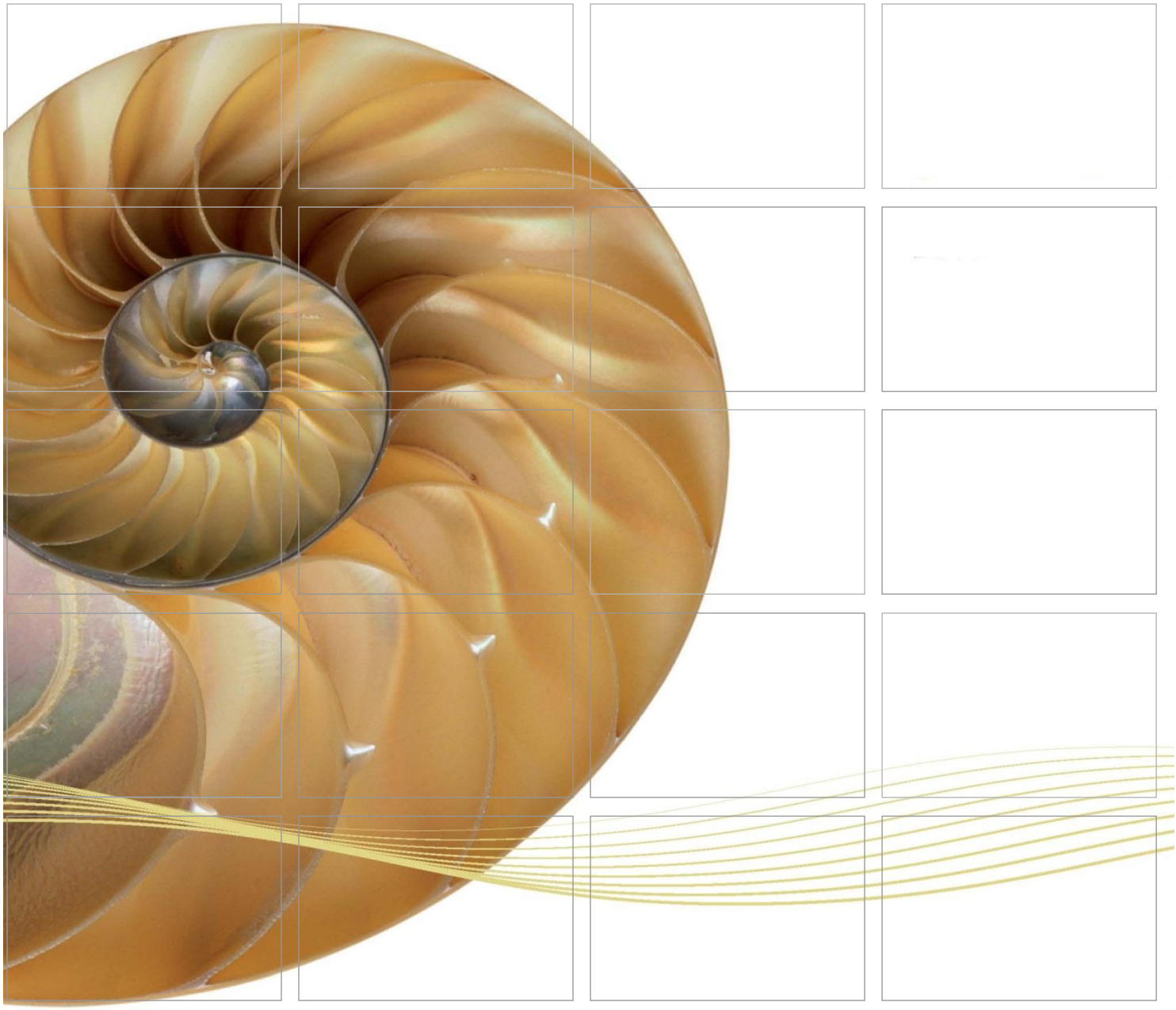
REPORT



Contract No. HY/2012/07
Tuen Mun – Chek Lap Kok Link – Southern Connection Viaduct Section

Sixteenth Monthly EM&A Report

11 March 2015

Environmental Resources Management
16/F, Berkshire House
25 Westlands Road
Quarry Bay, Hong Kong
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Contract No. HY/2012/07
Tuen Mun – Chek Lap Kok Link – Southern Connection Viaduct Section

Sixteenth Monthly EM&A Report

Environmental Resources Management

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Document Code: 0215660_16th Monthly EM&A_20150311.doc

Client:	Project No:
Gammon	0215660

Summary:	
This document presents the Sixteenth Monthly EM&A Report for Tuen Mun – Chek Lap Kok Link – Southern Connection Viaduct Section.	Date: 11 March 2015 Approved by: *Mr Craig Reid* *Partner* Certified by: *Mr Jovy Tam* *ET Leader*

Revision	Description	By	Checked	Approved	Date
	Sixteenth Monthly EM&A Report	VAR	JT	CAR	11/03/15

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Ref.: HYDHZMBEEM00_0_2792L.15

12 March 2015

AECOM
Supervising Officer's Representative's Office
780 Cheung Tung Road, Lantau, N.T.

By Fax (3691 2899) and By Post

Attention: Mr. Daniel Ip

Dear Sirs,

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/2012/07 TM-CLKL Southern Connection Viaduct Section
Monthly EM&A report for February 2015 (EP-354/2009/C)

Reference is made to the Monthly Environmental Monitoring and Audit (EM&A) Report (February 2015) certified by the ET Leader (ET's ref.: "0215660_16th Monthly EM&A_20150311.doc" dated 11 March 2015) and provided to us via mail on 11 March 2015.

We are pleased to inform you that we have no adverse comments on the captioned monthly EN&A report. We write to verify the captioned submission in accordance with Condition 4.4 of EP-354/2009/C.

Thank you for your kind attention. Please do not hesitate to contact the undersigned or the ENPO Leader Mr. Y. H. Hui should you have any queries.

Yours sincerely,

F. C. Tsang
Independent Environmental Checker
Tuen Mun – Chek Lap Kok Link

c.c. HyD – Mr. Stephen Chan (By Fax: 3188 6614)
HyD – Mr. Matthew Fung (By Fax: 3188 6614)
AECOM – Mr. Conrad Ng (By Fax: 3922 9797)
ERM – Mr. Jovy Tam (By Fax: 2723 5660)
Gammon – Mr. Roy Leung (By Fax: 3520 0486)

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ENVIRON Hong Kong Limited 英環香港有限公司
Room 2403, 24/F., Jubilee Centre, 18 Fenwick Street, Wanchai, Hong Kong Tel: 852.3465 2888 Fax: 852.3465 2899
www.environcorp.com

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EXECUTIVE SUMMARY

Under *Contract No. HY/2012/07*, Gammon Construction Limited (GCL) is commissioned by the Highways Department (HyD) to undertake the design and construction of the Southern Connection Viaduct Section of the Tuen Mun – Chek Lap Kok Link Project (TM-CLK Link Project) while AECOM Asia Company Limited was appointed by HyD as the Supervising Officer. For implementation of the environmental monitoring and audit (EM&A) programme under the Contract, ERM-Hong Kong, Limited (ERM) has been appointed as the Environmental Team (ET). ENVIRON Hong Kong Ltd. was employed by the HyD as the Independent Environmental Checker (IEC) and Environmental Project Office (ENPO) in accordance with *Environmental Permit No. EP-354/2009/A*. Further applications for variation of environmental permit (VEP), *EP-354/2009/B* and *EP-354/2009/C*, were granted on 28 January 2014 and 10 December 2014, respectively.

The construction phase of the Contract commenced on 31 October 2013 and will tentatively be completed by 2018. The impact monitoring of the EM&A programme, including air quality, noise, water quality and marine ecological monitoring as well as environmental site inspections, commenced on 31 October 2013.

This is the Sixteenth Monthly EM&A report presenting the EM&A works carried out during the period from 1 to 28 February 2015 for the Southern Connection Viaduct Section in accordance with the Updated EM&A Manual of the TM-CLK Link Project. As informed by the Contractor, major activities in the reporting period included:

Marine Works

- Construction of Pile caps at Viaducts B, C & E;
- Marine piling platform installation & uninstallation;
- Marine Piling at Viaducts C & E; and
- Additional marine ground investigation (GI) and laboratory testing.

Land-based Works

- Construction of pile cap superstructure of Viaduct B & C;
- Channel re-construction at Area 1;
- Land Piling at Viaducts B, C & D;
- Pre-drilling works at Viaduct A;
- Construction of pile cap at Viaducts B & D;
- Additional land GI, trial pits & lab testing;
- Utility surveys; and
- Slope work of Slopes 9SE-B/C8, 9SE-B/C9 & 9SE-B/F9.

A summary of monitoring and audit activities conducted in the reporting period is listed below:

24-hour TSP monitoring	6 sessions
1-hour TSP monitoring	6 sessions
Noise monitoring	6 sessions
Impact Water Quality Monitoring	10 sessions
Impact Dolphin Monitoring	2 sessions
Joint Environmental site inspection	4 sessions

Breaches of Action and Limit Levels for Air Quality

No exceedance of Action and Limit Levels was recorded for construction air monitoring in the reporting month.

Breaches of Action and Limit Levels for Noise

No exceedance of Action and Limit Levels was recorded for construction noise monitoring in the reporting month.

Breaches of Action and Limit Levels for Water Quality

No exceedance of Action and Limit Levels was recorded for impact water quality monitoring in the reporting month.

Impact Dolphin Monitoring

Whilst one (1) Limit Level exceedance was observed for the quarterly dolphin monitoring data between December 2014 and February 2015, no unacceptable impact from the construction activities of the TM-CLKL Southern Connection Viaduct Section on Chinese White Dolphins was noticeable from general observations. Due to monthly variation in dolphin occurrence within the study area, it would be more appropriate to draw conclusion on whether any impacts on dolphins have been detected related to the construction activities of the TM-CLKL Southern Connection Viaduct Section in the quarterly EM&A reports, where comparison on distribution, group size and encounter rates of dolphins between the quarterly impact monitoring period and baseline monitoring period will be made.

Daily marine mammal exclusion zone monitoring was undertaken during the period of marine works under this Contract. Passive Acoustic Monitoring (PAM) was implemented when the marine works were carried out outside the daylight hours in this reporting month. No sighting of the Indo-Pacific humpback dolphin *Sousa chinensis* (i.e. Chinese White Dolphin) was recorded in February 2015 during the exclusion zone monitoring.

Environmental Complaints, Non-compliance & Summons

No environmental complaint, notification of summons and successful prosecution was received in the reporting month.

Reporting Change

There was no reporting change required in the reporting period.

Upcoming Works for the Next Reporting Period

Works to be undertaken in the next monitoring period of March 2015 include the following:

Marine Works

- Construction of Pile caps at Viaducts B, C & E;
- Marine piling platform installation & uninstallation;
- Marine Piling at Viaducts A, C & E; and
- Additional marine ground investigation (GI) and laboratory testing.

Land-based Works

- Construction of pile cap superstructure of Viaduct B;
- Channel re-construction at Area 1;
- Land Piling at Viaducts B, C & D;
- Pre-drilling works at Viaduct A;
- Construction of pile cap at Viaducts B & D;
- Additional land GI, trial pits & lab testing;
- Utility surveys; and
- Slope work of Slopes 9SE-B/C8, 9SE-B/C9 & 9SE-B/F9.

F**uture Key Issues**

Potential environmental impacts arising from the above upcoming construction activities in the next reporting month of March 2015 are mainly associated with dust, noise, marine water quality, marine ecology and waste management issues.

1 INTRODUCTION

1.1 BACKGROUND

According to the findings of the Northwest New Territories (NWNT) Traffic and Infrastructure Review conducted by the Transport Department, Tuen Mun Road, Ting Kau Bridge, Lantau Link and North Lantau Highway would be operating beyond capacity after 2016. This forecast has been based on the estimated increase in cross boundary traffic, developments in the Northwest New Territories (NWNT), and possible developments in North Lantau, including the Airport developments, the Lantau Logistics Park (LLP) and the Hong Kong – Zhuhai – Macao Bridge (HZMB). In order to cope with the anticipated traffic demand, two new road sections between NWNT and North Lantau – Tuen Mun – Chek Lap Kok Link (TM-CLKL) and Tuen Mun Western Bypass (TMWB) are proposed.

An Environmental Impact Assessment (EIA) of TM-CLKL (the Project) was prepared in accordance with the EIA Study Brief (No. ESB-175/2007) and the *Technical Memorandum of the Environmental Impact Assessment Process* (*EIAO-TM*). The EIA Report was submitted under the Environmental Impact Assessment Ordinance (EIAO) in August 2009. Subsequent to the approval of the EIA Report (EIAO Register Number AEIAR-146/2009), an Environmental Permit (*EP-354/2009*) for TM-CLKL was granted by the Director of Environmental Protection (DEP) on 4 November 2009, and EP variation (*EP-354/2009/A*) was issued on 8 December 2010.

Under *Contract No. HY/2012/07*, Gammon Construction Limited (GCL) is commissioned by the Highways Department (HyD) to undertake the design and construction of the Southern Connection Viaduct Section of TM-CLKL ("the Contract") while AECOM Asia Company Limited was appointed by HyD as the Supervising Officer. For implementation of the environmental monitoring and audit (EM&A) programme under the Contract, ERM-Hong Kong, Limited (ERM) has been appointed as the Environmental Team (ET). ENVIRON Hong Kong Ltd. was employed by HyD as the Independent Environmental Checker (IEC) and Environmental Project Office (ENPO) in accordance with *Environmental Permit No. EP-354/2009/A*. Further applications for variation of environmental permit (VEP), *EP-354/2009/B* and *EP-354/2009/C*, were granted on 28 January 2014 and 10 December 2014, respectively.

The construction phase of the Contract commenced on 31 October 2013 and will be tentatively completed by 2018. The impact monitoring phase of the EM&A programme, including air quality, noise, water quality and marine ecological monitoring as well environmental site inspections, commenced on 31 October 2013.

The general layout plan of the Contract components is presented in *Figures 1.1 & 1.2a to l.*

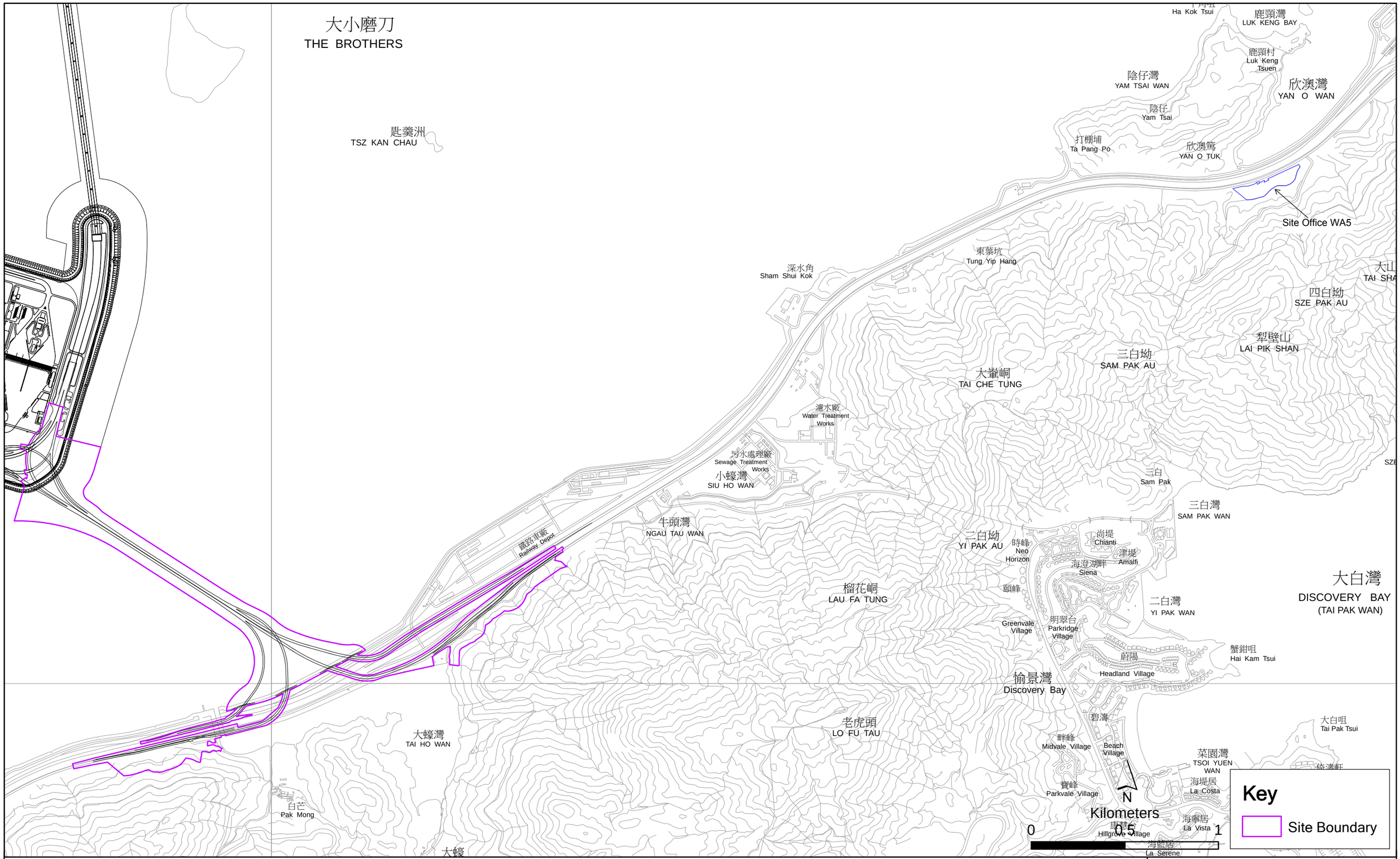

Figure 1.1

General Layout Plan of the Project

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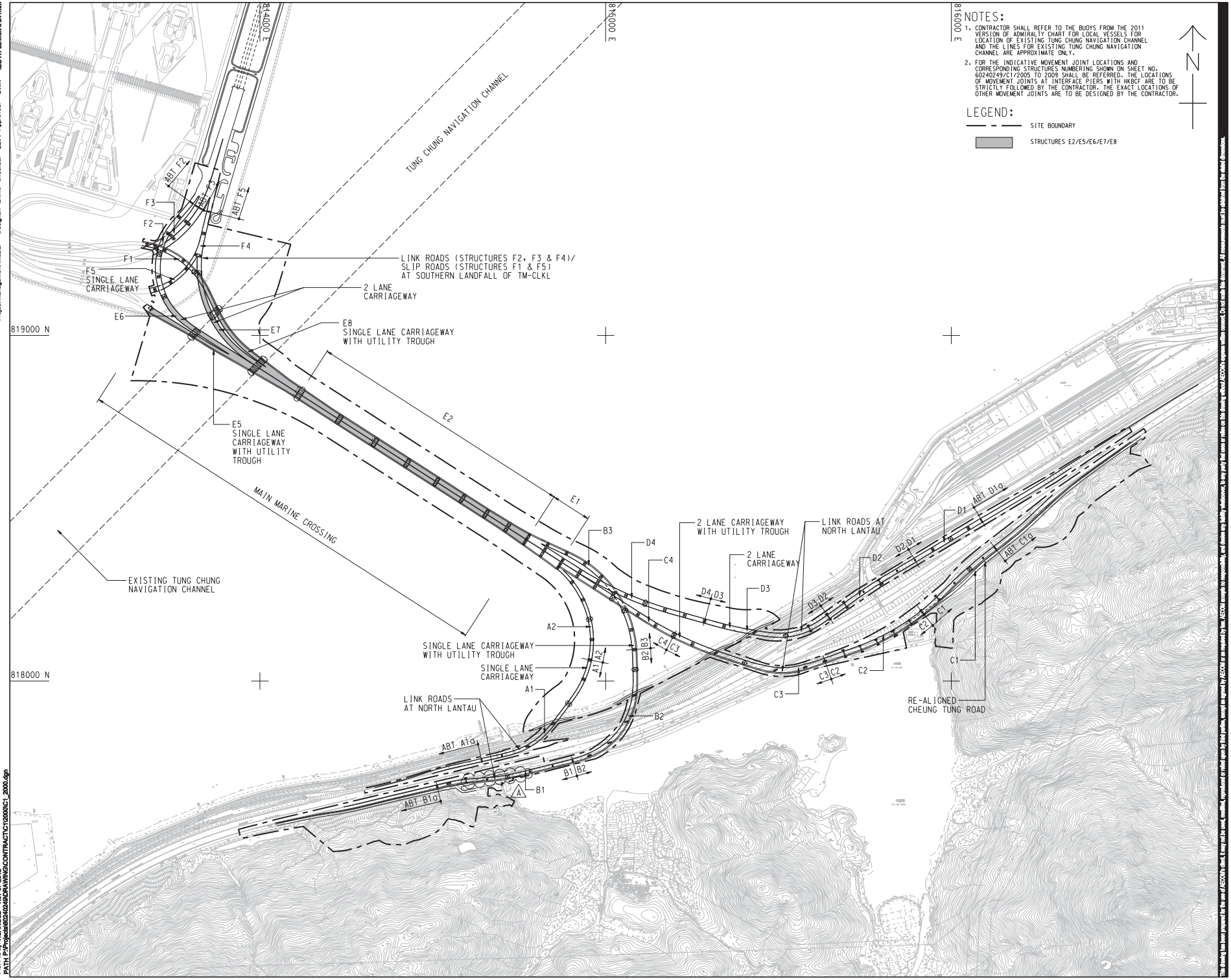

AECOM

PROJECT
項目

TUEN MUN - CHEK LAP KOK LINK

CONTRACT TITLE
TUEN MUN - CHEK LAP KOK LINK - SOUTHERN CONNECTION VIADUCT SECTION

CLIENT
業主

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

CONSULTANT
工程顧問公司

AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS
分判工程顧問公司

Figure 1.2a

ISSUE/REVISION
修訂

IVR 修訂	DATE 日期	DESCRIPTION 內容摘要	CHK. 審核
A	NOV. 12	TENDER ADDENDUM NO. 1	CWN
-	OCT. 12	TENDER DRAWING	CWN

STATUS
狀況

SCALE
比例
A1 1 : 5000

DIMENSION UNIT
尺寸單位
METRES

KEY PLAN
索引圖

PROJECT NO.
項目編號
60240249

CONTRACT NO.
合同編號
HY/2012/07

SHEET TITLE
圖紙名稱
SOUTHERN CONNECTION GENERAL LAYOUT PLAN

SHEET NUMBER
圖紙編號
60240249/C1/2000A

Project Management Initials: Designer: LKWB Checked: SLYY Approved: CWN ISO A1 594mm x 841mm

Plot File by: HUANGC2 Nov-07-2012
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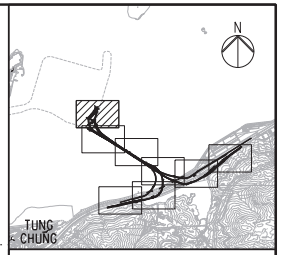

KEY PLAN

NOTES

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LEGEND

- SITE BOUNDARY
- GF1 FAULT

EXISTING G.I.STATIONS :

- BOREHOLE BY GIU DATA EXCLUDING VC
- BOREHOLE BY GCL CONTRACT HY/2012/04
- BOREHOLE BY GCL CONTRACT NL8/97
- BOREHOLE BY GCL CONTRACT HY/2009/23
- TRIAL PIT BY GCL CONTRACT HY/2012/04
- SLOPE STRIPPING BY GCL CONTRACT HY/2012/04

PROPOSED G.I.STATIONS :

- PBH01 PROPOSED BOREHOLE
- TP01 PROPOSED TRIAL PIT
- CH01 PROPOSED COREHOLE
- SS01 SS02 PROPOSED SLOPE STRIPPING

Rev	Description	By	Date	Rev	Description	By	Date
A	SUBMISSION	RC	07/13				
B	SUBMISSION	RC	07/13				
C	SUBMISSION	RC	09/13				

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RL	07/13
Checked	Approved
DS	DOP
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Client: 香港特別行政區政府 路政署 HIGHWAYS DEPARTMENT 港珠澳大橋香港段管理處 Hong Kong-Zhuhai-Macao Bridge Hong Kong Project Management Office

Supervising Officer: AECOM

Contractor: Gammon

Originator: ARUP

Project Title: Contract No. HY/2012/07 Tuen Mun - Chek Lap Kok Link Southern Connection Viaduct Section

Drawing title: **Figure 1.2b**

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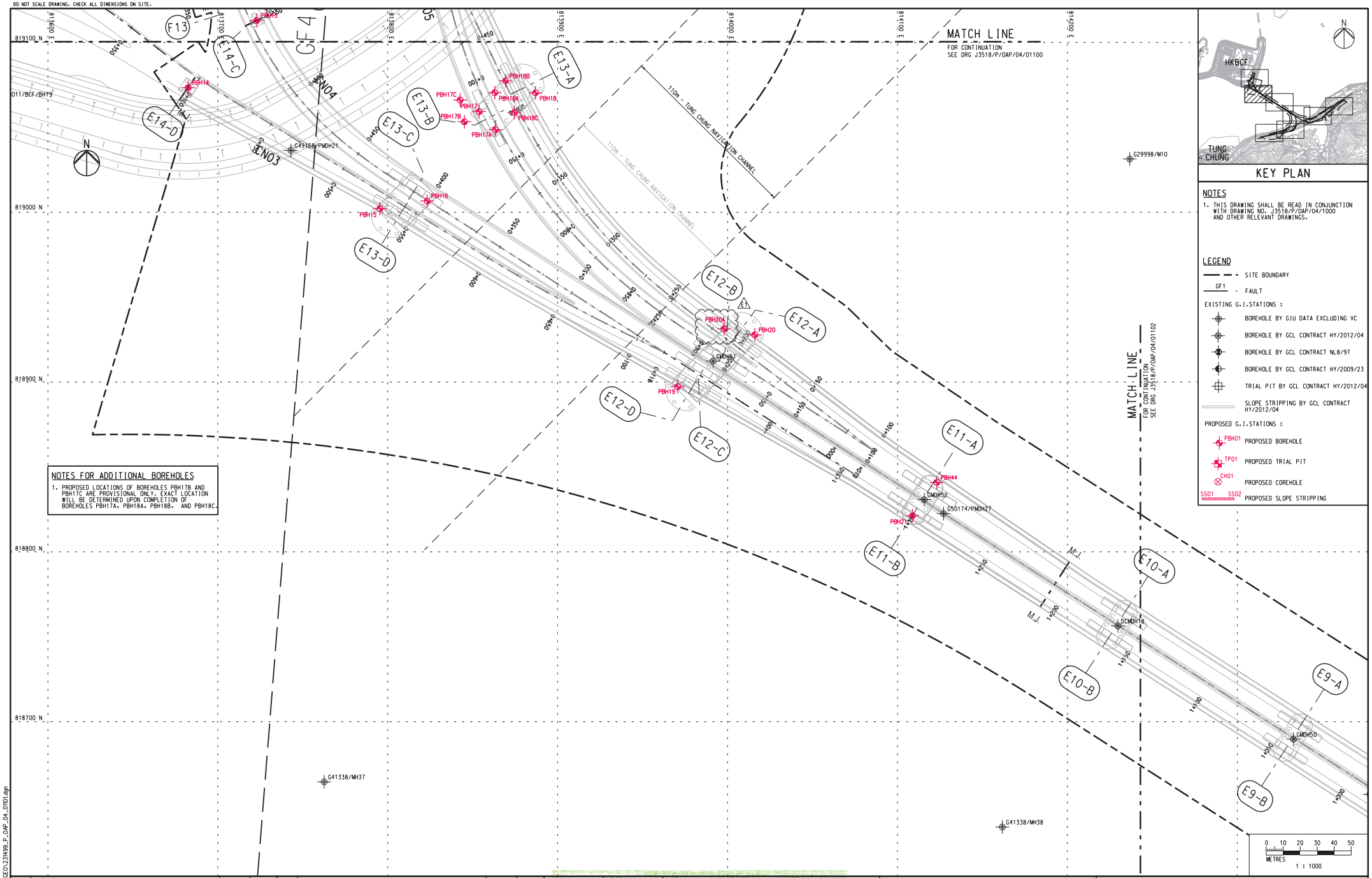

KEY PLAN

NOTES

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LEGEND

- SITE BOUNDARY
- GF1 - FAULT

EXISTING G.I.STATIONS :

- BOREHOLE BY GIU DATA EXCLUDING VC
- BOREHOLE BY GCL CONTRACT HY/2012/04
- BOREHOLE BY GCL CONTRACT NL8/97
- BOREHOLE BY GCL CONTRACT HY/2009/23
- TRIAL PIT BY GCL CONTRACT HY/2012/04
- SLOPE STRIPPING BY GCL CONTRACT HY/2012/04

PROPOSED G.I.STATIONS :

- PBH01 PROPOSED BOREHOLE
- TP01 PROPOSED TRIAL PIT
- CH01 PROPOSED COREHOLE
- SS01 SS02 PROPOSED SLOPE STRIPPING

NOTES FOR ADDITIONAL BOREHOLES

1. PROPOSED LOCATIONS OF BOREHOLES PBH17B AND PBH17C ARE PROVISIONAL ONLY. EXACT LOCATION WILL BE DETERMINED UPON COMPLETION OF BOREHOLES PBH17A, PBH18A, PBH18B, AND PBH18C.

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B	SUBMISSION	RC	07/13				
C	SUBMISSION	RC	09/13				
D	SUBMISSION	RC	10/13				
E1	FOR INTERNAL REVIEW	RC	11/13				

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Client: 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

Supervising Officer: AECOM

Contractor: Gammon

Originator: ARUP

Project Title: Contract No. HY/2012/07 Tuen Mun - Chek Lap Kok Link Southern Connection Viaduct Section

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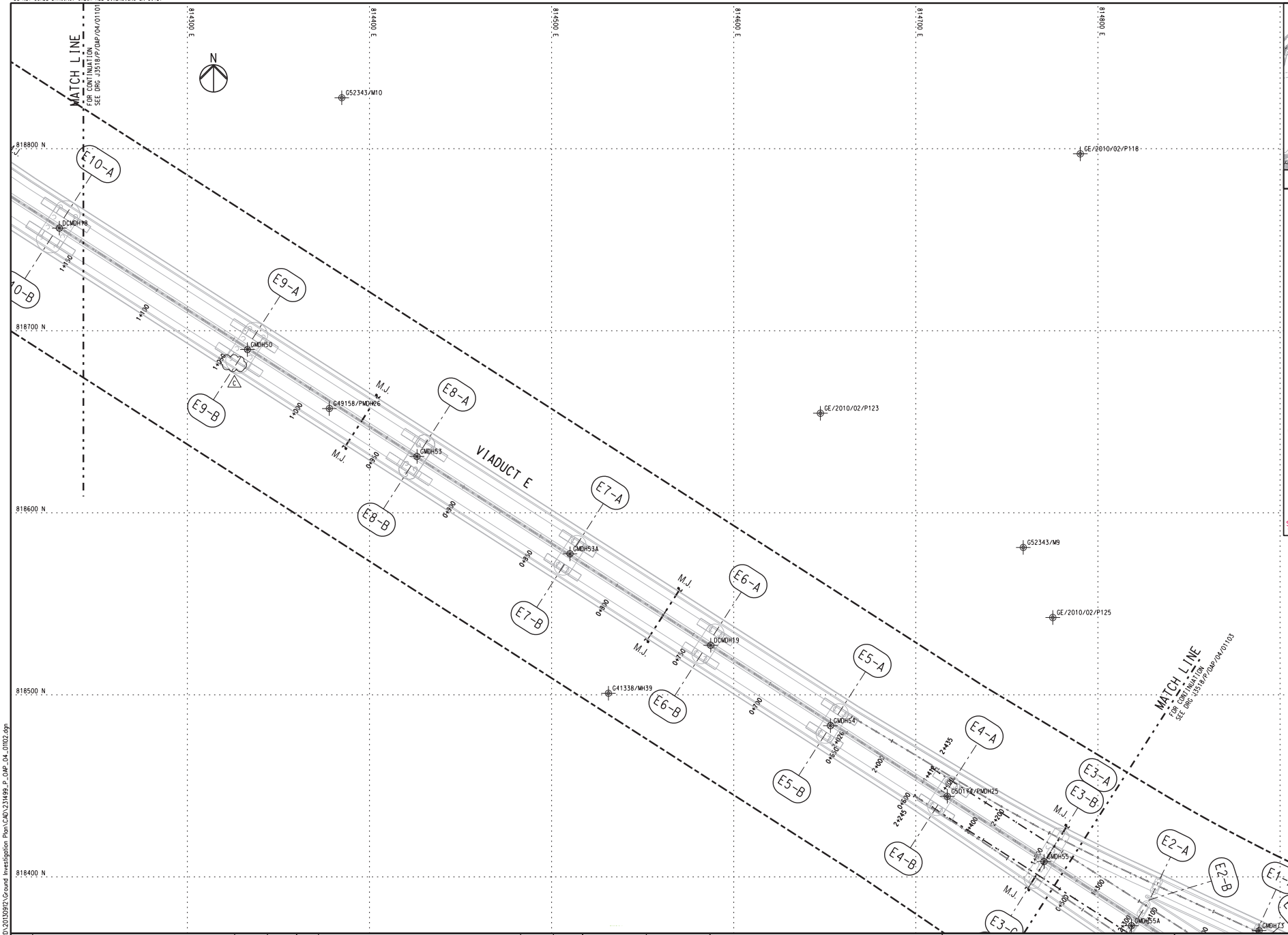

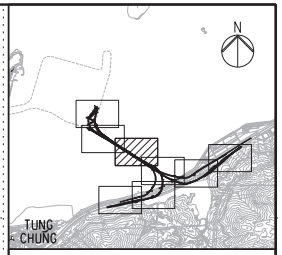

KEY PLAN

NOTES

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LEGEND

SITE BOUNDARY

GF1 FAULT

EXISTING G.I.STATIONS :

- BOREHOLE BY GIU DATA EXCLUDING VC
- BOREHOLE BY GCL CONTRACT HY/2012/04
- BOREHOLE BY GCL CONTRACT NL8/97
- BOREHOLE BY GCL CONTRACT HY/2009/23
- TRIAL PIT BY GCL CONTRACT HY/2012/04
- SLOPE STRIPPING BY GCL CONTRACT HY/2012/04

PROPOSED G.I.STATIONS :

- PBH01 PROPOSED BOREHOLE
- TP01 PROPOSED TRIAL PIT
- CH01 PROPOSED COREHOLE
- SS01 SS02 PROPOSED SLOPE STRIPPING

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

Project Title: Contract No. HY/2012/07
Tuen Mun - Chek Lap Kok Link
Southern Connection Viaduct Section

Supervising Officer: AECOM
Contractor: Gammon
Originator: ARUP

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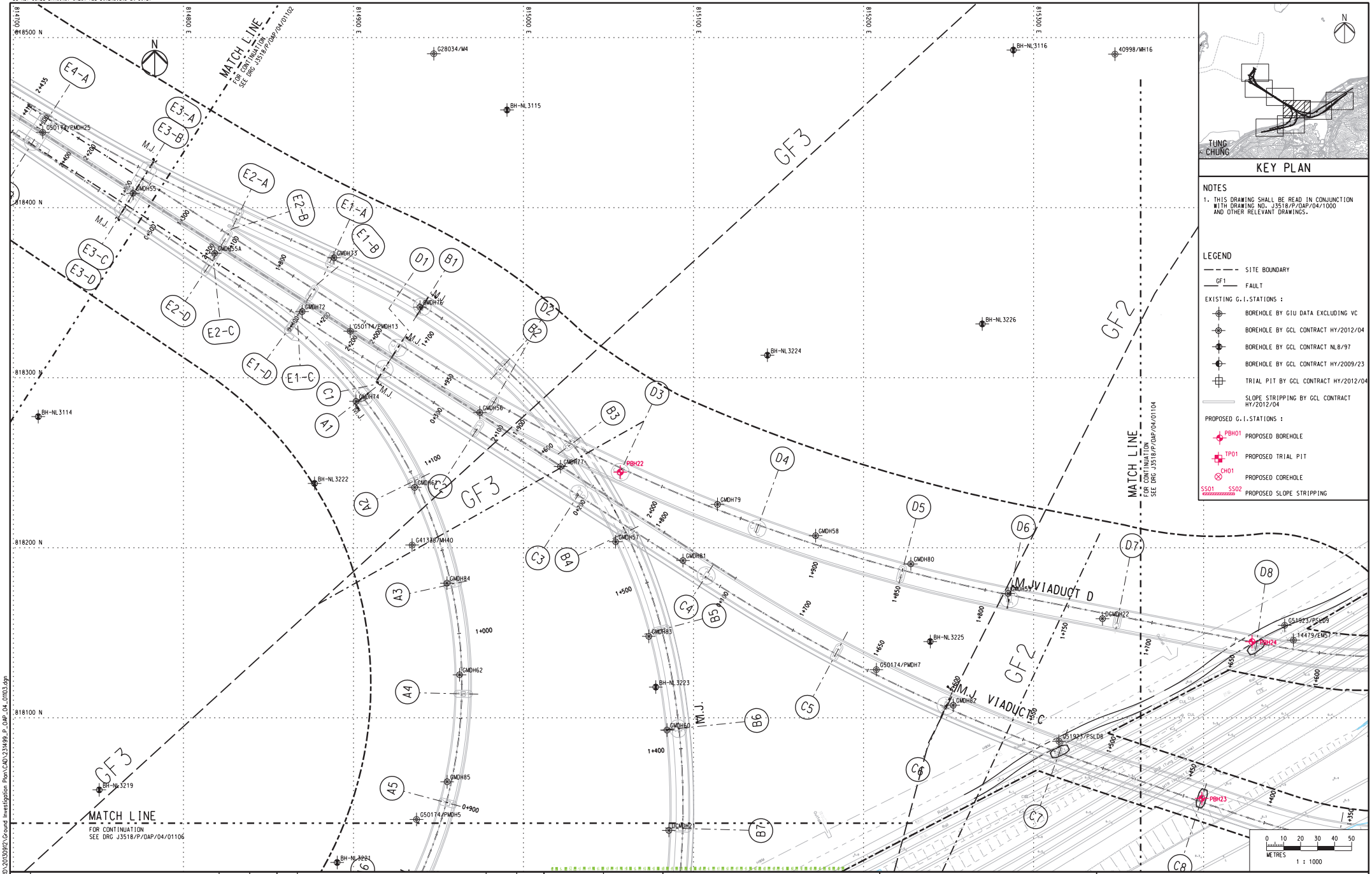

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C	SUBMISSION	RC	09/13				

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

Project Title: Contract No. HY/2012/07
Tuen Mun - Chek Lap Kok Link
Southern Connection Viaduct Section

Supervising Officer: AECOM
Contractor: Gammon
Originator: ARUP

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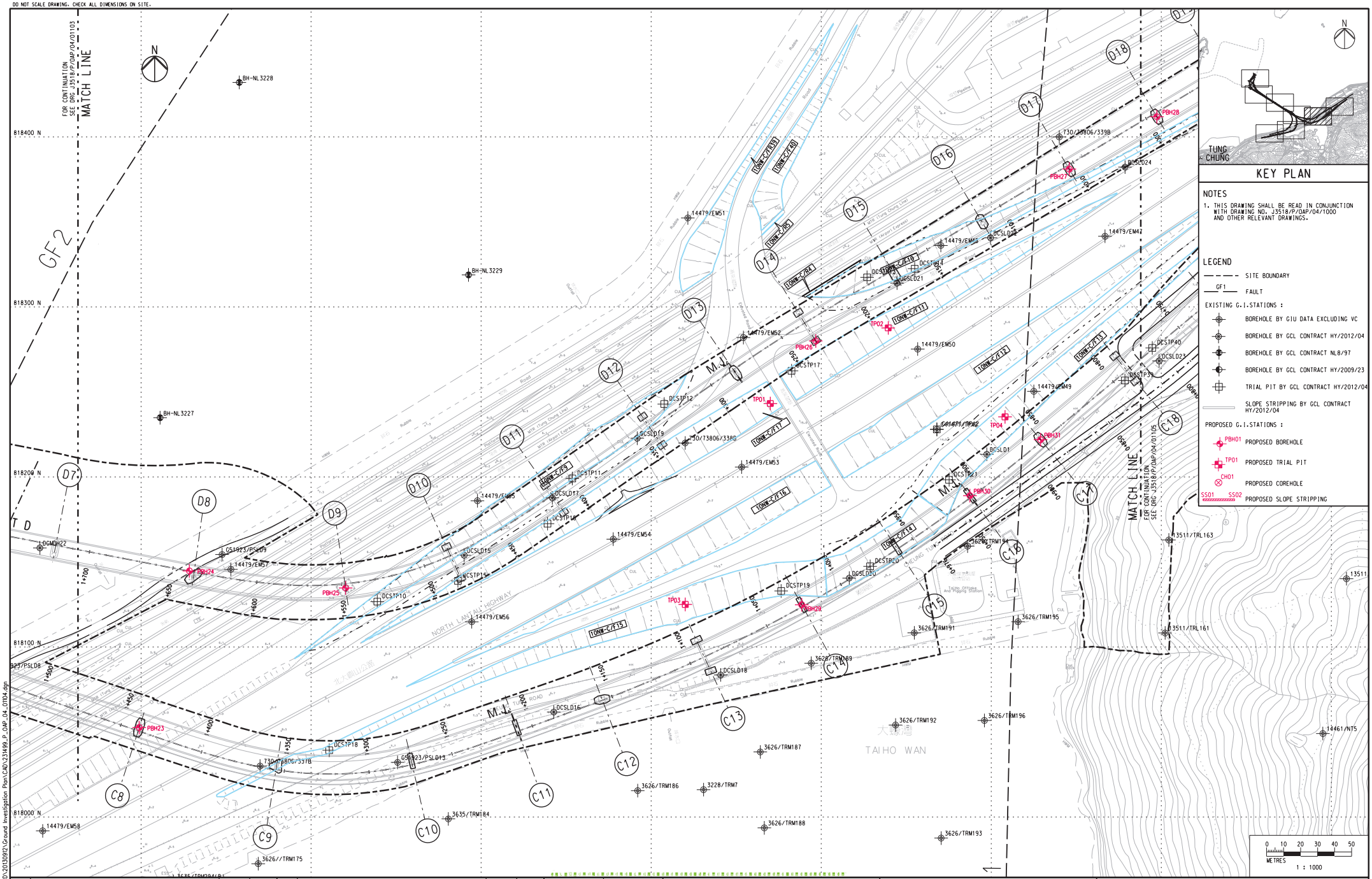

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C	SUBMISSION	RC	09/13				

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Client: 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

Project Title: Contract No. HY/2012/07 Tuen Mun - Chek Lap Kok Link Southern Connection Viaduct Section

Supervising Officer: AECOM
Contractor: Gammon
Originator: ARUP

Drawing title: **Figure 1.2f**

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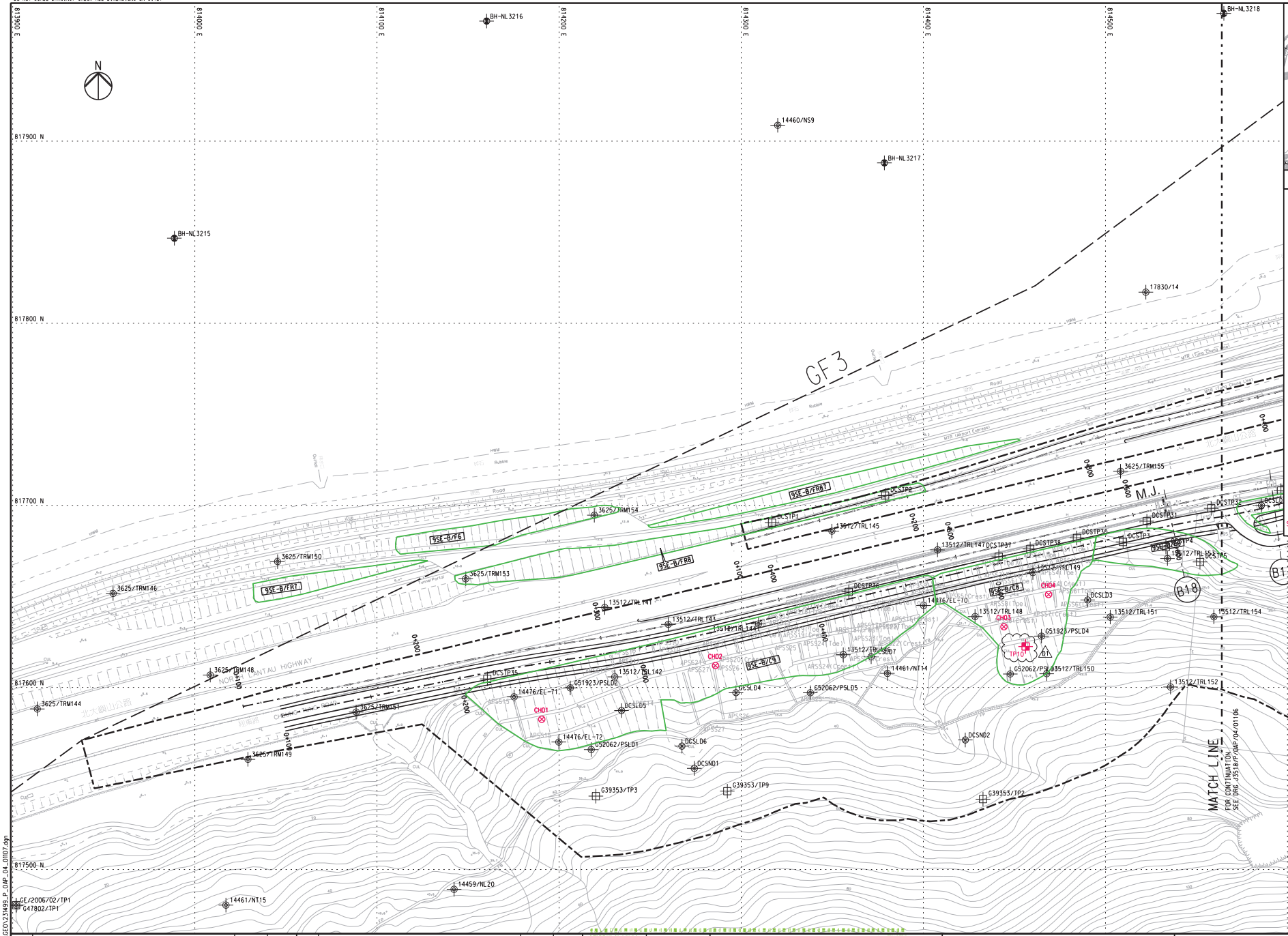


KEY PLAN

NOTES

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NO. J3518/P/OAP/04/1000 AND OTHER RELEVANT DRAWINGS.

LEGEND

SITE BOUNDARY

GF1 FAULT

EXISTING G.I.STATIONS :

- BOREHOLE BY GIU DATA EXCLUDING VC
- BOREHOLE BY GCL CONTRACT HY/2012/04
- BOREHOLE BY GCL CONTRACT NL8/97
- BOREHOLE BY GCL CONTRACT HY/2009/23
- TRIAL PIT BY GCL CONTRACT HY/2012/04
- SLOPE STRIPPING BY GCL CONTRACT HY/2012/04

PROPOSED G.I.STATIONS :

- PBH01 PROPOSED BOREHOLE
- TP01 PROPOSED TRIAL PIT
- CH01 PROPOSED COREHOLE
- SS01 SS02 PROPOSED SLOPE STRIPPING

Rev	Description	By	Date	Rev	Description	By	Date
A	SUBMISSION	RC	07/13				
B	SUBMISSION	RC	07/13				
C	SUBMISSION	RC	09/13				
D1	FOR INTERNAL REVIEW	RC	11/13				

Drawn: RL — Date: 07/13

Checked: DS — Approved: DOP

Scale: 1:1000 @ A1 / 1:2000 @ A3

Client: 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

Project Title: Contract No. HY/2012/07 Tuen Mun - Chek Lap Kok Link Southern Connection Viaduct Section

Supervising Officer: AECOM

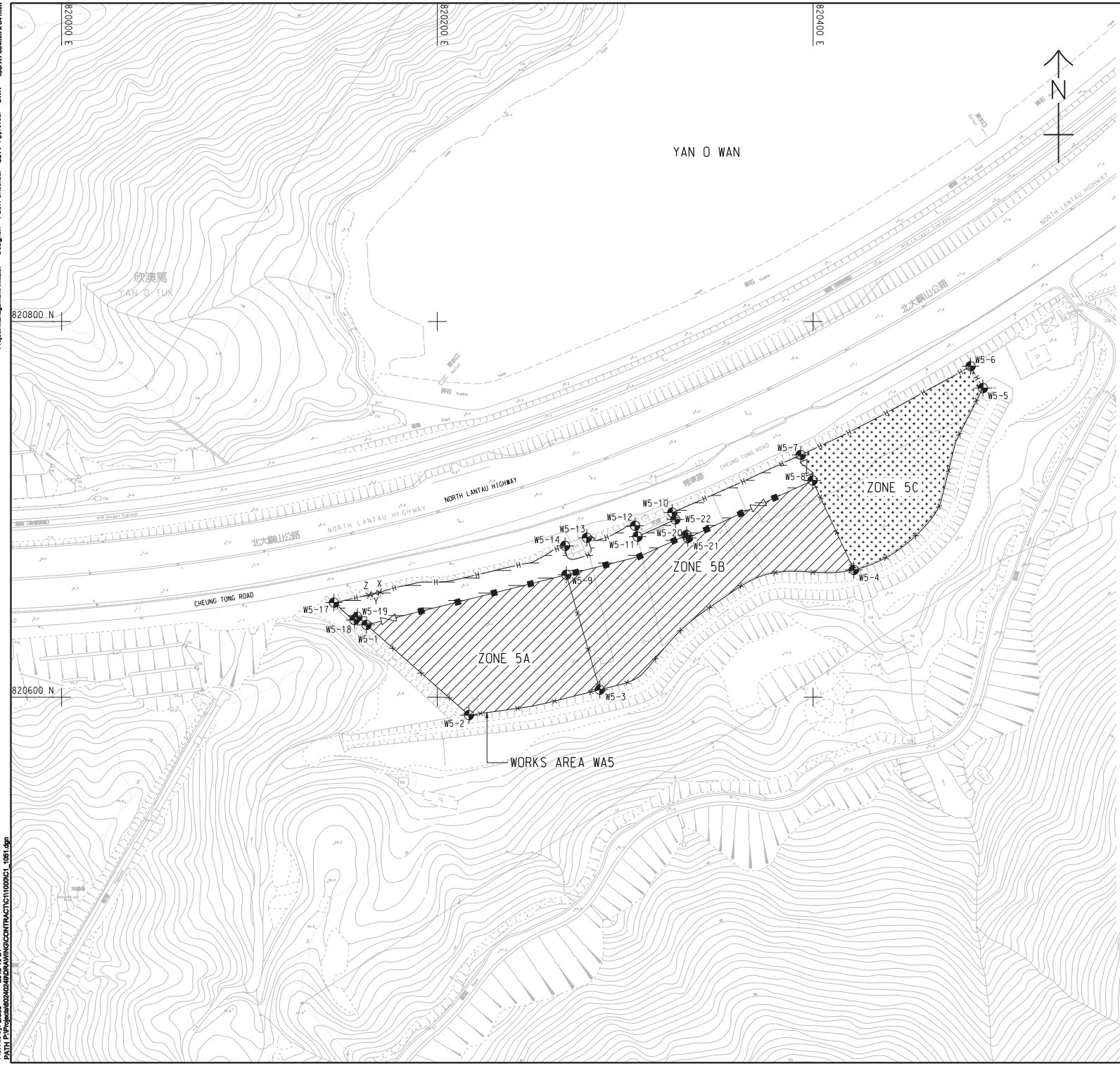
Contractor: Gammon

Originator: ARUP

Drawing title: **Figure 1.2g**

Drawing no. J3518/P/OAP/04/01107 Rev. D1

Printed by : 07/11/2013
File name : J3518P/GEO\234499_P_OAP_04_01107.dgn



NOTES:

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE WORKS AREA KEY PLAN IN SHEET NO. 60240249/C1/1000.
2. THE SETTING OUT INFORMATION AND WORKS AREA CONDITIONS SHOWN IN THIS DRAWING ARE FOR REFERENCE ONLY. THE WORKS AREA BOUNDARY SHALL BE IN ACCORDANCE WITH THE ENGINEERING CONDITIONS FOR TEMPORARY GOVERNMENT LAND ALLOCATION NO. TIS 619. IN CASE OF DISCREPANCY BETWEEN THE BOUNDARY SHOWN ON THIS DRAWING AND THE BOUNDARY INDICATED ON THE ENGINEERING CONDITIONS, THE LATTER SHALL PREVAIL.
3. DEMARCATION OF THE WORKS AREA SHALL BE DETERMINED ON SITE.
4. REFER TO HIGHWAYS DEPARTMENT STANDARD DRAWING NOS. H6110 AND H6111 FOR DETAILS OF HOARDING.
5. REFER TO HIGHWAYS DEPARTMENT STANDARD DRAWING NOS. H6121 AND H6122 FOR DETAILS OF CHAIN LINK FENCE.
6. REFER TO HIGHWAYS DEPARTMENT STANDARD DRAWING NO. H6121 FOR DETAILS OF GATE.
7. CHAIN LINK FENCE SHALL BE ERECTED ALONG THE WORKS AREA BOUNDARY. THE ALIGNMENT AND EXTENT OF CHAIN LINK FENCE SHOWN ARE INDICATIVE ONLY AND SHALL BE CONFIRMED BY THE SUPERVISING OFFICER.
8. THE LOCATION AND WIDTH OF GATE SHOWN ARE INDICATIVE ONLY AND SHALL BE CONFIRMED BY THE SUPERVISING OFFICER.
9. NO STRUCTURES SHALL BE ERECTED OTHER THAN SUCH STRUCTURES NOT EXCEEDING TWO STOREYS IN HEIGHT, WHICH ARE APPROVED BY THE DISTRICT LANDS OFFICER AS BEING APPROPRIATE FOR THE USE OF THE SITE AS A WORKS AREA.
10. THE TENTATIVE OCCUPATION PERIOD SHALL BE REFERRED TO EMPLOYER'S REQUIREMENTS PART 2 AND PART 14 SECTION 1 (CLAUSE 1.45A.
11. THE WORKS AREAS SHOWN ON THIS DRAWING ARE TO BE SHARE-USED AMONG THE CONTRACTS OF TM-CLKL RELATED CONTRACTS.THE AREAS HATCHED WITH ▨ ARE TENTATIVELY ALLOCATED FOR THE USE BY THIS CONTRACT.
12. THE COMMON AREA SHALL BE CONCRETE PAVED BY THE CONTRACTOR.

LEGEND:

- WORKS AREA UNDER THIS CONTRACT
- COMMON AREA (MAINTAINED UNDER THIS CONTRACT) TO BE SHARE-USED WITH OTHER CONTRACTS
- WORKS AREA FOR THIS CONTRACT TO BE EARLY HANDED OVER BY THE CONTRACTOR.
- H — HOARDING AND GATE (TO BE ERECTED AND MAINTAINED UNDER THIS CONTRACT)
- CHAIN LINK FENCE AND GATE (TO BE ERECTED AND MAINTAINED BY OTHERS)
- CHAIN LINK FENCE AND GATE (TO BE ERECTED AND MAINTAINED UNDER THIS CONTRACT)

SETTING OUT COORDINATES OF WORKS AREA WA5

POINT	COORDINATES	
	EASTING	NORTHING
W5-1	820162.308	820638.492
W5-2	820216.839	820590.455
W5-3	820286.496	820603.985
W5-4	820421.757	820667.742
W5-5	820490.425	820764.554
W5-6	820483.839	820776.180
W5-7	820393.451	820728.958
W5-8	820399.746	820715.343
W5-9	820268.674	820665.173
W5-10	820325.075	820698.276
W5-11	820306.587	820685.458
W5-12	820305.269	820691.287
W5-13	820279.580	820684.863
W5-14	820268.027	820680.572
X	820169.407	820655.859
Y	820166.601	820655.172
Z	820163.794	820654.484
W5-17	820144.957	820650.334
W5-18	820155.899	820641.093
W5-19	820157.432	820642.788
W5-20	820332.642	820686.314
W5-21	820333.350	820684.738
W5-22	820326.723	820694.608

AECOM

PROJECT 項目

TUEN MUN - CHEK LAP KOK LINK

CONTRACT TITLE

TUEN MUN - CHEK LAP KOK LINK - SOUTHERN CONNECTION VIADUCT SECTION

CLIENT 業主

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

CONSULTANT 工程顧問公司

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ISSUE/REVISION 修訂

VER. 修訂	DATE 日期	DESCRIPTION 內容修訂	CHK. 審核
-	OCT. 12	TENDER DRAWING	CWN

STATUS 階段

SCALE 比例: A1 1 : 1000

DIMENSION UNIT 尺寸單位: METRES

KEY PLAN 索引圖

Figure 1.2h

PROJECT NO. 項目編號: 60240249

CONTRACT NO. 合同編號: HY/2012/07

SHEET TITLE 圖紙名稱

WORKS AREA AND HOARDING PLAN

SHEET 1 OF 2

SHEET NUMBER 圖紙編號

60240249/C1/1051

Project Management Initials: Designer: PLCK Checked: SLYY Approved: CWN ISO A1 594mm x 841mm

Plot File by: LIUJ3 2012-10-24
PATH P:\Projects\60240249\DRAWING\CONTRACT\C1\1000\C1_1051.dgn

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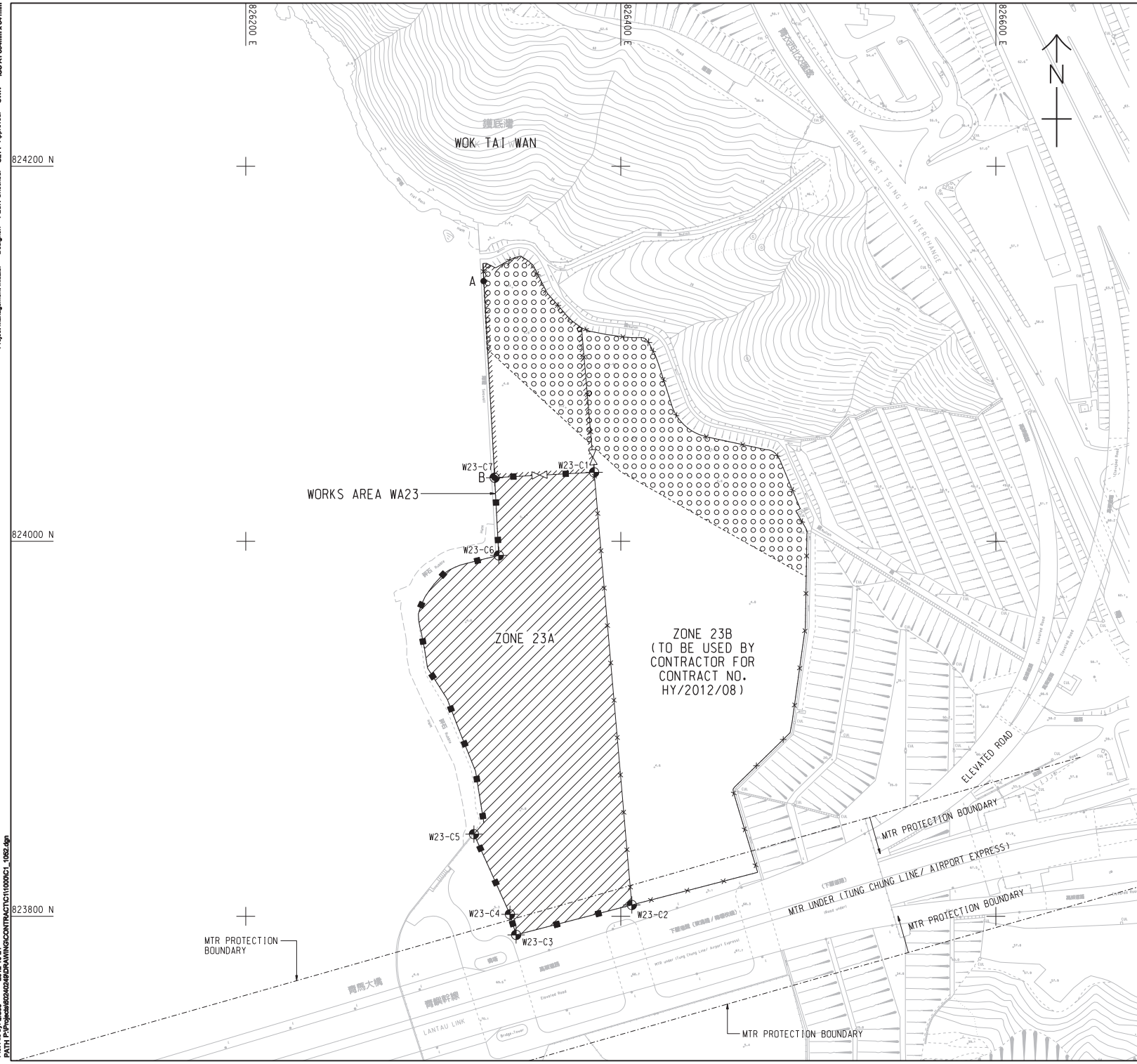

NOTES:

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE WORKS AREA KEY PLAN IN SHEET NO. 60240249/C1/1000.
2. THE SETTING OUT INFORMATION AND WORKS AREA CONDITIONS SHOWN IN THIS DRAWING ARE FOR REFERENCE ONLY. THE WORKS AREA BOUNDARY SHALL BE IN ACCORDANCE WITH THE ENGINEERING CONDITIONS FOR TEMPORARY GOVERNMENT LAND ALLOCATION NO. TKT 1878. IN CASE OF DISCREPANCY BETWEEN THE BOUNDARY SHOWN ON THIS DRAWING AND THE BOUNDARY INDICATED ON THE ENGINEERING CONDITIONS, THE LATTER SHALL PREVAIL.
3. DEMARCATION OF THE WORKS AREA SHALL BE DETERMINED ON SITE.
4. REFER TO HIGHWAYS DEPARTMENT STANDARD DRAWING NOS. H6121 AND H6122 FOR DETAILS OF CHAIN LINK FENCE.
5. REFER TO HIGHWAYS DEPARTMENT STANDARD DRAWING NO. H6121 FOR DETAILS OF GATE.
6. CHAIN LINK FENCE SHALL BE ERECTED ALONG THE WORKS AREA BOUNDARY. THE ALIGNMENT AND EXTENT OF CHAIN LINK FENCE SHOWN ARE INDICATIVE ONLY AND SHALL BE CONFIRMED BY THE SUPERVISING OFFICER.
7. THE LOCATION AND WIDTH OF GATE SHOWN ARE INDICATIVE ONLY AND SHALL BE CONFIRMED BY THE SUPERVISING OFFICER.
8. NO RIGHT OF ACCESS TO THE SEA FROM THE SITE AND FROM THE SEA TO THE SITE SHALL BE ALLOWED EXCEPT BETWEEN THE POINTS A AND B.
9. NO MANNED FACILITIES SHALL BE LOCATED WITHIN AREA X.
10. NO STRUCTURES SHALL BE ERECTED OTHER THAN SUCH STRUCTURES NOT EXCEEDING TWO STOREYS IN HEIGHT, WHICH ARE APPROVED BY THE DISTRICT LANDS OFFICER AS BEING APPROPRIATE FOR THE USE OF THE SITE AS A WORKS AREA.
11. THE TENTATIVE OCCUPATION PERIOD SHALL BE REFERRED TO EMPLOYER'S REQUIREMENTS PART 2 AND PART 14 SECTION 1 CLAUSE 1.45A.
12. THE WORKS AREAS SHOWN ON THIS DRAWING ARE TO BE SHARE-USED AMONG THE CONTRACTS OF TM-CLKL-RELATED CONTRACTS. THE AREAS HATCHED WITH ▨ ARE TENTATIVELY ALLOCATED FOR THE USE BY THIS CONTRACT.

LEGEND:

- AREA X
- WORKS AREA FOR THIS CONTRACT
- COMMON AREA (MAINTAINED UNDER CONTRACT NO. HY/2012/08) TO BE SHARE-USED WITH CONTRACT NO. HY/2012/08
- CHAIN LINK FENCE AND GATE (TO BE ERECTED AND MAINTAINED UNDER THIS CONTRACT)
- CHAIN LINK FENCE AND GATE (TO BE ERECTED AND MAINTAINED BY OTHERS)
- MTR PROTECTION BOUNDARY

SETTING OUT COORDINATES OF WORKS AREA WA23

POINT	COORDINATES	
	EASTING	NORTHING
W23-C1	826385.78	824036.80
W23-C2	826405.87	823806.07
W23-C3	826344.18	823790.10
W23-C4	826340.88	823801.06
W23-C5	826321.68	823843.84
W23-C6	826334.92	823992.47
W23-C7	826332.72	824033.89

AECOM

PROJECT 項目

TUEN MUN - CHEK LAP KOK LINK

CONTRACT TITLE

TUEN MUN - CHEK LAP KOK LINK - SOUTHERN CONNECTION VIADUCT SECTION

CLIENT 業主

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

CONSULTANT 工程顧問公司

AECOM Asia Company Ltd.
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ISSUE/REVISION 修訂

MR 修訂	DATE 日期	DESCRIPTION 內容修訂	CHK. 審核
-	OCT. 12	TENDER DRAWING	CWN

STATUS 階段

SCALE 比例: A1 1 : 1000

DIMENSION UNIT 尺寸單位: METRES

KEY PLAN 索引圖

Figure 1.2i

PROJECT NO. 項目編號: 60240249

CONTRACT NO. 合同編號: HY/2012/07

SHEET TITLE 圖紙名稱

WORKS AREA AND HOARDING PLAN

SHEET 2 OF 2

SHEET NUMBER 圖紙編號

60240249/C1/1052

Project Management Initials: PLCK Checked: SLYY Approved: CWN Designer: ISO A1 594mm x 841mm

Plot File by: LIUJ3 2012-10-24
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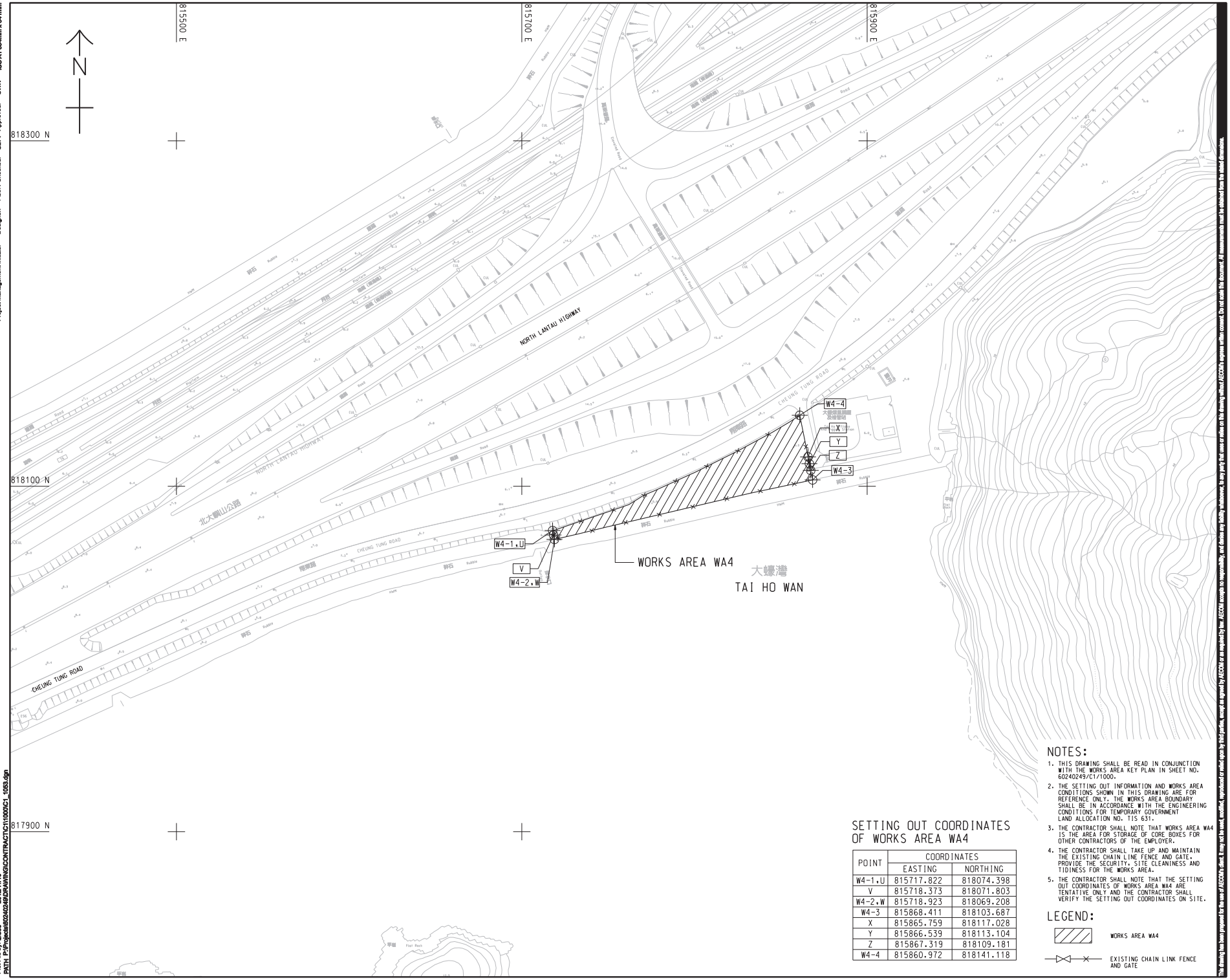

NOTES:

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE WORKS AREA KEY PLAN IN SHEET NO. 60240249/C1/1000.
2. THE SETTING OUT INFORMATION AND WORKS AREA CONDITIONS SHOWN IN THIS DRAWING ARE FOR REFERENCE ONLY. THE WORKS AREA BOUNDARY SHALL BE IN ACCORDANCE WITH THE ENGINEERING CONDITIONS FOR TEMPORARY GOVERNMENT LAND ALLOCATION NO. T15 631.
3. THE CONTRACTOR SHALL NOTE THAT WORKS AREA WA4 IS THE AREA FOR STORAGE OF CORE BOXES FOR OTHER CONTRACTORS OF THE EMPLOYER.
4. THE CONTRACTOR SHALL TAKE UP AND MAINTAIN THE EXISTING CHAIN LINE FENCE AND GATE. PROVIDE THE SECURITY. SITE CLEANINESS AND TIDINESS FOR THE WORKS AREA.
5. THE CONTRACTOR SHALL NOTE THAT THE SETTING OUT COORDINATES OF WORKS AREA WA4 ARE TENTATIVE ONLY AND THE CONTRACTOR SHALL VERIFY THE SETTING OUT COORDINATES ON SITE.

SETTING OUT COORDINATES OF WORKS AREA WA4

POINT	COORDINATES	
	EASTING	NORTHING
W4-1,U	815717.822	818074.398
V	815718.373	818071.803
W4-2,W	815718.923	818069.208
W4-3	815868.411	818103.687
X	815865.759	818117.028
Y	815866.539	818113.104
Z	815867.319	818109.181
W4-4	815860.972	818141.118

LEGEND:

WORKS AREA WA4

EXISTING CHAIN LINK FENCE AND GATE

AECOM

PROJECT
項目

TUEN MUN - CHEK LAP KOK LINK

CONTRACT TITLE

TUEN MUN - CHEK LAP KOK LINK - SOUTHERN CONNECTION VIADUCT SECTION

CLIENT
業主

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

CONSULTANT
工程顧問公司

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Figure 1.2j

ISSUE/REVISION
修訂

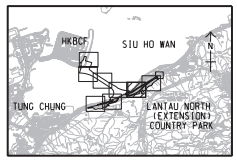
VR. 修訂	DATE 日期	DESCRIPTION 內容修訂	CHK. 審核
-	NOV. 12	TENDER ADDENDUM NO. 1	CWN

STATUS
階段

SCALE
比例: A1 1 : 1000

DIMENSION UNIT
尺寸單位: METRES

KEY PLAN
索引圖



PROJECT NO.
項目編號: 60240249

CONTRACT NO.
合約編號: HY/2012/07

SHEET TITLE
圖紙名稱

WORKS AREA WA4

SHEET NUMBER
圖紙編號

60240249/C1/1053

Project Management Initials: Designer: PLCK Checked: SLYY Approved: CWN ISO A1 594mm x 841mm

Plot File by: LIUJ3 2012/11/16
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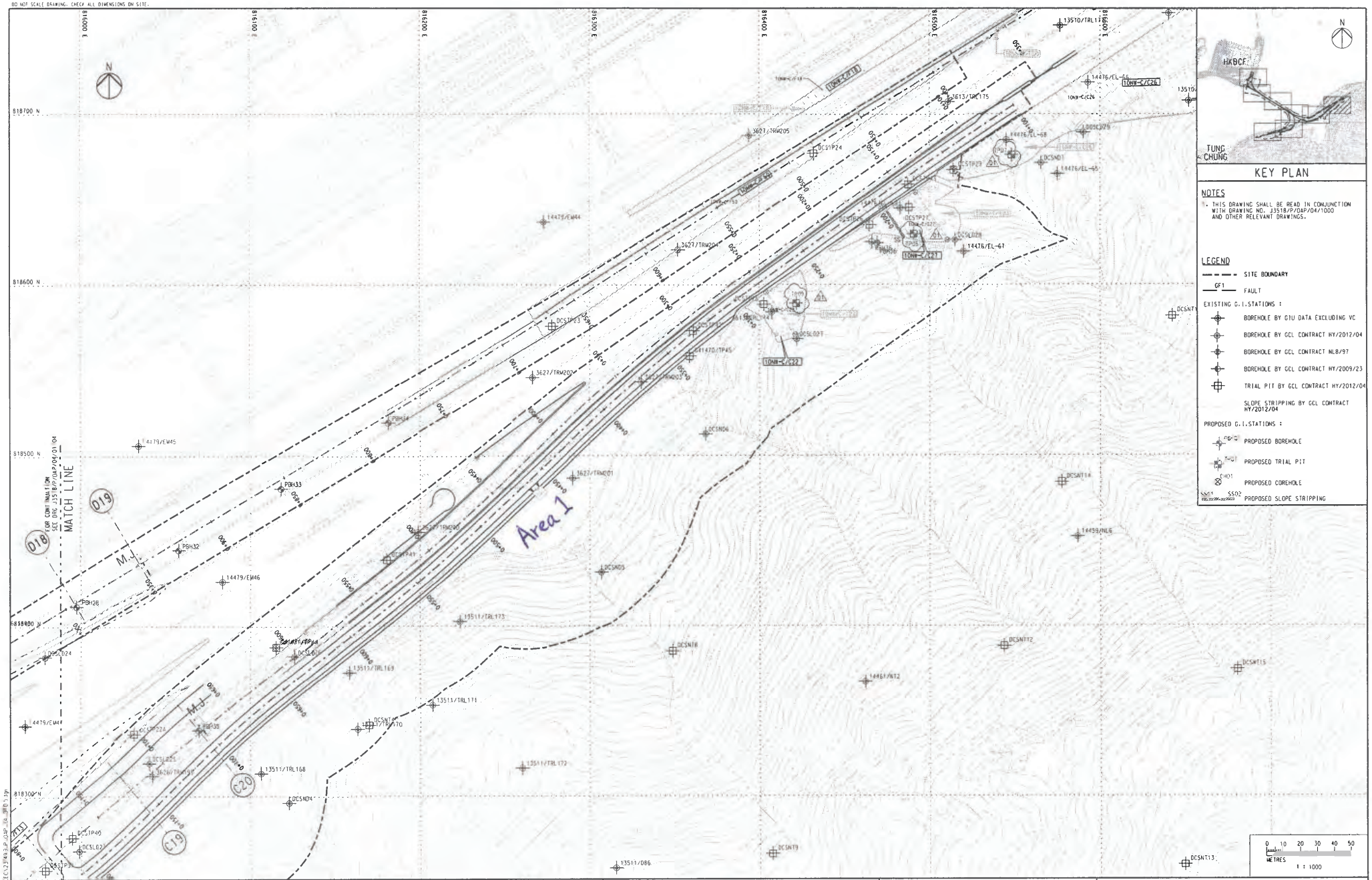

Rev	Description	By	Date	Rev	Description	By	Date
A	SUBMISSION	RL	07/13				
B	SUBMISSION	RL	07/13				
C	SUBMISSION	RL	09/13				
D1	ETA INTERNAL REVIEW	RL	10/13				

Drawn	RL
Date	07/13
Checked	DS
Approved	DOP
Scale	1:1000 @ A1 / 1:2000 @ A3

Client: 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

Project Title: Contract No. HY/2012/07 Tuen Mun - Chek Lap Kok Link Southern Connection Viaduct Section

Supervising Officer: AECOM

Contractor: Gammon

Originator: ARUP

Drawing title: **Figure 1.2k**

Drawing no. J3518/P/OAP/04/01105 Rev. D1

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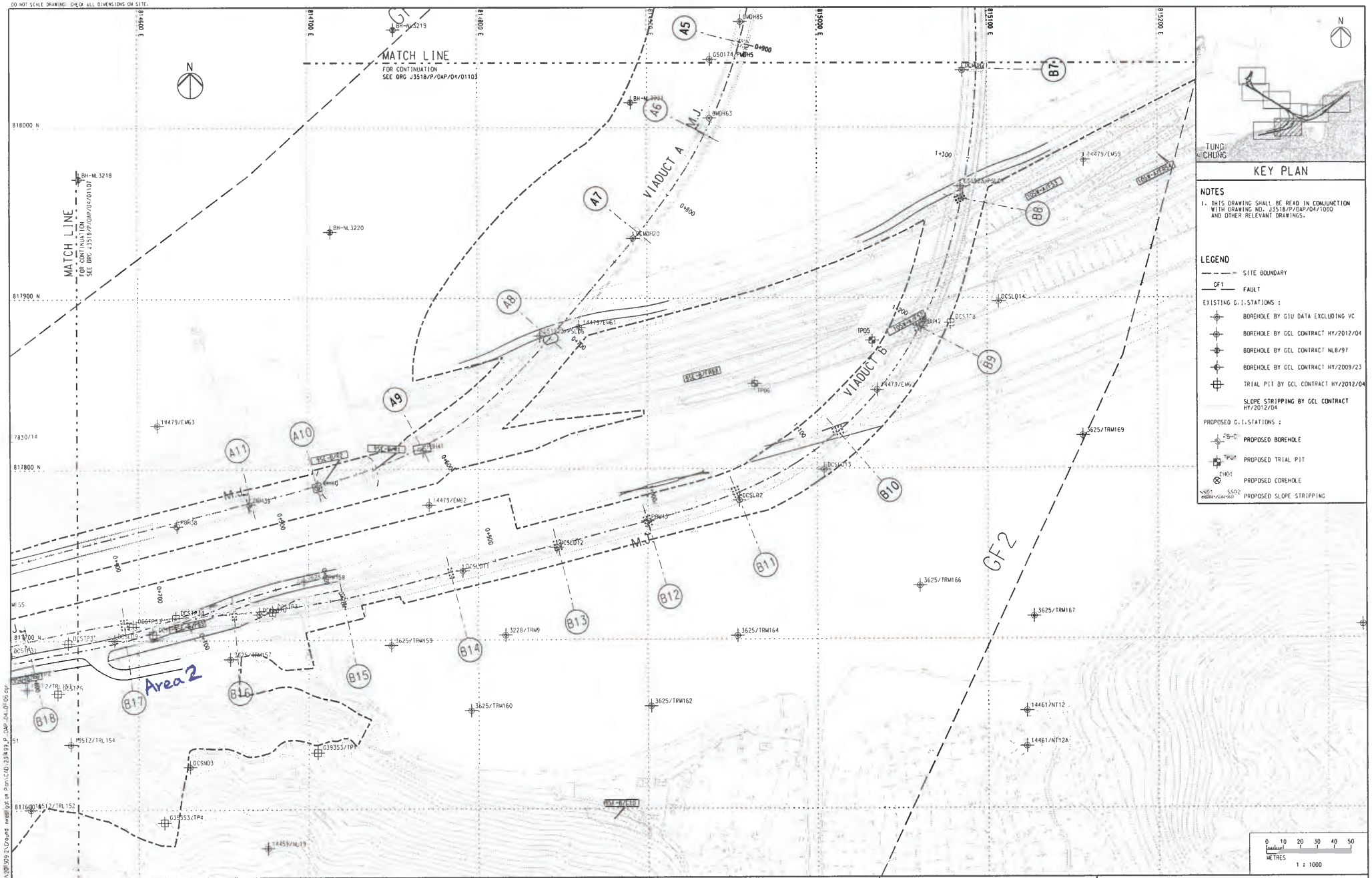


Rev	Description	By	Date	Rev	Description	By	Date
A	[illegible]	RC	07/13				
B	[illegible]	RC	07/13				
C	[illegible]	RC	09/13				

Drawn	Date
RL	07/13
Checked	Approved
DS	DOP
Scale	
1:1000 @ A1 / 1:2000 @ A3	

Client: 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

Project Title: Contract No. HY/2012/07
Tuen Mun - Chek Lap Kok Link
Southern Connection Viaduct Section

Supervising Officer: AECOM
Contractor: Gammon
Originator: ARUP

Drawing title: **Figure 1.2l**

Drawing no. J3518/P/OAP/04/01106 Rev C

Printed by: 9/9/2015
F:\Temp\J3518P/OAP/04/01106 21Ground overall gotcon Plan(CAD_23/499_P_OAP_04_01106.dgn

1.2 SCOPE OF REPORT

This is the Sixteenth Monthly EM&A Report under the *Contract No. HY/2012/07 Tuen Mun – Chek Lap Kok Link – Southern Connection Viaduct Section.* This report presents a summary of the environmental monitoring and audit works in February 2015.

1.3 ORGANIZATION STRUCTURE

The organization structure of the Contract is shown in *Appendix A*. The key personnel contact names and contact details are summarized in *Table 1.1* below.

Table 1.1 Contact Information of Key Personnel

Party	Position	Name	Telephone	Fax
HyD (Highways Department)	Project Coordinator	Stanley Chan	2762 3406	3188 6614
	Senior Engineer	Steven Shum	2762 4133	3188 6614
SOR (AECOM Asia Company Limited)	Chief Resident Engineer	Daniel Ip	3553 3800	2492 2057
	Resident Engineer	Kingman Chan	3691 3950	3691 2899
ENPO / IEC (ENVIRON Hong Kong Ltd.)	ENPO Leader	Y.H. Hui	3465 2888	3465 2899
	IEC	Dr. F.C. Tsang	3465 2828	3465 2899
Contractor (Gammon Construction Limited)	Environmental Manager	Brian Kam	3520 0387	3520 0486
	Environmental Officer	Roy Leung	3520 0387	3520 0486
	24-hour Complaint Hotline		9738 4332	
ET (ERM-HK)	ET Leader	Jovy Tam	2271 3113	2723 5660

1.4 SUMMARY OF CONSTRUCTION WORKS

The construction phase of the Contract commenced on 31 October 2013. The three-month rolling construction programme is shown in *Appendix B*.

As informed by the Contractor, details of the major works carried out in this reporting month are listed below:

Marine Works

- Construction of Pile caps at Viaducts B, C & E;
- Marine piling platform installation & uninstallation;
- Marine Piling at Viaducts C & E; and

- Additional marine ground investigation (GI) and laboratory testing.

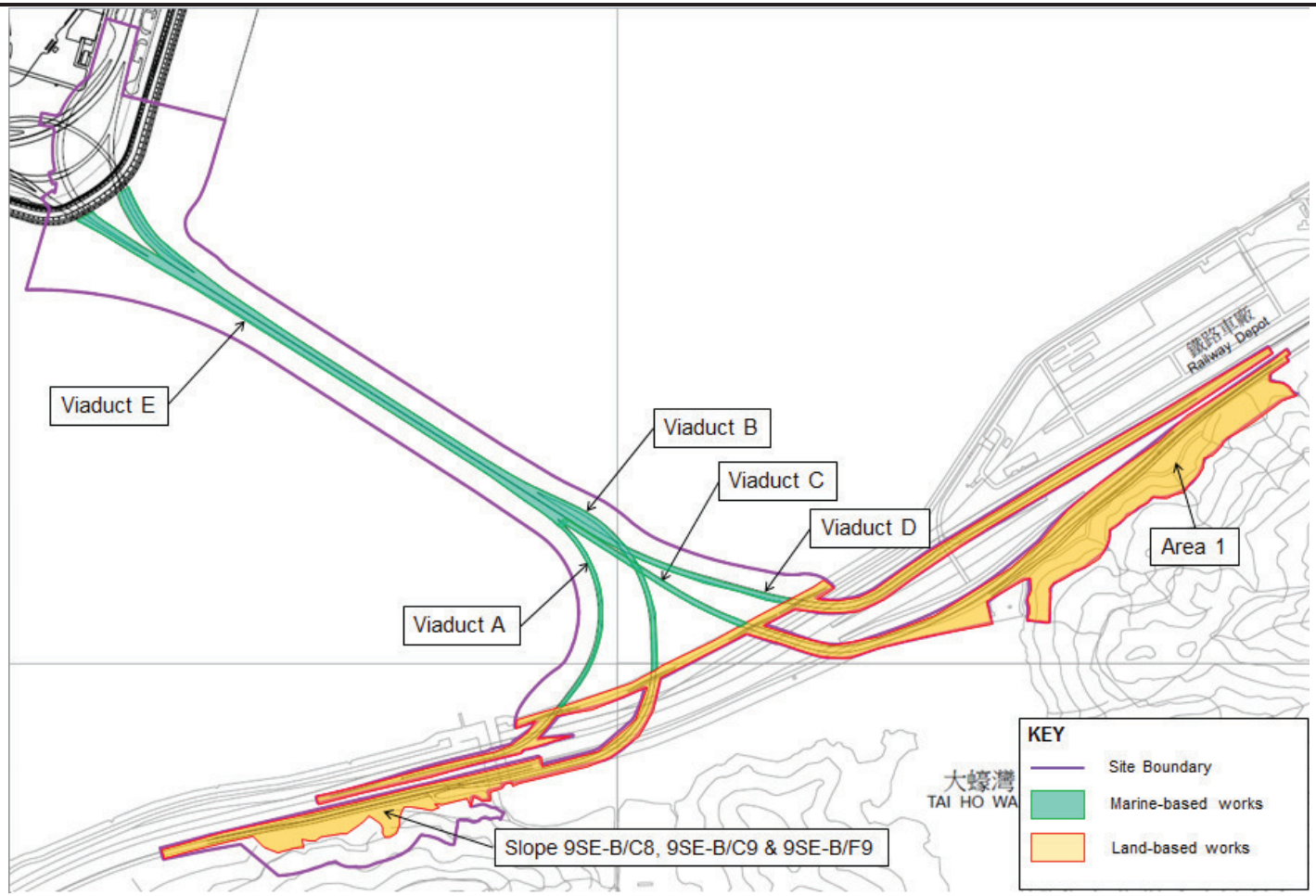
Land-based Works

- Construction of pile cap superstructure of Viaduct B & C;
- Channel re-construction at Area 1;
- Land Piling at Viaducts B, C & D;
- Pre-drilling works at Viaduct A;
- Construction of pile cap at Viaducts B & D;
- Additional land GI, trial pits & lab testing;
- Utility surveys; and
- Slope work of Slopes 9SE-B/C8, 9SE-B/C9 & 9SE-B/F9.

The locations of the construction activities are shown in *Figure 1.3*. The Environmental Sensitive Receivers in the vicinity of the Project are shown in *Figure 1.4*.

The environmental mitigation measures implementation schedule are presented in *Appendix C*.

Figure 1.3 Locations of Construction Activities in the Reporting Month



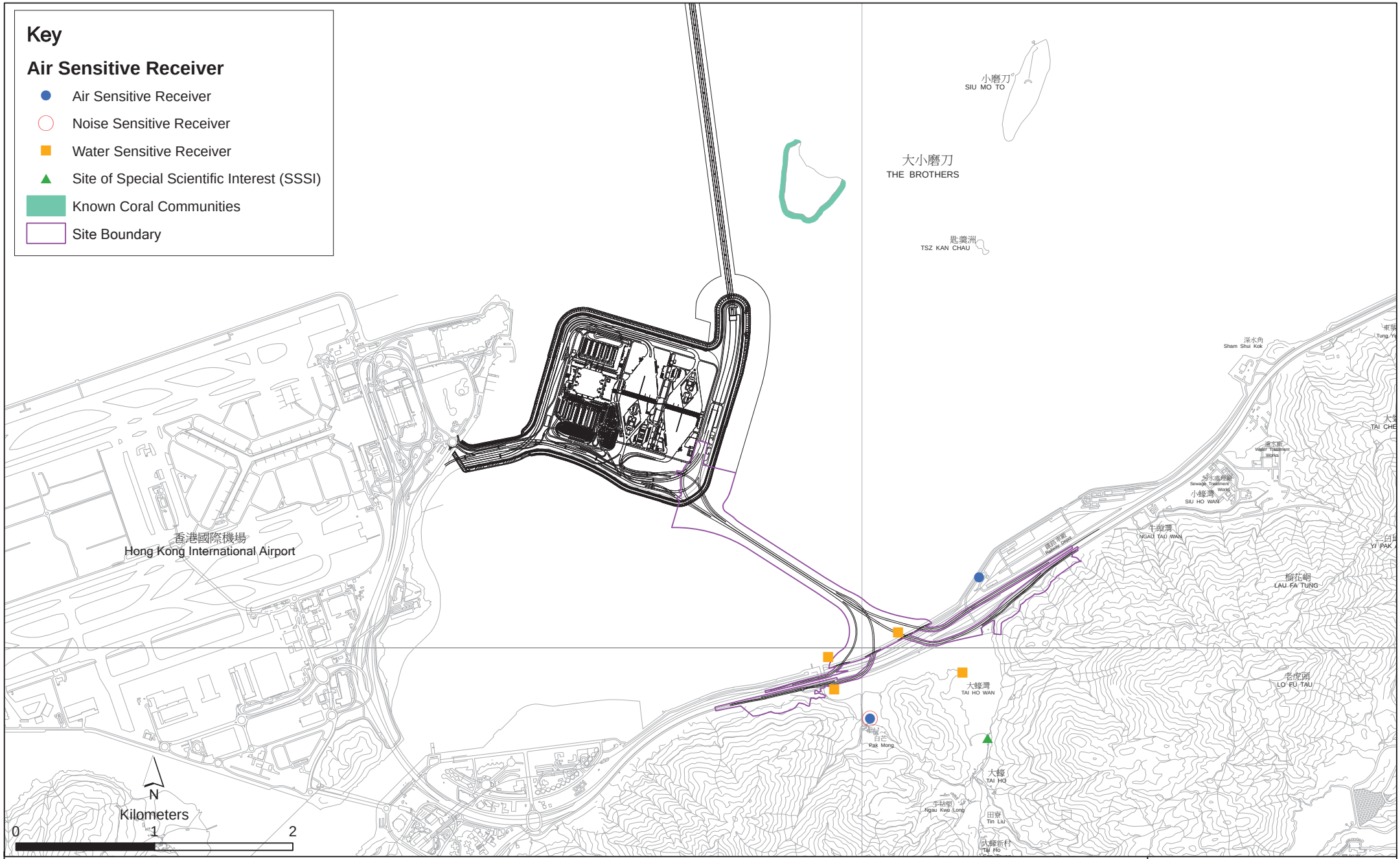


Figure 1.4

Environmental Sensitive Receivers in the Vicinity of Contract No. HY/2012/07
Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section

File: T:\GIS\CONTRACT\0215660\Mxd\0215660_Environmental_Sensitive_Receiver.mxd
Date: 7/8/2014

Environmental Resources Management

ERM

2 EM&A RESULTS

The EM&A programme required environmental monitoring for air quality, noise, water quality and marine ecology as well as environmental site inspections for air quality, noise, water quality, waste management, marine ecology and landscape and visual impacts. The EM&A requirements and related findings for each component are summarized in the following sections.

2.1 AIR QUALITY

2.1.1 Monitoring Requirements and Equipment

In accordance with the Updated EM&A Manual, impact 1-hour TSP monitoring was conducted three (3) times every six (6) days and impact 24-hour TSP monitoring was carried out once every six (6) days when the highest dust impact was expected. The Action and Limit Levels of the air quality monitoring is provided in *Appendix D*.

Table 2.1 Locations of Impact Air Quality Monitoring Stations

Monitoring Station	Location	Description	Monitoring Dates
ASR 9	MTR Depot	On the ground nearby MTR Depot Entrance	3, 9, 12, 17, 23 and 26 February 2015
ASR 8A	Area 4	On ground at the works area, Area 4	3, 9, 12, 17, 23 and 26 February 2015

High Volume Samplers (HVSs) were used for carried out 1-hour and 24-hour TSP monitoring on 3, 9, 12, 17, 23 and 26 February 2015 at ASR8A and ASR9 in accordance with the requirements of the Updated EM&A Manual. The TSP monitoring stations are illustrated in *Figure 2.1* and detailed in *Table 2.1*. Wind anemometer was deployed at Area 4 for logging wind speed and wind direction. Copies of the calibration certificates for the equipment are presented in *Appendix E*. Details of the deployed equipment are given in *Table 2.2*.

Table 2.2 *Air Quality Monitoring Equipment*

Equipment	Brand and Model
High Volume Sampler (1-hour TSP and 24-hour TSP)	Tisch Environmental Mass Flow Controlled Total Suspended Particulate (TSP) High Volume Sampler (Model No. TE-5170)
Wind Sensor	Global Water (Wind Speed Sensor: WE550; Wind Direction Sensor: WE570)
Wind Anemometer for calibration	Lutron (Model No. AM-4201)

2.1.2 *Monitoring Schedule for the Reporting Month*

The schedule for air quality monitoring in February 2015 is provided in *Appendix F*.

2.1.3 *Results and Observations*

The monitoring results for 1-hour TSP and 24-hour TSP are summarized in *Tables 2.3* and *2.4* respectively. Detailed impact air quality monitoring results are presented in *Appendix G*.

Table 2.3 *Summary of 1-hour TSP Monitoring Results in the Reporting Period*

Monitoring Station	Average (μg/m³)	Range (μg/m³)	Action Level (μg/m³)	Limit Level (μg/m³)
ASR 8A	118	68 - 211	394	500
ASR 9	132	68 - 241	393	500

Table 2.4 *Summary of 24-hour TSP Monitoring Results in the Reporting Period*

Monitoring Station	Average (μg/m³)	Range (μg/m³)	Action Level (μg/m³)	Limit Level (μg/m³)
ASR 8A	72	54 – 104	178	260
ASR 9	89	51 – 117	178	260

The major dust sources in the reporting period included construction activities under the Contract as well as nearby traffic emissions.

All 1-hour and 24-hour TSP results were below the Action and Limit levels at all monitoring locations in the reporting period. No action is thus required to be undertaken in accordance with the Event Action Plan presented in *Appendix L*.

Meteorological information collected at ASR8A including wind speed and wind direction is provided in *Appendix H*.

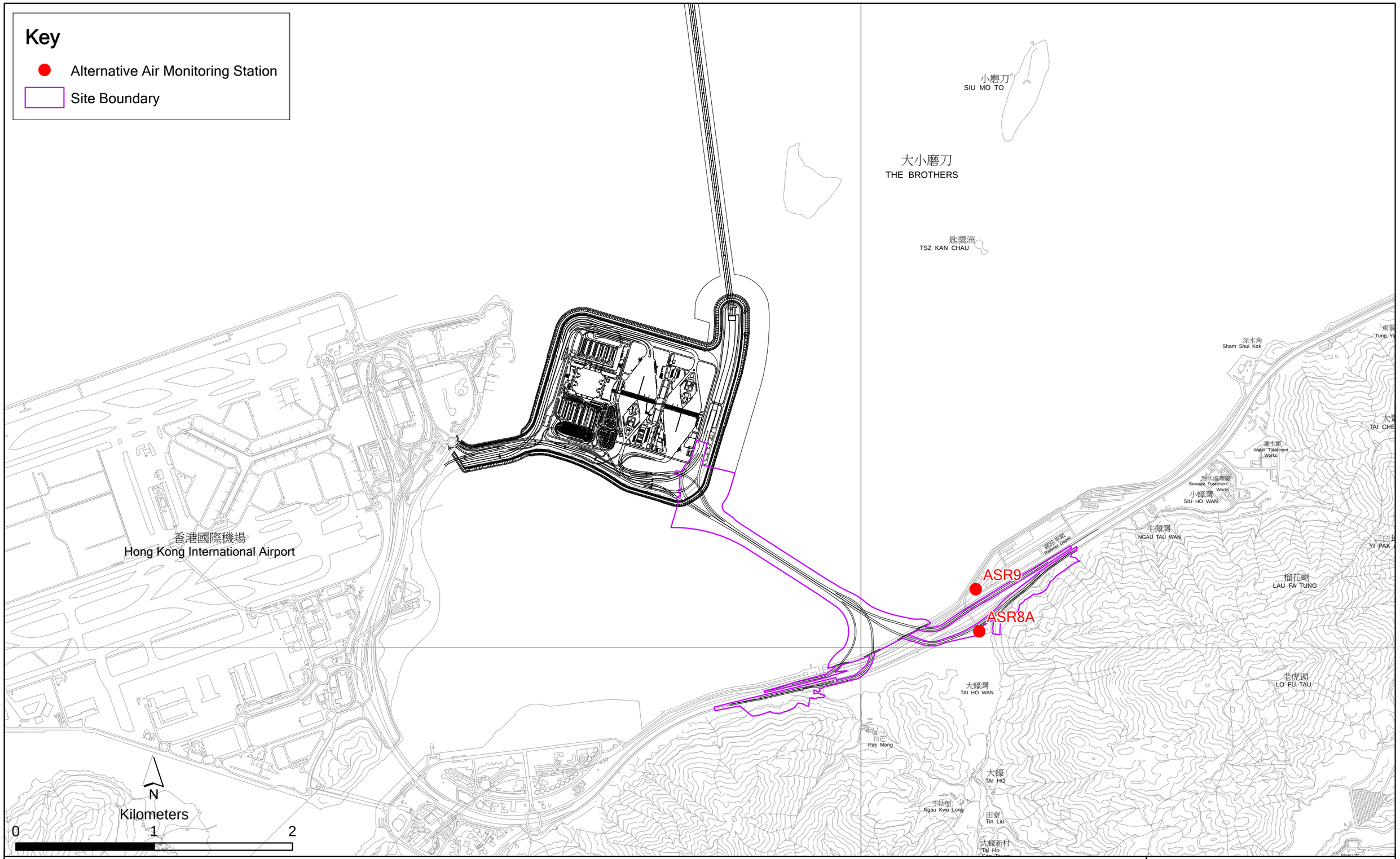


Figure 2.1

Locations of Air Quality Monitoring Stations

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Date: 7/1/2015

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2.2 NOISE MONITORING

2.2.1 *Monitoring Requirements and Equipment*

In accordance with the Updated EM&A Manual, impact noise monitoring was conducted once per week during the construction phase of the Contract. The Action and Limit level of the noise monitoring is provided in *Appendix D*.

Noise monitoring was performed on 3, 9, 12, 17, 23 and 26 February 2015 by using sound level meter at the designated monitoring station NSR1A (*Figure 2.2; Table 2.5*) in accordance with the requirements stipulated in the Updated EM&A Manual. Acoustic calibrator was deployed to check the sound level meters at a known sound pressure level. Details of the deployed equipment are provided in *Table 2.6*. Copies of the calibration certificates for the equipment are presented in *Appendix E*.

Table 2.5 Location of Impact Noise Monitoring Station

Monitoring Station	Location	Description	Parameter	Frequency and Duration	Monitoring Dates
NSR 1A	Pak Mong Village Pavilion	On the ground at the village entrance	30-minute measurement at each monitoring station between 0700 and 1900 on normal weekdays (Monday to Saturday). L_{eq}, L_{10} and L_{90} would be recorded.	At least once per week	3, 9, 12, 17, 23 and 26 February 2015

Table 2.6 Noise Monitoring Equipment

Equipment	Brand and Model
Integrated Sound Level Meter	Rion NL-31
Acoustic Calibrator	Rion NC-73

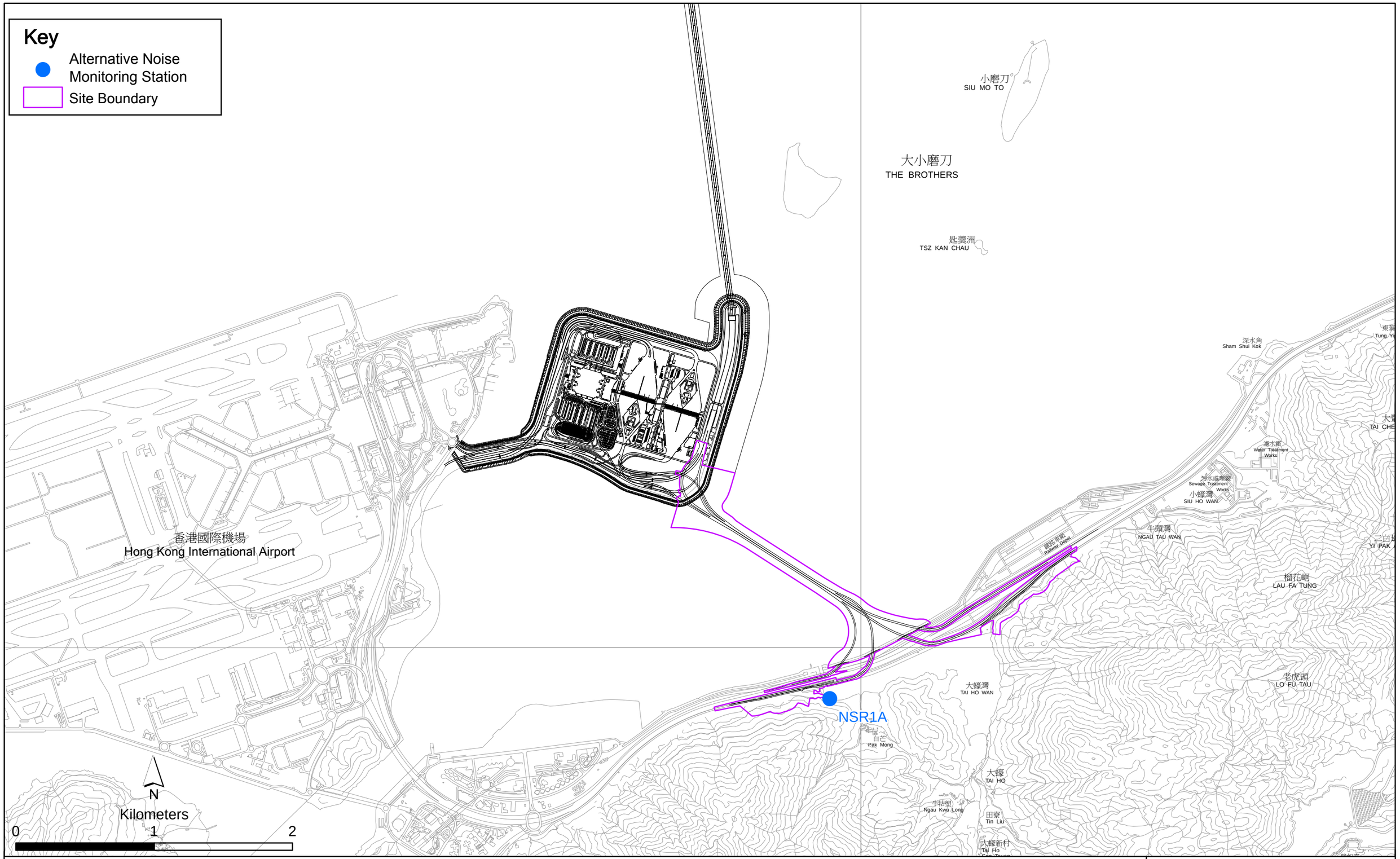

Figure 2.2

Location of Noise Monitoring Station

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Date: 7/1/2015

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2.2.2 *Monitoring Schedule for the Reporting Month*

The schedule for construction noise monitoring in the reporting period is provided in *Appendix F*.

2.2.3 *Results and Observations*

Results for noise monitoring are summarized in *Table 2.7* and the monitoring data is provided in *Appendix I*.

Table 2.7 Summary of Construction Noise Monitoring Results in the Reporting Period

	Average , dB(A), $L_{eq\ (30mins)}$	Range, dB(A), $L_{eq\ (30mins)}$	Limit Level, dB(A), $L_{eq\ (30mins)}$
NSR 1A	60	56 – 61	75

No noise Action Level and Limit level exceedance was recorded in the reporting month. No action is thus required to be undertaken in accordance with the Event Action Plan presented in *Appendix L*.

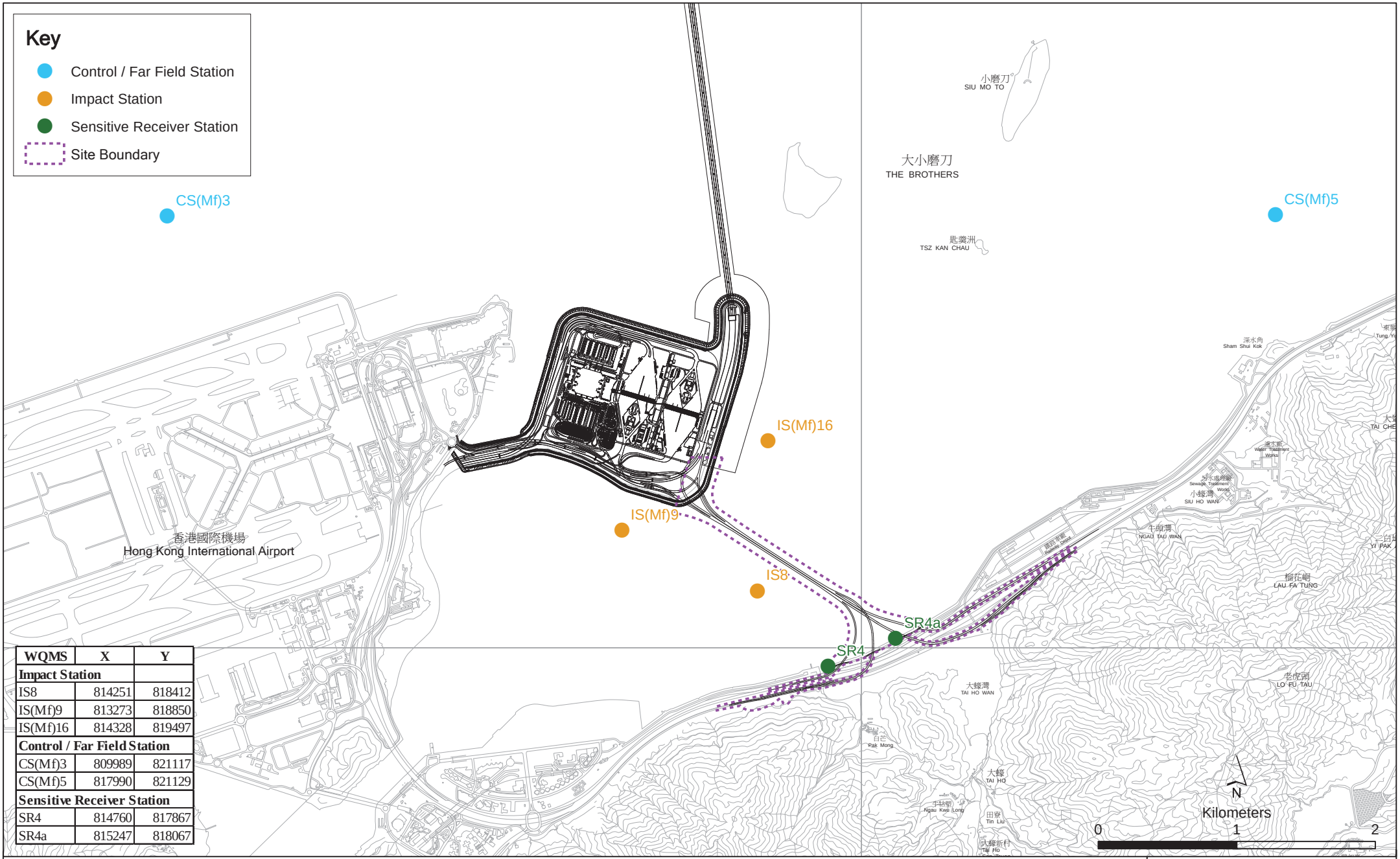
Major noise sources during the noise monitoring included noise from crane operation and excavation works, nearby traffic noise and aircraft noise.

2.3 *WATER QUALITY MONITORING*

2.3.1 *Monitoring Requirements and Equipment*

Impact water quality monitoring was carried out to ensure that any deterioration of water quality was detected, and that timely action was taken to rectify the situation. Impact water quality monitoring was undertaken three days per week during the construction period in accordance with the Updated EM&A Manual. The Action and Limit Levels of the water quality monitoring are provided in *Appendix D*.

The locations of the monitoring stations under the Contract are shown in *Figure 2.3* and *Table 2.8*.



WQMS	X	Y
Impact Station		
IS8	814251	818412
IS(Mf)9	813273	818850
IS(Mf)16	814328	819497
Control / Far Field Station		
CS(Mf)3	809989	821117
CS(Mf)5	817990	821129
Sensitive Receiver Station		
SR4	814760	817867
SR4a	815247	818067

Figure 2.3

Locations of Water Quality Monitoring Stations

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Date: 6/12/2013

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Table 2.8 Locations of Impact Water Quality Monitoring Stations and its Corresponding Monitoring Requirements

Station ID	Type	Coordinates		*Parameters, unit	Frequency	Depth
		Easting	Northing			
IS(Mf)9	Impact Station (Close to HKBCF construction site)	813273	818850	• Temperature(°C) • pH (pH unit) • Turbidity (NTU) • Water depth (m) • Salinity (ppt) • DO (mg/L and % of saturation) • SS (mg/L)	Impact monitoring: 3 days per week, at mid-flood and mid-ebb tides during the construction period of the Contract	3 water depths: 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted
IS(Mf)16	Impact Station (Close to HKBCF construction site)	814328	819497			
IS8	Impact Station (Close to HKBCF construction site)	814251	818412			
SR4	Sensitive receiver (Tai Ho Inlet)	814760	817867			
SR4a	Sensitive receiver	815247	818067			
CS(Mf)3	Control Station	809989	821117			
CS(Mf)5	Control Station	817990	821129			

*Notes:
In addition to the parameters presented monitoring location/position, time, water depth, sampling depth, tidal stages, weather conditions and any special phenomena or works underway nearby were also recorded.

Table 2.9 summarises the equipment used in the impact water quality monitoring programme. Copies of the calibration certificates are attached in *Appendix E*.

Table 2.9 Water Quality Monitoring Equipment

Equipment	Brand and Model
DO and Salinity	YSI Pro2030
Turbidity meter	HACH Model 2100Q
pH meter	HANNA HI8314
Positioning Equipment	Koden913MK2 with KBG-3 DGPS antenna
Water Depth Detector	Speedtech Instrument SM-5
Water Sampler	Kemmerer 1520 (1520-C25) 2.2L with messenger

2.3.2 *Monitoring Schedule for the Reporting Month*

The schedule for water quality monitoring in February 2015 is provided in *Appendix F*.

2.3.3 *Results and Observations*

In total of 10 monitoring events for impact water quality monitoring were conducted at all designated monitoring stations in the reporting month. Impact water quality monitoring results and graphical presentations are provided in *Appendix J*. No impact water quality monitoring was conducted on 19 and 21 February 2015 due to the suspension of marine works.

Although some results of depth-averaged SS were recorded higher than the values of Action Level or Limit Level in the monitoring period, the results were not higher than 120% of the upstream control at the same tide of the same day. Thus the results were considered as natural variation. No Action and Limit levels exceedances was recorded at all monitoring stations for impact water quality monitoring in the reporting month. No action is thus required to be undertaken in accordance with the Event Action Plan presented in *Appendix L*.

2.4 *DOLPHIN MONITORING*

2.4.1 *Monitoring Requirements*

Impact dolphin monitoring is required to be conducted by a qualified dolphin specialist team to evaluate whether there have been any effects on the dolphins. In order to fulfil the EM&A requirements and make good use of available resources, the on-going impact line transect dolphin monitoring data collected by HyD's *Contract No. HY/2011/03 Hong Kong-Zhuhai-Macao Bridge. Hong Kong Link Road - Section between Scenic Hill and Hong Kong Boundary Crossing Facilities* on the monthly basis is adopted to avoid duplicates of survey effort.

2.4.2 *Monitoring equipment*

Table 2.10 summarises the equipment used for the impact dolphin monitoring.

Table 2.10 Dolphin Monitoring Equipment

Equipment	Model
Global Positioning System (GPS)	Garmin 18X-PC
	Geo One Phottix
Camera	Nikon D90 300m 2.8D fixed focus
	Nikon D90 20-300m zoom lens
Laser Binoculars	Infinitor LRF 1000
Marine Binocular	Bushell 7 x 50 marine binocular with compass and reticules
Vessel for Monitoring	65 foot single engine motor vessel with viewing platform 4.5m above water level

2.4.3 *Monitoring Parameter, Frequencies and Duration*

Dolphin monitoring should cover all transect lines in Northeast Lantau (NEL) and the Northwest Lantau (NWL) survey areas twice per month throughout the entire construction period. The monitoring data should be compatible with, and should be made available for, long-term studies of small cetacean ecology in Hong Kong. In order to provide a suitable long-term dataset for comparison, identical methodology and line transects employed in baseline dolphin monitoring was followed in the impact dolphin monitoring.

2.4.4 *Monitoring Location*

The impact dolphin monitoring was carried out in the NEL and NWL along the line transect as depicted in *Figure 2.4.* The co-ordinates of all transect lines are shown in *Table 2.11* below.

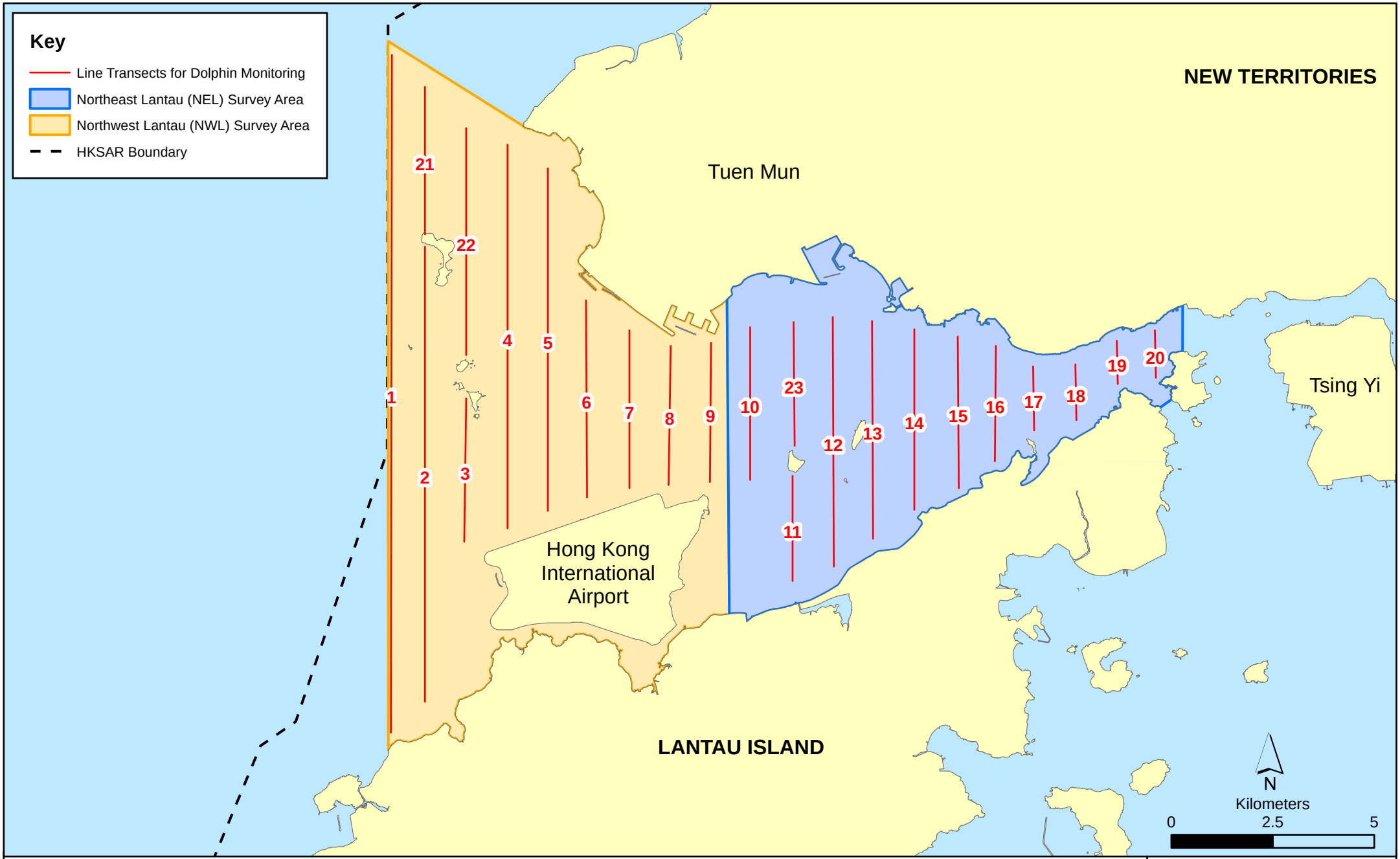

Figure 2.4

Layout of Transect Lines of Dolphin Monitoring in Northwest and Northeast Lantau Areas

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Table 2.11 Impact Dolphin Monitoring Line Transect Co-ordinates

Line No.		Easting	Northing		Line No.		Easting	Northing
1	Start Point	804671	814577		13	Start Point	816506	819480
1	End Point	804671	831404		13	End Point	816506	824859
2	Start Point	805475	815457		14	Start Point	817537	820220
2	End Point	805477	826654		14	End Point	817537	824613
3	Start Point	806464	819435		15	Start Point	818568	820735
3	End Point	806464	822911		15	End Point	818568	824433
4	Start Point	807518	819771		16	Start Point	819532	821420
4	End Point	807518	829230		16	End Point	819532	824209
5	Start Point	808504	820220		17	Start Point	820451	822125
5	End Point	808504	828602		17	End Point	820451	823671
6	Start Point	809490	820466		18	Start Point	821504	822371
6	End Point	809490	825352		18	End Point	821504	823761
7	Start Point	810499	820690		19	Start Point	822513	823268
7	End Point	810499	824613		19	End Point	822513	824321
8	Start Point	811508	820847		20	Start Point	823477	823402
8	End Point	811508	824254		20	End Point	823477	824613
9	Start Point	812516	820892		21	Start Point	805476	827081
9	End Point	812516	824254		21	End Point	805476	830562
10	Start Point	813525	820872		22	Start Point	806464	824033
10	End Point	813525	824657		22	End Point	806464	829598
11	Start Point	814556	818449		23	Start Point	814559	821739
11	End Point	814556	820992		23	End Point	814559	824768
12	Start Point	815542	818807					
12	End Point	815542	824882					

2.4.5 *Action & Limit Levels*

The Action and Limit levels of dolphin impact monitoring are shown in *Appendix D*. The Event and Action plan is presented in *Appendix L*.

2.4.6 *Monitoring Schedule for the Reporting Month*

Dolphin monitoring was carried out on 5, 13, 16 and 25 of February 2015 (*Appendix F*).

2.4.7 *Results and Observations*

A total of 298.01 km of survey effort was collected, with 100% of the total survey effort being conducted under favourable weather conditions (i.e. Beaufort Sea State 3 or below with good visibility) during the survey of February. Among the two areas, 115.15 km and 182.86 km of survey effort were collected from NEL and NWL survey areas respectively. The total survey effort conducted on primary and secondary lines were 214.26 km and 83.75 km respectively. The survey efforts are summarized in *Appendix K*.

Only one (1) group of a single dolphin was sighted during the two sets of monitoring surveys in February 2015. This single sighting was made in NWL during the two sets of surveys in February while no dolphin was sighted at all in NEL. The single sighting was made on primary lines during on-effort search, and it was not associated with operating fishing vessel. No sighting was made in the proximity of the Project's alignment. The distribution of dolphin sighting during the reporting month is shown in *Figure 2.5*.

Encounter rates of Chinese White Dolphins are deduced from the survey effort and on-effort sighting data made under favourable conditions (Beaufort 3 or below) in February 2015 are shown in *Tables 2.12* and *2.13*.

Table 2.12 Individual Survey Event Encounter Rates

		Encounter rate (STG) (no. of on-effort dolphin sightings per 100 km of survey effort)	**Encounter rate (ANI) (no. of dolphins from all on-effort sightings per 100 km of survey effort)**
		Primary Lines Only	Primary Lines Only
NEL	Set 1: Feb 5th / 13th	0.0	0.0
	Set 2: Feb 16th / 25th	0.0	0.0
NWL	Set 1: Feb 5th / 13th	1.4	1.4
	Set 2: Feb 16th / 25th	0	0

Note: Dolphin Encounter Rates are deduced from the two sets of surveys (two surveys in each set) in February 2015 in Northeast (NEL) and Northwest Lantau (NWL)

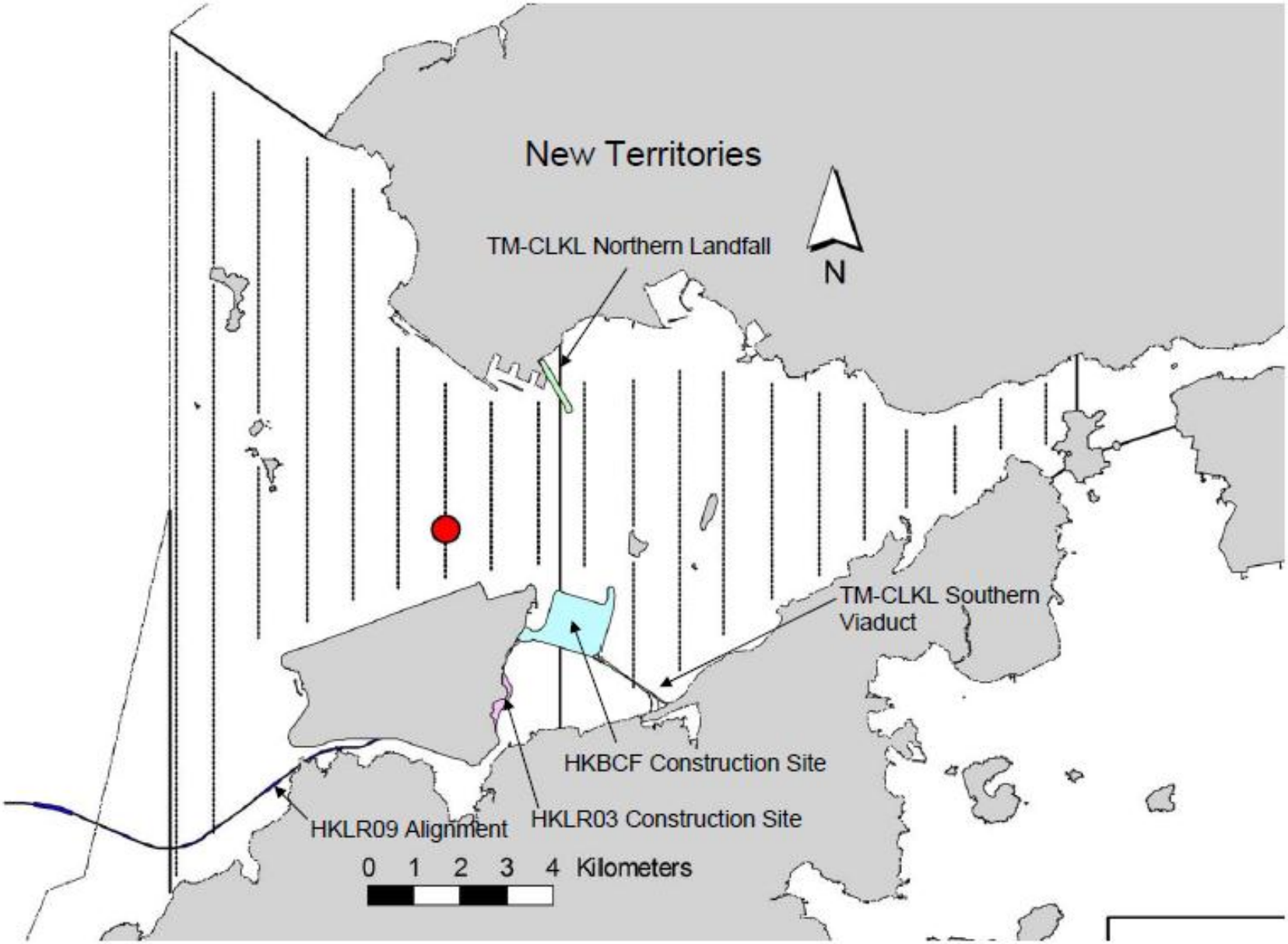

Figure 2.5

Date 9/3/2015

HY/2012/07 TM-CLKL Southern Connection Viaduct Section
The distribution of dolphin sightings during the reporting period
(Source: Adopted from HKLR03 Monitoring Survey in February 2015)

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Table 2.13 Monthly Average Encounter Rates

	Encounter rate (STG) (no. of on-effort dolphin sightings per 100 km of survey effort)		**Encounter rate (ANI)** (no. of dolphins from all on-effort sightings per 100 km of survey effort)	
	Primary Lines Only	**Both Primary and Secondary Lines**	**Primary Lines Only**	**Both Primary and Secondary Lines**
Northeast Lantau	0.0	0.0	0.0	0.0
Northwest Lantau	0.7	0.5	0.7	0.5

Note: Overall dolphin encounter rates (sightings per 100km of survey effort) from all four surveys are conducted in February 2015 on primary lines only as well as both primary lines and secondary lines in Northeast and Northwest Lantau

Whilst one (1) Limit Level exceedance was observed for the quarterly dolphin monitoring data between December 2014 and February 2015. No unacceptable impact from the construction activities of the TM-CLKL Southern Connection Viaduct Section on Chinese White Dolphins was noticeable from general observations during the dolphin monitoring in this reporting month.

Due to monthly variation in dolphin occurrence within the study area, it would be more appropriate to draw conclusion on whether any impacts on dolphins have been detected related to the construction activities of the TM-CLKL Southern Connection Viaduct Section in the quarterly EM&A reports, where comparison on distribution, group size and encounter rates of dolphins between the quarterly impact monitoring period and baseline monitoring period will be made.

2.4.8 Marine Mammal Exclusion Zone Monitoring

Daily 250 m marine mammal exclusion zone monitoring was undertaken during the period of marine works activities being undertaken. Passive Acoustic Monitoring (PAM) was implemented when the marine works marine works were carried out outside the daylight hours in this reporting month. No sighting of Indo-Pacific humpback dolphin *Sousa chinensis* (i.e. Chinese White Dolphin) were recorded in February 2015 during the exclusion zone monitoring.

2.5 *EM&A SITE INSPECTION*

Site inspections were carried out on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures under the Contract. In the reporting month, four (4) site inspections were carried out on 4, 13, 17 and 26 February 2015.

Key observations during the site inspections are summarized in *Table 2.14*.

Table 2.14 Specific Observations Identified during the Weekly Site Inspections in this Reporting Month

Inspection Date	Environmental Observations	Recommendations/ Remarks
4 February 2015	Area 1 • The ground was dry. • Washing facility at the entrance was incomplete. • Soil stockpile was not covered. • Refuse was accumulated in drainage. • A drip tray for generator was not plugged.	Area 1 • The contractor was reminded to implement the watering programme for dust suppression. • Wheel washing should be provided at the entrance. • Soil stockpile should be covered by tarpaulin sheet or wet to avoid dust emission. • Drainage should be cleaned up regularly. • Drip trays should be plugged.
13 February 2015	Pier D5 • A generator was not well placed on acoustic decoupling pad. Pier B1 • Sediment was accumulated in the gutter. Barge Tung Shun 88 (next to Pier D2) • Label for marine sediment was not displayed. Pier B2 • A part of gutter was not properly installed.	Pier D5 • Machine on marine platform should be well placed on decoupling pad. Pier B1 • Gutter should be cleaned regularly. Barge Tung Shun 88 (next to Pier D2) • Label for marine sediment should be displayed. Pier B2 • Gutter should be properly installed.
17 February 2015	Seafront near Pier B8 • A drip tray for generator was not plugged. Pier D12A • Some chemical containers were not placed in drip tray. • Grouting material was found not covered. Pier D10 • Sandbags were found insufficient to avoid waste water discharging offsite.	Seafront near Pier B8 • Drip trays should be plugged. Pier D12A • Chemical containers should be covered and placed in drip tray. • Stockpile of grouting material should be covered. Pier D10 • Sufficient sandbags should be provided to avoid any runoff of waste water.
26 February 2015	Pier C1 • Gutter was not properly installed.	Pier C1 • Gutter should be properly installed to ensure no waste water runoff from platform.

The Contractor has rectified all of the observations identified during environmental site inspections in the reporting month.

2.6 WASTE MANAGEMENT STATUS

The Contractor has submitted application form for registration as chemical waste producer under the Contract. Sufficient numbers of receptacles were available for general refuse collection and sorting.

Wastes generated during this reporting period include mainly construction wastes (inert and non-inert), recyclable materials, chemical waste and marine sediment (Categories L & M). Reference has been made to the waste flow table prepared by the Contractor (*Appendix M*). The quantities of different types of wastes are summarized in *Table 2.15*.

Table 2.15 Quantities of Different Waste Generated in the Reporting Period

Month/Year	Inert C&D Materials [(a)] (m^3)	Imported Fill (m^3)	Inert Construction Waste Re-used (m^3)	Non-inert Construction Waste [(b)] (kg)	Recyclable Materials [(c)] (kg)	Chemical Wastes (kg)	Marine Sediment (m^3)	
							Category L	Category M (M_p & M_f)
February 2015	5,759	0	436	141,020	112	400	801	333

Notes:
(a) Inert construction wastes include hard rock and large broken concrete, and materials disposed as public fill.
(b) Non-inert construction wastes include general refuse disposed at landfill.
(c) Recyclable materials include metals, paper, cardboard, plastics, timber, felled trees and others.

The Contractor was advised to properly maintain on site C&D materials and waste collection, sorting and recording system, dispose of C&D materials and wastes at designated ground and maximize reuse/ recycle of C&D materials and wastes. The Contractor was also reminded to properly maintain the site tidiness and dispose of the wastes accumulated on site regularly and properly.

For chemical waste containers, the Contractor was reminded to treat properly and store temporarily in designated chemical waste storage area on site in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes.

2.7 ENVIRONMENTAL LICENSES AND PERMITS

The status of environmental licensing and permit is summarized in *Table 2.16* below.

Table 2.16 Summary of Environmental Licensing and Permit Status

License/ Permit	License or Permit No.	Date of Issue	Date of Expiry	License/ Permit Holder	Remarks
Environmental Permit	EP-354/2009/C	10 Dec 2014	N/A	HyD	Tuen Mun- Chek Lap Kok Link
Construction Dust Notification	361571	5 Jul 2013	N/A	GCL	
Construction Dust Notification	362093	17 Jul 2013	N/A	GCL	For Area 23
Chemical Waste Registration	5213-961-G2380-13	10 Oct 2013	N/A	GCL	Chemical waste produced in Contract HY/2012/07 (Area 1 adjacent to Cheng Tung Road, Siu Ho Wan)
Chemical Waste Registration	5213-961-G2380-14	10 Oct 2013	N/A	GCL	Chemical waste produced in Contract HY/2012/07 (Area 2 adjacent to Cheung Tung Road, Pak Mong Village)
Chemical Waste Registration	5213-974-G2588-03	4 Nov 2013	N/A	GCL	Chemical waste produced in Contract HY/2012/07 (WA5 adjacent to Cheung Tung Road, Yam O)
Chemical Waste Registration	5213-951-G2380-17	12 Jun 2014	N/A	GCL	Viaducts A, B, C, D & E
Construction Waste Disposal Account	7017735	10 Jul 2013	N/A	GCL	-
Construction Waste Disposal Account	7019470	3 Mar 2014	N/A	GCL	Vessel CHIT Account
Waste Water Discharge License	WT00019017-2014	13 May 2014	31 May 2019	GCL	Discharge for marine portion
Waste Water Discharge License	WT00019018-2014	13 May 2014	31 May 2019	GCL	Discharge for land portion
Construction Noise Permit	Nil	N/A	N/A	GCL	For Piling Works
Construction Noise Permit for night works and works in general holidays	GW-RW0640-14	28 Aug 2014	27 Feb 2015	GCL	General works at WA5
Construction Noise Permit for night works and works in general holidays	GW-RS1032-14	25 Sep 2014	28 Mar 2015	GCL	For Load unload at NLH near Viaduct D
Construction Noise Permit for night works and works in general holidays	GW-RS0078-15	28 Jan 2015	29 Jul 2015	GCL	For Plant mobilization using tractor
Construction Noise Permit for night works and works in general holidays	GW-RS1225-14	31 Oct 2014	2 May 2015	GCL	For Broad Permit
Construction Noise Permit for night works and works in general holidays	GW-RS1386-14	15 Dec 2014	15 Mar 2015	GCL	TTA Case 009 Ch.2.3E-4.2E
Construction Noise Permit for night works and works in general holidays	GW-RS1406-15	24 Feb 2015	30 Apr 2015	GCL	B9-B16 Pier Head Segments Erection

License/ Permit	License or Permit No.	Date of Issue	Date of Expiry	License/ Permit Holder	Remarks
Construction Noise Permit for night works and works in general holidays	GW-RS0137-15	12 Feb 2014	15 Aug 2015	GCL	Pre-casted pile cap shell installation at E10-E13
Construction Noise Permit for night works and works in general holidays	GW-RS0084-15	28 Jan 2015	30 Apr 2015	GCL	Pier B8 formwork erection
Marine Dumping Permit	EP/MD/15-203	28 Jan 2015	27 Jul 2015	GCL	For dumping Type I sediment
Marine Dumping Permit	EP/MD/15-234	27 Feb 2015	31 Mar 2015	GCL	For dumping Type I (Dedicated Site) and Type II sediment

2.8 *IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES*

In response to the site audit findings, the Contractors carried out corrective actions.

A summary of the Implementation Schedule of Environmental Mitigation Measures (EMIS) is presented in *Appendix C*. The necessary mitigation measures were implemented properly for this Contract.

2.9 *SUMMARY OF EXCEEDANCES OF THE ENVIRONMENTAL QUALITY PERFORMANCE LIMIT*

Results for 1-hour TSP, 24-hour TSP, construction noise and impact water quality monitoring complied with the Action/ Limit levels in the reporting period.

One (1) Limit Level exceedance was recorded for the quarterly dolphin monitoring data between December 2014 and February 2015. The observed exceedances will be further investigated in the *Fifth Quarterly EM&A Report* for December 2014 to February 2015.

Cumulative statistics on exceedances is provided in *Appendix N*.

2.10 *SUMMARY OF COMPLAINTS, NOTIFICATION OF SUMMONS AND SUCCESSFUL PROSECUTIONS*

The Environmental Complaint Handling Procedure is provided in *Figure 2.6*.

No complaint, notification of summons and prosecution was received in the reporting period.

Statistics on complaints, notifications of summons, successful prosecutions are summarized in *Appendix N*.

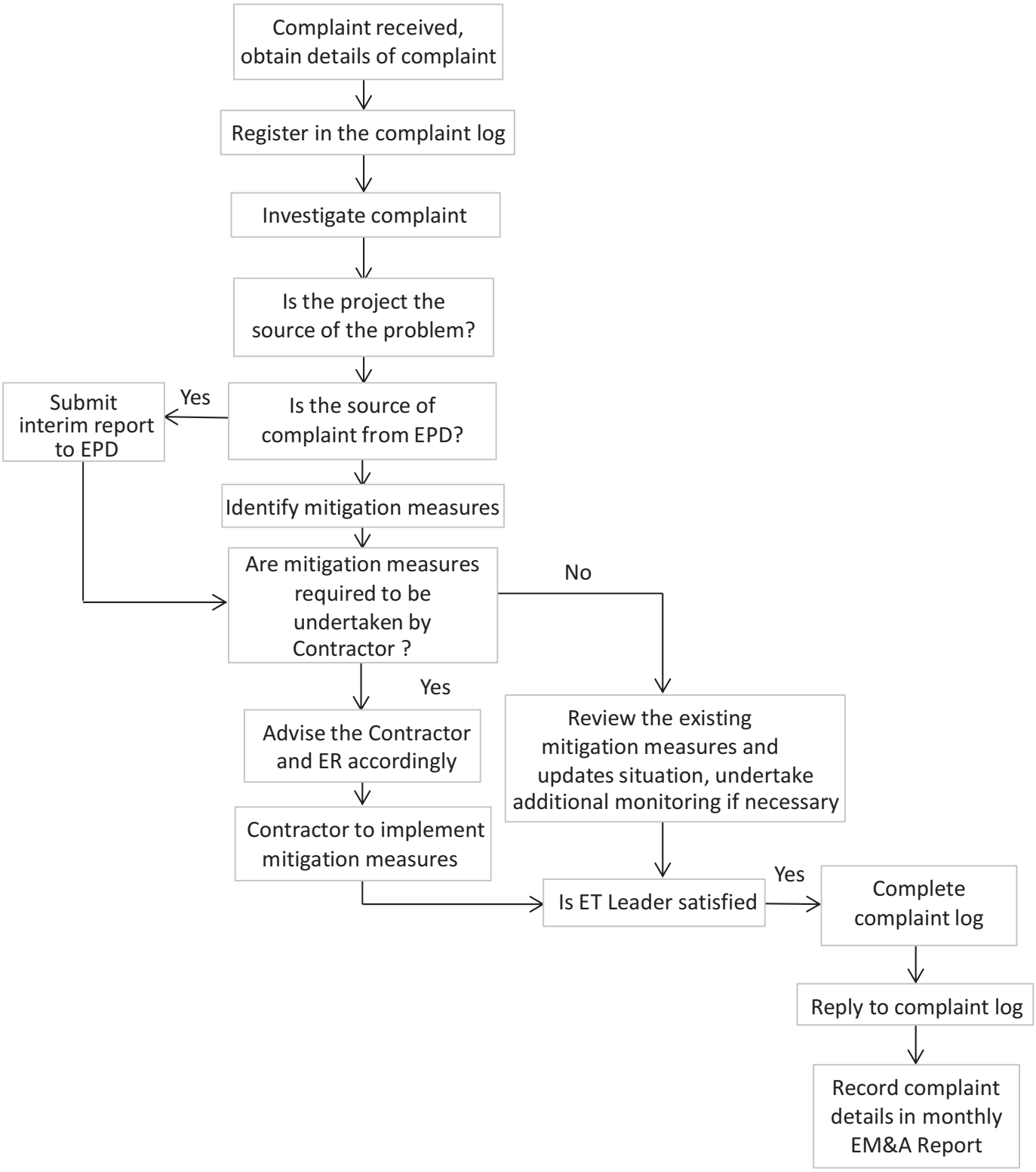

Figure 2.6 Environmental Complaint Handling Procedure

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3 FUTURE KEY ISSUES

3.1 CONSTRUCTION PROGRAMME FOR THE COMING MONTHS

As informed by the Contractor, the major works for this Contract in March 2015 will be:

Marine Works

- Construction of Pile caps at Viaducts B, C & E;
- Marine piling platform installation & uninstallation;
- Marine Piling at Viaducts A, C & E; and
- Additional marine ground investigation (GI) and laboratory testing.

Land-based Works

- Construction of pile cap superstructure of Viaduct B;
- Channel re-construction at Area 1;
- Land Piling at Viaducts B, C & D;
- Pre-drilling works at Viaduct A;
- Construction of pile cap at Viaducts B & D;
- Additional land GI, trial pits & lab testing;
- Utility surveys; and
- Slope work of Slopes 9SE-B/C8, 9SE-B/C9 & 9SE-B/F9.

3.2 KEY ISSUES FOR THE COMING MONTH

Potential environmental impacts arising from the above upcoming construction activities in the next reporting month of March 2015 are mainly associated with dust, noise, marine water quality, marine ecology and waste management issues.

3.3 MONITORING SCHEDULE FOR THE COMING MONTH

The tentative schedules for environmental monitoring in March 2015 are provided in *Appendix F*.

4 CONCLUSIONS AND RECOMMENDATIONS

4.1 CONCLUSIONS

This Sixteenth Monthly EM&A Report presents the findings of the EM&A activities undertaken during the period from 1 to 28 February 2015, in accordance with the Updated EM&A Manual and the requirements of the *Environmental Permit* (*EP-354/2009/C*).

Air quality (including 1-hour TSP and 24-hour TSP), noise, water quality, and dolphin monitoring were carried out in the reporting month. Results for water quality monitoring, 1-hour TSP, 24-hour TSP and noise monitoring complied with the Action and Limit levels in the reporting period.

Only one (1) group of a single dolphin was sighted during the two sets of monitoring surveys in February 2015. This single sighting was made in NWL during the two sets of surveys in February while no dolphin was sighted at all in NEL. No sighting was made in the proximity of the Project's alignment. One (1) Limit Level exceedances was observed for the quarterly dolphin monitoring data between December 2014 and February 2015. During this month of dolphin monitoring, no unacceptable impact from the construction activities of the TM-CLKL Southern Connection Viaduct Section on Chinese White Dolphins was noticeable from general observations.

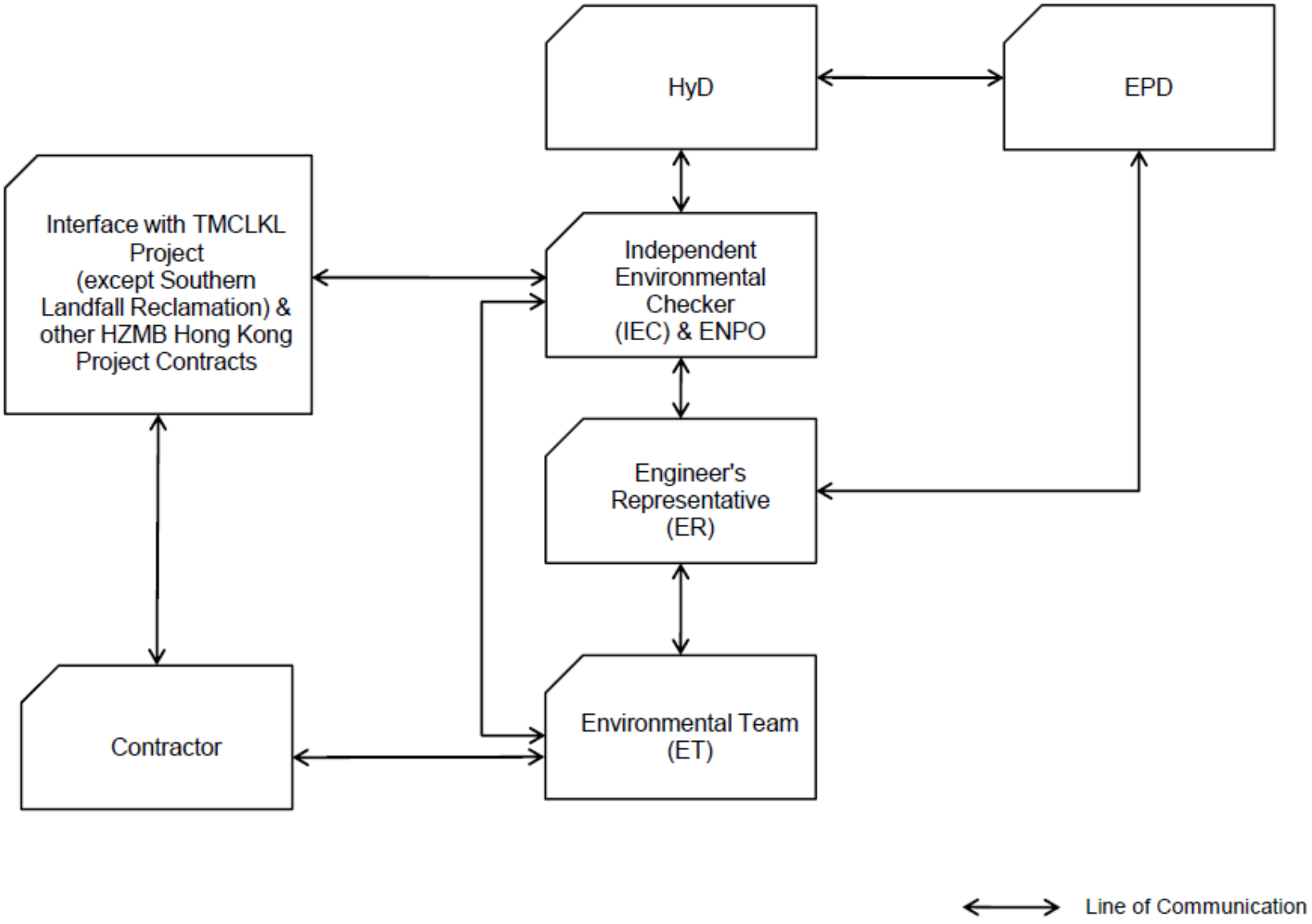
Environmental site inspection was carried out four (4) times in February 2015. Recommendations on remedial actions were given to the Contractor for the deficiencies identified during the site audits.

No environmental complaint, notification of summons or prosecution was received in the reporting month.

The ET will keep track on the construction works to confirm compliance of environmental requirements and the proper implementation of all necessary mitigation measures.

Appendix A

Project Organization for Environmental Works



Appendix A1

Contract No. HY/2012/07 Southern Connection Viaduct Section
Project Organization

DATE: 06/03/2013

Environmental Resources Management

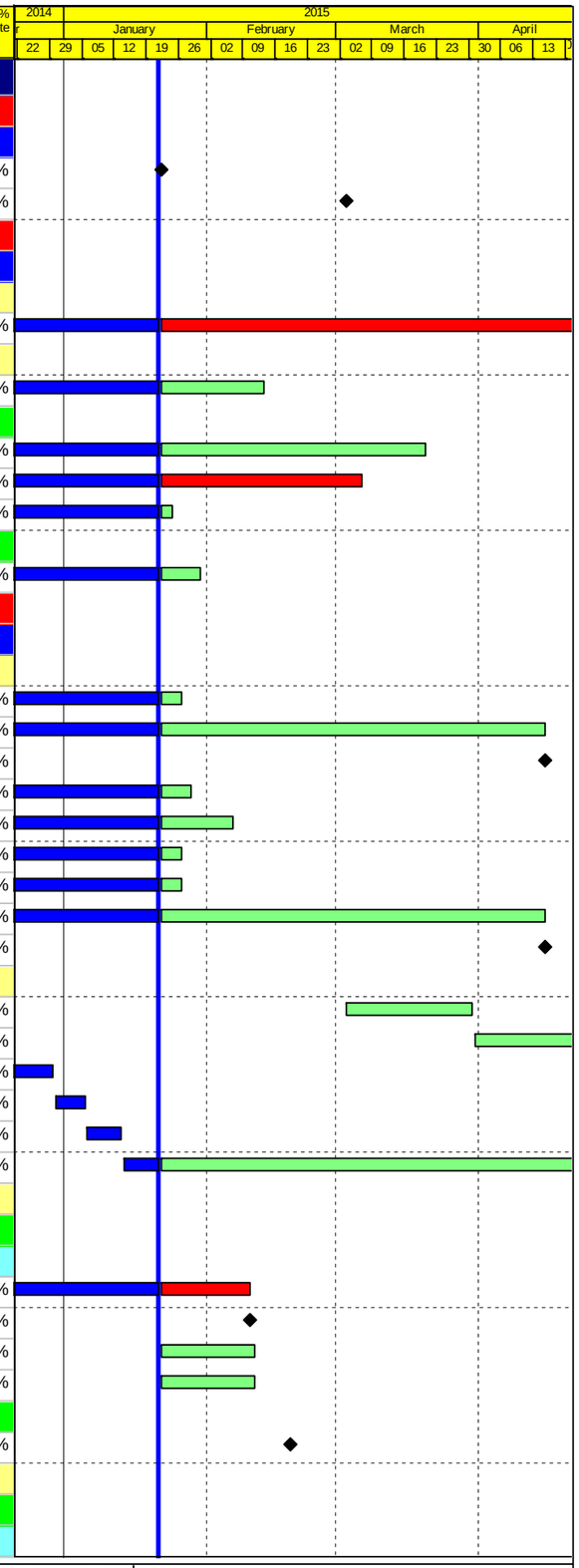
ERM

Appendix B

Three-Month Rolling Construction Programme

HY/2012/07 - TM-CLK Link-SC [DWP rE] - Status Update 21-01-2015

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete
Contract Key Dates											
Possession Dates / Access Period											
POS02	Portion A (Commencement of Works+499 days)	0	22-Jan-15*	0%	0		11-Jan-14		-376	0	0%
POS03	Portion B (Commencement of Works+619 days)	0	03-Mar-15*	0%	0		03-Mar-15		0	275	0%
General Submissions											
General Requirements											
Temporary Works Design											
PR00130	Unloading Jetty at HKBCF - Working Platform design and approval	90	02-Jun-14 A	10%	81	05-May-15	12-Nov-14	17-Feb-15	-58	7	10%
Land Works											
PR00160	Propose/submit a performance review for piled fnds in accordance w/ ETWB TCW No. 4/20(	101	26-May-14 A	80.2%	20	13-Feb-15	11-Jan-16	02-Feb-16	286	349	80%
Land GI Works											
PR02200	14No possible BH in E14 / F - possible early access ahead of possession of Portion A in early	72	30-Sep-13 A	34.72%	47	20-Mar-15	03-May-18	28-Jun-18	968	968	35%
PR02204	SQR Sampling & Testing and Approval	110	14-Aug-14 A	68.18%	35	06-Mar-15	27-Nov-14	09-Jan-15	-45	2	68%
PR03110	Trial Pits along Cheung Tung Road	20	21-Oct-13 A	85%	3	24-Jan-15	26-Jun-18	28-Jun-18	1012	5	85%
Additional Land GI											
PR03200	PBH25, 29, 30, 31 (Piers D9, C14, C16, C17)	33	11-Jan-14 A	75.76%	8	30-Jan-15	20-Jun-18	28-Jun-18	1007	1007	75%
Design Submissions											
Detailed Design (v18.8 18-08-14)											
Ground Investigation											
ARDD0009	Consultation with GEO	20	13-Aug-13 A	85%	3	26-Jan-15	14-Apr-15	16-Apr-15	58	57	85%
ARDD0010	IC/SO Approval of Ground Investigation Interpretative Report - AP03.00	75	13-Aug-13 A	20%	60	15-Apr-15	09-Jan-17	31-Mar-17	512	0	20%
ARDD0010-1	IC/SO Approval of Ground Investigation Interpretative Report - AP03.00	0		0%	0	15-Apr-15		31-Mar-17	512	0	0%
ARDD0013-1	Additional GI Fieldwork, Lab Testing and Permitting E5-E8	45	16-Jul-13 A	88.89%	5	28-Jan-15	22-Jun-18	28-Jun-18	891	891	88%
ARDD0013-2	Additional GI Fieldwork, Lab Testing and Permitting - Other areas	60	16-Jul-13 A	80%	12	06-Feb-15	13-Jun-18	28-Jun-18	884	884	80%
ARDD0015-1	E5-E8 Interpretation	15	17-Sep-13 A	80%	3	26-Jan-15	26-Jun-18	28-Jun-18	893	0	80%
ARDD0015-2	Additional GI Interpretative Report - AP03.00	15	08-Oct-13 A	80%	3	26-Jan-15	26-Jun-18	28-Jun-18	893	893	80%
ARDD0017-2	IC/SO Approval of Additional GI Interpretative Report - AP03.00	75	29-Jan-14 A	20%	60	15-Apr-15	23-Jan-15	16-Apr-15	1	0	20%
ARDD0017-4	IC/SO Approval of Additional GI Interpretative Report - AP03.00	0		0%	0	15-Apr-15		16-Apr-15	1	0	0%
General Submissions											
ARDD0037-7	Preparation of Seismic Performance Report Viaduct F - AP12.03	20	03-Mar-15	0%	20	30-Mar-15	23-Sep-15	20-Oct-15	146	0	0%
ARDD0037-8	IC/SO Approval of Seismic Performance Report Viaduct F - AP12.03	75	31-Mar-15	0%	75	13-Jul-15	21-Oct-15	02-Feb-16	146	0	0%
ARDD0042-1	Preparation of O&M Facility Provisions DDA - BP11.01	40	19-Sep-14 A	100%	0	29-Dec-14 A					100%
ARDD0042-1.1	Draft for GCL Review - BP11.01	14	30-Dec-14 A	100%	0	05-Jan-15 A					100%
ARDD0042-1.2	Update to Incorporate GCL Comments - BP11.01	14	06-Jan-15 A	100%	0	13-Jan-15 A					100%
ARDD0042-2	IC/SO Approval of O&M Facility Provisions DDA - BP11.01	75	14-Jan-15 A	0%	75	06-May-15	08-Jul-15	20-Oct-15	119	0	0%
Viaduct E5 and E6											
Viaduct Design											
Viaduct E5 E6 Superstructure Optimisation											
TGP0520	Viaduct E5 & E6 - IC/SO Approval of Optimised Superstructure DDA - DP61.01	35	09-Dec-14 A	60%	14	10-Feb-15	12-Jun-14	01-Jul-14	-160	0	60%
TGP0530	Viaduct E5 & E6 - IC/SO Approval of Optimised Superstructure DDA - DP61.01	0		0%	0	10-Feb-15		01-Jul-14	-160	6	0%
TGP0540	Viaduct E5 & E6 - Preparation of Optimised Bearing Schedule	15	22-Jan-15	0%	15	11-Feb-15	24-May-18	13-Jun-18	870	16	0%
TGP0550	Viaduct E5 & E6 - Preparation of Optimised Movement Joint Schedule	15	22-Jan-15	0%	15	11-Feb-15	08-Jun-18	28-Jun-18	881	881	0%
Associated Construction Milestones											
ARDD0175	Viaduct E5 & E6 - DDA approval ready for Initial Segment Casting	0	19-Feb-15	0%	0		02-Jul-14		-232	82	0%
Viaduct E7 & E8											
Viaduct Design											
Viaduct E7 E8 Superstructure Optimisation											



Actual Work
Planned Bar
Critical Bar
Milestone

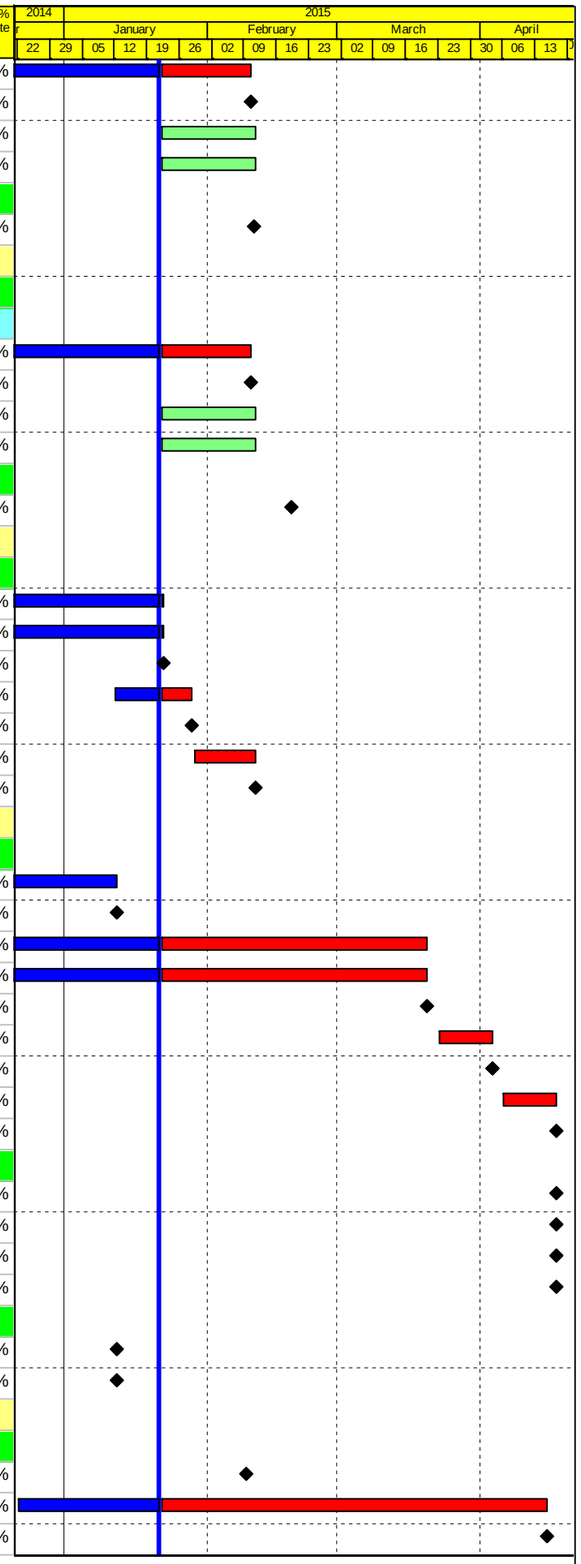
Project ID: J3518DWPrE-M20
Layout: J3518-DWP-3MRP Submission - M20
Filter: TASK filters: 3-Month Lookahead, No CC
Milestones, No Level of Effort.

Tuen Mun - Chek Lap Kok Link - Southern Connection
3-Month Rolling Programme (Page 1 of 40 Pages)
(Progress as of 21-Jan-15)

Date	Revision	Checked	Approved
21-Jan-15		DB	

DWG. No.:
J3518/GCL/PGM/3MRP-M20

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete
TGP0720	Viaduct E7 & E8 - IC/SO Approval of Optimised Superstructure DDA - DP61.01	35	09-Dec-14 A	60%	14	10-Feb-15	13-Jun-14	02-Jul-14	-159	0	0%
TGP0730	Viaduct E7 & E8 - IC/SO Approval of Optimised Superstructure DDA - DP61.01	0		0%	0	10-Feb-15		02-Jul-14	-159	0	0%
TGP0740	Viaduct E7 & E8 - Preparation of Optimised Bearing Schedule	15	22-Jan-15	0%	15	11-Feb-15	24-May-18	13-Jun-18	870	16	0%
TGP0750	Viaduct E7 & E8 - Preparation of Optimised Movement Joint Schedule	15	22-Jan-15	0%	15	11-Feb-15	08-Jun-18	28-Jun-18	881	881	0%
Associated Construction Milestones											
ARDD0220	Viaduct E7 & E8 - DDA approval ready for Initial Segment Casting	0	11-Feb-15	0%	0		03-Jul-14		-223	91	0%
Viaduct E2											
Viaduct Design											
Viaduct E2 Superstructure Optimisation											
TGP0220	Viaduct E2 - IC/SO Approval of Optimised Superstructure DDA - DP61.01	35	09-Dec-14 A	60%	14	10-Feb-15	31-Oct-14	20-Nov-14	-59	0	0%
TGP0230	Viaduct E2 - IC/SO Approval of Optimised Superstructure DDA - DP61.01	0		0%	0	10-Feb-15		20-Nov-14	-59	6	0%
TGP0240	Viaduct E2 - Preparation of Optimised Bearing Schedule	15	22-Jan-15	0%	15	11-Feb-15	24-May-18	13-Jun-18	870	16	0%
TGP0250	Viaduct E2 - Preparation of Optimised Movement Joint Schedule	15	22-Jan-15	0%	15	11-Feb-15	08-Jun-18	28-Jun-18	881	881	0%
Associated Construction Milestones											
ARDD0266	Viaduct E2 - DDA approval ready for Initial Segment Casting	0	19-Feb-15	0%	0		20-Nov-14		-91	4	0%
Viaduct E1											
Viaduct Design											
ARDD0287-3	Viaduct E1 - Coordination and Further Issue of Construction Method and Temporary Works [	60	30-Jul-14 A	98.33%	1	22-Jan-15	28-Jun-18	28-Jun-18	895	0	98%
ARDD0287-4	Viaduct E1 - Preparation of Draft Working Drawing Set	60	30-Jul-14 A	98.33%	1	22-Jan-15	28-Jun-18	28-Jun-18	895	0	98%
ARDD0287-5	Viaduct E1 - GCL/FRE Final Coordinated Construction Method/Temporary Work Details	0		0%	0	22-Jan-15		28-Jun-18	895	895	0%
ARDD0287-6	Viaduct E1 - Preparation and Coordination of Working Drawing Set	10	12-Jan-15 A	50%	5	28-Jan-15	31-Oct-14	06-Nov-14	-59	0	50%
ARDD0287-7	Viaduct E1 - Issue of Revised DDA Submission - DP15.03	0		0%	0	28-Jan-15		06-Nov-14	-59	0	0%
ARDD0287-8	Viaduct E1 - IC/SO Consent of Supplemental Working Drawings Viaduct E1	10	29-Jan-15	0%	10	11-Feb-15	07-Nov-14	20-Nov-14	-59	0	0%
ARDD0287-9	Viaduct E1 - IC/SO Consent of Supplemental Working Drawings Viaduct E1	0		0%	0	11-Feb-15		20-Nov-14	-59	2	0%
Viaduct D											
Viaduct Design											
ARDD0333	Viaduct D - IC/SO Approval of Sub & Superstructure DDA - DP14.03	75	01-Sep-14 A	100%	0	12-Jan-15 A					100%
ARDD0333-1	Viaduct D - IC/SO Approval of Sub & Superstructure DDA - DP14.03	0		100%	0	12-Jan-15 A					100%
ARDD0333-3	Viaduct D - Coordination and Further Issue of Construction Method and Temporary Works D	60	01-Sep-14 A	30%	42	20-Mar-15	27-Oct-14	23-Dec-14	-63	0	30%
ARDD0333-4	Viaduct D - Preparation of Draft Working Drawing Set	60	01-Sep-14 A	30%	42	20-Mar-15	27-Oct-14	23-Dec-14	-63	0	30%
ARDD0333-5	Viaduct D - GCL/FRE Final Coordinated Construction Method/Temporary Work Details	0		0%	0	20-Mar-15		23-Dec-14	-63	0	0%
ARDD0333-6	Viaduct D - Preparation and Coordination of Working Drawing Set	10	23-Mar-15	0%	10	03-Apr-15	24-Dec-14	06-Jan-15	-63	0	0%
ARDD0333-7	Viaduct D - Issue of Revised DDA Submission - DP14.03	0		0%	0	03-Apr-15		06-Jan-15	-63	0	0%
ARDD0333-8	Viaduct D - IC/SO Consent of Supplemental Working Drawings Viaduct D	10	06-Apr-15	0%	10	17-Apr-15	07-Jan-15	20-Jan-15	-63	0	0%
ARDD0333-9	Viaduct D - IC/SO Consent of Supplemental Working Drawings Viaduct D	0		0%	0	17-Apr-15		20-Jan-15	-63	0	0%
Information to Contractor											
ARDD0348	Viaduct D - Final Segment Types and Reinforcement	0		0%	0	17-Apr-15		20-Jan-15	-63	0	0%
ARDD0350	Viaduct D - Final Anchorage and PT Requirements	0		0%	0	17-Apr-15		20-Jan-15	-63	0	0%
ARDD0352	Viaduct D - Final Bearing Schedule	0		0%	0	17-Apr-15		28-Jun-18	834	834	0%
ARDD0354	Viaduct D - Final Movement Joint (MJ) Schedule	0		0%	0	17-Apr-15		20-Oct-15	132	2	0%
Associated Construction Milestones											
ARDD0362	Viaduct D - DDA approval ready for Commencement of Pilecaps	0	12-Jan-15 A	100%	0						100%
ARDD0363	Viaduct D - Initial Segment Casting on Approval of DDA	0	12-Jan-15 A	100%	0						100%
Viaduct C											
Viaduct Design											
ARDD0383-1	Viaduct C - Earliest IC Certificate for Sub & Superstructure DDA - DP13.03	0		100%	0	09-Feb-15 A					100%
ARDD0384	Viaduct C - IC/SO Approval of Sub & Superstructure DDA - DP13.03	75	22-Dec-14 A	20%	60	15-Apr-15	16-Dec-14	10-Mar-15	-27	0	20%
ARDD0384-1	Viaduct C - IC/SO Approval of Sub & Superstructure DDA - DP13.03	0		0%	0	15-Apr-15		10-Mar-15	-27	0	0%



Actual Work
Planned Bar
Critical Bar
Milestone

Project ID: J3518DWPrE-M20
Layout: J3518-DWP-3MRP Submission - M20
Filter: TASK filters: 3-Month Lookahead, No CC
Milestones, No Level of Effort.

Tuen Mun - Chek Lap Kok Link - Southern Connection
3-Month Rolling Programme (Page 2 of 40 Pages)
(Progress as of 21-Jan-15)

Date	Revision	Checked	Approved
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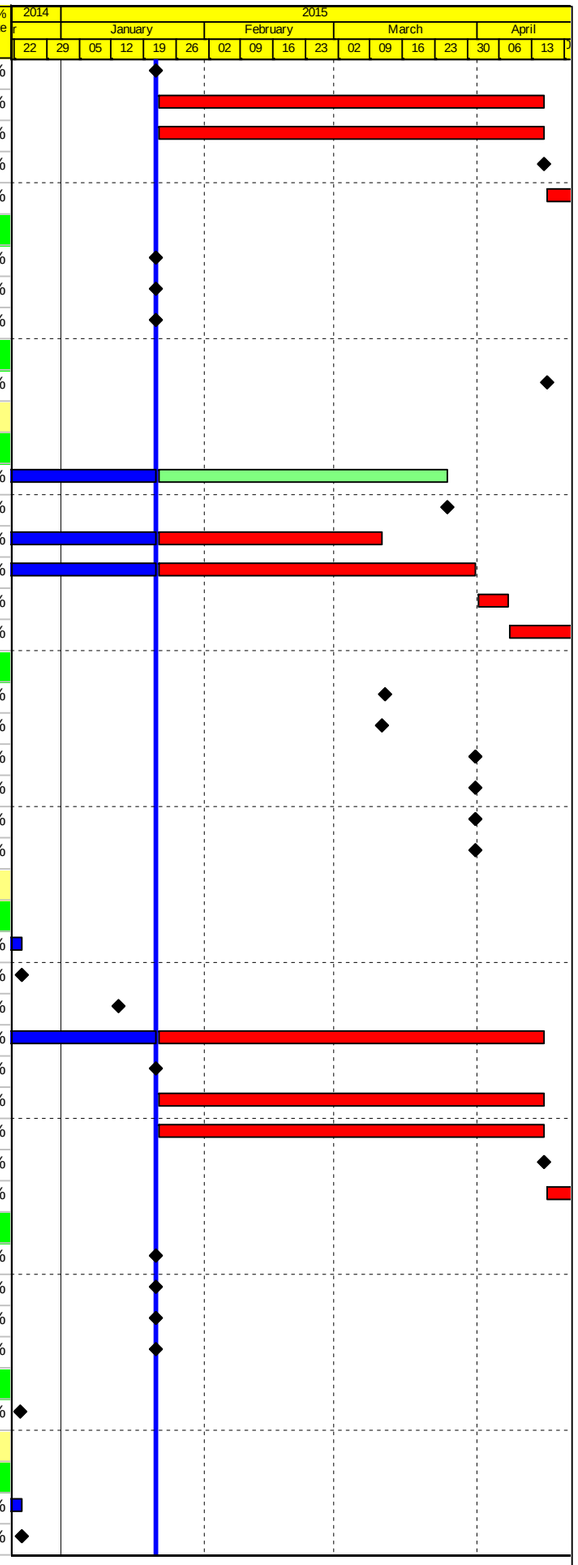
DWG. No.:
J3518/GCL/PGM/3MRP-M20

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete
ARDD0384-2	Viaduct C - GCL/FRE Issue of Construction Method/Temporary Work Data	0		0%	0	21-Jan-15		25-Nov-14	-42	0	0%
ARDD0384-3	Viaduct C - Coordination and Further Issue of Construction Method and Temporary Works D	60	22-Jan-15	0%	60	15-Apr-15	25-Nov-14	17-Feb-15	-42	0	0%
ARDD0384-4	Viaduct C - Preparation of Draft DDA Working Drawing Set	60	22-Jan-15	0%	60	15-Apr-15	25-Nov-14	17-Feb-15	-42	0	0%
ARDD0384-5	Viaduct C - GCL/FRE Final Coordinated Construction Method/Temporary Work Details	0		0%	0	15-Apr-15		17-Feb-15	-42	0	0%
ARDD0384-6	Viaduct C - Preparation and Coordination of Working Drawing Set	10	16-Apr-15	0%	10	29-Apr-15	17-Feb-15	03-Mar-15	-42	0	0%
Information to Contractor											
ARDD0401	Viaduct C - Final Anchorage and PT Requirements	0		0%	0	21-Jan-15		23-Dec-14	-22	20	0%
ARDD0403	Viaduct C - Final Bearing Schedule	0		0%	0	21-Jan-15		22-Jan-15	1	27	0%
ARDD0405	Viaduct C - Final Movement Joint (MJ) Schedule	0		0%	0	21-Jan-15		20-Oct-15	194	64	0%
Associated Construction Milestones											
ARDD0413	Viaduct C - DDA approval ready for Commencement of Pilecaps C1-C17	0	16-Apr-15	0%	0		10-Mar-15		-37	0	0%
Viaduct A											
Viaduct Design											
ARDD0430-2	Viaduct A - IC/SO Approval of Foundation DDA - DP11.01	75	04-Oct-14 A	40%	45	25-Mar-15	16-Apr-15	17-Jun-15	60	0	40%
ARDD0430-4	Viaduct A - IC/SO Approval of Foundation DDA - DP11.01	0		0%	0	25-Mar-15		17-Jun-15	60	0	0%
ARDD0432	Viaduct A - Preparation of Substructure DDA - DP11.03	50	19-Sep-14 A	30%	35	11-Mar-15	29-Dec-14	13-Feb-15	-18	0	30%
ARDD0433	Viaduct A - Preparation of Superstructure DDA -DP11.03	70	19-Sep-14 A	30%	49	31-Mar-15	13-Oct-14	18-Dec-14	-73	0	30%
ARDD0433-1	Viaduct A - GCL Review of Draft DDA Rev A1 - DP11.03	5	01-Apr-15	0%	5	07-Apr-15	19-Dec-14	25-Dec-14	-73	0	0%
ARDD0433-2	Viaduct A - Update to Incorporate GCL Comments	10	08-Apr-15	0%	10	21-Apr-15	26-Dec-14	08-Jan-15	-73	0	0%
Information to Contractor											
ARDD0443	Viaduct A - Typical Pilecap Reinforcement - Stainless Steel Rebar	0	12-Mar-15	0%	0		13-Feb-15		-18	29	0%
ARDD0444	Viaduct A - Typical Pilecap Reinforcement - Regular Rebar	0		0%	0	11-Mar-15		13-Feb-15	-18	29	0%
ARDD0448	Viaduct A - Typical Segment Shapes for Moulds	0		0%	0	31-Mar-15		07-Aug-15	93	0	0%
ARDD0449	Viaduct A - Typical Segment Reinforcement	0		0%	0	31-Mar-15		07-Aug-15	93	0	0%
ARDD0453	Viaduct A - Provisional Bearing Schedule	0		0%	0	31-Mar-15		16-Apr-15	12	0	0%
ARDD0455	Viaduct A - Provisional Movement Joint (MJ) Schedule	0		0%	0	31-Mar-15		20-Oct-15	145	15	0%
Viaduct F1 & F3											
Viaduct Design											
ARDD0481	Viaduct F1 & F3 - IC/SO Approval of Foundation DDA - DP16.01, DP16.07	75	18-Aug-14 A	100%	0	23-Dec-14 A					100%
ARDD0481-4	Viaduct F1 & F3 - IC/SO Approval of Foundation DDA - DP16.01, DP16.07	0		100%	0	23-Dec-14 A					100%
ARDD0484-5	Viaduct F1 & F3 - Earliest IC Certificate for DDA - DP16.02,03,08,09	0		100%	0	13-Jan-15 A					100%
ARDD0485	Viaduct F1 & F3 - IC/SO Approval of DDA - DP16.02, 16.03, 16.08, 16.09	75	25-Nov-14 A	20%	60	15-Apr-15	18-Aug-14	07-Nov-14	-113	10	20%
ARDD0486-1	Viaduct F1 & F3 - GCL/FRE Issue of Construction Method/Temporary Work Data	0		0%	0	21-Jan-15		18-Jul-14	-133	0	0%
ARDD0486-2	Viaduct F1 & F3 - Coordination and Further Issue of Construction Method and Temporary W	60	22-Jan-15	0%	60	15-Apr-15	21-Jul-14	10-Oct-14	-133	0	0%
ARDD0486-3	Viaduct F1 & F3 - Preparation of Draft Working Drawing Set	60	22-Jan-15	0%	60	15-Apr-15	21-Jul-14	10-Oct-14	-133	0	0%
ARDD0486-4	Viaduct F1 & F3 - GCL/FRE Final Coordinated Construction Method/Temporary Work Details	0		0%	0	15-Apr-15		10-Oct-14	-133	0	0%
ARDD0486-5	Viaduct F1 & F3 - Preparation and Coordination of DDA/Working Drawing Set	10	16-Apr-15	0%	10	29-Apr-15	13-Oct-14	24-Oct-14	-133	0	0%
Information to Contractor											
ARDD0499	Viaduct F1 & F3 - Final Segment Types and Reinforcement	0		0%	0	21-Jan-15		15-Aug-14	-113	21	0%
ARDD0501	Viaduct F1 & F3 - Final Anchorage and PT Requirements	0		0%	0	21-Jan-15		07-Nov-14	-53	81	0%
ARDD0503	Viaduct F1 & F3 - Final Bearing Schedule	0		0%	0	21-Jan-15		16-Apr-15	61	49	0%
ARDD0505	Viaduct F1 & F3 - Final Movement Joint (MJ) Schedule	0		0%	0	21-Jan-15		20-Oct-15	194	64	0%
Associated Construction Milestones											
ARDD0507	Viaduct F1 & F3 - DDA approval ready for Commencement of Piling	0	23-Dec-14 A	100%	0						100%
Viaduct F2, F4 and F5											
Viaduct Design											
ARDD0525-2	Viaduct F2, F4 & F5 - IC/SO Approval of Foundation DDA - DP16.04, DP16.10, DP16.13	75	18-Aug-14 A	100%	0	23-Dec-14 A					100%
ARDD0525-7	Viaduct F2, F4 & F5 - IC/SO Approval of Foundation DDA - DP16.04, DP16.10, DP16.13	0		100%	0	23-Dec-14 A					100%



Actual Work
Planned Bar
Critical Bar
Milestone

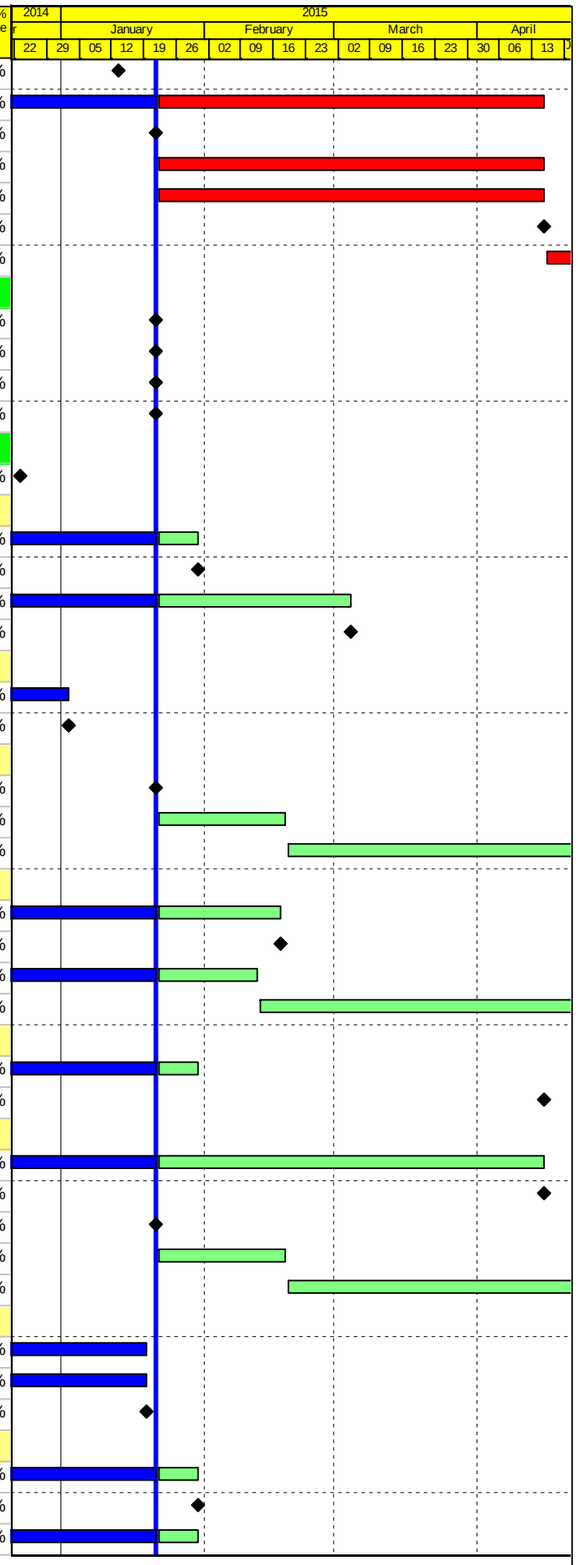
Project ID: J3518DWPrE-M20
Layout: J3518-DWP-3MRP Submission - M20
Filter: TASK filters: 3-Month Lookahead, No CC
Milestones, No Level of Effort.

Tuen Mun - Chek Lap Kok Link - Southern Connection
3-Month Rolling Programme (Page 3 of 40 Pages)
(Progress as of 21-Jan-15)

Date	Revision	Checked	Approved
21-Jan-15		DB	

DWG. No.:
J3518/GCL/PGM/3MRP-M20

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete
ARDD0528-6	Viaduct F2, F4 & F5 - Earliest IC certificate for DDA - DP16.05,06,11,12,14,15	0		100%	0	13-Jan-15 A					100%
ARDD0529	Viaduct F2, F4 & F5 - IC/SO Approval of DDA - DP16.05, 06, 11, 12, 14, 15	75	25-Nov-14 A	20%	60	15-Apr-15	18-Aug-14	07-Nov-14	-113	10	20%
ARDD0530-2	Viaduct F2, F4 & F5 - GCL/FRE Issue of Construction Method/Temporary Work Data	0		0%	0	21-Jan-15		18-Jul-14	-133	0	0%
ARDD0530-3	Viaduct F2, F4 & F5 - Coordination and Further Issue of Construction Method and Temporar	60	22-Jan-15	0%	60	15-Apr-15	21-Jul-14	10-Oct-14	-133	0	0%
ARDD0530-4	Viaduct F2, F4 & F5 - Preparation of Draft Working Drawing Set	60	22-Jan-15	0%	60	15-Apr-15	21-Jul-14	10-Oct-14	-133	0	0%
ARDD0530-5	Viaduct F2, F4 & F5 - GCL/FRE Final Coordination Construction Method/Temporary Work D	0		0%	0	15-Apr-15		10-Oct-14	-133	0	0%
ARDD0530-6	Viaduct F2, F4 & F5 - Preparation and Coordination of DDA/Working Drawing Set	10	16-Apr-15	0%	10	29-Apr-15	13-Oct-14	24-Oct-14	-133	0	0%
Information to Contractor											
ARDD0543	Viaduct F2, F4 & F5 - Final Segment Types and Reinforcement	0		0%	0	21-Jan-15		15-Aug-14	-113	21	0%
ARDD0545	Viaduct F2, F4 & F5 - Final Anchorage and PT Requirements	0		0%	0	21-Jan-15		15-Aug-14	-113	21	0%
ARDD0547	Viaduct F2, F4 & F5 - Final Bearing Schedule	0		0%	0	21-Jan-15		16-Apr-15	61	49	0%
ARDD0549	Viaduct F2, F4 & F5 - Final Movement Joint (MJ) Schedule	0		0%	0	21-Jan-15		20-Oct-15	194	64	0%
Associated Construction Milestones											
ARDD0551	Viaduct F2, F4 & F5 - DDA approval ready for Commencement of Piling	0	23-Dec-14 A	100%	0						100%
Parapet and Utility Trough											
ARDD0562-4	IC/SO Approval of DDA -DP30.01	75	31-Jul-14 A	90.67%	7	30-Jan-15	26-Feb-15	06-Mar-15	25	0	90%
ARDD0562-5	IC/SO Approval of DDA -DP30.01	0		0%	0	30-Jan-15		06-Mar-15	25	0	0%
ARDD0566	IC/SO Approval of DDA -DP31.01	75	24-Oct-14 A	60%	30	04-Mar-15	04-Sep-15	15-Oct-15	161	0	60%
ARDD0566-1	IC/SO Approval of DDA -DP31.01	0		0%	0	04-Mar-15		15-Oct-15	161	112	0%
TCSS Provisions											
ARDD0573	IC/SO Approval of DDA for TCSS civil provisions - BP10.01	75	29-Sep-14 A	100%	0	02-Jan-15 A					100%
ARDD0573-1	IC/SO Approval of DDA for TCSS civil provisions - BP10.01	0		100%	0	02-Jan-15 A					100%
Slopeworks for Viaduct B: 9SE- B/C8, B/C9, B/F9, B/F85+ 10SW-A/F52, A/F53											
ARDD0580-4	Additional GI for Slope A/F52	0		0%	0	21-Jan-15		27-Mar-15	47	0	0%
ARDD0580-5	Preparation of Slope A/F52 Submission - CP12.03	20	22-Jan-15	0%	20	18-Feb-15	30-Mar-15	24-Apr-15	47	0	0%
ARDD0580-6	IC/SO Approval of Slope - CP12.03	75	19-Feb-15	0%	75	03-Jun-15	27-Apr-15	07-Aug-15	47	0	0%
Slopeworks for Viaduct C: 10NW -C/C22, C/C26, C/C27, C/F13, C/F14. C/F15											
ARDD0587	IC/SO Approval of Slope Combined AIP/DDA -CP13.01	190	19-Nov-13 A	90%	19	17-Feb-15	23-Jun-16	19-Jul-16	370	0	90%
ARDD0587-1	IC/SO Approval of Slope Combined AIP/DDA -CP13.01	0		0%	0	17-Feb-15		19-Jul-16	370	202	0%
ARDD0588-1	Preparation of Fill Slope Combined AIP/DDA - CP13.02	20	21-Nov-14 A	20%	16	12-Feb-15	15-Mar-16	05-Apr-16	298	0	20%
ARDD0588-2	IC/SO Approval of Combined AIP/DDA -CP13.02	75	13-Feb-15	0%	75	28-May-15	06-Apr-16	19-Jul-16	298	0	0%
Slopeworks for Viaduct A: 9SE-B/FR8, B/R1, B/R2											
ARDD0595	IC/SO Approval of Slope Combined AIP/DDA -CP11.01	75	31-Jul-14 A	90.67%	7	30-Jan-15	06-Nov-15	16-Nov-15	206	53	90%
ARDD0595-1	IC/SO Approval of Slope Combined AIP/DDA -CP11.01	0		0%	0	15-Apr-15		16-Nov-15	153	189	0%
Slopeworks for Viaduct D: 10NW -C/R4, C/F9, C/F10, C/F11, C/F17, C/F50											
ARDD0603	IC/SO Approval of Slope Combined AIP/DDA -CP14.01	75	16-Dec-14 A	20%	60	15-Apr-15	13-Mar-15	04-Jun-15	36	0	20%
ARDD0603-1	IC/SO Approval of Slope Combined AIP/DDA -CP14.01	0		0%	0	15-Apr-15		04-Jun-15	36	15	0%
ARDD0604	Receipt of Further GI Data	0		0%	0	21-Jan-15		28-May-15	91	0	0%
ARDD0604-1	Further Update of Combined AIP/DDA - CP14.02	20	22-Jan-15	0%	20	18-Feb-15	29-May-15	25-Jun-15	91	0	0%
ARDD0604-2	IC/SO Approval of Slope Combined AIP/DDA -CP14.02	75	19-Feb-15	0%	75	03-Jun-15	26-Jun-15	08-Oct-15	91	0	0%
Natural Terrian Hazard Assessment											
ARDD0612-1.1	GEO Approval - CP20.01, CP21.01	40	23-Apr-14 A	100%	0	19-Jan-15 A					100%
ARDD0613	GEO Approval of NTHM Combined AIP/DDA - CP20.02, CP21.02	75	16-Jul-14 A	100%	0	19-Jan-15 A					100%
ARDD0613-1	GEO Approval of NTHM Combined AIP/DDA - CP20.02, CP21.02	0		100%	0	19-Jan-15 A					100%
Waterworks, Drainage & Utility Diversions											
ARDD0629	IC/SO Approval of Waterworks, Drainage & Utility DDA - BP20.01	75	22-Jul-14 A	90.67%	7	30-Jan-15	12-May-15	20-May-15	78	0	90%
ARDD0629-1	IC/SO Approval of Waterworks, Drainage & Utility DDA - BP20.01	0		0%	0	30-Jan-15		20-May-15	78	0	0%
ARDD0629-2	Gov't Approval of Submissions for Waterworks, Drainage & Utility Diversions	75	02-Jan-14 A	90.67%	7	30-Jan-15	13-Feb-15	23-Feb-15	16	0	90%



Actual Work
Planned Bar
Critical Bar
Milestone

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Tuen Mun - Chek Lap Kok Link - Southern Connection
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DWG. No.:
J3518/GCL/PGM/3MRP-M20

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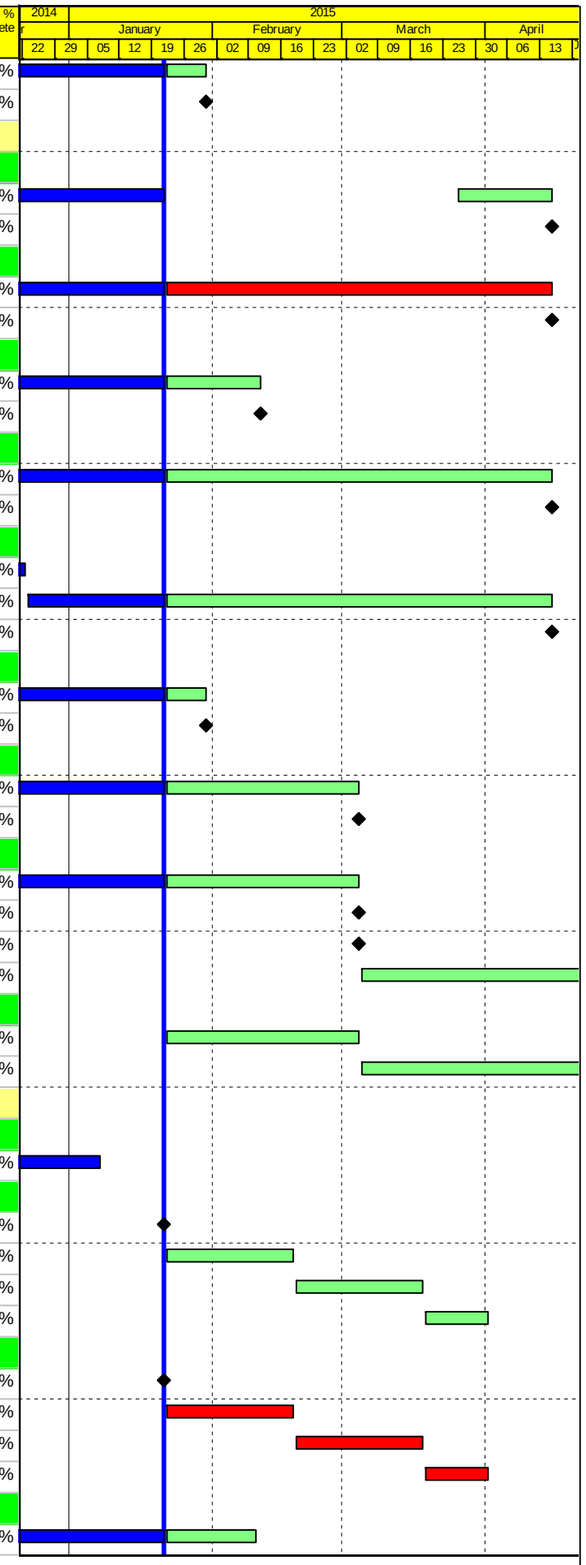
ARDD0630-3	IC/SO Approval of Deck Drainage DDA - BP20.02	75	30-Jun-14 A	90.67%	7	30-Jan-15	23-Mar-17	31-Mar-17	565	0	90%
ARDD0630-4	IC/SO Approval of Deck Drainage DDA - BP20.02	0		0%	0	30-Jan-15		31-Mar-17	565	23	0%
Viaduct Approach Ramp Retaining Walls											
Approach Ramp D											
ARDD0652	Approach D - IC/SO Approval of Approach Ramp D DDA - DP23.01	75	25-Sep-14 A	80%	15	15-Apr-15	27-Mar-15	16-Apr-15	1	0	80%
ARDD0652-1	Approach D - IC/SO Approval of Approach Ramp D DDA - DP23.01	0		0%	0	15-Apr-15		16-Apr-15	1	0	0%
Approach Ramp C											
ARDD0658	Approach C - IC/SO Approval of Approach Ramp C DDA -DP20.01	75	03-Oct-14 A	20%	60	15-Apr-15	23-Dec-14	17-Mar-15	-22	0	20%
ARDD0658-1	Approach C - IC/SO Approval of Approach Ramp C DDA -DP20.01	0		0%	0	15-Apr-15		17-Mar-15	-22	0	0%
Approach Ramp B											
ARDD0664	Approach B - IC/SO Approval of Approach Ramp B DDA -DP21.01	75	14-Oct-14 A	80%	15	11-Feb-15	21-Dec-15	08-Jan-16	237	0	80%
ARDD0664-1	Approach B - IC/SO Approval of Approach Ramp B DDA -DP21.01	0		0%	0	11-Feb-15		08-Jan-16	237	220	0%
Approach A											
ARDD0670	Approach A - IC/SO Approval of Approach Ramp A DDA - DP20.01	75	03-Oct-14 A	20%	60	15-Apr-15	19-May-15	10-Aug-15	83	0	20%
ARDD0670-1	Approach A - IC/SO Approval of Approach Ramp A DDA - DP20.01	0		0%	0	15-Apr-15		10-Aug-15	83	105	0%
Approach F											
ARDD0675	Approach F - Preparation of Approach Ramp F DDA Submission -DP24.01	50	12-Nov-14 A	100%	0	22-Dec-14 A					100%
ARDD0676	Approach F - IC/SO Approval of Approach Ramp F DDA -DP24.01	75	23-Dec-14 A	20%	60	15-Apr-15	27-Feb-15	21-May-15	26	0	20%
ARDD0676-1	Approach F - IC/SO Approval of Approach Ramp F DDA -DP24.01	0		0%	0	15-Apr-15		08-Dec-15	169	10	0%
Viaduct Pavement											
ARDD871	Viaduct Pavement - IC/SO Approval of AIP/DDA - BP02.01	75	27-Jun-14 A	90.67%	7	30-Jan-15	24-Mar-15	01-Apr-15	43	0	90%
ARDD871-1	Viaduct Pavement - IC/SO Approval of AIP/DDA - BP02.01	0		0%	0	30-Jan-15		01-Apr-15	43	0	0%
Signs, Markings and Street Furniture											
ARDD0688	IC/SO Approval of Signs, Markings & Street Furniture DDA - BP03.01	75	16-Oct-14 A	60%	30	04-Mar-15	12-Jun-15	23-Jul-15	101	0	60%
ARDD0688-1	IC/SO Approval of Signs, Markings & Street Furniture DDA - BP03.01	0		0%	0	04-Mar-15		23-Jul-15	101	0	0%
Landscape											
ARDD0700	IC/SO Approval of DDA for landscape works - BP22.01	75	15-Oct-14 A	60%	30	04-Mar-15	23-Nov-15	01-Jan-16	217	0	60%
ARDD0700-1	IC/SO Approval of DDA for landscape works - BP22.01	0		0%	0	04-Mar-15		01-Jan-16	217	0	0%
ARDD0701	Water Supply Application to WSD	0		0%	0	04-Mar-15		01-Jan-16	217	0	0%
ARDD0702	Gov't Approval of LVIA	40	05-Mar-15	0%	40	29-Apr-15	04-Jan-16	26-Feb-16	217	251	0%
Remaining Works											
ARDD0704	Preparation of Remaining Works AIP - ZP01.00	30	22-Jan-15	0%	30	04-Mar-15	29-Aug-16	07-Oct-16	417	0	0%
ARDD0705	IC/SO Approval of Remaining Works AIP - ZP01.00	40	05-Mar-15	0%	40	29-Apr-15	10-Oct-16	02-Dec-16	417	0	0%
Segment Target Geometry And Erection Engineering											
Viaduct B											
ARDD0714-9	Viaduct B - Issue Erection Manual	30	01-Dec-14 A	100%	0	07-Jan-15 A					100%
Viaduct A											
ARDD0716	Viaduct A - Confirmation of Erection Sequence from Freyssinet	0		0%	0	21-Jan-15		05-Feb-15	11	0	0%
ARDD0717	Viaduct A - Erection Sequence Analysis	20	22-Jan-15	0%	20	18-Feb-15	06-Feb-15	05-Mar-15	11	0	0%
ARDD0718	Viaduct A - Target Geometry Analysis	20	19-Feb-15	0%	20	18-Mar-15	06-Mar-15	02-Apr-15	11	0	0%
ARDD0719	Viaduct A - Segment Geometry Schedules	10	19-Mar-15	0%	10	01-Apr-15	03-Apr-15	16-Apr-15	11	84	0%
Viaduct C											
ARDD0721	Viaduct C - Confirmation of Erection Sequence from Freyssinet	0		0%	0	21-Jan-15		05-Jan-15	-13	0	0%
ARDD0722	Viaduct C - Erection Sequence Analysis	20	22-Jan-15	0%	20	18-Feb-15	05-Jan-15	02-Feb-15	-13	0	0%
ARDD0723	Viaduct C - Target Geometry Analysis	20	19-Feb-15	0%	20	18-Mar-15	02-Feb-15	02-Mar-15	-13	0	0%
ARDD0724	Viaduct C - Segment Geometry Schedules	10	19-Mar-15	0%	10	01-Apr-15	02-Mar-15	16-Mar-15	-13	20	0%
Viaduct D											
ARDD0728	Viaduct D - Target Geometry Analysis	20	11-Dec-14 A	30%	14	10-Feb-15	11-Jun-18	28-Jun-18	882	882	30%



Actual Work
Planned Bar
Critical Bar
Milestone

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Tuen Mun - Chek Lap Kok Link - Southern Connection
3-Month Rolling Programme (Page 5 of 40 Pages)
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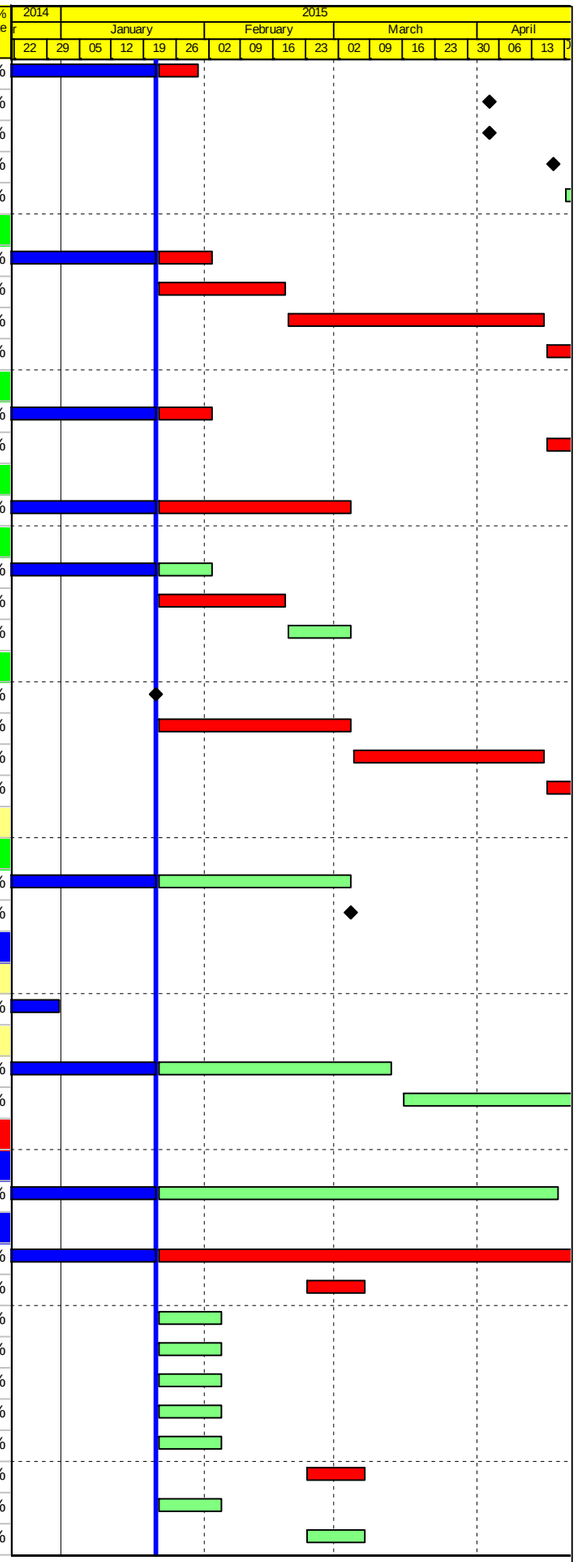
ARDD0729	Viaduct D - Segment Geometry Schedules	10	11-Dec-14 A	30%	7	30-Jan-15	12-Jan-15	20-Jan-15	-8	45	30%
ARDD0729-1	Viaduct D - Issue of Pierhead Segments Bridge D1, D2, D3	0		0%	0	03-Apr-15		20-Jan-15	-53	10	0%
ARDD0729-3	Viaduct D - Issue of Casting Data and Segment Catalogue Bridge D2, D3 (Final)	0		0%	0	03-Apr-15		20-Jan-15	-53	10	0%
ARDD0729-4	Viaduct D - Issue of Casting Data and Segment Catalogue Bridge D1 (Final)	0		0%	0	17-Apr-15		20-Jan-15	-63	0	0%
ARDD0729-5	Viaduct D - Issue Erection Manual	30	20-Apr-15	0%	30	29-May-15	13-May-15	23-Jun-15	17	0	0%
Viaduct E5 and E6											
ARDD0734	Viaduct E5 & E6 - Segment Geometry Schedules	10	05-May-14 A	20%	8	02-Feb-15	07-Jan-14	16-Jan-14	-272	0	20%
TGP0560	Viaduct E5 & E6 - Issue of Optimised Casting Data and Segment Catalogue Bridge E5	20	22-Jan-15	0%	20	18-Feb-15	04-Jun-14	01-Jul-14	-166	0	0%
TGP0570	Viaduct E5 & E6 - Issue of Optimised Casting Data and Segment Catalogue Bridge E6	40	19-Feb-15	0%	40	15-Apr-15	07-Aug-14	01-Oct-14	-140	0	0%
TGP0590	Viaduct E5 & E6 - Issue Erection Manual	10	16-Apr-15	0%	10	29-Apr-15	25-Dec-14	07-Jan-15	-80	104	0%
Viaduct E7 & E8											
ARDD0739	Viaduct E7 & E8 - Segment Geometry Schedules	10	05-May-14 A	20%	8	02-Feb-15	15-Dec-14	24-Dec-14	-28	112	20%
TGP0760	Viaduct E7 & E8 - Issue of Optimised Casting Data and Segment Catalogue Bridge E7	40	16-Apr-15	0%	40	10-Jun-15	02-Oct-14	26-Nov-14	-140	0	0%
Viaduct E1											
ARDD0744-3	Viaduct E1 - Issue Erection Manual	30	11-Dec-14 A	0%	30	04-Mar-15	19-Jan-15	02-Mar-15	-3	37	0%
Viaduct E2											
ARDD0749	Viaduct E2 - Segment Geometry Schedules	10	24-Mar-14 A	20%	8	02-Feb-15	23-Feb-15	04-Mar-15	22	12	20%
TGP0260	Viaduct E2 - Issue of Optimised Casting Data and Segment Catalogue Bridge E2	20	22-Jan-15	0%	20	18-Feb-15	23-Oct-14	20-Nov-14	-65	0	0%
TGP0290	Viaduct E2 - Issue of Erection Manual	10	19-Feb-15	0%	10	04-Mar-15	05-Mar-15	18-Mar-15	10	40	0%
Viaduct F											
ARDD0751	Viaduct F - Confirmation of Erection Sequence from Freyssinet	0		0%	0	21-Jan-15		01-Aug-14	-123	0	0%
ARDD0752	Viaduct F - Erection Sequence Analysis	30	22-Jan-15	0%	30	04-Mar-15	04-Aug-14	12-Sep-14	-123	0	0%
ARDD0753	Viaduct F - Target Geometry Analysis	30	05-Mar-15	0%	30	15-Apr-15	15-Sep-14	24-Oct-14	-123	0	0%
ARDD0754	Viaduct F - Segment Geometry Schedules	10	16-Apr-15	0%	10	29-Apr-15	27-Oct-14	07-Nov-14	-123	0	0%
Reprovisioning Works											
CEDD Access Track											
ARDD0809	IC/SO Approval of Combined AIP/DDA for CEDD Access Track - BP32.01	75	26-Sep-14 A	60%	30	04-Mar-15	02-May-16	10-Jun-16	332	0	60%
ARDD0817	IC/SO Approval of Combined AIP/DDA for CEDD Access Track - BP32.01	0		0%	0	04-Mar-15		10-Jun-16	332	375	0%
Other Design											
Ship Impact Assessment											
BMT0010	Preparation of SIA - AP16.00	30	18-Nov-13 A	100%	0	31-Dec-14 A					100%
Marine Permanent Navigation Aids											
BMT0135	Preparation of MPNA DDA - BP36.01	46	11-Jun-14 A	19.57%	37	13-Mar-15	09-Mar-15	28-Apr-15	32	0	20%
BMT0140	IC/SO Approval of MPNA DDA BP36.01	75	16-Mar-15	0%	75	26-Jun-15	29-Apr-15	11-Aug-15	32	0	0%
Major Procurement											
Marine Permanent Navigaion Aids											
PR65011	Design & Approvals for Marine Navigation Aids	150	23-Oct-13 A	54.67%	68	18-Apr-15	21-May-15	11-Aug-15	94	56	55%
Tower Cranes											
PR66011	Procure & Deliver Tower Cranes	325	01-Oct-14 A	53.85%	150	28-Jul-15	19-Jan-15	25-Jul-15	-3	865	50%
PR66013	Erect & Commission Tower Crane @ E4	12	23-Feb-15	0%	12	07-Mar-15	19-Jan-15	02-Feb-15	-27	18	0%
PR66013-1	Dismantle Tower Crane @ E4	12	22-Jan-15	0%	12	04-Feb-15	09-Jun-18	27-Jun-18	938	938	0%
PR66014-1	Dismantle Tower Crane @ E5	12	22-Jan-15	0%	12	04-Feb-15	09-Jun-18	27-Jun-18	938	938	0%
PR66015-1	Dismantle Tower Crane @ E6	12	22-Jan-15	0%	12	04-Feb-15	09-Jun-18	27-Jun-18	938	938	0%
PR66016-1	Dismantle Tower Crane @ E7	12	22-Jan-15	0%	12	04-Feb-15	09-Jun-18	27-Jun-18	938	938	0%
PR66017-1	Dismantle Tower Crane @ E8	12	22-Jan-15	0%	12	04-Feb-15	09-Jun-18	27-Jun-18	938	938	0%
PR66018	Erect & Commission Tower Crane @ E9	12	23-Feb-15	0%	12	07-Mar-15	22-Jan-15	05-Feb-15	-23	12	0%
PR66018-1	Dismantle Tower Crane @ E9	12	22-Jan-15	0%	12	04-Feb-15	09-Jun-18	27-Jun-18	938	938	0%
PR66019	Erect & Commission Tower Crane @ E10	12	23-Feb-15	0%	12	07-Mar-15	11-May-15	28-May-15	60	100	0%



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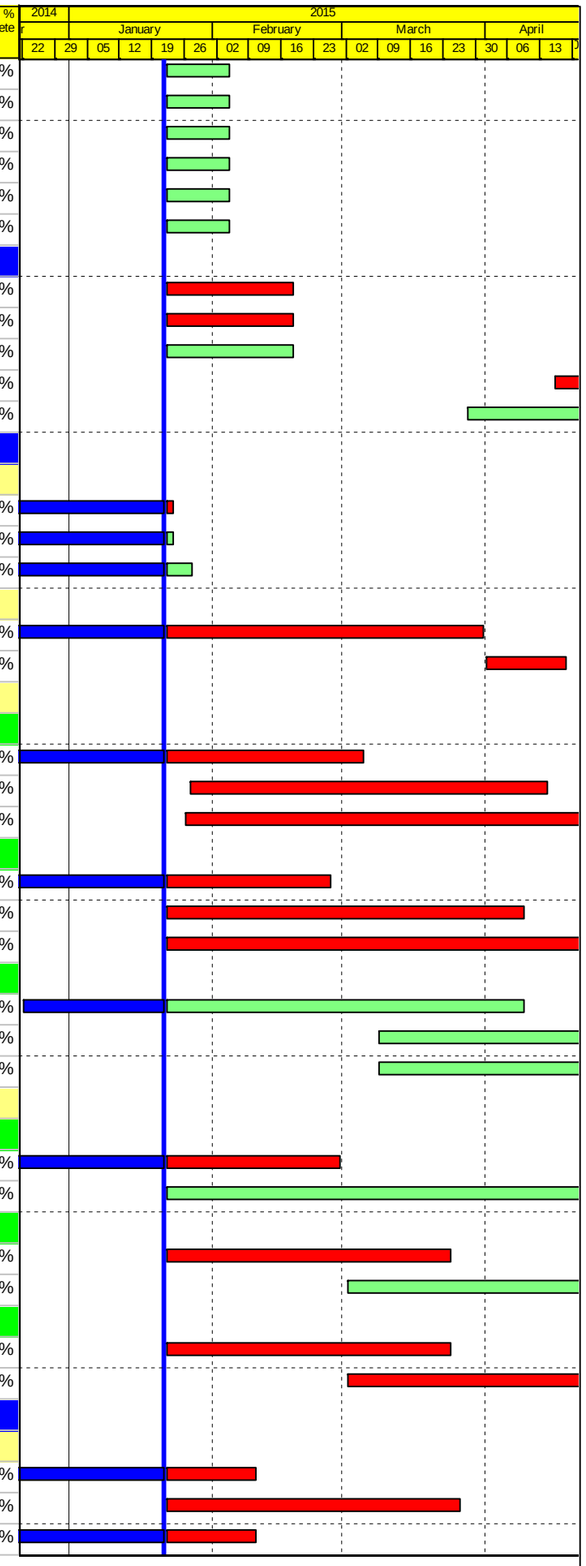
PR66019-1	Dismantle Tower Crane @ E10	12	22-Jan-15	0%	12	04-Feb-15	09-Jun-18	27-Jun-18	938	938	0%
PR66020-1	Dismantle Tower Crane @ E11	12	22-Jan-15	0%	12	04-Feb-15	09-Jun-18	27-Jun-18	938	938	0%
PR66021-1	Dismantle Tower Crane @ E12A	12	22-Jan-15	0%	12	04-Feb-15	09-Jun-18	27-Jun-18	938	938	0%
PR66022-1	Dismantle Tower Crane @ E12B	12	22-Jan-15	0%	12	04-Feb-15	09-Jun-18	27-Jun-18	938	938	0%
PR66023-1	Dismantle Tower Crane @ E13-Sth	12	22-Jan-15	0%	12	04-Feb-15	09-Jun-18	27-Jun-18	938	938	0%
PR66024-1	Dismantle Tower Crane @ E13-Nth	12	22-Jan-15	0%	12	04-Feb-15	09-Jun-18	27-Jun-18	938	938	0%
Equipment Platforms for Tower Cranes											
PR66026	Inst.Temp.Eqpt.Platform (piles & deck) @ E4	24	22-Jan-15	0%	24	18-Feb-15	18-Dec-14	19-Jan-15	-27	0	0%
PR66031	Inst.Temp.Eqpt.Platform (piles & deck) @ E9	24	22-Jan-15	0%	24	18-Feb-15	22-Dec-14	22-Jan-15	-23	0	0%
PR66032	Inst.Temp.Eqpt.Platform (piles & deck) @ E10	24	22-Jan-15	0%	24	18-Feb-15	09-Apr-15	11-May-15	60	0	0%
PR66033	Inst.Temp.Eqpt.Platform (piles & deck) @ E11	24	16-Apr-15	0%	24	16-May-15	20-Jan-15	17-Feb-15	-66	0	0%
PR66034	Re-arrange temp.platform @ E12	24	28-Mar-15	0%	24	02-May-15	07-Jul-15	06-Aug-15	69	0	0%
Deck Segment Installation Equipment											
Launching Gantry 1											
PR67040	Launching Gantry Design	130	05-Feb-14 A	98.46%	2	23-Jan-15	05-Nov-14	06-Nov-14	-64	6	99%
PR67041	Launching Gantry 1 Fabrication	130	10-Mar-14 A	98.46%	2	23-Jan-15	27-Jun-18	28-Jun-18	1013	1013	97%
PR67042	Launching Gantry 1 Delivery	24	25-Aug-14 A	79.17%	5	27-Jan-15	23-Jun-18	28-Jun-18	1010	1010	80%
Launching Gantry 2											
PR67043	Launching Gantry 2 Fabrication	142	16-Jun-14 A	60.56%	56	31-Mar-15	29-Oct-14	05-Jan-15	-70	0	60%
PR67044	Launching Gantry 2 Delivery	12	01-Apr-15	0%	12	18-Apr-15	06-Jan-15	19-Jan-15	-70	0	0%
Lifting Frames											
Lifting Frames 1 & 2											
PR68011	Lifting Frame 1&2 Design	86	02-Jun-14 A	60.47%	34	05-Mar-15	17-Oct-14	26-Nov-14	-80	0	60%
PR68012	Lifting Frame 1&2 Approval	60	27-Jan-15	0%	60	14-Apr-15	22-Oct-14	03-Jan-15	-80	0	0%
PR68013	Lifting Frame 1&2 Fabrication	85	26-Jan-15	0%	85	13-May-15	21-Oct-14	31-Jan-15	-80	0	0%
Lifting Frames 3 & 4											
PR68015	Lifting Frame 3&4 Design	70	02-Jun-14 A	60%	28	26-Feb-15	10-Nov-14	12-Dec-14	-60	2	60%
PR68016	Lifting Frame 3&4 Approval	60	22-Jan-15	0%	60	09-Apr-15	11-Nov-14	23-Jan-15	-59	1	0%
PR68017	Lifting Frame 3&4 Fabrication	85	22-Jan-15	0%	85	09-May-15	10-Nov-14	24-Feb-15	-60	0	0%
Lifting Frames 5 & 6											
PR68019	Lifting Frame 5&6 Design	70	22-Dec-14 A	14.29%	60	09-Apr-15	28-Apr-15	10-Jul-15	75	6	15%
PR68020	Lifting Frame 5&6 Approval	60	09-Mar-15	0%	60	22-May-15	12-Jun-15	22-Aug-15	76	1	0%
PR68021	Lifting Frame 5&6 Fabrication	85	09-Mar-15	0%	85	23-Jun-15	11-Jun-15	19-Sep-15	75	0	0%
Unloading Frames											
Type 1 (at B6 and D6)											
PR69100	Unloading Frame Type 1 Design	50	05-May-14 A	40%	30	28-Feb-15	10-Jan-15	13-Feb-15	-10	2	40%
PR69110	Unloading Frame Type 1 Fabrication	80	22-Jan-15	0%	80	04-May-15	02-Feb-18	15-May-18	899	0	0%
Type 2 (at Bridge E1)											
PR69170	Unloading Frame Type 2 Design	50	22-Jan-15	0%	50	24-Mar-15	10-Jan-15	12-Mar-15	-10	0	0%
PR69180	Unloading Frame Type 2 Fabrication	80	02-Mar-15	0%	80	09-Jun-15	05-Feb-18	17-May-18	871	0	0%
Type 4 (at HKBCF)											
PR69250	Unloading Frame Type 4 Design	50	22-Jan-15	0%	50	24-Mar-15	10-Jan-15	12-Mar-15	-10	0	0%
PR69260	Unloading Frame Type 4 (BCF) Fabrication	80	02-Mar-15	0%	80	09-Jun-15	14-Feb-15	28-May-15	-10	0	0%
Deck Segments & Precast Pile Cap Shells											
Preliminaries											
MBBE0018	Precast Segment Mould Design (Viaduct E5, E6, E7 & E8)	42	05-Jul-14 A	59.52%	17	10-Feb-15	09-Jun-14	27-Jun-14	-188	998	60%
MBBE0020	Precast Segment Mould Fabrication & Assembly (Viaduct E5, E6, E7 & E8)	52	22-Jan-15	0%	52	26-Mar-15	09-Jun-14	08-Aug-14	-188	67	0%
MBBE0024	Precast Segment Mould Design (Viaduct E2)	42	28-Jun-14 A	59.52%	17	10-Feb-15	28-Oct-14	17-Nov-14	-71	998	60%



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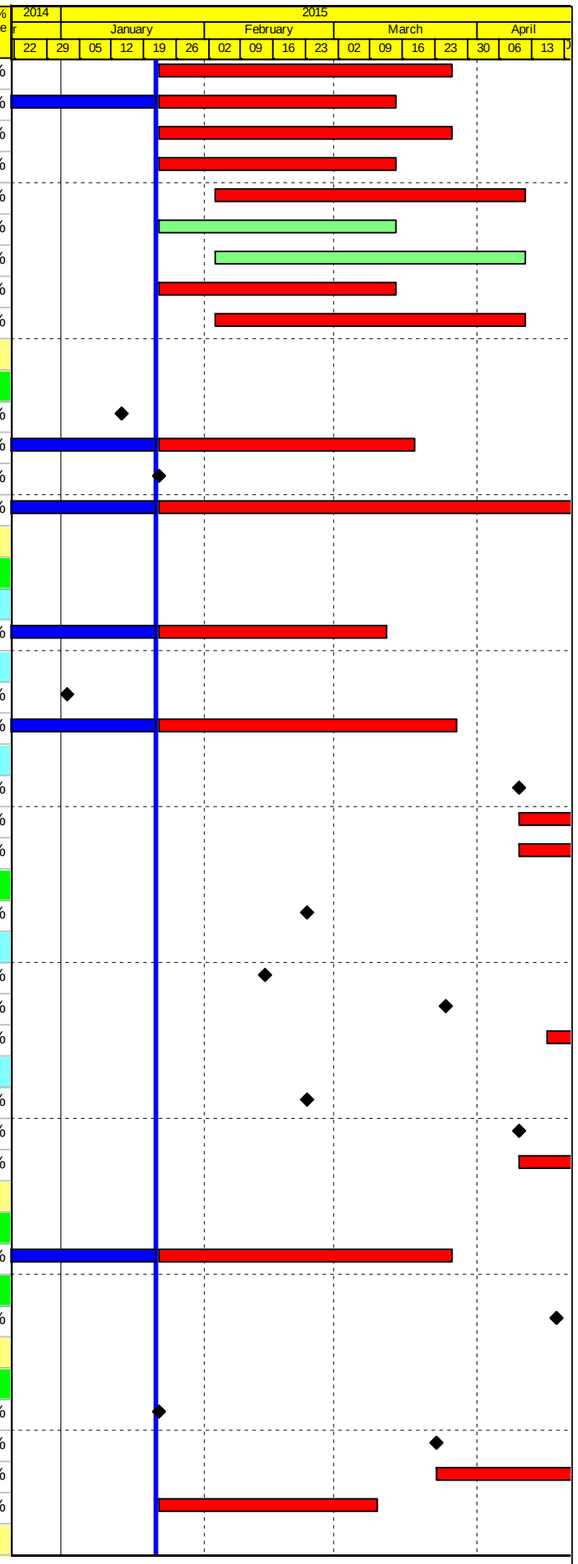
MBBE0026	Precast Segment Mould Fabrication & Assembly (Viaduct E2)	52	22-Jan-15	0%	52	26-Mar-15	28-Oct-14	30-Dec-14	-71	4	0%
MBBE0030	Precast Segment Mould Design (Viaduct E1)	42	30-Jul-14 A	0%	42	14-Mar-15	29-Oct-14	16-Dec-14	-70	973	0%
MBBE0032	Precast Segment Mould Fabrication & Assembly (Viaduct E1)	52	22-Jan-15	0%	52	26-Mar-15	29-Oct-14	30-Dec-14	-70	0	0%
MBBE0036	Precast Segment Mould Design (Viaduct D)	42	22-Jan-15	0%	42	14-Mar-15	13-Dec-14	03-Feb-15	-31	0	0%
MBBE0038	Precast Segment Mould Fabrication & Assembly (Viaduct D)	52	03-Feb-15	0%	52	11-Apr-15	27-Dec-14	02-Mar-15	-31	37	0%
MBBE0042	Precast Segment Mould Design (Viaduct C)	42	22-Jan-15	0%	42	14-Mar-15	06-Feb-15	31-Mar-15	13	0	0%
MBBE0044	Precast Segment Mould Fabrication & Assembly (Viaduct C)	52	03-Feb-15	0%	52	11-Apr-15	18-Feb-15	28-Apr-15	13	58	0%
MBBE0054	Precast Segment Mould Design (Viaduct F1 to F5)	42	22-Jan-15	0%	42	14-Mar-15	06-Oct-14	22-Nov-14	-90	0	0%
MBBE0056	Precast Segment Mould Fabrication & Erection (Viaduct F1 to F5)	52	03-Feb-15	0%	52	11-Apr-15	17-Oct-14	16-Dec-14	-90	59	0%
Viaduct B											
Precast Deck Segments											
MBBE0130	B: Commence Pier Head Segment Delivery	0	14-Jan-15 A	100%	0						100%
MBBE0130-1	B: Progressive Pier Head Segment Manufacture & Delivery remaining segments	54	02-Dec-14 A	16.67%	45	18-Mar-15	10-Jan-15	06-Mar-15	-10	0	16.7%
MBBE130	B: Commence Match Cast Segment Delivery	0	22-Jan-15	0%	0		28-Jun-18		1015	1015	0%
MBBE130-1	B: Progressive Match Cast Segment Manufacture & Delivery remaining segments (334 Nr)	96	24-Oct-14 A	10.42%	86	11-May-15	19-Nov-14	05-Mar-15	-52	1	10.48%
Viaduct E											
Precast Pile Caps											
Viaduct E1											
PP7330	Production of Viaduct E1 Marine Precast Pile Cap Shells	80	17-Oct-14 A	50%	40	12-Mar-15	17-Dec-14	04-Feb-15	-28	975	50%
Viaduct E2											
MBEC0130-4	E2: Commence Pile Cap Shell Delivery	0	02-Jan-15 A	100%	0						100%
PP7260	Production of Viaduct E2 Marine Precast Pile Cap Shells	80	27-Oct-14 A	33.75%	53	27-Mar-15	11-Dec-14	13-Feb-15	-33	55	33%
Viaduct E5, E6, E7 & E8											
MBEC0120-5	E5-6-7-8: Commence Pile Cap Shell Casting on Approval of DDA	0	10-Apr-15	0%	0		15-Dec-14		-90	0	0%
PP7120	Production of Viaduct E5 & E6 Marine Precast Pile Cap Shells	60	10-Apr-15	0%	60	22-Jun-15	15-Dec-14	02-Mar-15	-90	0	0%
PP7190	Production of Viaduct E7 & E8 Marine Precast Pile Cap Shells	60	10-Apr-15	0%	60	22-Jun-15	15-Dec-14	02-Mar-15	-90	0	0%
Precast Deck Segments											
MBE00014	Viaduct E2 - Pier Head Segment Casting	0	23-Feb-15	0%	0		20-Nov-14		-75	0	0%
Viaduct E1											
MBEE0120-3	E1: Commence Segment Casting on Approval of DDA	0	14-Feb-15	0%	0		21-Nov-14		-70	0	0%
MBEE0130-3	E1: Commence Segment Delivery	0	25-Mar-15	0%	0		16-Jan-15		-55	15	0%
MBEE0130-5	E1: Progressive Segment Manufacture & Delivery remaining segments (189 Nr)	120	16-Apr-15	0%	120	07-Sep-15	16-Jan-15	15-Jun-15	-70	0	0%
Viaduct E2											
MBEE0120-2	E2: Commence Segment Casting on Approval of DDA	0	23-Feb-15	0%	0		20-Nov-14		-75	0	0%
MBEE0130-2	E2: Commence Segment Delivery	0	10-Apr-15	0%	0		05-Jan-15		-75	0	0%
MBEE0130-7	E2: Progressive Segment Manufacture & Delivery remaining segments (358 Nr)	120	10-Apr-15	0%	120	01-Sep-15	05-Jan-15	04-Jun-15	-75	0	0%
Viaduct D											
Precast Pile Caps											
MBDC0130-8	D: Progressive Pile Cap Shell Manufacture & Delivery remaining shells	90	07-Dec-14 A	42.22%	52	26-Mar-15	22-Jan-15	26-Mar-15	0	963	42.8%
Precast Deck Segments											
MBDE0120	D: Commence Segment Casting on Approval of DDA	0	18-Apr-15	0%	0		21-Jan-15		-68	0	0%
Viaduct C											
Precast Pile Caps											
MBCC0120	C: Commence Pile Cap Shell Casting on Approval of DDA	0	22-Jan-15	0%	0		24-Oct-14		-74	0	0%
MBCC0130	C: Commence Pile Cap Shell Delivery	0	23-Mar-15	0%	0		19-Dec-14		-74	0	0%
MBCC0130-1	C: Progressive Pile Cap Shell Manufacture & Delivery remaining shells	80	23-Mar-15	0%	80	02-Jul-15	19-Dec-14	30-Mar-15	-74	0	0%
PP7490	Production of initial Viaduct C Marine Precast Pile Cap Shells	38	22-Jan-15	0%	38	10-Mar-15	05-Nov-14	19-Dec-14	-64	0	0%
Viaduct A											



Actual Work
Planned Bar
Critical Bar
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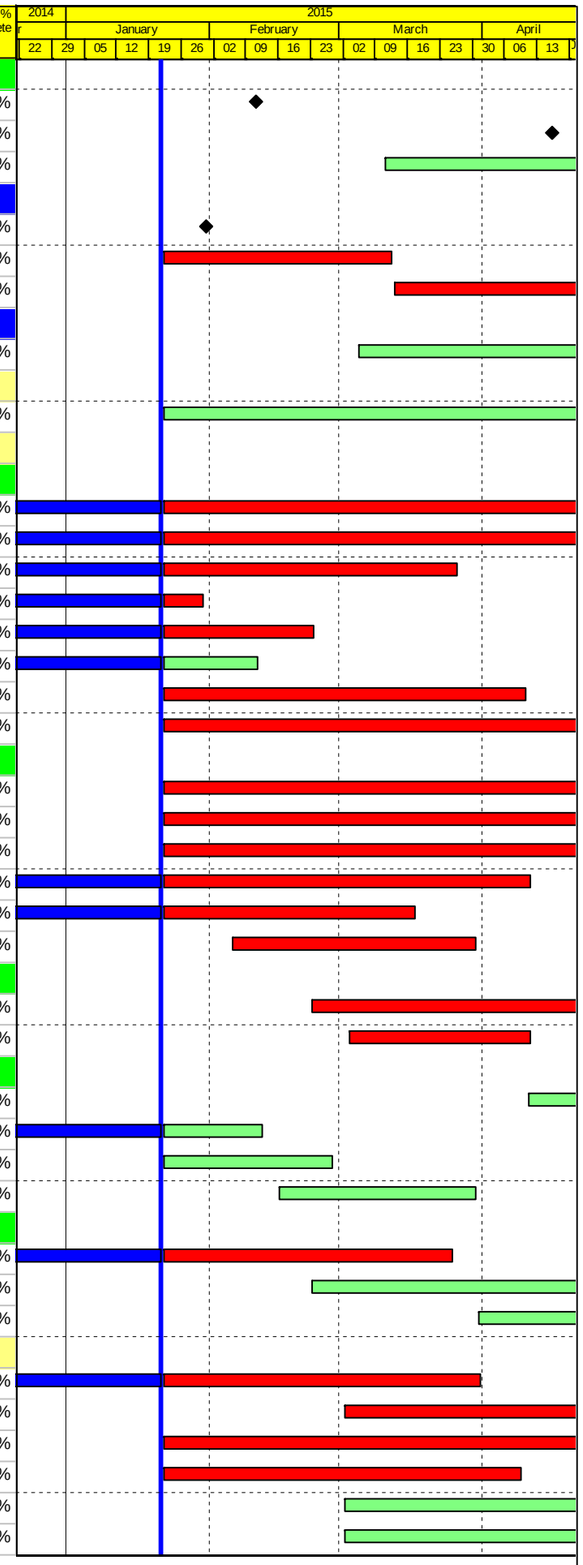
Precast Pile Caps											
MBAC0120	A: Commence Pile Cap Shell Casting on Approval of DDA	0	11-Feb-15	0%	0		02-Sep-15		163	0	0%
MBAC0130	A: Commence Pile Cap Shell Delivery	0	16-Apr-15	0%	0		06-Nov-15		168	13	0%
PP7570	Production of initial Viaduct A Marine Precast Pile Cap Shells	40	11-Mar-15	0%	40	30-Apr-15	02-Sep-15	20-Oct-15	142	0	0%
Parapets											
MBEE0090	Approval of DDA to start Precast Parapets/Barriers Casting	0	31-Jan-15	0%	0		09-Mar-15		28	32	0%
PP6010	Procure Sub-Contractor for Precast Parapets/Barriers	40	22-Jan-15	0%	40	12-Mar-15	17-Jan-15	07-Mar-15	-4	0	0%
PP6011	Precast Parapets/Barriers Detail Design & Procure Moulds	120	13-Mar-15	0%	120	08-Aug-15	09-Mar-15	04-Aug-15	-4	0	0%
Materials											
PP7010	Procure Sub-contractor for Signs & Street Furniture	90	05-Mar-15	0%	90	25-Jun-15	24-Jul-15	09-Nov-15	113	0	0%
H-Piles											
PP7550	Procurement of Viaduct A Socketted H-Piles	70	22-Jan-15	0%	70	21-Apr-15	29-Jul-15	20-Oct-15	150	0	0%
Reinforcement											
Bored Piles											
PP7100	Rebar - Cut, Bend & Fabricate Pile Cage for Viaduct E5 & E6 Piles	185	07-Jul-14 A	40.54%	110	09-Jun-15	16-Oct-14	28-Feb-15	-81	905	40%
PP7170	Rebar - Cut, Bend & Fabricate Pile Cage for Viaduct E7 & E8 Piles	185	07-Jul-14 A	40.54%	110	09-Jun-15	15-Dec-14	05-May-15	-30	905	40%
PP7240	Rebar - Cut, Bend & Fabricate Pile Cage for Viaduct E2 Piles	106	15-Apr-14 A	50.94%	52	26-Mar-15	27-Nov-14	30-Jan-15	-45	133	50%
PP7380	Rebar - Cut, Bend & Fabricate Pile Cage for Viaduct D Piles	25	28-Jul-14 A	68%	8	30-Jan-15	21-Jan-15	29-Jan-15	-1	6	68%
PP7460	Rebar - Cut, Bend & Fabricate Pile Cage for Viaduct C Piles	35	18-Aug-14 A	28.57%	25	23-Feb-15	02-Jan-15	30-Jan-15	-17	0	28%
PP7540	Rebar - Cut, Bend & Fabricate Pile Cage for Viaduct A Piles	21	12-Aug-14 A	14.29%	18	11-Feb-15	04-Feb-15	28-Feb-15	12	63	14%
PP7620	Rebar - Cut, Bend & Fabricate Pile Cage for Viaduct F1 & F3 Piles	61	22-Jan-15	0%	61	10-Apr-15	17-Dec-14	04-Mar-15	-28	0	0%
PP7690	Rebar - Cut, Bend & Fabricate Pile Cage for Viaduct F2, F4 & F5 Piles	73	22-Jan-15	0%	73	24-Apr-15	14-Jan-15	16-Apr-15	-7	0	0%
Marine Pile Caps											
PP7110	Rebar - Cut, Bend & Fabricate for Viaduct E5 & E6 Pile Caps	245	22-Jan-15	0%	245	19-Nov-15	16-Oct-14	14-Aug-15	-81	0	0%
PP7180	Rebar - Cut, Bend & Fabricate for Viaduct E7 & E8 Pile Caps	102	22-Jan-15	0%	102	30-May-15	15-Dec-14	24-Apr-15	-30	0	0%
PP7250	Rebar - Cut, Bend & Fabricate for Viaduct E2 Pile Caps	185	22-Jan-15	0%	185	07-Sep-15	27-Nov-14	17-Jul-15	-45	0	0%
PP7320	Rebar - Cut, Bend & Fabricate for Viaduct E1 Pile Caps	67	11-Dec-14 A	7.46%	62	11-Apr-15	26-Nov-14	09-Feb-15	-46	0	7%
PP7400	Rebar - Cut, Bend & Fabricate for Viaduct D Marine Pile Caps	47	18-Dec-14 A	6.38%	44	17-Mar-15	14-Jan-15	09-Mar-15	-7	971	6%
PP7480	Rebar - Cut, Bend & Fabricate for Viaduct C Marine Pile Caps	42	06-Feb-15	0%	42	30-Mar-15	17-Jan-15	10-Mar-15	-17	0	0%
Marine Piers - Viaduct E											
PP7270	Rebar - Cut, Bend & Fabricate for Viaduct E2 Piers	180	23-Feb-15	0%	180	30-Sep-15	07-Jan-15	18-Aug-15	-37	32	0%
PP7340	Rebar - Cut, Bend & Fabricate for Viaduct E1 Piers	31	03-Mar-15	0%	31	11-Apr-15	05-Jan-15	09-Feb-15	-46	0	0%
Land Pile Caps											
PP7630	Rebar - Cut, Bend & Fabricate for Viaduct F1 & F3 Pile Caps	47	11-Apr-15	0%	47	06-Jun-15	08-Aug-15	03-Oct-15	98	0	0%
PP7752	Rebar - Cut, Bend & Fabricate for Viaduct B Land Pile Caps	26	16-Jul-14 A	26.92%	19	12-Feb-15	06-Jun-18	28-Jun-18	996	996	26%
PP7754	Rebar - Cut, Bend & Fabricate for Viaduct D Land Pile Caps	29	22-Jan-15	0%	29	27-Feb-15	08-Jun-15	13-Jul-15	108	0	0%
PP7756	Rebar - Cut, Bend & Fabricate for Viaduct C Land Pile Caps	34	16-Feb-15	0%	34	30-Mar-15	10-Mar-15	23-Apr-15	16	0	0%
Land / Marine Piers - Viaduct A, B, C, D & F											
PP7060	Bending of Rebar for Viaduct B Piers	64	11-Aug-14 A	20.31%	51	25-Mar-15	09-Jan-15	12-Mar-15	-11	964	20%
PP7420	Bending of Rebar for Viaduct D Piers	71	23-Feb-15	0%	71	21-May-15	08-Jul-15	29-Sep-15	108	116	0%
PP7500	Bending of Rebar for Viaduct C Piers	78	31-Mar-15	0%	78	08-Jul-15	13-Aug-15	14-Nov-15	108	4	0%
In-Situ Formworks / Falseworks											
PP7070	On-Site Preparation & Assembly of Pier Formwork for Viaduct B Piers	70	03-Sep-14 A	20%	56	31-Mar-15	13-Jan-15	21-Mar-15	-8	24	20%
PP7140	On-Site Preparation & Assembly of Pier Formwork for Viaduct E5 & E6 Piers	90	02-Mar-15	0%	90	22-Jun-15	29-Nov-14	21-Mar-15	-73	25	0%
PP7280	On-Site Preparation & Assembly of Pier Formwork for Viaduct E2 Piers	80	22-Jan-15	0%	80	04-May-15	01-Nov-14	06-Feb-15	-67	0	0%
PP7350	On-Site Preparation & Assembly of Pier Formwork for Viaduct E1 Piers	60	22-Jan-15	0%	60	09-Apr-15	16-Dec-14	02-Mar-15	-29	3	0%
PP7430	On-Site Preparation & Assembly of Pier Formwork for Viaduct D Piers	80	02-Mar-15	0%	80	09-Jun-15	18-Apr-15	24-Jul-15	37	0	0%
PP7510	On-Site Preparation & Assembly of Pier Formwork for Viaduct C Piers	80	02-Mar-15	0%	80	09-Jun-15	10-Jun-15	12-Sep-15	80	0	0%



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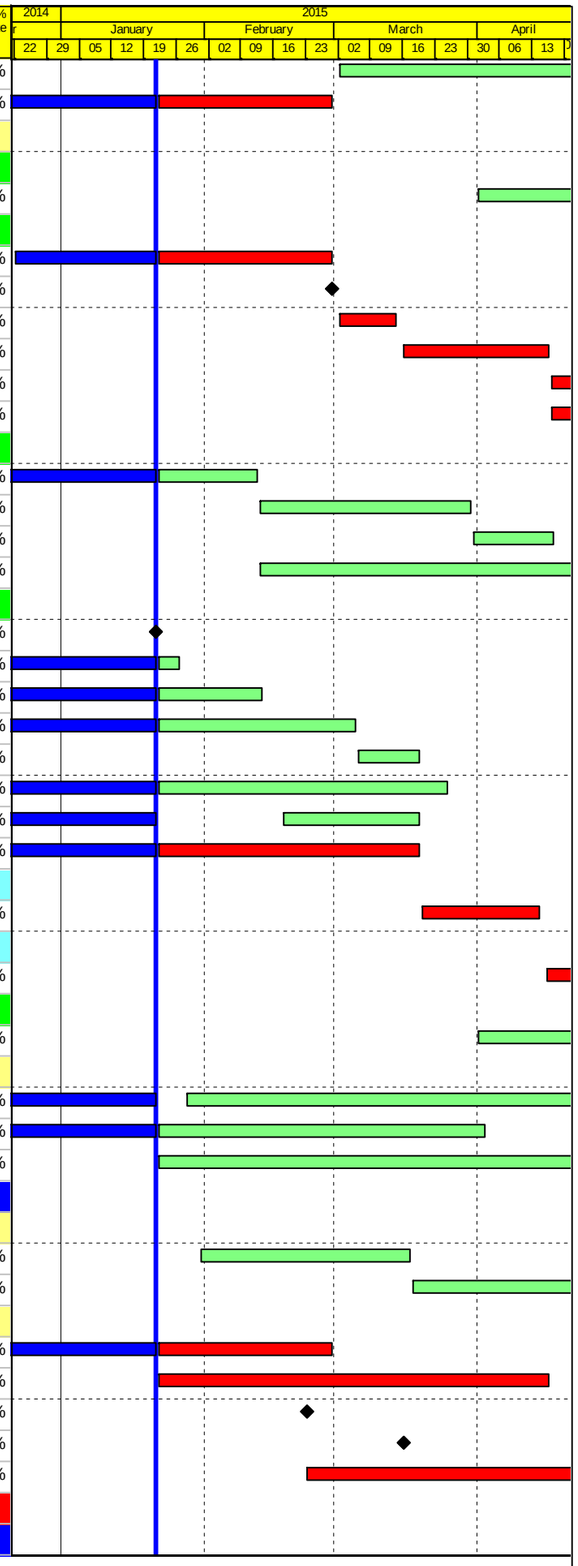
PP7710	On-Site Preparation & Assembly of Pier Formwork for Viaduct F2, F4 & F5 Pile Caps	60	02-Mar-15	0%	60	15-May-15	18-Apr-15	30-Jun-15	37	0	0%
PPPF02	Design & Fabrication of Falsework / Formwork & Delivery	120	20-Feb-14 A	75%	30	28-Feb-15	25-Oct-14	29-Nov-14	-73	0	75%
Bearings											
Viaduct A											
PPBRA1	Preliminary Design of Bearings - Viaduct A	50	01-Apr-15	0%	50	04-Jun-15	27-Oct-15	23-Dec-15	168	0	0%
Viaduct C											
PPBRC1	Preliminary Design of Bearings - Viaduct C	50	22-Dec-14 A	40%	30	28-Feb-15	16-Dec-14	22-Jan-15	-29	0	40%
PPBRC2	Confirmation of bearing assumption - Viaduct C	0		0%	0	28-Feb-15		22-Jan-15	-29	0	0%
PPBRC3	Bearing design and submission - Viaduct C	12	02-Mar-15	0%	12	14-Mar-15	23-Jan-15	05-Feb-15	-29	0	0%
PPBRC4	Design check by ICE - Viaduct C	24	16-Mar-15	0%	24	16-Apr-15	06-Feb-15	09-Mar-15	-29	0	0%
PPBRC5	SO review & comment on design submission - Viaduct C	36	17-Apr-15	0%	36	30-May-15	10-Mar-15	24-Apr-15	-29	0	0%
PPBRC7	Manufacture of Bearing - Viaduct C	54	17-Apr-15	0%	54	22-Jun-15	10-Mar-15	16-May-15	-29	0	0%
Viaduct D											
PPBRD4	Design check by ICE - Viaduct D	24	20-Dec-14 A	20.83%	19	12-Feb-15	31-Jan-15	25-Feb-15	8	0	20%
PPBRD5	SO review & comment on design submission - Viaduct D	36	13-Feb-15	0%	36	30-Mar-15	26-Feb-15	13-Apr-15	8	0	0%
PPBRD6	Bearing Design Amendment & re-issue - Viaduct D	12	31-Mar-15	0%	12	17-Apr-15	21-Apr-15	05-May-15	14	6	0%
PPBRD7	Manufacture of Bearing - Viaduct D	54	13-Feb-15	0%	54	24-Apr-15	26-Feb-15	05-May-15	8	0	0%
Viaduct E											
PPBRE2	Confirmation of bearing assumption - Viaduct E (E1, E2, E5, E6, E7 & E8)	0		0%	0	21-Jan-15		28-Jun-18	1015	1015	0%
PPBRE3	Bearing design and submission - Viaduct E (E1, E2, E5, E6, E7 & E8)	12	06-Jan-14 A	66.67%	4	26-Jan-15	25-Jun-18	28-Jun-18	1011	1011	65%
PPBRE4	Design check by ICE - Viaduct E (E1, E2, E5, E6, E7 & E8)	24	06-Jun-14 A	16.67%	20	13-Feb-15	05-Jun-18	28-Jun-18	995	995	16%
PPBRE5	SO review & comment on design submission - Viaduct E (E1, E2, E5, E6, E7 & E8)	36	10-Oct-14 A	5.56%	34	05-Mar-15	04-May-18	13-Jun-18	969	0	5%
PPBRE6	Bearing Design Amendment & re-issue - Viaduct E (E1, E2, E5, E6, E7 & E8)	12	06-Mar-15	0%	12	19-Mar-15	14-Jun-18	28-Jun-18	969	0	0%
PPBRE7	Manufacture of Bearing - Viaduct E (E1, E2, E5, E6, E7 & E8)	54	02-Jun-14 A	5.56%	51	25-Mar-15	27-Apr-18	28-Jun-18	964	964	5%
PPBRE8	Testing Bearing - Viaduct E (E1, E2, E5, E6, E7 & E8)	24	30-Jun-14 A	4.17%	23	19-Mar-15	01-Jun-18	28-Jun-18	969	969	5%
PPBRE9	Bearing Delivery - Viaduct E (E1, E2, E5, E6, E7 & E8)	48	18-Oct-14 A	4.17%	46	19-Mar-15	09-Oct-14	01-Dec-14	-87	0	5%
Bridge E1											
PP7360	Site preparation Bearings for Viaduct E1	18	20-Mar-15	0%	18	14-Apr-15	02-Dec-14	22-Dec-14	-87	0	0%
Bridge E2											
PP7290	Site preparation Bearings for Viaduct E2	18	16-Apr-15	0%	18	08-May-15	23-Dec-14	15-Jan-15	-87	0	0%
Viaduct F											
PPBRF1	Preliminary Design of Bearings - Viaduct F	70	01-Apr-15	0%	70	29-Jun-15	17-Apr-15	11-Jul-15	10	0	0%
Movement Joints											
PPMJ01	Design & Submission of MJ	138	08-Feb-14 A	52.9%	65	21-Apr-15	04-Aug-15	20-Oct-15	150	945	30%
PPMJ02-1	MJ Design Approval	96	26-May-14 A	39.58%	58	02-Apr-15	04-Aug-15	12-Oct-15	155	130	40%
PPMJ02-2	Manufacture & delivery of MJ	188	22-Jan-15	0%	188	10-Sep-15	04-Aug-15	19-Mar-16	155	0	0%
Other Sub-Contract Procurement											
Pavement											
PP7760-2	Procure Pavement Viaduct Sub-Contractor	36	31-Jan-15	0%	36	17-Mar-15	08-Oct-15	19-Nov-15	201	0	0%
PP7760-4	Pavement Viaduct Sub-Contractor - Materials approvals & MS	90	18-Mar-15	0%	90	09-Jul-15	20-Nov-15	10-Mar-16	201	114	0%
Structural Health Monitoring System (SHMS)											
PP7778	SHMS - So approval of Final System Proposal	30	16-Dec-14 A	0%	30	28-Feb-15	23-Apr-14	29-May-14	-225	30	0%
PP7780	SHMS - Prepare Civil Work Provision	66	22-Jan-15	0%	66	16-Apr-15	14-Mar-14	06-Jun-14	-255	0	0%
PP7782	SHMS - Submit Precast Pile Cap Shell SHMS details for E5-E6-E7-E8	0	23-Feb-15	0%	0		03-Nov-14		-90	0	0%
PP7786	SHMS - Submit Segment SHMS details for E5-E6-E7-E8	0	16-Mar-15	0%	0		09-May-14		-255	0	0%
PP7788	SHMS - FAT & Delivery for Bridge E5-E6-E7-E8 equipment	54	23-Feb-15	0%	54	30-Apr-15	27-May-14	30-Jul-14	-222	15	0%
Site Preparation / Mobilisations											
Temp Traffic Mgt Submission & Approval											



Actual Work
Planned Bar
Critical Bar
Milestone

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Tuen Mun - Chek Lap Kok Link - Southern Connection
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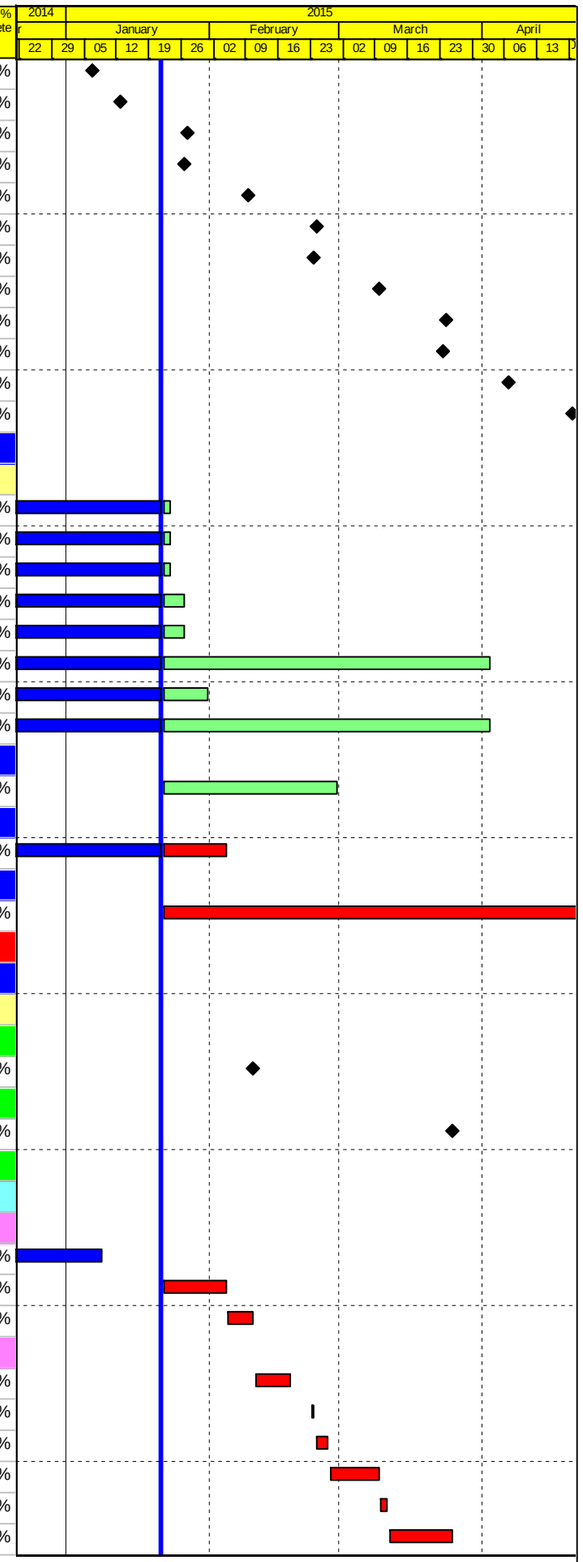
TTM00590	Send TTMs to SO & Govt Depts for TMLG Meeting No. 17	0		100%	0	07-Jan-15 A					100%
TTM00600	TMLG Meeting No. 17	0		100%	0	13-Jan-15 A					100%
TTM00610	Earliest Implementation of TTM after TMLG Meeting No. 17	0	27-Jan-15	0%	0		08-Dec-15		225	20	0%
TTM00620	Send TTMs to SO & Govt Depts for TMLG Meeting No. 18	0		0%	0	26-Jan-15		16-Apr-15	58	0	0%
TTM00630	TMLG Meeting No. 18	0		0%	0	09-Feb-15*		30-Apr-15	58	0	0%
TTM00640	Earliest Implementation of TTM after TMLG Meeting No. 18	0	24-Feb-15	0%	0		08-Dec-15		205	20	0%
TTM00650	Send TTMs to SO & Govt Depts for TMLG Meeting No. 19	0		0%	0	23-Feb-15		14-May-15	58	0	0%
TTM00660	TMLG Meeting No. 19	0		0%	0	09-Mar-15*		28-May-15	58	0	0%
TTM00670	Earliest Implementation of TTM after TMLG Meeting No. 19	0	24-Mar-15	0%	0		08-Dec-15		185	20	0%
TTM00680	Send TTMs to SO & Govt Depts for TMLG Meeting No. 20	0		0%	0	23-Mar-15		11-Jun-15	58	0	0%
TTM00690	TMLG Meeting No. 20	0		0%	0	06-Apr-15*		25-Jun-15	58	0	0%
TTM00710	Send TTMs to SO & Govt Depts for TMLG Meeting No. 21	0		0%	0	20-Apr-15		09-Jul-15	58	3	0%
Tree Felling / Transplant											
Approved Trees in Contract											
TR00200	Tree transplant for Viaduct B - affecting Piers B11 to B17	90	17-Feb-14 A	97.78%	2	23-Jan-15	09-May-16	10-May-16	360	948	95%
TR00220	Tree transplant for Viaduct B - affecting Pier B18 & Abutment B	90	17-Feb-14 A	97.78%	2	23-Jan-15	09-Jan-16	11-Jan-16	267	948	95%
TR00240	Tree transplant for Viaduct B - affecting realigned CTR	90	17-Feb-14 A	97.78%	2	23-Jan-15	24-Feb-15	25-Feb-15	25	948	95%
TR00250	Tree felling for Viaduct B - affecting Slopes 9SE-B/F9, C8 & C9	48	05-May-14 A	91.67%	4	26-Jan-15	22-Jun-18	27-Jun-18	946	946	90%
TR00260	Tree felling for Viaduct C - affecting Piers C9 to Abutment C	24	30-Jan-14 A	83.33%	4	26-Jan-15	22-Jun-18	27-Jun-18	946	946	70%
TR00270	Tree transplant for Viaduct C - affecting Piers C9 to Abutment C	90	17-Feb-14 A	35.56%	58	02-Apr-15	07-Apr-18	27-Jun-18	892	892	35%
TR00280	Tree felling for Viaduct C - affecting realigned CTR	30	30-Jan-14 A	70%	9	31-Jan-15	14-Jun-18	27-Jun-18	941	941	70%
TR00290	Tree transplant for Viaduct C - affecting realigned CTR	90	17-Feb-14 A	35.56%	58	02-Apr-15	07-Apr-18	27-Jun-18	892	892	35%
Site Set Up for Works Area 3 and Site Offices along CEDD Access Road											
PR30030	Works Area 3-A1/3-A2 - Construct 1.5m steel access bridge	30	22-Jan-15	0%	30	28-Feb-15	15-May-18	27-Jun-18	920	920	0%
Temporary Working Platform at North Lantau											
PR08080	Inst.Unloading Frame incl. T&C for seg.lift (incl. Load Test)	15	24-Oct-14 A	20%	12	04-Feb-15	29-Dec-14	12-Jan-15	-20	0	20%
Unloading Jetty at HKBCF											
PR09010	Unloading Jetty at HKBCF - Procurement of materials and lifting gantry	85	22-Jan-15	0%	85	13-May-15	12-Nov-14	25-Feb-15	-58	0	0%
CONSTRUCTION											
PILING AND SUBSTRUCTURE											
Viaduct A											
Milestones - Marine Foundation											
GFXX146-1	A1 (A2e) - Completion of piling works	0		0%	0	10-Feb-15		03-Feb-15	-6	0	0%
General											
ZA00010	Viaduct A - Approval of Foundation DDA DP11.01	0		0%	0	25-Mar-15		17-Jun-15	60	2	0%
Bridge A2											
Pier A1 (A2e)											
Foundation Works											
GFXX144	A1 (A2e) - Bored Piles (1.80m dia. x 3 nos)	88	12-Aug-14 A	100%	0	09-Jan-15 A					100%
GFXX145	A1 (A2e) - Sonic & Interface Coring	12	22-Jan-15	0%	12	04-Feb-15	14-Jan-15	28-Jan-15	-6	0	0%
GFXX146	A1 (A2e) - Dismantle removable panels of temp. platform	5	05-Feb-15	0%	5	10-Feb-15	28-Jan-15	03-Feb-15	-6	0	0%
Pile Cap Works											
SA2E0070	A1 (A2e) - Marine Pile Cap M2 - Inst.Floating Seal & Casing Head Steelwork	7	11-Feb-15	0%	7	18-Feb-15	03-Feb-15	11-Feb-15	-6	0	0%
SA2E0080	A1 (A2e) - Marine Pile Cap M2 - Install precast shell in position	1	23-Feb-15	0%	1	23-Feb-15	11-Feb-15	12-Feb-15	-6	0	0%
SA2E0090	A1 (A2e) - Marine Pile Cap M2 - Inst.Access & make Watertight	3	24-Feb-15	0%	3	26-Feb-15	12-Feb-15	16-Feb-15	-6	0	0%
SA2E0100	A1 (A2e) - Marine Pile Cap M2 - Weld Fin plates/Plug Rebar & Concrete	9	27-Feb-15	0%	9	09-Mar-15	16-Feb-15	02-Mar-15	-6	0	0%
SA2E0110	A1 (A2e) - Marine Pile Cap M2 - Dewater precast shell / Remove Lifting Frame	2	10-Mar-15	0%	2	11-Mar-15	02-Mar-15	04-Mar-15	-6	0	0%
SA2E0120	A1 (A2e) - Marine Pile Cap M2 - Pile cut down	12	12-Mar-15	0%	12	25-Mar-15	04-Mar-15	18-Mar-15	-6	0	0%



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Planned Bar
Critical Bar
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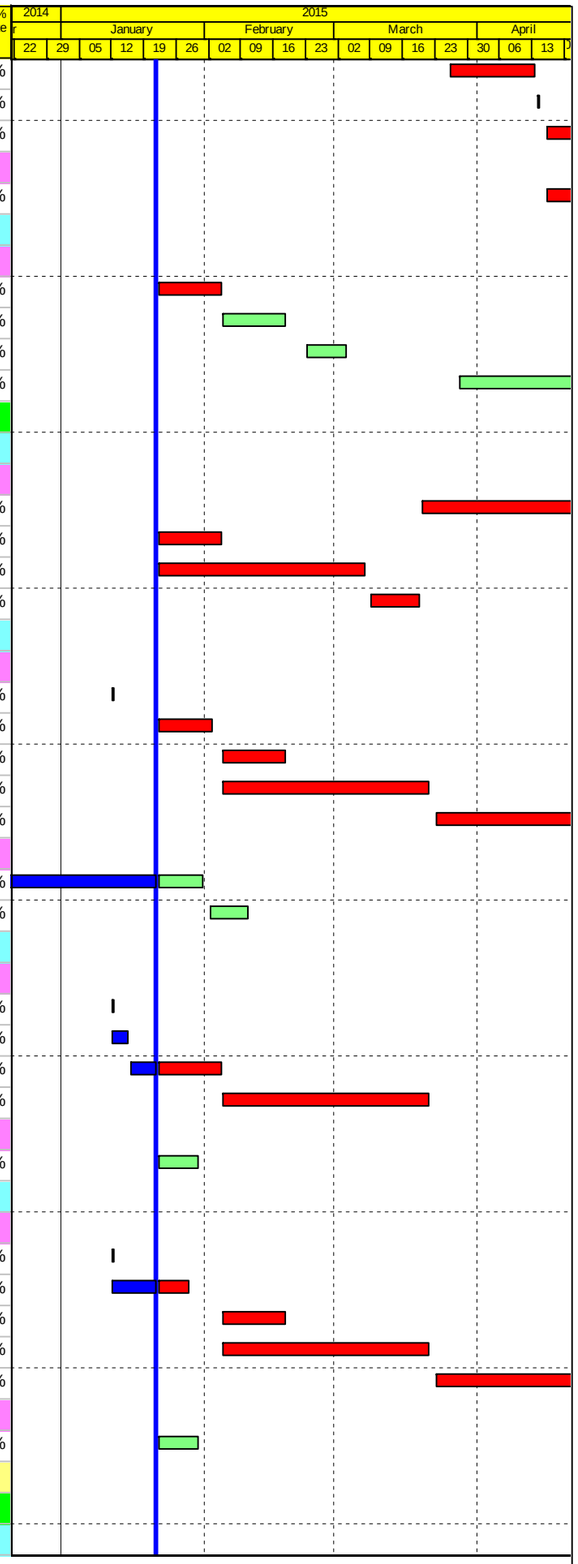
SA2E0130	A1 (A2e) - Marine Pile Cap M2 - Rebar fixing, inst.inserts etc	12	26-Mar-15	0%	12	13-Apr-15	18-Mar-15	01-Apr-15	-6	0	0%
SA2E0140	A1 (A2e) - Marine Pile Cap M2 - Concreting	1	14-Apr-15	0%	1	14-Apr-15	01-Apr-15	02-Apr-15	-6	0	0%
SA2E0164	A1 (A2e) - Marine Pile Cap M2 - Curing incl. CJ preparation	6	16-Apr-15	0%	6	22-Apr-15	02-Apr-15	14-Apr-15	-6	0	0%
Pier Works											
SA2E0170	A1 (A2e) - Type 4B-MJ Pier Temp. Support Platform	6	16-Apr-15	0%	6	22-Apr-15	02-Apr-15	14-Apr-15	-6	0	0%
Pier A2 (A2d)											
Foundation Works											
GFXX137	A2 (A2d) - Inst.Temp.Working Platform	12	22-Jan-15*	0%	12	04-Feb-15	04-Dec-14	17-Dec-14	-39	0	0%
GFXX138	A2 (A2d) - Pre-drilling (2 nos)	12	05-Feb-15	0%	12	18-Feb-15	06-Jul-15	18-Jul-15	118	0	0%
GFXX138-2	A2 (A2d) - Confirm Rockhead Levels	8	23-Feb-15	0%	8	03-Mar-15	20-Jul-15	28-Jul-15	118	21	0%
GFXX139	A2 (A2d) - Bored Piles (2.20m dia. x 2 nos)	90	28-Mar-15	0%	90	20-Jul-15	29-Jul-15	13-Nov-15	97	0	0%
Bridge A1											
Pier A8 (A1d)											
Preliminary Works for Land Piling											
GFXX281	A8 (A1d) - Mobilise & Set up grouting equipment	24	20-Mar-15	0%	24	21-Apr-15	27-Feb-15	26-Mar-15	-18	0	0%
PA080020	A8 (A1d) - Erect MTR protective fence / Remove existing fence	12	22-Jan-15	0%	12	04-Feb-15	28-Nov-14	11-Dec-14	-44	0	0%
PA080030	A8 (A1d) - Install Geo. Instru. & Baseline Monitoring	36	22-Jan-15	0%	36	07-Mar-15	31-Dec-14	11-Feb-15	-18	0	0%
PA080040	A8 (A1d) - Set up piling platform	10	09-Mar-15	0%	10	19-Mar-15	12-Feb-15	26-Feb-15	-18	0	0%
Pier A9 (A1c)											
Preliminary Works for Land Piling											
PA090010	A9 (A1c) - Implement TTMS along north side of NLH E/B	2	12-Jan-15 A	100%	0	12-Jan-15 A					100%
PA090020	A09 (A1c) - Erect boundary fence, site clearance & set up site ingress	10	22-Jan-15	0%	10	02-Feb-15	01-Dec-14	11-Dec-14	-42	2	0%
PA090030	A09 (A1c) - Erect MTR protective fence	12	05-Feb-15	0%	12	18-Feb-15	12-Dec-14	27-Dec-14	-44	0	0%
PA090040	A9 (A1c) - Install Geo. Instru. & Baseline Monitoring	36	05-Feb-15	0%	36	21-Mar-15	12-Dec-14	26-Jan-15	-44	0	0%
PA090050	A9 (A1c) - Set up piling platform	24	23-Mar-15	0%	24	25-Apr-15	27-Jan-15	26-Feb-15	-44	0	0%
Socketted H-Pile installation											
GFXX292	A9 (A1c) - Predrilling	16	15-Dec-14 A	43.75%	9	31-Jan-15	26-Aug-15	05-Sep-15	174	0	45%
GFXX292-1	A9 (A1c) - Confirm Rockhead Levels	8	02-Feb-15	0%	8	10-Feb-15	05-Sep-15	15-Sep-15	174	139	0%
Pier A10 (A1b)											
Preliminary Works for Land Piling											
PA100010	A10 (A1b) - Implement TTMS along north side of NLH E/B	2	12-Jan-15 A	100%	0	12-Jan-15 A					100%
PA100020	A10 (A1b) - Install Water filled barriers & set up site ingress	4	12-Jan-15 A	100%	0	15-Jan-15 A					100%
PA100030	A10 (A1b) - Erect MTR protective fence	12	16-Jan-15 A	0%	12	04-Feb-15	29-Dec-14	12-Jan-15	-20	0	0%
PA100040	A10 (A1b) - Install Geo. Instru. & Baseline Monitoring	36	05-Feb-15	0%	36	21-Mar-15	13-Jan-15	26-Feb-15	-20	0	0%
Socketted H-Pile installation											
GFXX286-3	A10 (A1b) - Confirm Rockhead Levels	8	22-Jan-15	0%	8	30-Jan-15	19-May-15	28-May-15	92	116	0%
Pier A11 (A1a) & Abutment A											
Preliminary Works for Land Piling											
PA110010	A11 (A1a) to Abutment A - Implement TTMS along north side of NLH E/B	2	12-Jan-15 A	100%	0	12-Jan-15 A					100%
PA110020	A11 (A1a) to Approach Ramp A - Erect boundary fence / water filled barrier & set up site ingr	14	12-Jan-15 A	57.14%	6	28-Jan-15	06-Jan-15	12-Jan-15	-14	6	0%
PA110030	A11 (A1a) - Erect MTR protective fence	12	05-Feb-15	0%	12	18-Feb-15	13-Jan-15	26-Jan-15	-20	0	0%
PA110040	A11 (A1a) - Install Geo. Instru. & Baseline Monitoring	36	05-Feb-15	0%	36	21-Mar-15	13-Jan-15	26-Feb-15	-20	0	0%
PA110050	A11 (A1a) - Set up piling platform	24	23-Mar-15	0%	24	25-Apr-15	27-Feb-15	26-Mar-15	-20	24	0%
Socketted H-Pile installation											
GFXX286-4	A11 (A1a) - Confirm Rockhead Levels	8	22-Jan-15	0%	8	30-Jan-15	09-Jun-15	17-Jun-15	109	116	0%
Viaduct B											
Bridge B3											
Pier B1 (B3f)											



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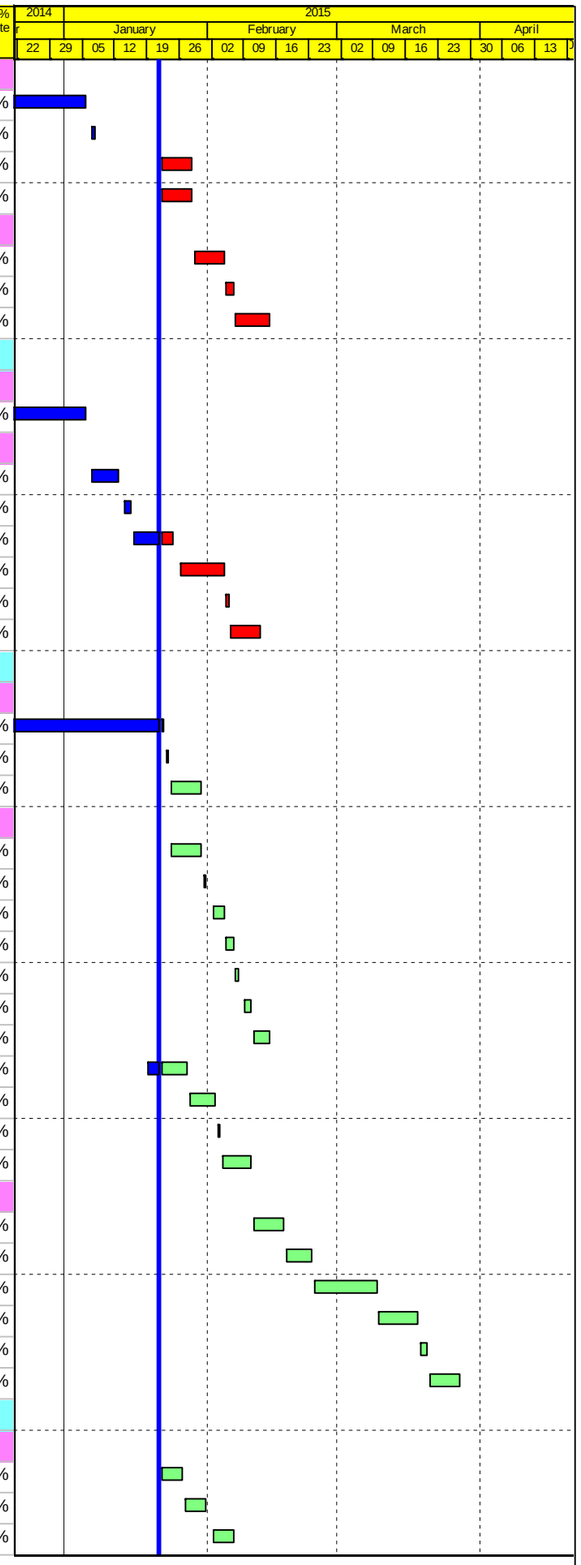
Pier Works											
SB3F0310	B1 (B3f) - Type 4B-MJ Pier Head Rebarwork	5	26-Nov-14 A	100%	0	06-Jan-15 A					100%
SB3F0330	B1 (B3f) - Type 4B-MJ Pier Head Concreting	1	07-Jan-15 A	100%	0	07-Jan-15 A					100%
SB3F0340	B1 (B3f) - Type 4B-MJ Pier Head Curing/Striking of Forms/Remove Scaffolding	6	22-Jan-15	0%	6	28-Jan-15	14-Nov-14	21-Nov-14	-56	0	0%
SB3F0350	B1 (B3f) - Type 4B-Bearing Plinth	6	22-Jan-15	0%	6	28-Jan-15	14-Nov-14	21-Nov-14	-56	0	0%
Pier Head Segments											
SB3F0370	B1 (B3f) - Pier Head Segment - Temporary Platform	6	29-Jan-15	0%	6	04-Feb-15	21-Nov-14	28-Nov-14	-56	0	0%
SB3F0371	B1 (B3f) - Pier Head Segment Bearings	2	05-Feb-15	0%	2	06-Feb-15	28-Nov-14	01-Dec-14	-56	0	0%
SB3F0372	B1 (B3f) - Pier Head Segment Lift & Temp Support (2 seg)	7	07-Feb-15	0%	7	14-Feb-15	01-Dec-14	09-Dec-14	-56	0	0%
Pier B2 (B3e)											
Pier Works											
SB3E0340	B2 (B3e) - Type 4B Pier Head Curing/Striking of Forms/Remove Scaffolding	6	10-Dec-14 A	100%	0	06-Jan-15 A					100%
Pier Head Segments											
SB3E0370	B2 (B3e) - Pier Head Segment - Temporary Platform	6	07-Jan-15 A	100%	0	13-Jan-15 A					100%
SB3E0372	B2 (B3e) - Pier Head Segment Lift & Fix (1 seg)	2	14-Jan-15 A	100%	0	15-Jan-15 A					100%
SB3E0374	B2 (B3e) - Pier Head Segment Diaphragm - Rebar	12	16-Jan-15 A	75%	3	24-Jan-15	27-Dec-14	31-Dec-14	-21	0	0%
SB3E0376	B2 (B3e) - Pier Head Segment Diaphragm - Formwork & Prep for Concreting	9	26-Jan-15	0%	9	04-Feb-15	31-Dec-14	12-Jan-15	-21	0	0%
SB3E0378	B2 (B3e) - Pier Head Segment Diaphragm - Concreting	1	05-Feb-15	0%	1	05-Feb-15	12-Jan-15	13-Jan-15	-21	0	0%
SB3E0380	B2 (B3e) - Pier Head Segment Diaphragm - Curing & Striking of Forms	6	06-Feb-15	0%	6	12-Feb-15	20-Jan-15	27-Jan-15	-15	0	0%
Pier B3 (B3d)											
Pile Cap Works											
SB3D0140	B3 (B3d) - Marine Pile Cap M1 - Rebar fixing, inst.inserts etc	10	15-Dec-14 A	90%	1	22-Jan-15	31-Mar-17	31-Mar-17	612	0	90%
SB3D0150	B3 (B3d) - Marine Pile Cap M1 - Concreting	1	23-Jan-15	0%	1	23-Jan-15	01-Apr-17	01-Apr-17	612	0	0%
SB3D0160	B3 (B3d) - Marine Pile Cap M1 - Curing incl. CJ Preparation	6	24-Jan-15	0%	6	30-Jan-15	30-May-18	06-Jun-18	929	0	0%
Pier Works											
SB3D0170	B3 (B3d) - Type 4B Pier Temp. Support Platform	6	24-Jan-15	0%	6	30-Jan-15	30-May-18	06-Jun-18	929	0	0%
SB3D0172	B3 (B3d) - Type 4B Pier Scaffolding (1st Lift)	1	31-Jan-15	0%	1	31-Jan-15	08-Jun-18	08-Jun-18	929	0	0%
SB3D0180	B3 (B3d) - Type 4B Pier Rebarwork (1st Lift)	3	02-Feb-15	0%	3	04-Feb-15	09-Jun-18	12-Jun-18	929	0	0%
SB3D0190	B3 (B3d) - Type 4B Pier Formwork & Prep for Concreting (1st Lift)	2	05-Feb-15	0%	2	06-Feb-15	14-Jun-18	16-Jun-18	929	0	0%
SB3D0200	B3 (B3d) - Type 4B Pier Concreting (1st Lift)	1	07-Feb-15	0%	1	07-Feb-15	19-Jun-18	19-Jun-18	929	0	0%
SB3D0202	B3 (B3d) - Type 4B Pier Curing & Striking of Forms incl. CJ prep (1st Lift)	2	09-Feb-15	0%	2	10-Feb-15	20-Jun-18	21-Jun-18	929	0	0%
SB3D0300	B3 (B3d) - Type 4B Pier Head Scaffolding	4	11-Feb-15	0%	4	14-Feb-15	22-Jun-18	27-Jun-18	929	929	0%
SB3D0310	B3 (B3d) - Type 4B Pier Head Rebarwork	5	19-Jan-15 A	0%	5	27-Jan-15	06-Feb-15	12-Feb-15	14	0	100%
SB3D0320	B3 (B3d) - Type 4B Pier Head Formwork & Prep for Concreting	5	28-Jan-15	0%	5	02-Feb-15	12-Feb-15	18-Feb-15	14	0	0%
SB3D0330	B3 (B3d) - Type 4B Pier Head Concreting	1	03-Feb-15	0%	1	03-Feb-15	18-Feb-15	23-Feb-15	14	0	0%
SB3D0340	B3 (B3d) - Type 4B Pier Head Curing/Striking of Forms/Remove Scaffolding	6	04-Feb-15	0%	6	10-Feb-15	23-Feb-15	02-Mar-15	14	0	0%
Pier Head Segments											
SB3D0370	B3 (B3d) - Pier Head Segment - Temporary Platform	6	11-Feb-15	0%	6	17-Feb-15	02-Mar-15	09-Mar-15	14	0	0%
SB3D0372	B3 (B3d) - Pier Head Segment Lift & Fix (1 seg)	2	18-Feb-15	0%	2	23-Feb-15	09-Mar-15	11-Mar-15	14	0	0%
SB3D0374	B3 (B3d) - Pier Head Segment Diaphragm - Rebar	12	24-Feb-15	0%	12	09-Mar-15	11-Mar-15	26-Mar-15	15	0	0%
SB3D0376	B3 (B3d) - Pier Head Segment Diaphragm - Formwork & Prep for Concreting	8	10-Mar-15	0%	8	18-Mar-15	26-Mar-15	09-Apr-15	15	0	0%
SB3D0378	B3 (B3d) - Pier Head Segment Diaphragm - Concreting	2	19-Mar-15	0%	2	20-Mar-15	09-Apr-15	11-Apr-15	15	0	0%
SB3D0380	B3 (B3d) - Pier Head Segment Diaphragm - Curing & Striking of Forms	6	21-Mar-15	0%	6	27-Mar-15	20-Apr-15	28-Apr-15	21	0	0%
Pier B4 (B3c)											
Pier Works											
SB3C0300	B4 (B3c) - Type 4B Pier Head Scaffolding	4	22-Jan-15	0%	4	26-Jan-15	23-Jan-15	28-Jan-15	2	0	0%
SB3C0310	B4 (B3c) - Type 4B Pier Head Rebarwork	5	27-Jan-15	0%	5	31-Jan-15	28-Jan-15	03-Feb-15	2	0	0%
SB3C0320	B4 (B3c) - Type 4B Pier Head Formwork & Prep for Concreting	5	02-Feb-15	0%	5	06-Feb-15	03-Feb-15	09-Feb-15	2	0	0%



Actual Work
Planned Bar
Critical Bar
Milestone

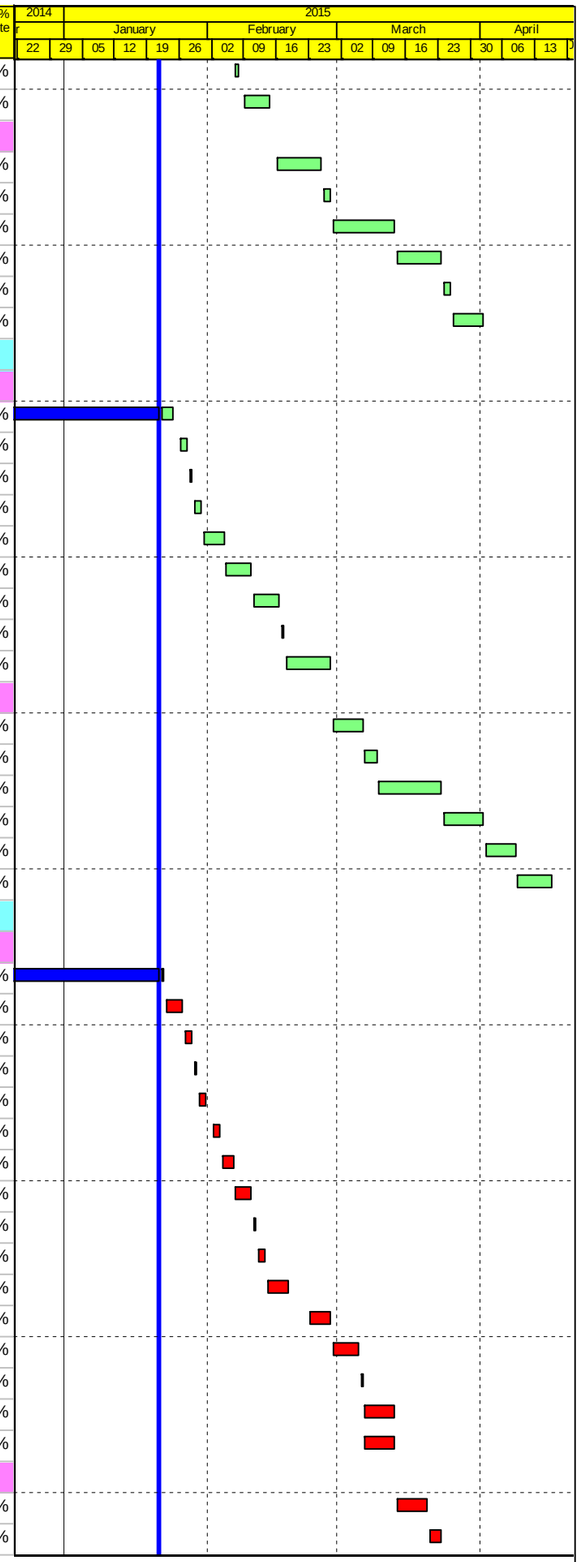
Project ID: J3518DWPrE-M20
Layout: J3518-DWP-3MRP Submission - M20
Filter: TASK filters: 3-Month Lookahead, No CC
Milestones, No Level of Effort.

Tuen Mun - Chek Lap Kok Link - Southern Connection
3-Month Rolling Programme (Page 13 of 40 Pages)
(Progress as of 21-Jan-15)

Date	Revision	Checked	Approved
21-Jan-15		DB	

DWG. No.:
J3518/GCL/PGM/3MRP-M20

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete
SB3C0330	B4 (B3c) - Type 4B Pier Head Concreting	1	07-Feb-15	0%	1	07-Feb-15	09-Feb-15	10-Feb-15	2	0	0%
SB3C0340	B4 (B3c) - Type 4B Pier Head Curing/Striking of Forms/Remove Scaffolding	6	09-Feb-15	0%	6	14-Feb-15	10-Feb-15	17-Feb-15	2	0	0%
Pier Head Segments											
SB3C0370	B4 (B3c) - Pier Head Segment - Temporary Platform	6	16-Feb-15	0%	6	25-Feb-15	17-Feb-15	27-Feb-15	2	0	0%
SB3C0372	B4 (B3c) - Pier Head Segment Lift & Fix (1 seg)	2	26-Feb-15	0%	2	27-Feb-15	27-Feb-15	02-Mar-15	2	0	0%
SB3C0374	B4 (B3c) - Pier Head Segment Diaphragm - Rebar	12	28-Feb-15	0%	12	13-Mar-15	02-Mar-15	16-Mar-15	2	0	0%
SB3C0376	B4 (B3c) - Pier Head Segment Diaphragm - Formwork & Prep for Concreting	8	14-Mar-15	0%	8	23-Mar-15	16-Mar-15	25-Mar-15	2	0	0%
SB3C0378	B4 (B3c) - Pier Head Segment Diaphragm - Concreting	2	24-Mar-15	0%	2	25-Mar-15	25-Mar-15	27-Mar-15	2	0	0%
SB3C0380	B4 (B3c) - Pier Head Segment Diaphragm - Curing & Striking of Forms	6	26-Mar-15	0%	6	01-Apr-15	08-Apr-15	16-Apr-15	8	0	0%
Pier B5 (B3b)											
Pier Works											
SB3B0180	B5 (B3b) - Type 4B Pier Rebarwork (1st Lift)	3	18-Dec-14 A	0%	3	24-Jan-15	04-Feb-15	07-Feb-15	12	0	0%
SB3B0190	B5 (B3b) - Type 4B Pier Formwork & Prep for Concreting (1st Lift)	2	26-Jan-15	0%	2	27-Jan-15	07-Feb-15	10-Feb-15	12	0	0%
SB3B0200	B5 (B3b) - Type 4B Pier Concreting (1st Lift)	1	28-Jan-15	0%	1	28-Jan-15	10-Feb-15	11-Feb-15	12	0	0%
SB3B0202	B5 (B3b) - Type 4B Pier Curing & Striking of Forms incl. CJ prep (1st Lift)	2	29-Jan-15	0%	2	30-Jan-15	11-Feb-15	13-Feb-15	12	0	0%
SB3B0300	B5 (B3b) - Type 4B Pier Head Scaffolding	4	31-Jan-15	0%	4	04-Feb-15	13-Feb-15	18-Feb-15	12	0	0%
SB3B0310	B5 (B3b) - Type 4B Pier Head Rebarwork	5	05-Feb-15	0%	5	10-Feb-15	18-Feb-15	27-Feb-15	12	0	0%
SB3B0320	B5 (B3b) - Type 4B Pier Head Formwork & Prep for Concreting	5	11-Feb-15	0%	5	16-Feb-15	27-Feb-15	05-Mar-15	12	0	0%
SB3B0330	B5 (B3b) - Type 4B Pier Head Concreting	1	17-Feb-15	0%	1	17-Feb-15	05-Mar-15	06-Mar-15	12	0	0%
SB3B0340	B5 (B3b) - Type 4B Pier Head Curing/Striking of Forms/Remove Scaffolding	6	18-Feb-15	0%	6	27-Feb-15	06-Mar-15	13-Mar-15	12	0	0%
Pier Head Segments											
SB3B0370	B5 (B3b) - Pier Head Segment - Temporary Platform	6	28-Feb-15	0%	6	06-Mar-15	13-Mar-15	20-Mar-15	12	0	0%
SB3B0372	B5 (B3b) - Pier Head Segment Lift & Fix (1 seg)	2	07-Mar-15	0%	2	09-Mar-15	20-Mar-15	23-Mar-15	12	0	0%
SB3B0374	B5 (B3b) - Pier Head Segment Diaphragm - Rebar	12	10-Mar-15	0%	12	23-Mar-15	23-Mar-15	10-Apr-15	12	0	0%
SB3B0376	B5 (B3b) - Pier Head Segment Diaphragm - Formwork & Prep for Concreting	8	24-Mar-15	0%	8	01-Apr-15	10-Apr-15	21-Apr-15	12	0	0%
SB3B0378	B5 (B3b) - Pier Head Segment Diaphragm - Concreting	2	02-Apr-15	0%	2	08-Apr-15	21-Apr-15	24-Apr-15	12	0	0%
SB3B0380	B5 (B3b) - Pier Head Segment Diaphragm - Curing & Striking of Forms	6	09-Apr-15	0%	6	16-Apr-15	02-May-15	09-May-15	18	0	0%
Pier B6 (B3a)											
Pier Works											
SB3A0172	B6 (B3a) - Type 4B-MJ Pier Scaffolding (1st Lift)	1	18-Dec-14 A	0%	1	22-Jan-15	08-Jan-15	08-Jan-15	-12	0	0%
SB3A0180	B6 (B3a) - Type 4B-MJ Pier Rebarwork (1st Lift)	3	23-Jan-15	0%	3	26-Jan-15	09-Jan-15	12-Jan-15	-12	0	0%
SB3A0190	B6 (B3a) - Type 4B-MJ Pier Formwork & Prep for Concreting (1st Lift)	2	27-Jan-15	0%	2	28-Jan-15	13-Jan-15	14-Jan-15	-12	0	0%
SB3A0200	B6 (B3a) - Type 4B-MJ Pier Concreting (1st Lift)	1	29-Jan-15	0%	1	29-Jan-15	15-Jan-15	15-Jan-15	-12	0	0%
SB3A0202	B6 (B3a) - Type 4B-MJ Pier Curing & Striking of Forms incl. CJ prep (1st Lift)	2	30-Jan-15	0%	2	31-Jan-15	16-Jan-15	17-Jan-15	-12	0	0%
SB3A0210	B6 (B3a) - Type 4B-MJ Pier Scaffolding (2nd Lift)	2	02-Feb-15	0%	2	03-Feb-15	19-Jan-15	20-Jan-15	-12	0	0%
SB3A0220	B6 (B3a) - Type 4B-MJ Pier Rebarwork (2nd Lift)	3	04-Feb-15	0%	3	06-Feb-15	21-Jan-15	23-Jan-15	-12	0	0%
SB3A0230	B6 (B3a) - Type 4B-MJ Pier Formwork & Prep for Concreting (2nd Lift)	3	07-Feb-15	0%	3	10-Feb-15	24-Jan-15	27-Jan-15	-12	0	0%
SB3A0240	B6 (B3a) - Type 4B-MJ Pier Concreting (2nd Lift)	1	11-Feb-15	0%	1	11-Feb-15	28-Jan-15	28-Jan-15	-12	0	0%
SB3A0242	B6 (B3a) - Type 4B-MJ Pier Curing & Striking of Forms incl. CJ prep (2nd Lift)	2	12-Feb-15	0%	2	13-Feb-15	29-Jan-15	30-Jan-15	-12	0	0%
SB3A0300	B6 (B3a) - Type 4B-MJ Pier Head Scaffolding	4	14-Feb-15	0%	4	18-Feb-15	31-Jan-15	04-Feb-15	-12	0	0%
SB3A0310	B6 (B3a) - Type 4B-MJ Pier Head Rebarwork	5	23-Feb-15	0%	5	27-Feb-15	05-Feb-15	10-Feb-15	-12	0	0%
SB3A0320	B6 (B3a) - Type 4B-MJ Pier Head Formwork & Prep for Concreting	5	28-Feb-15	0%	5	05-Mar-15	11-Feb-15	16-Feb-15	-12	0	0%
SB3A0330	B6 (B3a) - Type 4B-MJ Pier Head Concreting	1	06-Mar-15	0%	1	06-Mar-15	17-Feb-15	17-Feb-15	-12	0	0%
SB3A0340	B6 (B3a) - Type 4B-MJ Pier Head Curing/Striking of Forms/Remove Scaffolding	6	07-Mar-15	0%	6	13-Mar-15	18-Feb-15	27-Feb-15	-12	0	0%
SB3A0350	B6 (B3a) - Type 4B-Bearing Plinth	6	07-Mar-15	0%	6	13-Mar-15	18-Feb-15	27-Feb-15	-12	0	0%
Pier Head Segments											
SB3A0370	B6 (B3a) - Pier Head Segment - Temporary Platform	6	14-Mar-15	0%	6	20-Mar-15	28-Feb-15	06-Mar-15	-12	0	0%
SB3A0371	B6 (B3a) - Pier Head Segment bearings	2	21-Mar-15	0%	2	23-Mar-15	07-Mar-15	09-Mar-15	-12	0	0%



Actual Work
Planned Bar
Critical Bar
Milestone

Project ID: J3518DWPrE-M20
Layout: J3518-DWP-3MRP Submission - M20
Filter: TASK filters: 3-Month Lookahead, No CC
Milestones, No Level of Effort.

Tuen Mun - Chek Lap Kok Link - Southern Connection

3-Month Rolling Programme (Page 14 of 40 Pages)

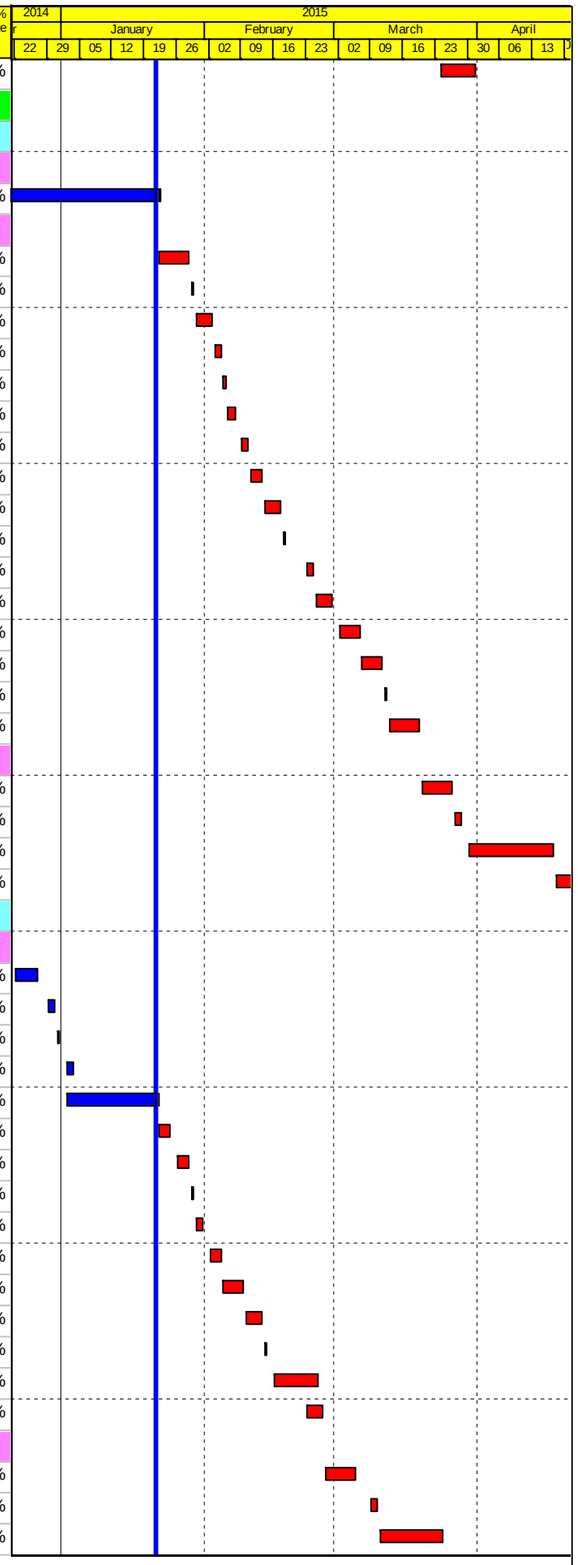
(Progress as of 21-Jan-15)

Date	Revision	Checked	Approved
21-Jan-15		DB	

DWG. No.:

J3518/GCL/PGM/3MRP-M20

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete
SB3A0372	B6 (B3a) - Pier Head Segment Lift & Temp Support (2 seg)	7	24-Mar-15	0%	7	31-Mar-15	10-Mar-15	17-Mar-15	-12	0	0%
Bridge B2											
Pier B7 (B2f)											
Pile Cap Works											
SB2F0160	B7 (B2f) - Marine Pile Cap M1 - Curing incl. CJ Preparation	6	11-Dec-14 A	83.33%	1	22-Jan-15	17-Nov-14	17-Nov-14	-54	5	80%
Pier Works											
SB2F0170	B7 (B2f) - Type 4B Pier Temp. Support Platform	6	22-Jan-15	0%	6	28-Jan-15	17-Nov-14	22-Nov-14	-54	0	0%
SB2F0172	B7 (B2f) - Type 4B Pier Scaffolding (1st Lift)	1	29-Jan-15	0%	1	29-Jan-15	24-Nov-14	24-Nov-14	-54	0	0%
SB2F0180	B7 (B2f) - Type 4B Pier Rebarwork (1st Lift)	3	30-Jan-15	0%	3	02-Feb-15	25-Nov-14	27-Nov-14	-54	0	0%
SB2F0190	B7 (B2f) - Type 4B Pier Formwork & Prep for Concreting (1st Lift)	2	03-Feb-15	0%	2	04-Feb-15	28-Nov-14	29-Nov-14	-54	0	0%
SB2F0200	B7 (B2f) - Type 4B Pier Concreting (1st Lift)	1	05-Feb-15	0%	1	05-Feb-15	01-Dec-14	01-Dec-14	-54	0	0%
SB2F0202	B7 (B2f) - Type 4B Pier Curing & Striking of Forms incl. CJ prep (1st Lift)	2	06-Feb-15	0%	2	07-Feb-15	02-Dec-14	03-Dec-14	-54	0	0%
SB2F0210	B7 (B2f) - Type 4B Pier Scaffolding (2nd Lift)	2	09-Feb-15	0%	2	10-Feb-15	04-Dec-14	05-Dec-14	-54	0	0%
SB2F0220	B7 (B2f) - Type 4B Pier Rebarwork (2nd Lift)	3	11-Feb-15	0%	3	13-Feb-15	06-Dec-14	09-Dec-14	-54	0	0%
SB2F0230	B7 (B2f) - Type 4B Pier Formwork & Prep for Concreting (2nd Lift)	3	14-Feb-15	0%	3	17-Feb-15	10-Dec-14	12-Dec-14	-54	0	0%
SB2F0240	B7 (B2f) - Type 4B Pier Concreting (2nd Lift)	1	18-Feb-15	0%	1	18-Feb-15	13-Dec-14	13-Dec-14	-54	0	0%
SB2F0242	B7 (B2f) - Type 4B Pier Curing & Striking of Forms incl. CJ prep (2nd Lift)	2	23-Feb-15	0%	2	24-Feb-15	15-Dec-14	16-Dec-14	-54	0	0%
SB2F0300	B7 (B2f) - Type 4B Pier Head Scaffolding	4	25-Feb-15	0%	4	28-Feb-15	17-Dec-14	20-Dec-14	-54	0	0%
SB2F0310	B7 (B2f) - Type 4B Pier Head Rebarwork	5	02-Mar-15	0%	5	06-Mar-15	22-Dec-14	29-Dec-14	-54	0	0%
SB2F0320	B7 (B2f) - Type 4B Pier Head Formwork & Prep for Concreting	4	07-Mar-15	0%	4	11-Mar-15	30-Dec-14	03-Jan-15	-54	0	0%
SB2F0330	B7 (B2f) - Type 4B Pier Head Concreting	1	12-Mar-15	0%	1	12-Mar-15	05-Jan-15	05-Jan-15	-54	0	0%
SB2F0340	B7 (B2f) - Type 4B Pier Head Curing/Striking of Forms/Remove Scaffolding	6	13-Mar-15	0%	6	19-Mar-15	06-Jan-15	12-Jan-15	-54	0	0%
Pier Head Segments											
SB2F0370	B7 (B2f) - Pier Head Segment - Temporary Platform	6	20-Mar-15	0%	6	26-Mar-15	13-Jan-15	19-Jan-15	-54	0	0%
SB2F0372	B7 (B2f) - Pier Head Segment Lift & Fix (1 seg)	2	27-Mar-15	0%	2	28-Mar-15	20-Jan-15	21-Jan-15	-54	0	0%
SB2F0374	B7 (B2f) - Pier Head Segment Diaphragm - Rebar	12	30-Mar-15	0%	12	17-Apr-15	22-Jan-15	04-Feb-15	-54	0	0%
SB2F0376	B7 (B2f) - Pier Head Segment Diaphragm - Formwork & Prep for Concreting	8	18-Apr-15	0%	8	28-Apr-15	05-Feb-15	13-Feb-15	-54	0	0%
Pier B8 (B2e)											
Pier Works											
SB2E0160	B8 (B2e) - Type 5B Pier Rebarwork (1st Lift)	3	22-Dec-14 A	100%	0	27-Dec-14 A					100%
SB2E0170	B8 (B2e) - Type 5B Pier Formwork & Prep for Concreting (1st Lift)	2	29-Dec-14 A	100%	0	30-Dec-14 A					100%
SB2E0180	B8 (B2e) - Type 5B Pier Concreting (1st Lift)	1	31-Dec-14 A	100%	0	31-Dec-14 A					100%
SB2E0182	B8 (B2e) - Type 5B Pier Curing & Striking of Forms incl. CJ prep (1st Lift)	2	02-Jan-15 A	100%	0	03-Jan-15 A					100%
SB2E0190	B8 (B2e) - Type 5B Pier Scaffolding (2nd Lift)	2	02-Jan-15 A	100%	0	22-Jan-15	30-Dec-14	30-Dec-14	-18	0	100%
SB2E0200	B8 (B2e) - Type 5B Pier Rebarwork (2nd Lift)	3	22-Jan-15	0%	3	24-Jan-15	31-Dec-14	03-Jan-15	-18	0	0%
SB2E0210	B8 (B2e) - Type 5B Pier Formwork & Prep for Concreting (2nd Lift)	3	26-Jan-15	0%	3	28-Jan-15	05-Jan-15	07-Jan-15	-18	0	0%
SB2E0220	B8 (B2e) - Type 5B Pier Concreting (2nd Lift)	1	29-Jan-15	0%	1	29-Jan-15	08-Jan-15	08-Jan-15	-18	0	0%
SB2E0222	B8 (B2e) - Type 5B Pier Curing & Striking of Forms incl. CJ prep (2nd Lift)	2	30-Jan-15	0%	2	31-Jan-15	09-Jan-15	10-Jan-15	-18	0	0%
SB2E0230	B8 (B2e) - Type 5B Pier Head Scaffolding	3	02-Feb-15	0%	3	04-Feb-15	12-Jan-15	14-Jan-15	-18	0	0%
SB2E0240	B8 (B2e) - Type 5B Pier Head Rebarwork	4	05-Feb-15	0%	4	09-Feb-15	15-Jan-15	19-Jan-15	-18	0	0%
SB2E0250	B8 (B2e) - Type 5B Pier Head Formwork & Prep for Concreting	4	10-Feb-15	0%	4	13-Feb-15	20-Jan-15	23-Jan-15	-18	0	0%
SB2E0260	B8 (B2e) - Type 5B Pier Head Concreting	1	14-Feb-15	0%	1	14-Feb-15	24-Jan-15	24-Jan-15	-18	0	0%
SB2E0270	B8 (B2e) - Type 5B Pier Head Curing & Striking of Forms & Remove Scaffolding	6	16-Feb-15	0%	6	25-Feb-15	26-Jan-15	31-Jan-15	-18	0	0%
SB2E0280	B8 (B2e) - Type 5B Pier Backfilling Works	4	23-Feb-15	0%	4	26-Feb-15	29-Jan-15	02-Feb-15	-18	0	0%
Pier Head Segments											
SB2E0370	B8 (B2e) - Pier Head Segment - Temporary Platform	6	27-Feb-15	0%	6	05-Mar-15	03-Feb-15	09-Feb-15	-18	2	0%
SB2E0372	B8 (B2e) - Pier Head Segment Lift & Fix (1 seg)	2	09-Mar-15	0%	2	10-Mar-15	10-Feb-15	11-Feb-15	-20	0	0%
SB2E0374	B8 (B2e) - Pier Head Segment Diaphragm - Rebar	12	11-Mar-15	0%	12	24-Mar-15	12-Feb-15	28-Feb-15	-20	0	0%



Actual Work
Planned Bar
Critical Bar
Milestone

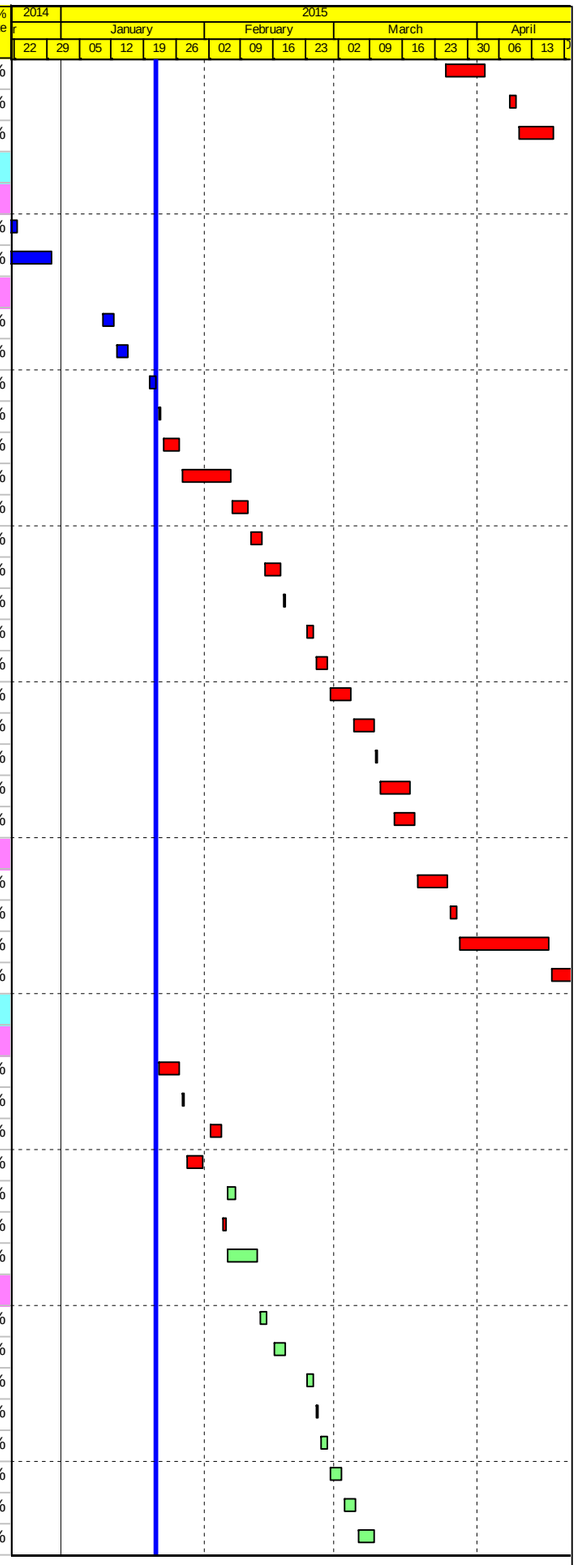
Project ID: J3518DWPrE-M20
Layout: J3518-DWP-3MRP Submission - M20
Filter: TASK filters: 3-Month Lookahead, No CC
Milestones, No Level of Effort.

Tuen Mun - Chek Lap Kok Link - Southern Connection
3-Month Rolling Programme (Page 15 of 40 Pages)
(Progress as of 21-Jan-15)

Date	Revision	Checked	Approved
21-Jan-15		DB	

DWG. No.:
J3518/GCL/PGM/3MRP-M20

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete
SB2E0376	B8 (B2e) - Pier Head Segment Diaphragm - Formwork & Prep for Concreting	8	25-Mar-15	0%	8	02-Apr-15	02-Mar-15	10-Mar-15	-20	0	0%
SB2E0378	B8 (B2e) - Pier Head Segment Diaphragm - Concreting	2	08-Apr-15	0%	2	09-Apr-15	11-Mar-15	12-Mar-15	-20	0	0%
SB2E0380	B8 (B2e) - Pier Head Segment Diaphragm - Curing & Striking of Forms	6	10-Apr-15	0%	6	17-Apr-15	19-Mar-15	26-Mar-15	-14	0	0%
Pier B9 (B2d)											
Pile Cap Works											
SB2D0122	B9 (B2d) - Pile cap Kicker Formwork	2	20-Dec-14 A	100%	0	22-Dec-14 A					100%
SB2D0140	B9 (B2d) - Pile cap Curing & Striking of Forms incl. CJ prep	6	20-Dec-14 A	100%	0	30-Dec-14 A					100%
Pier Works											
SB2D0150	B9 (B2d) - Type 5B Pier Scaffolding (1st Lift)	2	10-Jan-15 A	100%	0	12-Jan-15 A					100%
SB2D0160	B9 (B2d) - Type 5B Pier Rebarwork (1st Lift)	3	13-Jan-15 A	100%	0	15-Jan-15 A					100%
SB2D0170	B9 (B2d) - Type 5B Pier Formwork & Prep for Concreting (1st Lift)	2	20-Jan-15 A	100%	0	21-Jan-15 A					100%
SB2D0180	B9 (B2d) - Type 5B Pier Concreting (1st Lift)	1	22-Jan-15	0%	1	22-Jan-15	09-Jan-15	10-Jan-15	-11	0	0%
SB2D0182	B9 (B2d) - Type 5B Pier Curing & Striking of Forms incl. CJ prep (1st Lift)	3	23-Jan-15	0%	3	26-Jan-15	10-Jan-15	14-Jan-15	-11	0	0%
SB2D0185	B9 (B2d) - Type 5B Pier Prep, ELS Removal and Backfill	10	27-Jan-15	0%	10	06-Feb-15	14-Jan-15	26-Jan-15	-11	0	0%
SB2D0190	B9 (B2d) - Type 5B Pier Scaffolding (2nd Lift)	3	07-Feb-15	0%	3	10-Feb-15	26-Jan-15	29-Jan-15	-11	0	0%
SB2D0200	B9 (B2d) - Type 5B Pier Rebarwork (2nd Lift)	3	11-Feb-15	0%	3	13-Feb-15	29-Jan-15	02-Feb-15	-11	0	0%
SB2D0210	B9 (B2d) - Type 5B Pier Formwork & Prep for Concreting (2nd Lift)	3	14-Feb-15	0%	3	17-Feb-15	02-Feb-15	05-Feb-15	-11	0	0%
SB2D0220	B9 (B2d) - Type 5B Pier Concreting (2nd Lift)	1	18-Feb-15	0%	1	18-Feb-15	05-Feb-15	06-Feb-15	-11	0	0%
SB2D0222	B9 (B2d) - Type 5B Pier Curing & Striking of Forms incl. CJ prep (2nd Lift)	2	23-Feb-15	0%	2	24-Feb-15	06-Feb-15	09-Feb-15	-10	0	0%
SB2D0230	B9 (B2d) - Type 5B Pier Head Scaffolding	3	25-Feb-15	0%	3	27-Feb-15	10-Feb-15	12-Feb-15	-10	0	0%
SB2D0240	B9 (B2d) - Type 5B Pier Head Rebarwork	4	28-Feb-15	0%	4	04-Mar-15	13-Feb-15	17-Feb-15	-10	0	0%
SB2D0250	B9 (B2d) - Type 5B Pier Head Formwork & Prep for Concreting	4	05-Mar-15	0%	4	09-Mar-15	18-Feb-15	25-Feb-15	-10	0	0%
SB2D0260	B9 (B2d) - Type 5B Pier Head Concreting	1	10-Mar-15	0%	1	10-Mar-15	26-Feb-15	26-Feb-15	-10	0	0%
SB2D0270	B9 (B2d) - Type 5B Pier Head Curing & Striking of Forms & Remove Scaffolding	6	11-Mar-15	0%	6	17-Mar-15	27-Feb-15	05-Mar-15	-10	0	0%
SB2D0280	B9 (B2d) - Type 5B Pier Backfilling Works	4	14-Mar-15	0%	4	18-Mar-15	03-Mar-15	06-Mar-15	-10	0	0%
Pier Head Segments											
SB2D0370	B9 (B2d) - Pier Head Segment - Temporary Platform	6	19-Mar-15	0%	6	25-Mar-15	07-Mar-15	13-Mar-15	-10	0	0%
SB2D0372	B9 (B2d) - Pier Head Segment Lift & Fix (1 seg)	2	26-Mar-15	0%	2	27-Mar-15	14-Mar-15	16-Mar-15	-10	0	0%
SB2D0374	B9 (B2d) - Pier Head Segment Diaphragm - Rebar	12	28-Mar-15	0%	12	16-Apr-15	17-Mar-15	30-Mar-15	-10	0	0%
SB2D0376	B9 (B2d) - Pier Head Segment Diaphragm - Formwork & Prep for Concreting	8	17-Apr-15	0%	8	27-Apr-15	31-Mar-15	13-Apr-15	-10	0	0%
Pier B10 (B2c)											
Pile Cap Works											
SB2C0092	B10 (B2c) - Pile Breakdown to cut-off etc.	4	22-Jan-15	0%	4	26-Jan-15	22-Jan-15	26-Jan-15	0	0	0%
SB2C0100	B10 (B2c) - Pile cap Blinding	1	27-Jan-15	0%	1	27-Jan-15	27-Jan-15	27-Jan-15	0	0	0%
SB2C0110	B10 (B2c) - Pile cap Formwork	3	02-Feb-15	0%	3	04-Feb-15	02-Feb-15	04-Feb-15	0	0	0%
SB2C0120	B10 (B2c) - Pile cap Rebarwork	4	28-Jan-15	0%	4	31-Jan-15	28-Jan-15	31-Jan-15	0	0	0%
SB2C0122	B10 (B2c) - Pile cap Kicker Formwork	2	06-Feb-15	0%	2	07-Feb-15	11-Feb-15	13-Feb-15	5	4	0%
SB2C0130	B10 (B2c) - Pile cap Concreting	1	05-Feb-15	0%	1	05-Feb-15	05-Feb-15	05-Feb-15	0	0	0%
SB2C0140	B10 (B2c) - Pile cap Curing & Striking of Forms incl. CJ prep	6	06-Feb-15	0%	6	12-Feb-15	06-Feb-15	13-Feb-15	1	0	0%
Pier Works											
SB2C0150	B10 (B2c) - Type 5B Pier Scaffolding (1st Lift)	2	13-Feb-15	0%	2	14-Feb-15	14-Feb-15	16-Feb-15	1	0	0%
SB2C0160	B10 (B2c) - Type 5B Pier Rebarwork (1st Lift)	3	16-Feb-15	0%	3	18-Feb-15	17-Feb-15	23-Feb-15	1	0	0%
SB2C0170	B10 (B2c) - Type 5B Pier Formwork & Prep for Concreting (1st Lift)	2	23-Feb-15	0%	2	24-Feb-15	24-Feb-15	25-Feb-15	1	0	0%
SB2C0180	B10 (B2c) - Type 5B Pier Concreting (1st Lift)	1	25-Feb-15	0%	1	25-Feb-15	26-Feb-15	26-Feb-15	1	0	0%
SB2C0182	B10 (B2c) - Type 5B Pier Curing & Striking of Forms incl. CJ prep (1st Lift)	2	26-Feb-15	0%	2	27-Feb-15	27-Feb-15	28-Feb-15	1	0	0%
SB2C0190	B10 (B2c) - Type 5B Pier Scaffolding (2nd Lift)	2	28-Feb-15	0%	2	02-Mar-15	02-Mar-15	03-Mar-15	1	0	0%
SB2C0200	B10 (B2c) - Type 5B Pier Rebarwork (2nd Lift)	3	03-Mar-15	0%	3	05-Mar-15	04-Mar-15	06-Mar-15	1	0	0%
SB2C0210	B10 (B2c) - Type 5B Pier Formwork & Prep for Concreting (2nd Lift)	3	06-Mar-15	0%	3	09-Mar-15	07-Mar-15	10-Mar-15	1	0	0%



Actual Work
Planned Bar
Critical Bar
Milestone

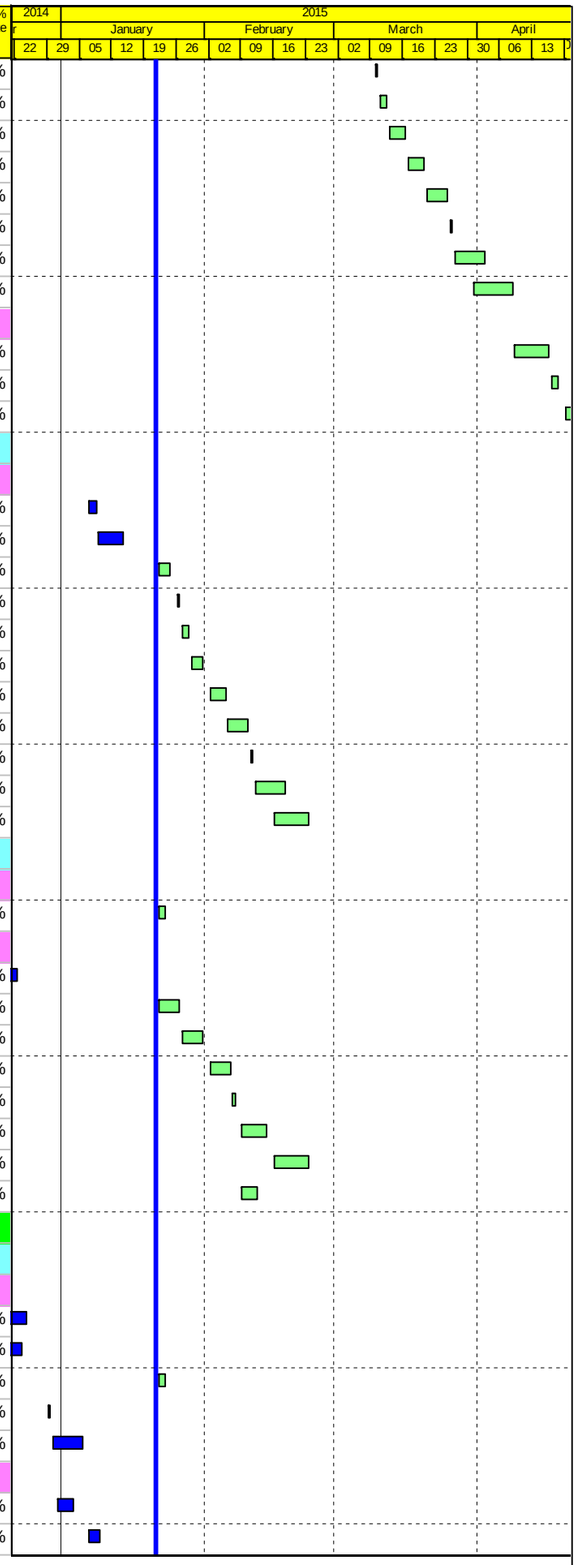
Project ID: J3518DWPrE-M20
Layout: J3518-DWP-3MRP Submission - M20
Filter: TASK filters: 3-Month Lookahead, No CC
Milestones, No Level of Effort.

Tuen Mun - Chek Lap Kok Link - Southern Connection
3-Month Rolling Programme (Page 16 of 40 Pages)
(Progress as of 21-Jan-15)

Date	Revision	Checked	Approved
21-Jan-15		DB	

DWG. No.:
J3518/GCL/PGM/3MRP-M20

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete
SB2C0220	B10 (B2c) - Type 5B Pier Concreting (2nd Lift)	1	10-Mar-15	0%	1	10-Mar-15	11-Mar-15	11-Mar-15	1	0	0%
SB2C0222	B10 (B2c) - Type 5B Pier Curing & Striking of Forms incl. CJ prep (2nd Lift)	2	11-Mar-15	0%	2	12-Mar-15	12-Mar-15	13-Mar-15	1	0	0%
SB2C0230	B10 (B2c) - Type 5B Pier Head Scaffolding	3	13-Mar-15	0%	3	16-Mar-15	14-Mar-15	17-Mar-15	1	0	0%
SB2C0240	B10 (B2c) - Type 5B Pier Head Rebarwork	4	17-Mar-15	0%	4	20-Mar-15	18-Mar-15	21-Mar-15	1	0	0%
SB2C0250	B10 (B2c) - Type 5B Pier Head Formwork & Prep for Concreting	4	21-Mar-15	0%	4	25-Mar-15	23-Mar-15	26-Mar-15	1	0	0%
SB2C0260	B10 (B2c) - Type 5B Pier Head Concreting	1	26-Mar-15	0%	1	26-Mar-15	27-Mar-15	27-Mar-15	1	0	0%
SB2C0270	B10 (B2c) - Type 5B Pier Head Curing & Striking of Forms & Remove Scaffolding	6	27-Mar-15	0%	6	02-Apr-15	28-Mar-15	08-Apr-15	1	0	0%
SB2C0280	B10 (B2c) - Type 5B Pier Backfilling Works	4	31-Mar-15	0%	4	08-Apr-15	01-Apr-15	09-Apr-15	1	0	0%
Pier Head Segments											
SB2C0370	B10 (B2c) - Pier Head Segment - Temporary Platform	6	09-Apr-15	0%	6	16-Apr-15	10-Apr-15	17-Apr-15	1	0	0%
SB2C0372	B10 (B2c) - Pier Head Segment Lift & Fix (1 seg)	2	17-Apr-15	0%	2	18-Apr-15	18-Apr-15	20-Apr-15	1	0	0%
SB2C0374	B10 (B2c) - Pier Head Segment Diaphragm - Rebar	12	20-Apr-15	0%	12	05-May-15	21-Apr-15	06-May-15	1	0	0%
Pier B11 (B2b)											
Pier Works											
SB2B0190	B11 (B2b) - Type 5B-B Pier Scaffolding (2nd Lift)	2	07-Jan-15 A	100%	0	08-Jan-15 A					100%
SB2B0200	B11 (B2b) - Type 5B-B Pier Rebarwork (2nd Lift)	3	09-Jan-15 A	100%	0	14-Jan-15 A					100%
SB2B0210	B11 (B2b) - Type 5B-B Pier Formwork & Prep for Concreting (2nd Lift)	3	22-Jan-15	0%	3	24-Jan-15	31-Mar-15	02-Apr-15	55	0	0%
SB2B0220	B11 (B2b) - Type 5B-B Pier Concreting (2nd Lift)	1	26-Jan-15	0%	1	26-Jan-15	08-Apr-15	08-Apr-15	55	0	0%
SB2B0222	B11 (B2b) - Type 5B-B Pier Curing & Striking of Forms incl. CJ prep (2nd Lift)	2	27-Jan-15	0%	2	28-Jan-15	09-Apr-15	10-Apr-15	55	0	0%
SB2B0230	B11 (B2b) - Type 5B-B Pier Head Scaffolding	3	29-Jan-15	0%	3	31-Jan-15	11-Apr-15	14-Apr-15	55	0	0%
SB2B0240	B11 (B2b) - Type 5B-B Pier Head Rebarwork	4	02-Feb-15	0%	4	05-Feb-15	16-Apr-15	20-Apr-15	55	0	0%
SB2B0250	B11 (B2b) - Type 5B-B Pier Head Formwork & Prep for Concreting	4	06-Feb-15	0%	4	10-Feb-15	21-Apr-15	25-Apr-15	55	0	0%
SB2B0260	B11 (B2b) - Type 5B-B Pier Head Concreting	1	11-Feb-15	0%	1	11-Feb-15	27-Apr-15	27-Apr-15	55	0	0%
SB2B0270	B11 (B2b) - Type 5B-B Pier Head Curing & Striking of Forms & Remove Scaffolding	6	12-Feb-15	0%	6	18-Feb-15	28-Apr-15	05-May-15	55	0	0%
SB2B0280	B11 (B2b) - Type 5B-B Pier Backfilling Works	4	16-Feb-15	0%	4	23-Feb-15	02-May-15	06-May-15	55	0	0%
Pier B12 (B2a)											
Pile Cap Works											
SB2A0122	B12 (B2a) - Pile cap Kicker Formwork	2	22-Jan-15	0%	2	23-Jan-15	31-Mar-17	01-Apr-17	612	374	0%
Pier Works											
SB2A0222	B12 (B2a) - Type 5B-MJ Pier Curing & Striking of Forms incl. CJ prep (2nd Lift)	2	20-Dec-14 A	100%	0	22-Dec-14 A					100%
SB2A0300	B12 (B2a) - Type 5B-MJ Pier Head Scaffolding (F/W from B6)	4	22-Jan-15	0%	4	26-Jan-15	28-May-15	01-Jun-15	95	0	0%
SB2A0310	B12 (B2a) - Type 5B-MJ Pier Head Rebarwork	5	27-Jan-15	0%	5	31-Jan-15	02-Jun-15	08-Jun-15	95	0	0%
SB2A0320	B12 (B2a) - Type 5B-MJ Pier Head Formwork & Prep for Concreting	5	02-Feb-15	0%	5	06-Feb-15	10-Jun-15	16-Jun-15	95	0	0%
SB2A0330	B12 (B2a) - Type 5B-MJ Pier Head Concreting	1	07-Feb-15	0%	1	07-Feb-15	18-Jun-15	18-Jun-15	95	0	0%
SB2A0340	B12 (B2a) - Type 5B-MJ Pier Head Curing/Striking of Forms/Remove Scaffolding	6	09-Feb-15	0%	6	14-Feb-15	19-Jun-15	29-Jun-15	95	0	0%
SB2A0360	B12 (B2a) - Type 5B-MJ Pier Backfilling Works	4	16-Feb-15	0%	4	23-Feb-15	30-Jun-15	04-Jul-15	95	58	0%
SB2A0380	B12 (B2a) - Type 5B-Bearing Plinth	4	09-Feb-15	0%	4	12-Feb-15	24-Jun-15	29-Jun-15	97	2	0%
Bridge B1											
Pier B13 (B1g)											
Pile Cap Works											
SB1G0110	B13 (B1g) - Pile cap Formwork	3	15-Dec-14 A	100%	0	24-Dec-14 A					100%
SB1G0120	B13 (B1g) - Pile cap Rebarwork	4	18-Dec-14 A	100%	0	23-Dec-14 A					100%
SB1G0122	B13 (B1g) - Pile cap Kicker Formwork	2	22-Jan-15	0%	2	23-Jan-15	31-Mar-17	01-Apr-17	612	374	0%
SB1G0130	B13 (B1g) - Pile cap Concreting	1	29-Dec-14 A	100%	0	29-Dec-14 A					100%
SB1G0140	B13 (B1g) - Pile cap Curing & Striking of Forms incl. CJ prep	6	30-Dec-14 A	100%	0	05-Jan-15 A					100%
Pier Works											
SB1G0150	B13 (B1g) - Type 5B-B Pier Scaffolding (1st Lift)	2	31-Dec-14 A	100%	0	03-Jan-15 A					100%
SB1G0160	B13 (B1g) - Type 5B-B Pier Rebarwork (1st Lift)	3	07-Jan-15 A	100%	0	09-Jan-15 A					100%



Actual Work
Planned Bar
Critical Bar
Milestone

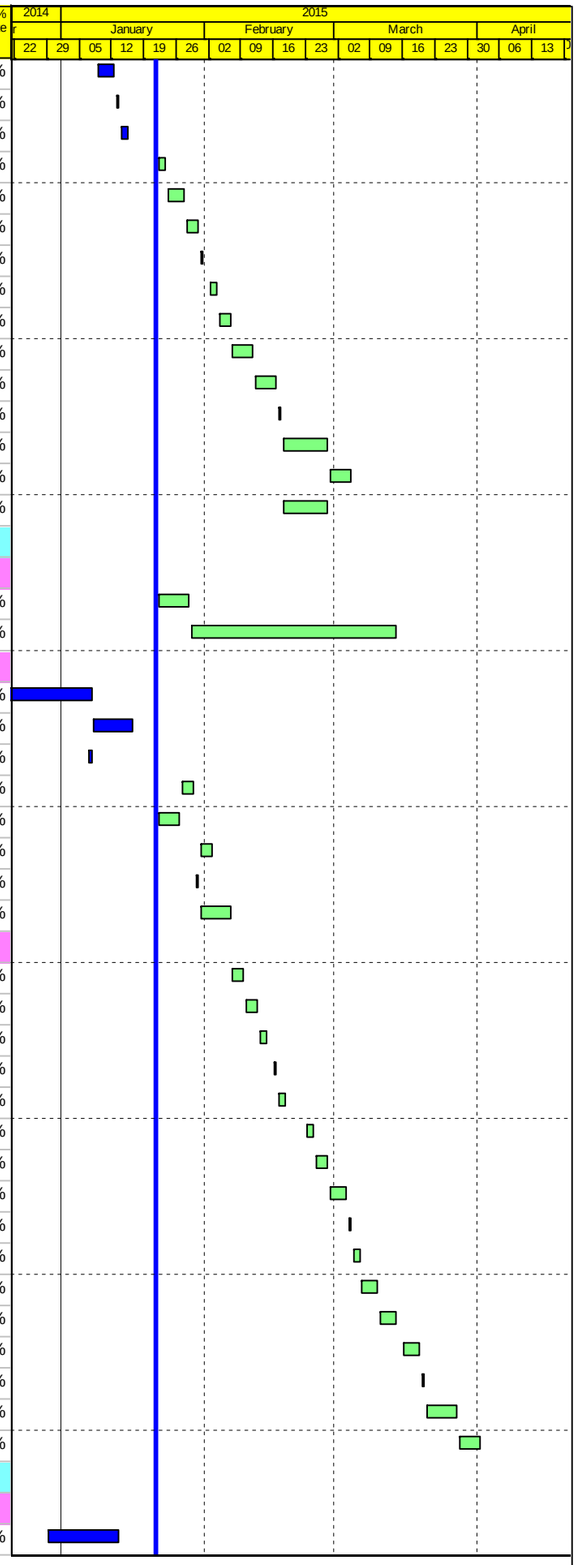
Project ID: J3518DWPrE-M20
Layout: J3518-DWP-3MRP Submission - M20
Filter: TASK filters: 3-Month Lookahead, No CC
Milestones, No Level of Effort.

Tuen Mun - Chek Lap Kok Link - Southern Connection
3-Month Rolling Programme (Page 17 of 40 Pages)
(Progress as of 21-Jan-15)

Date	Revision	Checked	Approved
21-Jan-15		DB	

DWG. No.:
J3518/GCL/PGM/3MRP-M20

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete
SB1G0170	B13 (B1g) - Type 5B-B Pier Formwork & Prep for Concreting (1st Lift)	2	09-Jan-15 A	100%	0	12-Jan-15 A					100%
SB1G0180	B13 (B1g) - Type 5B-B Pier Concreting (1st Lift)	1	13-Jan-15 A	100%	0	13-Jan-15 A					100%
SB1G0182	B13 (B1g) - Type 5B-B Pier Curing & Striking of Forms incl. CJ prep (1st Lift)	2	14-Jan-15 A	100%	0	15-Jan-15 A					100%
SB1G0190	B13 (B1g) - Type 5B-B Pier Scaffolding (2nd Lift)	2	22-Jan-15	0%	2	23-Jan-15	17-Apr-15	18-Apr-15	65	0	0%
SB1G0200	B13 (B1g) - Type 5B-B Pier Rebarwork (2nd Lift)	3	24-Jan-15	0%	3	27-Jan-15	20-Apr-15	22-Apr-15	65	0	0%
SB1G0210	B13 (B1g) - Type 5B-B Pier Formwork & Prep for Concreting (2nd Lift)	3	28-Jan-15	0%	3	30-Jan-15	24-Apr-15	27-Apr-15	65	0	0%
SB1G0220	B13 (B1g) - Type 5B-B Pier Concreting (2nd Lift)	1	31-Jan-15	0%	1	31-Jan-15	28-Apr-15	28-Apr-15	65	0	0%
SB1G0222	B13 (B1g) - Type 5B-B Pier Curing & Striking of Forms incl. CJ prep (2nd Lift)	2	02-Feb-15	0%	2	03-Feb-15	29-Apr-15	30-Apr-15	65	0	0%
SB1G0230	B13 (B1g) - Type 5B-B Pier Head Scaffolding	3	04-Feb-15	0%	3	06-Feb-15	02-May-15	05-May-15	65	0	0%
SB1G0240	B13 (B1g) - Type 5B-B Pier Head Rebarwork	4	07-Feb-15	0%	4	11-Feb-15	06-May-15	09-May-15	65	0	0%
SB1G0250	B13 (B1g) - Type 5B-B Pier Head Formwork & Prep for Concreting	4	12-Feb-15	0%	4	16-Feb-15	11-May-15	15-May-15	65	0	0%
SB1G0260	B13 (B1g) - Type 5B-B Pier Head Concreting	1	17-Feb-15	0%	1	17-Feb-15	16-May-15	16-May-15	65	0	0%
SB1G0270	B13 (B1g) - Type 5B-B Pier Head Curing & Striking of Forms & Remove Scaffolding	6	18-Feb-15	0%	6	27-Feb-15	18-May-15	26-May-15	65	0	0%
SB1G0280	B13 (B1g) - Type 5B-B Pier Backfilling Works	4	28-Feb-15	0%	4	04-Mar-15	27-May-15	30-May-15	65	50	0%
SB1G0290	B13 (B1g) - Type 5B-B Bearing Plinth	6	18-Feb-15	0%	6	27-Feb-15	18-May-15	26-May-15	65	0	0%
Pier B14 (B1f)											
Socketted H-Pile Installation											
GFXX326-2	B14 (B1f) - Selection of pile for loading test	6	22-Jan-15	0%	6	28-Jan-15	09-May-18	15-May-18	973	0	0%
GFXX326-4	B14 (B1f) - Loading Test for pre-bored H-pile	36	29-Jan-15	0%	36	14-Mar-15	16-May-18	28-Jun-18	973	973	0%
Pile Cap Works											
SB1F0091	B14 (B1f) - Pile cap Excavation / ELS (incl. sheet piling)	24	02-Dec-14 A	100%	0	07-Jan-15 A					100%
SB1F0092	B14 (B1f) - Pile Breakdown to cut-off etc.	4	08-Jan-15 A	100%	0	16-Jan-15 A					100%
SB1F0100	B14 (B1f) - Pile cap Blinding	1	07-Jan-15 A	100%	0	07-Jan-15 A					100%
SB1F0110	B14 (B1f) - Pile cap Formwork	3	27-Jan-15	0%	3	29-Jan-15	16-Apr-15	18-Apr-15	60	0	0%
SB1F0120	B14 (B1f) - Pile cap Rebarwork	4	22-Jan-15	0%	4	26-Jan-15	10-Apr-15	14-Apr-15	60	0	0%
SB1F0122	B14 (B1f) - Pile cap Kicker Formwork	2	31-Jan-15	0%	2	02-Feb-15	27-Apr-15	28-Apr-15	64	4	0%
SB1F0130	B14 (B1f) - Pile cap Concreting	1	30-Jan-15	0%	1	30-Jan-15	20-Apr-15	20-Apr-15	60	0	0%
SB1F0140	B14 (B1f) - Pile cap Curing & Striking of Forms incl. CJ prep	6	31-Jan-15	0%	6	06-Feb-15	21-Apr-15	28-Apr-15	60	0	0%
Pier Works											
SB1F0150	B14 (B1f) - Type 5B Pier Scaffolding (1st Lift)	2	07-Feb-15	0%	2	09-Feb-15	29-Apr-15	30-Apr-15	60	0	0%
SB1F0160	B14 (B1f) - Type 5B Pier Rebarwork (1st Lift)	3	10-Feb-15	0%	3	12-Feb-15	02-May-15	05-May-15	60	0	0%
SB1F0170	B14 (B1f) - Type 5B Pier Formwork & Prep for Concreting (1st Lift)	2	13-Feb-15	0%	2	14-Feb-15	06-May-15	07-May-15	60	0	0%
SB1F0180	B14 (B1f) - Type 5B Pier Concreting (1st Lift)	1	16-Feb-15	0%	1	16-Feb-15	08-May-15	08-May-15	60	0	0%
SB1F0182	B14 (B1f) - Type 5B Pier Curing & Striking of Forms incl. CJ prep (1st Lift)	2	17-Feb-15	0%	2	18-Feb-15	09-May-15	11-May-15	60	0	0%
SB1F0190	B14 (B1f) - Type 5B Pier Scaffolding (2nd Lift)	2	23-Feb-15	0%	2	24-Feb-15	13-May-15	14-May-15	60	0	0%
SB1F0200	B14 (B1f) - Type 5B Pier Rebarwork (2nd Lift)	3	25-Feb-15	0%	3	27-Feb-15	15-May-15	18-May-15	60	0	0%
SB1F0210	B14 (B1f) - Type 5B Pier Formwork & Prep for Concreting (2nd Lift)	3	28-Feb-15	0%	3	03-Mar-15	19-May-15	22-May-15	60	0	0%
SB1F0220	B14 (B1f) - Type 5B Pier Concreting (2nd Lift)	1	04-Mar-15	0%	1	04-Mar-15	23-May-15	23-May-15	60	0	0%
SB1F0222	B14 (B1f) - Type 5B Pier Curing & Striking of Forms incl. CJ prep (2nd Lift)	2	05-Mar-15	0%	2	06-Mar-15	26-May-15	27-May-15	60	0	0%
SB1F0230	B14 (B1f) - Type 5B Pier Head Scaffolding	3	07-Mar-15	0%	3	10-Mar-15	28-May-15	30-May-15	60	0	0%
SB1F0240	B14 (B1f) - Type 5B Pier Head Rebarwork	4	11-Mar-15	0%	4	14-Mar-15	01-Jun-15	05-Jun-15	60	0	0%
SB1F0250	B14 (B1f) - Type 5B Pier Head Formwork & Prep for Concreting	4	16-Mar-15	0%	4	19-Mar-15	06-Jun-15	12-Jun-15	60	0	0%
SB1F0260	B14 (B1f) - Type 5B Pier Head Concreting	1	20-Mar-15	0%	1	20-Mar-15	13-Jun-15	13-Jun-15	60	0	0%
SB1F0270	B14 (B1f) - Type 5B Pier Head Curing & Striking of Forms & Remove Scaffolding	6	21-Mar-15	0%	6	27-Mar-15	15-Jun-15	24-Jun-15	60	0	0%
SB1F0280	B14 (B1f) - Type 5B Pier Backfilling Works	4	28-Mar-15	0%	4	01-Apr-15	26-Jun-15	30-Jun-15	60	26	0%
Pier B15 (B1e)											
Pier Works											
SB1E0230	B15 (B1e) - Type 5B Pier Head Scaffolding	3	29-Dec-14 A	100%	0	13-Jan-15 A					100%



Actual Work
Planned Bar
Critical Bar
Milestone

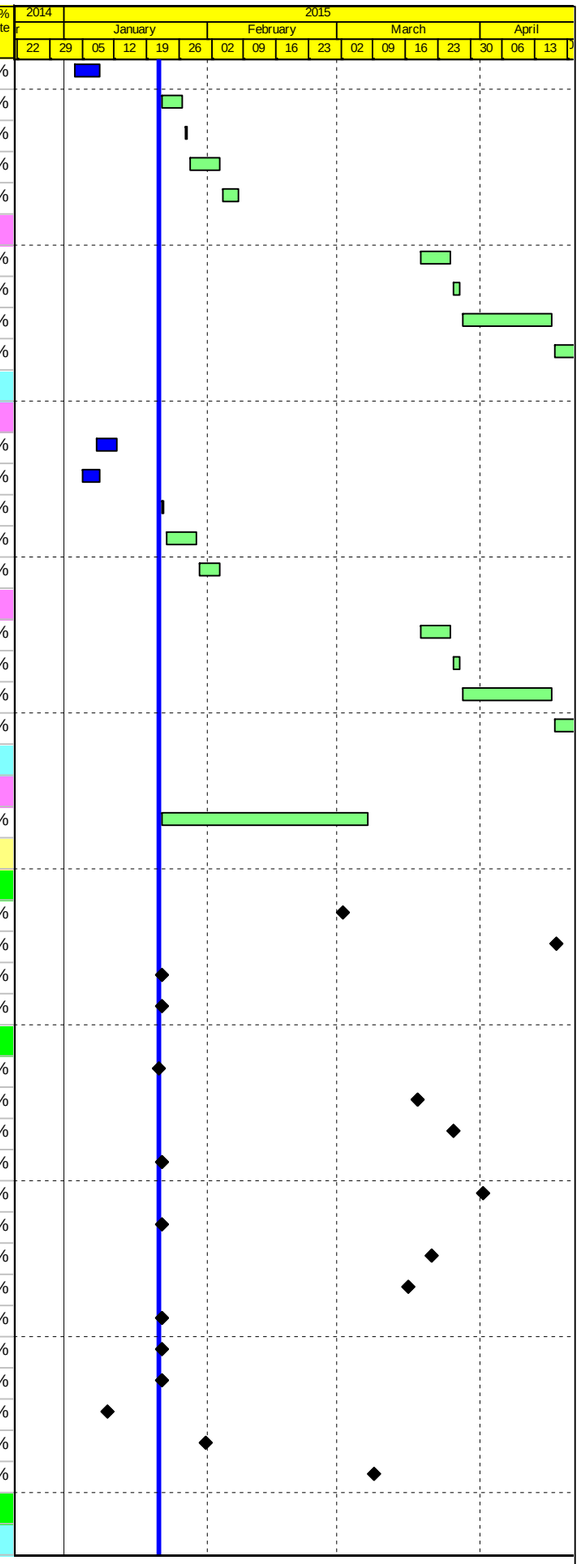
Project ID: J3518DWPrE-M20
Layout: J3518-DWP-3MRP Submission - M20
Filter: TASK filters: 3-Month Lookahead, No CC
Milestones, No Level of Effort.

Tuen Mun - Chek Lap Kok Link - Southern Connection
3-Month Rolling Programme (Page 18 of 40 Pages)
(Progress as of 21-Jan-15)

Date	Revision	Checked	Approved
21-Jan-15		DB	

DWG. No.:
J3518/GCL/PGM/3MRP-M20

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete
SB1E0240	B15 (B1e) - Type 5B Pier Head Rebarwork	4	03-Jan-15 A	100%	0	08-Jan-15 A					100%
SB1E0250	B15 (B1e) - Type 5B Pier Head Formwork & Prep for Concreting	4	22-Jan-15	0%	4	26-Jan-15	03-Jul-15	07-Jul-15	118	0	0%
SB1E0260	B15 (B1e) - Type 5B Pier Head Concreting	1	27-Jan-15	0%	1	27-Jan-15	08-Jul-15	08-Jul-15	118	0	0%
SB1E0270	B15 (B1e) - Type 5B Pier Head Curing & Striking of Forms & Remove Scaffolding	6	28-Jan-15	0%	6	03-Feb-15	09-Jul-15	15-Jul-15	118	0	0%
SB1E0280	B15 (B1e) - Type 5B Pier Backfilling Works	4	04-Feb-15	0%	4	07-Feb-15	17-Jul-15	21-Jul-15	118	30	0%
Pier Head Segments											
SB1E0370	B15 (B1e) - Pier Head Segment - Temporary Platform	6	19-Mar-15	0%	6	25-Mar-15	22-Jul-15	28-Jul-15	88	0	0%
SB1E0372	B15 (B1e) - Pier Head Segment Lift & Fix (1 seg)	2	26-Mar-15	0%	2	27-Mar-15	30-Jul-15	31-Jul-15	88	0	0%
SB1E0374	B15 (B1e) - Pier Head Segment Diaphragm - Rebar	12	28-Mar-15	0%	12	16-Apr-15	01-Aug-15	15-Aug-15	88	0	0%
SB1E0376	B15 (B1e) - Pier Head Segment Diaphragm - Formwork & Prep for Concreting	8	17-Apr-15	0%	8	27-Apr-15	17-Aug-15	26-Aug-15	88	0	0%
Pier B16 (B1d)											
Pier Works											
SB1D0200	B16 (B1d) - Type 5B Pier Head Rebarwork	4	08-Jan-15 A	100%	0	12-Jan-15 A					100%
SB1D0210	B16 (B1d) - Type 5B Pier Head Formwork & Prep for Concreting	4	05-Jan-15 A	100%	0	08-Jan-15 A					100%
SB1D0220	B16 (B1d) - Type 5B Pier Head Concreting	1	22-Jan-15	0%	1	22-Jan-15	24-Dec-16	28-Dec-16	535	0	0%
SB1D0270	B16 (B1d) - Type 5B Pier Head Curing & Striking of Forms & Remove Scaffolding	6	23-Jan-15	0%	6	29-Jan-15	28-Dec-16	05-Jan-17	535	0	0%
SB1D0280	B16 (B1d) - Type 5B Pier Backfilling Works	4	30-Jan-15	0%	4	03-Feb-15	05-Jan-17	10-Jan-17	535	34	0%
Pier Head Segments											
SB1D0370	B16 (B1d) - Pier Head Segment - Temporary Platform	6	19-Mar-15	0%	6	25-Mar-15	10-Jan-17	17-Jan-17	501	0	0%
SB1D0372	B16 (B1d) - Pier Head Segment Lift & Fix (1 seg)	2	26-Mar-15	0%	2	27-Mar-15	17-Jan-17	19-Jan-17	501	0	0%
SB1D0374	B16 (B1d) - Pier Head Segment Diaphragm - Rebar	12	28-Mar-15	0%	12	16-Apr-15	19-Jan-17	07-Feb-17	503	0	0%
SB1D0376	B16 (B1d) - Pier Head Segment Diaphragm - Formwork & Prep for Concreting	8	17-Apr-15	0%	8	27-Apr-15	08-Feb-17	16-Feb-17	503	0	0%
Pier B18 (B1b) & Abutment B											
Preliminary Works for Land Piling											
PB180030	B18 (B1b) - Install Geo. Instru. & Baseline Monitoring	36	22-Jan-15	0%	36	07-Mar-15	18-Nov-15	31-Dec-15	243	226	0%
Viaduct C											
Milestones - Marine Foundation											
GFXX194-1	C6 (C3f) - Start date for piling	0	02-Mar-15	0%	0		23-Mar-15		18	60	0%
GFXX202-1	C5 (C4a) - Completion of piling works	0		0%	0	17-Apr-15		18-Mar-15	-23	8	0%
GFXX204-1	C4 (C4b) - Start date for piling	0	22-Jan-15	0%	0		24-Feb-15		25	64	0%
GFXX209-1	C3 (C4c) - Start date for piling	0	22-Jan-15	0%	0		17-Jun-15		116	80	0%
Milestones - Land Foundation											
ZC00031	C19 (C1d) - Completion of piling works	0		0%	0	21-Jan-15		08-May-18	973	0	0%
ZC00041	C18 (C1e) - Completion of piling works	0		0%	0	18-Mar-15		15-Apr-16	316	0	0%
ZC00050	C17 (C2a) - Start date for piling	0	26-Mar-15	0%	0		10-Nov-15		185	52	0%
ZC00070	C15 (C2c) - Start date for piling	0	22-Jan-15	0%	0		08-Jan-16		284	199	0%
ZC00071	C15 (C2c) - Completion of piling works	0		0%	0	01-Apr-15		07-Jan-16	227	142	0%
ZC00080	C14 (C2d) - Start date for piling	0	22-Jan-15	0%	0		23-Dec-15		273	127	0%
ZC00081	C14 (C2d) - Completion of piling works	0		0%	0	21-Mar-15		22-Dec-15	225	79	0%
ZC00090-2	C13 (C2e) - Completion of piling works	0		0%	0	16-Mar-15		21-Aug-15	128	0	0%
ZC00091	C12 (C2f) - Start date for piling	0	22-Jan-15	0%	0		14-Aug-15		164	66	0%
ZC00092	C11 (C3a) - Start date for piling	0	22-Jan-15	0%	0		28-Aug-15		176	78	0%
ZC00093	C10 (C3b) - Start date for piling	0	22-Jan-15	0%	0		20-Mar-15		46	0	0%
ZC00094-1	C9 (C3c) - Completion of piling works	0		100%	0	10-Jan-15 A					100%
ZC00095-1	C8 (C3d) - Completion of piling works	0		0%	0	31-Jan-15		21-Aug-15	162	56	0%
ZC00096	C7 (C3e) - Start date for piling	0	09-Mar-15	0%	0		28-Jun-18		979	979	0%
Bridge C4											
Pier C1 (C4e)											



Actual Work
Planned Bar
Critical Bar
Milestone

Project ID: J3518DWPrE-M20
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Tuen Mun - Chek Lap Kok Link - Southern Connection
3-Month Rolling Programme (Page 19 of 40 Pages)
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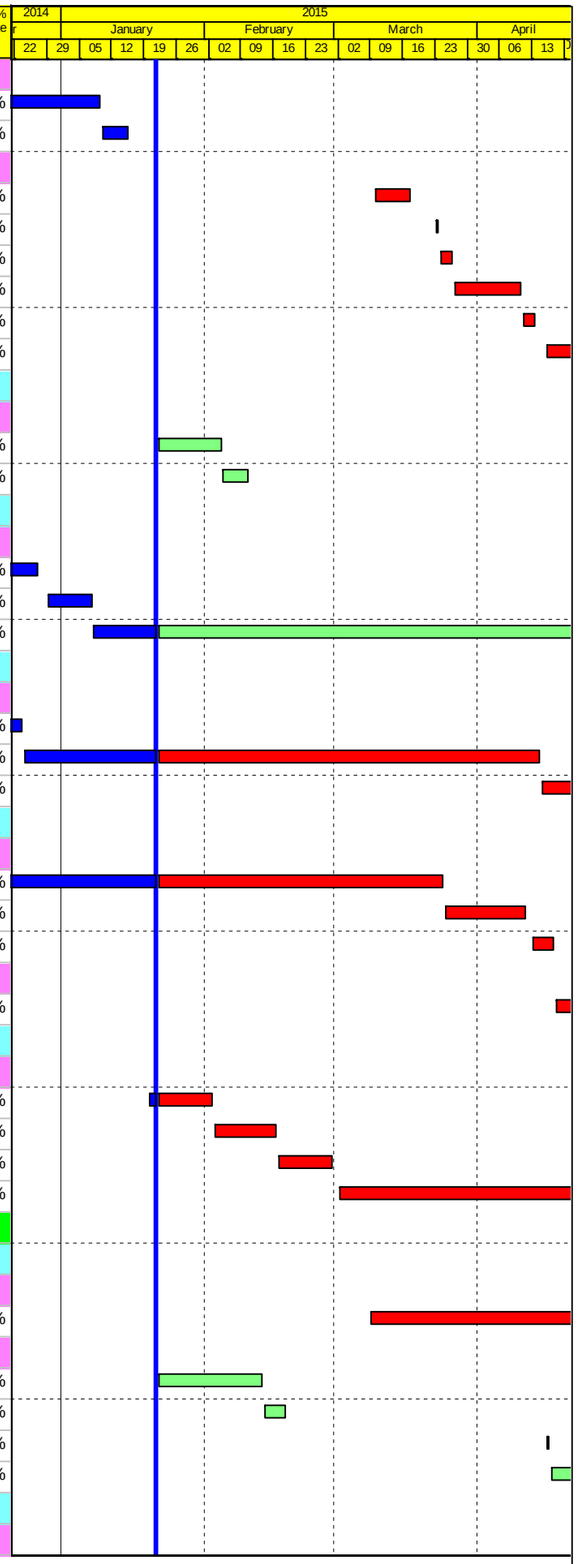
J3518/GCL/PGM/3MRP-M20

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete
Foundation Works											
GFXX221-2	C1 (C4e) - Bored Pile Full Depth Coring & Testing	20	15-Dec-14 A	100%	0	09-Jan-15 A					100%
GFXX222	C1 (C4e) - Dismantle removable panels of temp. platform	5	10-Jan-15 A	100%	0	15-Jan-15 A					100%
Pile Cap Works											
SC4E0070	C1 (C4e) - Marine Pile Cap M2 - Inst.Floating Seal & Casing Head Steelwork	7	10-Mar-15	0%	7	17-Mar-15	14-Feb-15	25-Feb-15	-17	4	0%
SC4E0080	C1 (C4e) - Marine Pile Cap M2 - Install precast shell in position	1	23-Mar-15	0%	1	23-Mar-15	26-Feb-15	26-Feb-15	-21	0	0%
SC4E0090	C1 (C4e) - Marine Pile Cap M2 - Inst.Access & make Watertight	3	24-Mar-15	0%	3	26-Mar-15	27-Feb-15	02-Mar-15	-21	0	0%
SC4E0100	C1 (C4e) - Marine Pile Cap M2 - Weld Fin plates/Plug Rebar & Concrete	9	27-Mar-15	0%	9	10-Apr-15	03-Mar-15	12-Mar-15	-21	0	0%
SC4E0110	C1 (C4e) - Marine Pile Cap M2 - Dewater precast shell / Remove Lifting Frame	2	11-Apr-15	0%	2	13-Apr-15	13-Mar-15	14-Mar-15	-21	1	0%
SC4E0120	C1 (C4e) - Marine Pile Cap M2 - Pile cut down	12	16-Apr-15	0%	12	30-Apr-15	16-Mar-15	28-Mar-15	-22	0	0%
Pier C2 (C4d)											
Foundation Works											
GFXX216	C2 (C4d) - Sonic & Interface Coring	12	22-Jan-15	0%	12	04-Feb-15	10-Apr-15	23-Apr-15	60	0	0%
GFXX217	C2 (C4d) - Dismantle removable panels of temp. platform	5	05-Feb-15	0%	5	10-Feb-15	24-Apr-15	29-Apr-15	60	82	0%
Pier C3 (C4c)											
Foundation Works											
GFXX209	C3 (C4c) - Predrilling (3 nos)	12	09-Dec-14 A	100%	0	27-Dec-14 A					100%
GFXX209-2	C3 (C4c) - Confirm Rockhead Levels	8	29-Dec-14 A	100%	0	07-Jan-15 A					100%
GFXX210	C3 (C4c) - Bored Piles (2.00m dia. x 3 nos)	90	08-Jan-15 A	11.11%	80	04-May-15	09-Mar-15	16-Jun-15	36	0	30%
Pier C4 (C4b)											
Foundation Works											
GFXX204-2	C4 (C4b) - Confirm Rockhead Levels	8	15-Dec-14 A	100%	0	23-Dec-14 A					100%
GFXX205	C4 (C4b) - Bored Piles (2.00m dia. x 3 nos)	84	24-Dec-14 A	23.81%	64	14-Apr-15	04-Dec-14	23-Feb-15	-39	0	35%
GFXX206	C4 (C4b) - Sonic & Interface Coring	12	15-Apr-15	0%	12	28-Apr-15	24-Feb-15	09-Mar-15	-39	0	0%
Pier C5 (C4a)											
Foundation Works											
GFXX200	C5 (C4a) - Bored Piles (2.35m dia. x 2 nos)	84	05-Dec-14 A	40.48%	50	24-Mar-15	15-Dec-14	14-Feb-15	-30	0	40%
GFXX201	C5 (C4a) - Sonic & Interface Coring	12	25-Mar-15	0%	12	11-Apr-15	14-Feb-15	04-Mar-15	-30	0	0%
GFXX202	C5 (C4a) - Dismantle removable panels of temp. platform	5	13-Apr-15	0%	5	17-Apr-15	04-Mar-15	10-Mar-15	-30	0	0%
Pile Cap Works											
SC4A0070	C5 (C4a) - Marine Pile Cap M2b - Inst.Floating Seal & Casing Head Steelwork	7	18-Apr-15	0%	7	27-Apr-15	10-Mar-15	18-Mar-15	-29	37	0%
Pier C6 (C3f)											
Foundation Works											
GFXX193	C6 (C3f) - Inst.Temp.Working Platform	12	20-Jan-15 A	16.67%	10	02-Feb-15	01-Dec-14	11-Dec-14	-42	0	20%
GFXX194	C6 (C3f) - Predrilling (3 nos)	12	03-Feb-15	0%	12	16-Feb-15	12-Dec-14	27-Dec-14	-42	0	0%
GFXX194-2	C6 (C3f) - Confirm Rockhead Levels	8	17-Feb-15	0%	8	28-Feb-15	29-Dec-14	07-Jan-15	-42	0	0%
GFXX195	C6 (C3f) - Bored Piles (2.00m dia. x 3 nos)	60	02-Mar-15	0%	60	15-May-15	08-Jan-15	21-Mar-15	-42	0	0%
Bridge C3											
Pier C7 (C3e)											
Socketted H-Pile Installation											
GFXX398	C7 (C3e) - Install SH Pile (16 no.)	120	09-Mar-15*	0%	120	04-Aug-15	09-Mar-15	04-Aug-15	0	0%	0%
Pile Cap Works											
SC3E0090	C7 (C3e) - Pile cap Excavation / ELS	20	22-Jan-15	0%	20	13-Feb-15	08-Aug-15	02-Sep-15	147	0	0%
SC3E0092	C7 (C3e) - Pile cap Pile breakdown to cut-off etc.	4	14-Feb-15	0%	4	18-Feb-15	03-Sep-15	07-Sep-15	147	40	0%
SC3E0100	C7 (C3e) - Pile cap Blinding	1	16-Apr-15	0%	1	16-Apr-15	08-Sep-15	08-Sep-15	107	0	0%
SC3E0120	C7 (C3e) - Pile cap Rebarwork	4	17-Apr-15	0%	4	21-Apr-15	10-Sep-15	14-Sep-15	107	0	0%
Pier C8 (C3d)											
Socketted H-Pile Installation											



Actual Work
Planned Bar
Critical Bar
Milestone

Project ID: J3518DWPrE-M20
Layout: J3518-DWP-3MRP Submission - M20
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Tuen Mun - Chek Lap Kok Link - Southern Connection
3-Month Rolling Programme (Page 20 of 40 Pages)
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DWG. No.:
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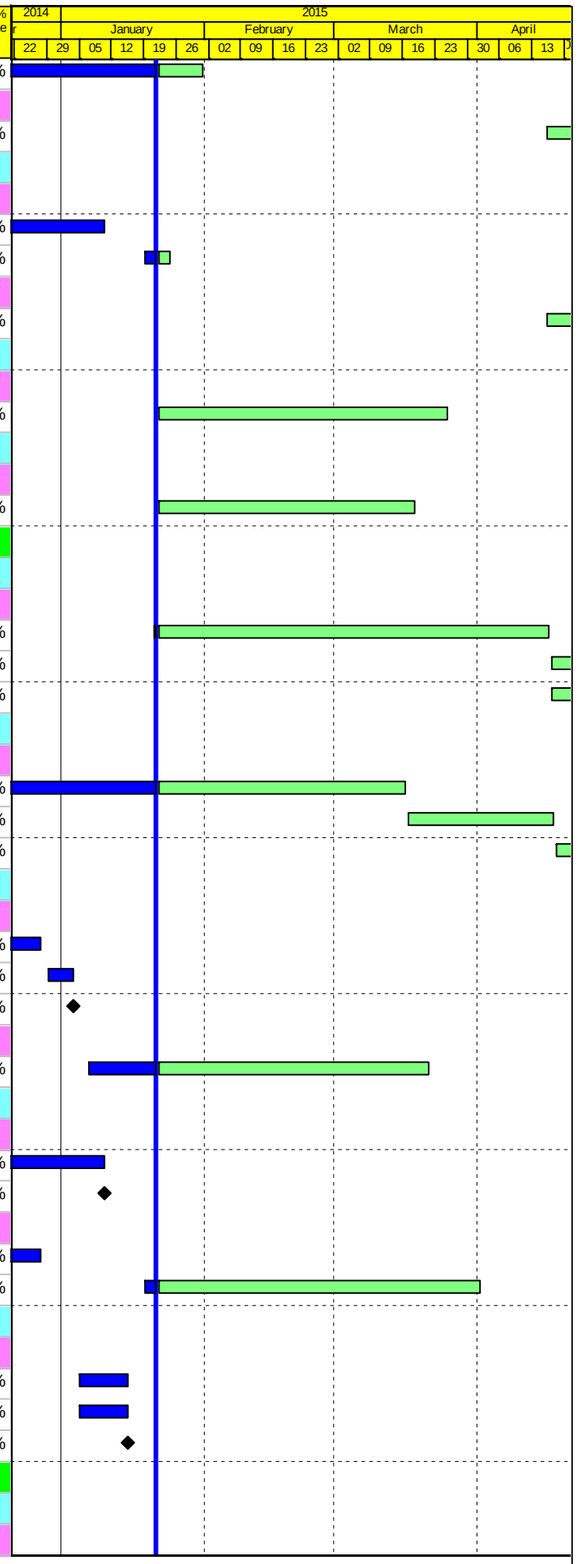
GFXX393	C8 (C3d) - Install SH Pile (16 no.)	90	29-Nov-14 A	90%	9	31-Jan-15	12-Aug-15	21-Aug-15	162	0	80%
Pile Cap Works											
SC3D0090	C8 (C3d) - Pile cap Excavation / ELS (incl. sheet piling)	36	16-Apr-15	0%	36	02-Jun-15	22-Aug-15	07-Oct-15	93	0	0%
Pier C9 (C3c)											
Foundation Works											
GFXX420	C9 (C3c) - Bored Pile (2.00m dia. x 3 nos)	110	18-Nov-14 A	100%	0	10-Jan-15 A					100%
GFXX421-1	C9 (C3c) - Sonic & Interface Coring Tests	12	19-Jan-15 A	75%	3	24-Jan-15	05-Aug-15	07-Aug-15	156	62	100%
Pile Cap Works											
SC3C0090	C9 (C3c) - Pile cap Excavation / ELS (incl. sheet piling)	18	16-Apr-15	0%	18	08-May-15	15-Oct-15	06-Nov-15	134	0	0%
Pier C10 (C3b)											
Foundation Works											
GFXX418	C10 (C3b) - Bored Pile (2.20m dia. x 2 nos)	51	22-Jan-15	0%	51	25-Mar-15	20-Mar-15	23-May-15	46	0	0%
Pier C11 (C3a)											
Foundation Works											
GFXX416	C11 (C3a) - Bored Pile (2.00m dia. x 2 nos)	45	22-Jan-15	0%	45	18-Mar-15	07-Jul-15	27-Aug-15	131	0	0%
Bridge C2											
Pier C12 (C2f)											
Foundation Works											
GFXX412	C12 (C2f) - Bored Pile (2.00m dia. x 2 nos)	66	21-Jan-15 A	0%	66	16-Apr-15	27-May-15	13-Aug-15	98	0	5%
GFXX413	C12 (C2f) - Sonic & Interface Coring Tests	12	17-Apr-15	0%	12	30-Apr-15	14-Aug-15	27-Aug-15	98	0	0%
GFXX422-4	C12 (C2f) - Selection of bored pile for Full Depth Coring	24	17-Apr-15	0%	24	15-May-15	09-Oct-15	06-Nov-15	144	0	0%
Pier C13 (C2e) Portal											
Socketted H-Pile Installation											
GFXX388	C13 (C2e) - Install SH Pile (10 nr.)	66	15-Dec-14 A	34.85%	43	16-Mar-15	03-Jul-15	21-Aug-15	128	0	60%
GFXX399-4	C13 (C2e) - Selction of pile for Loading Test	24	17-Mar-15	0%	24	17-Apr-15	22-Aug-15	18-Sep-15	128	0	0%
GFXX399-6	C13 (C2e) - Loading Test for pre-bored H-pile	36	18-Apr-15	0%	36	01-Jun-15	19-Sep-15	03-Nov-15	128	0	0%
Pier C14 (C2d)											
Preliminary Works for Land Piling											
PC140020	C14 (C2d) - Erect fencing & site clearance	5	20-Dec-14 A	100%	0	27-Dec-14 A					100%
PC140030	C14 (C2d) - Set up piling platform	15	29-Dec-14 A	100%	0	03-Jan-15 A					100%
PC140040	C14 (C2d) - Complete Civil Preparation Works for piling to commence	0		100%	0	03-Jan-15 A					100%
Socketted H-Pile Installation											
GFXX381-2	C14 (C2d) - Install SH Pile (12 nr)	60	07-Jan-15 A	20%	48	21-Mar-15	28-Oct-15	22-Dec-15	225	0	30%
Pier C15 (C2c)											
Preliminary Works for Land Piling											
PC150030	C15 (C2c) - Set up piling platform	15	17-Nov-14 A	100%	0	10-Jan-15 A					100%
PC150040	C15 (C2c) - Complete Civil Preparation Works for piling to commence	0		100%	0	10-Jan-15 A					100%
Socketted H-Pile Installation											
GFXX380-6	C15 (C2c) - Confirm Rockhead Levels	8	17-Dec-14 A	100%	0	27-Dec-14 A					100%
GFXX381-3	C15 (C2c) - Install SH Pile (13 nr)	60	19-Jan-15 A	5%	57	01-Apr-15	30-Oct-15	07-Jan-16	227	0	5%
Pier C16 (C2b)											
Preliminary Works for Land Piling											
PC160020	C16 (C2b) - Erect fencing & site clearance	5	05-Jan-15 A	100%	0	15-Jan-15 A					100%
PC160030	C16(C2b) - Set up piling platform	15	05-Jan-15 A	100%	0	15-Jan-15 A					100%
PC160040	C16 (C2b) - Complete civil preparation works for piling to commence	0		100%	0	15-Jan-15 A					100%
Bridge C1											
Pier C17 (C2a)											
Preliminary Works for Land Piling											



Actual Work
Planned Bar
Critical Bar
Milestone

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Tuen Mun - Chek Lap Kok Link - Southern Connection
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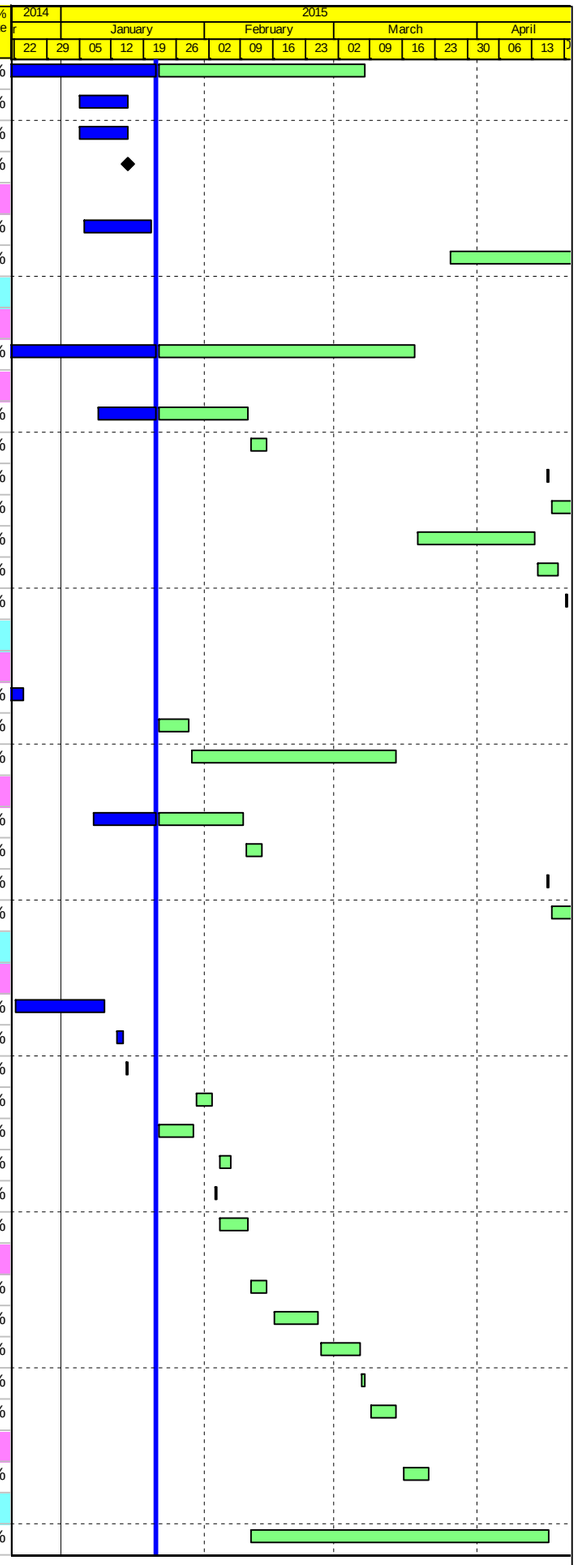
PC170010	C17 (C2a) - Install Geo. Instru. & Baseline Monitoring	36	08-Oct-14 A	0%	36	07-Mar-15	16-May-18	28-Jun-18	979	979	0%
PC170020	C17 (C2a) - Erect fencing & site clearance	5	05-Jan-15 A	100%	0	15-Jan-15 A					100%
PC170030	C17(C2a) - Set up piling platform	15	05-Jan-15 A	100%	0	15-Jan-15 A					100%
PC170040	C17 (C2a) - Complete civil preparation works for piling to commence	0		100%	0	15-Jan-15 A					100%
Foundation Works											
GFXX404-4	C17 (C2a) - Confirm Rockhead Levels	8	06-Jan-15 A	100%	0	20-Jan-15 A					100%
GFXX406	C17 (C2a) - Bored Pile (2.00m dia. x 2 nos)	52	26-Mar-15	0%	52	01-Jun-15	15-Jul-15	12-Sep-15	87	0	0%
Pier C18 (C3d) Portal											
Socketted H-Pile Installation											
GFXX374	C18 (C1e) - Install SH Pile (10 nr)	56	17-Nov-14 A	19.64%	45	18-Mar-15	18-Feb-16	15-Apr-16	316	0	50%
Pile Cap Works											
SC1EL090	C18A (C1e-L) - Pile cap Excavation / ELS	18	09-Jan-15 A	5.56%	17	10-Feb-15	21-Mar-16	15-Apr-16	325	0	5%
SC1EL092	C18A (C1e-L) - Pile cap Pile breakdown to cut-off etc	4	11-Feb-15	0%	4	14-Feb-15	05-May-16	09-May-16	340	43	0%
SC1EL100	C18A (C1e-L) - Pile cap Blinding	1	16-Apr-15	0%	1	16-Apr-15	10-May-16	10-May-16	297	0	0%
SC1EL120	C18A (C1e-L) - Pile cap Rebarwork	4	17-Apr-15	0%	4	21-Apr-15	11-May-16	16-May-16	297	0	0%
SC1ER090	C18B (C1e-R) - Pile cap Excavation / ELS	18	19-Mar-15	0%	18	13-Apr-15	15-Apr-16	09-May-16	297	0	0%
SC1ER092	C18B (C1e-R)- Pile cap Pile breakdown to cut-off etc	4	14-Apr-15	0%	4	18-Apr-15	09-May-16	13-May-16	297	0	0%
SC1ER100	C18B (C1e-R)- Pile cap Blinding	1	20-Apr-15	0%	1	20-Apr-15	13-May-16	16-May-16	297	0	0%
Pier C19 (C1d)											
Socketted H-Pile Installation											
GFXX369-2	C19 (C1d) - Install SH Pile (9 nr)	56	10-Nov-14 A	100%	0	24-Dec-14 A					100%
GFXX399-7	C19 (C1d) - Selection of Pile for Loading Test	6	22-Jan-15	0%	6	28-Jan-15	09-May-18	15-May-18	973	0	0%
GFXX399-8	C19 (C1d) - Loading Test for pre-bored H-pile	36	29-Jan-15	0%	36	14-Mar-15	16-May-18	28-Jun-18	973	973	0%
Pile Cap Works											
SC1D0090	C19 (C1d) - Pile cap Excavation / ELS (incl. sheet piling)	18	08-Jan-15 A	11.11%	16	09-Feb-15	21-Sep-16	12-Oct-16	459	0	10%
SC1D0092	C19 (C1d) - Pile Breakdown to cut-off etc.	4	10-Feb-15	0%	4	13-Feb-15	13-Oct-16	17-Oct-16	459	44	0%
SC1D0100	C19 (C1d) - Pile cap Blinding	1	16-Apr-15	0%	1	16-Apr-15	18-Oct-16	18-Oct-16	415	0	0%
SC1D0120	C19 (C1d) - Pile cap Rebarwork	4	17-Apr-15	0%	4	21-Apr-15	19-Oct-16	24-Oct-16	415	0	0%
Pier C20 (C1c) & Abutment C											
Pile Cap Works											
SC1C0090	C20 (C1c) - Pile cap Excavation / ELS	18	22-Dec-14 A	100%	0	10-Jan-15 A					100%
SC1C0092	C20 (C1c) - Pile Breakdown to cut-off etc.	7	13-Jan-15 A	100%	0	14-Jan-15 A					100%
SC1C0100	C20 (C1c) - Pile cap Blinding	1	15-Jan-15 A	100%	0	15-Jan-15 A					100%
SC1C0110	C20 (C1c) - Pile cap Formwork	3	30-Jan-15	0%	3	02-Feb-15	02-Jul-15	06-Jul-15	110	0	0%
SC1C0120	C20 (C1c) - Pile cap Rebarwork	7	22-Jan-15	0%	7	29-Jan-15	19-Jun-15	02-Jul-15	110	0	0%
SC1C0122	C20 (C1c) - Pile cap Kicker Formwork	3	04-Feb-15	0%	3	06-Feb-15	08-Oct-16	14-Oct-16	462	3	0%
SC1C0130	C20 (C1c) - Pile cap Concreting	1	03-Feb-15	0%	1	03-Feb-15	06-Jul-15	07-Jul-15	110	0	0%
SC1C0140	C20 (C1c) - Pile cap Curing & Striking of Forms incl. CJ prep	6	04-Feb-15	0%	6	10-Feb-15	07-Jul-15	14-Jul-15	111	0	0%
Pier Works											
SC1C0150	C20 (C1c) - Pier/Pier Head Scaffolding	4	11-Feb-15	0%	4	14-Feb-15	14-Oct-16	19-Oct-16	459	0	0%
SC1C0160	C20 (C1c) - Pier/Pier Head Rebarwork	6	16-Feb-15	0%	6	25-Feb-15	19-Oct-16	28-Oct-16	459	0	0%
SC1C0170	C20 (C1c) - Pier/Pier Head Formwork	8	26-Feb-15	0%	8	06-Mar-15	28-Oct-16	08-Nov-16	461	0	0%
SC1C0180	C20 (C1c) - Pier/Pier Head Concreting	1	07-Mar-15	0%	1	07-Mar-15	09-Nov-16	09-Nov-16	461	0	0%
SC1C0190	C20 (C1c) - Pier/Pier Head Curing & Striking of Forms incl. CJ prep	6	09-Mar-15	0%	6	14-Mar-15	10-Nov-16	16-Nov-16	461	0	0%
Pier Head Segments											
SC1C0370	C20 (C1c) - Pier Head Segment - Temporary Platform	6	16-Mar-15	0%	6	21-Mar-15	17-Nov-16	23-Nov-16	461	124	0%
Abutment & Approach Ramp C											
SC1C0200	Abutment C - Walls & Staircase	48	11-Feb-15	0%	48	16-Apr-15	15-Jul-15	14-Sep-15	111	47	0%



Actual Work
Planned Bar
Critical Bar
Milestone

Project ID: J3518DWPrE-M20
Layout: J3518-DWP-3MRP Submission - M20
Filter: TASK filters: 3-Month Lookahead, No CC
Milestones, No Level of Effort.

Tuen Mun - Chek Lap Kok Link - Southern Connection

3-Month Rolling Programme (Page 22 of 40 Pages)

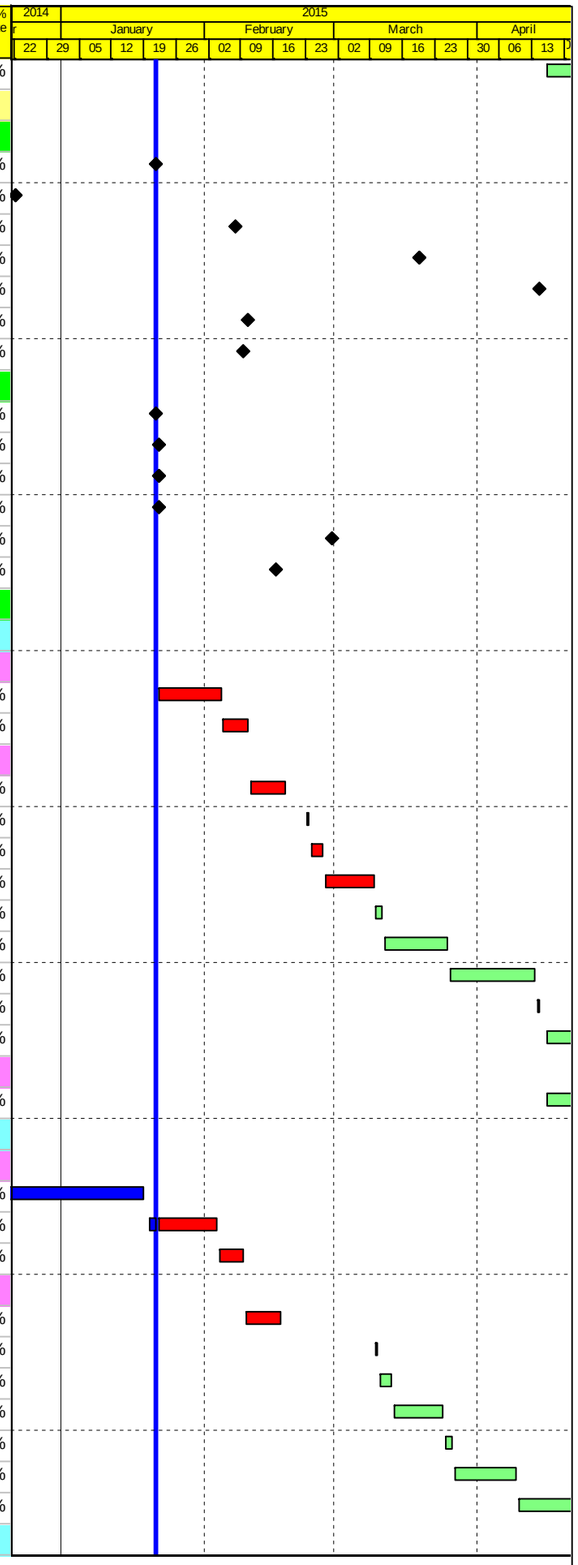
(Progress as of 21-Jan-15)

Date	Revision	Checked	Approved
21-Jan-15		DB	

DWG. No.:

J3518/GCL/PGM/3MRP-M20

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete
SC1C0250	AR-C - RE Walls - Erect fencing, Excavation/formation/ drainage filter & bottom layer to grd l	12	16-Apr-15	0%	12	30-Apr-15	15-Jul-15	30-Jul-15	64	0	0%
Viaduct D											
Milestones - Marine Foundation											
GFXX228	Viaduct D - ARUP issuses Pile Spacing & Diameter for Temporary Platform Design	0		0%	0	21-Jan-15		28-Jun-18	1015	1015	0%
GFXX230-1	Pier D7 (D3e) - Start date for piling	0	22-Dec-14 A	100%	0						100%
GFXX233-1	Pier D7 (D3e) - Completion of Piling Works	0		0%	0	07-Feb-15		16-Mar-15	28	0	0%
GFXX243-3	Pier D5 (D4b) - Completion of Piling Works	0		0%	0	19-Mar-15		18-Feb-15	-22	0	0%
GFXX248-1	Pier D4 (D4c) - Completion of Piling Works	0		0%	0	14-Apr-15		30-Jan-15	-56	1	0%
GFXX253-1	Pier D3 (D4d) - Completion of Piling Works	0		0%	0	10-Feb-15		29-Jan-15	-10	0	0%
GFXX258-2	Pier D2 (D4e) - Completion of Piling Works	0		0%	0	09-Feb-15		28-Jan-15	-10	0	0%
Milestones - Land Foundation											
GFXX446A2	D14 (D2c) - Completion of piling works	0		0%	0	21-Jan-15		25-Jul-15	148	0	0%
GFXX446B	D15 (D2b) - Start date for piling	0	22-Jan-15	0%	0		20-May-15		93	88	0%
GFXX454A	D13 (D2d) - Start date for piling	0	22-Jan-15	0%	0		18-Aug-15		167	104	0%
GFXX461C	D12 (D2e) - Start date for piling	0	22-Jan-15	0%	0		23-Jul-15		145	105	0%
GFXX466-2	D9 (D3c) - Completion of piling works	0		0%	0	28-Feb-15		28-Jun-18	985	985	0%
GFXX471-2	D8 (D3d) - Completion of piling works	0		0%	0	16-Feb-15		23-Feb-15	2	0	0%
Bridge D3											
Pier D1 (D4f)											
Foundation Works											
GFXX262	D1 (D4f) - Sonic & Interface Coring	12	22-Jan-15	0%	12	04-Feb-15	22-Dec-14	07-Jan-15	-24	0	0%
GFXX263	D1 (D4f) - Dismantle removable panels of temp. platform	5	05-Feb-15	0%	5	10-Feb-15	08-Jan-15	13-Jan-15	-24	0	0%
Pile Cap Works											
SD4F0070	D1 (D4f) - Marine Pile Cap M2 - Inst.Floating Seal & Casing Head Steelwork	7	11-Feb-15	0%	7	18-Feb-15	14-Jan-15	21-Jan-15	-24	0	0%
SD4F0080	D1 (D4f) - Marine Pile Cap M2 - Install precast shell in position	1	23-Feb-15	0%	1	23-Feb-15	22-Jan-15	22-Jan-15	-24	0	0%
SD4F0090	D1 (D4f) - Marine Pile Cap M2 - Inst.Access & make Watertight	3	24-Feb-15	0%	3	26-Feb-15	23-Jan-15	26-Jan-15	-24	0	0%
SD4F0100	D1 (D4f) - Marine Pile Cap M2 - Weld Fin plates/Plug Rebar & Concrete	9	27-Feb-15	0%	9	09-Mar-15	27-Jan-15	05-Feb-15	-24	0	0%
SD4F0110	D1 (D4f) - Marine Pile Cap M2 - Dewater precast shell / Remove Lifting Frame	2	10-Mar-15	0%	2	11-Mar-15	10-Apr-15	13-Apr-15	24	0	0%
SD4F0120	D1 (D4f) - Marine Pile Cap M2 - Pile cut down	12	12-Mar-15	0%	12	25-Mar-15	13-Apr-15	29-Apr-15	24	0	0%
SD4F0130	D1 (D4f) - Marine Pile Cap M2 - Rebar fixing, inst.inserts etc	12	26-Mar-15	0%	12	13-Apr-15	29-Apr-15	15-May-15	24	0	0%
SD4F0140	D1 (D4f) - Marine Pile Cap M2 - Concreting	1	14-Apr-15	0%	1	14-Apr-15	15-May-15	16-May-15	24	0	0%
SD4F0164	D1 (D4f) - Marine Pile Cap M2 - Curing incl. CJ preparation	6	16-Apr-15	0%	6	22-Apr-15	16-May-15	26-May-15	24	0	0%
Pier Works											
SD4F0170	D1 (D4f) - Type 4B-MJ Pier Temp. Support Platform	6	16-Apr-15	0%	6	22-Apr-15	16-May-15	26-May-15	24	0	0%
Pier D2 (D4e)											
Foundation Works											
GFXX256	D2 (D4e) - Bored Piles (2.2m dia. x 2 nos)	63	19-Sep-14 A	100%	0	19-Jan-15 A					100%
GFXX257	D2 (D4e) - Sonic & Interface Coring	12	20-Jan-15 A	8.33%	11	03-Feb-15	10-Jan-15	22-Jan-15	-10	0	0%
GFXX258	D2 (D4e) - Dismantle removable panels of temp. platform	5	04-Feb-15	0%	5	09-Feb-15	23-Jan-15	28-Jan-15	-10	0	0%
Pile Cap Works											
SD4E0070	D2 (D4e) - Marine Pile Cap M2b - Inst.Floating Seal & Casing Head Steelwork	7	10-Feb-15	0%	7	17-Feb-15	29-Jan-15	05-Feb-15	-10	14	0%
SD4E0080	D2 (D4e) - Marine Pile Cap M2b - Install precast shell in position	1	10-Mar-15	0%	1	10-Mar-15	06-Feb-15	06-Feb-15	-24	0	0%
SD4E0090	D2 (D4e) - Marine Pile Cap M2b - Inst.Access & make Watertight	3	11-Mar-15	0%	3	13-Mar-15	10-Nov-15	12-Nov-15	180	0	0%
SD4E0100	D2 (D4e) - Marine Pile Cap M2b - Weld Fin plates/Plug Rebar & Concrete	9	14-Mar-15	0%	9	24-Mar-15	13-Nov-15	23-Nov-15	180	0	0%
SD4E0120	D2 (D4e) - Marine Pile Cap M2b - Dewater precast shell / Remove Lifting Frame	2	25-Mar-15	0%	2	26-Mar-15	24-Nov-15	25-Nov-15	180	0	0%
SD4E0130	D2 (D4e) - Marine Pile Cap M2b - Pile cut down	8	27-Mar-15	0%	8	09-Apr-15	26-Nov-15	04-Dec-15	180	0	0%
SD4E0140	D2 (D4e) - Marine Pile Cap M2b - Rebar fixing, inst.inserts etc	12	10-Apr-15	0%	12	25-Apr-15	05-Dec-15	18-Dec-15	180	0	0%
Pier D3 (D4d)											



Actual Work
Planned Bar
Critical Bar
Milestone

Project ID: J3518DWPrE-M20
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Milestones, No Level of Effort.

Tuen Mun - Chek Lap Kok Link - Southern Connection
3-Month Rolling Programme (Page 23 of 40 Pages)
(Progress as of 21-Jan-15)

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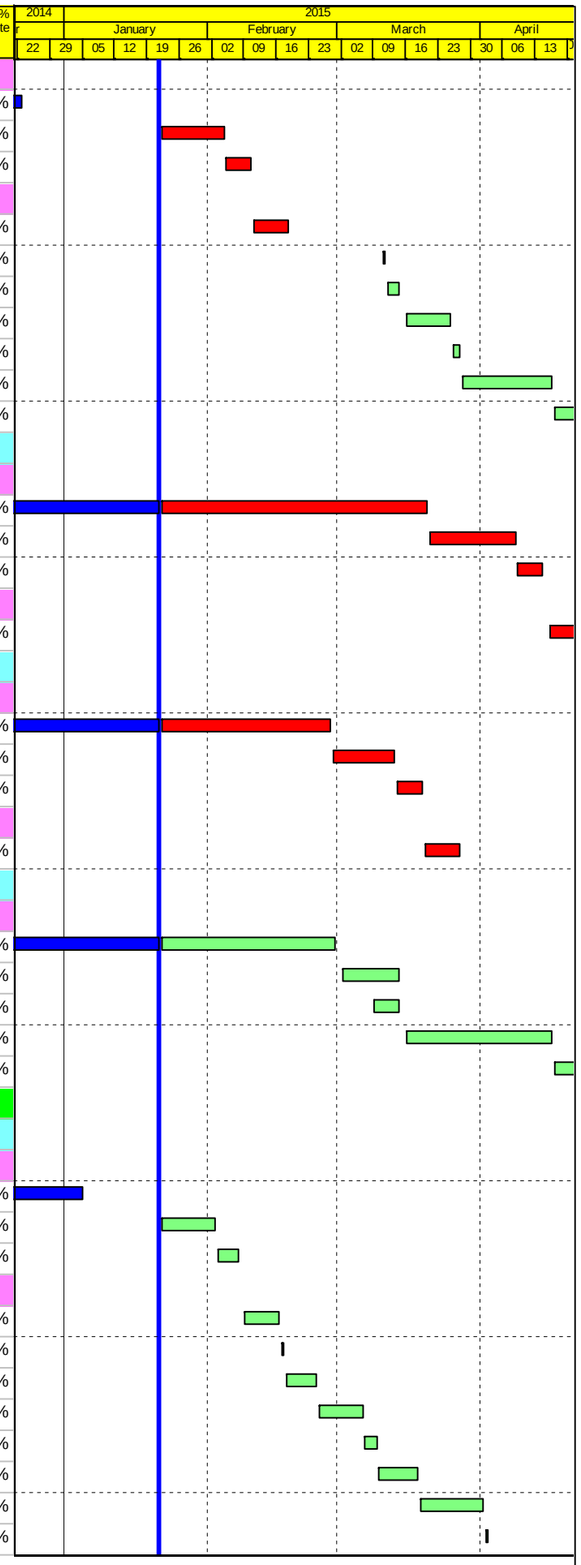
21-Jan-15		DB	

DWG. No.:
J3518/GCL/PGM/3MRP-M20

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete
Foundation Works											
GFXX251	D3 (D4d) - Bored Piles (2.20m dia. x 3 nos)	52	03-Nov-14 A	100%	0	23-Dec-14 A					100%
GFXX252	D3 (D4d) - Sonic & Interface Coring	12	22-Jan-15	0%	12	04-Feb-15	10-Jan-15	23-Jan-15	-10	0	0%
GFXX253	D3 (D4d) - Dismantle removable panels of temp. platform	5	05-Feb-15	0%	5	10-Feb-15	24-Jan-15	29-Jan-15	-10	0	0%
Pile Cap Works											
SD4D0070	D3 (D4d) - Marine Pile Cap M2b - Inst.Floating Seal & Casing Head Steelwork	7	11-Feb-15	0%	7	18-Feb-15	30-Jan-15	06-Feb-15	-10	14	0%
SD4D0080	D3 (D4d) - Marine Pile Cap M2b - Install precast shell in position	1	11-Mar-15	0%	1	11-Mar-15	07-Feb-15	07-Feb-15	-24	0	0%
SD4D0090	D3 (D4d) - Marine Pile Cap M2b - Inst.Access & make Watertight	3	12-Mar-15	0%	3	14-Mar-15	20-Apr-15	22-Apr-15	28	0	0%
SD4D0100	D3 (D4d) - Marine Pile Cap M2b - Weld Fin plates/Plug Rebar & Concrete	9	16-Mar-15	0%	9	25-Mar-15	24-Apr-15	05-May-15	28	0	0%
SD4D0120	D3 (D4d) - Marine Pile Cap M2b - Dewater precast shell / Remove Lifting Frame	2	26-Mar-15	0%	2	27-Mar-15	06-May-15	07-May-15	28	0	0%
SD4D0130	D3 (D4d) - Marine Pile Cap M2b - Pile cut down	12	28-Mar-15	0%	12	16-Apr-15	08-May-15	23-May-15	28	0	0%
SD4D0140	D3 (D4d) - Marine Pile Cap M2b - Rebar fixing, inst.inserts etc	12	17-Apr-15	0%	12	02-May-15	26-May-15	10-Jun-15	28	0	0%
Pier D4 (D4c)											
Foundation Works											
GFXX246	D4 (D4c) - Bored Piles (2.20m dia. x 3 nos)	62	06-Nov-14 A	24.19%	47	20-Mar-15	14-Nov-14	10-Jan-15	-56	0	25%
GFXX247	D4 (D4c) - Sonic & Interface Coring	12	21-Mar-15	0%	12	08-Apr-15	12-Jan-15	24-Jan-15	-56	0	0%
GFXX248	D4 (D4c) - Dismantle removable panels of temp. platform	5	09-Apr-15	0%	5	14-Apr-15	26-Jan-15	30-Jan-15	-56	0	0%
Pile Cap Works											
SD4C0070	D4 (D4c) - Marine Pile Cap M2b - Inst.Floating Seal & Casing Head Steelwork	7	16-Apr-15	0%	7	24-Apr-15	31-Jan-15	07-Feb-15	-56	0	0%
Pier D5 (D4b)											
Foundation Works											
GFXX241	D5 (D4b) - Bored Piles (2.2m dia. x 2 nos)	58	12-Dec-14 A	50%	29	27-Feb-15	24-Dec-14	29-Jan-15	-22	0	60%
GFXX242	D5 (D4b) - Sonic & Interface Coring	12	28-Feb-15	0%	12	13-Mar-15	30-Jan-15	12-Feb-15	-22	0	0%
GFXX243	D5 (D4b) - Dismantle removable panels of temp. platform	5	14-Mar-15	0%	5	19-Mar-15	13-Feb-15	18-Feb-15	-22	0	0%
Pile Cap Works											
SD4B0070	D5 (D4b) - Marine Pile Cap M2b - Inst.Floating Seal & Casing Head Steelwork	7	20-Mar-15	0%	7	27-Mar-15	23-Feb-15	02-Mar-15	-22	19	0%
Pier D6 (D4a)											
Foundation Works											
GFXX236	D6 (D4a) - Bored Piles (1.80m dia. x 3 nos)	62	03-Dec-14 A	51.61%	30	28-Feb-15	28-Jan-15	06-Mar-15	5	0	40%
GFXX237	D6 (D4a) - Sonic & Interface Coring	12	02-Mar-15	0%	12	14-Mar-15	07-Mar-15	20-Mar-15	5	0	0%
GFXX237-1	D6 (D4a) - Selection of bored pile for Full Depth Coring	6	09-Mar-15	0%	6	14-Mar-15	14-Mar-15	20-Mar-15	5	0	0%
GFXX237-2	D6 (D4a) - Bored Pile Full Depth Coring & Testing	24	16-Mar-15	0%	24	16-Apr-15	21-Mar-15	22-Apr-15	5	0	0%
GFXX238	D6 (D4a) - Dismantle removable panels of temp. platform	5	17-Apr-15	0%	5	22-Apr-15	23-Apr-15	28-Apr-15	5	0	0%
Bridge D2											
Pier D7 (D3e)											
Foundation Works											
GFXX231	D7 (D3e) - Bored Piles (2.2m dia. x 2 nos)	78	22-Nov-14 A	100%	0	05-Jan-15 A					100%
GFXX232	D7 (D3e) - Sonic & Interface Coring	10	22-Jan-15	0%	10	02-Feb-15	27-Feb-15	10-Mar-15	28	0	0%
GFXX233	D7 (D3e) - Dismantle removable panels of temp. platform	5	03-Feb-15	0%	5	07-Feb-15	11-Mar-15	16-Mar-15	28	0	0%
Pile Cap Works											
SD3E0070	D7 (D3e) - Marine Pile Cap M2b - Inst.Floating Seal & Casing Head Steelwork	7	09-Feb-15	0%	7	16-Feb-15	17-Mar-15	24-Mar-15	28	0	0%
SD3E0080	D7 (D3e) - Marine Pile Cap M2b - Install precast shell in position	1	17-Feb-15	0%	1	17-Feb-15	25-Mar-15	25-Mar-15	28	0	0%
SD3E0090	D7 (D3e) - Marine Pile Cap M2b - Inst.Access & make Watertight	3	18-Feb-15	0%	3	24-Feb-15	26-Mar-15	28-Mar-15	28	0	0%
SD3E0100	D7 (D3e) - Marine Pile Cap M2b - Weld Fin plates/Plug Rebar & Concrete	9	25-Feb-15	0%	9	06-Mar-15	30-Mar-15	13-Apr-15	28	0	0%
SD3E0120	D7 (D3e) - Marine Pile Cap M2b - Dewater precast shell / Remove Lifting Frame	2	07-Mar-15	0%	2	09-Mar-15	14-Apr-15	16-Apr-15	28	0	0%
SD3E0130	D7 (D3e) - Marine Pile Cap M2b - Pile cut down	8	10-Mar-15	0%	8	18-Mar-15	17-Apr-15	27-Apr-15	28	0	0%
SD3E0140	D7 (D3e) - Marine Pile Cap M2b - Rebar fixing, inst.inserts etc	12	19-Mar-15	0%	12	01-Apr-15	28-Apr-15	13-May-15	28	0	0%
SD3E0150	D7 (D3e) - Marine Pile Cap M2b - Concreting	1	02-Apr-15	0%	1	02-Apr-15	14-May-15	14-May-15	28	0	0%



Actual Work
Planned Bar
Critical Bar
Milestone

Project ID: J3518DWPrE-M20
Layout: J3518-DWP-3MRP Submission - M20
Filter: TASK filters: 3-Month Lookahead, No CC
Milestones, No Level of Effort.

Tuen Mun - Chek Lap Kok Link - Southern Connection

3-Month Rolling Programme (Page 24 of 40 Pages)

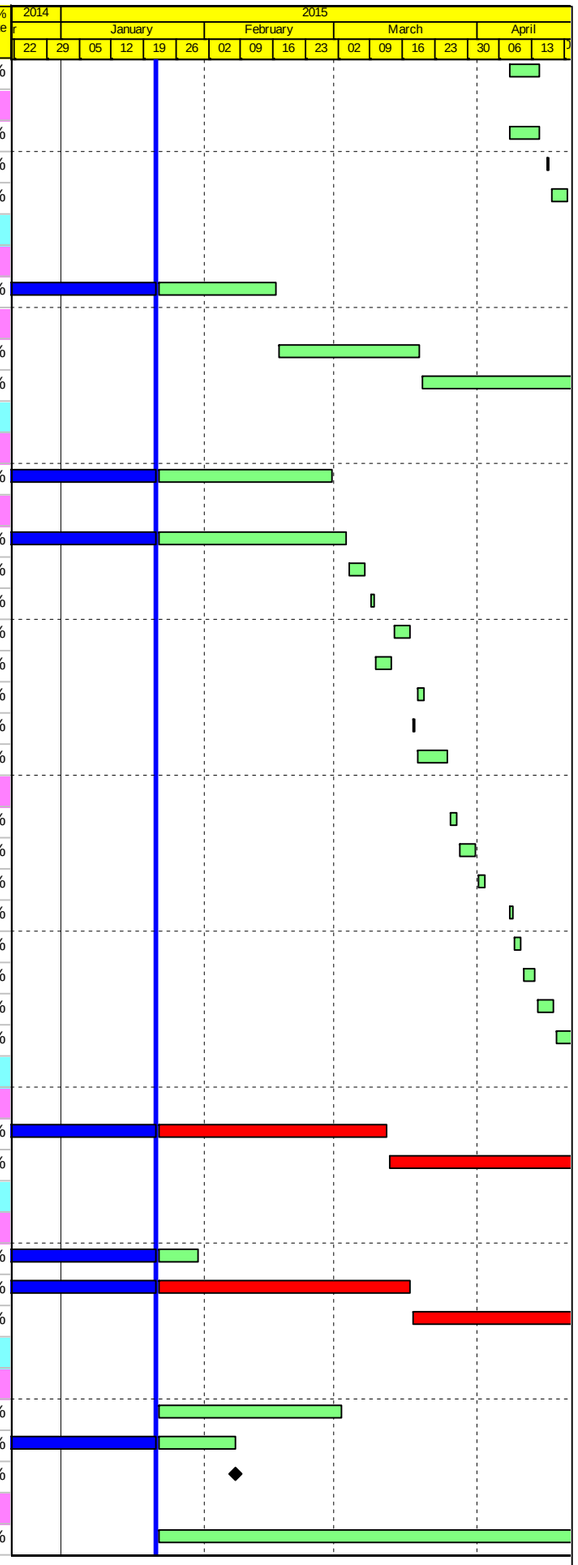
(Progress as of 21-Jan-15)

Date	Revision	Checked	Approved
21-Jan-15		DB	

DWG. No.:

J3518/GCL/PGM/3MRP-M20

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete
SD3E0160	D7 (D3e) - Marine Pile Cap M2b - Curing incl. CJ Preparation	6	08-Apr-15	0%	6	14-Apr-15	15-May-15	22-May-15	28	0	0%
Pier Works											
SD3E0170	D7 (D3e) - Type 4B Pier Temp. Support Platform	6	08-Apr-15	0%	6	14-Apr-15	15-May-15	22-May-15	28	0	0%
SD3E0172	D7 (D3e) - Type 4B Pier Scaffolding (1st Lift)	1	16-Apr-15	0%	1	16-Apr-15	23-May-15	23-May-15	28	0	0%
SD3E0180	D7 (D3e) - Type 4B Pier Rebarwork (1st Lift)	3	17-Apr-15	0%	3	20-Apr-15	26-May-15	28-May-15	28	0	0%
Pier D8 (D3d)											
Socketted H-Pile Installation											
GFXX471	D8 (D3d) - Installation of SH Pile (18 nr)	95	18-Oct-14 A	76.84%	22	16-Feb-15	24-Jan-15	23-Feb-15	2	0	95%
Pile Cap Works											
SD3D0088	D8 (D3d) - Pile cap - Pipe Pile Wall for ELS	24	17-Feb-15	0%	24	19-Mar-15	23-Feb-15	23-Mar-15	2	0	0%
SD3D0090	D8 (D3d) - Pile cap Excavation / ELS	36	20-Mar-15	0%	36	08-May-15	23-Mar-15	13-May-15	2	0	0%
Pier D9 (D3c)											
Socketted H-Pile Installation											
GFXX466	D9 (D3c) - Installation of SH Pile (16 nr)	80	20-Nov-14 A	62.5%	30	28-Feb-15	27-Feb-17	01-Apr-17	621	0	55%
Pile Cap Works											
SD3C0090	D9 (D3c) - Pile cap Excavation / ELS (incl. sheet piling)	45	27-Sep-14 A	28.89%	32	03-Mar-15	15-May-15	02-Jul-15	86	0	30%
SD3C0092	D9 (D3c) - Pile cap Pile breakdown to cut-off etc.	4	04-Mar-15	0%	4	07-Mar-15	03-Jul-15	07-Jul-15	86	0	0%
SD3C0100	D9 (D3c) - Pile cap Blinding	1	09-Mar-15	0%	1	09-Mar-15	08-Jul-15	08-Jul-15	86	0	0%
SD3C0110	D9 (D3c) - Pile cap Formwork	3	14-Mar-15	0%	3	17-Mar-15	14-Jul-15	17-Jul-15	86	0	0%
SD3C0120	D9 (D3c) - Pile cap Rebarwork	4	10-Mar-15	0%	4	13-Mar-15	09-Jul-15	13-Jul-15	86	0	0%
SD3C0122	D9 (D3c) - Pile cap Kicker Formwork	2	19-Mar-15	0%	2	20-Mar-15	24-Jul-15	25-Jul-15	90	4	0%
SD3C0130	D9 (D3c) - Pile cap Concreting	1	18-Mar-15	0%	1	18-Mar-15	18-Jul-15	18-Jul-15	86	0	0%
SD3C0140	D9 (D3c) - Pile cap Curing & Striking of Forms incl. CJ prep	6	19-Mar-15	0%	6	25-Mar-15	20-Jul-15	25-Jul-15	86	0	0%
Pier Works											
SD3C0150	D9 (D3c) - Type 5B Pier Scaffolding (1st Lift)	2	26-Mar-15	0%	2	27-Mar-15	27-Jul-15	28-Jul-15	86	0	0%
SD3C0160	D9 (D3c) - Type 5B Pier Rebarwork (1st Lift)	3	28-Mar-15	0%	3	31-Mar-15	30-Jul-15	01-Aug-15	86	0	0%
SD3C0170	D9 (D3c) - Type 5B Pier Formwork & Prep for Concreting (1st Lift)	2	01-Apr-15	0%	2	02-Apr-15	03-Aug-15	04-Aug-15	86	0	0%
SD3C0180	D9 (D3c) - Type 5B Pier Concreting (1st Lift)	1	08-Apr-15	0%	1	08-Apr-15	05-Aug-15	05-Aug-15	86	0	0%
SD3C0182	D9 (D3c) - Type 5B Pier Curing & Striking of Forms incl. CJ prep (1st Lift)	2	09-Apr-15	0%	2	10-Apr-15	06-Aug-15	07-Aug-15	86	0	0%
SD3C0190	D9 (D3c) - Type 5B Pier Scaffolding (2nd Lift)	2	11-Apr-15	0%	2	13-Apr-15	08-Aug-15	10-Aug-15	86	0	0%
SD3C0200	D9 (D3c) - Type 5B Pier Rebarwork (2nd Lift)	3	14-Apr-15	0%	3	17-Apr-15	12-Aug-15	14-Aug-15	86	0	0%
SD3C0210	D9 (D3c) - Type 5B Pier Formwork & Prep for Concreting (2nd Lift)	3	18-Apr-15	0%	3	21-Apr-15	15-Aug-15	18-Aug-15	86	0	0%
Pier D10 (D3b)											
Socketted H-Pile Installation D10											
GFXX461-1	D10A (D3b) - Installation of SH Pile (6 nr)	80	10-Nov-14 A	50%	40	12-Mar-15	08-Jan-15	26-Feb-15	-12	0	80%
GFXX461-5	D10B (D3b) - Installation of SH Pile (6 nr) - Resources Refer to D10A	80	13-Mar-15	0%	80	22-Jun-15	27-Feb-15	06-Jun-15	-12	0	0%
Pier D11 (D3a)											
Socketted H-Pile Installation - D11 (D3a)											
GFXX460-5	D11 (D3a) - Confirm Rockhead Levels	8	03-Nov-14 A	0%	8	30-Jan-15	26-Feb-15	07-Mar-15	27	36	0%
GFXX461-2	D11A (D3a) - Installation of SH Pile (7 nr)	90	28-Nov-14 A	51.11%	44	17-Mar-15	12-Jan-15	07-Mar-15	-9	0	55%
GFXX461-7	D11B (D3a) - Installation of SH Pile (7 nr) - Resources Refer to D11A	90	18-Mar-15	0%	90	09-Jul-15	07-Mar-15	29-Jun-15	-9	0	0%
Pier D12 (D2e)											
Preliminary Works for Land Piling											
PD120012	D12 (D2e) - Install Geo. Instru. & Baseline Monitoring	31	22-Jan-15	0%	31	02-Mar-15	23-May-18	28-Jun-18	984	984	0%
PD120020	D12 (D2e) - Set up piling platform	30	03-Nov-14 A	50%	15	07-Feb-15	04-Jun-18	27-Jun-18	935	0	50%
PD120030	D12 (D2e) - Complete Civil Preparation Works for piling to commence	0		0%	0	07-Feb-15		27-Jun-18	935	935	0%
Socketted H-Pile Installation - D12 (D2e)											
GFXX461-3	D12A (D2e) - Installation of SH Pile (8 nr)	104	22-Jan-15	0%	104	02-Jun-15	30-Apr-15	02-Sep-15	77	0	0%



Actual Work
Planned Bar
Critical Bar
Milestone

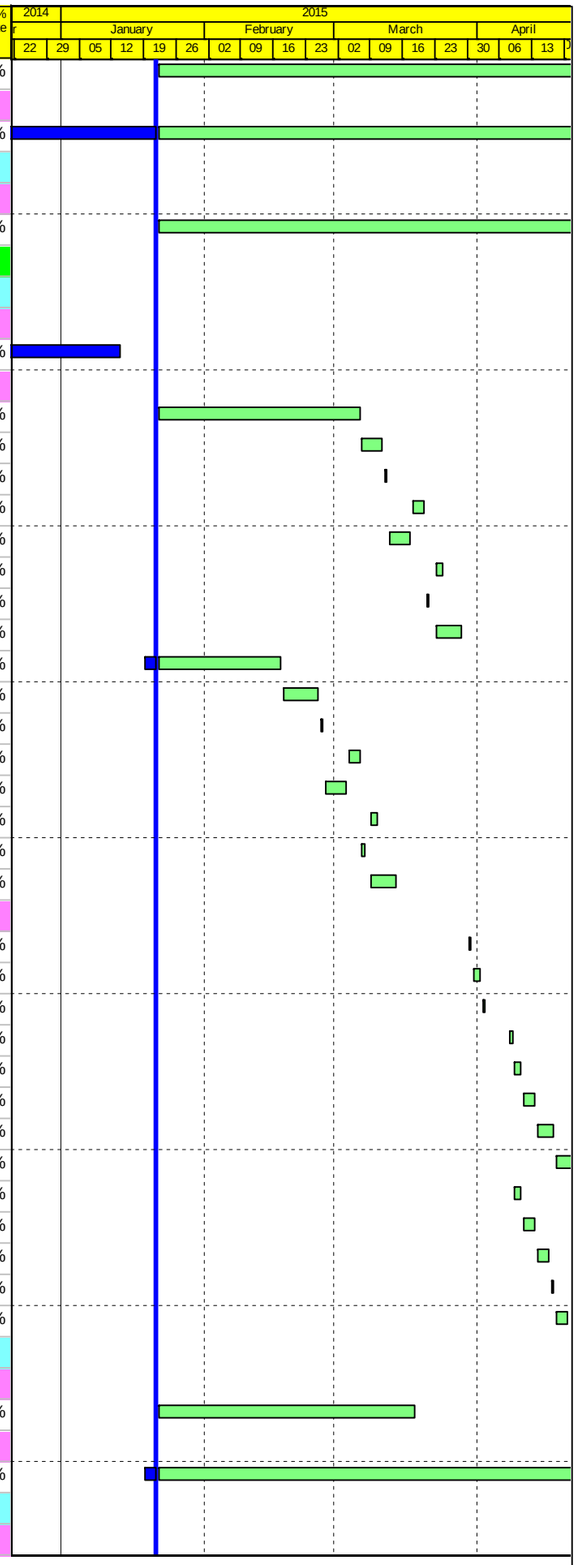
Project ID: J3518DWPrE-M20
Layout: J3518-DWP-3MRP Submission - M20
Filter: TASK filters: 3-Month Lookahead, No CC
Milestones, No Level of Effort.

Tuen Mun - Chek Lap Kok Link - Southern Connection
3-Month Rolling Programme (Page 25 of 40 Pages)
(Progress as of 21-Jan-15)

Date	Revision	Checked	Approved
21-Jan-15		DB	

DWG. No.:
J3518/GCL/PGM/3MRP-M20

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete
GFXX461-9	D12B (D2e) - Installation of SH Pile (8 nr)	104	22-Jan-15	0%	104	02-Jun-15	14-Mar-15	22-Jul-15	41	0	0%
Pile Cap Works											
SD2EL090	D12A (D2e-L) - Pile cap Excavation / ELS	34	03-Nov-14 A	0%	103	06-Jun-15	16-Apr-15	02-Sep-15	64	0	0%
Pier D13 (D2d)											
Socketted H-Pile Installation - D13 (D2d)											
GFXX454	D13 (D2d) - Installation of SH Pile (16 nos)	104	22-Jan-15	0%	104	02-Jun-15	14-Apr-15	17-Aug-15	63	0	0%
Bridge D1											
Pier D14 (D2c)											
Socketted H-Pile Installation											
GFXX446-	D14B (D2c) - Installation of SH Pile (5 nr) - Resources Refer to D14A	80	15-Dec-14 A	100%	0	14-Jan-15 A					100%
Pile Cap Works											
SD2CL090	D14A (D2c-L) - Pile cap Excavation / ELS	35	22-Jan-15	0%	35	06-Mar-15	27-Jul-15	08-Sep-15	137	0	0%
SD2CL092	D14A (D2c-L) - Pile cap Pile breakdown to cut-off etc	4	07-Mar-15	0%	4	11-Mar-15	10-Sep-15	14-Sep-15	137	0	0%
SD2CL100	D14A (D2c-L) - Pile cap Blinding	1	12-Mar-15	0%	1	12-Mar-15	15-Sep-15	15-Sep-15	137	0	0%
SD2CL110	D14A (D2c-L) - Pile cap Formwork	3	18-Mar-15	0%	3	20-Mar-15	22-Sep-15	24-Sep-15	137	0	0%
SD2CL120	D14A (D2c-L) - Pile cap Rebarwork	4	13-Mar-15	0%	4	17-Mar-15	16-Sep-15	21-Sep-15	137	0	0%
SD2CL122	D14A (D2c-L) - Pile cap Kicker Formwork	2	23-Mar-15	0%	2	24-Mar-15	03-Oct-15	05-Oct-15	141	4	0%
SD2CL130	D14A (D2c-L) - Pile cap Concreting	1	21-Mar-15	0%	1	21-Mar-15	25-Sep-15	25-Sep-15	137	0	0%
SD2CL140	D14A (D2c-L) - Pile cap Curing & Striking of Forms incl. CJ prep	6	23-Mar-15	0%	6	28-Mar-15	26-Sep-15	05-Oct-15	137	0	0%
SD2CR090	D14B (D2c-R) - Pile cap Excavation / ELS	25	19-Jan-15 A	8%	23	17-Feb-15	24-Aug-15	21-Sep-15	158	0	5%
SD2CR092	D14B (D2c-R) - Pile cap Pile breakdown to cut-off etc	4	18-Feb-15	0%	4	25-Feb-15	22-Sep-15	25-Sep-15	158	0	0%
SD2CR100	D14B (D2c-R) - Pile cap Blinding	1	26-Feb-15	0%	1	26-Feb-15	26-Sep-15	26-Sep-15	158	0	0%
SD2CR110	D14B (D2c-R) - Pile cap Formwork	3	04-Mar-15	0%	3	06-Mar-15	05-Oct-15	07-Oct-15	158	0	0%
SD2CR120	D14B (D2c-R) - Pile cap Rebarwork	4	27-Feb-15	0%	4	03-Mar-15	29-Sep-15	03-Oct-15	158	0	0%
SD2CR122	D14B (D2c-R) - Pile cap Kicker Formwork	2	09-Mar-15	0%	2	10-Mar-15	15-Oct-15	16-Oct-15	162	21	0%
SD2CR130	D14B (D2c-R) - Pile cap Concreting	1	07-Mar-15	0%	1	07-Mar-15	08-Oct-15	08-Oct-15	158	0	0%
SD2CR140	D14B (D2c-R) - Pile cap Curing & Striking of Forms incl. CJ prep	6	09-Mar-15	0%	6	14-Mar-15	09-Oct-15	16-Oct-15	158	17	0%
Pier Works											
SD2CL150	D14A (D2c-L) - Pier Scaffolding (1st Lift)	1	30-Mar-15	0%	1	30-Mar-15	06-Oct-15	06-Oct-15	137	0	0%
SD2CL160	D14A (D2c-L) - Pier Rebarwork (1st Lift)	2	31-Mar-15	0%	2	01-Apr-15	07-Oct-15	08-Oct-15	137	0	0%
SD2CL170	D14A (D2c-L) - Pier Formwork & Prep for Concreting (1st Lift)	1	02-Apr-15	0%	1	02-Apr-15	09-Oct-15	09-Oct-15	137	0	0%
SD2CL180	D14A (D2c-L) - Pier Concreting (1st Lift)	1	08-Apr-15	0%	1	08-Apr-15	10-Oct-15	10-Oct-15	137	0	0%
SD2CL182	D14A (D2c-L) - Pier Curing & Striking of Forms incl. CJ prep (1st Lift)	2	09-Apr-15	0%	2	10-Apr-15	12-Oct-15	13-Oct-15	137	0	0%
SD2CL190	D14A (D2c-L) - Pier Scaffolding (2nd Lift)	2	11-Apr-15	0%	2	13-Apr-15	15-Oct-15	16-Oct-15	137	0	0%
SD2CL200	D14A (D2c-L) - Pier Rebarwork (2nd Lift)	3	14-Apr-15	0%	3	17-Apr-15	17-Oct-15	20-Oct-15	137	0	0%
SD2CL210	D14A (D2c-L) - Pier Formwork & Prep for Concreting (2nd Lift)	3	18-Apr-15	0%	3	21-Apr-15	22-Oct-15	24-Oct-15	137	0	0%
SD2CR150	D14B (D2c-R) - Pier Scaffolding (1st Lift)	2	09-Apr-15	0%	2	10-Apr-15	17-Oct-15	19-Oct-15	141	0	0%
SD2CR160	D14B (D2c-R) - Pier Rebarwork (1st Lift)	2	11-Apr-15	0%	2	13-Apr-15	20-Oct-15	22-Oct-15	141	0	0%
SD2CR170	D14B (D2c-R) - Pier Formwork & Prep for Concreting (1st Lift)	2	14-Apr-15	0%	2	16-Apr-15	23-Oct-15	24-Oct-15	141	0	0%
SD2CR180	D14B (D2c-R) - Pier Concreting (1st Lift)	1	17-Apr-15	0%	1	17-Apr-15	26-Oct-15	26-Oct-15	141	0	0%
SD2CR182	D14B (D2c-R) - Pier Curing & Striking of Forms incl. CJ prep (1st Lift)	2	18-Apr-15	0%	2	20-Apr-15	27-Oct-15	28-Oct-15	141	29	0%
Pier D15 (D2b)											
Preliminary Works for Land Piling											
PD150020	D15 (D2b) - Set up piling platform (incl. Tree Clearance)	45	22-Jan-15	0%	45	18-Mar-15	24-Apr-18	27-Jun-18	905	905	0%
Socketted H-Pile Installation											
GFXX446-2	D15 (D2b) - Installation of SH Pile (13 nr)	90	19-Jan-15 A	2.22%	88	13-May-15	28-Jan-15	19-May-15	5	0	0%
Pier D16 (D2a)											
Pile Cap Works											



Actual Work
Planned Bar
Critical Bar
Milestone

Project ID: J3518DWPrE-M20
Layout: J3518-DWP-3MRP Submission - M20
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Milestones, No Level of Effort.

Tuen Mun - Chek Lap Kok Link - Southern Connection
3-Month Rolling Programme (Page 26 of 40 Pages)
(Progress as of 21-Jan-15)

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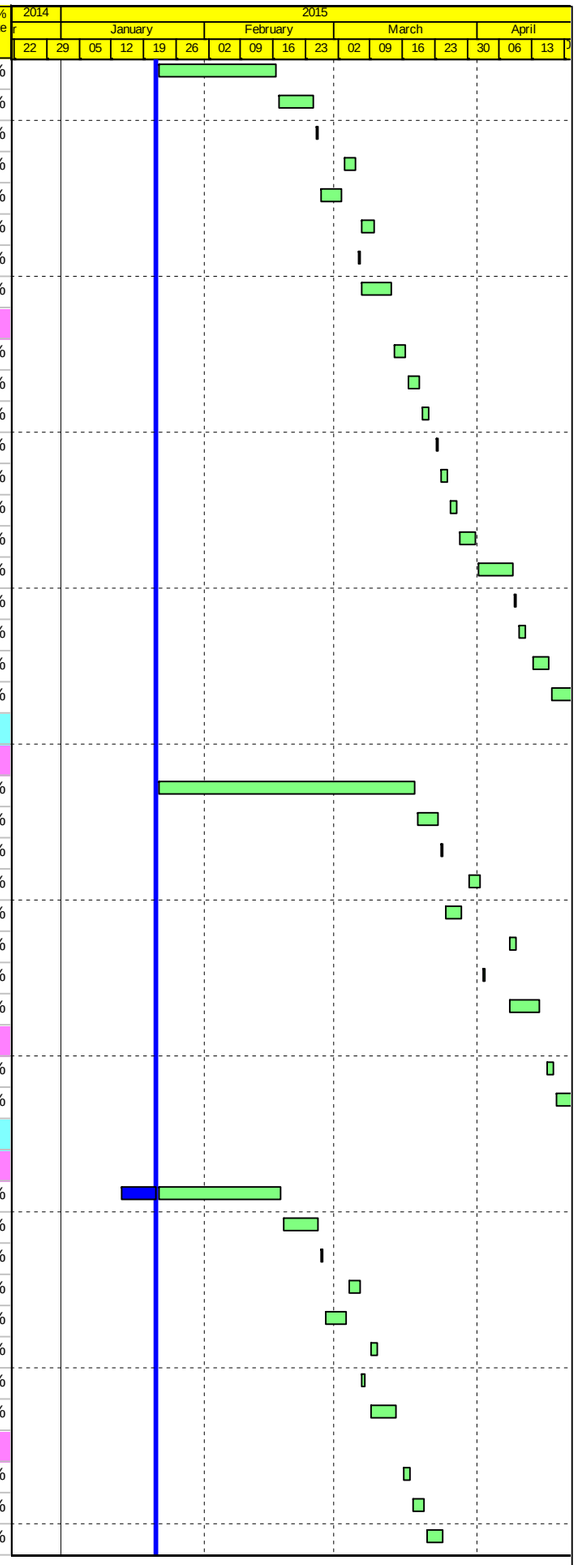
21-Jan-15		DB	

DWG. No.:
J3518/GCL/PGM/3MRP-M20

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete
SD2A0090	D16 (D2a) - Pile cap Excavation / ELS (incl. sheet piling)	22	22-Jan-15	0%	22	16-Feb-15	28-Apr-15	27-May-15	73	0	0%
SD2A0092	D16 (D2a) - Pile cap Pile breakdown to cut-off etc.	4	17-Feb-15	0%	4	24-Feb-15	28-May-15	01-Jun-15	73	0	0%
SD2A0100	D16 (D2a) - Pile cap Blinding	1	25-Feb-15	0%	1	25-Feb-15	02-Jun-15	02-Jun-15	73	0	0%
SD2A0110	D16 (D2a) - Pile cap Formwork	3	03-Mar-15	0%	3	05-Mar-15	10-Jun-15	13-Jun-15	73	0	0%
SD2A0120	D16 (D2a) - Pile cap Rebarwork	4	26-Feb-15	0%	4	02-Mar-15	04-Jun-15	08-Jun-15	73	0	0%
SD2A0122	D16 (D2a) - Pile cap Kicker Formwork	2	07-Mar-15	0%	2	09-Mar-15	24-Jun-15	26-Jun-15	77	4	0%
SD2A0130	D16 (D2a) - Pile cap Concreting	1	06-Mar-15	0%	1	06-Mar-15	15-Jun-15	15-Jun-15	73	0	0%
SD2A0140	D16 (D2a) - Pile cap Curing & Striking of Forms incl. CJ prep	6	07-Mar-15	0%	6	13-Mar-15	16-Jun-15	26-Jun-15	73	0	0%
Pier Works											
SD2A0150	D16 (D2a) - Type 5B Pier Scaffolding (1st Lift)	2	14-Mar-15	0%	2	16-Mar-15	27-Jun-15	29-Jun-15	73	0	0%
SD2A0160	D16 (D2a) - Type 5B Pier Rebarwork (1st Lift)	3	17-Mar-15	0%	3	19-Mar-15	30-Jun-15	03-Jul-15	73	0	0%
SD2A0170	D16 (D2a) - Type 5B Pier Formwork & Prep for Concreting (1st Lift)	2	20-Mar-15	0%	2	21-Mar-15	04-Jul-15	06-Jul-15	73	0	0%
SD2A0180	D16 (D2a) - Type 5B Pier Concreting (1st Lift)	1	23-Mar-15	0%	1	23-Mar-15	07-Jul-15	07-Jul-15	73	0	0%
SD2A0182	D16 (D2a) - Type 5B Pier Curing & Striking of Forms incl. CJ prep (1st Lift)	2	24-Mar-15	0%	2	25-Mar-15	08-Jul-15	09-Jul-15	73	0	0%
SD2A0190	D16 (D2a) - Type 5B Pier Scaffolding (2nd Lift)	2	26-Mar-15	0%	2	27-Mar-15	10-Jul-15	11-Jul-15	73	0	0%
SD2A0200	D16 (D2a) - Type 5B Pier Rebarwork (2nd Lift)	3	28-Mar-15	0%	3	31-Mar-15	13-Jul-15	15-Jul-15	73	0	0%
SD2A0210	D16 (D2a) - Type 5B Pier Formwork & Prep for Concreting (2nd Lift)	3	01-Apr-15	0%	3	08-Apr-15	17-Jul-15	20-Jul-15	73	0	0%
SD2A0220	D16 (D2a) - Type 5B Pier Concreting (2nd Lift)	1	09-Apr-15	0%	1	09-Apr-15	21-Jul-15	21-Jul-15	73	0	0%
SD2A0222	D16 (D2a) - Type 5B Pier Curing & Striking of Forms incl. CJ prep (2nd Lift)	2	10-Apr-15	0%	2	11-Apr-15	22-Jul-15	23-Jul-15	73	0	0%
SD2A0230	D16 (D2a) - Type 5B Pier Head Scaffolding	3	13-Apr-15	0%	3	16-Apr-15	24-Jul-15	27-Jul-15	73	0	0%
SD2A0240	D16 (D2a) - Type 5B Pier Head Rebarwork	4	17-Apr-15	0%	4	21-Apr-15	28-Jul-15	01-Aug-15	73	0	0%
Pier D17 (D1d)											
Pile Cap Works											
SD1D0090	D17 (D1d) - Pile cap Excavation / ELS (incl. sheet piling)	45	22-Jan-15	0%	45	18-Mar-15	13-May-15	15-Jul-15	84	0	0%
SD1D0092	D17 (D1d) - Pile cap Pile breakdown to cut-off etc.	4	19-Mar-15	0%	4	23-Mar-15	17-Jul-15	21-Jul-15	84	0	0%
SD1D0100	D17 (D1d) - Pile cap Blinding	1	24-Mar-15	0%	1	24-Mar-15	22-Jul-15	22-Jul-15	84	0	0%
SD1D0110	D17 (D1d) - Pile cap Formwork	3	30-Mar-15	0%	3	01-Apr-15	28-Jul-15	31-Jul-15	84	0	0%
SD1D0120	D17 (D1d) - Pile cap Rebarwork	4	25-Mar-15	0%	4	28-Mar-15	23-Jul-15	27-Jul-15	84	0	0%
SD1D0122	D17 (D1d) - Pile cap Kicker Formwork	2	08-Apr-15	0%	2	09-Apr-15	07-Aug-15	08-Aug-15	88	4	0%
SD1D0130	D17 (D1d) - Pile cap Concreting	1	02-Apr-15	0%	1	02-Apr-15	01-Aug-15	01-Aug-15	84	0	0%
SD1D0140	D17 (D1d) - Pile cap Curing & Striking of Forms incl. CJ prep	6	08-Apr-15	0%	6	14-Apr-15	03-Aug-15	08-Aug-15	84	0	0%
Pier Works											
SD1D0150	D17 (D1d) - Type 5B-B Pier Scaffolding (1st Lift)	2	16-Apr-15	0%	2	17-Apr-15	10-Aug-15	12-Aug-15	84	0	0%
SD1D0160	D17 (D1d) - Type 5B-B Pier Rebarwork (1st Lift)	3	18-Apr-15	0%	3	21-Apr-15	13-Aug-15	15-Aug-15	84	0	0%
Pier D18 (D1c)											
Pile Cap Works											
SD1C0090	D18 (D1c) - Pile cap Excavation / ELS (incl. sheet piling)	30	14-Jan-15 A	23.33%	23	17-Feb-15	14-Jul-15	12-Aug-15	127	0	15%
SD1C0092	D18 (D1c) - Pile cap Pile breakdown to cut-off etc.	4	18-Feb-15	0%	4	25-Feb-15	13-Aug-15	17-Aug-15	127	0	0%
SD1C0100	D18 (D1c) - Pile cap Blinding	1	26-Feb-15	0%	1	26-Feb-15	18-Aug-15	18-Aug-15	127	0	0%
SD1C0110	D18 (D1c) - Pile cap Formwork	3	04-Mar-15	0%	3	06-Mar-15	25-Aug-15	27-Aug-15	127	0	0%
SD1C0120	D18 (D1c) - Pile cap Rebarwork	4	27-Feb-15	0%	4	03-Mar-15	19-Aug-15	24-Aug-15	127	0	0%
SD1C0122	D18 (D1c) - Pile cap Kicker Formwork	2	09-Mar-15	0%	2	10-Mar-15	03-Sep-15	04-Sep-15	131	4	0%
SD1C0130	D18 (D1c) - Pile cap Concreting	1	07-Mar-15	0%	1	07-Mar-15	28-Aug-15	28-Aug-15	127	0	0%
SD1C0140	D18 (D1c) - Pile cap Curing & Striking of Forms incl. CJ prep	6	09-Mar-15	0%	6	14-Mar-15	29-Aug-15	04-Sep-15	127	0	0%
Pier Works											
SD1C0150	D18 (D1c) - Type 5B-B Pier Scaffolding (1st Lift)	2	16-Mar-15	0%	2	17-Mar-15	05-Sep-15	07-Sep-15	127	0	0%
SD1C0160	D18 (D1c) - Type 5B-B Pier Rebarwork (1st Lift)	3	18-Mar-15	0%	3	20-Mar-15	08-Sep-15	11-Sep-15	127	0	0%
SD1C0170	D18 (D1c) - Type 5B-B Pier Formwork & Prep for Concreting (1st Lift)	3	21-Mar-15	0%	3	24-Mar-15	12-Sep-15	15-Sep-15	127	0	0%



Actual Work
Planned Bar
Critical Bar
Milestone

Project ID: J3518DWPrE-M20
Layout: J3518-DWP-3MRP Submission - M20
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Tuen Mun - Chek Lap Kok Link - Southern Connection
3-Month Rolling Programme (Page 27 of 40 Pages)
(Progress as of 21-Jan-15)

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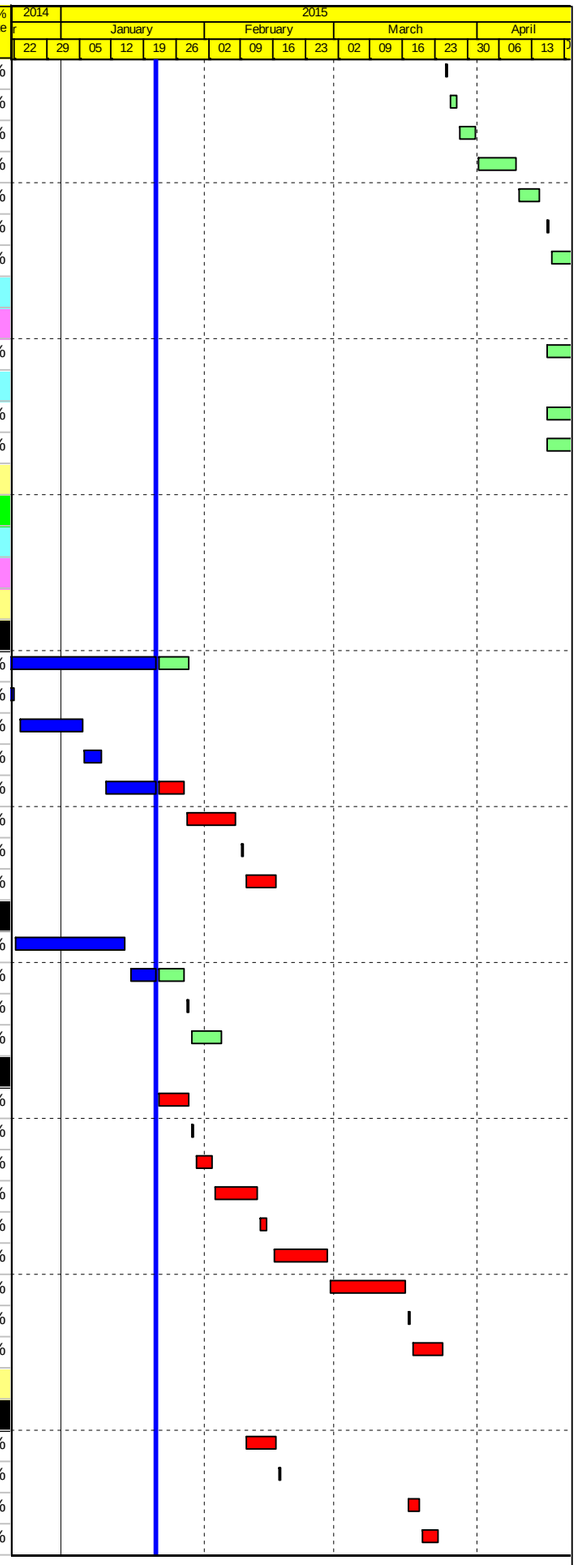
J3518/GCL/PGM/3MRP-M20

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete
SD1C0180	D18 (D1c) - Type 5B-B Pier Concreting (1st Lift)	1	25-Mar-15	0%	1	25-Mar-15	16-Sep-15	16-Sep-15	127	0	0%
SD1C0182	D18 (D1c) - Type 5B-B Pier Curing & Striking of Forms incl. CJ prep (1st Lift)	2	26-Mar-15	0%	2	27-Mar-15	18-Sep-15	19-Sep-15	127	0	0%
SD1C0190	D18 (D1c) - Type 5B-B Pier Head Scaffolding	3	28-Mar-15	0%	3	31-Mar-15	21-Sep-15	23-Sep-15	127	0	0%
SD1C0200	D18 (D1c) - Type 5B-B Pier Head Rebarwork	4	01-Apr-15	0%	4	09-Apr-15	24-Sep-15	29-Sep-15	127	0	0%
SD1C0210	D18 (D1c) - Type 5B-B Pier Head Formwork & Prep for Concreting	4	10-Apr-15	0%	4	14-Apr-15	30-Sep-15	05-Oct-15	127	0	0%
SD1C0220	D18 (D1c) - Type 5B-B Pier Head Concreting	1	16-Apr-15	0%	1	16-Apr-15	06-Oct-15	06-Oct-15	127	0	0%
SD1C0310	D18 (D1c) - Type 5B-B Pier Head Curing/Striking of Forms/Remove Scaffolding	6	17-Apr-15	0%	6	24-Apr-15	07-Oct-15	13-Oct-15	127	0	0%
Pier D19 (D1b) & Abutment D											
Pile Cap Works											
SD1B0090	D19 (D1b) - Pile cap Excavation / ELS	45	16-Apr-15	0%	45	16-Jun-15	17-Apr-15	18-Jun-15	1	0	0%
Abutment & Approach Ramp D											
SD1B0200	Abutment D - Walls & Staircase	48	16-Apr-15	0%	48	22-Jun-15	17-Apr-15	24-Jun-15	1	0	0%
SD1B0250	AR-D - RE Walls - Erect MTR boundary fence, Excavation/formation/drainage filter & bottom	24	16-Apr-15	0%	24	16-May-15	17-Apr-15	18-May-15	1	0	0%
Viaduct E											
Viaduct E1											
Bridge E1 - Piling & Substructure											
E1A, E1B, E1C & E1D (E1a1-2-3-4)											
Pile Cap Works - E1A, E1B, E1C & E1D											
Pile Cap Works - E1A (E1a4)											
SE1A4070	E1A (E1a4) - Marine Pile Cap M1 - Inst.Floating Seal & Casing Head Steelwork	6	28-Nov-14 A	0%	6	28-Jan-15	20-Jun-18	27-Jun-18	944	944	0%
SE1A4090	E1A (E1a4) - Marine Pile Cap M1 - Inst.Access & make Watertight	3	18-Dec-14 A	100%	0	22-Dec-14 A					100%
SE1A4100	E1A (E1a4) - Marine Pile Cap M1 - Weld Fin Plates/Plug Rebar & Concrete	9	23-Dec-14 A	100%	0	05-Jan-15 A					100%
SE1A4120	E1A (E1a4) - Marine Pile Cap M1 - Dewater precast shell / Remove Lifting Frame	2	06-Jan-15 A	100%	0	10-Jan-15 A					100%
SE1A4130	E1A (E1a4) - Marine Pile Cap M1 - Pile cut down	8	11-Jan-15 A	37.5%	5	27-Jan-15	23-Dec-14	31-Dec-14	-23	0	80%
SE1A4140	E1A (E1a4) - Marine Pile Cap M1 - Rebar fixing, inst.inserts etc	10	28-Jan-15	0%	10	07-Feb-15	31-Dec-14	13-Jan-15	-23	0	0%
SE1A4150	E1A (E1a4) - Marine Pile Cap M1 - Concreting	1	09-Feb-15	0%	1	09-Feb-15	13-Jan-15	14-Jan-15	-23	0	0%
SE1A4160	E1A (E1a4) - Marine Pile Cap M1 - Curing incl. CJ Preparation	6	10-Feb-15	0%	6	16-Feb-15	14-Jan-15	21-Jan-15	-23	0	0%
Pile Cap Works - E1B (E1a3)											
SE1A3130	E1B (E1a3) - Marine Pile Cap M1 - Pile cut down	8	22-Dec-14 A	100%	0	15-Jan-15 A					100%
SE1A3140	E1B (E1a3) - Marine Pile Cap M1 - Rebar fixing, inst.inserts etc	10	16-Jan-15 A	50%	5	27-Jan-15	30-Mar-15	09-Apr-15	54	0	40%
SE1A3150	E1B (E1a3) - Marine Pile Cap M1 - Concreting	1	28-Jan-15	0%	1	28-Jan-15	09-Apr-15	10-Apr-15	54	0	0%
SE1A3160	E1B (E1a3) - Marine Pile Cap M1 - Curing incl. CJ Preparation	6	29-Jan-15	0%	6	04-Feb-15	10-Apr-15	18-Apr-15	54	0	0%
Pile Cap Works - E1C/D (E1a2/E1a1)											
SE1A2070	E1C/D (E1a2/E1a1) - Marine Pile Cap M1 - Inst.Floating Seal & Casing Head Steelwork	6	22-Jan-15	0%	6	28-Jan-15	05-Jan-15	12-Jan-15	-15	0	0%
SE1A2080	E1C/D (E1a2/E1a1) - Marine Pile Cap M1 - Install precast shell in position	1	29-Jan-15	0%	1	29-Jan-15	12-Jan-15	13-Jan-15	-15	0	0%
SE1A2090	E1C/D (E1a2/E1a1) - Marine Pile Cap M1 - Inst.Access & make Watertight	3	30-Jan-15	0%	3	02-Feb-15	13-Jan-15	16-Jan-15	-15	0	0%
SE1A2100	E1C/D (E1a2/E1a1) - Marine Pile Cap M1 - Weld Fin Plates/Plug Rebar & Concrete	9	03-Feb-15	0%	9	12-Feb-15	16-Jan-15	27-Jan-15	-15	0	0%
SE1A2120	E1C/D (E1a2/E1a1) - Marine Pile Cap M1 - Dewater precast shell / Remove Lifting Frame	2	13-Feb-15	0%	2	14-Feb-15	27-Jan-15	29-Jan-15	-15	0	0%
SE1A2130	E1C/D (E1a2/E1a1) - Marine Pile Cap M1 - Pile cut down	8	16-Feb-15	0%	8	27-Feb-15	29-Jan-15	07-Feb-15	-15	0	0%
SE1A2140	E1C/D (E1a2/E1a1) - Marine Pile Cap M1 - Rebar fixing, inst.inserts etc	14	28-Feb-15	0%	14	16-Mar-15	07-Feb-15	27-Feb-15	-15	0	0%
SE1A2150	E1C/D (E1a2/E1a1) - Marine Pile Cap M1 - Concreting	1	17-Mar-15	0%	1	17-Mar-15	27-Feb-15	28-Feb-15	-15	0	0%
SE1A2160	E1C/D (E1a2/E1a1) - Marine Pile Cap M1 - Curing incl. CJ Preparation	6	18-Mar-15	0%	6	24-Mar-15	28-Feb-15	07-Mar-15	-15	0	0%
Pier Works - E1A, E1B, E1C & E1D											
Pier Works - E1A (E1a4)											
SE1A4170	E1A (E1a4) - Type 4B Pier Temp. Support Platform	6	10-Feb-15	0%	6	16-Feb-15	14-Jan-15	21-Jan-15	-23	0	0%
SE1A4172	E1A (E1a4) - Type 4B Pier Scaffolding (1st Lift)	1	17-Feb-15	0%	1	17-Feb-15	21-Jan-15	22-Jan-15	-23	20	0%
SE1A4180	E1A (E1a4) - Type 4B Pier Rebarwork (1st Lift)	3	17-Mar-15	0%	3	19-Mar-15	22-Jan-15	26-Jan-15	-43	0	0%
SE1A4190	E1A (E1a4) - Type 4B Pier Formwork & Prep for Concreting (1st Lift)	3	20-Mar-15	0%	3	23-Mar-15	26-Jan-15	29-Jan-15	-43	0	0%



Actual Work
Planned Bar
Critical Bar
Milestone

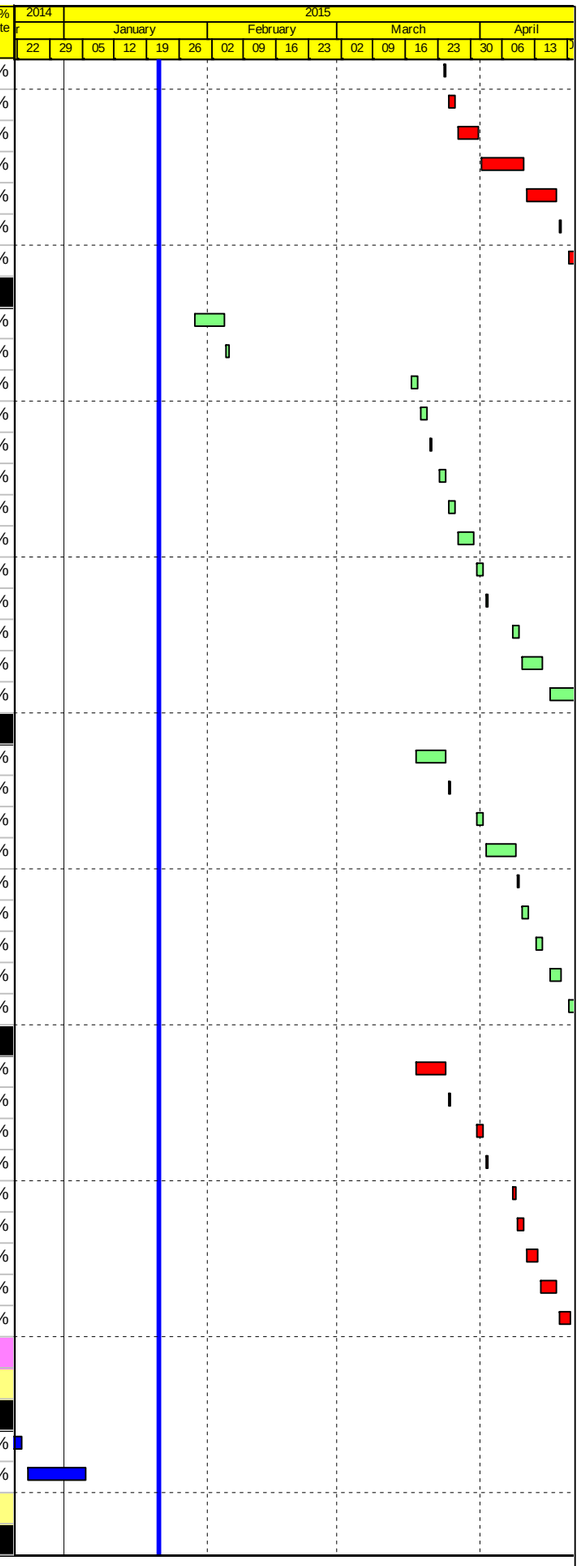
Project ID: J3518DWPrE-M20
Layout: J3518-DWP-3MRP Submission - M20
Filter: TASK filters: 3-Month Lookahead, No CC
Milestones, No Level of Effort.

Tuen Mun - Chek Lap Kok Link - Southern Connection
3-Month Rolling Programme (Page 28 of 40 Pages)
(Progress as of 21-Jan-15)

Date	Revision	Checked	Approved
21-Jan-15		DB	

DWG. No.:
J3518/GCL/PGM/3MRP-M20

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete
SE1A4200	E1A (E1a4) - Type 4B Pier Concreting (1st Lift)	1	24-Mar-15	0%	1	24-Mar-15	29-Jan-15	30-Jan-15	-43	0	0%
SE1A4202	E1A (E1a4) - Type 4B Pier Curing & Striking of Forms incl. CJ prep (1st Lift)	2	25-Mar-15	0%	2	26-Mar-15	30-Jan-15	02-Feb-15	-43	0	0%
SE1A4300	E1A (E1a4) - Type 4B Pier Head Scaffolding	4	27-Mar-15	0%	4	31-Mar-15	02-Feb-15	06-Feb-15	-43	0	0%
SE1A4310	E1A (E1a4) - Type 4B Pier Head Rebarwork	5	01-Apr-15	0%	5	10-Apr-15	06-Feb-15	12-Feb-15	-43	0	0%
SE1A4320	E1A (E1a4) - Type 4B Pier Head Formwork & Prep for Concreting	5	11-Apr-15	0%	5	17-Apr-15	12-Feb-15	18-Feb-15	-43	0	0%
SE1A4330	E1A (E1a4) - Type 4B Pier Head Concreting	1	18-Apr-15	0%	1	18-Apr-15	18-Feb-15	23-Feb-15	-43	0	0%
SE1A4340	E1A (E1a4) - Type 4B Pier Head Curing/Striking of Forms/Remove Scaffolding	6	20-Apr-15	0%	6	27-Apr-15	23-Feb-15	02-Mar-15	-43	0	0%
Pier Works - E1B (E1a3)											
SE1A3170	E1B (E1a3) - Type 4B Pier Temp. Support Platform	6	29-Jan-15	0%	6	04-Feb-15	10-Apr-15	18-Apr-15	54	0	0%
SE1A3172	E1B (E1a3) - Type 4B Pier Scaffolding (1st Lift)	1	05-Feb-15	0%	1	05-Feb-15	18-Apr-15	20-Apr-15	54	30	0%
SE1A3180	E1B (E1a3) - Type 4B Pier Rebarwork (1st Lift)	2	17-Mar-15	0%	2	18-Mar-15	20-Apr-15	22-Apr-15	24	0	0%
SE1A3190	E1B (E1a3) - Type 4B Pier Formwork & Prep for Concreting (1st Lift)	2	19-Mar-15	0%	2	20-Mar-15	22-Apr-15	25-Apr-15	24	0	0%
SE1A3200	E1B (E1a3) - Type 4B Pier Concreting (1st Lift)	1	21-Mar-15	0%	1	21-Mar-15	25-Apr-15	27-Apr-15	24	0	0%
SE1A3202	E1B (E1a3) - Type 4B Pier Curing & Striking of Forms incl. CJ prep (1st Lift)	2	23-Mar-15	0%	2	24-Mar-15	27-Apr-15	29-Apr-15	24	0	0%
SE1A3210	E1B (E1a3) - Type 4B Pier Scaffolding (2nd Lift)	2	25-Mar-15	0%	2	26-Mar-15	29-Apr-15	02-May-15	24	0	0%
SE1A3220	E1B (E1a3) - Type 4B Pier Rebarwork (2nd Lift)	3	27-Mar-15	0%	3	30-Mar-15	02-May-15	06-May-15	24	0	0%
SE1A3230	E1B (E1a3) - Type 4B Pier Formwork & Prep for Concreting (2nd Lift)	2	31-Mar-15	0%	2	01-Apr-15	06-May-15	08-May-15	24	0	0%
SE1A3240	E1B (E1a3) - Type 4B Pier Concreting (2nd Lift)	1	02-Apr-15	0%	1	02-Apr-15	08-May-15	09-May-15	24	0	0%
SE1A3242	E1B (E1a3) - Type 4B Pier Curing & Striking of Forms incl. CJ prep (2nd Lift)	2	08-Apr-15	0%	2	09-Apr-15	09-May-15	13-May-15	24	0	0%
SE1A3300	E1B (E1a3) - Type 4B Pier Head Scaffolding	4	10-Apr-15	0%	4	14-Apr-15	13-May-15	18-May-15	24	0	0%
SE1A3310	E1B (E1a3) - Type 4B Pier Head Rebarwork	5	16-Apr-15	0%	5	21-Apr-15	18-May-15	26-May-15	24	0	0%
Pier Works - E1C (E1a2)											
SE1A2170	E1C (E1a2) - Type 4B Pier Temp. Support Platform	6	18-Mar-15	0%	6	24-Mar-15	07-Aug-15	15-Aug-15	102	0	0%
SE1A2172	E1C (E1a2) - Type 4B Pier Scaffolding (1st Lift)	1	25-Mar-15	0%	1	25-Mar-15	15-Aug-15	17-Aug-15	102	4	0%
SE1A2180	E1C (E1a2) - Type 4B Pier Rebarwork (1st Lift)	2	31-Mar-15	0%	2	01-Apr-15	17-Aug-15	19-Aug-15	98	0	0%
SE1A2190	E1C (E1a2) - Type 4B Pier Formwork & Prep for Concreting (1st Lift)	2	02-Apr-15	0%	2	08-Apr-15	19-Aug-15	22-Aug-15	98	0	0%
SE1A2200	E1C (E1a2) - Type 4B Pier Concreting (1st Lift)	1	09-Apr-15	0%	1	09-Apr-15	22-Aug-15	24-Aug-15	98	0	0%
SE1A2202	E1C (E1a2) - Type 4B Pier Curing & Striking of Forms incl. CJ prep (1st Lift)	2	10-Apr-15	0%	2	11-Apr-15	24-Aug-15	28-Aug-15	100	0	0%
SE1A2210	E1C (E1a2) - Type 4B Pier Scaffolding (2nd Lift)	2	13-Apr-15	0%	2	14-Apr-15	28-Aug-15	31-Aug-15	100	0	0%
SE1A2220	E1C (E1a2) - Type 4B Pier Rebarwork (2nd Lift)	3	16-Apr-15	0%	3	18-Apr-15	31-Aug-15	03-Sep-15	100	0	0%
SE1A2230	E1C (E1a2) - Type 4B Pier Formwork & Prep for Concreting (2nd Lift)	2	20-Apr-15	0%	2	21-Apr-15	03-Sep-15	05-Sep-15	100	0	0%
Pier Works - E1D (E1a1)											
SE1A1170	E1D (E1a1) - Type 4B Pier Temp. Support Platform	6	18-Mar-15	0%	6	24-Mar-15	28-Feb-15	07-Mar-15	-15	0	0%
SE1A1172	E1D (E1a1) - Type 4B Pier Scaffolding (1st Lift)	1	25-Mar-15	0%	1	25-Mar-15	07-Mar-15	09-Mar-15	-15	4	0%
SE1A1180	E1D (E1a1) - Type 4B Pier Rebarwork (1st Lift)	2	31-Mar-15	0%	2	01-Apr-15	09-Mar-15	11-Mar-15	-19	0	0%
SE1A1190	E1D (E1a1) - Type 4B Pier Formwork & Prep for Concreting (1st Lift)	1	02-Apr-15	0%	1	02-Apr-15	11-Mar-15	12-Mar-15	-19	0	0%
SE1A1200	E1D (E1a1) - Type 4B Pier Concreting (1st Lift)	1	08-Apr-15	0%	1	08-Apr-15	12-Mar-15	13-Mar-15	-19	0	0%
SE1A1202	E1D (E1a1) - Type 4B Pier Curing & Striking of Forms incl. CJ prep (1st Lift)	2	09-Apr-15	0%	2	10-Apr-15	13-Mar-15	16-Mar-15	-19	0	0%
SE1A1210	E1D (E1a1) - Type 4B Pier Scaffolding (2nd Lift)	2	11-Apr-15	0%	2	13-Apr-15	16-Mar-15	18-Mar-15	-19	0	0%
SE1A1220	E1D (E1a1) - Type 4B Pier Rebarwork (2nd Lift)	3	14-Apr-15	0%	3	17-Apr-15	18-Mar-15	21-Mar-15	-19	0	0%
SE1A1230	E1D (E1a1) - Type 4B Pier Formwork & Prep for Concreting (2nd Lift)	2	18-Apr-15	0%	2	20-Apr-15	21-Mar-15	24-Mar-15	-19	0	0%
E2A, E2B, E2C & E2D (E1b1-2-3-4)											
Foundation Works - E2A, E2B, E2C & E2D											
Foundation Works											
GFXX02	E2A/E2B/E2C/E2D (E1b4/3/2/1) - Sonic & Interface Coring	34	03-Dec-14 A	100%	0	23-Dec-14 A					100%
GFXX030	E2A/E2B/E2C/E2D (E1b4/3/2/1) - Dismantle Temporary Removable Piling Platform	8	24-Dec-14 A	100%	0	05-Jan-15 A					100%
Pile Cap Works - E2A, E2B, E2C & E2D											
Pile Cap Works - E2A (E1b4)											



Actual Work
Planned Bar
Critical Bar
Milestone

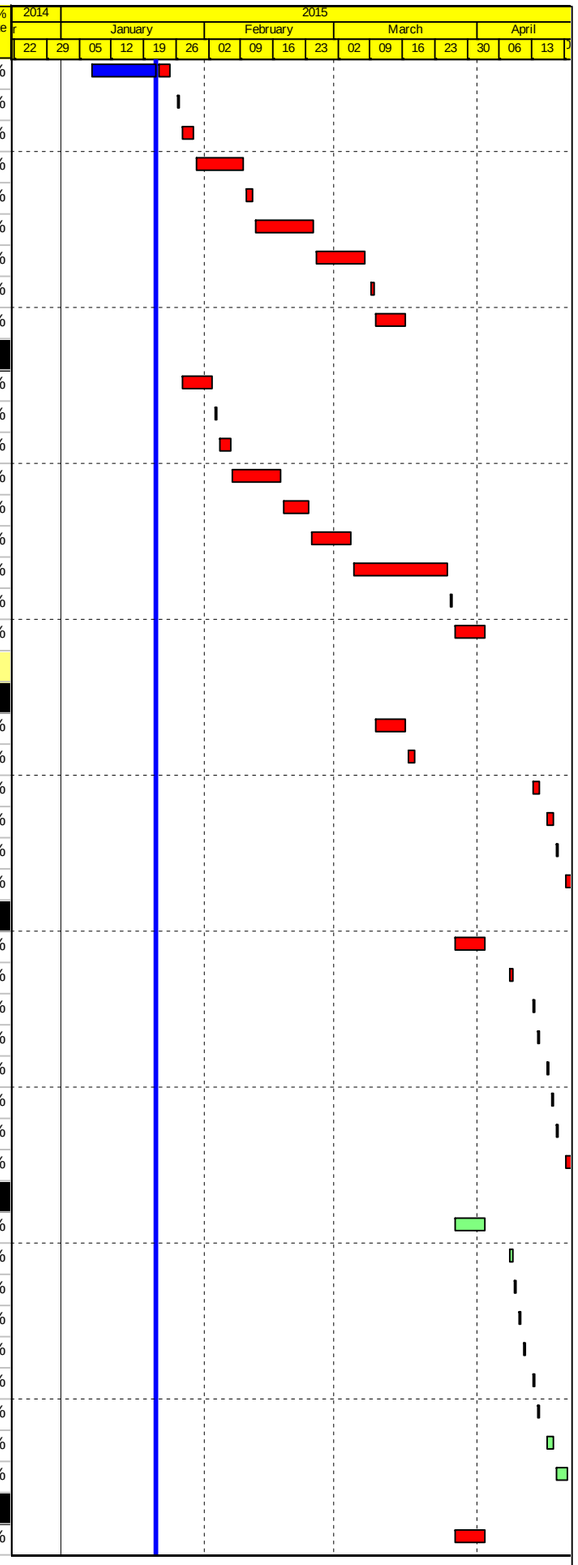
Project ID: J3518DWPrE-M20
Layout: J3518-DWP-3MRP Submission - M20
Filter: TASK filters: 3-Month Lookahead, No CC
Milestones, No Level of Effort.

Tuen Mun - Chek Lap Kok Link - Southern Connection
3-Month Rolling Programme (Page 29 of 40 Pages)
(Progress as of 21-Jan-15)

Date	Revision	Checked	Approved
21-Jan-15		DB	

DWG. No.:
J3518/GCL/PGM/3MRP-M20

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete
SE1B4070	E2A (E1b4) - Marine Pile Cap M1 - Inst.Floating Seal & Casing Head Steelwork	6	08-Jan-15 A	50%	3	24-Jan-15	13-Dec-14	16-Dec-14	-31	0	50%
SE1B4080	E2A (E1b4) - Marine Pile Cap M1 - Install precast shell in position	1	26-Jan-15	0%	1	26-Jan-15	17-Dec-14	17-Dec-14	-31	0	0%
SE1B4090	E2A (E1b4) - Marine Pile Cap M1 - Inst.Access & make Watertight	3	27-Jan-15	0%	3	29-Jan-15	20-Dec-14	23-Dec-14	-29	0	0%
SE1B4100	E2A (E1b4) - Marine Pile Cap M1 - Weld Fin Plates/Plug Rebar & Concrete	9	30-Jan-15	0%	9	09-Feb-15	24-Dec-14	06-Jan-15	-29	0	0%
SE1B4120	E2A (E1b4) - Marine Pile Cap M1 - Dewater precast shell / Remove Lifting Frame	2	10-Feb-15	0%	2	11-Feb-15	07-Jan-15	08-Jan-15	-29	0	0%
SE1B4130	E2A (E1b4) - Marine Pile Cap M1 - Pile cut down	8	12-Feb-15	0%	8	24-Feb-15	09-Jan-15	17-Jan-15	-29	0	0%
SE1B4140	E2A (E1b4) - Marine Pile Cap M1 - Rebar fixing, inst.inserts etc	10	25-Feb-15	0%	10	07-Mar-15	19-Jan-15	29-Jan-15	-29	0	0%
SE1B4150	E2A (E1b4) - Marine Pile Cap M1 - Concreting	1	09-Mar-15	0%	1	09-Mar-15	30-Jan-15	30-Jan-15	-29	0	0%
SE1B4160	E2A (E1b4) - Marine Pile Cap M1 - Curing incl. CJ Preparation	6	10-Mar-15	0%	6	16-Mar-15	31-Jan-15	06-Feb-15	-29	0	0%
Pile Cap Works - E2B (E1b3)											
SE1B3070	E2B (E1b3) - Marine Pile Cap M1 - Inst.Floating Seal & Casing Head Steelwork	6	27-Jan-15	0%	6	02-Feb-15	18-Dec-14	24-Dec-14	-31	0	0%
SE1B3080	E2B (E1b3) - Marine Pile Cap M1 - Install precast shell in position	1	03-Feb-15	0%	1	03-Feb-15	27-Dec-14	27-Dec-14	-31	0	0%
SE1B3090	E2B (E1b3) - Marine Pile Cap M1 - Inst.Access & make Watertight	3	04-Feb-15	0%	3	06-Feb-15	29-Dec-14	31-Dec-14	-31	0	0%
SE1B3100	E2B (E1b3) - Marine Pile Cap M1 - Weld Fin Plates/Plug Rebar & Concrete	9	07-Feb-15	0%	9	17-Feb-15	02-Jan-15	12-Jan-15	-31	0	0%
SE1B3120	E2B (E1b3) - Marine Pile Cap M1 - Dewater precast shell / Remove Lifting Frame	2	18-Feb-15	0%	2	23-Feb-15	13-Jan-15	14-Jan-15	-31	0	0%
SE1B3130	E2B (E1b3) - Marine Pile Cap M1 - Pile cut down	8	24-Feb-15	0%	8	04-Mar-15	15-Jan-15	23-Jan-15	-31	0	0%
SE1B3140	E2B (E1b3) - Marine Pile Cap M1 - Rebar fixing, inst.inserts etc	18	05-Mar-15	0%	18	25-Mar-15	24-Jan-15	13-Feb-15	-31	0	0%
SE1B3150	E2B (E1b3) - Marine Pile Cap M1 - Concreting	1	26-Mar-15	0%	1	26-Mar-15	14-Feb-15	14-Feb-15	-31	0	0%
SE1B3160	E2B (E1b3) - Marine Pile Cap M1 - Curing incl. CJ Preparation	6	27-Mar-15	0%	6	02-Apr-15	16-Feb-15	25-Feb-15	-31	0	0%
Pier Works - E2A, E2B, E2C & E2D											
Pier Works - E2A (E1b4)											
SE1B4170	E2A (E1b4) - Type 4B Pier Temp. Support Platform	6	10-Mar-15	0%	6	16-Mar-15	31-Jan-15	06-Feb-15	-29	0	0%
SE1B4172	E2A (E1b4) - Type 4B Pier Scaffolding (1st Lift)	2	17-Mar-15	0%	2	18-Mar-15	07-Feb-15	09-Feb-15	-29	17	0%
SE1B4180	E2A (E1b4) - Type 4B Pier Rebarwork (1st Lift)	2	13-Apr-15	0%	2	14-Apr-15	10-Feb-15	11-Feb-15	-46	0	0%
SE1B4190	E2A (E1b4) - Type 4B Pier Formwork & Prep for Concreting (1st Lift)	2	16-Apr-15	0%	2	17-Apr-15	12-Feb-15	13-Feb-15	-46	0	0%
SE1B4200	E2A (E1b4) - Type 4B Pier Concreting (1st Lift)	1	18-Apr-15	0%	1	18-Apr-15	14-Feb-15	14-Feb-15	-46	0	0%
SE1B4202	E2A (E1b4) - Type 4B Pier Curing & Striking of Forms incl. CJ prep (1st Lift)	2	20-Apr-15	0%	2	21-Apr-15	16-Feb-15	17-Feb-15	-46	0	0%
Pier Works - E2B (E1b3)											
SE1B3170	E2B (E1b3) - Type 4B Pier Temp. Support Platform	6	27-Mar-15	0%	6	02-Apr-15	20-Mar-15	27-Mar-15	-6	0	0%
SE1B3172	E2B (E1b3) - Type 4B Pier Scaffolding (1st Lift)	1	08-Apr-15	0%	1	08-Apr-15	27-Mar-15	28-Mar-15	-6	3	0%
SE1B3180	E2B (E1b3) - Type 4B Pier Rebarwork (1st Lift)	1	13-Apr-15	0%	1	13-Apr-15	28-Mar-15	30-Mar-15	-9	0	0%
SE1B3190	E2B (E1b3) - Type 4B Pier Formwork & Prep for Concreting (1st Lift)	1	14-Apr-15	0%	1	14-Apr-15	30-Mar-15	31-Mar-15	-9	0	0%
SE1B3200	E2B (E1b3) - Type 4B Pier Concreting (1st Lift)	1	16-Apr-15	0%	1	16-Apr-15	31-Mar-15	01-Apr-15	-9	0	0%
SE1B3202	E2B (E1b3) - Type 4B Pier Curing & Striking of Forms incl. CJ prep (1st Lift)	1	17-Apr-15	0%	1	17-Apr-15	01-Apr-15	02-Apr-15	-9	0	0%
SE1B3210	E2B (E1b3) - Type 4B Pier Scaffolding (2nd Lift)	1	18-Apr-15	0%	1	18-Apr-15	02-Apr-15	08-Apr-15	-9	0	0%
SE1B3220	E2B (E1b3) - Type 4B Pier Rebarwork (2nd Lift)	2	20-Apr-15	0%	2	21-Apr-15	08-Apr-15	10-Apr-15	-9	0	0%
Pier Works - E2C (E1b1)											
SE1B1170	E2C (E1b1) - Type 4B Pier Temp. Support Platform	6	27-Mar-15	0%	6	02-Apr-15	22-Jul-15	31-Jul-15	83	0	0%
SE1B1172	E2C (E1b1) - Type 4B Pier Scaffolding (1st Lift)	1	08-Apr-15	0%	1	08-Apr-15	01-Aug-15	01-Aug-15	83	0	0%
SE1B1180	E2C (E1b1) - Type 4B Pier Rebarwork (1st Lift)	1	09-Apr-15	0%	1	09-Apr-15	03-Aug-15	03-Aug-15	83	0	0%
SE1B1190	E2C (E1b1) - Type 4B Pier Formwork & Prep for Concreting (1st Lift)	1	10-Apr-15	0%	1	10-Apr-15	04-Aug-15	04-Aug-15	83	0	0%
SE1B1200	E2C (E1b1) - Type 4B Pier Concreting (1st Lift)	1	11-Apr-15	0%	1	11-Apr-15	05-Aug-15	05-Aug-15	83	0	0%
SE1B1202	E2C (E1b1) - Type 4B Pier Curing & Striking of Forms incl. CJ prep (1st Lift)	1	13-Apr-15	0%	1	13-Apr-15	06-Aug-15	06-Aug-15	83	0	0%
SE1B1212	E2C (E1b1) - Type 4B Pier Scaffolding (2nd Lift)	1	14-Apr-15	0%	1	14-Apr-15	07-Aug-15	07-Aug-15	83	0	0%
SE1B1220	E2C (E1b1) - Type 4B Pier Rebarwork (2nd Lift)	2	16-Apr-15	0%	2	17-Apr-15	08-Aug-15	10-Aug-15	83	0	0%
SE1B1230	E2C (E1b1) - Type 4B Pier Formwork & Prep for Concreting (2nd Lift)	2	18-Apr-15	0%	2	20-Apr-15	12-Aug-15	13-Aug-15	83	0	0%
Pier Works - E2D (E1b2)											
SE1B2170	E2D (E1b2) - Type 4B Pier Temp. Support Platform	6	27-Mar-15	0%	6	02-Apr-15	16-Feb-15	25-Feb-15	-31	0	0%



Actual Work
Planned Bar
Critical Bar
Milestone

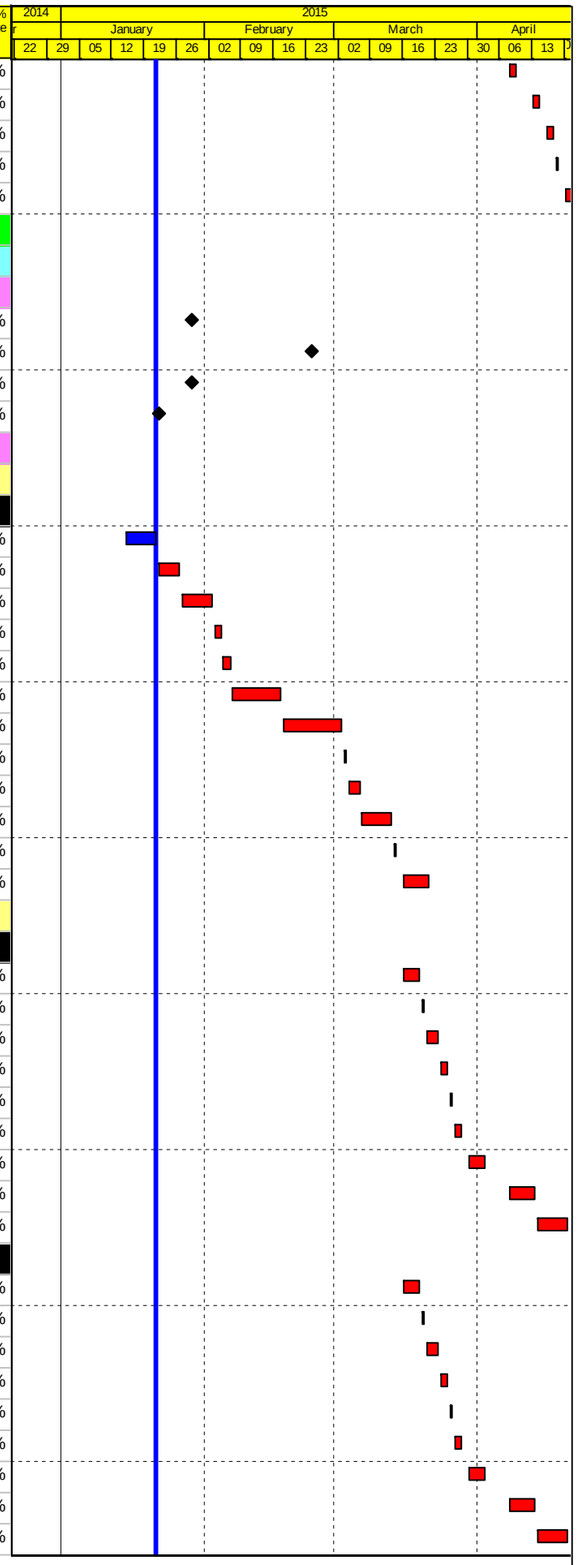
Project ID: J3518DWPrE-M20
Layout: J3518-DWP-3MRP Submission - M20
Filter: TASK filters: 3-Month Lookahead, No CC
Milestones, No Level of Effort.

Tuen Mun - Chek Lap Kok Link - Southern Connection
3-Month Rolling Programme (Page 30 of 40 Pages)
(Progress as of 21-Jan-15)

Date	Revision	Checked	Approved
21-Jan-15		DB	

DWG. No.:
J3518/GCL/PGM/3MRP-M20

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete
SE1B2172	E2D (E1b2) - Type 4B Pier Scaffolding (1st Lift)	2	08-Apr-15	0%	2	09-Apr-15	26-Feb-15	27-Feb-15	-31	2	0%
SE1B2180	E2D (E1b2) - Type 4B Pier Rebarwork (1st Lift)	2	13-Apr-15	0%	2	14-Apr-15	28-Feb-15	02-Mar-15	-33	0	0%
SE1B2190	E2D (E1b2) - Type 4B Pier Formwork & Prep for Concreting (1st Lift)	2	16-Apr-15	0%	2	17-Apr-15	03-Mar-15	04-Mar-15	-33	0	0%
SE1B2200	E2D (E1b2) - Type 4B Pier Concreting (1st Lift)	1	18-Apr-15	0%	1	18-Apr-15	05-Mar-15	05-Mar-15	-33	0	0%
SE1B2202	E2D (E1b2) - Type 4B Pier Curing & Striking of Forms incl. CJ prep (1st Lift)	2	20-Apr-15	0%	2	21-Apr-15	06-Mar-15	07-Mar-15	-33	0	0%
Viaduct E2											
Bridge E2 - Piling & Substructure											
Milestones											
GFXX047-1	E5 (E2c) - Start date for piling	0	29-Jan-15	0%	0		04-Mar-15		27	74	0%
GFXX052-1	E6 (E2d) - Start date for piling	0	24-Feb-15	0%	0		16-Apr-15		41	72	0%
GFXX057-1	E7 (E2e) - Start date for piling	0	29-Jan-15	0%	0		03-Mar-15		26	78	0%
GFXX062-1	E8 (E2f) - Start date for piling	0	22-Jan-15	0%	0		20-May-15		94	80	0%
E3A,E3B, E3C & E3D (E2a - 1/2/3/4)											
Pile Cap Works - E3A,E3B, E3C & E3D											
Pile Cap Works											
SE2A1070	E3 (E2a1/2/3/4)- Marine Pile Cap - Inst.Floating Seal & Casing Head Steelwork	6	15-Jan-15 A	100%	0	21-Jan-15 A					100%
SE2A1080	E3 (E2a1/2/3/4)- Marine Pile Cap - Install precast shell in position (3 units)	4	22-Jan-15	0%	4	26-Jan-15	11-Dec-14	15-Dec-14	-33	0	0%
SE2A1090	E3 (E2a1/2/3/4)- Marine Pile Cap - Inst.Access & make Watertight	6	27-Jan-15	0%	6	02-Feb-15	16-Dec-14	22-Dec-14	-33	0	0%
SE2A1100	E3 (E2a1/2/3/4)- Marine Pile Cap - Weld Fin Plates / Plug Rebar & Concrete	2	03-Feb-15	0%	2	04-Feb-15	23-Dec-14	24-Dec-14	-33	0	0%
SE2A1110	E3 (E2a1/2/3/4)- Marine Pile Cap - Dewater precast shell / Remove Lifting Frame	2	05-Feb-15	0%	2	06-Feb-15	27-Dec-14	29-Dec-14	-33	0	0%
SE2A1120	E3 (E2a1/2/3/4)- Marine Pile Cap - Pile cut down 6nr	9	07-Feb-15	0%	9	17-Feb-15	30-Dec-14	09-Jan-15	-33	0	0%
SE2A1130	E3 (E2a1/2/3/4)- Marine Pile Cap - Rebar fixing (1st pour)	8	18-Feb-15	0%	8	02-Mar-15	10-Jan-15	19-Jan-15	-33	0	0%
SE2A1140	E3 (E2a1/2/3/4)- Marine Pile Cap - Concreting (First pour)	1	03-Mar-15	0%	1	03-Mar-15	20-Jan-15	20-Jan-15	-33	0	0%
SE2A1150	E3 (E2a1/2/3/4)- Marine Pile Cap - CJ preparation	3	04-Mar-15	0%	3	06-Mar-15	21-Jan-15	23-Jan-15	-33	0	0%
SE2A1160	E3 (E2a1/2/3/4)- Marine Pile Cap - Rebar fixing (Final pour)	6	07-Mar-15	0%	6	13-Mar-15	24-Jan-15	30-Jan-15	-33	0	0%
SE2A1162	E3 (E2a1/2/3/4)- Marine Pile Cap - Concreting (Final pour)	1	14-Mar-15	0%	1	14-Mar-15	31-Jan-15	31-Jan-15	-33	0	0%
SE2A1164	E3 (E2a1/2/3/4)- Marine Pile Cap - Curing incl. CJ preparation	6	16-Mar-15	0%	6	21-Mar-15	02-Feb-15	07-Feb-15	-33	0	0%
Pier Works - E3A,E3B, E3C & E3D											
Pier Works - E3A (E2a4)											
SE2A4170	E3A (E2a4) - Type 4B Pier Temp. Support Platform	4	16-Mar-15	0%	4	19-Mar-15	02-Feb-15	07-Feb-15	-31	0	0%
SE2A4172	E3A (E2a4) - Type 4B Pier Scaffolding (1st Lift)	1	20-Mar-15	0%	1	20-Mar-15	09-Feb-15	09-Feb-15	-31	0	0%
SE2A4180	E3A (E2a4) - Type 4B Pier Rebarwork (1st Lift)	2	21-Mar-15	0%	2	23-Mar-15	10-Feb-15	11-Feb-15	-31	0	0%
SE2A4190	E3A (E2a4) - Type 4B Pier Formwork & Prep for Concreting (1st Lift)	2	24-Mar-15	0%	2	25-Mar-15	12-Feb-15	14-Feb-15	-30	0	0%
SE2A4200	E3A (E2a4) - Type 4B Pier Concreting (1st Lift)	1	26-Mar-15	0%	1	26-Mar-15	16-Feb-15	16-Feb-15	-30	0	0%
SE2A4202	E3A (E2a4) - Type 4B Pier Curing & Striking of Forms incl. CJ prep (1st Lift)	2	27-Mar-15	0%	2	28-Mar-15	17-Feb-15	18-Feb-15	-30	0	0%
SE2A4300	E3A (E2a4) - Type 4B Pier Head Scaffolding	4	30-Mar-15	0%	4	02-Apr-15	23-Feb-15	26-Feb-15	-30	0	0%
SE2A4310	E3A (E2a4) - Type 4B Pier Head Rebarwork	5	08-Apr-15	0%	5	13-Apr-15	27-Feb-15	04-Mar-15	-30	0	0%
SE2A4320	E3A (E2a4) - Type 4B Pier Head Formwork & Prep for Concreting	5	14-Apr-15	0%	5	20-Apr-15	05-Mar-15	10-Mar-15	-30	0	0%
Pier Works - E3B (E2a3)											
SE2A3170	E3B (E2a3) - Type 4B Pier Temp. Support Platform	4	16-Mar-15	0%	4	19-Mar-15	16-Feb-15	25-Feb-15	-19	0	0%
SE2A3172	E3B (E2a3) - Type 4B Pier Scaffolding (1st Lift)	1	20-Mar-15	0%	1	20-Mar-15	26-Feb-15	26-Feb-15	-19	0	0%
SE2A3180	E3B (E2a3) - Type 4B Pier Rebarwork (1st Lift)	2	21-Mar-15	0%	2	23-Mar-15	27-Feb-15	28-Feb-15	-19	0	0%
SE2A3190	E3B (E2a3) - Type 4B Pier Formwork & Prep for Concreting (1st Lift)	2	24-Mar-15	0%	2	25-Mar-15	02-Mar-15	04-Mar-15	-18	0	0%
SE2A3200	E3B (E2a3) - Type 4B Pier Concreting (1st Lift)	1	26-Mar-15	0%	1	26-Mar-15	05-Mar-15	05-Mar-15	-18	0	0%
SE2A3202	E3B (E2a3) - Type 4B Pier Curing & Striking of Forms incl. CJ prep (1st Lift)	2	27-Mar-15	0%	2	28-Mar-15	06-Mar-15	07-Mar-15	-18	0	0%
SE2A3300	E3B (E2a3) - Type 4B Pier Head Scaffolding	4	30-Mar-15	0%	4	02-Apr-15	09-Mar-15	12-Mar-15	-18	0	0%
SE2A3310	E3B (E2a3) - Type 4B Pier Head Rebarwork	5	08-Apr-15	0%	5	13-Apr-15	13-Mar-15	19-Mar-15	-17	0	0%
SE2A3320	E3B (E2a3) - Type 4B Pier Head Formwork & Prep for Concreting	5	14-Apr-15	0%	5	20-Apr-15	20-Mar-15	25-Mar-15	-17	0	0%



Actual Work
Planned Bar
Critical Bar
Milestone

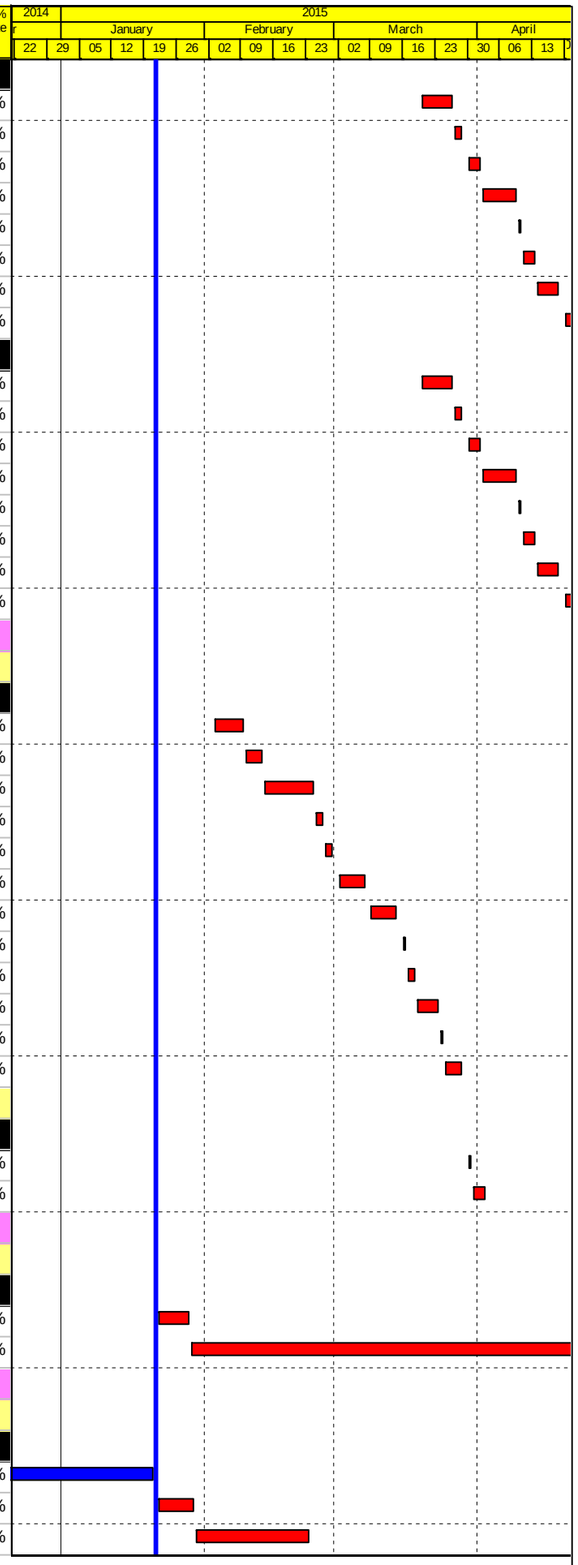
Project ID: J3518DWPrE-M20
Layout: J3518-DWP-3MRP Submission - M20
Filter: TASK filters: 3-Month Lookahead, No CC
Milestones, No Level of Effort.

Tuen Mun - Chek Lap Kok Link - Southern Connection
3-Month Rolling Programme (Page 31 of 40 Pages)
(Progress as of 21-Jan-15)

Date	Revision	Checked	Approved
21-Jan-15		DB	

DWG. No.:
J3518/GCL/PGM/3MRP-M20

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete
Pier Works - E3C (E2a2)											
SE2A2170	E3C (E2a2) - Type 4B Pier Temp. Support Platform	6	20-Mar-15	0%	6	26-Mar-15	27-Feb-15	10-Mar-15	-14	0	0%
SE2A2172	E3C (E2a2) - Type 4B Pier Scaffolding (1st Lift)	2	27-Mar-15	0%	2	28-Mar-15	11-Mar-15	12-Mar-15	-14	0	0%
SE2A2180	E3C (E2a2) - Type 4B Pier Rebarwork (1st Lift)	3	30-Mar-15	0%	3	01-Apr-15	13-Mar-15	16-Mar-15	-14	0	0%
SE2A2190	E3C (E2a2) - Type 4B Pier Formwork & Prep for Concreting (1st Lift)	3	02-Apr-15	0%	3	09-Apr-15	17-Mar-15	19-Mar-15	-14	0	0%
SE2A2200	E3C (E2a2) - Type 4B Pier Concreting (1st Lift)	1	10-Apr-15	0%	1	10-Apr-15	20-Mar-15	20-Mar-15	-14	0	0%
SE2A2202	E3C (E2a2) - Type 4B Pier Curing & Striking of Forms incl. CJ prep (1st Lift)	2	11-Apr-15	0%	2	13-Apr-15	21-Mar-15	23-Mar-15	-14	0	0%
SE2A2300	E3C (E2a2) - Type 4B Pier Head Scaffolding	4	14-Apr-15	0%	4	18-Apr-15	24-Mar-15	27-Mar-15	-14	0	0%
SE2A2310	E3C (E2a2) - Type 4B Pier Head Rebarwork	5	20-Apr-15	0%	5	25-Apr-15	28-Mar-15	02-Apr-15	-14	0	0%
Pier Works - E3D (E2a1)											
SE2A1170	E3D (E2a1) - Type 4B Pier Temp. Support Platform	6	20-Mar-15	0%	6	26-Mar-15	18-Mar-15	26-Mar-15	0	0	0%
SE2A1172	E3D (E2a1) - Type 4B Pier Scaffolding (1st Lift)	2	27-Mar-15	0%	2	28-Mar-15	27-Mar-15	28-Mar-15	0	0	0%
SE2A1180	E3D (E2a1) - Type 4B Pier Rebarwork (1st Lift)	3	30-Mar-15	0%	3	01-Apr-15	30-Mar-15	01-Apr-15	0	0	0%
SE2A1190	E3D (E2a1) - Type 4B Pier Formwork & Prep for Concreting (1st Lift)	3	02-Apr-15	0%	3	09-Apr-15	02-Apr-15	09-Apr-15	0	0	0%
SE2A1200	E3D (E2a1) - Type 4B Pier Concreting (1st Lift)	1	10-Apr-15	0%	1	10-Apr-15	10-Apr-15	10-Apr-15	0	0	0%
SE2A1202	E3D (E2a1) - Type 4B Pier Curing & Striking of Forms incl. CJ prep (1st Lift)	2	11-Apr-15	0%	2	13-Apr-15	11-Apr-15	13-Apr-15	0	0	0%
SE2A1300	E3D (E2a1) - Type 4B Pier Head Scaffolding	4	14-Apr-15	0%	4	18-Apr-15	14-Apr-15	18-Apr-15	0	0	0%
SE2A1310	E3D (E2a1) - Type 4B Pier Head Rebarwork	5	20-Apr-15	0%	5	25-Apr-15	20-Apr-15	25-Apr-15	0	0	0%
E4A & E4B (E2b - 1/2)											
Pile Cap Works - E4A & E4B											
Pile Cap Works											
SE2B0070	E4 (E2b1/2) - Marine Pile Cap - Inst.Floating Seal & Casing Head Steelwork	6	03-Feb-15	0%	6	09-Feb-15	09-Dec-14	16-Dec-14	-45	0	0%
SE2B0080	E4 (E2b1/2) - Marine Pile Cap - Install precast shell in position (3 units)	4	10-Feb-15	0%	4	13-Feb-15	16-Dec-14	20-Dec-14	-45	0	0%
SE2B0090	E4 (E2b1/2) - Marine Pile Cap - Inst.Access & make Watertight	6	14-Feb-15	0%	6	24-Feb-15	20-Dec-14	30-Dec-14	-45	0	0%
SE2B0100	E4 (E2b1/2) - Marine Pile Cap - Weld Fin Plates / Plug Rebar & Concrete	2	25-Feb-15	0%	2	26-Feb-15	30-Dec-14	02-Jan-15	-45	0	0%
SE2B0110	E4 (E2b1/2) - Marine Pile Cap - Dewater precast shell / Remove Lifting Frame	2	27-Feb-15	0%	2	28-Feb-15	02-Jan-15	05-Jan-15	-45	0	0%
SE2B0120	E4 (E2b1/2) - Marine Pile Cap - Pile cut down 4nr	6	02-Mar-15	0%	6	07-Mar-15	05-Jan-15	12-Jan-15	-45	0	0%
SE2B0130	E4 (E2b1/2) - Marine Pile Cap - Rebar fixing (1st pour)	6	09-Mar-15	0%	6	14-Mar-15	12-Jan-15	19-Jan-15	-45	0	0%
SE2B0140	E4 (E2b1/2) - Marine Pile Cap - Concreting (First pour)	1	16-Mar-15	0%	1	16-Mar-15	19-Jan-15	20-Jan-15	-45	0	0%
SE2B0150	E4 (E2b1/2) - Marine Pile Cap - CJ preparation	2	17-Mar-15	0%	2	18-Mar-15	20-Jan-15	22-Jan-15	-45	0	0%
SE2B0160	E4 (E2b1/2) - Marine Pile Cap - Rebar fixing (Final pour)	4	19-Mar-15	0%	4	23-Mar-15	22-Jan-15	27-Jan-15	-45	0	0%
SE2B0162	E4 (E2b1/2) - Marine Pile Cap - Concreting (Final pour)	1	24-Mar-15	0%	1	24-Mar-15	27-Jan-15	28-Jan-15	-45	0	0%
SE2B0164	E4 (E2b1/2) - Marine Pile Cap - Curing incl. CJ preparation	4	25-Mar-15	0%	4	28-Mar-15	28-Jan-15	02-Feb-15	-45	0	0%
Pier Works - E4A & E4B											
Pier Works - E4A (E2b2)											
SE2B2020	E4A (E2b2) - Seagull Pier Falsework & Scaffolding (1st wall pour)	1	30-Mar-15	0%	1	30-Mar-15	02-Feb-15	03-Feb-15	-45	0	0%
SE2B2030	E4A (E2b2) - Seagull Pier Rebar Fixing (1st wall pour)	3	31-Mar-15	0%	3	02-Apr-15	03-Feb-15	06-Feb-15	-45	20	0%
E5A & E5B (E2c - 1/2)											
Foundation Works - E5A & E5B											
Foundation Works											
GFXX04	E5 (E2c) - Relocation & Install Temporary Removable Platform from E4 to E5, Piling Plant frc	6	22-Jan-15	0%	6	28-Jan-15	24-Nov-14	01-Dec-14	-48	0	0%
GFXX047	E5 (E2c) - Bored Piles (2.20m dia. x 4 nos)	74	29-Jan-15	0%	74	04-May-15	01-Dec-14	04-Mar-15	-48	0	0%
E6A & E6B (E2d - 1/2)											
Foundation Works - E6A & E6B											
Foundation Works											
GFXX050	E6 (E2d) - Inst.Temp.Working Platform (Heavy)	18	15-Dec-14 A	100%	0	21-Jan-15 A					100%
GFXX05	E6 (E2d) - Inst.Temp.Working Platform (Light)	7	22-Jan-15	0%	7	29-Jan-15	12-Dec-14	20-Dec-14	-32	0	0%
GFXX051	E6 (E2d) - Predrilling (4 nos)	18	30-Jan-15	0%	18	23-Feb-15	20-Dec-14	14-Jan-15	-32	0	0%



Actual Work
Planned Bar
Critical Bar
Milestone

Project ID: J3518DWPrE-M20
Layout: J3518-DWP-3MRP Submission - M20
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Tuen Mun - Chek Lap Kok Link - Southern Connection
3-Month Rolling Programme (Page 32 of 40 Pages)
(Progress as of 21-Jan-15)

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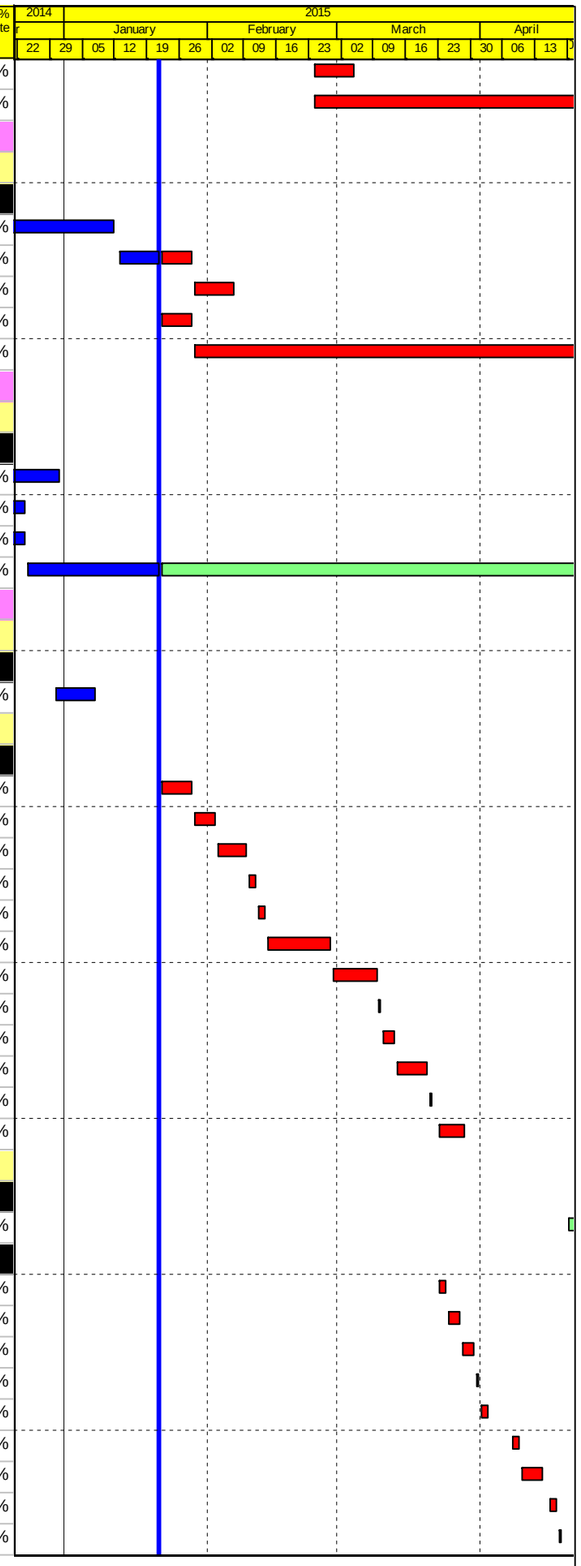
DWG. No.:
J3518/GCL/PGM/3MRP-M20

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete
GFXX05	E6 (E2d) - Confirm Rockhead levels	8	24-Feb-15	0%	8	04-Mar-15	14-Jan-15	23-Jan-15	-32	0	0%
GFXX052	E6 (E2d) - Bored Piles (2.50m dia. x 4 nr)	72	24-Feb-15	0%	72	23-May-15	14-Jan-15	16-Apr-15	-32	0	0%
E7A & E7B (E2e - 1/2)											
Foundation Works - E7A & E7B											
Foundation Works											
GFXX055	E7 (E2e) - Inst.Temp.Working Platforms (Heavy & Light)	10	02-Dec-14 A	100%	0	12-Jan-15 A					100%
GFXX056	E7 (E2e) - Predrilling (4 nos)	14	13-Jan-15 A	57.14%	6	28-Jan-15	18-Nov-14	25-Nov-14	-53	0	30%
GFXX05	E7 (E2e) - Confirm Rockhead levels	8	29-Jan-15	0%	8	06-Feb-15	25-Nov-14	04-Dec-14	-53	0	0%
GFXX05	E7 (E2e) - Relocation & Install, Temporary Removable Platform from E11 to E7	6	22-Jan-15	0%	6	28-Jan-15	18-Nov-14	25-Nov-14	-53	0	0%
GFXX057	E7 (E2e) - Bored Piles (2.50m dia. x 4 nr)	78	29-Jan-15	0%	78	08-May-15	25-Nov-14	03-Mar-15	-53	0	0%
E8A & E8B (E2f - 1/2)											
Foundation Works - E8A & E8B											
Foundation Works											
GFXX061	E8 (E2f) - Predrilling (4 nos)	15	09-Dec-14 A	100%	0	31-Dec-14 A					100%
GFXX06	E8 (E2f) - Confirm Rockhead levels	8	15-Dec-14 A	100%	0	23-Dec-14 A					100%
GFXX06	E8 (E2f) - Relocation & Install Temporary Removable Platform from E3, Plant & Equipment fr	7	16-Dec-14 A	100%	0	23-Dec-14 A					100%
GFXX062	E8 (E2f) - Bored Piles (2.50m dia. x 4 nr)	102	24-Dec-14 A	21.57%	80	04-May-15	06-Feb-15	20-May-15	14	0	10%
E9A & E9B (E2g - 1/2)											
Foundation Works - E9A & E9B											
Foundation Works											
GFXX069	E9 (E2g) - Dismantle temp. removable piling platform	7	30-Dec-14 A	100%	0	07-Jan-15 A					100%
Pile Cap Works - E9A & E9B											
Pile Cap Works											
SE2G00	E9 (E2g1/2) - Marine Pile Cap - Inst.Floating Seal & Casing Head Steelwork	6	22-Jan-15	0%	6	28-Jan-15	08-Dec-14	15-Dec-14	-35	0	0%
SE2G00	E9 (E2g1/2) - Marine Pile Cap - Install precast shell in position (3 units)	4	29-Jan-15	0%	4	02-Feb-15	15-Dec-14	19-Dec-14	-35	0	0%
SE2G00	E9 (E2g1/2) - Marine Pile Cap - Inst.Access & make Watertight	6	03-Feb-15	0%	6	09-Feb-15	19-Dec-14	29-Dec-14	-35	0	0%
SE2G01	E9 (E2g1/2) - Marine Pile Cap - Weld Fin Plates / Plug Rebar & Concrete	2	10-Feb-15	0%	2	11-Feb-15	29-Dec-14	31-Dec-14	-35	0	0%
SE2G01	E9 (E2g1/2) - Marine Pile Cap - Dewater precast shell / Remove Lifting Frame	2	12-Feb-15	0%	2	13-Feb-15	31-Dec-14	03-Jan-15	-35	0	0%
SE2G01	E9 (E2g1/2) - Marine Pile Cap - Pile cut down 6nr	9	14-Feb-15	0%	9	27-Feb-15	03-Jan-15	14-Jan-15	-35	0	0%
SE2G01	E9 (E2g1/2) - Marine Pile Cap - Rebar fixing (1st pour)	8	28-Feb-15	0%	8	09-Mar-15	14-Jan-15	23-Jan-15	-35	0	0%
SE2G01	E9 (E2g1/2) - Marine Pile Cap - Concreting (First pour)	1	10-Mar-15	0%	1	10-Mar-15	23-Jan-15	24-Jan-15	-35	0	0%
SE2G01	E9 (E2g1/2) - Marine Pile Cap - CJ preparation	3	11-Mar-15	0%	3	13-Mar-15	24-Jan-15	28-Jan-15	-35	0	0%
SE2G01	E9 (E2g1/2) - Marine Pile Cap - Rebar fixing (Final pour)	6	14-Mar-15	0%	6	20-Mar-15	28-Jan-15	04-Feb-15	-35	0	0%
SE2G01	E9 (E2g1/2) - Marine Pile Cap - Concreting (Final pour)	1	21-Mar-15	0%	1	21-Mar-15	04-Feb-15	05-Feb-15	-35	0	0%
SE2G01	E9 (E2g1/2) - Marine Pile Cap - Curing incl. CJ preparation	6	23-Mar-15	0%	6	28-Mar-15	05-Feb-15	12-Feb-15	-35	0	0%
Pier Works - E9A & E9B											
Pier Works - E9A (E2g2)											
SE2G20	E9A (E2g2) - Seagull Pier Falsework & Scaffolding (1st wall pour)	2	20-Apr-15	0%	2	21-Apr-15	11-May-15	14-May-15	17	0	0%
Pier Works - E9B (E2g1)											
SE2G10	E9B (E2g1) - Seagull Pier Falsework & Scaffolding (1st wall pour)	2	23-Mar-15	0%	2	24-Mar-15	05-Feb-15	07-Feb-15	-35	0	0%
SE2G10	E9B (E2g1) - Seagull Pier Rebar Fixing (1st wall pour)	3	25-Mar-15	0%	3	27-Mar-15	07-Feb-15	11-Feb-15	-35	0	0%
SE2G10	E9B (E2g1) - Seagull Pier Formwork & Prep. for concreting (1st wall pour)	2	28-Mar-15	0%	2	30-Mar-15	11-Feb-15	13-Feb-15	-35	0	0%
SE2G10	E9B (E2g1) - Seagull Pier Concreting (1st wall pour)	1	31-Mar-15	0%	1	31-Mar-15	13-Feb-15	14-Feb-15	-35	0	0%
SE2G10	E9B (E2g1) - Seagull Pier Curing & Striking of Forms incl. CJ Prep. (1st wall pour)	2	01-Apr-15	0%	2	02-Apr-15	14-Feb-15	17-Feb-15	-35	0	0%
SE2G10	E9B (E2g1) - Seagull Pier Falsework & Scaffolding (2nd wall pour)	2	08-Apr-15	0%	2	09-Apr-15	17-Feb-15	23-Feb-15	-35	0	0%
SE2G10	E9B (E2g1) - Seagull Pier Rebar Fixing (2nd wall pour)	4	10-Apr-15	0%	4	14-Apr-15	23-Feb-15	27-Feb-15	-35	0	0%
SE2G10	E9B (E2g1) - Seagull Pier Formwork & Prep. for concreting (2nd wall pour)	2	16-Apr-15	0%	2	17-Apr-15	27-Feb-15	02-Mar-15	-35	0	0%
SE2G11	E9B (E2g1) - Seagull Pier Concreting (2nd wall pour)	1	18-Apr-15	0%	1	18-Apr-15	02-Mar-15	03-Mar-15	-35	0	0%



Actual Work
Planned Bar
Critical Bar
Milestone

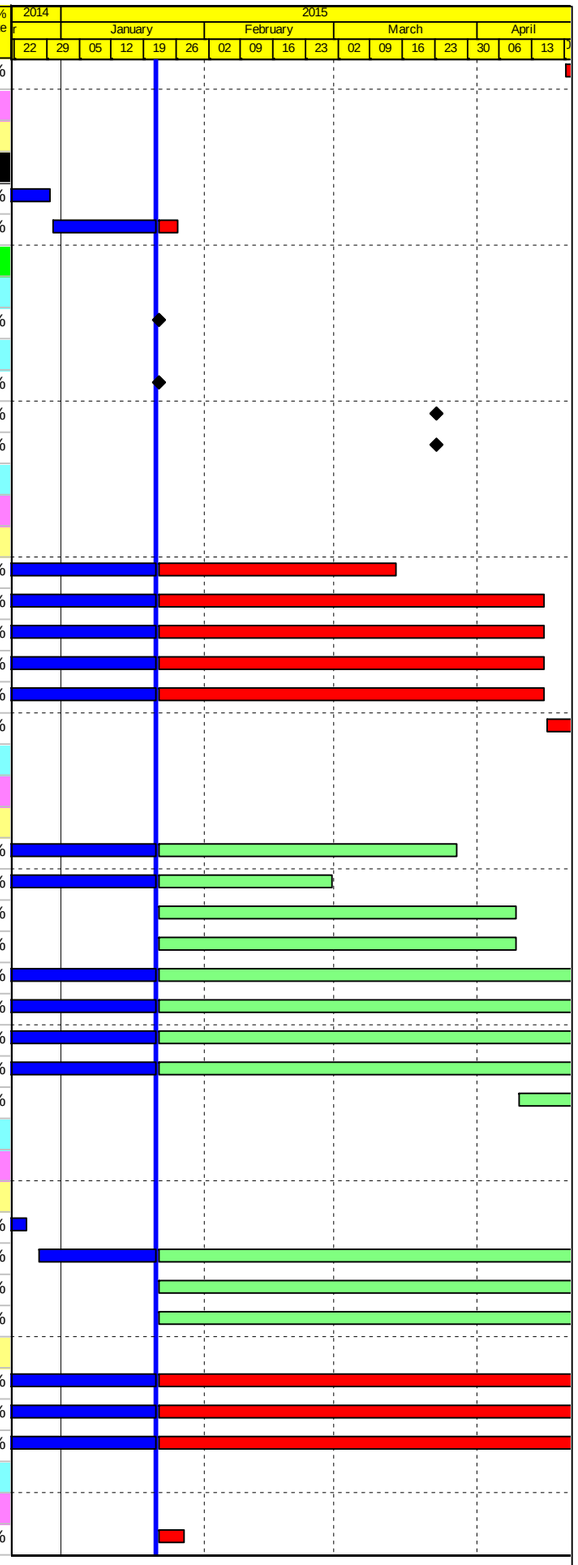
Project ID: J3518DWPrE-M20
Layout: J3518-DWP-3MRP Submission - M20
Filter: TASK filters: 3-Month Lookahead, No CC
Milestones, No Level of Effort.

Tuen Mun - Chek Lap Kok Link - Southern Connection
3-Month Rolling Programme (Page 33 of 40 Pages)
(Progress as of 21-Jan-15)

Date	Revision	Checked	Approved
21-Jan-15		DB	

DWG. No.:
J3518/GCL/PGM/3MRP-M20

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete
SE2G111	E9B (E2g1) - Seagull Pier Curing & Striking of Forms incl. CJ Prep. (2nd wall pour)	2	20-Apr-15	0%	2	21-Apr-15	03-Mar-15	05-Mar-15	-35	0	0%
E10A & E10B (E2h - 1/2)											
Foundation Works - E10A & E10B											
Foundation Works											
GFXX073	E10 (E2h) - Sonic & Interface Coring	12	13-Dec-14 A	100%	0	29-Dec-14 A					100%
GFXX074	E10 (E2h) - Dismantle temp. removable piling platform	7	30-Dec-14 A	50%	4	26-Jan-15	21-Nov-14	25-Nov-14	-50	3	50%
Viaduct E5, E6, E7 & E8											
Milestones - Marine Foundation											
GFXX101-1	E13A/B (E8c/E7c + dolphin) - Start date for piling	0	22-Jan-15	0%	0		13-Nov-15		240	172	0%
Milestones - Land Foundation											
GFXX012	Land Access to BCF (Available in Month 17)	0	22-Jan-15	0%	0		11-Jan-14		-376	0	0%
GFXX546-1	E14D (E5d) - Start date for piling	0	23-Mar-15	0%	0		12-Jul-14		-208	102	0%
GFXX547-1	E14C (E6d) - Start date for piling	0	23-Mar-15	0%	0		22-Jul-14		-200	93	0%
E11A & E11B (E5E6a/E7E8a)											
Foundation Works - E11A & E11B											
Foundation Works											
GFXX084	E11 (E5E6a/E7E8a) - Bored Piles (2.5m dia. x 10 nr)	130	10-Jul-14 A	67.69%	42	14-Mar-15	03-Nov-14	22-Dec-14	-66	23	70%
GFXX084	E11 (E5E6a/E7E8a) - Bored Piles (2.5m dia. x 10 nr) 25% in total	130	10-Jul-14 A	50%	65	15-Apr-15	07-Oct-14	22-Dec-14	-89	0	59%
GFXX084	E11 (E5E6a/E7E8a) - Bored Piles (2.5m dia. x 10 nr) 25% in total	130	10-Jul-14 A	50%	65	15-Apr-15	07-Oct-14	22-Dec-14	-89	0	59%
GFXX084	E11 (E5E6a/E7E8a) - Bored Piles (2.5m dia. x 10 nr) 25% in total	130	10-Jul-14 A	50%	65	15-Apr-15	07-Oct-14	22-Dec-14	-89	0	59%
GFXX084	E11 (E5E6a/E7E8a) - Bored Piles (2.5m dia. x 10 nr) 25% in total	130	10-Jul-14 A	50%	65	15-Apr-15	07-Oct-14	22-Dec-14	-89	0	59%
GFXX085	E11 (E5E6a/E7E8a) - Sonic & Interface Coring	12	16-Apr-15	0%	12	29-Apr-15	22-Dec-14	08-Jan-15	-89	0	0%
E12A, E12B, E12C & E12D (E8b/E7b/E6b/E5b)											
Foundation Works - E12											
Foundation Works											
GFXX089	E12 (E5b/E6b/E7b/E8b) - Bored Piles (2.5m dia. x 14 nr)	151	09-Jul-14 A	64.9%	53	27-Mar-15	10-Mar-15	16-May-15	38	0	80%
GFXX089	E12A & E12D (E5b, E8b) - Dolphins - Bored Piles (2.20m dia x 6 nr)	60	01-Nov-14 A	50%	30	28-Feb-15	25-Nov-16	31-Dec-16	546	30	60%
GFXX089	E12A & E12D (E5b, E8b) - Dolphins - Bored Piles (2.20m dia x 6 nr) 50% in total	60	22-Jan-15	0%	60	09-Apr-15	25-Nov-16	08-Feb-17	546	0	0%
GFXX089	E12A & E12D (E5b, E8b) - Dolphins - Bored Piles (2.20m dia x 6 nr) 50% in total	60	22-Jan-15	0%	60	09-Apr-15	25-Nov-16	08-Feb-17	546	0	0%
GFXX089	E12 (E5b/E6b/E7b/E8b) - Bored Piles (2.5m dia. x 14 nr) 25% in total	151	09-Jul-14 A	50.33%	75	27-Apr-15	09-Feb-15	16-May-15	16	0	51%
GFXX089	E12 (E5b/E6b/E7b/E8b) - Bored Piles (2.5m dia. x 14 nr) 25% in total	151	09-Jul-14 A	50.33%	75	27-Apr-15	09-Feb-15	16-May-15	16	0	51%
GFXX089	E12 (E5b/E6b/E7b/E8b) - Bored Piles (2.5m dia. x 14 nr) 25% in total	151	09-Jul-14 A	50.33%	75	27-Apr-15	09-Feb-15	16-May-15	16	0	51%
GFXX089	E12 (E5b/E6b/E7b/E8b) - Bored Piles (2.5m dia. x 14 nr) 25% in total	151	09-Jul-14 A	50.33%	75	27-Apr-15	09-Feb-15	16-May-15	16	0	51%
GFXX091	E12 (E5b/E6b/E7b/E8b Dolphins only) - Sonic & Interface Coring	12	10-Apr-15	0%	12	23-Apr-15	09-Feb-17	22-Feb-17	546	0	0%
E13A, E13B, E13C & E13D (E8c/E7c/E6c/E5c)											
Foundation Works - E13											
Foundation Works - E13A (E8c) & E13B (E7c)											
GFXX100	E13A/B (E8c/E7c) - Confirm Rockhead levels	8	16-Dec-14 A	100%	0	24-Dec-14 A					100%
GFXX101	E13A/B (E8c/E7c) - Bored Piles (2.5m dia. x 10 nr)	172	27-Dec-14 A	12.21%	151	29-Jul-15	18-Apr-15	19-Oct-15	68	0	5%
GFXX101	E13A/B (E8c/E7c) - Bored Piles (2.5m dia. x 10 nr) 50% in total	172	22-Jan-15	0%	172	22-Aug-15	18-Apr-15	13-Nov-15	68	0	0%
GFXX101	E13A/B (E8c/E7c) - Bored Piles (2.5m dia. x 10 nr) 50% in total	172	22-Jan-15	0%	172	22-Aug-15	18-Apr-15	13-Nov-15	68	0	0%
Foundation Works - E13C (E6c) & E13D (E5c)											
GFXX095	E13C/D (E6c/E5c) - Bored Piles (2.50m dia. x 10 nr)	128	23-Aug-14 A	39.06%	78	30-Apr-15	24-Dec-14	01-Apr-15	-21	0	40%
GFXX095	E13C/D (E6c/E5c) - Bored Piles (2.50m dia. x 10 nr) 50% in total	128	14-Aug-14 A	35.16%	83	07-May-15	18-Dec-14	01-Apr-15	-26	0	35%
GFXX095	E13C/D (E6c/E5c) - Bored Piles (2.50m dia. x 10 nr) 50% in total	128	14-Aug-14 A	35.16%	83	07-May-15	18-Dec-14	01-Apr-15	-26	0	35%
E14A, E14B, E14C & E14D (E8d/E7d/E6d/E5d)											
Foundation Works - E14											
GFXX545	Mobilization & Assembling Bored Pile Plant & Equipment for Viaducts in HKBCF	5	22-Jan-15	0%	5	27-Jan-15	11-Jan-14	16-Jan-14	-305	0	0%



Actual Work
Planned Bar
Critical Bar
Milestone

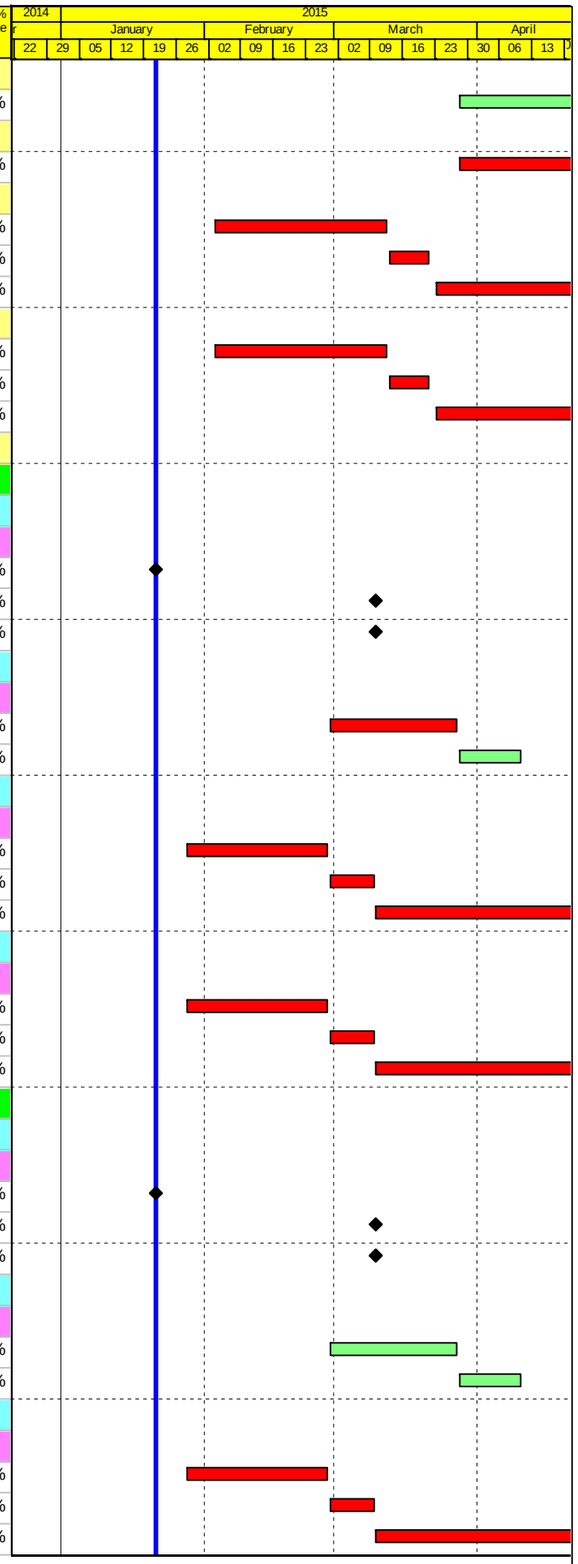
Project ID: J3518DWPrE-M20
Layout: J3518-DWP-3MRP Submission - M20
Filter: TASK filters: 3-Month Lookahead, No CC
Milestones, No Level of Effort.

Tuen Mun - Chek Lap Kok Link - Southern Connection
3-Month Rolling Programme (Page 34 of 40 Pages)
(Progress as of 21-Jan-15)

Date	Revision	Checked	Approved
21-Jan-15		DB	

DWG. No.:
J3518/GCL/PGM/3MRP-M20

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete
Foundation Works - E14A (E8d)											
GFXX544	E14A (E8d) - Pre-drilling for Piles (4 nos)	24	28-Mar-15	0%	24	29-Apr-15	02-Apr-15	05-May-15	4	0	0%
Foundation Works - E14B (E7d)											
GFXX544	E14B (E7d) - Pre-drilling for Piles (3 nos)	24	28-Mar-15	0%	24	29-Apr-15	19-Mar-15	20-Apr-15	-8	0	0%
Foundation Works - E14C (E6d)											
GFXX544	E14C (E6d) - Pre-drilling for Piles (3 nos)	30	03-Feb-15	0%	30	12-Mar-15	10-Feb-14	15-Mar-14	-293	0	0%
GFXX544	E14C (E6d) - Confirm Rockhead levels	8	13-Mar-15	0%	8	21-Mar-15	17-Mar-14	25-Mar-14	-293	0	0%
GFXX547	E14C (E6d) - Bored Piles (2.20m dia. x 3 nos)	93	23-Mar-15	0%	93	17-Jul-15	26-Mar-14	21-Jul-14	-293	0	0%
Foundation Works - E14D (E5d)											
GFXX544	E14D (E5d) - Pre-drilling for Piles (4 nos)	30	03-Feb-15	0%	30	12-Mar-15	17-Jan-14	24-Feb-14	-310	0	0%
GFXX544	E14D (E5d) - Confirm Rockhead levels	8	13-Mar-15	0%	8	21-Mar-15	25-Feb-14	05-Mar-14	-310	0	0%
GFXX546	E14D (E5d) - Bored Piles (2.20m dia. x 4 nos)	102	23-Mar-15	0%	102	28-Jul-15	06-Mar-14	11-Jul-14	-310	0	0%
Viaduct F											
Viaduct F1											
General F1											
Milestones											
F10010	Viaduct F1 - Approval of Foundation DDA	0		0%	0	21-Jan-15		14-Jan-15	-5	33	0%
GFXX553-8	F2 (F1c) - Start date for piling	0	10-Mar-15	0%	0		17-Apr-15		29	72	0%
GFXX553-9	F3 (F1d) - Start date for piling	0	10-Mar-15	0%	0		12-Sep-15		152	84	0%
F1 (F1b)											
Foundation Works											
GFXX553-1	F1 (F1b) - Pre-drilling for Piles (2 nos)	24	28-Feb-15	0%	24	27-Mar-15	16-Feb-15	18-Mar-15	-8	0	0%
GFXX553-4	F1 (F1b) - Confirm Rockhead Levels	8	28-Mar-15	0%	8	10-Apr-15	24-Apr-15	04-May-15	19	60	0%
F2 (F1c)											
Foundation Works											
GFXX553-2	F2 (F1c) - Pre-drilling for Piles (2 nos)	24	28-Jan-15	0%	24	27-Feb-15	05-Dec-14	05-Jan-15	-43	0	0%
GFXX553-5	F2 (F1c) - Confirm Rockhead Levels	8	28-Feb-15	0%	8	09-Mar-15	06-Jan-15	14-Jan-15	-43	0	0%
GFXX556	F2 (F1c) - Bored Piles (2.20m dia. x 2 nos)	72	10-Mar-15	0%	72	08-Jun-15	15-Jan-15	16-Apr-15	-43	0	0%
F3 (F1d)											
Foundation Works											
GFXX553-3	F3 (F1d) - Pre-drilling for Piles (2 nos)	24	28-Jan-15	0%	24	27-Feb-15	08-Dec-14	07-Jan-15	-41	0	0%
GFXX553-6	F3 (F1d) - Confirm Rockhead Levels	8	28-Feb-15	0%	8	09-Mar-15	08-Jan-15	16-Jan-15	-41	0	0%
GFXX557	F3 (F1d) - Bored Piles (2.20m dia. x 2 nos)	84	10-Mar-15	0%	84	23-Jun-15	17-Jan-15	04-May-15	-41	0	0%
Viaduct F2											
General F2											
Milestones											
F20010	Viaduct F2 - Approval of Foundation DDA	0		0%	0	21-Jan-15		28-Nov-14	-38	4	0%
GFXX561-	F6 (F2d) - Start date for piling	0	10-Mar-15	0%	0		04-Jul-15		92	72	0%
GFXX561-9	F5 (F2c) - Start date for piling	0	10-Mar-15	0%	0		08-Jul-15		95	72	0%
F4 (F2b)											
Foundation Works											
GFXX561-1	F4 (F2b) - Pre-drilling for piles (2 nos)	24	28-Feb-15	0%	24	27-Mar-15	02-Mar-15	28-Mar-15	1	0	0%
GFXX561-6	F4 (F2b) - Confirm Rockhead Levels	8	28-Mar-15	0%	8	10-Apr-15	30-Mar-15	11-Apr-15	1	48	0%
F5 (F2c)											
Foundation Works											
GFXX561-2	F5 (F2c) - Pre-drilling for Piles (2 nos)	24	28-Jan-15	0%	24	27-Feb-15	01-Dec-14	30-Dec-14	-47	0	0%
GFXX561-8	F5 (F2c) - Confirm Rockhead Levels	8	28-Feb-15	0%	8	09-Mar-15	31-Dec-14	09-Jan-15	-47	0	0%
GFXX564	F5 (F2c) - Bored Piles (2.20m dia. x 2 nos)	72	10-Mar-15	0%	72	08-Jun-15	10-Jan-15	11-Apr-15	-47	0	0%



Actual Work
Planned Bar
Critical Bar
Milestone

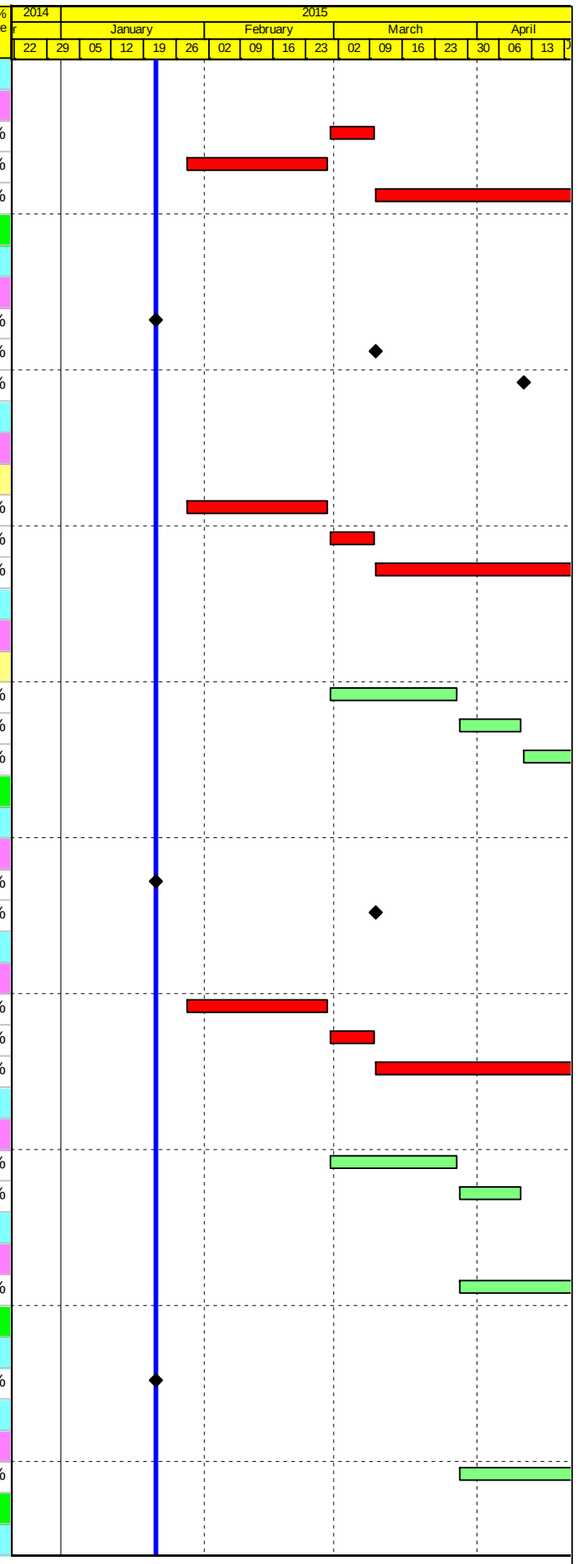
Project ID: J3518DWPrE-M20
Layout: J3518-DWP-3MRP Submission - M20
Filter: TASK filters: 3-Month Lookahead, No CC Milestones, No Level of Effort.

Tuen Mun - Chek Lap Kok Link - Southern Connection
3-Month Rolling Programme (Page 35 of 40 Pages)
(Progress as of 21-Jan-15)

Date	Revision	Checked	Approved
21-Jan-15		DB	

DWG. No.:
J3518/GCL/PGM/3MRP-M20

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete
F6 (F2d)											
Foundation Works											
GFXX561-	F6 (F2d) - Confirm Rockhead Levels	8	28-Feb-15	0%	8	09-Mar-15	02-Feb-15	10-Feb-15	-20	0	0%
GFXX561-3	F6 (F2d) - Pre-drilling for Piles (2 nos)	24	28-Jan-15	0%	24	27-Feb-15	05-Jan-15	31-Jan-15	-20	0	0%
GFXX565	F6 (F2d) - Bored Piles (2.20m dia. x 2 nos)	72	10-Mar-15	0%	72	08-Jun-15	11-Feb-15	14-May-15	-20	0	0%
Viaduct F3											
General F3											
Milestones											
F30010	Viaduct F3 - Approval of Foundation DDA	0		0%	0	21-Jan-15		14-Jan-15	-6	4	0%
GFXX571-6	F9 (F3d) - Start date for piling	0	10-Mar-15	0%	0		14-Jul-15		100	84	0%
GFXX571-8	F10 (F3c) - Start date for piling	0	11-Apr-15	0%	0		15-Sep-15		130	72	0%
F9 (F3d-1/F3d-2)											
Foundation Works - F9 (F3d-1/F3d-2)											
Foundation Works											
GFXX571	F9 (F3d) - Pre-drilling for Piles (4 nos)	24	28-Jan-15	0%	24	27-Feb-15	14-Jan-15	11-Feb-15	-12	0	0%
GFXX571	F9 (F3d) - Confirm Rockhead Levels	8	28-Feb-15	0%	8	09-Mar-15	11-Feb-15	24-Feb-15	-12	0	0%
GFXX575	F9 (F3d) - Bored Piles (2.20m dia. x 4 nos)	84	10-Mar-15	0%	84	23-Jun-15	24-Feb-15	09-Jun-15	-12	0	0%
F10 (F3c-1/F3c-2)											
Foundation Works - Pier F10											
Foundation Works											
GFXX571	F10 (F3c) - Pre-drilling for Piles (4 nos)	24	28-Feb-15	0%	24	27-Mar-15	05-Mar-15	01-Apr-15	4	0	0%
GFXX571	F10 (F3c) - Confirm Rockhead Levels	8	28-Mar-15	0%	8	10-Apr-15	11-Jun-15	19-Jun-15	58	0	0%
GFXX574	F10 (F3c) - Bored Piles (2.20m dia. x 4 nos)	72	11-Apr-15	0%	72	08-Jul-15	22-Jun-15	14-Sep-15	58	0	0%
Viaduct F5											
General F5											
Milestones											
F50010	Viaduct F5 - Approval of foundation DDA	0		0%	0	21-Jan-15		15-Jan-15	-4	4	0%
GFXX586-5	F13 (F5d) - Start date for piling	0	10-Mar-15	0%	0		08-Dec-15		223	84	0%
F13 (F5d)											
Foundation Works											
GFXX586-1	F13 (F5d) - Pre-drilling for Piles (3 nos)	24	28-Jan-15	0%	24	27-Feb-15	16-Jan-15	12-Feb-15	-10	0	0%
GFXX586-4	F13 (F5d) - Confirm Rockhead Levels	8	28-Feb-15	0%	8	09-Mar-15	13-Feb-15	25-Feb-15	-10	0	0%
GFXX589	F13 (F5d) - Bored Piles (2.20m dia. x 3 nos)	84	10-Mar-15	0%	84	23-Jun-15	26-Feb-15	10-Jun-15	-10	0	0%
F14 (F5c)											
Foundation Works											
GFXX586-2	F14 (F5c) - Pre-drilling for Piles (2 nos)	24	28-Feb-15	0%	24	27-Mar-15	31-Mar-15	02-May-15	26	0	0%
GFXX586-6	F14 (F5c) - Confirm Rockhead Levels	8	28-Mar-15	0%	8	10-Apr-15	06-May-15	14-May-15	28	48	0%
F15 (F5b)											
Foundation Works											
GFXX586-3	F15 (F5b) - Pre-drilling for Piles (2 nos)	24	28-Mar-15	0%	24	29-Apr-15	30-Apr-15	30-May-15	24	0	0%
Viaduct F4											
General F4											
F40010	Viaduct F4 - Approval of foundation DDA	0		0%	0	21-Jan-15		10-Jun-15	100	109	0%
F16 (F4a/F5a)											
Foundation Works											
GFXX579-1	F16 (F4a/F5a) - Pre-drilling for Piles (4 nos)	24	28-Mar-15	0%	24	29-Apr-15	04-May-15	01-Jun-15	26	0	0%
Approach Ramp F											
Approach Ramp Land Foundation - HKBCF											



Actual Work
Planned Bar
Critical Bar
Milestone

Project ID: J3518DWPrE-M20
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Tuen Mun - Chek Lap Kok Link - Southern Connection
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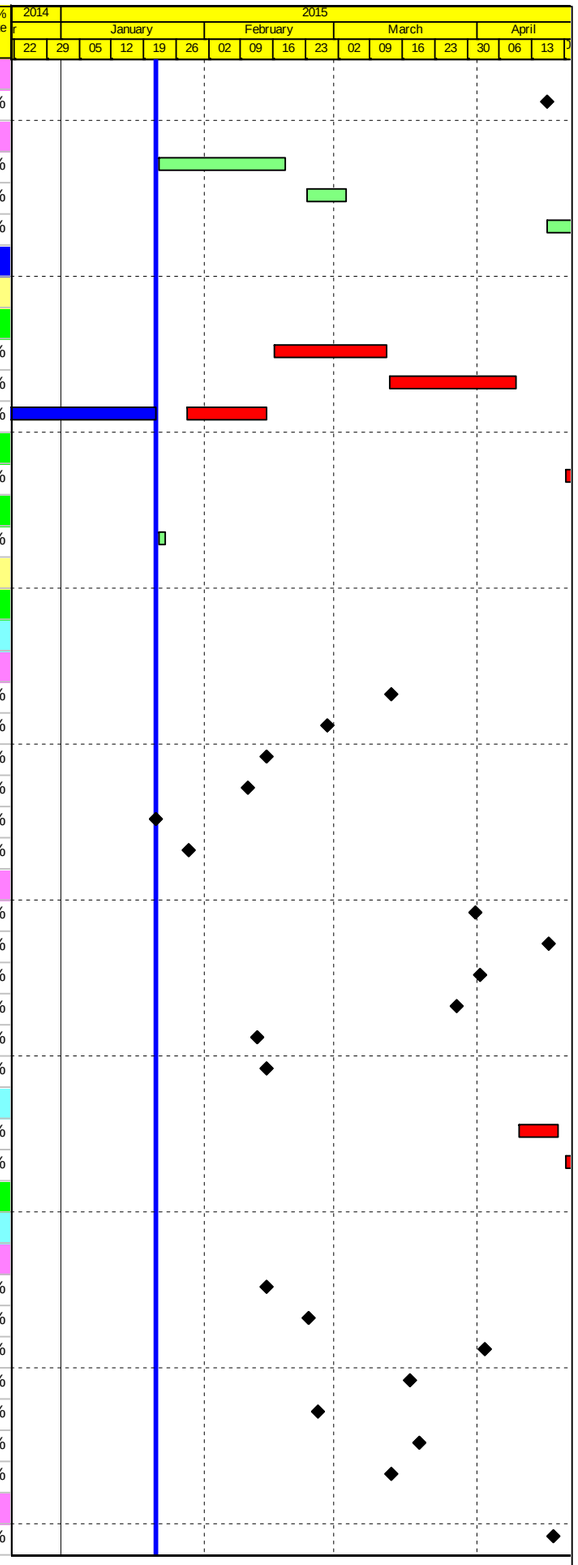
Milestones											
GFXX611	AR-F - Start date for piling	0	16-Apr-15	0%	0		12-Jul-15		87	48	0%
Approach Ramp F Piling											
GFXX593	AR-F - Pre-drilling for Piles (28 nos)	24	22-Jan-15	0%	24	18-Feb-15	14-Apr-15	12-May-15	63	0	0%
GFXX594	AR-F - Confirm Rockhead Levels	8	23-Feb-15	0%	8	03-Mar-15	13-May-15	21-May-15	63	33	0%
GFXX595	AR-F - Bored Piles (28 nos.)	218	16-Apr-15	0%	218	06-Jan-16	22-May-15	13-Feb-16	30	0	0%
SUPERSTRUCTURE											
Assembling, relocation and dismantle of lifting equipment											
Launching Gantry 1											
NS11170	Assembly of Launching Gantry LG1 onto Pier B1/B2 (incl.Load Test)	19	16-Feb-15*	0%	19	12-Mar-15	09-Dec-14	03-Jan-15	-56	0	0%
NS11180	Viaduct B3 - Learning Curve Gantry LG1	20	13-Mar-15	0%	20	09-Apr-15	03-Jan-15	27-Jan-15	-56	0	0%
PR20130	Assembly of Launching Gantry LG1 on Temp.Loading Platform	36	15-Sep-14 A	55.56%	16	14-Feb-15	20-Nov-14	09-Dec-14	-56	0	55%
Launching Gantry 2											
FR000099	Assembly of Launching Gantry LG2 on Temp.Loading Platform	30	20-Apr-15	0%	30	26-May-15	20-Jan-15	26-Feb-15	-70	0	0%
Unloading Frames											
PR69210	Removal of Unloading Frame UF-2 @E1/E2	2	22-Jan-15	0%	2	23-Jan-15	27-Jun-18	28-Jun-18	1013	1013	0%
Viaduct B Superstructure											
Bridge B3 Superstructure											
Milestones											
Milestones Ready for PH Segment Erection											
B300010-1	Pier B6 (B3a) ready for Viaduct B3 PH segment erection	0		0%	0	13-Mar-15		27-Feb-15	-12	0	0%
B300020-1	Pier B5 (B3b) ready for Viaduct B3 PH segment erection	0		0%	0	27-Feb-15		13-Mar-15	12	0	0%
B300030-1	Pier B4 (B3c) ready for Viaduct B3 PH segment erection	0		0%	0	14-Feb-15		17-Feb-15	2	0	0%
B300040-1	Pier B3 (B3d) ready for Viaduct B3 PH segment erection	0		0%	0	10-Feb-15		02-Mar-15	14	0	0%
B300050-1	Pier B2 (B3e) ready for Viaduct B3 PH segment erection	0		0%	0	21-Jan-15		27-Jun-18	950	950	0%
B300060-1	Pier B1 (B3f) ready for Viaduct B3 PH segment erection	0		0%	0	28-Jan-15		21-Nov-14	-56	0	0%
Milestones Ready for Deck Segment Erection											
B300010	Pier B6 (B3a) ready for Viaduct B3 deck segment erection	0		0%	0	31-Mar-15		17-Mar-15	-12	42	0%
B300020	Pier B5 (B3b) ready for Viaduct B3 deck segment erection	0		0%	0	16-Apr-15		09-May-15	18	19	0%
B300030	Pier B4 (B3c) ready for Viaduct B3 deck segment erection	0		0%	0	01-Apr-15		16-Apr-15	8	27	0%
B300040	Pier B3 (B3d) ready for Viaduct B3 deck segment erection	0		0%	0	27-Mar-15		28-Apr-15	21	31	0%
B300050	Pier B2 (B3e) ready for Viaduct B3 deck segment erection	0		0%	0	12-Feb-15		27-Jan-15	-15	41	0%
B300060	Pier B1 (B3f) ready for Viaduct B3 deck segment erection	0		0%	0	14-Feb-15		09-Dec-14	-56	0	0%
Deck installation											
NS11190	Viaduct B3 - Cantilever at Pier B2 (B3e) (14 seg) - LG1	7	10-Apr-15	0%	7	18-Apr-15	27-Jan-15	04-Feb-15	-56	0	0%
NS11200	Viaduct B3 - End Span at Pier B1 (B3f) (up) (7 seg) - LG1	6	20-Apr-15	0%	6	27-Apr-15	04-Feb-15	11-Feb-15	-56	0	0%
Bridge B2 Superstructure											
Milestones											
Milestones Ready for PH Segment Erection											
B200010-1	Pier B12 (B2a) ready for Viaduct B2 PH segment erection	0		0%	0	14-Feb-15		04-Jul-15	99	62	0%
B200020-1	Pier B11 (B2b) ready for Viaduct B2 PH segment erection	0		0%	0	23-Feb-15		06-May-15	55	48	0%
B200030-1	Pier B10 (B2c) ready for Viaduct B2 PH segment erection	0		0%	0	02-Apr-15		09-Apr-15	2	1	0%
B200040-1	Pier B9 (B2d) ready for Viaduct B2 PH segment erection	0		0%	0	17-Mar-15		06-Mar-15	-9	1	0%
B200050-1	Pier B8 (B2e) ready for Viaduct B2 PH segment erection	0		0%	0	25-Feb-15		02-Feb-15	-17	1	0%
B200060-1	Pier B7 (B2f) ready for Viaduct B2 PH segment erection	0		0%	0	19-Mar-15		12-Jan-15	-54	0	0%
B200070-1	Pier B6 (B3a) ready for Viaduct B2 PH segment erection	0		0%	0	13-Mar-15		27-Feb-15	-12	0	0%
Milestones Ready for Deck Segment Erection											
B200050	Pier B8 (B2e) ready for Viaduct B2 deck segment erection	0		0%	0	17-Apr-15		26-Mar-15	-14	40	0%



Actual Work
Planned Bar
Critical Bar
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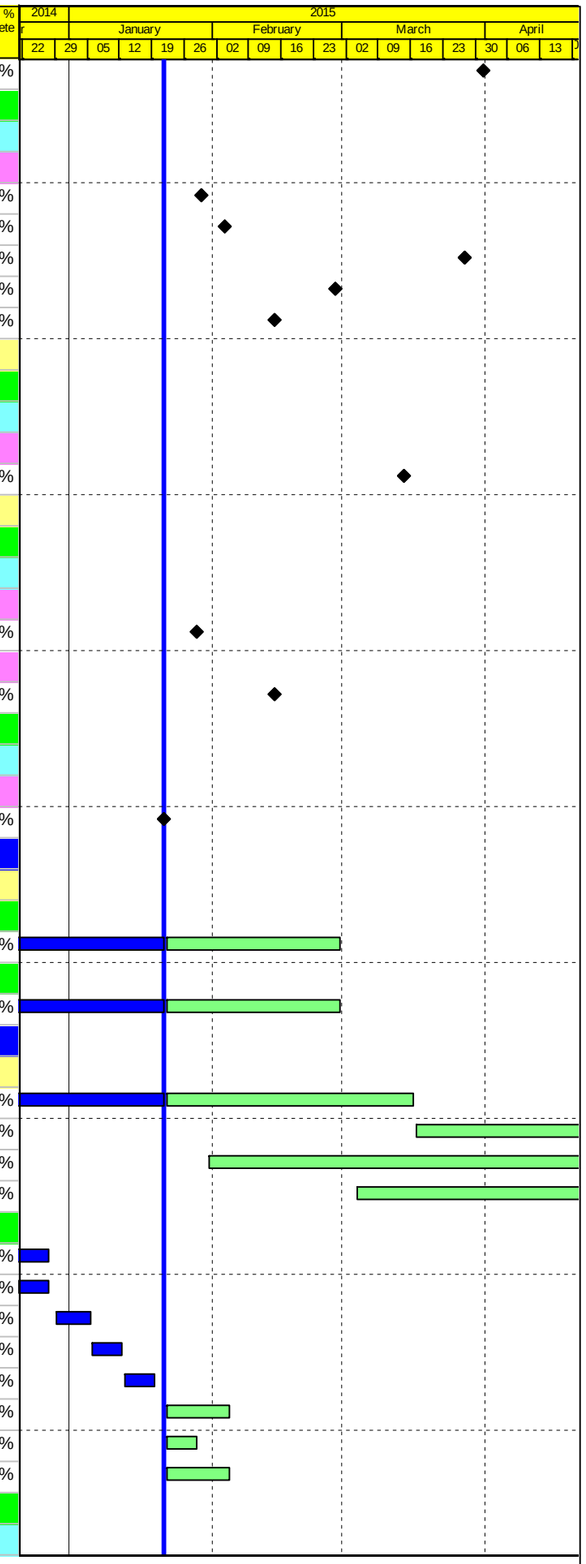
B200070	Pier B6 (B3a) ready for Viaduct B2 deck segment erection	0		0%	0	31-Mar-15		17-Mar-15	-12	42	0%
Bridge B1 Superstructure											
Milestones											
Milestones Ready for PH Segment Erection											
B100030-1	Pier B16 (B1d) ready for Viaduct B1 PH segment erection	0		0%	0	29-Jan-15		05-Jan-17	535	0	0%
B100040-1	Pier B15 (B1e) ready for Viaduct B1 PH segment erection	0		0%	0	03-Feb-15		15-Jul-15	118	0	0%
B100050-1	Pier B14 (B1f) ready for Viaduct B1 PH segment erection	0		0%	0	27-Mar-15		24-Jun-15	60	0	0%
B100060-1	Pier B13 (B1g) ready for Viaduct B1 PH segment erection	0		0%	0	27-Feb-15		26-May-15	65	0	0%
B100070-1	Pier B12 (B2a) ready for Viaduct B1 PH segment erection	0		0%	0	14-Feb-15		29-Jun-15	95	0	0%
Viaduct C Superstructure											
Bridge C1 Superstructure											
Milestones											
Milestones Ready for PH Segment Erection											
C100010-1	Pier C20 (C1c) ready for Viaduct C1 PH segment erection	0		0%	0	14-Mar-15		16-Nov-16	461	0	0%
Viaduct E											
Bridge E1 Superstructure											
Milestones											
Milestones Ready for PH Segment Erection											
E100040-1	Pier B1 (B3f) ready for Viaduct E1 PH segment erection	0		0%	0	28-Jan-15		21-Nov-14	-56	0	0%
Milestones Ready for Deck Segment Erection											
E100040	Pier B1 (B3f) ready for Viaduct E1 deck segment erection	0		0%	0	14-Feb-15		30-Apr-15	55	121	0%
Bridge E2 Superstructure											
Milestones											
Milestones Ready for Deck Segment Erection											
E507060-1	Viaduct E5 - Complete segment erection for interface span E13D(E5c) to E14D(E5d) with HI	0		0%	0	21-Jan-15		18-Jun-16	388	462	0%
At-Grade Roadworks & Other Works along NLH											
Viaduct D Slope Works											
Slope 10NW-C/F10											
M201215	10NW-C/F10 - Install Geo. Instru. & Baseline Monitoring	30	26-Jul-14 A	0%	30	28-Feb-15	02-Aug-16	08-Sep-16	420	274	0%
Slope 10NW-C/F11											
M201220	10NW-C/F11 - Install Geo. Instru. & Baseline Monitoring	30	16-Aug-14 A	0%	30	28-Feb-15	28-Sep-16	05-Nov-16	464	504	0%
At-Grade Roadworks and Other Works along Cheung Tung Road											
Re-alignment of Cheung Tung Road adjacent to Viaduct B											
RP00020	Construct new ESS adjacent to Viaduct B	60	15-Sep-14 A	28.33%	43	16-Mar-15	14-Feb-15	13-Apr-15	20	0	28%
RP00030	Inst. new equip. & testing / commissioning of new ESS	60	17-Mar-15	0%	60	06-Jun-15	14-Apr-15	08-Jul-15	20	0	0%
RW50020	CTR Re-alignment adj. to Via.B - Diversion of watermains	140	31-Jan-15	0%	140	08-Aug-15	24-Feb-15	31-Aug-15	17	0	0%
RW50090	CTR Re-alignment adj. to Via.B - Diversion of Drainage	120	04-Mar-15	0%	120	14-Aug-15	24-Mar-15	04-Sep-15	17	0	0%
Box Culvert Extension											
BCE0060	Culvert RC walls & connect new 450 dia. stormwater pipe	20	12-Dec-14 A	100%	0	27-Dec-14 A					100%
BCE0070	Culvert RC roof	20	21-Dec-14 A	100%	0	27-Dec-14 A					100%
BCE0080	Catch pit rear wall to +3.189	6	29-Dec-14 A	100%	0	05-Jan-15 A					100%
BCE0090	Catch pit rear wall to +7.600	6	06-Jan-15 A	100%	0	12-Jan-15 A					100%
BCE0100	Catch pit rear wall to +12.250 w/ backfill	6	13-Jan-15 A	100%	0	19-Jan-15 A					100%
BCE0110	Construct staircases & backfill to required elevation	12	22-Jan-15	0%	12	04-Feb-15	22-Aug-15	04-Sep-15	157	0	0%
BCE0120	Construct step irons at 300c/c staggerd & new railings	6	22-Jan-15	0%	6	28-Jan-15	29-Aug-15	04-Sep-15	163	6	0%
BCE0130	Construct all proposed connecting U-Channels	12	22-Jan-15	0%	12	04-Feb-15	22-Aug-15	04-Sep-15	157	140	0%
Viaduct B Slope Works											
Slope 9SE-B/C9											



Actual Work
Planned Bar
Critical Bar
Milestone

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3-Month Rolling Programme (Page 38 of 40 Pages)
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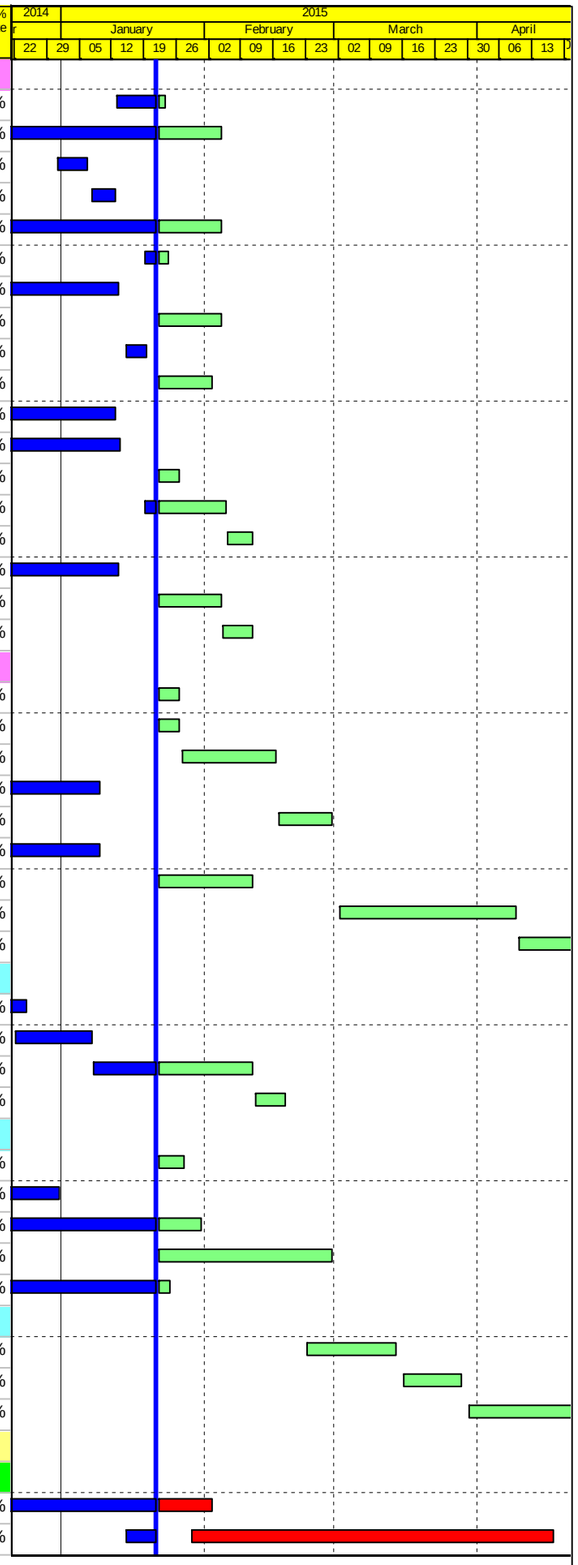
Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete
Zone A & B											
SWVB1110	9SE-B/C9 Zone A1 - Soil nail 22 nr @ +13.00 Row C	9	13-Jan-15 A	77.78%	2	23-Jan-15	25-Jun-18	27-Jun-18	948	948	90%
SWVB1130	9SE-B/C9 Zone A1 - Soil nail 30 nr @ +11.00 Row B	12	08-Dec-14 A	0%	12	04-Feb-15	09-Jun-18	27-Jun-18	938	938	75%
SWVB1140	9SE-B/C9 Zone A1 - Raking Drain 15 nr @ +10.5	5	31-Dec-14 A	100%	0	06-Jan-15 A					100%
SWVB1150	9SE-B/C9 Zone A1 - Excav. to +7.0	5	08-Jan-15 A	100%	0	13-Jan-15 A					100%
SWVB1160	9SE-B/C9 Zone A1 - Soil nail 31 nr @ +9.00 Row A	12	18-Dec-14 A	0%	12	04-Feb-15	09-Jun-18	27-Jun-18	938	938	75%
SWVB1170	9SE-B/C9 Zone A1 - Raking Drain 15 nr @ +8.5	5	19-Jan-15 A	50%	3	24-Jan-15	23-Jun-18	27-Jun-18	948	948	50%
SWVB1180	9SE-B/C9 Zone A1 - Excav. to +5.50	5	07-Nov-14 A	100%	0	13-Jan-15 A					100%
SWVB1190	9SE-B/C9 Zone A1 - Form 375UC @ +5.5	12	22-Jan-15	0%	12	04-Feb-15	08-Aug-15	24-Aug-15	147	0	0%
SWVB1260	9SE-B/C9 Zone A2 & B - Raking Drain 13 nr @ +16.0	4	15-Jan-15 A	100%	0	19-Jan-15 A					100%
SWVB1270	9SE-B/C9 Zone A2 & B - Inst. 300UC @ +15.0	10	22-Jan-15	0%	10	02-Feb-15	12-Jun-18	27-Jun-18	940	940	0%
SWVB1310	9SE-B/C9 Zone A2 & B - Soil nail 34 nr @ +13.00 Row C	13	16-Dec-14 A	100%	0	13-Jan-15 A					100%
SWVB1330	9SE-B/C9 Zone A2 & B - Soil nail 34 nr @ +11.00 Row B	13	08-Dec-14 A	100%	0	14-Jan-15 A					100%
SWVB1340	9SE-B/C9 Zone A2 & B - Raking Drain 13 nr @ +10.5	4	22-Jan-15	0%	4	26-Jan-15	22-Jun-18	27-Jun-18	946	946	0%
SWVB1360	9SE-B/C9 Zone A2 & B - Soil nail 34 nr @ +9.00 Row A	13	19-Jan-15 A	0%	13	05-Feb-15	31-May-18	20-Jun-18	932	0	90%
SWVB1370	9SE-B/C9 Zone A2 & B - Raking Drain 13 nr @ +8.5	5	06-Feb-15	0%	5	11-Feb-15	21-Jun-18	27-Jun-18	932	932	0%
SWVB1380	9SE-B/C9 Zone A2 & B - Excav. to +5.50	5	07-Nov-14 A	100%	0	13-Jan-15 A					100%
SWVB1390	9SE-B/C9 Zone A2 & B - Form 375UC @ +5.5	12	22-Jan-15	0%	12	04-Feb-15	08-Aug-15	24-Aug-15	147	0	0%
SWVB1399	9SE-B/C9 Zone A & B - Hydroseeding	6	05-Feb-15	0%	6	11-Feb-15	25-Aug-15	31-Aug-15	147	48	0%
Zone C & D											
SWVB1470	9SE-B/C9 Zone C & D - Raking Drain 12 nr @ +19.0	4	22-Jan-15	0%	4	26-Jan-15	22-Jun-18	27-Jun-18	946	946	0%
SWVB1500	9SE-B/C9 Zone C & D - Raking Drain 14 nr @ +17.0	4	22-Jan-15	0%	4	26-Jan-15	24-Sep-15	29-Sep-15	183	0	0%
SWVB1510	9SE-B/C9 Zone C & D - Form 375UC @ approx +16.0	18	27-Jan-15	0%	18	16-Feb-15	30-Sep-15	23-Oct-15	183	0	0%
SWVB1520	9SE-B/C9 Zone C & D - Rock excav. to +6.5	40	09-Dec-14 A	100%	0	09-Jan-15 A					100%
SWVB1530	9SE-B/C9 Zone C & D - Raking Drain 9 nr @ +8.0 in rock	8	17-Feb-15	0%	8	28-Feb-15	24-Oct-15	03-Nov-15	183	0	0%
SWVB1540	9SE-B/C9 Zone C & D - Rock excav. to +5.5	40	09-Dec-14 A	100%	0	09-Jan-15 A					100%
SWVB1550	9SE-B/C9 Zone C & D - Form 375UC @ +5.5	18	22-Jan-15	0%	18	11-Feb-15	18-Nov-15	08-Dec-15	225	42	0%
SWVB1560	9SE-B/C9 Zone C & D - Install Geo. Instru. & Baseline Monitoring	30	02-Mar-15	0%	30	09-Apr-15	04-Nov-15	08-Dec-15	183	0	0%
SWVB1570	9SE-B/C9 Zone C & D - Hydroseeding	12	10-Apr-15	0%	12	25-Apr-15	09-Dec-15	22-Dec-15	183	24	0%
Slope 9SE-B/C8											
SWVB2110	9SE-B/C8 -Rock excav. to +7.00	30	10-Oct-14 A	100%	0	24-Dec-14 A					100%
SWVB2130	9SE-B/C8 -Inst. 225UC	12	22-Dec-14 A	100%	0	07-Jan-15 A					100%
SWVB2140	9SE-B/C8 - Install Geo. Instru. & Baseline Monitoring	30	08-Jan-15 A	40%	18	11-Feb-15	02-Jul-15	23-Jul-15	117	0	30%
SWVB2150	9SE-B/C8 -Hydroseeding	6	12-Feb-15	0%	6	18-Feb-15	24-Jul-15	31-Jul-15	117	0	0%
Slope 9SE-B/F9											
SWVB3070	9SE-B/F9 - Raking Drain 17 nr	5	22-Jan-15	0%	5	27-Jan-15	21-Jun-18	27-Jun-18	945	945	0%
SWVB3090	9SE-B/F9 - Inst. 600 width conc. maintenance staircase w/ railings & 450UC	18	09-Dec-14 A	100%	0	31-Dec-14 A					100%
SWVB3100	9SE-B/F9 - Inst. 225UC	12	09-Dec-14 A	30%	8	31-Jan-15	23-Mar-17	01-Apr-17	606	370	60%
SWVB3110	9SE-B/F9 - Install Geo. Instru. & Baseline Monitoring	30	22-Jan-15	0%	30	28-Feb-15	15-May-18	27-Jun-18	920	920	0%
SWVB3120	9SE-B/F9 - Hydroseeding	6	17-Dec-14 A	50%	3	24-Jan-15	21-Aug-15	24-Aug-15	156	0	50%
Slope 9SE-B/F85											
SWVB4020	9SE-B/F85 - Filling & forming slope	18	23-Feb-15	0%	18	14-Mar-15	01-Aug-15	24-Aug-15	117	0	0%
SWVB4030	9SE-B/F85 - Form UC	12	16-Mar-15	0%	12	28-Mar-15	19-Oct-15	03-Nov-15	159	0	0%
SWVB4035	9SE-B/F85 - Install Geo. Instru. & Baseline Monitoring	30	30-Mar-15	0%	30	11-May-15	04-Nov-15	08-Dec-15	159	0	0%
Re-alignment of Cheung Tung Road adjacent to Viaduct C											
West Portion											
RW61000	Realign CTR (West of Abut. C) - Site Clearance	42	03-Sep-14 A	76.19%	10	02-Feb-15	15-Jan-15	26-Jan-15	-6	32	75%
RW61010	Realign CTR (West of Abut. C) - Road drainage works	60	15-Jan-15 A	0%	60	17-Apr-15	15-Jan-15	28-Mar-15	-12	18	0%



Actual Work
Planned Bar
Critical Bar
Milestone

Project ID: J3518DWPrE-M20
Layout: J3518-DWP-3MRP Submission - M20
Filter: TASK filters: 3-Month Lookahead, No CC
Milestones, No Level of Effort.

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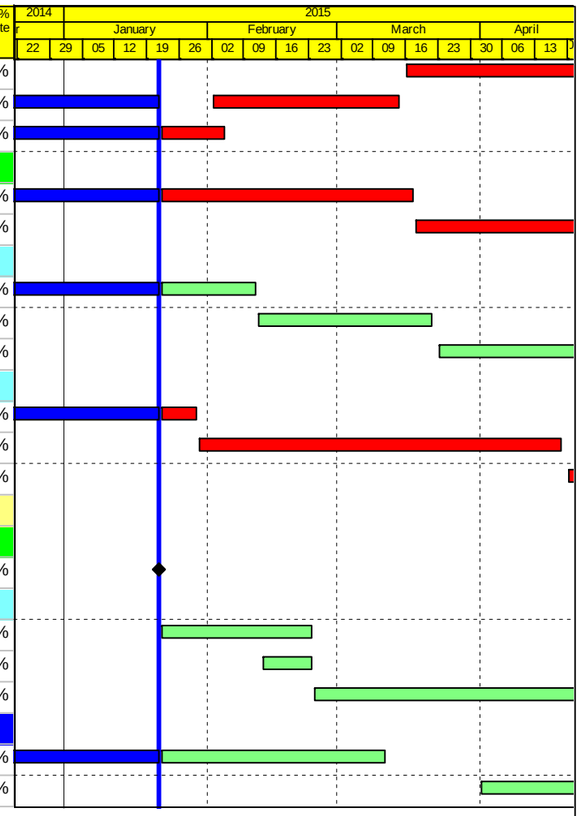
3-Month Rolling Programme (Page 39 of 40 Pages)
(Progress as of 21-Jan-15)

Date	Revision	Checked	Approved
21-Jan-15		DB	

DWG. No.:
J3518/GCL/PGM/3MRP-M20

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete
RW61020	Realign CTR (West of Abut. C) - Utilily diversion	90	16-Mar-15	0%	90	20-Jul-15	09-Mar-15	11-Jul-15	-6	0	0%
RW61082	Realign CTR (West of Abut. C) - Road formation	48	20-Nov-14 A	31.25%	33	14-Mar-15	16-Dec-14	26-Jan-15	-38	0	30%
RW61084	Realign CTR (West of Abut. C) - Retaining Wall C1	48	13-Oct-14 A	75%	12	04-Feb-15	05-Dec-14	18-Dec-14	-38	0	75%
East Portion											
RW60000	Realign CTR (East of Abut. C) - Site Clearance	54	01-Dec-14 A	18.52%	44	17-Mar-15	03-Dec-14	26-Jan-15	-40	0	18%
RW60005	Realign CTR (East of Abut. C) - Road formation	66	18-Mar-15	0%	66	18-Jun-15	27-Jan-15	22-Apr-15	-40	0	0%
Emergency Gates G6 & G7											
RP10070	Construct Expressway Fence /Beam Barriers betw new Gates G6 & G7	24	30-Oct-14 A	25%	18	11-Feb-15	07-Aug-15	29-Aug-15	146	0	25%
RP10080	Construct footings, pavement, kerbing for new gates G6 & G7	30	12-Feb-15	0%	30	21-Mar-15	31-Aug-15	08-Oct-15	146	0	0%
RP10090	Install new gates G6 & G7	24	23-Mar-15	0%	24	25-Apr-15	09-Oct-15	09-Nov-15	146	152	0%
ESS Sub-Station											
RP10020	Construct new ESS-C Sub.Stn. adjacent to Viaduct C	48	30-Jun-14 A	85.42%	7	29-Jan-15	11-Dec-14	18-Dec-14	-33	0	85%
RP10030	Inst.Eqpt. & Testing / commissioning of new ESS	60	30-Jan-15	0%	60	18-Apr-15	19-Dec-14	05-Mar-15	-33	0	0%
RP10040	Removal of equipment in existing ESS	30	20-Apr-15	0%	30	29-May-15	06-Mar-15	14-Apr-15	-33	0	0%
Natural Terrain Hazard Mitigation Works											
NTHM Works - West Portion											
NTW0010	DDA Approval for Natural Terrain Hazard Mitigation Measures	0		0%	0	21-Jan-15		01-May-15	72	0	0%
Check Dam no. 1 (CD1)											
GFXX497	Predrilling Works for Check Dams	25	22-Jan-15	0%	25	23-Feb-15	04-May-15	05-Jun-15	77	0	0%
GFXX499	CD1 - Mobilization of rig for MiniPile	6	13-Feb-15	0%	6	23-Feb-15	29-May-15	05-Jun-15	77	0	0%
GFXX500	CD1 - Installation of MiniPile (13nos.)	52	24-Feb-15	0%	52	02-May-15	06-Jun-15	17-Aug-15	77	0	0%
Watermains & All Assoc Works from Tung Chung to Southern Landfall											
WM00030	Trial trench works for watermains along existing CTR	157	26-May-14 A	75.16%	39	11-Mar-15	14-Mar-16	05-May-16	319	65	75%
WM00120	Lay DN450 Fresh Water Main along re-aligned CTR (app. 500 m at 12m/day)	48	01-Apr-15	0%	48	08-Jun-15	18-Jun-15	21-Aug-15	53	0	0%



Actual Work
Planned Bar
Critical Bar
Milestone

Project ID: J3518DWPrE-M20
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3-Month Rolling Programme (Page 40 of 40 Pages)
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Appendix C

Environmental Mitigation and Enhancement Measure Implementation Schedules

(In reference to CINOTECH (2011) Agreement No. CE35/2011 EP Baseline Environmental Monitoring for Hong Kong-Zhuhai-Macao BridgeTuen Mun-Chep Lap Kok Link – Investigation. UpdatedEM&A Manual for Tuen Mun-Chek Lap Kok Link)

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	O	
AIR QUALITY									
4.8.1	3.8	An effective watering programme of eight daily watering with complete coverage, is estimated to reduce by 50%. This is recommended for all areas in order to reduce dust levels to a minimum;	All areas / throughout construction period	Contractor	TMEIA Avoid smoke impacts and disturbance		Y		<>
4.8.1	3.8	The Contractor shall, to the satisfaction of the Engineer, install effective dust suppression measures and take such other measures as may be necessary to ensure that at the Site boundary and any nearby sensitive receiver, dust levels are kept to acceptable levels.	All areas / throughout construction period	Contractor	TMEIA Avoid dust generation		Y		<>
4.8.1	3.8	The Contractor shall not burn debris or other materials on the works areas.	All areas / throughout construction period	Contractor	TMEIA Avoid dust generation		Y		✓
4.8. 1	3.8	In hot, dry or windy weather, the watering programme shall maintain all exposed road surfaces and dust sources wet.	All unpaved haul roads / throughout construction period in hot, dry or windy weather	Contractor	TMEIA Avoid smoke impacts and disturbance		Y		<>
4.8.1	3.8	Where breaking of oversize rock/concrete is required, watering shall be implemented to control dust. Water spray shall be used during the handling of fill material at the site and at active cuts, excavation and fill sites where dust is likely to be created.	All areas / throughout construction period	Contractor	TMEIA Avoid dust generation		Y		✓
4.8. 1	3.8	Open dropping heights for excavated materials shall be controlled to a maximum height of 2m to minimise the fugitive dust arising from unloading.	All areas / throughout construction period	Contractor	TMEIA Avoid dust generation		Y		✓
4.8.1	3.8	During transportation by truck, materials shall not be loaded to a level higher than the side and tail boards, and shall be dampened or covered before transport.	All areas / throughout construction period	Contractor	TMEIA Avoid dust generation		Y		✓

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	O	
4.8.1	3.8	Materials having the potential to create dust shall not be loaded to a level higher than the side and tail boards, and shall be covered by a clean tarpaulin. The tarpaulin shall be properly secured and shall extend at least 300mm over the edges of the side and tail boards.	All areas / throughout construction period	Contractor	TMEIA Avoid dust generation		Y		✓
4.8.1	3.8	No earth, mud, debris, dust and the like shall be deposited on public roads. Wheel washing facility shall be usable prior to any earthworks excavation activity on the site.	All site exits / throughout construction period	Contractor	TMEIA Avoid dust		Y		✓
4.8.1	3.8	Areas of exposed soil shall be minimised to areas in which works have been completed shall be restored as soon as is practicable.	All exposed surfaces / throughout construction period	Contractor	TMEIA Avoid dust generation		Y		<>
4.8.1	3.8	All stockpiles of aggregate or spoil shall be enclosed or covered and water applied in dry or windy condition.	All areas / throughout construction period	Contractor	TMEIA Avoid dust generation		Y		<>
4.11	Section 3	EM&A in the form of 1 hour and 24 hour dust monitoring and site audit	All representative existing ASRs / throughout construction period	Contractor	EM&A Manual		Y		✓
NOISE									
5.11	Section 4	Noise monitoring	All existing representative sensitive receivers / during North Lantau Viaduct construction	Contractor	EM&A Manual		Y		✓
WATER QUALITY									
General Marine Works									
6.10	-	Bored piling to be undertaken within a metal casing.	Marine viaducts of TM-CLKL and HKLR/ bored piling	Contractor	TM-EIAO		Y		✓
6.10	-	Barges and hopper dredgers shall have tight fitting seals to their bottom openings to prevent leakage of material.	All areas/ throughout construction period	Contractor	Marine Fill Committee Guidelines. DASO permit conditions.		Y		✓

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	O	
6.10	-	Any pipe leakages shall be repaired quickly. Plant should not be operated with leaking pipes.	All areas/ throughout construction period	Contractor	Marine Fill Committee Guidelines. DASO permit conditions.		Y		✓
6.10	-	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.	All areas/ throughout construction period	Contractor	Marine Fill Committee Guidelines. DASO permit conditions.		Y		✓
6.10	-	Excess material shall be cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessel is moved	All areas/ throughout construction period	Contractor	Marine Fill Committee Guidelines. DASO permit conditions.		Y		✓
6.10	-	Adequate freeboard shall be maintained on barges to reduce the likelihood of decks being washed by wave action;	All areas/ throughout construction period	Contractor	Marine Fill Committee Guidelines. DASO permit conditions.		Y		✓
6.10	-	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.	All areas/ throughout construction period	Contractor	Marine Fill Committee Guidelines. DASO permit conditions.		Y		✓
6.10	-	The works shall not cause foam, oil, grease, litter or other objectionable matter to be present in the water within and adjacent to the works site.	All areas/ throughout construction period	Contractor	Marine Fill Committee Guidelines. DASO permit conditions.		Y		✓
Temporary Staging work									
	5.2	Regular inspection for the accumulation of floating refuse and collection of floating refuse if required	During temporary staging works	Contractor			Y		✓
	5.2	Provision of temporary drainage system on the temporary staging for collection of construction site runoff to allow appropriate treatment before discharge into the sea	During temporary staging works	Contractor			Y		✓
	5.2	Wastewater generated from construction works such as bored / drilling water will be collected, treated, neutralized and de-silted through silt trap or sedimentation tank before disposal	During temporary staging works	Contractor			Y		✓
	5.2	One additional water quality monitoring station is	During temporary	Contractor			Y		✓

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	O	
		proposed at station SR4a In case elevated SS or turbidity is identified during the water quality monitoring, the source of pollution will be tracked down and be removed as soon as possible. In case depletion of dissolved oxygen is identified, artificial aeration will be arranged at the monitoring station SR4a,	staging works						
Land Works									
6.10	-	Wastewater from temporary site facilities should be controlled to prevent direct discharge to surface or marine waters.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.10	-	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.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.10	-	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.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.10	-	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.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.10	-	Temporary access roads should be surfaced with crushed stone or gravel.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		<>
6.10	-	Rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.10	-	Measures should be taken to prevent the washout of construction materials, soil, silt or debris into any drainage system.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		<>

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	O	
6.10	-	Open stockpiles of construction materials (e.g. aggregates and sand) on site should be covered with tarpaulin or similar fabric during rainstorms.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		<>
6.10	5.8	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.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.10	-	Discharges of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.10	-	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.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.10	-	Wheel wash overflow shall be directed to silt removal facilities before being discharged to the storm drain.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		<>
6.10	-	Section of construction road between the wheel washing bay and the public road should be surfaced with crushed stone or coarse gravel.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		<>
6.10	-	Wastewater generated from concreting, plastering, internal decoration, cleaning work and other similar activities, shall be screened to remove large objects.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.10	-	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 offsite disposal.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.10	-	The Contractor shall prepare an oil / chemical cleanup plan and ensure that leakages or spillages are contained and cleaned up immediately.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.10	-	Waste oil should be collected and stored for recycling or disposal, in accordance with the Waste Disposal Ordinance.	All areas/ throughout construction period	Contractor	TM-EIAO Waste Disposal Ordinance		Y		✓

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	O	
6.10	-	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.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.10	-	Surface run-off from bunded areas should pass through oil/grease traps prior to discharge to the stormwater system.	All areas/ throughout construction period	Contractor	TM-EIAO		Y		✓
6.10	-	Roadside gullies to trap silt and grit shall be provided prior to discharging the stormwater into the marine environment. The sumps will be maintained and cleaned at regular intervals.	Roadside/design and operation	Design Consultant/ Contractor	TM-EIAO	Y		Y	✓
6.10	Section 5	All construction works shall be subject to routine audit to ensure implementation of all EIA recommendations and good working practice.	All areas/ throughout construction period	Contractor	EM&A Manual		Y		✓
Water Quality Monitoring									
6.10	Section 5	Water quality monitoring shall be undertaken for suspended solids, turbidity, and dissolved oxygen. Nutrients and metal parameters shall also be measured for Mf sediment operations (only HKBCF and HKLR required handling of Mf sediment) during baseline, backfilling and post construction period. One year operation phase water quality monitoring at designated stations	Designated monitoring stations as defined in EM&A Manual, Section 5/ Before, through-out marine construction period, post construction and monthly operational phase water quality monitoring for a year.	Contractor	EM&A Manual		Y	Y	✓
ECOLOGY									
8.14	6.3	Specification for and implement pre, during and post construction dolphin abundance monitoring.	All Areas/Detailed Design/ during construction works/post construction	Design Consultant/ Contractor	TMEIA	Y	Y	Y	✓
8.14	6.3	Specification for bored piling monitoring	Detailed Design	Design Consultant	TMEIA	Y			✓
8.14	6.3	Implement any recommendations of the bored piling monitoring	Southern marine viaduct/Throughout	Contractor	TMEIA		Y		✓

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	O	
			construction during bored piling						
8.14	6.3,6.5	Avoidance of peak CWD calving season in May and June for driving of metal caissons during bored piling works	Southern marine viaduct/ May and June during bored piling	Contractor	TMEIA		Y		n/a
8.14	6.3,6.5	Specification and implementation of 250m dolphin exclusion zone.	All marine bored piling and temporary staging works areas/Detailed Design/during all marine bored piling and temporary staging works	Design Consultant/ Contractor	TMEIA	Y	Y		✓
8.15	6.3, 6.5	Specification and deployment of an artificial reef of an area of 3,600 m² in an area where fishing activities are prohibited.	Area of prohibited fishing activities/Detailed Design/towards end of construction period	TM-CLKL/ HKBCF Design Consultant/ TM-CLKL/ HKBCF Contractor	TMEIA	Y		Y	n/a To be enforced by AFCD.
8.14	6.3, 6.5	Specification and implementation of marine vessel control specifications	All areas/Detailed Design/during construction works	Design Consultant/ Contractor	TMEIA	Y	Y		✓
8.14	6.3, 6.5	Design and implementation of acoustic decoupling methods for marine bored piling and the whole lifespan of temporary staging works.	All areas/ Detailed Design/during marine bored piling and temporary staging works	Design Consultant/ Contractor	TMEIA	Y	Y		✓
8.15	6.3, 6.4	Pre-construction phase survey and coral translocation	Tai Ho Wan (donar site) and Yam Tsui Wan (receptor site) /Detailed Design/Prior to construction	Design Consultant/ Contractor	TMEIA	Y	Y		n/a
8.15	6.5	Audit coral translocation success	Yam Tsui Wan (receptor site)/Post translocation	Contractor	TMEIA		Y		✓
7.13	6.5	Undertaken gabion wall works in Stream NL1 in the dry season	North Lantau slope works/dry	Contractor	TMEIA		Y		✓

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	O	
			season/construction phase						
7.13	6.5	The loss of habitat shall be supplemented by enhancement planting in accordance with the landscape mitigation schedule.	All areas / As soon as accessible	Contractor	TMEIA		Y		n/a. To be approved by AFCD/LCSD
7.13	6.5	Spoil heaps shall be covered at all times.	All areas / Throughout construction period	Contractor	TMEIA		Y		✓
7.13	6.5	Avoid damage and disturbance to the remaining and surrounding natural habitat	All areas / Throughout construction period	Contractor	TMEIA		Y		✓
7.13	6.5	Placement of equipment in designated areas within the existing disturbed land	All areas / Throughout construction period	Contractor	TMEIA		Y		✓
7.13	6.5	Disturbed areas to be reinstated immediately after completion of the works.	All areas / Throughout construction period	Contractor	TMEIA		Y		✓
7.13	6.5	Construction activities should be restricted to the proposed works boundary	All areas / Throughout construction period	Contractor	TMEIA		Y		✓
LANDSCAPE AND VISUAL									
10.9	7.6	Round angle, patterned finishes, and oval shaped pier were considered in the viaduct design, and further details will be developed under ACABAS submission (DM3)	All areas/detailed design	Design Consultant	TMEIA	Y			n/a
10.9	7.6	Details of the street furniture will be developed in the detailed design stage (DM4)	All areas/detailed design	Design Consultant	TMEIA	Y			n/a
10.9	7.6	Aesthetic design of the viaduct, retaining wall and other structures will be developed under ACABAS submission (DM5)	All areas/detailed design	Design Consultant	TMEIA	Y			n/a
10.9	7.6	Existing trees on boundary of the Project Area shall be carefully protected during construction. Detailed Tree Protection Specification shall be provided in the Contract Specification. Under this specification, the Contractor shall be required to submit, for approval, a detailed working method statement for the protection of trees	All areas/detailed design/ during construction	Design Consultant/ Contractor	TMEIA	Y	Y		✓

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	O	
		prior to undertaking any works adjacent to all retained trees, including trees in contractor's works areas. (Tree protection measures will be detailed at Tree Removal Application stage) (CM1)							
10.9	7.6	Trees unavoidably affected by the works shall be transplanted where practical. Trees will be transplanted straight to their final receptor site and not held in a temporary nursery. A detailed Tree Transplanting Specification shall be provided in the Contract Specification. Sufficient time for necessary tree root and crown preparation periods shall be allowed in the project programme (CM2)	All areas/detailed design/ during construction	Design Consultant/ Contractor	TMEIA	Y	Y		✓
10.9	7.6	Hillside and roadside screen planting to proposed roads, associated structures and slope works (CM3).	All areas/detailed design/ during construction/post construction	Design Consultant/	TMEIA	Y	Y		✓
10.9	7.6	Hydroseeding or sheeting of soil stockpiles with visually unobtrusive material (in earth tone) (CM4)	All areas/detailed design/ during construction/post construction	Design Consultant/ Contractor	TMEIA	Y	Y		✓
10.9	7.6	Screening of construction works by hoardings around works area in visually unobtrusive colours, to screen works (CM5)	All areas/detailed design/ during construction/post construction	Design Consultant/ Contractor	TMEIA	Y	Y		<>
10.9	7.6	Control night-time lighting and glare by hooding all lights (CM6)	All areas/detailed design/ during construction	Design Consultant/ Contractor	TMEIA	Y	Y		n/a
10.9	7.6	Ensure no run-off into water body adjacent to the Project Area (CM7)	All areas/detailed design/ during construction	Design Consultant/ Contractor	TMEIA	Y	Y		✓
10.9	7.6	Avoidance of excessive height and bulk of buildings and structures (CM8)	All areas/detailed design/ during construction	Design Consultant/ Contractor	TMEIA	Y	Y		✓
10.9	7.6	Recycle/Reuse all felled trees and vegetation, e.g.	All areas/detailed	Design	TMEIA	Y	Y		✓

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	O	
		mulching (CM9)	design/ during construction	Consultant/ Contractor					
10.9	7.6	Compensatory tree planting shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Felling Application process under ETWBTC 3/2006 (CM10).	All areas/detailed design/ during construction	Design Consultant/ Contractor	TMEIA	Y	Y		✓
10.9	7.6	Re-vegetation of affected woodland/shrubland with native species (OM1)	All areas/detailed design/ during construction/ during operation	Design Consultant/ Contractor	TMEIA	Y	Y	Y	n/a. To be implemented by AFCD/HyD/ L CSD
10.9	7.6	Tall buffer screen tree / shrub / climber planting should be incorporated to soften hard engineering structures and facilities (OM2)	All areas/detailed design/ during construction/ during operation	Design Consultant/ Contractor	TMEIA	Y	Y	Y	n/a To be implemented by HyD/LCSD
10.9	7.6	Streetscape elements (e.g. paving, signage, street furniture, lighting etc.) shall be sensitively designed in a manner that responds to the local context, and minimises potential negative landscape and visual impacts. Lighting units should be directional and minimise unnecessary light spill (OM3)	All areas/detailed design/ during construction / during operation	Design Consultant/ Contractor	TMEIA	Y	Y	Y	n/a. To be implemented by HyD/LCSD
10.9	7.6	Structure, ornamental tree / shrub / climber planting should be provided along roadside amenity strips, central dividers and newly formed slopes to enhance the townscape quality and further greenery enhancement (OM4)	All areas/detailed design/ during construction / during operation	Design Consultant/ Contractor	TMEIA	Y	Y	Y	n/a. To be implemented by HyD/LCSD
10.9	7.6	Aesthetically pleasing design (visually unobtrusive and non-reflective) as regard to the form, material and	All areas/detailed design/ during	Design Consultant/	TMEIA	Y	Y	Y	n/a. To be

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	O	
		finishes	construction / during operation	Contractor					implemented by HyD
WASTE									
12.6		The Contractor shall identify a coordinator for the management of waste.	Contract mobilisation	Contractor	TMEIA		Y		✓
12.6		The Contractor shall prepare and implement a Waste Management Plan which specifies procedures such as a ticketing system, to facilitate tracking of loads and to ensure that illegal disposal of wastes does not occur, and protocols for the maintenance of records of the quantities of wastes generated, recycled and disposed. A recording system for the amount of waste generated, recycled and disposed (locations) should be established.	Contract mobilisation	Contractor	TMEIA, Works Branch Technical Circular No. 5/99 for the Trip-ticket System for Disposal of Construction and Demolition Material		Y		✓
12.6		The Contractor shall apply for and obtain the appropriate licenses for the disposal of public fill, chemical waste and effluent discharges.	Contract mobilisation	Contractor	TMEIA, Land (Miscellaneous Provisions) Ordinance (Cap 28); Waste Disposal Ordinance (Cap 354); Dumping at Sea Ordinance (Cap 466); Water Pollution Control Ordinance.		Y		✓
12.6	8.1	Training shall be provided to workers about the concepts of site cleanliness and appropriate waste management procedures including waste reduction, reuse and recycling.	Contract Mobilisation	Contractor	TMEIA		Y		✓
12.6	8.1	The extent of cutting operation should be optimised where possible. Earth retaining structures and bored pile walls should be proposed to minimise the extent of cutting.	All areas / throughout construction period	Contractor	TMEIA		Y		✓

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	O	
12.6	8.1	Rock armour from the existing seawall should be reused on the new sloping seawall as far as possible	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	The site and surroundings shall be kept tidy and litter free.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	No waste shall be burnt on site.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	Provisions to be made in contract documents to allow and promote the use of recycled aggregates where appropriate.	Detailed Design	Design Consultant	TMEIA	Y			**n/a**
12.6	8.1	The Contractor shall be prohibited from disposing of C&D materials at any sensitive locations. The Contractor should propose the final disposal sites in the EMP and WMP for approval before implementation.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	Stockpiled material shall be covered by tarpaulin and /or watered as appropriate to prevent windblown dust/ surface run off.	All areas / throughout construction period	Contractor	TMEIA		Y		**<>**
12.6	8.1	Excavated material in trucks shall be covered by tarpaulins to reduce the potential for spillage and dust generation.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	Wheel washing facilities shall be used by all trucks leaving the site to prevent transfer of mud onto public roads.	All areas / throughout construction period	Contractor	TMEIA		Y		**<>**
12.6	8.1	Standard formwork or pre-fabrication should be used as far as practicable so as to minimise the C&D materials arising. The use of more durable formwork/plastic facing for construction works should be considered. The use of wooden hoardings should be avoided and metal hoarding should be used to facilitate recycling. Purchasing of construction materials should avoid over-ordering and wastage.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	The Contractor should recycle as many C&D	All areas / throughout	Contractor	TMEIA		Y		✓

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	O	
		materials (this is a waste section) as possible on-site. The public fill and C&D waste should be segregated and stored in separate containers or skips to facilitate the reuse or recycling of materials and proper disposal. Where practicable, the concrete and masonry should be crushed and used as fill materials. Steel reinforcement bar should be collected for use by scrap steel mills. Different areas of the sites should be considered for segregation and storage activities.	construction period						
12.6	8.1	All falsework will be steel instead of wood.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	Chemical waste producers should register with the EPD. Chemical waste should be handled in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Wastes as follows: - suitable for the substance to be held, resistant to corrosion, maintained in good conditions and securely closed; - Having a capacity of <450L unless the specifications have been approved by the EPD; and - Displaying a label in English and Chinese according to the instructions prescribed in Schedule 2 of the Regulations. Clearly labelled and used solely for the storage of chemical wastes; - Enclosed with at least 3 sides; - Impermeable floor and bund with capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in the area, whichever is greatest; - Adequate ventilation; - Sufficiently covered to prevent rainfall entering	All areas / throughout construction period	Contractor	TMEIA		Y		✓

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	O	
		(water collected within the bund must be tested and disposed of as chemical waste, if necessary); and - Incompatible materials are adequately separated.							
12.6	8.1	Waste oils, chemicals or solvents shall not be disposed of to drain,	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	Adequate numbers of portable toilets should be provided for on-site workers. Portable toilets should be maintained in reasonable states, which will not deter the workers from utilising them.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	Night soil should be regularly collected by licensed collectors.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	General refuse arising on-site should be stored in enclosed bins or compaction units separately from C&D and chemical wastes. Sufficient dustbins shall be provided for storage of waste as required under the Public Cleansing and Prevention of Nuisances By-laws. In addition, general refuse shall be cleared daily and shall be disposed of to the nearest licensed landfill or refuse transfer station. Burning of refuse on construction sites is prohibited.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	All waste containers shall be in a secure area on hardstanding;	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	Training shall be provided to workers about the concepts of site cleanliness and appropriate waste management procedure, including waste reduction, reuse and recycling.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	Office wastes can be reduced by recycling of paper if such volume is sufficiently large to warrant collection. Participation in a local	Site Offices/ throughout construction period	Contractor	TMEIA		Y		✓

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	O	
		collection scheme by the Contractor should be advocated. Waste separation facilities for paper, aluminium cans, plastic bottles, etc should be provided on-site.							
12.6	Section 8	EM&A of waste handling, storage, transportation, disposal procedures and documentation through the site audit programme shall be undertaken.	All areas / throughout construction period	Contractor	EM&A Manual		Y		✓
CULTURAL HERITAGE									
11.8	Section 9	EM&A in the form of audit of the mitigation measures	All areas / throughout construction period	Highways Department	EIAO-TM		Y		n/a

Notes:

Legend: D=Design, C=Construction, O=Operation

Note: Funding Agent for all mitigation measures will be the Highways Department of the Hong Kong SAR Government

Status:

✓ Compliance of Mitigation Measures

<> Compliance of Mitigation but need improvement

x Non-compliance of Mitigation Measures

▲ Non-compliance of Mitigation Measures but rectified by Contractor

Δ Deficiency of Mitigation Measures but rectified by Contractor

n/a Not Applicable in Reporting Period

Appendix D

Summary of Action and Limit Levels

Table D1 *Action and Limit Levels for 1-hour and 24-hour TSP*

Parameters	Action	Limit
24 Hour TSP Level in µg/m³	ASR9A/ASR8A = 178 ASR9C/ASR8/ASR9 = 178	260
1 Hour TSP Level in µg /m³	ASR9A/ASR8A = 394 ASR9C/ASR8/ ASR9 = 393	500

Table D2 *Action and Limit Levels for Construction Noise (0700-1900 hrs of normal weekdays)*

Time Period	Action	Limit
0700-1900 hrs on normal weekdays	When one documented complaint is received	75* dB(A)

Table D3 *Action and Limit Levels for Water Quality*

Parameter	Action Level#	Limit Level#
DO in mg/L [(a)]	Surface and Middle **5.0 mg/L** Bottom **4.7 mg/L**	Surface and Middle **4.2 mg/L** Bottom **3.6 mg/L**
Turbidity in NTU (Depth-averaged [(b), (c)])	120% of upstream control station at the same tide of the same day and 95%-ile of baseline data, i.e., **27.5 NTU**	130% of upstream control station at the same tide of the same day and 99%-ile of baseline data, i.e., **47.0 NTU**
SS in mg/L (Depth-averaged [(b), (c)])	120% of upstream control station at the same tide of the same day and 95%-ile of baseline data, i.e., **23.5 mg/L**	130% of upstream control station at the same tide of the same day and 10mg/L for WSD Seawater Intakes at Tuen Mun and 99%-ile of baseline data, i.e., **34.4 mg/L**

Notes:

Baseline data: data from HKZMB Baseline Water Quality Monitoring between 6 and 31 October 2011.

(a) For DO, non-compliance of the water quality limits occurs when monitoring result is lower than the limits.

(b) "Depth-averaged" is calculated by taking the arithmetic means of reading of all three depths

(c) For turbidity and SS, non-compliance of the water quality limits occurs when monitoring result is higher than the limits.

(d) All figures given in the table are used for reference only, and EPD may amend the figures whenever it is considered as necessary

Parameter	Action Level#	Limit Level#
(e) The 1%-ile of baseline data for surface and middle DO is 4.2 mg/L, whilst for bottom DO is 3.6 mg/L.		

Table D4 *Action and Limit Levels for Impact Dolphin Monitoring*

	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	

Notes:

1. STG means quarterly encounter rate of number of dolphin sightings, which is **6.00 in NEL** and **9.85 in NWL** during the baseline monitoring period
2. ANI means quarterly encounter rate of total number of dolphins, which is **22.19 in NEL** and **44.66 in NWL** during the baseline monitoring period
3. For North Lantau Social Cluster, AL will be trigger if NEL or NWL fall below the criteria; LL will be triggered if both NEL and NWL fall below the criteria.

Table D5 *Derived Value of Action Level (AL) and Limit Level (LL)*

	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]	

Appendix E

Calibration Certificates of Monitoring Equipments

輝創工程有限公司
Sun Creation Engineering Limited
Calibration and Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C146966
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC14-2877) Date of Receipt / 收件日期 : 12 November 2014

Description / 儀器名稱 : Anemometer
Manufacturer / 製造商 : Lutron
Model No. / 型號 : AM-4201
Serial No. / 編號 : AF.27513
Supplied By / 委託者 : Envirotech Services Co.
Shop 6, G/F., Casio Mansion, 209 Shaukeiwan Road,
Hong Kong

TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C Relative Humidity / 相對濕度 : (55 ± 20)%
Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 14 November 2014

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via :
- Testo Industrial Services GmbH, Germany

Tested By 測試 : C F Leung
Project Engineer

Certified By 核證 : H C Chan
Engineer

Date of Issue 簽發日期 : 18 November 2014

The test equipment used for calibration are traceable to the Nation Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.
本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗所書面批准。

Sun Creation Engineering Limited – Calibration & Testing Laboratory
c/o 4/F, Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong
輝創工程有限公司 – 校正及檢測實驗所
c/o 香港新界屯門興安里一號青山灣機樓四樓
Tel/電話: 2927 2606 Fax/傳真: 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

輝創工程有限公司
Sun Creation Engineering Limited
Calibration and Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C146966
證書編號

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours before the commencement of the test.

2. The results presented are the mean of 10 measurements at each calibration point.

3. Test equipment :

Equipment ID	Description	Certificate No.
CL386	Multi-function Measuring Instrument	S12109

4. Test procedure : MA130N.

5. Results :

Air Velocity

Applied Value (m/s)	UUT Reading (m/s)	Measured Correction		
		Value (m/s)	Measurement Uncertainty	
			Expanded Uncertainty (m/s)	Coverage Factor
2.0	1.7	+0.3	0.2	2.0
4.1	3.8	+0.3	0.3	2.0
6.1	5.8	+0.3	0.3	2.0
8.0	7.8	+0.2	0.3	2.0
10.0	9.9	+0.1	0.4	2.0

Remarks : - The Measured Corrections are defined as :
Value = Applied Value - UUT Reading

- The expanded uncertainties are for a level of confidence of 95 %.

Note :
The values given in this Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.

The test equipment used for calibration are traceable to the Nation Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.
本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗所書面批准。

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ENVIROTECH SERVICES CO.

Calibration Report of Wind Meter

Date of Calibration : 20 November 2014

Brand of Test Meter: Global Water

Model: Speed Sensor: WE550 (S/N:EC0000)

Direction Senor: WE570 (S/N:ED0000)

Location : Pak Mong, Siu Ho Wan

Procedures :

1. Wind Still Test: The wind speed sensor was hold by hand until it keep still

2.Wind Speed Test: The wind meter was on-site calibrated against the Anemometer

3.Wind Direction Test : The wind meter was on-site calibrated against the marine compass at four directions

Results:

Wind Still Test

Wind Speed (m/s)
0.00

Wind Speed Test

Global Wate (m/s)	Anemomete (m/s)
0.35	0.4
1.49	1.6
3.01	3.1

Wind Direction Test

Global Wate (o)	Marine Compass (o)
270.21	270
0.01	0
90.12	90
179.05	180

Calibrated by: Fai
Yeung Ping Fai
(Technical Officer)

Checked by : Fat
Ho Kam Fat
(Senior Technical Officer)

東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

Internal Calibration Report of Dissolved Oxygen Meter

Equipment Ref. No.	:	ET/EW/008/006	Manufacturer	:	YSI
Model No.	:	Pro 2030	Serial No.	:	12A 100554
Date of Calibration	:	17/12/2014	Calibration Due Date	:	16/03/2015

Temperature Verification

Ref. No. of Reference Thermometer : ET/0521/008

Ref. No. of Water Bath : ---

	Temperature (°C)			
Reference Thermometer reading	Measured	20.0	Corrected	19.4
DO Meter reading	Measured	19.4	Difference	0.0

Standardization of sodium thiosulphate ($Na_2S_2O_3$) solution

Reagent No. of $Na_2S_2O_3$ titrant	CPE/012/4.5/001/9	Reagent No. of 0.025N $K_2Cr_2O_7$	CPE/012/4.4/001/32

	Trial 1	Trial 2
Initial Vol. of $Na_2S_2O_3$ (ml)	0.00	10.15
Final Vol. of $Na_2S_2O_3$ (ml)	10.15	20.35
Vol. of $Na_2S_2O_3$ used (ml)	10.15	10.20
Normality of $Na_2S_2O_3$ solution (N)	0.02463	0.02451
Average Normality (**N**) of $Na_2S_2O_3$ solution (N)	0.02457	
Acceptance criteria, Deviation	Less than ± 0.001N	

Calculation: Normality of $Na_2S_2O_3$, **N** = 0.25 / ml $Na_2S_2O_3$ used

Lineality Checking

Determination of dissolved oxygen content by Winkler Titration *

Purging Time (min)	2		5		10	
Trial	1	2	1	2	1	2
Initial Vol. of $Na_2S_2O_3$ (ml)	0.00	11.40	22.80	0.00	6.60	10.30
Final Vol. of $Na_2S_2O_3$ (ml)	11.40	22.80	29.30	6.60	10.30	14.00
Vol. (**V**) of $Na_2S_2O_3$ used (ml)	11.40	11.40	6.50	6.60	3.70	3.70
Dissolved Oxygen (**DO**), mg/L	7.52	7.52	4.29	4.35	2.44	2.44
Acceptance criteria, Deviation	Less than + 0.3mg/L		Less than + 0.3mg/L		Less than + 0.3mg/L	

Calculation: DO (mg/L) = **V** x **N** x 8000/298

Purging time, min	DO meter reading, mg/L			Winkler Titration result *, mg/L			Difference (%) of DO Content
	1	2	Average	1	2	Average	
2	7.61	7.20	7.41	7.52	7.52	7.52	1.47
5	4.28	4.75	4.52	4.29	4.35	4.32	4.52
10	2.50	2.49	2.50	2.44	2.44	2.44	2.43
Linear regression coefficient				0.9978			

東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

Internal Calibration Report of Dissolved Oxygen Meter

Zero Point Checking

DO meter reading, mg/L	0.00

Salinity Checking

Reagent No. of NaCl (10ppt)	CPE/012/4.7/002/29	Reagent No. of NaCl (30ppt)	CPE/012/4.8/002/29

Determination of dissolved oxygen content by Winkler Titration **

Salinity (ppt)	10		30	
Trial	1	2	1	2
Initial Vol. of $Na_2S_2O_3$ (ml)	0.00	11.90	23.80	34.40
Final Vol. of $Na_2S_2O_3$ (ml)	11.90	23.80	34.40	44.90
Vol. (**V**) of $Na_2S_2O_3$ used (ml)	11.90	11.90	10.60	10.50
Dissolved Oxygen (**DO**), mg/L	7.85	7.85	6.99	6.93
Acceptance criteria, Deviation	Less than + 0.3mg/L		Less than + 0.3mg/L	

Calculation: DO (mg/L) = **V** x **N** x 8000/298

Salinity (ppt)	DO meter reading, mg/L			Winkler Titration result**, mg/L			Difference (%) of DO Content
	1	2	Average	1	2	Average	
10	7.68	7.78	7.73	7.85	7.85	7.85	1.54
30	6.88	6.89	6.89	6.99	6.93	6.96	1.01

Acceptance Criteria

(1) Differenc between temperature readings from temperature sensor of DO probe and reference thermometer : < 0.5 °C
(2) Linear regression coefficient : >0.99
(3) Zero checking: 0.0mg/L
(4) Difference (%) of DO content from the meter reading and by winkler titration : within ± 5%

The equipment complies # / ~~does not comply~~ # with the specified requirements and is deemed acceptable # / ~~unacceptable~~ # for use.

Delete as appropriate

Calibrated by : _____ Approved by : _____

CEP/012/W

東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

Performance Check of Salinity Meter

Equipment Ref. No. : ET/EW/008/006 Manufacturer : YSI

Model No. : Pro 2030 Serial No. : 12A 100554

Date of Calibration : 17/12/2014 Due Date : 16/03/2015

Ref. No. of Salinity Standard used (30ppt)	S/001/5

Salinity Standard (ppt)	Measured Salinity (ppt)	Difference %
30.0	30.5	1.7

(*) Difference (%) = (Measured Salinity – Salinity Standard value) / Salinity Standard value x 100

Acceptance Criteria

Difference : -10 % to 10 %

The salinity meter complies * / ~~does not comply~~ * with the specified requirements and is deemed acceptable * / ~~unacceptable~~ * for use. Measurements are traceable to national standards.

Checked by : _____ Approved by : _____

東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

Internal Calibration & Performance Check of pH Meter

Equipment Ref. No. :	ET/EW/007/005	Manufacturer :	HANNA
Model No. :	HI 8314	Serial No. :	8246095
Date of Calibration :	07/01/2015	Calibration Due Date :	06/02/2015

Liquid Junction Error

Primary Standard Solution Used : Phosphate Ref No. of Primary Solution: 003/5.2/001/20

Temperature of Solution : 20.0 $\Delta pH_{½}$ = +0.08

pH value of diluted buffer : 6.79 pH (S) = 6.881

ΔpH = pH(S) - pH of diluted buffer = 0.091 (Observed Deviation)

Liquid Junction Error (ΔpH_j) = ΔpH - $\Delta pH_{½}$ = 0.011

Shift on Stirring

pH of buffer solution (with stirring), pH_s = 6.91

Shift on stirring, ΔpH_s= pH_s - pH(S) - ΔpH_j = 0.018

Noise

Noise, ΔpH_n = difference between max and min reading : 0.00

Verification of ATC

Ref. No. of reference thermometer used: ET/0521/008

Temperature record from the reference thermometer (T_R): 19.9 °C

Temperature record from the ATC (T_{ATC}): 19.9 °C

Temperature Difference, $|T_R - T_{ATC}|$ 0.0 °C

Acceptance Criteria

Performance Characteristic		Acceptable Range
Liquid Junction Error	ΔpHj	≤0.05
Shift on Stirring	ΔpHs	≤0.02
Noise	ΔpHn	≤0.02
Verifcation of ATC	Temperature Difference	≤0.5°C

The pH meter complies * / ~~does not comply~~ * with the specified requirements and is deemed acceptable * / ~~unacceptable~~ * for use. Measurements are traceable to national standards.

* Delete as appropriate

Calibrated by : [signature] Checked by : [signature]

CPE/015/W

東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

Internal Calibration & Performance Check of pH Meter

Equipment Ref. No. :	ET/EW/007/005	Manufacturer :	HANNA
Model No. :	HI 8314	Serial No. :	8246095
Date of Calibration :	07/02/2015	Calibration Due Date :	06/03/2015

Liquid Junction Error

Primary Standard Solution Used : Phosphate Ref No. of Primary Solution: 003/5.2/001/21

Temperature of Solution : 20.0 $\Delta pH_{½}$ = +0.08

pH value of diluted buffer : 6.79 pH (S) = 6.881

ΔpH = pH(S) - pH of diluted buffer = 0.091 (Observed Deviation)

Liquid Junction Error (ΔpH_j) = ΔpH - $\Delta pH_{½}$ = 0.011

Shift on Stirring

pH of buffer solution (with stirring), pH_s = 6.90

Shift on stirring, ΔpH_s= pH_s - pH(S) - ΔpH_j = 0.008

Noise

Noise, ΔpH_n = difference between max and min reading : 0.00

Verification of ATC

Ref. No. of reference thermometer used: ET/0521/008

Temperature record from the reference thermometer (T_R): 19.9 °C

Temperature record from the ATC (T_{ATC}): 20.0 °C

Temperature Difference, $|T_R - T_{ATC}|$ -0.1 °C

Acceptance Criteria

Performance Characteristic		Acceptable Range
Liquid Junction Error	ΔpHj	≤0.05
Shift on Stirring	ΔpHs	≤0.02
Noise	ΔpHn	≤0.02
Verifcation of ATC	Temperature Difference	≤0.5°C

The pH meter complies * / ~~does not comply~~ * with the specified requirements and is deemed acceptable * / ~~unacceptable~~ * for use. Measurements are traceable to national standards.

* Delete as appropriate

Calibrated by : _____ Checked by : _____

CPE/015/W

東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

Performance Check of Turbidity Meter

Equipment Ref. No.	: ET/0505/011	Manufacturer	: HACH
Model No.	: 2100Q	Serial No.	: 12060 C 018534
Date of Calibration	: 05/01/2015	Due Date	: 04/04/2015

Ref. No. of Turbidity Standard used (4000NTU)	005/6.1/001/7

Theoretical Value of Turbidity Standard (NTU)	Measured Value (NTU)	Difference % *
20	19.8	-1.00
100	104	4.00
800	788	-1.50

(*) Difference = (Measured Value – Theoretical Value) / Theoretical Value x 100

Acceptance Criteria

Difference : -5 % to 5 %

The turbidity meter complies * / ~~does not comply~~ * with the specified requirements and is deemed acceptable * / ~~unacceptable~~ * for use. Measurements are traceable to national standards.

Prepared by : _____ Checked by : _____

輝創工程有限公司
Sun Creation Engineering Limited
Calibration and Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C144558
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC14-1853) Date of Receipt / 收件日期 : 22 July 2014

Description / 儀器名稱 : Sound Level Meter
Manufacturer / 製造商 : Rion
Model No. / 型號 : NL-31
Serial No. / 編號 : 00603867
Supplied By / 委託者 : Envirotech Services Co.
Shop 6, G/F., Casio Mansion, 209 Shaukeiwan Road,
Hong Kong

TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C Relative Humidity / 相對濕度 : (55 ± 20)%
Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 29 July 2014

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
All results are within manufacturer's specification.
The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via :
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Rohde & Schwarz Laboratory, Germany
- Fluke Everett Service Center, USA
- Agilent Technologies, USA

Tested By : K C Lee
測試 Project Engineer

Certified By : K M Wu
核證 Engineer

Date of Issue : 30 July 2014
簽發日期

The test equipment used for calibration are traceable to the Nation Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.
本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗所書面批准。

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c/o 香港新界屯門興安里一號青山灣機樓四樓
Tel/電話: 2927 2606 Fax/傳真: 2744 8986 E-mail/電郵: callab@suncreation.com Website/網址: www.suncreation.com

Certificate of Calibration
校正證書

Certificate No. : C144558
證書編號

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours, and switched on to warm up for over 10 minutes before the commencement of the test.

2. Self-calibration was performed before the test.

3. The results presented are the mean of 3 measurements at each calibration point.

4. Test equipment :

Equipment ID	Description	Certificate No.
CL280	40 MHz Arbitrary Waveform Generator	C140016
CL281	Multifunction Acoustic Calibrator	DC130171

5. Test procedure : MA101N.

6. Results :

6.1 Sound Pressure Level

6.1.1 Reference Sound Pressure Level

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
30 - 120	L_A	A	Fast	94.00	1	93.6	± 1.1

6.1.2 Linearity

UUT Setting				Applied Value		UUT Reading (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	
30 - 120	L_A	A	Fast	94.00	1	93.6 (Ref.)
				104.00		103.6
				114.00		113.6

IEC 61672 Class 1 Spec. : ± 0.6 dB per 10 dB step and ± 1.1 dB for overall different.

6.2 Time Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
30 - 120	L_A	A	Fast	94.00	1	93.6	Ref.
			Slow			93.5	± 0.3

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Certificate of Calibration
校正證書

Certificate No. : C144558
證書編號

6.3 Frequency Weighting

6.3.1 A-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
30 - 120	L_A	A	Fast	94.00	63 Hz	67.3	-26.2 ± 1.5
					125 Hz	77.3	-16.1 ± 1.5
					250 Hz	84.9	-8.6 ± 1.4
					500 Hz	90.3	-3.2 ± 1.4
					1 kHz	93.6	Ref.
					2 kHz	94.9	+1.2 ± 1.6
					4 kHz	94.7	+1.0 ± 1.6
					8 kHz	92.5	-1.1 (+2.1 ; -3.1)
					12.5 kHz	89.7	-4.3 (+3.0 ; -6.0)

6.3.2 C-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Mode	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
30 - 120	L_C	C	Fast	94.00	63 Hz	92.7	-0.8 ± 1.5
					125 Hz	93.4	-0.2 ± 1.5
					250 Hz	93.6	0.0 ± 1.4
					500 Hz	93.6	0.0 ± 1.4
					1 kHz	93.6	Ref.
					2 kHz	93.5	-0.2 ± 1.6
					4 kHz	92.9	-0.8 ± 1.6
					8 kHz	90.6	-3.0 (+2.1 ; -3.1)
					12.5 kHz	87.8	-6.2 (+3.0 ; -6.0)

The test equipment used for calibration are traceable to the Nation Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.
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Certificate of Calibration
校正證書

Certificate No. : C144558
證書編號

Remarks : - UUT Microphone Model No. : UC-53A & S/N : 316987

- Mfr's Spec. : IEC 61672 Class 1

- Uncertainties of Applied Value :

94 dB	63 Hz - 125 Hz	± 0.35 dB
	250 Hz - 500 Hz	± 0.30 dB
	1 kHz	± 0.20 dB
	2 kHz - 4 kHz	± 0.35 dB
	8 kHz	± 0.45 dB
	12.5 kHz	± 0.70 dB
104 dB	1 kHz	± 0.10 dB (Ref. 94 dB)
114 dB	1 kHz	± 0.10 dB (Ref. 94 dB)

- The uncertainties are for a confidence probability of not less than 95 %.

Note :
The values given in this Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.

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輝創工程有限公司
Sun Creation Engineering Limited
Calibration and Testing Laboratory

Certificate of Calibration
校正證書

Certificate No. : C143980
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC14-1497) Date of Receipt / 收件日期 : 23 June 2014

Description / 儀器名稱 : Sound Level Calibrator
Manufacturer / 製造商 : Rion
Model No. / 型號 : NC-73
Serial No. / 編號 : 10997142
Supplied By / 委託者 : Envirotech Services Co.
Shop 6, G/F., Casio Mansion, 209 Shaukeiwan Road,
Hong Kong

TEST CONDITIONS / 測試條件

Temperature / 溫度 : (23 ± 2)°C
Relative Humidity / 相對濕度 : (55 ± 20)%
Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 28 June 2014

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
All results are within manufacturer's specification.
The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via :
- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Rohde & Schwarz Laboratory, Germany
- Fluke Everett Service Center, USA
- Agilent Technologies, USA

Tested By 測試 : K C Lee
Project Engineer

Certified By 核證 : K M Wu
Engineer

Date of Issue 簽發日期 : 2 July 2014

The test equipment used for calibration are traceable to the Nation Standards as specified in this certificate. This certificate shall not be reproduced except in full, without the prior written approval of this laboratory.
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Certificate of Calibration
校正證書

Certificate No. : C143980
證書編號

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours before the commencement of the test.

2. The results presented are the mean of 3 measurements at each calibration point.

3. Test equipment :

Equipment ID	Description	Certificate No.
CL130	Universal Counter	C143868
CL281	Multifunction Acoustic Calibrator	DC130171
TST150A	Measuring Amplifier	C141558

4. Test procedure : MA100N.

5. Results :

5.1 Sound Level Accuracy

UUT Nominal Value	Measured Value (dB)	Mfr's Spec. (dB)	Uncertainty of Measured Value (dB)
94 dB, 1 kHz	93.7	± 0.5	± 0.2

5.2 Frequency Accuracy

UUT Nominal Value (kHz)	Measured Value (kHz)	Mfr's Spec.	Uncertainty of Measured Value (Hz)
1	0.987	1 kHz ± 2 %	± 1

Remark : The uncertainties are for a confidence probability of not less than 95 %.

Note :
The values given in this Certificate only relate to the values measured at the time of the test and any uncertainties quoted will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during transportation, overloading, mis-handling, or the capability of any other laboratory to repeat the measurement. Sun Creation Engineering Limited shall not be liable for any loss or damage resulting from the use of the equipment.

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TISCH Environmental

TISCH ENVIRONMENTAL, INC.
145 SOUTH MIAMI AVE
VILLAGE OF CLEVES, OH
45002
513.467.9000
877.263.7610 TOLL FREE
513.467.9009 FAX

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - Mar 24, 2014 Rootsmeter S/N 0438320 Ta (K) - 293
Operator Tisch Orifice I.D. - 2454 Pa (mm) - 758.19

PLATE OR Run #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	DIFF TIME (min)	METER DIFF Hg (mm)	ORFICE DIFF H2O (in.)
1	NA	NA	1.00	1.4740	3.2	2.00
2	NA	NA	1.00	1.0340	6.4	4.00
3	NA	NA	1.00	0.9240	7.9	5.00
4	NA	NA	1.00	0.8820	8.8	5.50
5	NA	NA	1.00	0.7270	12.7	8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)
1.0103	0.6854	1.4245
1.0061	0.9730	2.0146
1.0040	1.0866	2.2524
1.0028	1.1370	2.3623
0.9976	1.3722	2.8491

Qstd slope (m) = 2.07593
intercept (b) = -0.00102
coefficient (r) = 0.99996

y axis = SQRT[H2O(Pa/760)(298/Ta)]

Va	(x axis) Qa	(y axis)
0.9958	0.6755	0.8791
0.9916	0.9590	1.2433
0.9895	1.0709	1.3900
0.9884	1.1206	1.4579
0.9832	1.3524	1.7583

Qa slope (m) = 1.29991
intercept (b) = -0.00063
coefficient (r) = 0.99996

y axis = SQRT[H2O(Ta/Pa)]

CALCULATIONS

Vstd = Diff. Vol[(Pa-Diff. Hg)/760](298/Ta)
Qstd = Vstd/Time

Va = Diff Vol [(Pa-Diff Hg)/Pa]
Qa = Va/Time

For subsequent flow rate calculations:

Qstd = 1/m{[SQRT(H2O(Pa/760)(298/Ta))]- b}
Qa = 1/m{[SQRT H2O(Ta/Pa)]- b}

High-Volume TSP Sampler
5-Point Calibration Record

Location : ASR8(A)
Calibrated by : P.F.Yeung
Date : 28/01/2015

Sampler
Model : TE-5170
Serial Number : S/N 3956

Calibration Orfice and Standard Calibration Relationship
Serial Number : 2454
Service Date : 24 Mar 2014
Slope (m) : 2.07593
Intercept (b) : -0.00102
Correlation Coefficient(r) : 0.99996

Standard Condition
Pstd (hpa) : 1013
Tstd (K) : 298.18

Calibration Condition
Pa (hpa) : 1018
Ta(K) : 293

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	11.6	3.443	1.659	56	56.62
2	13 holes	9.6	3.132	1.509	51	51.56
3	10 holes	7.1	2.694	1.298	45	45.49
4	7 holes	4.6	2.168	1.045	37	37.41
5	5 holes	2.8	1.692	0.815	29	29.32

Notes:Z=SQRT{dH(Pa/Pstd)(Tstd/Ta)}, X=Z/m-b ,Y(Corrected Flow)=IC*{SQRT(Pa/Pstd)(Tstd/Ta)}

Sampler Calibration Relationship (Linear Regression)

Slope(m):31.968 Intercept(b): 3.625 Correlation Coefficient(r): 0.9994

Checked by: Magnum Fan Date: 31/01/2015

High-Volume TSP Sampler
5-Point Calibration Record

Location	:	ASR9
Calibrated by	:	P.F.Yeung
Date	:	28/01/2015

Sampler

Model	:	TE-5170
Serial Number	:	S/N 3958

Calibration Orfice and Standard Calibration Relationship

Serial Number	:	2454
Service Date	:	24 Mar 2014
Slope (m)	:	2.07593
Intercept (b)	:	-0.00102
Correlation Coefficient(r)	:	0.99996

Standard Condition

Pstd (hpa)	:	1013
Tstd (K)	:	298.18

Calibration Condition

Pa (hpa)	:	1018
Ta(K)	:	293

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	11.5	3.428	1.652	55	55.60
2	13 holes	9.7	3.149	1.517	50	50.55
3	10 holes	6.8	2.636	1.270	42	42.46
4	7 holes	4.6	2.168	1.045	35	35.38
5	5 holes	2.8	1.692	0.815	28	28.31

Notes:Z=SQRT{dH(Pa/Pstd)(Tstd/Ta)}, X=Z/m-b ,Y(Corrected Flow)=IC*{SQRT(Pa/Pstd)(Tstd/Ta)}

Sampler Calibration Relationship (Linear Regression)

Slope(m):32.439 Intercept(b): 1.587 Correlation Coefficient(r): 0.9995

Checked by: Magnum Fan Date: 31/01/2015

Appendix F

EM&A Monitoring Schedules

HY/2012/07 Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section
Impact Marine Water Quality Monitoring (WQM) Schedule (February 15)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
01-Feb	02-Feb	03-Feb	04-Feb	05-Feb	06-Feb	07-Feb
		WQM Mid-Ebb 12:58 (11:13 - 14:43) Mid-Flood 18:20 (15:35 - 20:05)		WQM Mid-Ebb 8:29 (06:44 - 10:14) Mid-Flood 13:53 (12:08 - 15:38)		WQM Mid-Ebb 9:14 (07:29 - 10:59) Mid-Flood 14:35 (12:50 - 16:20)
08-Feb	09-Feb	10-Feb	11-Feb	12-Feb	13-Feb	14-Feb
		WQM Mid-Ebb 10:39 (08:54 - 12:24) Mid-Flood 16:52 (15:08 - 18:38)		WQM Mid-Ebb 12:00 (10:15 - 13:45) Mid-Flood 19:00 (17:15 - 20:45)		WQM Mid-Ebb 9:11 (07:40 - 10:40) Mid-Flood 14:09 (12:24 - 15:54)
15-Feb	16-Feb	17-Feb	18-Feb	Holiday 19-Feb	Holiday 20-Feb	Holiday 21-Feb
		WQM Mid-Ebb 12:05 (10:20 - 13:50) Mid-Flood 17:21 (15:36 - 19:06)		WQM cancelled due to marine works suspension		WQM cancelled due to marine works suspension
22-Feb	23-Feb	24-Feb	25-Feb	26-Feb	27-Feb	28-Feb
		WQM Mid-Ebb 10:39 (08:54 - 12:24) Mid-Flood 17:18 (15:33 - 19:03)		WQM Mid-Ebb 12:19 (10:34 - 14:04) Mid-Flood 19:46 (18:01 - 21:31)		WQM Mid-Ebb 10:02 (09:00 - 11:00) Mid-Flood 14:52 (13:07 - 16:37)

HY/2012/07 - Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section
Impact Marine Water Quality Monitoring (WQM) Schedule (March 15)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
01-Mar	02-Mar	03-Mar	04-Mar	05-Mar	06-Mar	07-Mar
		WQM Mid-Ebb 12:12 (10:27 - 13:57) Mid-Flood 17:39 (15:54 - 19:24)		**WQM** Mid-Ebb 13:02 (11:17 - 14:47) Mid-Flood 18:53 (17:08 - 20:38)		**WQM** Mid-Flood 8:08 (06:23 - 09:53) Mid-Ebb 13:56 (12:11 - 15:41)
08-Mar	09-Mar	10-Mar	11-Mar	12-Mar	13-Mar	14-Mar
		WQM Mid-Flood 9:21 (07:36 - 11:06) Mid-Ebb 15:35 (13:50 - 17:20)		**WQM** Mid-Flood 10:21 (08:36 - 12:06) Mid-Ebb 17:05 (15:20 - 18:50)		**WQM** Mid-Flood 11:56 (10:11 - 13:41) Mid-Ebb 19:27 (17:42 - 21:12)
15-Mar	16-Mar	17-Mar	18-Mar	19-Mar	20-Mar	21-Mar
		WQM Mid-Ebb 11:04 (09:19 - 12:49) Mid-Flood 16:16 (14:31 - 18:01)		**WQM** Mid-Ebb 12:27 (10:42 - 14:12) Mid-Flood 18:08 (16:23 - 19:53)		**WQM** Mid-Flood 7:40 (05:55 - 09:25) Mid-Ebb 13:45 (12:00 - 15:30)
22-Mar	23-Mar	24-Mar	25-Mar	26-Mar	27-Mar	28-Mar
		WQM Mid-Flood 9:17 (07:32 - 11:02) Mid-Ebb 15:53 (14:08 - 17:38)		**WQM** Mid-Flood 10:27 (08:42 - 12:12) Mid-Ebb 17:35 (15:50 - 19:20)		**WQM** Mid-Flood 7:36 (05:51 - 09:21) Mid-Ebb 20:18 (18:33 - 22:03)
29-Mar	30-Mar	31-Mar				
		WQM Mid-Ebb 11:21 (09:36 - 13:06) Mid-Flood 16:46 (15:01 - 18:31)				

HY/2012/07 Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section
Impact Noise Monitoring Schedule (1 to 28 February 2015)

Alternative Noise Monitoring at Pak Mong Village Entrance

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
01-Feb	02-Feb	03-Feb	04-Feb	05-Feb	06-Feb	07-Feb
		Noise Impact Monitoring				
08-Feb	09-Feb	10-Feb	11-Feb	12-Feb	13-Feb	14-Feb
	Noise Impact Monitoring			Noise Impact Monitoring		
15-Feb	16-Feb	17-Feb	18-Feb	Holiday 19-Feb	Holiday 20-Feb	Holiday 21-Feb
		Noise Impact Monitoring				
22-Feb	23-Feb	24-Feb	25-Feb	26-Feb	27-Feb	28-Feb
	Noise Impact Monitoring			Noise Impact Monitoring		

The schedule is subject to agreement from the EPD on the monitoring times. The schedule will be revised after reviewing the progress of the construction works or due to adverse (safety, weather etc) conditions.

HY/2012/07 Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section
Impact Air Quality Monitoring Schedule (1 to 28 February 2015)

Alternative Air Quality Monitoring at WA4 and MTRC Depot Entrance

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
01-Feb	02-Feb	03-Feb	04-Feb	05-Feb	06-Feb	07-Feb
		1-hr TSP Monitoring 24-hr TSP Monitoring				
08-Feb	09-Feb	10-Feb	11-Feb	12-Feb	13-Feb	14-Feb
	1-hr TSP Monitoring 24-hr TSP Monitoring			1-hr TSP Monitoring 24-hr TSP Monitoring		
15-Feb	16-Feb	17-Feb	18-Feb	Holiday 19-Feb	Holiday 20-Feb	Holiday 21-Feb
		1-hr TSP Monitoring 24-hr TSP Monitoring				
22-Feb	23-Feb	24-Feb	25-Feb	26-Feb	27-Feb	28-Feb
	1-hr TSP Monitoring 24-hr TSP Monitoring			1-hr TSP Monitoring 24-hr TSP Monitoring		

The schedule is subject to agreement from the EPD on the monitoring times. The schedule will be revised after reviewing the progress of the construction works or due to adverse (safety, weather etc) conditions.

HY/2012/07 Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section
Tentative Impact Noise Monitoring Schedule (1 to 31 March 2015)

Alternative Noise Monitoring at Pak Mong Village Entrance

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
01-Mar	02-Mar	03-Mar	04-Mar	05-Mar	06-Mar	07-Mar
			Noise Impact Monitoring			
08-Mar	09-Mar	10-Mar	11-Mar	12-Mar	13-Mar	14-Mar
		Noise Impact Monitoring				
15-Mar	16-Mar	17-Mar	18-Mar	19-Mar	20-Mar	21-Mar
	Noise Impact Monitoring			Noise Impact Monitoring		
22-Mar	23-Mar	24-Mar	25-Mar	26-Mar	27-Mar	28-Mar
			Noise Impact Monitoring			
29-Mar	30-Mar	31-Mar				
		Noise Impact Monitoring				

The schedule is subject to agreement from the EPD on the monitoring times. The schedule will be revised after reviewing the progress of the construction works or due to adverse (safety, weather etc) conditions.

HY/2012/07 Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section
Tentative Impact Air Quality Monitoring Schedule (1 to 31 March 2015)

Alternative Air Quality Monitoring at WA4 and MTRC Depot Entrance

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
01-Mar	02-Mar	03-Mar	04-Mar	05-Mar	06-Mar	07-Mar
			1-hr TSP Monitoring 24-hr TSP Monitoring			
08-Mar	09-Mar	10-Mar	11-Mar	12-Mar	13-Mar	14-Mar
		1-hr TSP Monitoring 24-hr TSP Monitoring				
15-Mar	16-Mar	17-Mar	18-Mar	19-Mar	20-Mar	21-Mar
	1-hr TSP Monitoring 24-hr TSP Monitoring			1-hr TSP Monitoring 24-hr TSP Monitoring		
22-Mar	23-Mar	24-Mar	25-Mar	26-Mar	27-Mar	28-Mar
			1-hr TSP Monitoring 24-hr TSP Monitoring			
29-Mar	30-Mar	31-Mar				
		1-hr TSP Monitoring 24-hr TSP Monitoring				

The schedule is subject to agreement from the EPD on the monitoring times. The schedule will be revised after reviewing the progress of the construction works or due to adverse (safety, weather etc) conditions.

HY/2012/07 Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section
Impact Dolphin Monitoring Survey Schedule (1 to 28 February 2015)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
01-Feb	02-Feb	03-Feb	04-Feb	05-Feb	06-Feb	07-Feb
				Impact Dolphin Monitoring		
08-Feb	09-Feb	10-Feb	11-Feb	12-Feb	13-Feb	14-Feb
					Impact Dolphin Monitoring	
15-Feb	16-Feb	17-Feb	18-Feb	Holiday 19-Feb	Holiday 20-Feb	Holiday 21-Feb
	Impact Dolphin Monitoring					
22-Feb	23-Feb	24-Feb	25-Feb	26-Feb	27-Feb	28-Feb
			Impact Dolphin Monitoring			

The schedule is subject to agreement from the EPD on the monitoring times. The schedule will be revised after reviewing the progress of the construction works or due to adverse (safety, weather etc) conditions.

HY/2012/07 Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section
Tentative Impact Dolphin Monitoring Survey Schedule (1 to 31 March 2015)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
01-Mar	02-Mar	03-Mar	04-Mar	05-Mar	06-Mar	07-Mar
			Impact Dolphin Monitoring			
08-Mar	09-Mar	10-Mar	11-Mar	12-Mar	13-Mar	14-Mar
			Impact Dolphin Monitoring			
15-Mar	16-Mar	17-Mar	18-Mar	19-Mar	20-Mar	21-Mar
		Impact Dolphin Monitoring				
22-Mar	23-Mar	24-Mar	25-Mar	26-Mar	27-Mar	28-Mar
	Impact Dolphin Monitoring					
29-Mar	30-Mar	31-Mar				

The schedule is subject to agreement from the EPD on the monitoring times. The schedule will be revised after reviewing the progress of the construction works or due to adverse (safety, weather etc) conditions.

Appendix G

Impact Air Quality Monitoring Results and Graphical Presentation

1-hour TSP Monitoring Results at Air Quality Monitoring Station ASR8A

Project	Works	Date(yyyy-mm-dd)	Station	Time (hh:mm, 24hour)	Parameter	Results (ug/m3)	Action Level (ug/m3)	Limit Level (ug/m3)
TMCLKL	HY/2012/07	2015/02/03	ASR8A	8:23	1-hr TSP	92	394	500
TMCLKL	HY/2012/07	2015/02/03	ASR8A	9:25	1-hr TSP	93		
TMCLKL	HY/2012/07	2015/02/03	ASR8A	10:27	1-hr TSP	114		
TMCLKL	HY/2012/07	2015/02/09	ASR8A	8:08	1-hr TSP	81		
TMCLKL	HY/2012/07	2015/02/09	ASR8A	9:10	1-hr TSP	82		
TMCLKL	HY/2012/07	2015/02/09	ASR8A	10:12	1-hr TSP	129		
TMCLKL	HY/2012/07	2015/02/12	ASR8A	8:23	1-hr TSP	168		
TMCLKL	HY/2012/07	2015/02/12	ASR8A	9:25	1-hr TSP	211		
TMCLKL	HY/2012/07	2015/02/12	ASR8A	10:27	1-hr TSP	183		
TMCLKL	HY/2012/07	2015/02/17	ASR8A	8:20	1-hr TSP	110		
TMCLKL	HY/2012/07	2015/02/17	ASR8A	9:22	1-hr TSP	160		
TMCLKL	HY/2012/07	2015/02/17	ASR8A	10:24	1-hr TSP	188		
TMCLKL	HY/2012/07	2015/02/23	ASR8A	8:20	1-hr TSP	115		
TMCLKL	HY/2012/07	2015/02/23	ASR8A	9:22	1-hr TSP	101		
TMCLKL	HY/2012/07	2015/02/23	ASR8A	10:24	1-hr TSP	92		
TMCLKL	HY/2012/07	2015/02/26	ASR8A	8:27	1-hr TSP	68		
TMCLKL	HY/2012/07	2015/02/26	ASR8A	9:29	1-hr TSP	75		
TMCLKL	HY/2012/07	2015/02/26	ASR8A	10:31	1-hr TSP	68		
					Average	118		
					Min.	68		
					Max.	211		

1-hour TSP Monitoring Results at Air Quality Monitoring Station ASR9

Project	Works	Date(yyyy-mm-dd)	Station	Time (hh:mm, 24hour)	Parameter	Results (ug/m3)	Action Level (ug/m3)	Limit Level (ug/m3)
TMCLKL	HY/2012/07	2015/02/03	ASR9	8:33	1-hr TSP	119	393	500
TMCLKL	HY/2012/07	2015/02/03	ASR9	9:35	1-hr TSP	109		
TMCLKL	HY/2012/07	2015/02/03	ASR9	10:37	1-hr TSP	165		
TMCLKL	HY/2012/07	2015/02/09	ASR9	8:19	1-hr TSP	112		
TMCLKL	HY/2012/07	2015/02/09	ASR9	9:21	1-hr TSP	116		
TMCLKL	HY/2012/07	2015/02/09	ASR9	10:23	1-hr TSP	172		
TMCLKL	HY/2012/07	2015/02/12	ASR9	8:34	1-hr TSP	112		
TMCLKL	HY/2012/07	2015/02/12	ASR9	9:36	1-hr TSP	241		
TMCLKL	HY/2012/07	2015/02/12	ASR9	10:38	1-hr TSP	171		
TMCLKL	HY/2012/07	2015/02/17	ASR9	8:31	1-hr TSP	143		
TMCLKL	HY/2012/07	2015/02/17	ASR9	9:33	1-hr TSP	131		
TMCLKL	HY/2012/07	2015/02/17	ASR9	10:35	1-hr TSP	137		
TMCLKL	HY/2012/07	2015/02/23	ASR9	8:33	1-hr TSP	159		
TMCLKL	HY/2012/07	2015/02/23	ASR9	9:35	1-hr TSP	117		
TMCLKL	HY/2012/07	2015/02/23	ASR9	10:37	1-hr TSP	109		
TMCLKL	HY/2012/07	2015/02/26	ASR9	8:38	1-hr TSP	81		
TMCLKL	HY/2012/07	2015/02/26	ASR9	9:40	1-hr TSP	116		
TMCLKL	HY/2012/07	2015/02/26	ASR9	10:42	1-hr TSP	68		
					Average	132		
					Min.	68		
					Max.	241		

24-hour TSP Monitoring Results at Air Quality Monitoring Station ASR8A

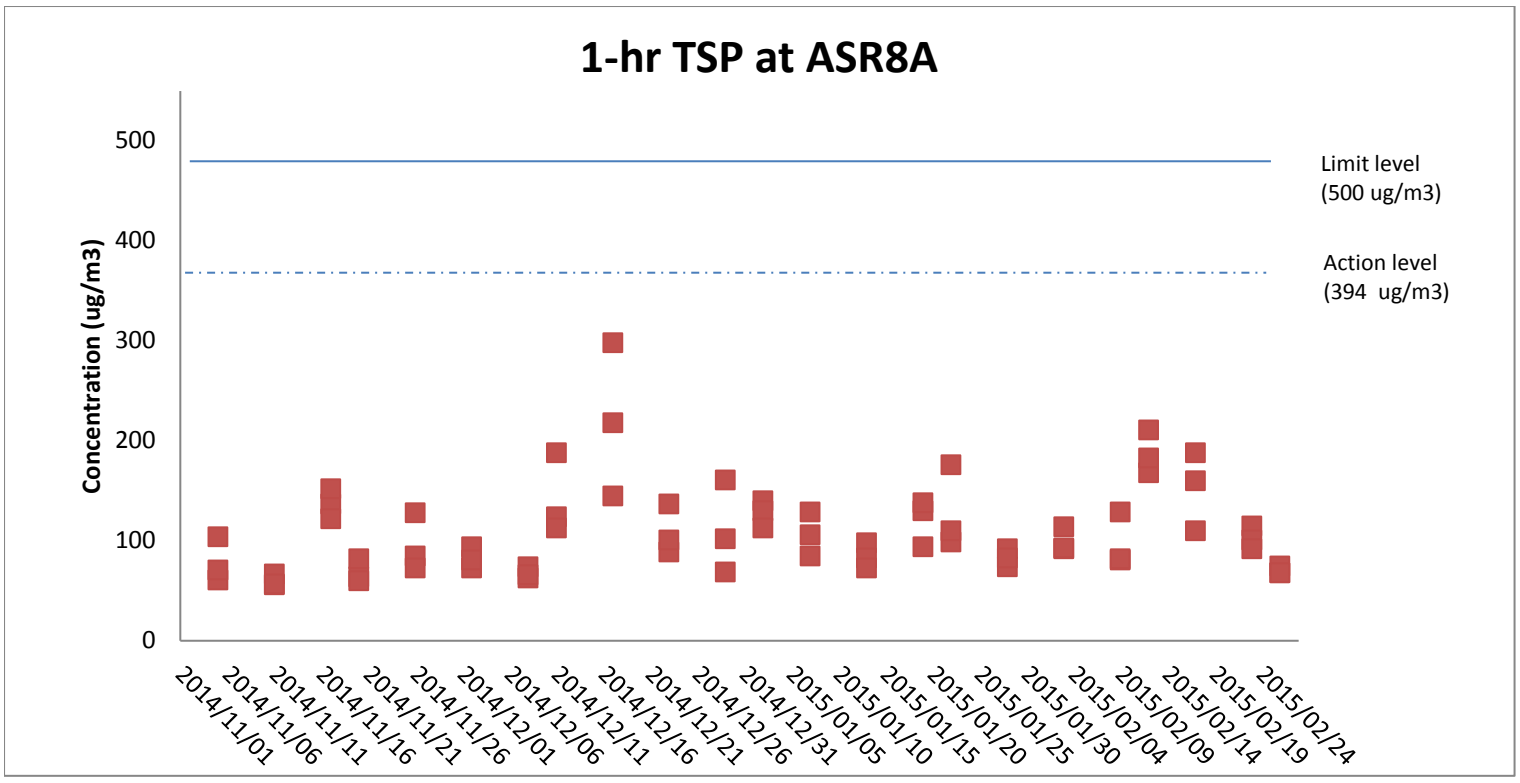
Project	Works	Date(yyyy-mm-dd)	Station	Time (hh:mm, 24hour)	Parameter	Results (ug/m3)	Action Level (ug/m3)	Limit Level (ug/m3)
TMCLKL	HY/2012/07	2015/02/03	ASR8A	11:29	24-hr TSP	74	178	260
TMCLKL	HY/2012/07	2015/02/09	ASR8A	11:14	24-hr TSP	64		
TMCLKL	HY/2012/07	2015/02/12	ASR8A	11:29	24-hr TSP	104		
TMCLKL	HY/2012/07	2015/02/17	ASR8A	11:26	24-hr TSP	76		
TMCLKL	HY/2012/07	2015/02/23	ASR8A	11:26	24-hr TSP	54		
TMCLKL	HY/2012/07	2015/02/26	ASR8A	11:33	24-hr TSP	57		
					Average	72		
					Min.	54		
					Max.	104		

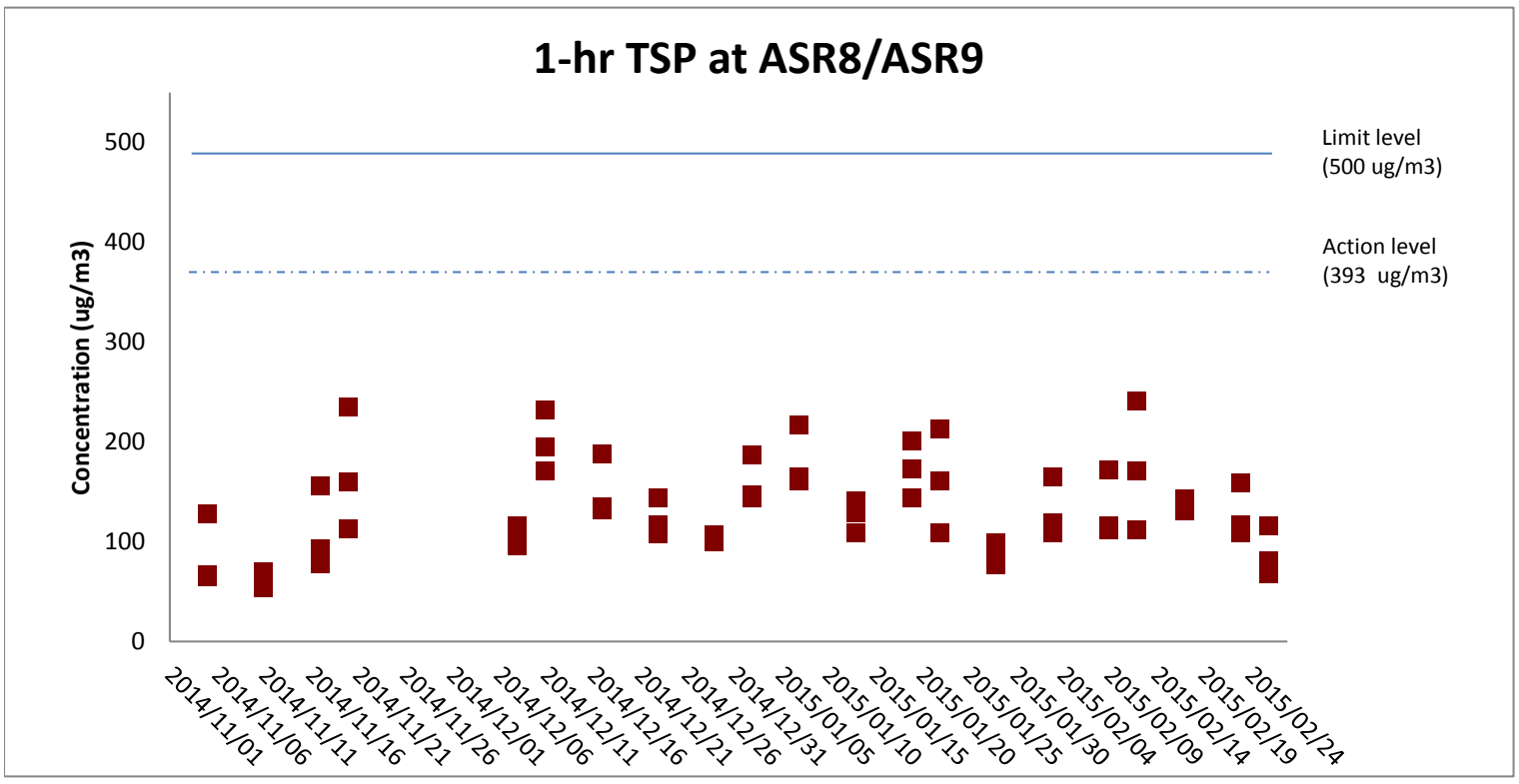
24-hour TSP Monitoring Results at Air Quality Monitoring Station ASR9

Project	Works	Date(yyyy-mm-dd)	Station	Time (hh:mm, 24hour)	Parameter	Results (ug/m3)	Action Level (ug/m3)	Limit Level (ug/m3)
TMCLKL	HY/2012/07	2015/02/03	ASR9	11:39	24-hr TSP	97	178	260
TMCLKL	HY/2012/07	2015/02/09	ASR9	11:25	24-hr TSP	117		
TMCLKL	HY/2012/07	2015/02/12	ASR9	11:40	24-hr TSP	114		
TMCLKL	HY/2012/07	2015/02/17	ASR9	11:37	24-hr TSP	92		
TMCLKL	HY/2012/07	2015/02/23	ASR9	11:39	24-hr TSP	61		
TMCLKL	HY/2012/07	2015/02/26	ASR9	11:44	24-hr TSP	51		
					Average	89		
					Min.	51		
					Max.	117		

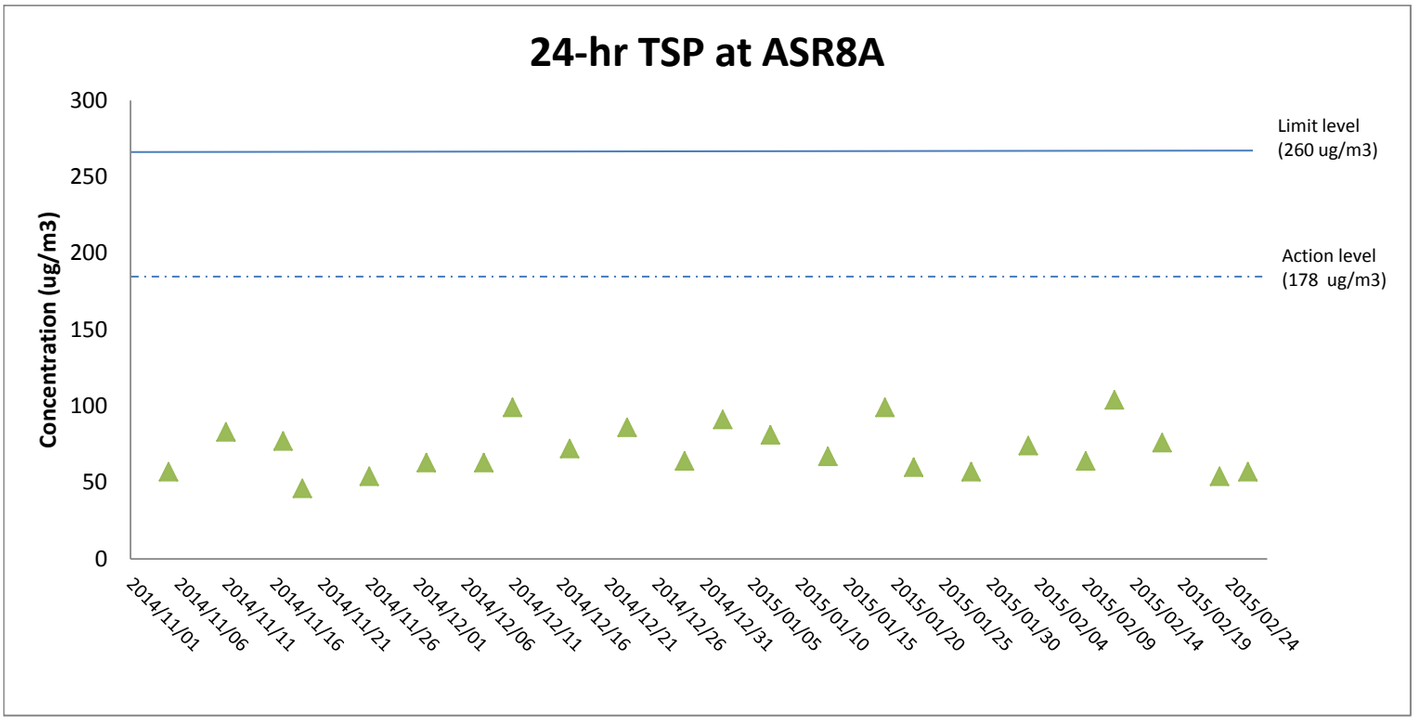
Action Level Exceedance

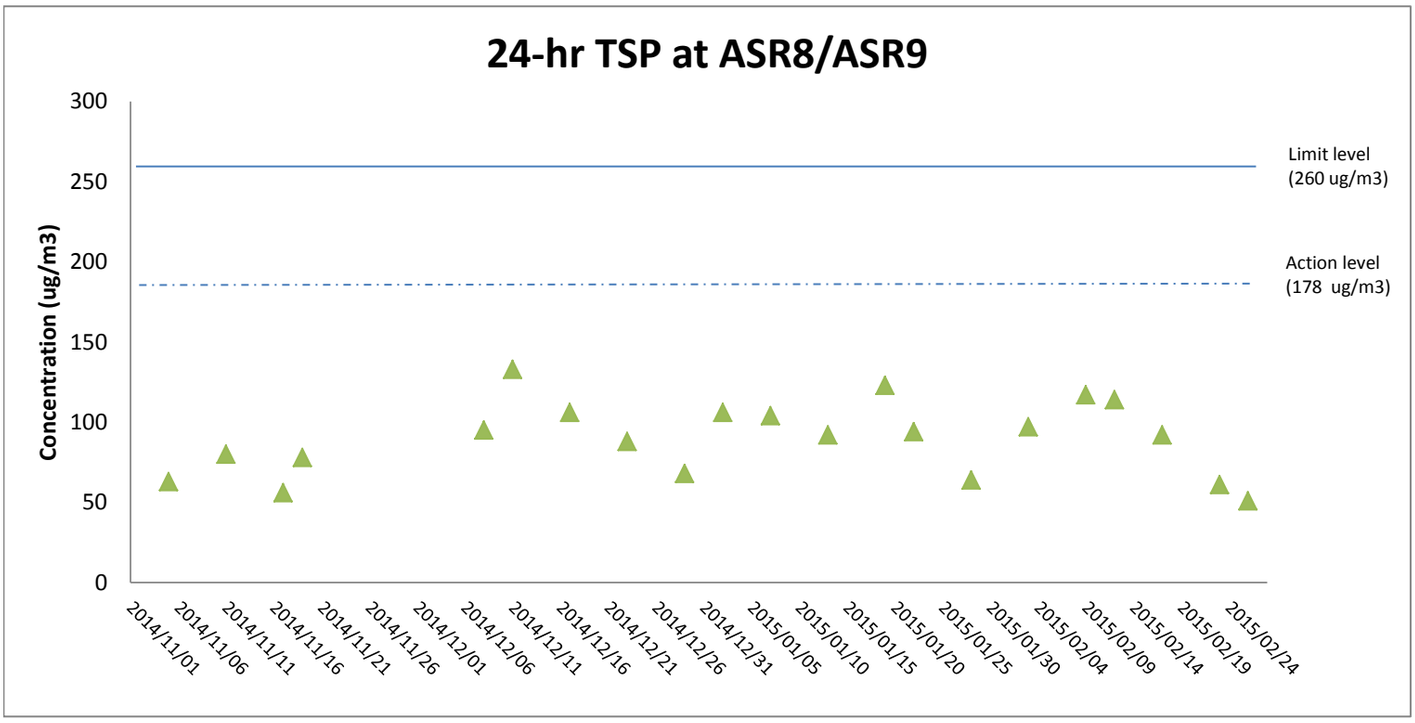
Limit Level Exceedance





Weather condition within the reporting period varied between sunny to rainy.
Major construction works undertaken within the reporting period include Construction of pile cap superstructure of Viaducts B & C; Channel re-construction at Area 1; Land Piling at Viaducts B, C & D; Pre-drilling works at Viaduct A; Construction of pile cap at Viaducts B & D; Additional land GI, trial pits & lab testing; Utility surveys; and Slope work of Slopes 9SE-B/C8, 9SE-B/C9 & 9SE-B/F9.
Marine works within the reporting period include Construction of Pile caps at Viaducts B, C & E; Marine piling platform installation & uninstallation; Marine Piling at Viaducts B, C, D & E; and Additional marine ground investigation (GI) and laboratory testing.
TSP monitoring at ASR8 on 26 November and 2 December were cancelled due to rejection of access to monitoring station.





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Major construction works undertaken within the reporting period include Construction of pile cap superstructure of Viaducts B & C; Channel re-construction at Area 1; Land Piling at Viaducts B, C & D; Pre-drilling works at Viaduct A; Construction of pile cap at Viaducts B & D; Additional land GI, trial pits & lab testing; Utility surveys; and Slope work of Slopes 9SE-B/C8, 9SE-B/C9 & 9SE-B/F9.
Marine works within the reporting period include Construction of Pile caps at Viaducts B, C & E; Marine piling platform installation & uninstallation; Marine Piling at Viaducts B, C, D & E; and Additional marine ground investigation (GI) and laboratory testing.
TSP monitoring at ASR8 on 26 November and 2 December were cancelled due to rejection of access to monitoring station.

Appendix H

Meteorological Data for the Reporting Month

Date	Time	Wind speed (m/s)	Wind direction (deg)
03-02-2015	7:00	1.56	166
03-02-2015	8:00	2.22	186
03-02-2015	9:00	3.12	177
03-02-2015	10:00	1.04	189
03-02-2015	11:00	0.25	299
03-02-2015	12:00	0.46	211
03-02-2015	13:00	0.38	219
03-02-2015	14:00	0.12	202
03-02-2015	15:00	0.90	179
03-02-2015	16:00	1.48	200
03-02-2015	17:00	0.65	200
03-02-2015	18:00	1.60	183
03-02-2015	19:00	0.81	198
03-02-2015	20:00	0.03	192
03-02-2015	21:00	0.05	186
03-02-2015	22:00	0.22	184
03-02-2015	23:00	0.05	169
04-02-2015	0:00	0.13	186
04-02-2015	1:00	0.03	190
04-02-2015	2:00	0.36	182
04-02-2015	3:00	0.29	158
04-02-2015	4:00	0.20	178
04-02-2015	5:00	0.10	172
04-02-2015	6:00	0.03	174
04-02-2015	7:00	0.03	165
04-02-2015	8:00	0.03	170
04-02-2015	9:00	0.03	159
04-02-2015	10:00	0.03	85
04-02-2015	11:00	0.05	113
04-02-2015	12:00	0.06	286
09-02-2015	7:00	0.03	178
09-02-2015	8:00	1.24	172
09-02-2015	9:00	2.31	111
09-02-2015	10:00	0.97	107
09-02-2015	11:00	3.19	161
09-02-2015	12:00	0.96	154
09-02-2015	13:00	0.27	168
09-02-2015	14:00	0.20	317
09-02-2015	15:00	0.15	241
09-02-2015	16:00	2.36	168
09-02-2015	17:00	2.72	172
09-02-2015	18:00	2.95	164
09-02-2015	19:00	3.33	170
09-02-2015	20:00	3.07	168
09-02-2015	21:00	2.35	170
09-02-2015	22:00	1.83	172
09-02-2015	23:00	1.02	161
10-02-2015	0:00	0.23	140
10-02-2015	1:00	0.38	206
10-02-2015	2:00	0.65	198

Date	Time	Wind speed (m/s)	Wind direction (deg)
10-02-2015	3:00	0.05	233
10-02-2015	4:00	0.64	165
10-02-2015	5:00	2.13	146
10-02-2015	6:00	2.74	183
10-02-2015	7:00	0.92	151
10-02-2015	8:00	2.62	158
10-02-2015	9:00	3.85	167
10-02-2015	10:00	1.61	162
10-02-2015	11:00	1.37	150
10-02-2015	12:00	1.98	161
12-02-2015	7:00	0.03	122
12-02-2015	8:00	0.04	98
12-02-2015	9:00	0.06	278
12-02-2015	10:00	0.04	314
12-02-2015	11:00	0.04	214
12-02-2015	12:00	0.08	264
12-02-2015	13:00	0.15	262
12-02-2015	14:00	0.28	225
12-02-2015	15:00	1.04	165
12-02-2015	16:00	2.49	157
12-02-2015	17:00	1.05	160
12-02-2015	18:00	0.06	111
12-02-2015	19:00	0.04	111
12-02-2015	20:00	0.13	107
12-02-2015	21:00	0.57	115
12-02-2015	22:00	0.12	129
12-02-2015	23:00	0.34	122
13-02-2015	0:00	0.58	129
13-02-2015	1:00	0.44	133
13-02-2015	2:00	0.17	251
13-02-2015	3:00	0.02	209
13-02-2015	4:00	0.52	166
13-02-2015	5:00	3.50	164
13-02-2015	6:00	2.69	151
13-02-2015	7:00	0.16	161
13-02-2015	8:00	0.05	84
13-02-2015	9:00	0.88	149
13-02-2015	10:00	2.78	170
13-02-2015	11:00	0.91	158
13-02-2015	12:00	0.20	157
17-02-2015	7:00	0.05	66
17-02-2015	8:00	0.03	325
17-02-2015	9:00	0.02	283
17-02-2015	10:00	0.02	208
17-02-2015	11:00	0.64	161
17-02-2015	12:00	1.31	151
17-02-2015	13:00	2.32	152
17-02-2015	14:00	3.16	161
17-02-2015	15:00	2.94	158
17-02-2015	16:00	3.72	172

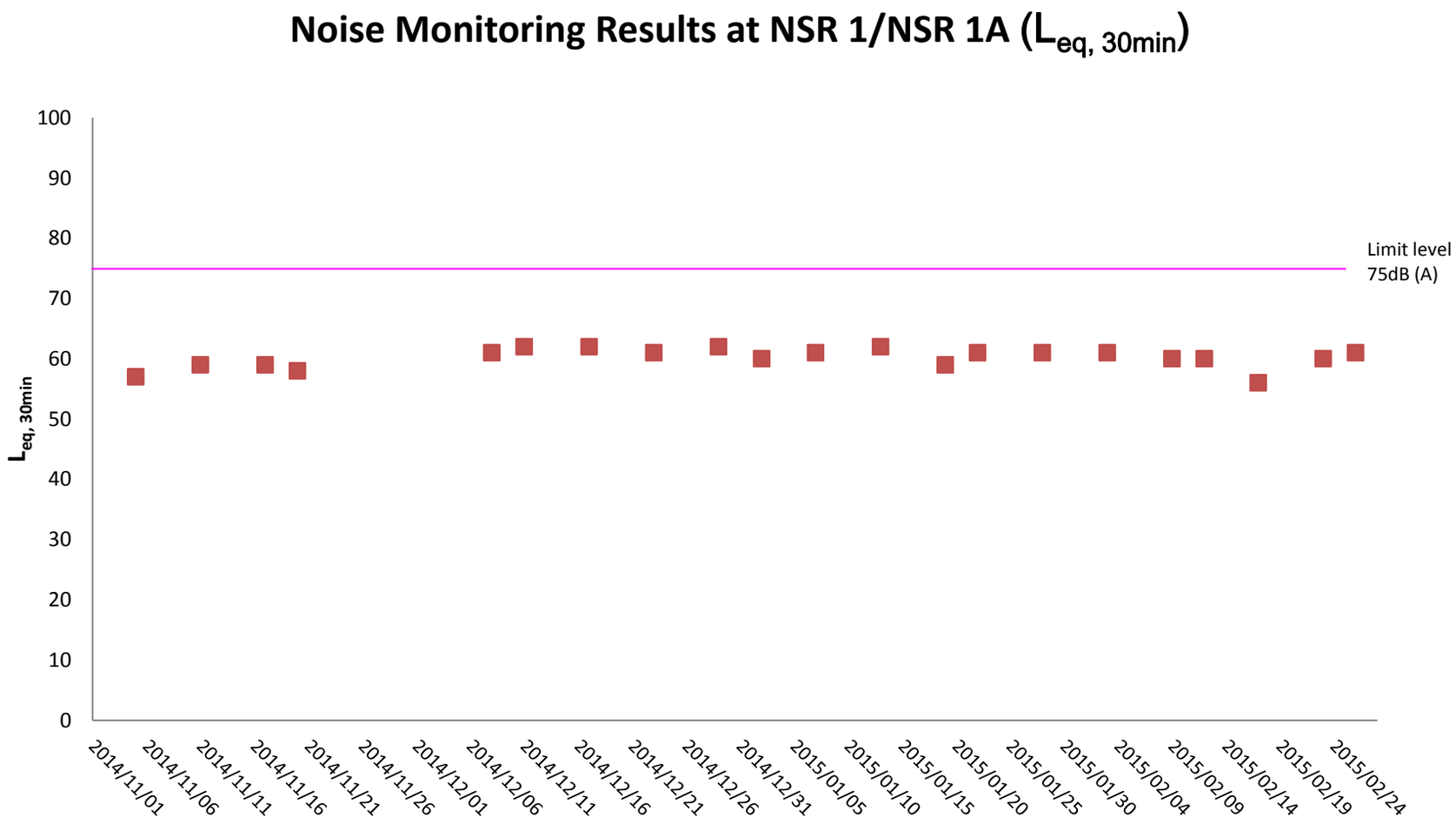
Date	Time	Wind speed (m/s)	Wind direction (deg)
17-02-2015	17:00	2.73	129
17-02-2015	18:00	2.67	136
17-02-2015	19:00	4.60	174
17-02-2015	20:00	6.70	168
17-02-2015	21:00	3.93	165
17-02-2015	22:00	2.16	168
17-02-2015	23:00	0.59	127
18-02-2015	0:00	2.54	164
18-02-2015	1:00	2.79	167
18-02-2015	2:00	2.18	163
18-02-2015	3:00	1.66	169
18-02-2015	4:00	0.70	154
18-02-2015	5:00	2.34	164
18-02-2015	6:00	3.64	176
18-02-2015	7:00	0.64	138
18-02-2015	8:00	0.27	117
18-02-2015	9:00	0.64	99
18-02-2015	10:00	1.20	98
18-02-2015	11:00	0.92	126
18-02-2015	12:00	1.56	149
23-02-2015	7:00	0.67	194
23-02-2015	8:00	3.65	164
23-02-2015	9:00	2.47	163
23-02-2015	10:00	3.40	185
23-02-2015	11:00	4.55	173
23-02-2015	12:00	3.78	166
23-02-2015	13:00	4.81	182
23-02-2015	14:00	2.35	197
23-02-2015	15:00	4.82	168
23-02-2015	16:00	4.92	169
23-02-2015	17:00	4.02	174
23-02-2015	18:00	4.17	174
23-02-2015	19:00	4.67	170
23-02-2015	20:00	4.91	167
23-02-2015	21:00	5.36	174
23-02-2015	22:00	5.07	174
23-02-2015	23:00	3.71	189
24-02-2015	0:00	2.08	176
24-02-2015	1:00	1.26	171
24-02-2015	2:00	0.95	187
24-02-2015	3:00	0.31	155
24-02-2015	4:00	0.35	168
24-02-2015	5:00	1.45	158
24-02-2015	6:00	1.81	189
24-02-2015	7:00	4.87	168
24-02-2015	8:00	4.40	173
24-02-2015	9:00	4.13	157
24-02-2015	10:00	2.78	199
24-02-2015	11:00	1.76	164
24-02-2015	12:00	2.96	194

Date	Time	Wind speed (m/s)	Wind direction (deg)
26-02-2015	7:00	0.18	182
26-02-2015	8:00	3.54	184
26-02-2015	9:00	3.72	193
26-02-2015	10:00	2.18	173
26-02-2015	11:00	2.15	159
26-02-2015	12:00	3.70	156
26-02-2015	13:00	5.60	190
26-02-2015	14:00	5.74	184
26-02-2015	15:00	5.94	183
26-02-2015	16:00	4.81	169
26-02-2015	17:00	5.05	164
26-02-2015	18:00	6.34	160
26-02-2015	19:00	4.53	161
26-02-2015	20:00	3.99	175
26-02-2015	21:00	0.38	191
26-02-2015	22:00	0.24	188
26-02-2015	23:00	0.07	198
27-02-2015	0:00	0.20	181
27-02-2015	1:00	0.02	175
27-02-2015	2:00	1.83	192
27-02-2015	3:00	2.53	154
27-02-2015	4:00	0.22	121
27-02-2015	5:00	0.31	138
27-02-2015	6:00	1.00	193
27-02-2015	7:00	0.18	182
27-02-2015	8:00	3.54	184
27-02-2015	9:00	3.72	193
27-02-2015	10:00	2.18	173
27-02-2015	11:00	2.15	159
27-02-2015	12:00	3.70	156

Appendix I

Impact Noise Monitoring Results and Graphical Presentation

Project	Works	Date (yyyy-mm-dd)	Station	Weather Condition	Time (hh:mm, 24hour)	Noise Level for 30-min, dB(A)			Limit Level dB(A)	Temp (° C)	Wind Speed (m/s)	Noise Meter Model/ID	Calibrator Model/ID
						Leq	L10	L90					
TMCLKL	HY/2012/07	2015/02/03	NSR1A	Sunny	9:46	61	63	54	75	17	0.5	RION NL31 (S/N 00603867)	RION NC73 (S/N 10997142)
TMCLKL	HY/2012/07	2015/02/09	NSR1A	Sunny	9:32	60	63	54	75	14	0.9	RION NL31 (S/N 00603867)	RION NC73 (S/N 10997142)
TMCLKL	HY/2012/07	2015/02/12	NSR1A	Sunny	9:48	60	61	55	75	14	0.3	RION NL31 (S/N 00603867)	RION NC73 (S/N 10997142)
TMCLKL	HY/2012/07	2015/02/17	NSR1A	Cloudy	9:45	56	58	50	75	18	0.2	RION NL31 (S/N 00603867)	RION NC73 (S/N 10997142)
TMCLKL	HY/2012/07	2015/02/23	NSR1A	Cloudy	9:46	60	63	56	75	20	0.8	RION NL31 (S/N 00603867)	RION NC73 (S/N 10997142)
TMCLKL	HY/2012/07	2015/02/26	NSR1A	Sunny	9:50	61	64	55	75	21	0.8	RION NL31 (S/N 00603867)	RION NC73 (S/N 10997142)
					Min.	56							
					Max.	61							
					Average	60							



Weather condition within the reporting period varied between sunny to rainy.
Major construction works undertaken within the reporting period include Construction of pile cap superstructure of Viaduct B & C; Channel re-construction at Area 1; Land Piling at Viaducts B, C & D; Pre-drilling works at Viaduct A; Construction of pile cap at Viaducts B & D; Additional land GI, trial pits & lab testing; Utility surveys; and Slope work of Slopes 9SE-B/C8, 9SE-B/C9 & 9SE-B/F9.
Marine works within the reporting period include Construction of Pile caps at Viaducts B, C & E; Marine piling platform installation & uninstallation; Marine Piling at Viaducts B, C, D & E; and Additional marine ground investigation (GI) and laboratory testing.
Noise impact monitoring on 26 November and 2 December were cancelled due to rejection of access to monitoring station.

Appendix J

Impact Water Quality Monitoring Results and Graphical Presentation

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v	Received Date (SS)
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	CS(Mf)5	16:35	Surface	1	1	17.4	8.18	28.2	7.3	6.2	8.7	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	CS(Mf)5	16:35	Surface	1	2	17.5	8.18	28.3	7.4	6.2	8.7	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	CS(Mf)5	16:35	Middle	2	1	17.5	8.17	28.5	7.1	7.1	10.6	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	CS(Mf)5	16:35	Middle	2	2	17.5	8.19	28.4	7.0	7.1	10.6	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	CS(Mf)5	16:35	Bottom	3	1	17.6	8.19	28.3	6.9	7.3	8.8	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	CS(Mf)5	16:35	Bottom	3	2	17.5	8.2	28.4	6.9	7.3	11.0	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	SR4a	17:10	Surface	1	1	17.4	8.2	28.3	7.3	6.8	9.5	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	SR4a	17:10	Surface	1	2	17.5	8.18	28.2	7.2	6.8	8.9	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	SR4a	17:10	Middle	2	1							5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	SR4a	17:10	Middle	2	2							5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	SR4a	17:10	Bottom	3	1	17.6	8.18	28.4	7.0	7.1	10.7	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	SR4a	17:10	Bottom	3	2	17.6	8.19	28.2	7.0	7.1	10.7	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	SR4	17:38	Surface	1	1	17.5	8.21	28.2	7.3	6.9	10.4	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	SR4	17:38	Surface	1	2	17.5	8.2	28.1	7.3	7.0	9.8	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	SR4	17:38	Middle	2	1							5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	SR4	17:38	Middle	2	2							5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	SR4	17:38	Bottom	3	1	17.5	8.2	28.1	7.0	7.4	9.6	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	SR4	17:38	Bottom	3	2	17.4	8.21	28.1	7.0	7.4	8.9	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	IS8	18:00	Surface	1	1	17.5	8.2	28.1	7.5	6.8	9.6	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	IS8	18:00	Surface	1	2	17.3	8.19	28	7.5	6.8	9.5	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	IS8	18:00	Middle	2	1							5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	IS8	18:00	Middle	2	2							5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	IS8	18:00	Bottom	3	1	17.6	8.2	28.1	7.1	7.3	9.5	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	IS8	18:00	Bottom	3	2	17.5	8.2	28.2	7.1	7.3	8.7	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	IS(Mf)16	18:25	Surface	1	1	17.3	8.2	28.3	7.7	6.7	8.1	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	IS(Mf)16	18:25	Surface	1	2	17.3	8.19	28.1	7.7	6.8	10.1	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	IS(Mf)16	18:25	Middle	2	1	17.6	8.2	28.4	7.1	7.1	9.9	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	IS(Mf)16	18:25	Middle	2	2	17.5	8.2	28.3	7.2	7.1	11.3	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	IS(Mf)16	18:25	Bottom	3	1	17.6	8.21	28.5	7.0	7.3	9.4	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	IS(Mf)16	18:25	Bottom	3	2	17.5	8.2	28.4	7.0	7.3	11.7	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	IS(Mf)9	18:50	Surface	1	1	17.2	8.16	28.1	7.4	6.8	8.2	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	IS(Mf)9	18:50	Surface	1	2	17.1	8.16	28	7.4	6.8	10.2	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	IS(Mf)9	18:50	Middle	2	1							5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	IS(Mf)9	18:50	Middle	2	2							5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	IS(Mf)9	18:50	Bottom	3	1	17.4	8.18	28.1	7.1	7.3	10.2	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	IS(Mf)9	18:50	Bottom	3	2	17.4	8.19	28.2	7.1	7.3	8.7	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	CS(Mf)3	19:19	Surface	1	1	17.1	8.17	28	7.5	6.6	9.9	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	CS(Mf)3	19:19	Surface	1	2	17.2	8.16	28.1	7.4	6.6	8.6	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	CS(Mf)3	19:19	Middle	2	1	17.4	8.17	28.2	7.2	7.5	12.0	5/2/2015

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v	Received Date (SS)
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	CS(Mf)3	19:19	Middle	2	2	17.4	8.18	28.4	7.3	7.5	11.2	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	CS(Mf)3	19:19	Bottom	3	1	17.4	8.18	28.3	7.1	7.4	9.6	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Flood	CS(Mf)3	19:19	Bottom	3	2	17.5	8.19	28.3	7.1	7.4	11.2	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	CS(Mf)3	11:43	Surface	1	1	17.2	8.18	28.2	7.3	6.7	8.8	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	CS(Mf)3	11:43	Surface	1	2	17.3	8.17	28.2	7.3	6.7	10.1	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	CS(Mf)3	11:43	Middle	2	1	17.4	8.18	28.3	7.1	7.6	9.9	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	CS(Mf)3	11:43	Middle	2	2	17.5	8.19	28.4	7.2	7.6	11.4	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	CS(Mf)3	11:43	Bottom	3	1	17.5	8.19	28.4	7.0	7.5	9.8	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	CS(Mf)3	11:43	Bottom	3	2	17.4	8.2	28.5	7.0	7.5	9.8	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	SR4a	13:50	Surface	1	1	17.5	8.19	28.2	7.2	6.9	9.7	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	SR4a	13:50	Surface	1	2	17.4	8.19	28.1	7.1	7.0	9.0	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	SR4a	13:50	Middle	2	1							5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	SR4a	13:50	Middle	2	2							5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	SR4a	13:50	Bottom	3	1	17.6	8.19	28.3	6.9	7.2	10.9	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	SR4a	13:50	Bottom	3	2	17.5	8.18	28.2	6.9	7.2	9.4	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	SR4	13:28	Surface	1	1	17.4	8.2	28.1	7.2	7.0	9.2	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	SR4	13:28	Surface	1	2	17.4	8.19	28	7.2	7.1	9.9	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	SR4	13:28	Middle	2	1							5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	SR4	13:28	Middle	2	2							5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	SR4	13:28	Bottom	3	1	17.5	8.2	28.1	6.9	7.6	11.3	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	SR4	13:28	Bottom	3	2	17.5	8.2	28.1	6.8	7.5	12.0	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	IS8	13:03	Surface	1	1	17.4	8.19	28.1	7.4	7.0	9.0	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	IS8	13:03	Surface	1	2	17.3	8.19	28.1	7.4	6.9	11.1	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	IS8	13:03	Middle	2	1							5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	IS8	13:03	Middle	2	2							5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	IS8	13:03	Bottom	3	1	17.6	8.19	28.2	6.9	7.4	8.9	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	IS8	13:03	Bottom	3	2	17.6	8.2	28.1	7.0	7.4	11.1	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	IS(Mf)16	12:38	Surface	1	1	17.4	8.19	28.2	7.5	6.8	10.9	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	IS(Mf)16	12:38	Surface	1	2	17.3	8.18	28.1	7.6	6.9	9.6	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	IS(Mf)16	12:38	Middle	2	1	17.5	8.19	28.3	7.0	7.2	8.7	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	IS(Mf)16	12:38	Middle	2	2	17.6	8.2	28.2	7.1	7.2	10.8	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	IS(Mf)16	12:38	Bottom	3	1	17.6	8.2	28.4	6.9	7.4	9.6	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	IS(Mf)16	12:38	Bottom	3	2	17.6	8.2	28.3	6.8	7.3	9.6	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	IS(Mf)9	12:13	Surface	1	1	17.3	8.17	28.2	7.3	7.0	9.0	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	IS(Mf)9	12:13	Surface	1	2	17.2	8.16	28.1	7.2	6.9	10.4	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	IS(Mf)9	12:13	Middle	2	1							5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	IS(Mf)9	12:13	Middle	2	2							5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	IS(Mf)9	12:13	Bottom	3	1	17.4	8.19	28.3	7.0	7.4	10.4	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	IS(Mf)9	12:13	Bottom	3	2	17.5	8.19	28.2	7.0	7.4	9.7	5/2/2015

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v	Received Date (SS)
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	CS(Mf)5	14:23	Surface	1	1	17.5	8.17	28.3	7.2	6.4	9.6	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	CS(Mf)5	14:23	Surface	1	2	17.5	8.18	28.2	7.2	6.4	10.2	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	CS(Mf)5	14:23	Middle	2	1	17.6	8.19	28.4	6.9	7.2	9.3	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	CS(Mf)5	14:23	Middle	2	2	17.5	8.2	28.3	6.9	7.2	10.8	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	CS(Mf)5	14:23	Bottom	3	1	17.6	8.2	28.4	6.8	7.4	9.6	5/2/2015
TMCLKL	HY/2012/07	3/2/2015	Mid-Ebb	CS(Mf)5	14:23	Bottom	3	2	17.6	8.2	28.5	6.8	7.4	9.7	5/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Flood	CS(Mf)5	7:30	Surface	1	1	17.5	8.11	28.3	7.2	6.4	9.7	6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Flood	CS(Mf)5	7:30	Surface	1	2	17.5	8.1	28.4	7.2	6.4	8.3	6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Flood	CS(Mf)5	7:30	Middle	2	1	17.6	8.12	28.4	6.9	7.2	8.6	6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Flood	CS(Mf)5	7:30	Middle	2	2	17.6	8.14	28.5	6.9	7.2	9.4	6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Flood	CS(Mf)5	7:30	Bottom	3	1	17.6	8.1	28.4	6.8	7.4	11.9	6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Flood	CS(Mf)5	7:30	Bottom	3	2	17.6	8.09	28.5	6.8	7.5	11.2	6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Flood	SR4a	7:54	Surface	1	1	17.4	8.12	28.2	7.1	6.9	8.3	6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Flood	SR4a	7:54	Surface	1	2	17.5	8.13	28.1	7.1	7.0	9.7	6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Flood	SR4a	7:54	Middle	2	1							6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Flood	SR4a	7:54	Middle	2	2							6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Flood	SR4a	7:54	Bottom	3	1	17.5	8.12	28.1	6.9	7.3	11.6	6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Flood	SR4a	7:54	Bottom	3	2	17.6	8.13	28.2	6.8	7.2	9.4	6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Flood	SR4	8:18	Surface	1	1	17.3	8.13	28	7.2	7.1	10.6	6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Flood	SR4	8:18	Surface	1	2	17.2	8.15	27.9	7.2	7.1	9.2	6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Flood	SR4	8:18	Middle	2	1							6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Flood	SR4	8:18	Middle	2	2							6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Flood	SR4	8:18	Bottom	3	1	17.3	8.14	28.1	7.8	7.6	9.8	6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Flood	SR4	8:18	Bottom	3	2	17.2	8.13	28	7.8	7.5	11.3	6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Flood	IS8	8:42	Surface	1	1	17.2	8.12	27.9	7.3	7.0	9.1	6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Flood	IS8	8:42	Surface	1	2	17.3	8.13	28	7.3	6.9	9.0	6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Flood	IS8	8:42	Middle	2	1							6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Flood	IS8	8:42	Middle	2	2							6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Flood	IS8	8:42	Bottom	3	1	17.5	8.13	28	6.9	7.5	11.2	6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Flood	IS8	8:42	Bottom	3	2	17.6	8.14	28.1	6.9	7.4	11.1	6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Flood	IS(Mf)16	9:06	Surface	1	1	17.2	8.11	28	7.5	6.8	10.2	6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Flood	IS(Mf)16	9:06	Surface	1	2	17.3	8.13	28	7.5	6.9	11.0	6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Flood	IS(Mf)16	9:06	Middle	2	1	17.4	8.12	28.1	7.0	7.1	10.6	6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Flood	IS(Mf)16	9:06	Middle	2	2	17.5	8.13	28.2	7.0	7.1	9.9	6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Flood	IS(Mf)16	9:06	Bottom	3	1	17.5	8.13	28.2	6.8	7.2	9.4	6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Flood	IS(Mf)16	9:06	Bottom	3	2	17.4	8.12	28.3	6.8	7.2	10.1	6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Flood	IS(Mf)9	9:30	Surface	1	1	17	8.05	27.8	7.2	7.0	11.1	6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Flood	IS(Mf)9	9:30	Surface	1	2	17.1	8.08	27.9	7.2	6.9	10.4	6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Flood	IS(Mf)9	9:30	Middle	2	1							6/2/2015

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v	Received Date (SS)
TMCLKL	HY/2012/07	05-02-2015	Mid-Flood	IS(Mf)9	9:30	Middle	2	2							06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Flood	IS(Mf)9	9:30	Bottom	3	1	17.4	8.12	28.2	7.0	7.4	11.1	06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Flood	IS(Mf)9	9:30	Bottom	3	2	17.3	8.11	28.1	6.9	7.4	10.4	06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Flood	CS(Mf)3	9:54	Surface	1	1	17.2	8.12	27.7	7.3	6.8	8.8	06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Flood	CS(Mf)3	9:54	Surface	1	2	17.1	8.1	27.8	7.3	6.7	8.7	06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Flood	CS(Mf)3	9:54	Middle	2	1	17.2	8.11	27.9	7.1	7.6	11.4	06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Flood	CS(Mf)3	9:54	Middle	2	2	17.3	8.12	28	7.1	7.6	9.9	06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Flood	CS(Mf)3	9:54	Bottom	3	1	17.4	8.13	28.1	6.9	7.5	9.0	06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Flood	CS(Mf)3	9:54	Bottom	3	2	17.3	8.12	28.3	6.9	7.6	11.3	06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Ebb	CS(Mf)3	12:08	Surface	1	1	17.4	8.09	28.2	7.3	6.8	8.8	06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Ebb	CS(Mf)3	12:08	Surface	1	2	17.3	8.08	28.3	7.2	6.8	8.8	06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Ebb	CS(Mf)3	12:08	Middle	2	1	17.4	8.09	28.4	7.0	7.7	11.5	06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Ebb	CS(Mf)3	12:08	Middle	2	2	17.5	8.1	28.5	7.1	7.7	11.5	06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Ebb	CS(Mf)3	12:08	Bottom	3	1	17.6	8.1	28.5	6.9	7.6	10.6	06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Ebb	CS(Mf)3	12:08	Bottom	3	2	17.5	8.11	28.6	6.9	7.6	9.1	06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Ebb	SR4a	14:18	Surface	1	1	17.5	8.1	28.2	7.1	7.0	9.8	06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Ebb	SR4a	14:18	Surface	1	2	17.6	8.11	28.3	7.0	7.0	11.2	06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Ebb	SR4a	14:18	Middle	2	1							06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Ebb	SR4a	14:18	Middle	2	2							06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Ebb	SR4a	14:18	Bottom	3	1	17.6	8.11	28.3	6.8	7.3	11.7	06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Ebb	SR4a	14:18	Bottom	3	2	17.7	8.12	28.4	6.8	7.3	10.9	06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Ebb	SR4	13:52	Surface	1	1	17.5	8.11	28.2	7.1	7.1	8.5	06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Ebb	SR4	13:52	Surface	1	2	17.4	8.12	28.1	7.1	7.1	10.0	06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Ebb	SR4	13:52	Middle	2	1							06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Ebb	SR4	13:52	Middle	2	2							06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Ebb	SR4	13:52	Bottom	3	1	17.6	8.11	28.2	7.8	7.6	10.7	06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Ebb	SR4	13:52	Bottom	3	2	17.5	8.12	28.2	7.7	7.6	11.4	06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Ebb	IS8	13:26	Surface	1	1	17.4	8.1	28.1	7.3	7.0	10.5	06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Ebb	IS8	13:26	Surface	1	2	17.5	8.11	28.2	7.3	7.0	9.1	06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Ebb	IS8	13:26	Middle	2	1							06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Ebb	IS8	13:26	Middle	2	2							06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Ebb	IS8	13:26	Bottom	3	1	17.7	8.11	28.3	6.9	7.5	10.5	06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Ebb	IS8	13:26	Bottom	3	2	17.6	8.12	28.2	6.9	7.5	11.9	06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Ebb	IS(Mf)16	13:00	Surface	1	1	17.4	8.1	28.2	7.5	6.9	8.3	06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Ebb	IS(Mf)16	13:00	Surface	1	2	17.5	8.09	28.3	7.5	6.9	1.4	06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Ebb	IS(Mf)16	13:00	Middle	2	1	17.6	8.1	28.4	6.9	7.1	9.3	06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Ebb	IS(Mf)16	13:00	Middle	2	2	17.7	8.11	28.3	7.0	7.1	8.5	06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Ebb	IS(Mf)16	13:00	Bottom	3	1	17.7	8.11	28.4	6.8	7.3	9.5	06-02-2015
TMCLKL	HY/2012/07	05-02-2015	Mid-Ebb	IS(Mf)16	13:00	Bottom	3	2	17.6	8.12	28.5	6.8	7.2	11.6	06-02-2015

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v	Received Date (SS)
TMCLKL	HY/2012/07	5/2/2015	Mid-Ebb	IS(Mf)9	12:34	Surface	1	1	17.3	8.08	28.2	7.2	7.0	10.5	6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Ebb	IS(Mf)9	12:34	Surface	1	2	17.4	8.07	28.3	7.2	7.0	10.5	6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Ebb	IS(Mf)9	12:34	Middle	2	1							6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Ebb	IS(Mf)9	12:34	Middle	2	2							6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Ebb	IS(Mf)9	12:34	Bottom	3	1	17.6	8.1	28.4	6.9	7.5	9.0	6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Ebb	IS(Mf)9	12:34	Bottom	3	2	17.5	8.09	28.3	6.9	7.5	10.4	6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Ebb	CS(Mf)5	14:48	Surface	1	1	17.5	8.08	28.3	7.1	6.5	7.8	6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Ebb	CS(Mf)5	14:48	Surface	1	2	17.6	8.09	28.4	7.1	6.4	7.7	6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Ebb	CS(Mf)5	14:48	Middle	2	1	17.6	8.1	28.5	6.9	7.2	8.7	6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Ebb	CS(Mf)5	14:48	Middle	2	2	17.7	8.11	28.4	6.8	7.3	9.4	6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Ebb	CS(Mf)5	14:48	Bottom	3	1	17.7	8.11	28.5	6.7	7.5	11.2	6/2/2015
TMCLKL	HY/2012/07	5/2/2015	Mid-Ebb	CS(Mf)5	14:48	Bottom	3	2	17.7	8.12	28.6	6.7	7.5	12.0	6/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	CS(Mf)5	8:06	Surface	1	1	16.8	7.94	28.2	7.3	6.3	9.6	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	CS(Mf)5	8:06	Surface	1	2	16.9	7.95	28.3	7.3	6.4	9.9	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	CS(Mf)5	8:06	Middle	2	1	17.3	7.99	28.4	7.8	6.9	10.6	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	CS(Mf)5	8:06	Middle	2	2	17.3	8.01	28.4	7.8	6.9	10.8	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	CS(Mf)5	8:06	Bottom	3	1	17.5	8.02	28.5	7.0	7.2	11.0	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	CS(Mf)5	8:06	Bottom	3	2	17.6	8.03	28.6	7.0	7.3	11.4	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	SR4a	8:35	Surface	1	1	16.8	7.98	28.2	7.2	6.7	9.8	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	SR4a	8:35	Surface	1	2	16.8	7.99	28.2	7.2	6.7	10.2	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	SR4a	8:35	Middle	2	1							12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	SR4a	8:35	Middle	2	2							12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	SR4a	8:35	Bottom	3	1	16.9	8.01	28.3	7.1	7.0	10.7	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	SR4a	8:35	Bottom	3	2	17	8.04	28.4	7.0	7.0	11.2	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	SR4	9:00	Surface	1	1	16.8	7.99	28.1	7.2	6.8	10.3	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	SR4	9:00	Surface	1	2	16.9	8.01	28.1	7.2	6.8	10.0	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	SR4	9:00	Middle	2	1							12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	SR4	9:00	Middle	2	2							12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	SR4	9:00	Bottom	3	1	16.9	8.02	28.2	7.6	7.1	10.8	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	SR4	9:00	Bottom	3	2	17	8.03	28.3	7.7	7.2	11.1	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	IS8	9:25	Surface	1	1	16.9	8.02	28.1	7.4	6.7	10.4	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	IS8	9:25	Surface	1	2	16.9	8	28.2	7.4	6.8	10.5	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	IS8	9:25	Middle	2	1							12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	IS8	9:25	Middle	2	2							12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	IS8	9:25	Bottom	3	1	17	8.03	28.3	7.1	7.2	11.3	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	IS8	9:25	Bottom	3	2	17	8.05	28.2	7.1	7.3	11.2	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	IS(Mf)16	9:50	Surface	1	1	16.9	7.94	28.2	7.6	6.8	10.3	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	IS(Mf)16	9:50	Surface	1	2	16.9	7.96	28.2	7.6	6.7	10.2	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	IS(Mf)16	9:50	Middle	2	1	16.9	8	28.3	7.2	6.9	10.5	12/2/2015

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v	Received Date (SS)
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	IS(Mf)16	9:50	Middle	2	2	17	7.98	28.3	7.2	7.0	10.8	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	IS(Mf)16	9:50	Bottom	3	1	17.2	8.01	28.4	7.1	7.1	11.4	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	IS(Mf)16	9:50	Bottom	3	2	17.3	8.02	28.5	7.0	7.2	12.0	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	IS(Mf)9	10:15	Surface	1	1	16.8	8.04	28.1	7.4	6.8	10.9	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	IS(Mf)9	10:15	Surface	1	2	16.9	8.07	28.2	7.3	6.9	10.8	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	IS(Mf)9	10:15	Middle	2	1							12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	IS(Mf)9	10:15	Middle	2	2							12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	IS(Mf)9	10:15	Bottom	3	1	17	8.07	28.3	7.1	7.2	11.6	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	IS(Mf)9	10:15	Bottom	3	2	17.1	8.08	28.3	7.1	7.3	11.7	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	CS(Mf)3	10:38	Surface	1	1	16.9	8.02	28.2	7.4	6.7	10.5	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	CS(Mf)3	10:38	Surface	1	2	16.9	8.03	28.2	7.4	6.8	10.2	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	CS(Mf)3	10:38	Middle	2	1	17.1	8.09	28.3	7.2	7.4	12.0	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	CS(Mf)3	10:38	Middle	2	2	17.1	8.1	28.4	7.2	7.4	11.8	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	CS(Mf)3	10:38	Bottom	3	1	17.3	8.11	28.5	7.1	7.7	12.0	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Flood	CS(Mf)3	10:38	Bottom	3	2	17.4	8.12	28.6	7.0	7.5	12.2	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	CS(Mf)3	12:50	Surface	1	1	17.4	8.14	28.3	7.3	6.9	10.5	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	CS(Mf)3	12:50	Surface	1	2	17.5	8.13	28.4	7.3	6.8	10.2	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	CS(Mf)3	12:50	Middle	2	1	17.6	8.14	28.6	7.1	7.7	11.0	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	CS(Mf)3	12:50	Middle	2	2	17.5	8.15	28.5	7.1	7.7	11.2	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	CS(Mf)3	12:50	Bottom	3	1	17.6	8.16	28.6	7.0	7.6	12.2	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	CS(Mf)3	12:50	Bottom	3	2	17.7	8.17	28.7	6.9	7.7	11.8	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	SR4a	15:00	Surface	1	1	17.7	8.04	28.4	7.1	7.0	10.6	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	SR4a	15:00	Surface	1	2	17.6	8.05	28.3	7.1	7.1	11.0	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	SR4a	15:00	Middle	2	1							12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	SR4a	15:00	Middle	2	2							12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	SR4a	15:00	Bottom	3	1	17.7	8.06	28.4	6.9	7.4	12.2	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	SR4a	15:00	Bottom	3	2	17.8	8.07	28.5	6.8	7.3	11.8	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	SR4	14:34	Surface	1	1	17.5	8.06	28.2	7.2	7.2	11.2	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	SR4	14:34	Surface	1	2	17.6	8.05	28.3	7.2	7.2	10.8	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	SR4	14:34	Middle	2	1							12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	SR4	14:34	Middle	2	2							12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	SR4	14:34	Bottom	3	1	17.7	8.05	28.4	7.8	7.7	11.8	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	SR4	14:34	Bottom	3	2	17.7	8.06	28.4	7.8	7.6	12.0	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	IS8	14:08	Surface	1	1	17.5	8.04	28.2	7.4	7.1	10.4	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	IS8	14:08	Surface	1	2	17.6	8.05	28.3	7.3	7.0	10.2	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	IS8	14:08	Middle	2	1							12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	IS8	14:08	Middle	2	2							12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	IS8	14:08	Bottom	3	1	17.7	8.05	28.4	6.9	7.6	11.8	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	IS8	14:08	Bottom	3	2	17.8	8.06	28.3	6.9	7.5	11.8	12/2/2015

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v	Received Date (SS)
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	IS(Mf)16	13:42	Surface	1	1	17.5	8.04	28.3	7.5	6.9	10.6	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	IS(Mf)16	13:42	Surface	1	2	17.6	8.03	28.4	7.5	7.0	10.9	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	IS(Mf)16	13:42	Middle	2	1	17.6	8.04	28.4	7.0	7.2	11.4	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	IS(Mf)16	13:42	Middle	2	2	17.5	8.05	28.5	7.0	7.2	11.0	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	IS(Mf)16	13:42	Bottom	3	1	17.7	8.05	28.5	6.9	7.3	11.8	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	IS(Mf)16	13:42	Bottom	3	2	17.8	8.06	28.6	6.8	7.3	11.2	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	IS(Mf)9	13:16	Surface	1	1	17.4	8.13	28.3	7.2	7.1	10.4	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	IS(Mf)9	13:16	Surface	1	2	17.5	8.14	28.4	7.2	7.0	10.4	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	IS(Mf)9	13:16	Middle	2	1							12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	IS(Mf)9	13:16	Middle	2	2							12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	IS(Mf)9	13:16	Bottom	3	1	17.7	8.16	28.5	7.0	7.6	11.2	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	IS(Mf)9	13:16	Bottom	3	2	17.6	8.15	28.4	7.0	7.5	11.4	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	CS(Mf)5	15:30	Surface	1	1	17.6	8.02	28.4	7.2	6.6	10.5	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	CS(Mf)5	15:30	Surface	1	2	17.7	8.03	28.5	7.2	6.5	10.2	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	CS(Mf)5	15:30	Middle	2	1	17.8	8.04	28.5	7.9	7.3	11.0	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	CS(Mf)5	15:30	Middle	2	2	17.7	8.05	28.6	7.9	7.3	11.2	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	CS(Mf)5	15:30	Bottom	3	1	17.8	8.05	28.6	6.8	7.5	12.2	12/2/2015
TMCLKL	HY/2012/07	7/2/2015	Mid-Ebb	CS(Mf)5	15:30	Bottom	3	2	17.9	8.06	28.7	6.7	7.6	11.8	12/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	CS(Mf)5	9:24	Surface	1	1	16.7	8.01	26.6	6.8	19.5	29.3	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	CS(Mf)5	9:24	Surface	1	2	16.6	8.03	26.7	6.8	20.3	30.5	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	CS(Mf)5	9:24	Middle	2	1	16.7	8.04	26.8	6.7	28.6	42.9	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	CS(Mf)5	9:24	Middle	2	2	16.8	8.05	26.8	6.6	29.4	41.2	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	CS(Mf)5	9:24	Bottom	3	1	16.9	8.07	26.9	6.3	33.5	50.3	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	CS(Mf)5	9:24	Bottom	3	2	17	8.08	27	6.3	32.7	42.5	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	SR4a	10:00	Surface	1	1	16.6	8.03	26.5	6.7	16.7	25.1	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	SR4a	10:00	Surface	1	2	16.6	8.04	26.6	6.7	18.3	25.6	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	SR4a	10:00	Middle	2	1							10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	SR4a	10:00	Middle	2	2							10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	SR4a	10:00	Bottom	3	1	16.6	8.06	26.6	6.6	26.6	39.9	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	SR4a	10:00	Bottom	3	2	16.7	8.07	26.7	6.6	25.5	40.8	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	SR4	10:24	Surface	1	1	16.6	8.01	26.7	6.6	20.6	28.8	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	SR4	10:24	Surface	1	2	16.7	8.03	26.7	6.7	21.9	30.7	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	SR4	10:24	Middle	2	1							10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	SR4	10:24	Middle	2	2							10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	SR4	10:24	Bottom	3	1	16.7	8.07	26.7	6.6	32.6	42.4	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	SR4	10:24	Bottom	3	2	16.7	8.08	26.8	6.5	30.5	45.8	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	IS8	10:48	Surface	1	1	16.7	8.04	26.7	6.8	19.3	30.9	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	IS8	10:48	Surface	1	2	16.7	8.05	26.8	6.8	20.2	30.3	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	IS8	10:48	Middle	2	1							10/2/2015

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v	Received Date (SS)
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	IS8	10:48	Middle	2	2							10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	IS8	10:48	Bottom	3	1	16.7	8.07	26.8	6.7	30.1	39.1	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	IS8	10:48	Bottom	3	2	16.7	8.06	26.8	6.6	31.3	40.7	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	IS(Mf)16	11:12	Surface	1	1	16.7	8.01	26.8	6.7	17.8	21.4	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	IS(Mf)16	11:12	Surface	1	2	16.8	8.03	26.8	6.7	18.5	24.1	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	IS(Mf)16	11:12	Middle	2	1	16.8	8.07	26.8	6.7	24.1	33.7	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	IS(Mf)16	11:12	Middle	2	2	16.8	8.09	26.9	6.6	23.6	33.0	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	IS(Mf)16	11:12	Bottom	3	1	16.9	8.05	27	6.5	32.4	45.4	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	IS(Mf)16	11:12	Bottom	3	2	16.9	8.07	27	6.5	31.8	47.7	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	IS(Mf)9	11:37	Surface	1	1	16.7	8.05	26.8	6.7	18.6	24.2	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	IS(Mf)9	11:37	Surface	1	2	16.8	8.07	26.9	6.6	19.4	27.2	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	IS(Mf)9	11:37	Middle	2	1							10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	IS(Mf)9	11:37	Middle	2	2							10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	IS(Mf)9	11:37	Bottom	3	1	16.8	8.1	26.9	6.4	28.5	37.1	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	IS(Mf)9	11:37	Bottom	3	2	16.8	8.09	26.9	6.4	29.3	35.2	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	CS(Mf)3	12:03	Surface	1	1	16.8	7.97	26.9	6.9	17.4	22.6	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	CS(Mf)3	12:03	Surface	1	2	16.8	7.99	26.9	6.9	18.7	22.4	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	CS(Mf)3	12:03	Middle	2	1	16.8	8.01	27	6.7	26.2	36.7	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	CS(Mf)3	12:03	Middle	2	2	16.8	8	27	6.7	27.4	41.1	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	CS(Mf)3	12:03	Bottom	3	1	16.9	8.06	27.1	6.4	31.1	43.5	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Flood	CS(Mf)3	12:03	Bottom	3	2	16.9	8.08	27.2	6.5	32.3	51.7	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	CS(Mf)3	15:08	Surface	1	1	16.6	7.99	26.9	6.7	18.9	24.6	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	CS(Mf)3	15:08	Surface	1	2	16.7	7.98	27	6.7	19.3	25.1	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	CS(Mf)3	15:08	Middle	2	1	16.4	8.01	27.1	6.7	26.6	37.2	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	CS(Mf)3	15:08	Middle	2	2	16.5	8	27.2	6.6	27.8	33.4	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	CS(Mf)3	15:08	Bottom	3	1	16.5	8.03	27	6.3	32.8	45.9	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	CS(Mf)3	15:08	Bottom	3	2	16.4	8.02	27.1	6.3	31.6	44.2	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	SR4a	16:56	Surface	1	1	16.4	8.06	26.8	6.5	17.6	22.9	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	SR4a	16:56	Surface	1	2	16.5	8.07	26.9	6.6	17.9	28.6	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	SR4a	16:56	Middle	2	1							10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	SR4a	16:56	Middle	2	2							10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	SR4a	16:56	Bottom	3	1	16.5	8.07	26.9	6.4	27.1	40.7	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	SR4a	16:56	Bottom	3	2	16.5	8.08	27	6.5	27.8	44.5	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	SR4	16:36	Surface	1	1	16.3	8.02	26.8	6.4	21.3	29.8	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	SR4	16:36	Surface	1	2	16.4	8.03	26.9	6.5	22.1	28.7	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	SR4	16:36	Middle	2	1							10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	SR4	16:36	Middle	2	2							10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	SR4	16:36	Bottom	3	1	16.4	8.09	26.9	6.4	33.1	43.0	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	SR4	16:36	Bottom	3	2	16.5	8.08	27	6.4	31.8	38.2	10/2/2015

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v	Received Date (SS)
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	IS8	16:16	Surface	1	1	16.5	8.07	26.7	6.7	20.6	26.8	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	IS8	16:16	Surface	1	2	16.6	8.08	26.8	6.7	21.2	29.7	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	IS8	16:16	Middle	2	1							10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	IS8	16:16	Middle	2	2							10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	IS8	16:16	Bottom	3	1	16.4	8.09	26.9	6.5	32.3	51.7	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	IS8	16:16	Bottom	3	2	16.5	8.11	26.9	6.5	31.9	51.0	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	IS(Mf)16	15:53	Surface	1	1	16.4	8.03	26.9	6.6	18.2	27.3	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	IS(Mf)16	15:53	Surface	1	2	16.5	8.05	26.9	6.6	18.8	24.4	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	IS(Mf)16	15:53	Middle	2	1	16.6	8.1	26.9	6.6	25.3	35.4	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	IS(Mf)16	15:53	Middle	2	2	16.5	8.09	27	6.5	25.9	36.3	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	IS(Mf)16	15:53	Bottom	3	1	16.5	8.08	27	6.3	32.9	49.4	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	IS(Mf)16	15:53	Bottom	3	2	16.6	8.09	27.1	6.3	33.4	50.1	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	IS(Mf)9	15:33	Surface	1	1	16.5	8.09	26.9	6.5	19.4	29.1	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	IS(Mf)9	15:33	Surface	1	2	16.6	8.08	27	6.4	19.9	29.9	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	IS(Mf)9	15:33	Middle	2	1							10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	IS(Mf)9	15:33	Middle	2	2							10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	IS(Mf)9	15:33	Bottom	3	1	16.6	8.11	27.1	6.3	29.9	41.9	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	IS(Mf)9	15:33	Bottom	3	2	16.7	8.12	27.2	6.3	30.1	42.1	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	CS(Mf)5	17:22	Surface	1	1	16.3	7.99	26.9	6.6	20.8	24.6	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	CS(Mf)5	17:22	Surface	1	2	16.2	7.99	26.8	6.7	20.6	25.1	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	CS(Mf)5	17:22	Middle	2	1	16.5	8.03	27	6.4	29.9	37.2	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	CS(Mf)5	17:22	Middle	2	2	16.4	8.04	27.1	6.5	30.4	33.4	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	CS(Mf)5	17:22	Bottom	3	1	16.4	8.06	27.3	6.5	34.2	45.9	10/2/2015
TMCLKL	HY/2012/07	10/2/2015	Mid-Ebb	CS(Mf)5	17:22	Bottom	3	2	16.3	8.07	27.2	6.5	33.9	44.2	10/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	CS(Mf)5	10:45	Surface	1	1	16.6	8.04	26.9	6.8	17.0	16.9	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	CS(Mf)5	10:45	Surface	1	2	16.7	8.06	26.9	6.8	18.2	17.2	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	CS(Mf)5	10:45	Middle	2	1	16.7	8.04	27	6.9	23.2	20.2	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	CS(Mf)5	10:45	Middle	2	2	16.7	8.05	26.9	6.9	24.0	24.2	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	CS(Mf)5	10:45	Bottom	3	1	16.9	8.11	27	6.7	29.2	19.2	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	CS(Mf)5	10:45	Bottom	3	2	17	8.11	27.2	6.7	29.9	20.9	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	SR4a	11:17	Surface	1	1	16.7	8.1	26.7	6.8	16.1	20.0	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	SR4a	11:17	Surface	1	2	16.7	8.09	26.8	6.7	17.3	20.5	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	SR4a	11:17	Middle	2	1							14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	SR4a	11:17	Middle	2	2							14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	SR4a	11:17	Bottom	3	1	16.8	8.12	27	6.4	21.1	16.6	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	SR4a	11:17	Bottom	3	2	16.9	8.12	26.9	6.4	22.0	17.6	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	SR4	11:40	Surface	1	1	16.8	8.06	26.9	6.7	15.3	16.3	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	SR4	11:40	Surface	1	2	16.7	8.08	26.9	6.7	16.5	18.9	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	SR4	11:40	Middle	2	1							14/2/2015

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v	Received Date (SS)
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	SR4	11:40	Middle	2	2							14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	SR4	11:40	Bottom	3	1	16.8	8.08	26.8	6.7	23.5	19.0	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	SR4	11:40	Bottom	3	2	16.8	8.09	26.8	6.6	24.4	21.8	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	IS8	12:05	Surface	1	1	16.8	8.06	26.9	6.9	14.8	19.5	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	IS8	12:05	Surface	1	2	16.8	8.07	26.7	6.8	15.4	20.6	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	IS8	12:05	Middle	2	1							14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	IS8	12:05	Middle	2	2							14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	IS8	12:05	Bottom	3	1	16.8	8.1	26.9	6.6	22.1	21.8	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	IS8	12:05	Bottom	3	2	16.7	8.11	26.8	6.6	23.2	20.7	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	IS(Mf)16	12:30	Surface	1	1	16.7	8.05	26.5	6.9	16.6	19.8	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	IS(Mf)16	12:30	Surface	1	2	16.8	8.05	26.7	6.8	16.0	17.4	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	IS(Mf)16	12:30	Middle	2	1	16.7	8.08	26.7	6.7	18.2	17.7	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	IS(Mf)16	12:30	Middle	2	2	16.8	8.08	26.9	6.8	17.4	18.9	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	IS(Mf)16	12:30	Bottom	3	1	16.9	8.03	26.9	6.4	26.4	22.2	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	IS(Mf)16	12:30	Bottom	3	2	16.9	8.03	26.8	6.5	27.2	21.9	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	IS(Mf)9	13:00	Surface	1	1	16.9	8	26.9	6.8	17.4	18.9	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	IS(Mf)9	13:00	Surface	1	2	16.8	8.01	26.7	6.8	16.8	20.1	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	IS(Mf)9	13:00	Middle	2	1							14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	IS(Mf)9	13:00	Middle	2	2							14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	IS(Mf)9	13:00	Bottom	3	1	16.8	8.06	26.8	6.6	21.2	18.6	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	IS(Mf)9	13:00	Bottom	3	2	16.8	8.07	26.9	6.5	20.5	19.9	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	CS(Mf)3	13:27	Surface	1	1	16.8	7.97	26.7	6.8	18.2	16.8	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	CS(Mf)3	13:27	Surface	1	2	16.9	7.98	26.7	6.7	19.0	17.9	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	CS(Mf)3	13:27	Middle	2	1	16.7	8.01	26.5	6.8	22.0	18.2	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	CS(Mf)3	13:27	Middle	2	2	16.8	8.02	26.7	6.9	23.0	19.0	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	CS(Mf)3	13:27	Bottom	3	1	16.9	7.98	26.8	6.7	29.5	18.5	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Flood	CS(Mf)3	13:27	Bottom	3	2	16.9	7.99	26.9	6.6	30.5	19.9	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	CS(Mf)3	17:15	Surface	1	1	16.7	7.98	26.7	6.6	18.3	17.1	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	CS(Mf)3	17:15	Surface	1	2	16.8	7.99	26.8	6.6	19.2	18.1	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	CS(Mf)3	17:15	Middle	2	1	16.8	8.02	26.8	6.7	22.1	20.0	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	CS(Mf)3	17:15	Middle	2	2	16.8	8.03	26.9	6.7	23.2	17.8	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	CS(Mf)3	17:15	Bottom	3	1	16.9	7.97	26.9	6.5	29.7	18.9	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	CS(Mf)3	17:15	Bottom	3	2	16.9	7.98	27	6.5	30.6	19.3	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	SR4a	19:06	Surface	1	1	16.9	8.08	26.9	6.6	16.4	14.6	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	SR4a	19:06	Surface	1	2	16.8	8.1	26.9	6.6	17.5	15.8	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	SR4a	19:06	Middle	2	1							14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	SR4a	19:06	Middle	2	2							14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	SR4a	19:06	Bottom	3	1	16.9	8.11	26.9	6.3	21.3	16.1	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	SR4a	19:06	Bottom	3	2	16.9	8.12	27	6.3	22.2	15.3	14/2/2015

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v	Received Date (SS)
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	SR4	18:45	Surface	1	1	16.8	8.07	26.8	6.6	15.4	16.0	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	SR4	18:45	Surface	1	2	16.8	8.09	26.9	6.6	16.7	14.9	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	SR4	18:45	Middle	2	1							14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	SR4	18:45	Middle	2	2							14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	SR4	18:45	Bottom	3	1	16.8	8.09	26.9	6.5	23.7	18.9	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	SR4	18:45	Bottom	3	2	16.8	8.1	26.8	6.5	24.5	17.4	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	IS8	18:26	Surface	1	1	16.7	8.07	26.8	6.7	14.9	18.3	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	IS8	18:26	Surface	1	2	16.8	8.08	26.8	6.7	15.5	21.5	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	IS8	18:26	Middle	2	1							14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	IS8	18:26	Middle	2	2							14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	IS8	18:26	Bottom	3	1	16.8	8.11	26.9	6.4	22.3	16.3	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	IS8	18:26	Bottom	3	2	16.8	8.12	26.9	6.4	23.4	17.6	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	IS(Mf)16	18:02	Surface	1	1	16.8	8.04	26.7	6.8	16.7	16.1	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	IS(Mf)16	18:02	Surface	1	2	16.8	8.05	26.8	6.7	16.1	15.2	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	IS(Mf)16	18:02	Middle	2	1	16.8	8.07	26.8	6.6	18.3	18.5	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	IS(Mf)16	18:02	Middle	2	2	16.8	8.08	26.8	6.6	17.6	17.5	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	IS(Mf)16	18:02	Bottom	3	1	16.9	8.04	26.8	6.3	26.5	17.9	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	IS(Mf)16	18:02	Bottom	3	2	16.9	8.03	26.9	6.3	27.4	22.2	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	IS(Mf)9	17:40	Surface	1	1	16.8	8.01	26.8	6.7	17.6	18.3	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	IS(Mf)9	17:40	Surface	1	2	16.8	8.03	26.8	6.7	16.9	17.4	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	IS(Mf)9	17:40	Middle	2	1							14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	IS(Mf)9	17:40	Middle	2	2							14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	IS(Mf)9	17:40	Bottom	3	1	16.8	8.07	26.9	6.4	21.4	17.6	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	IS(Mf)9	17:40	Bottom	3	2	16.8	8.08	26.9	6.4	20.6	19.4	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	CS(Mf)5	19:27	Surface	1	1	16.8	8.05	26.8	6.6	17.2	15.8	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	CS(Mf)5	19:27	Surface	1	2	16.9	8.07	26.9	6.7	18.4	17.1	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	CS(Mf)5	19:27	Middle	2	1	16.9	8.04	26.9	6.7	23.4	16.1	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	CS(Mf)5	19:27	Middle	2	2	17	8.03	27	6.8	24.2	18.7	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	CS(Mf)5	19:27	Bottom	3	1	17.1	8.1	27.1	6.5	29.3	18.6	14/2/2015
TMCLKL	HY/2012/07	12/2/2015	Mid-Ebb	CS(Mf)5	19:27	Bottom	3	2	17.1	8.11	27.2	6.5	30.1	17.5	14/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	CS(Mf)5	12:24	Surface	1	1	16.7	8.06	26.7	6.9	16.3	22.8	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	CS(Mf)5	12:24	Surface	1	2	16.8	8.08	26.8	6.8	17.5	22.8	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	CS(Mf)5	12:24	Middle	2	1	16.9	8.09	26.9	6.7	22.5	29.3	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	CS(Mf)5	12:24	Middle	2	2	16.8	8.1	26.8	6.7	23.3	30.3	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	CS(Mf)5	12:24	Bottom	3	1	17	8.12	27	6.3	28.4	45.4	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	CS(Mf)5	12:24	Bottom	3	2	17.1	8.13	27.1	6.4	29.2	40.9	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	SR4a	12:50	Surface	1	1	16.6	8.08	26.6	6.8	15.5	24.8	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	SR4a	12:50	Surface	1	2	16.7	8.09	26.7	6.8	16.6	21.6	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	SR4a	12:50	Middle	2	1							16/2/2015

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v	Received Date (SS)
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	SR4a	12:50	Middle	2	2							16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	SR4a	12:50	Bottom	3	1	16.7	8.11	26.7	6.6	20.4	30.6	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	SR4a	12:50	Bottom	3	2	16.8	8.12	26.8	6.7	21.3	25.6	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	SR4	13:16	Surface	1	1	16.7	8.06	26.7	6.7	14.5	17.4	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	SR4	13:16	Surface	1	2	16.8	8.08	26.8	6.8	15.5	23.7	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	SR4	13:16	Middle	2	1							16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	SR4	13:16	Middle	2	2							16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	SR4	13:16	Bottom	3	1	16.8	8.12	26.8	6.6	23.8	36.5	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	SR4	13:16	Bottom	3	2	16.8	8.13	26.9	6.6	23.6	28.3	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	IS8	13:42	Surface	1	1	16.8	8.09	26.8	6.9	14.0	21.0	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	IS8	13:42	Surface	1	2	16.7	8.1	26.9	6.8	14.6	17.5	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	IS8	13:42	Middle	2	1							16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	IS8	13:42	Middle	2	2							16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	IS8	13:42	Bottom	3	1	16.8	8.12	26.9	6.7	21.4	32.1	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	IS8	13:42	Bottom	3	2	16.9	8.13	26.8	6.7	22.5	33.8	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	IS(Mf)16	14:08	Surface	1	1	16.8	8.06	26.8	6.8	15.8	23.7	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	IS(Mf)16	14:08	Surface	1	2	16.9	8.08	26.9	6.8	15.2	18.2	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	IS(Mf)16	14:08	Middle	2	1	16.8	8.12	26.9	6.7	17.4	22.6	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	IS(Mf)16	14:08	Middle	2	2	16.9	8.14	27	6.7	16.7	26.7	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	IS(Mf)16	14:08	Bottom	3	1	16.9	8.1	27	6.6	25.6	38.4	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	IS(Mf)16	14:08	Bottom	3	2	17	8.12	27.1	6.6	26.5	37.1	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	IS(Mf)9	14:34	Surface	1	1	16.8	8.1	26.9	6.7	16.7	21.7	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	IS(Mf)9	14:34	Surface	1	2	16.9	8.11	27	6.7	16.0	20.8	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	IS(Mf)9	14:34	Middle	2	1							16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	IS(Mf)9	14:34	Middle	2	2							16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	IS(Mf)9	14:34	Bottom	3	1	16.9	8.15	27	6.5	20.5	24.6	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	IS(Mf)9	14:34	Bottom	3	2	16.8	8.14	26.9	6.4	19.7	25.6	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	CS(Mf)3	15:04	Surface	1	1	16.7	8.02	26.9	6.9	16.5	21.5	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	CS(Mf)3	15:04	Surface	1	2	16.6	8.04	27	6.9	17.8	26.7	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	CS(Mf)3	15:04	Middle	2	1	16.7	8.06	27	6.8	21.2	31.8	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	CS(Mf)3	15:04	Middle	2	2	16.8	8.05	27.1	6.8	22.3	35.7	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	CS(Mf)3	15:04	Bottom	3	1	16.8	8.11	27.2	6.5	28.8	37.4	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Flood	CS(Mf)3	15:04	Bottom	3	2	16.9	8.13	27.3	6.6	29.7	44.6	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	CS(Mf)3	8:10	Surface	1	1	16.5	8.01	26.7	6.8	17.9	25.1	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	CS(Mf)3	8:10	Surface	1	2	16.4	8.02	26.6	6.8	18.4	27.6	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	CS(Mf)3	8:10	Middle	2	1	16.6	8.03	26.8	6.7	22.6	29.4	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	CS(Mf)3	8:10	Middle	2	2	16.7	8.04	26.9	6.6	22.9	36.6	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	CS(Mf)3	8:10	Bottom	3	1	16.9	8.08	27	6.4	29.2	46.7	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	CS(Mf)3	8:10	Bottom	3	2	16.8	8.09	27.1	6.4	30.1	45.2	16/2/2015

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v	Received Date (SS)
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	SR4a	9:56	Surface	1	1	16.5	8.06	26.4	6.7	16.7	20.0	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	SR4a	9:56	Surface	1	2	16.6	8.05	26.5	6.6	17.1	22.2	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	SR4a	9:56	Middle	2	1							16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	SR4a	9:56	Middle	2	2							16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	SR4a	9:56	Bottom	3	1	16.7	8.1	26.6	6.5	21.4	34.2	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	SR4a	9:56	Bottom	3	2	16.6	8.09	26.6	6.6	21.8	28.3	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	SR4	9:35	Surface	1	1	16.5	8.09	26.8	6.4	14.9	22.4	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	SR4	9:35	Surface	1	2	16.4	8.08	26.7	6.5	16.2	22.7	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	SR4	9:35	Middle	2	1							16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	SR4	9:35	Middle	2	2							16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	SR4	9:35	Bottom	3	1	16.6	8.11	26.6	6.5	24.6	36.9	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	SR4	9:35	Bottom	3	2	16.5	8.12	26.5	6.6	24.9	32.4	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	IS8	9:14	Surface	1	1	16.4	8.11	26.6	6.7	18.1	27.2	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	IS8	9:14	Surface	1	2	16.5	8.1	26.7	6.7	18.7	24.3	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	IS8	9:14	Middle	2	1							16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	IS8	9:14	Middle	2	2							16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	IS8	9:14	Bottom	3	1	16.6	8.13	26.8	6.6	22.8	36.5	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	IS8	9:14	Bottom	3	2	16.7	8.14	26.7	6.6	22.6	33.9	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	IS(Mf)16	8:55	Surface	1	1	16.7	8.04	26.7	6.7	16.4	23.0	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	IS(Mf)16	8:55	Surface	1	2	16.6	8.05	26.6	6.7	16.9	22.0	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	IS(Mf)16	8:55	Middle	2	1	16.8	8.09	26.8	6.6	18.8	26.3	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	IS(Mf)16	8:55	Middle	2	2	16.8	8.08	26.7	6.6	19.1	28.7	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	IS(Mf)16	8:55	Bottom	3	1	16.8	8.12	26.9	6.5	25.8	31.0	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	IS(Mf)16	8:55	Bottom	3	2	16.9	8.13	27	6.4	26.7	42.7	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	IS(Mf)9	8:36	Surface	1	1	16.6	8.08	26.7	6.7	17.2	24.1	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	IS(Mf)9	8:36	Surface	1	2	16.7	8.07	26.8	6.6	17.6	21.1	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	IS(Mf)9	8:36	Middle	2	1							16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	IS(Mf)9	8:36	Middle	2	2							16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	IS(Mf)9	8:36	Bottom	3	1	16.8	8.11	26.8	6.4	21.3	32.0	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	IS(Mf)9	8:36	Bottom	3	2	16.8	8.12	26.9	6.4	20.7	26.9	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	CS(Mf)5	10:25	Surface	1	1	16.4	8.03	26.6	6.8	16.9	20.3	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	CS(Mf)5	10:25	Surface	1	2	16.5	8.04	26.5	6.8	17.8	24.9	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	CS(Mf)5	10:25	Middle	2	1	16.7	8.11	26.6	6.5	23.6	35.4	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	CS(Mf)5	10:25	Middle	2	2	16.6	8.12	26.7	6.6	23.9	35.9	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	CS(Mf)5	10:25	Bottom	3	1	16.8	8.09	26.8	6.3	30.1	48.2	16/2/2015
TMCLKL	HY/2012/07	14/2/2015	Mid-Ebb	CS(Mf)5	10:25	Bottom	3	2	16.9	8.1	26.9	6.2	29.6	44.4	16/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	CS(Mf)5	15:36	Surface	1	1	16.8	8.1	26.9	7.1	15.3	22.0	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	CS(Mf)5	15:36	Surface	1	2	16.8	8.11	26.9	7.0	16.5	24.2	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	CS(Mf)5	15:36	Middle	2	1	17.1	8.15	26.9	6.9	21.4	31.0	18/2/2015

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v	Received Date (SS)
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	CS(Mf)5	15:36	Middle	2	2	17	8.13	27	6.9	22.3	31.8	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	CS(Mf)5	15:36	Bottom	3	1	17.1	8.18	27	6.5	27.3	40.6	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	CS(Mf)5	15:36	Bottom	3	2	17.1	8.16	27.1	6.6	28.1	41.8	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	SR4a	16:06	Surface	1	1	16.9	8.12	26.8	6.9	14.5	20.8	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	SR4a	16:06	Surface	1	2	16.8	8.13	26.9	7.0	15.6	21.6	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	SR4a	16:06	Middle	2	1							18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	SR4a	16:06	Middle	2	2							18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	SR4a	16:06	Bottom	3	1	16.8	8.16	26.7	6.8	19.4	28.9	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	SR4a	16:06	Bottom	3	2	16.9	8.16	26.8	6.9	20.2	29.6	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	SR4	16:32	Surface	1	1	16.8	8.12	26.9	6.9	13.5	19.0	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	SR4	16:32	Surface	1	2	16.7	8.13	26.8	6.9	14.8	20.8	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	SR4	16:32	Middle	2	1							18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	SR4	16:32	Middle	2	2							18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	SR4	16:32	Bottom	3	1	16.8	8.17	27	6.8	22.7	32.5	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	SR4	16:32	Bottom	3	2	16.8	8.18	27.1	6.7	22.5	31.8	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	IS8	16:58	Surface	1	1	16.7	8.14	27	7.0	12.9	18.2	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	IS8	16:58	Surface	1	2	16.8	8.14	27.1	7.0	13.6	19.6	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	IS8	16:58	Middle	2	1							18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	IS8	16:58	Middle	2	2							18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	IS8	16:58	Bottom	3	1	17	8.16	27	6.9	20.4	29.5	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	IS8	16:58	Bottom	3	2	17	8.17	27	6.8	21.5	31.0	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	IS(Mf)16	17:24	Surface	1	1	17	8.1	27	7.0	14.7	21.1	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	IS(Mf)16	17:24	Surface	1	2	17	8.11	27.1	6.9	14.2	19.9	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	IS(Mf)16	17:24	Middle	2	1	17	8.18	27.2	6.9	16.3	23.8	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	IS(Mf)16	17:24	Middle	2	2	16.9	8.18	27	6.9	15.6	22.6	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	IS(Mf)16	17:24	Bottom	3	1	17	8.14	27.2	6.7	24.5	34.0	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	IS(Mf)16	17:24	Bottom	3	2	17.1	8.15	27.1	6.8	25.4	33.8	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	IS(Mf)9	17:50	Surface	1	1	16.9	8.16	26.9	6.9	15.7	22.1	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	IS(Mf)9	17:50	Surface	1	2	16.9	8.17	27	6.9	15.0	21.0	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	IS(Mf)9	17:50	Middle	2	1							18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	IS(Mf)9	17:50	Middle	2	2							18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	IS(Mf)9	17:50	Bottom	3	1	17.1	8.19	27	6.7	19.4	27.2	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	IS(Mf)9	17:50	Bottom	3	2	17	8.18	27.1	6.6	18.7	26.4	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	CS(Mf)3	18:16	Surface	1	1	16.8	8.08	27.1	7.1	15.4	22.1	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	CS(Mf)3	18:16	Surface	1	2	16.7	8.09	27	7.1	16.7	23.9	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	CS(Mf)3	18:16	Middle	2	1	16.8	8.1	27.2	7.0	20.1	28.4	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	CS(Mf)3	18:16	Middle	2	2	16.8	8.09	27.2	6.9	21.2	29.7	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	CS(Mf)3	18:16	Bottom	3	1	17	8.15	27.2	6.7	27.8	37.2	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Flood	CS(Mf)3	18:16	Bottom	3	2	17	8.16	27.3	6.7	28.3	36.8	18/2/2015

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v	Received Date (SS)
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	CS(Mf)3	10:50	Surface	1	1	16.8	8.07	27	7.0	15.6	21.6	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	CS(Mf)3	10:50	Surface	1	2	16.7	8.09	27.1	7.0	16.9	22.2	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	CS(Mf)3	10:50	Middle	2	1	16.8	8.11	27.1	6.8	20.3	28.2	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	CS(Mf)3	10:50	Middle	2	2	16.9	8.1	27.2	6.8	21.4	28.0	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	CS(Mf)3	10:50	Bottom	3	1	17	8.16	27.3	6.6	27.9	37.3	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	CS(Mf)3	10:50	Bottom	3	2	16.9	8.17	27.4	6.6	28.4	37.8	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	SR4a	13:00	Surface	1	1	16.8	8.13	26.7	6.8	14.6	19.5	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	SR4a	13:00	Surface	1	2	16.7	8.14	26.8	6.9	15.7	20.8	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	SR4a	13:00	Middle	2	1							18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	SR4a	13:00	Middle	2	2							18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	SR4a	13:00	Bottom	3	1	16.8	8.16	26.8	6.7	19.5	27.5	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	SR4a	13:00	Bottom	3	2	16.9	8.17	26.9	6.7	20.4	28.8	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	SR4	12:34	Surface	1	1	16.7	8.11	26.8	6.7	13.6	18.2	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	SR4	12:34	Surface	1	2	16.8	8.12	26.9	6.8	14.9	19.4	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	SR4	12:34	Middle	2	1							18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	SR4	12:34	Middle	2	2							18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	SR4	12:34	Bottom	3	1	16.8	8.17	26.9	6.7	22.9	29.8	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	SR4	12:34	Bottom	3	2	16.9	8.19	27	6.6	22.7	30.3	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	IS8	12:08	Surface	1	1	16.8	8.14	26.9	6.9	13.1	17.0	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	IS8	12:08	Surface	1	2	16.9	8.15	27	6.9	13.7	18.3	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	IS8	12:08	Middle	2	1							18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	IS8	12:08	Middle	2	2							18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	IS8	12:08	Bottom	3	1	17	8.17	27	6.8	20.5	29.6	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	IS8	12:08	Bottom	3	2	16.9	8.18	27.1	6.7	21.6	30.5	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	IS(Mf)16	11:42	Surface	1	1	16.9	8.11	26.9	6.9	14.9	20.8	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	IS(Mf)16	11:42	Surface	1	2	17	8.12	27	6.8	14.3	19.2	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	IS(Mf)16	11:42	Middle	2	1	17	8.17	27	6.8	16.5	23.3	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	IS(Mf)16	11:42	Middle	2	2	17.1	8.19	27.1	6.8	15.8	22.1	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	IS(Mf)16	11:42	Bottom	3	1	17.1	8.15	27.1	6.6	24.7	32.9	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	IS(Mf)16	11:42	Bottom	3	2	17	8.17	27.2	6.7	25.6	34.1	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	IS(Mf)9	11:16	Surface	1	1	16.9	8.15	27	6.8	15.8	20.8	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	IS(Mf)9	11:16	Surface	1	2	17	8.16	27.1	6.8	15.1	21.2	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	IS(Mf)9	11:16	Middle	2	1							18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	IS(Mf)9	11:16	Middle	2	2							18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	IS(Mf)9	11:16	Bottom	3	1	17	8.2	27.1	6.5	19.6	28.2	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	IS(Mf)9	11:16	Bottom	3	2	17.1	8.19	27.2	6.5	18.8	26.4	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	CS(Mf)5	13:30	Surface	1	1	16.8	8.11	26.8	6.9	15.4	21.4	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	CS(Mf)5	13:30	Surface	1	2	16.9	8.12	26.9	6.9	16.6	21.8	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	CS(Mf)5	13:30	Middle	2	1	17	8.14	27	6.8	21.6	28.3	18/2/2015

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v	Received Date (SS)
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	CS(Mf)5	13:30	Middle	2	2	17.1	8.15	26.9	6.7	22.4	29.6	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	CS(Mf)5	13:30	Bottom	3	1	17.1	8.17	27	6.4	27.5	38.2	18/2/2015
TMCLKL	HY/2012/07	17/2/2015	Mid-Ebb	CS(Mf)5	13:30	Bottom	3	2	17.2	8.18	27.1	6.4	28.3	40.0	18/2/2015
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	CS(Mf)5	9:24	Surface	1	1	16.8	8.12	26.7	7.0	14.6	22.0	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	CS(Mf)5	9:24	Surface	1	2	16.9	8.13	26.8	6.9	14.8	22.1	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	CS(Mf)5	9:24	Middle	2	1	16.9	8.15	26.9	6.8	15.3	24.4	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	CS(Mf)5	9:24	Middle	2	2	17	8.16	27	6.8	15.3	19.9	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	CS(Mf)5	9:24	Bottom	3	1	17.1	8.18	27.1	6.4	15.8	19.0	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	CS(Mf)5	9:24	Bottom	3	2	17	8.2	27	6.4	15.9	23.9	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	SR4a	9:50	Surface	1	1	16.7	8.14	26.8	6.8	14.6	18.9	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	SR4a	9:50	Surface	1	2	16.8	8.15	26.7	6.9	14.7	22.0	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	SR4a	9:50	Middle	2	1							24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	SR4a	9:50	Middle	2	2							24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	SR4a	9:50	Bottom	3	1	16.9	8.17	26.8	6.7	15.0	19.6	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	SR4a	9:50	Bottom	3	2	16.8	8.18	26.9	6.8	15.1	21.2	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	SR4	10:16	Surface	1	1	16.8	8.12	26.8	6.7	14.5	23.1	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	SR4	10:16	Surface	1	2	16.9	8.13	26.9	6.8	14.5	20.3	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	SR4	10:16	Middle	2	1							24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	SR4	10:16	Middle	2	2							24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	SR4	10:16	Bottom	3	1	16.9	8.18	26.9	6.7	15.3	24.5	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	SR4	10:16	Bottom	3	2	17	8.19	27	6.6	15.4	23.0	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	IS8	10:42	Surface	1	1	16.8	8.15	26.9	6.9	14.4	20.2	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	IS8	10:42	Surface	1	2	16.9	8.16	27	6.9	14.5	18.8	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	IS8	10:42	Middle	2	1							24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	IS8	10:42	Middle	2	2							24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	IS8	10:42	Bottom	3	1	16.9	8.18	27	6.8	15.1	21.2	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	IS8	10:42	Bottom	3	2	17	8.19	26.9	6.7	15.3	21.4	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	IS(Mf)16	11:08	Surface	1	1	16.9	8.12	26.8	6.9	14.6	20.4	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	IS(Mf)16	11:08	Surface	1	2	16.8	8.13	26.9	6.8	14.5	21.8	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	IS(Mf)16	11:08	Middle	2	1	16.9	8.18	27	6.8	14.7	22.1	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	IS(Mf)16	11:08	Middle	2	2	17	8.19	26.9	6.8	14.7	20.5	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	IS(Mf)16	11:08	Bottom	3	1	17	8.16	27.1	6.6	15.6	20.2	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	IS(Mf)16	11:08	Bottom	3	2	16.9	8.18	27	6.7	15.7	20.4	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	IS(Mf)9	11:34	Surface	1	1	16.8	8.16	26.8	6.8	14.7	22.0	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	IS(Mf)9	11:34	Surface	1	2	16.9	8.17	26.9	6.8	14.6	17.5	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	IS(Mf)9	11:34	Middle	2	1							24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	IS(Mf)9	11:34	Middle	2	2							24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	IS(Mf)9	11:34	Bottom	3	1	16.9	8.21	27	6.5	15.1	22.6	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	IS(Mf)9	11:34	Bottom	3	2	17	8.22	26.9	6.5	15.0	19.5	24/2/2014

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v	Received Date (SS)
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	CS(Mf)3	12:04	Surface	1	1	16.7	8.08	27	7.0	14.7	17.6	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	CS(Mf)3	12:04	Surface	1	2	16.8	8.1	26.9	7.0	14.8	19.2	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	CS(Mf)3	12:04	Middle	2	1	16.9	8.12	27.1	6.8	15.1	21.2	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	CS(Mf)3	12:04	Middle	2	2	16.8	8.11	27	6.8	15.2	24.4	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	CS(Mf)3	12:04	Bottom	3	1	17	8.17	27.1	6.6	15.9	19.1	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Flood	CS(Mf)3	12:04	Bottom	3	2	16.9	8.18	27.2	6.6	16.0	25.6	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	CS(Mf)3	15:33	Surface	1	1	17.4	8.19	27.7	7.1	10.6	13.8	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	CS(Mf)3	15:33	Surface	1	2	17.3	8.18	27.6	7.2	10.9	14.2	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	CS(Mf)3	15:33	Middle	2	1	17.4	8.2	27.8	7.1	11.7	17.6	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	CS(Mf)3	15:33	Middle	2	2	17.4	8.21	27.7	7.1	12.0	16.8	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	CS(Mf)3	15:33	Bottom	3	1	17.6	8.23	27.8	6.8	13.3	20.0	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	CS(Mf)3	15:33	Bottom	3	2	17.5	8.22	27.9	6.8	13.7	17.8	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	SR4a	17:30	Surface	1	1	17.5	8.2	27.7	7.1	10.3	14.4	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	SR4a	17:30	Surface	1	2	17.5	8.19	27.7	7.1	10.6	14.8	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	SR4a	17:30	Middle	2	1							24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	SR4a	17:30	Middle	2	2							24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	SR4a	17:30	Bottom	3	1	17.6	8.19	27.9	7.0	10.9	15.2	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	SR4a	17:30	Bottom	3	2	17.7	8.19	27.8	6.9	11.1	17.8	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	SR4	16:59	Surface	1	1	17.6	8.21	27.8	7.2	12.2	17.1	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	SR4	16:59	Surface	1	2	17.6	8.21	27.7	7.2	12.6	18.9	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	SR4	16:59	Middle	2	1							24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	SR4	16:59	Middle	2	2							24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	SR4	16:59	Bottom	3	1	17.8	8.18	27.8	6.8	13.1	19.7	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	SR4	16:59	Bottom	3	2	17.8	8.19	27.9	6.8	13.4	18.8	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	IS8	16:34	Surface	1	1	17.6	8.18	27.7	7.3	10.8	16.2	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	IS8	16:34	Surface	1	2	17.5	8.19	27.9	7.3	10.5	14.7	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	IS8	16:34	Middle	2	1							24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	IS8	16:34	Middle	2	2							24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	IS8	16:34	Bottom	3	1	17.8	8.2	27.9	7.0	12.1	16.9	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	IS8	16:34	Bottom	3	2	17.7	8.21	27.9	7.1	12.4	18.6	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	IS(Mf)16	16:17	Surface	1	1	17.6	8.21	27.7	7.2	11.4	14.8	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	IS(Mf)16	16:17	Surface	1	2	17.7	8.2	27.8	7.2	11.7	15.2	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	IS(Mf)16	16:17	Middle	2	1	17.7	8.19	27.8	7.1	12.3	18.5	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	IS(Mf)16	16:17	Middle	2	2	17.8	8.2	27.9	7.1	12.7	19.1	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	IS(Mf)16	16:17	Bottom	3	1	17.8	8.22	27.9	6.9	13.4	21.4	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	IS(Mf)16	16:17	Bottom	3	2	17.9	8.23	27.9	6.9	13.5	18.9	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	IS(Mf)9	15:53	Surface	1	1	17.5	8.21	27.6	7.1	12.1	19.4	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	IS(Mf)9	15:53	Surface	1	2	17.5	8.21	27.6	7.2	12.4	17.4	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	IS(Mf)9	15:53	Middle	2	1							24/2/2014

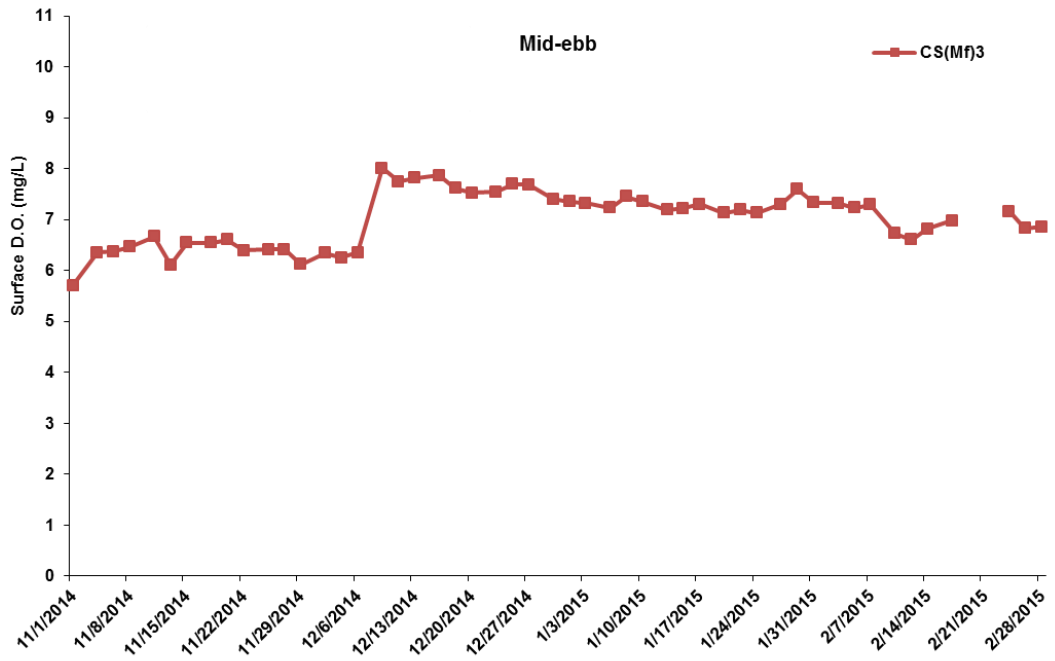
Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v	Received Date (SS)
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	IS(Mf)9	15:53	Middle	2	2							24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	IS(Mf)9	15:53	Bottom	3	1	17.7	8.22	27.8	6.9	13.5	16.2	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	IS(Mf)9	15:53	Bottom	3	2	17.6	8.23	27.8	6.9	13.6	16.3	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	CS(Mf)5	17:55	Surface	1	1	17.3	8.16	27.6	7.1	11.7	16.4	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	CS(Mf)5	17:55	Surface	1	2	17.3	8.17	27.6	7.2	11.9	17.9	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	CS(Mf)5	17:55	Middle	2	1	17.4	8.18	27.8	7.1	12.6	16.4	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	CS(Mf)5	17:55	Middle	2	2	17.5	8.19	27.9	7.1	12.4	18.6	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	CS(Mf)5	17:55	Bottom	3	1	17.8	8.2	28	7.0	13.2	17.2	24/2/2014
TMCLKL	HY/2012/07	24/2/2015	Mid-Ebb	CS(Mf)5	17:55	Bottom	3	2	17.7	8.22	28	7.0	13.5	20.3	24/2/2014
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	CS(Mf)5	11:04	Surface	1	1	17	8.11	27	6.84	13.4	17.4	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	CS(Mf)5	11:04	Surface	1	2	17.1	8.09	27	6.86	13.6	17.7	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	CS(Mf)5	11:04	Middle	2	1	17.2	8.21	27.2	6.77	13	19.5	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	CS(Mf)5	11:04	Middle	2	2	17.2	8.19	27.1	6.75	12.8	19.2	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	CS(Mf)5	11:04	Bottom	3	1	17.2	8.14	27.1	6.63	12.9	20.6	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	CS(Mf)5	11:04	Bottom	3	2	17.3	8.16	27.2	6.61	13.1	18.3	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	SR4a	11:27	Surface	1	1	17.1	8.03	27.1	7.01	15.3	20.8	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	SR4a	11:27	Surface	1	2	17.2	8.05	27.1	7.03	15.5	20.5	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	SR4a	11:27	Middle	2	1							28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	SR4a	11:27	Middle	2	2							28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	SR4a	11:27	Bottom	3	1	17.4	8.15	27.4	6.73	16.1	19.3	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	SR4a	11:27	Bottom	3	2	17.5	8.13	27.4	6.71	16	19.2	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	SR4	11:50	Surface	1	1	17.1	8	27	6.92	12.8	17.9	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	SR4	11:50	Surface	1	2	17	8.02	27	6.9	13	18.2	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	SR4	11:50	Middle	2	1							28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	SR4	11:50	Middle	2	2							28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	SR4	11:50	Bottom	3	1	17.3	8.07	27.1	6.73	13.4	18.8	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	SR4	11:50	Bottom	3	2	17.3	8.09	27.2	6.71	13.6	16.3	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	IS8	12:25	Surface	1	1	16.9	8.14	27.1	7.13	13	16.5	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	IS8	12:25	Surface	1	2	17	8.16	27.2	7.11	12.8	16.6	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	IS8	12:25	Middle	2	1							28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	IS8	12:25	Middle	2	2							28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	IS8	12:25	Bottom	3	1	17.1	7.89	27.3	6.9	13.9	18.1	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	IS8	12:25	Bottom	3	2	17.2	7.91	27.4	6.92	14.1	18.3	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	IS(Mf)16	12:57	Surface	1	1	17.1	7.93	27	6.86	12.9	18.1	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	IS(Mf)16	12:57	Surface	1	2	17.2	7.91	27	6.88	13.1	18.3	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	IS(Mf)16	12:57	Middle	2	1	17.2	8	27.1	6.75	13.8	16.6	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	IS(Mf)16	12:57	Middle	2	2	17.3	8.02	27.2	6.73	14	16.4	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	IS(Mf)16	12:57	Bottom	3	1	17.4	8.13	27.3	6.69	14.5	17.8	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	IS(Mf)16	12:57	Bottom	3	2	17.4	8.15	27.2	6.67	14.3	17.2	28/2/2015

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v	Received Date (SS)
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	IS(Mf)9	13:21	Surface	1	1	17	8.24	27	6.88	15.2	20.3	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	IS(Mf)9	13:21	Surface	1	2	17	8.22	27.1	6.9	15	20	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	IS(Mf)9	13:21	Middle	2	1							28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	IS(Mf)9	13:21	Middle	2	2							28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	IS(Mf)9	13:21	Bottom	3	1	17.2	7.96	27.3	6.77	15.4	21.6	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	IS(Mf)9	13:21	Bottom	3	2	17.3	7.98	27.3	6.77	15.6	21.4	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	CS(Mf)3	13:45	Surface	1	1	16.9	8.03	27	6.99	16.5	22.1	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	CS(Mf)3	13:45	Surface	1	2	17	8.05	27	7.01	16.7	21.7	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	CS(Mf)3	13:45	Middle	2	1	17.1	8.11	27.1	6.8	17.1	20.5	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	CS(Mf)3	13:45	Middle	2	2	17.2	8.13	27.2	6.82	16.9	21	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	CS(Mf)3	13:45	Bottom	3	1	17.3	7.94	27.3	6.73	17.3	20	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Flood	CS(Mf)3	13:45	Bottom	3	2	17.4	7.96	27.4	6.71	17.5	20.3	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	CS(Mf)3	18:01	Surface	1	1	16.6	8.06	26.9	6.82	17.1	18.2	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	CS(Mf)3	18:01	Surface	1	2	16.7	8.04	26.9	6.84	17.3	19.5	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	CS(Mf)3	18:01	Middle	2	1	16.8	8.09	27.1	6.62	21.2	18.2	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	CS(Mf)3	18:01	Middle	2	2	16.9	8.11	27	6.66	21.5	17.8	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	CS(Mf)3	18:01	Bottom	3	1	17	8.14	27.1	6.73	25.1	21	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	CS(Mf)3	18:01	Bottom	3	2	17.1	8.13	27.2	6.77	24.4	21	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	SR4a	19:37	Surface	1	1	16.7	8.16	26.9	6.86	17.4	20.9	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	SR4a	19:37	Surface	1	2	16.8	8.17	26.8	6.88	16.9	20.4	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	SR4a	19:37	Middle	2	1							28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	SR4a	19:37	Middle	2	2							28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	SR4a	19:37	Bottom	3	1	16.9	8.18	27	6.62	20.3	21.4	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	SR4a	19:37	Bottom	3	2	17	8.19	27.1	6.68	21.1	21.4	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	SR4	19:16	Surface	1	1	16.9	8.11	26.8	6.72	14.7	22.5	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	SR4	19:16	Surface	1	2	16.8	8.12	26.9	6.76	14.2	22.1	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	SR4	19:16	Middle	2	1							28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	SR4	19:16	Middle	2	2							28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	SR4	19:16	Bottom	3	1	17	8.15	26.9	6.65	20.8	20.8	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	SR4	19:16	Bottom	3	2	17.1	8.16	27	6.68	21.3	20.8	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	IS8	18:59	Surface	1	1	16.9	8.12	26.9	6.8	14.1	19.9	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	IS8	18:59	Surface	1	2	17	8.11	26.9	6.83	14.6	19.7	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	IS8	18:59	Middle	2	1							28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	IS8	18:59	Middle	2	2							28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	IS8	18:59	Bottom	3	1	16.9	8.14	27.1	6.62	18.3	22.5	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	IS8	18:59	Bottom	3	2	16.8	8.16	27	6.65	18.9	22.5	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	IS(Mf)16	18:40	Surface	1	1	16.7	8.09	26.7	6.76	13.2	18.4	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	IS(Mf)16	18:40	Surface	1	2	16.8	8.1	26.8	6.71	13.6	18.2	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	IS(Mf)16	18:40	Middle	2	1	16.9	8.13	26.9	6.82	16.8	18	28/2/2015

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v	Received Date (SS)
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	IS(Mf)16	18:40	Middle	2	2	16.9	8.15	26.8	6.83	16.2	19.5	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	IS(Mf)16	18:40	Bottom	3	1	17	8.18	27	6.65	22.3	20.8	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	IS(Mf)16	18:40	Bottom	3	2	17.1	8.19	26.9	6.67	21.7	21	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	IS(Mf)9	18:23	Surface	1	1	16.9	8.13	26.9	6.71	16.8	19.9	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	IS(Mf)9	18:23	Surface	1	2	16.8	8.14	26.8	6.74	17.3	20.8	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	IS(Mf)9	18:23	Middle	2	1							28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	IS(Mf)9	18:23	Middle	2	2							28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	IS(Mf)9	18:23	Bottom	3	1	17	8.16	27	6.64	20.4	19.5	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	IS(Mf)9	18:23	Bottom	3	2	17.1	8.17	27.1	6.68	20.8	19.5	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	CS(Mf)5	20:01	Surface	1	1	16.9	8.09	26.7	6.86	14.8	22.2	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	CS(Mf)5	20:01	Surface	1	2	16.8	8.12	26.6	6.82	15.2	19.8	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	CS(Mf)5	20:01	Middle	2	1	17	8.13	26.8	6.64	18.3	20.8	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	CS(Mf)5	20:01	Middle	2	2	16.9	8.14	26.8	6.69	19.1	22.4	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	CS(Mf)5	20:01	Bottom	3	1	17.1	8.18	26.9	6.82	22.4	22.2	28/2/2015
TMCLKL	HY/2012/07	26/2/2015	Mid-Ebb	CS(Mf)5	20:01	Bottom	3	2	17	8.16	27	6.61	23.2	22.5	28/2/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	CS(Mf)5	13:07	Surface	1	1	17	8.03	25.4	7.02	10.8	17.3	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	CS(Mf)5	13:07	Surface	1	2	17	8.04	25.3	7.04	10.9	16.4	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	CS(Mf)5	13:07	Middle	2	1	16.9	8.09	26	7	11	15.4	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	CS(Mf)5	13:07	Middle	2	2	16.9	8.07	25.8	6.99	11.2	14.6	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	CS(Mf)5	13:07	Bottom	3	1	17	8.1	26	7.02	11.3	14.8	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	CS(Mf)5	13:07	Bottom	3	2	16.9	8.08	26.2	6.98	11.4	14.2	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	SR4a	13:30	Surface	1	1	16.8	8.01	27.4	6.94	12.1	16.9	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	SR4a	13:30	Surface	1	2	16.9	8.03	27.5	6.92	12.4	18.6	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	SR4a	13:30	Middle	2	1							6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	SR4a	13:30	Middle	2	2							6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	SR4a	13:30	Bottom	3	1	17	8.04	27.6	6.92	13.8	20.7	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	SR4a	13:30	Bottom	3	2	17.1	8.05	27.7	6.9	14	16.8	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	SR4	13:53	Surface	1	1	16.9	8.04	25.4	6.92	13.7	19.2	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	SR4	13:53	Surface	1	2	17	8.05	25.7	6.94	13.9	22.2	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	SR4	13:53	Middle	2	1							6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	SR4	13:53	Middle	2	2							6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	SR4	13:53	Bottom	3	1	17	8.07	26	6.74	17.4	24.4	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	SR4	13:53	Bottom	3	2	17	8.05	26.2	6.76	17.8	26.7	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	IS8	14:08	Surface	1	1	17	8.03	25.4	6.91	12.4	19.8	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	IS8	14:08	Surface	1	2	17.2	8.04	25.6	6.94	12.2	18.3	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	IS8	14:08	Middle	2	1							6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	IS8	14:08	Middle	2	2							6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	IS8	14:08	Bottom	3	1	17	8.01	26.2	6.84	15.9	25.4	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	IS8	14:08	Bottom	3	2	17	8	26.3	6.86	16.3	26.1	6/3/2015

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v	Received Date (SS)
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	IS(Mf)16	14:24	Surface	1	1	17.2	8.02	26	6.93	11.7	15.2	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	IS(Mf)16	14:24	Surface	1	2	17.1	8.03	25.8	6.9	11.9	17.9	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	IS(Mf)16	14:24	Middle	2	1	17.1	8.07	26.1	6.66	12.6	18.9	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	IS(Mf)16	14:24	Middle	2	2	17	8.05	26.2	6.64	12.9	20.6	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	IS(Mf)16	14:24	Bottom	3	1	17	8.09	26.2	6.67	16.9	25.4	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	IS(Mf)16	14:24	Bottom	3	2	17	8.07	26	6.69	16.4	21.3	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	IS(Mf)9	14:41	Surface	1	1	17	8	25.8	7.14	12.6	18.9	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	IS(Mf)9	14:41	Surface	1	2	17.1	7.98	25.9	7.13	12.9	16.8	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	IS(Mf)9	14:41	Middle	2	1							6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	IS(Mf)9	14:41	Middle	2	2							6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	IS(Mf)9	14:41	Bottom	3	1	17.2	8.03	26	6.93	18.4	25.8	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	IS(Mf)9	14:41	Bottom	3	2	17	8.01	26.1	6.96	18	27	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	CS(Mf)3	14:58	Surface	1	1	17	8.04	25.4	6.99	12.6	18.9	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	CS(Mf)3	14:58	Surface	1	2	17.1	8.02	25	6.94	12.9	18.1	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	CS(Mf)3	14:58	Middle	2	1	16.9	8.06	26.1	6.77	14.3	20	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	CS(Mf)3	14:58	Middle	2	2	16.9	8.04	26.2	6.78	14.5	17.4	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	CS(Mf)3	14:58	Bottom	3	1	17	8.05	26	6.67	15.7	22	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Flood	CS(Mf)3	14:58	Bottom	3	2	17.2	8.09	26.2	6.68	15.9	23.9	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	CS(Mf)3	9:00	Surface	1	1	17	8.08	26.8	6.87	13.3	16	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	CS(Mf)3	9:00	Surface	1	2	17.1	8.09	26.9	6.84	13.4	21.4	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	CS(Mf)3	9:00	Middle	2	1	17.1	8.09	27	6.64	15.2	21.3	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	CS(Mf)3	9:00	Middle	2	2	17.1	8.09	27.1	6.68	15.2	22.8	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	CS(Mf)3	9:00	Bottom	3	1	17.2	8.09	27.1	6.59	16.7	20	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	CS(Mf)3	9:00	Bottom	3	2	17.1	8.1	27.1	6.55	16.8	21.8	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	SR4a	10:25	Surface	1	1	17	8.12	26.9	6.88	13.8	17.9	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	SR4a	10:25	Surface	1	2	17	8.13	26.8	6.85	13.9	22.2	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	SR4a	10:25	Middle	2	1							6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	SR4a	10:25	Middle	2	2							6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	SR4a	10:25	Bottom	3	1	17.2	8.13	27.1	6.77	15.9	23.9	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	SR4a	10:25	Bottom	3	2	17.1	8.13	27.1	6.74	16	19.2	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	SR4	10:10	Surface	1	1	17	8.11	26.8	6.78	14.2	21.3	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	SR4	10:10	Surface	1	2	16.9	8.1	26.9	6.74	14.1	21.2	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	SR4	10:10	Middle	2	1							6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	SR4	10:10	Middle	2	2							6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	SR4	10:10	Bottom	3	1	17	8.11	27	6.53	18.7	28.1	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	SR4	10:10	Bottom	3	2	17.1	8.12	27.1	6.5	18.6	22.9	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	IS8	9:53	Surface	1	1	17	8.12	26.9	6.8	13	18.2	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	IS8	9:53	Surface	1	2	17	8.13	26.9	6.78	13.1	17	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	IS8	9:53	Middle	2	1							6/3/2015

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v	Received Date (SS)
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	IS8	9:53	Middle	2	2							6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	IS8	9:53	Bottom	3	1	17.1	8.13	27.1	6.64	16.8	25.2	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	IS8	9:53	Bottom	3	2	17.1	8.12	27.2	6.67	16.9	22	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	IS(Mf)16	9:37	Surface	1	1	17	8.11	26.9	6.71	12.6	16.4	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	IS(Mf)16	9:37	Surface	1	2	17.1	8.12	26.8	6.68	12.5	20	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	IS(Mf)16	9:37	Middle	2	1	17.1	8.12	27.1	6.47	14.4	20.2	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	IS(Mf)16	9:37	Middle	2	2	17.2	8.12	27.1	6.44	14.5	20.3	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	IS(Mf)16	9:37	Bottom	3	1	17.2	8.12	27.1	6.4	17.2	25.8	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	IS(Mf)16	9:37	Bottom	3	2	17.2	8.11	27.2	6.44	17.2	25.8	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	IS(Mf)9	9:20	Surface	1	1	17	8.1	26.9	6.92	13.4	21.4	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	IS(Mf)9	9:20	Surface	1	2	17	8.1	26.9	6.95	13.5	18.9	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	IS(Mf)9	9:20	Middle	2	1							6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	IS(Mf)9	9:20	Middle	2	2							6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	IS(Mf)9	9:20	Bottom	3	1	17.1	8.11	26.9	6.7	19.7	27.6	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	IS(Mf)9	9:20	Bottom	3	2	17.2	8.1	27	6.74	19.9	29.9	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	CS(Mf)5	10:45	Surface	1	1	17	8.13	26.9	6.93	12.2	15.9	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	CS(Mf)5	10:45	Surface	1	2	17.1	8.14	27	6.97	12.1	19.4	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	CS(Mf)5	10:45	Middle	2	1	17.1	8.14	27	6.72	13.6	20.4	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	CS(Mf)5	10:45	Middle	2	2	17.1	8.13	27.1	6.76	13.5	16.2	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	CS(Mf)5	10:45	Bottom	3	1	17.2	8.14	27.1	6.65	14.8	19.2	6/3/2015
TMCLKL	HY/2012/07	28/2/2015	Mid-Ebb	CS(Mf)5	10:45	Bottom	3	2	17.2	8.14	27.2	6.68	14.7	23.5	6/3/2015



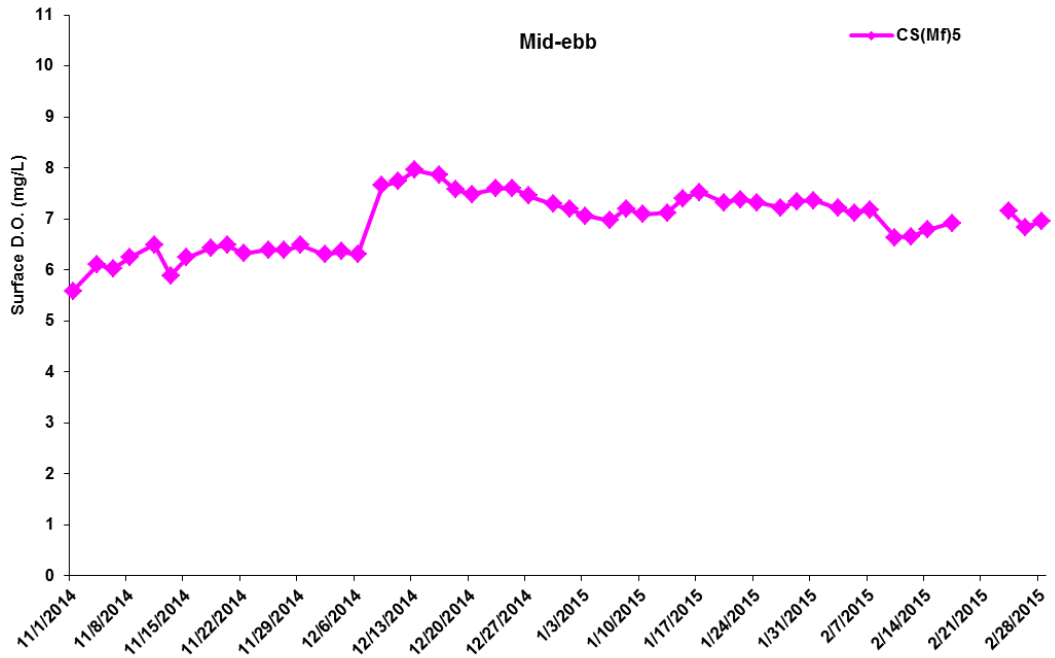
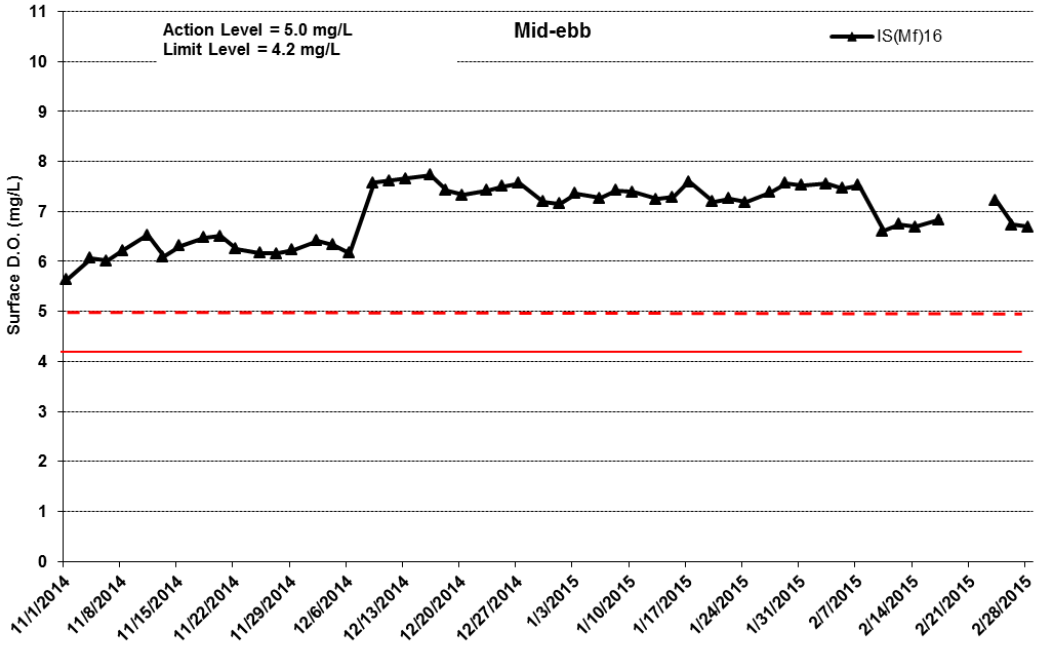


Figure J1 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-ebb tide between 1 November 2014 and 28 February 2015 at CS(Mf)3 and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include marine piling platform installation and marine piling.) No marine works was undertaken on 19 and 21 February 2015.

Environmental Resources Management

ERM



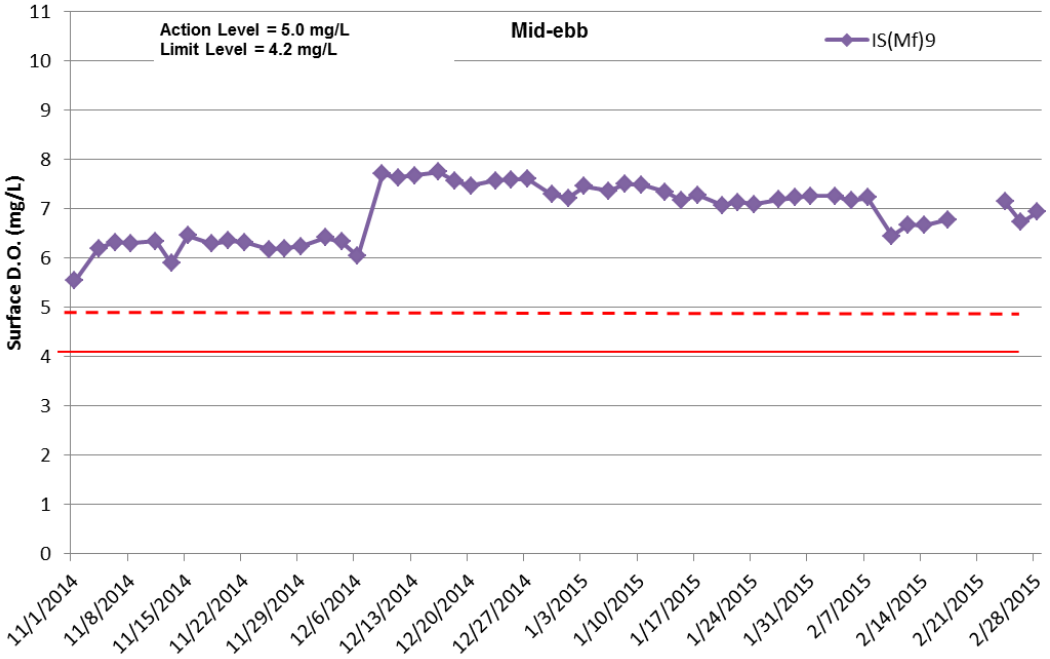
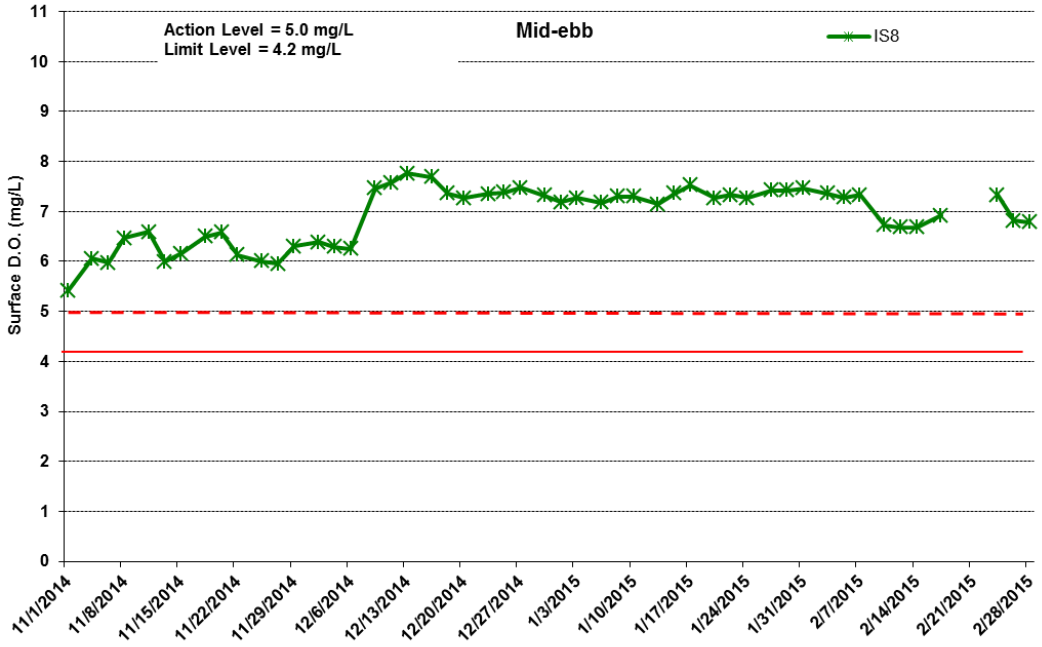


Figure J2 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-ebb tide between 1 November 2014 and 28 February 2015 at IS(Mf)16 and IS(Mf)9.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include marine piling platform installation and marine piling.) No marine works was undertaken on 19 and 21 February 2015.

Environmental Resources Management

ERM



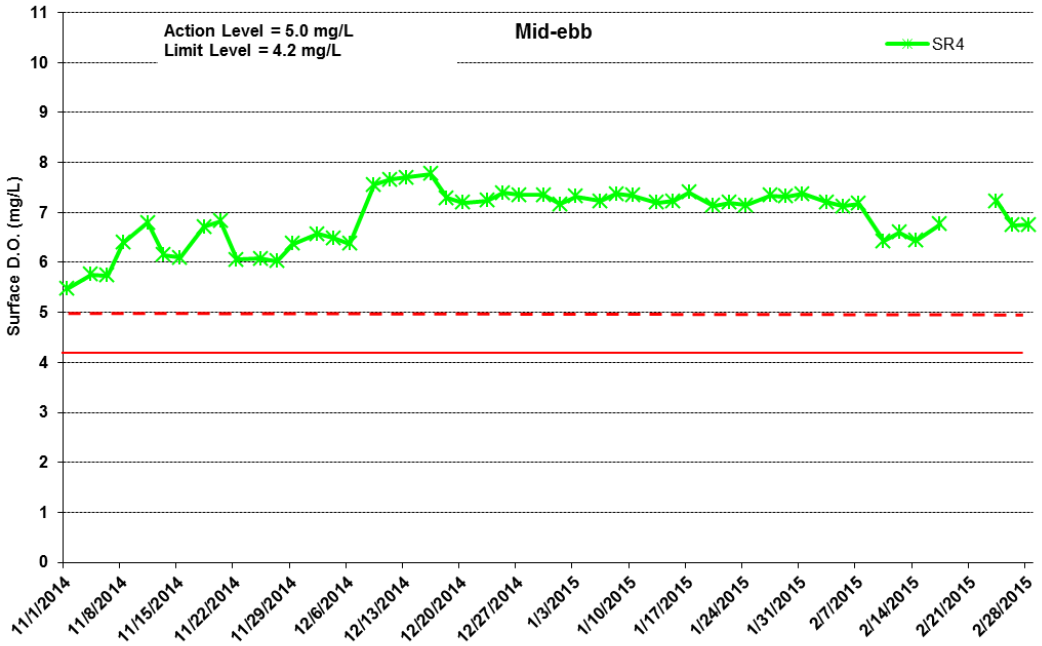


Figure J3 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-ebb tide between 1 November 2014 and 28 February 2015 at IS8 and SR4.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include marine piling platform installation and marine piling.) No marine works was undertaken on 19 and 21 February 2015.

Environmental Resources Management

ERM

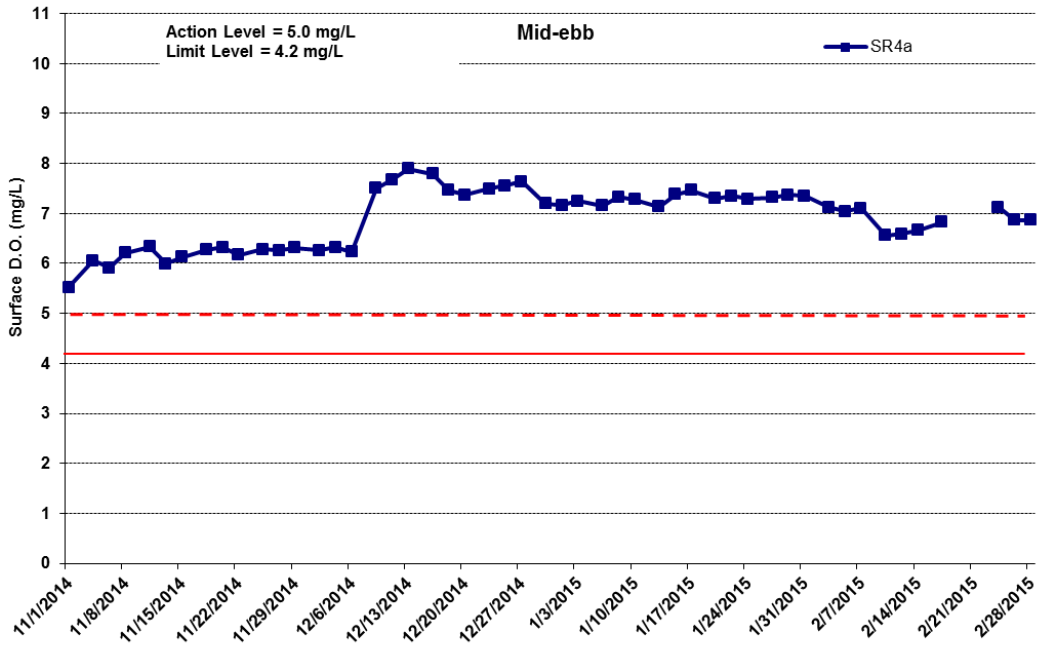


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Figure J4 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-ebb tide between 1 November 2014 and 28 February 2015 at SR4a.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include marine piling platform installation and marine piling.) No marine works was undertaken on 19 and 21 February 2015.

Environmental Resources Management

ERM

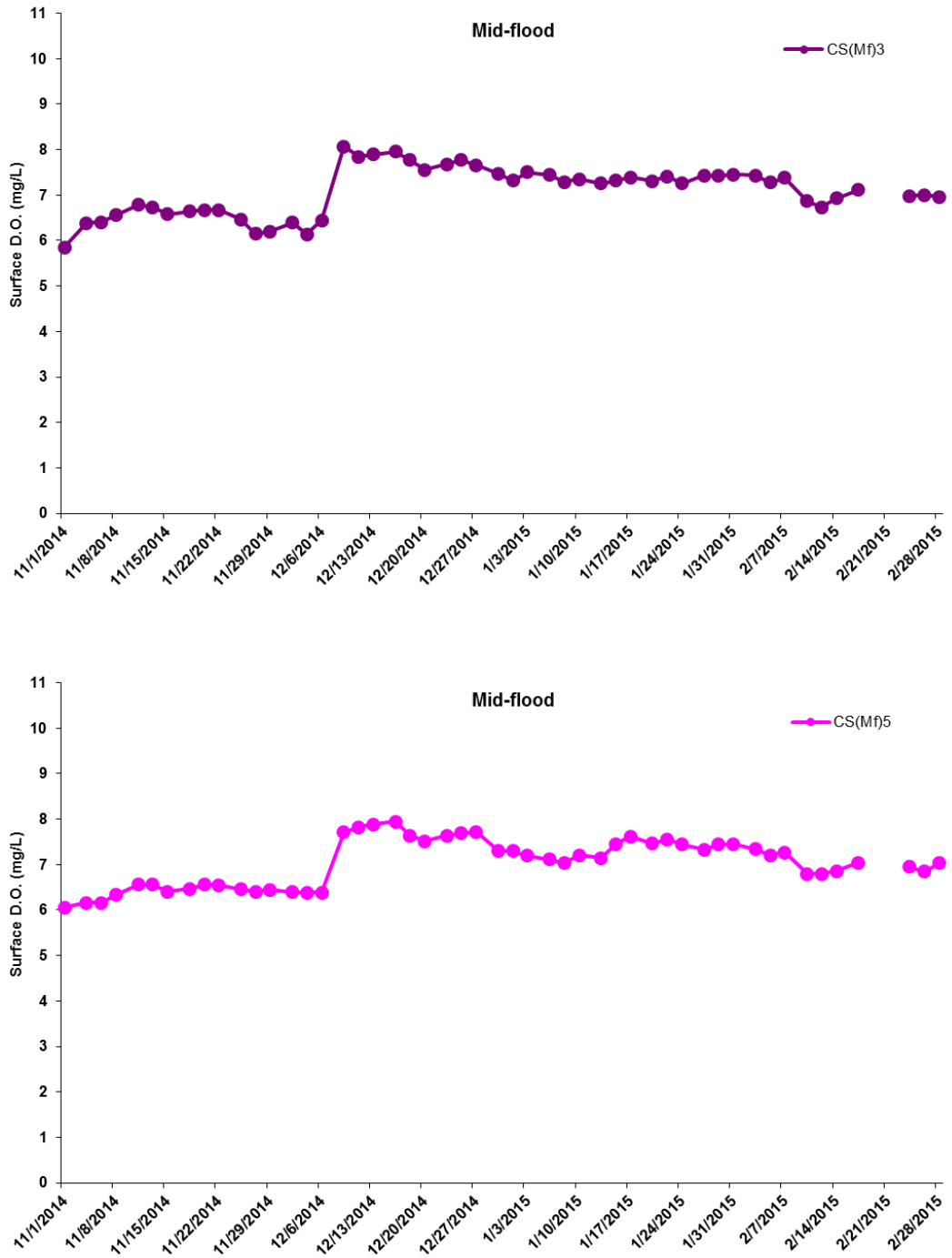
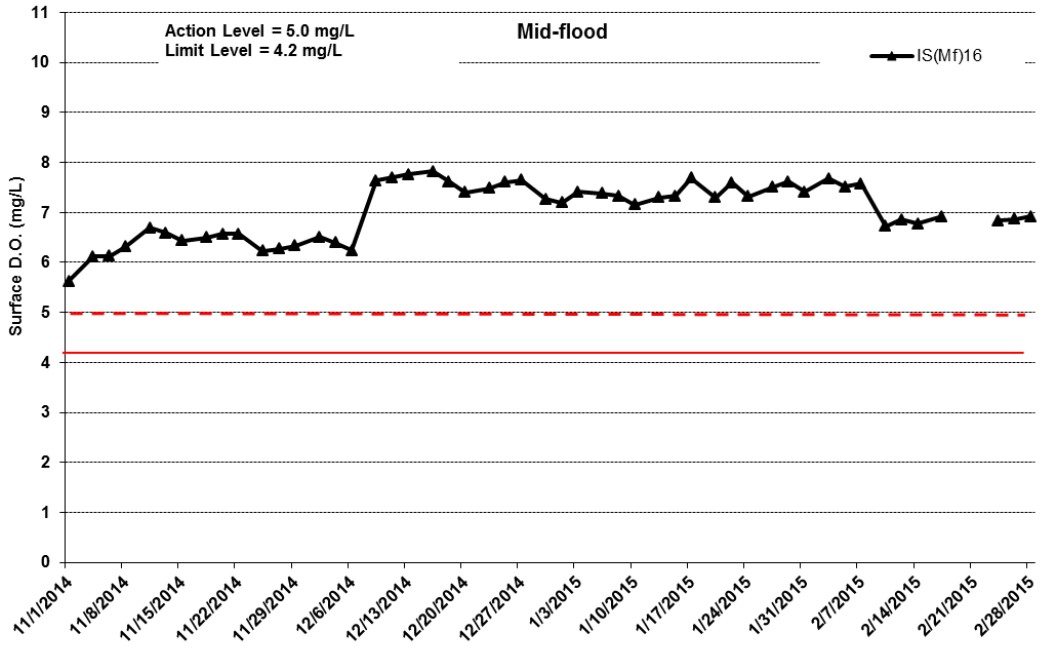


Figure J5 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-flood tide between 1 November 2014 and 28 February 2015 at CS(Mf)3 and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include marine piling platform installation and marine piling.) No marine works was undertaken on 19 and 21 February 2015.

Environmental Resources Management

ERM



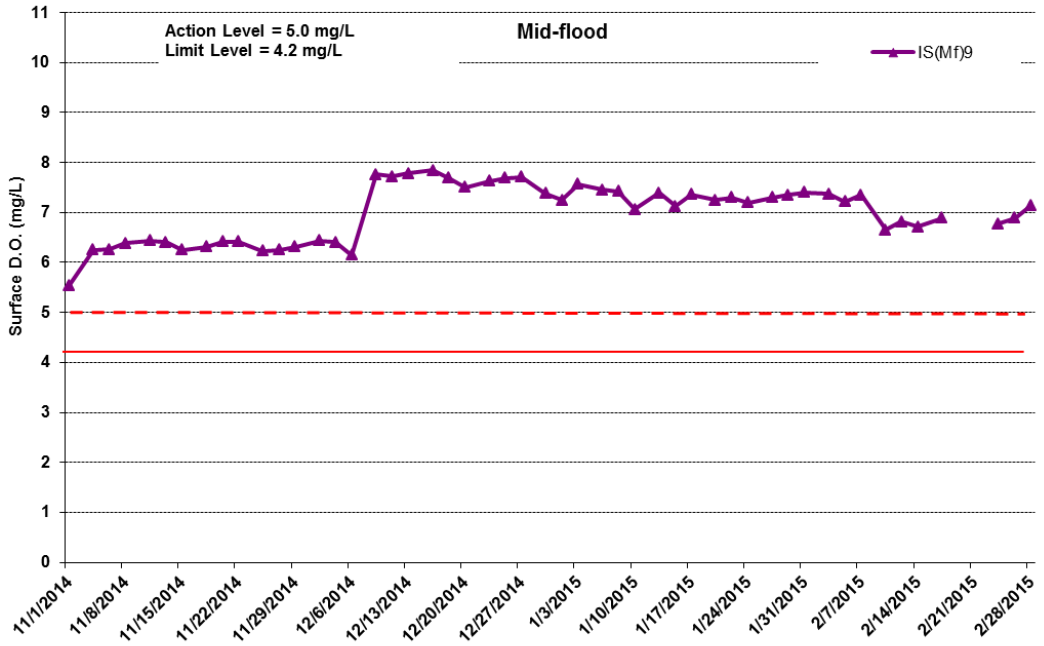
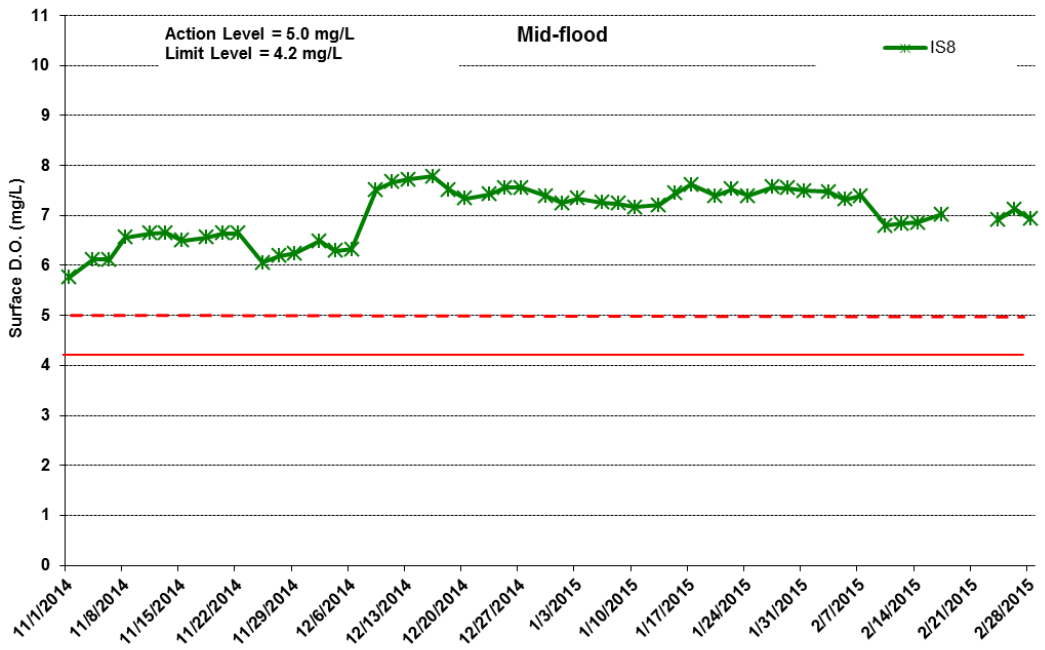


Figure J6 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-flood tide between 1 November 2014 and 28 February 2015 at IS(Mf)16 and IS(Mf)9.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include marine piling platform installation and marine piling.) No marine works was undertaken on 19 and 21 February 2015.

Environmental Resources Management

ERM



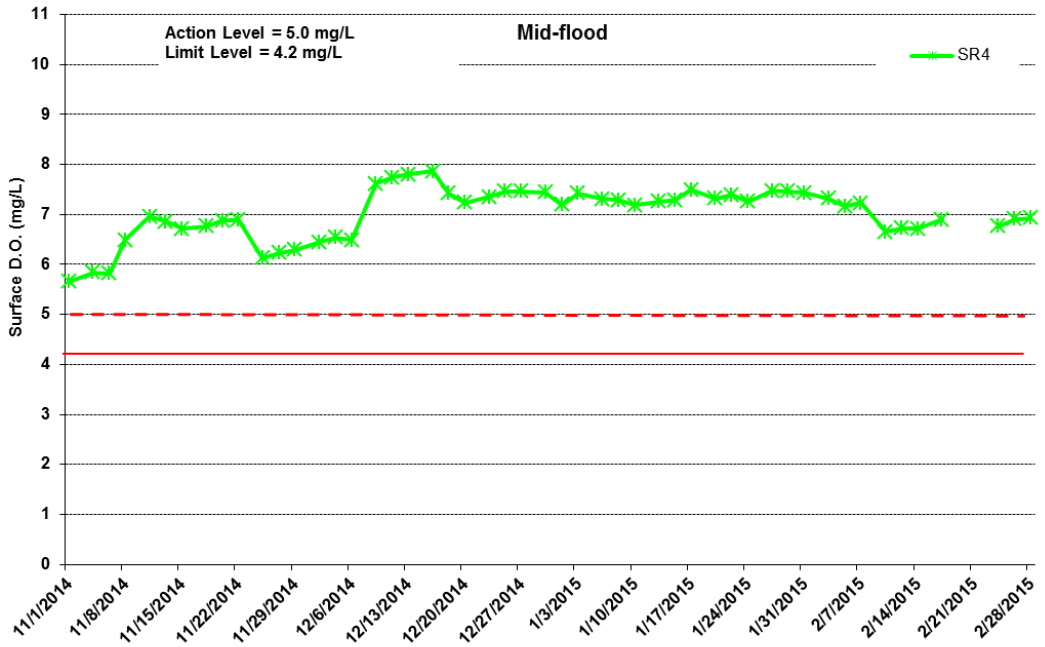


Figure J7 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-flood tide between 1 November 2014 and 28 February 2015 at IS8 and SR4.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include marine piling platform installation and marine piling.) No marine works was undertaken on 19 and 21 February 2015.

Environmental Resources Management

ERM

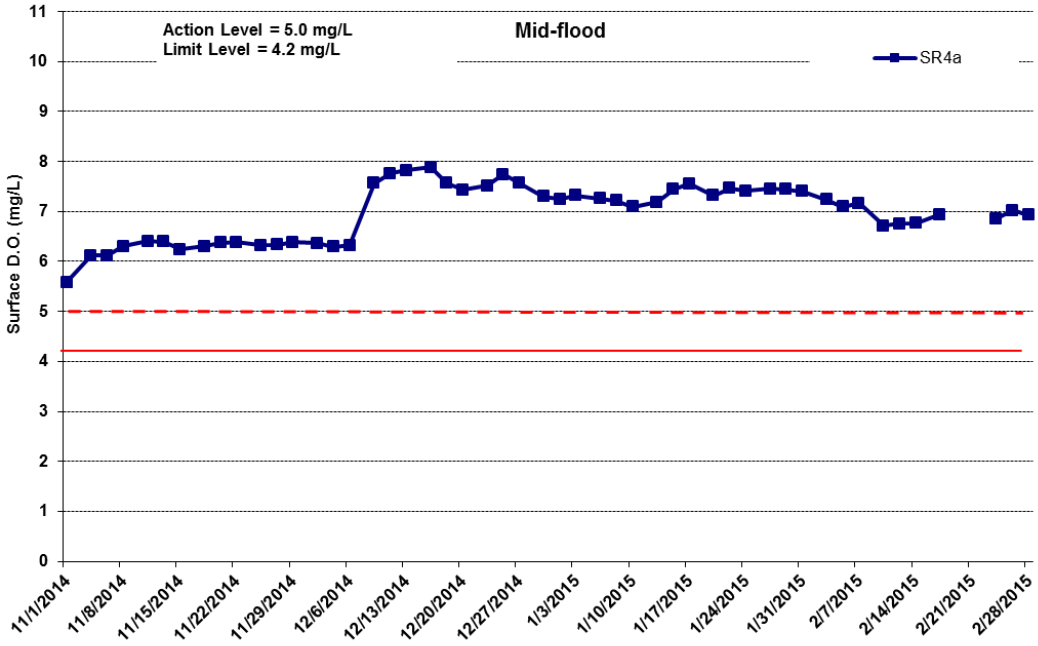
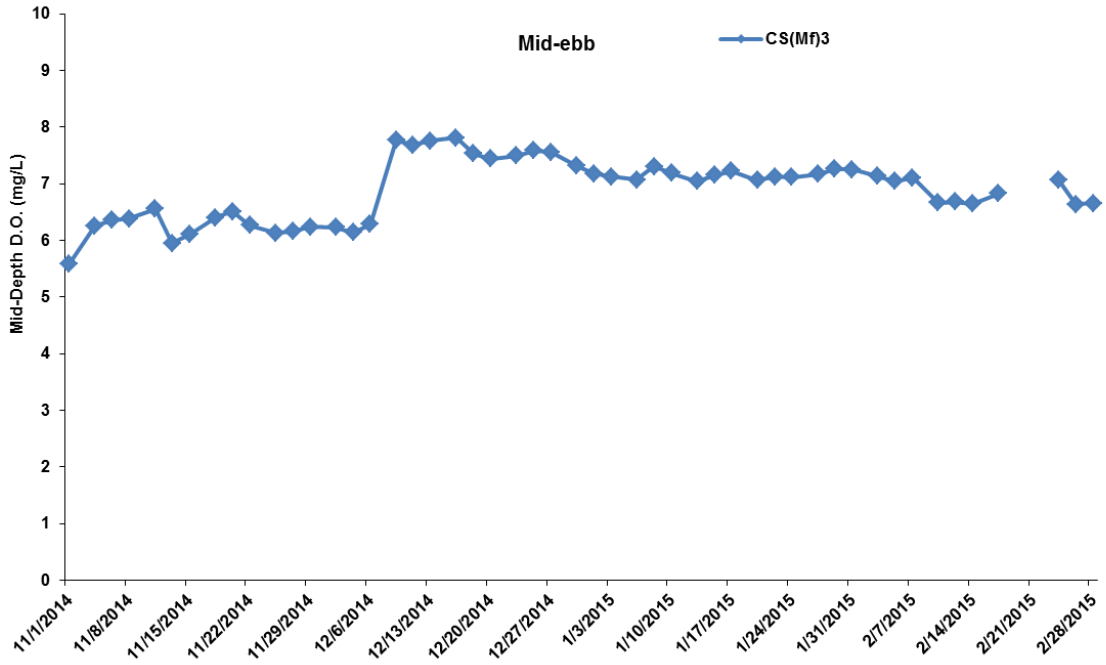


Figure J8 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-flood tide between 1 November 2014 and 28 February 2015 at SR4a.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include marine piling platform installation and marine piling.) No marine works was undertaken on 19 and 21 February 2015.

Environmental Resources Management

ERM



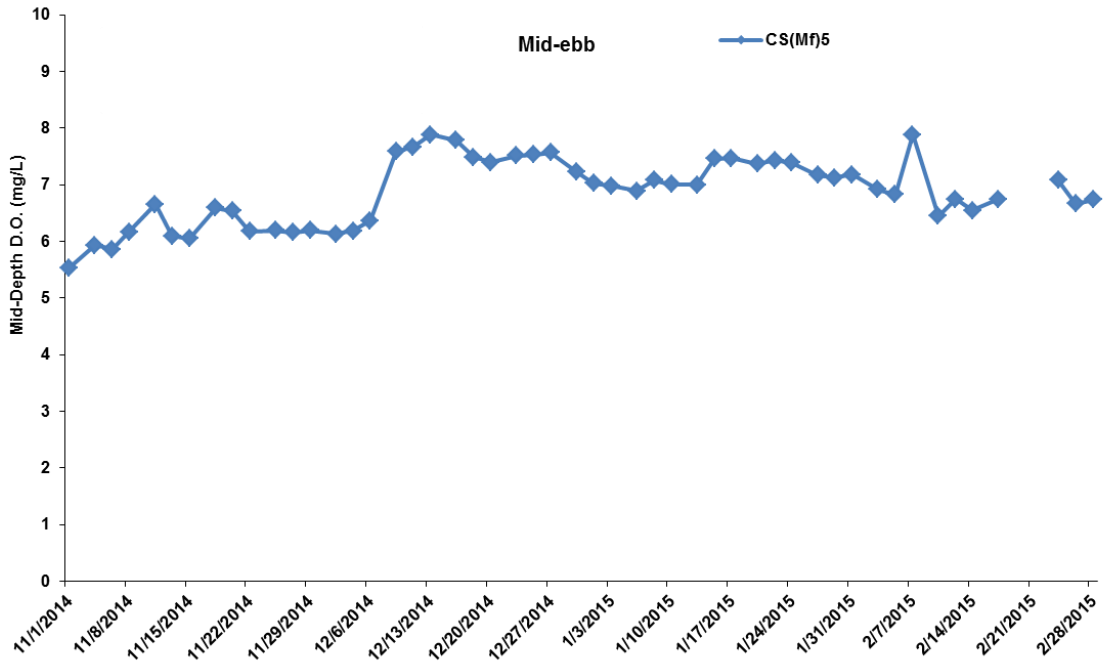


Figure J9 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters during mid-ebb tide between 1 November 2014 and 28 February 2015 at CS(Mf)3 and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include marine piling platform installation and marine piling.) No marine works was undertaken on 19 and 21 February 2015.

Environmental Resources Management

ERM

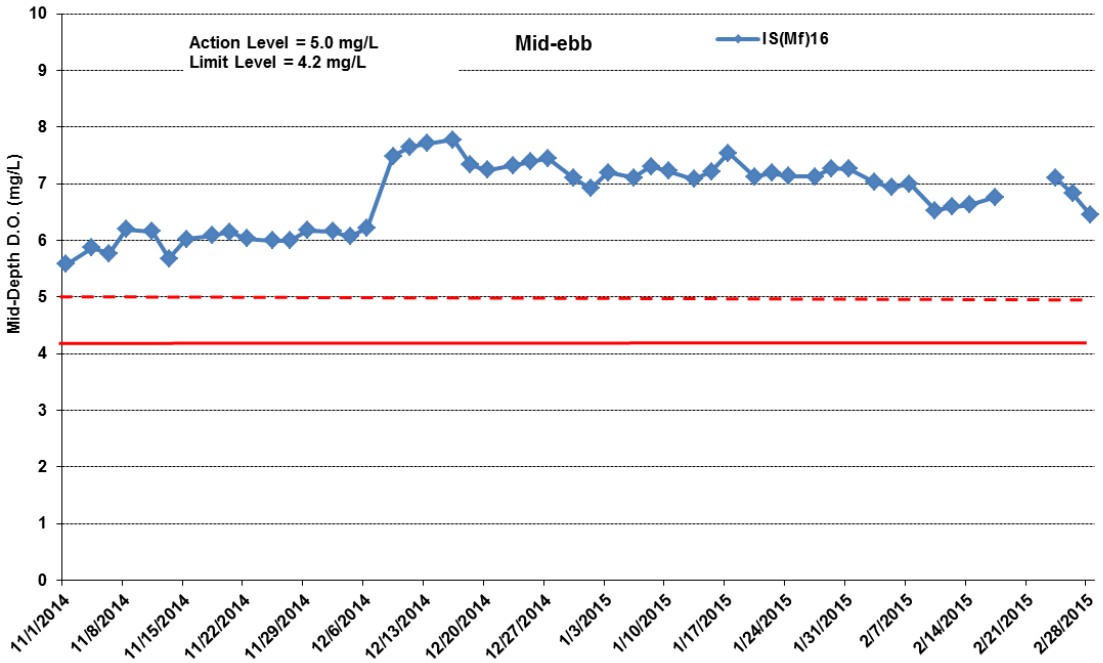
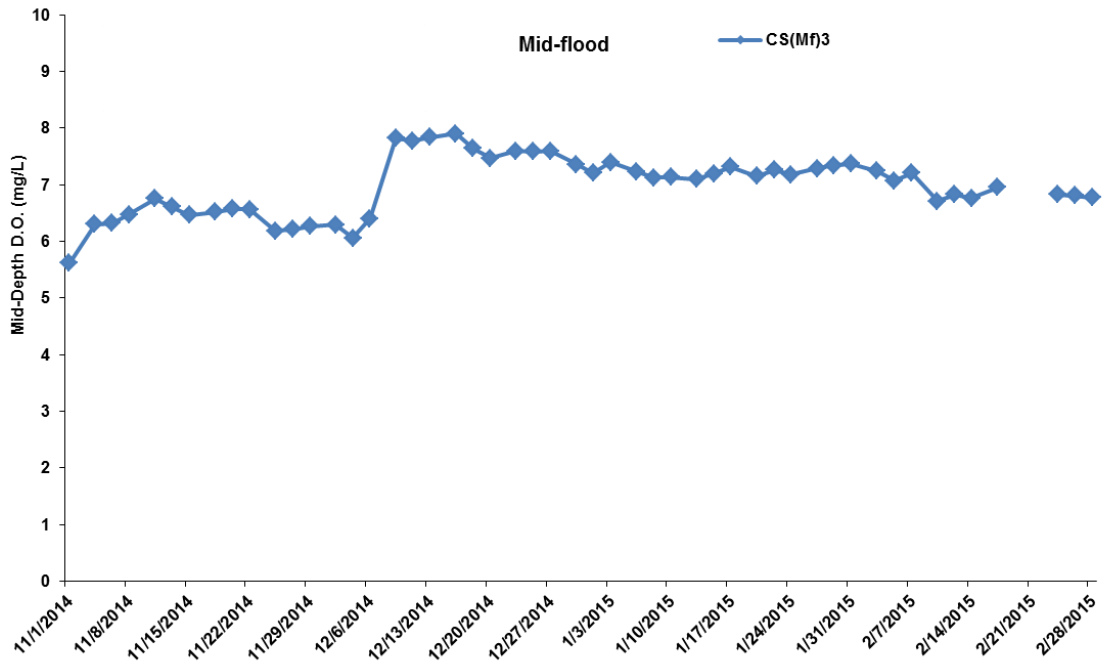


Figure J10 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters during mid-ebb tide between 1 November 2014 and 28 February 2015 at IS(Mf)16.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include marine piling platform installation and marine piling.) No marine works was undertaken on 19 and 21 February 2015.

Environmental Resources Management

ERM



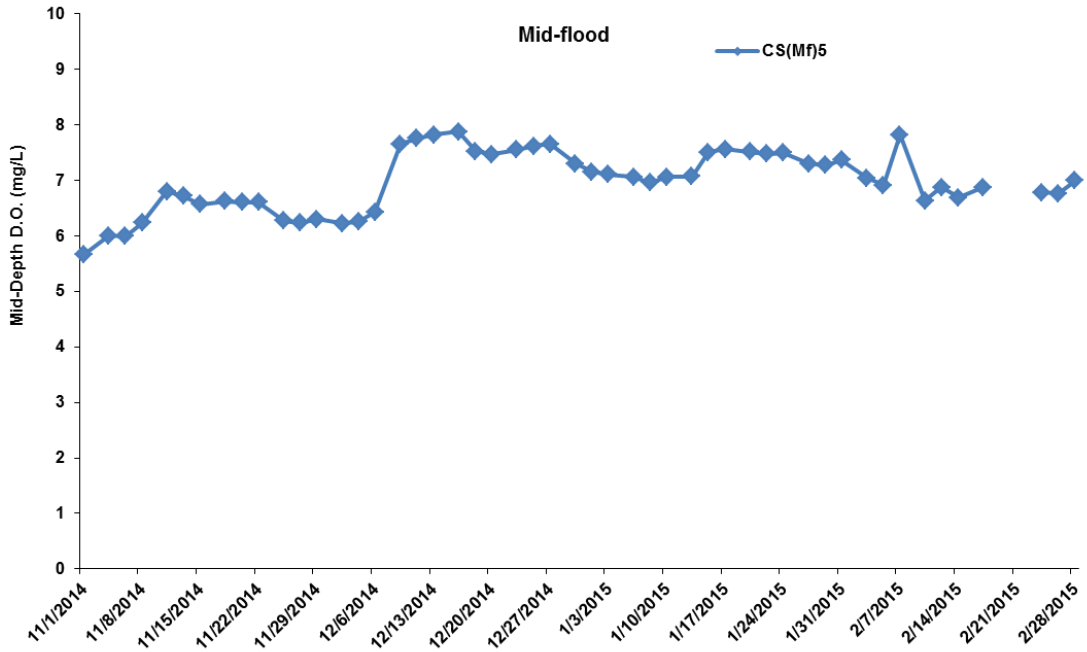


Figure J11 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters during mid-flood tide between 1 November 2014 and 28 February 2015 at CS(Mf)3 and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include marine piling platform installation and marine piling.) No marine works was undertaken on 19 and 21 February 2015.

Environmental Resources Management

ERM

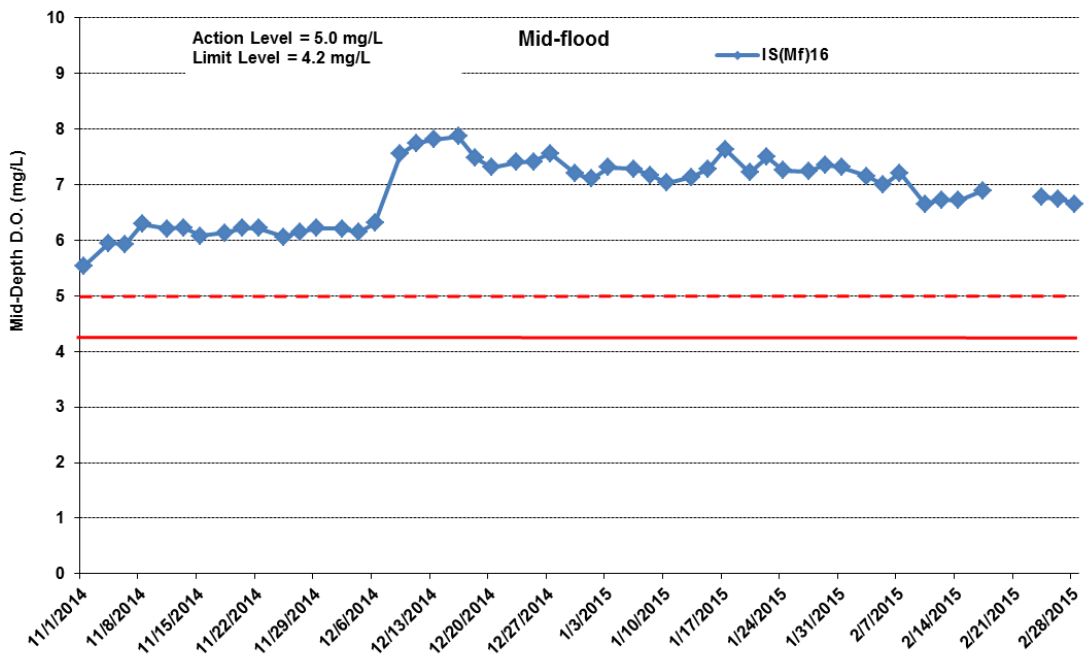
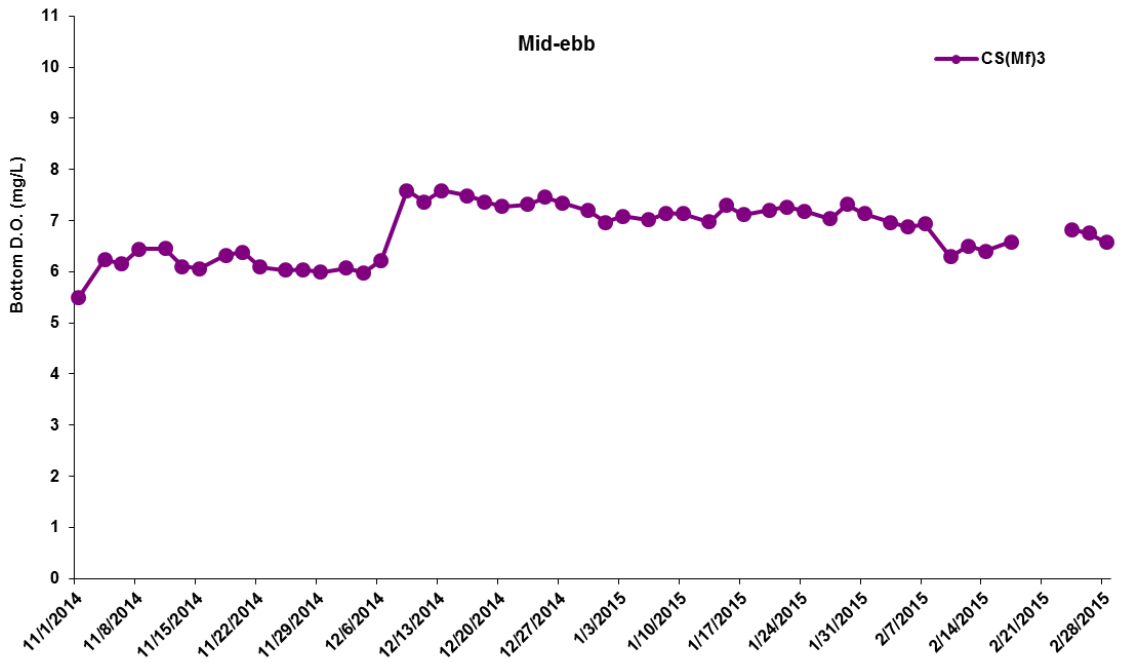


Figure J12 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters during mid-flood tide between 1 November 2014 and 28 February 2015 at IS(Mf)16.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include marine piling platform installation and marine piling.) No marine works was undertaken on 19 and 21 February 2015.

Environmental Resources Management

ERM



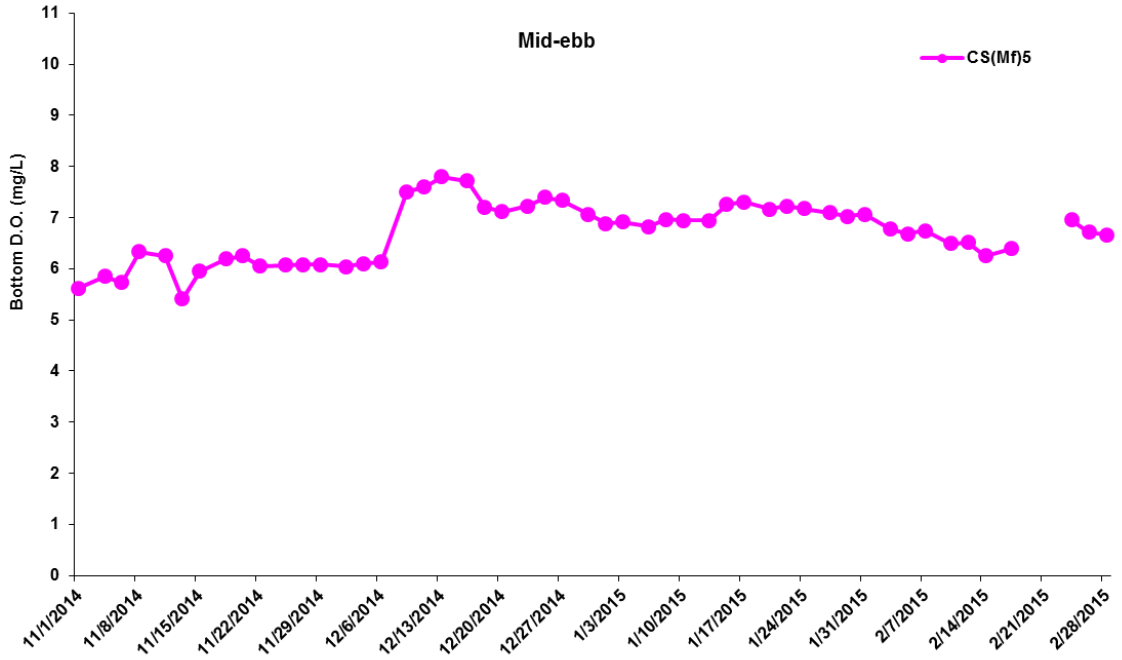
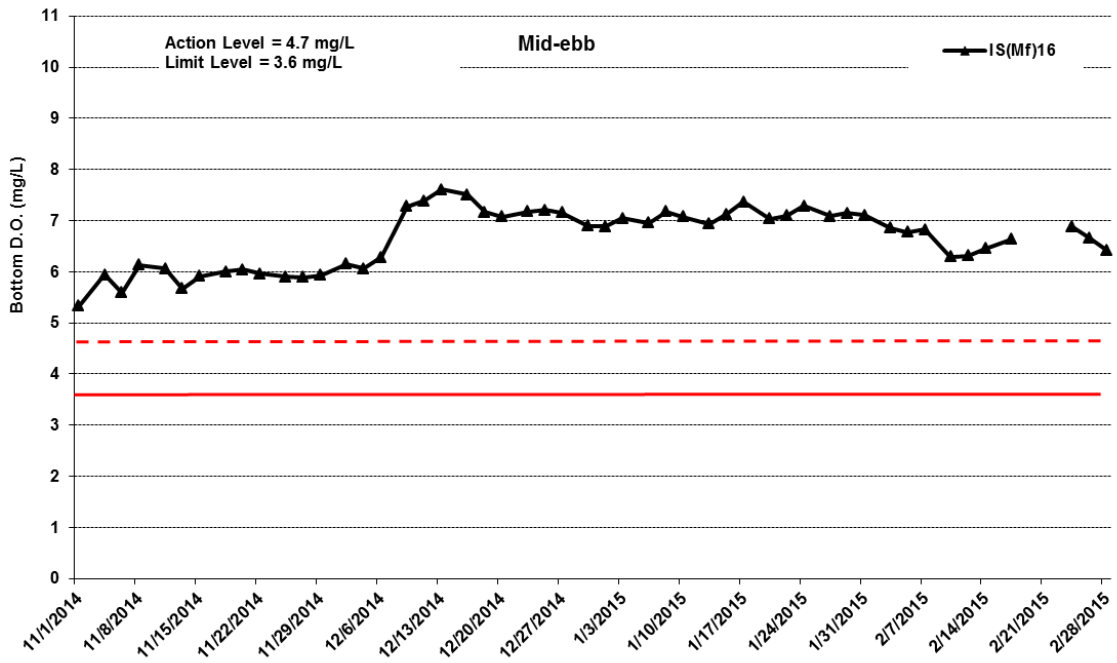


Figure J13 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-ebb tide between 1 November 2014 and 28 February 2015 at CS(Mf)3 and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include marine piling platform installation and marine piling.) No marine works was undertaken on 19 and 21 February 2015.

Environmental Resources Management

ERM



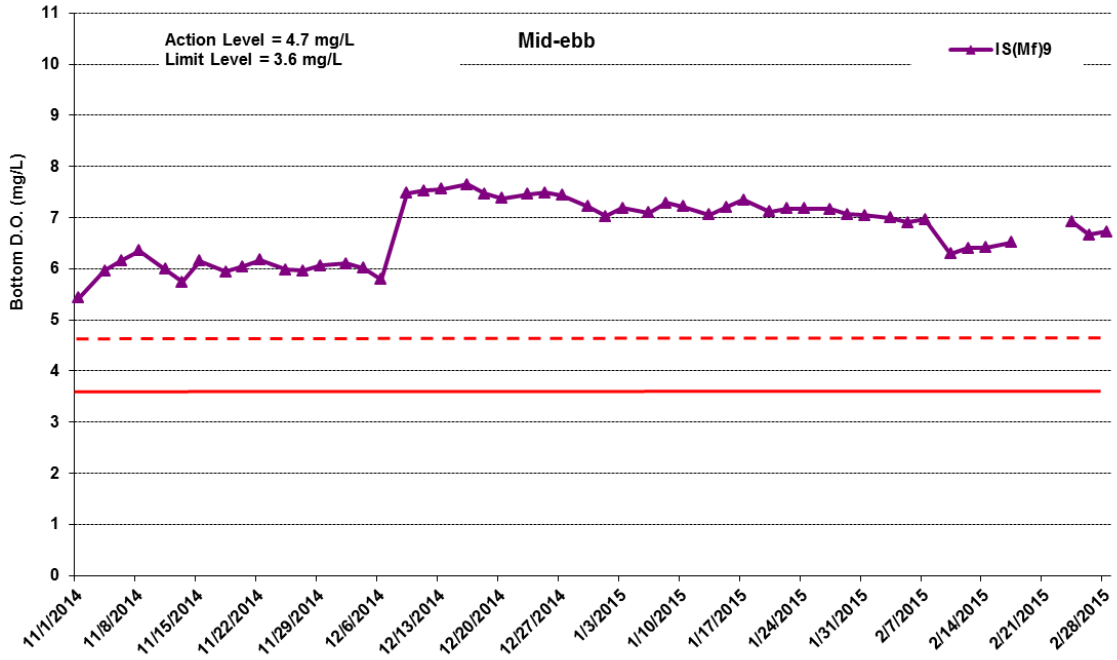
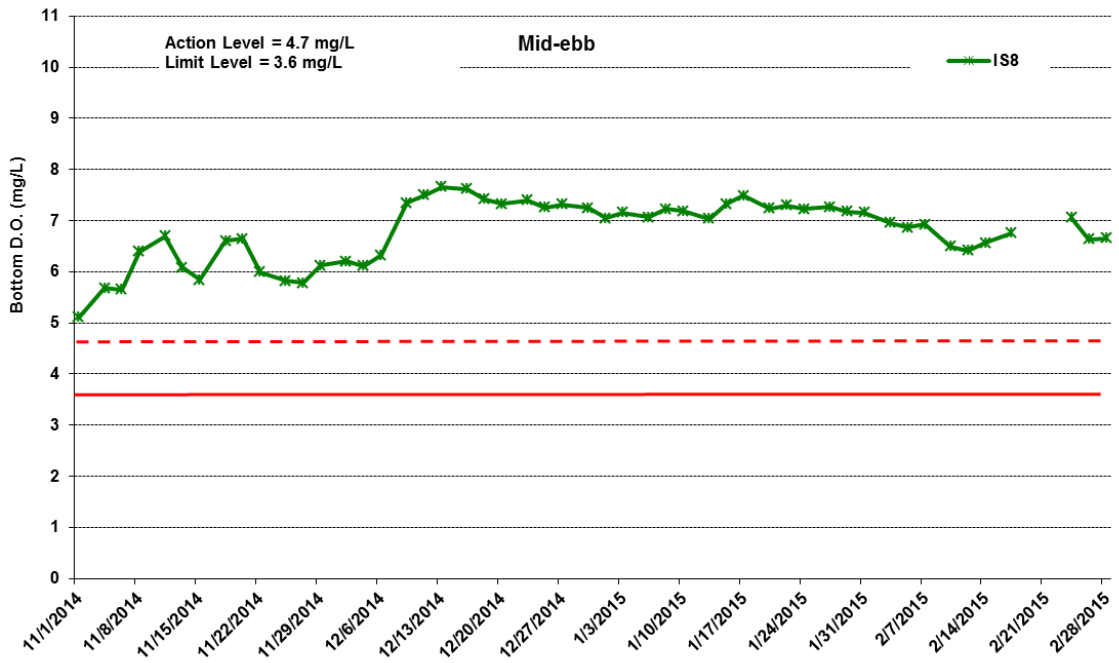


Figure J14 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-ebb tide between 1 November 2014 and 28 February 2015 at IS(Mf)16 and IS(Mf)9.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include marine piling platform installation and marine piling.) No marine works was undertaken on 19 and 21 February 2015.

Environmental Resources Management

ERM



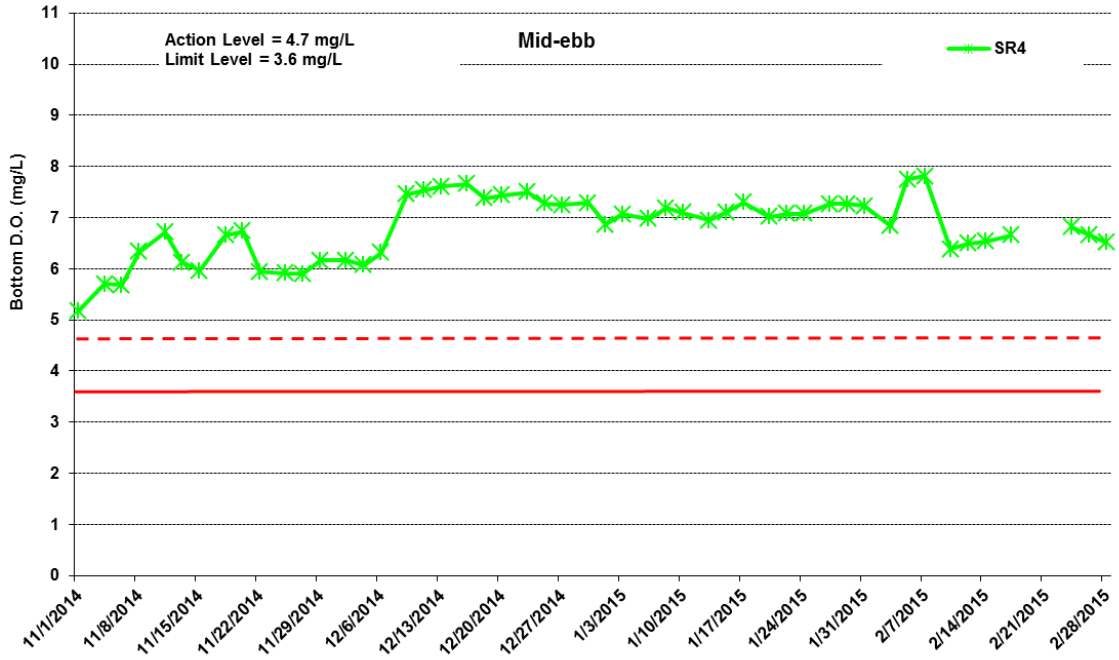


Figure J15 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-ebb tide between 1 November 2014 and 28 February 2015 at IS8 and SR4.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include marine piling platform installation and marine piling.) No marine works was undertaken on 19 and 21 February 2015.

Environmental Resources Management

ERM

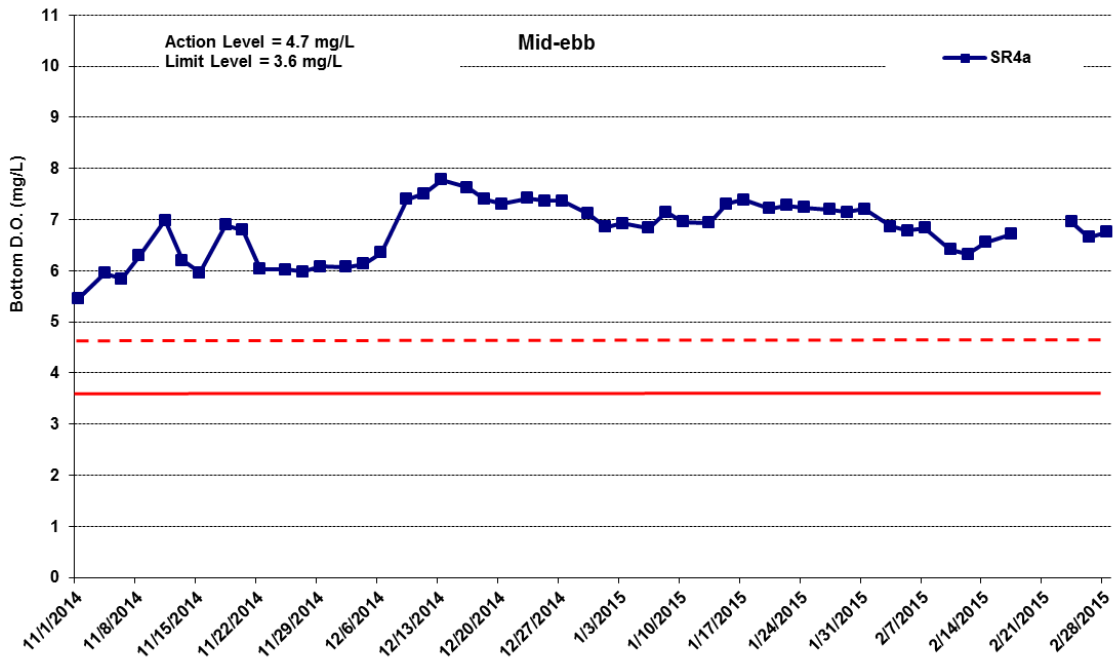


Figure J16 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-ebb tide between 1 November 2014 and 28 February 2015 at SR4a.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include marine piling platform installation and marine piling.) No marine works was undertaken on 19 and 21 February 2015.

Environmental Resources Management

ERM

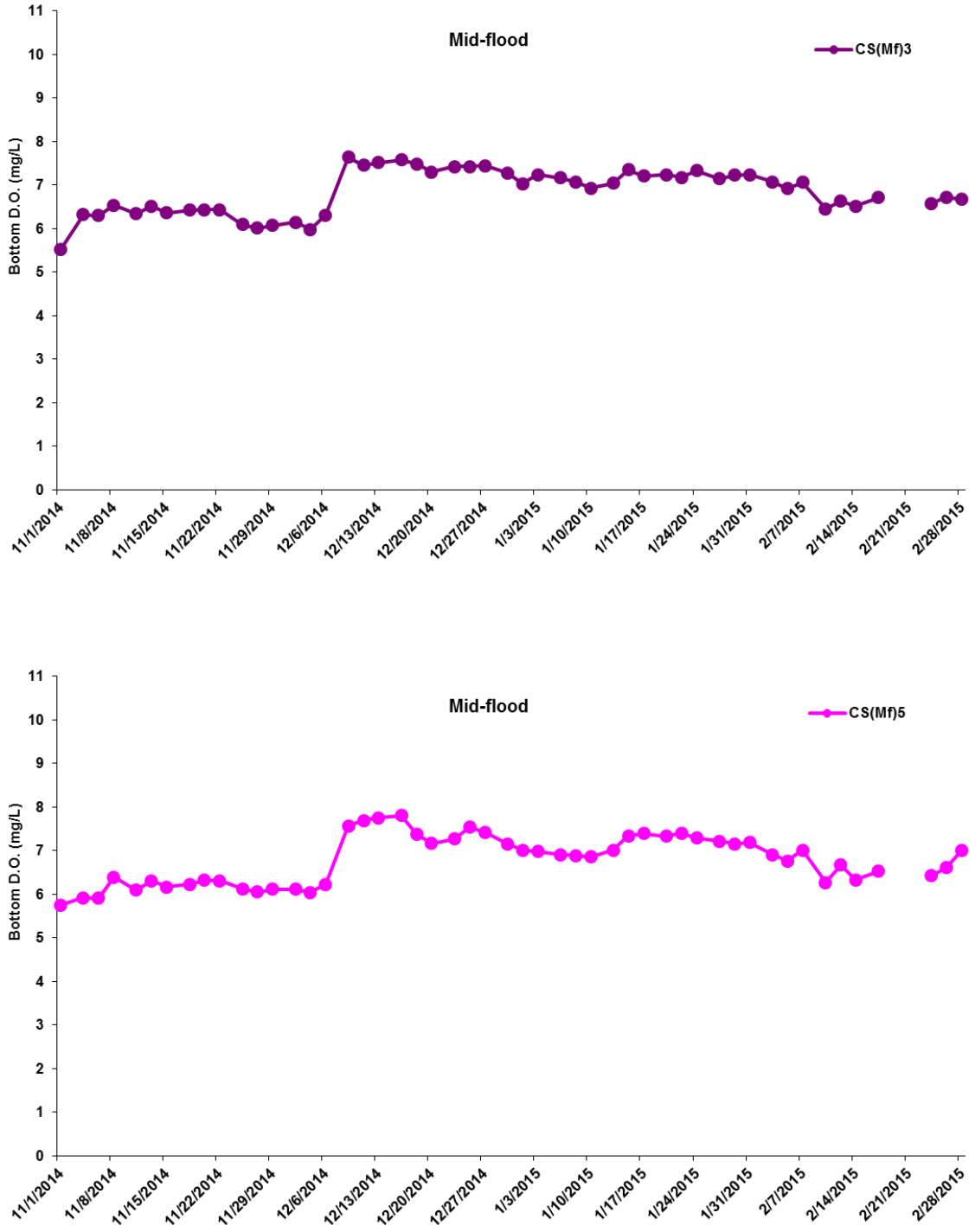
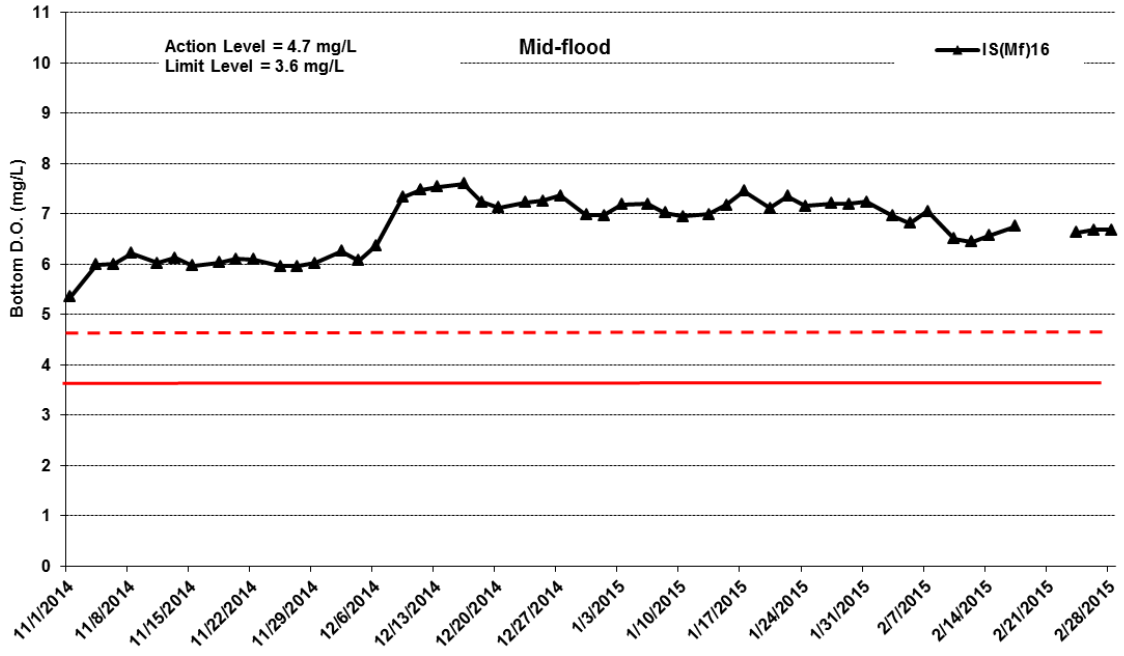


Figure J17 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-flood tide between 1 November 2014 and 28 February 2015 at CS(Mf)3 and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include marine piling platform installation and marine piling.) No marine works was undertaken on 19 and 21 February 2015.

Environmental Resources Management

ERM



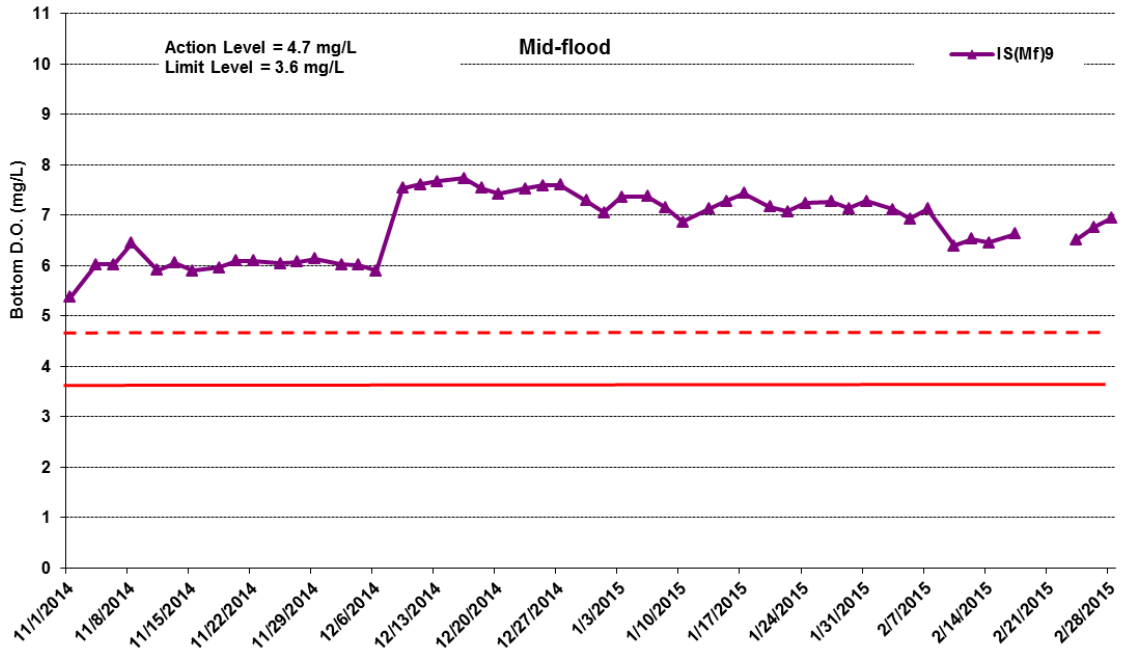


Figure J18 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-flood tide between 1 November 2014 and 28 February 2015 at IS(Mf)16 and IS(Mf)9.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include marine piling platform installation and marine piling.) No marine works was undertaken on 19 and 21 February 2015.

Environmental Resources Management

ERM

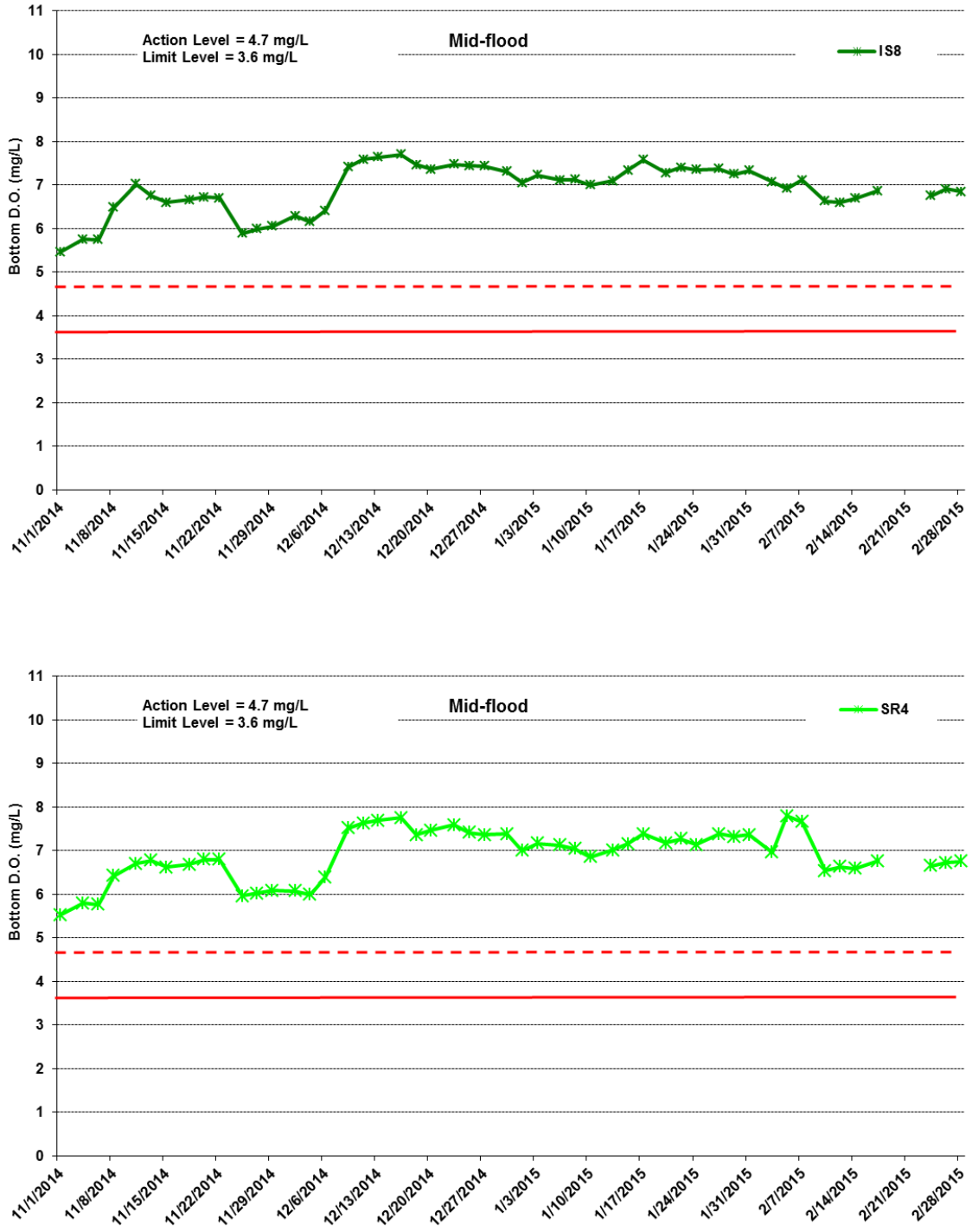


Figure J19 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-flood tide between 1 November 2014 and 28 February 2015 at IS8 and SR4.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include marine piling platform installation and marine piling.) No marine works was undertaken on 19 and 21 February 2015.

Environmental Resources Management

ERM

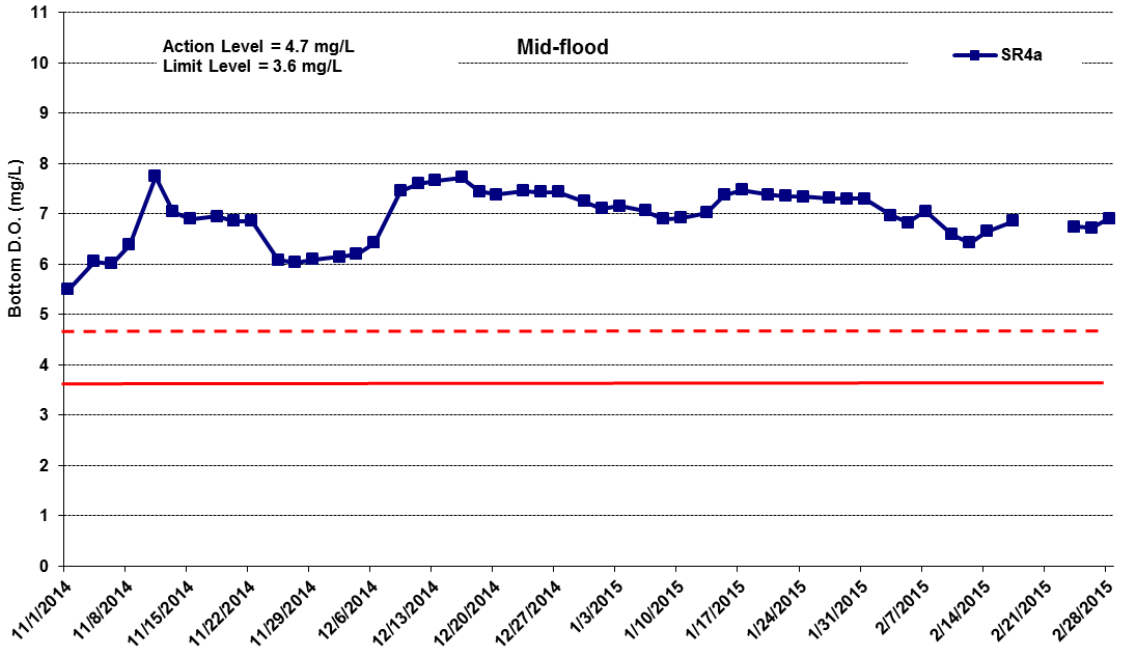
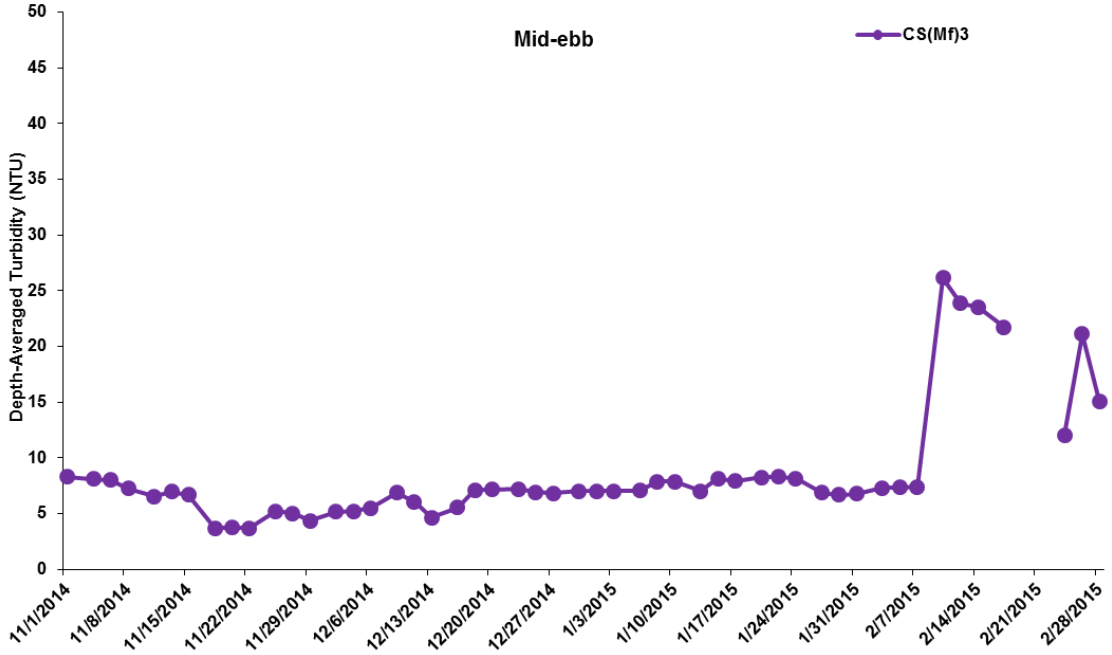


Figure J20 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-flood tide between 1 November 2014 and 28 February 2015 at SR4a.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include marine piling platform installation and marine piling.) No marine works was undertaken on 19 and 21 February 2015.

Environmental Resources Management

ERM



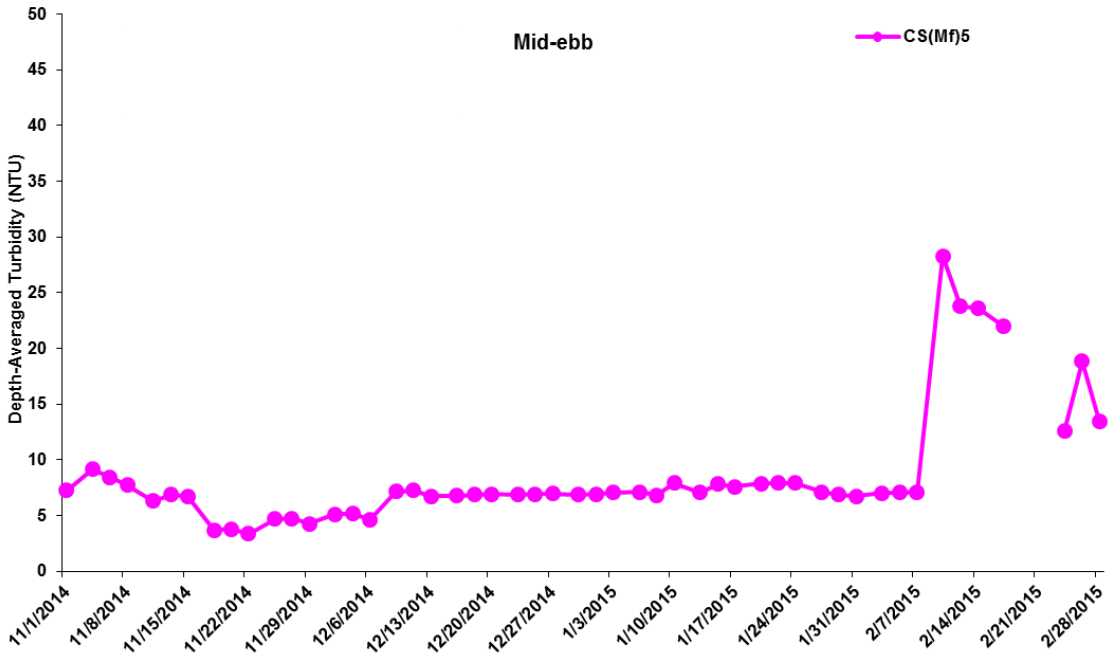
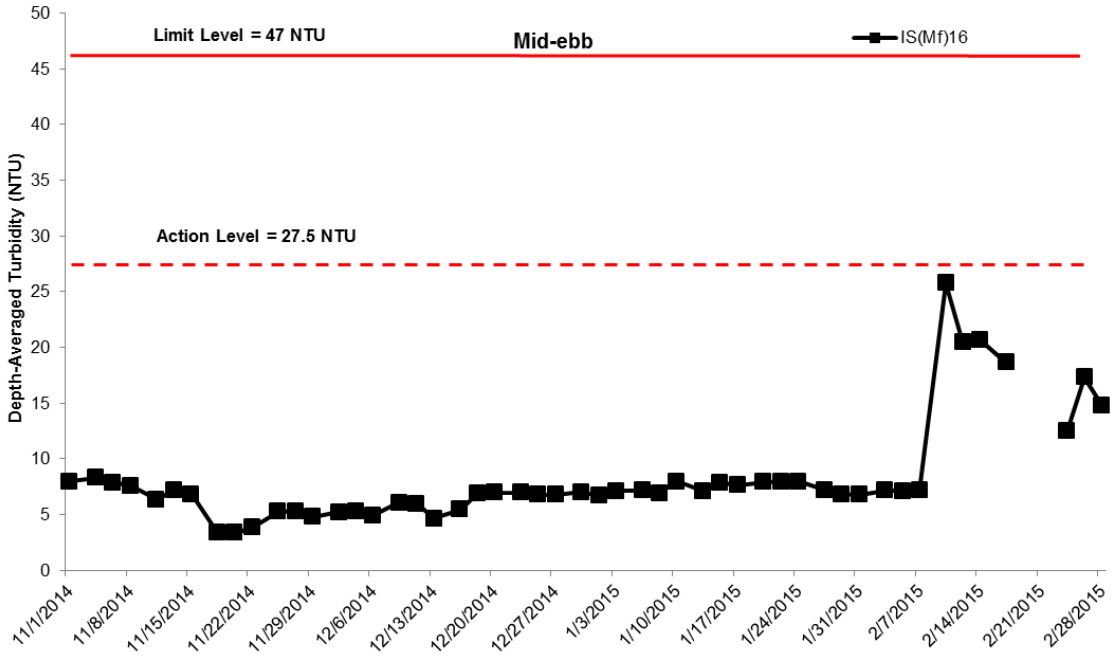


Figure J21 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-ebb tide between 1 November 2014 and 28 February 2015 at CS(Mf)3 and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include marine piling platform installation and marine piling.) No marine works was undertaken on 19 and 21 February 2015.

Environmental Resources Management

ERM



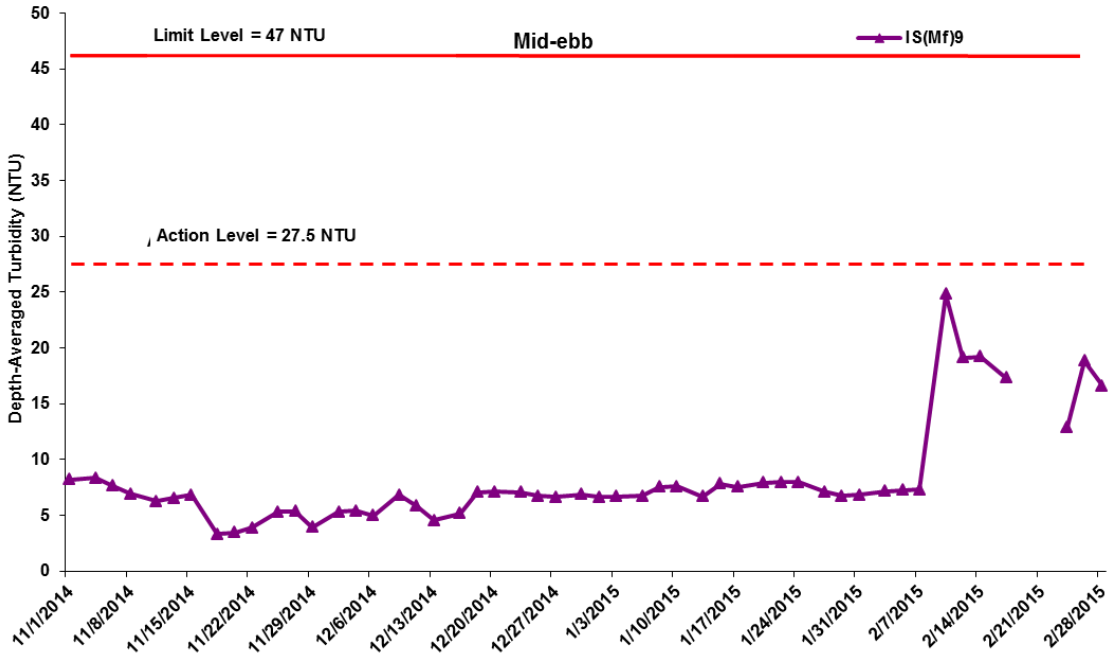
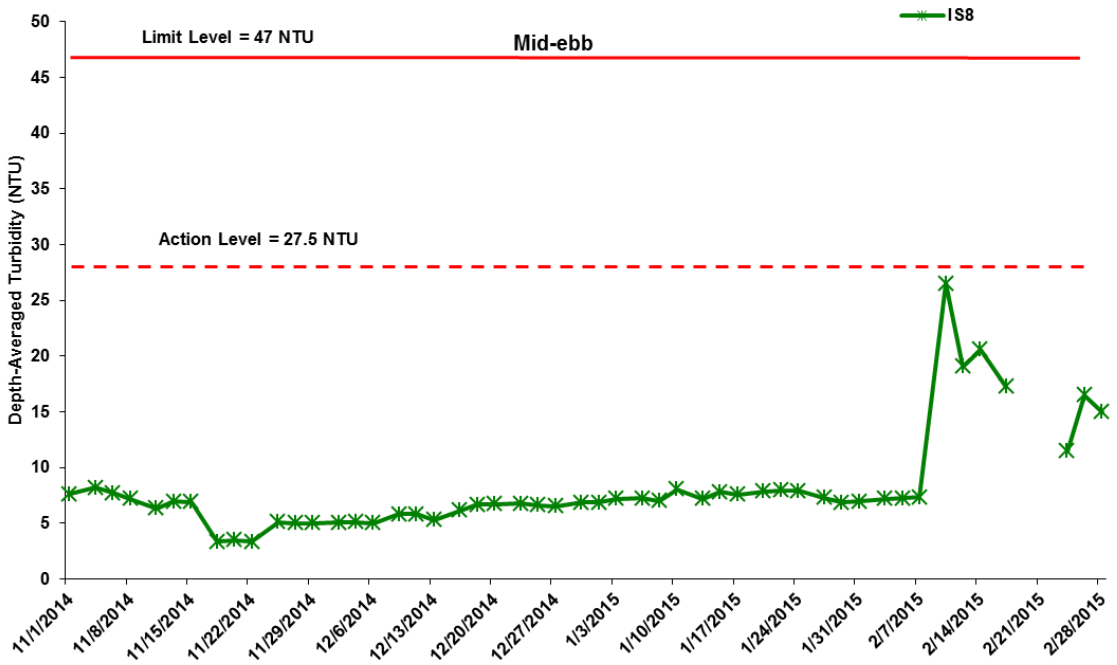


Figure J22 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-ebb tide between 1 November 2014 and 28 February 2015 at IS(Mf)16 and IS(Mf)9.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include marine piling platform installation and marine piling.) No marine works was undertaken on 19 and 21 February 2015.

Environmental Resources Management

ERM



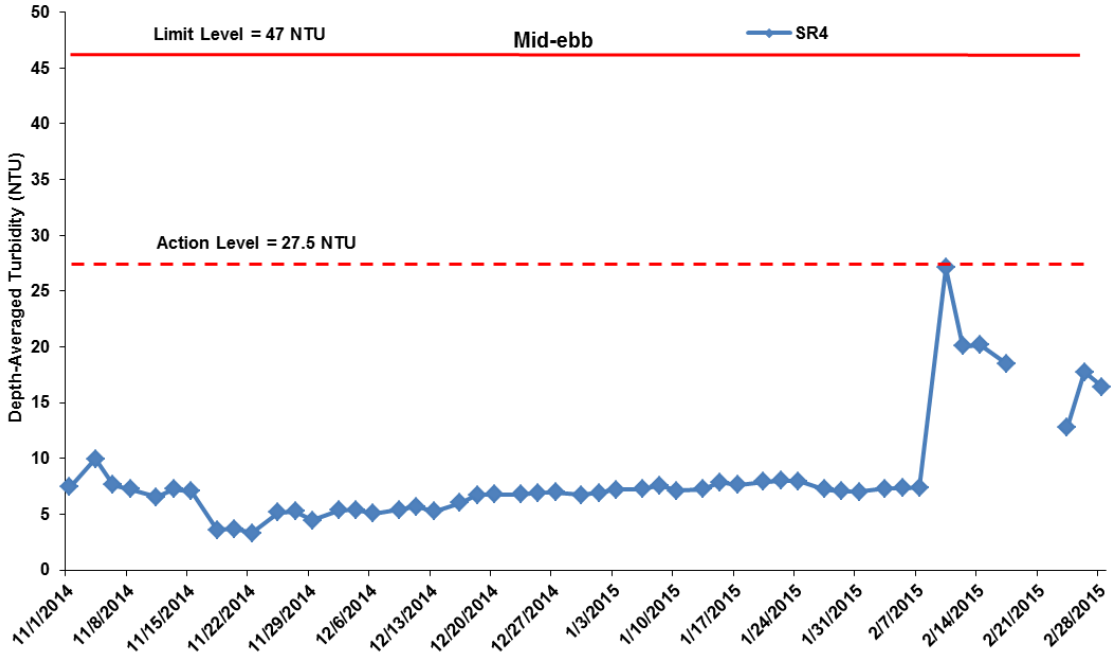


Figure J23 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-ebb tide between 1 November 2014 and 28 February 2015 at IS8 and SR4.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include marine piling platform installation and marine piling.) No marine works was undertaken on 19 and 21 February 2015.

Environmental Resources Management

ERM

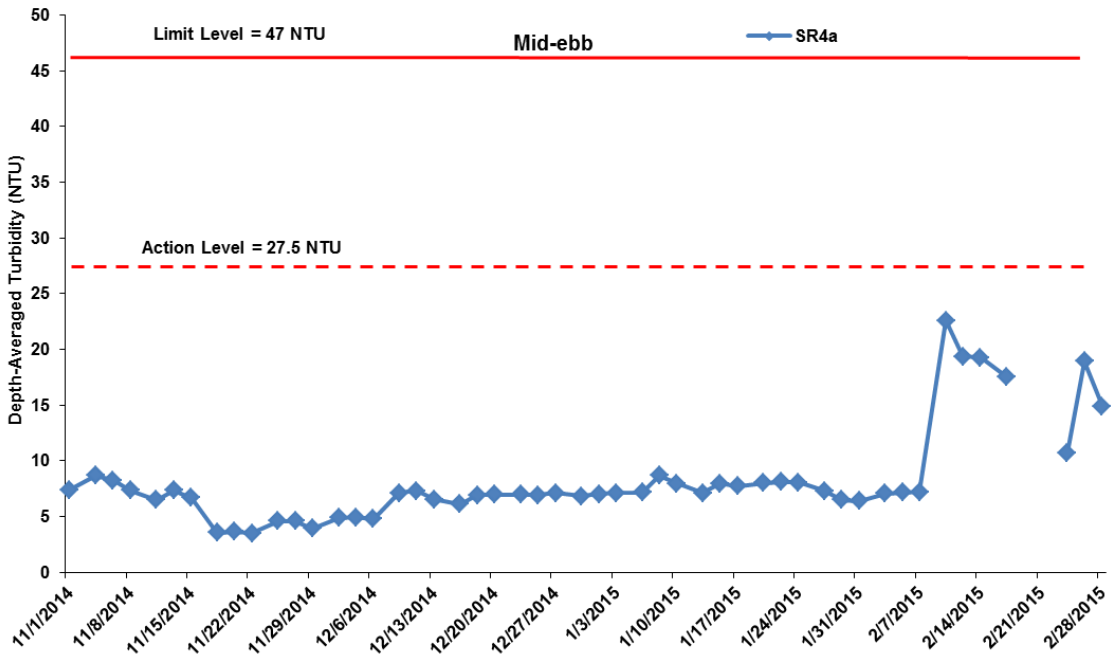
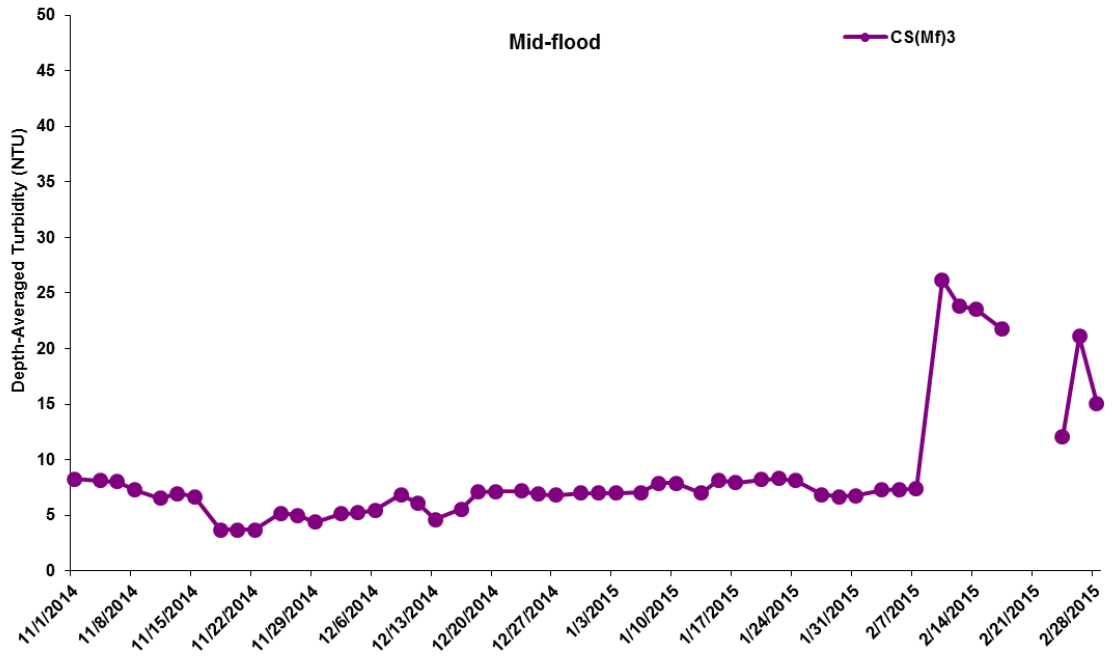


Figure J24 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-ebb tide between 1 November 2014 and 28 February 2015 at SR4a.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include marine piling platform installation and marine piling.) No marine works was undertaken on 19 and 21 February 2015.

Environmental Resources Management

ERM



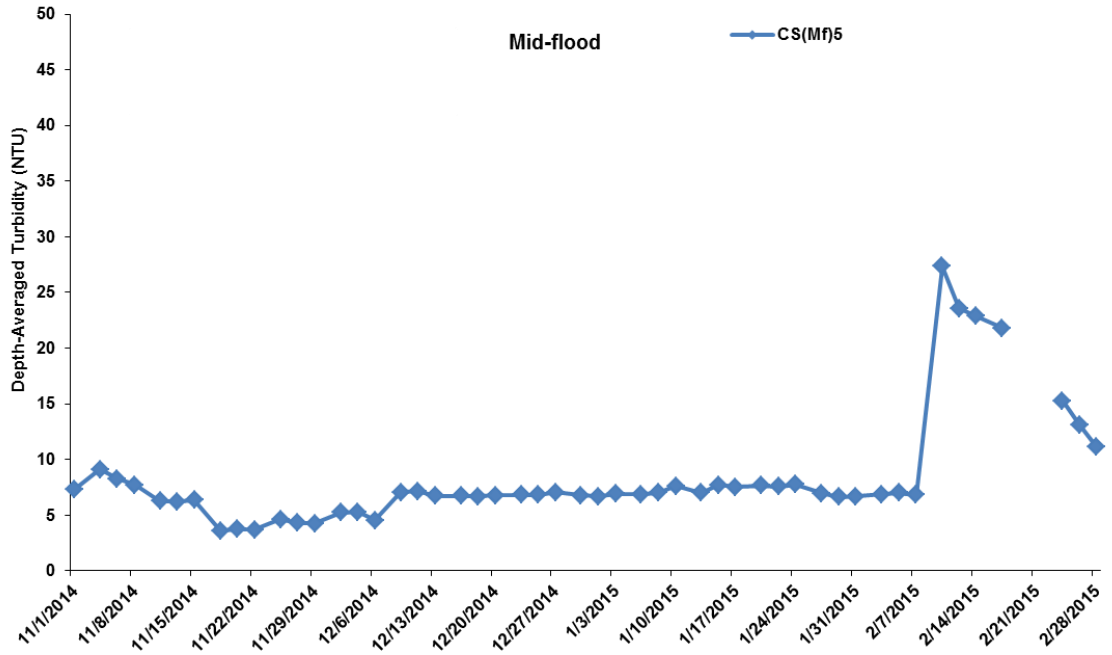
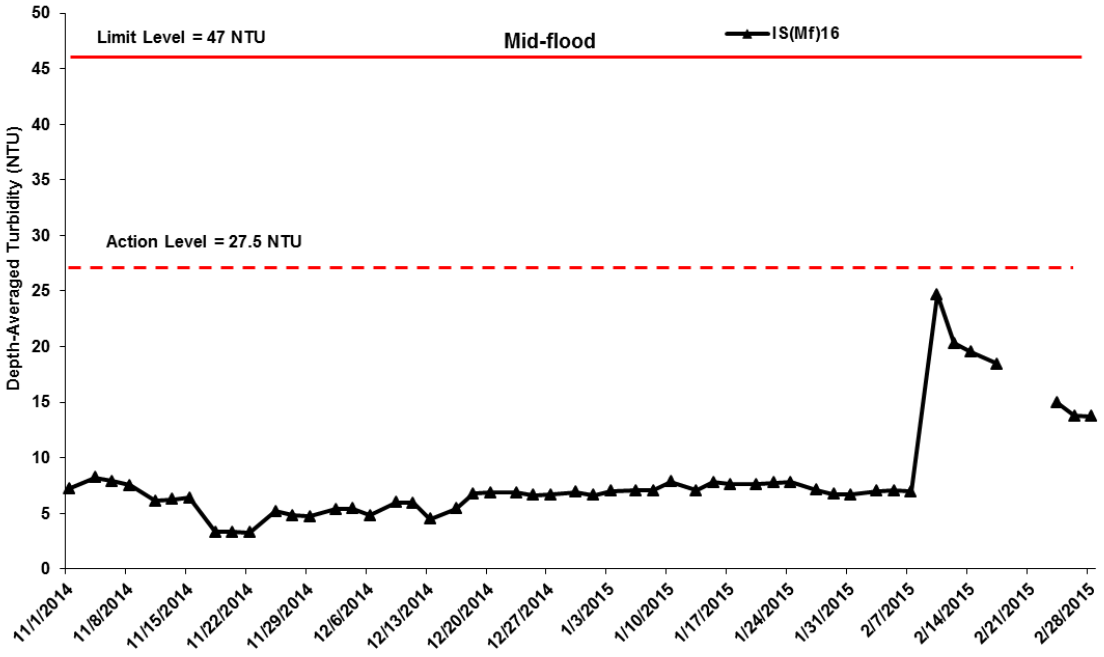


Figure J25 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-flood tide between 1 November 2014 and 28 February 2015 at CS(Mf)3 and CS(MF)5.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include marine piling platform installation and marine piling.) No marine works was undertaken on 19 and 21 February 2015.

Environmental Resources Management

ERM



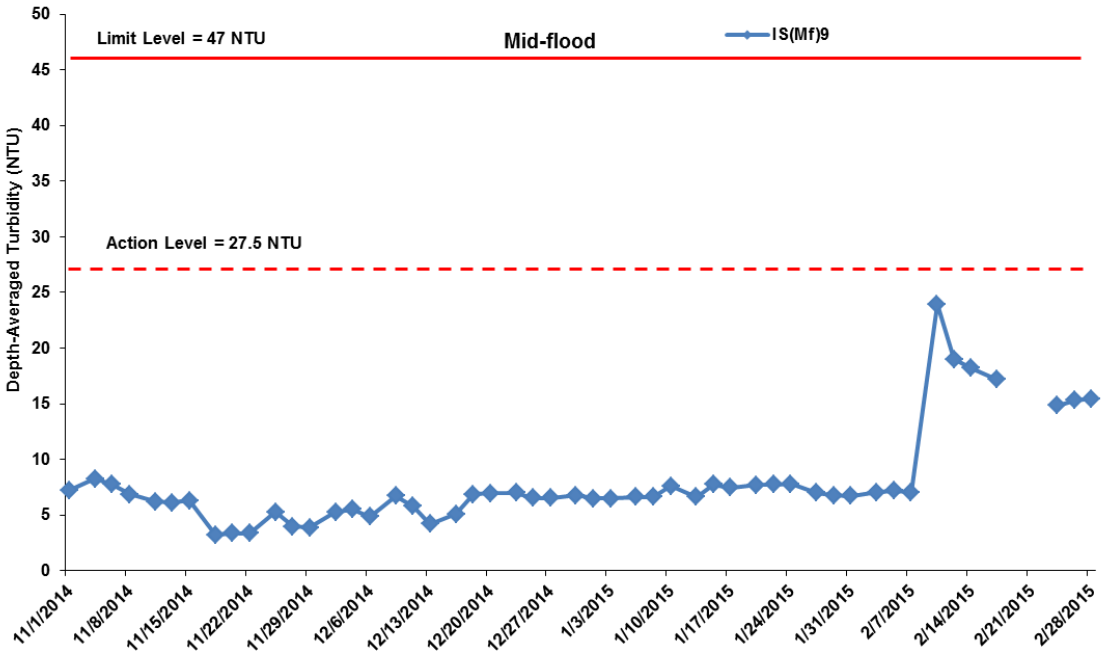
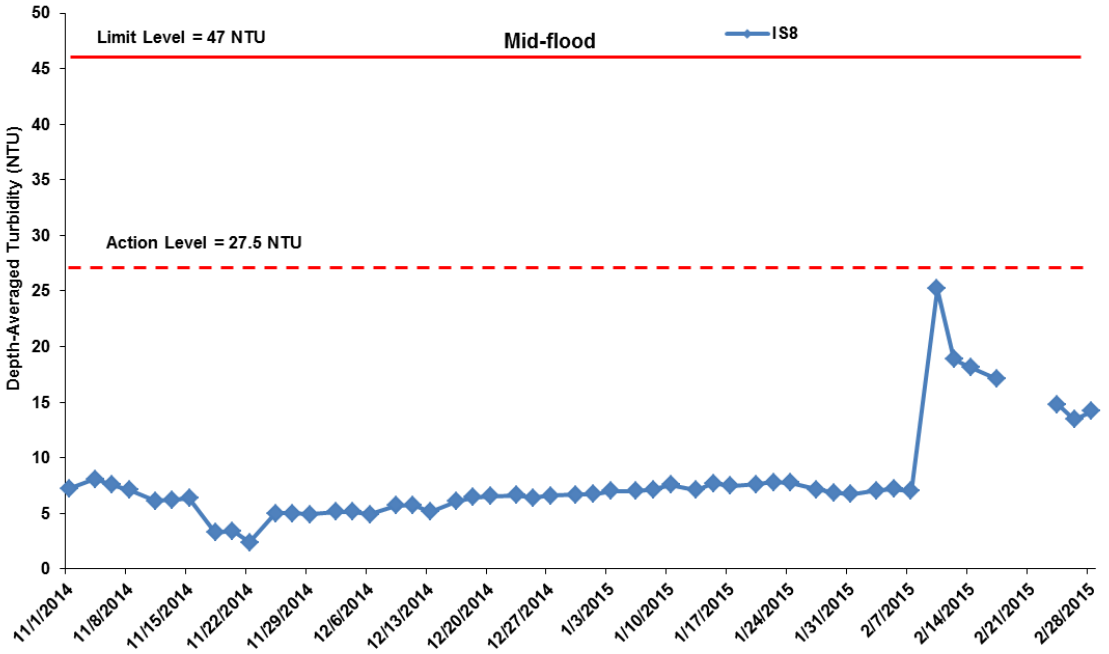


Figure J26 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-flood tide between 1 November 2014 and 28 February 2015 at IS(Mf)16 and IS(Mf)9.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include marine piling platform installation and marine piling.) No marine works was undertaken on 19 and 21 February 2015.

Environmental Resources Management

ERM



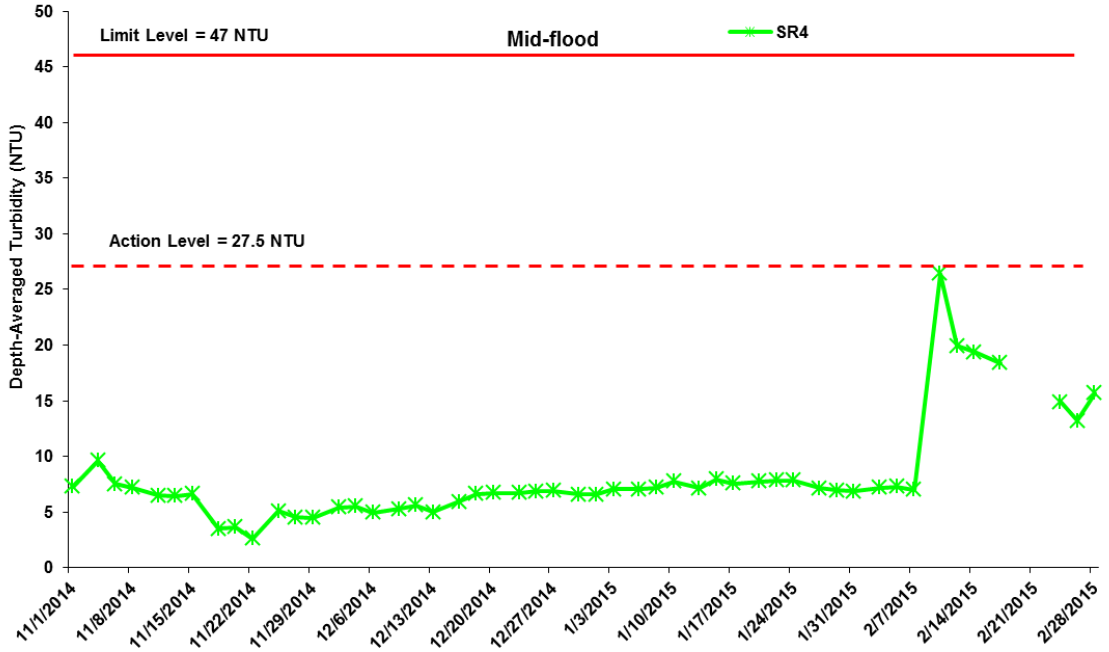


Figure J27 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-flood tide between 1 November 2014 and 28 February 2015 at IS8 and SR4.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include marine piling platform installation and marine piling.) No marine works was undertaken on 19 and 21 February 2015.

Environmental Resources Management

ERM

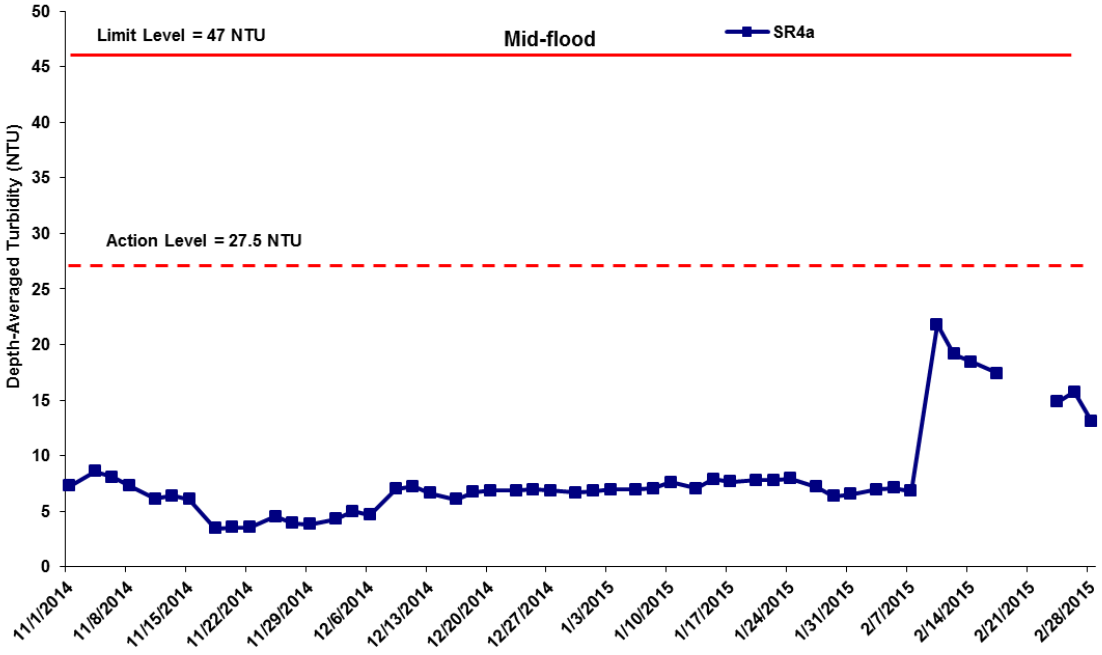


Figure J28 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-flood tide between 1 November 2014 and 28 February 2015 at SR4a.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include marine piling platform installation and marine piling.) No marine works was undertaken on 19 and 21 February 2015.

Environmental Resources Management

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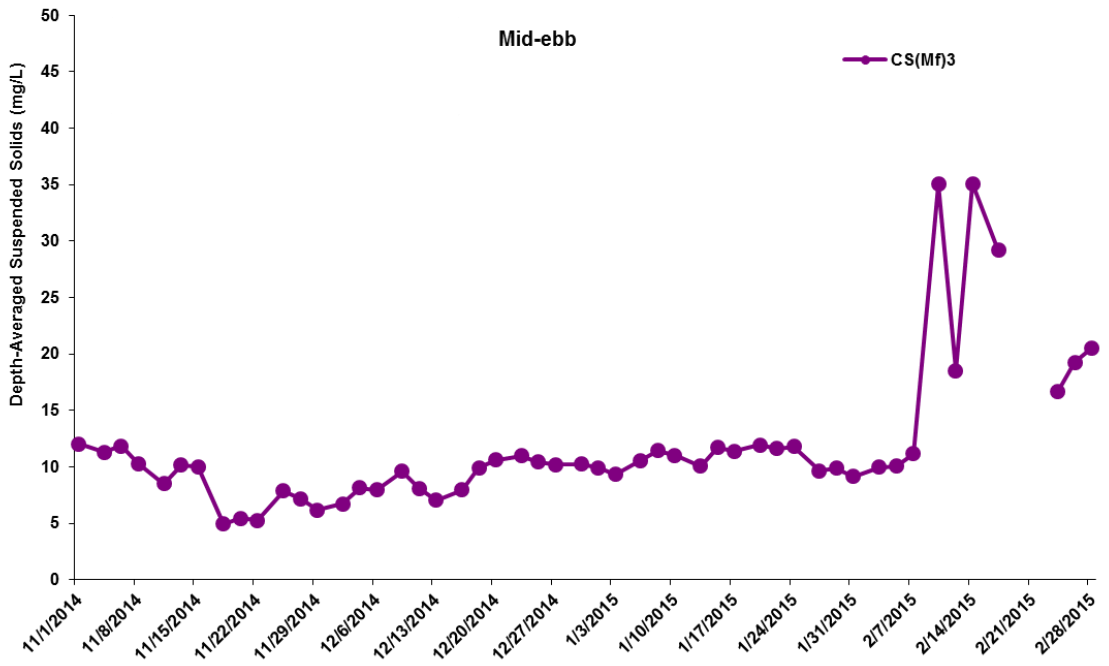


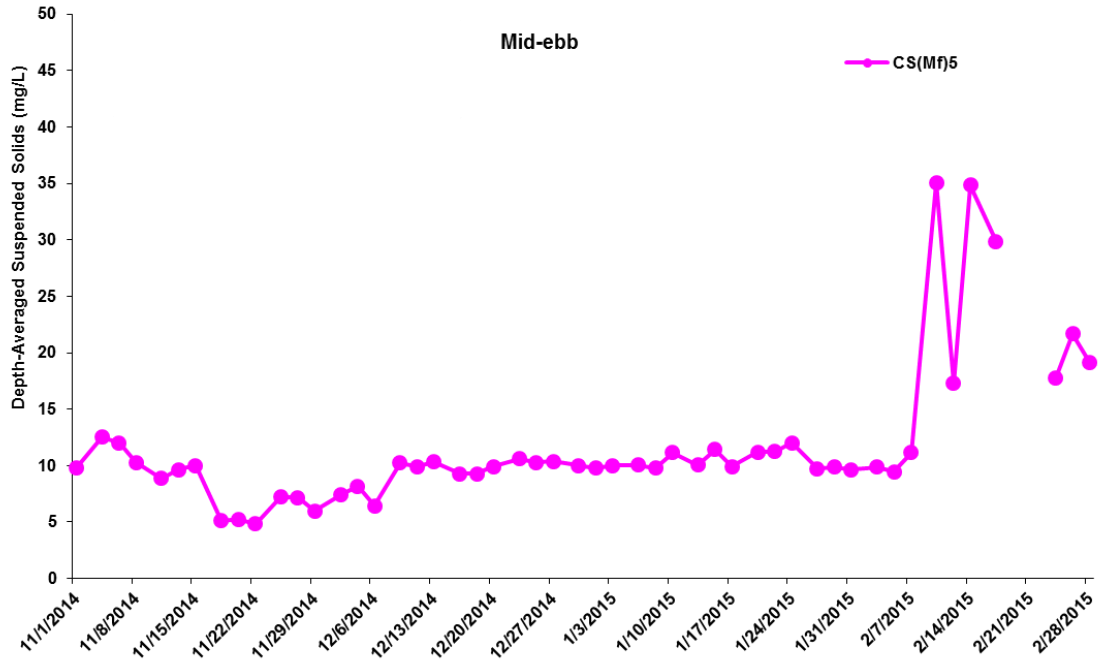
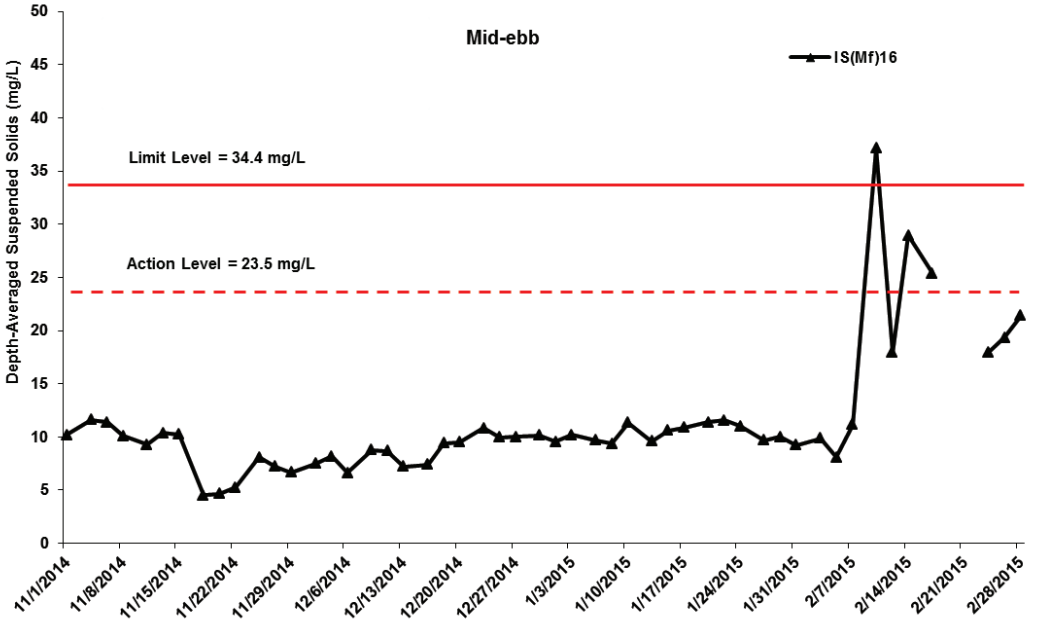


Figure J29 Impact Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-ebb tide between 1 November 2014 and 28 February 2015 at CS(Mf)3 and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include marine piling platform installation and marine piling.) No marine works was undertaken on 19 and 21 February 2015.

Environmental Resources Management

ERM



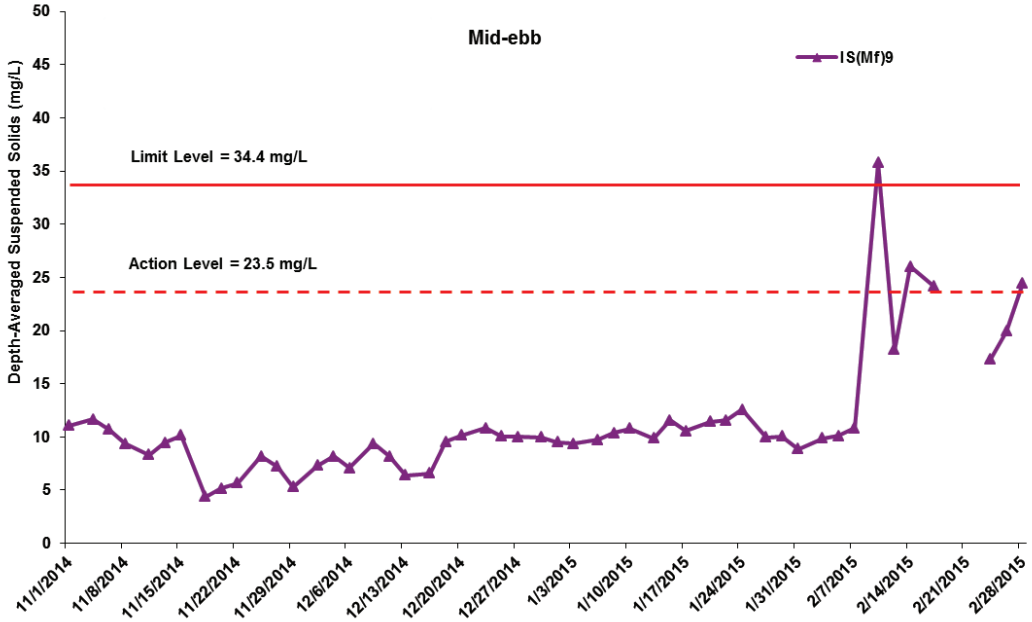
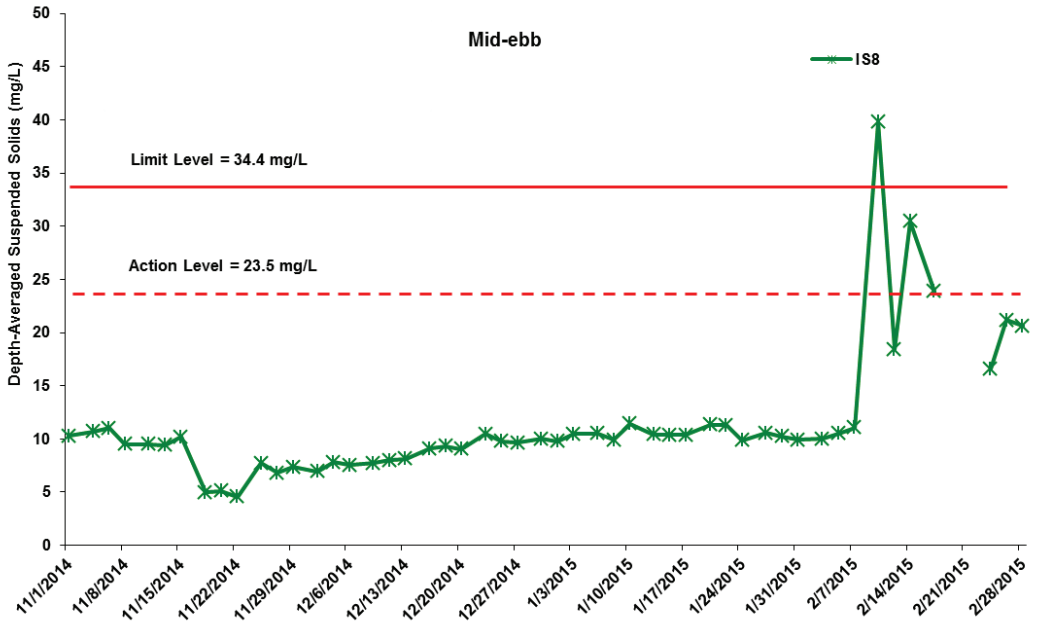


Figure J30 Impact Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-ebb tide between 1 November 2014 and 28 February 2015 at IS(Mf)16 and IS(Mf)9.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include marine piling platform installation and marine piling.) No marine works was undertaken on 19 and 21 February 2015. The SS results in Feb 2015 higher than Action / Limit Levels were not considered as exceedances as the results were not higher than 120% of upstream control station.

Environmental Resources Management

ERM



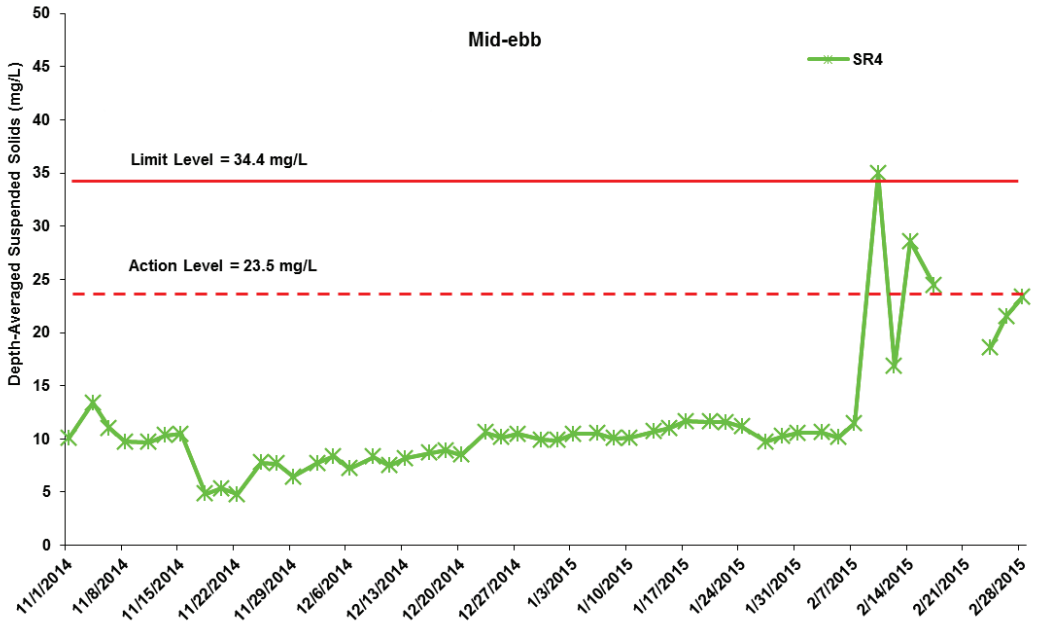


Figure J31 Impact Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-ebb tide between 1 November 2014 and 28 February 2015 at IS8 and SR4.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include marine piling platform installation and marine piling.) No marine works was undertaken on 19 and 21 February 2015. The SS results in Feb 2015 higher than Action / Limit Levels were not considered as exceedances as the results were not higher than 120% of upstream control station.

Environmental Resources Management

ERM

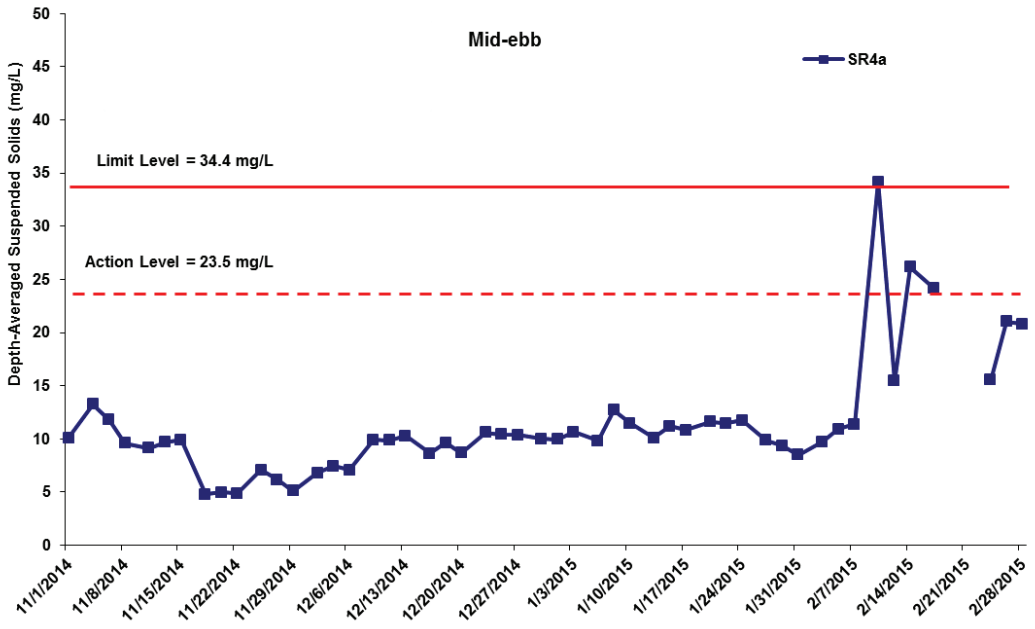
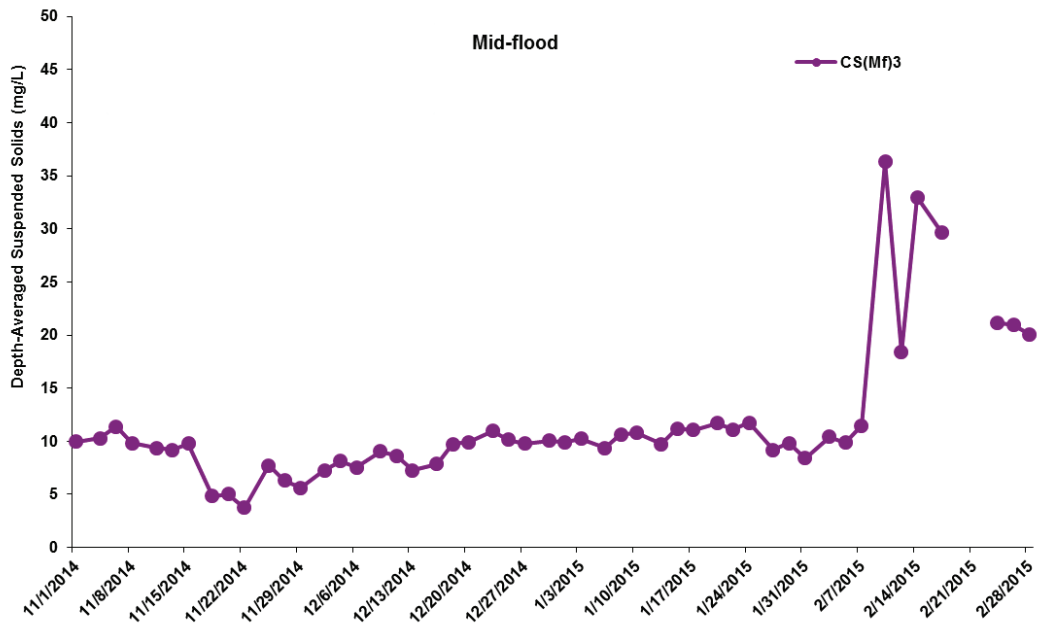


Figure J32 Impact Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-ebb tide between 1 November 2014 and 28 February 2015 at SR4a.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include marine piling platform installation and marine piling.) No marine works was undertaken on 19 and 21 February 2015. The SS results in Feb 2015 higher than Action / Limit Levels were not considered as exceedances as the results were not higher than 120% of upstream control station.

Environmental Resources Management

ERM



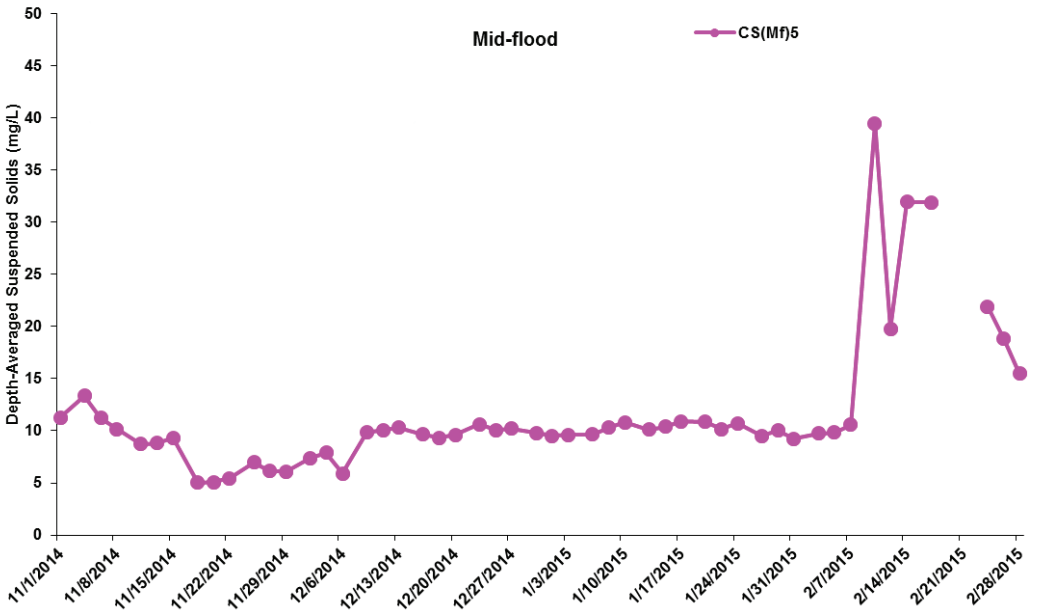
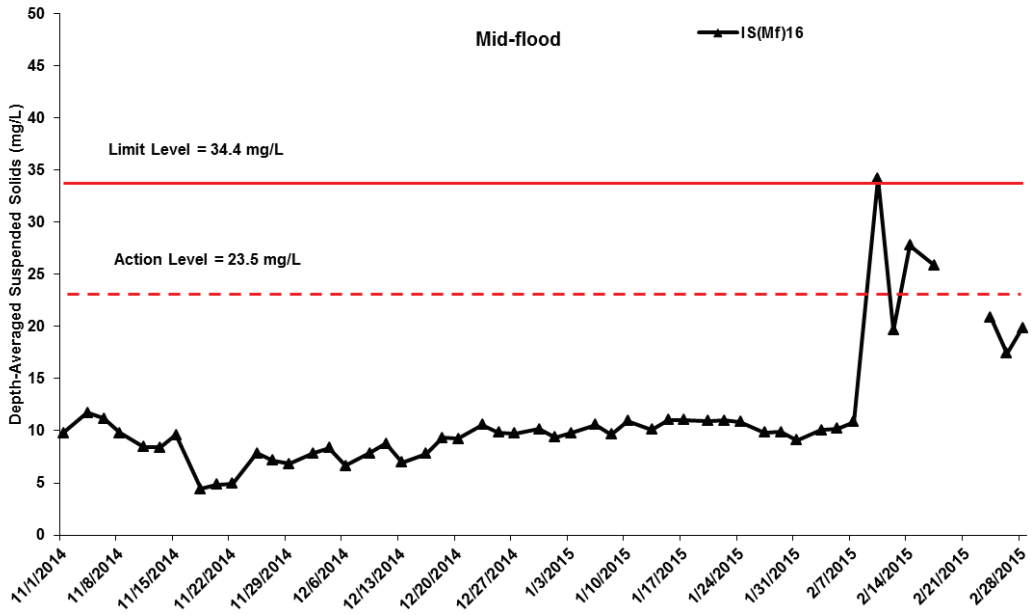


Figure J33 Impact Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-flood tide between 1 November 2014 and 28 February 2015 at CS(Mf)3 and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include marine piling platform installation and marine piling.) No marine works was undertaken on 19 and 21 February 2015.

Environmental Resources Management

ERM



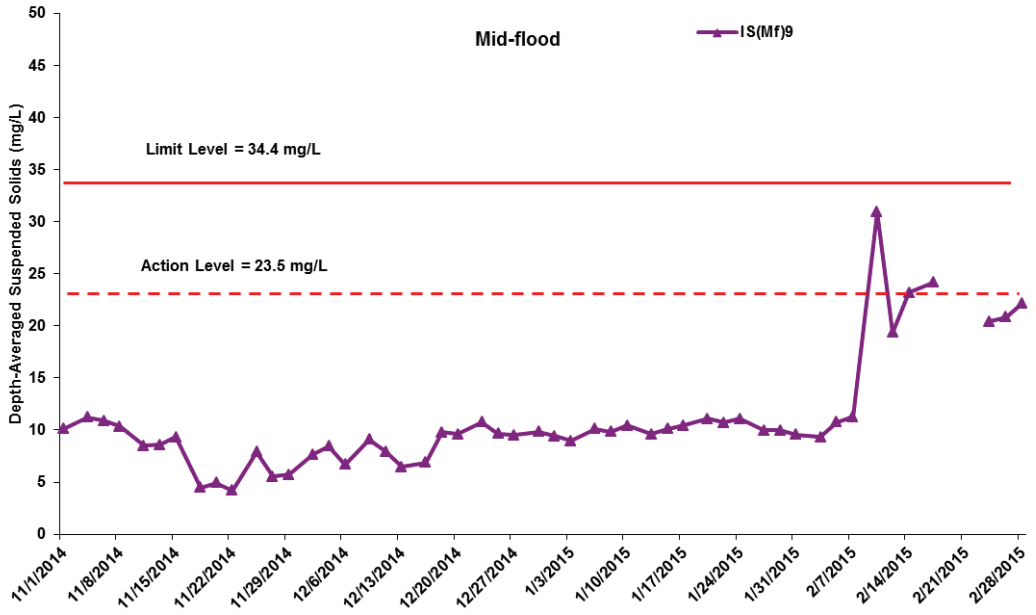
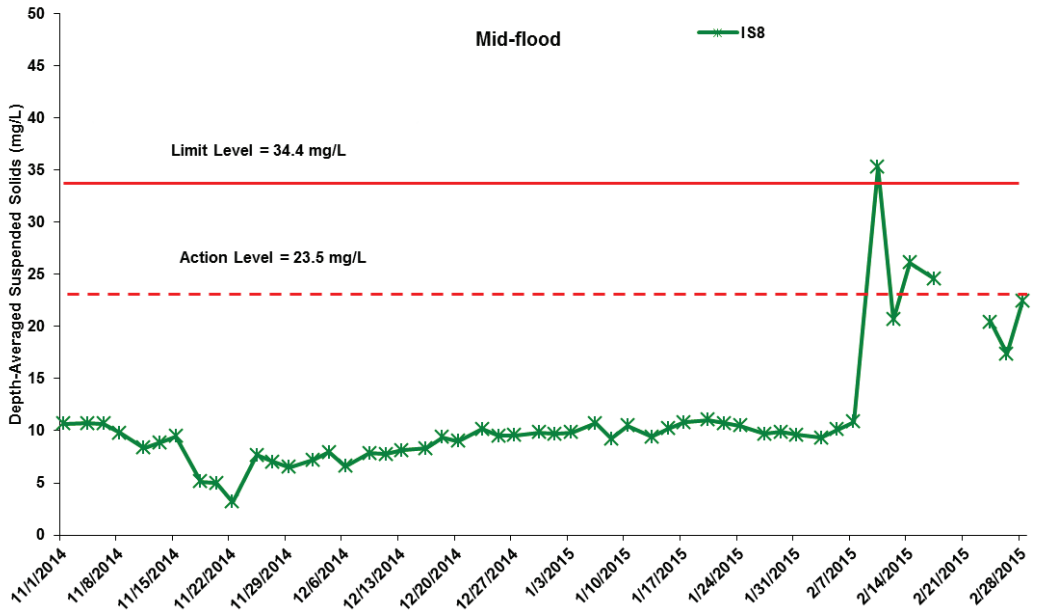


Figure J34 Impact Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-flood tide between 1 November 2014 and 28 February 2015 at IS(Mf)16 and IS(Mf)9.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include marine piling platform installation and marine piling.) No marine works was undertaken on 19 and 21 February 2015. The SS results in Feb 2015 higher than Action / Limit Levels were not considered as exceedances as the results were not higher than 120% of upstream control station.

Environmental Resources Management

ERM



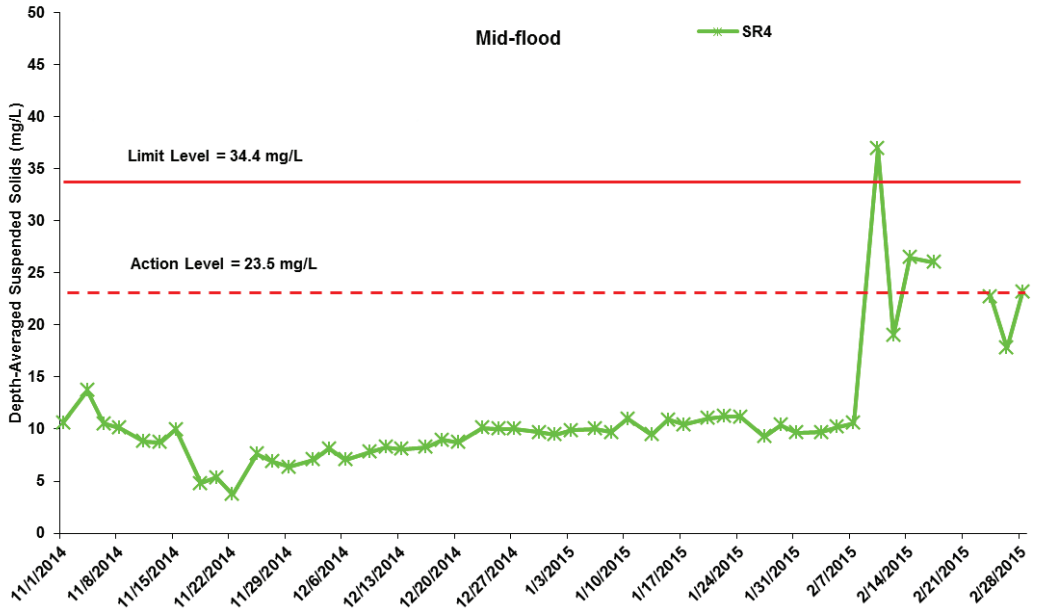


Figure J35 Impact Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-flood tide between 1 November 2014 and 28 February 2015 at IS8 and SR4.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include marine piling platform installation and marine piling.) No marine works was undertaken on 19 and 21 February 2015. The SS results in Feb 2015 higher than Action / Limit Levels were not considered as exceedances as the results were not higher than 120% of upstream control station.

Environmental Resources Management

ERM

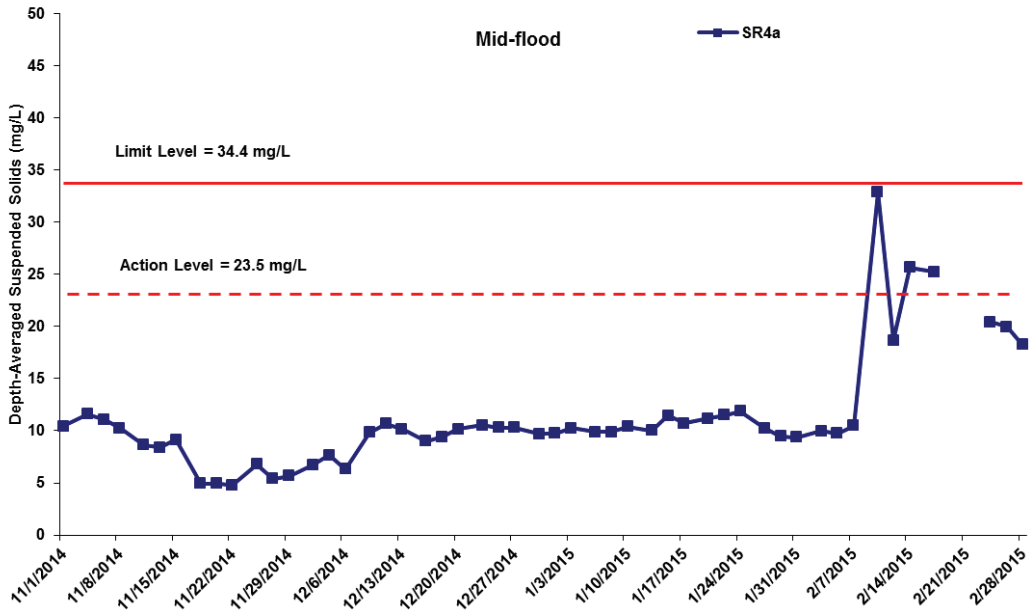


Figure J36 Impact Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-flood tide between 1 November 2014 and 28 February 2015 at SR4a.

(Weather condition varied between sunny to rainy within the reporting period. Marine works within the reporting period include marine piling platform installation and marine piling.) No marine works was undertaken on 19 and 21 February 2015. The SS results in Feb 2015 higher than Action / Limit Levels were not considered as exceedances as the results were not higher than 120% of upstream control station.

Environmental Resources Management

ERM

Appendix K

Impact Dolphin Monitoring Survey Results

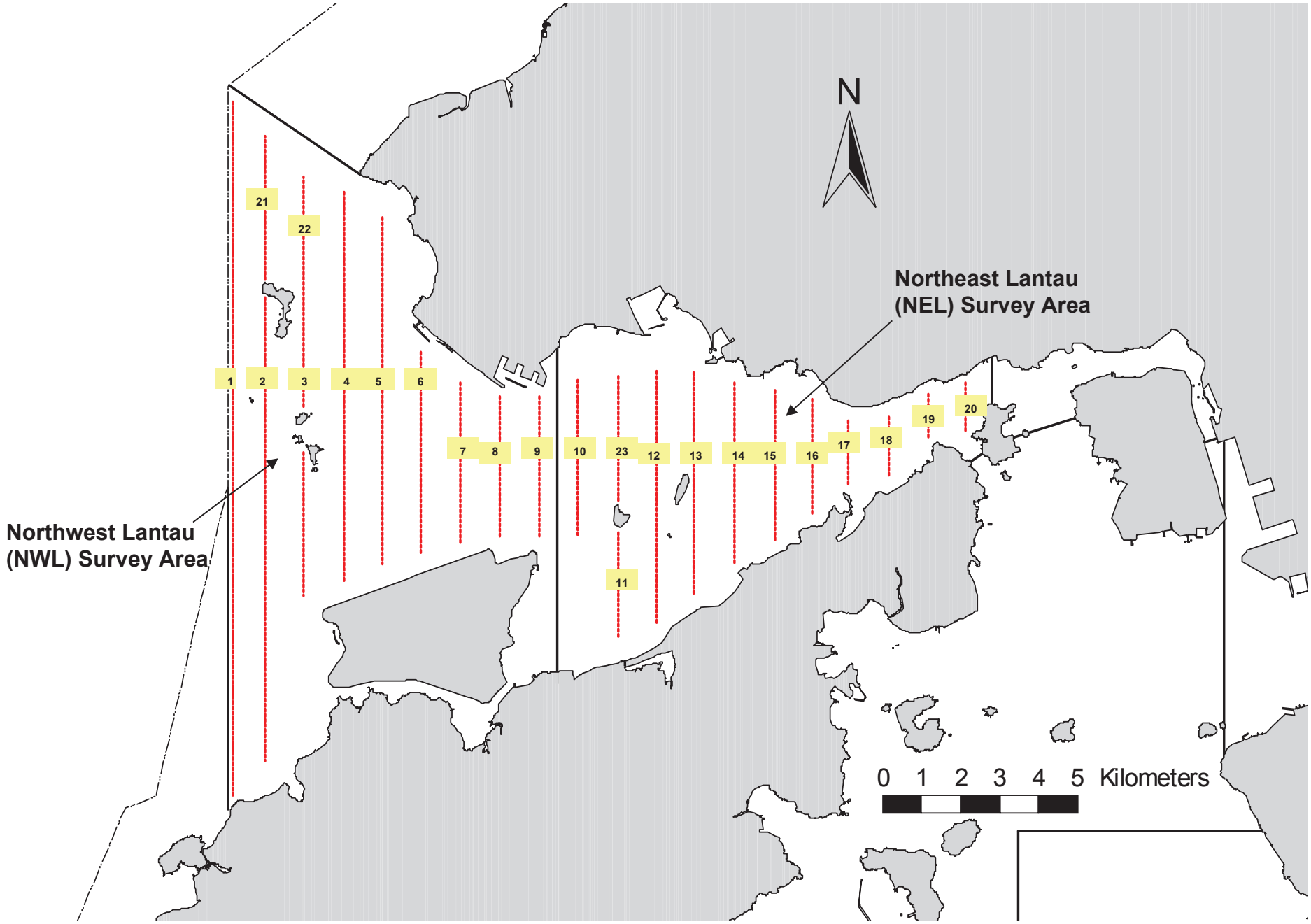


Figure 1. Transect Line Layout in Northwest and Northeast Lantau Survey Areas

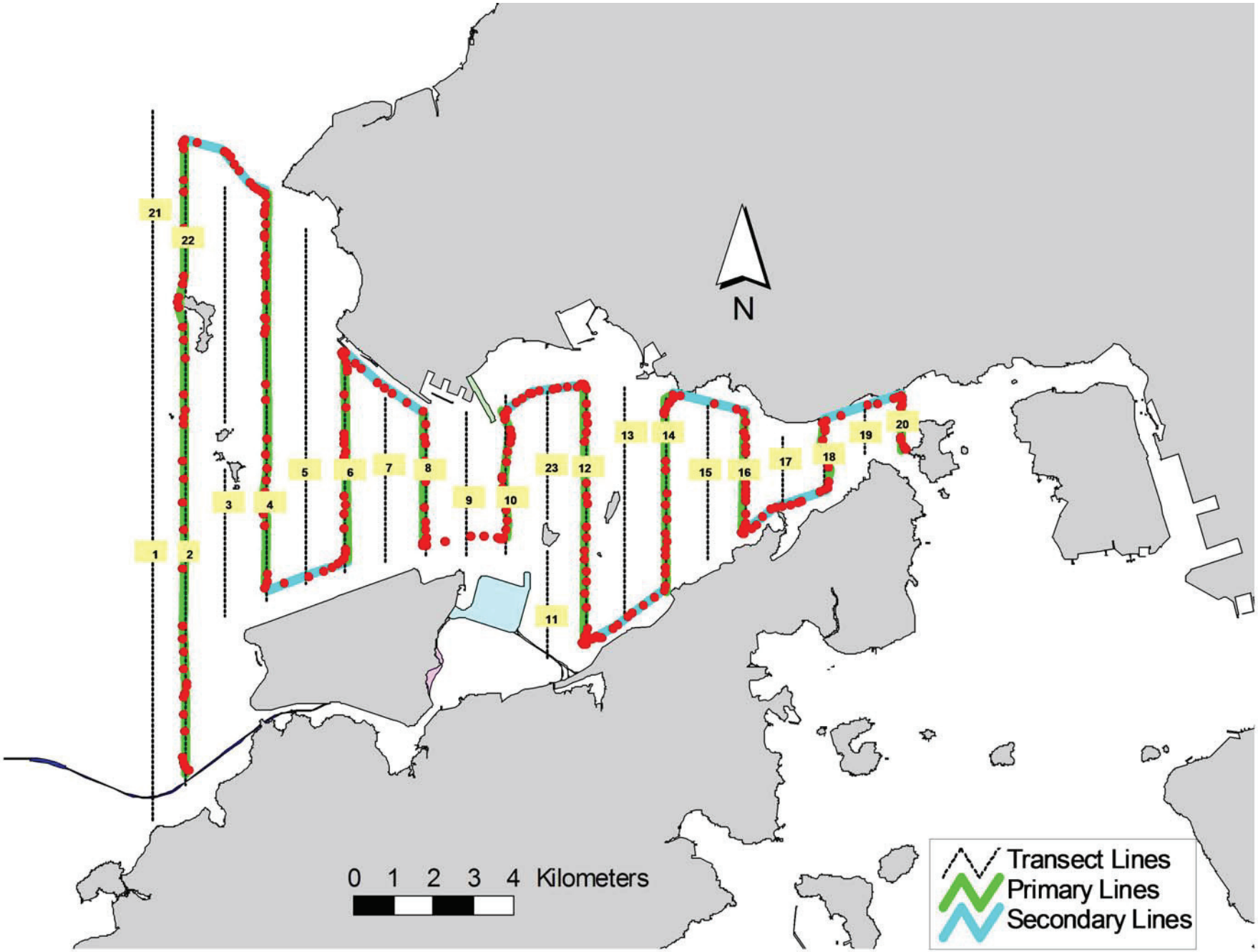


Figure 2. Survey Route on February 5th, 2015 (from HKLR03 project)

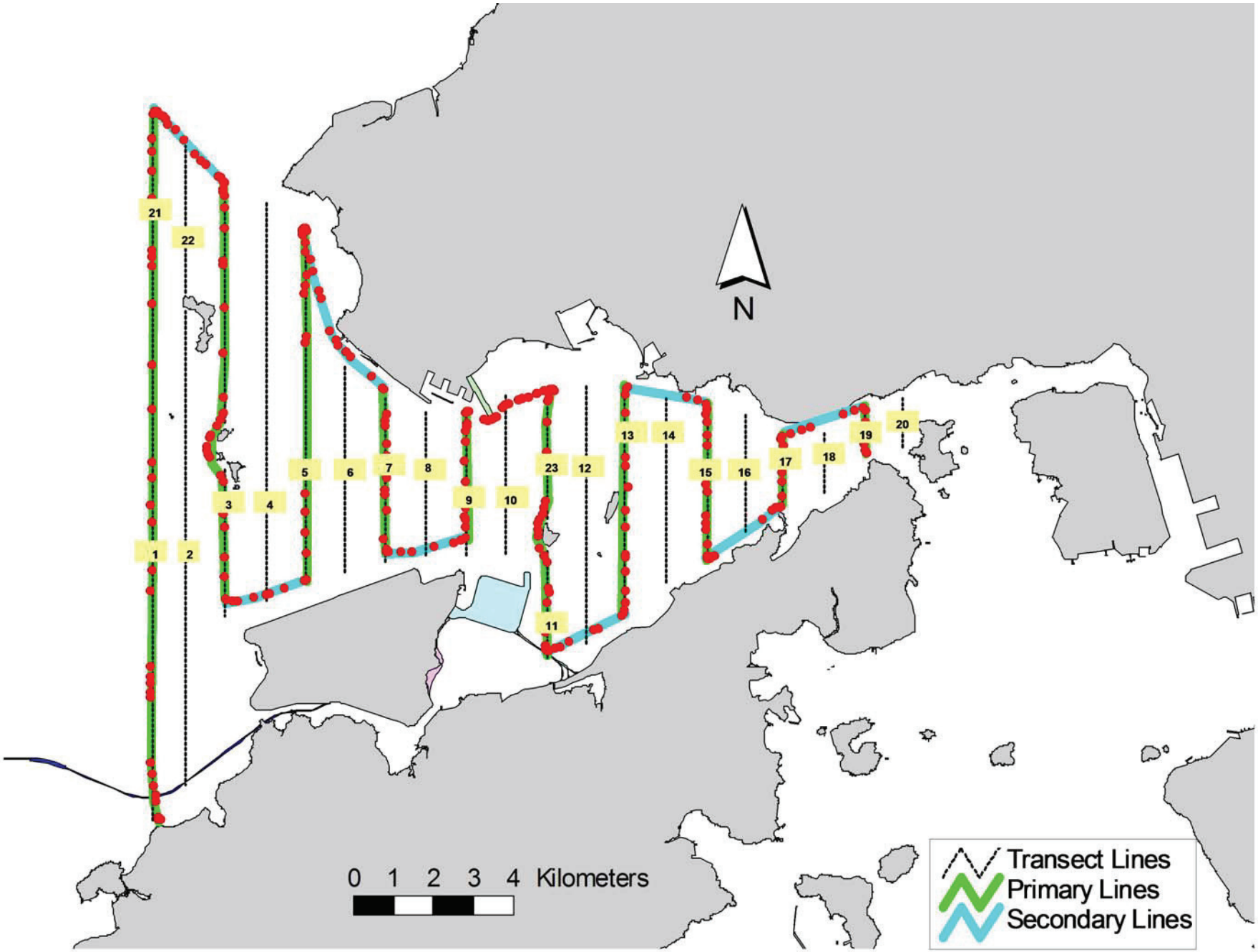


Figure 3. Survey Route on February 13th, 2015 (from HKLR03 project)

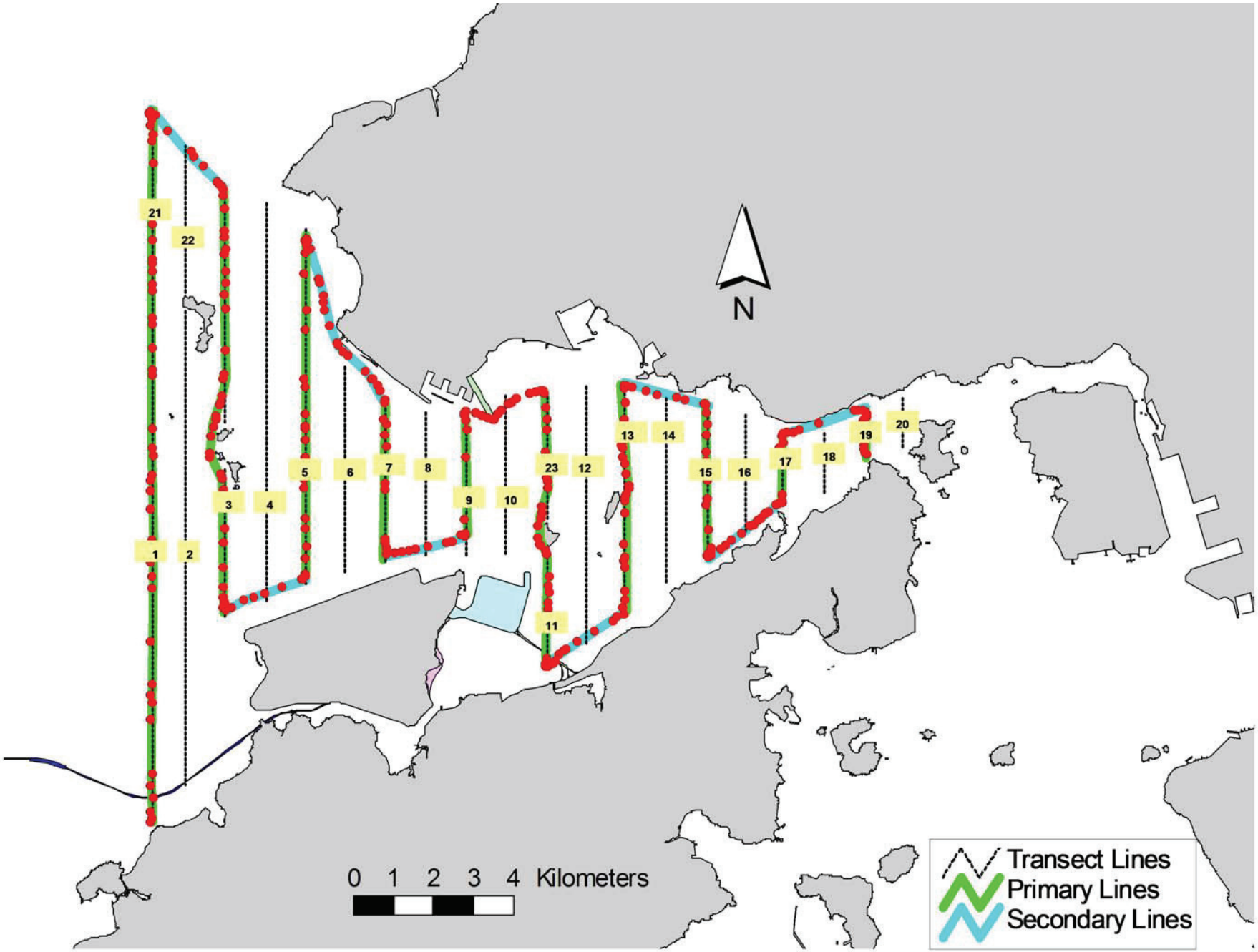


Figure 4. Survey Route on February 16th, 2015 (from HKLR03 project)

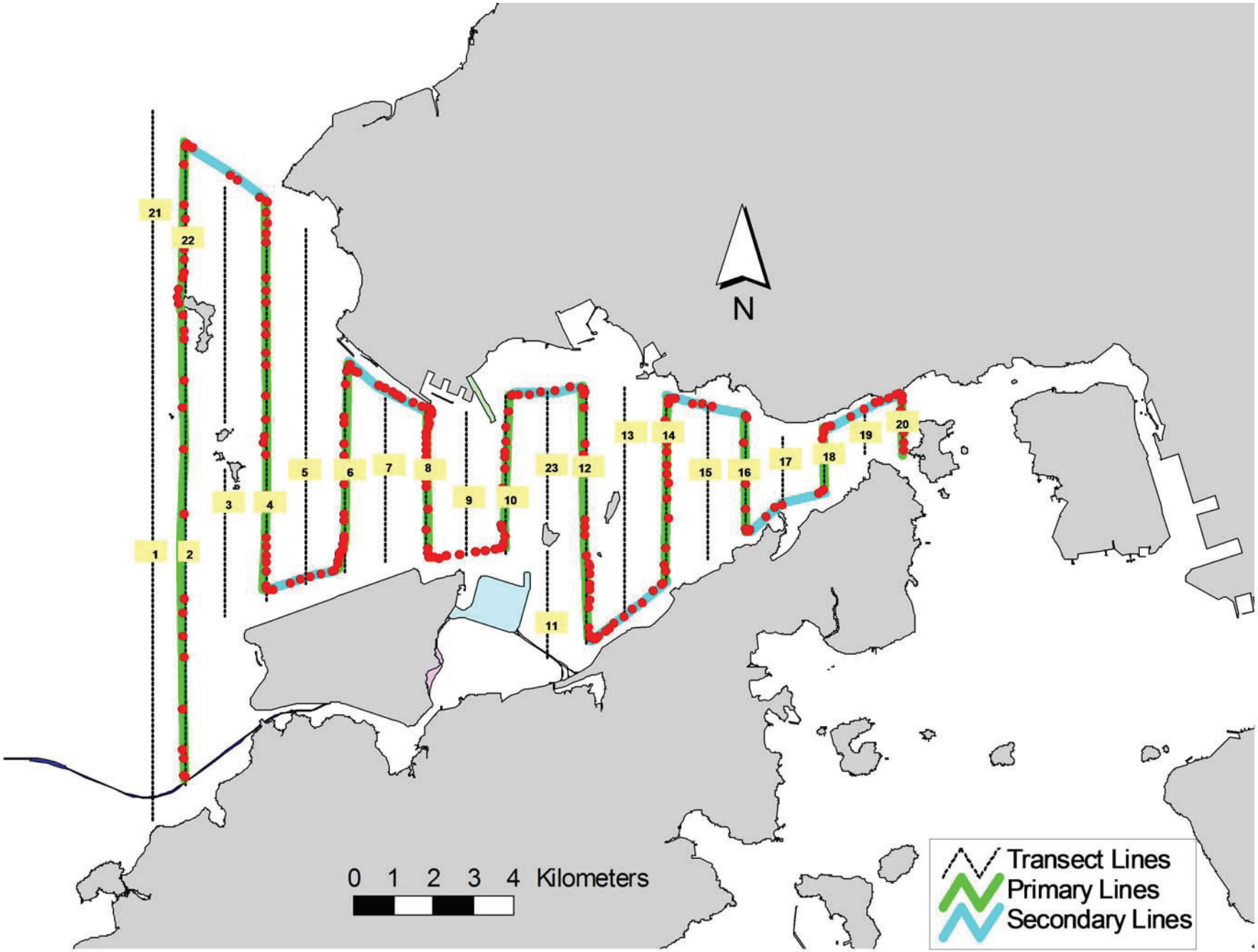


Figure 5. Survey Route on February 25th, 2015 (from HKLR03 project)

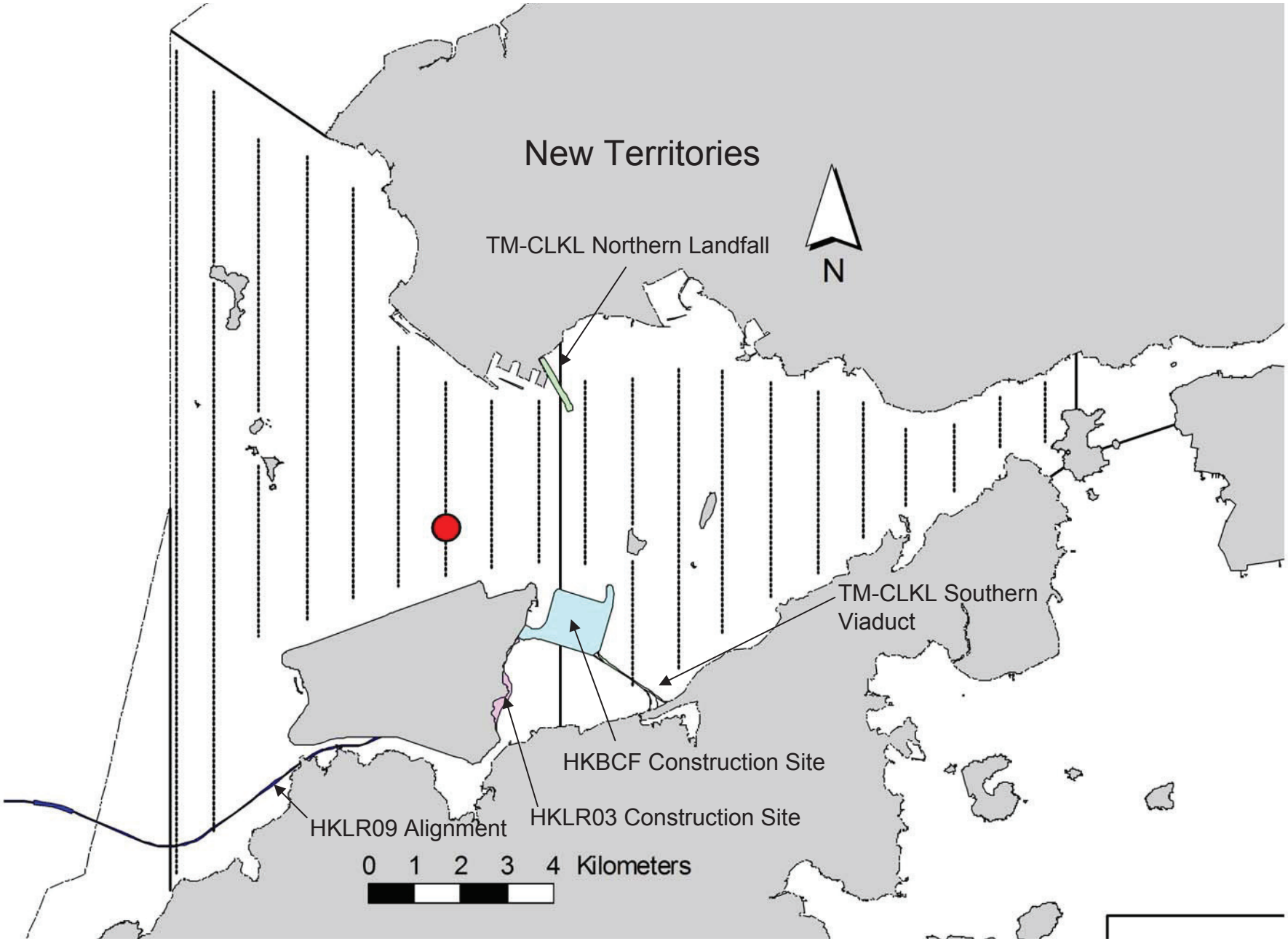


Figure 6. Distribution of Chinese White Dolphin Sightings During February 2015 HKLR03 Monitoring Surveys

Appendix I. HKLR03 Survey Effort Database (February 2015)

(Abbreviations: BEAU = Beaufort Sea State; P = Primary Line Effort; S = Secondary Line Effort)

DATE	AREA	BEAU	EFFORT	SEASON	VESSEL	TYPE	P/S
5-Feb-15	NE LANTAU	2	11.79	WINTER	STANDARD31516	HKLR	P
5-Feb-15	NE LANTAU	3	8.03	WINTER	STANDARD31516	HKLR	P
5-Feb-15	NE LANTAU	1	0.20	WINTER	STANDARD31516	HKLR	S
5-Feb-15	NE LANTAU	2	7.00	WINTER	STANDARD31516	HKLR	S
5-Feb-15	NE LANTAU	3	3.88	WINTER	STANDARD31516	HKLR	S
5-Feb-15	NW LANTAU	2	11.86	WINTER	STANDARD31516	HKLR	P
5-Feb-15	NW LANTAU	3	19.78	WINTER	STANDARD31516	HKLR	P
5-Feb-15	NW LANTAU	2	3.96	WINTER	STANDARD31516	HKLR	S
5-Feb-15	NW LANTAU	3	4.10	WINTER	STANDARD31516	HKLR	S
13-Feb-15	NW LANTAU	1	10.31	WINTER	STANDARD31516	HKLR	P
13-Feb-15	NW LANTAU	2	24.74	WINTER	STANDARD31516	HKLR	P
13-Feb-15	NW LANTAU	3	4.98	WINTER	STANDARD31516	HKLR	P
13-Feb-15	NW LANTAU	1	4.92	WINTER	STANDARD31516	HKLR	S
13-Feb-15	NW LANTAU	2	8.01	WINTER	STANDARD31516	HKLR	S
13-Feb-15	NE LANTAU	2	16.97	WINTER	STANDARD31516	HKLR	P
13-Feb-15	NE LANTAU	2	9.83	WINTER	STANDARD31516	HKLR	S
16-Feb-15	NE LANTAU	2	17.07	WINTER	STANDARD31516	HKLR	P
16-Feb-15	NE LANTAU	1	2.87	WINTER	STANDARD31516	HKLR	S
16-Feb-15	NE LANTAU	2	7.61	WINTER	STANDARD31516	HKLR	S
16-Feb-15	NW LANTAU	1	0.90	WINTER	STANDARD31516	HKLR	P
16-Feb-15	NW LANTAU	2	36.33	WINTER	STANDARD31516	HKLR	P
16-Feb-15	NW LANTAU	3	2.60	WINTER	STANDARD31516	HKLR	P
16-Feb-15	NW LANTAU	2	10.57	WINTER	STANDARD31516	HKLR	S
16-Feb-15	NW LANTAU	3	2.60	WINTER	STANDARD31516	HKLR	S
25-Feb-15	NW LANTAU	2	9.90	WINTER	STANDARD31516	HKLR	P
25-Feb-15	NW LANTAU	3	19.50	WINTER	STANDARD31516	HKLR	P
25-Feb-15	NW LANTAU	2	3.50	WINTER	STANDARD31516	HKLR	S
25-Feb-15	NW LANTAU	3	4.30	WINTER	STANDARD31516	HKLR	S
25-Feb-15	NE LANTAU	1	1.20	WINTER	STANDARD31516	HKLR	P
25-Feb-15	NE LANTAU	2	16.30	WINTER	STANDARD31516	HKLR	P
25-Feb-15	NE LANTAU	3	2.00	WINTER	STANDARD31516	HKLR	P
25-Feb-15	NE LANTAU	2	10.40	WINTER	STANDARD31516	HKLR	S

Appendix II. HKLR03 Chinese White Dolphin Sighting Database (February 2015)

(Abberviations: STG# = Sighting Number; HRD SZ = Dolphin Herd Size; BEAU = Beaufort Sea State; PSD = Perpendicular Distance; BOAT ASSOC. = Fishing Boat Association; P/S: Sighting Made on Primary/Secondary Lines)

DATE	STG #	TIME	HRD SZ	AREA	BEAU	PSD	EFFORT	TYPE	NORTHING	EASTING	SEASON	BOAT ASSOC.	P/S
13-Feb-15	1	1344	1	NW LANTAU	2	103	ON	HKLR	821649	810495	WINTER	NONE	P

Appendix III. Individual dolphins identified during HKLR03 monitoring surveys in February 2015

ID#	DATE	STG#	AREA
NL306	13/02/15	1	NW LANTAU

Appendix IV. Photographs of Identified Individual Dolphin in February 2015 (HKLR03)

Appendix L

Event Action Plan

Appendix L1 Event/ Action Plan for Air Quality

	ACTION			
EVENT	**ET** [(1)]	**IEC** [(1)]	**SOR** [(1)]	**Contractor**
Action Level				
1. Exceedance for one sample	1. Identify the source. 2. Inform the IEC and the SOR. 3. Repeat measurement to confirm finding. 4. Increase monitoring frequency to daily.	1. Check monitoring data submitted by the ET. 2. Check Contractor's working method.	1. Notify Contractor.	1. Rectify any unacceptable practice 2. Amend working methods if appropriate
2. Exceedance for two or more consecutive samples	1. Identify the source. 2. Inform the IEC and the SOR. 3. Repeat measurements to confirm findings. 4. Increase monitoring frequency to daily. 5. Discuss with the IEC and the Contractor on remedial actions required. 6. If exceedance continues, arrange meeting with the IEC and the SOR. 7. If exceedance stops, cease additional monitoring.	1. Check monitoring data submitted by the ET. 2. Check the Contractor's working method. 3. Discuss with the ET and the Contractor on possible remedial measures. 4. Advise the SOR on the effectiveness of the proposed remedial measures. 5. Supervisor implementation of remedial measures.	1. Confirm receipt of notification of failure in writing. 2. Notify the Contractor. 3. Ensure remedial measures properly implemented.	1. Submit proposals for remedial actions to IEC within 3 working days of notification 2. Implement the agreed proposals 3. Amend proposal if appropriate

	ACTION			
EVENT	**ET** [(1)]	**IEC** [(1)]	**SOR**[(1)]	**Contractor**
Limit Level				
1. Exceedance for one sample	1. Identify the source. 2. Inform the SOR and the DEP. 3. Repeat measurement to confirm finding. 4. Increase monitoring frequency to daily. 5. Assess effectiveness of Contractor's remedial actions and keep the IEC, the DEP and the SOR informed of the results.	1. Check monitoring data submitted by the ET. 2. Check Contractor's working method. 3. Discuss with the ET and the Contractor on possible remedial measures. 4. Advise the SOR on the effectiveness of the proposed remedial measures. 5. Supervisor implementation of remedial measures.	1. Confirm receipt of notification of failure in writing. 2. Notify the Contractor. 3. Ensure remedial measures are properly implemented.	1. Take immediate action to avoid further exceedance 2. Submit proposals for remedial actions to IEC within 3 working days of notification 3. Implement the agreed proposals 4. Amend proposal if appropriate
2. Exceedance for two or more consecutive samples	1. Notify the IEC, the SOR, the DEP and the Contractor. 2. Identify the source. 3. Repeat measurements to confirm findings. 4. Increase monitoring frequency to daily. 5. Carry out analysis of the Contractor's working procedures to determine possible mitigation to be implemented. 6. Arrange meeting with the IEC and the SOR to discuss the remedial actions to be taken. 7. Assess effectiveness of the Contractor's remedial actions	1. Discuss amongst the SOR, ET and the Contractor on the potential remedial actions. 2. Review the Contractor's remedial actions whenever necessary to assure their effectiveness and advise the SOR accordingly. 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing. 2. Notify the Contractor. 3. In consultation with the IEC, agree with the Contractor on the remedial measures to be implemented. 4. Ensure remedial measures are properly implemented. 5. If exceedance continues, consider what activity of the work is responsible and instruct the Contractor to stop that activity of work until the exceedance is abated.	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 activity of works as determined by the SOR until the exceedance is abated.

and keep the IEC, the DEP and the SOR informed of the results. 8. If the exceedance stops, cease additional monitoring.	

Appendix L2 Event/ Action Plan for Construction Noise

	ACTION			
EVENT	**ET**	**IEC**	**SOR**	**Contractor**
Action Level	1. Notify the IEC and the Contractor. 2. Carry out investigation. 3. Report the results of investigation to the IEC and the Contractor. 4. Discuss with the Contractor and formulate remedial measures. 5. Increase monitoring frequency to check mitigation effectiveness.	1. Review the analysed results submitted by the ET. 2. Review the proposed remedial measures by the Contractor and advise the SOR accordingly. 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing. 2. Notify the Contractor. 3. Require the Contractor to propose remedial measures for the analysed noise problem. 4. Ensure remedial measures are properly implemented.	1. Submit noise mitigation proposals to IEC 2. Implement noise mitigation proposals
Limit Level	1. Notify the IEC, the SOR, the DEP and the Contractor. 2. Identify the source. 3. Repeat measurement 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 the IEC, the SOR and the DEP the causes & actions taken for the exceedances. 7. Assess effectiveness of the Contractor's remedial actions and keep the IEC, the DEP and the SOR informed of the results. 8. If exceedance stops, cease additional monitoring.	1. Discuss amongst the SOR, the ET and the Contractor on the potential remedial actions. 2. Review the Contractor's remedial actions whenever necessary to assure their effectiveness and advise the SOR accordingly. 3. Supervise the implementation of remedial measures.	1. Confirm receipt of notification of failure in writing. 2. Notify the Contractor. 3. Require the Contractor to propose remedial measures for the analysed noise problem. 4. Ensure remedial measures are properly implemented. 5. If exceedance continues, consider what activity of the work is responsible and instruct the Contractor to stop that activity of work until the exceedance is abated.	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 activity of works as determined by the SOR until the exceedance is abated.

Appendix L3 Event/ Action Plan for Water Quality

Event	ET Leader	IEC	SOR	Contractor
Action level being exceeded by one sampling day	1. Repeat in situ measurement on next day of exceedance to confirm findings; 2. Identify source(s) of impact; 3. Inform IEC, contractor and SOR; 4. Check monitoring data, all plant, equipment and Contractor's working methods.	1. Check monitoring data submitted by ET and Contractor's working methods.	1. Confirm receipt of notification of non-compliance in writing; 2. Notify Contractor.	1. Inform the SOR and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Amend working methods if appropriate.
Action level being exceeded by two or more consecutive sampling days	1. Repeat measurement on next day of exceedance to confirm findings; 2. Identify source(s) of impact; 3. Inform IEC, contractor, SOR and EPD; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC, SOR and Contractor; 6. Ensure mitigation measures are implemented; 7. Increase the monitoring frequency to daily until no exceedance of Action level;	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 SOR accordingly; 4. Supervise the implementation of mitigation measures.	1. Discuss with IEC on the proposed mitigation measures; 2. Ensure mitigation measures are properly implemented; 3. Assess the effectiveness of the implemented mitigation measures.	1. Inform the Supervising Officer and confirm notification of the non-compliance in writing; 2. Rectify unacceptable practice; 3. Check all plant and equipment and consider changes of working methods; 4. Submit proposal of additional mitigation measures to SOR within 3 working days of notification and discuss with ET, IEC and SOR; 5. Implement the agreed mitigation measures.
Limit level being exceeded by one sampling day	1. Repeat measurement on next day of exceedance to confirm findings;	1. Check monitoring data submitted by ET and Contractor's working method;	1. Confirm receipt of notification of failure in writing;	1. Inform the SOR and confirm notification of the non-compliance in writing;

Event	ET Leader	IEC	SOR	Contractor
	2. Identify source(s) of impact; 3. Inform IEC, contractor, SOR and EPD; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC, SOR and Contractor;	2. Discuss with ET and Contractor on possible remedial actions; 3. Review the proposed mitigation measures submitted by Contractor and advise the SOR accordingly.	2. Discuss with IEC, ET and Contractor on the proposed mitigation measures; 3. Request Contractor to review the working methods.	2. Rectify unacceptable practice; 3. Check all plant and equipment and consider changes of working methods; 4. Submit proposal of mitigation measures to SOR within 3 working days of notification and discuss with ET, IEC and SOR.
Limit level being exceeded by two or more consecutive sampling days	1. Repeat measurement on next day of exceedance to confirm findings; 2. Identify source(s) of impact; 3. Inform IEC, contractor, SOR and EPD; 4. Check monitoring data, all plant, equipment and Contractor's working methods; 5. Discuss mitigation measures with IEC, SOR 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;	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 SOR accordingly; 4. Supervise the implementation of mitigation measures.	1. Discuss with IEC, ET and Contractor on the proposed mitigation measures; 2. Request Contractor to critically review the working methods; 3. Make agreement on the mitigation measures to be implemented; 4. 5. Ensure mitigation measures are properly implemented; 6. 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.	1. Take immediate action to avoid further exceedance; 2. Submit proposal of mitigation measures to SOR within 3 working days of notification and discuss with ET, IEC and SOR; 3. Implement the agreed mitigation measures; 4. Resubmit proposals of mitigation measures if problem still not under control; 5. As directed by the Supervising Officer, to slow down or to stop all or part of the construction activities until no exceedance of Limit level.

Appendix L4 Implementation of Event-Action Plan for Dolphin Monitoring

Event	ET Leader	IEC	SOR	Contractor
Action Level	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, 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.	1. Check monitoring data submitted by ET and Contractor; 2. Discuss monitoring results and findings with the ET and the Contractor.	1. Discuss monitoring with the IEC and any other measures proposed by the ET; 2. If SOR is satisfied with the proposal of any other measures, SOR to signify the agreement in writing on the measures to be implemented.	1. Inform the 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 SOR; 3. Implement the agreed measures.

Event	ET Leader	IEC	SOR	Contractor
Limit Level	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.	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.	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.	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.

Appendix L5 Event and Action Plan on Dolphin Acoustic Behaviour

EVENT	ACTION			
	ET Leader	**IEC**	**SO**	**Contractor**
Action Level				
With the numerical values presented in *Table 5.7* of *Baseline Monitoring Report*, when any of the response variable for dolphin acoustic behaviour recorded in the construction phase monitoring is 20% lower or higher than that recorded in the baseline monitoring (see *Table 5.8* of *Baseline Monitoring Report*), or when there is a difference of 20% in dolphin acoustic signal detection at nighttime period at Site C1 only, the action level should be triggered	1. Repeat statistical data analysis to confirm findings; 2. Review all available and relevant data to ascertain if differences are as a result of natural variation or seasonal differences; 3. Identify source(s) of impact; 4. Inform the IEC, SO and Contractor; 5. Check monitoring data; 6. Carry out audit to ensure all dolphin protective measures are implemented fully and additional measures be proposed if necessary	1. Check monitoring data submitted by ET and Contractor; 2. Discuss monitoring with the ET and the Contractor;	1. Discuss with the IEC the repeat monitoring and any other measures proposed by the ET; 2. Make agreement on measures to be implemented.	1. Inform the SO 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 SO; 3. Implement the agreed measures.

EVENT	ACTION			
	ET Leader	IEC	SO	Contractor
Limit Level				
With the numerical values presented in Table 5.7 of *Baseline Monitoring Report*, when any of the response variable for dolphin acoustic behaviour recorded in the construction phase monitoring is 40% lower or higher than that recorded in the baseline monitoring (see Table 5.8 of *Baseline Monitoring Report*), or when there is a difference of 40% in dolphin acoustic signal detection at nighttime at Site C1 only, the limit level should be triggered	1. Repeat statistical data analysis to confirm findings; 2. Review all available and relevant data to ascertain if differences are as a result of natural variation or seasonal differences; 3. Identify source(s) of impact; 4. Inform the IEC, SO and Contractor; 5. Check monitoring data; 6. Carry out audit to ensure all dolphin protective measures are implemented fully and additional measures be proposed if necessary 7. Discuss additional dolphin monitoring and any other potential mitigation measures (eg consider to temporarily stop relevant portion of construction activity) with the IEC and Contractor.	1. Check monitoring data submitted by ET and Contractor; 2. Discuss monitoring with the ET and the Contractor; 3. Review proposals for additional monitoring and any other measures submitted by the Contractor and advise ER accordingly.	1. Discuss with the IEC the repeat monitoring and any other measures proposed by the ET; 2. Make agreement on measures to be implemented.	1. Inform the SO 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 SO; 3. Implement the agreed measures.

Abbreviations: ET – Environmental Team, IEC – Independent Environmental Checker, SO – Supervising Office, DEP – Director of Environmental Protection

Appendix M

Monthly Summary of Waste Flow Table

Contract No. : HY/2012/07
Tuen Mun Chek Lap Kok Link – Southern Connection Viaduct Section
Monthly Summary Waste Flow Table for 2015 (Year)

Month\Material	Actual Quantities of Inert C&D Materials Generation						Actual Quantities of C&D wastes Generation					Actual Quantities of Recyclables Generation			
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fills	Imported Fill	Marine Sediment, Cat. L	Marine Sediment, Cat. Mp	Marine Sediment, Cat. Mf	Chemical Waste	General Refuse	Metals	Felled trees	Paper/ cardboard packaging	Plastics
Unit	('000m^3)	('000m^3)	('000m^3)	('000m^3)	('000m^3)	('000m^3)	('000m^3)	('000m^3)	('000m^3)	('000Kg)	('000Kg)	('000Kg)	('000Kg)	('000Kg)	('000Kg)
Jan	13.578	0.081	0.990	-	12.474	0.115	0.178	0.229	0.258	-	132.170	-	-	0.091	-
Feb	6.194	0.148	0.436	-	5.759	-	0.801	0.110	0.223	0.400	141.020	-	-	0.112	-
Mar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Apr	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
May	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jun	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SUB-TOTAL	**19.772**	**0.229**	**1.426**	**-**	**18.232**	**0.115**	**0.979**	**0.339**	**0.481**	**0.400**	**273.190**	**-**	**0.000**	**0.203**	**-**
Jul	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aug	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sep	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oct	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nov	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	**19.772**	**0.229**	**1.426**	**-**	**18.232**	**0.115**	**0.979**	**0.339**	**0.481**	**0.400**	**273.190**	**-**	**-**	**0.203**	**-**

Notes :

1 - The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.

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

3 - Broken concrete for recycling into aggregates.

4 - Assumed 5 kg per damaged water-filled barrier.

5 - Disposed as Public Fills includes Hard Rock and Large Broken Concrete.

Appendix N

Cumulative Statistics on Exceedances, Complaints, Notifications of Summons and Successful Prosecutions

Appendix N1 Cumulative Statistics on Exceedances

		Total No. recorded in this reporting month	Total No. recorded since project commencement
1-Hr TSP	Action	0	0
	Limit	0	0
24-Hr TSP	Action	0	2
	Limit	0	0
Noise	Action	0	0
	Limit	0	0
Water Quality	Action	0	1
	Limit	0	0
Impact Dolphin Monitoring	Action	0	7
	Limit	1	1

Appendix N2 Cumulative Statistics on Complaints, Notifications of Summons and Successful Prosecutions

Reporting Period	Cumulative Statistics		
	Complaints	Notifications of Summons	Successful Prosecutions
This Reporting Month (February 2015)	0	0	0
Total No. received since project commencement	2	0	0