090	Other BS + E & M Installation					
B03010	T&C for BS & Pumps SWT					
B03030	OP Application & TPIDC Inspection					
030 Outbound Kiosks, Section IX, Subject to Excision						
C03020	Pre-fabrication for the Steel Kiosks					
C03030	Superstructure					
C03040	BS + E&M for AVCSS Works (KD18C) & Finishing					
C03050	BS + E&M for AVCSS Works (KD18D) & Finishing					
C03070	Pavement & Drainage (KD30)					
Portion J Buildings						
024 Outbound Private Car Exam Building						
A02440	BS for Office Accommodations (KD18F)					
A02450	BS + E&M for Office Accommodation (KD18G)					
A02460	Other BS + E & M Installation (KD31)					
Test & Commission						
D02410	Submission & Issue of WW046 I, II, III (Inside Services & FS)					
D02420	Submission & Issue of WW046 IV, V (Inside Services & FS)					
D02430	BEEO Stage II & Assessor Certification Submission					
D02460	T&C for BS & Pumps					
D02470	OP Application & TPIDC Inspection					
Glass Canopy Installation						
B02415	Fabrication of F/C System					
B02430	Steel Frame Installation					
B02440	Glass Panel Installation					
Aluminium Metal Canopy						
B02455	Fabrication of F/C System					
B02470	Steel Frame Installation					
B02480	Aluminium Cladding Installation (KD31)					
031 Outbound IMMD and DOH Secondary Screen Building						
A03150	Finishing (KD31)					
A03160	BS for Office Accommodations (KD18F)					
A03170	BS + E&M for Office Accommodation (KD18G)					
A03180	Other BS + E & M Installation (KD31)					
Test & Commission						
C03120	Submission & Issue of WW046 I, II, III (Inside Services & FS)					
C03130	Submission & Issue of WW046 IV, V (Inside Services & FS)					
C03140	BEEO Stage II & Assessor Certification Submission					
C03150	Form LE5 Submission to EMSD					
C03160	Lift Inspection by EMSD					
C03170	T&C for BS & Pumps					
D03110	OP Application & TPIDC Inspection					
060 - Single Storey Support Building Associated with Buildings 044 & 045						
A06025	Finishing					
A06055	Energisation by CLP					
A06060	BS for Office Accommodation (Stage 10) (KD11)					
A06080	Other BS + E&M Installation					
Fuel Filling Station incl. BS & E/M						
A06090	All Works for Fuel Filling Station					
T&C and Statutory Inspection for Zone 3a						

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30-Jun-17	3MRP updated as of 30 June 2017	ZJ	

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B06020	BEEC Stage II & Assessor Certification Submission					
B06030	T&C for BS & Pumps					
B06060	Essential T&C (FSI)					
B06070	Non-Essential T&C (Non-FSI)					
B06080	OP Application & TPIDC Inspection					
Completion of Fire Services Installation and Equipment (FCD)						
F06050	Application for FSI Inspection (FSI/501) c/w FSI Plan (FSI/314)					◆ Application for FSI Inspection (FSI/501) c/w FSI
F06060	Provision of Direct Link for Fire Alarm System by Chubb					◆ Provision of
Waterworks Ordinance (WSD)						
G06020	Submission of WWO46 - Part I & II (Inside Services)					
G06030	Submission of WWO46 - Part IV (Inside Services)					
DG License & EPD Generator Approval						
G06000	DG Application					
061 Telecom Building						
A06150	Finishing (KD9)					
A06160	BS for Office Accommodations (KD9)					
A06170	BS + E&M for Office Accommodation (KD10)					
A06180	Other BS + E & M Installation					
A06190	T&C for BS					
B06170	OP Application & TPIDC Inspection					
Aluminium Metal Canopy						
B06130	Steel Frame Installation					
B06140	Aluminium Cladding Installation					
101 Outbound Traffic Control Kiosk						
A10140	Finishing					
A10150	BS + E&M for AVCSS Works (KD18A)					
A10160	BS + E&M for AVCSS Cabling (KD18B)					
A10170	BS for Office Accommodations (KD9)					
A10180	BS + E&M for Office Accommodation (KD10)					
A10190	Other BS + E & M Installation					
C10110	Submission of WWO46 - Part I & II (Inside Services)					
C10120	Submission of WWO46 - Part IV (Inside Services)					
C10130	T&C for BS & Pumps					
C10140	WSD Inspection					
C10150	FSD Inspection					
C10160	OP Application & TPIDC Inspection					
HPL Composite Panel Cladding System						
B10120	Fabrication of HPL Cladding					
B10140	Steel Frame Installation					
B10150	HPL Cladding Panel Installation (KD25)					
206 - Outbound Private Car Mobile X-ray Operation Area						
ER5780	Radiation Screen Wall Construction					
ER5800	Construction of the Area and Access to the Interface Contractor					
External Works for Portion J						
Works in Location 1.7B						
EU1500	ELV Works & T&C in Location 1.7B					
Works in Location 1.7C						
EU1530	ELV Works & T&C in Location 1.7C					
Drainage Works						
ED4220	Drainage Works (1700m & 86MHs), Stage 1					

■ Actual Work
■ Remaining Work
■ Critical
◆ Milestone

THREE MONTH ROLLING PROGRAMME
VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES
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Date	Revision	Checked	Approved
30-Apr-17	3MRP updated as of 30 Apr. 2017	ZJ	
31-May-17	3MRP updated as of 31 May 2017	ZJ	
30-Jun-17	3MRP updated as of 30 June 2017	ZJ	

Activity ID	Activity Name	2017				
		Jun	Jul	Aug	Sep	Oct
ED4340	Sewerage (425m & 11MHs), Stage 1					
ED5710	Drainage Works (1697m & 85MHs), Stage 2					
ED5720	Sewerage (425m & 12MHs), Stage 2					
Waterpipe Laying						
EW4230	Fresh Water Main Laying (1541m)					
EW4240	Flushing Water Main Laying (862m)					
SW9290	Chilled Water Pipe Laying in Portion J (external)					
Duct Laying for Utilities/Telecom Cabling, TCSS & Lighting						
EU5420	Duct & Cable Laying for Utilities/Telecom, CLP, BS & ELV					
EU5430	Duct & Cable Laying for TCSS & Lighting					
EU5570	ELV Installation					
Roadworks						
ER4320	Subbase (15400 ton), Stage 1 (Northern)					
ER4350	Bitumen Pavement (20000 ton), Stage 1 (Northern)					
ER4360	Rigid Pavement (173 m3), Footpath & EVA, Stage 1 (Northern)					
ER5680	Subbase (15409 ton), Stage 2 (Southern)					
Road Furniture						
ER4300	Road Furniture (KD25)					
Sign Gantry DS104						
ES5130	Testing for P-bored Piles					
ES5150	Fabrication & Delivery of Sign Gantries to Site					
ES5160	Erection of Sign Gantry					
PORTION K, L, M, S & T						
Portion K Building						
002 - C&ED Observation Guard Booth No. 1, Portion K						
A00220	Raft Foundation					
A00230	Superstructure					
A00240	Finishing					
A00250	BS for Office Accommodations (Degree of Completion 2)					
A00260	BS + E&M for Office Accommodation (Degree of Completion 3)					
A00270	Other BS + E & M Installation					
A00280	T&C for BS & Pumps					
A00295	OP Application & TPIDC Inspection					
002 - C&ED Observation Guard Booth No. 2, Portion K						
B00220	Raft Foundation					
B00230	Superstructure					
B00240	Finishing					
B00250	BS for Office Accommodations (Degree of Completion 2)					
B00260	BS + E&M for Office Accommodation (Degree of Completion 3)					
B00270	Other BS + E & M Installation					
B00280	T&C for BS & Pumps					
B00295	OP Application & TPIDC Inspection					
Portion M Buildings						
108 - C&ED Mobile X-ray Operation Office, Portion M						
B10810	Substructure (raft Foundation)					
B10840	Superstructure (Roof beams & Slabs)					
B10850	Finishing					
B10860	BS for Office Accommodations (KD9)					
B10870	BS + E&M for Office Accommodation (KD10)					

- Actual Work
- Remaining Work
- Critical
- Milestone

THREE MONTH ROLLING PROGRAMME
VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES
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30-Apr-17	3MRP updated as of 30 Apr. 2017	ZJ	
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30-Jun-17	3MRP updated as of 30 June 2017	ZJ	

Activity ID	Activity Name	2017				
		Jun	Jul	Aug	Sep	Oct
B10880	Other BS + E & M Installation					
B10890	T&C for BS & Pumps					
D10800	OP Application & TPIDC Inspection					
HPL Composite Panel Cladding System						
C10820	Fabrication of HPL Cladding					
C10830	Casted-in Items Installation					
C10840	Steel Frame Installation					
C10850	HPL Cladding Panel Installation					
104 DOH Screening Station, at Portion M						
C10430	Structure (Raft Foundation)					
C10440	Finishing					
C10450	BS for Office Accommodations (KD9)					
C10460	BS + E&M for Office Accommodation (KD10)					
C10470	Other BS + E & M Installation					
C10480	T&C for BS & Pumps					
D10490	OP Application & TPIDC Inspection					
Facade Envelop Structure Installation						
D10455	Fabrication of F/C System					
D10460	Casted-in Items Installation					
D10470	Steel Frame Installation					
D10480	Envelop Cladding and Roofing Panel Installation					
203 - Outbound Coach/Shuttle Bus Exam Area & Mobile X-ray Operation Area						
ER5770	Radiation Screen Wall Construction					
ER5870	Construction of the Area and Access to the Interface Contractor					
External Works						
Additional Works (Filling & RE Slope), SA1						
ED3230	C1 Contractor to Completed cooling mains at east Portion (Stage 2)					
ED3232	C2 provide access to north slope at Portion K					
ED3233	Temp. access at north slope					
ED3234	Removal of temp. access at east slope					
ED3310	C1 Contractor to Complete Handover the South Portion					
ED3320	Fill Platform from +11.5PD to near PCB (South)					
ED3330	Add surcharge to Platform at +14.5mPD near PCB (South)					
ED3332	Consolidation of fill at the Platform (South East)					
ED3334	Remove surcharge at the Platform (South East)					
ED3336	Construct Rock Fill Slope near PCB (South East)					
ED3338	Consolidation of fill at the Platform (South West)					
ED3410	C2 Contractor to complete abutment at the North (2 nos.)					
ED3420	Fill Slope around C2 abutments					
Construction of Slopes						
ED3440	Construction of fill slope (East)					
ED3520	Construct RE slope (West)					
ED3550	Construction of fill slope (North)					
Drainage Works						
ED4370	Drainage Works (2129m & 102MHs)					
Waterpipe Laying						
EW4380	Fresh Water Main Laying (1216m)					
Duct Laying for Utilities/Telecom Cabling, TCSS & Lighting						
EU5440	Duct & Cable Laying for Utilities/Telecom, CLP, BS & ELV					
EU5450	Duct & Cable Laying for TCSS & Lighting					

█ Actual Work
█ Remaining Work
█ Critical
◆ Milestone

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30-Apr-17	3MRP updated as of 30 Apr. 2017	ZJ	
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30-Jun-17	3MRP updated as of 30 June 2017	ZJ	

Activity ID	Activity Name	2017				
		Jun	Jul	Aug	Sep	Oct
Roadworks						
ER5710	Subbase (9225 ton)					
ER5720	Bitumen Pavement (9102 ton)					
ER5730	Rigid Pavement (1525 m3) & Footpath					
Canopy and Covered Walkway						
CC1400	Shop drawing, Approved & Fabrication					
CC1410	Footing					
CC1420	Steel Frame Installation					
CC1430	Panel Installation					
Road Furniture						
ER4450	Road Furniture (KD25)					
PORTION N						
Portion N Structure						
Box Culvert B						
Box Culvert Structure						
SB0710	Box B - Construction (Stage 1)					
SB0720	Box B - Construction (Stage 2)					
SB0722	Box B - Temporary Works for Construction of Outfall Structure					
SB0730	Box B - Outfall Structure					
Portion N Buildings						
104 DOH Screening Station, at Portion N						
C10410	Structure (Raft Foundation)					
C10420	Finishing					
E10410	BS for Office Accommodations (KD9)					
E10420	BS + E&M for Office Accommodation (KD10)					
E10430	Other BS + E & M Installation					
E10440	T&C for BS & Pumps					
E10460	OP Application & TPIDC Inspection					
Facade Envelop Structure Installation						
D10415	Fabrication of F/C System					
D10420	Casted-in Items Installation					
D10430	Steel Frame Installation					
106 C&ED Detention Area Guard Booth						
A10610	Structure (Raft Foundation)					
A10640	Finishing					
E10640	BS for Office Accommodations (KD9)					
E10650	BS + E&M for Office Accommodation (KD10)					
E10660	Other BS + E & M Installation					
E10670	T&C for BS & Pumps					
Facade Envelop Structure Installation						
B10615	Fabrication of F/C System					
B10620	Casted-in Items Installation					
B10630	Steel Frame Installation					
107 C&ED Mobile X-ray Operation Office, Portion N						
A10710	Substructure (Raft Foundation)					
A10740	Superstructure					
A10750	Finishing (KD9)					
A10760	Other BS + E & M Installation (KD10)					
HPL Composite Panel Cladding System						

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

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

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Activity ID	Activity Name	2017				
		Jun	Jul	Aug	Sep	Oct
B10720	Fabrication of HPL Composite Panel System	Actual Work				
B10730	Casted-in Items Installation		Remaining Work			
B10740	Steel Frame Installation			Remaining Work		
B10750	HPL Cladding Panel Installation				Remaining Work	
200 - Inbound/Outbound Vehicle Detection Area						
ER5810	Construction of the Area and Access to the Interface Contractor		Remaining Work			
202 - Outbound Cargo Mobile X-ray Operation Area						
ER5790	Radiation Screen Wall Construction	Actual Work	Remaining Work			
ER5820	Construction of the Area and Access to the Interface Contractor			Remaining Work		
211 - ImmD GV Secondary Examination Bays Outbound						
ER5840	Construction of the Bays and Access to the Interface Contractor		Remaining Work			
External Works for Portion N						
Works in Location 1.7A						
EU1540	ELV Works & T&C in Location 1.7A		Critical			
Drainage Works						
ED4620	Drainage Works (964m & 56MHs), Stage 1 (Southern)	Actual Work	Critical			
ED4650	Sewerage (383m & 12MHs), Stage 1 (Southern)	Actual Work	Critical			
ED5750	Drainage Works (963m & 55MHs), Stage 2 (Northern)				Critical	
ED5760	Sewerage (383m & 12MHs), Stage 2 (Northern)				Critical	
Waterpipe Laying						
EW4530	Fresh Water Main Laying (641m)	Actual Work	Remaining Work			
EW4540	Flushing Water Main Laying (413m)	Actual Work	Remaining Work			
SW9300	Chilled Water Pipe Laying in Portion N (external)				Remaining Work	
Duct Laying for Utilities/Telecom Cabling, TCSS & Lighting						
EU5460	Duct & Cable Laying for Utilities/Telecom, CLP, BS & ELV		Critical			
EU5470	Duct & Cable Laying for TCSS & Lighting		Critical			
Roadworks						
ER4620	Subbase (6475 ton)		Critical			
ER4650	Bitumen Pavement (10144ton)		Critical			
ER4660	Rigid Pavement (183 m3), Footpath & EVA		Critical			
Road Furniture						
ER4600	Road Furniture (KD25)				Critical	
PORTION P						
Portion Structure						
Retaining Wall RW1						
RW1110	Construction of Retaining Wall RW1 (U-shape, 5 bays)	Actual Work	Critical			
RW1140	Backfilling RW1			Critical		
RW1150	Parapet RW1 (20 pours)				Critical	
Portion P Buildings						
105 IMMDD Guard Booth, Portion P						
A10510	Excavation + Blinding	Actual Work				
A10520	Substructure (Raft Foundation)	Actual Work	Critical			
A10530	On Grade Ground Slab		Critical			
A10540	Finishing			Remaining Work		
E10500	BS for Office Accommodations (KD9)			Remaining Work		
E10510	BS + E&M for Office Accommodation (KD10)				Remaining Work	
E10520	Other BS + E & M Installation				Critical	
Facade Envelop Structure Installation						
A10560	Shop Drawing Submission and Approval	Actual Work				

■ Actual Work
■ Remaining Work
■ Critical
◆ Milestone

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30-Apr-17	3MRP updated as of 30 Apr. 2017	ZJ	
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30-Jun-17	3MRP updated as of 30 June 2017	ZJ	

Activity ID	Activity Name	2017				
		Jun	Jul	Aug	Sep	Oct
A10570	Casted-in Items Installation		█			
A10580	Steel Frame Installation			█		
A10590	Envelop Cladding and Roofing Panel Installation				█	
External Works for Portion P						
Drainage Works						
ED4670	Drainage Works (2957m & 128MHs)	█	█	█	█	█
ED4790	Sewerage (269m & 7MHs)	█	█	█	█	█
Waterpipe Laying						
EW4680	Fresh Water Main Laying (1270m)	█	█	█	█	█
EW4690	Flushing Water Main Laying (455m)	█	█	█	█	█
Duct Laying for Utilities/Telecom Cabling, TCSS & Lighting						
EU5480	Duct & Cable Laying for Utilities/Telecom, CLP, BS & ELV			█	█	█
EU5600	ELV Installation				█	█
EU5640	Access date to Telephone Companies				◆	
Roadworks						
ER4770	Subbase (16519 ton)		█	█	█	█
ER4800	Bitumen Pavement (23958 ton)			█	█	█
ER4810	Rigid Pavement (220 m3), Footpath & EVA			█	█	█
Road Furniture						
ER4750	Road Furniture				█	█
PORTION Q						
External Works for Portion Q						
Duct Laying for Utilities/Telecom Cabling, TCSS & Lighting						
ED5570	Duct & Cable Laying for Utilities/Telecom, CLP, BS & ELV		█	█	█	█
ED5580	Duct & Cable Laying for TCSS & Lighting		█	█		
EU1490	ELV System Installation for Contract HY/2013/04		█	█		
Roadworks						
AS0170	Initial Survey		█			
AS1810	C3-S1 Slope Construction		█	█		
AS1820	C3-S2 Slope Construction		█	█		
ER4920	Subbase (104 ton)			█	█	█
ER4950	Bitumen Pavement (215 ton)				█	█
PORTION R						
Portion R Building						
002 - C&ED Observation Guard Booth, Portion R						
D00210	Excavation + Blinding		█			
D00220	Raft Foundation		█	█		
D00230	Superstructure			█	█	█
D00240	Finishing				█	█
D00250	BS for Office Accommodations (KD9)				█	█
D00260	BS + E&M for Office Accommodation (KD10)					█
D00270	Other BS + E & M Installation					█
External Works for Portion R						
Drainage Works						
ED4960	Drainage Works (1040m & 70MHs)	█	█	█	█	█
ED5080	Sewerage (272m & 7MHs)	█	█	█	█	█
Waterpipe Laying						
EW4970	Fresh Water Main Laying (614m)		█	█	█	█
EW4980	Flushing Water Main Laying (222m)		█	█	█	█

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

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

Date	Revision	Checked	Approved
30-Apr-17	3MRP updated as of 30 Apr. 2017	ZJ	
31-May-17	3MRP updated as of 31 May 2017	ZJ	
30-Jun-17	3MRP updated as of 30 June 2017	ZJ	

Activity ID	Activity Name	2017				
		Jun	Jul	Aug	Sep	Oct
Duct Laying for Utilities/Telecom Cabling, TCSS & Lighting						
EU5500	Duct & Cable Laying for Utilities/Telecom, CLP, BS & ELV					
EU5510	Duct & Cable Laying for TCSS & Lighting					
Roadworks						
ER5060	Subbase (1734 ton)					
Landscape Works						
A5170	Design and Procurement for Irrigation System					
A5190	All landscape Soft & Hard Works					

<ul style="list-style-type: none"> Actual Work Remaining Work Critical Milestone 	THREE MONTH ROLLING PROGRAMME VEHICLE CLEARANCE PLAZAS AND ANCILLARY BUILDINGS AND FACILITIES Page 25 of 25	Date	Revision	Checked	Approved
		30-Apr-17	3MRP updated as of 30 Apr. 2017	ZJ	
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		30-Jun-17	3MRP updated as of 30 June 2017	ZJ	

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



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

- █ Actual Level of Effort
- █ Actual Work
- █ Remaining Work
- █ Critical Remaining Work
- ◆ Milestone
- ▬ summary

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



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

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

Programme No.: HZMB-DWP Data Date: 14-Aug-15	<ul style="list-style-type: none"> Actual Level of Effort Actual Work Remaining Work Critical Remaining Work Milestone summary 	Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities - Automatic Vehicle Clearance Support System (AVCSS)		<table border="1" style="width: 100%;"> <tr> <td>Date</td> <td>Revision</td> <td>Checked</td> <td>Approved</td> </tr> <tr> <td>14-Nov-16</td> <td>Rev.: 0</td> <td>WC</td> <td>LC</td> </tr> </table>	Date	Revision	Checked	Approved	14-Nov-16	Rev.: 0	WC	LC
Date	Revision	Checked	Approved									
14-Nov-16	Rev.: 0	WC	LC									

Activity ID	Activity Name	2015				2016				2017				2018				2019	
		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	
A5360	Pre Site and Facility Inspection by Contractor at Location 16 - Deg2																		
A5370	Joint Site and Facility Inspection with Interface Contractor at Location 16 - Deg2																		
A5375	Pre Site and Facility Inspection by Contractor at Location 17 - Deg1																		
A5378	Joint Site and Facility Inspection with Interface Contractor at Location 17 - Deg1																		
A5380	Pre Site and Facility Inspection by Contractor at Location 17 - Deg2																		
A5390	Joint Site and Facility Inspection with Interface Contractor at Location 17 - Deg2																		
A5395	Pre Site and Facility Inspection by Contractor at Location 18 - Deg1																		
A5396	Joint Site and Facility Inspection with Interface Contractor at Location 18 - Deg1																		
A5400	Pre Site and Facility Inspection by Contractor at Location 18 - Deg2																		
A5410	Joint Site and Facility Inspection with Interface Contractor at Location 18 - Deg2																		
A5420	Pre Site and Facility Inspection by Contractor at Location 19 - Deg1																		
A5430	Joint Site and Facility Inspection with Interface Contractor at Location 19 - Deg1																		
A5440	Pre Site and Facility Inspection by Contractor at Location 19 - Deg2																		
A5450	Joint Site and Facility Inspection with Interface Contractor at Location 19 - Deg2																		
A5470	Pre Site and Facility Inspection by Contractor at Inbound Vehicle Clearance Plaza																		
A5480	Joint Site and Facility Inspection with Interface Contractor at Inbound Vehicle Clearance Plaza																		
A5490	Pre Site and Facility Inspection by Contractor at Outbound Vehicle Clearance Plaza																		
A5550	Joint Site and Facility Inspection with Interface Contractor at Outbound Vehicle Clearance Plaza																		
Access Dates		<p>◆ Location 1(PCB (001) Basement)-Deg1 (270d), 10-May-16*</p> <p>◆ Location 1(PCB (001) ELV Room (Grid Line E3))-Deg1 (270d), 10-May-16*</p> <p>◆ Location 2(PCB (001) First Floor Main Server Room)-Deg1 (330d), 09-Jul-16*</p> <p>◆ Location 2(PCB (001) First Floor Main Server Room)-Deg2 (380d), 28-Aug-16*</p> <p>◆ Location 2(PCB (001) First Floor Main Server Room) - For Server Installation, 28-Aug-16*</p> <p>◆ Location 2(PCB (001) Ground Floor ELV Room (Grid Line E3)) - Deg1 (330d), 09-Jul-16*</p> <p>◆ Location 2(PCB (001) Ground Floor DOH Port Health Control Room (Grid Line BD5)) - Deg1 (330d), 09-Jul-16*</p> <p>◆ Location 2(PCB (001) Ground Floor DOH Port Health Control Room (Grid Line BD5)) - Deg2 (380d), 09-Jul-16*</p> <p>◆ Location 3(Inbd Cargo Exam Bldg (037) MDF Room)-Deg1 (400d), 17-Sep-16*</p> <p>◆ Location 3(Inbd Cargo Exam Bldg (037) ELV Room)-Deg1 (400d), 17-Sep-16*</p> <p>◆ Location 3(Inbd Cargo Exam Bldg (037) Platform Control Room)-Deg1 (400d), 17-Sep-16*</p> <p>◆ Location 3(Inbd Cargo Exam Bldg (037) Platform Control Room)-Deg2 (500d), 17-Sep-16*</p> <p>◆ Location 3(Inbd Cargo Exam Bldg (037) Inspector Offices 128,129,130,131,128,129,140,141)-Deg1 (400d), 17-Sep-16*</p> <p>◆ Location 3(Inbd Cargo Exam Bldg (037) Inspector Offices 128,129,130,131,128,129,140,141)-Deg2 (500d), 17-Sep-16*</p> <p>◆ Location 3a(Inbd Cargo Exam Bldg ROCARS Room)-Deg1 (-), 17-Sep-16*</p> <p>◆ Location 3a(Inbd Cargo Exam Bldg ROCARS Room)-Deg2 (480d), 06-Dec-16*</p> <p>◆ Location 3a(Inbd Cargo Exam Bldg Main Server Room)-Deg1 (-), 17-Sep-16*</p> <p>◆ Location 3a(Inbd Cargo Exam Bldg Main Server Room)-Deg2 (480d), 06-Dec-16*</p> <p>◆ Location 3a(Inbd Cargo Exam Bldg Main Server Room) - For Server installation, 06-Dec-16*</p> <p>◆ Location 4(Outbd Cargo Exam Bldg (023))-Deg1 (530d), 25-Jan-17*</p> <p>◆ Location 4(Outbd Cargo Exam Bldg (023))-Deg2 (680d), 24-Jun-17*</p> <p>◆ Location 4a(Outbd Cargo Exam Bldg (023))-Deg1 (-), 25-Jan-17*</p>																	

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		Q2	Q3	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	
A1162	Location 4a(Outbd Cargo Exam Bldg (023))-Deg2 (630d)																	◆ Location 4a(Outbd Cargo Exam Bldg (023))-Deg2 (630d), 05-May-17*
A1170	Location 5(Common Utility Enclosure & Staff Subway)-Deg1 (320d)																	◆ Location 5(Common Utility Enclosure & Staff Subway)-Deg1 (320d), 29-Jun-16*
A1180	Location 5(Common Utility Enclosure & Staff Subway)-Deg2 (-)																	◆ Location 5(Common Utility Enclosure & Staff Subway)-Deg2 (-), 16-Nov-16*
A1190	Location 6(Common Utility Enclosure & Staff Subway)-Deg1 (400d)																	◆ Location 6(Common Utility Enclosure & Staff Subway)-Deg1 (400d), 17-Sep-16*
A1200	Location 6(Common Utility Enclosure & Staff Subway)-Deg2 (-)																	◆ Location 6(Common Utility Enclosure & Staff Subway)-Deg2 (-), 06-Nov-16*
A1210	Location 7(Common Utility Enclosure & Staff Subway)-Deg1 (270d)																	◆ Location 7(Common Utility Enclosure & Staff Subway)-Deg1 (270d), 10-May-16*
A1230	Location 8(Inbd Private Car Annex (025))-Deg1 (430d)																	◆ Location 8(Inbd Private Car Annex (025))-Deg1 (430d), 17-Oct-16*
A1240	Location 8(Inbd Private Car Annex (025))-Deg2 (580d)																	◆ Location 8(Inbd Private Car Annex (025))-Deg2 (580d), 16-May-17*
A1241	Location 8(Inbd Private Car Annex (025) Canopy)-Deg1 (430d)																	◆ Location 8(Inbd Private Car Annex (025) Canopy)-Deg1 (430d), 17-Oct-16*
A1242	Location 8(Inbd Private Car Annex (025) Canopy)-Deg2 (580d)																	◆ Location 8(Inbd Private Car Annex (025) Canopy)-Deg2 (580d), 16-May-17*
A1250	Location 9(Outbd Private Car Annex (032))-Deg1 (520d)																	◆ Location 9(Outbd Private Car Annex (032))-Deg1 (520d), 15-Jan-17*
A1260	Location 9(Outbd Private Car Annex (032))-Deg2 (660d)																	◆ Location 9(Outbd Private Car Annex (032))-Deg2 (660d), 04-Jun-17*
A1261	Location 9(Outbd Private Car Annex (032) Canopy)-Deg1 (520d)																	◆ Location 9(Outbd Private Car Annex (032) Canopy)-Deg1 (520d), 15-Jan-17*
A1262	Location 9(Outbd Private Car Annex (032) Canopy)-Deg2 (660d)																	◆ Location 9(Outbd Private Car Annex (032) Canopy)-Deg2 (660d), 04-Jun-17*
A1270	Location 10(Shuttle Bus Kiosks (006))-Deg1 (480d)																	◆ Location 10(Shuttle Bus Kiosks (006))-Deg1 (480d), 06-Dec-16*
A1280	Location 10(Shuttle Bus Kiosks (006))-Deg2 (550d)																	◆ Location 10(Shuttle Bus Kiosks (006))-Deg2 (550d), 14-Feb-17*
A1281	Location 10(Shuttle Bus Kiosks (006) Canopy)-Deg1 (480d)																	◆ Location 10(Shuttle Bus Kiosks (006) Canopy)-Deg1 (480d), 06-Dec-16*
A1282	Location 10(Shuttle Bus Kiosks (006) Canopy)-Deg2 (550d)																	◆ Location 10(Shuttle Bus Kiosks (006) Canopy)-Deg2 (550d), 14-Feb-17*
A1290	Location 11(Outbd Coach Kiosks (009))-Deg1 (400d)																	◆ Location 11(Outbd Coach Kiosks (009))-Deg1 (400d), 17-Sep-16*
A1300	Location 11(Outbd Coach Kiosks (009))-Deg2 (480d)																	◆ Location 11(Outbd Coach Kiosks (009))-Deg2 (480d), 06-Dec-16*
A1301	Location 11(Outbd Coach Kiosks (009) Canopy)-Deg1 (400d)																	◆ Location 11(Outbd Coach Kiosks (009) Canopy)-Deg1 (400d), 17-Sep-16*
A1302	Location 11(Outbd Coach Kiosks (009) Canopy)-Deg2 (480d)																	◆ Location 11(Outbd Coach Kiosks (009) Canopy)-Deg2 (480d), 06-Dec-16*
A1303	Location 11(Inbd Coach Kiosks (010))-Deg1 (400d)																	◆ Location 11(Inbd Coach Kiosks (010))-Deg1 (400d), 17-Sep-16*
A1304	Location 11(Inbd Coach Kiosks (010))-Deg2 (480d)																	◆ Location 11(Inbd Coach Kiosks (010))-Deg2 (480d), 06-Dec-16*
A1305	Location 11(Inbd Coach Kiosks (010) Canopy)-Deg1 (400d)																	◆ Location 11(Inbd Coach Kiosks (010) Canopy)-Deg1 (400d), 17-Sep-16*
A1306	Location 11(Inbd Coach Kiosks (010) Canopy)-Deg2 (480d)																	◆ Location 11(Inbd Coach Kiosks (010) Canopy)-Deg2 (480d), 06-Dec-16*
A1310	Location 12(Inbd Private Car Kiosks(027))-Deg1 (400d)																	◆ Location 12(Inbd Private Car Kiosks(027))-Deg1 (400d), 17-Sep-16*
A1311	Location 12(Inbd Private Car Kiosks(027))-Deg2 (480d)																	◆ Location 12(Inbd Private Car Kiosks(027))-Deg2 (480d), 06-Dec-16*
A1312	Location 12(Inbd Private Car Kiosks(027) Canopy)-Deg1 (400d)																	◆ Location 12(Inbd Private Car Kiosks(027) Canopy)-Deg1 (400d), 17-Sep-16*
A1313	Location 12(Inbd Private Car Kiosks(027) Canopy)-Deg2 (480d)																	◆ Location 12(Inbd Private Car Kiosks(027) Canopy)-Deg2 (480d), 06-Dec-16*
A1314	Location 12(Inbd GV Kiosks (028))-Deg1 (400d)																	◆ Location 12(Inbd GV Kiosks (028))-Deg1 (400d), 17-Sep-16*
A1315	Location 12(Inbd GV Kiosks (028))-Deg2 (480d)																	◆ Location 12(Inbd GV Kiosks (028))-Deg2 (480d), 06-Dec-16*
A1316	Location 12(Inbd GV Kiosks (028) Canopy)-Deg1 (400d)																	◆ Location 12(Inbd GV Kiosks (028) Canopy)-Deg1 (400d), 17-Sep-16*
A1317	Location 12(Inbd GV Kiosks (028) Canopy)-Deg2 (480d)																	◆ Location 12(Inbd GV Kiosks (028) Canopy)-Deg2 (480d), 06-Dec-16*
A1318	Location 12(Outbd GV Kiosks (029))-Deg1 (400d)																	◆ Location 12(Outbd GV Kiosks (029))-Deg1 (400d), 17-Sep-16*
A1319	Location 12(Outbd GV Kiosks (029))-Deg2 (480d)																	◆ Location 12(Outbd GV Kiosks (029))-Deg2 (480d), 06-Dec-16*
A1320	Location 12(Outbd GV Kiosks (029) Canopy)-Deg1 (400d)																	◆ Location 12(Outbd GV Kiosks (029) Canopy)-Deg1 (400d), 17-Sep-16*
A1321	Location 12(Outbd GV Kiosks (029) Canopy)-Deg2 (480d)																	◆ Location 12(Outbd GV Kiosks (029) Canopy)-Deg2 (480d), 06-Dec-16*
A1330	Location 13(Outbd Private Car Kiosks (030))-Deg1 (480d)																	◆ Location 13(Outbd Private Car Kiosks (030))-Deg1 (480d), 06-Dec-16*
A1340	Location 13(Outbd Private Car Kiosks (030))-Deg2 (550d)																	◆ Location 13(Outbd Private Car Kiosks (030))-Deg2 (550d), 14-Feb-17*
A1341	Location 13(Outbd Private Car Kiosks (030) Canopy)-Deg1 (480d)																	◆ Location 13(Outbd Private Car Kiosks (030) Canopy)-Deg1 (480d), 06-Dec-16*
A1342	Location 13(Outbd Private Car Kiosks (030) Canopy)-Deg2 (550d)																	◆ Location 13(Outbd Private Car Kiosks (030) Canopy)-Deg2 (550d), 14-Feb-17*
A1350	Location 14(Future-Outbd/Inbd Private Car Kiosks)-Deg1 (610d)																	◆ Location 14(Future-Outbd/Inbd Private Car Kiosks)-Deg1 (610d), 15-Apr-17*
A1370	Location 15(Inbd Traffic Control Kiosk (100))-Deg1 (400d)																	◆ Location 15(Inbd Traffic Control Kiosk (100))-Deg1 (400d), 17-Sep-16*
A1380	Location 15(Inbd Traffic Control Kiosk (100))-Deg2 (480d)																	◆ Location 15(Inbd Traffic Control Kiosk (100))-Deg2 (480d), 06-Dec-16*

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

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

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Coding		05-Jan-17, Coding CCS, SURCON, SYSCON, CDDBS Development Stage 1 VTS Development Stage 1 VIDS Development Stage 1 CCS, SURCON, SYSCON, CDDBS Development Stage 2 VTS Development Stage 2 VIDS Development Stage 2															
Software System Inetgration		22-May-17, Software System Inetgration Test Plan Documentation Submission Engineer's Review and Approval for Test Plan Documentation Submission Software System Integration Test CCS/SYSCON/SURCON/CDDBS/VTS/VIDS Software Enhancement Software User Acceptance Test (UAT)															
Prototype & Software Simulation Tests		09-Sep-16, Prototype & Software Simulation Tests Prototype Test Document Engineer's Approval for Testing Document CCWS with CDDBS, SURCON and SYSCON (Software Simulation/ Software Integration Test) Vehicle Tracking System (VTS) (Software Simulation/ Software Integration Test) LED Displays (VID, ODB and XDB) All-In-One Panel (AIOP) Prototype Testing Report Submission Engineer's Approval for Prototype Testing Report															
Procurement - Phase 1 / Section I		27-Dec-16, Procurement - Phase 1 / Section I Procurement of Equipment for Phase 1/Section I Procurement of Cable and Accessories for Phase 1 /Section I Procurement of All Servers and Workstations															
Supply/Manufacture products for FAT		10-Nov-16, Supply/Manufacture products for FAT Supply/Manufacture LED Display (ODB, VID and XDB) for FAT Supply/Manufacture All-In-One Panel (AIOP) for FAT Supply/Manufacture off-the-shelf equipment for FAT															
Factory Acceptance Test (FAT)		12-Dec-16, Factory Acceptance Test (FAT) FAT Procedure Document Engineer's Approval for FAT Procedure Document FAT for Licence Plate Recognition System (LPRS) FAT for PA/Intercom FAT for ODB FAT for XDB FAT for VID FAT for Video Management System (VMS) FAT for Vehicle Tracking System (VTS) FAT for Communication Network (CMN) FAT for All-In-One Panel (AIOP) FAT for AVCSS System Test FAT Report Submission															

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A4370	Engineer's Approval for FAT Report Submission																		
Supply/Manufacture Equipment																			
A6830	Supply/Manufacture LED (ODB, VID and XDB) Display for installation																		
A6840	Supply/Manufacture AIOF for installation																		
Delivery and Bench Acceptance Test for Phase 1/ Section I																			
A6740	Material On-Site for Phase 1/Section I																		
A6750	Material Bench Acceptance Test for Phase 1/Section I																		
A6850	Cable On-Site for Phase 1/Section I																		
A6960	AIOF On-Site for Phase 1/Section I																		
A6970	AIOF Bench Acceptance Test for Phase 1/Section I																		
A6980	LED (ODB, VID and XDB) On-Site for Phase 1/Section I																		
A6990	LED (ODB, VID and XDB) Bench Acceptance Test for Phase 1/Section I																		
Installation - Phase 1 / Section I																			
Location 1(PCB (001) Basement)																			
A3081	Cable Laying and termination at Location 1 and Location 2																		
Location 1(PCB (001) ELV Room (Grid Line E3))																			
A3101	Cable Laying and termination at Location 1 and Location 2																		
Location 2(PCB (001) Ground Floor ELV Room (Grid Line E3))																			
A3121	Cable Laying and termination at Location 1 and Location 2																		
Location 2(PCB (001) Ground Floor DOH Port Health Control Room (Grid Line BD))																			
A2041	Cable Laying and termination at Location 1 and Location 2																		
A2042	Cable Testing																		
A2043	Intercom and PA system Installation																		
A2044	Intercom and PA system tuning																		
Location 2(PCB (001) First Floor Main Server Room)																			
A2001	Cable Laying and termination at Location 1 and Location 2																		
A2002	Cable Testing																		
A2003	AVCSS Network and Server Installation																		
A2004	AVCSS Network and Server Tuning																		
Location 3(Inbd Cargo Exam Bldg (037) Inspector Offices 128,129,130,131,128,12)																			
A3241	Cable Laying and termination in Location 3 and Location 3a																		
A3242	AVCSS SURCON WS and 55" LCD Installation																		
A3243	VTS WS Installation																		
A3245	SURCON, WS Tuning																		
Location 3(Inbd Cargo Exam Bldg (037) ELV Room)																			
A3210	Cable Laying and termination between Location 3 and CUE																		
Location 3(Inbd Cargo Exam Bldg (037) Platform Control Room)																			
A2071	Cable Laying and termination in Location 3 and Location 3a																		
A2072	AVCSS SYSCON WS and 55" TV Wall Installation																		
A2074	AVCSS SYSCON WS Tuning																		
Location 3(Inbd Cargo Exam Bldg (037) MDF Room)																			
A3190	Cable Laying and termination between Location 3 and CUE																		
Location 3a(Inbd Cargo Exam Bldg (037) ROCARS Room)																			
A2091	Cable Laying and termination in Location 3 and Location 3a																		
A2092	AVCSS SYSCON,SURCON and Intercom Installation																		

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A2093	VTS WS Installation																
A2094	VID WS Installation																
A2096	SURCON, SYSCON, WS Tuning																
Location 3a(Inbd Cargo Exam Bldg Main Server Room)																	
A3330	Cable Laying and termination in Location 3 and Location 3a																
A3340	AVCSS Server Installation																
A3350	VTS Server Installation																
A3360	Servers Tuning																
Location 4(Outbd Cargo Exam Bldg (023) MDF Room)																	
A3410	Cable Laying and termination between CUE and Location 4																
Location 4 and 4a(Outbd Cargo Exam Bldg (023) ROCARS Room)																	
A3370	Cable Laying and termination in Location 4 and 4a																
A3380	AVCSS SYSCON, SURCON and Intercom Installation																
A3390	VTS WS Installation																
A3400	SYSCON, SURCON, WS Tuning																
Location 5(Common Utility Enclosure & Staff Subway)																	
A3430	Cable Laying between Location 5 and Location 7																
A3440	Cable Laying between Location 5 and Location 6																
A3480	ODB Switch Installation at EL Room 2-7																
Location 6(Common Utility Enclosure & Staff Subway)																	
A3450	Cable Laying between Location 5 and Location 6																
A3490	ODB Switch Installation at EL Room 8-9,11-12																
Location 7(Common Utility Enclosure & Staff Subway)																	
A3470	Cable Laying between Location 5 and Location 7																
Location 12(Inbd Private Car Kiosks,GV Kiosks (027,028,029))																	
Inbd Private Car Kiosks(027) - 9 nos (Phase 1)																	
A2452	Cable Containment in Kiosks																
A2453	Cable Laying and termination																
A2454	Cable Splicing, Testing and Labeling																
A2460	AVCSS/DOH/MOM Kiosk Equipment Installation (9 nos)																
A2470	ODB & XDB installation (9 nos)																
A4380	Inbd Private Car Kiosk Installation Complete																
Inbd Goods Vehicle Kiosks(028) - 5 nos (Phase 1)																	
A2532	Cable Containment in Kiosks																
A2533	Cable Laying and termination																
A2534	Cable Splicing, Testing and Labeling																
A2540	AVCSS/DOH/MOM Kiosk Equipment Installation (5 nos)																
A2550	AIOP Installation (5 nos)																
A2560	ODB & XDB installation (5 nos)																
A4390	Inbd Goods Vehicle Kiosks Installation Complete																
Outbd Goods Vehicle Kiosks(029) - 5 nos (Phase 1)																	
A2572	Cable Containment in Kiosks																
A2573	Cable Laying and termination																
A2574	Cable Splicing, Testing and Labeling																
A2580	AVCSS/DOH/MOM Kiosk Equipment Installation (5 nos)																

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		Q2	Q3	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
A2590	AIOP Installation (5 nos)																
A2600	ODB & XDB installation (5 nos)																
A4400	Outbd Goods Vehicle Kiosks Installation Complete																
Location 13(Outbd Private Car Kiosks (030)) - 9 nos (Phase 1)																	
A3582	Cable Containment in Kiosks																
A3583	Cable Laying and termination																
A3584	Cable Splicing, Testing and Labeling																
A3590	AVCSS/DOH/MOM Kiosk Equipment Installation (9 nos)																
A3600	ODB & XDB installation (9 nos)																
A4410	Outbd Private Car Kiosks Installation Complete																
Location 14(Future-Outbd/Inbd Private Car Kiosks) - 6+6 nos																	
A2441	Cable Laying and termination at ELV Room in CUE																
Location 15(Inbd Traffic Control Kiosk (100))																	
A3651	Cable Laying and termination																
A3652	AVCSS SYSCON, SURCON Installation																
A3660	VTS WS and 55" LCD Installation																
A3670	SYSCON, SURCON, WS Tuning																
Location 16(Outbd Traffic Control Kiosk (101))																	
A3701	Cable Laying and termination																
A3702	AVCSS SYSCON, SURCON Installation																
A3710	VTS WS and 55" LCD Installation																
Location 17(Inbd Private Car Exam Bldg(033) Operational Office)																	
A3750	Cable Laying and termination																
A3760	AVCSS SURCON and 55" LCD Installation																
A3770	SURCON Tuning																
Location 18 (Outbd Private Car Exam Bldg(024) Operational Office)																	
A3780	Cable Laying and termination																
A3790	AVCSS SURCON and 55" LCD Installation																
Location 19 (DOH Cargo Clearance Bldg(043))																	
A2111	Cable Laying and termination between Location 19 and CUE																
A2112	Cable Laying in Location 19																
A2113	PA and Intercom Installation																
A2123	PA and Intercom Tuning																
Inbd Vehicle Clearance Plaza - 8 nos VID, 7 nos VTS, 4 nos TLS																	
A4050	Inbound VID cabling from pillar box to VID field equipment																
A4052	Inbound VTS cabling from pillar box to VTS field equipment																
A4054	Inbound TLS cabling from pillar box to TLS field equipment																
A4060	Inbound VID field equipment installation (8 VID)																
A4062	Inbound VTS field equipment installation (4 RFID + 3 Cameras)																
A4064	Inbound TLS field equipment installation (4 TLS)																
A4066	Inbound VID, VTS and TLS field equipment tuning																
Outbd Vehicle Clearance Plaza - 8 nos VID, 6 nos VTS, 4 nos TLS																	
A4110	Outbound VID cabling from pillar box to VID field equipment																
A4120	Outbound VTS cabling from pillar box to VTS field equipment																
A4130	Outbound TLS cabling from pillar box to TLS field equipment																

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		Q2	Q3	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
A4140	Outbound VID field equipment installation (8 VID)																
A4150	Outbound VTS field equipment installation (3 RFID + 3 Cameras)																
A4170	Outbound TLS field equipment installation (4 TLS)																
A4180	Outbound VID, VTS and TLS field equipment tuning																
Underground Ducting between Inbd Cargo Exam Bldg (037) and CUE																	
A3810	Cable Laying and termination (note: Access Date by C03)																
Underground Ducting between Inbd Cargo Exam Bldg (037) and Inbd Vehicle Clea																	
A3830	Cable Laying and termination (note: Access Date by C03)																
Underground Ducting between CUE and Outbd Car Exam Bldg (023)																	
A3850	Cable Laying and termination (note: Access Date by C03)																
Underground Ducting Between Outbd Cargo Exam Bldg (023) and Outbd Vehicle C																	
A3870	Cable Laying and termination (note: Access Date by C03)																
Underground Ducting between CUE and Outbd Vehicle Clearance Plaza																	
A3890	Cable Laying and termination (note: Access Date by C03)																
On-Site Test and Commissioning (Phase 1 / Section I)																	
A2150	Testing & Commissioning Documents Submission (8 weeks before Testings carried out)																
A2151	Engineer Approval for T&C Document																
A2152	Joint Site Inspection for Permanent Power/Tele-communication for Initial on-site testing																
A2153	Initial on-site Testing & Commissioning																
Site Acceptance Test (Phase 1 / Section I)																	
A6601	Interface Readiness CED(LBS, CED IT, Metro-Ethernet) and IMMD (AVS)																
A6602	SAT for AVCSS																
A6603	SAT for Location 18 (AVCSS SURCON and 55" LCD)																
A6630	SAT Test Document Submission																
A6640	Software Manual Documentations Submission																
Security Risk Assessment and Audit																	
A6800	SRAA (Assessment)																
A6810	Fix per SRAA Assessment																
A6820	SRAA Audit																
Operability Period Test (Phase 1 / Section I)																	
A5610	Joint Site Inspection for utilities, telecom connection and metro ethernet for OPT																
A5620	Operability Period Test (OPT) Phase 1																
A5650	Operability Period Test (OPT) Phase 2																
Completion (Phase 1 /Section I)																	
A2230	AVCSS - Certificate of Completion (Phase 1/Section I)																
A2231	Certificate of Completion Approval by Engineer																
Training and Document (Phase 1 /Section I)																	
A2180	Training Materials & Documentation Submission																
A2190	Operation and Maintenance Training																
Operation (Phase 1 /Section I)																	
A2240	Site Operation (Phase 1/Section I)																
Engineering Support for Phase 1 / Section I																	

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		Q2	Q3	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
A4420	Engineering Support for Phase 1/Section I																
Procurement - Phase 2 / Section II																	
A3980	Procurement of Lane Field Equipment for Phase 2/Section II																
Delivery and Bench Acceptance Test for Phase 2/Section II																	
A6760	Material On-site for Phase 2/Section II																
A6770	Bench Acceptance Test for Phase 2/Section II																
Instatllation - Phase 2 / Section II																	
Location 8(Inbd Pricate Car Annex (025)) (Phase 2)																	
A4090	Site Preparation																
A4091	Cable Containment in Kiosks																
A4093	Cable Laying and termination																
A4094	Cable Splicing, Testing and Labeling																
A4096	Mobilization of kiosk equipment																
A4100	AVCSS/DOH/MOM Kiosk Equipment Installation (1 no)																
A4430	Inbd Private Car Annex Installation Complete																
Location 9(Outbd Private Car Annex (032)) (Phase 2)																	
A4151	Site Preparation																
A4152	Cable Containment in Kiosks																
A4153	Cable Laying and termination																
A4154	Cable Splicing, Testing and Labeling																
A4156	Mobilization of kiosk equipment																
A4160	AVCSS/DOH/MOM Kiosk Equipment Installation (1 no)																
A4440	Outbd Private Car Annex Installation Complete																
Test and Commissioning (Phase 2 / Section II)																	
A2290	Testing & Commissioning Documents Submission																
A2291	Engineer Approval for T&C Document																
A2292	Initial on-site Testing & Commissioning																
A2300	Site Acceptance Tests (SAT)																
A2310	Operability Period Test (OPT)																
Completion (Phase 2 / Section II)																	
A2320	AVCSS - Certificate of Completion (Phase 2/Section II)																
A4320	Certificate of Completion Approval by Engineer																
Engineering Support for Phase 2 / Section II																	
A4450	Engineering Support for Phase 2/Section II																
Procurement for Phase2 / Section III																	
A4000	Procurement of Lane Field Equipment for Phase 2/Section III																
Delivery and Bench Acceptance Test for Phase2 / Section III																	
A6780	Material On-site for Phase 2/Section III																
A6790	Bench Acceptance Test for Phase 2/Section III																
Installation - Phase 2 / Section III																	
Location 10,11,12,13 (Vehicle Clearance Kiosks)																	
Shuttle Bus Kiosks (006) - 4 nos (Phase 2)																	
A2622	Cable Containment																

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

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		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
A2370	Testing & Commissioning Documents Submission (8 weeks before Testings carried out)																	
A2371	Engineer Approval for T&C Document																	
A2373	Initial on-site Testing & Commissioning																	
A2380	Site Acceptance Test (SAT)																	
A2390	Operation Acceptance Test (OPT)																	
Completion (Phase 2 / Section III)																		
A2400	AVCSS - Certificate of Completion (Phase 2/Section III)																	
A4330	Certificate of Completion Approval by Enginner																	
Operation (Phase 2 / Section III)																		
A2420	Site Operation (Phase 2/Section II & III)																	
Defect Liability Period (DLP)																		
A2430	DLP																	
Document Submission (Phase 2 / Section III)																		
A4340	As-built Drawings and O&M Manual																	

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MATERIALAB CONSULTANTS LIMITED

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

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

The logo for MaterialLab, featuring the word "MaterialLab" in a bold, sans-serif font. The text is white and is set against a black background that consists of two horizontal bars, one above and one below the text.

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Appendix D

Event / Action Plan

Appendix D –

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

Event / Action Plan for Air Quality

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

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

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

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

Event / Action Plan for Construction Noise Monitoring

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

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

Event / Action Plan for Water Quality

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

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

Event / Action Plan for Ecological Monitoring

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

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

MATERIALAB CONSULTANTS LIMITED

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

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

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Report No.: 0165/15/ED/0921

Appendix E

Implementation Schedule for Environmental Mitigation Measures (EMIS)

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

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Location of the measures	Implementation Status
Air Quality				
S5.5.6.1	A1	1) The contractor shall follow the procedures and requirements given in the Air Pollution Control (Construction Dust) Regulation	All construction sites	V
S5.5.6.2	A2	2) Proper watering of exposed spoil should be undertaken throughout the construction phase: <ul style="list-style-type: none"> • Any excavated or stockpile of dusty material should be covered entirely by impervious sheeting or sprayed with water to maintain the entire surface wet and then removed or backfilled or reinstated where practicable within 24 hours of the excavation or unloading; • Any dusty materials remaining after a stockpile is removed should be wetted with water and cleared from the surface of roads; • A stockpile of dusty material should not be extend beyond the pedestrian barriers, fencing or traffic cones. • The load of dusty materials on a vehicle leaving a construction site should be covered entirely by impervious sheeting to ensure that the dusty materials do not leak from the vehicle; • Where practicable, vehicle washing facilities with high pressure water jet should be provided at every discernible or designated vehicle exit point. The area where vehicle washing takes place and the road section between the washing facilities and the exit point should be paved with concrete, bituminous materials or hardcores; 	All construction sites	V
S5.5.6.2	A2	<ul style="list-style-type: none"> • When there are open excavation and reinstatement works, hoarding of not less than 2.4m high should be provided as far as practicable along the site boundary with provision for public crossing. Good site practice shall also be adopted by the Contractor to ensure the conditions of the hoardings are properly maintained throughout the construction period; • The portion of any road leading only to construction site that is within 30m of a vehicle entrance or exit should be kept clear of dusty materials, • Surfaces where any pneumatic or power-driven drilling, cutting, polishing or other mechanical breaking operation takes place should be sprayed with water or a dust suppression chemical continuously; • Any area that involves demolition activities should be sprayed with water or a dust suppression chemical immediately prior to, during and immediately after the activities so as to maintain the entire surface wet; • Where a scaffolding is erected around the perimeter of a building under construction, effective dust screens, sheeting or netting should be provided to enclose the scaffolding from the ground floor level of the building, or a canopy should be provided from the first floor level up to the highest level of the scaffolding; • Any skip hoist for material transport should be totally enclosed by impervious sheeting; • Every stock of more than 20 bags of cement or dry pulverised fuel ash (PFA) should be covered entirely by impervious sheeting or placed in an area sheltered on the top 	All construction sites	V
S5.5.6.2	A2	<ul style="list-style-type: none"> • Cement or dry PFA delivered in bulk should be stored in a closed silo fitted with an audible high level alarm which is interlocked with the material filling line and no overfilling is allowed; • Loading, unloading, transfer, handling or storage of bulk 	All construction sites	N/A

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

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Location of the measures	Implementation Status
		<ul style="list-style-type: none"> silencers or mufflers on construction equipment should be properly fitted and maintained during the construction works; mobile plant should be sited as far away from NSRs as possible and practicable; material stockpiles, mobile container site office and other structures should be effectively utilised, where practicable, to screen noise from on-site construction activities. 		
S6.4.11	N2	2) Install temporary hoarding located on the site boundaries between noisy construction activities and NSRs. The conditions of the hoardings shall be properly maintained throughout the construction period.	All construction sites	V
S6.4.12	N3	3) Install movable noise barriers (typically density@14kg/m acoustic mat or full enclosure close to noisy plants including compressor, generators, saw.	For plant items listed in Appendix 6D of the EIA report at all construction sites	N/A
S6.4.13	N4	4) Select "Quiet plants" which comply with the BS 5228 Part 1 or TM standards.	For plant items listed in Appendix 6D of the EIA report at all construction site	V
S6.4.14	N5	5) Sequencing operation of construction plants where practicable	All construction sites where practicable	V
S5.1	N6	6) Implement a noise monitoring under EM&A programme.	Selected representative noise monitoring station	V (Conducted by Contract No. HY/2010/02)
Sediment				
S7.3	S1	1) The requirements as recommended in ETWB TC 34/2002 Management of Dredged/Excavated Sediment shall be included in the Particular Specification as appropriate.	All construction sites	V
Waste Management (Construction Waste)				
S8.3.8	WM1	<u>Construction and Demolition Material</u> The following mitigation measures should be implemented in handling the waste: <ul style="list-style-type: none"> Maintain temporary stockpiles and reuse excavated fill material for backfilling and reinstatement; Carry out on-site sorting; Make provisions in the Contract documents to allow and promote the use of recycled aggregates where appropriate; Implement a trip-ticket system for each works contract to ensure that the disposal of C&D materials are properly documented and verified; and Implement an enhanced Waste Management Plan similar to E7WBTC (Works) No. 19/2005 - "Environmental Management on Construction Sites" to encourage on-site sorting of C&D materials and to minimize their generation during the course of construction. In addition, disposal of the C&D materials onto any sensitive locations such as agricultural lands, etc. should be avoided. The Contractor shall propose the final disposal sites to the Project Proponent and get its approval before implementation 	All construction sites	V
S8.3.9-	WM2	<u>C&D Waste</u>	All construction	V

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Location of the measures	Implementation Status
S8.3.11		<ul style="list-style-type: none"> • Standard formwork or pre-fabrication should be used as far as practicable in order to minimise the arising of C&D materials. The use of more durable formwork or plastic facing for the construction works should be considered. Use of wooden hoardings should not be used, as in other projects. Metal hoarding should be used to enhance the possibility of recycling. The purchasing of construction materials will be carefully planned in order to avoid over ordering and wastage. • The Contractor should recycle as much of the C&D materials as possible on-site. Public fill and C&D waste should be segregated and stored in different containers or skips to enhance reuse or recycling of materials and their proper disposal. Where practicable, concrete and masonry can be crushed and used as fill. Steel reinforcement bar can be used by scrap steel mills. Different areas of the sites should be considered for such segregation and storage. 	sites	
S8.2.12- S8.3.15	WM3	<p><u>Chemical Waste</u></p> <ul style="list-style-type: none"> • Chemical waste that is produced, as defined by Schedule 1 of the Waste Disposal (Chemical Waste) (General) Regulation, should be handled in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. • Containers used for the storage of chemical wastes should be suitable for the substance they are holding, resistant to corrosion, maintained in a good condition, and securely closed; have a capacity of less than 450 liters unless the specification has been approved by the EPD; and display a label in English and Chinese in accordance with instructions prescribed in Schedule 2 of the regulation. • The storage area for chemical wastes should be clearly labeled and used solely for the storage of chemical waste; enclosed on at least 3 sides; have an impermeable floor and bunding of sufficient capacity to accommodate 110% of the volume of the largest container or 20 % of the total volume of waste stored in that area, whichever is the greatest; have adequate ventilation; covered to prevent rainfall entering; and arranged so that incompatible materials are adequately separated. • Disposal of chemical waste should be via a licensed waste collector; be to a facility licensed to receive chemical waste, such as the Chemical Waste Treatment Centre which also offers chemical waste collection service and can supply the necessary storage containers; or be to a reuser of the waste, under approval from the EPD. 	All construction sites	V
S8.3.16	WM4	<p><u>Sewage</u></p> <ul style="list-style-type: none"> • Adequate numbers of portable toilets should be provided for the workers. The portable toilets should be maintained in a state which will not deter the workers from utilizing these portable toilets. Night soil should be collected by licensed collectors regularly. 	All construction sites	V
S8.3.17	WM5	<p><u>General Refuse</u></p> <ul style="list-style-type: none"> • General refuse generated on-site should be stored in enclosed bins or compaction units separately from construction and chemical wastes. • A reputable waste collector should be employed by the Contractor to remove general refuse from the site, separately from construction and chemical wastes, on a daily basis to minimize odour, pest and litter impacts. Burning of refuse on construction sites is prohibited by law. 	All construction sites	V

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Location of the measures	Implementation Status
		<ul style="list-style-type: none"> • Aluminium cans are often recovered from the waste stream by individual collectors if they are segregated and made easily accessible. Separate labelled bins for their deposit should be provided if feasible. • Office wastes can be reduced through the recycling of paper if volumes are large enough to warrant collection. Participation in a local collection scheme should be considered by the Contractor. • Training should be provided to workers about the concepts of site cleanliness and appropriate waste management procedure, including reduction, reuse and recycling of wastes. 		
Water Quality (Construction Phase)				
S9.11.1.7	W2	<p><u>Land Works</u> General construction activities on land should also be governed by standard good working practice. Specific measures to be written into the works contracts should include:</p> <ul style="list-style-type: none"> • wastewater from temporary site facilities should be controlled to prevent direct discharge to surface or marine waters; • sewage effluent and discharges from on-site kitchen facilities shall be directed to Government sewer in accordance with the requirements of the WPCO or collected for disposal offsite. The use of soakaways shall be avoided; • storm drainage shall be directed to storm drains via adequately designed sand/silt removal facilities such as sand traps, silt traps and sediment basins. Channels, earth bunds or sand bag barriers should be provided on site to properly direct stormwater to such silt removal facilities. Catchpits and perimeter channels should be constructed in advance of site formation works and earthworks; • silt removal facilities, channels and manholes shall be maintained and any deposited silt and grit shall be removed regularly, including specifically at the onset of and after each rainstorm; • temporary access roads should be surfaced with crushed stone or gravel; • rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities; • measures should be taken to prevent the washout of construction materials, soil, silt or debris into any drainage system; • open stockpiles of construction materials (e.g. aggregates and sand) on site should be covered with tarpaulin or similar fabric during rainstorms; • manholes (including any newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul sewers; • discharges of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system; 	Land-based works area	V
S9.11.1.7	W2	<ul style="list-style-type: none"> • all vehicles and plant should be cleaned before they leave the construction site to ensure that no earth, mud or debris is deposited by them on roads. A wheel washing bay should be provided at every site exit; • wheel wash overflow shall be directed to silt removal facilities before being discharged to the storm drain; • the section of construction road between the wheel washing bay and the public road should be surfaced 	Land-based works area	V

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Location of the measures	Implementation Status
		<ul style="list-style-type: none"> with crushed stone or coarse gravel; • wastewater generated from concreting, plastering, internal decoration, cleaning work and other similar activities, shall be screened to remove large objects; • vehicle and plant servicing areas, vehicle wash bays and lubrication facilities shall be located under roofed areas. The drainage in these covered areas shall be connected to foul sewers via a petrol interceptor in accordance with the requirements of the WPCO or collected for off site disposal; • the contractors shall prepare an oil / chemical cleanup plan and ensure that leakages or spillages are contained and cleaned up immediately; • waste oil should be collected and stored for recycling or disposal, in accordance with the Waste Disposal Ordinance; • all fuel tanks and chemical storage areas should be provided with locks and be sited on sealed areas. The storage areas should be surrounded by bunds with a capacity equal to 110% of the storage capacity of the largest tank; and • surface run-off from bunded areas should pass through oil/grease traps prior to discharge to the stormwater system. 		
S9.14	W3	Implement a water quality monitoring programme	Selected representative WQM stations	V (Conducted by Contract No. HY/2010/02)
Ecology (Construction Phase)				
S10.7	E4	<ul style="list-style-type: none"> • Watering to reduce dust generation; prevention of siltation of freshwater habitats; Site runoff should be desilted, to reduce the potential for suspended sediments, organics and other contaminants to enter streams and standing freshwater 	Land-based works areas	V
S10.7	E5	<ul style="list-style-type: none"> • Good site practices, including strictly following the permitted works hours, using quieter machines where practicable, and avoiding excessive lightings during night time 	Land-based works areas	V
S10.7	E6	<ul style="list-style-type: none"> • Dolphin Exclusion Zone • Dolphin watching plan 	Marine works	V
S10.7	E7	<ul style="list-style-type: none"> • Decouple compressors and other equipment on working vessels • Proposal on design and implementation of acoustic decoupling measures applied during dredging and reclamation works • Avoidance of percussive piling 	Marine works	V
S10.7	E8	<ul style="list-style-type: none"> • Control vessel speed • Skipper training • Predefined and regular routes for working vessels; avoid Brother Islands. 	Marine Traffic	V
S10.10	E9	Vessel based dolphin monitoring	Northeast and Northwest Lantau	V (Conducted by Contract No. HY/2010/02)
Fisheries				
S11.7	F4	<ul style="list-style-type: none"> • Maritime Oil Spill Response Plan (MOSRP); • Contingency plan. 	HKBCF	V
Landscape & Visual (Detailed Design Phase)				
S14.3.3.1	LV1	<p>General design measures include:</p> <ul style="list-style-type: none"> • Roadside planting and planting along the edge of the HKBCF Island is proposed; • Transplanting of mature trees in good health and amenity value where appropriate and reinstatement of areas disturbed during construction by compensatory 	HKBCF	V

EIA Ref.	EM&A Log Ref.	Recommended Mitigation Measures	Location of the measures	Implementation Status
		<p>hydro-seeding and planting;</p> <ul style="list-style-type: none"> • Protection measures for the trees to be retained during construction activities; • Optimizing the sizes and spacing of the bridge columns; • Fine-tuning the location of the bridge columns to avoid visually-sensitive locations; • Providing planting area around peripheral of HKBCF for tree planting screening effect; • Providing salt-tolerant native trees along the planter strip at affected seawall and newly reclaimed coastline; • For HKBCF, providing aesthetic architectural design on the related buildings (e.g. similar materials for PCB building facade to Airport buildings, roof planting and subtle materials for other facilities buildings and so on), and the related infrastructure (e.g. parapet planting and transparent cover for elevated footbridges) to provide harmonious atmosphere of the HKBCF; and • Fine-tuning the sizes of the structural members to minimize the bulkiness of buildings and adjustment of building arrangement to minimise disturbance to surrounding vegetation in the HKBCF. 		
Landscape & Visual (Construction Phase)				
S14.3.3.3	LV2	<p>Mitigate both Landscape and Visual Impacts</p> <p>G1. Grass-hydroseed bare soil surface and stock pile areas.</p> <p>G2. Add planting strip and automatic irrigation system if appropriate at some portions of bridge footbridge to screen bridge and traffic.</p> <p>G3. Not applicable as this is for HKLR.</p> <p>G4. For HKBCF, providing aesthetic architectural design on the related buildings (e.g. similar materials for PCB building facade to Airport buildings, roof planting and subtle materials for other facilities buildings and so on), and the related infrastructure (e.g. parapet planting and transparent cover for elevated footbridges) to provide harmonious atmosphere of the HKBCF</p> <p>G5. Vegetation reinstatement and upgrading to disturbed areas</p> <p>G6. Maximizing new tree shrub and other vegetation planting to compensate tree felled and vegetation removed</p> <p>G7. Providing planting area around peripheral of HKBCF for tree planting screening effect;</p> <p>G8. Plant salt-tolerant native and shrubs etc along the planter strip at affected seawall.</p> <p>G9. Reserve of loose natural granite rocks for re-use, Provide new coastline to adopt "natural-look" by means of using armour rocks in the form of natural rock materials and planting strip area accommodating screen buffer to enhance "natural-look" of the new coastline.</p>	HKBCF	N/A
S14.3.3.3	LV3	<p><u>Mitigate Visual Impacts</u></p> <p>V1. Minimize time for construction activities during construction period.</p> <p>V2. Provide screen hoarding at the portion of the project site / works areas / storage areas near VSRs who have close low-level views to the Project during HKBCF construction.</p>	HKBCF	N/A
EM&A				
S15.2.2	EM1	An Independent Environmental Checker needs to be employed as per the EM&A Manual	All construction sites	V
S15.5 – S15.6	EM2	<p>1) An Environmental Team needs to be employed as per the EM&A Manual.</p> <p>2) Prepare a systematic Environmental Management Plan to ensure effective implementation of the mitigation</p>	All construction sites	V

MATERIALAB CONSULTANTS LIMITED

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

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

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Appendix F

Site Audit Findings and Corrective Actions

Report No.: 0165/15/ED/0921

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, 13 site inspections were carried out on 1, 8, 15, 22 and 30 June 2017, 6, 13, 21, and 27 July 2017 and 3, 10, 18, 25 and 31 August 2017 (includes Contract No. HY/2013/06 within Contract No. HY/2013/03 works area).

Particular observations during the site inspections are described below.

For Contract No. HY/2013/03

26 May 2017

1. The Contractor was reminded to remove general and construction waste accumulated on site. Subsequently, waste was removed. The observation was closed on 1 June 2017.
2. The Contractor was reminded to remove stagnant water accumulated on site. Subsequently, stagnant water was removed. The observation was closed on 1 June 2017.

1 June 2017

1. The Contractor was reminded to increase watering for dust suppression on site. Subsequently, watering was increased. The observation was closed on 8 June 2017.

8 June 2017

1. The Contractor was reminded to remove general waste accumulated at Building 037 and CUE works area. Subsequently, waste was removed. The observation was closed on 15 June 2017.

15 June 2017

The Contractor was reminded to remove general waste accumulated at CUE works area. Subsequently, general waste was removed. The observation was closed on 22 June 2017.

22 June 2017

1. The Contractor was reminded to remove general waste accumulated at CUE works area and Building 037. Subsequently, waste was removed. The observation was closed on 30 June 2017.

30 June 2017

1. The Contractor was reminded to increase watering for dust suppression on site. Subsequently, watering was provided. The observation was closed on 6 July 2017.
2. The Contractor was reminded to improve housekeeping on site. Subsequently, housekeeping was removed. The observation was closed on 6 July 2017.
3. The Contractor was reminded to increase watering for dust suppression when drilling at A6 Bridge. Subsequently, watering was provided for dust suppression when drilling. The observation was closed on 6 July 2017.

MATERIALAB CONSULTANTS LIMITED

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

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

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4. The Contractor was reminded to remove stagnant water accumulated at the drip tray of a generator at CUE works area. Subsequently, stagnant water was removed. The observation was closed on 6 July 2017.

6 July 2017

1. The Contractor was reminded to remove general and construction waste accumulated at Building 037. Subsequently, general and construction waste were removed. The observation was closed on 13 July 2017.

13 July 2017

1. The Contractor was reminded to increase watering for dust suppression on site. Subsequently, watering was provided. The observation was closed on 21 July 2017.
2. The Contractor was reminded to remove stagnant water accumulated around Building 040. Subsequently, stagnant water was removed. The observation was closed on 21 July 2017.

21 July 2017

1. The Contractor was reminded to remove stagnant water accumulated at Building 037. Subsequently, stagnant water was removed. The observation was closed on 27 July 2017.
2. The Contractor was reminded to remove general waste accumulated at Building 037. Subsequently, general waste was removed. The observation was closed on 27 July 2017.
3. The Contractor was reminded to provide a label for NRMM found in A7 Bridge. Subsequently, a label was provided. The observation was closed on 27 July 2017.
4. The Contractor was reminded to provide covers for the opened cement bags in A7 Bridge. Subsequently, covers were provided. The observation was closed on 27 July 2017.

27 July 2017

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

3 August 2017

1. The Contractor was reminded to provide a label for a NRMM found near building 030. Subsequently, a label was provided to the NRMM found. The observation was closed on 10 August 2017.

MATERIALAB CONSULTANTS LIMITED

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

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

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2. The Contractor was reminded to remove general waste accumulated at Building 061. Subsequently, general waste was removed. The observation was closed on 10 August 2017.

10 August 2017

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

18 August 2017

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

25 August 2017

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

31 August 2017

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

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

1 June 2017

MATERIALAB CONSULTANTS LIMITED

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

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

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1. Nil findings.

8 June 2017

1. Nil findings.

15 June 2017

1. Nil findings.

22 June 2017

1. Nil findings.

30 June 2017

1. Nil findings.

6 July 2017

1. Nil findings.

13 July 2017

1. Nil findings.

21 July 2017

1. Nil findings.

27 July 2017

1. Nil findings.

3 August 2017

1. Nil findings.

10 August 2017

1. Nil findings.

18 August 2017

1. Nil findings.

25 August 2017

1. Nil findings.

31 August 2017

1. Nil findings.

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

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

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

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Appendix G

Waste Flow Table



Monthly Summary of Waste Flow Table for 2017 (year)

Name of Person completing the Record: Marko Chan

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

Notes:

(1) Broken concrete for recycling into aggregates.

(2) Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.

Monthly Summary of Excavated Marine Sediment for 2017 (year)

Month	Total Quantity of Excavated Marine Sediment Generated in '000m ³	Reused in this contract in '000m ³	Reused in other Projects in '000m ³	Disposed of at CMP in '000m ³
Jan	0.656	0.000	0.000	0.656
Feb	0.264	0.000	0.000	0.264
Mar	0.000	0.000	0.000	0.000
Apr	1.288	0.000	0.000	1.288
May	1.440	0.000	0.000	1.440
Jun	1.432	0.000	0.000	1.432
Jul	0.000	0.000	0.000	0.000
Aug	0.248	0.000	0.000	0.248
Sep				
Oct				
Nov				
Dec				
Total	3.896	0.000	0.000	3.896



ATAL Technologies Ltd.

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

Location: Artificial Island of HKBCF (C3 Area)

Ver: 1st
Date: Jan 2017

Monthly Summary Waste Flow Table for 2017

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

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

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

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

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Appendix H

Environmental Licenses and Permits

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

(update: 07/09/2017)

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

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

(update: 07/09/2017)

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

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

MATERIALAB CONSULTANTS LIMITED

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

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

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Appendix I

Investigation Reports on Action Level or Limit Level Non-compliance

MATERIALAB CONSULTANTS LIMITED

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

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

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INVESTIGATION REPORT ON
ACTION AND LIMIT LEVEL NON-COMPLIANCE

FOR

CONTRACT NO. HY/2013/03

**Hong Kong Zhuhai Macao Bridge
Hong Kong Boundary Crossing Facilities – Vehicle Clearance Plazas and
Ancillary Buildings and Facilities**

Report No. Ref.: 0165-15-IR002

Prepared by: Ms. Jamie Tam

Reviewed by: Mr. Bong Yu

Certified by:


Mr. Arthur Cheng
Environmental Team Leader

Date: 1-8-2017

NON-COMPLIANCE INVESTIGATION REPORT No.: 0165-15-IR002**1. Project Details**

Contract No.: HY/2013/03

Contract Title: Hong Kong Zhuhai Macao Bridge Hong Kong Boundary Crossing
Facilities - Vehicle Clearance Plazas and Ancillary Buildings and
Facilities

Project Proponent: Highways Department

Main Contractor: China Harbour Engineering Co. Ltd.

2. Details of Non-complianceNotification of Action/Limit Level Exceedance W107 was forwarded by IEC on 26
July 2017, with the information provided by the ET of Contract No. HY/2010/02:

Monitoring Date: 12 July 2017

The Action and Limit Levels of suspended solids (SS) determined from baseline
monitoring data are listed below:

Monitoring Parameter	Action Level (AL)	Limit Level (LL)
Depth averaged SS (in mg/L)	23.5	34.4

Mid-Ebb tide

Suspended Solids (SS) (in mg/L)

Monitoring Station	Monitoring Time	Measured Depth Averaged	Level Exceeded
SR3	13:49	24.7	Action

Monitoring was undertaken by the ET of Contract No. HY/2010/02. The Notification
of Action/Limit Level Exceedance W107 provided by the ET of Contract No.
HY/2010/02 is shown in **Appendix A**.

3. Investigation of Non-compliance

Date Exceedance Investigated by Environmental Team: 1 August 2017

Summary of Investigation

As confirmed with Mr. Marko Chan, Environmental Officer, and operation team of Contract No. HY/2013/03, marine-based construction works were undertaken in Box Culvert B and there was one derrick lighter delivered sand to the work site of Three Runway Project on 12 July 2017 under Contract No. HY/2013/03. Both marine-based construction works and the route of marine transportation were far away from the concerned WQM station SR3. There was no notification of exceedance received at the WQM stations closer to the marine-based construction works areas, such as IS(Mf)11, IS10, IS17 and SR7. Besides, the SS exceedance was recorded at 13:49. The derrick lighter was deposited at HKBCF from morning until 16:00. Therefore, it was unlikely to generate any suspended solids to cause the SS exceedance recorded at the concerned WQM station SR3 during mid-ebb tide on 12 July 2017. The location of the WQM station where exceedance was recorded and all relevant WQM stations are shown in **Figure 1** and the locations of marine transportation and marine-based construction works are shown in **Figure 2**.

Investigation Results

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

- Water Quality:
W1-
 1. barges and hopper dredgers shall have tight fitting seals to their bottom openings to prevent leakage of material;
 2. any pipe leakages shall be repaired quickly. Plant should not be operated with leaking pipes;
 3. loading of barges and hoppers shall be controlled to prevent splashing of dredged material to the surrounding water. Barges or hoppers shall not be filled to a level which will cause overflow of materials or pollution of water during loading or transportation;
 4. excess material shall be cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessel is moved;
 5. adequate freeboard shall be maintained on barges to reduce the likelihood of decks being washed by wave action; and
 6. all vessels shall be sized such that adequate clearance is maintained between vessels and the sea bed at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash.

4. Follow up Status (Exceedance)

During weekly site audit on 30 June, 6 and 13 July 2017, ET confirmed the Contractor had provided workable and effective water quality mitigation measures.

5. Recommendation to the Contractor

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

6. Follow up Status (Overall)

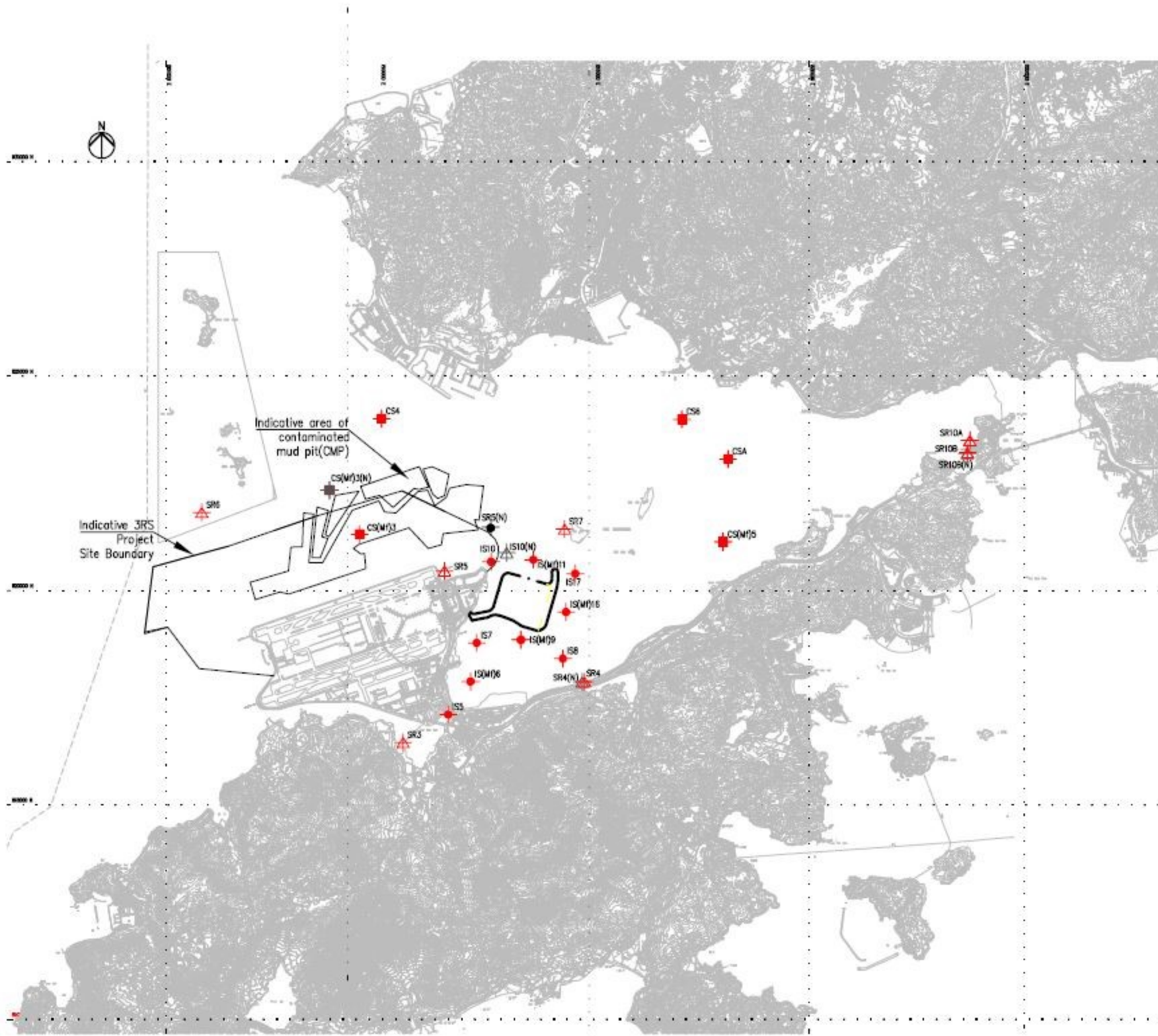
The captioned exceedance was not related to the Contract and therefore, no additional follow-up action is needed. However, ET proposed recommendations to Contractor in particular to the following aspects when there are marine construction activities.

Water Quality:

- Barges and hopper dredgers shall have tight fitting seals to their bottom openings to prevent leakage of material;
- Any pipe leakages shall be repaired quickly. Plant should not be operated with leaking pipes;
- Loading of barges and hoppers shall be controlled to prevent splashing of dredged material to the surrounding water. Barges or hoppers shall not be filled to a level which will cause overflow of materials or pollution of water during loading or transportation;
- Excess material shall be cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessel is moved;
- Adequate freeboard shall be maintained on barges to reduce the likelihood of decks being washed by wave action; and
- All vessels shall be sized such that adequate clearance is maintained between vessels and the sea bed at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash.

Figure 1

The Location of WQM Stations



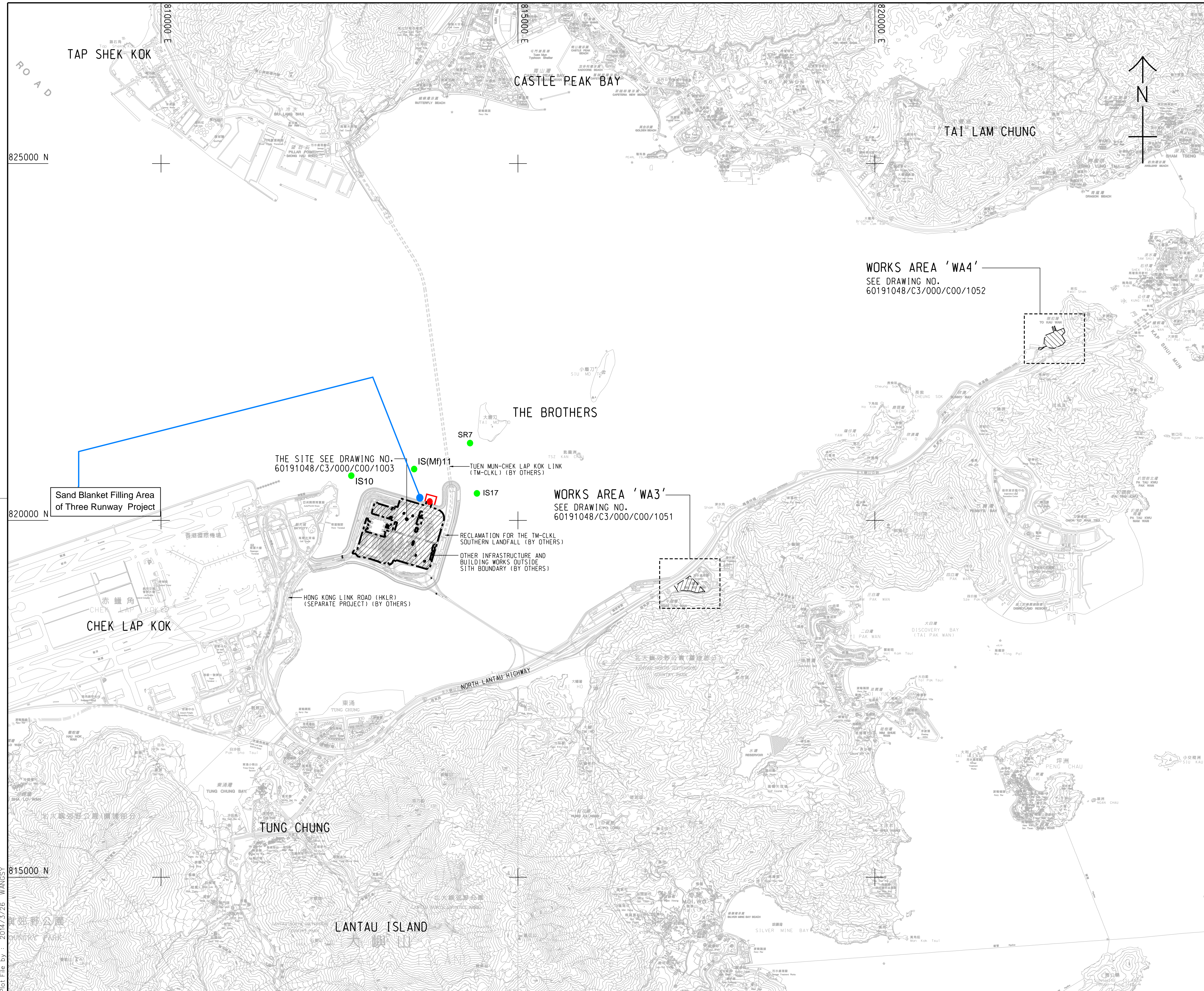
- LEGEND**
- IS IMPACT STATIONS
 - CS CONTROL / FAR FIELD STATIONS
 - ▲ SR SENSITIVE RECEIVERS STATIONS
 - ▲ IS IMPACT STATIONS (RELOCATED)
 - SR SENSITIVE RECEIVERS STATIONS (RELOCATED)
 - CS CONTROL / FAR FIELD STATIONS (RELOCATED)

SETTING OUT SCHEDULE

MONITORING STATIONS	CO-ORDINATES	
	EASTING	NORTHING
IS5	811579	817106
IS(M)6	812101	817873
IS7	812244	818777
IS8	814251	818412
IS(M)9	813273	818850
SR5(N)	812569	821475
IS(M)11	813362	820716
IS(M)16	814328	819497
IS17	814539	820391
SR3	810525	816456
SR4(N)	814705	817859
IS10(N)	812942	820881
SR6	805837	821818
SR7	814293	821431
SR10A	823741	823495
SR10B(N)	823683	823187
CS(M)3(N)	808814	822355
CS(M)5	817990	821129
CS4	810025	824004
CS6	817028	823992
CSA	818103	823064
IS10	812577	820670
SR5	811489	820455
CS(M)3	809989	821117

Figure 2

The Locations of Marine Transportation and Marine-based Construction Works



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

- LEGEND:**
- SITE BOUNDARY
 - WORKS AREA
 - Location of Box Culvert B
 - Route of Marine Transportation
 - Location of the Derrick Lighter Deposited
 - Silt Curtain
 - Water Quality Monitoring Stations

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

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

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

Sand Blanket Filling Area
of Three Runway Project

SR7
IS(M)11
IS10
IS17

TUEN MUN-CHEK LAP KOK LINK
(TM-CKL) (BY OTHERS)

RECLAMATION FOR THE TM-CKL
SOUTHERN LANDFALL (BY OTHERS)

OTHER INFRASTRUCTURE AND
BUILDING WORKS OUTSIDE
SITE BOUNDARY (BY OTHERS)

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

- TENDER DRAWING		BSC	SCI	MAR. 14
REV. 修訂	DESCRIPTION 內容摘要	B.C.	C.C.	DATE 日期

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

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

SITE LOCATION PLAN

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

DRG.NO. 60191048/C3/000/C00/1000
圖紙編號

DESIGNED BY 設計	CONTRACT NO. 合約編號	P. Dir. APPROVED 批准人
BWCW	HY/2013/03	TKH

DRAWN BY 繪圖	STATUS 階段
WSY	預校

SCALE 比例 A1 1 : 25000
DIMENSIONS ARE IN 尺寸單位 METRES

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MATERIALAB CONSULTANTS LIMITED

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

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



Appendix A

Notification of Limit Level Exceedance W107

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

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



Contract No. HY/2010/02
Hong Kong-Zhuhai-Macao Bridge
Hong Kong Boundary Crossing Facilities – Reclamation Works
Incident Report on Action Level or Limit Level Non-compliance

Report No. W107
Monitoring Date 12-Jul-17

The Action and Limit Levels of turbidity and suspended solids (SS) determined from baseline monitoring data are reproduced below:

Monitoring Parameter	Action Level (AL)	Limit Level (LL)
Depth averaged SS (in mg/L)	23.5	34.4

Mid-Ebb tide

Suspended Solids (SS) (in mg/L)

Monitoring Station	Monitoring time	Measured depth averaged	Level Exceeded
SR3	13:49	24.7	Action

Investigation results will be provided within three working days.

ET Leader Signature & Date:  26-Jul-17

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

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

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INVESTIGATION REPORT ON
ACTION AND LIMIT LEVEL NON-COMPLIANCE

FOR

CONTRACT NO. HY/2013/03

**Hong Kong Zhuhai Macao Bridge
Hong Kong Boundary Crossing Facilities – Vehicle Clearance Plazas and
Ancillary Buildings and Facilities**

Report No. Ref.: 0165-15-IR003

Prepared by: Ms. Jamie Tam

Reviewed by: Mr. Bong Yu

Certified by:



Mr. Arthur Cheng
Environmental Team Leader

Date: 1-8-2017

NON-COMPLIANCE INVESTIGATION REPORT No.: 0165-15-IR003**1. Project Details**

Contract No.: HY/2013/03

Contract Title: Hong Kong Zhuhai Macao Bridge Hong Kong Boundary Crossing
Facilities - Vehicle Clearance Plazas and Ancillary Buildings and
Facilities

Project Proponent: Highways Department

Main Contractor: China Harbour Engineering Co. Ltd.

2. Details of Non-complianceNotification of Action/Limit Level Exceedance W108 was forwarded by IEC on 26
July 2017, with the information provided by the ET of Contract No. HY/2010/02:

Monitoring Date: 14 July 2017

The Action and Limit Levels of suspended solids (SS) determined from baseline
monitoring data are listed below:

Monitoring Parameter	Action Level (AL)	Limit Level (LL)
Depth averaged SS (in mg/L)	23.5	34.4

Mid-Flood tide

Suspended Solids (SS) (in mg/L)

Monitoring Station	Monitoring Time	Measured Depth Averaged	Level Exceeded
IS7	10:17	24.9	Action

Monitoring was undertaken by the ET of Contract No. HY/2010/02. The Notification
of Action/Limit Level Exceedance W108 provided by the ET of Contract No.
HY/2010/02 is shown in **Appendix A**.

3. Investigation of Non-compliance

Date Exceedance Investigated by Environmental Team: 1 August 2017

Summary of Investigation

As confirmed with Mr. Marko Chan, Environmental Officer, and operation team of Contract No. HY/2013/03, marine-based construction works were undertaken in Box Culvert B and there were two derrick lighters delivered sand to the work site of Three Runway Project on 14 July 2017 under Contract No. HY/2013/03. Both marine-based construction works and the routes of marine transportation were undertaken in the north side of HKBCF while the concerned WQM station IS7 was in the south-west side. As the concerned monitoring station was far away from both marine-based construction works and the routes of marine transportation and there was no notification of exceedance received at the WQM stations closer to the works areas, such as IS(Mf)11, IS10, SR7 and IS17, it was unlikely to generate any suspended solids to cause the SS exceedance recorded at the concerned WQM station IS7 during mid-flood tide on 14 July 2017. The location of the WQM station where exceedance was recorded and all relevant WQM stations are shown in **Figure 1** and the locations of marine transportation and marine-based construction works are shown in **Figure 2**.

Investigation Results

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

- Water Quality:
W1-
 1. barges and hopper dredgers shall have tight fitting seals to their bottom openings to prevent leakage of material;
 2. any pipe leakages shall be repaired quickly. Plant should not be operated with leaking pipes;
 3. loading of barges and hoppers shall be controlled to prevent splashing of dredged material to the surrounding water. Barges or hoppers shall not be filled to a level which will cause overflow of materials or pollution of water during loading or transportation;
 4. excess material shall be cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessel is moved;
 5. adequate freeboard shall be maintained on barges to reduce the likelihood of decks being washed by wave action; and
 6. all vessels shall be sized such that adequate clearance is maintained between vessels and the sea bed at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash.

4. Follow up Status (Exceedance)

During weekly site audit on 30 June, 6, 13 and 21 July 2017, ET confirmed the Contractor had provided workable and effective water quality mitigation measures.

5. Recommendation to the Contractor

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

6. Follow up Status (Overall)

The captioned exceedance was not related to the Contract and therefore, no additional follow-up action is needed. However, ET proposed recommendations to Contractor in particular to the following aspects when there are marine construction activities.

Water Quality:

- Barges and hopper dredgers shall have tight fitting seals to their bottom openings to prevent leakage of material;
- Any pipe leakages shall be repaired quickly. Plant should not be operated with leaking pipes;
- Loading of barges and hoppers shall be controlled to prevent splashing of dredged material to the surrounding water. Barges or hoppers shall not be filled to a level which will cause overflow of materials or pollution of water during loading or transportation;
- Excess material shall be cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessel is moved;
- Adequate freeboard shall be maintained on barges to reduce the likelihood of decks being washed by wave action; and
- All vessels shall be sized such that adequate clearance is maintained between vessels and the sea bed at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash.

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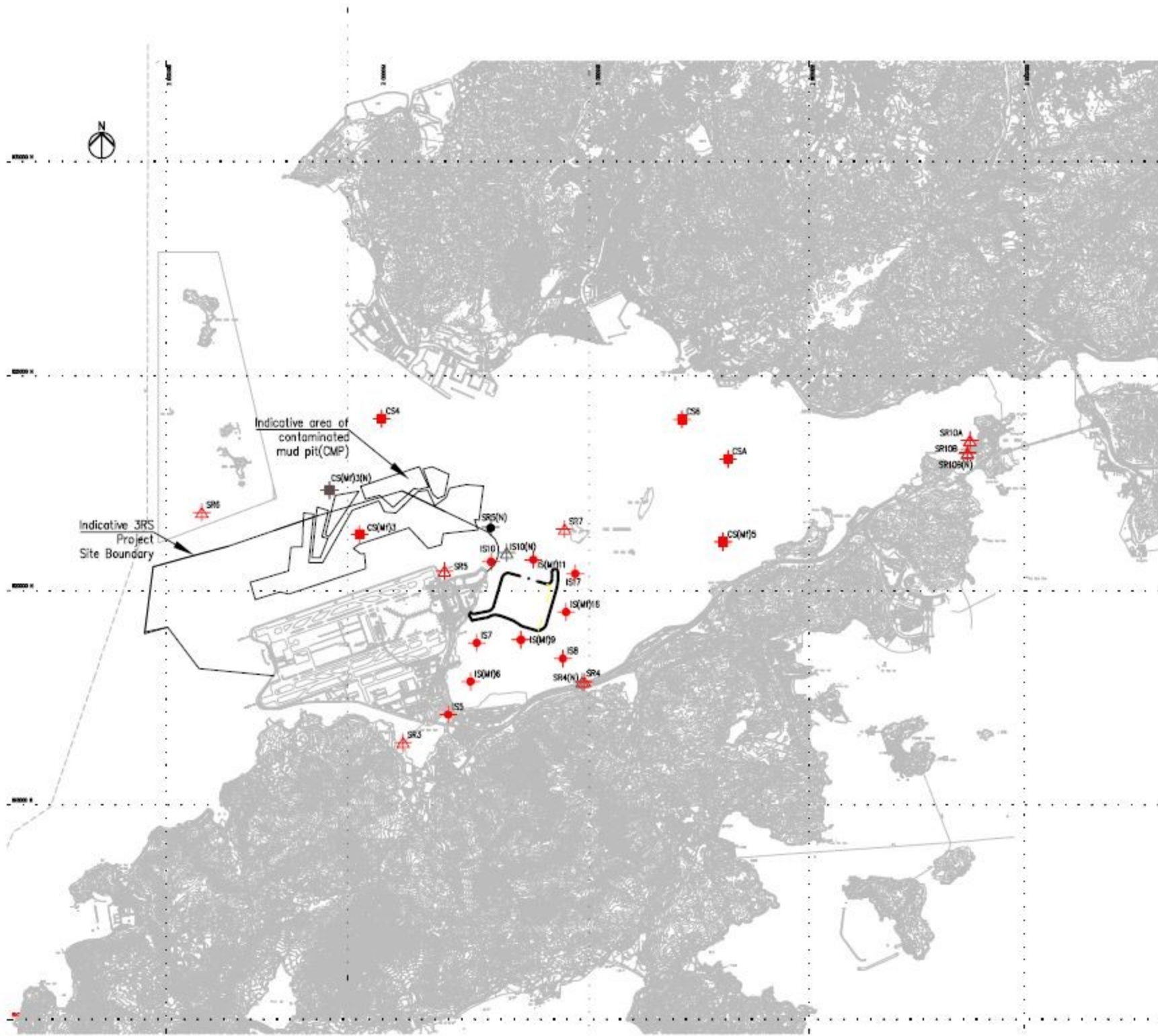
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Profit Industrial Building,
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Figure 1

The Location of WQM Stations



- LEGEND**
- IS IMPACT STATIONS
 - CS CONTROL / FAR FIELD STATIONS
 - ▲ SR SENSITIVE RECEIVERS STATIONS
 - ◻ IS IMPACT STATIONS (RELOCATED)
 - ◻ SR SENSITIVE RECEIVERS STATIONS (RELOCATED)
 - SR SENSITIVE RECEIVERS STATIONS (RELOCATED)
 - CS CONTROL / FAR FIELD STATIONS (RELOCATED)

SETTING OUT SCHEDULE

MONITORING STATIONS	CO-ORDINATES	
	EASTING	NORTHING
IS5	811579	817106
IS(M)6	812101	817873
IS7	812244	818777
IS8	814251	818412
IS(M)9	813273	818850
SR5(N)	812569	821475
IS(M)11	813362	820716
IS(M)16	814328	819497
IS17	814539	820391
SR3	810525	816456
SR4(N)	814705	817859
IS10(N)	812942	820881
SR6	805837	821818
SR7	814293	821431
SR10A	823741	823495
SR10B(N)	823683	823187
CS(M)3(N)	808814	822355
CS(M)5	817990	821129
CS4	810025	824004
CS6	817028	823992
CSA	818103	823064
IS10	812577	820670
SR5	811489	820455
CS(M)3	809989	821117

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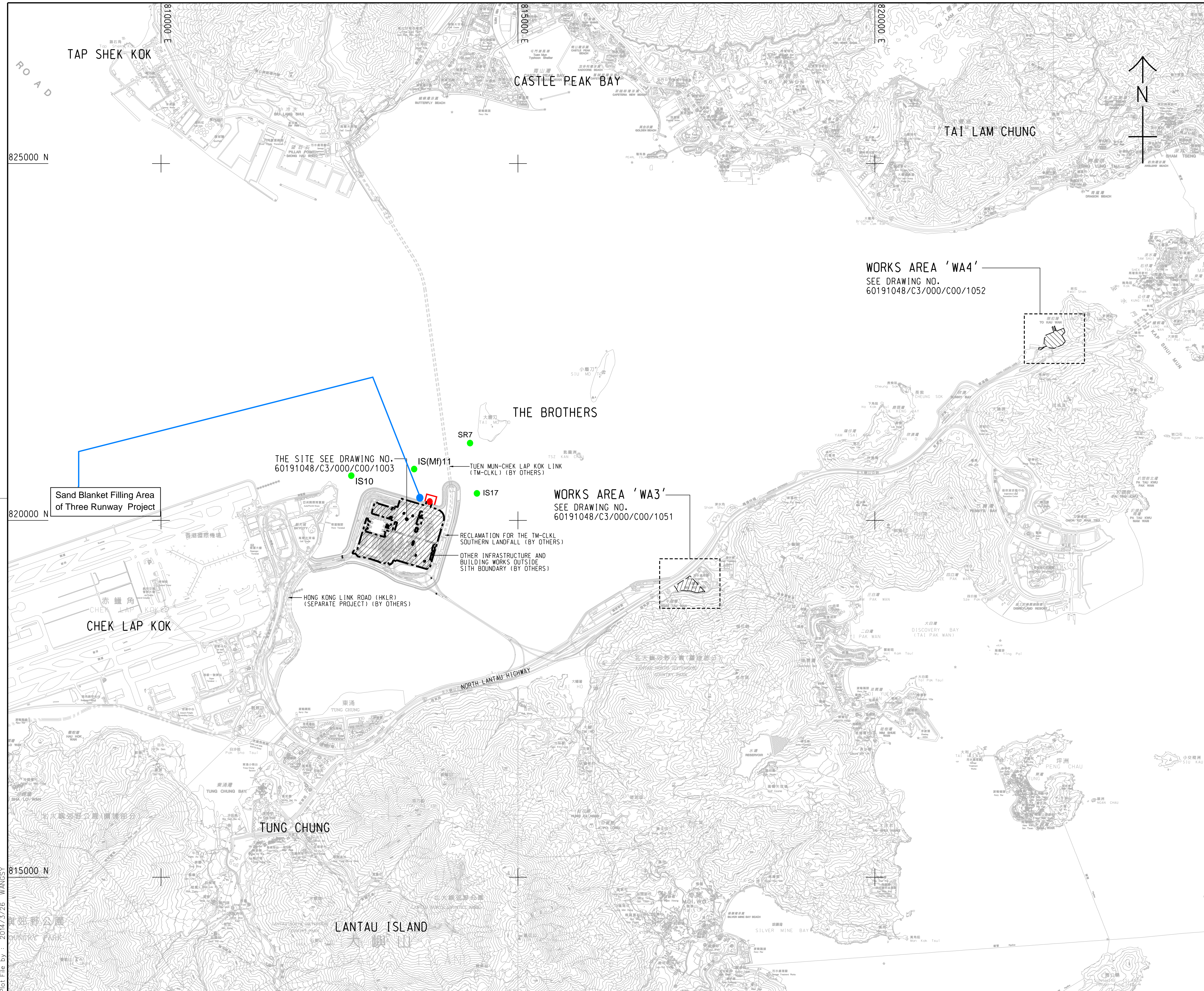
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Kwai Fong, Hong Kong.

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

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Figure 2

The Locations of Marine Transportation and Marine-based Construction Works



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

- LEGEND:**
- SITE BOUNDARY
 - [Hatched Box] WORKS AREA
 - Location of Box Culvert B
 - Route of Marine Transportation
 - Location of the Derrick Lighter Deposited
 - [Red Square] Silt Curtain
 - Water Quality Monitoring Stations

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

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

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

Sand Blanket Filling Area
of Three Runway Project

SR7
IS(M)11
IS10
IS17

TUEN MUN-CHEK LAP KOK LINK
(TM-CKL) (BY OTHERS)

RECLAMATION FOR THE TM-CKL
SOUTHERN LANDFALL (BY OTHERS)

OTHER INFRASTRUCTURE AND
BUILDING WORKS OUTSIDE
SITE BOUNDARY (BY OTHERS)

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

- TENDER DRAWING		BSCW SCI	MAR. 14
REV. 修訂	DESCRIPTION 內容摘要	D.C. 查核	DATE 日期

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

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

SITE LOCATION PLAN

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

DRG.NO. 60191048/C3/000/C00/1000
圖紙編號

DESIGNED BY 設計	CONTRACT NO. 合約編號	P. Dir. APPROVED 批准人
BWCW	HY/2013/03	TKH

DRAWN BY 繪圖	STATUS 階段
WSY	預校

SCALE 比例 A1 1 : 25000
DIMENSIONS ARE IN 尺寸單位 METRES

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1-15 Kwai Fung Crescent,
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Tel : (852)-24508238
Fax : (852)-24508032
Email : mcl@fugro.com

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Appendix A

Notification of Limit Level Exceedance W108

MATERIALAB CONSULTANTS LIMITED

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

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

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Contract No. HY/2010/02
Hong Kong-Zhuhai-Macao Bridge
Hong Kong Boundary Crossing Facilities – Reclamation Works
Incident Report on Action Level or Limit Level Non-compliance

Report No. W108
Monitoring Date 14-Jul-17

The Action and Limit Levels of turbidity and suspended solids (SS) determined from baseline monitoring data are reproduced below:

Monitoring Parameter	Action Level (AL)	Limit Level (LL)
Depth averaged SS (in mg/L)	23.5	34.4

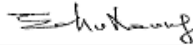
Mid-Flood tide

Suspended Solids (SS) (in mg/L)

Monitoring Station	Monitoring time	Measured depth averaged	Level Exceeded
IS7	10:17	24.9	Action

Investigation results will be provided within three working days.

ET Leader Signature & Date:



26-Jul-17

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Room 723 & 725, 7/F, Block B,
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Hong Kong.

Tel : (852)-24508238
Fax : (852)-24508032
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The logo for MaterialLab, featuring the word "MaterialLab" in a bold, sans-serif font. The text is white and is set against a black background that consists of two thick horizontal bars, one above and one below the text.

Report No.: 0165/15/ED/0921

Appendix J

Statistics on Environmental Complaints, Notification of Summons and Successful Prosecutions

MATERIALAB CONSULTANTS LIMITED

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

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

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Report No.: 0165/15/ED/0921

Appendix J –

Statistics on Environmental Complaints, Notifications of Summons and Successful Prosecutions

For Contract No. HY/2013/03

Reporting Period	Cumulative Statistics		
	Complaints	Notifications of Summons	Successful Prosecutions
This reporting period	4	0	0
From commencement date of construction to end of reporting period	12	0	0

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

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