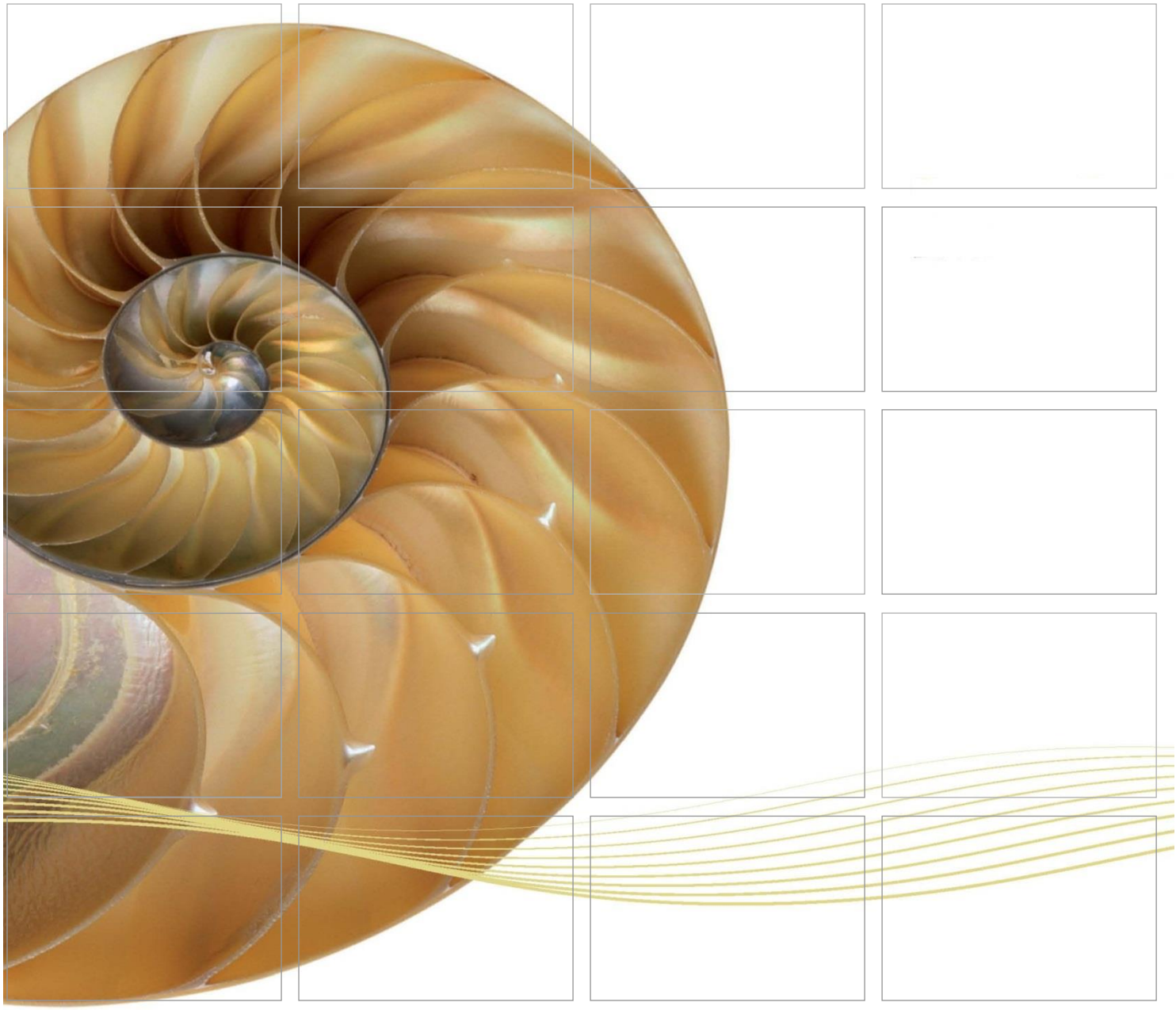
REPORT



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

Thirty-ninth Monthly EM&A Report

09 February 2017

Environmental Resources Management
16/F, Berkshire House
25 Westlands Road
Quarry Bay, Hong Kong
Telephone 2271 3000
Facsimile 2723 5660

www.erm.com

ERM

The business of sustainability

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

Thirty-ninth Monthly EM&A Report

Environmental Resources Management

16/F, Berkshire House
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Quarry Bay, Hong Kong
Telephone: (852) 2271 3000
Facsimile: (852) 2723 5660
E-mail: post.hk@erm.com
http://www.erm.com

Document Code: 0215660_39th Monthly EM&A_20170209.doc

Client: Gammon	Project No: 0215660
Summary: This document presents the Thirty-ninth Monthly EM&A Report for Tuen Mun – Chek Lap Kok Link – Southern Connection Viaduct Section.	Date: 09 February 2017 Approved by: *Mr Craig Reid* *Partner* Certified by: *Mr Jovy Tam* *ET Leader*

Revision	Description	By	Checked	Approved	Date
	Thirty-ninth Monthly EM&A Report	VAR	JT	CAR	09/02/17

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RAMBOLL ENVIRON

Ref.: HYDHZMBEEM00_0_5038L.17 09 February 2017

AECOM By Fax (3691 2899) and By Post
Supervising Officer's Representative's Office
780 Cheung Tung Road, Lantau, N.T.

Attention: Mr. Daniel Ip

Dear Mr. Ip,

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
39th Monthly EM&A Report for January 2017 (EP-354/2009/D)

Reference is made to the Monthly Environmental Monitoring and Audit (EM&A) Report (Jan. 2017) (ET's ref.: "0215660_39th Monthly EM&A_20170209.doc" dated 9 Feb. 2017) certified by the ET Leader and provided to us via e-mail on 9 Feb. 2017.

Please be informed that we have no adverse comments on the captioned monthly EM&A report. We write to verify the captioned submission in accordance with Condition 4.4 of EP-354/2009/D.

Thank you for your 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. Vico Cheung (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)

Internal: DY, YH, ENPO Site

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Ramboll Environ Hong Kong Limited 英環香港有限公司
21/F, BEA Harbour View Centre, 56 Gloucester Road, Wan Chai, Hong Kong Tel: 852.3465 2888 Fax: 852.3465 2899
www.Ramboll-Environ.com

TABLE OF CONTENTS

List of Appendices

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). Ramboll 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*, *EP-354/2009/C* and *EP-354/2009/D*, were granted on 28 January 2014, 10 December 2014 and 13 March 2015, respectively.

The southern landfall of TM-CLK Link lies alongside the Hong Kong - Zhuhai - Macao Bridge Hong Kong Boundary Crossing Facilities (HKBCF) where a reclamation area is constructed by *Contract No. HY/2010/02* under *Environmental Permit No. EP-353/2009/K* and *EP-354/2009/D*. Upon the agreement and confirmation between the Supervising Officer Representatives and Contractors of *HY/2010/02* and *HY/2012/07* in September 2015, part of the reclamation area for southern landfall under *EP-353/2009/K* and *EP-354/2009/D* was handed-over to *Contract No. HY/2012/07*. Another part of the southern landfall area under *EP-354/2009/D* was handed-over to *Contract No. HY/2012/07* after completion of reclamation works by *Contract No. HY/2010/02* in June 2016.

The construction phase of the Contract commenced on 31 October 2013 and will be tentatively 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 Thirty-ninth Monthly EM&A report presenting the EM&A works carried out during the period from 1 to 31 January 2017 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

- Uninstallation of marine piling platform;
- Pier construction;
- Launching gantry operation; and

- Installation of deck segment and pier head segment.

Land-based Works

- Pier construction;
- Re-alignment of Cheung Tung Road;
- Road works along North Lantau Highway;
- Installation of pier head and deck segments; and
- Slope work of Viaducts A, B & C.

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	11 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 quality 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 water quality impact monitoring in the reporting period.

Impact Dolphin Monitoring

During this month of dolphin monitoring, no unacceptable impact from the construction activities of the TM-CLKL Southern Connection Viaduct Section on Indo-Pacific humpback dolphin *Sousa chinensis* (i.e. Chinese White Dolphin) 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, in which 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. No sighting of the Chinese White Dolphin was recorded in January 2017 during the exclusion zone monitoring.

Environmental Complaints, Non-compliance & Summons

There was one (1) complaint received from EPD on 13 January 2017 regarding constructional vessels and silt curtain found within the boundary of Brothers Marine Park in the reporting period. Upon investigation, the complaint is considered not related to this Project.

There was no notification of summons or successful prosecution recorded in the reporting period.

Reporting Change

There was no reporting change in the reporting period.

Upcoming Works for the Next Reporting Period

Works to be undertaken in the next monitoring period of February 2017 include the following:

Marine Works

- Uninstallation of marine piling platform;
- Pier construction;
- Launching gantry operation; and
- Installation of deck segment and pier head segment.

Land-based Works

- Pier construction;
- Re-alignment of Cheung Tung Road;
- Road works along North Lantau Highway;
- Installation of pier head and deck segments; and
- Slope work of Viaducts A, B & C.

F**uture Key Issues**

Potential environmental impacts arising from the above upcoming construction activities in the next reporting month of February 2017 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). Ramboll 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*, *EP-354/2009/C* and *EP-354/2009/D*, were granted on 28 January 2014, 10 December 2014 and 13 March 2015, respectively.

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southern landfall area under *EP-354/2009/D* was handed-over to *Contract No. HY/2012/07* after completion of reclamation works by *Contract No. HY/2010/02* in June 2016.

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.*

1.2 SCOPE OF REPORT

This is the Thirty-ninth 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 January 2017.

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.

大小磨刀
THE BROTHERS

鹿頸灣
LUK KENG BAY

鹿頸村
Luk Keng Tsuen

陰仔灣
YAM TSAI WAN

欣澳灣
YAN O WAN

陰仔
Yam Tsai

打棚埔
Ta Pang Po

欣澳篤
YAN O TUK

Site Office WA5

匙羹洲
TSZ KAN CHAU

東葉坑
Tung Yip Hang

深水角
Sham Shui Kok

四白坳
SZE PAK AU

犁壁山
LAI PIK SHAN

三白坳
SAM PAK AU

大輋峒
TAI CHE TUNG

濾水廠
Water Treatment Works

污水處理廠
Sewage Treatment Works

小蠔灣
SIU HO WAN

三白
Sam Pak

三白灣
SAM PAK WAN

牛頭灣
NGAU TAU WAN

鐵路車廠
Railway Depot

二白坳
YI PAK AU

時峰
Neo Horizon

尚堤
Chianti

津堤
Amalfi

海澄湖畔
Siena

頤峰

大白灣
DISCOVERY BAY
(TAI PAK WAN)

榴花峒
LAU FA TUNG

二白灣
YI PAK WAN

Greenvale Village

明翠台
Parkridge Village

蟹鉗咀
Hai Kam Tsui

蔚陽
Headland Village

愉景灣
Discovery Bay

老虎頭
LO FU TAU

碧濤

畔峰
Midvale Village

Beach Village

大白咀
Tai Pak Tsui

菜園灣
TSOI YUEN WAN

海堤居
La Costa

寶峰
Parkvale Village

大蠔灣
TAI HO WAN

白芒
Pak Mong

大蠔

海蝶居
La Vista

Hillgrove Village

海鄰居
La Serene

N

Kilometers
0 0.5 1

Key
Site Boundary

Figure 1.1

General Layout Plan of the Project

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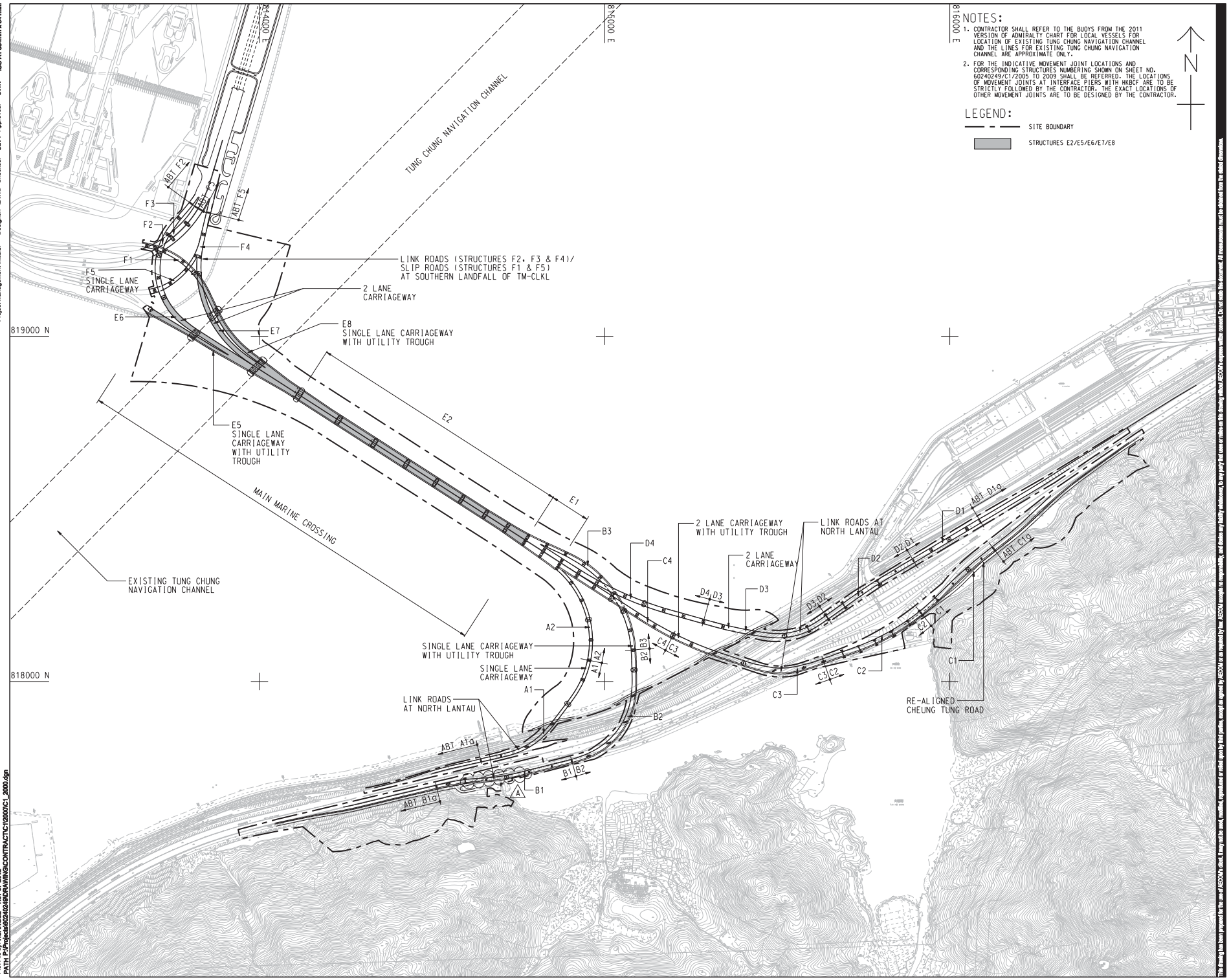
Environmental Resources Management

ERM



AECOM

PROJECT
TUEN MUN - CHEK LAP KOK LINK

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

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

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

Figure 1.2a

ISSUE/REVISION

IR	DATE	DESCRIPTION	CHK.
A	NOV. 12	TENDER ADDENDUM NO. 1	CWN
-	OCT. 12	TENDER DRAWING	CWN

STATUS

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KEY PLAN

PROJECT NO.: 60240249
CONTRACT NO.: HY/2012/07

SHEET TITLE
SOUTHERN CONNECTION GENERAL LAYOUT PLAN

SHEET NUMBER
60240249/C1/2000A

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

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

MATCH LINE
FOR CONTINUATION
SEE DRG J3518/P/OAP/04/01101

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C	SUBMISSION	RC	09/13				

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Client: 路政署 HIGHWAYS DEPARTMENT, 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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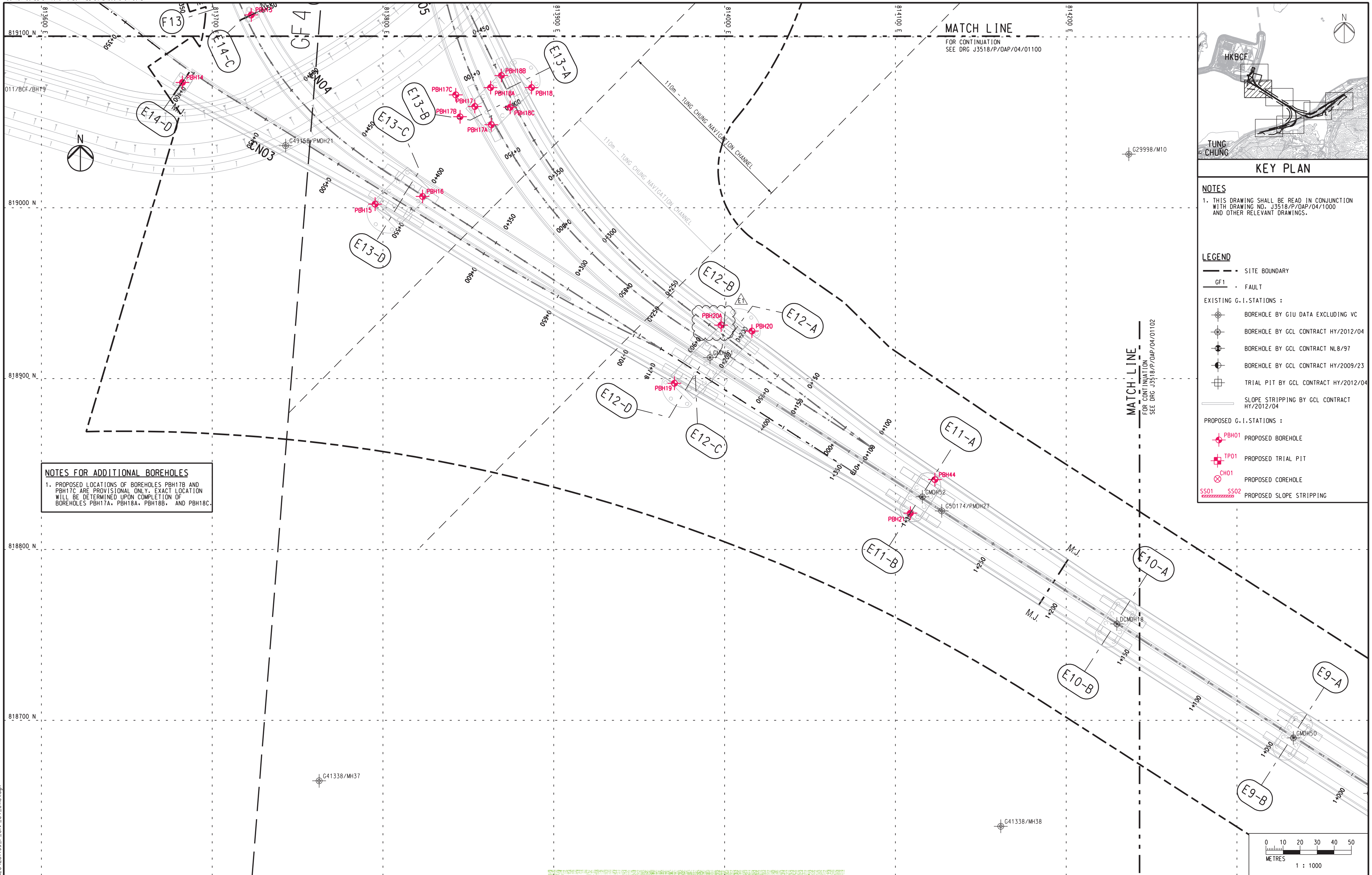

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Client: 路政署 HIGHWAYS DEPARTMENT
港珠澳大橋香港工程管理處
Hong Kong - Zhuhai - Macao Bridge
Hong Kong Project Management Office

Supervising Officer: AECOM

Contractor: Gammon

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

Originator: ARUP

Drawing title
Figure 1.2c

Drawing no. J3518/P/OAP/04/01101 Rev. E1

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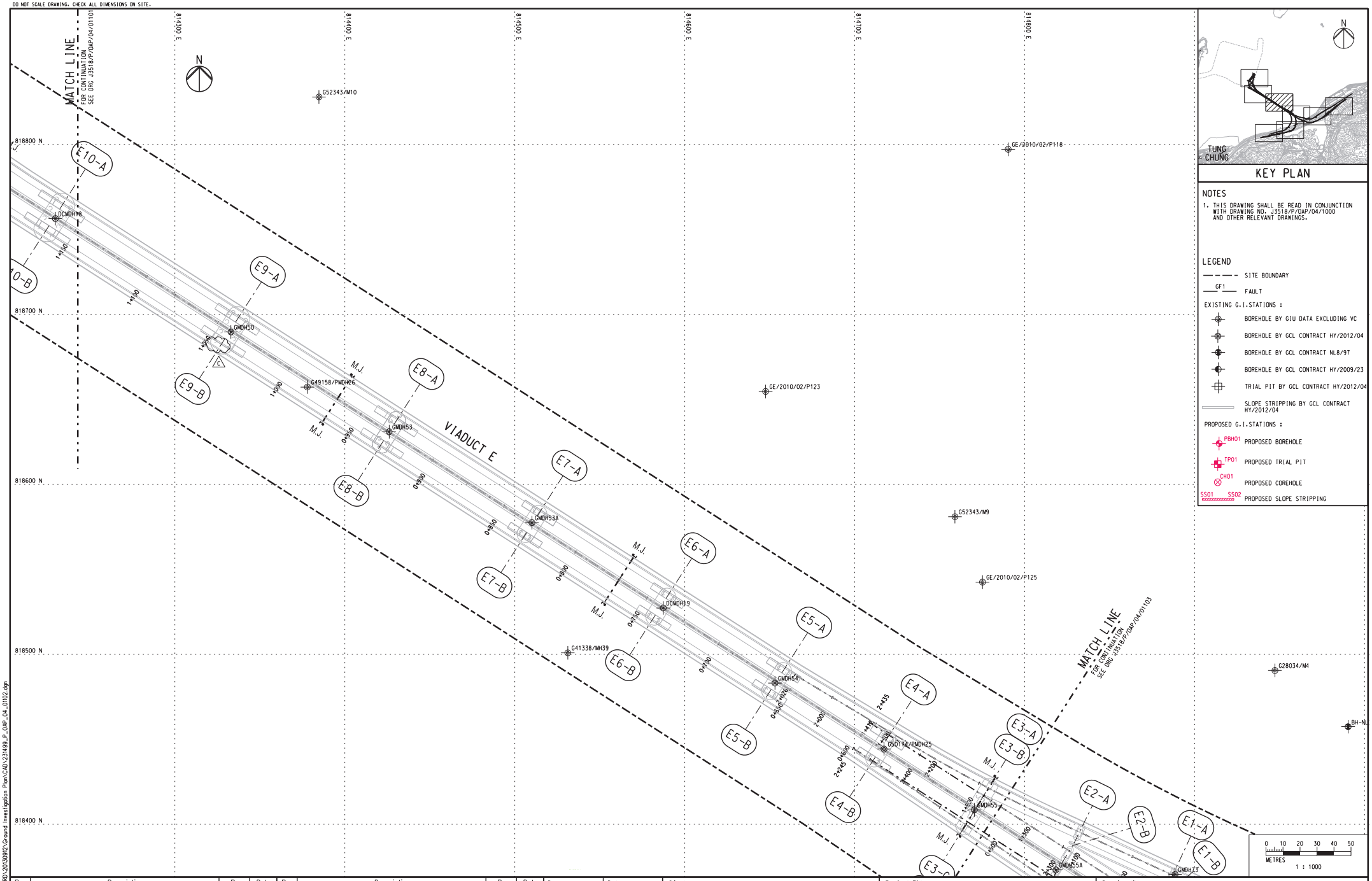

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Project Title: Contract No. HY/2012/07
Tuen Mun - Chek Lap Kok Link
Southern Connection Viaduct Section

Supervising Officer: AECOM
Contractor: Gammon
Originator: ARUP

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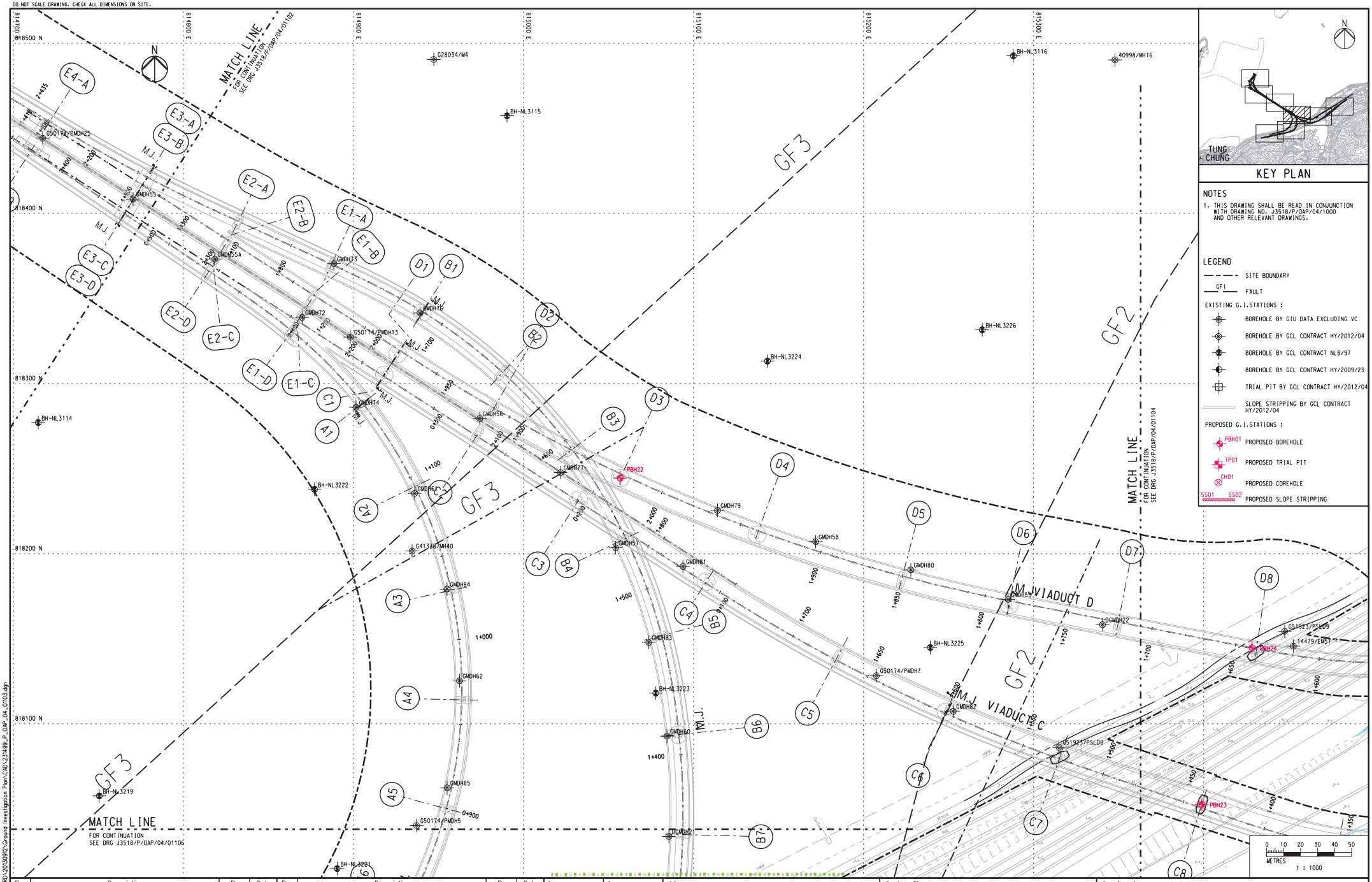

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Client: 路政署 HIGHWAYS DEPARTMENT 港珠澳大橋香港工程管理處 Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office

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 1.2e**

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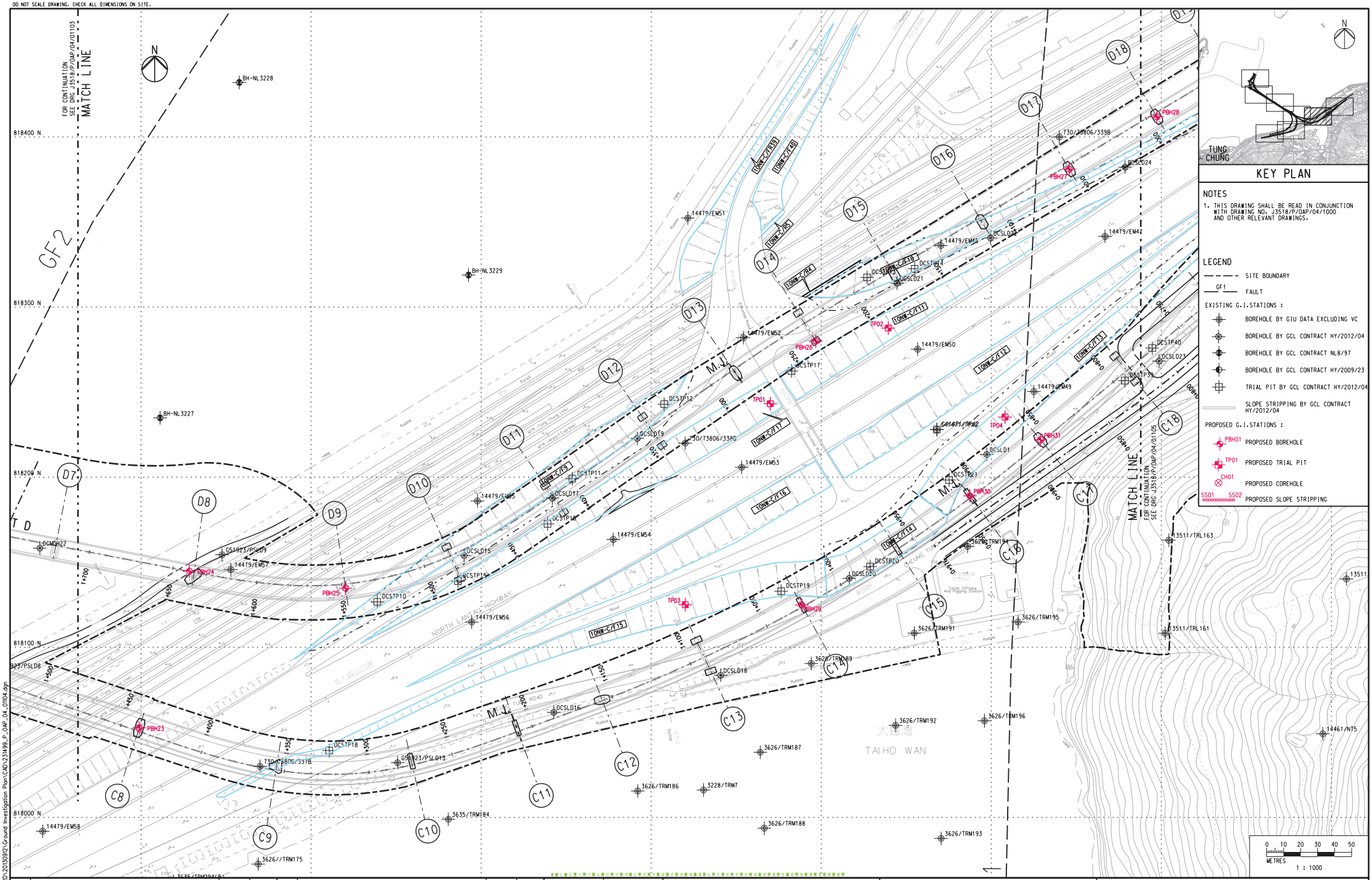

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Project Title: Contract No. HY/2012/07 Tuen Mun - Chek Lap Kok Link Southern Connection Viaduct Section

Supervising Officer: AECOM

Contractor: Gammon

Originator: ARUP

Drawing title: **Figure 1.2f**

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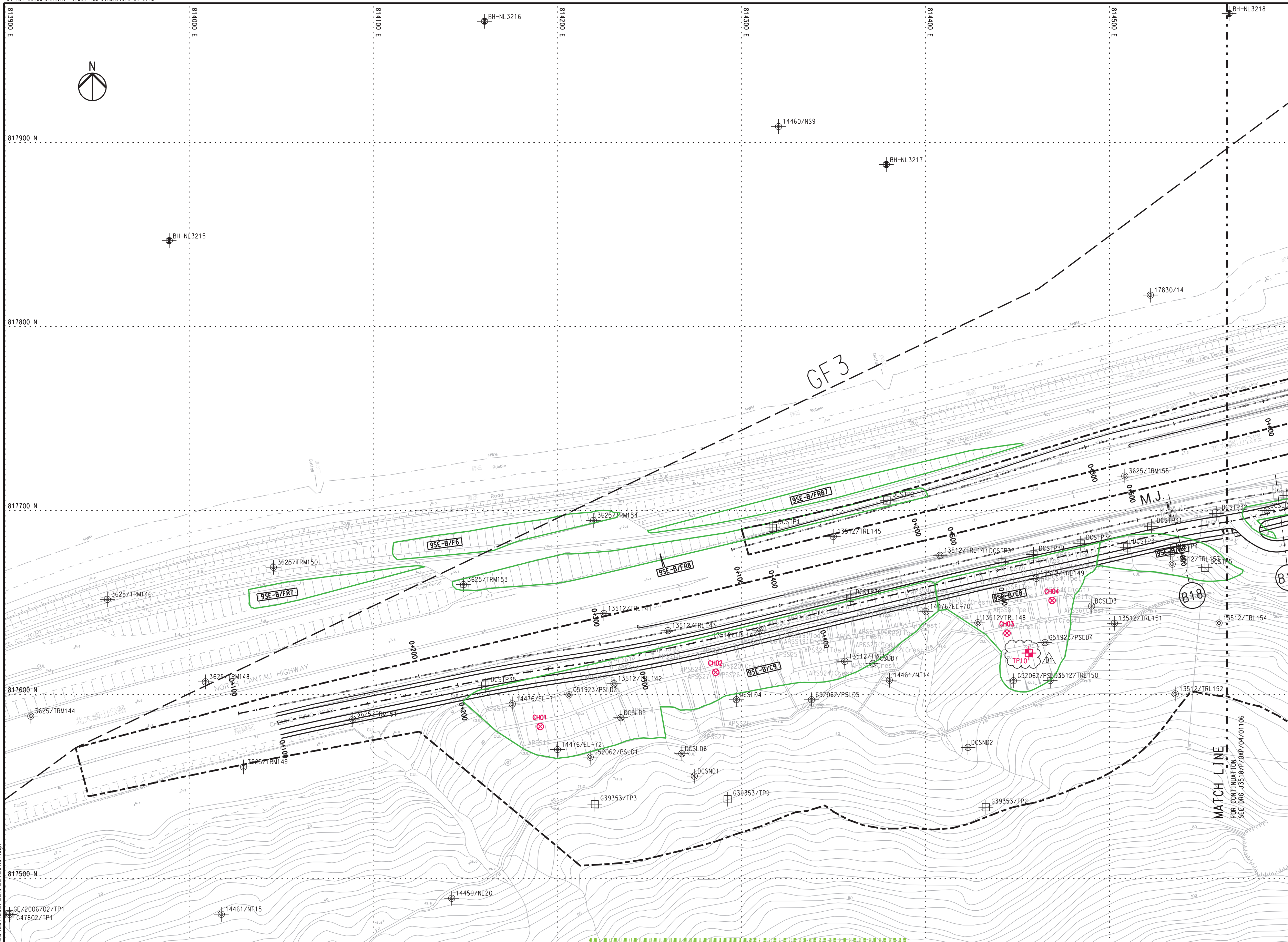

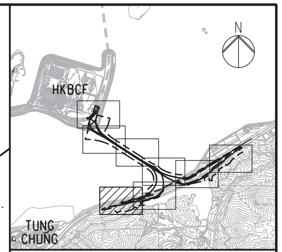

KEY PLAN

NOTES

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  - BOREHOLE BY GCL CONTRACT HY/2012/04
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  - BOREHOLE BY GCL CONTRACT HY/2009/23
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  - SLOPE STRIPPING BY GCL CONTRACT HY/2012/04
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  - TP01 PROPOSED TRIAL PIT
  - CH01 PROPOSED COREHOLE
  - SS01 SS02 PROPOSED SLOPE STRIPPING

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B	SUBMISSION	RC	07/13				
C	SUBMISSION	RC	09/13				
D1	FOR INTERNAL REVIEW	RC	11/13				

Drawn: RL	Date: 07/13
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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 1.2g

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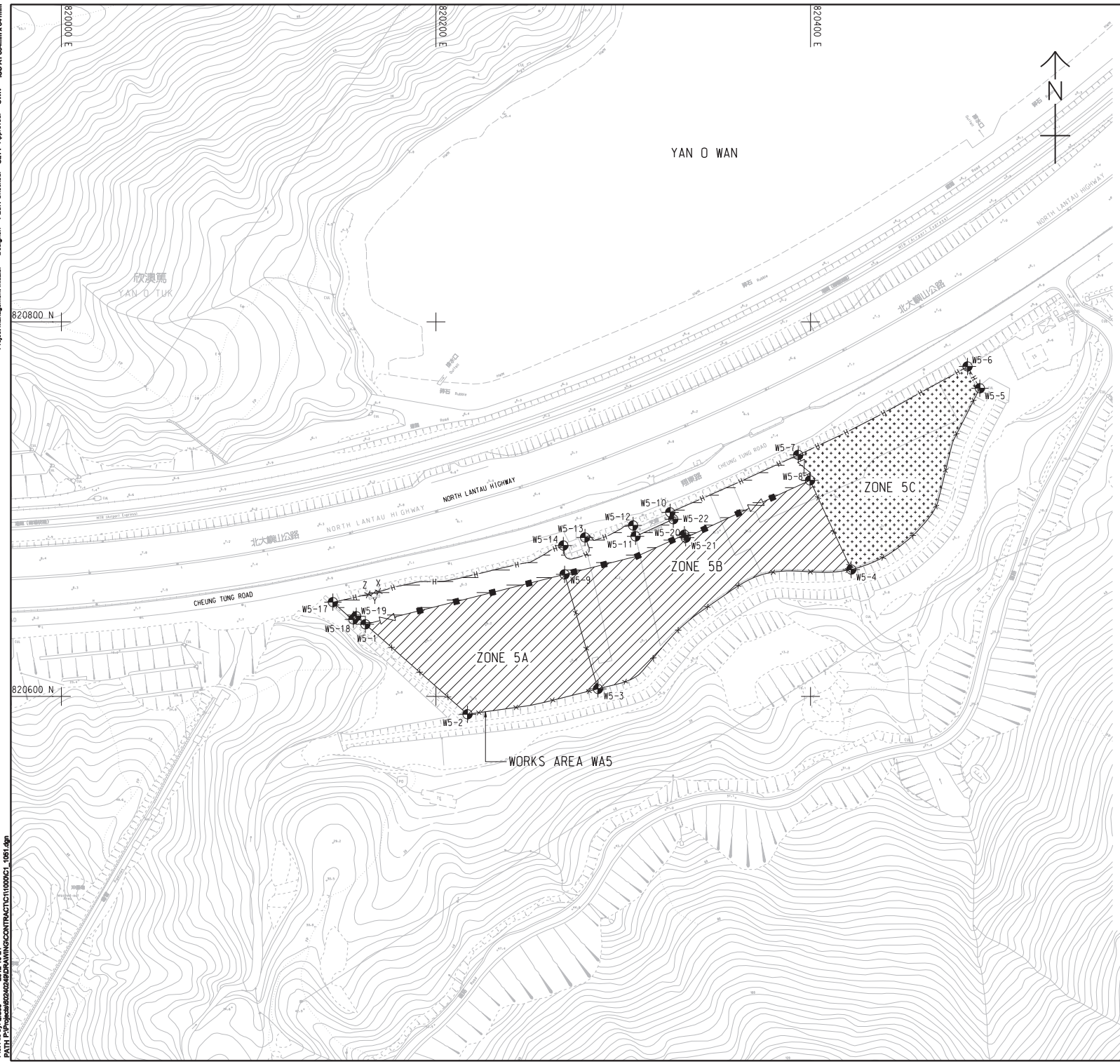

NOTES:

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. 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
TUEN MUN - CHEK LAP KOK LINK

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

CLIENT
HIGHWAYS DEPARTMENT
路政署
Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

VR	DATE	DESCRIPTION	CHK.
-	OCT. 12	TENDER DRAWING	CWN

STATUS

SCALE: A1 1 : 1000
DIMENSION UNIT: METRES

KEY PLAN

Figure 1.2h

PROJECT NO.: 60240249
CONTRACT NO.: HY/2012/07

SHEET TITLE
WORKS AREA AND HOARDING PLAN

SHEET 1 OF 2

SHEET NUMBER
60240249/C1/1051

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

Plot File by: LIUJ3 2012-10-24
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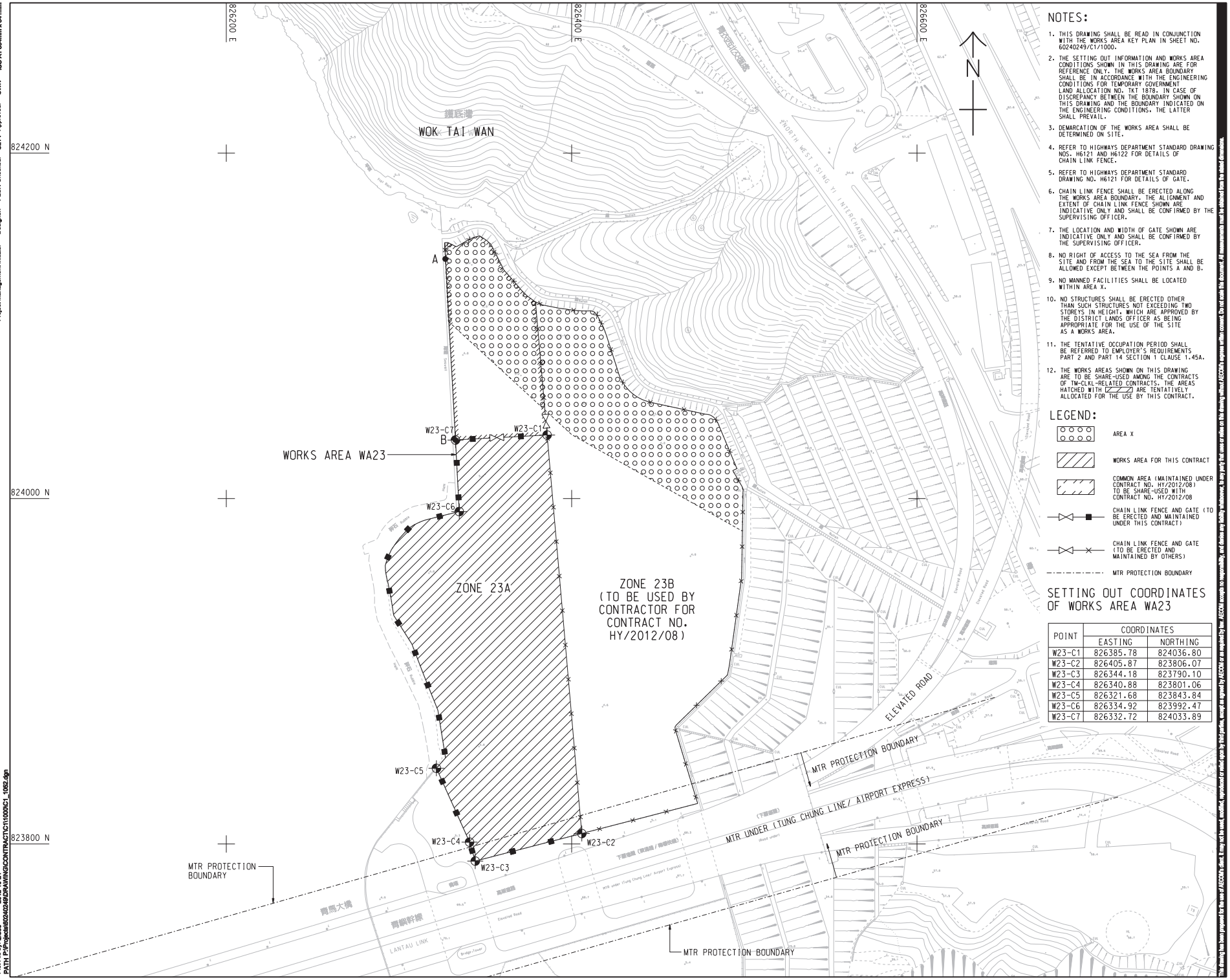


NOTES:

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. 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
TUEN MUN - CHEK LAP KOK LINK

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

CLIENT
HIGHWAYS DEPARTMENT
Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

ISSUE/REVISION

VR	DATE	DESCRIPTION	CHK.
-	OCT. 12	TENDER DRAWING	CWN

STATUS

SCALE: A1 1 : 1000
DIMENSION UNIT: METRES

KEY PLAN

Figure 1.2i

PROJECT NO.: 60240249
CONTRACT NO.: HY/2012/07

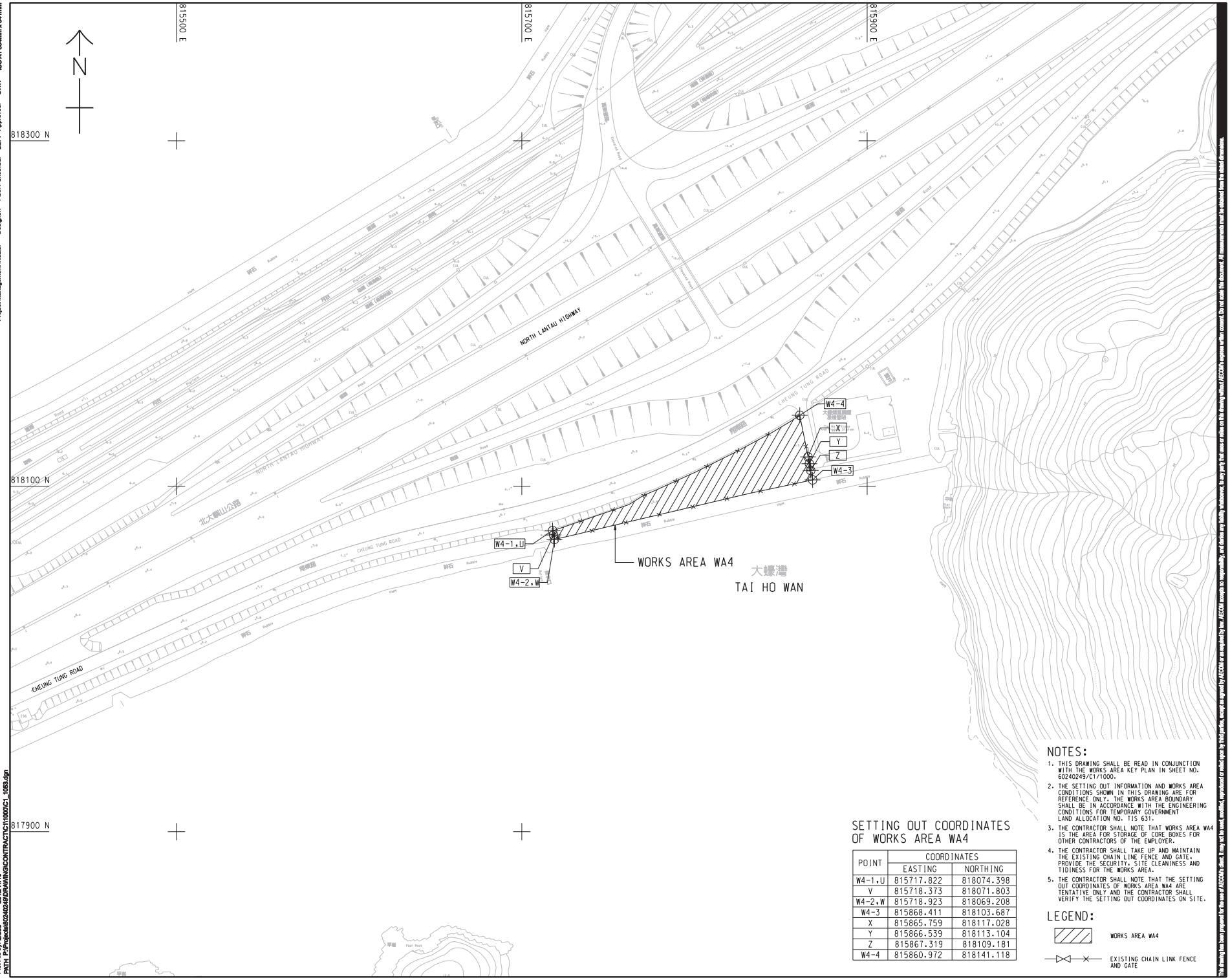
SHEET TITLE
WORKS AREA AND HOARDING PLAN

SHEET 2 OF 2

SHEET NUMBER
60240249/C1/1052

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_1052.dgn



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

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 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.

LEGEND:

WORKS AREA WA4

EXISTING CHAIN LINK FENCE AND GATE

AECOM

PROJECT
TUEN MUN - CHEK LAP KOK LINK

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

CLIENT
HIGHWAYS DEPARTMENT
Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office

CONSULTANT
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Figure 1.2j

ISSUE/REVISION

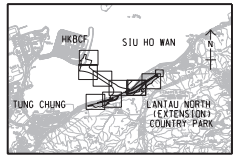
VR	DATE	DESCRIPTION	CHK.
-	NOV. 12	TENDER ADDENDUM NO. 1	CWN

STATUS

SCALE: A1 1 : 1000

DIMENSION UNIT: METRES

KEY PLAN



PROJECT NO.: 60240249

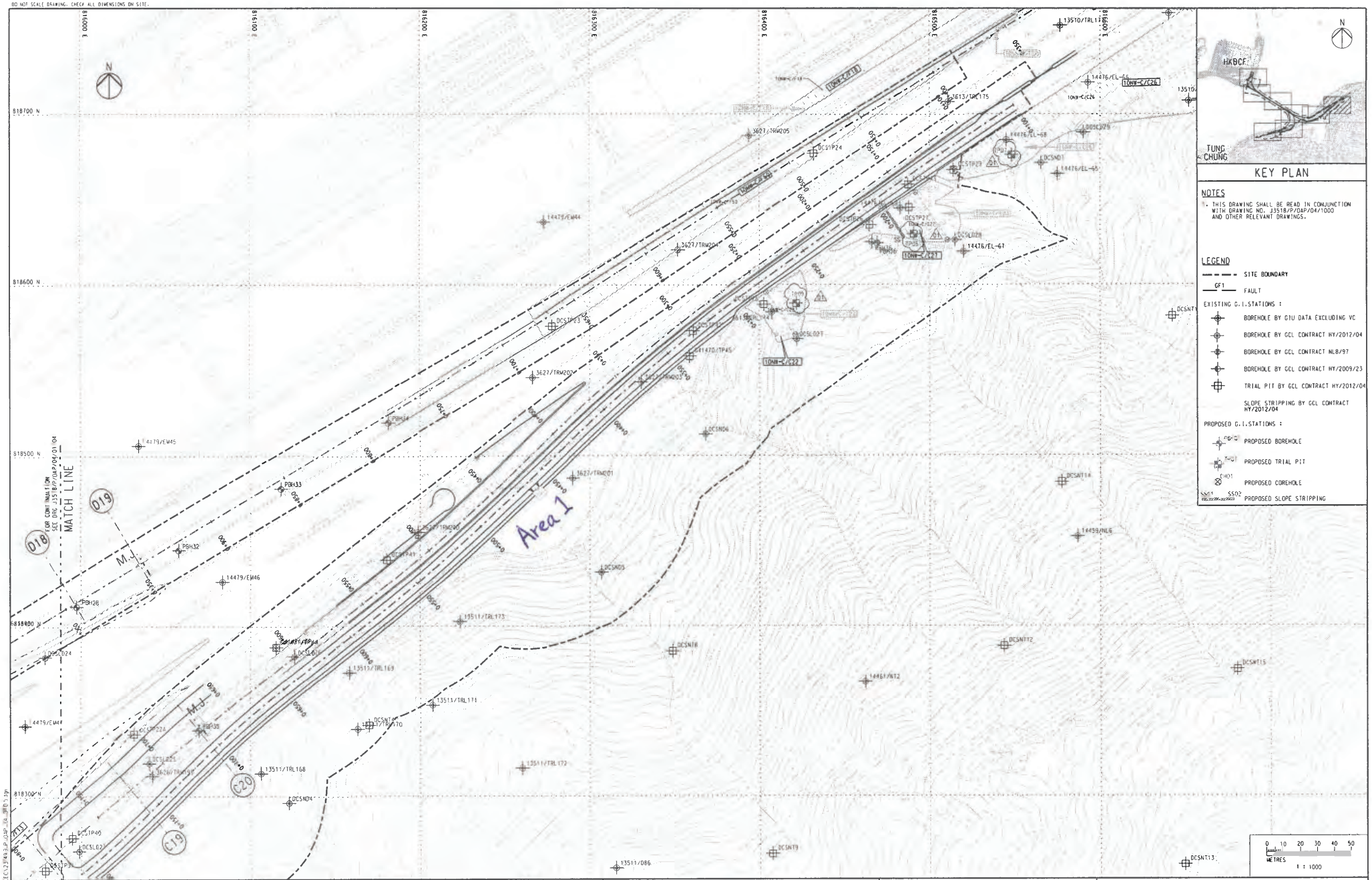
CONTRACT NO.: HY/2012/07

SHEET TITLE
WORKS AREA WA4

SHEET NUMBER
60240249/C1/1053

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

Plot File by: LIUJ3 2012/11/16
PATH: P:\Projects\60240249\DRAWING\CONTRACT\C1\1000\C1_1053.dgn



Rev.	Description	By	Date	Rev.	Description	By	Date
A	[illegible]	RL	07/13				
B	[illegible]	RL	07/13				
C	[illegible]	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

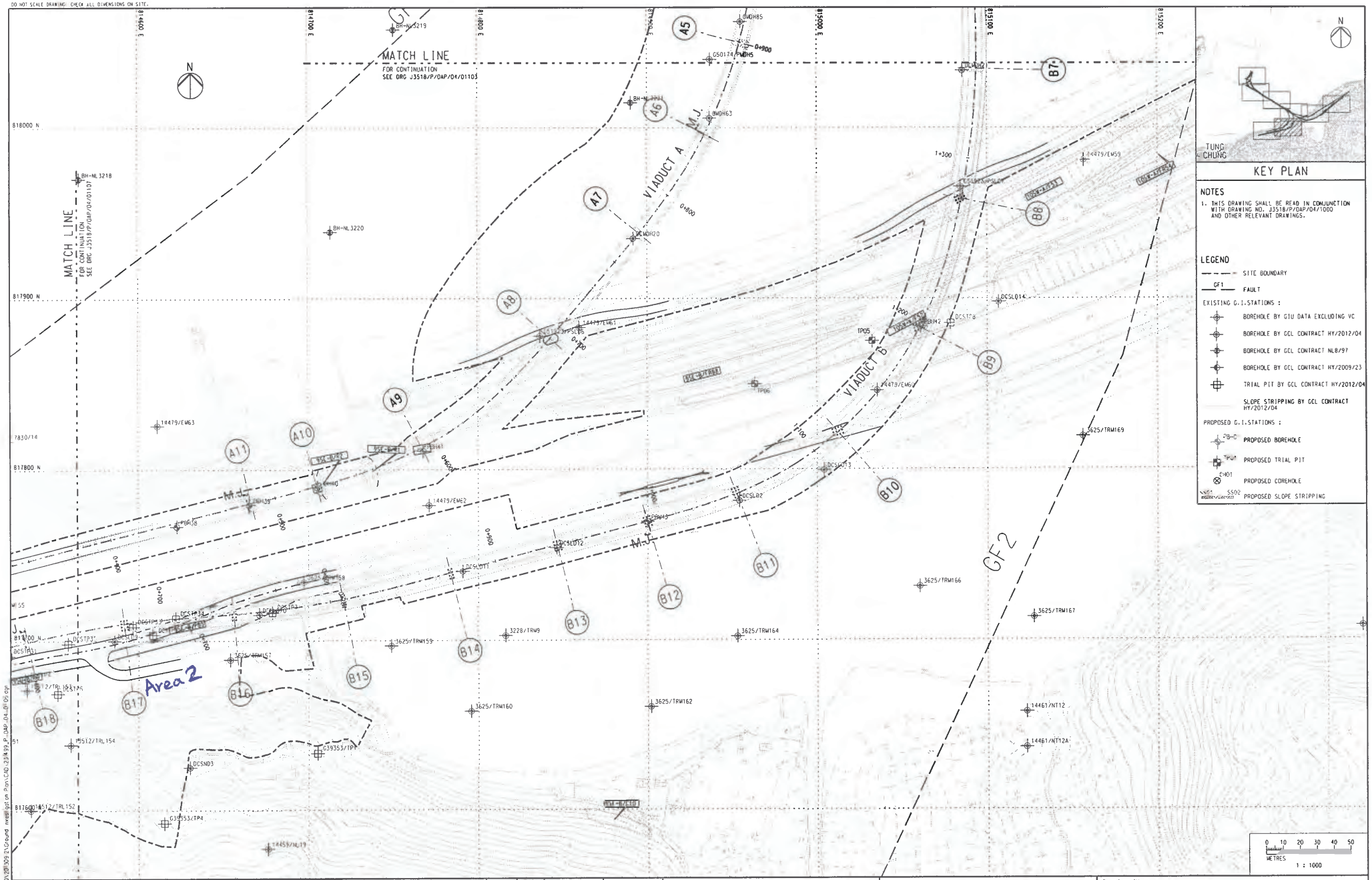
Supervising Officer: AECOM

Contractor: Gammon

Originator: ARUP

Drawing title: **Figure 1.2k**

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



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

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 1.2I**

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

Plotted by [illegible] on 19/07/2013
J:\3518\P\OAP\04\01106 21\Ground investigation Plan\CAD\3518P_OAP_04_01106.dgn

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 (Ramboll Environ Hong Kong Ltd.)	ENPO Leader	Y.H. Hui	3465 2850	3465 2899
	IEC	Dr. F.C. Tsang	3465 2851	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

- Uninstallation of marine piling platform;
- Pier construction;
- Launching gantry operation; and
- Installation of deck segment and pier head segment.

Land-based Works

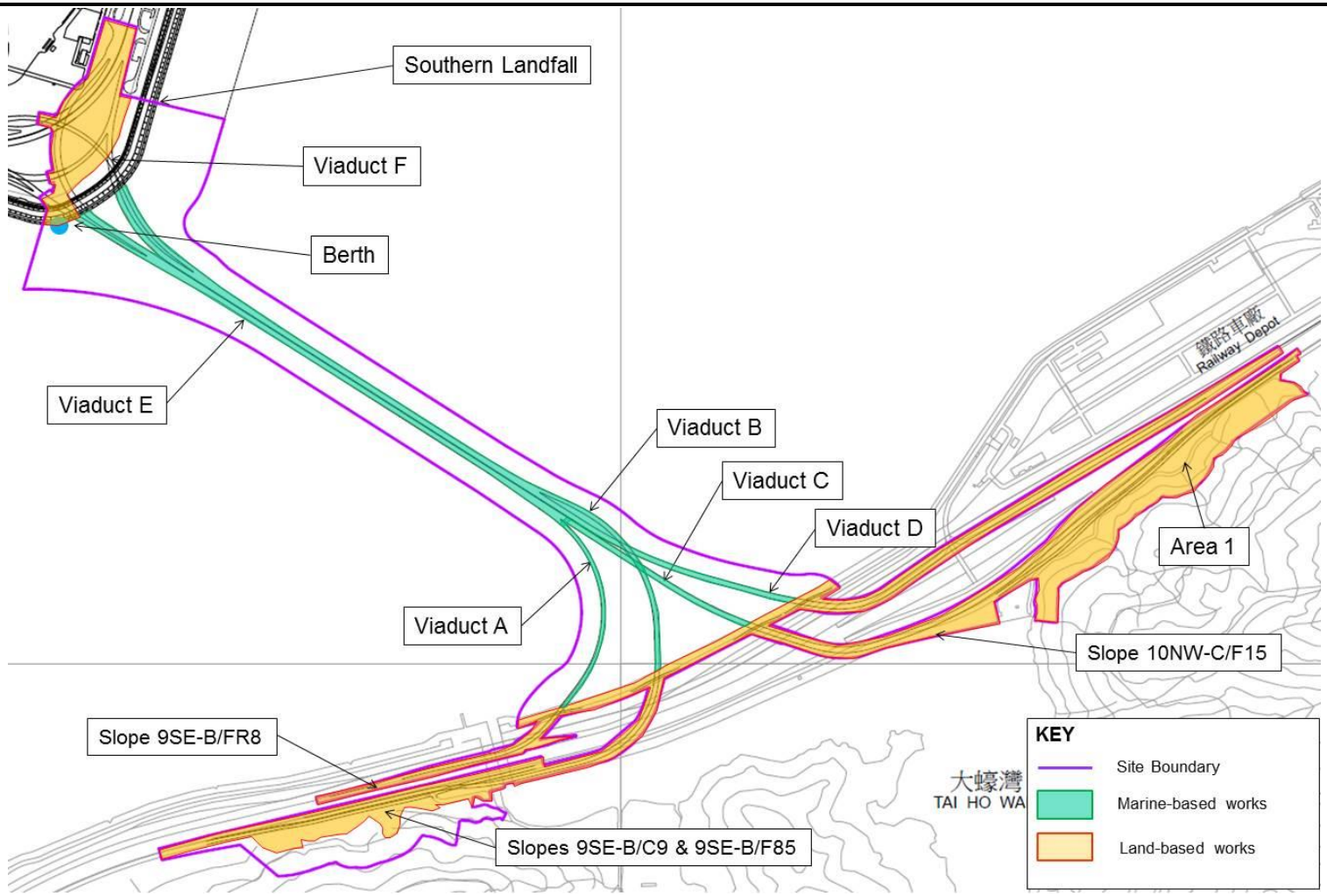
- Pier construction;
- Re-alignment of Cheung Tung Road;
- Road works along North Lantau Highway;

- Installation of pier head and deck segments; and
- Slope work of Viaducts A, B & C.

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 is presented in *Appendix C*.

Figure 1.3 Locations of Major Construction Activities in the Reporting Month



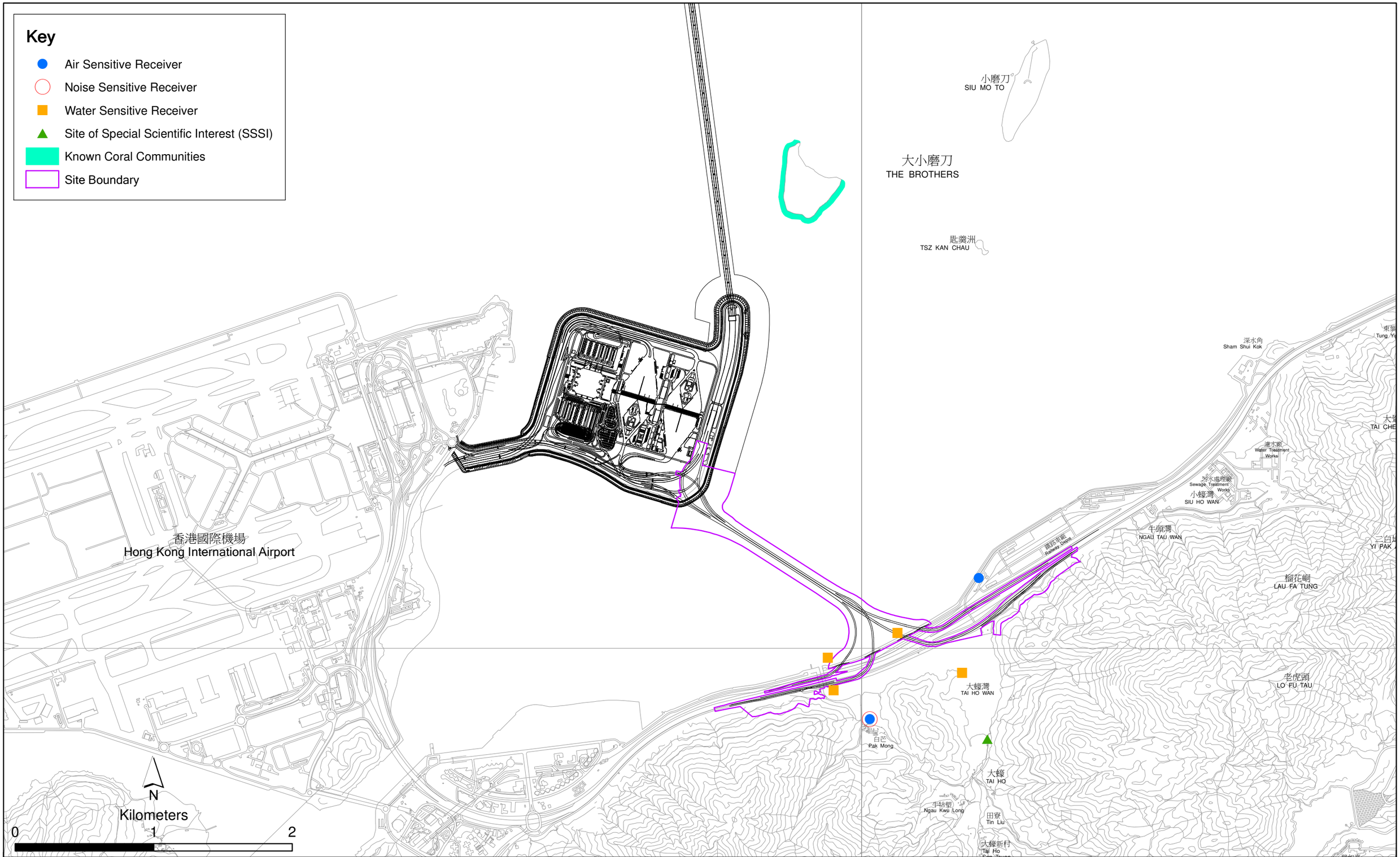


Figure 1.4

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: 18/5/2015

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, 18, 24 and 27 January 2017
ASR 8A	Area 4	On ground at the works area, Area 4	3, 9, 12, 18, 24 and 27 January 2017

High Volume Samplers (HVSs) were used for carried out 1-hour and 24-hour TSP monitoring on 3, 9, 12, 18, 24 and 27 January 2017 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*.

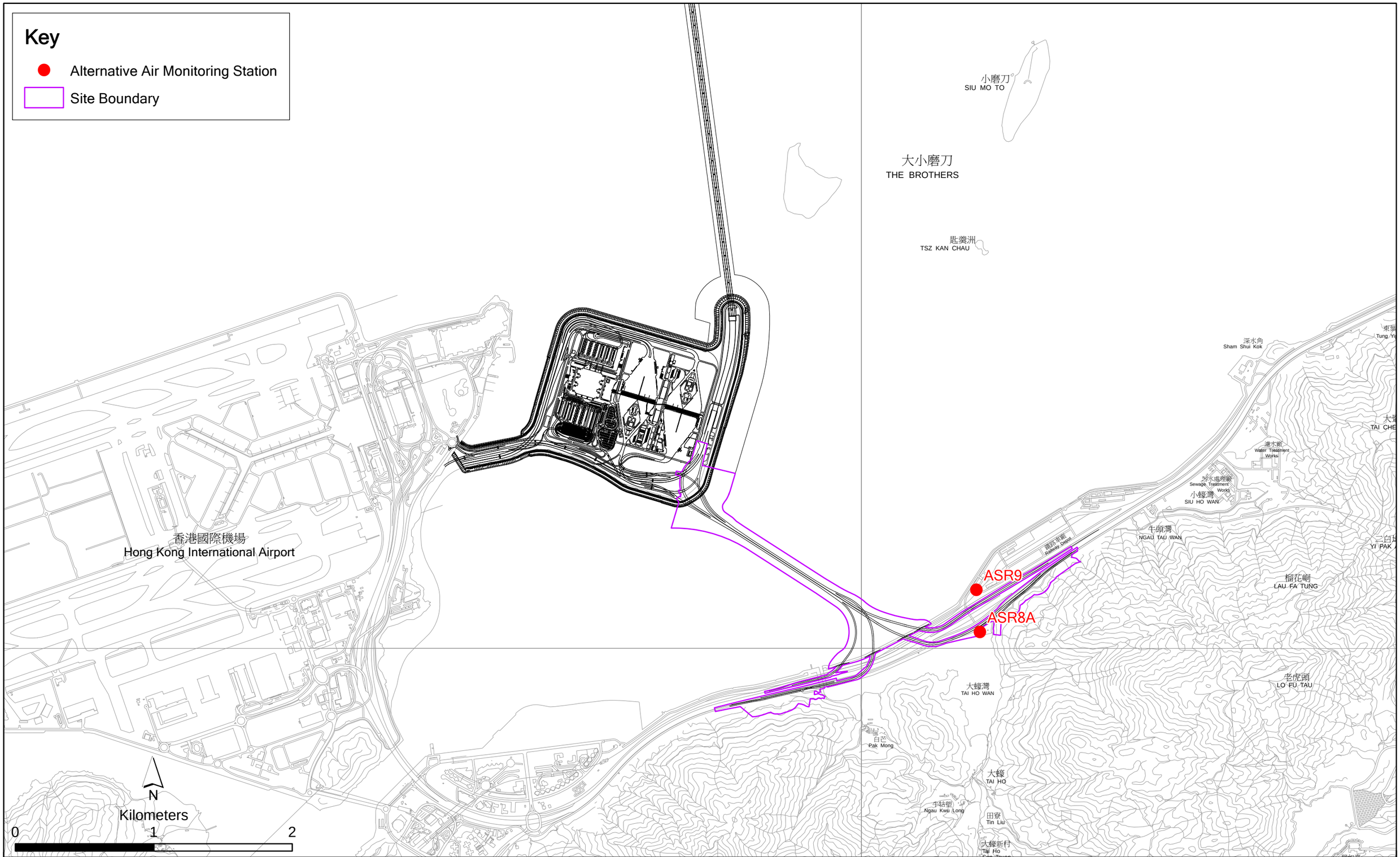


Figure 2.1

Locations of Air Quality Monitoring Stations

File: T:\GIS\CONTRACT\0215660\Mxd\0215660_AQMS.mxd
Date: 7/1/2015

Environmental Resources Management

ERM

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 January 2017 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	107	58-160	394	500
ASR 9	165	77-245	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	62	50-81	178	260
ASR 9	85	72-96	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*.

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, 18, 24 and 27 January 2017 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, 18, 24 and 27 January 2017

Table 2.6 Noise Monitoring Equipment

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

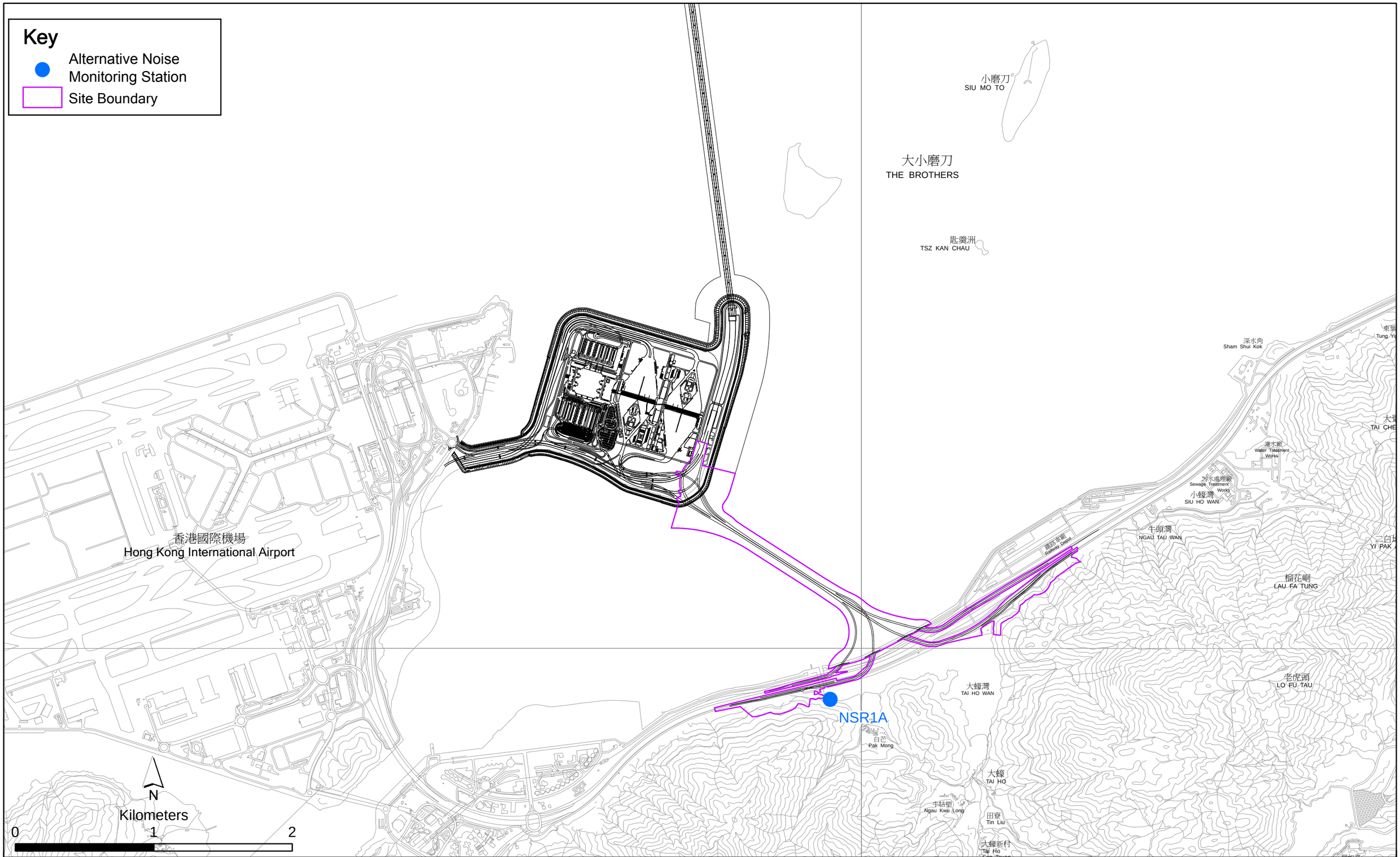


Figure 2.2

Location of Noise Monitoring Station

File: T:\GIS\CONTRACT\0215660\Mxd\0215660_NMS.mxd
Date: 7/1/2015

Environmental Resources Management

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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	59-61	75

No noise Action or 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*.

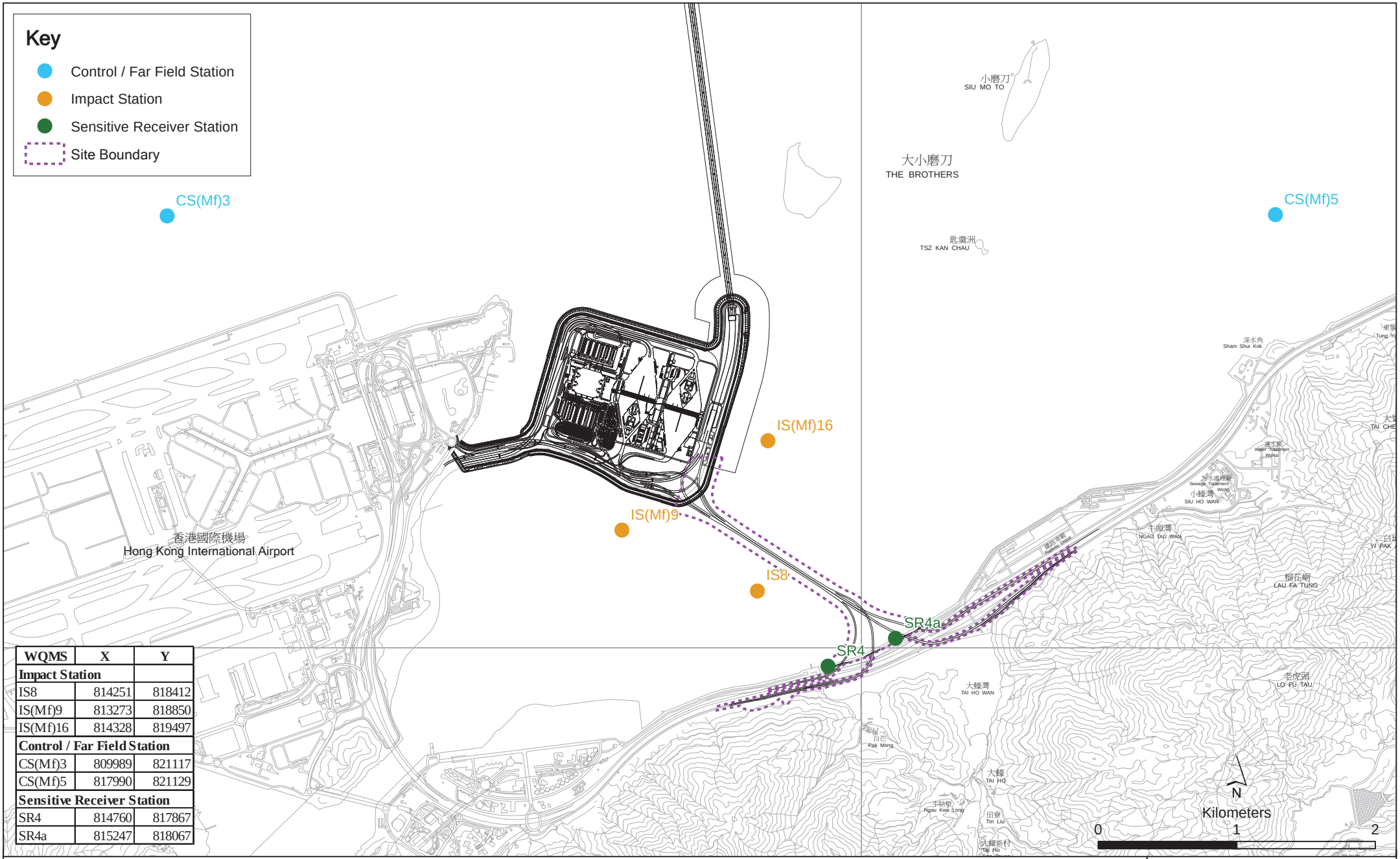
Major noise sources during the noise monitoring included noise from crane operation and excavation works, nearby traffic noise and aircraft noise.

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

File: T:\GIS\CONTRACT\0215660\Mxd\0215660_WQMS.mxd
Date: 6/12/2013

Environmental Resources Management

ERM

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) • Dissolved Oxygen (DO) (mg/L and % of saturation) • Suspended Solid (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 January 2017 is provided in *Appendix F*.

2.3.3 *Results and Observations*

In total of 11 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*. The water quality monitoring on 28 and 31 January 2017 were cancelled due to suspension of marine works.

Neither Action nor 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 Indo-Pacific humpback dolphin *Sousa chinensis* (i.e. Chinese White Dolphin) from the Contract. 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 summarizes 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.

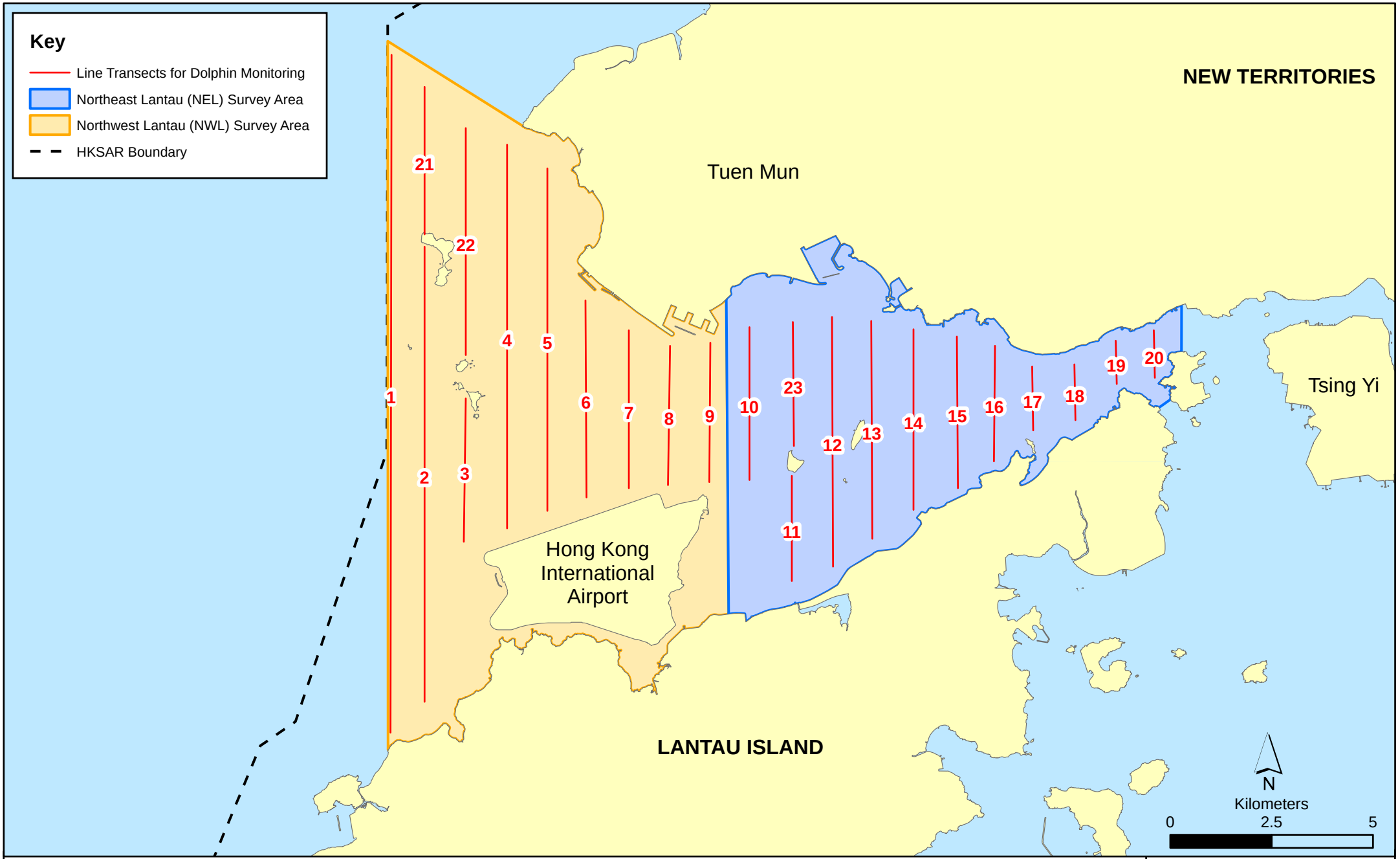


Figure 2.4

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

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Date: 10/12/2013

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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	815456	13	Start Point	816506	819480
1	End Point	804671	831404	13	End Point	816506	824859
2	Start Point	805475	815913	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	820880	19	Start Point	822513	823268
7	End Point	810499	824613	19	End Point	822513	824321
8	Start Point	811508	821123	20	Start Point	823477	823402
8	End Point	811508	824254	20	End Point	823477	824613
9	Start Point	812516	821303	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	818853	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 10, 12, 16 and 20 January 2017 (*Appendix F*).

2.4.7 *Results and Observations*

A total of 294.60 km of survey effort was collected, with 97.7% of the total survey effort being conducted under favourable weather conditions (i.e. Beaufort Sea State 3 or below with good visibility) during the surveys in January 2017. Among the two areas, 112.49 km and 182.11 km of survey effort were collected from NEL and NWL survey areas, respectively. The total survey effort conducted on primary and secondary lines were 211.72 km and 82.88 km, respectively. The survey efforts are summarized in *Appendix K*.

Four (4) groups of 13 Chinese White Dolphins were sighted during the two sets of monitoring surveys in January 2017. All four (4) dolphin sightings were made in NWL, while none was sighted in NEL. During the surveys in January 2017, all four sightings were made on primary lines during on-effort search. None of the dolphin groups was associated with operating fishing vessel and none of the dolphin groups were sighted 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 January 2017 are shown in *Tables 2.12 & 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: Jan 10th / 12th	0.0	0.0
	Set 2: Jan 16th / 20th	0.0	0.0
NWL	Set 1: Jan 10th / 12th	0.0	0.0
	Set 2: Jan 16th / 20th	6.3	20.4

Note: Dolphin Encounter Rates are deduced from the two sets of surveys (two surveys in each set) in January 2017 in Northeast (NEL) and Northwest Lantau (NWL)

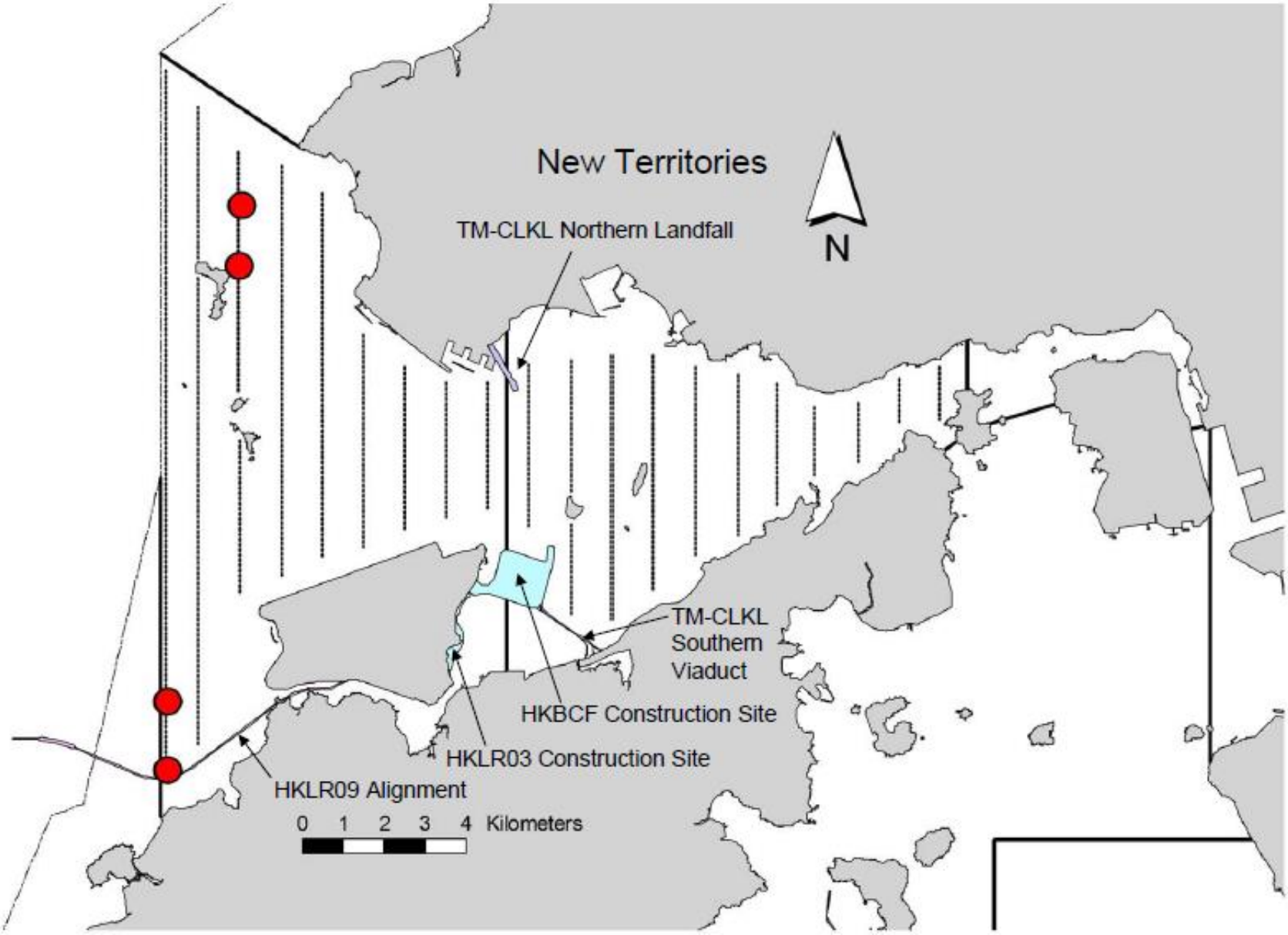

Figure 2.5

Date 7/10/2016

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 January 2017)

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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	3.0	2.3	9.7	7.4

Note: Overall dolphin encounter rates (sightings per 100 km of survey effort) from all four surveys are conducted in January 2017 on primary lines only as well as both primary lines and secondary lines in Northeast and Northwest Lantau

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. 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, in which 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 daytime marine works activities. No sighting of Chinese White Dolphin was recorded in January 2017 during the exclusion zone monitoring.

Passive Acoustic Monitoring (PAM) had been decommissioned as no marine piling works was carried out outside the daylight hours since September 2015.

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, 11, 18 and 26 January 2017.

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
04 January 2017	Viaduct E (E13CD) • Chemical container was not placed in drip tray. Southern Landfall (Portion A) • Chemical container was not placed in drip tray.	Viaduct E (E13CD) • The Contractor was reminded to remove the chemical containers and placed them in drip tray. Southern Landfall (Portion A) • The Contractor was reminded to remove the chemical containers and placed them in drip tray.
11 January 2017	Viaduct B (B16) • Drip tray was not well-plugged to avoid water runoff. • Tidiness should be maintained at site. Viaduct C (C16) • Chemical container was not placed in drip tray.	Viaduct B (B16) • The Contractor was reminded to plug the drip tray. • The Contractor was reminded to keep tidiness at site. Viaduct C (C16) • The Contractor was reminded to remove the chemical containers and placed them in drip tray.
18 January 2017	Viaduct E (E5) • Chemical containers were not placed in drip tray. Southern Landfall (Portion A) • Labelling of Mp sediment should be displayed properly.	Viaduct E (E5) • The Contractor was reminded to remove the chemical containers and placed them in drip tray. Southern Landfall (Portion A) • The Contractor was reminded to display the label properly.
26 January 2017	Viaduct E (E12) • Better housekeeping should be maintained.	Viaduct E (E12) • The Contractor was reminded to keep tidy of the site.

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 and chemical waste. 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)
January 2017	4,118	0	474	99,840	140	3,400	0	0

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/D	13 March 2015	N/A	HyD	Tuen Mun- Chek Lap Kok Link
Environmental Permit	EP-353/2009/K	11 April 2016	N/A	HyD	Hong Kong Boundary Crossing Facilities
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 No. 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 No. 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 No. 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 for night works and works in general holidays	GW-RW0708-16	20 Dec 2016	18 Jun 2017	GCL	General works at WA5
Construction Noise Permit for night works and works in general holidays	GW-RS1045-16	14 Oct 2016	13 Apr 2017	GCL	For Broad Permit
Construction Noise Permit for night works and works in general holidays	GW-RS1309-16	20 Dec 2016	19 Jun 2017	GCL	Broad Permit for Whole Site Areas
Construction Noise Permit for night works and works in general holidays	GW-RS1159-16	24 Nov 2016	28 Feb 2017	GCL	Broad Permit for Segment Launching at Land Portion
Construction Noise Permit for night works and works in general holidays	GW-RS1044-16	14 Oct 2016	13 Apr 2017	GCL	Pre-casted pile cap shell installation at E8-E13
Marine Dumping Permit	EP-MD-17-154	01 Jan 2017	31 Jan 2017	GCL	For dumping Type I (Dedicated Site) and Type II sediment
Marine Dumping Permit	EP-MD-17-153	01 Jan 2017	30 Jun 2017	GCL	For dumping Type I 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.

The landscape and visual (L&V) mitigation measures were also monitored on weekly basis in the reporting period. The monitoring status is summarized in *Appendix C*.

2.9 SUMMARY OF EXCEEDANCES OF THE ENVIRONMENTAL QUALITY PERFORMANCE LIMIT

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

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*.

There was one (1) complaint received from EPD on 13 January 2017 regarding constructional vessels and silt curtain found within the boundary of Brothers Marine Park in the reporting period. Upon investigation, the complaint is considered not related to this Project. Detailed investigation report is presented in *Appendix N*.

There was no notification of summons or successful prosecution recorded in the reporting period.

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

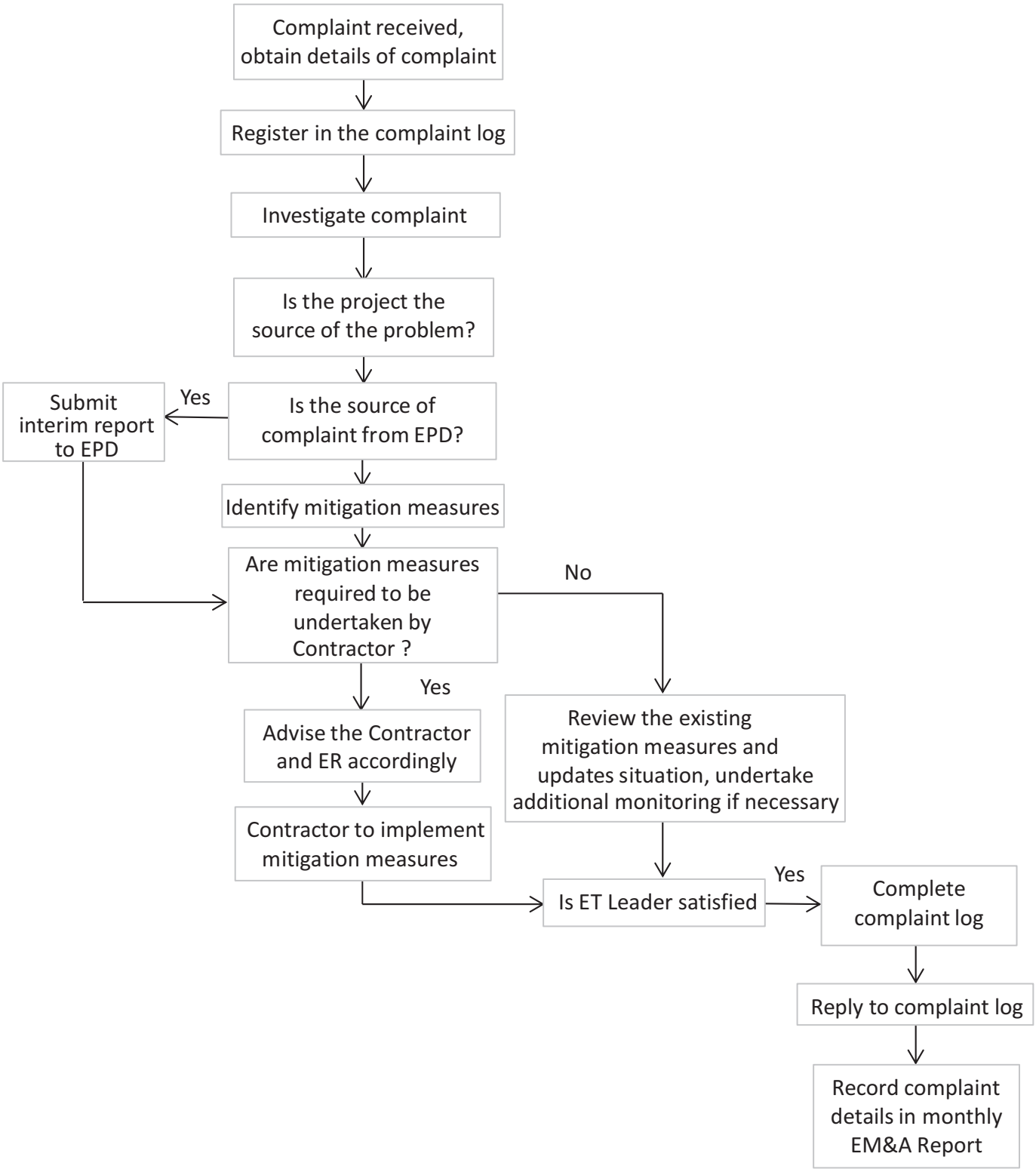

Figure 2.6 Environmental Complaint Handling Procedure

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3 FUTURE KEY ISSUES

3.1 CONSTRUCTION PROGRAMME FOR THE COMING MONTH

As informed by the Contractor, the major works for this Contract in February 2017 will be:

Marine Works

- Uninstallation of marine piling platform;
- Pier construction;
- Launching gantry operation; and
- Installation of deck segment and pier head segment.

Land-based Works

- Pier construction;
- Re-alignment of Cheung Tung Road;
- Road works along North Lantau Highway;
- Installation of pier head and deck segments; and
- Slope work of Viaducts A, B & C.

3.2 KEY ISSUES FOR THE COMING MONTH

Potential environmental impacts arising from the above upcoming construction activities in the next reporting month of February 2017 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 February 2017 are provided in *Appendix F*.

4 CONCLUSIONS AND RECOMMENDATIONS

4.1 CONCLUSIONS

This Thirty-ninth Monthly EM&A Report presents the findings of the EM&A activities undertaken during the period from 1 to 31 January 2017 in accordance with the Updated EM&A Manual and the requirements of the Environmental Permits (*EP-354/2009/D* and *EP-353/2009/K*).

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

Four (4) groups of 13 Chinese White Dolphins were sighted during the two sets of monitoring surveys in January 2017. 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.

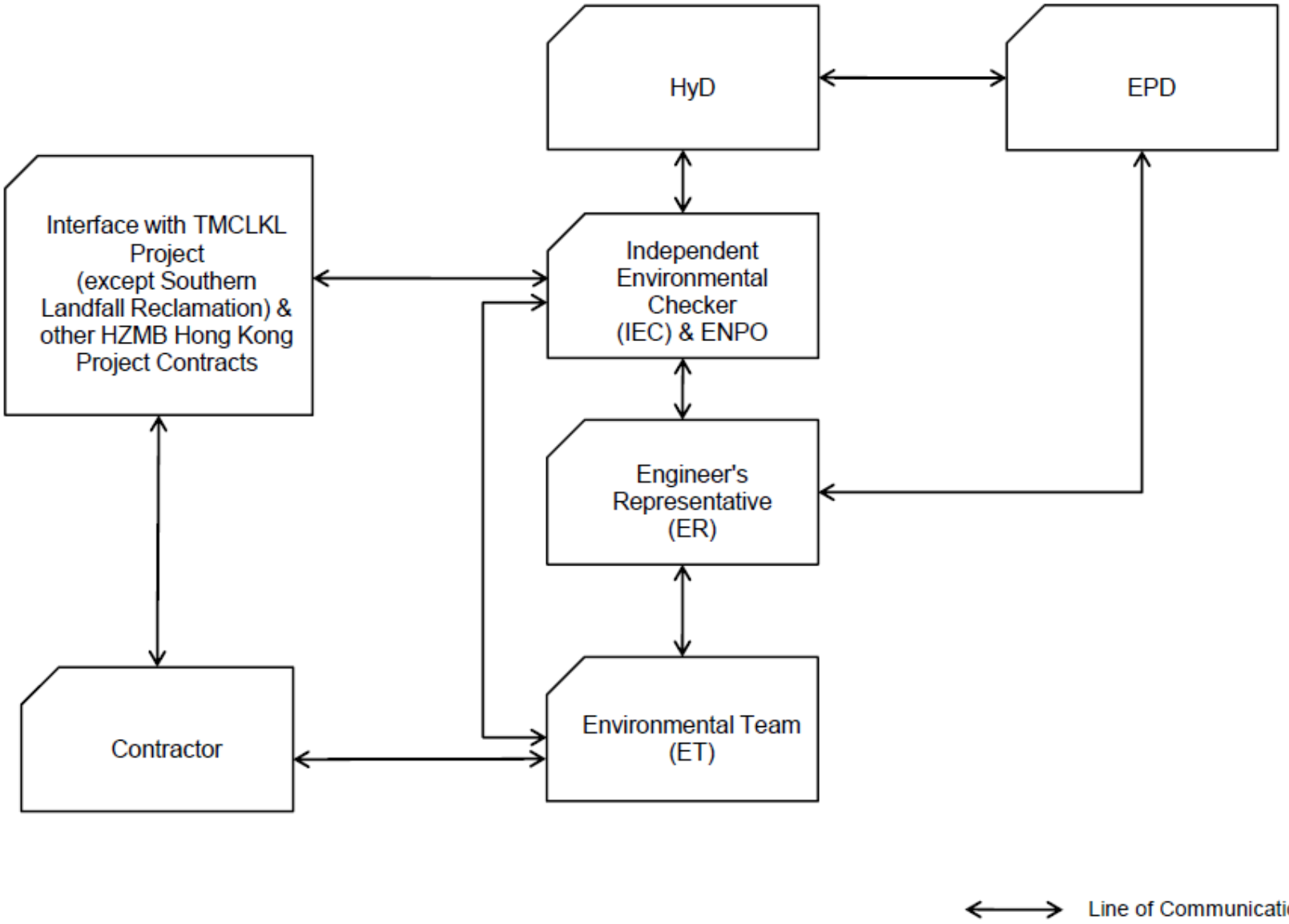
Environmental site inspection was carried out four (4) times in January 2017. Recommendations on remedial actions were given to the Contractor for the deficiencies identified during the site audits.

There was one (1) complaint received from EPD on 13 January 2017 regarding constructional vessels and silt curtain found within the boundary of Brothers Marine Park in the reporting period. Upon investigation, the complaint is considered not related to this Project. There was no notification of summons or successful prosecution recorded in the reporting period.

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

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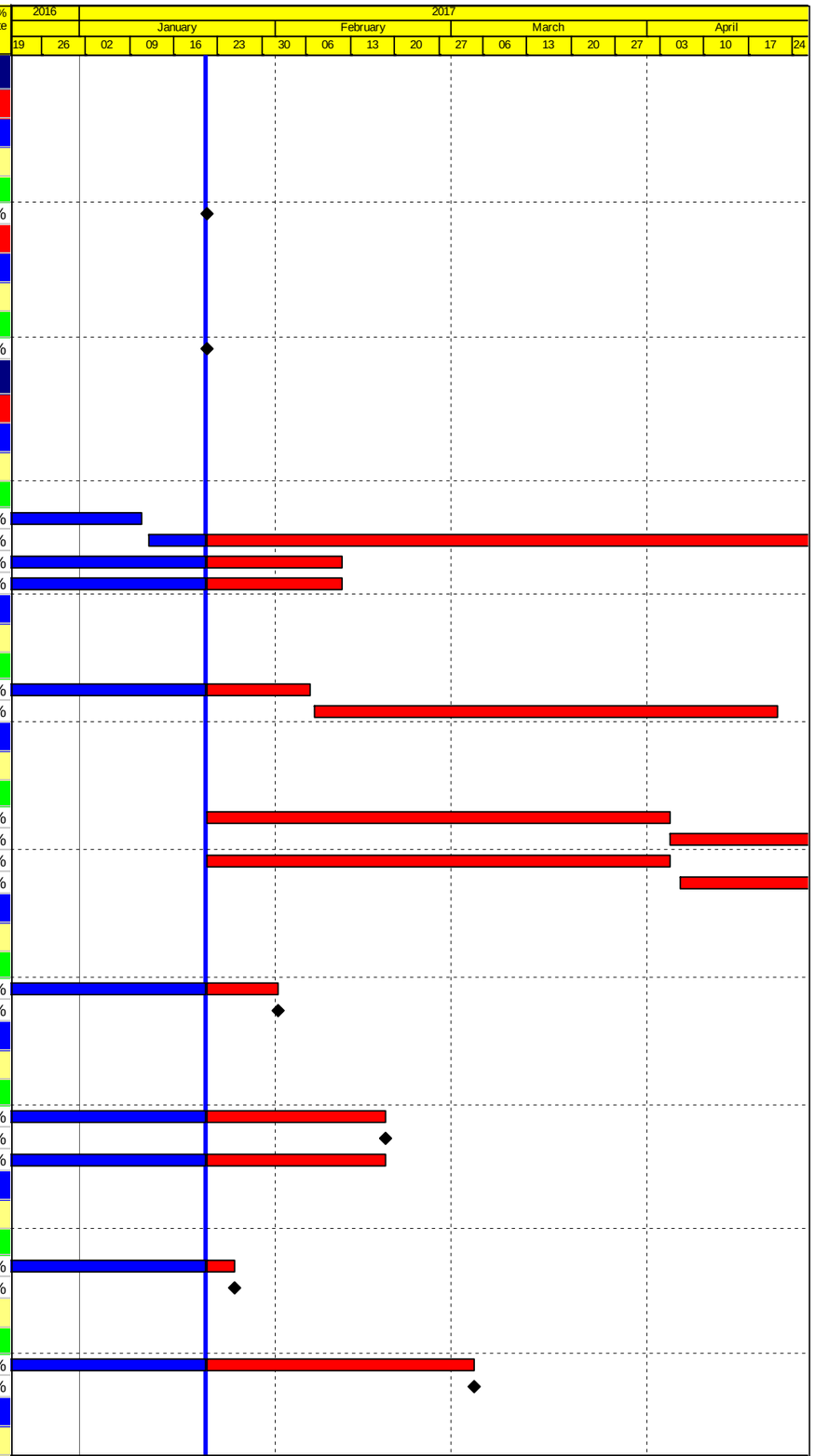
Appendix B

Three-Month Rolling Construction Programme

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Physical % Complete
Contract Milestones									
Key Dates for Completion									
Stage of the Works									
Completion Date									
General									
KD03	KD3 - Stage 3: TCSS Along NLH Near Viaduct C, D (EoT 5-Apr-16)	0		0	21-Jan-17*		05-Apr-16	-290	0%
Portion Handover Dates									
Possession of the Works Area									
Access Dates									
General									
POS02-6B	Portion A - Area 6B (To be confirmed)	0	21-Jan-17*	0		15-Dec-15		-403	0%
Design									
Detailed Design									
General Submissions									
Reports & Manuals									
General									
ARDD0037-7	Preparation of Seismic Performance Report Viaduct F - AP12.03	160	21-Aug-15 A	0	11-Jan-17 A				100%
ARDD0037-8	IC/SO Approval of Seismic Performance Report Viaduct F - AP12.03	75	12-Jan-17 A	75	26-Apr-17	08-Apr-16	08-Jul-16	-237	0%
ARDD0040-2	IC/SO Approval of Operation and Maintenance Manual - AP08.00	75	20-Oct-15 A	16	11-Feb-17	20-Jun-16	08-Jul-16	-178	0%
ARDD0042-2	IC/SO Approval of O&M Facility Provisions DDA - BP11.01	75	14-Jan-15 A	16	11-Feb-17	20-Jun-16	08-Jul-16	-178	50%
Slope Works Near Viaduct A									
Feature 9SE-B/FR8, B/R1, B/R2									
Slope Works Design									
ARDD0596	Preparation of remaining portion of Slope FR8 Combined AIP/DDA - CP11.	35	21-Dec-16 A	11	06-Feb-17	19-Jan-16	30-Jan-16	-299	50%
ARDD0596-1	IC/SO Approval of Slope Combined AIP/DDA - CP11.01	60	07-Feb-17	60	21-Apr-17	01-Feb-16	18-Apr-16	-299	0%
Slope Works Near Viaduct C									
Feature 10NW-C/C22, C/C26, C/C27, C/F13, C/F14, C/F15									
Slope Works Design									
ARDD0589-1	Preparation of Slope Combined AIP/DDA - CP13.01	60	21-Jan-17*	60	04-Apr-17	19-Jul-16	27-Sep-16	-154	0%
ARDD0589-2	IC/SO Approval of Combined AIP/DDA - CP13.01	28	04-Apr-17	28	02-May-17	28-Sep-16	25-Oct-16	-189	0%
ARDD0590	Newfill slopes PF1 & PF2 Preparation of Combined AIP/DDA - CP13.01	60	21-Jan-17	60	04-Apr-17	05-Jul-16	12-Sep-16	-166	0%
ARDD0590-1	New fill slopes PF1 & PF2 IC/SO Approval of combined AIP/DDA - CP13.0	28	06-Apr-17	28	13-May-17	13-Sep-16	18-Oct-16	-166	0%
Slope Works Near Viaduct D									
Feature 10NW-C/R4, C/F9, C/F10, C/F11, C/F17, C/F50									
Slope Works Design									
ARDD0603	IC/SO Approval of Slope Combined AIP/DDA -CP14.01	75	16-Dec-14 A	7	01-Feb-17	17-Feb-16	24-Feb-16	-277	75%
ARDD0603-1	IC/SO Approval of Slope Combined AIP/DDA -CP14.01	0		0	01-Feb-17		24-Feb-16	-277	0%
Watermain, Drainage & Utility Diversions									
General									
Design									
ARDD0629	IC/SO Approval of Waterworks, Drainage & Utility DDA - BP20.01	75	22-Jul-14 A	22	18-Feb-17	01-Mar-16	29-Mar-16	-266	95%
ARDD0629-1	IC/SO Approval of Waterworks, Drainage & Utility DDA - BP20.01	0		0	18-Feb-17		29-Mar-16	-266	0%
ARDD0629-2	Gov't Approval of Submissions for Waterworks, Drainage & Utility Diversior	75	02-Jan-14 A	22	18-Feb-17	01-Mar-16	29-Mar-16	-266	95%
Viaduct Approach Ramp Retaining Walls									
Abutment & Approach Ramp B									
Design									
ARDD0664	Approach B - IC/SO Approval of Approach Ramp B DDA -DP21.01	75	14-Oct-14 A	4	25-Jan-17	09-Mar-16	12-Mar-16	-259	95%
ARDD0664-1	Approach B - IC/SO Approval of Approach Ramp B DDA -DP21.01	0		0	25-Jan-17		12-Mar-16	-259	0%
Abutment & Approach Ramp F									
Design									
ARDD0676	Approach F - IC/SO Approval of Approach Ramp F DDA -DP24.01	75	23-Dec-14 A	34	04-Mar-17	13-May-16	23-Jun-16	-208	70%
ARDD0676-1	Approach F - IC/SO Approval of Approach Ramp F DDA -DP24.01	0		0	04-Mar-17		23-Jun-16	-208	0%
Segment Target Geometry & Erection Engineering									
Viaduct A									



Actual Work
Planned Bar
Critical Bar
Milestone

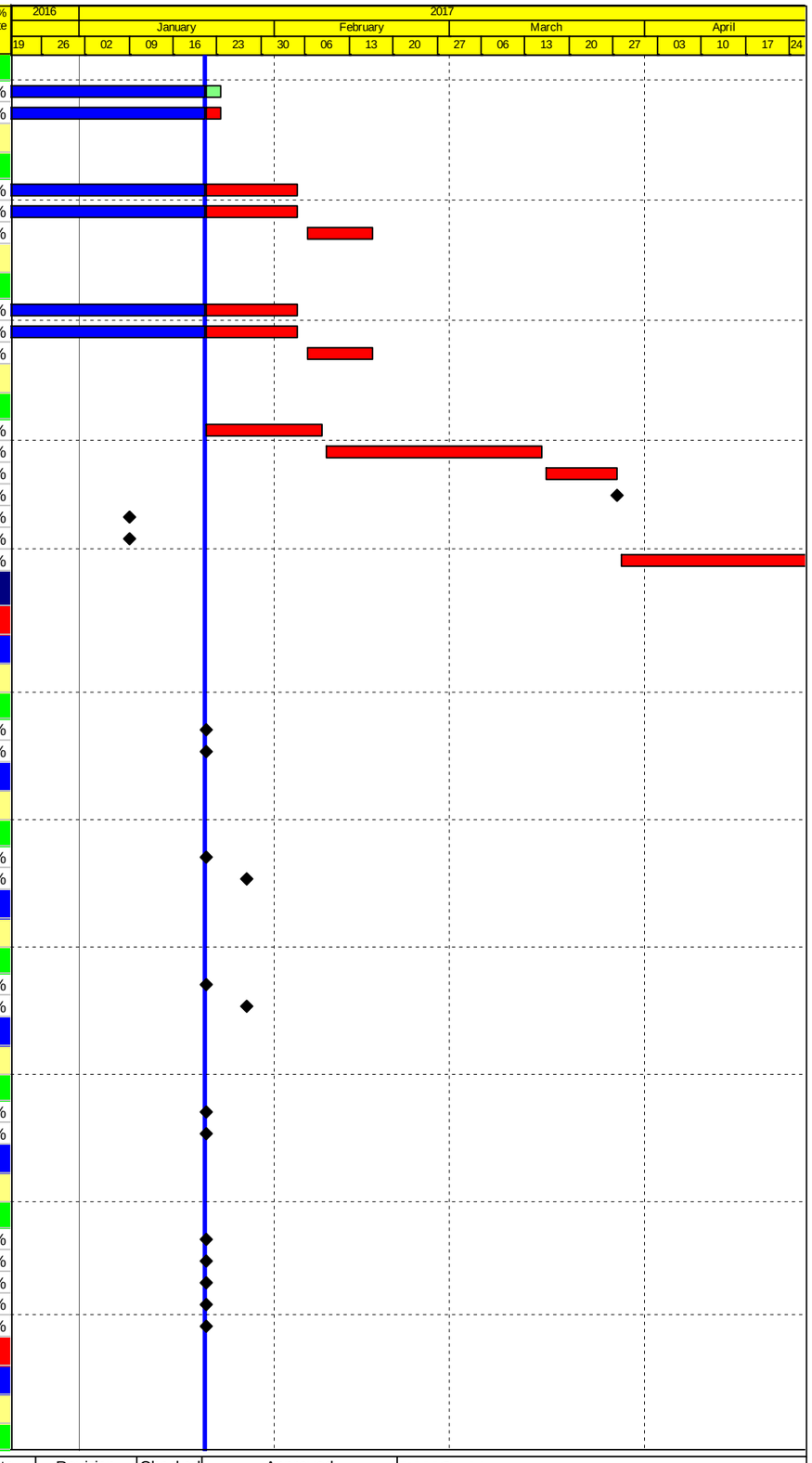
Project ID: TMCLK-DWPH-M44
Layout: J3518-DWP-3MRP Submission - M44
Filter: TASK filters: 3-Month Lookahead, No CC Milestones, No Level of Effort.

Tuen Mun - Chek Lap Kok Link - Southern Connection
3-Month Rolling Programme (Page 1 of 13 Pages)
(Progress as of 21-Jan-17)

Date	Revision	Checked	Approved
30-Nov-...		PKN	GL
03-Jan-17		PKN	GL
26-Jan-17		PKN	GL

DWG. No.:
J3518/GCL/PGM/3MRP-M44

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Physical % Complete
Design									
ARDD0718	Viaduct A - Target Geometry Analysis	20	21-Dec-16 A	2	23-Jan-17	02-Apr-20	03-Apr-20	946	0%
ARDD0719-5	Viaduct A - Issue Erection Manual	20	21-Dec-16 A	2	23-Jan-17	06-Apr-16	07-Apr-16	-239	0%
Viaduct E5 & E6									
Design									
ARDD0734	Viaduct E5 & E6 - Segment Geometry Schedules	10	05-May-14 A	10	04-Feb-17	08-Oct-15	19-Oct-15	-383	90%
TGP0570	Viaduct E5 & E6 - Issue of Optimised Casting Data and Segment Catalogu	40	30-Apr-15 A	10	04-Feb-17	08-Oct-15	19-Oct-15	-383	90%
TGP0590	Viaduct E5 & E6 - Issue Erection Manual	10	06-Feb-17	10	16-Feb-17	20-Oct-15	31-Oct-15	-383	0%
Viaduct E7 & E8									
Design									
ARDD0739	Viaduct E7 & E8 - Segment Geometry Schedules	10	05-May-14 A	10	04-Feb-17	08-Oct-15	19-Oct-15	-383	90%
TGP0760	Viaduct E7 & E8 - Issue of Optimised Casting Data and Segment Catalogu	40	31-Jul-15 A	10	04-Feb-17	08-Oct-15	19-Oct-15	-383	90%
TGP0790	Viaduct E7 & E8 - Issue Erection Manual	10	06-Feb-17	10	16-Feb-17	20-Oct-15	31-Oct-15	-383	0%
Viaduct F									
Design									
ARDD0752	Viaduct F - Erection Sequence Analysis	13	21-Jan-17*	13	08-Feb-17	09-Oct-15	24-Oct-15	-382	0%
ARDD0753	Viaduct F - Target Geometry Analysis	30	09-Feb-17	30	15-Mar-17	26-Oct-15	28-Nov-15	-382	0%
ARDD0754	Viaduct F - Segment Geometry Schedules	10	16-Mar-17	10	27-Mar-17	30-Nov-15	10-Dec-15	-382	0%
ARDD0754-1	Viaduct F - Issue of Pierhead Segments Bridge F1, F2, F3, F4 & F5	0		0	27-Mar-17		03-Apr-20	895	0%
ARDD0754-3	Viaduct F - Issue of Casting Data and Segment Catalogue Bridge F1, F3 (I	0		0	09-Jan-17 A				100%
ARDD0754-4	Viaduct F - Issue of Casting Data and Segment Catalogue Bridge F2, F4, I	0		0	09-Jan-17 A				100%
ARDD0754-5	Viaduct F - Issue Erection Manual	30	28-Mar-17	30	08-May-17	11-Dec-15	18-Jan-16	-382	0%
Procurement									
Deck Segment Installation Equipment									
Traveling Hanging Beams									
Viaduct A to F									
Equipment Delivery									
PR67050	Steelworks for THB 3.0 - Batch 1	0		0	21-Jan-17*		03-Apr-20	948	0%
PR67060	Steelworks for THB 3.0 - Batch 2	0		0	21-Jan-17*		03-Apr-20	948	0%
K-Frames									
Viaduct A to F									
Equipment Delivery									
PR67120	Steelworks for K-Frame	0		0	21-Jan-17*		03-Apr-20	948	0%
PR67130	Hydraulic for K-Frame	0		0	27-Jan-17*		03-Apr-20	942	0%
Strand Jacks									
Viaduct A to F									
Equipment Delivery									
PR67140	Steelworks for 294T Strand Jack module	0		0	21-Jan-17*		03-Apr-20	948	0%
PR67150	Hydraulic for 294T Strand Jack	0		0	27-Jan-17*		03-Apr-20	942	0%
Crab									
Viaduct A to F									
Equipment Delivery									
PR67160	Steelworks for 294T Crab - Batch 1	0		0	21-Jan-17*		03-Apr-20	948	0%
PR67170	Steelworks for 294T Crab - Batch 2	0		0	21-Jan-17*		03-Apr-20	948	0%
Travelling Hanging Beams (Self-Launch)									
Viaduct A to F									
Equipment Delivery									
PR67070	Steelworks for Self-Launching System - Batch 1	0		0	21-Jan-17*		03-Apr-20	948	0%
PR67080	Steelworks for Self-Launching System - Batch 2	0		0	21-Jan-17*		03-Apr-20	948	0%
PR67090	Steelworks for Self-Launching System - Batch 3	0		0	21-Jan-17*		03-Apr-20	948	0%
PR67100	2 nos. Hydraulic Cylinder & Associated Accessories for Spare	0		0	21-Jan-17*		03-Apr-20	948	0%
PR67110	Power Pack for Hydraulic System for Self-Launching System	0		0	21-Jan-17*		03-Apr-20	948	0%
Precast Deck Segments									
Preliminaries									
Viaduct F									
General									



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Critical Bar
Milestone

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Tuen Mun - Chek Lap Kok Link - Southern Connection
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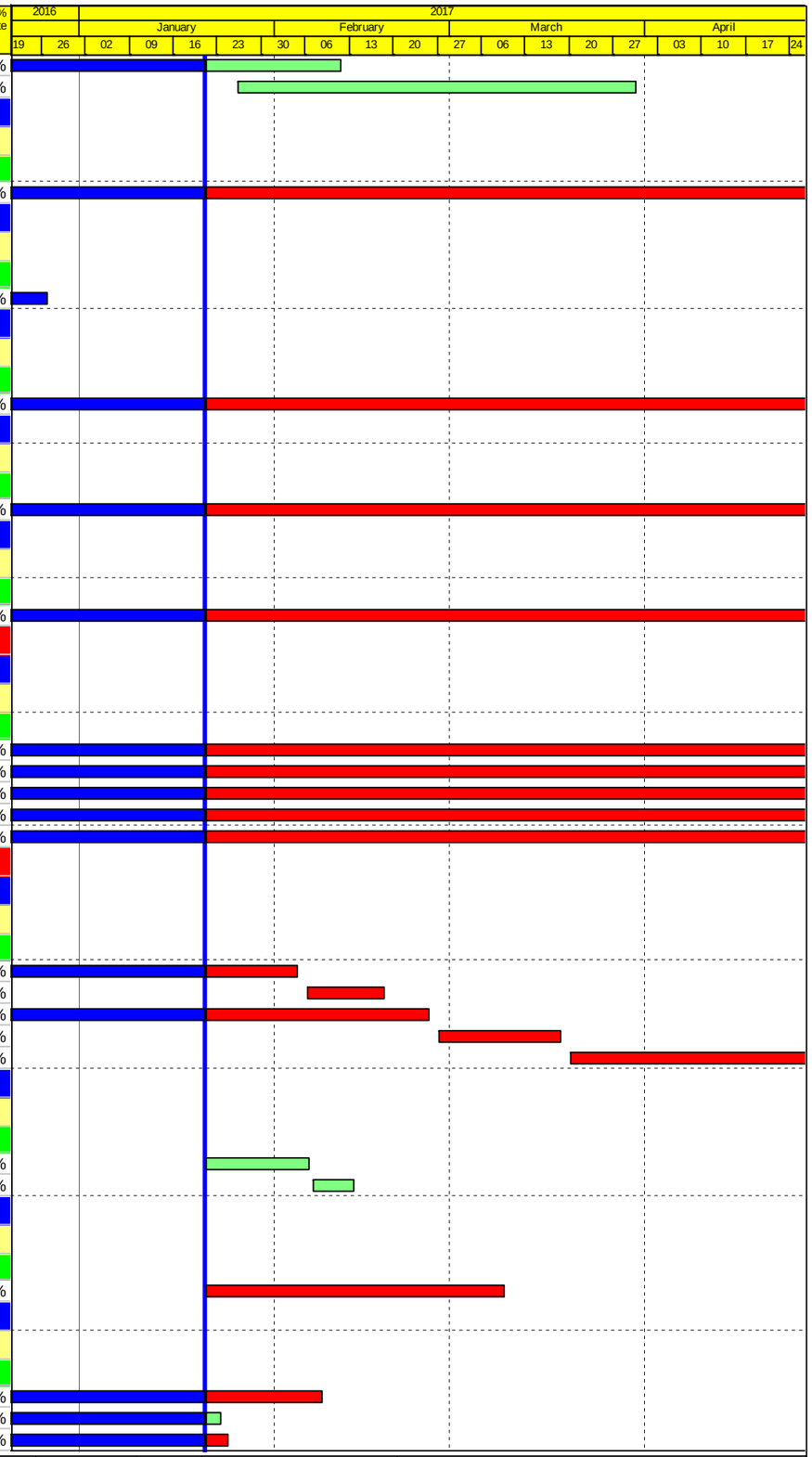
J3518/GCL/PGM/3MRP-M44

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Physical % Complete
MBBE0054	Precast Segment Mould Design (Viaduct F1 to F5)	42	01-Sep-16 A	16	11-Feb-17	30-Jan-20	17-Feb-20	892	0%
MBBE0056	Precast Segment Mould Fabrication & Erection (Viaduct F1 to F5)	52	26-Jan-17	52	30-Mar-17	04-Feb-20	03-Apr-20	892	0%
Viaduct A - Bridge A2-A1									
Segment Manufacture									
General									
MBAE0130-1	A: Progressive Segment Manufacture (179 Nr)	180	13-Jun-16 A	91	17-May-17	12-Feb-16	03-Jun-16	-281	44.7%
Viaduct E - Bridge E1									
Segment Manufacture									
General									
MBEE0130-5	E1: Progressive Segment Manufacture (188 Nr)	456	08-Apr-15 A	0	27-Dec-16 A				100%
Viaduct E - Bridge E2									
Segment Manufacture									
General									
MBEE0130-7	E2: Progressive Segment Manufacture (404 Nr)	376	06-May-15 A	102	31-May-17	21-Dec-15	28-Apr-16	-321	82.2%
Viaduct E - Bridge E5, E6, E7, E8									
Segment Manufacture									
General									
MBEE0130-9	E5-6-7-8: Progressive Segment Manufacture (544Nr)	360	06-May-15 A	182	02-Sep-17	15-Oct-15	28-May-16	-377	34.9%
Viaduct F - Bridge F1-F5									
Segment Manufacture									
General									
MBFE0130-1	F: Progressive Segment Manufacture (300 Nr)	252	27-Oct-16 A	190	12-Sep-17	15-Apr-16	30-Nov-16	-231	10%
Precast Parapets & Barriers									
Viaduct A to F									
Precast Parapet Manufacture									
General									
PP6011-01	Viaduct A - Precast Parapets/Barriers Production	90	01-Sep-16 A	178	29-Aug-17	02-Feb-16	08-Sep-16	-287	0%
PP6011-02	Viaduct B - Precast Parapets/Barriers Production	120	03-May-16 A	152	29-Jul-17	07-Mar-16	08-Sep-16	-261	0%
PP6011-03	Viaduct C - Precast Parapets/Barriers Production	120	01-Apr-16 A	128	30-Jun-17	03-Dec-15	12-May-16	-336	0%
PP6011-04	Viaduct D - Precast Parapets/Barriers Production	120	01-Mar-16 A	128	30-Jun-17	03-Dec-15	12-May-16	-336	0%
PP6011-05	Viaduct E - Precast Parapets/Barriers Production	180	02-Jul-16 A	256	01-Dec-17	08-Dec-15	20-Oct-16	-332	0%
Bearings									
Viaduct A									
Bearing Design & Manufacture									
General									
PPBRA5	SO review & comment on design submission - Viaduct A	36	21-Oct-16 A	10	04-Feb-17	12-Nov-16	23-Nov-16	-57	0%
PPBRA6	Bearing Design Amendment & re-issue - Viaduct A	12	06-Feb-17	12	18-Feb-17	24-Nov-16	07-Dec-16	-57	0%
PPBRA7	Manufacture of Bearing - Viaduct A	54	21-Oct-16 A	28	25-Feb-17	05-Nov-16	07-Dec-16	-63	0%
PPBRA8	Testing Bearing - Viaduct A	18	27-Feb-17	18	18-Mar-17	08-Dec-16	30-Dec-16	-63	0%
PPBRA9	Bearing Delivery - Viaduct A	48	20-Mar-17	48	20-May-17	31-Dec-16	01-Mar-17	-63	0%
Viaduct C									
Bearing Design & Manufacture									
General									
PPBRC6	Bearing Design Ammendment & re-issue - Viaduct C	11	21-Jan-17	11	06-Feb-17	16-Mar-20	27-Mar-20	931	0%
PPBRC99	Site preparation Bearings for Viaduct C	6	07-Feb-17	6	13-Feb-17	28-Mar-20	03-Apr-20	931	0%
Viaduct D									
Bearing Design & Manufacture									
General									
PPBRD99	Site preparation Bearings for Viaduct D	38	21-Jan-17	38	09-Mar-17	18-Feb-16	06-Apr-16	-276	0%
Viaduct E									
Bearing Design & Manufacture									
General									
PP7290	Site preparation Bearings for Viaduct E2	18	27-Apr-16 A	13	08-Feb-17	10-Mar-16	24-Mar-16	-258	0%
PP7360	Site preparation Bearings for Viaduct E1	18	10-Feb-15 A	2	23-Jan-17	02-Apr-20	03-Apr-20	946	0%
PPBRE3	Bearing design and submission - Viaduct E (E1, E2, E5, E6, E7 & E8)	12	28-Nov-13 A	3	24-Jan-17	08-Dec-15	10-Dec-15	-332	85%



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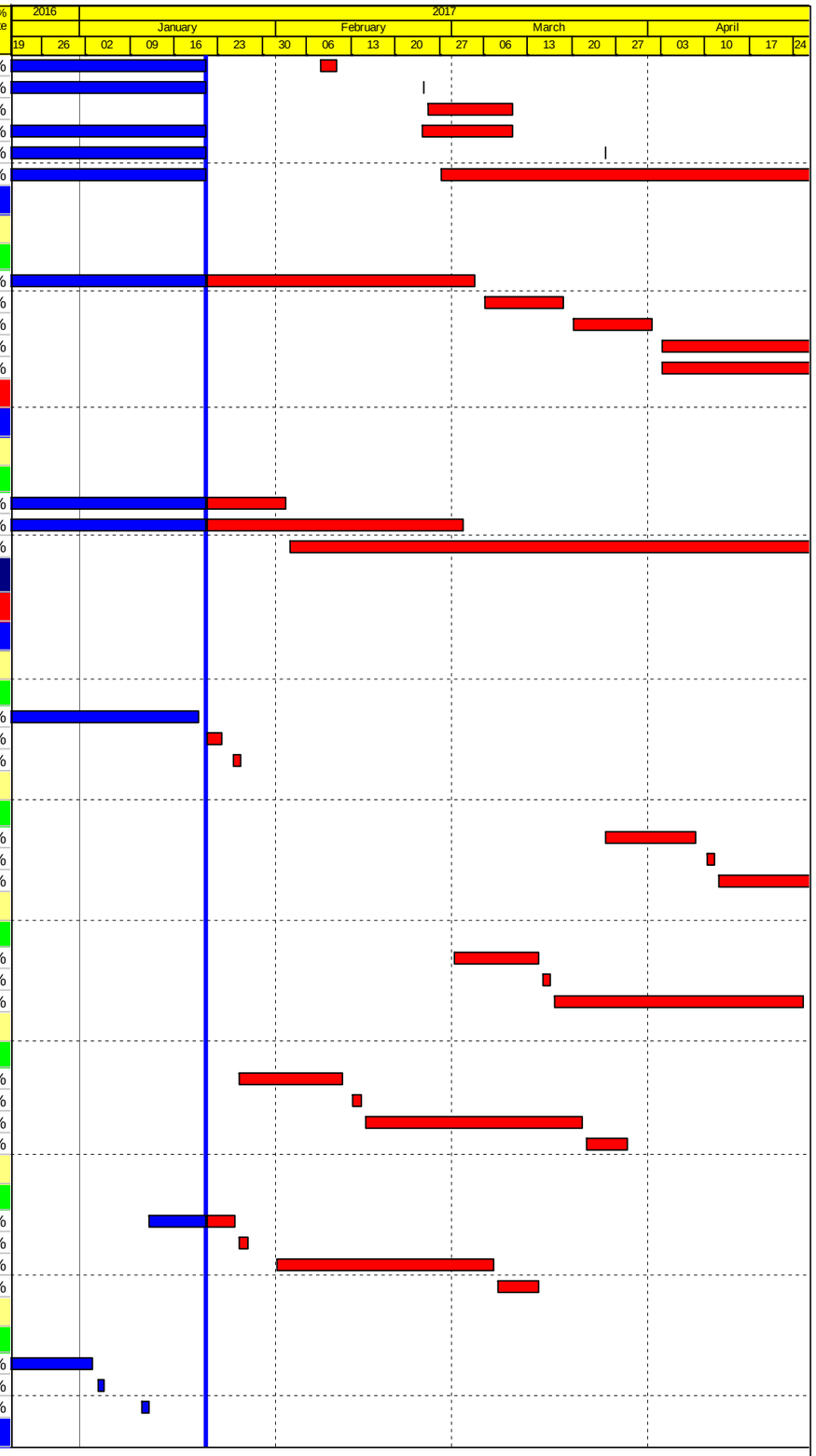
Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Physical % Complete
PPBRE4	Design check by ICE - Viaduct E (E1, E2, E5, E6, E7 & E8)	24	04-Apr-14 A	3	10-Feb-17	22-Dec-15	24-Dec-15	-332	85%
PPBRE5	SO review & comment on design submission - Viaduct E (E1, E2, E5, E6, E	36	26-Sep-14 A	0	24-Feb-17	11-Jan-16	11-Jan-16	-332	100%
PPBRE6	Bearing Design Amendment & re-issue - Viaduct E (E1, E2, E5, E6, E7 & E	12	25-Feb-17	12	10-Mar-17	12-Jan-16	25-Jan-16	-332	0%
PPBRE7	Manufacture of Bearing - Viaduct E (E1, E2, E5, E6, E7 & E8)	54	02-Jun-14 A	13	10-Mar-17	11-Jan-16	25-Jan-16	-332	100%
PPBRE8	Testing Bearing - Viaduct E (E1, E2, E5, E6, E7 & E8)	24	03-Aug-15 A	0	25-Mar-17	11-Feb-16	11-Feb-16	-332	100%
PPBRE9	Bearing Delivery - Viaduct E (E1, E2, E5, E6, E7 & E8)	48	19-Nov-14 A	59	12-May-17	13-Jan-16	24-Mar-16	-332	100%
Viaduct F									
Bearing Design & Manufacture									
General									
PPBRF1	Preliminary Design of Bearings - Viaduct F	60	21-Oct-16 A	34	04-Mar-17	29-Jul-15	07-Sep-15	-441	0%
PPBRF3	Bearing design and submission - Viaduct F	12	06-Mar-17	12	18-Mar-17	08-Sep-15	21-Sep-15	-441	0%
PPBRF4	Design check by ICE - Viaduct F	12	20-Mar-17	12	01-Apr-17	22-Sep-15	07-Oct-15	-441	0%
PPBRF5	SO review & comment on design submission - Viaduct F	24	03-Apr-17	24	06-May-17	06-Nov-15	03-Dec-15	-417	0%
PPBRF7	Manufacture of Bearing - Viaduct F	48	03-Apr-17	48	05-Jun-17	08-Oct-15	03-Dec-15	-441	0%
Movement Joints									
Viaduct A to F									
MJ Design & Manufacture									
General									
PP6MJ01	Design & Submission of MJ	138	08-Feb-14 A	8	02-Feb-17	10-Mar-16	18-Mar-16	-258	30%
PP6MJ02-1	MJ Design Approval	96	26-May-14 A	32	02-Mar-17	01-Mar-16	11-Apr-16	-266	40%
PP6MJ02-2	Manufacture & delivery of MJ	150	03-Feb-17	150	05-Aug-17	10-Mar-16	09-Sep-16	-266	0%
Construction									
Foundation & Substructure Works									
Viaduct A - Bridge A2									
Pier A1 (A2e)									
Pier Head Segment									
A01-C5210	A1 - PHS - Temporary Platform	12	19-Dec-16 A	0	20-Jan-17 A				100%
A01-C5310	A1 - Install PH Segment A1-A2 (1 nr)	2	21-Jan-17	2	23-Jan-17	26-Feb-16	27-Feb-16	-269	0%
A01-C5320	A1 - Install PH Segment A1-E1 (1 nr)	2	25-Jan-17*	2	26-Jan-17	29-Feb-16	01-Mar-16	-270	0%
Pier A2 (A2d)									
Pier Head Segment									
A02-C5210	A2 - PHS - Temporary Platform	12	25-Mar-17	12	08-Apr-17	10-May-16	25-May-16	-262	0%
A02-C5310	A2 - Install PH Segment (1 nr)	2	10-Apr-17*	2	11-Apr-17	25-May-16	27-May-16	-262	0%
A02-C5410	A2 - PHS Diaphragm - Rebar, Formwork, Concreting	30	12-Apr-17	30	22-May-17	27-May-16	04-Jul-16	-262	0%
Pier A3 (A2c)									
Pier Head Segment									
A03-C5210	A3 - PHS - Temporary Platform	12	01-Mar-17	12	14-Mar-17	08-Apr-16	21-Apr-16	-267	0%
A03-C5310	A3 - Install PH Segment (1 nr)	2	15-Mar-17*	2	16-Mar-17	22-Apr-16	23-Apr-16	-267	0%
A03-C5410	A3 - PHS Diaphragm - Rebar, Formwork, Concreting	30	17-Mar-17	30	25-Apr-17	25-Apr-16	31-May-16	-267	0%
Pier A4 (A2b)									
Pier Head Segment									
A04-C5210	A4 - PHS - Temporary Platform	12	26-Jan-17	12	11-Feb-17	01-Mar-16	15-Mar-16	-269	0%
A04-C5310	A4 - Install PH Segment (1nr)	2	13-Feb-17*	2	14-Feb-17	15-Mar-16	17-Mar-16	-269	0%
A04-C5410	A4 - PHS Diaphragm - Rebar, Formwork, Concreting	30	15-Feb-17	30	21-Mar-17	17-Mar-16	26-Apr-16	-269	0%
A04-C5510	A4 - PHS Diaphragm - Curing & Striking of Forms	6	22-Mar-17	6	28-Mar-17	26-Apr-16	05-May-16	-268	0%
Pier A5 (A2a)									
Pier Head Segment									
A05-C5210	A5 - PHS - Temporary Platform	12	12-Jan-17 A	4	25-Jan-17	04-Feb-16	12-Feb-16	-284	0%
A05-C5310	A5 - Install PH Segment (1 nr)	2	26-Jan-17*	2	27-Jan-17	12-Feb-16	15-Feb-16	-284	0%
A05-C5410	A5 - PHS Diaphragm - Rebar, Formwork, Concreting	30	01-Feb-17	30	07-Mar-17	15-Feb-16	21-Mar-16	-284	0%
A05-C5420	A5 - PHS Diaphragm - Curing & Striking of Forms	6	08-Mar-17	6	14-Mar-17	21-Mar-16	01-Apr-16	-283	0%
Pier A6 (A1f)									
Pier Head Segment									
A06-C5210	A6 - PHS - Temporary Platform	12	14-Dec-16 A	0	03-Jan-17 A				100%
A06-C5310	A6 - Install PH Segment A6-A5 (1 nr)	2	04-Jan-17 A	0	05-Jan-17 A				100%
A06-C5320	A6 - Install PH Segment A6-A7 (1 nr)	2	11-Jan-17 A	0	12-Jan-17 A				100%
Viaduct A - Bridge A1									



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Tuen Mun - Chek Lap Kok Link - Southern Connection
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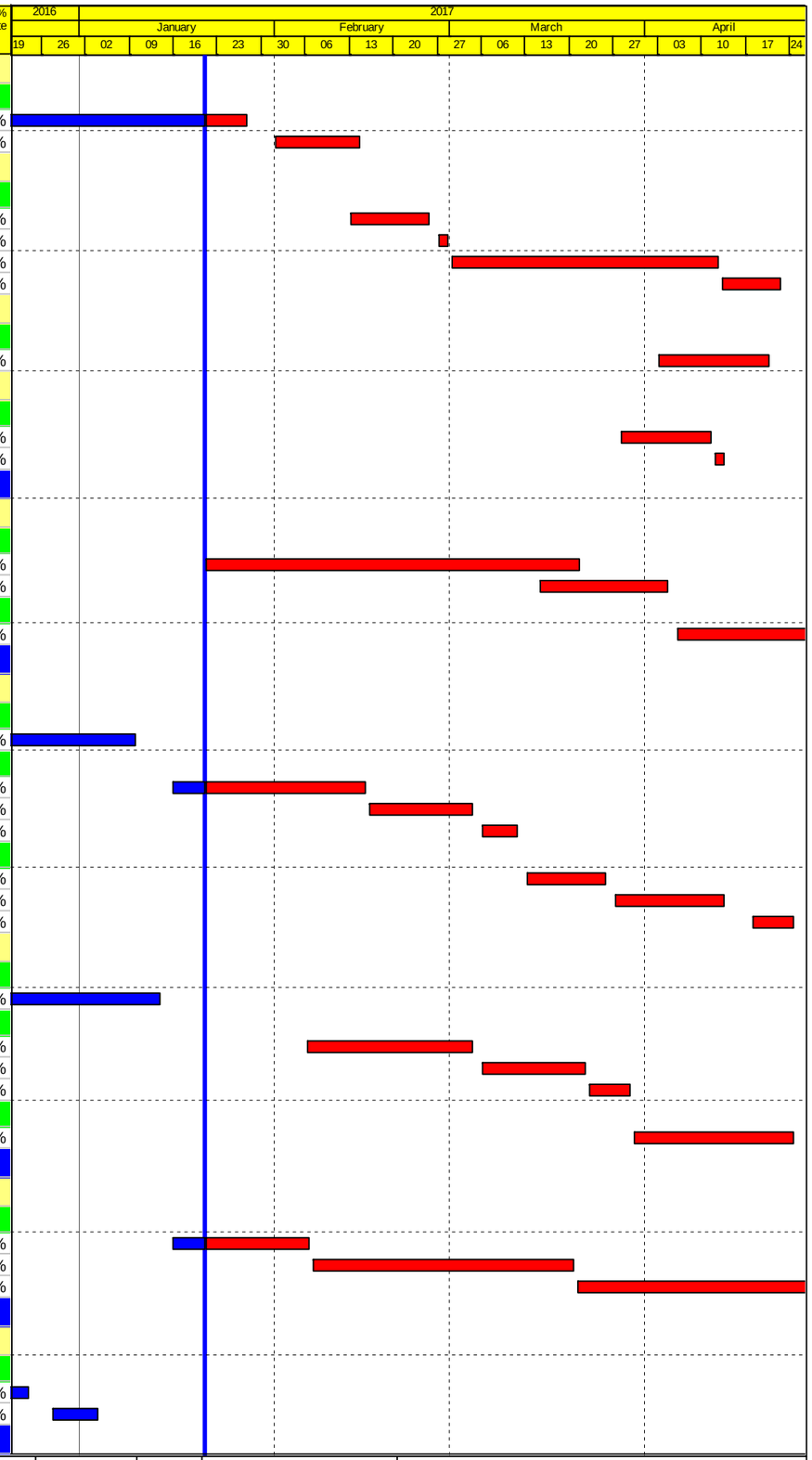
Pier A8 (A1d)									
Pier Head Segment									
A08-C5410	A8 - PHS Diaphragm - Rebar, Formwork, Concreting	36	02-Dec-16 A	6	27-Jan-17	12-Jan-16	18-Jan-16	-305	50%
A08-C5420	A8 - PHS Diaphragm - Curing & Striking of Forms	12	01-Feb-17	12	14-Feb-17	19-Jan-16	01-Feb-16	-305	0%
Pier A9 (A1c)									
Pier Head Segment									
A09-C5210	A9 - PHS - Temporary Platform	12	13-Feb-17	12	25-Feb-17	26-Jan-16	11-Feb-16	-309	0%
A09-C5310	A9 - Install PH Segment (1 nr)	2	27-Feb-17*	2	28-Feb-17	12-Feb-16	13-Feb-16	-309	0%
A09-C5410	A9 - PHS Diaphragm - Rebar, Formwork, Concreting	36	01-Mar-17	36	12-Apr-17	15-Feb-16	30-Mar-16	-309	0%
A09-C5420	A9 - PHS Diaphragm - Curing & Striking of Forms	6	13-Apr-17	6	22-Apr-17	31-Mar-16	07-Apr-16	-309	0%
Pier A10 (A1b)									
Pier Head Segment									
A10-C5210	A10 - PHS - Temporary Platform	12	03-Apr-17	12	20-Apr-17	16-Apr-16	29-Apr-16	-288	0%
Pier A11 (A1a)									
Pier Head Segment									
A11-C5210	A11 - PHS - Temporary Platform	12	28-Mar-17	12	11-Apr-17	18-Jul-16	30-Jul-16	-208	0%
A11-C5310	A11 - Install PH Segment (1nr)	2	12-Apr-17*	2	13-Apr-17	01-Aug-16	02-Aug-16	-208	0%
Ramp A									
Abutment & Approach Ramp A									
Ramp Structure									
ARA-C6140	Ramp A - Remaining RE & RC Walls	48	21-Jan-17*	48	21-Mar-17	21-Jan-16	19-Mar-16	-297	0%
ARA-C6150	Ramp A - Backfill to Walls	18	15-Mar-17	18	04-Apr-17	14-Mar-16	07-Apr-16	-297	0%
Ramp Finishes, E&M & Roadworks									
ARA-C7710	Ramp A - Parapet Panels	42	06-Apr-17	42	31-May-17	08-Apr-16	28-May-16	-297	0%
Viaduct B - Bridge B1									
Pier B17 (B1c)									
Foundation - Socketed H-Piles									
B17-C2110	B17 - Install SH Pile (10 nr) (incl. proof drilling)	36	01-Dec-16 A	0	10-Jan-17 A				100%
Pile Cap									
B17-C3110	B17 - Pile Cap Excavation / ELS & Break Pile	24	16-Jan-17 A	19	15-Feb-17	22-Dec-15	15-Jan-16	-320	0%
B17-C3210	B17 - Pile Cap Blinding, Rebar, Formwork, Concrete	15	16-Feb-17	15	04-Mar-17	16-Jan-16	02-Feb-16	-320	0%
B17-C3310	B17 - Pile Cap Curing, Strike Formwork, CJ Prep, Backfill	6	06-Mar-17	6	11-Mar-17	03-Feb-16	12-Feb-16	-320	0%
Pier									
B17-C4110	B17 - Pier Scaffold, Rebar, Formwork, Concrete (1st Lift)	12	13-Mar-17	12	25-Mar-17	13-Feb-16	26-Feb-16	-320	0%
B17-C4210	B17 - Pier Scaffold, Rebar, Formwork, Concrete (2nd Lift)	15	27-Mar-17	15	13-Apr-17	27-Feb-16	15-Mar-16	-320	0%
B17-C4310	B17 - Pier Curing, Remove Formwork	6	18-Apr-17	6	24-Apr-17	16-Mar-16	22-Mar-16	-320	0%
Pier B18 (B1b)									
Foundation - Socketed H-Piles									
B18-C2110	B18 - Install SH Pile (6 nr) (incl. proof drilling)	27	09-Dec-16 A	0	14-Jan-17 A				100%
Pile Cap									
B18-C3110	B18 - Pile Cap Excavation / ELS & Break Pile	24	06-Feb-17*	24	04-Mar-17	14-Apr-16	12-May-16	-242	0%
B18-C3210	B18 - Pile Cap Blinding, Rebar, Formwork, Concrete	15	06-Mar-17	15	22-Mar-17	13-May-16	31-May-16	-242	0%
B18-C3310	B18 - Pile Cap Curing, Strike Formwork, CJ Prep, Backfill	6	23-Mar-17	6	29-Mar-17	01-Jun-16	07-Jun-16	-242	0%
Pier									
B18-C4110	B18 - Pier Scaffold, Rebar, Formwork, Concrete	18	30-Mar-17	18	24-Apr-17	08-Jun-16	29-Jun-16	-242	0%
Ramp B									
Abutment & Approach Ramp B									
Ramp Structure									
ARB-C6110	Ramp B - Erect Fence / Enabling Works	12	16-Jan-17 A	11	06-Feb-17	01-Mar-16	12-Mar-16	-266	20%
ARB-C6120	Ramp B - RE Wall - Excavation & Bottom Layer to Grnd Level	36	07-Feb-17	36	20-Mar-17	14-Mar-16	28-Apr-16	-266	0%
ARB-C6130	Ramp B - RE Wall - Upper Layer With Backfill in Stages	48	21-Mar-17	48	22-May-17	29-Apr-16	27-Jun-16	-266	0%
Viaduct C - Bridge C2									
Pier C16 (C2b)									
Pier Head Segment									
C16-C5410	C16 - PHS Diaphragm - Rebar, Formwork, Concreting	36	15-Nov-16 A	0	24-Dec-16 A				100%
C16-C5420	C16 - PHS Diaphragm - Curing & Striking of Forms	6	28-Dec-16 A	0	04-Jan-17 A				100%
Ramp C									



Actual Work
Planned Bar
Critical Bar
Milestone

Project ID: TMCLK-DWPH-M44
Layout: J3518-DWP-3MRP Submission - M44
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 5 of 13 Pages)
(Progress as of 21-Jan-17)

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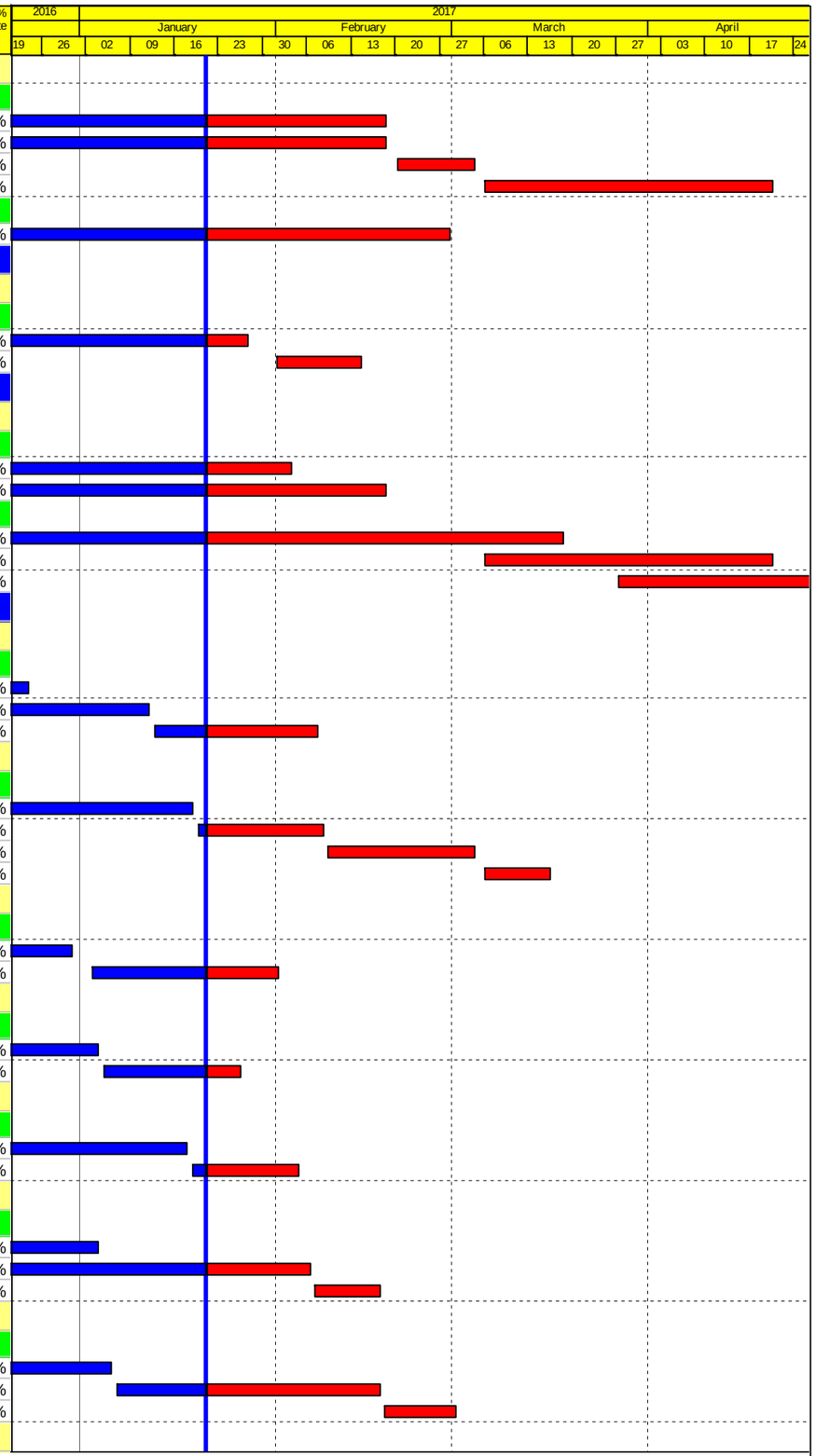
DWG. No.:
J3518/GCL/PGM/3MRP-M44

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Physical % Complete
Abutment & Approach Ramp C									
Ramp Structure									
ARC-C6140	Ramp C - RC Wall - Backfill	12	16-May-16 A	22	18-Feb-17	15-Jan-16	12-Feb-16	-302	90%
ARC-C6150	Ramp C - Utility - Termination of 800 Tee	72	21-Sep-16 A	22	18-Feb-17	15-Jan-16	12-Feb-16	-302	0%
ARC-C6160	Ramp C - Utility - Remove 800 Tee & Backfill	12	20-Feb-17	12	04-Mar-17	13-Feb-16	26-Feb-16	-302	0%
ARC-C6170	Ramp C - RE Wall - Remaining Bays at 800 Tee	36	06-Mar-17	36	20-Apr-17	27-Feb-16	13-Apr-16	-302	0%
Ramp Finishes, E&M & Roadworks									
ARC-C7710	Ramp C - Parapet Panels (Initial)	24	26-Sep-16 A	30	28-Feb-17	21-Apr-16	27-May-16	-226	10%
Viaduct D - Bridge D2									
Pier D13 (D2d)									
Pier Head Segment									
D13-C5410	D13 - PHS Diaphragm - Rebar, Formwork, Concreting	42	12-Sep-16 A	6	27-Jan-17	11-Feb-16	17-Feb-16	-282	60%
D13-C5420	D13 - PHS Diaphragm - Curing, Striking of Forms, Remove Scaffold	12	01-Feb-17	12	14-Feb-17	18-Feb-16	02-Mar-16	-282	0%
Ramp D									
Abutment & Approach Ramp D									
Ramp Structure									
ARD-C6140	Ramp D - Box Structure Bay 1 & Bay 8	55	07-Mar-16 A	9	03-Feb-17	16-Mar-16	29-Mar-16	-253	80%
ARD-C6150	Ramp D - Backfill Embankment	90	02-Nov-15 A	22	18-Feb-17	16-Mar-16	14-Apr-16	-253	70%
Ramp Finishes, E&M & Roadworks									
ARD-C7710	Ramp D - Parapet Panels	42	15-Oct-16 A	46	18-Mar-17	16-Mar-16	13-May-16	-253	50%
ARD-C7720	Ramp D - Ducting, Gantry & TCSS Provisions (KD4)	36	06-Mar-17	36	20-Apr-17	29-Apr-16	13-Jun-16	-253	0%
ARD-C7810	Ramp D - Drainage, Fire Main & E&M Services	54	27-Mar-17	54	05-Jun-17	23-May-16	26-Jul-16	-253	0%
Viaduct E - Bridge E2									
Pier E4A (E2b2)									
Pier Head Segment									
E04A-C5140	E4A - Remove Rail Beams, Megashore Towers. Crane	17	13-Oct-16 A	0	24-Dec-16 A				100%
E04A-C5145	E4A - Install Infill Segments (4 nr) - THB	26	14-Nov-16 A	0	12-Jan-17 A				100%
E04A-C5150	E4A - IFS Stitch & Remove Equipment	9	13-Jan-17 A	12	07-Feb-17	04-Jul-16	16-Jul-16	-167	35%
Pier E4B (E2b1)									
Pier Head Segment									
E04B-C5130	E4B - Diaphragm of PHS - Formwork, Rebar, Concreting	125	14-Sep-16 A	0	19-Jan-17 A				100%
E04B-C5140	E4B - Remove Rail Beams, Megashore Towers	8	20-Jan-17 A	13	08-Feb-17	07-Jul-16	21-Jul-16	-164	5%
E04B-C5145	E4B - Install Infill Segments (4 nr) - THB	21	09-Feb-17	21	04-Mar-17	22-Jul-16	15-Aug-16	-164	0%
E04B-C5150	E4B - IFS Stitch & Remove Equipment	10	06-Mar-17	10	16-Mar-17	16-Aug-16	26-Aug-16	-164	0%
Pier E5A (E2c2)									
Pier Head Segment									
E05A-C5145	E5A - Install Infill Segments (4 nr) - THB	23	12-Nov-16 A	0	31-Dec-16 A				100%
E05A-C5150	E5A - IFS Stitch & Remove Equipment	12	03-Jan-17 A	7	01-Feb-17	05-Jan-16	12-Jan-16	-311	70%
Pier E5B (E2c1)									
Pier Head Segment									
E05B-C5145	E5B - Install Infill Segments (4 nr) - THB	15	08-Dec-16 A	0	04-Jan-17 A				100%
E05B-C5150	E5B - IFS Stitch & Remove Equipment	12	05-Jan-17 A	5	26-Jan-17	03-Feb-16	11-Feb-16	-286	70%
Pier E6A (E2d2)									
Pier Head Segment									
E06A-C5145	E6A - Install Infill Segments (4 nr) - THB	16	29-Nov-16 A	0	18-Jan-17 A				100%
E06A-C5150	E6A - IFS Stitch & Remove Equipment	11	19-Jan-17 A	10	04-Feb-17	18-Feb-16	29-Feb-16	-276	15%
Pier E6B (E2d1)									
Pier Head Segment									
E06B-C5140	E6B - Remove Rail Beams	9	06-Dec-16 A	0	04-Jan-17 A				100%
E06B-C5145	E6B - Install Infill Segments (4 nr) - THB	17	16-Dec-16 A	11	06-Feb-17	08-Mar-16	19-Mar-16	-260	50%
E06B-C5150	E6B - IFS Stitch & Remove Equipment	10	07-Feb-17	10	17-Feb-17	21-Mar-16	05-Apr-16	-260	0%
Pier E7A (E2e2)									
Pier Head Segment									
E07A-C5140	E7A - Remove Rail Beams, Crane	14	15-Dec-16 A	0	06-Jan-17 A				100%
E07A-C5145	E7A - Install Infill Segments (4 nr) - THB	18	07-Jan-17 A	21	17-Feb-17	13-Feb-16	08-Mar-16	-280	40%
E07A-C5150	E7A - IFS Stitch & Remove Equipment	10	18-Feb-17	10	01-Mar-17	09-Mar-16	19-Mar-16	-280	0%
Pier E7B (E2e1)									



Actual Work
Planned Bar
Critical Bar
Milestone

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Layout: J3518-DWP-3MRP Submission - M44
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Tuen Mun - Chek Lap Kok Link - Southern Connection
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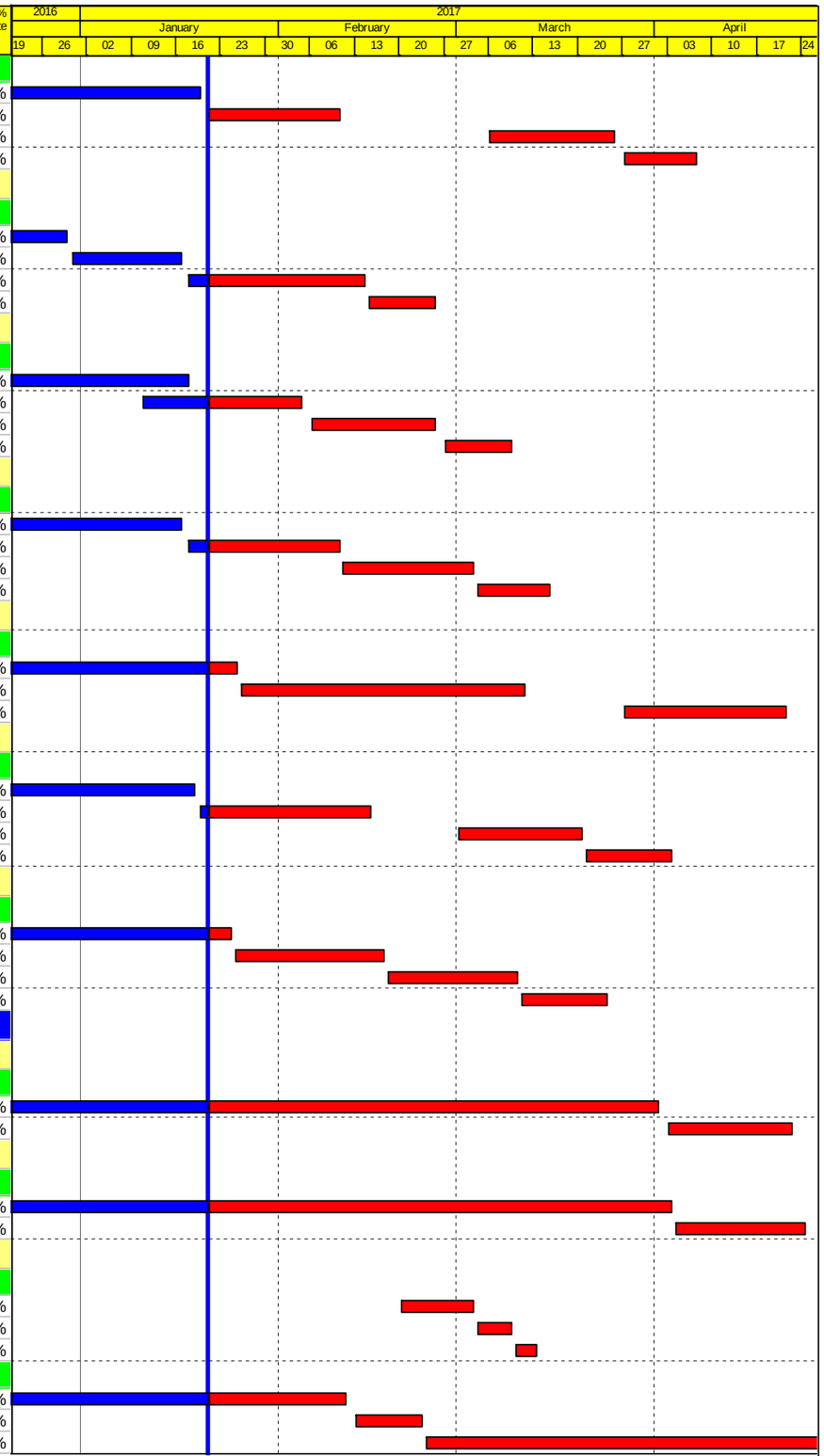
J3518/GCL/PGM/3MRP-M44

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Physical % Complete
Pier Head Segment									
E07B-C5130	E7B - Diaphragm of PHS - Formwork, Rebar, Concreting	76	14-Oct-16 A	0	20-Jan-17 A				100%
E07B-C5140	E7B - Remove Rail Beams	15	21-Jan-17	15	10-Feb-17	03-Dec-15	19-Dec-15	-336	0%
E07B-C5145	E7B - Install Infill Segments (4 nr) - THB	18	06-Mar-17*	18	25-Mar-17	21-Dec-15	13-Jan-16	-355	0%
E07B-C5150	E7B - IFS Stitch & Remove Equipment	10	27-Mar-17	10	07-Apr-17	14-Jan-16	25-Jan-16	-355	0%
Pier E8A (E2f2)									
Pier Head Segment									
E08A-C5130	E8A - Diaphragm of PHS - Formwork, Rebar, Concreting	82	28-Sep-16 A	0	30-Dec-16 A				100%
E08A-C5140	E8A - Remove Rail Beams, Crane	8	31-Dec-16 A	0	17-Jan-17 A				100%
E08A-C5145	E8A - Install Infill Segments (4 nr) - THB	18	18-Jan-17 A	18	14-Feb-17	14-Nov-15	04-Dec-15	-352	50%
E08A-C5150	E8A - IFS Stitch & Remove Equipment	10	15-Feb-17	10	25-Feb-17	05-Dec-15	16-Dec-15	-352	0%
Pier E8B (E2f1)									
Pier Head Segment									
E08B-C5130	E8B - Diaphragm of PHS - Formwork, Rebar, Concreting	61	26-Oct-16 A	0	18-Jan-17 A				100%
E08B-C5140	E8B - Remove Rail Beams	8	11-Jan-17 A	10	04-Feb-17	07-Apr-16	18-Apr-16	-238	50%
E08B-C5145	E8B - Install Infill Segments (4 nr) - THB	18	06-Feb-17	18	25-Feb-17	19-Apr-16	10-May-16	-238	0%
E08B-C5150	E8B - IFS Stitch & Remove Equipment	10	27-Feb-17	10	09-Mar-17	11-May-16	23-May-16	-238	0%
Pier E9A (E2g2)									
Pier Head Segment									
E09A-C5130	E9A - Diaphragm of PHS - Formwork, Rebar, Concreting	86	23-Sep-16 A	0	17-Jan-17 A				100%
E09A-C5140	E9A - Remove Rail Beams, Crane	14	18-Jan-17 A	15	10-Feb-17	04-Jan-16	20-Jan-16	-312	15%
E09A-C5145	E9A - Install Infill Segments (4 nr) - THB	18	11-Feb-17	18	03-Mar-17	21-Jan-16	13-Feb-16	-312	0%
E09A-C5150	E9A - IFS Stitch & Remove Equipment	10	04-Mar-17	10	15-Mar-17	15-Feb-16	25-Feb-16	-312	0%
Pier E9B (E2g1)									
Pier Head Segment									
E09B-C5130	E9B - Diaphragm of PHS - Formwork, Rebar, Concreting	33	17-Oct-16 A	4	25-Jan-17	01-Feb-16	04-Feb-16	-288	50%
E09B-C5140	E9B - Remove Rail Beams	36	26-Jan-17	36	11-Mar-17	05-Feb-16	21-Mar-16	-288	0%
E09B-C5145	E9B - Install Infill Segments (4 nr) - THB	19	27-Mar-17	19	21-Apr-17	22-Mar-16	16-Apr-16	-300	0%
Pier E10A (E2h2)									
Pier Head Segment									
E10A-C5130	E10A - Diaphragm of PHS - Formwork, Rebar, Concreting	56	15-Oct-16 A	0	19-Jan-17 A				100%
E10A-C5140	E10A - Remove Rail Beams, Crane	13	20-Jan-17 A	19	15-Feb-17	03-May-16	25-May-16	-217	5%
E10A-C5145	E10A - Install Infill Segments (4 nr) - THB	17	01-Mar-17*	17	20-Mar-17	26-May-16	15-Jun-16	-228	0%
E10A-C5150	E10A - IFS Stitch & Remove Equipment	12	21-Mar-17	12	03-Apr-17	16-Jun-16	29-Jun-16	-228	0%
Pier E10B (E2h1)									
Pier Head Segment									
E10B-C5130	E10B - Diaphragm of PHS - Formwork, Rebar, Concreting	51	19-Nov-16 A	3	24-Jan-17	28-Apr-16	30-Apr-16	-220	95%
E10B-C5140	E10B - Remove Rail Beams	18	25-Jan-17	18	17-Feb-17	03-May-16	24-May-16	-220	0%
E10B-C5145	E10B - Install Infill Segments (4 nr) - THB	18	18-Feb-17	18	10-Mar-17	25-May-16	15-Jun-16	-220	0%
E10B-C5150	E10B - IFS Stitch & Remove Equipment	12	11-Mar-17	12	24-Mar-17	16-Jun-16	29-Jun-16	-220	0%
Viaduct E - Bridge E5, E6, E7, E8									
Pier E11A (E7E8a)									
Pier Head Segment									
E11A-C5130	E11A - Diaphragm of PHS - Formwork, Rebar, Concreting	80	10-Dec-16 A	58	01-Apr-17	05-Nov-15	14-Jan-16	-360	35%
E11A-C5140	E11A - Remove Rail Beams, Spreader Beams, Crane	14	03-Apr-17	14	22-Apr-17	15-Jan-16	30-Jan-16	-360	0%
Pier E11B (E5e6a)									
Pier Head Segment									
E11B-C5130	E11B - Diaphragm of PHS - Formwork, Rebar, Concreting	81	19-Dec-16 A	59	03-Apr-17	04-Jun-15	13-Aug-15	-486	30%
E11B-C5140	E11B - Remove Rail Beams, Spreader Beams	14	04-Apr-17	14	24-Apr-17	14-Aug-15	29-Aug-15	-486	0%
Pier E12A (E8b)									
Pile Cap Dolphin									
E12A-C3130	E12A- Dolphin - Marine Pile Cap - Fixings, Dewatering & Trim Pile	11	20-Feb-17*	11	03-Mar-17	07-Nov-16	18-Nov-16	-84	0%
E12A-C3150	E12A - Dolphin - Marine Pile Cap - Rebar, Concreting	5	04-Mar-17	5	09-Mar-17	19-Nov-16	24-Nov-16	-84	0%
E12A-C3160	E12A - Dolphin - Marine Pile Cap - CJ preparation & Curing	3	10-Mar-17	3	13-Mar-17	25-Nov-16	28-Nov-16	-84	0%
Pier Head Segment / Infill Segment									
E12A-C5110	E12A - Temp. Work, Grillages, Megashore Towers, Rail Beams	28	17-Dec-16 A	16	11-Feb-17	02-Jun-15	19-Jun-15	-488	60%
E12A-C5120	E12A - Install PH Segment (4 nr)	10	13-Feb-17	10	23-Feb-17	22-Jun-15	03-Jul-15	-488	0%
E12A-C5130	E12A - Diaphragm of PHS - Formwork, Rebar, Concreting	78	24-Feb-17	78	02-Jun-17	04-Jul-15	06-Oct-15	-488	0%



Actual Work
Planned Bar
Critical Bar
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Tuen Mun - Chek Lap Kok Link - Southern Connection
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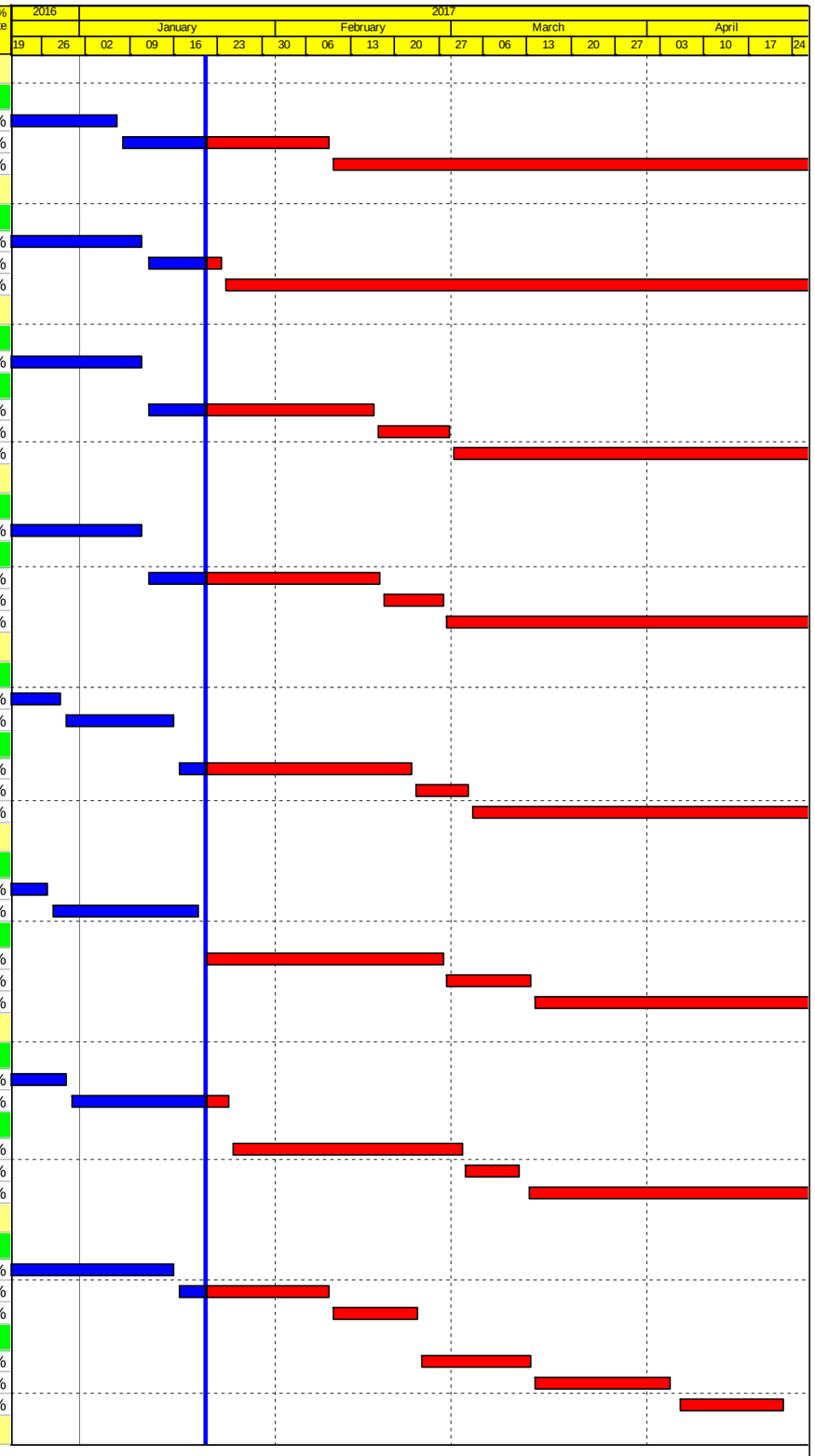
DWG. No.:
J3518/GCL/PGM/3MRP-M44

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Physical % Complete
Pier E12B (E7b)									
Pier Head Segment / Infill Segment									
E12B-C5110	E12B - Temp. Work, Grillages, Megashore Towers, Rail Beams	29	02-Dec-16 A	0	07-Jan-17 A				100%
E12B-C5120	E12B - Install PH Segment (4 nr)	8	08-Jan-17 A	14	09-Feb-17	07-Dec-15	22-Dec-15	-333	75%
E12B-C5130	E12B - Diaphragm of PHS - Formwork, Rebar, Concreting	81	10-Feb-17	81	22-May-17	23-Dec-15	06-Apr-16	-333	0%
Pier E12C (E6b)									
Pier Head Segment / Infill Segment									
E12C-C5110	E12C - Temp. Work, Grillages, Megashore Towers, Rail Beams	28	29-Nov-16 A	0	11-Jan-17 A				100%
E12C-C5120	E12C - Install PH Segment (4 nr)	10	12-Jan-17 A	2	23-Jan-17	17-Dec-15	18-Dec-15	-324	0%
E12C-C5130	E12C - Diaphragm of PHS - Formwork, Rebar, Concreting	79	24-Jan-17	79	05-May-17	19-Dec-15	30-Mar-16	-324	0%
Pier E12D (E5b)									
Pier									
E12D-C4050	E12D Pier - Curing, CJ, Remove Formwork & Falsework	12	16-Dec-16 A	0	11-Jan-17 A				100%
Pier Head Segment / Infill Segment									
E12D-C5110	E12D - Temp. Work, Grillages, Megashore Towers, Rail Beams	28	12-Jan-17 A	20	16-Feb-17	26-May-15	17-Jun-15	-494	40%
E12D-C5120	E12D - Install PH Segment (4 nr)	10	17-Feb-17	10	28-Feb-17	18-Jun-15	30-Jun-15	-494	0%
E12D-C5130	E12D - Diaphragm of PHS - Formwork, Rebar, Concreting	77	01-Mar-17	77	06-Jun-17	02-Jul-15	02-Oct-15	-494	0%
Pier E13A (E8c)									
Pier									
E13A-C4050	E13A Pier - Curing, CJ, Remove Formwork & Falsework	12	17-Dec-16 A	0	11-Jan-17 A				100%
Pier Head Segment / Infill Segment									
E13A-C5110	E13A - Temp. Work, Grillages, Megashore Towers, Rail Beams	29	12-Jan-17 A	21	17-Feb-17	22-May-15	16-Jun-15	-496	25%
E13A-C5120	E13A - Install PH Segment (4 nr)	8	18-Feb-17	8	27-Feb-17	17-Jun-15	26-Jun-15	-496	0%
E13A-C5130	E13A - Diaphragm of PHS - Formwork, Rebar, Concreting	77	28-Feb-17	77	05-Jun-17	27-Jun-15	26-Sep-15	-496	0%
Pier E13B (E7c)									
Pier									
E13B-C4030	E13B Pier - TW, Rebar, Formwork, Concreting - Upper Arm (Solid)	52	31-Oct-16 A	0	29-Dec-16 A				100%
E13B-C4040	E13B Pier - Curing, CJ, Remove Formwork & Falsework	12	30-Dec-16 A	0	16-Jan-17 A				100%
Pier Head Segment / Infill Segment									
E13B-C5110	E13B - Temp. Work, Grillages, Megashore Towers, Rail Beams	29	17-Jan-17 A	25	22-Feb-17	27-May-15	25-Jun-15	-493	15%
E13B-C5120	E13B - Install PH Segment (4 nr)	8	23-Feb-17	8	03-Mar-17	26-Jun-15	06-Jul-15	-493	0%
E13B-C5130	E13B - Diaphragm of PHS - Formwork, Rebar, Concreting	77	04-Mar-17	77	09-Jun-17	07-Jul-15	07-Oct-15	-493	0%
Pier E13C (E6c)									
Pier									
E13C-C4030	E13C Pier - TW, Rebar, Formwork, Concreting - Upper Arm (Soild)	36	15-Nov-16 A	0	27-Dec-16 A				100%
E13C-C4040	E13C Pier - Curing, CJ, Remove Formwork & Falsework	12	28-Dec-16 A	0	20-Jan-17 A				100%
Pier Head Segment / Infill Segment									
E13C-C5110	E13C - Temp. Work, Grillages, Megashore Towers, Rail Beams	29	21-Jan-17	29	27-Feb-17	04-Sep-15	09-Oct-15	-410	0%
E13C-C5120	E13C - Install PH Segment (4 nr)	12	28-Feb-17	12	13-Mar-17	10-Oct-15	24-Oct-15	-410	0%
E13C-C5130	E13C - Diaphragm of PHS - Formwork, Rebar, Concreting	76	14-Mar-17	76	17-Jun-17	26-Oct-15	25-Jan-16	-410	0%
Pier E13D (E5c)									
Pier									
E13D-C4030	E13D Pier - TW, Rebar, Formwork, Concreting - Upper Arm (Solid)	36	21-Nov-16 A	0	30-Dec-16 A				100%
E13D-C4040	E13D Pier - Curing, CJ, Remove Formwork & Falsework	12	31-Dec-16 A	3	24-Jan-17	12-Aug-15	14-Aug-15	-429	0%
Pier Head Segment / Infill Segment									
E13D-C5110	E13D - Temp. Work, Grillages, Megashore Towers, Rail Beams	29	25-Jan-17	29	02-Mar-17	15-Aug-15	18-Sep-15	-429	0%
E13D-C5120	E13D - Install PH Segment (4 nr)	8	03-Mar-17	8	11-Mar-17	19-Sep-15	29-Sep-15	-429	0%
E13D-C5130	E13D - Diaphragm of PHS - Formwork, Rebar, Concreting	77	13-Mar-17	77	17-Jun-17	30-Sep-15	02-Jan-16	-429	0%
Pier E14A (E8d)									
Foundation - Bored Piles									
E14A-C2140	E14A EB Pile - Excavate, Rebar, Concrete (2nd) P3 - Resume	9	20-Dec-16 A	0	16-Jan-17 A				100%
E14A-C2210	E14A EB PIle - Curing & Sonic Test	18	17-Jan-17 A	14	09-Feb-17	10-Jul-15	25-Jul-15	-457	0%
E14A-C2220	E14A EB PIle - Full Depth Core & Test	12	10-Feb-17	12	23-Feb-17	27-Jul-15	08-Aug-15	-457	0%
Pile Cap									
E14A-C3110	E14A Pile Cap - Excavate, Break Pile Head	15	24-Feb-17*	15	13-Mar-17	10-Aug-15	26-Aug-15	-457	0%
E14A-C3210	E14A Pile Cap - Blinding, Formwork, Rebar, Concrete	19	14-Mar-17	19	04-Apr-17	27-Aug-15	18-Sep-15	-457	0%
E14A-C3310	E14A Pile Cap - Curing, Remove Formwork, Backfill	12	06-Apr-17	12	22-Apr-17	19-Sep-15	05-Oct-15	-457	0%
Pier E14B (E7d)									



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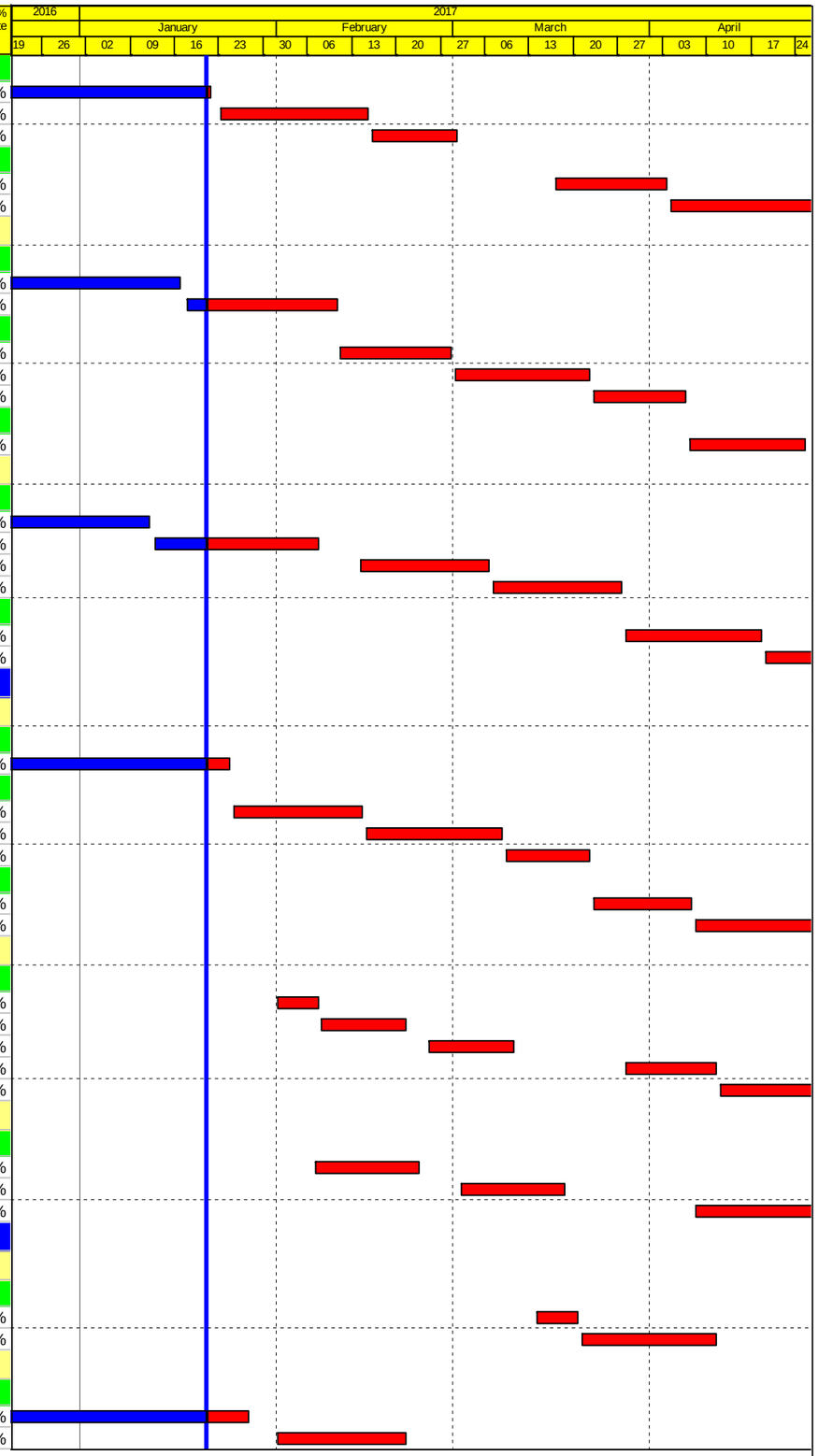
Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Physical % Complete
Foundation - Bored Piles									
E14B-C2140	E14B EB Pile - Excavate, Rebar, Concrete (3rd) P1	19	19-Dec-16 A	1	21-Jan-17	26-Jun-15	26-Jun-15	-468	0%
E14B-C2210	E14B EB PIle - Curing & Sonic Test	18	23-Jan-17	18	15-Feb-17	27-Jun-15	18-Jul-15	-468	0%
E14B-C2220	E14B EB PIle - Full Depth Core & Test	12	16-Feb-17	12	01-Mar-17	20-Jul-15	01-Aug-15	-468	0%
Pile Cap									
E14B-C3110	E14B Pile Cap - Excavate, Break Pile Head	15	17-Mar-17*	15	03-Apr-17	03-Aug-15	19-Aug-15	-481	0%
E14B-C3210	E14B Pile Cap - Blinding, Formwork, Rebar, Concrete	19	04-Apr-17	19	29-Apr-17	20-Aug-15	11-Sep-15	-481	0%
Pier E14C (E6d)									
Foundation - Bored Piles									
E14C-C2140	E14C EB Pile - Excavate, Rebar, Concrete (3rd) P2	18	07-Dec-16 A	0	17-Jan-17 A				100%
E14C-C2210	E14C EB PIle - Curing & Sonic Test	18	18-Jan-17 A	15	10-Feb-17	08-Oct-15	26-Oct-15	-383	0%
Pile Cap									
E14C-C3110	E14C Pile Cap - Excavate, Break Pile Head	15	11-Feb-17	15	28-Feb-17	27-Oct-15	12-Nov-15	-383	0%
E14C-C3210	E14C Pile Cap - Blinding, Formwork, Rebar, Concrete	19	01-Mar-17	19	22-Mar-17	13-Nov-15	04-Dec-15	-383	0%
E14C-C3310	E14C Pile Cap - Curing, Remove Formwork, Backfill	12	23-Mar-17	12	06-Apr-17	05-Dec-15	18-Dec-15	-383	0%
Pier									
E14C-C4110	E14C Pier - Scaffold, Rebar, Formwork, Concrete (1st Lift)	13	07-Apr-17	13	25-Apr-17	19-Dec-15	06-Jan-16	-383	0%
Pier E14D (E5d)									
Foundation - Bored Piles									
E14D-C2130	E14D EB Pile - Excavate, Rebar, Concrete (2nd) P4	18	29-Nov-16 A	0	12-Jan-17 A				100%
E14D-C2140	E14D EB Pile - Excavate, Rebar, Concrete (3rd) P1	18	13-Jan-17 A	12	07-Feb-17	13-Apr-15	25-Apr-15	-529	0%
E14D-C2150	E14D EB Pile - Excavate, Rebar, Concrete (4th) P3	18	14-Feb-17*	18	06-Mar-17	27-Apr-15	18-May-15	-534	0%
E14D-C2210	E14D EB PIle - Curing & Sonic Test	18	07-Mar-17	18	27-Mar-17	19-May-15	09-Jun-15	-534	0%
Pile Cap									
E14D-C3110	E14D Pile Cap - Excavate, Break Pile Head	15	28-Mar-17	15	18-Apr-17	10-Jun-15	27-Jun-15	-534	0%
E14D-C3210	E14D Pile Cap - Blinding, Formwork, Rebar, Concrete	19	19-Apr-17	19	12-May-17	29-Jun-15	21-Jul-15	-534	0%
Viaduct F - Bridge F1									
Pier F1 (F1b)									
Foundation - Bored Piles									
F01-C2210	F1 EB PIle - Curing & Sonic Test	18	12-Dec-16 A	3	24-Jan-17	01-Aug-15	04-Aug-15	-438	100%
Pile Cap									
F01-C3110	F1 Pile Cap - Excavate, Break Pile Head	15	25-Jan-17	15	14-Feb-17	05-Aug-15	21-Aug-15	-438	0%
F01-C3210	F1 Pile Cap - Blinding, Formwork, Rebar, Concrete	19	15-Feb-17	19	08-Mar-17	22-Aug-15	14-Sep-15	-438	0%
F01-C3310	F1 Pile Cap - Curing, Remove Formwork, Backfill	12	09-Mar-17	12	22-Mar-17	15-Sep-15	29-Sep-15	-438	0%
Pier									
F01-C4110	F1 Pier - Scaffold, Rebar, Formwork, Concrete (1st Lift)	13	23-Mar-17	13	07-Apr-17	30-Sep-15	15-Oct-15	-438	0%
F01-C4210	F1 Pier - Scaffold, Rebar, Formwork, Concrete (2nd Lift)	18	08-Apr-17	18	04-May-17	16-Oct-15	06-Nov-15	-438	0%
Pier F2 (F1c)									
Foundation - Bored Piles									
F02-C2110	F2 Fr Pile - Set-up Plant & Install Sleeve	6	01-Feb-17*	6	07-Feb-17	01-Jun-15	06-Jun-15	-495	0%
F02-C2120	F2 Fr Pile - Excavate, Rebar, Concrete (1st) P1	12	08-Feb-17	12	21-Feb-17	08-Jun-15	22-Jun-15	-495	0%
F02-C2130	F2 Fr Pile - Excavate, Rebar, Concrete (2nd) P2	12	25-Feb-17*	12	10-Mar-17	23-Jun-15	07-Jul-15	-498	0%
F02-C2140	F2 Fr Pile - Excavate, Rebar, Concrete (3rd) P3	12	28-Mar-17*	12	11-Apr-17	08-Jul-15	21-Jul-15	-512	0%
F02-C2210	F2 Fr PIle - Curing & Sonic Test	18	12-Apr-17	18	08-May-17	22-Jul-15	11-Aug-15	-512	0%
Pier F3 (F1d)									
Foundation - Bored Piles									
F03-C2130	F3 Fr Pile - Excavate, Rebar, Concrete (1st) P2	15	07-Feb-17*	15	23-Feb-17	26-Jun-15	14-Jul-15	-479	0%
F03-C2180	F3 Fr Pile - Excavate, Rebar, Concrete (2nd) P1 -Replacement	15	02-Mar-17*	15	18-Mar-17	15-Jul-15	31-Jul-15	-484	0%
F03-C2190	F3 Fr Pile - Excavate, Rebar, Concrete (3rd) P3	15	08-Apr-17*	15	28-Apr-17	01-Aug-15	18-Aug-15	-500	0%
Viaduct F - Bridge F2									
Pier F4 (F2b)									
Foundation - Bored Piles									
F04-C2110	F4 Fr Pile - Set-up Plant & Install Sleeve	6	14-Mar-17*	6	20-Mar-17	04-Sep-15	10-Sep-15	-451	0%
F04-C2120	F4 Fr Pile - Excavate, Rebar, Concrete (1st) P1	18	21-Mar-17	18	11-Apr-17	11-Sep-15	03-Oct-15	-451	0%
Pier F5 (F2c)									
Foundation - Bored Piles									
F05-C2140	F5 EB Pile - Excavate, Rebar, Concrete (3rd) P2	18	21-Dec-16 A	6	27-Jan-17	16-Oct-15	23-Oct-15	-376	100%
F05-C2210	F5 EB PIle - Curing & Sonic Test	18	01-Feb-17	18	21-Feb-17	24-Oct-15	13-Nov-15	-376	0%



Actual Work
Planned Bar
Critical Bar
Milestone

Project ID: TMCLK-DWPH-M44
Layout: J3518-DWP-3MRP Submission - M44
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Tuen Mun - Chek Lap Kok Link - Southern Connection
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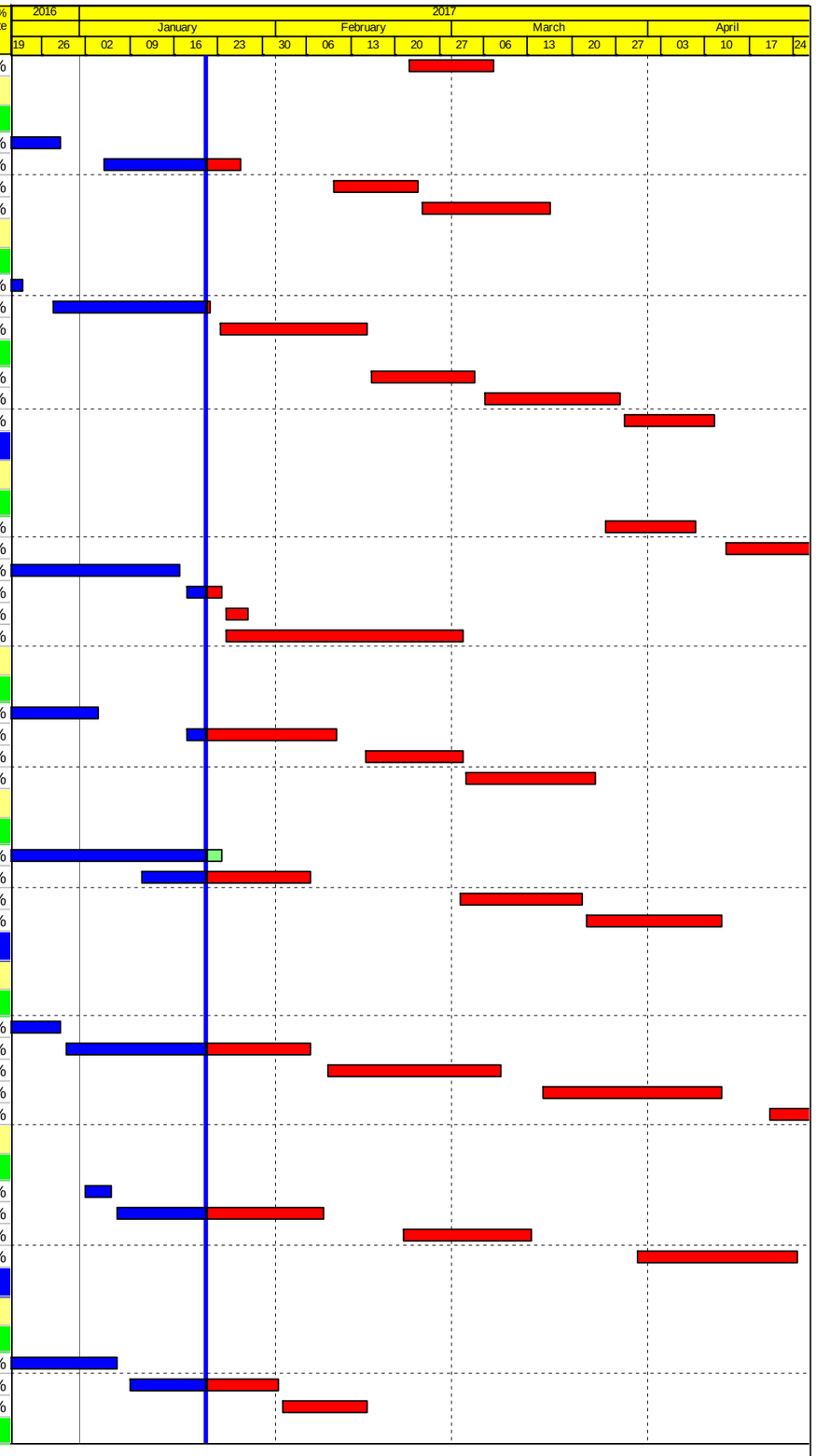
DWG. No.:

J3518/GCL/PGM/3MRP-M44

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Physical % Complete
F05-C2220	F5 EB PIle - Full Depth Core & Test	12	22-Feb-17	12	07-Mar-17	14-Nov-15	27-Nov-15	-376	0%
Pier F6 (F2d)									
Foundation - Bored Piles									
F06-C2120	F6 EB Pile - Excavate, Rebar, Concrete (1st) P2	13	12-Dec-16 A	0	29-Dec-16 A				100%
F06-C2130	F6 EB Pile - Excavate, Rebar, Concrete (2nd) P1	17	05-Jan-17 A	5	26-Jan-17	10-Dec-15	15-Dec-15	-330	0%
F06-C2140	F6 EB Pile - Excavate, Rebar, Concrete (3rd) P3	12	10-Feb-17*	12	23-Feb-17	16-Dec-15	31-Dec-15	-339	0%
F06-C2210	F6 EB PIle - Curing & Sonic Test	18	24-Feb-17	18	16-Mar-17	02-Jan-16	22-Jan-16	-339	0%
Pier F7 (F2e)									
Foundation - Bored Piles									
F07-C2130	F7 EB Pile - Excavate, Rebar, Concrete (2nd) P3	18	05-Dec-16 A	0	23-Dec-16 A				100%
F07-C2140	F7 EB Pile - Excavate, Rebar, Concrete (3rd) P2	23	28-Dec-16 A	1	21-Jan-17	03-May-16	03-May-16	-217	0%
F07-C2210	F7 EB PIle - Curing & Sonic Test	18	23-Jan-17	18	15-Feb-17	04-May-16	25-May-16	-217	0%
Pile Cap									
F07-C3110	F7 Pile Cap - Excavate, Break Pile Head	15	16-Feb-17	15	04-Mar-17	26-May-16	13-Jun-16	-217	0%
F07-C3210	F7 Pile Cap - Blinding, Formwork, Rebar, Concrete	19	06-Mar-17	19	27-Mar-17	14-Jun-16	06-Jul-16	-217	0%
F07-C3310	F7 Pile Cap - Curing, Remove Formwork, Backfill	12	28-Mar-17	12	11-Apr-17	07-Jul-16	20-Jul-16	-217	0%
Viaduct F - Bridge F3									
Pier F9 (F3d)									
Foundation - Bored Piles									
F09-C2130	F9 Fr Pile - Excavate, Rebar, Concrete (2nd) P1	12	25-Mar-17*	12	08-Apr-17	15-Jul-15	28-Jul-15	-504	0%
F09-C2140	F9 Fr Pile - Excavate, Rebar, Concrete (3rd) P3	12	13-Apr-17*	12	29-Apr-17	29-Jul-15	11-Aug-15	-507	0%
F09-C3135	F9 Fr Pile - Install Kentledges for Load Test (Prelim. Pile)	28	13-Dec-16 A	0	17-Jan-17 A				100%
F09-C3140	F9 Fr Pile - Cary Out Load Test (Prelim. Pile)	5	18-Jan-17 A	2	23-Jan-17	23-May-15	26-May-15	-495	0%
F09-C3145	F9 Fr Pile - Load Test Report Submission & Approval (Prelim. Pile)	4	24-Jan-17	4	27-Jan-17	27-May-15	30-May-15	-495	0%
F09-C3150	F9 Fr Pile - Remove Kentledges / Footing & Clear Area	30	24-Jan-17	30	02-Mar-17	08-Jun-15	14-Jul-15	-485	0%
Pier F10 (F3c)									
Foundation - Bored Piles									
F10-C2130	F10 EB Pile - Excavate, Rebar, Concrete (2nd) P3	14	16-Dec-16 A	0	04-Jan-17 A				100%
F10-C2140	F10 EB Pile - Excavate, Rebar, Concrete (3rd) P4	18	18-Jan-17 A	15	10-Feb-17	11-Dec-15	30-Dec-15	-329	0%
F10-C2150	F10 EB Pile - Excavate, Rebar, Concrete (4th) P2	14	15-Feb-17*	14	02-Mar-17	31-Dec-15	16-Jan-16	-332	0%
F10-C2210	F10 EB PIle - Curing & Sonic Test	18	03-Mar-17	18	23-Mar-17	18-Jan-16	06-Feb-16	-332	0%
Pier F11 (F3b)									
Foundation - Bored Piles									
F11-C2130	F11 EB Pile - Excavate, Rebar, Concrete (2nd) P3	17	19-Dec-16 A	2	23-Jan-17	02-Apr-20	03-Apr-20	946	0%
F11-C2140	F11 EB Pile - Excavate, Rebar, Concrete (3rd) P1	17	11-Jan-17 A	11	06-Feb-17	07-Mar-16	18-Mar-16	-261	0%
F11-C2150	F11 EB Pile - Excavate, Rebar, Concrete (4th) P4	17	02-Mar-17*	17	21-Mar-17	19-Mar-16	12-Apr-16	-281	0%
F11-C2210	F11 EB PIle - Curing & Sonic Test	18	22-Mar-17	18	12-Apr-17	13-Apr-16	04-May-16	-281	0%
Viaduct F - Bridge F4									
Pier F16 (F5a/F4a)									
Foundation - Bored Piles									
F16-C2110	F16 EB Pile - Set-up Plant & Install Sleeve	6	21-Dec-16 A	0	29-Dec-16 A				100%
F16-C2120	F16 EB Pile - Excavate, Rebar, Concrete (1st) P3	24	30-Dec-16 A	11	06-Feb-17	03-Oct-15	15-Oct-15	-387	0%
F16-C2130	F16 EB Pile - Excavate, Rebar, Concrete (2nd) P1	24	09-Feb-17*	24	08-Mar-17	16-Oct-15	13-Nov-15	-389	0%
F16-C2140	F16 EB Pile - Excavate, Rebar, Concrete (3rd) P2	24	15-Mar-17*	24	12-Apr-17	14-Nov-15	11-Dec-15	-394	0%
F16-C2150	F16 EB Pile - Excavate, Rebar, Concrete (3rd) P4	25	20-Apr-17*	25	20-May-17	12-Dec-15	13-Jan-16	-397	0%
Pier F17 (F4b)									
Foundation - Bored Piles									
F17-C2110	F17 EB Pile - Set-up Plant & Install Sleeve	6	02-Jan-17 A	0	06-Jan-17 A				100%
F17-C2120	F17 EB Pile - Excavate, Rebar, Concrete (1st) P2	18	07-Jan-17 A	13	08-Feb-17	09-Dec-15	23-Dec-15	-331	0%
F17-C2130	F17 EB Pile - Excavate, Rebar, Concrete (2nd) P1	18	21-Feb-17*	18	13-Mar-17	24-Dec-15	16-Jan-16	-341	0%
F17-C2140	F17 EB Pile - Excavate, Rebar, Concrete (3rd) P3	18	30-Mar-17*	18	24-Apr-17	18-Jan-16	06-Feb-16	-355	0%
Viaduct F - Bridge F5									
Pier F13 (F5d)									
Foundation - Bored Piles									
F13-C2140	F13 EB Pile - Excavate, Rebar, Concrete (3rd) P1	19	12-Dec-16 A	0	07-Jan-17 A				100%
F13-C2210	F13 EB PIle - Curing & Sonic Test	18	09-Jan-17 A	7	01-Feb-17	07-Nov-15	14-Nov-15	-358	0%
F13-C2220	F13 EB PIle - Full Depth Core & Test	12	02-Feb-17	12	15-Feb-17	16-Nov-15	28-Nov-15	-358	0%
Pile Cap									



Actual Work
Planned Bar
Critical Bar
Milestone

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Layout: J3518-DWP-3MRP Submission - M44
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Tuen Mun - Chek Lap Kok Link - Southern Connection
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(Progress as of 21-Jan-17)

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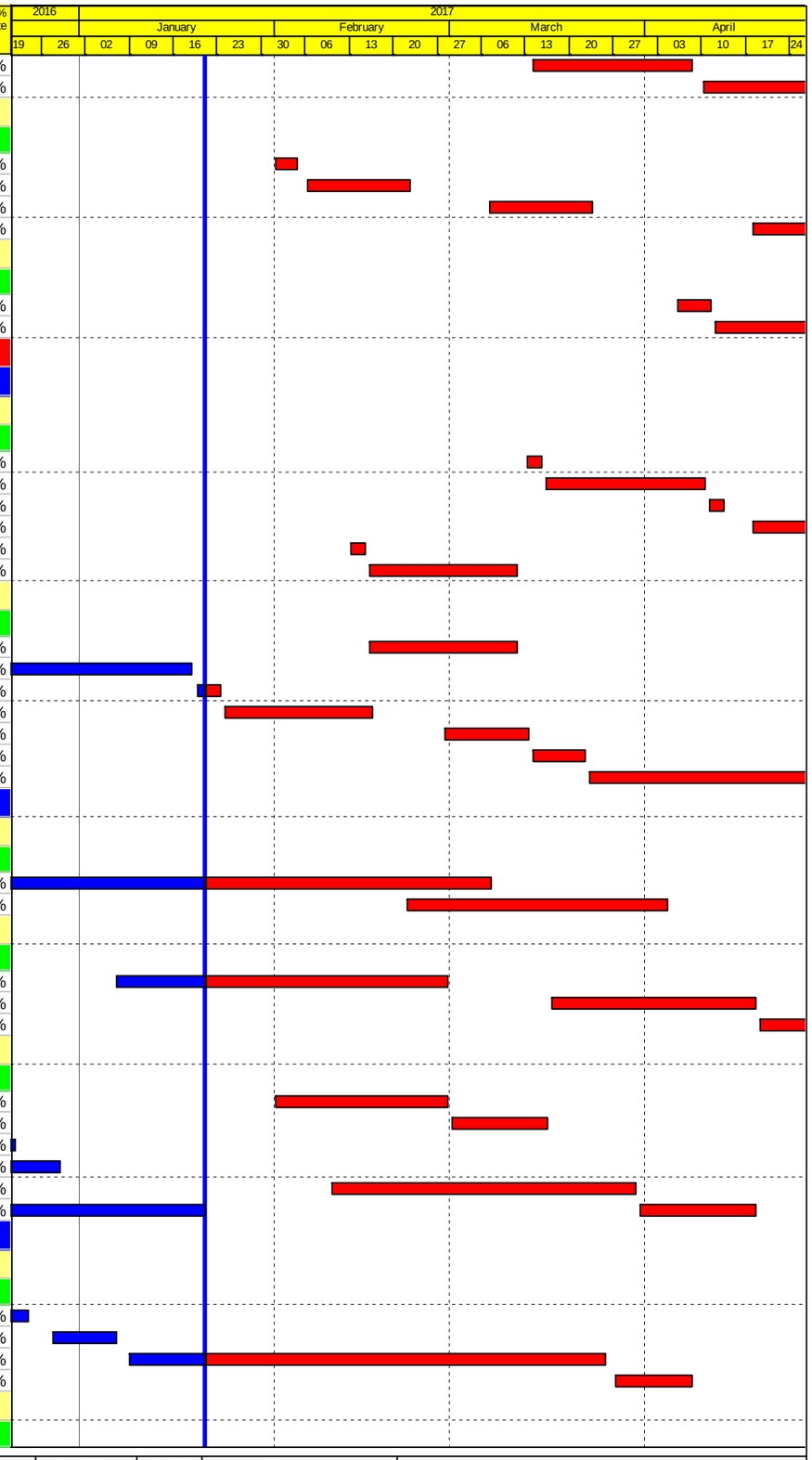
J3518/GCL/PGM/3MRP-M44

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Physical % Complete
F13-C3110	F13 Pile Cap - ELS/Excavate, Break Pile Head	22	14-Mar-17*	22	08-Apr-17	30-Nov-15	24-Dec-15	-380	0%
F13-C3210	F13 Pile Cap - Blinding, Formwork, Rebar, Concrete	19	10-Apr-17	19	06-May-17	28-Dec-15	19-Jan-16	-380	0%
Pier F14 (F5c)									
Foundation - Bored Piles									
F14-C2110	F14 Fr Pile - Set-up Plant & Install Sleeve	4	01-Feb-17	4	04-Feb-17	20-Aug-15	24-Aug-15	-428	0%
F14-C2120	F14 Fr Pile - Excavate, Rebar, Concrete (1st) P1	15	06-Feb-17	15	22-Feb-17	25-Aug-15	11-Sep-15	-428	0%
F14-C2130	F14 Fr Pile - Excavate, Rebar, Concrete (2nd) P2	15	07-Mar-17*	15	23-Mar-17	05-Mar-16	22-Mar-16	-297	0%
F14-C2140	F14 Fr Pile - Excavate, Rebar, Concrete (3rd) P3	15	18-Apr-17*	15	06-May-17	23-Mar-16	13-Apr-16	-314	0%
Pier F15 (F5b)									
Foundation - Bored Piles									
F15-C2110	F15 Fr Pile - Set-up Plant & Install Sleeve	5	06-Apr-17*	5	11-Apr-17	26-Sep-15	03-Oct-15	-451	0%
F15-C2120	F15 Fr Pile - Excavate, Rebar, Concrete (1st) P1	15	12-Apr-17	15	04-May-17	05-Oct-15	22-Oct-15	-451	0%
Superstructure & Associated Works									
Viaduct A									
Bridge A2									
Deck Span Segment									
A01-C6210	A1 - Install THB	3	13-Mar-17	3	15-Mar-17	02-Mar-16	04-Mar-16	-305	0%
A01-C6310	A1 - End Span to A2 (6 nr) - THB	21	16-Mar-17	21	10-Apr-17	05-Mar-16	01-Apr-16	-305	0%
A05-C6210	A5 - Install THB	3	11-Apr-17	3	13-Apr-17	02-Apr-16	06-Apr-16	-305	0%
A05-C6310	A5 - Cantilever Span at A5 (16 nr) - THB	24	18-Apr-17	24	17-May-17	07-Apr-16	05-May-16	-305	0%
A06-C6210	A6 - Install THB	3	13-Feb-17	3	15-Feb-17	30-Jan-16	02-Feb-16	-305	0%
A06-C6310	A6 - End Span to A5 (6 nr) - THB	21	16-Feb-17	21	11-Mar-17	03-Feb-16	01-Mar-16	-305	0%
Bridge A1									
Deck Span Segment									
A06-C6320	A6 - End Span to A7 (8 nr) - THB	21	16-Feb-17	21	11-Mar-17	03-Feb-16	01-Mar-16	-305	0%
A07-C6310	A7 - Cantilever Span (Initial 7 nr) - THB	9	20-Dec-16 A	0	19-Jan-17 A				100%
A07-C6320	A7 - Install KF	6	20-Jan-17 A	2	23-Jan-17	23-Jan-16	25-Jan-16	-295	0%
A07-C6330	A7 - Cantilever Span (Remaining 9 nr) - KF	18	24-Jan-17	18	16-Feb-17	26-Jan-16	18-Feb-16	-295	0%
A08-C6310	A8 - Cantilever Span (Initial 3 nr) - Crane	12	28-Feb-17	12	13-Mar-17	02-Feb-16	18-Feb-16	-316	0%
A08-C6410	A8 - Install KF (MTR)	8	14-Mar-17*	8	22-Mar-17	19-Feb-16	27-Feb-16	-316	0%
A08-C6510	A8 - Cantilever Span (Remaining 23 nr) (MTR) - KF	42	23-Mar-17	42	17-May-17	29-Feb-16	21-Apr-16	-316	0%
Viaduct B									
Bridge B3									
Deck Fnishes, E&M and Roadworks									
VB3-C7710	Viaduct B3 - Parapet Panels	48	16-Dec-16 A	36	07-Mar-17	30-Jun-16	11-Aug-16	-169	30%
VB3-C7720	Viaduct B3 - Gantry & TCSS Provisions (KD5)	36	22-Feb-17	36	04-Apr-17	29-Jul-16	08-Sep-16	-169	0%
Bridge B2									
Deck Span Segment									
B11-C6310	B11 - Cantilever Span (Remaining 16 nr) - THB/Crane	52	07-Jan-17 A	30	28-Feb-17	09-Apr-16	16-May-16	-236	63%
B12-C6410	B12 - Falsework for End Span to B11	24	17-Mar-17	24	18-Apr-17	11-Jun-16	09-Jul-16	-229	0%
B12-C6510	B12 - End Span to B11 (5 nr) - Crane	10	19-Apr-17	10	29-Apr-17	11-Jul-16	21-Jul-16	-229	0%
Bridge B1									
Deck Span Segment									
B12-C6210	B12 - Falsework for End Span to B13	24	01-Feb-17*	24	28-Feb-17	27-Feb-16	29-Mar-16	-274	0%
B12-C6310	B12 - End Span to B13 (7 nr) - Crane	14	01-Mar-17	14	16-Mar-17	30-Mar-16	15-Apr-16	-274	0%
B14-C6310	B14 - Cantilever Span (24 nr) - Crane	48	12-Nov-16 A	0	22-Dec-16 A				100%
B15-C6310	B15 - Cantilever Span (Initial 7 nr) - Crane	20	06-Dec-16 A	0	29-Dec-16 A				100%
B15-C6320	B15 - Cantilever Span (Remaining 19 nr) - Crane	42	10-Feb-17	42	30-Mar-17	08-Mar-16	29-Apr-16	-274	0%
B16-C6310	B16 - Cantilever Span (24 nr) - Crane	28	13-Oct-16 A	12	18-Apr-17	30-Apr-16	16-May-16	-274	88%
Viaduct C									
Bridge C3									
Deck Span Segment									
C06-C6310	C6 - End Span to C7 (7 nr) - LG2	6	19-Dec-16 A	0	24-Dec-16 A				100%
C08-C6210	C8 - Launch LG2 from C6 to C8 (MTR/NLH)	9	28-Dec-16 A	0	07-Jan-17 A				100%
C08-C6310	C8 - Cantilever Span (24 nr) (MTR/NLH) - LG2	58	09-Jan-17 A	52	25-Mar-17	17-Oct-15	17-Dec-15	-375	42%
C09-C6410	C9 - Launch LG2 from C8 to C9 (NLH)	11	27-Mar-17	11	08-Apr-17	18-Dec-15	02-Jan-16	-375	0%
Bridge C2									
Deck Span Segment									



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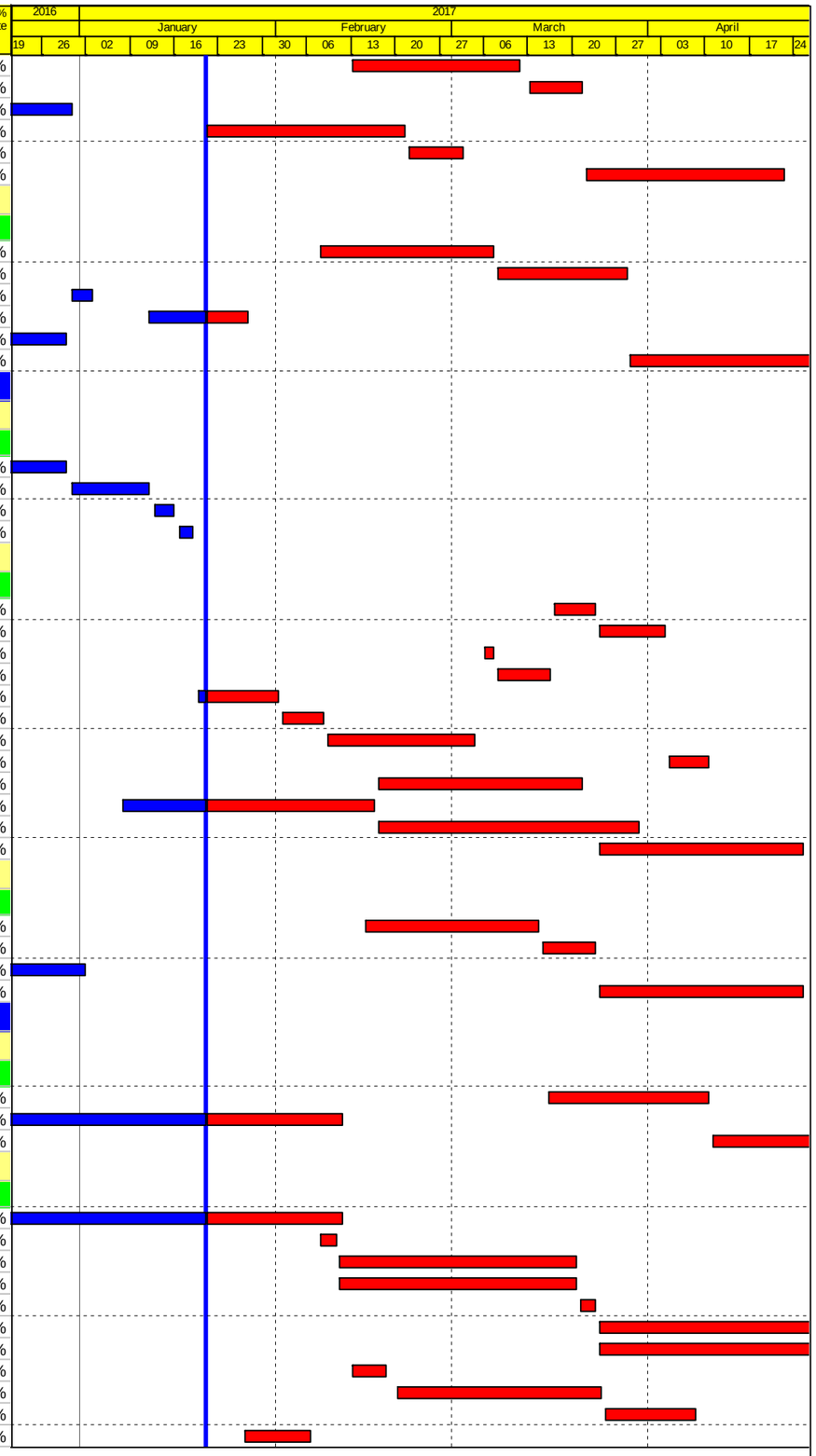
DWG. No.:

J3518/GCL/PGM/3MRP-M44

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Physical % Complete
C11-C6210	C11 - Falsework for End Span to C12	24	13-Feb-17	24	11-Mar-17	18-Jan-16	17-Feb-16	-316	0%
C11-C6310	C11 - End Span to C12 (4 nr) - Crane	8	13-Mar-17	8	21-Mar-17	18-Feb-16	26-Feb-16	-316	0%
C15-C6310	C15 - Cantilever Span (16 nr) - Crane & THB	36	16-Nov-16 A	0	31-Dec-16 A				100%
C16-C6410	C16 - Falsework for End Span to C15	24	21-Jan-17	24	21-Feb-17	29-Dec-15	26-Jan-16	-316	0%
C16-C6510	C16 - End Span to C15 (4 nr) - Crane	8	22-Feb-17	8	02-Mar-17	27-Jan-16	04-Feb-16	-316	0%
VC2-C6510	Viaduct C2 - Final Stitch & Stressing to Span	24	22-Mar-17	24	22-Apr-17	14-Apr-16	12-May-16	-280	0%
Bridge C1									
Deck Span Segment									
C16-C6210	C16 - Falsework for End Span to C17	24	08-Feb-17*	24	07-Mar-17	20-Feb-16	18-Mar-16	-286	0%
C16-C6310	C16 - End Span to C17 (9 nr) - Crane	18	08-Mar-17	18	28-Mar-17	19-Mar-16	13-Apr-16	-286	0%
C17-C6310	C17 - Cantilever Span (Initial 2 nr) - Crane	8	31-Dec-16 A	0	03-Jan-17 A				100%
C17-C6320	C17 - Cantilever Span (Remaining 22 nr) - Crane	27	12-Jan-17 A	6	27-Jan-17	13-Feb-16	19-Feb-16	-280	64%
C18-C6320	C18 - Cantilever Span (Remaining 24 nr) - Crane	29	29-Nov-16 A	0	30-Dec-16 A				100%
VC1-C6510	Viaduct C1 - Final Stitch & Stressing to Span	24	29-Mar-17	24	29-Apr-17	14-Apr-16	12-May-16	-286	0%
Viaduct D									
Bridge D3									
Deck Span Segment									
D03-C6610	D3 - Cantilever Span (Remaining 18 nr) - LG1	9	20-Dec-16 A	0	30-Dec-16 A				100%
D04-C6210	D4 - Launch LG1 from D3 to D4, D5	12	31-Dec-16 A	0	12-Jan-17 A				100%
D04-C6310	D4 - Cantilever Span (Remaining 6 nr) - LG1	3	13-Jan-17 A	0	16-Jan-17 A				100%
D05-C6510	D5 - Cantilever Span (Remaining 4 nr) - LG1	3	17-Jan-17 A	0	19-Jan-17 A				100%
Bridge D2									
Deck Span Segment									
D06-C6210	D6 - Launch LG1 from D7 to D6	6	17-Mar-17	6	23-Mar-17	19-Nov-15	25-Nov-15	-392	0%
D06-C6310	D6 - End Span to D7 (8 nr) - LG1	9	24-Mar-17	9	03-Apr-17	26-Nov-15	05-Dec-15	-392	0%
D07-C6410	D7 - Launch LG1 from D8 to D7	2	06-Mar-17	2	07-Mar-17	07-Nov-15	09-Nov-15	-392	0%
D07-C6510	D7 - Cantilever Span (Remaining 4 nr) - LG1	8	08-Mar-17	8	16-Mar-17	10-Nov-15	18-Nov-15	-392	0%
D08-C6210	D8 - Launch LG1 from D5 to D7 (MTR)	6	20-Jan-17 A	7	01-Feb-17	25-Sep-15	05-Oct-15	-392	0%
D08-C6215	D8 - Launch LG1 from D7 to D8 (MTR)	6	02-Feb-17	6	08-Feb-17	06-Oct-15	12-Oct-15	-392	0%
D08-C6310	D8 - Cantilever Span (26 nr) (MTR) - LG1	21	09-Feb-17	21	04-Mar-17	13-Oct-15	06-Nov-15	-392	0%
D09-C6210	D9 - Launch LG1 from D7 to D8 (MTR/NLH)	5	04-Apr-17	5	10-Apr-17	07-Dec-15	11-Dec-15	-392	0%
D10-C6310	D10 - Cantilever Span (Remaining 14 nr) - Crane & THB	28	17-Feb-17	28	21-Mar-17	27-Jan-16	02-Mar-16	-312	0%
D11-C6310	D11 - Cantilever Span (Remaining 12 nr) - THB	30	08-Jan-17 A	20	16-Feb-17	31-Dec-15	23-Jan-16	-314	34%
D12-C6310	D12 - Cantilever Span (Remaining 18 nr) - Crane & THB	36	17-Feb-17	36	30-Mar-17	25-Jan-16	09-Mar-16	-314	0%
D13-C6610	D13 - Falsework for End Span to D12	24	24-Mar-17	24	25-Apr-17	03-Mar-16	02-Apr-16	-314	0%
Bridge D1									
Deck Span Segment									
D13-C6210	D13 - Falsework for End Span to D14	24	15-Feb-17	24	14-Mar-17	03-Mar-16	02-Apr-16	-282	0%
D13-C6310	D13 - End Span to D14 (4 nr) - Crane	8	15-Mar-17	8	23-Mar-17	05-Apr-16	13-Apr-16	-282	0%
D14-C6310	D14 - Cantilever Span (Remaining 10 nr) - THB	45	09-Nov-16 A	0	02-Jan-17 A				100%
VD1-C6510	Viaduct D1 - Final Stitch & Stressing to Span	24	24-Mar-17	24	25-Apr-17	14-Apr-16	12-May-16	-282	0%
Viaduct E									
Bridge E1									
Deck Span Segment									
A01-C6320	A1 - End Span to E1D (7 nr) - THB	21	16-Mar-17	21	10-Apr-17	05-Mar-16	01-Apr-16	-305	0%
E03D-C6410	E3D - End Span to E2D (6 nr) - THB	33	09-Dec-16 A	16	11-Feb-17	12-Jan-16	29-Jan-16	-305	5%
VE1-C6510	Viaduct E1 - Final Stitch & Stressing to Span	24	11-Apr-17	24	13-May-17	14-Apr-16	12-May-16	-296	0%
Bridge E2									
Deck Span Segment									
E03D-C6420	E3D - End Span to E4B (7 nr) - THB	33	09-Dec-16 A	16	11-Feb-17	12-Jan-16	29-Jan-16	-305	15%
E04A-C6210	E4A - Install THB	3	08-Feb-17	3	10-Feb-17	18-Jul-16	20-Jul-16	-167	0%
E04A-C6310	E4A - Bifurcation Span to E3A (12 nr) with 1st Stitch - THB	32	11-Feb-17	32	20-Mar-17	21-Jul-16	26-Aug-16	-167	0%
E04A-C6410	E4A - Bifurcation Span to E5A (6 nr) with 1st Stitch - THB	32	11-Feb-17	32	20-Mar-17	27-Aug-16	05-Oct-16	-135	0%
E04B-C6210	E4B - Install THB	3	21-Mar-17	3	23-Mar-17	27-Aug-16	30-Aug-16	-167	0%
E04B-C6310	E4B - Bifurcation Span to E3B (12 nr) with 1st Stitch - THB	32	24-Mar-17	32	06-May-17	31-Aug-16	08-Oct-16	-167	0%
E04B-C6410	E4B - Bifurcation Span to E5B (6 nr) with 1st Stitch - THB	32	24-Mar-17	32	06-May-17	31-Aug-16	08-Oct-16	-167	0%
E05A-C6410	E5A - Install KF	6	13-Feb-17*	6	18-Feb-17	13-Jan-16	19-Jan-16	-320	0%
E05A-C6510	E5A - Cantilever Span (14 nr) with 1st Stitch - KF	29	20-Feb-17	29	24-Mar-17	20-Jan-16	25-Feb-16	-320	0%
E05A-C6610	E5A - Stitch between E4A and E5A	12	25-Mar-17	12	08-Apr-17	06-Oct-16	20-Oct-16	-139	0%
E05B-C6410	E5B - Install ALF	6	27-Jan-17	6	06-Feb-17	12-Feb-16	18-Feb-16	-286	0%



Actual Work
Planned Bar
Critical Bar
Milestone

Project ID: TMCLK-DWPH-M44
Layout: J3518-DWP-3MRP Submission - M44
Filter: TASK filters: 3-Month Lookahead, No CC Milestones, No Level of Effort.

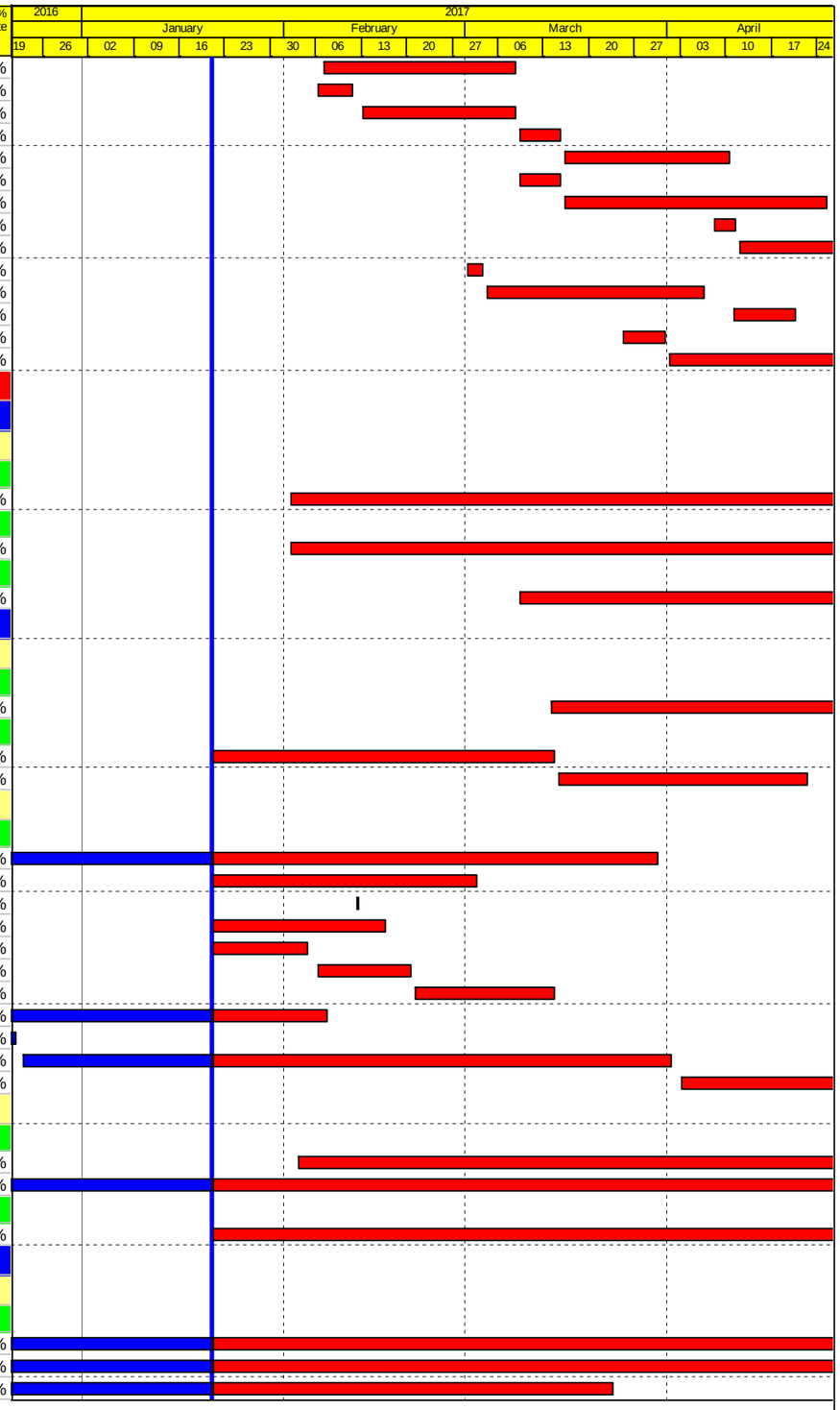
Tuen Mun - Chek Lap Kok Link - Southern Connection
3-Month Rolling Programme (Page 12 of 13 Pages)
(Progress as of 21-Jan-17)

Date	Revision	Checked	Approved
30-Nov-...		PKN	GL
03-Jan-17		PKN	GL
26-Jan-17		PKN	GL

DWG. No.:

J3518/GCL/PGM/3MRP-M44

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Physical % Complete
E05B-C6510	E5B - Cantilever Span (14 nr) with 1st Stitch - ALF	26	07-Feb-17	26	08-Mar-17	19-Feb-16	19-Mar-16	-286	0%
E06A-C6210	E6A - Install WLF	6	06-Feb-17	6	11-Feb-17	01-Mar-16	07-Mar-16	-276	0%
E06A-C6310	E6A - Cantilever Span (9 nr) with 1st Stitch- WLF	21	13-Feb-17	21	08-Mar-17	08-Mar-16	05-Apr-16	-276	0%
E06B-C6210	E6B - Install WLF	6	09-Mar-17	6	15-Mar-17	06-Apr-16	12-Apr-16	-276	0%
E06B-C6310	E6B - Cantilever Span (9 nr) with 1st Stitch - WLF	21	16-Mar-17	21	10-Apr-17	13-Apr-16	07-May-16	-276	0%
E07A-C6210	E7A - Install ALF	6	09-Mar-17	6	15-Mar-17	21-Mar-16	30-Mar-16	-286	0%
E07A-C6310	E7A - Cantilever Span (18 nr) with 1st Stitch - ALF	31	16-Mar-17	31	25-Apr-17	31-Mar-16	07-May-16	-286	0%
E07B-C6210	E7B - Install THB	3	08-Apr-17	3	11-Apr-17	26-Jan-16	28-Jan-16	-355	0%
E07B-C6310	E7B - Cantilever Span (18 nr) with 1st Stitch - THB	35	12-Apr-17	35	27-May-17	29-Jan-16	12-Mar-16	-355	0%
E08A-C6200	E8A - Install THB	3	01-Mar-17*	3	03-Mar-17	17-Dec-15	19-Dec-15	-354	0%
E08A-C6310	E8A - Cantilever Span (13 nr) - THB	28	04-Mar-17	28	06-Apr-17	21-Dec-15	25-Jan-16	-354	0%
E08B-C6210	E8B - Install WLF	6	11-Apr-17	6	20-Apr-17	24-May-16	30-May-16	-264	0%
E09A-C6210	E9A - Install KF	6	25-Mar-17*	6	31-Mar-17	26-Feb-16	03-Mar-16	-320	0%
E09A-C6310	E9A - Cantilever Span (24 nr) with 1st Stitch - KF	44	01-Apr-17	44	29-May-17	04-Mar-16	28-Apr-16	-320	0%
At-Grade Works & Miscellaneous Works									
At-Grade Works Along North Lantau Highway									
Slope Works Near Viaduct D									
Slope 10NW-C/F10									
M201160	10NW-C/F10 - Slope works (incl. L-Shape Ret. Walls)	110	02-Feb-17*	110	17-Jun-17	06-May-16	14-Sep-16	-221	0%
Slope 10NW-C/F11									
M201180	10NW-C/F11 - Slope works (incl. Concrete Toe Walls)	90	02-Feb-17*	90	24-May-17	21-Jun-16	06-Oct-16	-184	0%
Slope 10NW-C/R4									
M201170	10NW-C/R4 - Slope works	80	09-Mar-17	80	17-Jun-17	13-Jun-16	14-Sep-16	-221	0%
At-Grade Works Along Cheung Tung Road									
Slope Works Near Viaduct C									
Slope 10NW-C/F14									
SWVC5000	10NW-C/F14 - Slope works	42	14-Mar-17*	42	08-May-17	06-Aug-16	24-Sep-16	-179	0%
Slope 10NW-C/F15									
SWVC6000	10NW-C/F15 - Slope works	42	21-Jan-17*	42	14-Mar-17	13-Aug-16	03-Oct-16	-132	0%
SWVC6005	10NW-C/F15 - Install Geo. Instru. & Baseline Monitoring	30	15-Mar-17	30	22-Apr-17	04-Oct-16	08-Nov-16	-132	0%
Re-alignment of CTR Along Viaduct B									
General									
RP00064	Ch620-750: telecom, 11KV & 132KV ducting	20	20-Aug-15 A	56	30-Mar-17	21-Mar-16	31-May-16	-249	80%
RP00071	Ch620-750: towngas(DN250+DN400) connection	32	21-Jan-17*	32	02-Mar-17	22-Apr-16	31-May-16	-225	0%
RP00072	Ch620-700 DN1000 connection	1	12-Feb-17*	1	12-Feb-17	30-May-16	31-May-16	-257	0%
RP00075	Ch100-300: duct laying for 11KV	20	21-Jan-17*	20	16-Feb-17	07-May-16	31-May-16	-213	0%
RP00076	Ch100-300: lay telecom cable	10	21-Jan-17*	10	04-Feb-17	11-Apr-16	21-Apr-16	-235	0%
RP00077	Ch100-300: street lighting & draw pit	13	06-Feb-17	13	20-Feb-17	22-Apr-16	07-May-16	-235	0%
RP00078	Ch100-300: relocation of vent pipe	19	21-Feb-17	19	14-Mar-17	09-May-16	31-May-16	-235	0%
RP00079	Ch100-300: watermain(DN450+DN1000)	142	29-Apr-15 A	12	07-Feb-17	18-May-16	31-May-16	-205	80%
RP00081-1	Ch100-300 Temp roadwork for CTR diversion	15	14-Dec-16 A	0	22-Dec-16 A				100%
RP00081-3	Ch100-300 watermain DN1000 remaining pipework and connection	58	23-Dec-16 A	58	01-Apr-17	18-Mar-16	31-May-16	-251	0%
RP00083	Ch100-300: drainage and roadwork for new CTR	122	03-Apr-17	122	31-Aug-17	01-Jun-16	26-Oct-16	-251	0%
Re-alignment of CTR Along Viaduct C									
West Portion									
RW61012	Realign CTR (West of Abut C) - tie out drainage	100	03-Feb-17*	100	07-Jun-17	21-Oct-16	21-Feb-17	-84	0%
RW61020	Realign CTR (West of Abut. C) - Utilily diversion	90	24-Mar-15 A	124	26-Jun-17	10-Sep-16	11-Feb-17	-108	50%
East Portion									
RW60005	Realign CTR (East of Abut. C) - Drainage for tie-in	143	21-Jan-17*	143	19-Jul-17	15-Oct-15	11-Apr-16	-377	0%
Watermain from Tung Chung to Southern Landfall									
Watermain Works									
General									
WM00120	Lay DN450 Fresh Water Main at Re-aligned CTR (approx. 500m)	48	22-Apr-15 A	124	26-Jun-17	27-May-16	24-Oct-16	-197	40%
WM00170	Lay DN450 Watermain Tung Chung to Re-aligned CTR (3rd 500m)	50	01-Jun-16 A	84	09-May-17	15-Jul-16	24-Oct-16	-157	50%
WM00180	Lay DN450 Watermain from Tung Chung to Re-aligned CTR (last 400m)	76	21-Oct-16 A	50	23-Mar-17	24-Aug-16	24-Oct-16	-123	80%



Actual Work
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Critical Bar
Milestone

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Tuen Mun - Chek Lap Kok Link - Southern Connection
3-Month Rolling Programme (Page 13 of 13 Pages)
(Progress as of 21-Jan-17)

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DWG. No.:

J3518/GCL/PGM/3MRP-M44

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 Bridge Tuen Mun-Chep Lap Kok Link – Investigation. Updated EM&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			n/a
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 m^2 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		**Completed in October 2014**
7.13	6.5	Undertaken gabion wall works in Stream NL1 in the dry season	North Lantau slope works/dry	Contractor	TMEIA		Y		n/a

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		✓ Tree transplanted as Contract Specification
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		✓
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		✓

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	O	
10.9	7.6	Recycle/Reuse all felled trees and vegetation, e.g. mulching (CM9)	All areas/detailed design/ during construction	Design Consultant/ Contractor	TMEIA	Y	Y		n/a No felled trees or vegetation suitable for recycle
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	All areas/detailed design/ during construction / during operation	Design Consultant/ Contractor	TMEIA	Y	Y	Y	n/a. To be implemented by

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	O	
		(OM4)							HyD/LCSD
10.9	7.6	Aesthetically pleasing design (visually unobtrusive and non-reflective) as regard to the form, material and finishes	All areas/detailed design/ during construction / during operation	Design Consultant/ Contractor	TMEIA	Y	Y	Y	n/a. To be 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	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	
		where possible. Earth retaining structures and bored pile walls should be proposed to minimise the extent of cutting.	construction period						
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	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	
		materials should avoid over-ordering and wastage.							
12.6	8.1	The Contractor should recycle as many C&D 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.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
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;	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	
		- Adequate ventilation; - Sufficiently covered to prevent rainfall entering (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 hard standing;	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	Site Offices/	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	
		paper if such volume is sufficiently large to warrant collection. Participation in a local collection scheme by the Contractor should be advocated. Waste separation facilities for paper, aluminium cans, plastic bottles, etc should be provided on-site.	throughout construction period						
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

High-Volume TSP Sampler
5-Point Calibration Record

Location	:	ASR8(A)
Calibrated by	:	P.F.Yeung
Date	:	28/11/2016

Sampler

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

Calibration Orfice and Standard Calibration Relationship

Serial Number	:	2454
Service Date	:	24 Mar 2015
Slope (m)	:	2.09532
Intercept (b)	:	-0.03812
Correlation Coefficient(r)	:	0.99994

Standard Condition

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

Calibration Condition

Pa (hpa)	:	1017
Ta(K)	:	292

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	11.4	3.418	1.657	56	56.68
2	13 holes	9.3	3.087	1.499	50	50.61
3	10 holes	6.6	2.600	1.268	43	43.53
4	7 holes	4.5	2.147	1.053	36	36.44
5	5 holes	2.5	1.600	0.793	26	26.32

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):34.464 Intercept(b): -0.502 Correlation Coefficient(r): 0.9990

Checked by: Magnum Fan Date: 02/12/2016

High-Volume TSP Sampler
5-Point Calibration Record

Location	:	ASR9
Calibrated by	:	P.F.Yeung
Date	:	28/11/2016

Sampler

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

Calibration Orfice and Standard Calibration Relationship

Serial Number	:	2454
Service Date	:	24 Mar 2015
Slope (m)	:	2.09532
Intercept (b)	:	-0.03812
Correlation Coefficient(r)	:	0.99994

Standard Condition

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

Calibration Condition

Pa (hpa)	:	1017
Ta(K)	:	292

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	11.6	3.447	1.671	56	56.68
2	13 holes	9.5	3.120	1.515	50	50.61
3	10 holes	7.0	2.678	1.305	44	44.54
4	7 holes	4.8	2.218	1.086	35	35.48
5	5 holes	2.7	1.663	0.823	26	26.32

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):35.730 Intercept(b):-3.020 Correlation Coefficient(r): 0.9989

Checked by: Magnum Fan Date: 02/12/2016

High-Volume TSP Sampler
5-Point Calibration Record

Location	:	ASR8(A)
Calibrated by	:	P.F.Yeung
Date	:	28/01/2017

Sampler

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

Calibration Orfice and Standard Calibration Relationship

Serial Number	:	2454
Service Date	:	24 Mar 2015
Slope (m)	:	2.09532
Intercept (b)	:	-0.03812
Correlation Coefficient(r)	:	0.99994

Standard Condition

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

Calibration Condition

Pa (hpa)	:	1020
Ta(K)	:	291

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	11.4	3.429	1.662	56	56.87
2	13 holes	9.5	3.130	1.520	52	52.80
3	10 holes	6.8	2.648	1.291	44	44.68
4	7 holes	4.8	2.225	1.090	38	38.59
5	5 holes	2.7	1.669	0.825	28	28.43

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):33.913 Intercept(b): 0.950 Correlation Coefficient(r): 0.9990

Checked by: Magnum Fan Date: 04/02/2017

High-Volume TSP Sampler
5-Point Calibration Record

Location	:	ASR9
Calibrated by	:	P.F.Yeung
Date	:	28/01/2017

Sampler

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

Calibration Orfice and Standard Calibration Relationship

Serial Number	:	2454
Service Date	:	24 Mar 2015
Slope (m)	:	2.09532
Intercept (b)	:	-0.03812
Correlation Coefficient(r)	:	0.99994

Standard Condition

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

Calibration Condition

Pa (hpa)	:	1020
Ta(K)	:	291

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	11.8	3.488	1.690	55	55.85
2	13 holes	9.2	3.080	1.496	48	48.74
3	10 holes	6.6	2.609	1.272	42	42.65
4	7 holes	4.4	2.130	1.045	35	35.54
5	5 holes	2.7	1.669	0.825	28	28.43

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):31.156 Intercept(b):2.809 Correlation Coefficient(r): 0.9992

Checked by: Magnum Fan Date: 04/02/2017

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 14, 2016 Rootsmeter S/N 0438320 Ta (K) - 295
Operator Tisch Orifice I.D. - 2454 Pa (mm) - 745.49

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	1.4020	3.2	2.00
2	NA	NA	1.00	1.0060	6.4	4.00
3	NA	NA	1.00	0.9010	7.9	5.00
4	NA	NA	1.00	0.8590	8.8	5.50
5	NA	NA	1.00	0.7090	12.8	8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)
0.9866	0.7037	1.4078
0.9824	0.9765	1.9909
0.9803	1.0880	2.2259
0.9792	1.1399	2.3345
0.9738	1.3735	2.8155

Qstd slope (m) = 2.10326
intercept (b) = -0.06696
coefficient (r) = 0.99989

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

Va	(x axis) Qa	(y axis)
0.9957	0.7102	0.8896
0.9914	0.9855	1.2581
0.9893	1.0980	1.4066
0.9882	1.1504	1.4753
0.9828	1.3862	1.7792

Qa slope (m) = 1.31703
intercept (b) = -0.04232
coefficient (r) = 0.99989

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}

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. : C163248
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC16-1307) Date of Receipt / 收件日期 : 10 June 2016

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. Room 113, 1/F, My Loft, 9 Hoi Wing Road, Tuen Mun, New Territories, 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 : 15 June 2016

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
The results do not exceed 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
- Agilent Technologies / Keysight Technologies
- Rohde & Schwarz Laboratory, Germany
- Fluke Everett Service Center, USA

Tested By 測試 : H T Wong, Technical Officer

Certified By 核證 : K C Lee, Project Engineer

Date of Issue 簽發日期 : 17 June 2016

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
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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. : C163248
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	C153519
CL281	Multifunction Acoustic Calibrator	PA160023
TST150A	Measuring Amplifier	C161175

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	0.985	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.

Sun Creation Engineering Limited – Calibration & Testing Laboratory
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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. : C163758
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC16-1465) Date of Receipt / 收件日期 : 29 June 2016

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. Room 113, 1/F, My Loft, 9 Hoi Wing Road, Tuen Mun, New Territories, 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 : 11 July 2016

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
The results do not exceed 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
- Agilent Technologies / Keysight Technologies
- Rohde & Schwarz Laboratory, Germany
- Fluke Everett Service Center, USA

Tested By 測試 : H T Wong
Technical Officer

Certified By 核證 : K C Lee
Project Engineer

Date of Issue 簽發日期 : 12 July 2016

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

Certificate of Calibration
校正證書

Certificate No. : C163758
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	C160077
CL281	Multifunction Acoustic Calibrator	PA160023

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	93.4	± 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	93.4 (Ref.)
				104.00		103.4
				114.00		113.4

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	93.4	Ref.
			Slow			93.4	± 0.3

Certificate of Calibration
校正證書

Certificate No. : C163758
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	67.1	-26.2 ± 1.5
					125 Hz	77.1	-16.1 ± 1.5
					250 Hz	84.7	-8.6 ± 1.4
					500 Hz	90.1	-3.2 ± 1.4
					1 kHz	93.4	Ref.
					2 kHz	94.7	+1.2 ± 1.6
					4 kHz	94.5	+1.0 ± 1.6
					8 kHz	92.4	-1.1 (+2.1 ; -3.1)
					12.5 kHz	89.5	-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	92.5	-0.8 ± 1.5
					125 Hz	93.2	-0.2 ± 1.5
					250 Hz	93.4	0.0 ± 1.4
					500 Hz	93.4	0.0 ± 1.4
					1 kHz	93.4	Ref.
					2 kHz	93.3	-0.2 ± 1.6
					4 kHz	92.7	-0.8 ± 1.6
					8 kHz	90.5	-3.0 (+2.1 ; -3.1)
					12.5 kHz	87.6	-6.2 (+3.0 ; -6.0)

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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東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

Performance Check of Turbidity Meter

Equipment Ref. No. : ET/0505/012 Manufacturer : HACH

Model No. : 2100Q Serial No. : 12060 C 018447

Date of Calibration : 24/12/2016 Due Date : 23/03/2017

Ref. No. of Turbidity Standard used (4000NTU)	005/6.1/001/9

Theoretical Value of Turbidity Standard (NTU)	Measured Value (NTU)	Difference % *
20	20.2	1.0
100	98.5	-1.5
800	780	-2.5

(*) 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 : _____

東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

'Form E/CE/L/15/Issue 2 (1/1) [04/15]

Internal Calibration & Performance Check of pH Meter

Equipment Ref. No.	:	ET/EW007/007	Manufacturer	:	HANNA
Model No.	:	HI 8314	Serial No.	:	08500489
Date of Calibration	:	07/12/2016	Calibration Due Date	:	06/01/2017

Liquid Junction Error

003/5.2/002/07 (20℃)

Primary Standard Solution Used : Phosphate Ref No. of Primary Solution: 003/5.2/002/08 (25℃)

Temperature of Solution : 25.0 / 20.0 $\Delta pH_{½}$ = 0.080 / 0.080

pH value of diluted buffer : 6.97 / 6.98 pH (S) = 6.865 / 6.881

ΔpH = pH(S) - pH of diluted buffer = 0.105 / 0.099 (Observed Deviation)

Liquid Junction Error (ΔpH_j) = $\Delta pH - \Delta pH_{½}$ = 0.025 / 0.019

Shift on Stirring

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

Shift on stirring, $\Delta pH_s = pH_s - pH(S) - \Delta pH_j$ = 0.010 / 0.000

Noise

Noise, ΔpH_n = difference between max and min reading : 0.01 / 0.01

Verification of ATC

Ref. No. of reference thermometer used: ET/0521/018 / ET/0521/019

Temperature record from the reference thermometer (T_R):	25.0 / 20.0	°C
Temperature record from the ATC (T_{ATC}):	24.8 / 19.8	°C
Temperature Difference, $\lvert T_R - T_{ATC} \rvert$	0.2 / 0.2	°C
Correction	+0.2 / +0.2	°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 : _____

東業德勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

'Form E/CE/L/15/Issue 2 (1/1) [04/15]

Internal Calibration & Performance Check of pH Meter

Equipment Ref. No.	:	ET/EW007/007	Manufacturer	:	HANNA
Model No.	:	HI 8314	Serial No.	:	08500489
Date of Calibration	:	07/01/2017	Calibration Due Date	:	06/02/2017

Liquid Junction Error

003/5.2/002/07 (20℃)

Primary Standard Solution Used : Phosphate Ref No. of Primary Solution: 003/5.2/002/08 (25℃)

Temperature of Solution : 25.0 / 20.0 $\Delta pH_{½}$ = 0.080 / 0.080

pH value of diluted buffer : 6.98 / 6.99 pH (S) = 6.865 / 6.881

ΔpH = pH(S) - pH of diluted buffer = 0.115 / 0.109 (Observed Deviation)

Liquid Junction Error (ΔpH_j) = ΔpH - $\Delta pH_{½}$ = 0.035 / 0.029

Shift on Stirring

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

Shift on stirring, ΔpH_s= pH_s - pH(S) - ΔpH_j = 0.010 / 0.000

Noise

Noise, ΔpH_n = difference between max and min reading : 0.01 / 0.01

Verification of ATC

Ref. No. of reference thermometer used: ET/0521/018 / ET/0521/019

Temperature record from the reference thermometer (T_R):	25.0 / 20.0	°C
Temperature record from the ATC (T_{ATC}):	24.8 / 19.8	°C
Temperature Difference, $\lvert T_R - T_{ATC} \rvert$	0.2 / 0.2	°C
Correction	+0.2 / +0.2	°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 : _____

Internal Calibration Report of Dissolved Oxygen Meter

Equipment Ref. No.	:	ET/EW/008/005	Manufacturer	:	YSI
Model No.	:	Pro 2030	Serial No.	:	12A 100353
Date of Calibration	:	22/10/2016	Calibration Due Date	:	21/01/2017

Temperature Verification

Ref. No. of Reference Thermometer : ET/0521/017

Ref. No. of Water Bath : ---

	Temperature (°C)			
Reference Thermometer reading	Measured	20.0	Corrected	20.1
DO Meter reading	Measured	19.9	Difference	0.2

Standardization of sodium thiosulphate ($Na_2S_2O_3$) solution

Reagent No. of $Na_2S_2O_3$ titrant	CPE/012/4.5/001/14	Reagent No. of 0.025N $K_2Cr_2O_7$	CPE/012/4.4/002/14

	Trial 1	Trial 2
Initial Vol. of $Na_2S_2O_3$ (ml)	0.00	10.35
Final Vol. of $Na_2S_2O_3$ (ml)	10.35	20.75
Vol. of $Na_2S_2O_3$ used (ml)	10.35	10.40
Normality of $Na_2S_2O_3$ solution (N)	0.02415	0.02404
Average Normality (**N**) of $Na_2S_2O_3$ solution (N)	0.02410	
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	11.70	23.40	0.00	6.50	10.50
Final Vol. of $Na_2S_2O_3$ (ml)	11.70	23.40	30.00	6.50	10.50	14.60
Vol. (**V**) of $Na_2S_2O_3$ used (ml)	11.70	11.70	6.60	6.50	4.00	4.10
Dissolved Oxygen (**DO**), mg/L	7.57	7.57	4.27	4.21	2.59	2.65
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	7.44	7.51	7.48	7.57	7.57	7.57	1.20
5	4.19	4.19	4.19	4.27	4.21	4.24	1.19
10	2.52	2.54	2.53	2.59	2.65	2.62	3.50
Linear regression coefficient				0.9999			

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/012/4.7/003/29	Reagent No. of NaCl (30ppt)	CPE/012/4.8/003/29

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	10.90	21.90	31.30
Final Vol. of $Na_2S_2O_3$ (ml)	10.90	21.90	31.30	40.80
Vol. (**V**) of $Na_2S_2O_3$ used (ml)	10.90	11.00	9.40	9.50
Dissolved Oxygen (**DO**), mg/L	7.05	7.12	6.08	6.15
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	7.11	7.15	7.13	7.05	7.12	7.09	0.56
30	6.08	6.04	6.06	6.08	6.15	6.12	0.99

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 : _____

Internal Calibration Report of Dissolved Oxygen Meter

Equipment Ref. No.	:	ET/EW/008/005	Manufacturer	:	YSI
Model No.	:	Pro 2030	Serial No.	:	12A 100353
Date of Calibration	:	19/01/2017	Calibration Due Date	:	18/04/2017

Temperature Verification

Ref. No. of Reference Thermometer : ET/0521/017

Ref. No. of Water Bath : ---

	Temperature (°C)			
Reference Thermometer reading	Measured	20.3	Corrected	19.8
DO Meter reading	Measured	19.9	Difference	-0.1

Standardization of sodium thiosulphate ($Na_2S_2O_3$) solution

Reagent No. of $Na_2S_2O_3$ titrant	CPE/012/4.5/001/15	Reagent No. of 0.025N $K_2Cr_2O_7$	CPE/012/4.4/002/16

	Trial 1	Trial 2
Initial Vol. of $Na_2S_2O_3$ (ml)	0.00	10.35
Final Vol. of $Na_2S_2O_3$ (ml)	10.35	20.70
Vol. of $Na_2S_2O_3$ used (ml)	10.35	10.35
Normality of $Na_2S_2O_3$ solution (N)	0.02415	0.02415
Average Normality (N) of $Na_2S_2O_3$ solution (N)	0.02415	
Acceptance criteria, Deviation	Less than $\pm$ 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	23.00	0.00	6.10	9.90
Final Vol. of $Na_2S_2O_3$ (ml)	11.40	23.00	29.60	6.10	9.90	13.80
Vol. (V) of $Na_2S_2O_3$ used (ml)	11.40	11.60	6.60	6.10	3.80	3.90
Dissolved Oxygen (**DO**), mg/L	7.39	7.52	4.28	3.95	2.46	2.53
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	7.35	7.42	7.39	7.39	7.52	7.46	0.94
5	4.24	4.13	4.19	4.28	3.95	4.12	1.68
10	2.51	2.58	2.55	2.46	2.53	2.50	1.98
Linear regression coefficient				0.9998			

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/012/4.7/003/33	Reagent No. of NaCl (30ppt)	CPE/012/4.8/003/33

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	10.90	21.80	31.20
Final Vol. of $Na_2S_2O_3$ (ml)	10.90	21.80	31.20	40.60
Vol. (V) of $Na_2S_2O_3$ used (ml)	10.90	10.90	9.40	9.40
Dissolved Oxygen (**DO**), mg/L	7.07	7.07	6.09	6.09
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	7.21	7.18	7.2	7.07	7.07	7.07	1.82
30	6.13	6.18	6.16	6.09	6.09	6.09	1.14

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 : Bimo

Approved by :

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/008/005	Manufacturer :	YSI
Model No. :	Pro 2030	Serial No. :	12A 100353
Date of Calibration :	22/10/2016	Due Date :	21/01/2017

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

Salinity Standard (ppt)	Measured Salinity (ppt)	Difference * (%)
30.0	30.6	2.00

(*) 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 : _____

東業環勤測試顧問有限公司
ETS-TESTCONSULT LIMITED

Performance Check of Salinity Meter

Equipment Ref. No. : ET/EW/008/005 Manufacturer : YSI

Model No. : Pro 2030 Serial No. : 12A 100353

Date of Calibration : 19/01/2017 Due Date : 18/04/2017

Ref. No. of Salinity Standard used (30ppt)	S/001/9

Salinity Standard (ppt)	Measured Salinity (ppt)	Difference * (%)
30.0	30.3	1.00

(*) 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 : Brian W Approved by : C A L

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. : C165934
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC16-2438) Date of Receipt / 收件日期 : 26 October 2016

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. Room 113, 1/F, My Loft, 9 Hoi Wing Road, Tuen Mun, New Territories, 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 : 27 October 2016

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 : T L Shek
Assistant Engineer

Certified By / 核證 : H C Chan
Engineer

Date of Issue / 簽發日期 : 28 October 2016

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. : C165934
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	1.8	+0.2	0.2	2.0
4.0	3.8	+0.2	0.2	2.0
6.0	5.8	+0.2	0.3	2.0
8.1	8.0	+0.1	0.3	2.0
10.0	10.0	0.0	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 :
Only the original copy or the laboratory's certified true copy is valid.

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.

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

ENVIROTECH SERVICES CO.

Calibration Report of Wind Meter

Date of Calibration : 1 November 2016

Brand of Test Meter: Global Water

Model: Speed Sensor: WE550 (S/N:E1337005099)

Direction Senor: WE570 (S/N:153500564)

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)
1.18	1.3
0.99	1.1
0.67	0.7

Wind Direction Test

Global Wate (o)	Marine Compass (o)
270.46	270
0.07	0
90.25	90
181.13	180

Calibrated by: Fai

Yeung Ping Fai
(Technical Officer)

Checked by : Fat

Ho Kam Fat
(Senior Technical Officer)

Appendix F

EM&A Monitoring Schedules

HY/2012/07 Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section
Impact Noise Monitoring Schedule (1 to 31 January 2017)

Alternative Noise Monitoring at Pak Mong Village Entrance

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

HY/2012/07 Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section
Impact Air Quality Monitoring Schedule (1 to 31 January 2017)

Alternative Air Quality Monitoring at WA4 and MTRC Depot Entrance

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

HY/2012/07 Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section
Impact Noise Monitoring Schedule (1 to 28 February 2017)

Alternative Noise Monitoring at Pak Mong Village Entrance

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1-Feb	2-Feb	3-Feb	4-Feb
				Noise Impact Monitoring		
5-Feb	6-Feb	7-Feb	8-Feb	9-Feb	10-Feb	11-Feb
			Noise Impact Monitoring			
12-Feb	13-Feb	14-Feb	15-Feb	16-Feb	17-Feb	18-Feb
		Noise Impact Monitoring				
19-Feb	20-Feb	21-Feb	22-Feb	23-Feb	24-Feb	25-Feb
	Noise Impact Monitoring			Noise Impact Monitoring		
26-Feb	27-Feb	28-Feb				

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 2017)

Alternative Air Quality Monitoring at WA4 and MTRC Depot Entrance

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1-Feb	2-Feb	3-Feb	4-Feb
				1-hr TSP Monitoring 24-hr TSP Monitoring		
5-Feb	6-Feb	7-Feb	8-Feb	9-Feb	10-Feb	11-Feb
			1-hr TSP Monitoring 24-hr TSP Monitoring			
12-Feb	13-Feb	14-Feb	15-Feb	16-Feb	17-Feb	18-Feb
		1-hr TSP Monitoring 24-hr TSP Monitoring				
19-Feb	20-Feb	21-Feb	22-Feb	23-Feb	24-Feb	25-Feb
	1-hr TSP Monitoring 24-hr TSP Monitoring			1-hr TSP Monitoring 24-hr TSP Monitoring		
26-Feb	27-Feb	28-Feb				

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 Marine Water Quality Monitoring (WQM) Schedule (January 2017)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
01-Jan	02-Jan	03-Jan	04-Jan	05-Jan	06-Jan	07-Jan
		WQM Mid-Flood 11:02 (09:17 - 12:47) Mid-Ebb 16:39 (14:54 - 18:24)		**WQM** Mid-Flood 12:35 (10:50 - 14:20) Mid-Ebb 18:49 (17:04 - 20:34)		**WQM** Mid-Ebb 7:23 (05:38 - 09:08) Mid-Flood 14:16 (12:31 - 16:01)
08-Jan	09-Jan	10-Jan	11-Jan	12-Jan	13-Jan	14-Jan
		WQM Mid-Ebb 11:18 (09:33 - 13:03) Mid-Flood 16:43 (14:58 - 18:28)		**WQM** Mid-Ebb 13:02 (11:17 - 14:47) Mid-Flood 18:16 (16:31 - 20:01)		**WQM** Mid-Flood 9:07 (07:22 - 10:52) Mid-Ebb 14:29 (12:44 - 16:14)
15-Jan	16-Jan	17-Jan	18-Jan	19-Jan	20-Jan	21-Jan
		WQM Mid-Flood 11:02 (09:17 - 12:47) Mid-Ebb 16:34 (14:49 - 18:19)		**WQM** Mid-Flood 12:16 (10:31 - 14:01) Mid-Ebb 18:23 (16:38 - 20:08)		**WQM** Mid-Ebb 6:47 (05:02 - 08:32) Mid-Flood 13:47 (12:02 - 15:32)
22-Jan	23-Jan	24-Jan	25-Jan	26-Jan	27-Jan	28-Jan
		WQM Mid-Ebb 11:04 (09:19 - 12:49) Mid-Flood 16:07 (14:22 - 17:52)		**WQM** Mid-Ebb 12:24 (10:39 - 14:09) Mid-Flood 17:30 (15:45 - 19:15)		**WQM is cancelled due to suspension of marine works.**
29-Jan	30-Jan	31-Jan	01-Feb	02-Feb	03-Feb	04-Feb
		WQM is cancelled due to suspension of marine works.		**WQM** Mid-Flood 10:50 (09:05 - 12:35) Mid-Ebb 16:56 (15:11 - 18:41)		**WQM** Mid-Flood 12:22 (10:37 - 14:07) Mid-Ebb 19:11 (17:26 - 20:56)

HY/2012/07 - Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section
Impact Marine Water Quality Monitoring (WQM) Schedule (February 2017)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
29-Jan	30-Jan	31-Jan	01-Feb	02-Feb	03-Feb	04-Feb
				WQM Mid-Flood 10:50 (09:05 - 12:35) Mid-Ebb 16:56 (15:11 - 18:41)		**WQM** Mid-Flood 12:22 (10:37 - 14:07) Mid-Ebb 19:11 (17:26 - 20:56)
05-Feb	06-Feb	07-Feb	08-Feb	09-Feb	10-Feb	11-Feb
		WQM Mid-Ebb 10:15 (08:30 - 12:00) Mid-Flood 15:33 (13:48 - 17:18)		**WQM** Mid-Ebb 12:09 (10:24 - 13:54) Mid-Flood 17:24 (15:39 - 19:09)		**WQM** Mid-Flood 8:04 (06:19 - 09:49) Mid-Ebb 13:33 (11:48 - 15:18)
12-Feb	13-Feb	14-Feb	15-Feb	16-Feb	17-Feb	18-Feb
		WQM Mid-Flood 9:31 (07:46 - 11:16) Mid-Ebb 15:10 (13:25 - 16:55)		**WQM** Mid-Flood 10:22 (08:37 - 12:07) Mid-Ebb 16:22 (14:37 - 18:07)		**WQM** Mid-Flood 11:28 (09:43 - 13:13) Mid-Ebb 18:10 (16:25 - 19:55)
19-Feb	20-Feb	21-Feb	22-Feb	23-Feb	24-Feb	25-Feb
		WQM Mid-Ebb 9:52 (09:00 - 10:45) Mid-Flood 14:20 (12:35 - 16:05)		**WQM** Mid-Ebb 11:28 (09:43 - 13:13) Mid-Flood 16:27 (14:42 - 18:12)		**WQM** Mid-Ebb 12:39 (10:54 - 14:24) Mid-Flood 18:00 (16:15 - 19:45)
26-Feb	27-Feb	28-Feb	01-Mar	02-Mar	03-Mar	04-Mar
		WQM Mid-Flood 8:28 (06:43 - 10:13) Mid-Ebb 14:19 (12:34 - 16:04)		**WQM** Mid-Flood 9:25 (07:40 - 11:10) Mid-Ebb 15:35 (13:50 - 17:20)		**WQM** Mid-Flood 10:35 (08:50 - 12:20) Mid-Ebb 17:18 (15:33 - 19:03)

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 31 January 2017)

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

HY/2012/07 Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section
Impact Dolphin Monitoring Survey Schedule (1 to 28 February 2017)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1-Feb	2-Feb	3-Feb	4-Feb
5-Feb	6-Feb	7-Feb	8-Feb	9-Feb	10-Feb	11-Feb
		Impact Dolphin Monitoring		Impact Dolphin Monitoring		
12-Feb	13-Feb	14-Feb	15-Feb	16-Feb	17-Feb	18-Feb
		Impact Dolphin Monitoring				
19-Feb	20-Feb	21-Feb	22-Feb	23-Feb	24-Feb	25-Feb
	Impact Dolphin Monitoring					
26-Feb	27-Feb	28-Feb				

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	2017-01-03	ASR8A	8:25	1-hr TSP	141	394	500
TMCLKL	HY/2012/07	2017-01-03	ASR8A	9:27	1-hr TSP	100		
TMCLKL	HY/2012/07	2017-01-03	ASR8A	10:29	1-hr TSP	91		
TMCLKL	HY/2012/07	2017-01-09	ASR8A	8:00	1-hr TSP	80		
TMCLKL	HY/2012/07	2017-01-09	ASR8A	9:02	1-hr TSP	58		
TMCLKL	HY/2012/07	2017-01-09	ASR8A	10:04	1-hr TSP	66		
TMCLKL	HY/2012/07	2017-01-12	ASR8A	8:12	1-hr TSP	130		
TMCLKL	HY/2012/07	2017-01-12	ASR8A	9:14	1-hr TSP	85		
TMCLKL	HY/2012/07	2017-01-12	ASR8A	10:16	1-hr TSP	160		
TMCLKL	HY/2012/07	2017-01-18	ASR8A	8:14	1-hr TSP	131		
TMCLKL	HY/2012/07	2017-01-18	ASR8A	9:16	1-hr TSP	98		
TMCLKL	HY/2012/07	2017-01-18	ASR8A	10:18	1-hr TSP	107		
TMCLKL	HY/2012/07	2017-01-24	ASR8A	9:00	1-hr TSP	157		
TMCLKL	HY/2012/07	2017-01-24	ASR8A	10:02	1-hr TSP	131		
TMCLKL	HY/2012/07	2017-01-24	ASR8A	11:04	1-hr TSP	117		
TMCLKL	HY/2012/07	2017-01-27	ASR8A	9:13	1-hr TSP	83		
TMCLKL	HY/2012/07	2017-01-27	ASR8A	10:15	1-hr TSP	102		
TMCLKL	HY/2012/07	2017-01-27	ASR8A	11:17	1-hr TSP	84		
					Average	107		
					Min.	58		
					Max.	160		

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

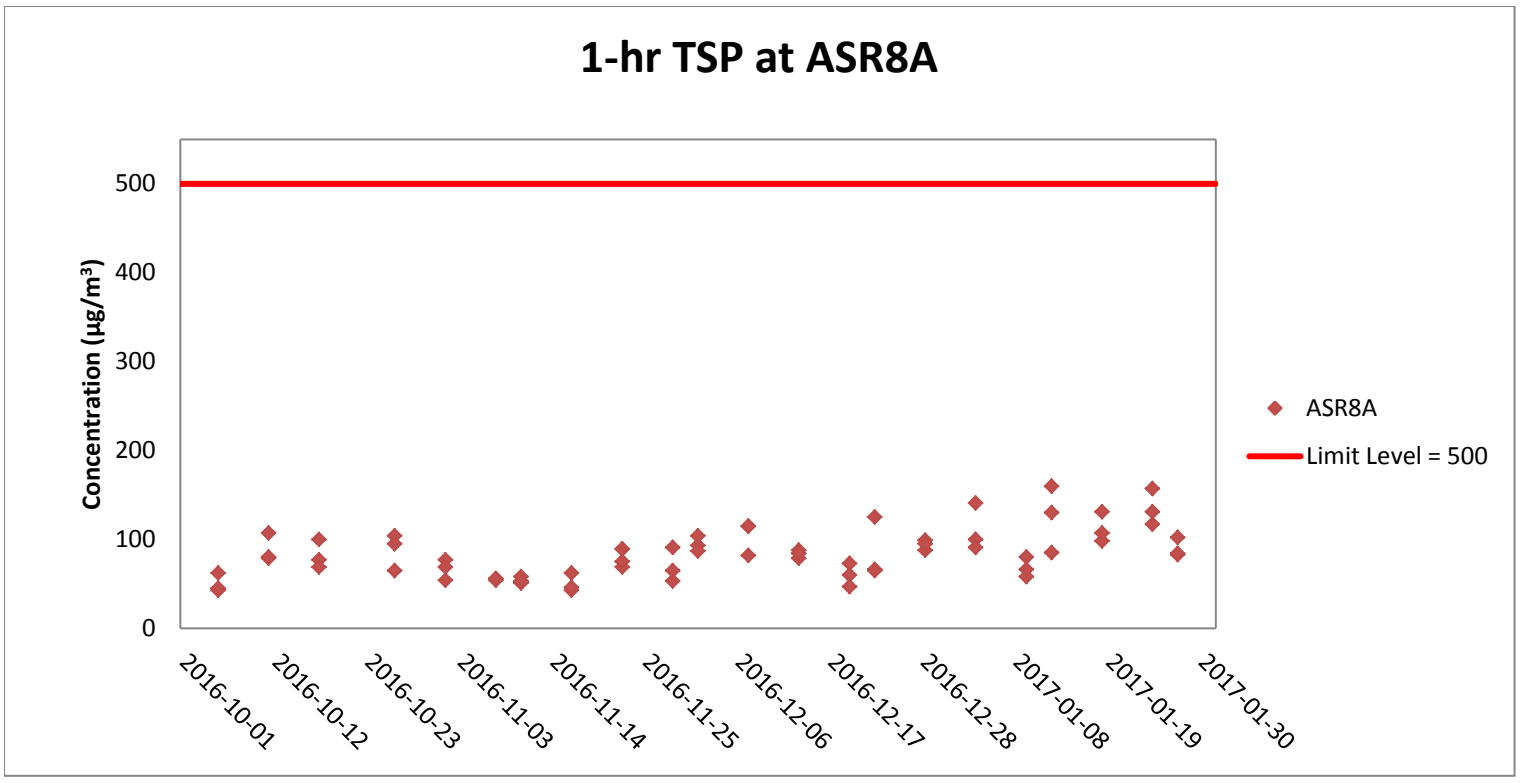
Project	Works	Date(yyyy-mm-dd)	Station	Time (hh:mm, 24hour)	Parameter	Results (ug/m3)	Action Level (ug/m3)	Limit Level (ug/m3)
TMCLKL	HY/2012/07	2017-01-03	ASR9	8:35	1-hr TSP	245	393	500
TMCLKL	HY/2012/07	2017-01-03	ASR9	9:37	1-hr TSP	164		
TMCLKL	HY/2012/07	2017-01-03	ASR9	10:39	1-hr TSP	202		
TMCLKL	HY/2012/07	2017-01-09	ASR9	8:11	1-hr TSP	175		
TMCLKL	HY/2012/07	2017-01-09	ASR9	9:13	1-hr TSP	188		
TMCLKL	HY/2012/07	2017-01-09	ASR9	10:15	1-hr TSP	112		
TMCLKL	HY/2012/07	2017-01-12	ASR9	8:22	1-hr TSP	185		
TMCLKL	HY/2012/07	2017-01-12	ASR9	9:24	1-hr TSP	165		
TMCLKL	HY/2012/07	2017-01-12	ASR9	10:26	1-hr TSP	155		
TMCLKL	HY/2012/07	2017-01-18	ASR9	8:25	1-hr TSP	118		
TMCLKL	HY/2012/07	2017-01-18	ASR9	9:27	1-hr TSP	148		
TMCLKL	HY/2012/07	2017-01-18	ASR9	10:29	1-hr TSP	77		
TMCLKL	HY/2012/07	2017-01-24	ASR9	9:11	1-hr TSP	228		
TMCLKL	HY/2012/07	2017-01-24	ASR9	10:13	1-hr TSP	198		
TMCLKL	HY/2012/07	2017-01-24	ASR9	11:15	1-hr TSP	214		
TMCLKL	HY/2012/07	2017-01-27	ASR9	9:23	1-hr TSP	152		
TMCLKL	HY/2012/07	2017-01-27	ASR9	10:25	1-hr TSP	131		
TMCLKL	HY/2012/07	2017-01-27	ASR9	11:27	1-hr TSP	107		
					Average	165		
					Min.	77		
					Max.	245		

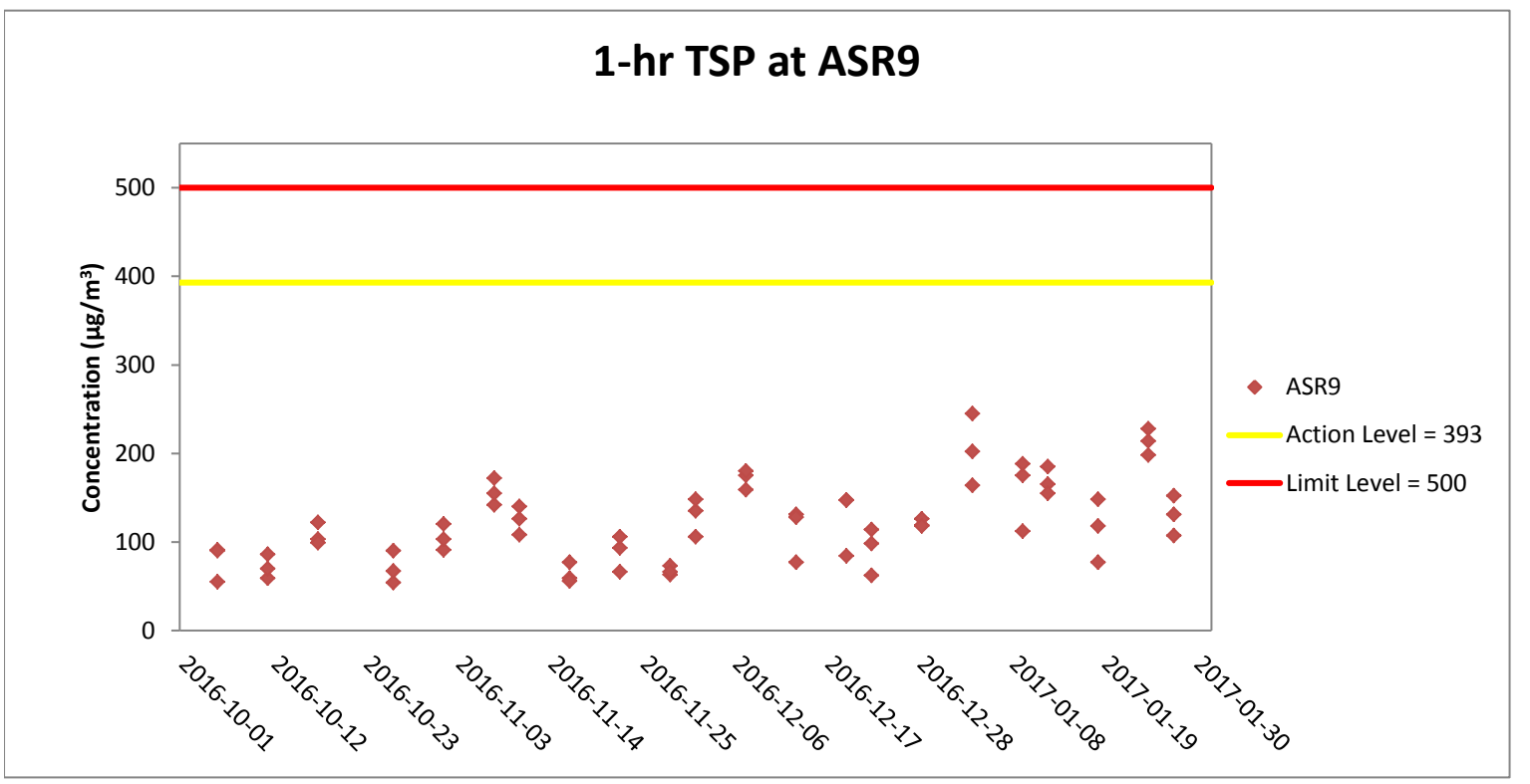
24-hour TSP Monitoring Results at Air Quality Monitoring Station ASR8A

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	2017-01-03	ASR8A	11:31	24-hr TSP	50	178	260
TMCLKL	HY/2012/07	2017-01-09	ASR8A	11:06	24-hr TSP	65		
TMCLKL	HY/2012/07	2017-01-12	ASR8A	11:18	24-hr TSP	81		
TMCLKL	HY/2012/07	2017-01-18	ASR8A	11:20	24-hr TSP	58		
TMCLKL	HY/2012/07	2017-01-24	ASR8A	12:06	24-hr TSP	61		
TMCLKL	HY/2012/07	2017-01-27	ASR8A	12:19	24-hr TSP	55		
					Average	62		
					Min.	50		
					Max.	81		

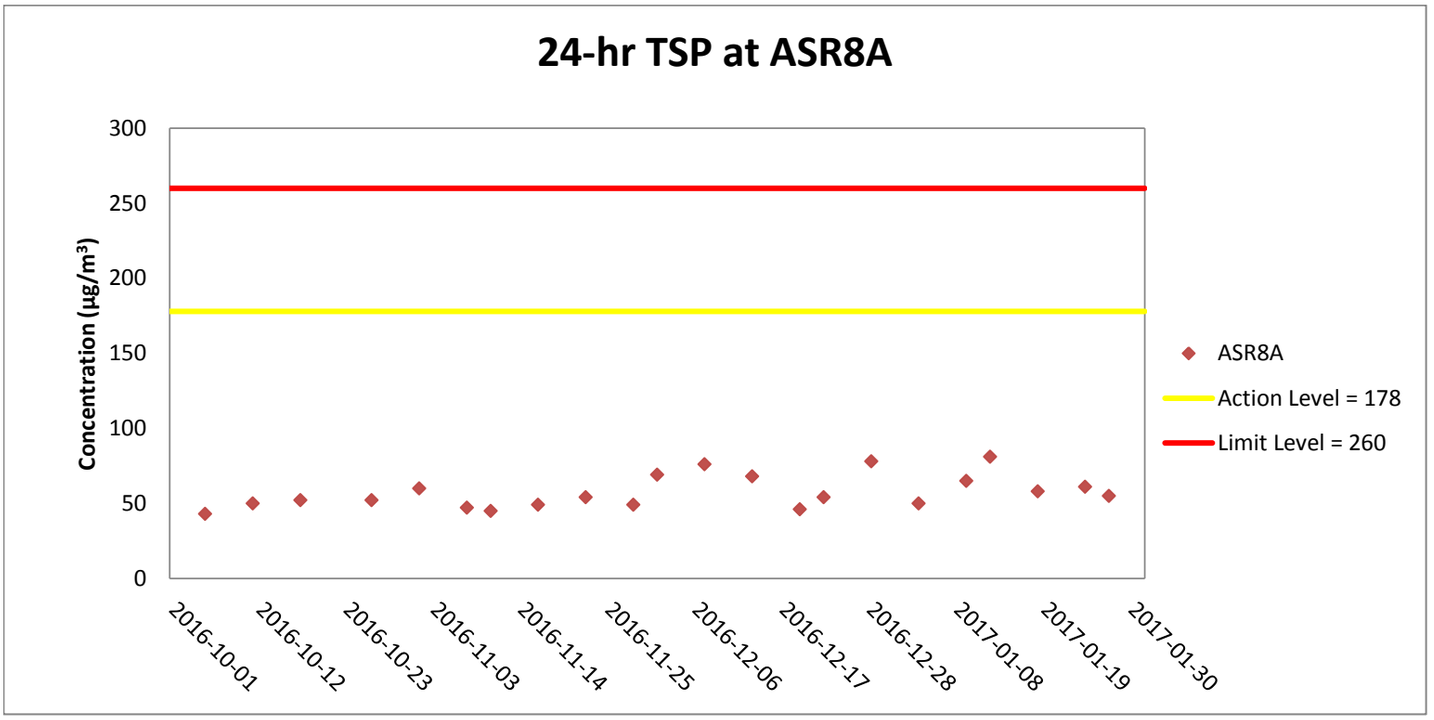
24-hour TSP Monitoring Results at Air Quality Monitoring Station ASR9

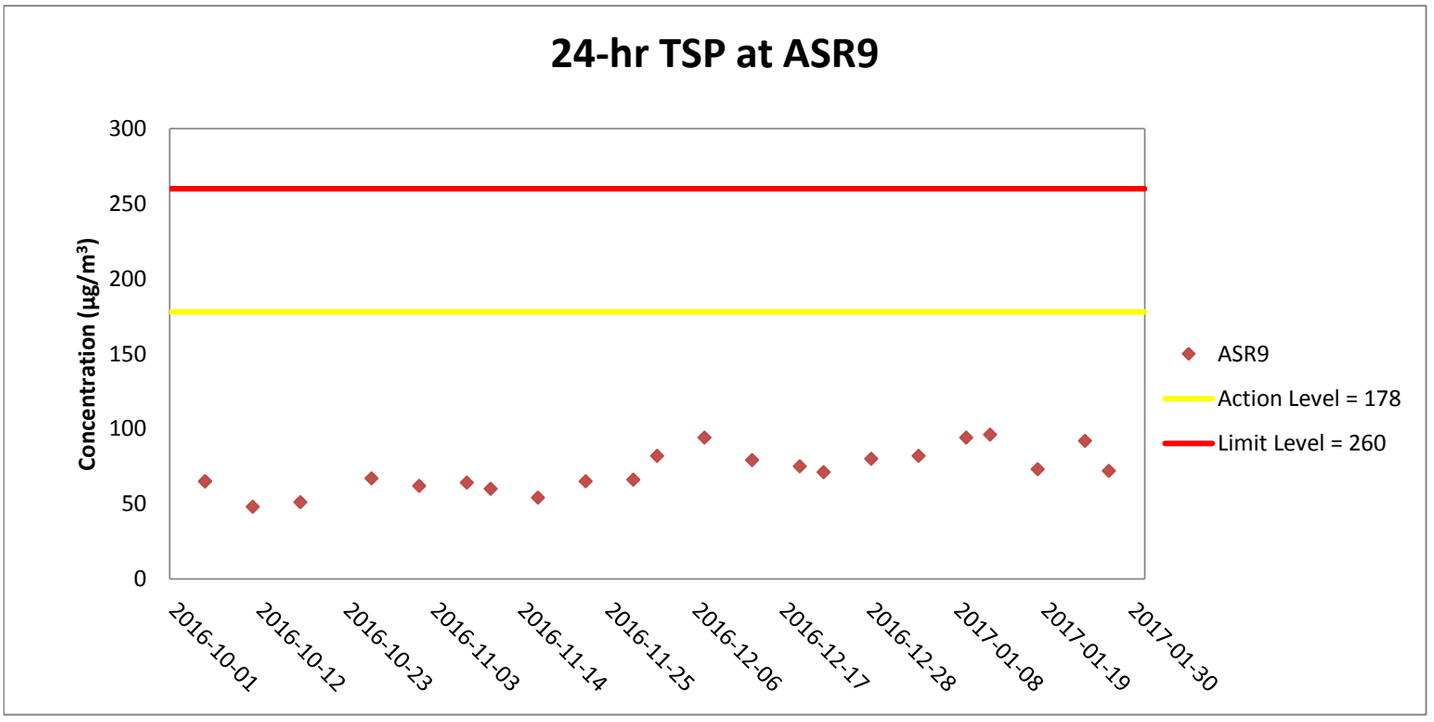
Project	Works	Date(yyyy-mm-dd)	Station	Time (hh:mm, 24hour)	Parameter	Results (ug/m3)	Action Level (ug/m3)	Limit Level (ug/m3)
TMCLKL	HY/2012/07	2017-01-03	ASR9	11:41	24-hr TSP	82	178	260
TMCLKL	HY/2012/07	2017-01-09	ASR9	11:17	24-hr TSP	94		
TMCLKL	HY/2012/07	2017-01-12	ASR9	11:28	24-hr TSP	96		
TMCLKL	HY/2012/07	2017-01-18	ASR9	11:31	24-hr TSP	73		
TMCLKL	HY/2012/07	2017-01-24	ASR9	12:17	24-hr TSP	92		
TMCLKL	HY/2012/07	2017-01-27	ASR9	12:29	24-hr TSP	72		
					Average	85		
					Min.	72		
					Max.	96		





Weather condition within the reporting period varied between sunny to rainy.
Major construction works undertaken within the reporting period include Pier construction; Re-alignment of Cheung Tung Road; Road works along North Lantau Highway;; Installation of pier head and deck segments; and Slope work of Viaducts A, B & C.
Marine works within the reporting period include Construction and installation of pile caps; Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.





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Major construction works undertaken within the reporting period include Pier construction; Re-alignment of Cheung Tung Road; Road works along North Lantau Highway;; Installation of pier head and deck segments; and Slope work of Viaducts A, B & C.
Marine works within the reporting period include Construction and installation of pile caps; Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.

Appendix H

Meteorological Data for the Reporting Month

Date	Time (HH)	Wind speed (m/s)	Wind direction (deg)
2017/1/3	0	0.0	188
2017/1/3	1	0.0	194
2017/1/3	2	0.0	193
2017/1/3	3	0.1	193
2017/1/3	4	0.0	210
2017/1/3	5	0.0	210
2017/1/3	6	0.0	210
2017/1/3	7	0.3	215
2017/1/3	8	3.0	165
2017/1/3	9	2.6	167
2017/1/3	10	3.0	166
2017/1/3	11	3.9	160
2017/1/3	12	3.7	168
2017/1/3	13	2.4	162
2017/1/3	14	2.1	143
2017/1/3	15	2.2	144
2017/1/3	16	3.0	156
2017/1/3	17	2.3	190
2017/1/3	18	0.6	179
2017/1/3	19	1.1	108
2017/1/3	20	1.3	138
2017/1/3	21	3.0	168
2017/1/3	22	1.6	171
2017/1/3	23	2.6	167
2017/1/4	0	1.5	165
2017/1/4	1	0.3	219
2017/1/4	2	1.8	173
2017/1/4	3	2.5	183
2017/1/4	4	1.9	190
2017/1/4	5	3.3	164
2017/1/4	6	3.3	174
2017/1/4	7	1.1	186
2017/1/4	8	0.6	180
2017/1/4	9	1.2	173
2017/1/4	10	0.9	153
2017/1/4	11	1.9	165
2017/1/4	12	2.1	154
2017/1/4	13	2.5	164
2017/1/4	14	2.4	145
2017/1/4	15	2.8	160
2017/1/4	16	2.6	161
2017/1/4	17	1.1	157
2017/1/4	18	0.3	201
2017/1/4	19	0.2	172
2017/1/4	20	0.1	176
2017/1/4	21	0.0	183
2017/1/4	22	0.3	175
2017/1/4	23	0.4	151
2017/1/9	0	0.0	133
2017/1/9	1	0.0	131
2017/1/9	2	0.0	189
2017/1/9	3	0.2	185
2017/1/9	4	0.0	190
2017/1/9	5	0.0	75
2017/1/9	6	0.1	52
2017/1/9	7	0.1	68
2017/1/9	8	0.0	142
2017/1/9	9	0.1	105
2017/1/9	10	0.4	193
2017/1/9	11	0.9	156
2017/1/9	12	0.8	157
2017/1/9	13	1.2	158
2017/1/9	14	1.7	192
2017/1/9	15	2.8	192
2017/1/9	16	2.8	185
2017/1/9	17	1.8	178
2017/1/9	18	1.8	181
2017/1/9	19	0.4	171
2017/1/9	20	0.0	90
2017/1/9	21	0.1	115
2017/1/9	22	0.2	155
2017/1/9	23	0.5	188
2017/1/10	0	0.4	207

Date	Time (HH)	Wind speed (m/s)	Wind direction (deg)
2017/1/10	1	0.5	162
2017/1/10	2	0.0	52
2017/1/10	3	0.3	82
2017/1/10	4	1.0	188
2017/1/10	5	0.8	178
2017/1/10	6	1.1	161
2017/1/10	7	0.4	132
2017/1/10	8	1.0	153
2017/1/10	9	1.0	193
2017/1/10	10	1.2	178
2017/1/10	11	2.1	167
2017/1/10	12	1.3	167
2017/1/10	13	1.8	174
2017/1/10	14	2.5	169
2017/1/10	15	2.2	161
2017/1/10	16	2.2	176
2017/1/10	17	0.9	183
2017/1/10	18	1.4	181
2017/1/10	19	0.9	181
2017/1/10	20	0.3	160
2017/1/10	21	0.6	160
2017/1/10	22	0.1	177
2017/1/10	23	0.1	232
2017/1/12	0	0.7	156
2017/1/12	1	0.3	163
2017/1/12	2	0.0	188
2017/1/12	3	0.0	161
2017/1/12	4	0.1	137
2017/1/12	5	0.0	112
2017/1/12	6	0.0	131
2017/1/12	7	0.0	154
2017/1/12	8	0.1	116
2017/1/12	9	0.0	173
2017/1/12	10	0.0	184
2017/1/12	11	0.1	134
2017/1/12	12	0.0	276
2017/1/12	13	0.0	273
2017/1/12	14	0.0	123
2017/1/12	15	0.1	146
2017/1/12	16	0.0	182
2017/1/12	17	0.0	290
2017/1/12	18	0.0	331
2017/1/12	19	0.0	112
2017/1/12	20	0.0	58
2017/1/12	21	0.0	274
2017/1/12	22	0.1	158
2017/1/12	23	0.0	285
2017/1/13	0	0.1	186
2017/1/13	1	0.0	175
2017/1/13	2	0.0	124
2017/1/13	3	0.0	284
2017/1/13	4	0.0	256
2017/1/13	5	0.0	147
2017/1/13	6	0.0	185
2017/1/13	7	0.0	250
2017/1/13	8	0.1	242
2017/1/13	9	0.0	94
2017/1/13	10	0.2	165
2017/1/13	11	0.0	86
2017/1/13	12	0.0	231
2017/1/13	13	0.0	160
2017/1/13	14	0.1	194
2017/1/13	15	0.1	189
2017/1/13	16	0.0	139
2017/1/13	17	0.0	168
2017/1/13	18	0.0	55
2017/1/13	19	0.0	131
2017/1/13	20	0.1	77
2017/1/13	21	0.0	130
2017/1/13	22	0.0	60
2017/1/13	23	0.0	213
2017/1/18	0	0.1	72
2017/1/18	1	0.3	96

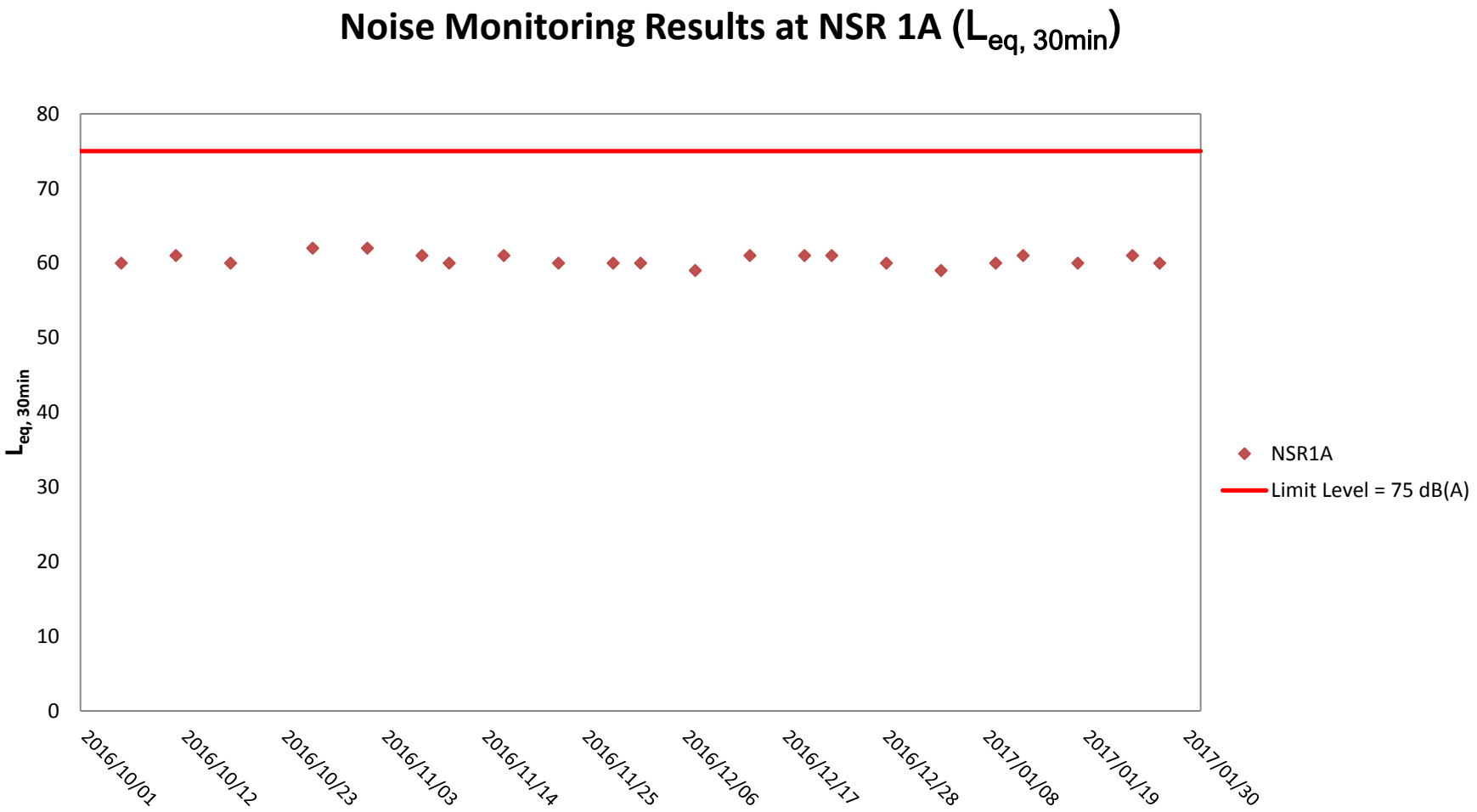
Date	Time (HH)	Wind speed (m/s)	Wind direction (deg)
2017/1/18	2	0.1	94
2017/1/18	3	0.0	158
2017/1/18	4	0.0	119
2017/1/18	5	0.3	161
2017/1/18	6	0.0	115
2017/1/18	7	0.0	79
2017/1/18	8	0.0	130
2017/1/18	9	0.1	175
2017/1/18	10	0.2	130
2017/1/18	11	0.0	288
2017/1/18	12	0.1	160
2017/1/18	13	0.0	164
2017/1/18	14	0.0	170
2017/1/18	15	0.0	169
2017/1/18	16	0.0	169
2017/1/18	17	0.0	169
2017/1/18	18	0.0	138
2017/1/18	19	0.0	170
2017/1/18	20	0.0	170
2017/1/18	21	0.0	154
2017/1/18	22	0.0	180
2017/1/18	23	0.0	180
2017/1/19	0	0.0	180
2017/1/19	1	0.0	180
2017/1/19	2	0.0	180
2017/1/19	3	0.0	180
2017/1/19	4	0.0	180
2017/1/19	5	0.0	180
2017/1/19	6	0.0	134
2017/1/19	7	0.0	166
2017/1/19	8	0.0	142
2017/1/19	9	0.0	211
2017/1/19	10	0.0	77
2017/1/19	11	0.0	160
2017/1/19	12	0.0	95
2017/1/19	13	0.0	162
2017/1/19	14	0.0	131
2017/1/19	15	0.0	105
2017/1/19	16	0.0	67
2017/1/19	17	0.0	85
2017/1/19	18	0.1	136
2017/1/19	19	0.1	147
2017/1/19	20	0.0	153
2017/1/19	21	0.0	161
2017/1/19	22	0.3	225
2017/1/19	23	0.1	194
2017/1/24	0	1.2	192
2017/1/24	1	0.9	226
2017/1/24	2	1.0	193
2017/1/24	3	1.1	182
2017/1/24	4	0.9	180
2017/1/24	5	0.9	178
2017/1/24	6	0.6	162
2017/1/24	7	0.1	160
2017/1/24	8	0.8	170
2017/1/24	9	0.7	132
2017/1/24	10	0.2	206
2017/1/24	11	0.0	219
2017/1/24	12	0.5	115
2017/1/24	13	2.0	144
2017/1/24	14	2.1	158
2017/1/24	15	2.8	174
2017/1/24	16	2.1	172
2017/1/24	17	2.3	177
2017/1/24	18	2.9	174
2017/1/24	19	2.5	183
2017/1/24	20	2.1	187
2017/1/24	21	2.6	168
2017/1/24	22	0.9	195
2017/1/24	23	1.5	206
2017/1/25	0	1.6	173
2017/1/25	1	0.1	111
2017/1/25	2	0.1	82
2017/1/25	3	0.0	94
2017/1/25	4	0.1	184

Date	Time (HH)	Wind speed (m/s)	Wind direction (deg)
2017/1/25	5	1.2	162
2017/1/25	6	0.4	147
2017/1/25	7	0.1	172
2017/1/25	8	0.0	79
2017/1/25	9	0.0	248
2017/1/25	10	0.0	240
2017/1/25	11	0.0	160
2017/1/25	12	0.1	176
2017/1/25	13	0.1	221
2017/1/25	14	1.2	199
2017/1/25	15	2.8	176
2017/1/25	16	3.0	169
2017/1/25	17	1.3	157
2017/1/25	18	2.0	165
2017/1/25	19	0.9	134
2017/1/25	20	1.0	140
2017/1/25	21	1.0	148
2017/1/25	22	1.4	185
2017/1/25	23	1.4	165
2017/1/27	0	0.5	126
2017/1/27	1	0.3	130
2017/1/27	2	0.0	208
2017/1/27	3	0.0	134
2017/1/27	4	0.0	36
2017/1/27	5	0.0	58
2017/1/27	6	0.0	183
2017/1/27	7	0.2	181
2017/1/27	8	0.0	147
2017/1/27	9	0.0	183
2017/1/27	10	0.0	158
2017/1/27	11	0.0	232
2017/1/27	12	0.1	303
2017/1/27	13	0.0	177
2017/1/27	14	0.0	174
2017/1/27	15	0.0	141
2017/1/27	16	0.2	120
2017/1/27	17	1.2	172
2017/1/27	18	0.7	172
2017/1/27	19	0.4	177
2017/1/27	20	1.6	155
2017/1/27	21	1.8	160
2017/1/27	22	0.1	131
2017/1/27	23	0.1	115
2017/1/28	0	0.0	110
2017/1/28	1	0.3	171
2017/1/28	2	0.1	171
2017/1/28	3	0.1	191
2017/1/28	4	0.3	163
2017/1/28	5	2.9	169
2017/1/28	6	1.8	190
2017/1/28	7	3.2	166
2017/1/28	8	3.6	162
2017/1/28	9	3.1	172
2017/1/28	10	1.8	198
2017/1/28	11	1.2	185
2017/1/28	12	1.4	140
2017/1/28	13	1.1	170
2017/1/28	14	1.7	179
2017/1/28	15	1.2	182
2017/1/28	16	0.1	106
2017/1/28	17	0.0	49
2017/1/28	18	0.1	91
2017/1/28	19	1.5	167
2017/1/28	20	1.5	179
2017/1/28	21	1.2	177
2017/1/28	22	2.0	171
2017/1/28	23	1.9	164

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)	Wind Speed (m/s)	Noise Meter Model/ID	Calibrator Model/ID
						Leq	L10	L90				
TMCLKL	HY/2012/07	2017-01-03	NSR1A	Sunny	9:48	59	61	55	75	0.2	RION NL31 (S/N 00603867)	RION NC73 (S/N 10997142)
TMCLKL	HY/2012/07	2017-01-09	NSR1A	Sunny	9:23	60	62	54	75	0.2	RION NL31 (S/N 00603867)	RION NC73 (S/N 10997142)
TMCLKL	HY/2012/07	2017-01-12	NSR1A	Cloudy	10:36	61	63	55	75	0.3	RION NL31 (S/N 00603867)	RION NC73 (S/N 10997142)
TMCLKL	HY/2012/07	2017-01-18	NSR1A	Cloudy	9:37	60	62	53	75	0.2	RION NL31 (S/N 00603867)	RION NC73 (S/N 10997142)
TMCLKL	HY/2012/07	2017-01-24	NSR1A	Sunny	10:23	61	63	57	75	0.3	RION NL31 (S/N 00603867)	RION NC73 (S/N 10997142)
TMCLKL	HY/2012/07	2017-01-27	NSR1A	Sunny	10:35	60	62	55	75	0.2	RION NL31 (S/N 00603867)	RION NC73 (S/N 10997142)
					Min.	59						
					Max.	61						
					Average	60						



Weather condition within the reporting period varied between sunny to rainy.
Major construction works undertaken within the reporting period include Pier construction; Re-alignment of Cheung Tung Road; Road works along North Lantau Highway; Installation of pier head and deck segments; and Slope work of Viaducts A, B & C.
Marine works within the reporting period include Construction and installation of pile caps; Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.

Appendix J

Impact Water Quality Monitoring Results and Graphical Presentation

Project	Works	Date (yyyy-mm-d	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	CS(Mf)5	10:17	Surface	1	1	20.5	7.94	27.5	7.69	6.72	9.1
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	CS(Mf)5	10:17	Surface	1	2	20.5	7.96	27.6	7.71	6.74	9.2
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	CS(Mf)5	10:17	Middle	2	1	20.6	8.13	27.7	7.88	6.88	9.4
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	CS(Mf)5	10:17	Middle	2	2	20.7	8.15	27.8	7.9	6.91	9.4
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	CS(Mf)5	10:17	Bottom	3	1	20.8	8.02	27.9	8.14	7.05	9.9
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	CS(Mf)5	10:17	Bottom	3	2	20.8	8.04	27.9	8.12	7.08	9.9
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	SR4a	10:40	Surface	1	1	20.5	8.13	27.6	7.84	6.48	8.9
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	SR4a	10:40	Surface	1	2	20.6	8.15	27.6	7.87	6.45	8.9
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	SR4a	10:40	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	SR4a	10:40	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	SR4a	10:40	Bottom	3	1	20.7	7.9	27.7	7.99	6.55	9.1
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	SR4a	10:40	Bottom	3	2	20.8	7.93	27.8	8.01	6.57	9.2
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	SR4	11:05	Surface	1	1	20.5	8.14	27.6	7.92	6.66	9.2
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	SR4	11:05	Surface	1	2	20.6	8.17	27.7	7.95	6.68	9.2
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	SR4	11:05	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	SR4	11:05	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	SR4	11:05	Bottom	3	1	20.7	7.73	27.8	8.13	6.79	9.6
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	SR4	11:05	Bottom	3	2	20.8	7.75	27.8	8.15	6.81	9.7
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	IS8	11:25	Surface	1	1	20.5	7.93	27.5	8.14	6.72	9.3
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	IS8	11:25	Surface	1	2	20.5	7.96	27.6	8.17	6.75	9.3
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	IS8	11:25	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	IS8	11:25	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	IS8	11:25	Bottom	3	1	20.6	8.13	27.7	8.44	7.03	10
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	IS8	11:25	Bottom	3	2	20.7	8.15	27.8	8.46	7.06	10
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	IS(Mf)16	11:43	Surface	1	1	20.6	8.07	27.5	8.04	6.34	8.7
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	IS(Mf)16	11:43	Surface	1	2	20.7	8.11	27.6	8.07	6.37	8.8
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	IS(Mf)16	11:43	Middle	2	1	20.8	7.83	27.7	8.15	6.45	8.7
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	IS(Mf)16	11:43	Middle	2	2	20.7	7.8	27.8	8.18	6.48	8.8
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	IS(Mf)16	11:43	Bottom	3	1	20.9	7.6	27.9	8.29	6.77	9.3
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	IS(Mf)16	11:43	Bottom	3	2	20.8	7.63	27.8	8.31	6.79	9.3
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	IS(Mf)9	12:10	Surface	1	1	20.5	8.13	27.7	8.04	6.41	8.5
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	IS(Mf)9	12:10	Surface	1	2	20.5	8.16	27.6	8.07	6.44	8.6

Project	Works	Date (yyyy-mm-d	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	IS(Mf)9	12:10	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	IS(Mf)9	12:10	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	IS(Mf)9	12:10	Bottom	3	1	20.6	7.94	27.8	8.25	6.58	8.9
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	IS(Mf)9	12:10	Bottom	3	2	20.7	7.91	27.8	8.27	6.61	9
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	CS(Mf)3	12:30	Surface	1	1	20.4	7.83	27.5	7.85	6.74	9
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	CS(Mf)3	12:30	Surface	1	2	20.5	7.85	27.6	7.88	6.71	8.9
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	CS(Mf)3	12:30	Middle	2	1	20.6	8.11	27.7	8.04	7	9.4
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	CS(Mf)3	12:30	Middle	2	2	20.7	8.13	27.7	8.07	7.03	9.5
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	CS(Mf)3	12:30	Bottom	3	1	20.8	7.94	27.8	8.29	7.15	9.9
TMCLKL	HY/2012/07	2017-01-03	Mid-Flood	CS(Mf)3	12:30	Bottom	3	2	20.8	7.97	27.7	8.31	7.17	9.9
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	CS(Mf)5	17:16	Surface	1	1	20.6	7.62	27.7	7.56	7.41	10.1
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	CS(Mf)5	17:16	Surface	1	2	20.7	7.68	27.6	7.6	7.45	10.1
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	CS(Mf)5	17:16	Middle	2	1	20.7	7.97	27.7	7.94	7.58	10.3
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	CS(Mf)5	17:16	Middle	2	2	20.8	7.93	27.8	7.99	7.53	10.2
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	CS(Mf)5	17:16	Bottom	3	1	20.9	7.54	27.8	7.8	7.68	10.6
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	CS(Mf)5	17:16	Bottom	3	2	20.9	7.59	27.9	7.76	7.71	10.6
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	SR4a	16:48	Surface	1	1	20.6	7.84	27.9	7.57	7.36	9.8
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	SR4a	16:48	Surface	1	2	20.5	7.88	27.8	7.64	7.4	9.8
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	SR4a	16:48	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	SR4a	16:48	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	SR4a	16:48	Bottom	3	1	20.7	7.65	27.9	7.88	7.52	10.2
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	SR4a	16:48	Bottom	3	2	20.7	7.67	27.9	7.94	7.55	10.2
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	SR4	16:27	Surface	1	1	20.6	7.54	27.8	7.61	7.42	9.9
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	SR4	16:27	Surface	1	2	20.7	7.59	27.8	7.67	7.46	9.9
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	SR4	16:27	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	SR4	16:27	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	SR4	16:27	Bottom	3	1	20.7	7.67	27.7	7.92	7.79	10.4
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	SR4	16:27	Bottom	3	2	20.7	7.73	27.8	7.95	7.75	10.3
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	IS8	15:58	Surface	1	1	20.5	7.86	27.9	7.68	7.53	10
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	IS8	15:58	Surface	1	2	20.6	7.83	27.8	7.74	7.58	10.1
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	IS8	15:58	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	IS8	15:58	Middle	2	2						

Project	Works	Date (yyyy-mm-d	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	IS8	15:58	Bottom	3	1	20.8	7.93	27.9	7.82	7.66	10.3
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	IS8	15:58	Bottom	3	2	20.7	7.96	27.9	7.86	7.69	10.4
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	IS(Mf)16	15:40	Surface	1	1	20.6	7.77	27.7	7.44	7.63	10.1
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	IS(Mf)16	15:40	Surface	1	2	20.7	7.72	27.8	7.47	7.67	10.2
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	IS(Mf)16	15:40	Middle	2	1	20.8	7.5	27.8	7.95	7.54	10
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	IS(Mf)16	15:40	Middle	2	2	20.8	7.54	27.8	7.91	7.56	10.1
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	IS(Mf)16	15:40	Bottom	3	1	20.9	7.92	27.8	7.56	7.83	10.6
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	IS(Mf)16	15:40	Bottom	3	2	20.8	7.98	27.9	7.59	7.8	10.5
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	IS(Mf)9	15:20	Surface	1	1	20.6	7.66	27.9	7.47	7.34	9.9
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	IS(Mf)9	15:20	Surface	1	2	20.6	7.61	27.8	7.56	7.36	9.9
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	IS(Mf)9	15:20	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	IS(Mf)9	15:20	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	IS(Mf)9	15:20	Bottom	3	1	20.7	7.94	27.8	7.68	7.52	10.2
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	IS(Mf)9	15:20	Bottom	3	2	20.7	7.98	27.8	7.71	7.55	10.3
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	CS(Mf)3	14:54	Surface	1	1	20.6	7.85	27.8	7.42	7.26	9.8
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	CS(Mf)3	14:54	Surface	1	2	20.7	7.91	27.8	7.46	7.28	9.8
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	CS(Mf)3	14:54	Middle	2	1	20.7	7.74	27.9	7.53	7.37	9.9
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	CS(Mf)3	14:54	Middle	2	2	20.7	7.7	27.8	7.57	7.33	9.9
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	CS(Mf)3	14:54	Bottom	3	1	20.8	7.82	27.7	7.49	7.5	10.2
TMCLKL	HY/2012/07	2017-01-03	Mid-Ebb	CS(Mf)3	14:54	Bottom	3	2	20.9	7.88	27.7	7.55	7.53	10.3
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	CS(Mf)5	11:50	Surface	1	1	21.4	7.89	27.6	7.59	8.64	11.7
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	CS(Mf)5	11:50	Surface	1	2	21.5	7.86	27.6	7.64	8.57	11.7
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	CS(Mf)5	11:50	Middle	2	1	21.4	7.84	27.6	7.59	9	12.1
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	CS(Mf)5	11:50	Middle	2	2	21.4	7.87	27.6	7.6	8.92	12.2
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	CS(Mf)5	11:50	Bottom	3	1	21.4	7.89	27.6	7.48	8.76	12.2
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	CS(Mf)5	11:50	Bottom	3	2	21.4	7.92	27.6	7.49	8.82	12.2
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	SR4a	12:06	Surface	1	1	21.4	7.94	27.6	7.78	8.64	11.6
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	SR4a	12:06	Surface	1	2	21.4	7.96	27.6	7.82	8.72	11.6
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	SR4a	12:06	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	SR4a	12:06	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	SR4a	12:06	Bottom	3	1	21.3	7.94	27.6	7.68	8.86	11.8
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	SR4a	12:06	Bottom	3	2	21.3	7.92	27.6	7.69	8.9	11.5

Project	Works	Date (yyyy-mm-d	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	SR4	12:20	Surface	1	1	21.4	7.96	27.6	7.34	8.74	11.7
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	SR4	12:20	Surface	1	2	21.5	7.92	27.5	7.38	8.8	11.7
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	SR4	12:20	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	SR4	12:20	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	SR4	12:20	Bottom	3	1	21.4	7.94	27.6	7.27	9.02	12.2
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	SR4	12:20	Bottom	3	2	21.4	7.94	27.6	7.3	9.06	12.2
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	IS8	12:34	Surface	1	1	21.5	7.93	27.6	7.62	8.79	11.7
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	IS8	12:34	Surface	1	2	21.4	7.96	27.6	7.65	8.82	11.7
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	IS8	12:34	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	IS8	12:34	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	IS8	12:34	Bottom	3	1	21.4	7.93	27.6	7.59	8.96	12.2
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	IS8	12:34	Bottom	3	2	21.4	7.94	27.6	7.63	9.02	12.2
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	IS(Mf)16	12:48	Surface	1	1	21.5	7.96	27.6	7.68	8.79	11.7
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	IS(Mf)16	12:48	Surface	1	2	21.5	7.92	27.6	7.64	8.82	11.7
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	IS(Mf)16	12:48	Middle	2	1	21.4	7.92	27.6	7.65	8.93	11.8
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	IS(Mf)16	12:48	Middle	2	2	21.4	7.93	27.6	7.62	8.96	11.7
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	IS(Mf)16	12:48	Bottom	3	1	21.4	7.92	27.6	7.69	8.79	12.1
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	IS(Mf)16	12:48	Bottom	3	2	21.4	7.93	27.6	7.74	8.86	11.8
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	IS(Mf)9	13:08	Surface	1	1	21.4	7.76	27.6	7.68	8.68	11.5
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	IS(Mf)9	13:08	Surface	1	2	21.5	7.78	27.6	7.69	8.7	11.6
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	IS(Mf)9	13:08	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	IS(Mf)9	13:08	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	IS(Mf)9	13:08	Bottom	3	1	21.4	7.69	27.6	7.58	9.04	12.3
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	IS(Mf)9	13:08	Bottom	3	2	21.4	7.68	27.6	7.62	9.02	12.3
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	CS(Mf)3	13:21	Surface	1	1	21.5	7.65	27.6	7.78	8.87	11.8
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	CS(Mf)3	13:21	Surface	1	2	21.5	7.68	27.6	7.74	8.89	11.8
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	CS(Mf)3	13:21	Middle	2	1	21.4	7.69	27.6	7.72	9.02	12.1
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	CS(Mf)3	13:21	Middle	2	2	21.4	7.74	27.6	7.7	9.06	12.2
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	CS(Mf)3	13:21	Bottom	3	1	21.4	7.68	27.6	7.66	8.92	12.4
TMCLKL	HY/2012/07	2017-01-05	Mid-Flood	CS(Mf)3	13:21	Bottom	3	2	21.4	7.72	27.6	7.68	8.86	12.2
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	CS(Mf)5	18:51	Surface	1	1	21.4	7.87	27.7	7.6	8.59	11.8
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	CS(Mf)5	18:51	Surface	1	2	21.4	7.84	27.6	7.56	8.62	11.7

Project	Works	Date (yyyy-mm-d	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	CS(Mf)5	18:51	Middle	2	1	21.5	7.85	27.6	7.53	8.89	12.2
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	CS(Mf)5	18:51	Middle	2	2	21.4	7.83	27.6	7.56	8.94	12.1
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	CS(Mf)5	18:51	Bottom	3	1	21.5	7.94	27.7	7.47	8.86	12.3
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	CS(Mf)5	18:51	Bottom	3	2	21.5	7.88	27.6	7.49	8.81	12.3
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	SR4a	18:31	Surface	1	1	21.4	7.91	27.6	7.73	8.74	11.9
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	SR4a	18:31	Surface	1	2	21.3	7.95	27.6	7.71	8.69	12
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	SR4a	18:31	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	SR4a	18:31	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	SR4a	18:31	Bottom	3	1	21.4	7.96	27.6	7.63	8.83	12.3
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	SR4a	18:31	Bottom	3	2	21.4	7.93	27.7	7.6	8.85	12.5
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	SR4	18:17	Surface	1	1	21.4	7.89	27.5	7.29	8.77	12.1
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	SR4	18:17	Surface	1	2	21.4	7.93	27.6	7.27	8.83	12.1
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	SR4	18:17	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	SR4	18:17	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	SR4	18:17	Bottom	3	1	21.4	7.92	27.6	7.23	8.99	12.7
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	SR4	18:17	Bottom	3	2	21.4	7.94	27.5	7.2	9.03	12.9
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	IS8	18:17	Surface	1	1	21.4	7.91	27.6	7.56	8.82	12.1
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	IS8	18:17	Surface	1	2	21.5	7.93	27.6	7.58	8.77	12.2
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	IS8	18:17	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	IS8	18:17	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	IS8	18:17	Bottom	3	1	21.5	7.89	27.6	7.52	8.91	12.7
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	IS8	18:17	Bottom	3	2	21.5	7.92	27.5	7.5	8.89	12.8
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	IS(Mf)16	17:44	Surface	1	1	21.5	7.93	27.5	7.66	8.81	12.1
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	IS(Mf)16	17:44	Surface	1	2	21.4	7.9	27.6	7.63	8.77	12.2
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	IS(Mf)16	17:44	Middle	2	1	21.4	7.88	27.6	7.6	8.84	12.1
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	IS(Mf)16	17:44	Middle	2	2	21.4	7.91	27.6	7.58	8.8	12.2
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	IS(Mf)16	17:44	Bottom	3	1	21.5	7.91	27.6	7.67	8.87	12
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	IS(Mf)16	17:44	Bottom	3	2	21.4	7.94	27.6	7.71	8.83	12.1
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	IS(Mf)9	17:28	Surface	1	1	21.5	7.74	27.6	7.62	8.67	11.5
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	IS(Mf)9	17:28	Surface	1	2	21.5	7.77	27.5	7.6	8.73	11.6
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	IS(Mf)9	17:28	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	IS(Mf)9	17:28	Middle	2	2						

Project	Works	Date (yyyy-mm-d	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	IS(Mf)9	17:28	Bottom	3	1	21.5	7.73	27.6	7.55	8.99	12.3
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	IS(Mf)9	17:28	Bottom	3	2	21.5	7.75	27.6	7.57	9.03	12.3
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	CS(Mf)3	17:04	Surface	1	1	21.5	7.65	27.5	7.73	8.85	11.8
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	CS(Mf)3	17:04	Surface	1	2	21.6	7.61	27.6	7.7	8.9	11.8
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	CS(Mf)3	17:04	Middle	2	1	21.6	7.67	27.6	7.7	8.97	12.1
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	CS(Mf)3	17:04	Middle	2	2	21.6	7.71	27.6	7.67	9.03	12.2
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	CS(Mf)3	17:04	Bottom	3	1	21.6	7.69	27.6	7.65	8.99	12.4
TMCLKL	HY/2012/07	2017-01-05	Mid-Ebb	CS(Mf)3	17:04	Bottom	3	2	21.5	7.67	27.6	7.63	8.93	12.2
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	CS(Mf)5	12:31	Surface	1	1	20.4	7.74	27.6	7.68	6.54	8.9
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	CS(Mf)5	12:31	Surface	1	2	20.3	7.7	27.7	7.66	6.59	9
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	CS(Mf)5	12:31	Middle	2	1	20.5	7.66	27.8	7.95	6.83	9.3
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	CS(Mf)5	12:31	Middle	2	2	20.5	7.89	27.9	7.92	6.79	9.2
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	CS(Mf)5	12:31	Bottom	3	1	20.5	7.65	28	8.01	6.61	9.3
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	CS(Mf)5	12:31	Bottom	3	2	20.6	7.66	28.1	8.03	6.69	9.4
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	SR4a	11:51	Surface	1	1	20.4	7.81	27.7	7.56	6.21	8.6
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	SR4a	11:51	Surface	1	2	20.5	7.84	27.6	7.55	6.28	8.7
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	SR4a	11:51	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	SR4a	11:51	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	SR4a	11:51	Bottom	3	1	20.5	7.79	27.7	7.49	6.47	9
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	SR4a	11:51	Bottom	3	2	20.5	7.76	27.8	7.44	6.4	9
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	SR4	13:03	Surface	1	1	20.4	7.68	27.7	7.69	6.34	8.7
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	SR4	13:03	Surface	1	2	20.5	7.71	27.6	7.71	6.31	8.7
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	SR4	13:03	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	SR4	13:03	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	SR4	13:03	Bottom	3	1	20.5	7.76	27.7	7.54	6.69	9.4
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	SR4	13:03	Bottom	3	2	20.5	7.77	27.8	7.58	6.75	9.6
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	IS8	13:15	Surface	1	1	20.4	7.88	27.6	7.72	6.42	8.9
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	IS8	13:15	Surface	1	2	20.4	7.84	27.7	7.74	6.48	8.9
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	IS8	13:15	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	IS8	13:15	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	IS8	13:15	Bottom	3	1	20.5	7.8	27.7	7.82	6.53	9.3
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	IS8	13:15	Bottom	3	2	20.4	7.82	27.7	7.83	6.61	9.4

Project	Works	Date (yyyy-mm-d	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	IS(Mf)16	13:27	Surface	1	1	20.4	7.7	27.6	7.52	6.41	8.8
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	IS(Mf)16	13:27	Surface	1	2	20.5	7.73	27.5	7.5	6.52	9
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	IS(Mf)16	13:27	Middle	2	1	20.3	7.74	27.7	7.46	6.76	9.1
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	IS(Mf)16	13:27	Middle	2	2	20.4	7.78	27.6	7.48	6.81	9.3
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	IS(Mf)16	13:27	Bottom	3	1	20.4	7.83	27.9	7.69	6.62	9.1
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	IS(Mf)16	13:27	Bottom	3	2	20.5	7.82	27.8	7.72	6.67	9.1
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	IS(Mf)9	13:42	Surface	1	1	20.4	7.88	27.5	7.47	6.25	8.3
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	IS(Mf)9	13:42	Surface	1	2	20.4	7.91	27.4	7.44	6.19	8.2
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	IS(Mf)9	13:42	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	IS(Mf)9	13:42	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	IS(Mf)9	13:42	Bottom	3	1	20.4	7.82	27.6	7.52	6.34	8.6
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	IS(Mf)9	13:42	Bottom	3	2	20.5	7.78	27.6	7.55	6.38	8.7
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	CS(Mf)3	14:03	Surface	1	1	20.4	7.87	27.6	7.56	6.24	8.3
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	CS(Mf)3	14:03	Surface	1	2	20.3	7.84	27.5	7.54	6.31	8.4
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	CS(Mf)3	14:03	Middle	2	1	20.5	7.92	27.7	7.36	6.38	8.5
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	CS(Mf)3	14:03	Middle	2	2	20.4	7.9	27.8	7.38	6.32	8.5
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	CS(Mf)3	14:03	Bottom	3	1	20.6	7.79	27.8	7.42	6.47	9
TMCLKL	HY/2012/07	2017-01-07	Mid-Flood	CS(Mf)3	14:03	Bottom	3	2	20.6	7.78	27.9	7.46	6.54	9
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	CS(Mf)5	8:55	Surface	1	1	20.5	7.68	27.6	7.47	6.47	8.9
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	CS(Mf)5	8:55	Surface	1	2	20.4	7.74	27.5	7.51	6.51	8.9
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	CS(Mf)5	8:55	Middle	2	1	20.6	8.03	27.7	7.85	6.64	9
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	CS(Mf)5	8:55	Middle	2	2	20.7	7.99	27.8	7.9	6.59	9
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	CS(Mf)5	8:55	Bottom	3	1	20.7	7.6	27.8	7.71	6.74	9.3
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	CS(Mf)5	8:55	Bottom	3	2	20.8	7.65	27.9	7.67	6.77	9.3
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	SR4a	8:42	Surface	1	1	20.5	7.9	27.6	7.48	6.42	8.6
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	SR4a	8:42	Surface	1	2	20.6	7.94	27.7	7.55	6.46	8.6
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	SR4a	8:42	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	SR4a	8:42	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	SR4a	8:42	Bottom	3	1	20.6	7.71	27.7	7.79	6.58	8.9
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	SR4a	8:42	Bottom	3	2	20.6	7.73	27.8	7.85	6.61	8.9
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	SR4	8:29	Surface	1	1	20.5	7.6	27.5	7.52	6.48	8.6
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	SR4	8:29	Surface	1	2	20.4	7.65	27.6	7.58	6.52	8.7
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	SR4	8:29	Middle	2	1						

Project	Works	Date (yyyy-mm-d	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	SR4	8:29	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	SR4	8:29	Bottom	3	1	20.5	7.73	27.7	7.83	6.85	9
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	SR4	8:29	Bottom	3	2	20.6	7.79	27.8	7.86	6.81	9.1
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	IS8	8:19	Surface	1	1	20.3	7.92	27.5	7.59	6.59	8.9
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	IS8	8:19	Surface	1	2	20.4	7.89	27.4	7.65	6.64	8.8
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	IS8	8:19	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	IS8	8:19	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	IS8	8:19	Bottom	3	1	20.5	7.99	27.6	7.73	6.72	9
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	IS8	8:19	Bottom	3	2	20.4	8.02	27.5	7.77	6.75	9.1
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	IS(Mf)16	8:05	Surface	1	1	20.3	7.83	27.3	7.35	6.69	8.9
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	IS(Mf)16	8:05	Surface	1	2	20.2	7.78	27.4	7.38	6.73	9
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	IS(Mf)16	8:05	Middle	2	1	20.4	7.56	27.5	7.86	6.6	8.8
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	IS(Mf)16	8:05	Middle	2	2	20.5	7.6	27.6	7.82	6.62	8.8
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	IS(Mf)16	8:05	Bottom	3	1	20.6	7.98	27.7	7.47	6.89	9.4
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	IS(Mf)16	8:05	Bottom	3	2	20.7	8.04	27.8	7.5	6.86	9.2
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	IS(Mf)9	7:53	Surface	1	1	20.4	7.72	27.5	7.38	6.4	8.6
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	IS(Mf)9	7:53	Surface	1	2	20.4	7.67	27.6	7.47	6.42	8.7
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	IS(Mf)9	7:53	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	IS(Mf)9	7:53	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	IS(Mf)9	7:53	Bottom	3	1	20.5	8	27.7	7.59	6.58	9
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	IS(Mf)9	7:53	Bottom	3	2	20.4	8.04	27.6	7.62	6.61	9.1
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	CS(Mf)3	7:38	Surface	1	1	20.2	7.91	27.4	7.33	6.32	8.5
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	CS(Mf)3	7:38	Surface	1	2	20.3	7.97	27.5	7.37	6.34	8.5
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	CS(Mf)3	7:38	Middle	2	1	20.5	7.8	27.6	7.44	6.43	8.7
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	CS(Mf)3	7:38	Middle	2	2	20.4	7.76	27.5	7.48	6.39	8.6
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	CS(Mf)3	7:38	Bottom	3	1	20.5	7.88	27.7	7.4	6.56	9.1
TMCLKL	HY/2012/07	2017-01-07	Mid-Ebb	CS(Mf)3	7:38	Bottom	3	2	20.6	7.94	27.8	7.46	6.59	9
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	CS(Mf)5	14:58	Surface	1	1	20.1	7.74	27.2	7.35	6.22	8.5
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	CS(Mf)5	14:58	Surface	1	2	20.1	7.79	27.2	7.39	6.25	8.5
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	CS(Mf)5	14:58	Middle	2	1	20.1	7.86	27.3	7.41	6.3	8.6
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	CS(Mf)5	14:58	Middle	2	2	20.2	7.91	27.4	7.46	6.33	8.6
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	CS(Mf)5	14:58	Bottom	3	1	20.3	7.57	27.5	7.38	6.47	9.1
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	CS(Mf)5	14:58	Bottom	3	2	20.4	7.62	27.5	7.43	6.49	9.1

Project	Works	Date (yyyy-mm-d	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	SR4a	15:14	Surface	1	1	20.1	7.81	27	7.43	6.4	8.8
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	SR4a	15:14	Surface	1	2	20.2	7.87	27.1	7.48	6.43	8.9
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	SR4a	15:14	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	SR4a	15:14	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	SR4a	15:14	Bottom	3	1	20.3	7.54	27.3	7.66	6.35	8.8
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	SR4a	15:14	Bottom	3	2	20.4	7.58	27.4	7.7	6.38	8.9
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	SR4	15:41	Surface	1	1	20.4	7.72	27.2	7.56	6.47	8.9
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	SR4	15:41	Surface	1	2	20.3	7.75	27.2	7.58	6.5	9
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	SR4	15:41	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	SR4	15:41	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	SR4	15:41	Bottom	3	1	20.5	7.8	27.3	7.83	6.77	9.5
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	SR4	15:41	Bottom	3	2	20.6	7.86	27.4	7.86	6.81	9.7
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	IS8	16:00	Surface	1	1	20.4	7.64	27.3	7.66	6.55	9
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	IS8	16:00	Surface	1	2	20.4	7.68	27.3	7.7	6.59	9.1
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	IS8	16:00	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	IS8	16:00	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	IS8	16:00	Bottom	3	1	20.4	7.85	27.2	7.78	6.67	9.5
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	IS8	16:00	Bottom	3	2	20.5	7.88	27.3	7.82	6.69	9.5
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	IS(Mf)16	16:17	Surface	1	1	20.1	7.86	27.1	7.33	6.65	9.2
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	IS(Mf)16	16:17	Surface	1	2	20.1	7.81	27.1	7.38	6.6	9.1
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	IS(Mf)16	16:17	Middle	2	1	20.2	7.52	27.1	7.91	6.48	8.7
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	IS(Mf)16	16:17	Middle	2	2	20.3	7.57	27.2	7.98	6.51	8.9
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	IS(Mf)16	16:17	Bottom	3	1	20.2	7.99	27.3	7.59	6.72	9.2
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	IS(Mf)16	16:17	Bottom	3	2	20.2	7.96	27.2	7.64	6.77	9.3
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	IS(Mf)9	16:33	Surface	1	1	20.1	7.54	27.2	7.34	6.36	8.5
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	IS(Mf)9	16:33	Surface	1	2	20.2	7.59	27.3	7.36	6.39	8.5
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	IS(Mf)9	16:33	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	IS(Mf)9	16:33	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	IS(Mf)9	16:33	Bottom	3	1	20.3	7.87	27.2	7.62	6.53	8.9
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	IS(Mf)9	16:33	Bottom	3	2	20.3	7.82	27.2	7.67	6.55	8.9
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	CS(Mf)3	16:47	Surface	1	1	20.2	7.96	27.1	7.44	6.39	8.5
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	CS(Mf)3	16:47	Surface	1	2	20.3	7.92	27	7.49	6.41	8.5
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	CS(Mf)3	16:47	Middle	2	1	20.2	7.99	27.1	7.58	6.52	8.7

Project	Works	Date (yyyy-mm-d	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	CS(Mf)3	16:47	Middle	2	2	20.2	8.02	27.2	7.53	6.55	8.8
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	CS(Mf)3	16:47	Bottom	3	1	20.3	7.73	27.3	7.62	6.57	9.1
TMCLKL	HY/2012/07	2017-01-10	Mid-Flood	CS(Mf)3	16:47	Bottom	3	2	20.4	7.78	27.4	7.69	6.6	9.1
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	CS(Mf)5	12:47	Surface	1	1	20.2	7.74	27.3	7.38	6.53	8.9
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	CS(Mf)5	12:47	Surface	1	2	20.3	7.8	27.4	7.42	6.57	8.9
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	CS(Mf)5	12:47	Middle	2	1	20.4	7.94	27.4	7.76	6.7	8.6
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	CS(Mf)5	12:47	Middle	2	2	20.3	7.9	27.5	7.81	6.65	9
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	CS(Mf)5	12:47	Bottom	3	1	20.4	7.66	27.6	7.62	6.8	9.4
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	CS(Mf)5	12:47	Bottom	3	2	20.4	7.71	27.5	7.58	6.83	9.4
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	SR4a	12:23	Surface	1	1	20.2	7.81	27.3	7.39	6.48	8.7
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	SR4a	12:23	Surface	1	2	20.1	7.85	27.2	7.46	6.52	8.7
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	SR4a	12:23	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	SR4a	12:23	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	SR4a	12:23	Bottom	3	1	20.2	7.62	27.4	7.7	6.64	9
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	SR4a	12:23	Bottom	3	2	20.3	7.64	27.3	7.76	6.67	8.9
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	SR4	12:01	Surface	1	1	20.3	7.66	27.3	7.43	6.54	8.7
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	SR4	12:01	Surface	1	2	20.4	7.71	27.4	7.49	6.58	8.8
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	SR4	12:01	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	SR4	12:01	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	SR4	12:01	Bottom	3	1	20.5	7.79	27.5	7.74	6.91	9.1
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	SR4	12:01	Bottom	3	2	20.4	7.85	27.4	7.77	6.87	9.1
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	IS8	11:39	Surface	1	1	20.3	7.83	27.1	7.5	6.65	8.8
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	IS8	11:39	Surface	1	2	20.2	7.8	27.2	7.56	6.7	8.9
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	IS8	11:39	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	IS8	11:39	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	IS8	11:39	Bottom	3	1	20.3	7.9	27.2	7.64	6.78	9.1
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	IS8	11:39	Bottom	3	2	20.4	7.93	27.3	7.68	6.81	9.2
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	IS(Mf)16	11:17	Surface	1	1	20	7.74	27	7.26	6.75	9
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	IS(Mf)16	11:17	Surface	1	2	20.1	7.69	27.1	7.29	6.79	9.1
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	IS(Mf)16	11:17	Middle	2	1	20.2	7.47	27.2	7.77	6.66	8.9
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	IS(Mf)16	11:17	Middle	2	2	20.1	7.51	27.3	7.73	6.68	8.9
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	IS(Mf)16	11:17	Bottom	3	1	20.2	7.89	27.3	7.38	6.95	9.5
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	IS(Mf)16	11:17	Bottom	3	2	20.3	7.95	27.4	7.41	6.92	9.3

Project	Works	Date (yyyy-mm-d	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	IS(Mf)9	10:55	Surface	1	1	20	7.63	27.1	7.29	6.46	8.7
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	IS(Mf)9	10:55	Surface	1	2	19.9	7.58	27.2	7.38	6.48	8.7
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	IS(Mf)9	10:55	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	IS(Mf)9	10:55	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	IS(Mf)9	10:55	Bottom	3	1	20	7.91	27.3	7.5	6.64	9.1
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	IS(Mf)9	10:55	Bottom	3	2	20.1	7.95	27.2	7.53	6.67	9.1
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	CS(Mf)3	10:33	Surface	1	1	20.1	7.82	27.2	7.24	6.38	8.5
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	CS(Mf)3	10:33	Surface	1	2	20	7.88	27.3	7.28	6.4	8.6
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	CS(Mf)3	10:33	Middle	2	1	20.1	7.71	27.4	7.35	6.49	8.8
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	CS(Mf)3	10:33	Middle	2	2	20.2	7.67	27.3	7.39	6.45	8.7
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	CS(Mf)3	10:33	Bottom	3	1	20.3	7.79	27.5	7.31	6.62	9.1
TMCLKL	HY/2012/07	2017-01-10	Mid-Ebb	CS(Mf)3	10:33	Bottom	3	2	20.4	7.85	27.6	7.37	6.65	9.1
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	CS(Mf)5	16:31	Surface	1	1	20.4	7.62	26.9	7.33	6.2	8.4
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	CS(Mf)5	16:31	Surface	1	2	20.4	7.67	26.9	7.36	6.23	8.5
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	CS(Mf)5	16:31	Middle	2	1	20.3	7.83	27	7.4	6.27	8.5
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	CS(Mf)5	16:31	Middle	2	2	20.4	7.88	26.9	7.44	6.31	8.6
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	CS(Mf)5	16:31	Bottom	3	1	20.4	7.51	27.1	7.39	6.38	8.9
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	CS(Mf)5	16:31	Bottom	3	2	20.5	7.56	27.2	7.42	6.34	8.9
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	SR4a	16:48	Surface	1	1	20.3	7.71	26.9	7.48	6.41	8.8
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	SR4a	16:48	Surface	1	2	20.4	7.76	27	7.52	6.44	8.9
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	SR4a	16:48	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	SR4a	16:48	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	SR4a	16:48	Bottom	3	1	20.4	7.55	27	7.76	6.37	8.9
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	SR4a	16:48	Bottom	3	2	20.5	7.59	27.1	7.79	6.41	9
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	SR4	17:17	Surface	1	1	20.3	7.63	27	7.52	6.34	8.7
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	SR4	17:17	Surface	1	2	20.4	7.69	27.1	7.58	6.38	8.8
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	SR4	17:17	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	SR4	17:17	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	SR4	17:17	Bottom	3	1	20.4	7.86	27	7.91	6.67	9.4
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	SR4	17:17	Bottom	3	2	20.4	7.81	27	7.96	6.7	9.5
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	IS8	17:33	Surface	1	1	20.1	7.66	26.9	7.76	6.45	8.9
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	IS8	17:33	Surface	1	2	20.2	7.71	27	7.74	6.49	9
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	IS8	17:33	Middle	2	1						

Project	Works	Date (yyyy-mm-d	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	IS8	17:33	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	IS8	17:33	Bottom	3	1	20.3	7.82	27	7.87	6.66	9.5
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	IS8	17:33	Bottom	3	2	20.3	7.89	27.1	7.91	6.7	9.5
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	IS(Mf)16	17:47	Surface	1	1	20.1	7.64	27	7.38	6.45	8.9
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	IS(Mf)16	17:47	Surface	1	2	20.1	7.66	26.9	7.43	6.48	8.9
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	IS(Mf)16	17:47	Middle	2	1	20.2	7.87	27	7.81	6.53	8.8
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	IS(Mf)16	17:47	Middle	2	2	20.3	7.93	27.1	7.87	6.57	8.9
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	IS(Mf)16	17:47	Bottom	3	1	20.3	8.02	27.1	7.69	6.84	9.4
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	IS(Mf)16	17:47	Bottom	3	2	20.2	8.08	27.2	7.64	6.89	9.4
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	IS(Mf)9	18:03	Surface	1	1	20.1	7.55	26.9	7.33	6.26	8.3
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	IS(Mf)9	18:03	Surface	1	2	20.2	7.58	26.9	7.36	6.3	8.4
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	IS(Mf)9	18:03	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	IS(Mf)9	18:03	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	IS(Mf)9	18:03	Bottom	3	1	20.3	7.78	27	7.67	6.63	9
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	IS(Mf)9	18:03	Bottom	3	2	20.3	7.71	27.1	7.72	6.68	9.1
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	CS(Mf)3	18:18	Surface	1	1	20.3	7.86	26.9	7.46	6.4	8.5
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	CS(Mf)3	18:18	Surface	1	2	20.3	7.91	27	7.5	6.46	8.6
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	CS(Mf)3	18:18	Middle	2	1	20.4	7.97	27.1	7.62	6.59	8.8
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	CS(Mf)3	18:18	Middle	2	2	20.3	8.03	27.2	7.66	6.63	9
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	CS(Mf)3	18:18	Bottom	3	1	20.5	7.81	27.1	7.54	6.6	9.2
TMCLKL	HY/2012/07	2017-01-12	Mid-Flood	CS(Mf)3	18:18	Bottom	3	2	20.5	7.88	27.1	7.58	6.56	9.1
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	CS(Mf)5	14:31	Surface	1	1	20.4	7.8	26.9	7.29	6.59	9
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	CS(Mf)5	14:31	Surface	1	2	20.5	7.86	27	7.33	6.63	9
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	CS(Mf)5	14:31	Middle	2	1	20.5	8	27.1	7.67	6.76	9.2
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	CS(Mf)5	14:31	Middle	2	2	20.4	7.96	27.2	7.72	6.71	9.1
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	CS(Mf)5	14:31	Bottom	3	1	20.5	7.72	27.4	7.53	6.86	9.5
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	CS(Mf)5	14:31	Bottom	3	2	20.6	7.77	27.3	7.49	6.89	9.5
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	SR4a	14:07	Surface	1	1	20.2	7.87	27	7.3	6.54	8.8
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	SR4a	14:07	Surface	1	2	20.3	7.91	27.1	7.37	6.58	8.8
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	SR4a	14:07	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	SR4a	14:07	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	SR4a	14:07	Bottom	3	1	20.5	7.68	27.3	7.61	6.7	9
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	SR4a	14:07	Bottom	3	2	20.4	7.7	27.2	7.67	6.73	9

Project	Works	Date (yyyy-mm-d	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	SR4	13:45	Surface	1	1	20.2	7.72	26.9	7.34	6.6	8.8
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	SR4	13:45	Surface	1	2	20.3	7.77	26.8	7.4	6.64	8.8
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	SR4	13:45	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	SR4	13:45	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	SR4	13:45	Bottom	3	1	20.3	7.85	27	7.65	6.97	9.2
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	SR4	13:45	Bottom	3	2	20.4	7.91	27.1	7.68	6.93	9.2
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	IS8	13:23	Surface	1	1	20.4	7.89	27	7.41	6.71	8.9
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	IS8	13:23	Surface	1	2	20.5	7.86	26.9	7.47	6.76	9
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	IS8	13:23	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	IS8	13:23	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	IS8	13:23	Bottom	3	1	20.5	7.96	27.1	7.55	6.84	9.2
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	IS8	13:23	Bottom	3	2	20.4	7.99	27.2	7.59	6.87	9.3
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	IS(Mf)16	13:01	Surface	1	1	20.3	7.8	26.9	7.17	6.81	9.1
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	IS(Mf)16	13:01	Surface	1	2	20.4	7.75	27	7.2	6.85	9.2
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	IS(Mf)16	13:01	Middle	2	1	20.4	7.53	27.2	7.68	6.72	8.9
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	IS(Mf)16	13:01	Middle	2	2	20.5	7.57	27.3	7.64	6.74	9
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	IS(Mf)16	13:01	Bottom	3	1	20.6	7.95	27.3	7.29	7.01	9.5
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	IS(Mf)16	13:01	Bottom	3	2	20.5	8.01	27.4	7.32	6.98	9.4
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	IS(Mf)9	12:39	Surface	1	1	20.3	7.69	26.8	7.2	6.52	8.8
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	IS(Mf)9	12:39	Surface	1	2	20.3	7.64	26.7	7.29	6.54	8.8
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	IS(Mf)9	12:39	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	IS(Mf)9	12:39	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	IS(Mf)9	12:39	Bottom	3	1	20.3	7.97	26.9	7.41	6.7	9.2
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	IS(Mf)9	12:39	Bottom	3	2	20.4	8.01	27	7.44	6.73	9.2
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	CS(Mf)3	12:17	Surface	1	1	20.3	7.88	26.8	7.15	6.44	8.6
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	CS(Mf)3	12:17	Surface	1	2	20.2	7.94	26.9	7.19	6.46	8.7
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	CS(Mf)3	12:17	Middle	2	1	20.4	7.77	27	7.26	6.55	8.8
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	CS(Mf)3	12:17	Middle	2	2	20.5	7.73	27.1	7.3	6.51	8.8
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	CS(Mf)3	12:17	Bottom	3	1	20.5	7.85	27.3	7.22	6.68	9.2
TMCLKL	HY/2012/07	2017-01-12	Mid-Ebb	CS(Mf)3	12:17	Bottom	3	2	20.4	7.91	27.2	7.28	6.71	9.2
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	CS(Mf)5	8:22	Surface	1	1	20.1	7.86	26.6	7.35	6.5	8.8
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	CS(Mf)5	8:22	Surface	1	2	20.2	7.92	26.5	7.39	6.54	8.9
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	CS(Mf)5	8:22	Middle	2	1	20.2	8.06	26.7	7.73	6.67	9.1

Project	Works	Date (yyyy-mm-d	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	CS(Mf)5	8:22	Middle	2	2	20.2	8.02	26.8	7.78	6.62	9
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	CS(Mf)5	8:22	Bottom	3	1	20.4	7.78	26.8	7.59	6.77	9.5
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	CS(Mf)5	8:22	Bottom	3	2	20.3	7.83	26.9	7.55	6.8	9.5
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	SR4a	8:44	Surface	1	1	20.2	7.93	26.4	7.36	6.45	8.9
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	SR4a	8:44	Surface	1	2	20.3	7.97	26.5	7.43	6.49	9
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	SR4a	8:44	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	SR4a	8:44	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	SR4a	8:44	Bottom	3	1	20.2	7.74	26.6	7.67	6.61	9.2
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	SR4a	8:44	Bottom	3	2	20.2	7.76	26.5	7.7	6.64	9.3
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	SR4	9:06	Surface	1	1	20.3	7.78	26.6	7.4	6.51	9
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	SR4	9:06	Surface	1	2	20.2	7.83	26.7	7.46	6.55	9
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	SR4	9:06	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	SR4	9:06	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	SR4	9:06	Bottom	3	1	20.4	7.91	26.7	7.71	6.88	9.7
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	SR4	9:06	Bottom	3	2	20.3	7.97	26.8	7.74	6.84	9.7
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	IS8	9:28	Surface	1	1	20.4	7.95	26.7	7.47	6.62	9.1
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	IS8	9:28	Surface	1	2	20.3	7.92	26.8	7.53	6.67	9.2
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	IS8	9:28	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	IS8	9:28	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	IS8	9:28	Bottom	3	1	20.4	8.02	26.9	7.61	6.75	9.6
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	IS8	9:28	Bottom	3	2	20.4	8.05	27	7.65	6.78	9.6
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	IS(Mf)16	9:50	Surface	1	1	20.2	7.86	26.8	7.23	6.72	9.3
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	IS(Mf)16	9:50	Surface	1	2	20.3	7.81	26.7	7.26	6.76	9.3
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	IS(Mf)16	9:50	Middle	2	1	20.4	7.59	26.8	7.59	6.63	8.9
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	IS(Mf)16	9:50	Middle	2	2	20.3	7.63	26.9	7.55	6.65	9
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	IS(Mf)16	9:50	Bottom	3	1	20.4	8.01	27	7.35	6.92	9.5
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	IS(Mf)16	9:50	Bottom	3	2	20.5	8.07	27.1	7.38	6.89	9.4
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	IS(Mf)9	10:12	Surface	1	1	20.4	7.75	26.6	7.26	6.43	8.6
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	IS(Mf)9	10:12	Surface	1	2	20.3	7.7	26.7	7.3	6.45	8.6
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	IS(Mf)9	10:12	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	IS(Mf)9	10:12	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	IS(Mf)9	10:12	Bottom	3	1	20.5	8.03	26.7	7.47	6.61	9
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	IS(Mf)9	10:12	Bottom	3	2	20.5	8.07	26.8	7.5	6.64	9

Project	Works	Date (yyyy-mm-d	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	CS(Mf)3	10:36	Surface	1	1	20.4	7.94	26.7	7.21	6.35	8.4
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	CS(Mf)3	10:36	Surface	1	2	20.5	8	26.8	7.25	6.37	8.5
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	CS(Mf)3	10:36	Middle	2	1	20.6	7.83	26.8	7.32	6.46	8.7
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	CS(Mf)3	10:36	Middle	2	2	20.5	7.79	26.9	7.36	6.42	8.7
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	CS(Mf)3	10:36	Bottom	3	1	20.7	7.91	27.1	7.28	6.59	9.2
TMCLKL	HY/2012/07	2017-01-14	Mid-Flood	CS(Mf)3	10:36	Bottom	3	2	20.8	7.97	27.2	7.34	6.62	9.1
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	CS(Mf)5	14:35	Surface	1	1	20.3	7.68	26.4	7.14	6.64	9.1
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	CS(Mf)5	14:35	Surface	1	2	20.4	7.7	26.5	7.17	6.67	9.1
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	CS(Mf)5	14:35	Middle	2	1	20.5	7.84	26.6	7.25	6.73	9.2
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	CS(Mf)5	14:35	Middle	2	2	20.6	7.82	26.7	7.28	6.76	9.2
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	CS(Mf)5	14:35	Bottom	3	1	20.7	8.07	26.8	7.34	6.84	9.4
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	CS(Mf)5	14:35	Bottom	3	2	20.6	8.04	26.7	7.37	6.87	9.5
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	SR4a	14:15	Surface	1	1	20.4	7.94	26.4	7.25	6.74	9
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	SR4a	14:15	Surface	1	2	20.4	7.97	26.4	7.27	6.72	8.9
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	SR4a	14:15	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	SR4a	14:15	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	SR4a	14:15	Bottom	3	1	20.5	8.15	26.5	7.38	6.86	9.3
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	SR4a	14:15	Bottom	3	2	20.6	8.13	26.6	7.41	6.88	9.2
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	SR4	14:00	Surface	1	1	20.3	7.74	26.4	7.24	6.47	8.6
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	SR4	14:00	Surface	1	2	20.4	7.77	26.5	7.27	6.49	8.6
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	SR4	14:00	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	SR4	14:00	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	SR4	14:00	Bottom	3	1	20.5	8.05	26.6	7.47	6.51	8.6
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	SR4	14:00	Bottom	3	2	20.6	8.07	26.7	7.49	6.53	8.7
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	IS8	13:46	Surface	1	1	20.3	8.04	26.4	7.36	6.54	8.7
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	IS8	13:46	Surface	1	2	20.4	8.02	26.5	7.34	6.57	8.7
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	IS8	13:46	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	IS8	13:46	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	IS8	13:46	Bottom	3	1	20.6	7.92	26.6	7.52	6.61	8.9
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	IS8	13:46	Bottom	3	2	20.5	7.95	26.5	7.55	6.63	9
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	IS(Mf)16	13:27	Surface	1	1	20.4	7.67	26.5	7.19	6.6	8.8
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	IS(Mf)16	13:27	Surface	1	2	20.4	7.69	26.6	7.17	6.63	8.9
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	IS(Mf)16	13:27	Middle	2	1	20.5	8.04	26.7	7.25	6.77	9

Project	Works	Date (yyyy-mm-d	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	IS(Mf)16	13:27	Middle	2	2	20.6	8.02	26.7	7.27	6.79	9
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	IS(Mf)16	13:27	Bottom	3	1	20.7	7.85	26.8	7.34	6.85	9.3
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	IS(Mf)16	13:27	Bottom	3	2	20.6	7.88	26.7	7.37	6.87	9.2
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	IS(Mf)9	13:05	Surface	1	1	20.5	7.84	26.5	6.98	6.72	9.1
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	IS(Mf)9	13:05	Surface	1	2	20.5	7.86	26.6	7	6.74	9.1
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	IS(Mf)9	13:05	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	IS(Mf)9	13:05	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	IS(Mf)9	13:05	Bottom	3	1	20.6	7.99	26.7	7.14	6.95	9.5
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	IS(Mf)9	13:05	Bottom	3	2	20.7	8.01	26.8	7.16	6.97	9.5
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	CS(Mf)3	12:44	Surface	1	1	20.6	8.14	26.4	7.04	6.49	8.7
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	CS(Mf)3	12:44	Surface	1	2	20.5	8.17	26.5	7.07	6.51	8.7
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	CS(Mf)3	12:44	Middle	2	1	20.7	8.04	26.6	7.2	6.65	9
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	CS(Mf)3	12:44	Middle	2	2	20.7	8.06	26.7	7.23	6.67	9
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	CS(Mf)3	12:44	Bottom	3	1	20.8	7.92	26.8	7.38	6.42	8.9
TMCLKL	HY/2012/07	2017-01-14	Mid-Ebb	CS(Mf)3	12:44	Bottom	3	2	20.7	7.95	26.7	7.4	6.44	8.8
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	CS(Mf)5	10:17	Surface	1	1	18.6	7.78	26.5	7.19	13.5	18.4
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	CS(Mf)5	10:17	Surface	1	2	18.7	7.81	26.6	7.22	12.6	17.1
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	CS(Mf)5	10:17	Middle	2	1	18.8	7.69	26.6	7.36	9.85	13.4
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	CS(Mf)5	10:17	Middle	2	2	18.9	7.73	26.7	7.3	9.93	13.5
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	CS(Mf)5	10:17	Bottom	3	1	18.9	7.8	26.8	7.38	14.1	19.7
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	CS(Mf)5	10:17	Bottom	3	2	19	7.77	26.9	7.41	14.8	20.7
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	SR4a	10:45	Surface	1	1	18.6	7.79	26.6	7.08	11.7	16.1
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	SR4a	10:45	Surface	1	2	18.6	7.84	26.6	7.11	12.2	16.8
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	SR4a	10:45	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	SR4a	10:45	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	SR4a	10:45	Bottom	3	1	18.6	7.81	26.6	7.23	14	19.5
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	SR4a	10:45	Bottom	3	2	18.7	7.85	26.7	7.26	14.7	20.6
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	SR4	10:58	Surface	1	1	18.5	7.69	26.6	7.17	12.3	17
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	SR4	10:58	Surface	1	2	18.6	7.73	26.7	7.14	13.1	18.1
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	SR4	10:58	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	SR4	10:58	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	SR4	10:58	Bottom	3	1	18.6	7.72	26.7	7.09	14	19.7
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	SR4	10:58	Bottom	3	2	18.6	7.75	26.8	7.13	14.7	20.9

Project	Works	Date (yyyy-mm-d	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	IS8	11:14	Surface	1	1	18.6	7.84	26.7	7.26	11.6	16
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	IS8	11:14	Surface	1	2	18.6	7.77	26.7	7.22	12.2	16.8
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	IS8	11:14	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	IS8	11:14	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	IS8	11:14	Bottom	3	1	18.6	7.74	26.8	7.29	13.6	19.3
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	IS8	11:14	Bottom	3	2	18.6	7.8	26.8	7.32	14.2	20.2
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	IS(Mf)16	11:34	Surface	1	1	18.6	7.83	26.5	7.08	13.3	18.4
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	IS(Mf)16	11:34	Surface	1	2	18.7	7.87	26.6	7.05	14	19.3
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	IS(Mf)16	11:34	Middle	2	1	18.6	7.74	26.6	7.21	10.8	14.5
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	IS(Mf)16	11:34	Middle	2	2	18.6	7.8	26.7	7.25	11.5	15.6
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	IS(Mf)16	11:34	Bottom	3	1	18.7	7.84	26.8	7.18	14.8	20.3
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	IS(Mf)16	11:34	Bottom	3	2	18.8	7.88	26.9	7.15	15.4	21.1
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	IS(Mf)9	11:55	Surface	1	1	18.7	7.74	26.7	7.05	11.8	15.7
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	IS(Mf)9	11:55	Surface	1	2	18.7	7.7	26.7	7.09	12.4	16.5
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	IS(Mf)9	11:55	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	IS(Mf)9	11:55	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	IS(Mf)9	11:55	Bottom	3	1	18.6	7.76	26.8	7.14	14	19
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	IS(Mf)9	11:55	Bottom	3	2	18.6	7.77	26.8	7.18	14.9	20.3
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	CS(Mf)3	12:17	Surface	1	1	18.7	7.74	26.8	6.97	12.8	17
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	CS(Mf)3	12:17	Surface	1	2	18.8	7.78	26.9	7	13.6	18.1
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	CS(Mf)3	12:17	Middle	2	1	18.8	7.67	26.9	7.06	11.2	15
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	CS(Mf)3	12:17	Middle	2	2	18.9	7.73	27	7.1	10.7	14.4
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	CS(Mf)3	12:17	Bottom	3	1	19	7.86	27.1	7.16	14.1	19.6
TMCLKL	HY/2012/07	2017-01-17	Mid-Flood	CS(Mf)3	12:17	Bottom	3	2	19	7.84	27.2	7.12	15	20.7
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	CS(Mf)5	17:03	Surface	1	1	18.9	7.92	26.7	7.26	14.1	19.3
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	CS(Mf)5	17:03	Surface	1	2	18.8	7.98	26.8	7.3	13.2	18
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	CS(Mf)5	17:03	Middle	2	1	19	8.12	26.8	7.64	10.6	14.4
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	CS(Mf)5	17:03	Middle	2	2	19.1	8.08	26.9	7.69	11.2	15.2
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	CS(Mf)5	17:03	Bottom	3	1	19.1	7.84	27	7.5	14.7	20.3
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	CS(Mf)5	17:03	Bottom	3	2	19.2	7.89	27.1	7.46	15.4	21.3
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	SR4a	16:39	Surface	1	1	19	7.99	26.8	7.27	12.3	16.5
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	SR4a	16:39	Surface	1	2	18.9	8.03	26.9	7.34	12.8	17
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	SR4a	16:39	Middle	2	1						

Project	Works	Date (yyyy-mm-d	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	SR4a	16:39	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	SR4a	16:39	Bottom	3	1	19	7.8	26.9	7.58	14.6	19.7
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	SR4a	16:39	Bottom	3	2	19.1	7.82	27	7.61	15.3	20.5
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	SR4	16:17	Surface	1	1	18.9	7.84	26.9	7.31	14.3	19
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	SR4	16:17	Surface	1	2	19	7.89	27	7.37	15.1	20.1
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	SR4	16:17	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	SR4	16:17	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	SR4	16:17	Bottom	3	1	19	7.97	27	7.62	16.7	22
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	SR4	16:17	Bottom	3	2	19.1	8.03	27.1	7.65	17.4	23.1
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	IS8	15:55	Surface	1	1	18.9	8.01	26.7	7.38	12.5	16.6
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	IS8	15:55	Surface	1	2	18.9	7.98	26.8	7.44	13.1	17.4
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	IS8	15:55	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	IS8	15:55	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	IS8	15:55	Bottom	3	1	18.9	8.08	26.9	7.52	15.8	21.2
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	IS8	15:55	Bottom	3	2	19	8.11	27	7.56	15.1	20.4
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	IS(Mf)16	15:33	Surface	1	1	18.7	7.92	26.5	7.14	13.9	18.5
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	IS(Mf)16	15:33	Surface	1	2	18.8	7.87	26.6	7.17	14.6	19.6
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	IS(Mf)16	15:33	Middle	2	1	18.9	7.65	26.7	7.5	11.4	15.2
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	IS(Mf)16	15:33	Middle	2	2	19	7.69	26.8	7.46	12.1	16.1
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	IS(Mf)16	15:33	Bottom	3	1	19.1	8.07	26.9	7.26	15.4	20.9
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	IS(Mf)16	15:33	Bottom	3	2	19	8.13	26.8	7.29	16	21.4
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	IS(Mf)9	15:11	Surface	1	1	18.8	7.81	26.8	7.17	12.4	16.7
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	IS(Mf)9	15:11	Surface	1	2	18.9	7.76	26.9	7.21	13	17.6
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	IS(Mf)9	15:11	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	IS(Mf)9	15:11	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	IS(Mf)9	15:11	Bottom	3	1	18.9	8.06	27.1	7.38	14.6	20
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	IS(Mf)9	15:11	Bottom	3	2	19	8.13	27	7.41	15.5	21.2
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	CS(Mf)3	14:49	Surface	1	1	18.7	8	27	7.12	13.4	18
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	CS(Mf)3	14:49	Surface	1	2	18.8	8.06	26.9	7.16	14.2	19
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	CS(Mf)3	14:49	Middle	2	1	19	7.89	27	7.23	11.8	15.9
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	CS(Mf)3	14:49	Middle	2	2	18.9	7.85	27.1	7.27	11.3	15.3
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	CS(Mf)3	14:49	Bottom	3	1	19.1	7.97	27.2	7.19	14.7	20.3
TMCLKL	HY/2012/07	2017-01-17	Mid-Ebb	CS(Mf)3	14:49	Bottom	3	2	19.2	8.03	27.3	7.25	15.6	21.4

Project	Works	Date (yyyy-mm-d	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	CS(Mf)5	11:31	Surface	1	1	19.9	7.79	26.7	7.71	6.67	9.1
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	CS(Mf)5	11:31	Surface	1	2	19.8	7.74	26.6	7.67	6.61	9
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	CS(Mf)5	11:31	Middle	2	1	19.7	7.63	26.8	7.81	6.58	8.9
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	CS(Mf)5	11:31	Middle	2	2	19.8	7.66	26.8	7.8	6.52	8.9
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	CS(Mf)5	11:31	Bottom	3	1	19.7	7.69	26.9	7.74	6.78	9.5
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	CS(Mf)5	11:31	Bottom	3	2	19.6	7.72	27	7.76	6.69	9.4
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	SR4a	11:57	Surface	1	1	19.8	7.63	26.8	7.65	6.31	8.7
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	SR4a	11:57	Surface	1	2	19.7	7.64	26.7	7.68	6.25	8.6
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	SR4a	11:57	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	SR4a	11:57	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	SR4a	11:57	Bottom	3	1	19.9	7.72	26.9	7.58	6.46	9
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	SR4a	11:57	Bottom	3	2	19.9	7.7	26.8	7.56	6.54	9.2
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	SR4	12:14	Surface	1	1	19.8	7.67	26.9	7.63	6.52	9
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	SR4	12:14	Surface	1	2	19.7	7.66	26.8	7.61	6.58	9.1
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	SR4	12:14	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	SR4	12:14	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	SR4	12:14	Bottom	3	1	19.8	7.72	26.9	7.69	6.72	9.5
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	SR4	12:14	Bottom	3	2	19.8	7.76	26.9	7.73	6.61	9.4
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	IS8	12:30	Surface	1	1	19.7	7.78	26.8	7.54	6.38	8.8
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	IS8	12:30	Surface	1	2	19.8	7.77	26.8	7.51	6.31	8.7
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	IS8	12:30	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	IS8	12:30	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	IS8	12:30	Bottom	3	1	19.7	7.7	26.9	7.44	6.54	9.3
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	IS8	12:30	Bottom	3	2	19.6	7.68	26.8	7.46	6.6	9.4
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	IS(Mf)16	12:46	Surface	1	1	19.7	7.62	26.9	7.67	6.56	9.1
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	IS(Mf)16	12:46	Surface	1	2	19.7	7.64	26.8	7.64	6.62	9.1
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	IS(Mf)16	12:46	Middle	2	1	19.8	7.69	26.9	7.74	6.63	8.9
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	IS(Mf)16	12:46	Middle	2	2	19.7	7.66	27	7.78	6.69	9.1
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	IS(Mf)16	12:46	Bottom	3	1	19.9	7.7	27.2	7.72	6.49	8.9
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	IS(Mf)16	12:46	Bottom	3	2	19.8	7.73	27.1	7.7	6.42	8.8
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	IS(Mf)9	13:05	Surface	1	1	19.6	7.74	26.6	7.73	6.49	8.6
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	IS(Mf)9	13:05	Surface	1	2	19.7	7.78	26.7	7.72	6.44	8.6
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	IS(Mf)9	13:05	Middle	2	1						

Project	Works	Date (yyyy-mm-d	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	IS(Mf)9	13:05	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	IS(Mf)9	13:05	Bottom	3	1	19.7	7.7	26.8	7.61	6.6	9
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	IS(Mf)9	13:05	Bottom	3	2	19.8	7.68	26.7	7.58	6.52	8.9
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	CS(Mf)3	13:30	Surface	1	1	19.7	7.63	26.7	7.78	6.39	8.5
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	CS(Mf)3	13:30	Surface	1	2	19.8	7.6	26.8	7.76	6.32	8.4
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	CS(Mf)3	13:30	Middle	2	1	19.9	7.68	26.8	7.64	6.47	8.7
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	CS(Mf)3	13:30	Middle	2	2	19.9	7.69	26.9	7.65	6.41	8.7
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	CS(Mf)3	13:30	Bottom	3	1	19.6	7.76	27.1	7.59	6.7	9.3
TMCLKL	HY/2012/07	2017-01-19	Mid-Flood	CS(Mf)3	13:30	Bottom	3	2	19.7	7.75	27	7.57	6.63	9.1
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	CS(Mf)5	16:38	Surface	1	1	20.1	7.62	26.8	7.43	7.1	9.7
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	CS(Mf)5	16:38	Surface	1	2	20.2	7.63	26.9	7.51	7.12	9.7
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	CS(Mf)5	16:38	Middle	2	1	20.2	7.74	26.9	7.77	6.67	9.1
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	CS(Mf)5	16:38	Middle	2	2	20.2	7.76	26.9	7.65	6.69	9.1
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	CS(Mf)5	16:38	Bottom	3	1	20.3	7.62	26.9	7.52	6.82	9.4
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	CS(Mf)5	16:38	Bottom	3	2	20.2	7.63	26.8	7.63	6.84	9.4
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	SR4a	16:58	Surface	1	1	20.2	7.43	26.7	7.44	6.52	8.7
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	SR4a	16:58	Surface	1	2	20.3	7.45	26.8	7.49	6.58	8.8
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	SR4a	16:58	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	SR4a	16:58	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	SR4a	16:58	Bottom	3	1	20.3	7.55	26.8	7.63	6.92	9.3
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	SR4a	16:58	Bottom	3	2	20.3	7.57	26.9	7.72	6.94	9.3
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	SR4	17:10	Surface	1	1	20.2	7.58	26.8	7.52	6.73	9
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	SR4	17:10	Surface	1	2	20.2	7.59	26.9	7.59	6.78	9
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	SR4	17:10	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	SR4	17:10	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	SR4	17:10	Bottom	3	1	20.2	7.66	26.9	7.41	6.96	9.2
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	SR4	17:10	Bottom	3	2	20.3	7.67	26.8	7.32	6.99	9.3
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	IS8	17:22	Surface	1	1	20.1	7.83	26.7	7.23	6.77	9
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	IS8	17:22	Surface	1	2	20.2	7.84	26.8	7.39	6.76	9
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	IS8	17:22	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	IS8	17:22	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	IS8	17:22	Bottom	3	1	20.2	7.65	26.8	7.31	6.68	9
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	IS8	17:22	Bottom	3	2	20.3	7.66	26.7	7.38	6.69	9

Project	Works	Date (yyyy-mm-d	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	IS(Mf)16	17:34	Surface	1	1	20	7.61	26.6	7.58	6.88	9.2
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	IS(Mf)16	17:34	Surface	1	2	20.1	7.55	26.7	7.5	6.87	9.2
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	IS(Mf)16	17:34	Middle	2	1	20.1	7.42	26.7	7.43	6.75	9
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	IS(Mf)16	17:34	Middle	2	2	20.2	7.44	26.8	7.58	6.76	9
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	IS(Mf)16	17:34	Bottom	3	1	20.3	7.56	26.8	7.69	6.99	9.5
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	IS(Mf)16	17:34	Bottom	3	2	20.3	7.59	26.7	7.73	6.97	9.3
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	IS(Mf)9	17:49	Surface	1	1	20.2	7.76	26.7	7.49	6.67	9
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	IS(Mf)9	17:49	Surface	1	2	20.2	7.79	26.8	7.53	6.68	9
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	IS(Mf)9	17:49	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	IS(Mf)9	17:49	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	IS(Mf)9	17:49	Bottom	3	1	20.2	7.88	26.8	7.73	6.92	9.5
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	IS(Mf)9	17:49	Bottom	3	2	20.3	7.86	26.9	7.82	6.93	9.5
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	CS(Mf)3	18:10	Surface	1	1	20.2	7.52	26.8	7.43	6.58	8.8
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	CS(Mf)3	18:10	Surface	1	2	20.3	7.53	26.8	7.58	6.57	8.8
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	CS(Mf)3	18:10	Middle	2	1	20.3	7.69	26.9	7.39	6.73	9.1
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	CS(Mf)3	18:10	Middle	2	2	20.2	7.7	26.8	7.48	6.77	9.1
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	CS(Mf)3	18:10	Bottom	3	1	20.3	7.53	26.8	7.65	6.82	9.4
TMCLKL	HY/2012/07	2017-01-19	Mid-Ebb	CS(Mf)3	18:10	Bottom	3	2	20.3	7.55	26.8	7.71	6.91	9.5
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	CS(Mf)5	12:08	Surface	1	1	19.9	7.81	26.8	7.25	6.85	9.3
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	CS(Mf)5	12:08	Surface	1	2	19.8	7.79	26.8	7.23	6.91	9.4
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	CS(Mf)5	12:08	Middle	2	1	19.8	7.72	26.9	7.34	7.07	9.6
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	CS(Mf)5	12:08	Middle	2	2	19.8	7.7	26.8	7.37	7.11	9.7
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	CS(Mf)5	12:08	Bottom	3	1	19.8	7.76	27	7.55	7.02	9.7
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	CS(Mf)5	12:08	Bottom	3	2	19.9	7.73	26.9	7.53	6.97	9.8
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	SR4a	12:27	Surface	1	1	19.8	7.67	26.6	7.4	6.6	9.1
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	SR4a	12:27	Surface	1	2	19.9	7.65	26.7	7.36	6.65	9.2
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	SR4a	12:27	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	SR4a	12:27	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	SR4a	12:27	Bottom	3	1	19.9	7.73	26.7	7.45	6.8	9.5
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	SR4a	12:27	Bottom	3	2	19.9	7.71	26.8	7.47	6.89	9.6
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	SR4	12:49	Surface	1	1	19.8	7.7	26.8	7.58	6.52	9
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	SR4	12:49	Surface	1	2	19.8	7.72	26.9	7.61	6.49	9
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	SR4	12:49	Middle	2	1						

Project	Works	Date (yyyy-mm-d	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	SR4	12:49	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	SR4	12:49	Bottom	3	1	19.8	7.75	27	7.78	6.61	9.3
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	SR4	12:49	Bottom	3	2	19.8	7.78	27	7.75	6.69	9.5
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	IS8	13:04	Surface	1	1	19.9	7.88	26.8	7.42	6.69	9.2
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	IS8	13:04	Surface	1	2	19.8	7.9	26.9	7.4	6.77	9.3
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	IS8	13:04	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	IS8	13:04	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	IS8	13:04	Bottom	3	1	19.9	7.83	26.8	7.37	6.86	9.7
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	IS8	13:04	Bottom	3	2	19.9	7.81	26.9	7.35	6.82	9.7
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	IS(Mf)16	13:19	Surface	1	1	19.8	7.73	26.7	7.59	6.43	8.9
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	IS(Mf)16	13:19	Surface	1	2	19.7	7.7	26.7	7.61	6.51	9
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	IS(Mf)16	13:19	Middle	2	1	19.8	7.79	26.7	7.77	6.5	8.7
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	IS(Mf)16	13:19	Middle	2	2	19.9	7.82	26.8	7.74	6.58	8.9
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	IS(Mf)16	13:19	Bottom	3	1	19.9	7.85	26.9	7.51	6.61	9.1
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	IS(Mf)16	13:19	Bottom	3	2	19.9	7.82	26.9	7.54	6.69	9.2
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	IS(Mf)9	13:40	Surface	1	1	19.8	7.79	26.8	7.34	6.61	8.8
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	IS(Mf)9	13:40	Surface	1	2	19.8	7.82	26.7	7.36	6.73	9
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	IS(Mf)9	13:40	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	IS(Mf)9	13:40	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	IS(Mf)9	13:40	Bottom	3	1	19.8	7.88	26.9	7.49	6.88	9.4
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	IS(Mf)9	13:40	Bottom	3	2	19.9	7.93	26.8	7.46	6.93	9.4
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	CS(Mf)3	13:55	Surface	1	1	19.9	7.72	26.9	7.47	7.01	9.3
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	CS(Mf)3	13:55	Surface	1	2	19.9	7.75	26.8	7.45	6.96	9.3
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	CS(Mf)3	13:55	Middle	2	1	19.8	7.78	26.9	7.53	7.24	9.7
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	CS(Mf)3	13:55	Middle	2	2	19.9	7.81	26.9	7.55	7.19	9.7
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	CS(Mf)3	13:55	Bottom	3	1	19.9	7.85	27	7.62	7.09	9.9
TMCLKL	HY/2012/07	2017-01-21	Mid-Flood	CS(Mf)3	13:55	Bottom	3	2	19.9	7.89	27	7.61	7.03	9.7
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	CS(Mf)5	8:13	Surface	1	1	19.8	7.87	26.8	7.15	6.96	9.5
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	CS(Mf)5	8:13	Surface	1	2	19.9	7.85	26.7	7.18	7.03	9.6
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	CS(Mf)5	8:13	Middle	2	1	19.7	7.69	26.9	7.23	7.21	9.8
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	CS(Mf)5	8:13	Middle	2	2	19.8	7.73	27	7.26	7.26	9.9
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	CS(Mf)5	8:13	Bottom	3	1	19.6	7.78	27.2	7.42	7.14	9.8
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	CS(Mf)5	8:13	Bottom	3	2	19.7	7.74	27.1	7.44	7.09	9.8

Project	Works	Date (yyyy-mm-d	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	SR4a	7:53	Surface	1	1	19.7	7.74	26.7	7.28	6.71	9
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	SR4a	7:53	Surface	1	2	19.6	7.73	26.7	7.24	6.78	9
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	SR4a	7:53	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	SR4a	7:53	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	SR4a	7:53	Bottom	3	1	19.8	7.82	26.8	7.34	6.94	9.4
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	SR4a	7:53	Bottom	3	2	19.7	7.8	26.7	7.37	7.02	9.4
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	SR4	7:41	Surface	1	1	19.7	7.73	26.7	7.46	6.65	8.8
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	SR4	7:41	Surface	1	2	19.7	7.76	26.8	7.49	6.61	8.8
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	SR4	7:41	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	SR4	7:41	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	SR4	7:41	Bottom	3	1	19.7	7.79	27.1	7.66	6.74	8.9
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	SR4	7:41	Bottom	3	2	19.8	7.78	27	7.68	6.83	9.1
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	IS8	7:30	Surface	1	1	19.8	7.86	26.8	7.34	6.81	9.1
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	IS8	7:30	Surface	1	2	19.9	7.89	26.8	7.31	6.88	9.2
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	IS8	7:30	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	IS8	7:30	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	IS8	7:30	Bottom	3	1	19.8	7.82	26.9	7.25	6.95	9.3
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	IS8	7:30	Bottom	3	2	19.8	7.81	26.8	7.21	6.91	9.3
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	IS(Mf)16	7:18	Surface	1	1	19.7	7.71	26.7	7.51	6.52	8.7
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	IS(Mf)16	7:18	Surface	1	2	19.6	7.75	26.6	7.54	6.59	8.8
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	IS(Mf)16	7:18	Middle	2	1	19.9	7.8	26.8	7.68	6.68	8.9
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	IS(Mf)16	7:18	Middle	2	2	19.8	7.84	26.9	7.66	6.61	8.8
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	IS(Mf)16	7:18	Bottom	3	1	19.9	7.89	27.1	7.4	6.7	9.1
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	IS(Mf)16	7:18	Bottom	3	2	19.8	7.87	27	7.42	6.79	9.1
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	IS(Mf)9	7:06	Surface	1	1	19.7	7.81	26.7	7.26	6.74	9.1
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	IS(Mf)9	7:06	Surface	1	2	19.8	7.84	26.8	7.29	6.82	9.2
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	IS(Mf)9	7:06	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	IS(Mf)9	7:06	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	IS(Mf)9	7:06	Bottom	3	1	19.9	7.89	27	7.4	6.95	9.5
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	IS(Mf)9	7:06	Bottom	3	2	19.9	7.92	26.9	7.37	7.04	9.6
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	CS(Mf)3	6:47	Surface	1	1	19.8	7.74	26.8	7.38	7.12	9.5
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	CS(Mf)3	6:47	Surface	1	2	19.9	7.76	26.8	7.36	7.06	9.5
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	CS(Mf)3	6:47	Middle	2	1	19.7	7.8	26.9	7.44	7.36	9.9

Project	Works	Date (yyyy-mm-d	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	CS(Mf)3	6:47	Middle	2	2	19.6	7.83	27	7.46	7.28	9.8
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	CS(Mf)3	6:47	Bottom	3	1	19.7	7.86	27.2	7.52	7.19	9.9
TMCLKL	HY/2012/07	2017-01-21	Mid-Ebb	CS(Mf)3	6:47	Bottom	3	2	19.8	7.88	27.1	7.53	7.15	9.8
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	CS(Mf)5	14:22	Surface	1	1	19.1	8.32	27.3	7.04	7.03	9.6
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	CS(Mf)5	14:22	Surface	1	2	19.2	8.27	27.4	7.02	7.09	9.6
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	CS(Mf)5	14:22	Middle	2	1	19.3	8.17	27.6	7.07	6.86	9.3
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	CS(Mf)5	14:22	Middle	2	2	19.2	8.19	27.5	7.09	6.9	9.4
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	CS(Mf)5	14:22	Bottom	3	1	19.4	8.37	27.6	7.18	7.12	10
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	CS(Mf)5	14:22	Bottom	3	2	19.5	8.36	27.7	7.16	7.18	10.1
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	SR4a	14:44	Surface	1	1	19.1	8.22	27.4	6.92	6.86	9.4
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	SR4a	14:44	Surface	1	2	19.2	8.18	27.5	6.94	6.8	9.7
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	SR4a	14:44	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	SR4a	14:44	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	SR4a	14:44	Bottom	3	1	19.2	8.09	27.5	6.7	6.99	9.7
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	SR4a	14:44	Bottom	3	2	19.3	8.07	27.6	6.69	6.93	10
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	SR4	15:06	Surface	1	1	19.2	8.16	27.5	6.8	7.23	10
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	SR4	15:06	Surface	1	2	19.1	8.14	27.6	6.82	7.15	9.9
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	SR4	15:06	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	SR4	15:06	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	SR4	15:06	Bottom	3	1	19.1	8.07	27.7	6.89	7.32	10.3
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	SR4	15:06	Bottom	3	2	19.2	8.1	27.6	6.92	7.39	10.5
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	IS8	15:28	Surface	1	1	18.9	8.27	27.5	6.93	7.09	9.8
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	IS8	15:28	Surface	1	2	19	8.29	27.4	6.9	7.15	9.9
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	IS8	15:28	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	IS8	15:28	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	IS8	15:28	Bottom	3	1	19	8.22	27.5	6.98	7.29	10.4
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	IS8	15:28	Bottom	3	2	19.1	8.2	27.6	7	7.21	10.2
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	IS(Mf)16	15:50	Surface	1	1	19.1	8.15	27.6	6.98	6.78	9.4
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	IS(Mf)16	15:50	Surface	1	2	19.2	8.19	27.7	7	6.7	9.2
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	IS(Mf)16	15:50	Middle	2	1	19.3	8.33	27.7	7.1	6.81	9.1
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	IS(Mf)16	15:50	Middle	2	2	19.4	8.3	27.8	7.07	6.86	9.3
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	IS(Mf)16	15:50	Bottom	3	1	19.5	8.39	27.9	6.81	7.05	9.7
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	IS(Mf)16	15:50	Bottom	3	2	19.4	8.41	27.8	6.84	7.03	9.6

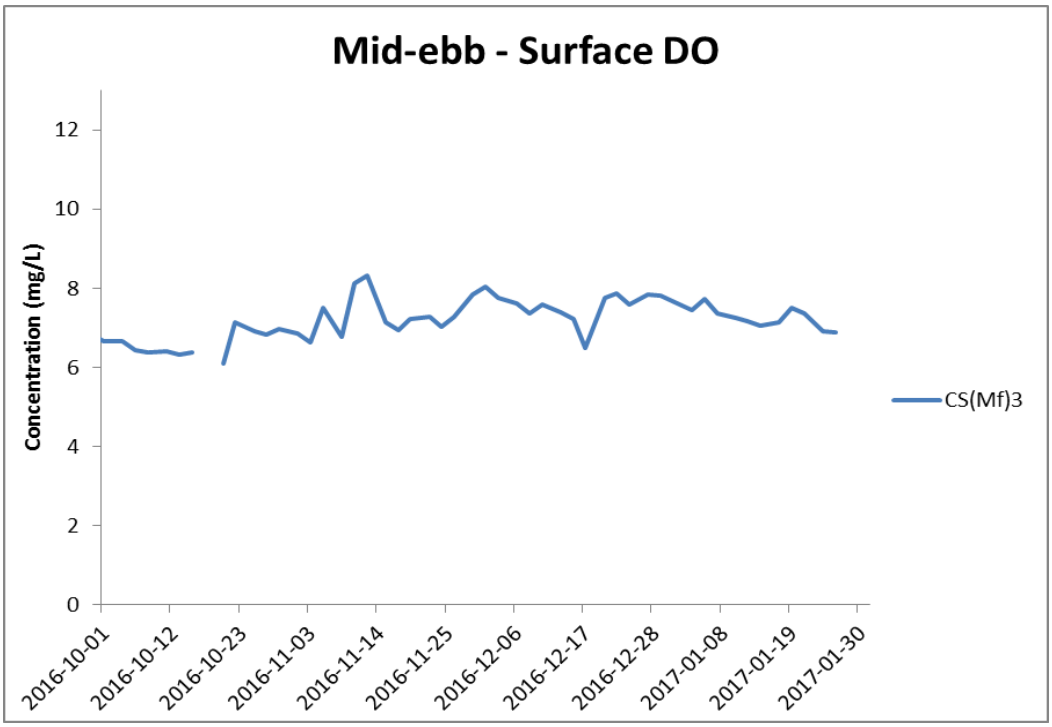
Project	Works	Date (yyyy-mm-d	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	IS(Mf)9	16:12	Surface	1	1	19	8.03	27.5	6.77	7.17	9.5
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	IS(Mf)9	16:12	Surface	1	2	19.1	8.07	27.4	6.81	7.2	9.6
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	IS(Mf)9	16:12	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	IS(Mf)9	16:12	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	IS(Mf)9	16:12	Bottom	3	1	19.1	8.14	27.5	6.88	7.29	9.9
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	IS(Mf)9	16:12	Bottom	3	2	19.2	8.15	27.6	6.9	7.34	10
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	CS(Mf)3	16:36	Surface	1	1	18.9	7.98	27.5	7	7.32	9.7
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	CS(Mf)3	16:36	Surface	1	2	18.8	8	27.6	6.97	7.22	9.6
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	CS(Mf)3	16:36	Middle	2	1	18.9	8.22	27.6	7.17	7.35	9.8
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	CS(Mf)3	16:36	Middle	2	2	19	8.25	27.7	7.2	7.43	10
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	CS(Mf)3	16:36	Bottom	3	1	19.1	8.32	27.8	7.34	7.59	10.6
TMCLKL	HY/2012/07	2017-01-24	Mid-Flood	CS(Mf)3	16:36	Bottom	3	2	19.1	8.33	27.7	7.3	7.5	10.4
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	CS(Mf)5	12:15	Surface	1	1	19	8.26	27.3	6.98	7.12	9.8
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	CS(Mf)5	12:15	Surface	1	2	19	8.21	27.2	6.96	7.18	9.8
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	CS(Mf)5	12:15	Middle	2	1	19.1	8.11	27.5	7.01	6.95	9.5
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	CS(Mf)5	12:15	Middle	2	2	19.2	8.13	27.4	7.03	6.99	9.5
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	CS(Mf)5	12:15	Bottom	3	1	19.3	8.31	27.7	7.12	7.21	9.9
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	CS(Mf)5	12:15	Bottom	3	2	19.2	8.3	27.8	7.1	7.27	10
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	SR4a	11:51	Surface	1	1	18.9	8.16	27.4	6.86	6.95	9.3
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	SR4a	11:51	Surface	1	2	19	8.12	27.3	6.88	6.89	9.2
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	SR4a	11:51	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	SR4a	11:51	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	SR4a	11:51	Bottom	3	1	19.1	8.03	27.4	6.64	7.08	9.6
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	SR4a	11:51	Bottom	3	2	19	8.01	27.4	6.63	7.02	9.4
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	SR4	11:35	Surface	1	1	19	8.1	27.5	6.74	7.32	9.7
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	SR4	11:35	Surface	1	2	18.9	8.08	27.4	6.76	7.24	9.6
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	SR4	11:35	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	SR4	11:35	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	SR4	11:35	Bottom	3	1	19.1	8.01	27.6	6.83	7.41	9.8
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	SR4	11:35	Bottom	3	2	19	8.04	27.5	6.86	7.48	9.9
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	IS8	11:19	Surface	1	1	18.9	8.21	27.4	6.87	7.18	9.5
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	IS8	11:19	Surface	1	2	18.8	8.23	27.3	6.84	7.24	9.6
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	IS8	11:19	Middle	2	1						

Project	Works	Date (yyyy-mm-d	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	IS8	11:19	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	IS8	11:19	Bottom	3	1	19	8.16	27.5	6.92	7.38	9.9
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	IS8	11:19	Bottom	3	2	19	8.14	27.4	6.94	7.3	9.9
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	IS(Mf)16	11:00	Surface	1	1	19	8.09	27.4	6.92	6.87	9.1
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	IS(Mf)16	11:00	Surface	1	2	19.1	8.13	27.5	6.94	6.79	9.1
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	IS(Mf)16	11:00	Middle	2	1	19.1	8.27	27.7	7.04	6.9	9.2
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	IS(Mf)16	11:00	Middle	2	2	19.2	8.24	27.6	7.01	6.95	9.2
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	IS(Mf)16	11:00	Bottom	3	1	19.4	8.33	27.8	6.75	7.14	9.7
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	IS(Mf)16	11:00	Bottom	3	2	19.3	8.35	27.7	6.78	7.22	9.7
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	IS(Mf)9	10:44	Surface	1	1	19	7.97	27.4	6.71	7.26	9.8
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	IS(Mf)9	10:44	Surface	1	2	19.9	8.01	27.3	6.75	7.29	9.8
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	IS(Mf)9	10:44	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	IS(Mf)9	10:44	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	IS(Mf)9	10:44	Bottom	3	1	19.1	8.08	27.5	6.82	7.38	10.1
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	IS(Mf)9	10:44	Bottom	3	2	19	8.09	27.4	6.84	7.43	10.2
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	CS(Mf)3	10:19	Surface	1	1	18.7	7.92	27.5	6.94	7.38	9.9
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	CS(Mf)3	10:19	Surface	1	2	18.8	7.94	27.4	6.91	7.31	9.8
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	CS(Mf)3	10:19	Middle	2	1	18.9	8.16	27.6	7.11	7.44	10
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	CS(Mf)3	10:19	Middle	2	2	19	8.19	27.5	7.14	7.52	10.2
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	CS(Mf)3	10:19	Bottom	3	1	19.2	8.26	27.6	7.28	7.68	10.6
TMCLKL	HY/2012/07	2017-01-24	Mid-Ebb	CS(Mf)3	10:19	Bottom	3	2	19.1	8.27	27.7	7.24	7.59	10.4
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	CS(Mf)5	15:45	Surface	1	1	19	8.27	27.3	7.09	6.87	9.3
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	CS(Mf)5	15:45	Surface	1	2	19.1	8.33	27.3	7.14	6.94	9.4
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	CS(Mf)5	15:45	Middle	2	1	19.1	8.08	27.4	7.06	6.98	9.5
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	CS(Mf)5	15:45	Middle	2	2	19.2	8.15	27.4	7.02	7.08	9.6
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	CS(Mf)5	15:45	Bottom	3	1	19.1	8.3	27.5	7.15	7.25	10.2
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	CS(Mf)5	15:45	Bottom	3	2	19	8.36	27.5	7.2	7.18	10.1
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	SR4a	16:11	Surface	1	1	19	8.01	27.4	6.84	6.72	9.3
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	SR4a	16:11	Surface	1	2	19	8.06	27.3	6.88	6.77	9.3
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	SR4a	16:11	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	SR4a	16:11	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	SR4a	16:11	Bottom	3	1	19.2	8.11	27.3	6.97	6.84	9.5
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	SR4a	16:11	Bottom	3	2	19.3	8.14	27.3	6.92	6.87	9.6

Project	Works	Date (yyyy-mm-d	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	SR4	16:29	Surface	1	1	19.1	8.22	27.4	6.72	7.14	9.9
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	SR4	16:29	Surface	1	2	19.1	8.26	27.4	6.76	7.19	9.9
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	SR4	16:29	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	SR4	16:29	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	SR4	16:29	Bottom	3	1	19.2	8.07	27.5	6.85	7.23	10.2
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	SR4	16:29	Bottom	3	2	19.2	8.13	27.6	6.88	7.27	10.3
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	IS8	16:51	Surface	1	1	19	8.2	27.3	6.87	7.12	9.8
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	IS8	16:51	Surface	1	2	19.1	8.24	27.4	6.92	7.16	9.9
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	IS8	16:51	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	IS8	16:51	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	IS8	16:51	Bottom	3	1	19.2	8.35	27.5	6.8	7.17	10.2
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	IS8	16:51	Bottom	3	2	19.3	8.31	27.6	6.74	7.23	10.3
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	IS(Mf)16	17:13	Surface	1	1	19.1	8.29	27.4	6.88	6.7	9.2
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	IS(Mf)16	17:13	Surface	1	2	19.2	8.34	27.3	6.94	6.74	9.3
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	IS(Mf)16	17:13	Middle	2	1	19.3	8.07	27.5	6.73	6.83	9.2
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	IS(Mf)16	17:13	Middle	2	2	19.2	8.01	27.6	6.77	6.88	9.4
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	IS(Mf)16	17:13	Bottom	3	1	19.5	8.25	27.8	7.05	7.03	9.6
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	IS(Mf)16	17:13	Bottom	3	2	19.4	8.31	27.8	7.12	6.97	9.5
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	IS(Mf)9	17:35	Surface	1	1	19.1	8.16	27.4	6.82	7.03	9.3
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	IS(Mf)9	17:35	Surface	1	2	19.2	8.21	27.3	6.86	7.08	9.4
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	IS(Mf)9	17:35	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	IS(Mf)9	17:35	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	IS(Mf)9	17:35	Bottom	3	1	19.4	8.03	27.5	6.92	7.19	9.8
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	IS(Mf)9	17:35	Bottom	3	2	19.3	8.08	27.6	6.99	7.25	9.9
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	CS(Mf)3	17:57	Surface	1	1	19	8.15	27.4	6.9	7.04	9.4
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	CS(Mf)3	17:57	Surface	1	2	19.2	8.11	27.5	6.94	7.1	9.4
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	CS(Mf)3	17:57	Middle	2	1	19.2	8.27	27.7	6.82	7.4	9.9
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	CS(Mf)3	17:57	Middle	2	2	19.3	8.34	27.7	6.88	7.36	9.9
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	CS(Mf)3	17:57	Bottom	3	1	19.5	8.02	27.5	7.05	7.21	10
TMCLKL	HY/2012/07	2017-01-26	Mid-Flood	CS(Mf)3	17:57	Bottom	3	2	19.6	8.09	27.4	7.11	7.26	10
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	CS(Mf)5	13:30	Surface	1	1	19	8.13	27.2	7.04	7.04	9.6
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	CS(Mf)5	13:30	Surface	1	2	19.1	8.08	27.2	7	6.99	9.5
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	CS(Mf)5	13:30	Middle	2	1	19.1	8.12	27.2	7.07	7.08	9.6

Project	Works	Date (yyyy-mm-d	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	CS(Mf)5	13:30	Middle	2	2	19.1	8.07	27.3	7.03	7.15	9.7
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	CS(Mf)5	13:30	Bottom	3	1	19.1	8.09	27.4	7.14	7.28	10
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	CS(Mf)5	13:30	Bottom	3	2	19.2	8.15	27.5	7.18	7.34	10.1
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	SR4a	13:06	Surface	1	1	19	7.99	27.3	6.95	7.08	9.5
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	SR4a	13:06	Surface	1	2	19	8.03	27.2	6.91	7.05	9.4
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	SR4a	13:06	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	SR4a	13:06	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	SR4a	13:06	Bottom	3	1	19	8.05	27.3	6.99	7.18	9.7
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	SR4a	13:06	Bottom	3	2	19	8.01	27.3	6.96	7.23	9.7
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	SR4	12:50	Surface	1	1	19	8.13	27.3	6.89	7.17	9.5
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	SR4	12:50	Surface	1	2	19.1	8.07	27.3	6.92	7.22	9.6
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	SR4	12:50	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	SR4	12:50	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	SR4	12:50	Bottom	3	1	19.1	8.08	27.3	6.85	7.44	9.8
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	SR4	12:50	Bottom	3	2	19.1	8.14	27.4	6.81	7.39	9.8
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	IS8	12:34	Surface	1	1	19	8.09	27.3	6.97	7.24	9.6
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	IS8	12:34	Surface	1	2	19	8.11	27.4	6.94	7.3	9.7
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	IS8	12:34	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	IS8	12:34	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	IS8	12:34	Bottom	3	1	19	8.05	27.4	6.9	7.39	9.9
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	IS8	12:34	Bottom	3	2	19.1	8	27.4	6.87	7.33	9.9
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	IS(Mf)16	12:15	Surface	1	1	19	8.07	27.3	7.04	7.06	9.4
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	IS(Mf)16	12:15	Surface	1	2	19	8.04	27.3	7.01	7.13	9.6
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	IS(Mf)16	12:15	Middle	2	1	19	8.01	27.4	6.93	7.35	9.8
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	IS(Mf)16	12:15	Middle	2	2	19.1	8.05	27.4	6.97	7.3	9.7
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	IS(Mf)16	12:15	Bottom	3	1	19.1	8.04	27.6	6.99	7.48	10.2
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	IS(Mf)16	12:15	Bottom	3	2	19.1	8.08	27.6	7.02	7.4	9.9
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	IS(Mf)9	12:00	Surface	1	1	18.9	8.1	27.3	6.96	7.23	9.8
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	IS(Mf)9	12:00	Surface	1	2	19	8.07	27.3	6.92	7.35	9.9
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	IS(Mf)9	12:00	Middle	2	1						
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	IS(Mf)9	12:00	Middle	2	2						
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	IS(Mf)9	12:00	Bottom	3	1	19	8.02	27.4	7.01	7.46	10.2
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	IS(Mf)9	12:00	Bottom	3	2	19.1	7.98	27.4	7.04	7.38	10.1

Project	Works	Date (yyyy-mm-d	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	CS(Mf)3	11:39	Surface	1	1	18.9	8.03	27.3	6.88	7.46	10
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	CS(Mf)3	11:39	Surface	1	2	18.9	8.06	27.4	6.91	7.38	9.9
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	CS(Mf)3	11:39	Middle	2	1	19	7.98	27.5	6.93	7.86	10.6
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	CS(Mf)3	11:39	Middle	2	2	18.9	8.01	27.6	6.96	7.69	10.4
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	CS(Mf)3	11:39	Bottom	3	1	19.3	7.96	27.6	7	7.53	10.4
TMCLKL	HY/2012/07	2017-01-26	Mid-Ebb	CS(Mf)3	11:39	Bottom	3	2	19.4	7.99	27.7	7.03	7.48	10.2



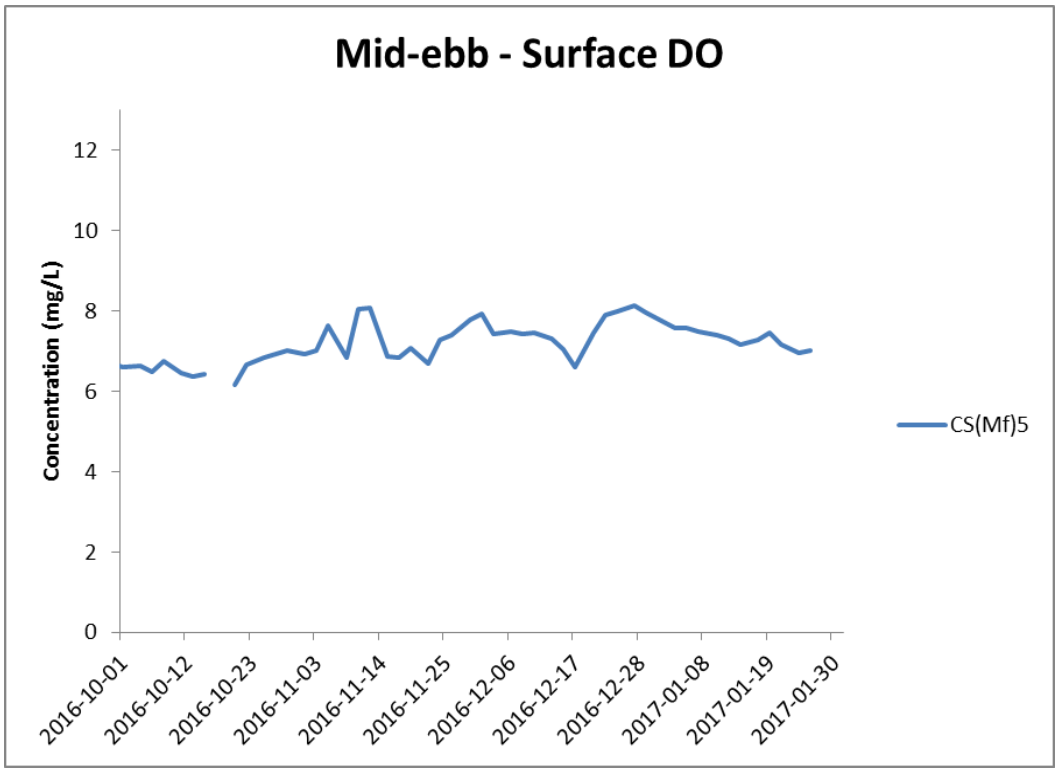
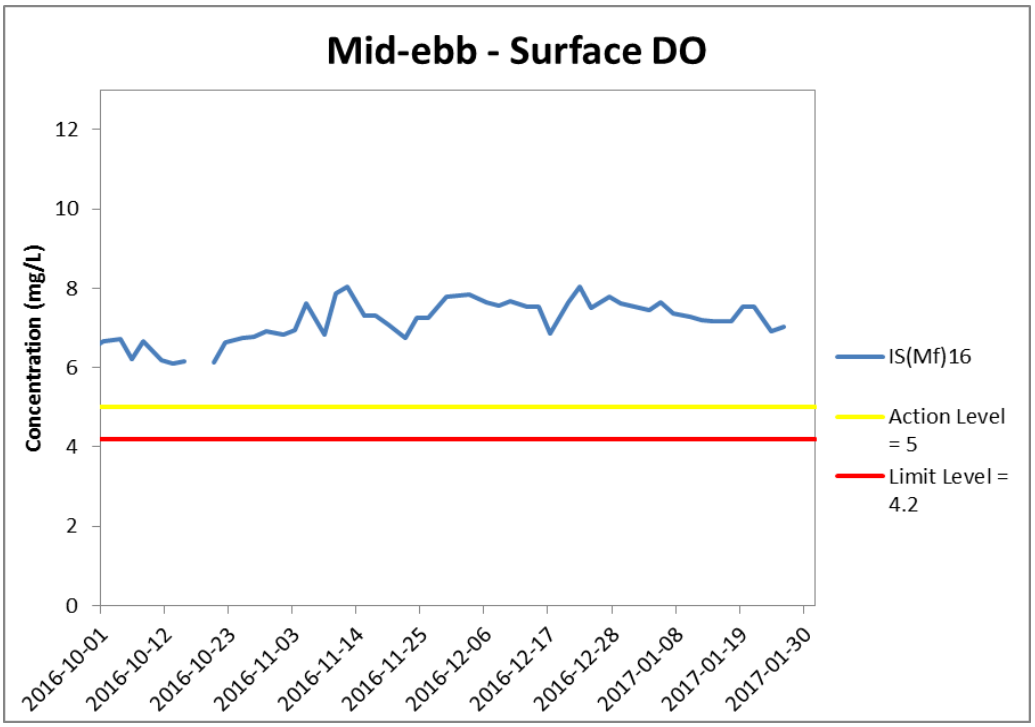


Figure J1 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-ebb tide between 1 October 2016 and 31 January 2017 at CS(Mf)3 and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period.) WQM on 28 and 31 Jan were cancelled due to suspension of marine works. Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.

Environmental Resources Management

ERM



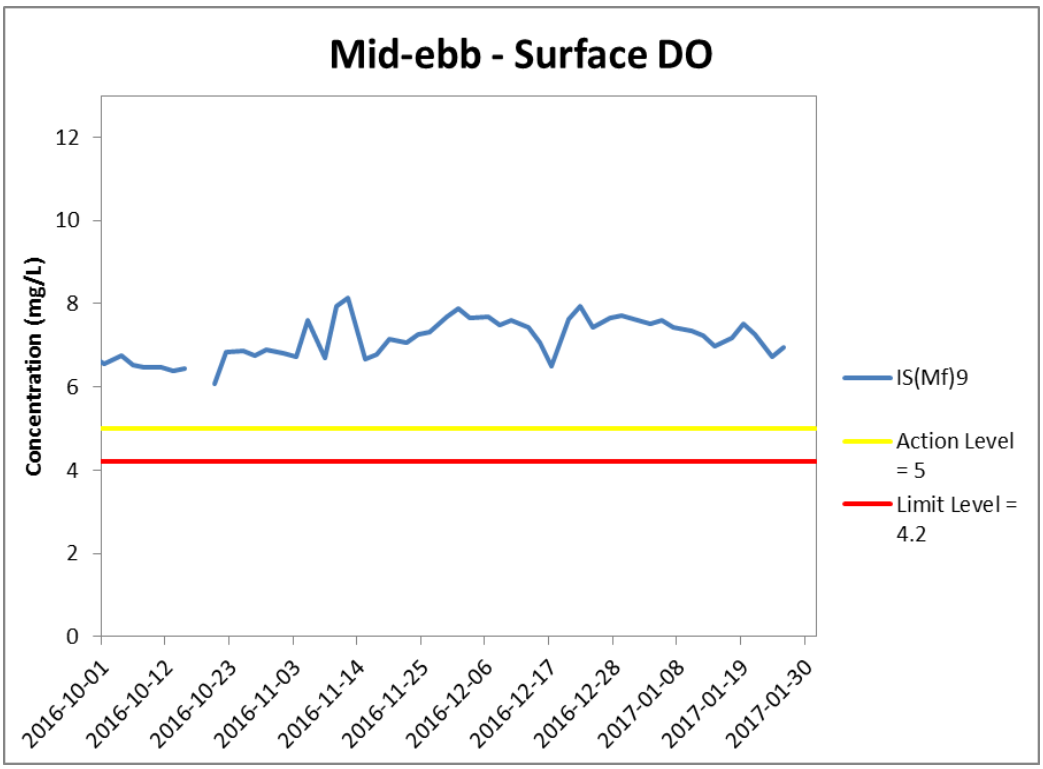
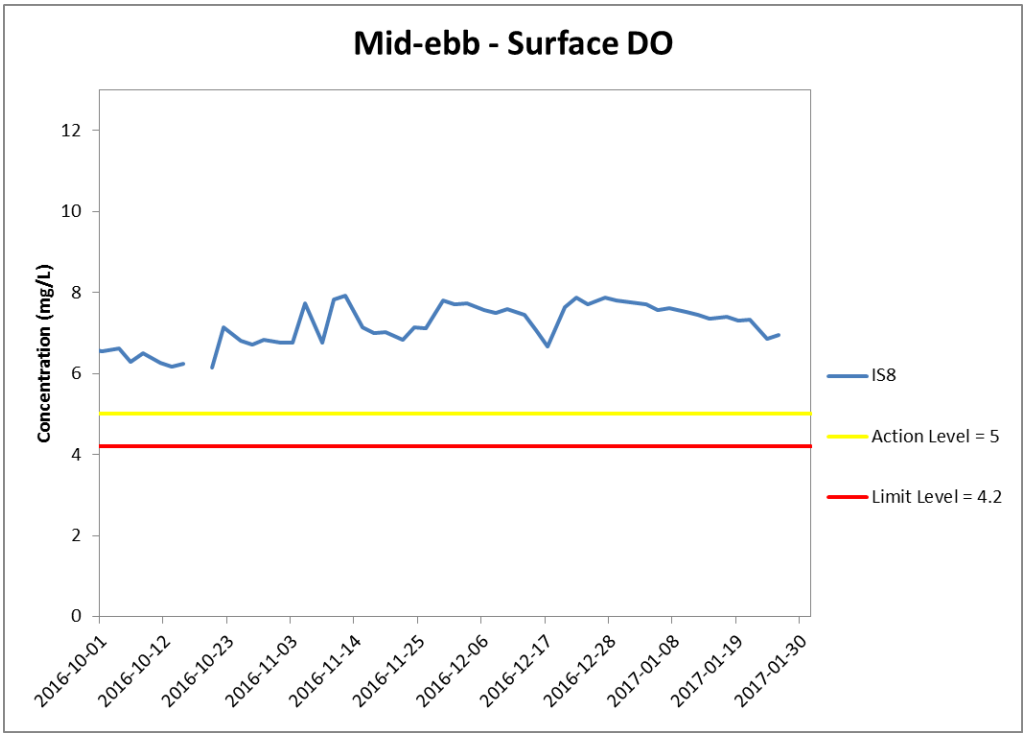


Figure J2 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-ebb tide between 1 October 2016 and 31 January 2017 at IS(Mf)16 and IS(Mf)9.

(Weather condition varied between sunny to rainy within the reporting period.) WQM on 28 and 31 Jan were cancelled due to suspension of marine works. Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.

Environmental Resources Management

ERM



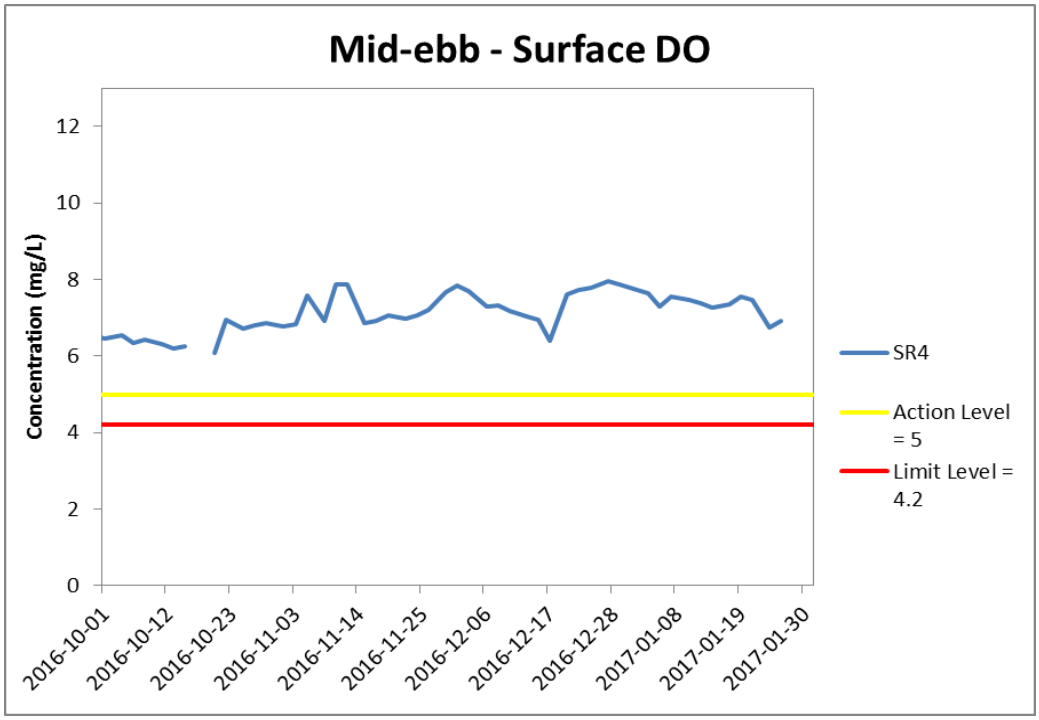


Figure J3 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-ebb tide between 1 October 2016 and 31 January 2017 at IS8 and SR4.

(Weather condition varied between sunny to rainy within the reporting period.) WQM on 28 and 31 Jan were cancelled due to suspension of marine works. Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.

Environmental Resources Management

ERM

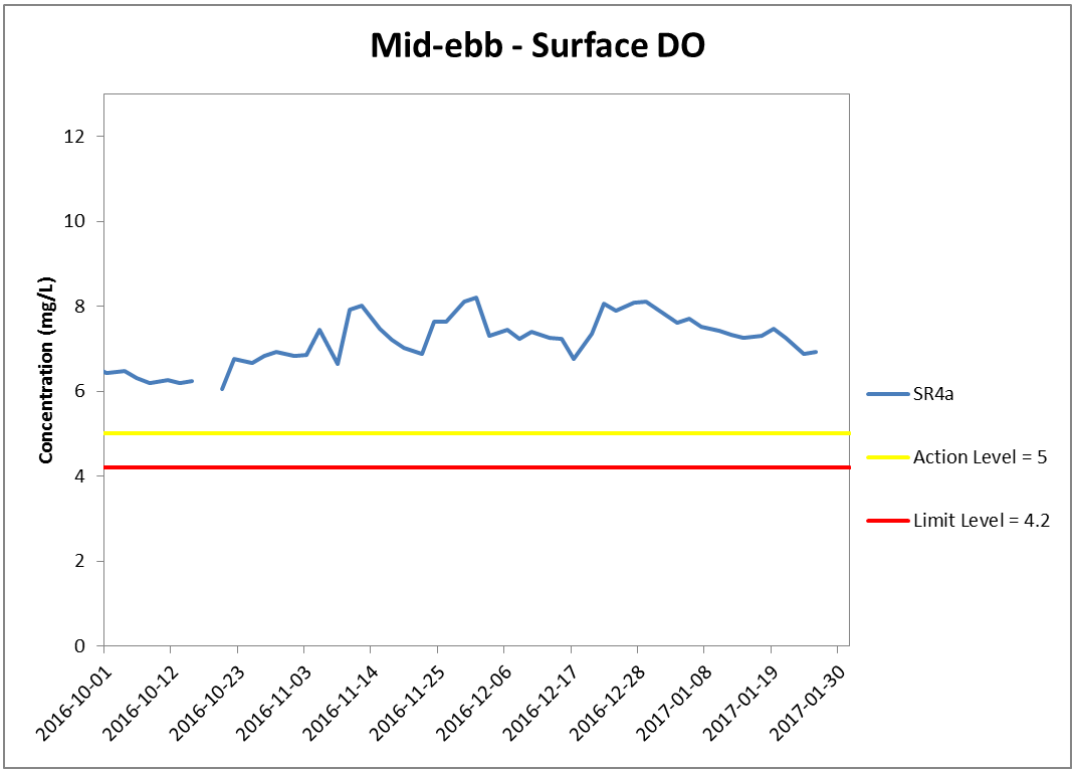
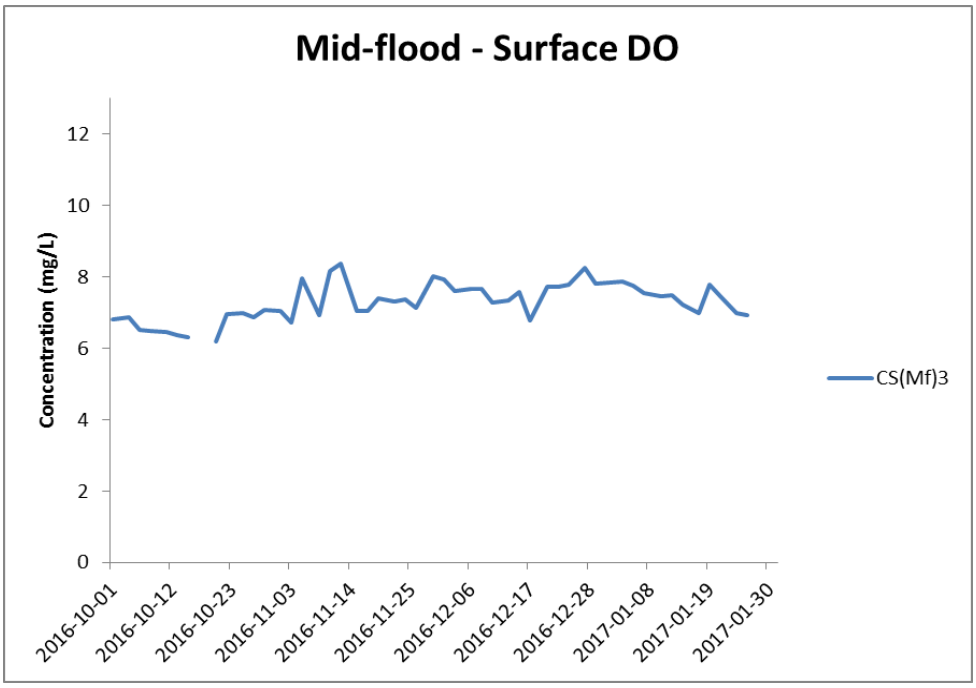


Figure J4 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-ebb tide between 1 October 2016 and 31 January 2017 at SR4a.

(Weather condition varied between sunny to rainy within the reporting period.) WQM on 28 and 31 Jan were cancelled due to suspension of marine works. Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.

Environmental Resources Management

ERM



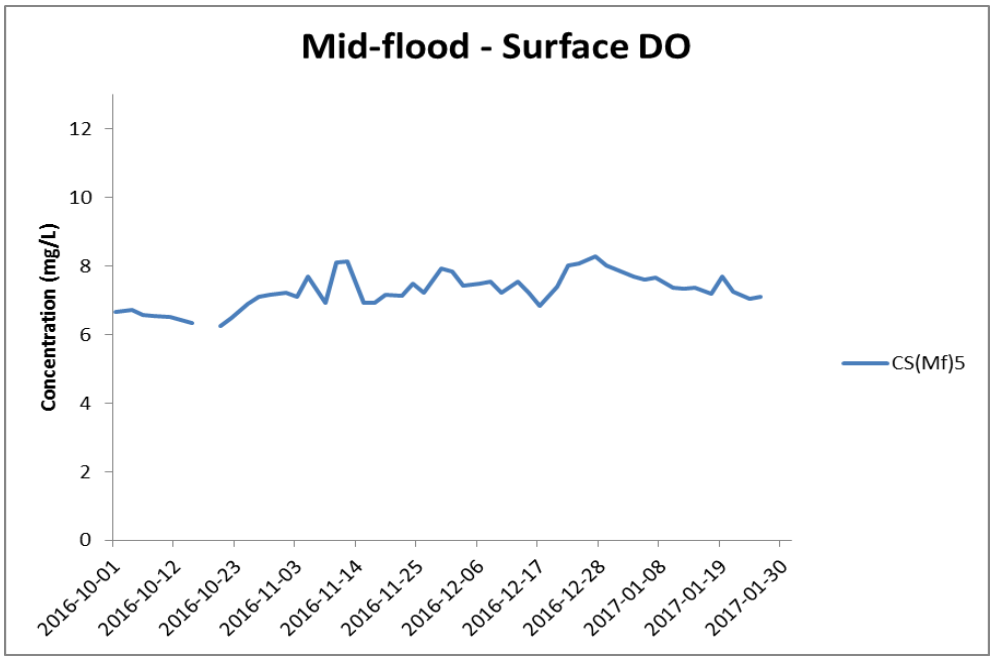
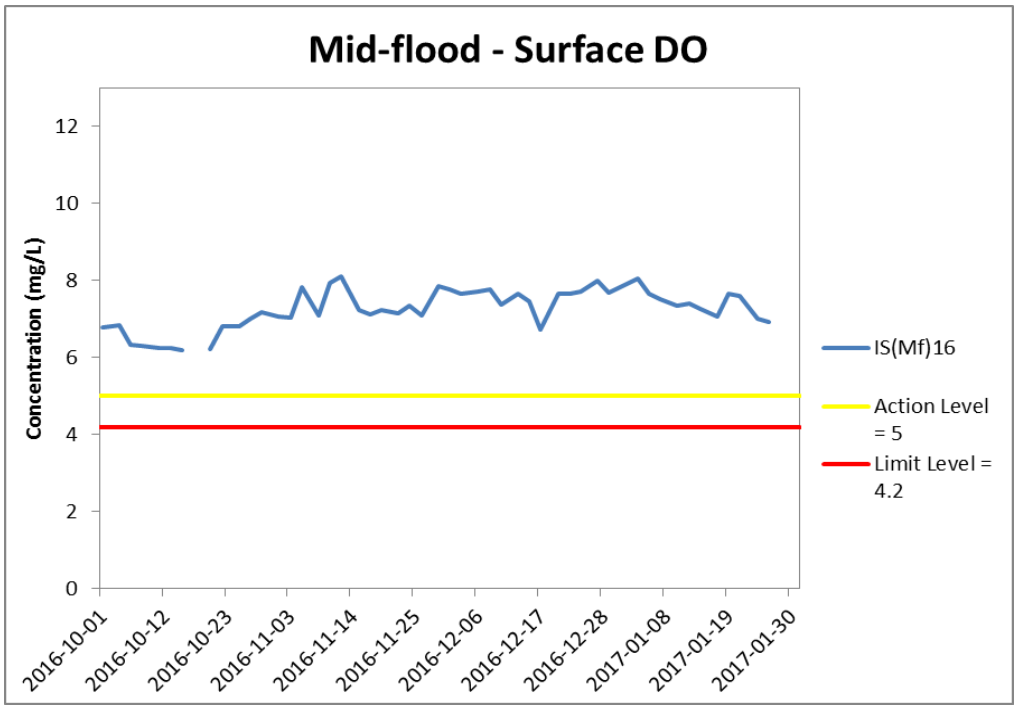


Figure J5 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-flood tide between 1 October 2016 and 31 January 2017 at CS(Mf)3 and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period.) WQM on 28 and 31 Jan were cancelled due to suspension of marine works. Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.

Environmental Resources Management

ERM



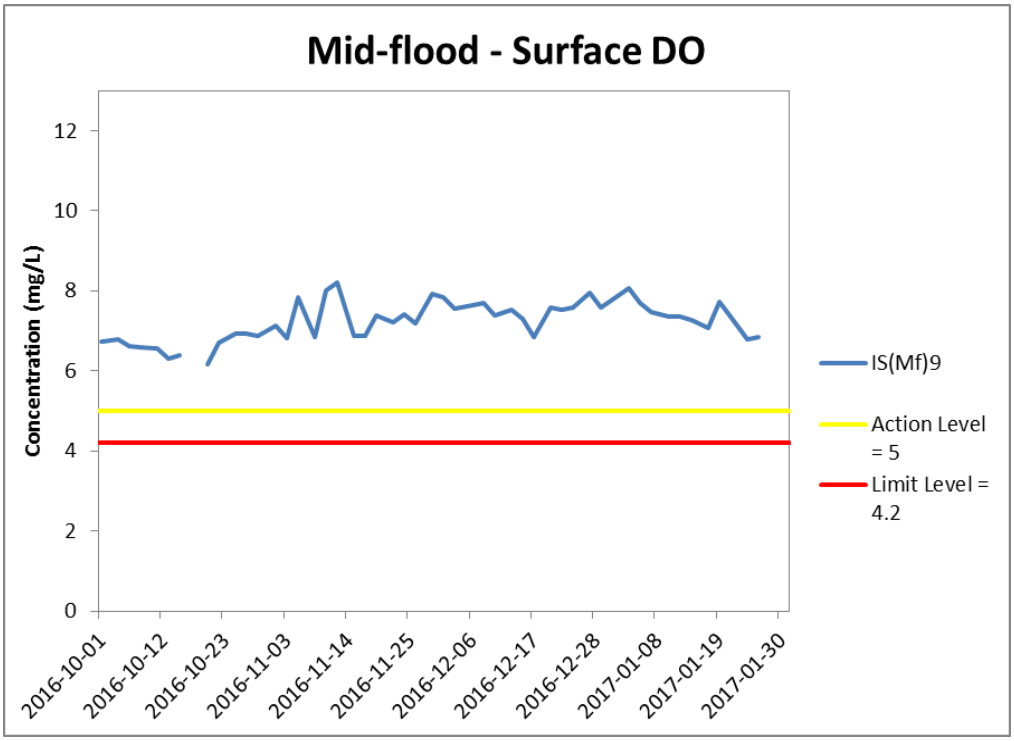
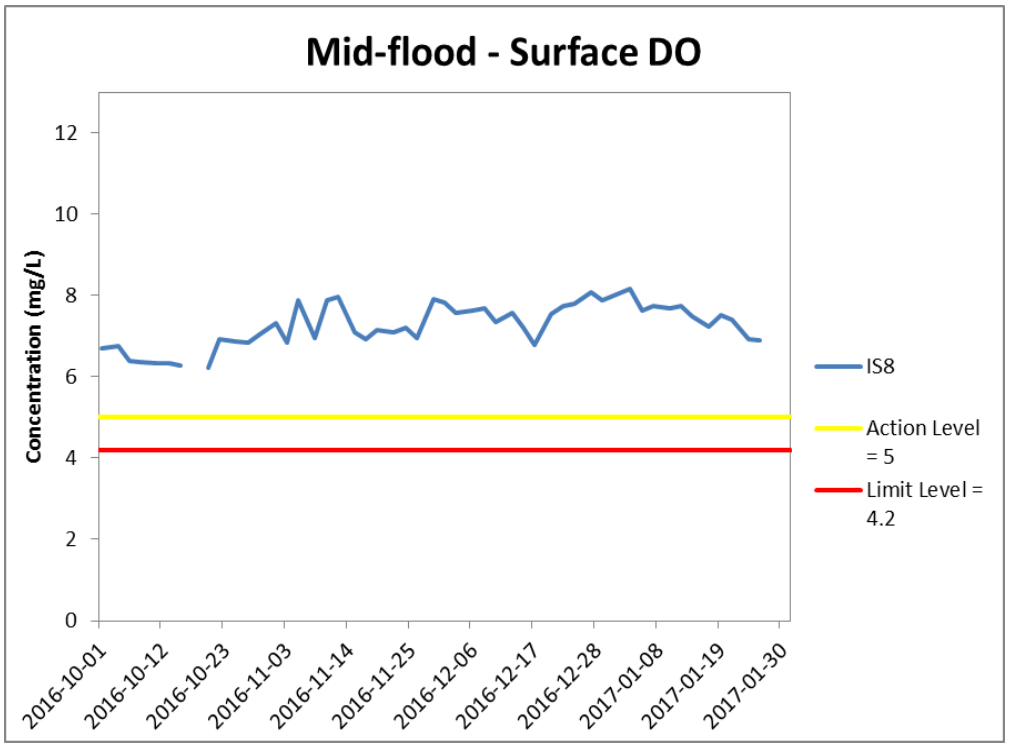


Figure J6 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-flood tide between 1 October 2016 and 31 January 2017 at IS(Mf)16 and IS(Mf)9.

(Weather condition varied between sunny to rainy within the reporting period.) WQM on 28 and 31 Jan were cancelled due to suspension of marine works. Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.

Environmental Resources Management

ERM



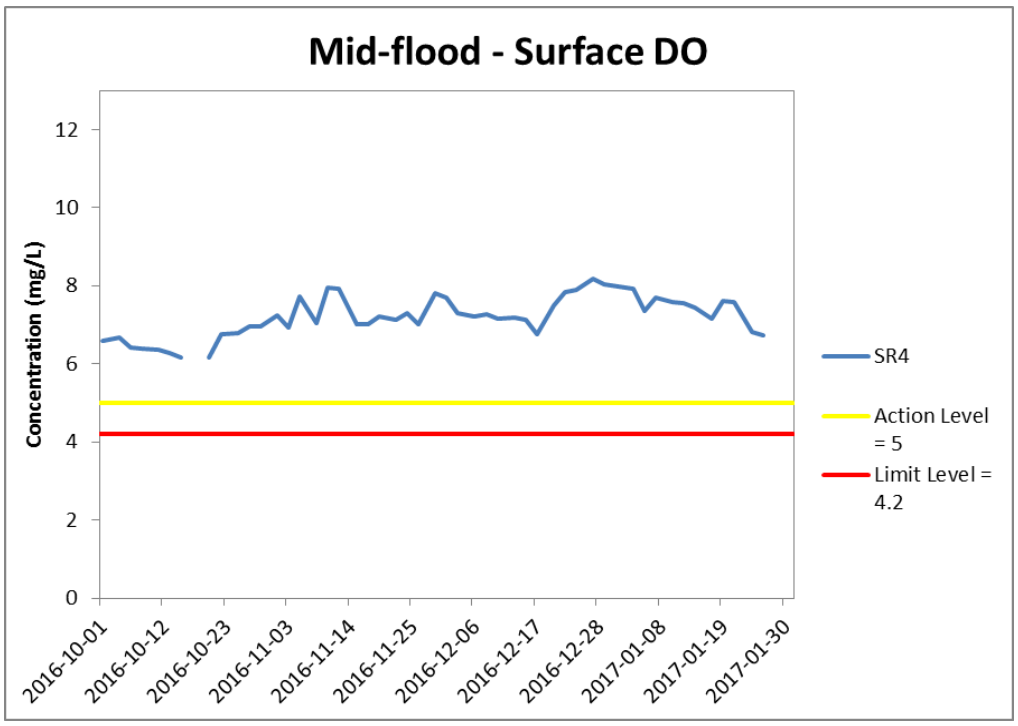


Figure J7 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-flood tide between 1 October 2016 and 31 January 2017 at IS8 and SR4.

(Weather condition varied between sunny to rainy within the reporting period.) WQM on 28 and 31 Jan were cancelled due to suspension of marine works. Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.

Environmental Resources Management

ERM

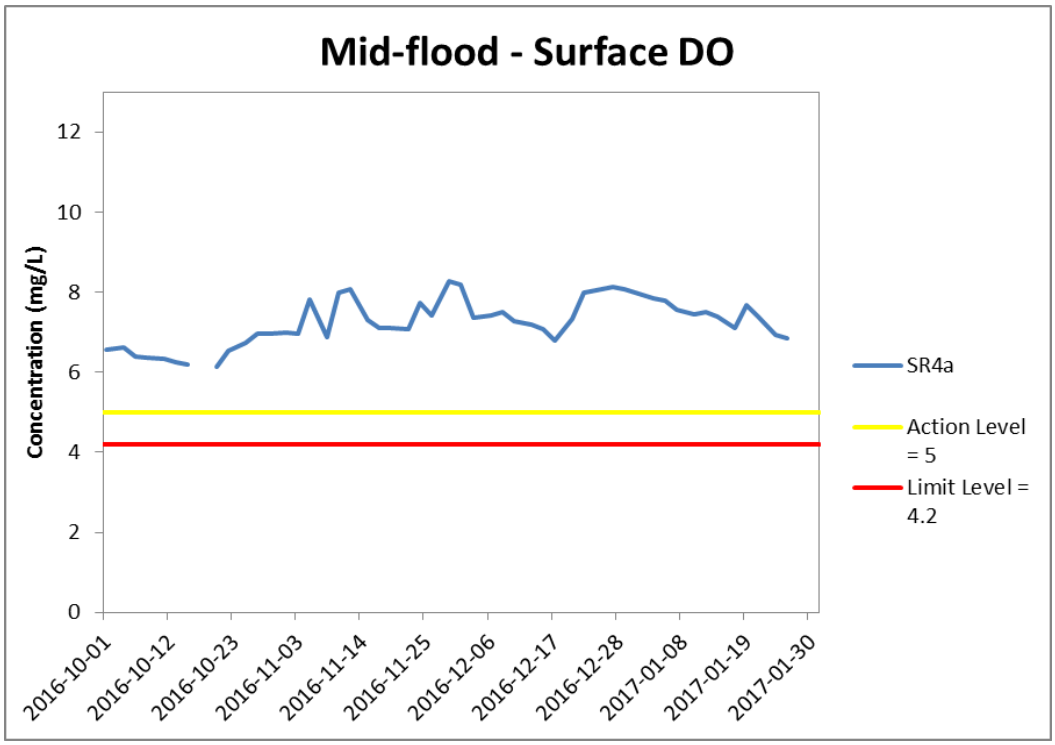
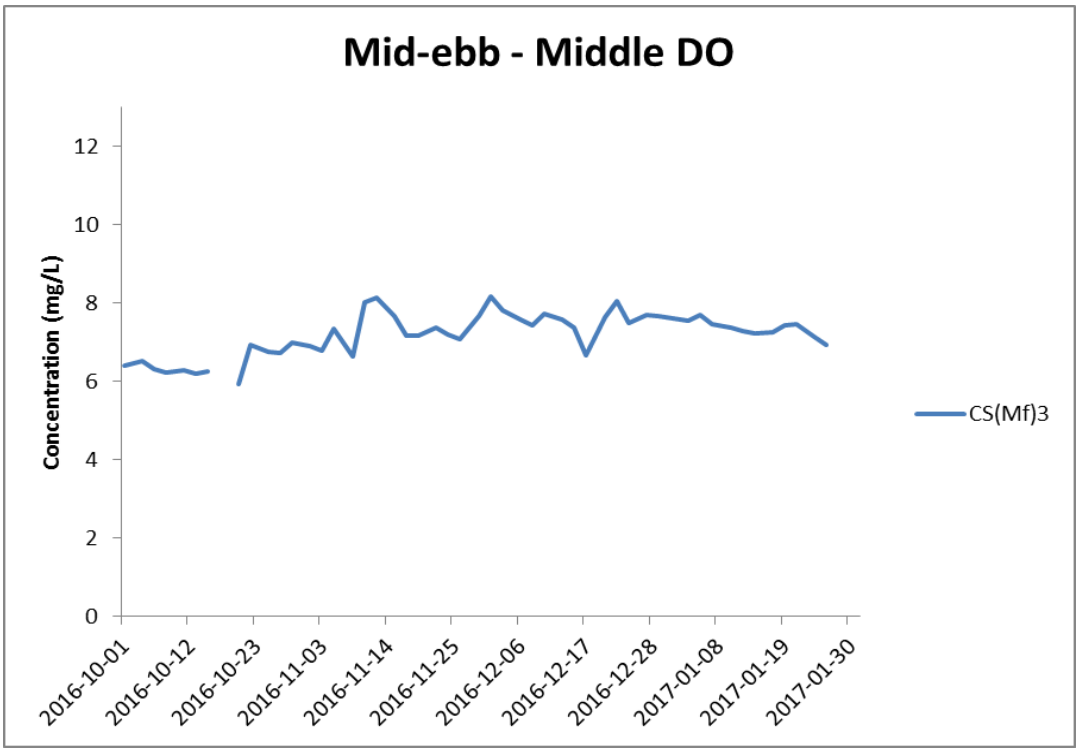


Figure J8 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-flood tide between 1 October 2016 and 31 January 2017 at SR4a.

(Weather condition varied between sunny to rainy within the reporting period.) WQM on 28 and 31 Jan were cancelled due to suspension of marine works. Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.

Environmental Resources Management

ERM



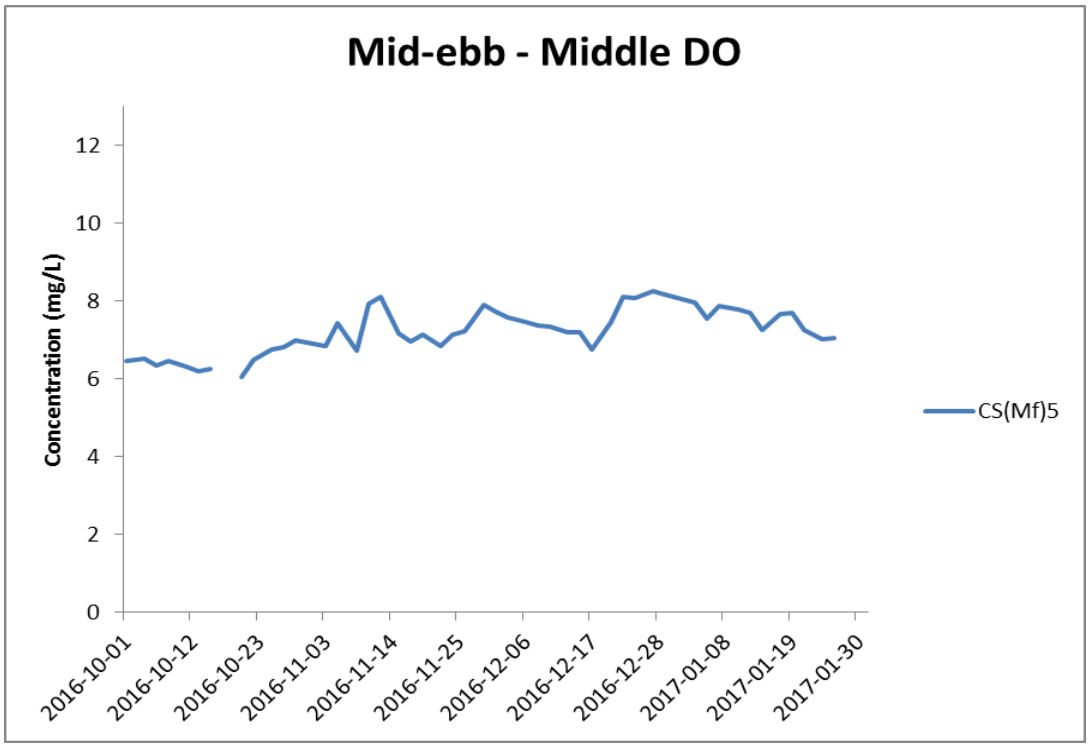


Figure J9 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters during mid-ebb tide between 1 October 2016 and 31 January 2017 at CS(Mf)3 and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period.) WQM on 28 and 31 Jan were cancelled due to suspension of marine works. Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.

Environmental Resources Management

ERM

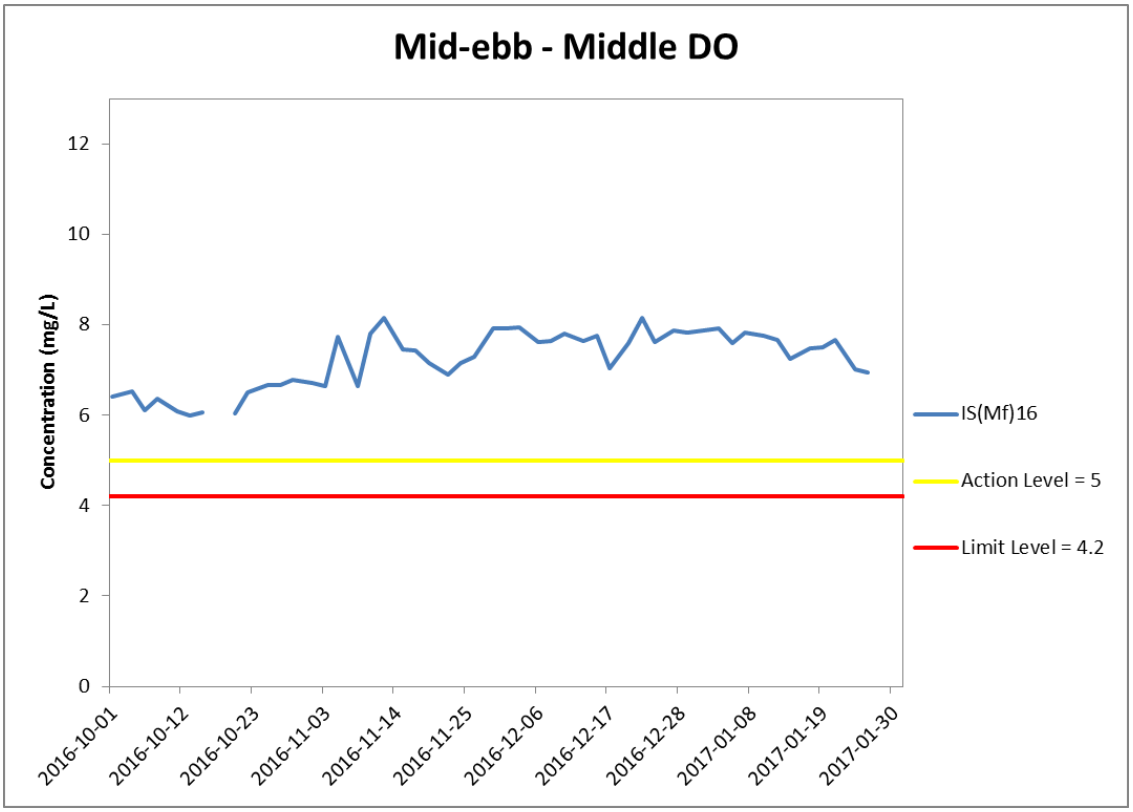
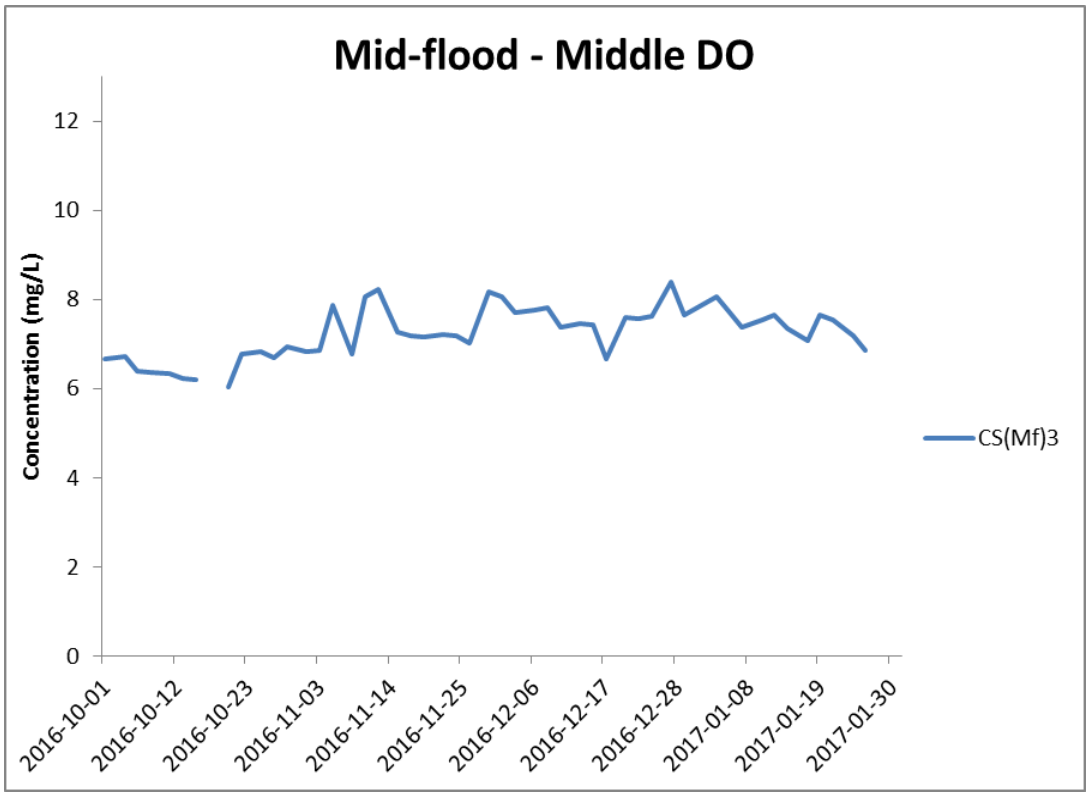


Figure J10 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters during mid-ebb tide between 1 October 2016 and 31 January 2017 at IS(Mf)16.

(Weather condition varied between sunny to rainy within the reporting period.) WQM on 28 and 31 Jan were cancelled due to suspension of marine works. Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.

Environmental Resources Management

ERM



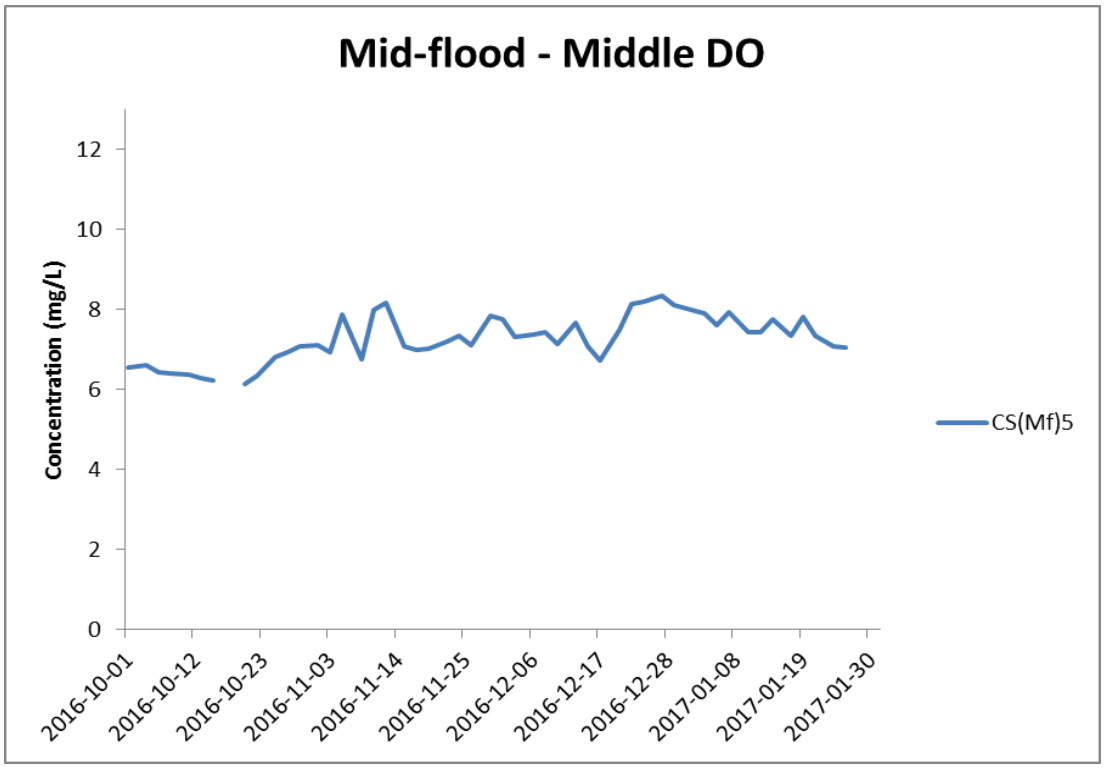


Figure J11 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters during mid-flood tide between 1 October and 31 January 2017 at CS(Mf)3 and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period.) WQM on 28 and 31 Jan were cancelled due to suspension of marine works. Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.

Environmental Resources Management

ERM

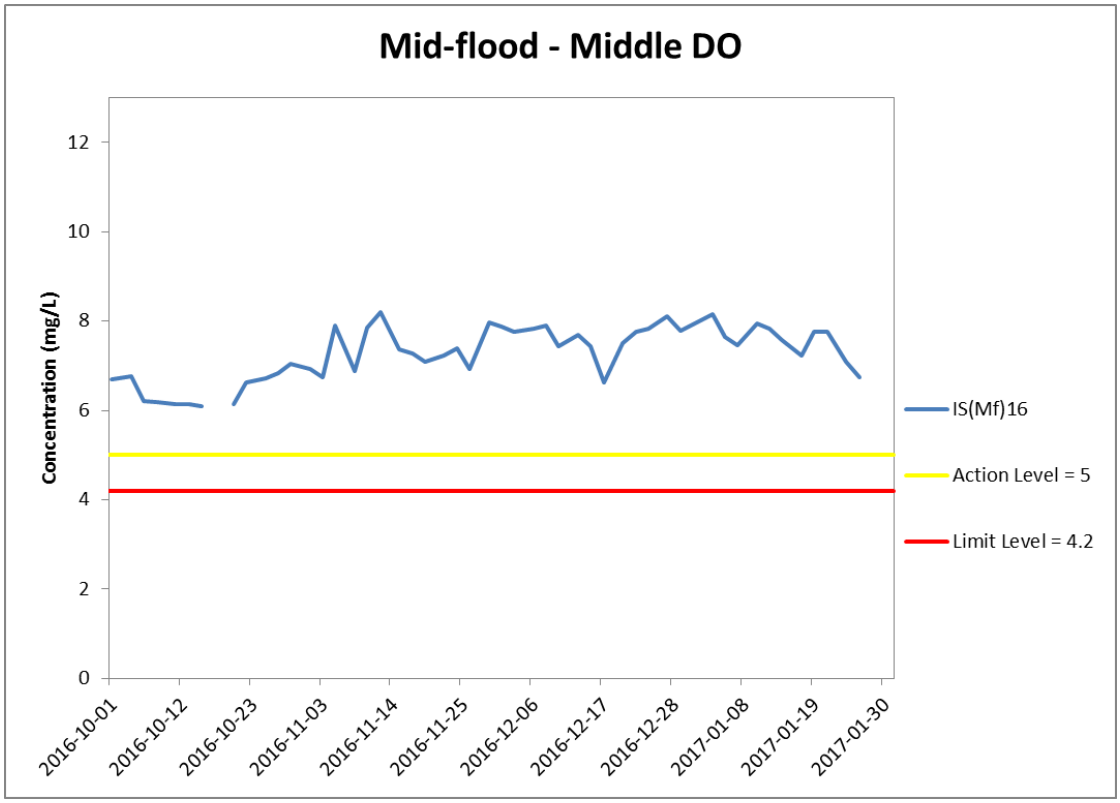
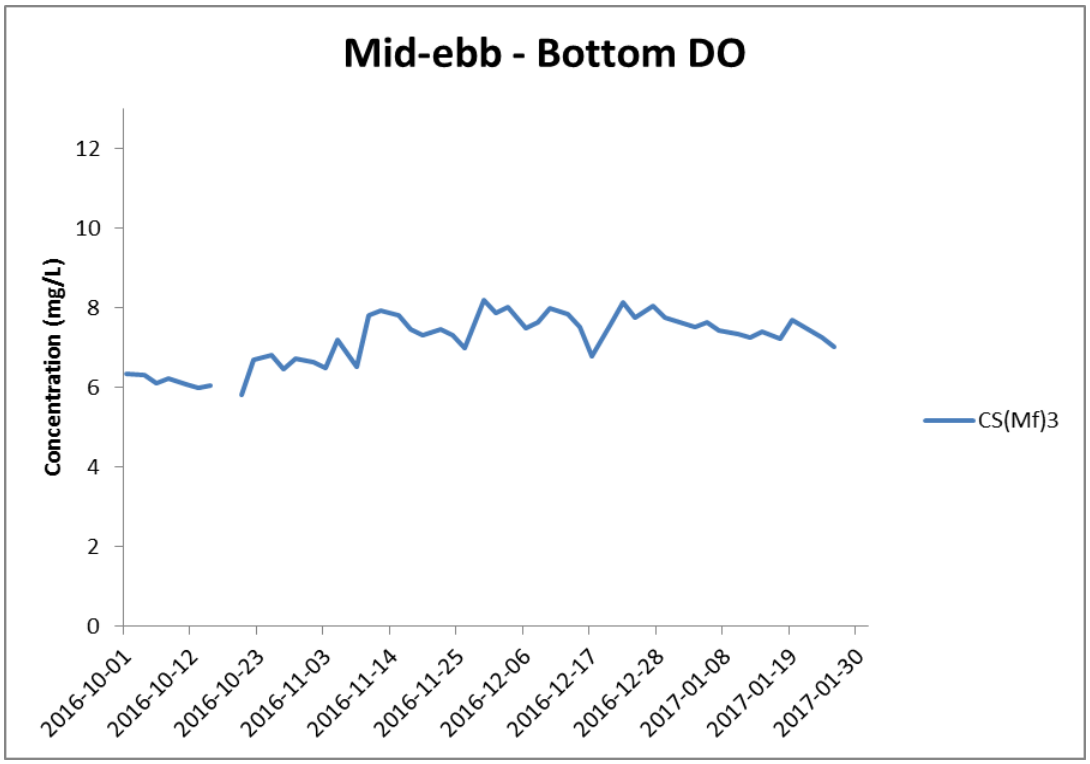


Figure J12 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters during mid-flood tide between 1 October 2016 and 31 January 2017 at IS(Mf)16.

(Weather condition varied between sunny to rainy within the reporting period.) WQM on 28 and 31 Jan were cancelled due to suspension of marine works. Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.

Environmental Resources Management

ERM



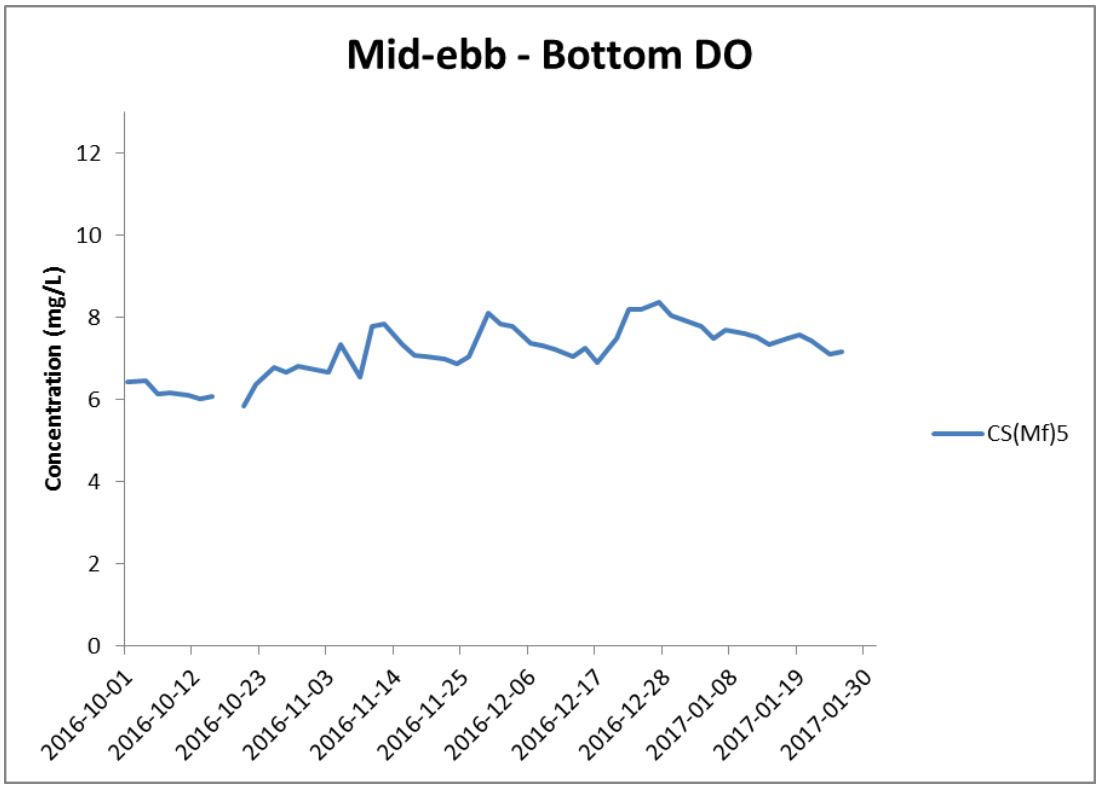
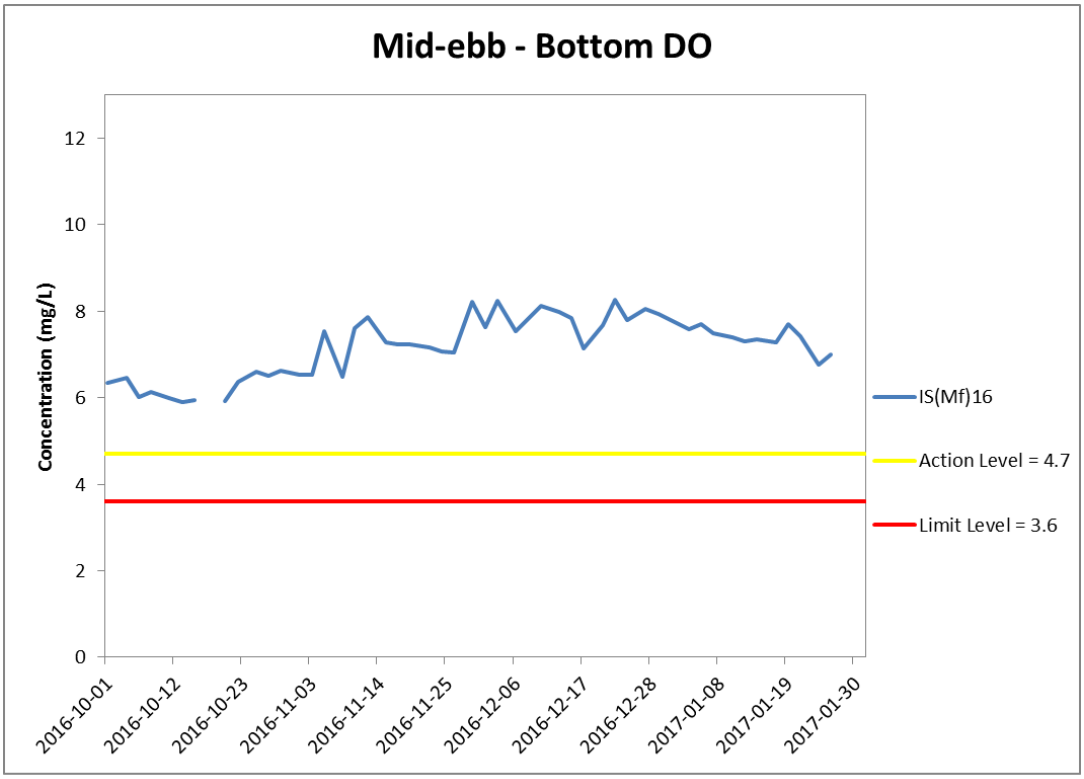


Figure J13 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-ebb tide between 1 October 2016 and 31 January 2017 at CS(Mf)3 and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period.) WQM on 28 and 31 Jan were cancelled due to suspension of marine works. Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.

Environmental Resources Management

ERM



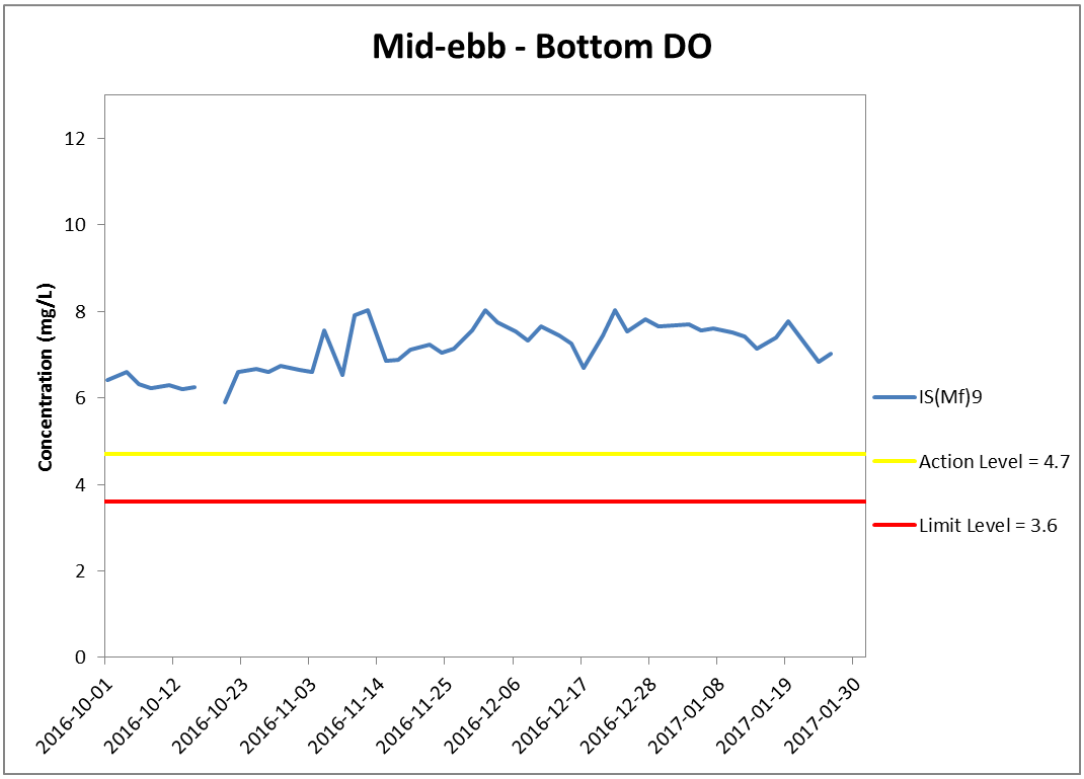
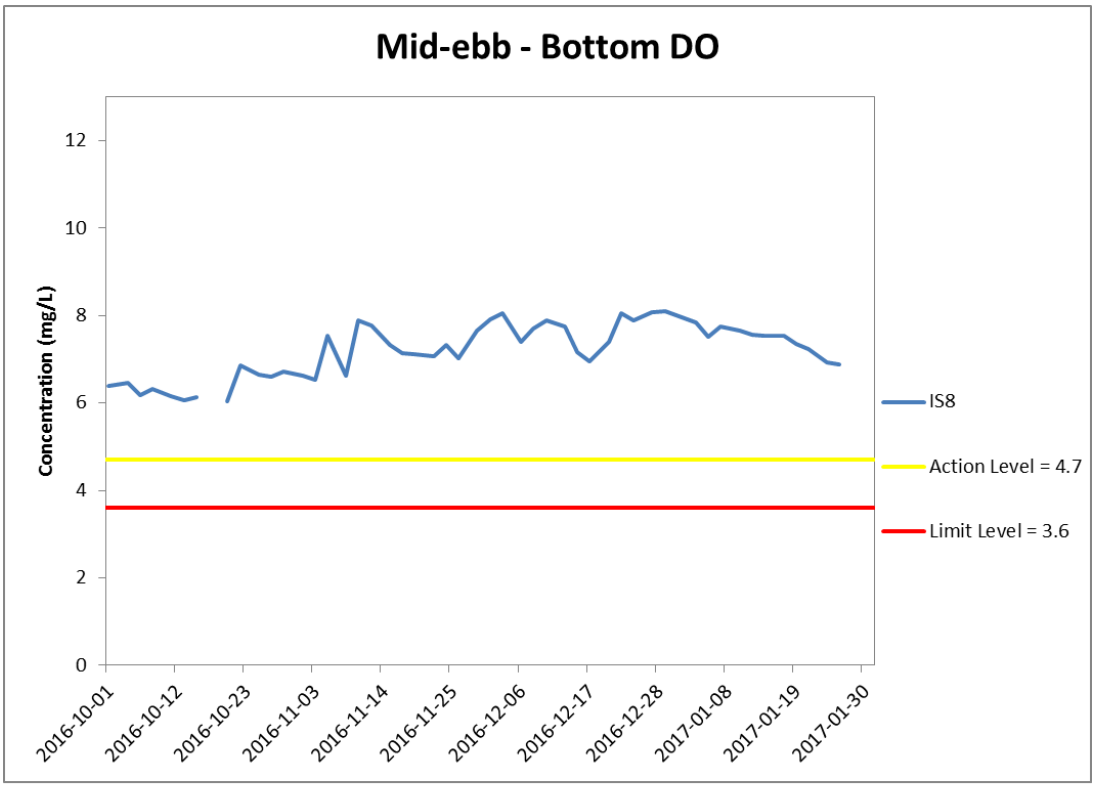


Figure J14 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-ebb tide between 1 October 2016 and 31 January 2017 at IS(Mf)16 and IS(Mf)9.

(Weather condition varied between sunny to rainy within the reporting period.) WQM on 28 and 31 Jan were cancelled due to suspension of marine works. Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.

Environmental Resources Management

ERM



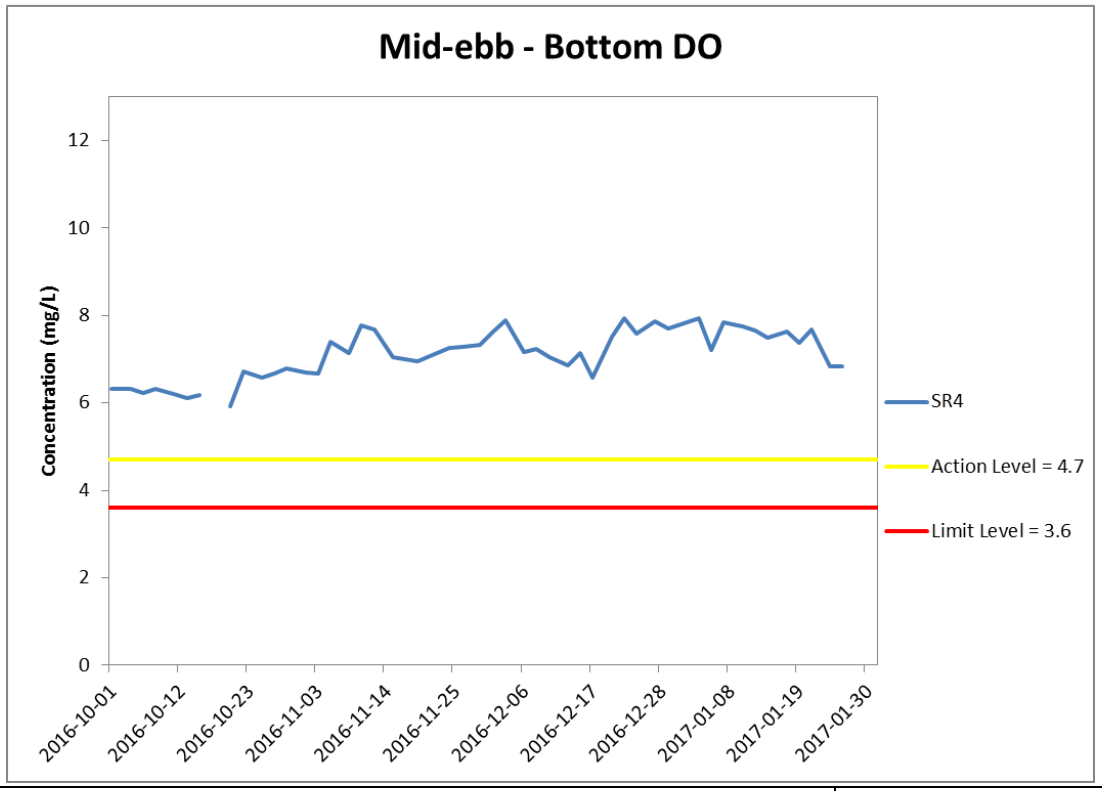


Figure J15 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-ebb tide between 1 October 2016 and 31 January 2017 at IS8 and SR4.

(Weather condition varied between sunny to rainy within the reporting period.) WQM on 28 and 31 Jan were cancelled due to suspension of marine works. Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.

Environmental Resources Management

ERM

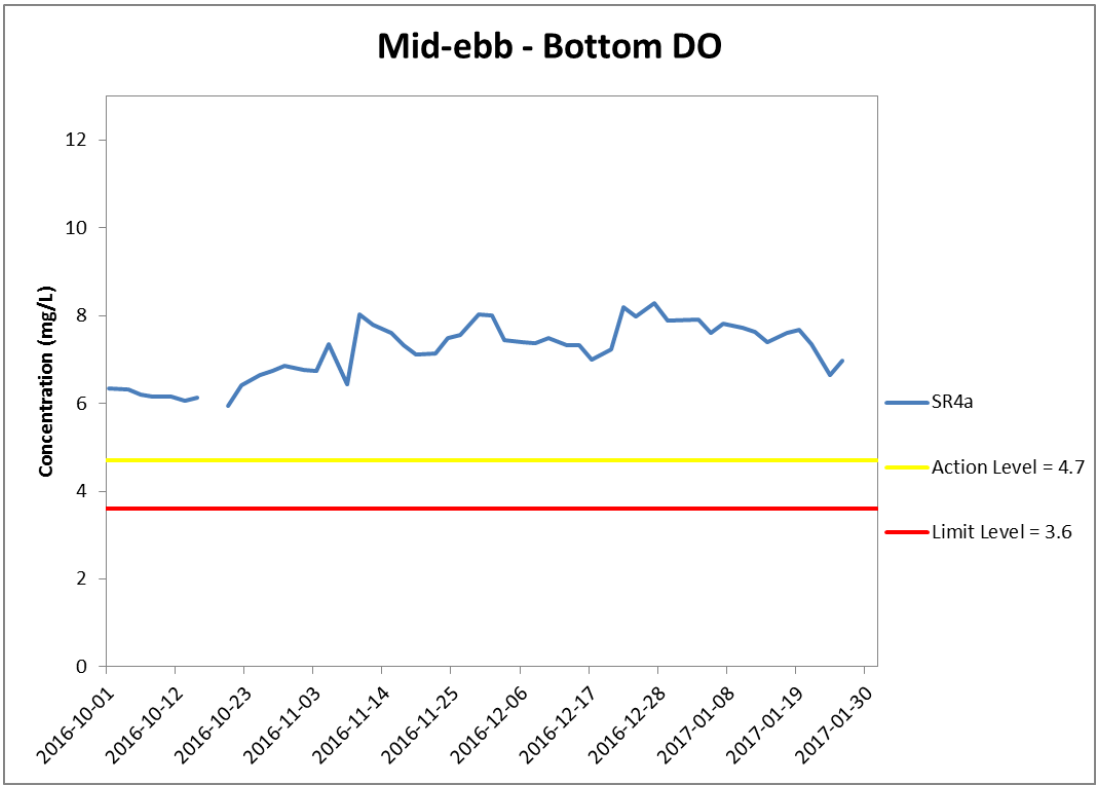
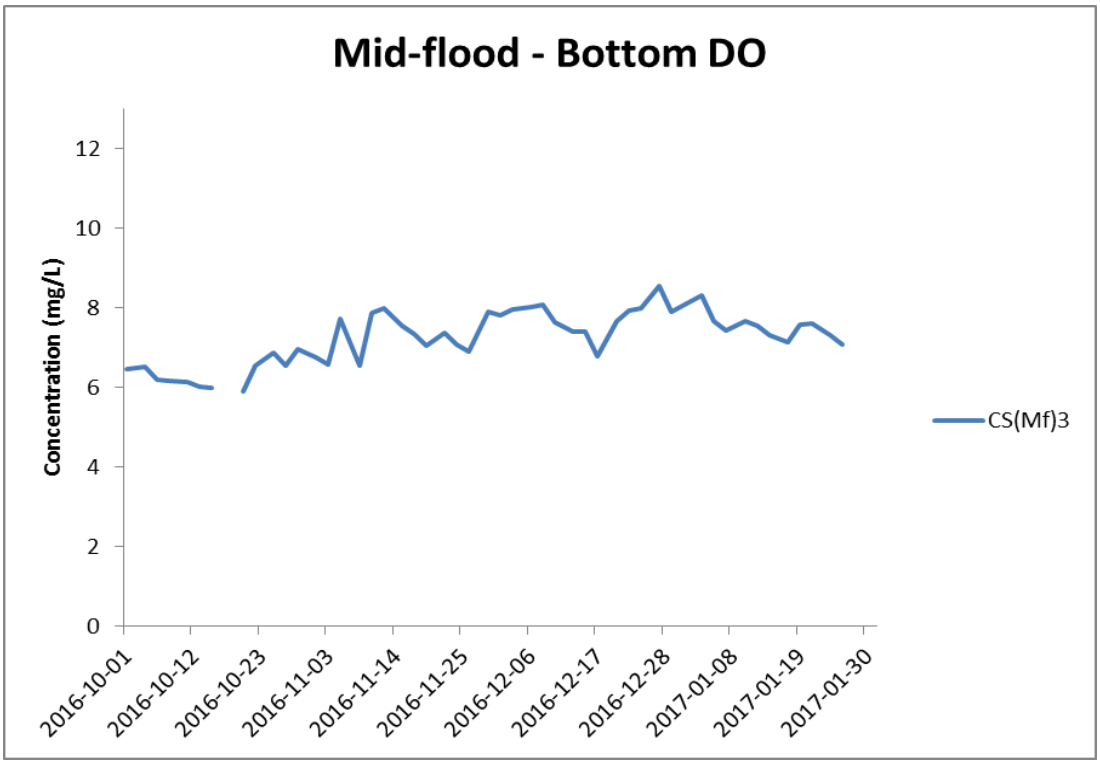


Figure J16 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-ebb tide between 1 October 2016 and 31 January 2017 at SR4a.

(Weather condition varied between sunny to rainy within the reporting period.) WQM on 28 and 31 Jan were cancelled due to suspension of marine works. Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.



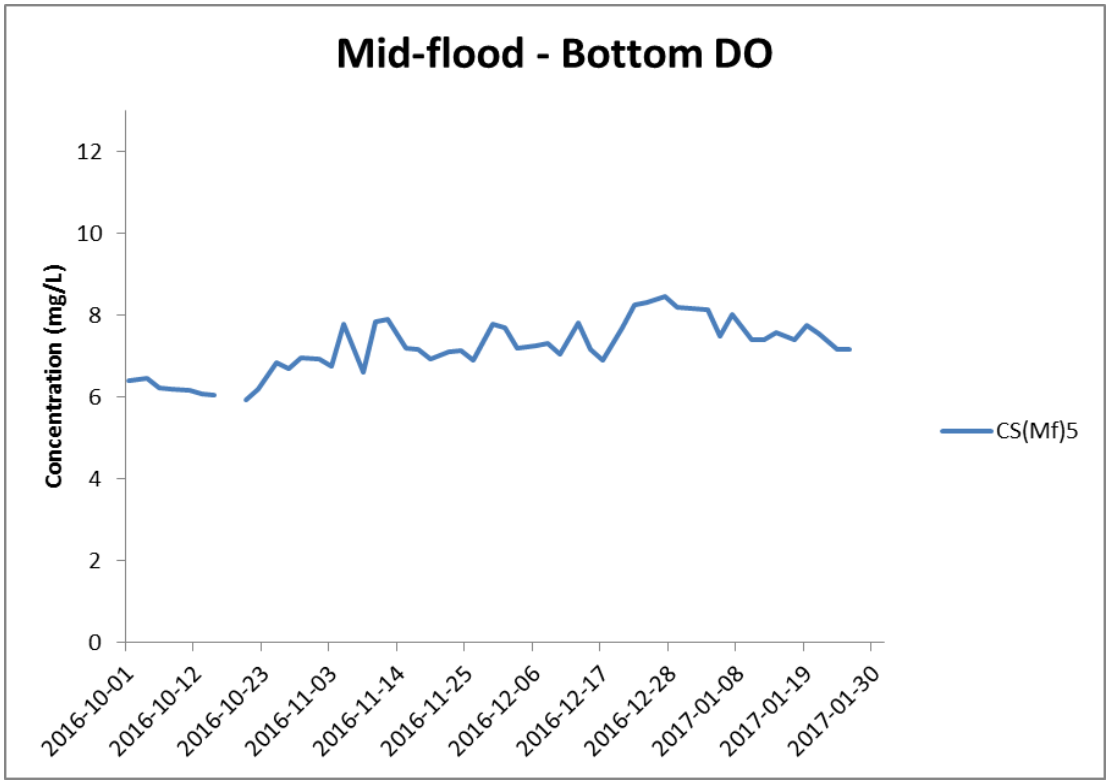
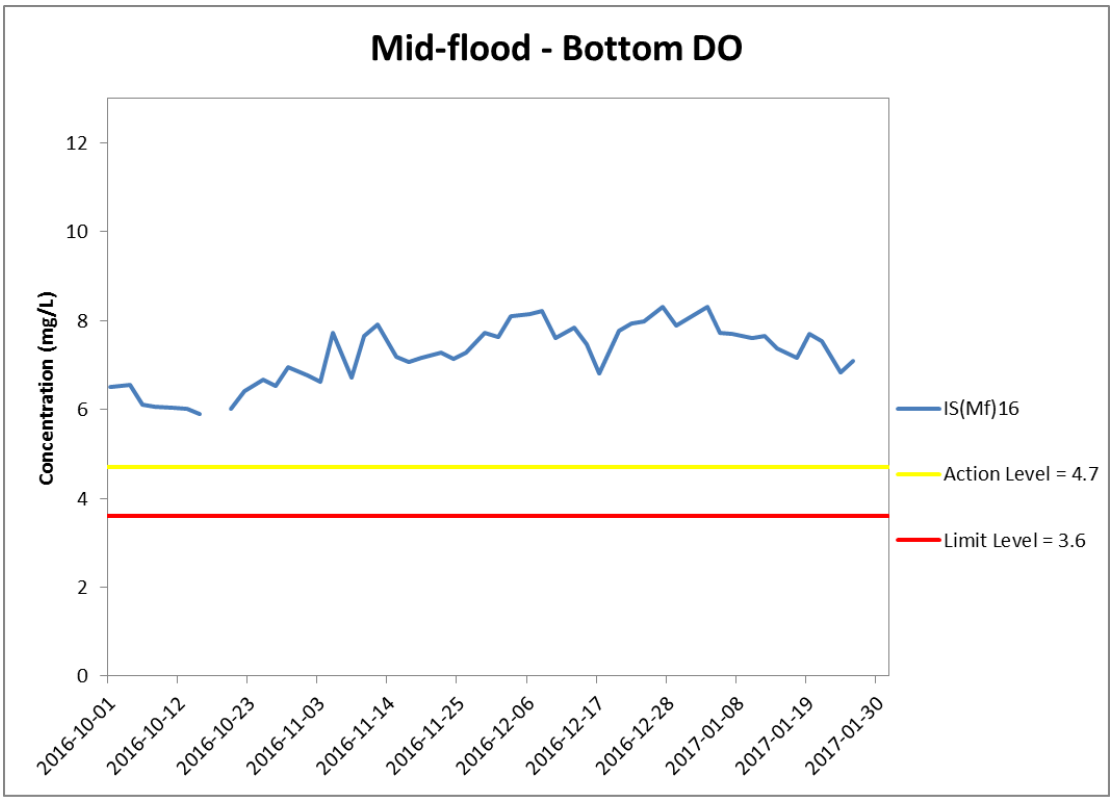


Figure J17 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-flood tide between 1 October 2016 and 31 January 2017 at CS(Mf)3 and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period.) WQM on 28 and 31 Jan were cancelled due to suspension of marine works. Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.

Environmental Resources Management

ERM



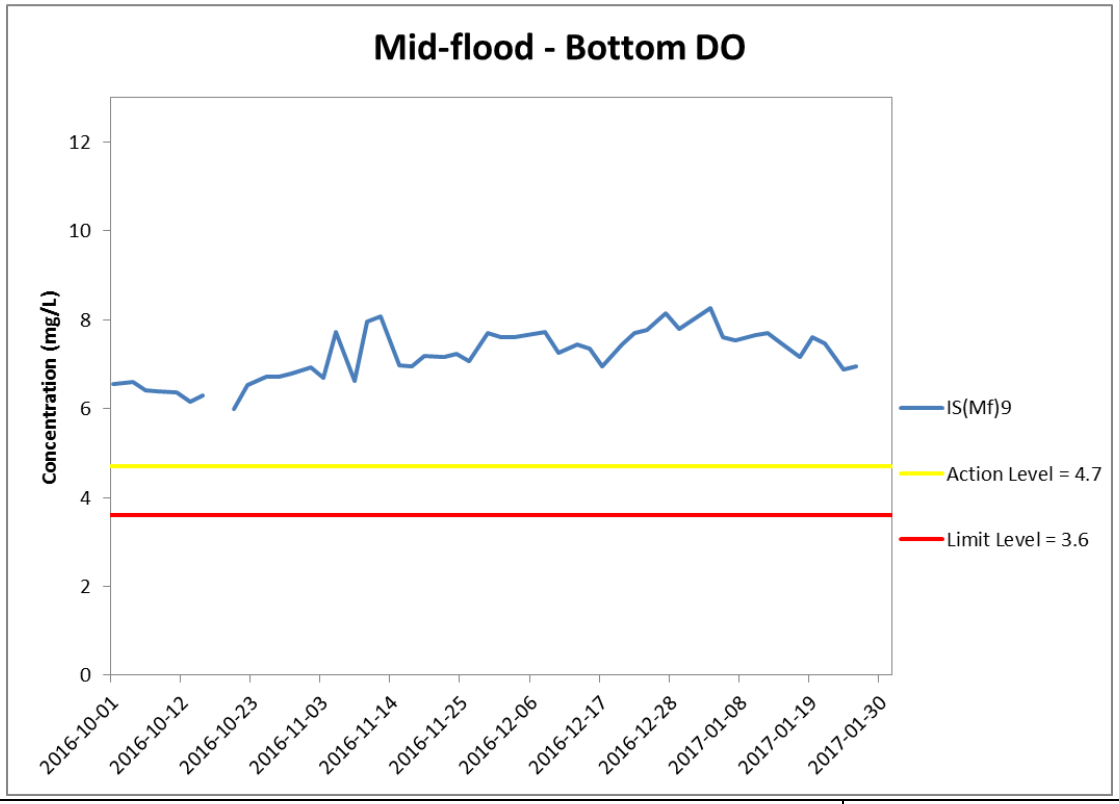
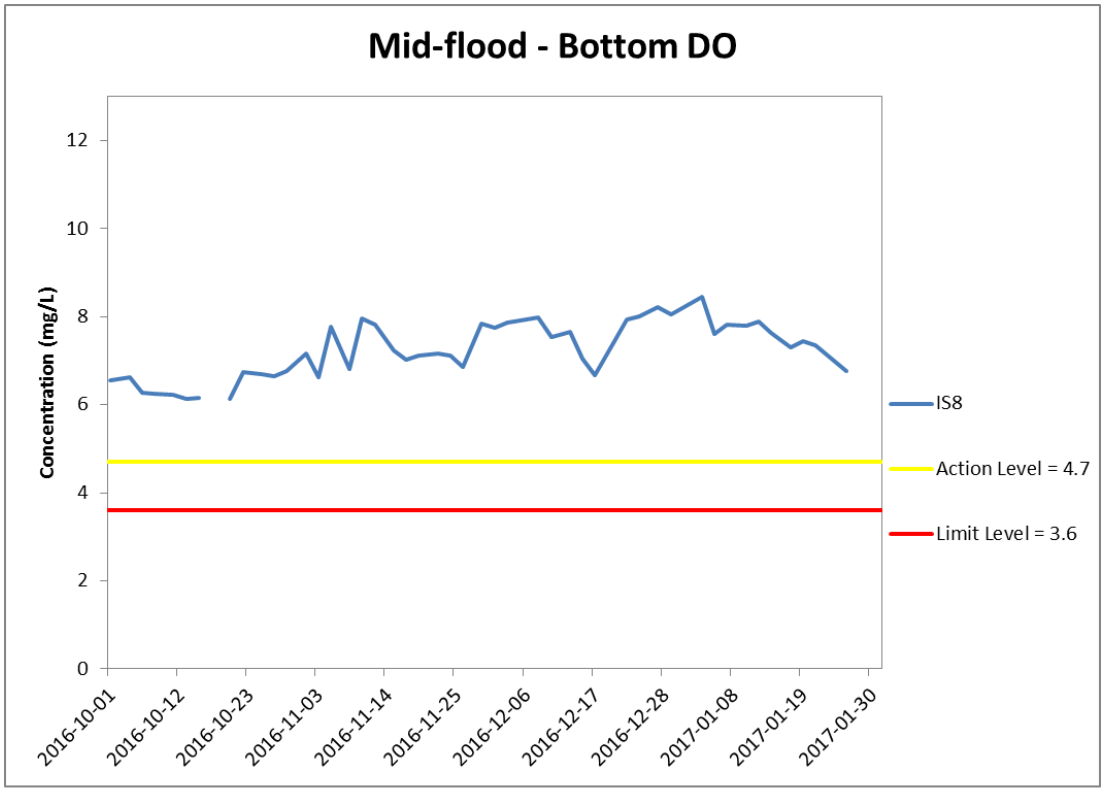


Figure J18 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-flood tide between 1 October 2016 and 31 January 2017 at IS(Mf)16 and IS(Mf)9.

(Weather condition varied between sunny to rainy within the reporting period.) WQM on 28 and 31 Jan were cancelled due to suspension of marine works. Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.



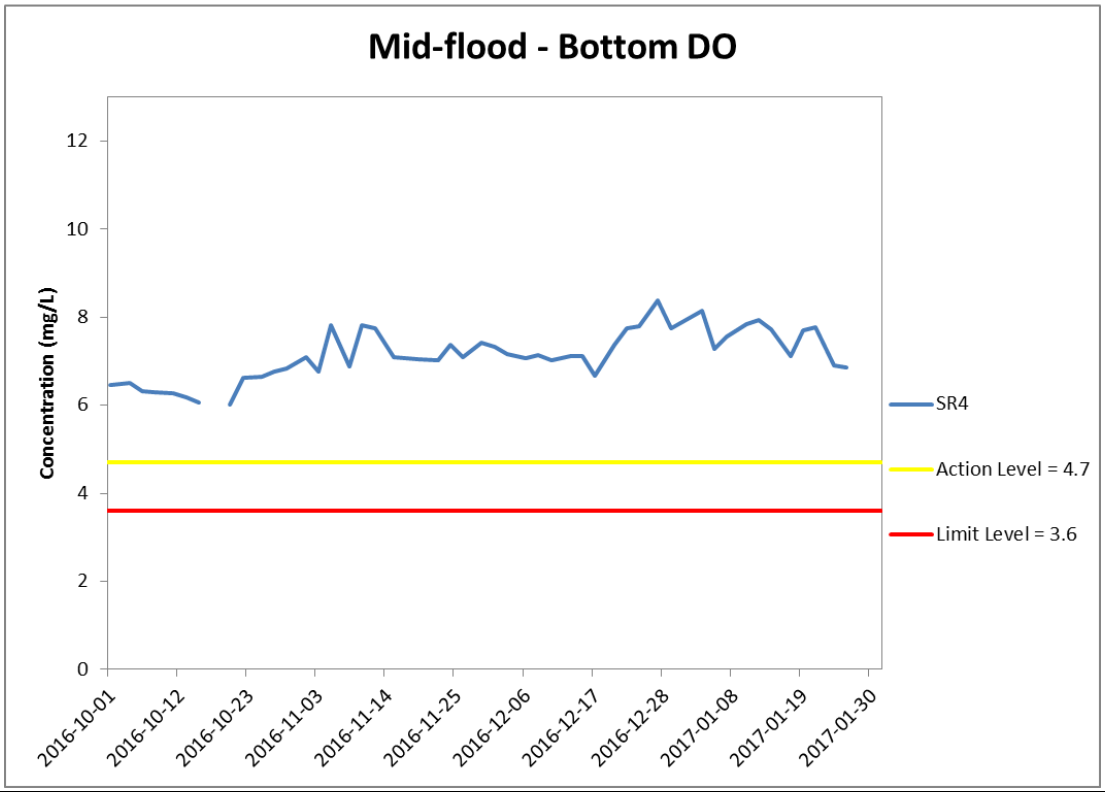


Figure J19 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-flood tide between 1 October 2016 and 31 January 2017 at IS8 and SR4.

(Weather condition varied between sunny to rainy within the reporting period.) WQM on 28 and 31 Jan were cancelled due to suspension of marine works. Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.

Environmental Resources Management

ERM

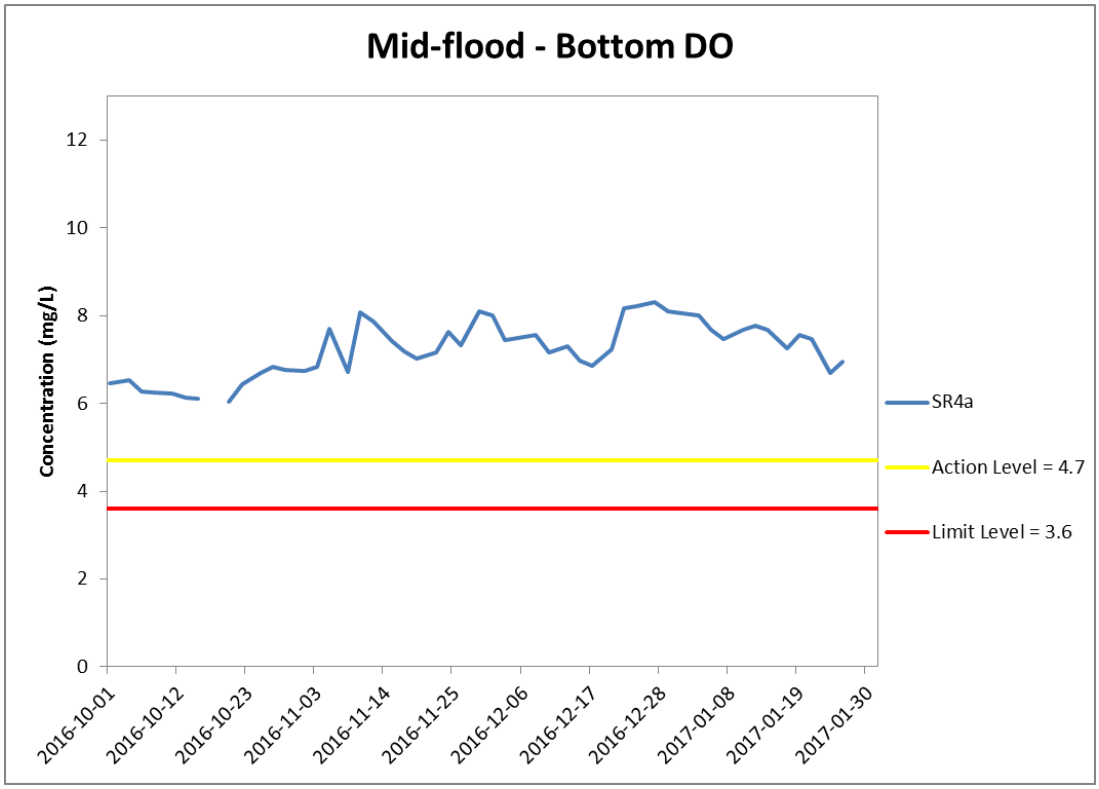
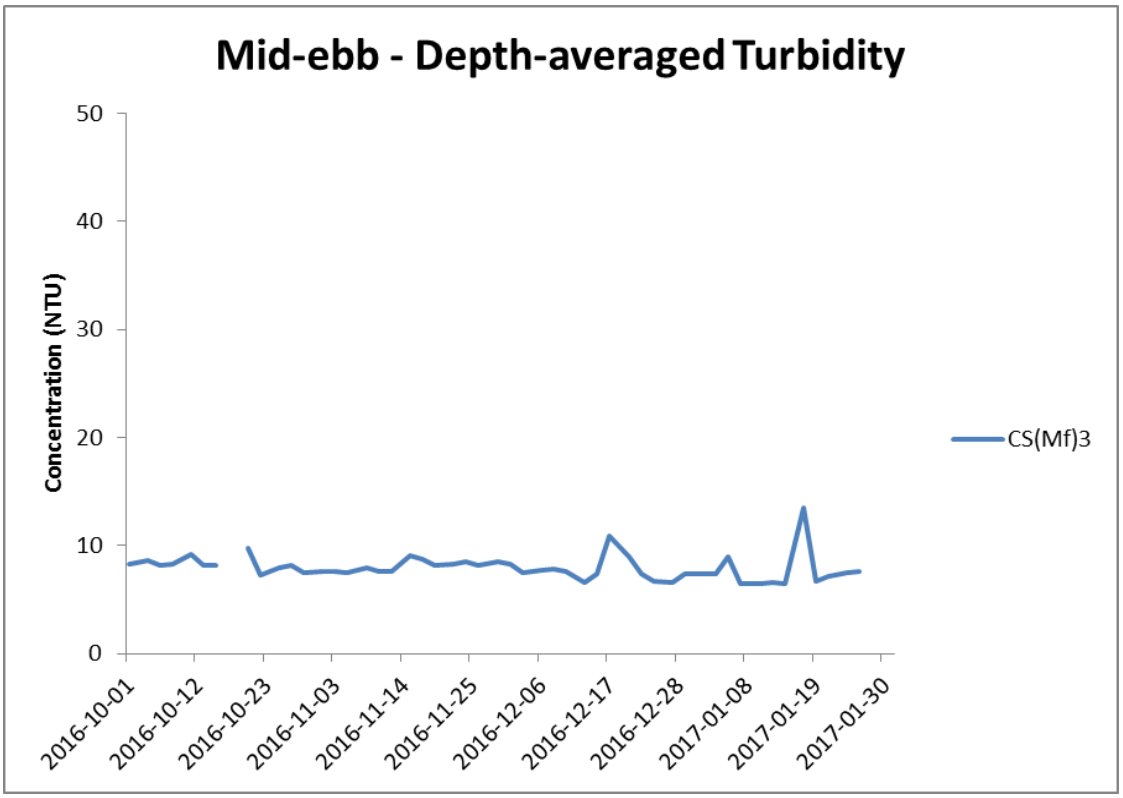


Figure J20 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-flood tide between 1 October 2016 and 31 January 2017 at SR4a.

(Weather condition varied between sunny to rainy within the reporting period.) WQM on 28 and 31 Jan were cancelled due to suspension of marine works. Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.

Environmental Resources Management

ERM



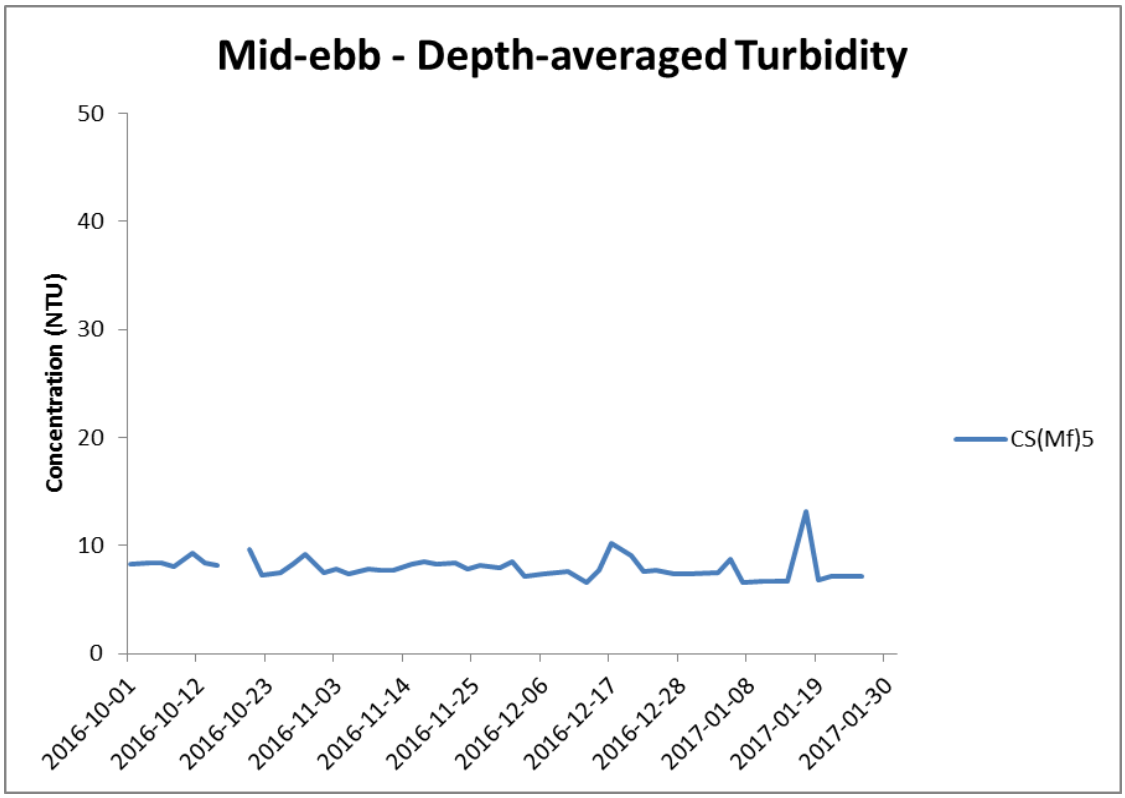
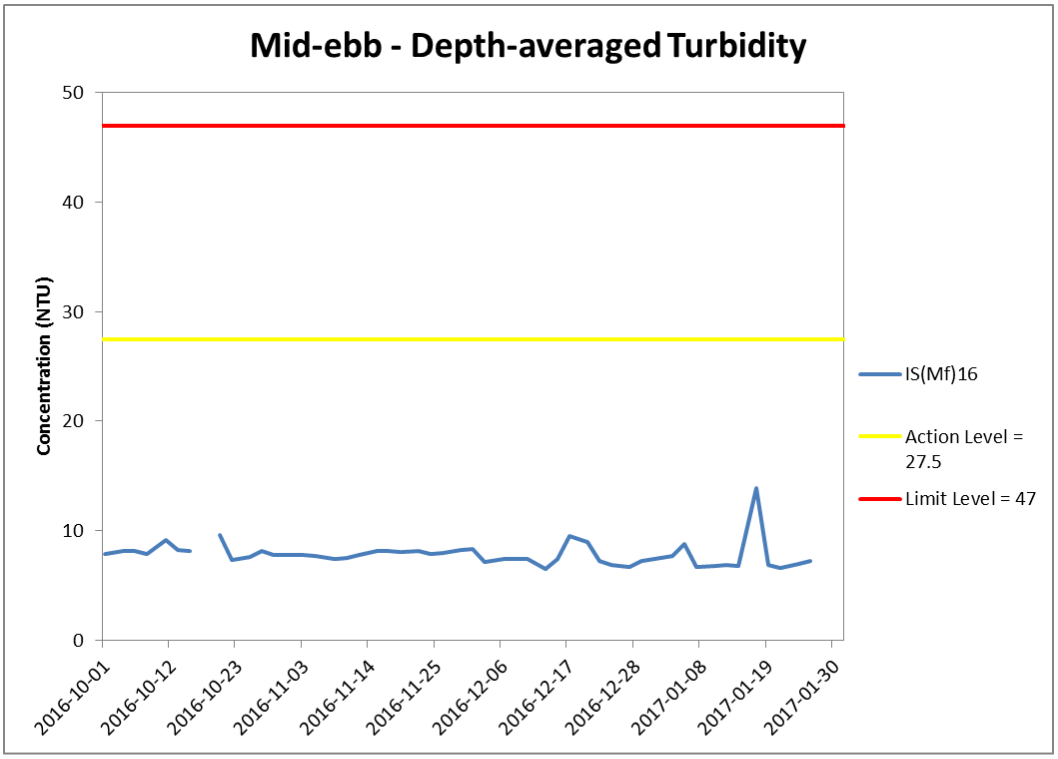


Figure J21 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-ebb tide between 1 October 2016 and 31 January 2017 at CS(Mf)3 and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period.) WQM on 28 and 31 Jan were cancelled due to suspension of marine works. Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.

Environmental Resources Management

ERM



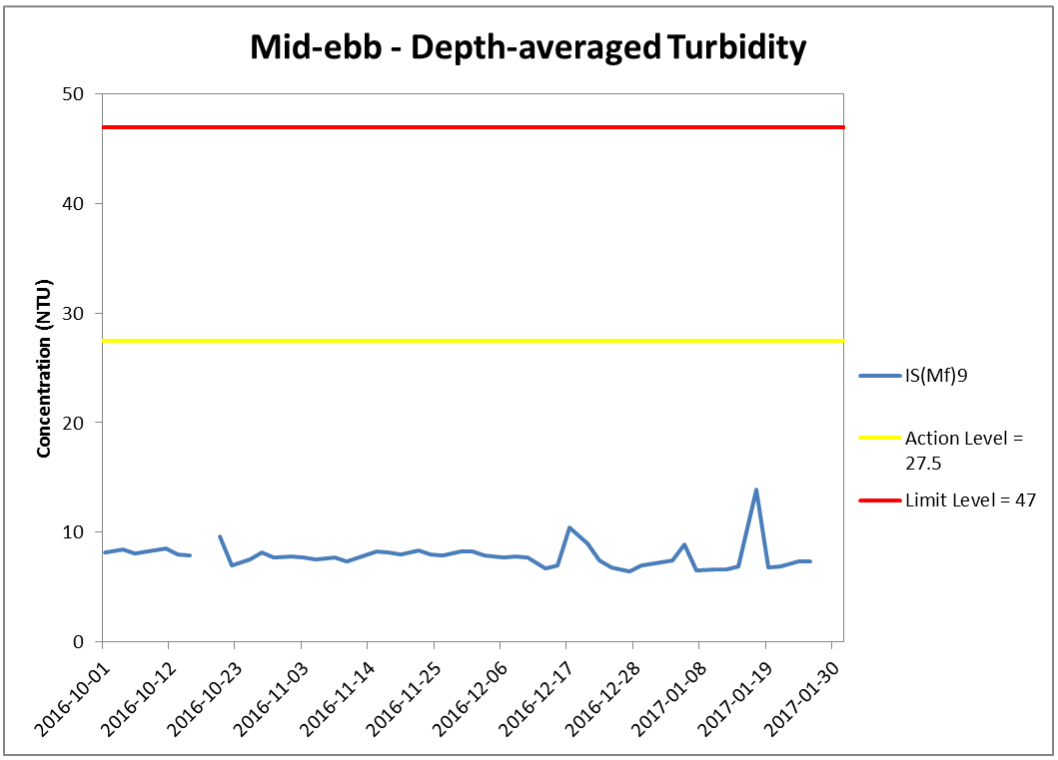
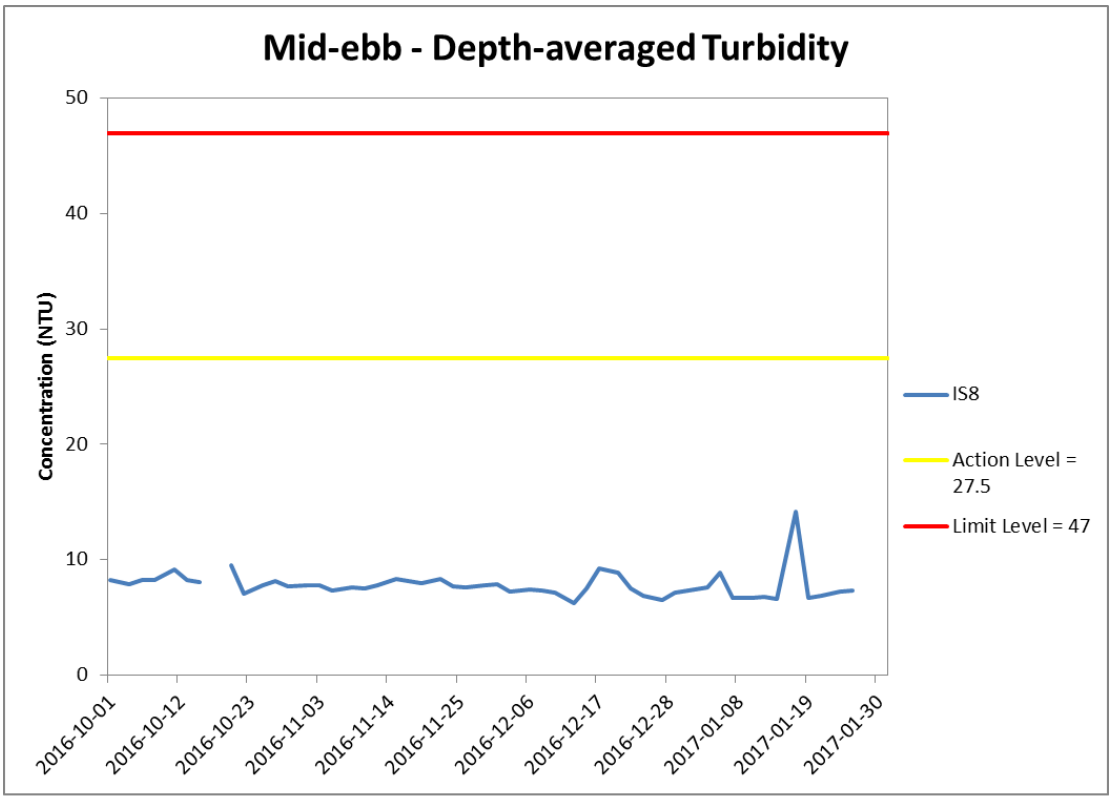


Figure J22 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-ebb tide between 1 October 2016 and 31 January 2017 at IS(Mf)16 and IS(Mf)9.

(Weather condition varied between sunny to rainy within the reporting period.) WQM on 28 and 31 Jan were cancelled due to suspension of marine works. Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.



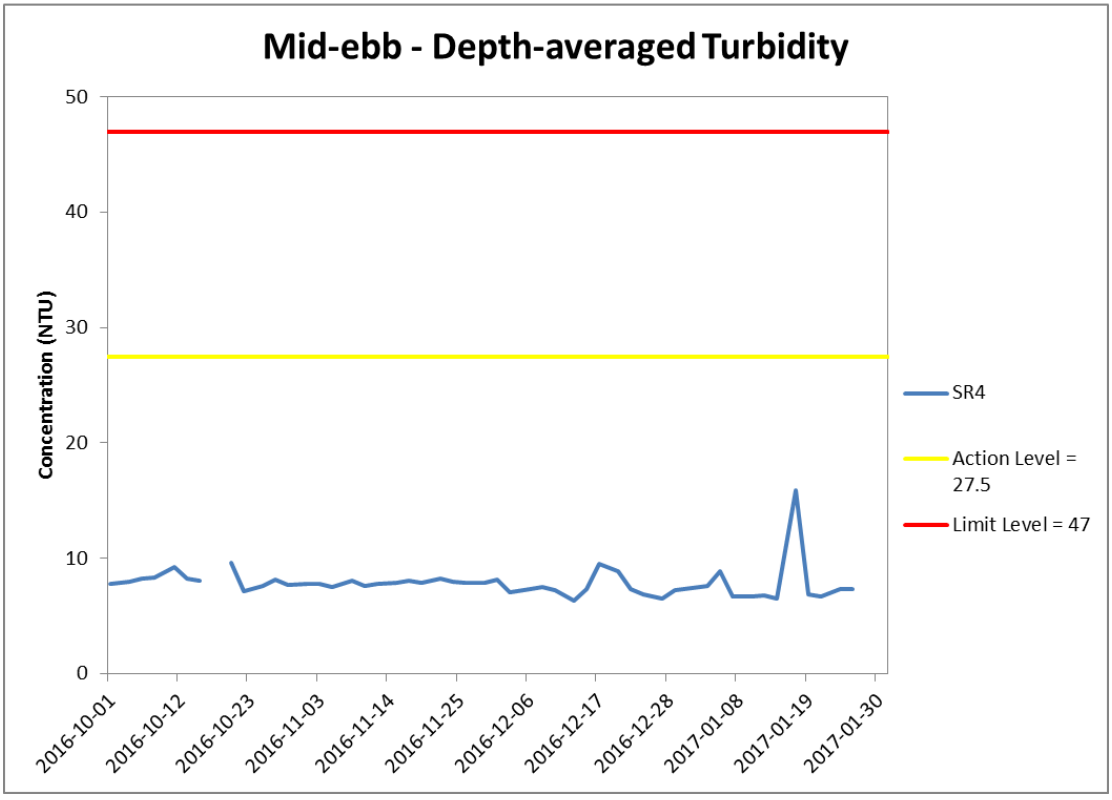


Figure J23 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-ebb tide between 1 October 2016 and 31 January 2017 at IS8 and SR4.

(Weather condition varied between sunny to rainy within the reporting period.) WQM on 28 and 31 Jan were cancelled due to suspension of marine works. Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.

Environmental Resources Management

ERM

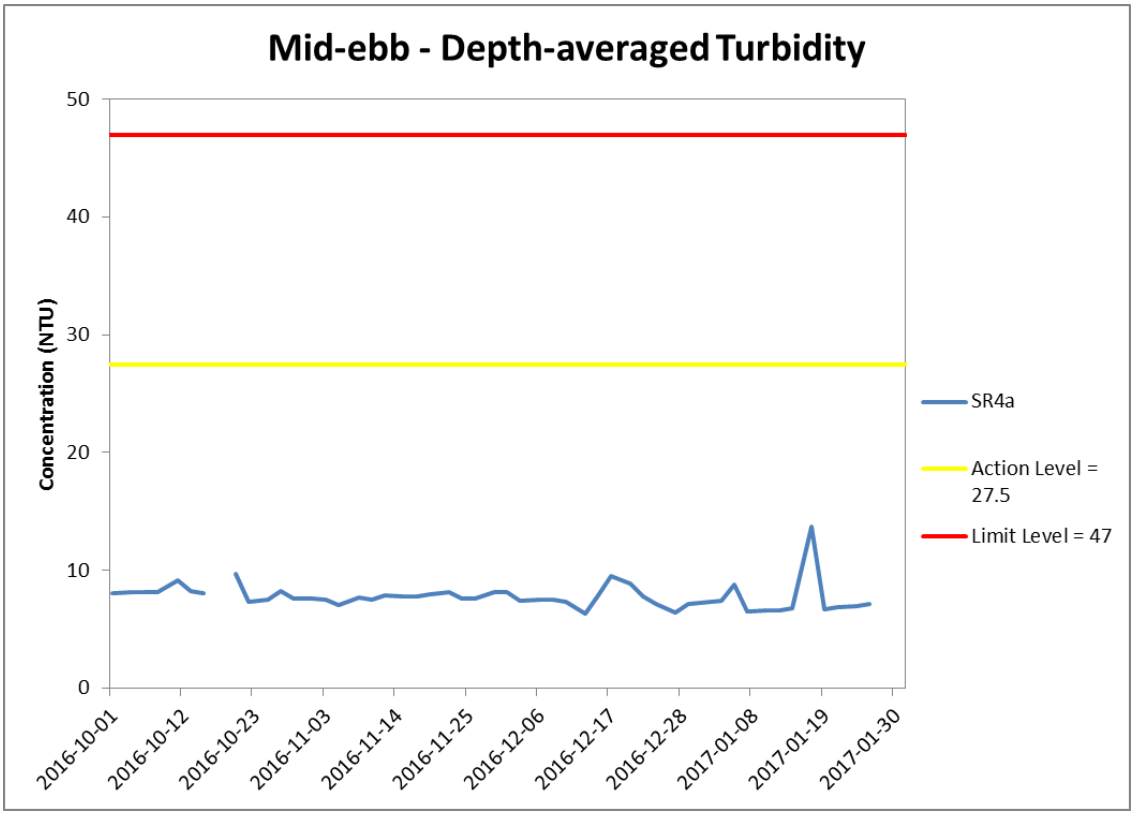
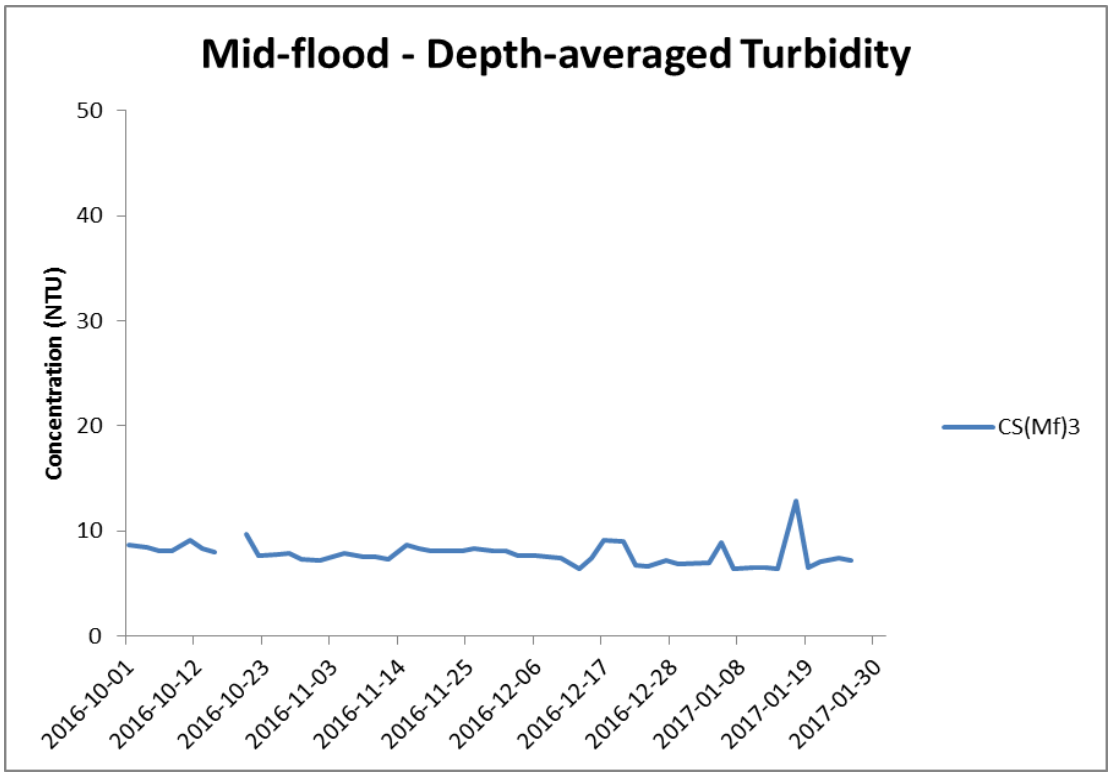


Figure J24 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-ebb tide between 1 October and 31 January 2017 at SR4a.

(Weather condition varied between sunny to rainy within the reporting period.) WQM on 28 and 31 Jan were cancelled due to suspension of marine works. Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.

Environmental Resources Management

ERM



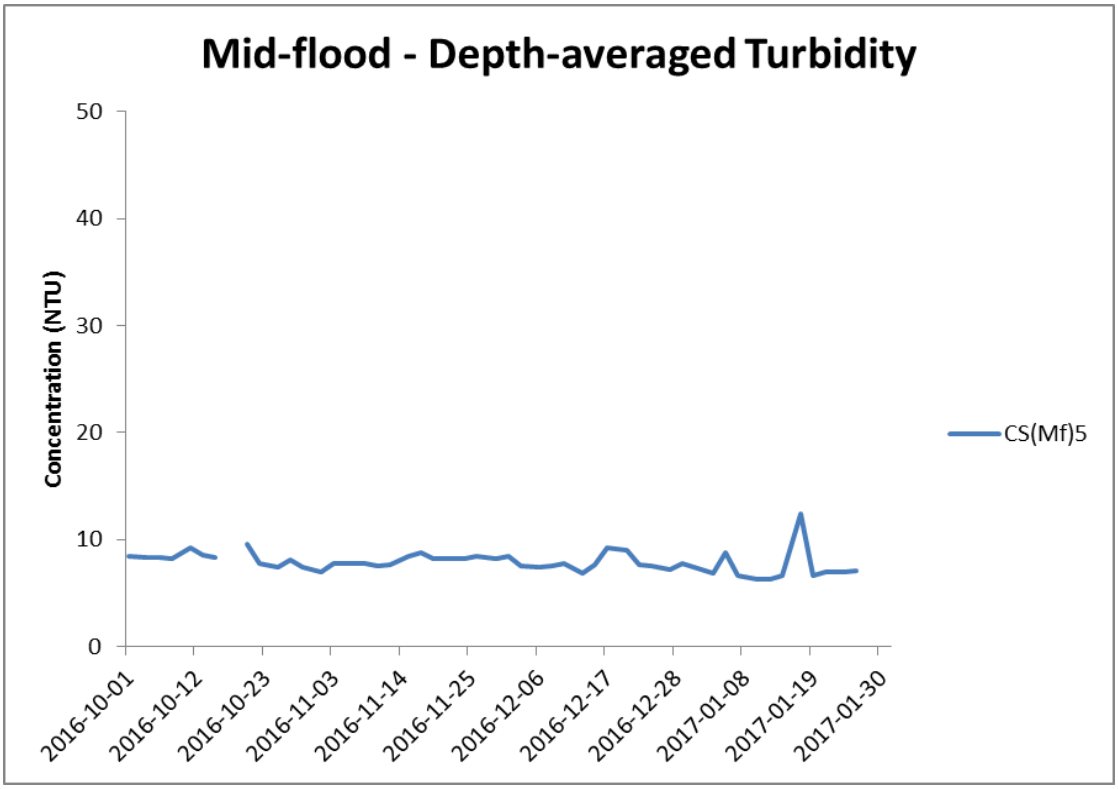
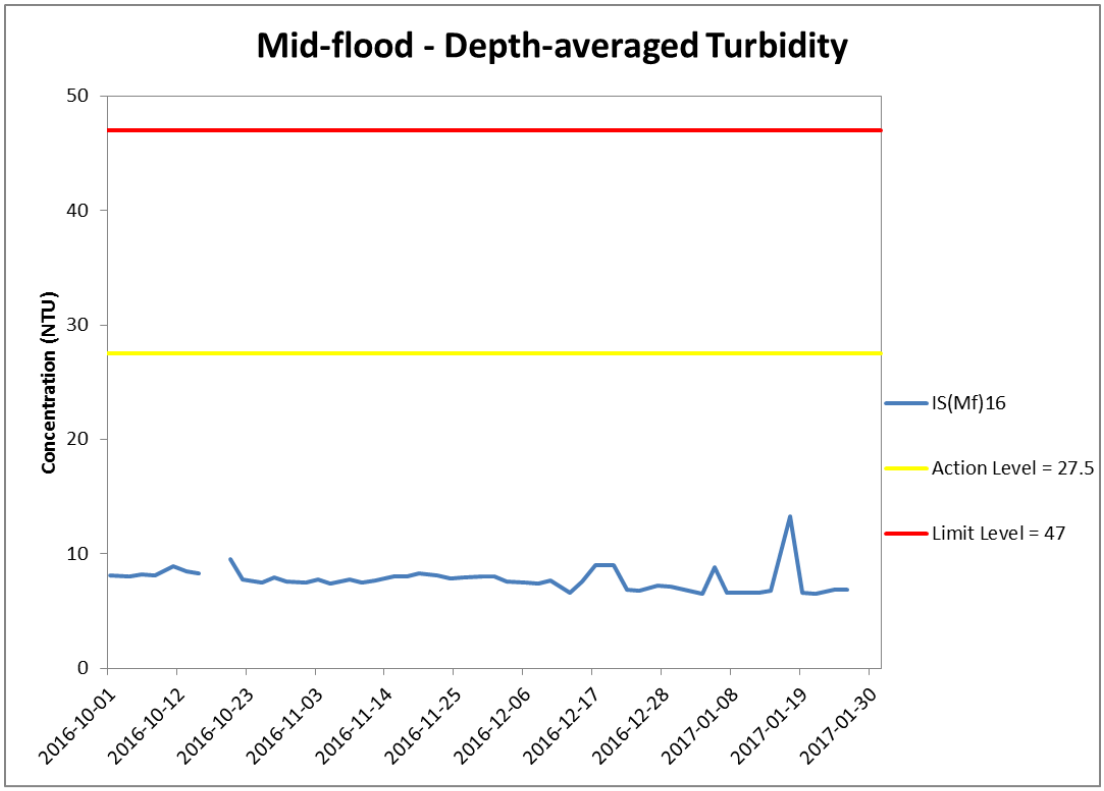


Figure J25 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-flood tide between 1 October 2016 and 31 January 2017 at CS(Mf)3 and CS(MF)5.

(Weather condition varied between sunny to rainy within the reporting period.) WQM on 28 and 31 Jan were cancelled due to suspension of marine works. Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.



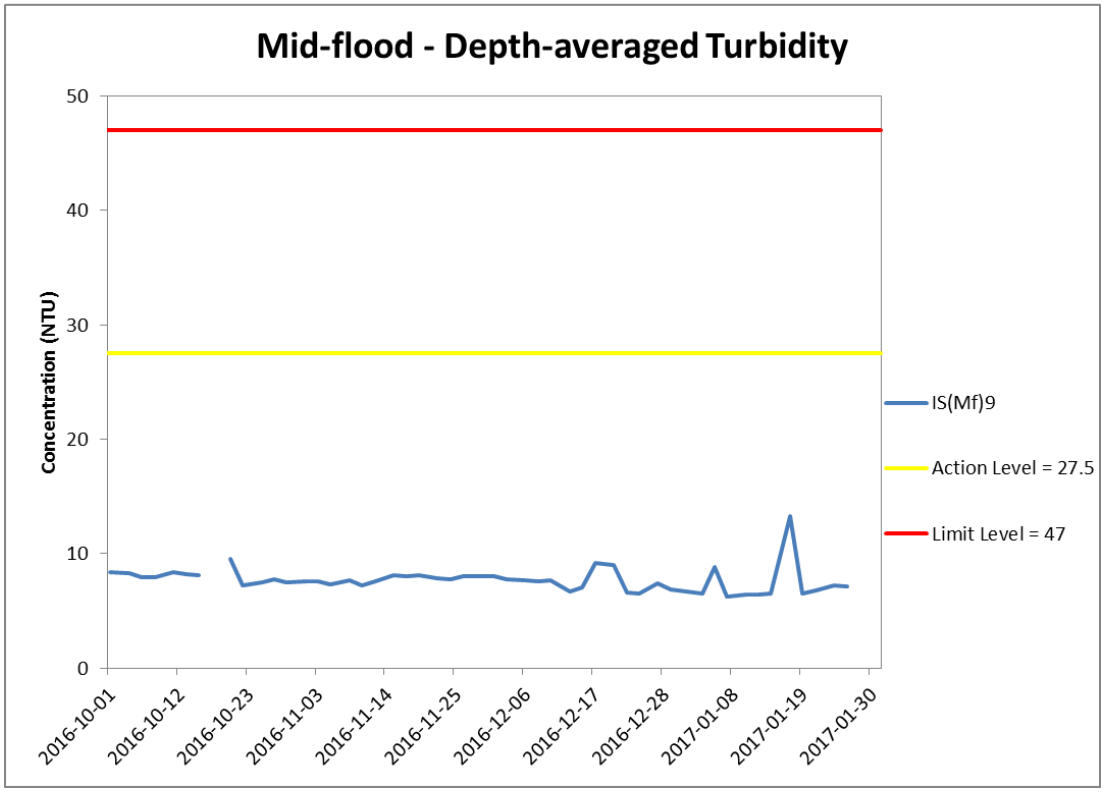
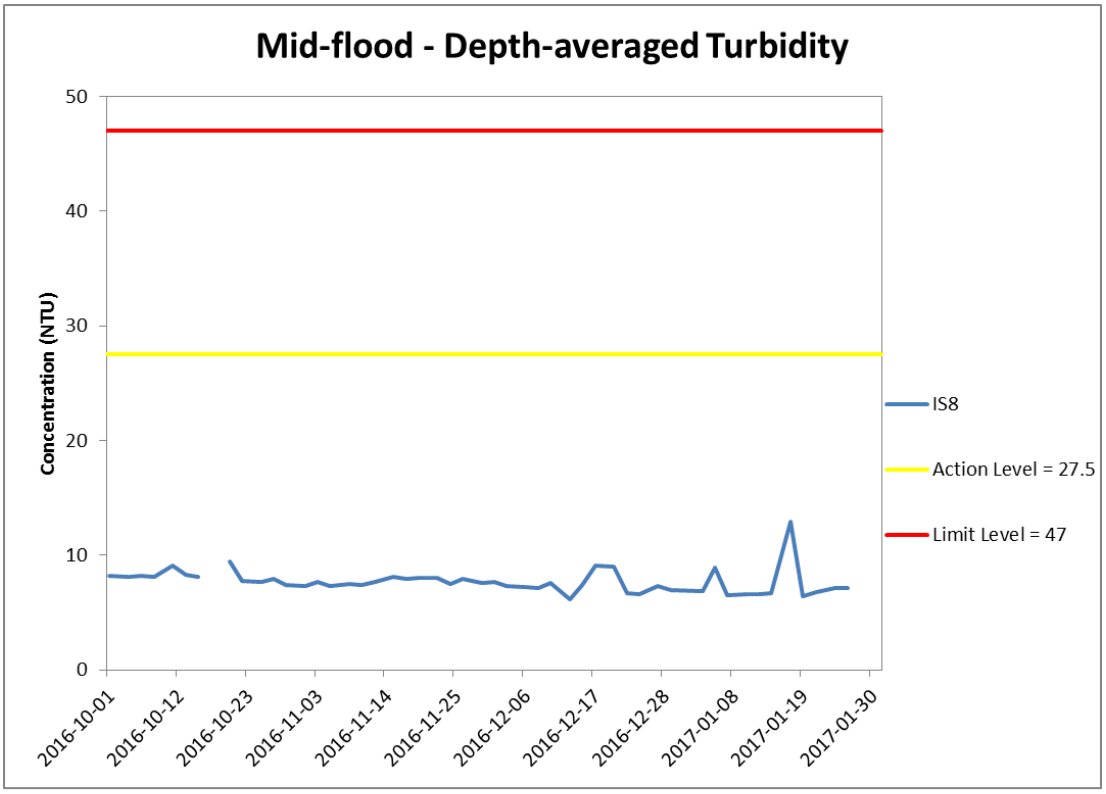


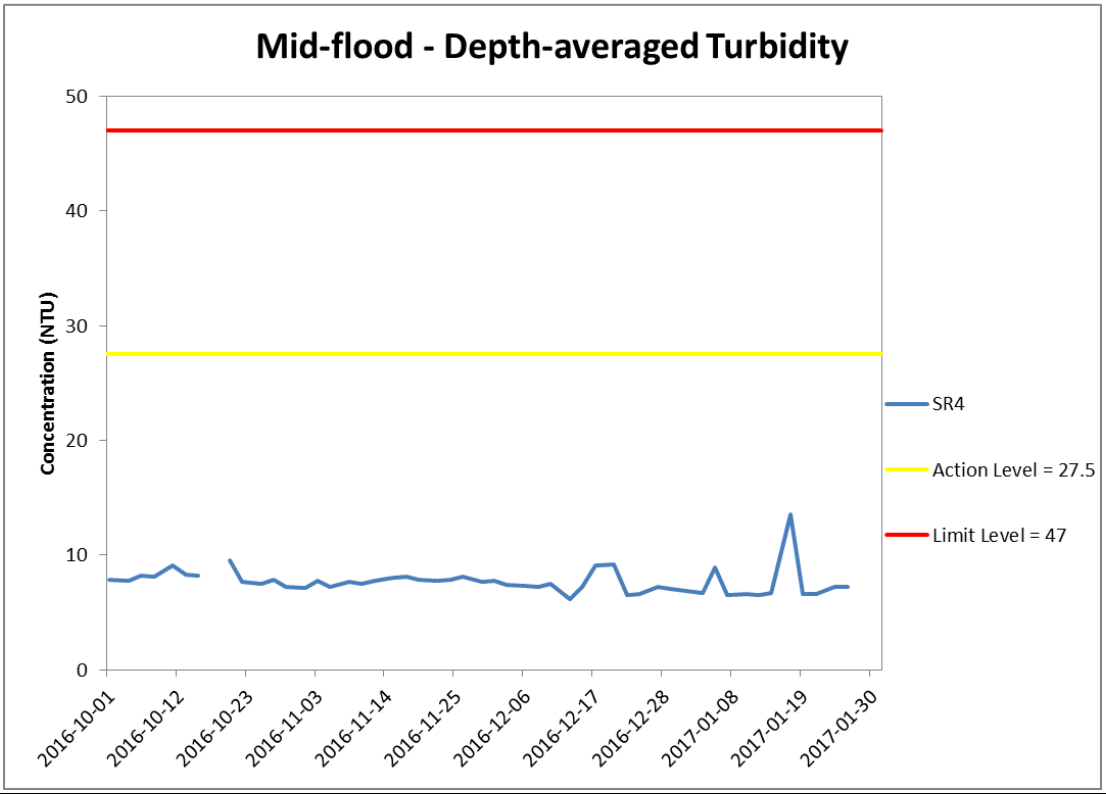
Figure J26 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-flood tide between 1 October 2016 and 31 January 2017 at IS(Mf)16 and IS(Mf)9.

(Weather condition varied between sunny to rainy within the reporting period.) WQM on 28 and 31 Jan were cancelled due to suspension of marine works. Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.

Environmental Resources Management

ERM





`Figure J27 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-flood tide between 1 October 2016 and 31 January 2017 at IS8 and SR4.

(Weather condition varied between sunny to rainy within the reporting period.) WQM on 28 and 31 Jan were cancelled due to suspension of marine works. Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.

Environmental Resources Management

ERM

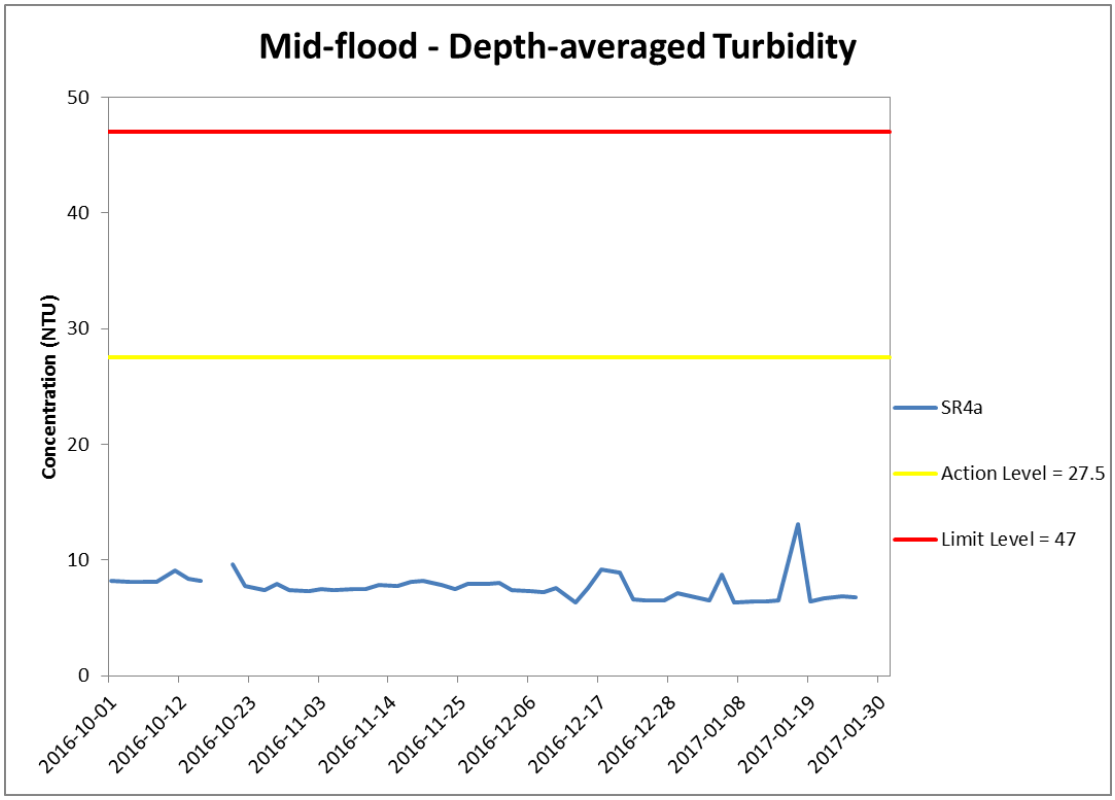
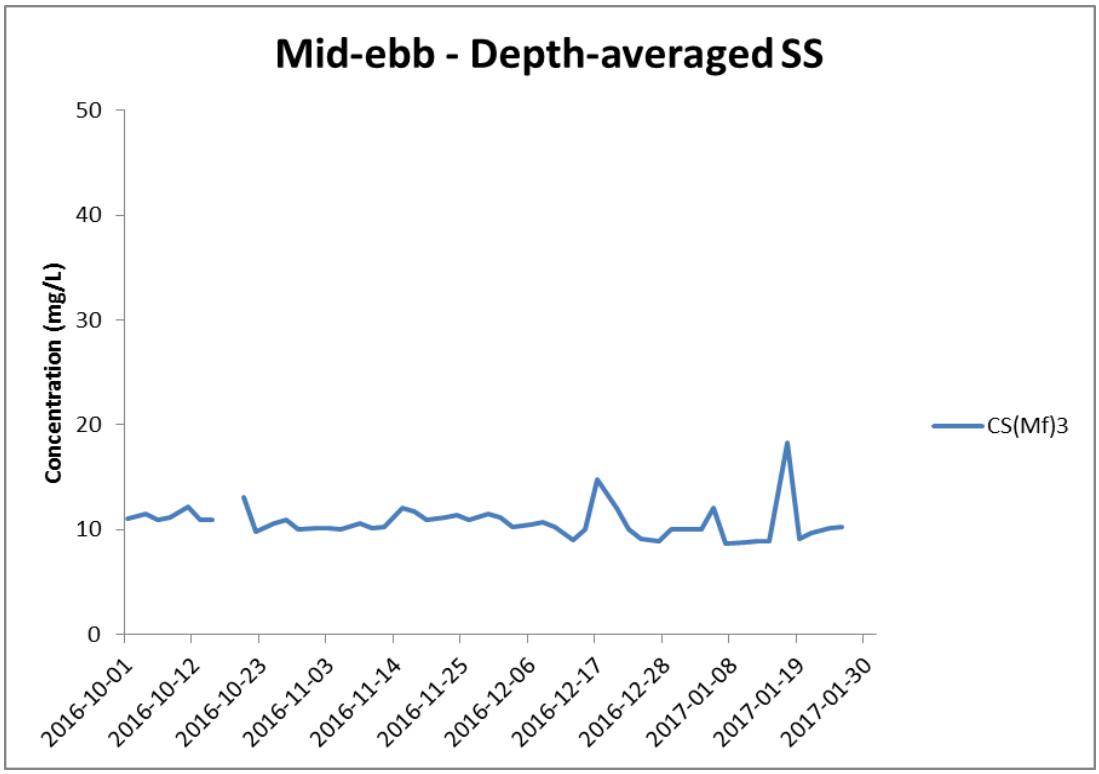


Figure J28 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-flood tide between 1 October 2016 and 31 January 2017 at SR4a.

(Weather condition varied between sunny to rainy within the reporting period.) WQM on 28 and 31 Jan were cancelled due to suspension of marine works. Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.

Environmental Resources Management

ERM



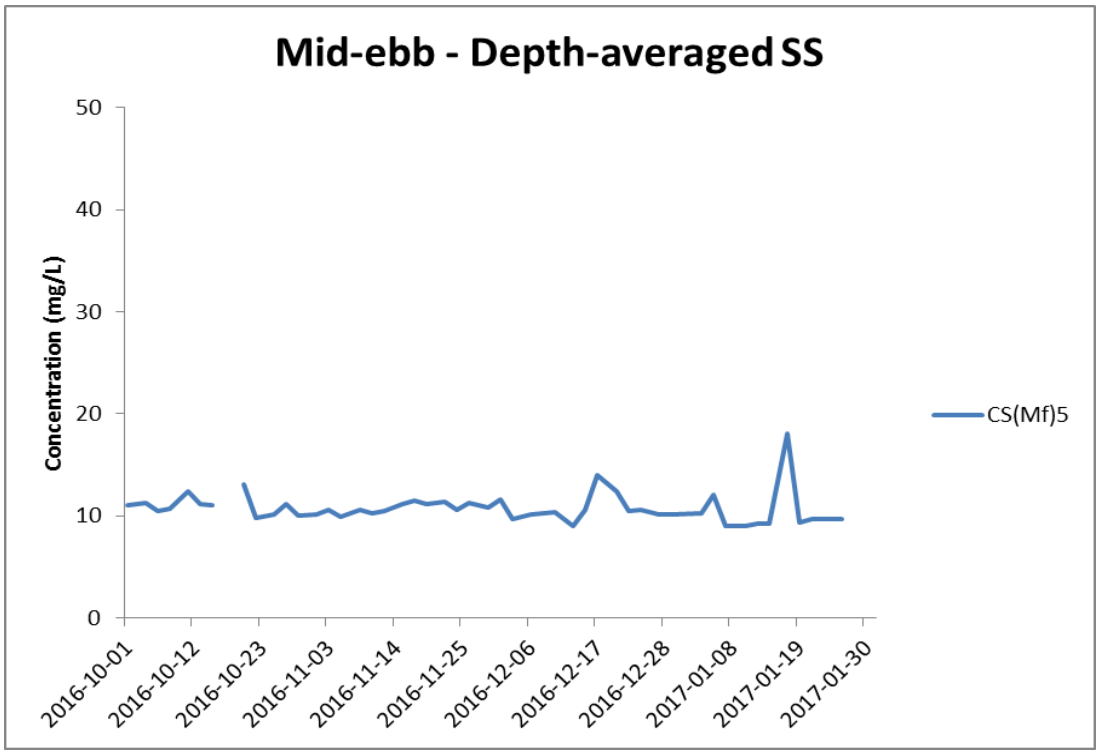
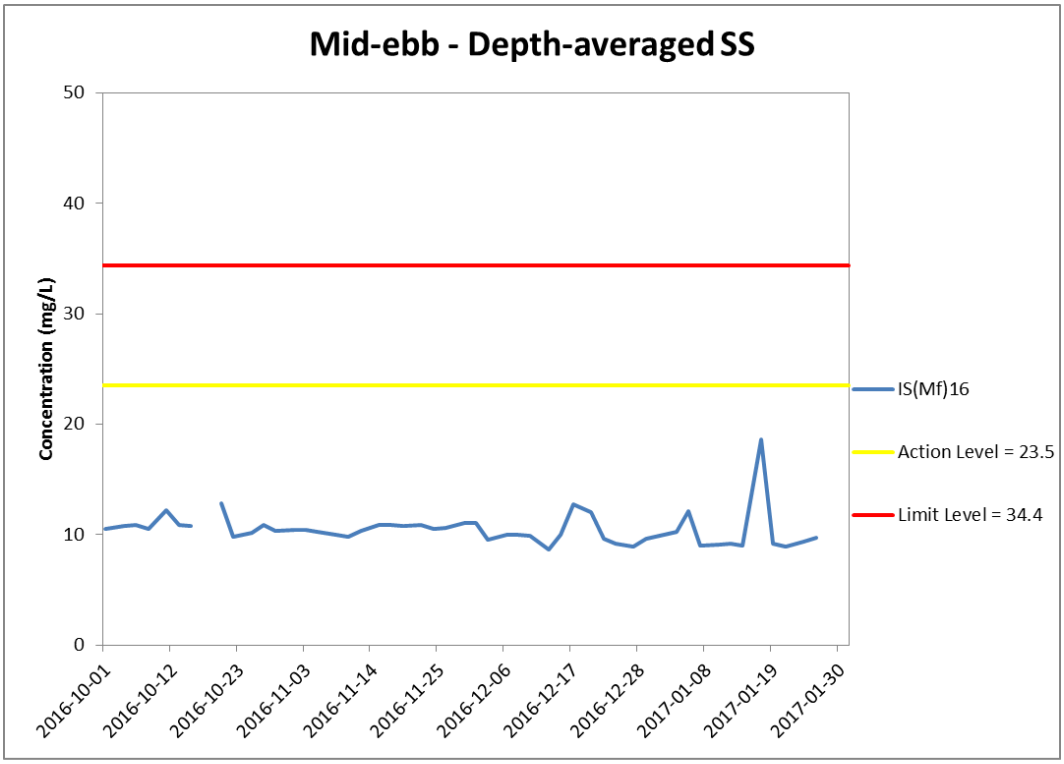


Figure J29 Impact Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-ebb tide between 1 October 2016 and 31 January 2017 at CS(Mf)3 and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period.) WQM on 28 and 31 Jan were cancelled due to suspension of marine works. Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.

Environmental Resources Management

ERM



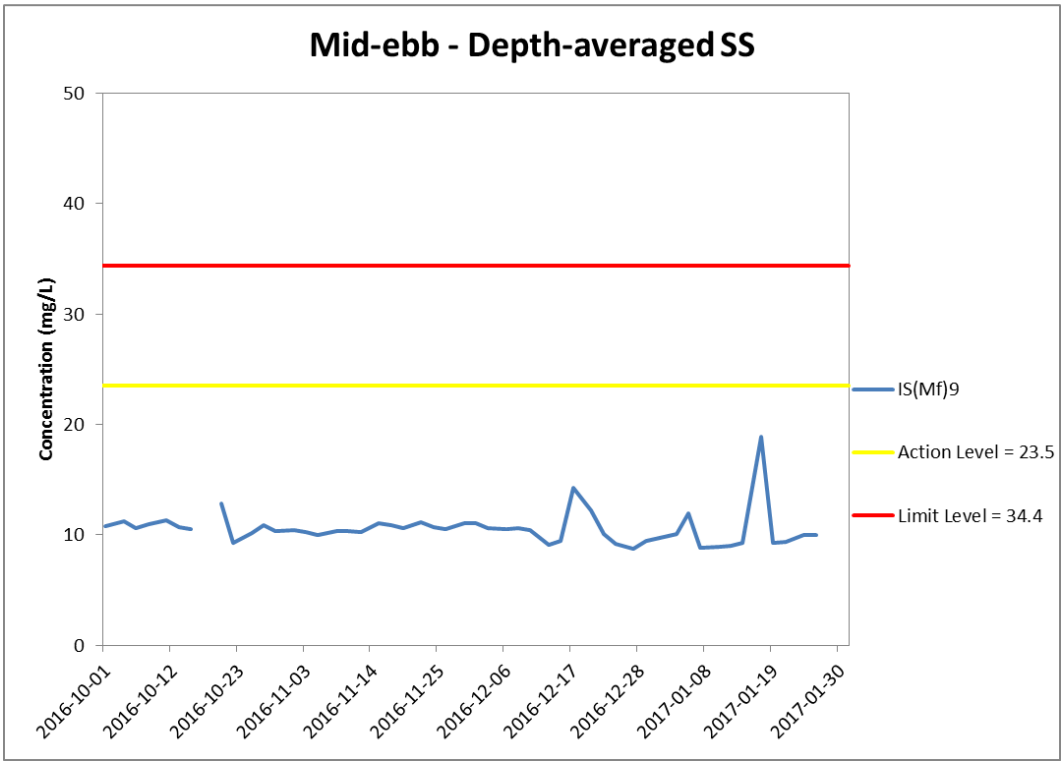
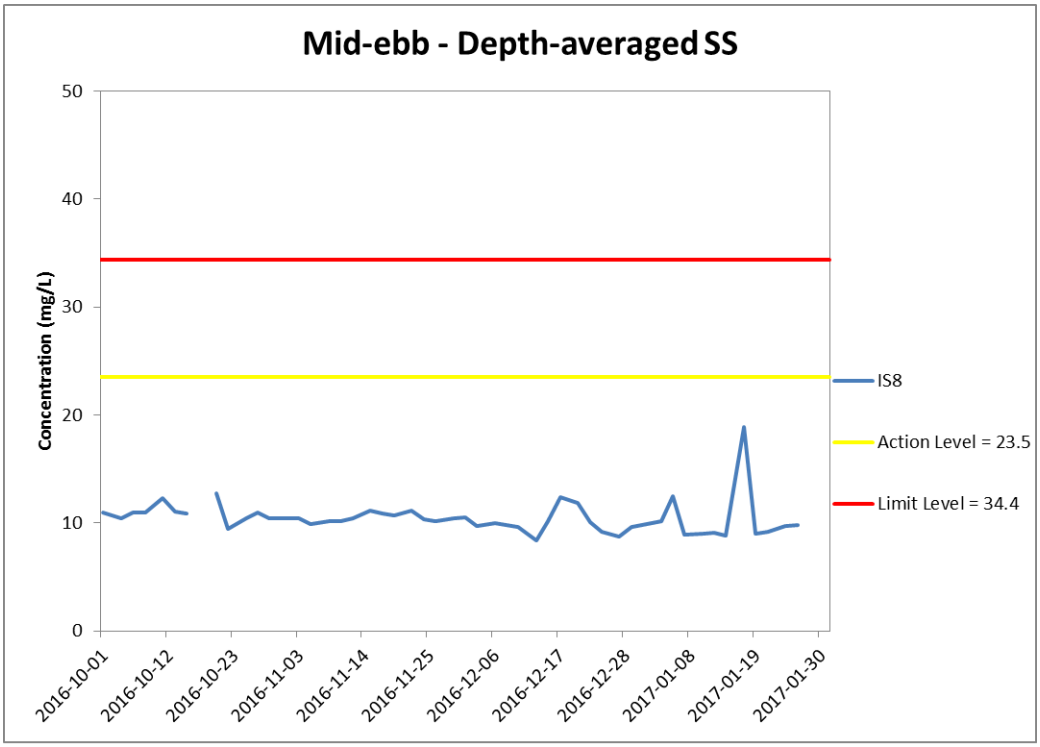


Figure J30 Impact Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-ebb tide between 1 October 2016 and 31 January 2017 at IS(Mf)16 and IS(Mf)9.

(Weather condition varied between sunny to rainy within the reporting period.) WQM on 28 and 31 Jan were cancelled due to suspension of marine works. Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.

Environmental Resources Management

ERM



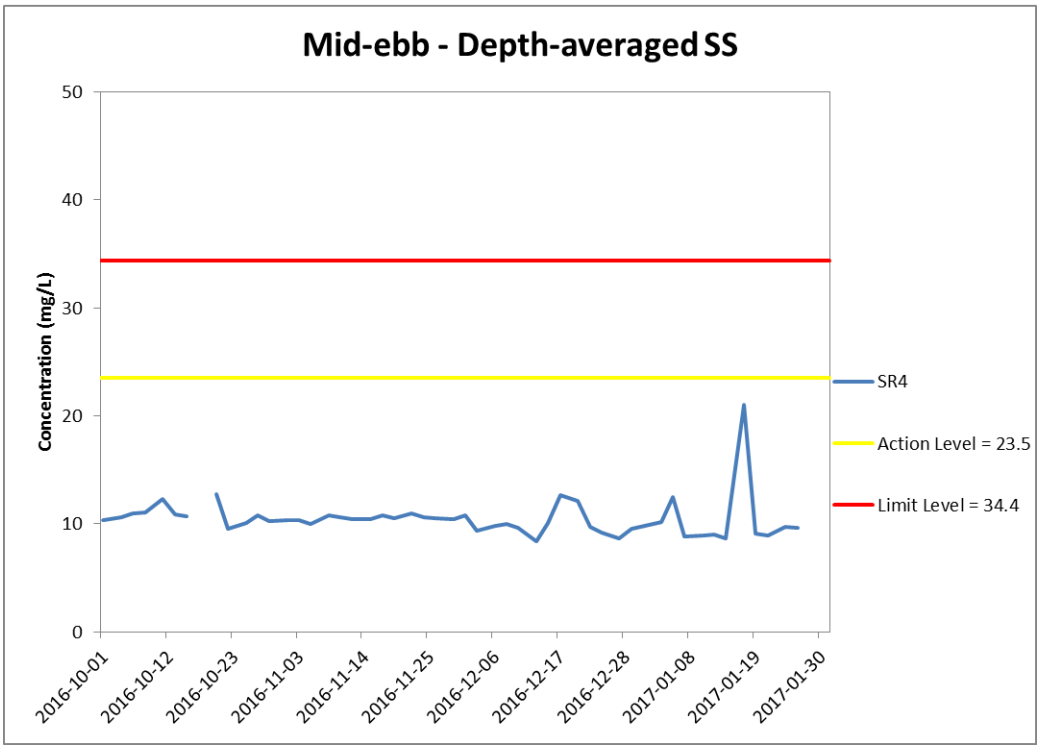


Figure J31 Impact Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-ebb tide between 1 October 2016 and 31 January 2017 at IS8 and SR4.

(Weather condition varied between sunny to rainy within the reporting period.) WQM on 28 and 31 Jan were cancelled due to suspension of marine works. Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.

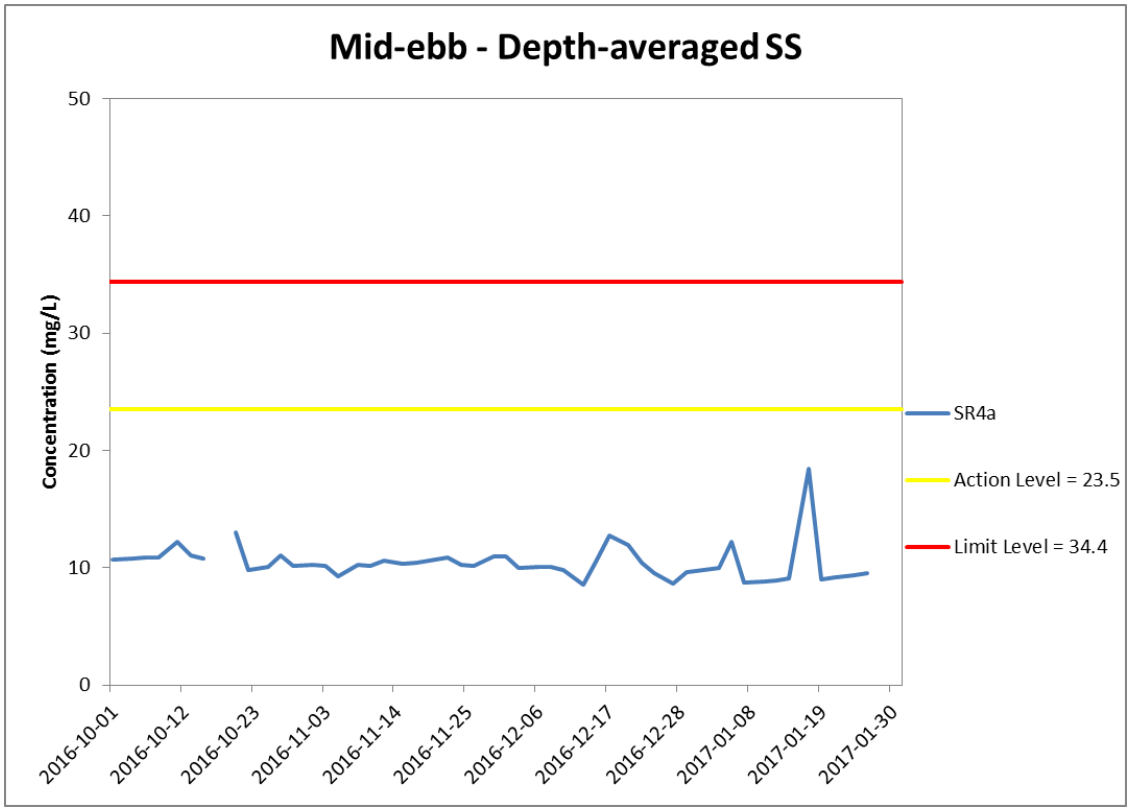
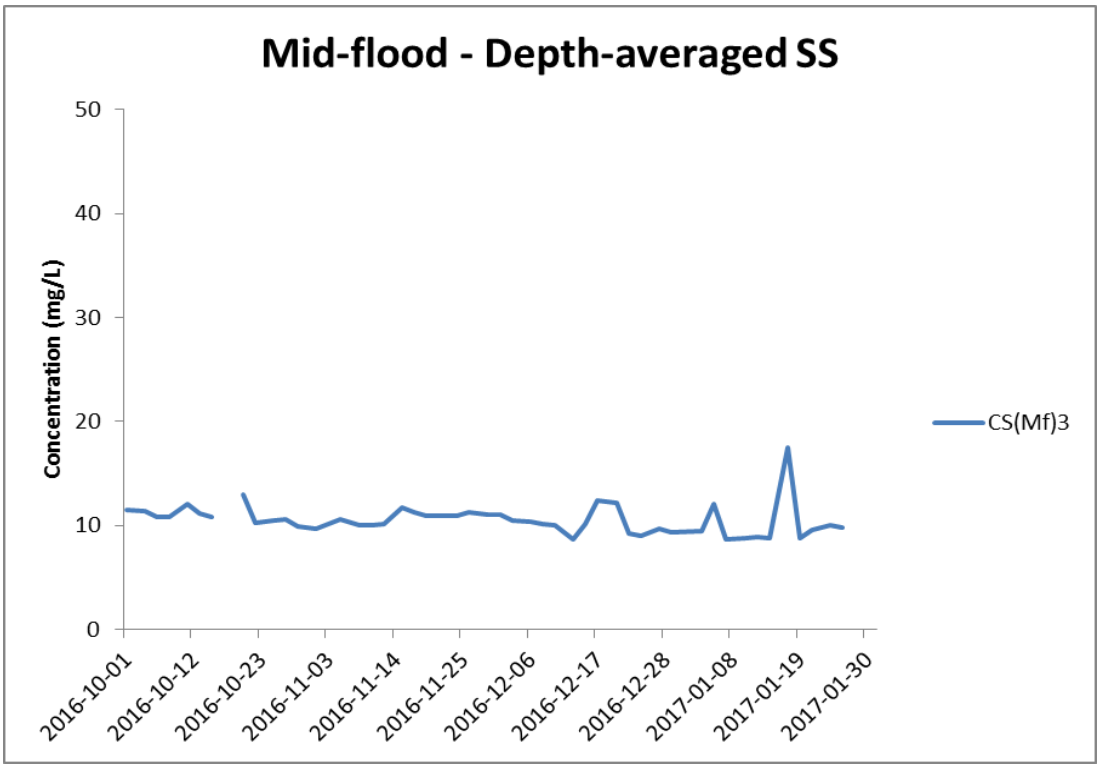


Figure J32 Impact Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-ebb tide between 1 October 2016 and 31 January 2017 at SR4a.

(Weather condition varied between sunny to rainy within the reporting period.) WQM on 28 and 31 Jan were cancelled due to suspension of marine works. Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.

Environmental Resources Management

ERM



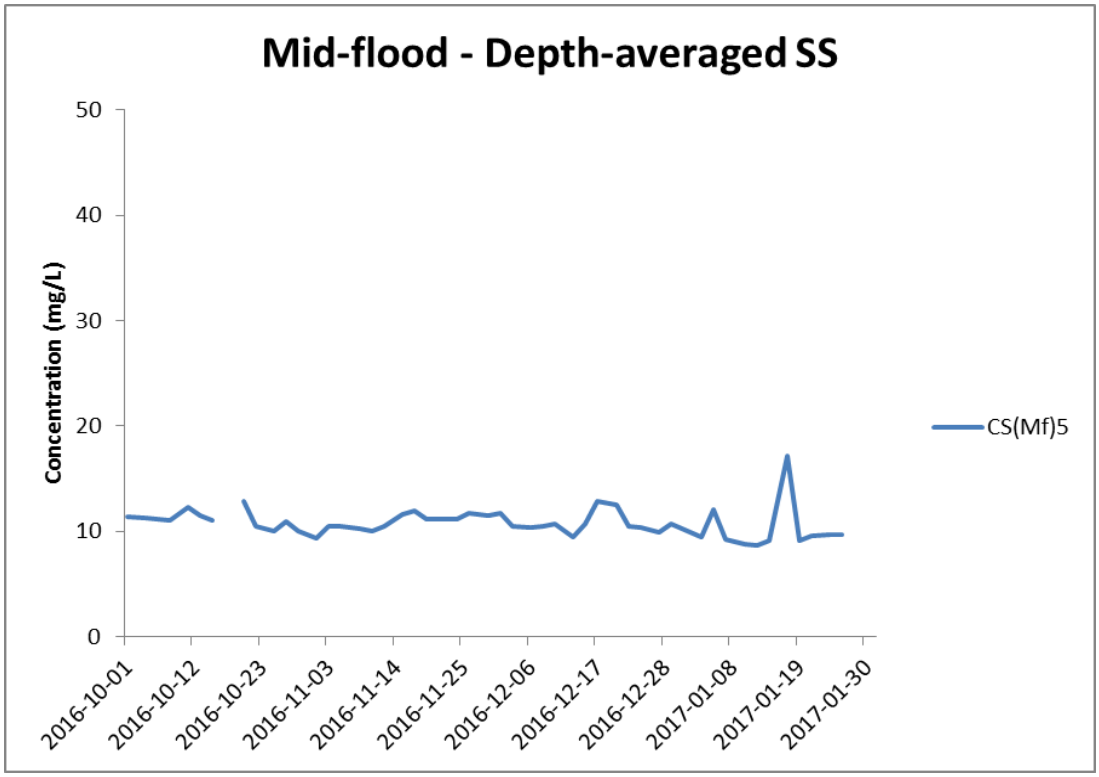
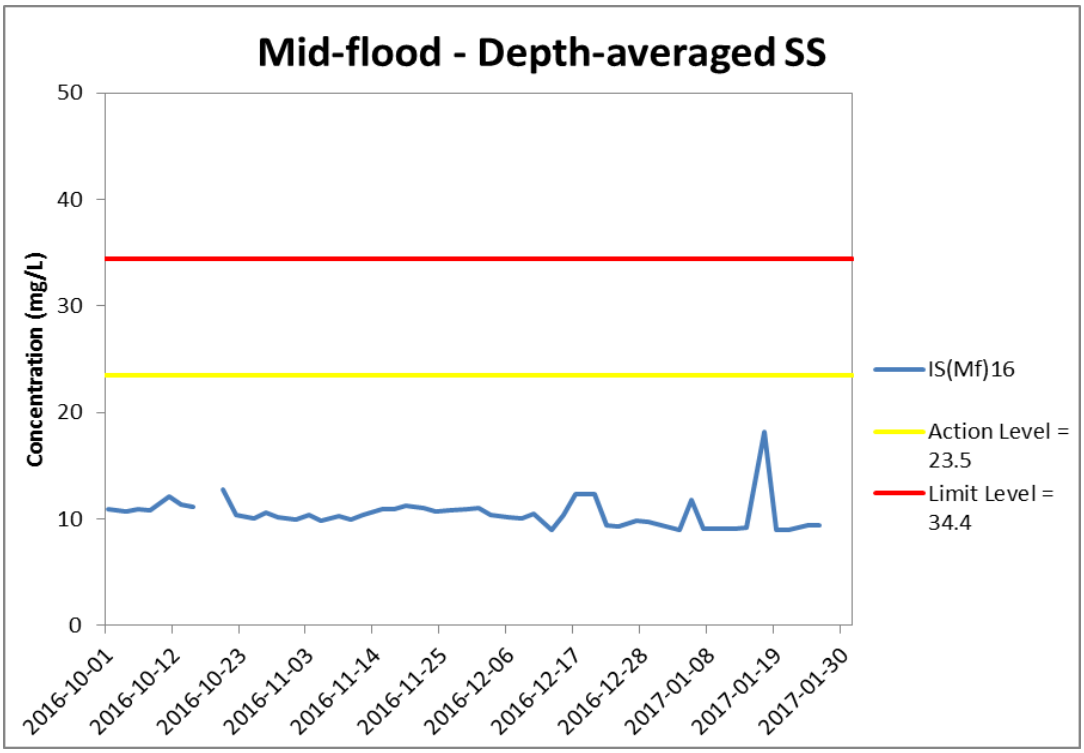


Figure J33 Impact Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-flood tide between 1 October 2016 and 31 January 2017 at CS(Mf)3 and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period.) WQM on 28 and 31 Jan were cancelled due to suspension of marine works. Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.



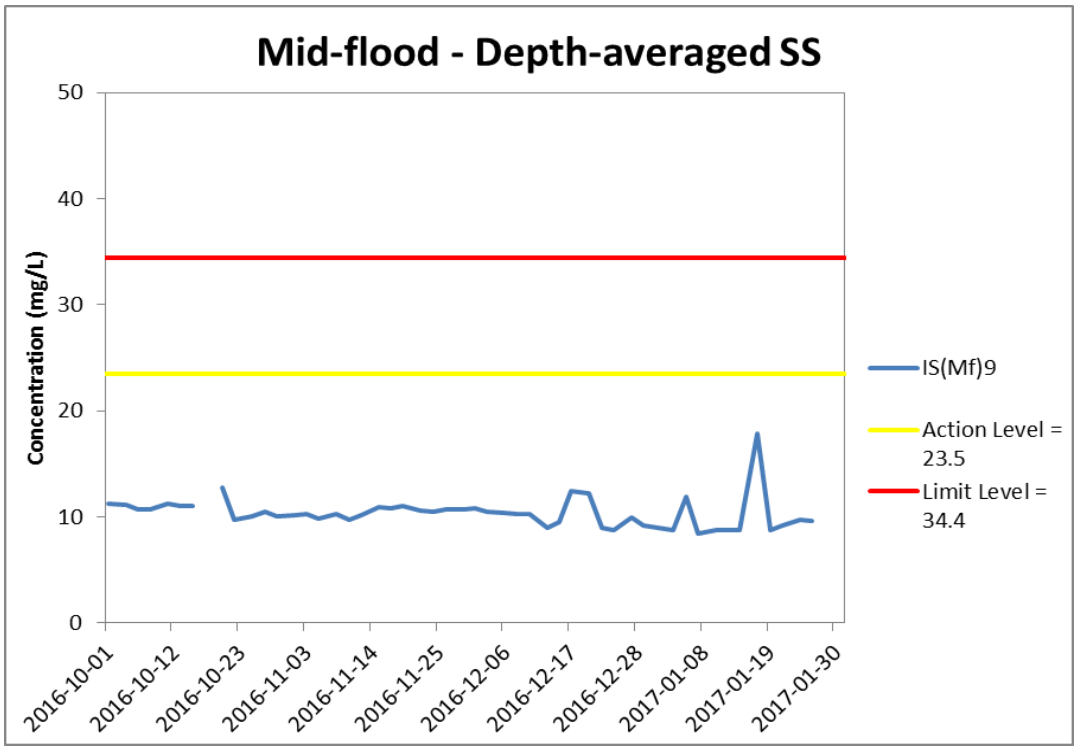
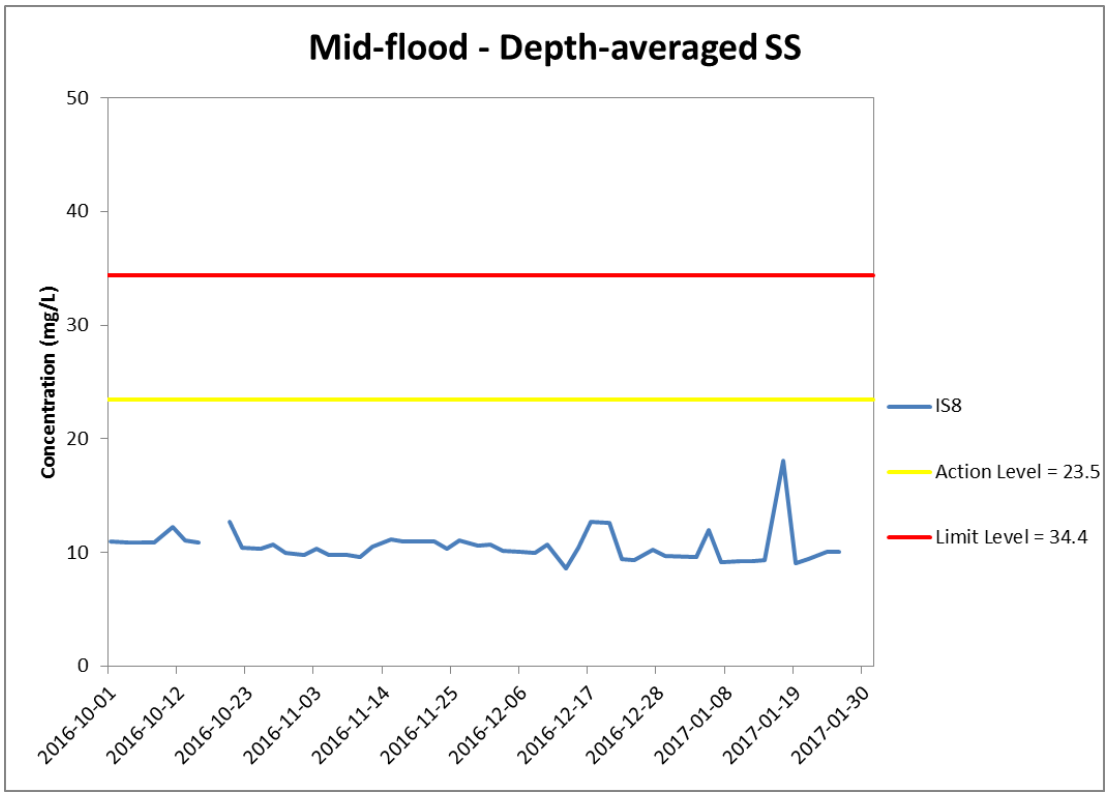


Figure J34 Impact Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-flood tide between 1 October 2016 and 31 January 2017 at IS(Mf)16 and IS(Mf)9.

(Weather condition varied between sunny to rainy within the reporting period.) WQM on 28 and 31 Jan were cancelled due to suspension of marine works. Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.

Environmental Resources Management

ERM



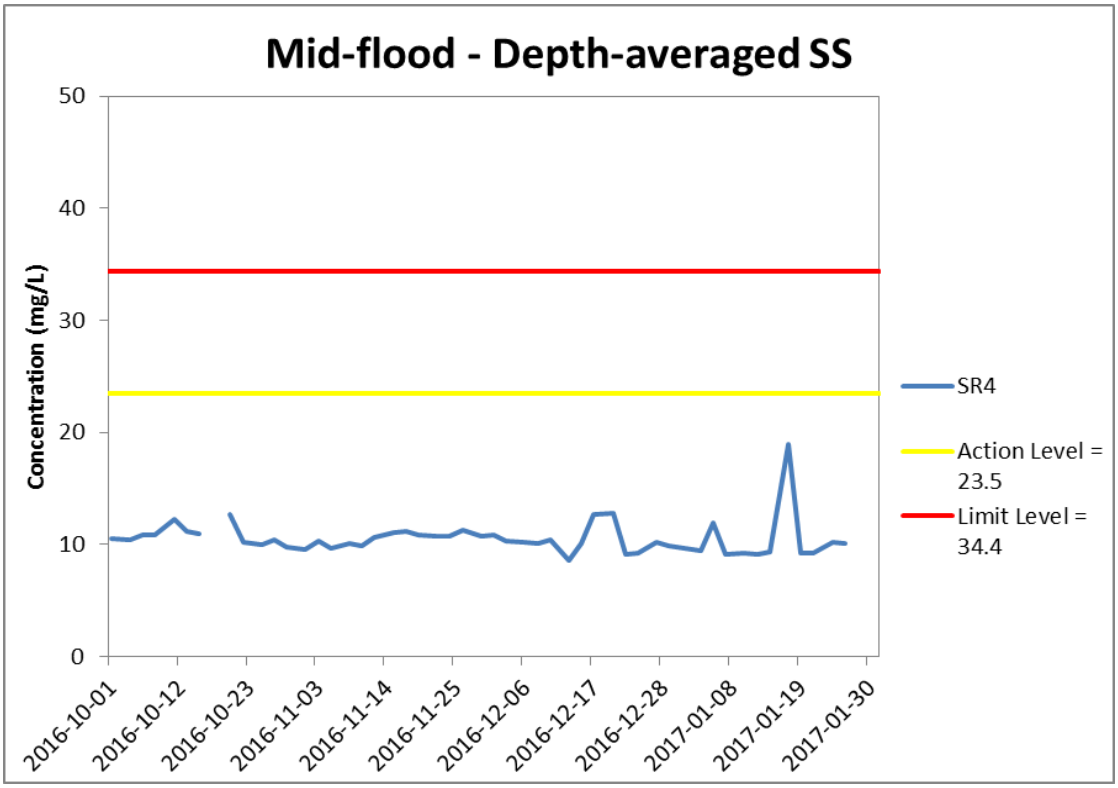


Figure J35 Impact Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-flood tide between 1 October 2016 and 31 January 2017 at IS8 and SR4.

(Weather condition varied between sunny to rainy within the reporting period.) WQM on 28 and 31 Jan were cancelled due to suspension of marine works. Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.

Environmental Resources Management

ERM

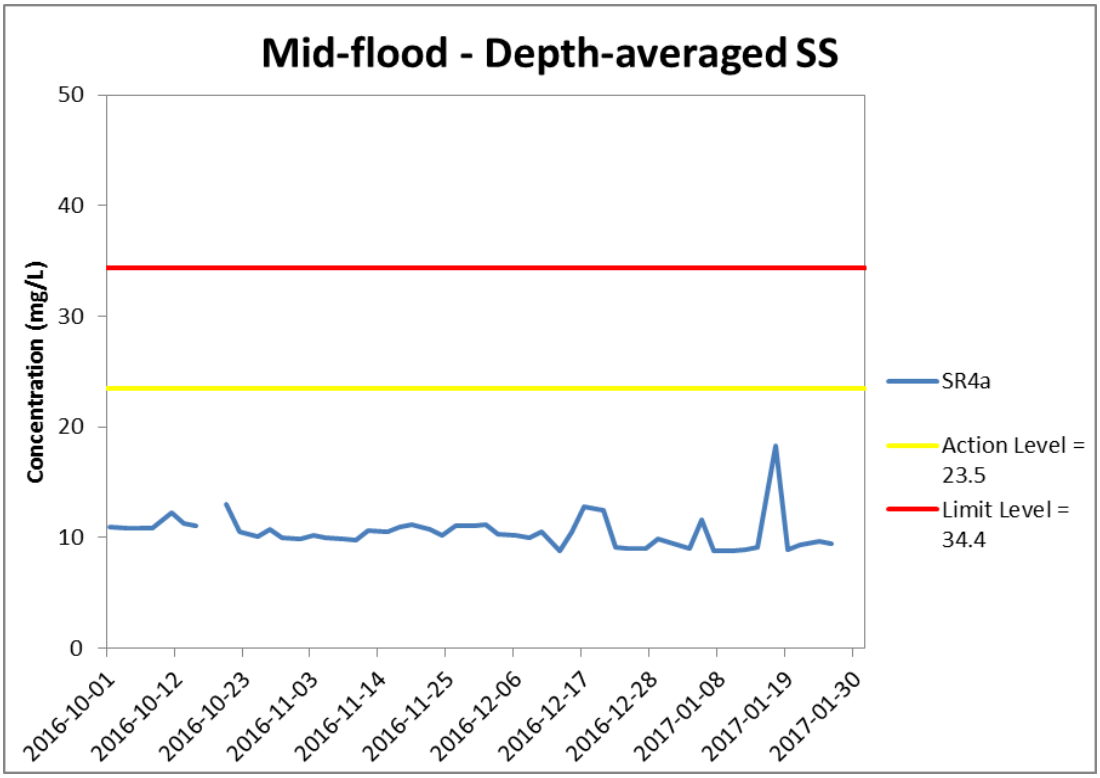


Figure J36 Impact Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-flood tide between 1 October 2016 and 31 January 2017 at SR4a.

(Weather condition varied between sunny to rainy within the reporting period.) WQM on 28 and 31 Jan were cancelled due to suspension of marine works. Marine works within the reporting period include Uninstallation of marine piling platform; Pier construction; Launching gantry operation; and Installation of deck segment and pier head segment.

Environmental Resources Management

ERM

Appendix K

Impact Dolphin Monitoring Survey Results

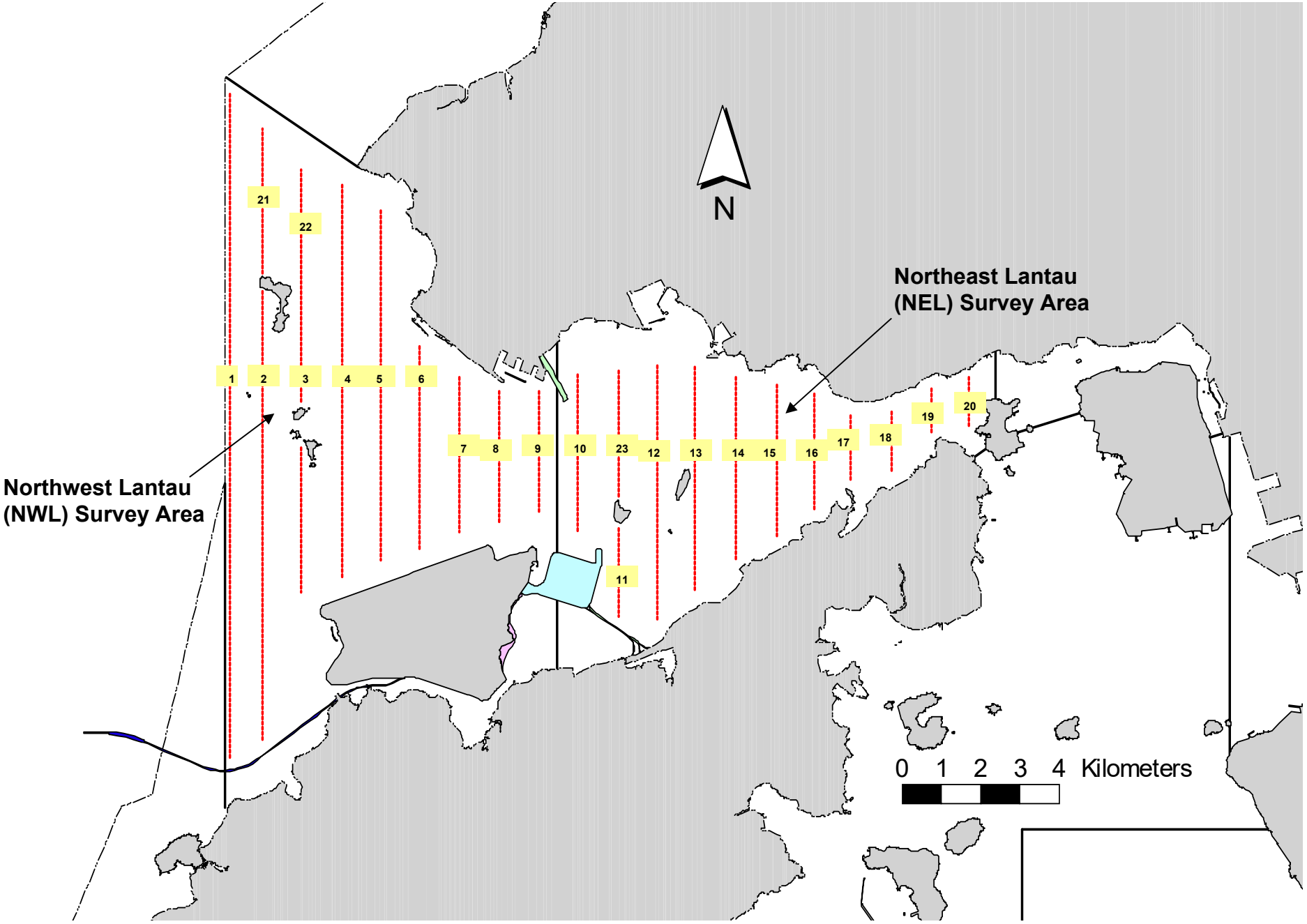


Figure 1. Transect Line Layout in Northwest and Northeast Lantau Survey Areas

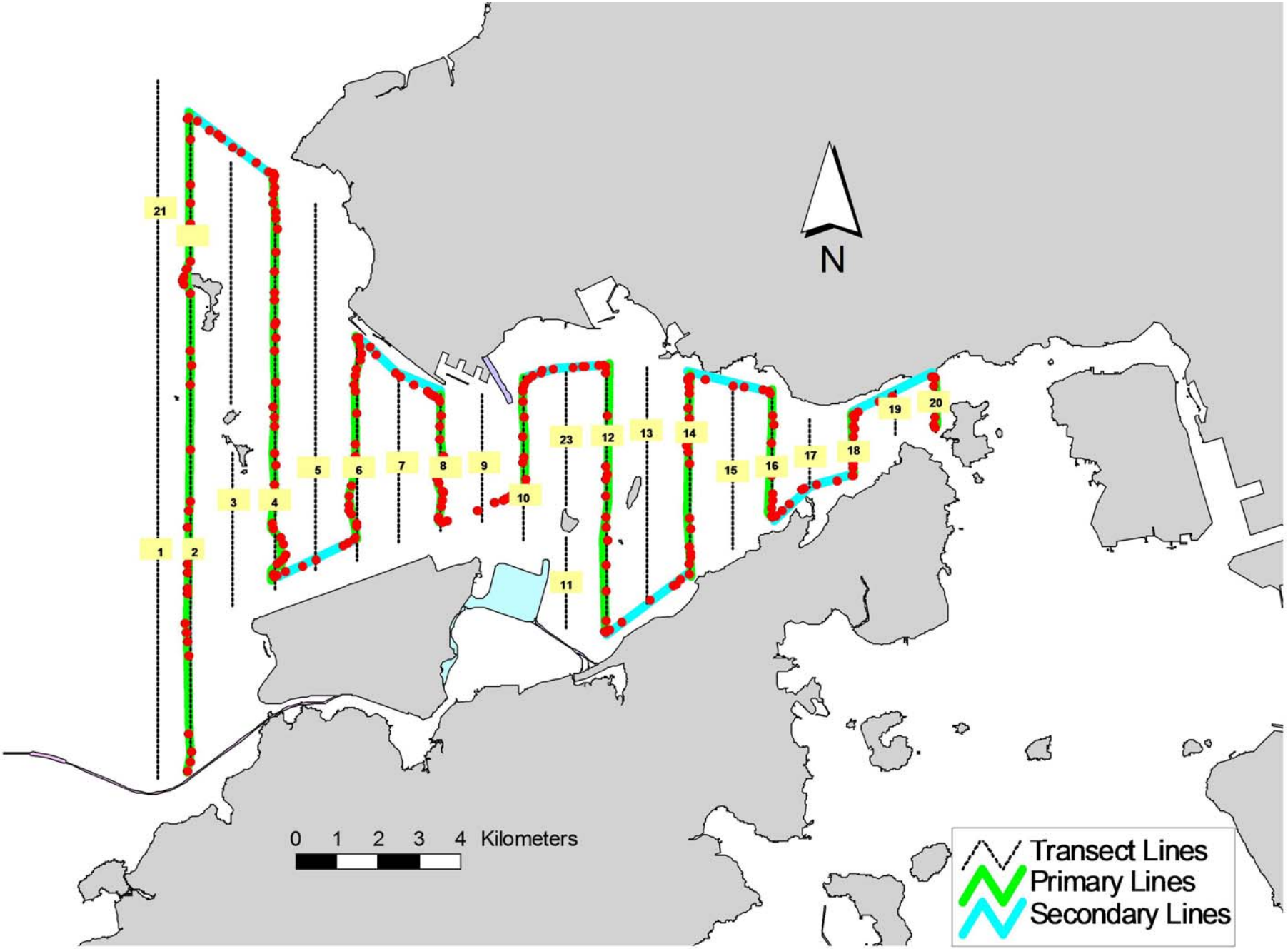


Figure 2. Survey Route on January 10th, 2017 (from HKLR03 project)

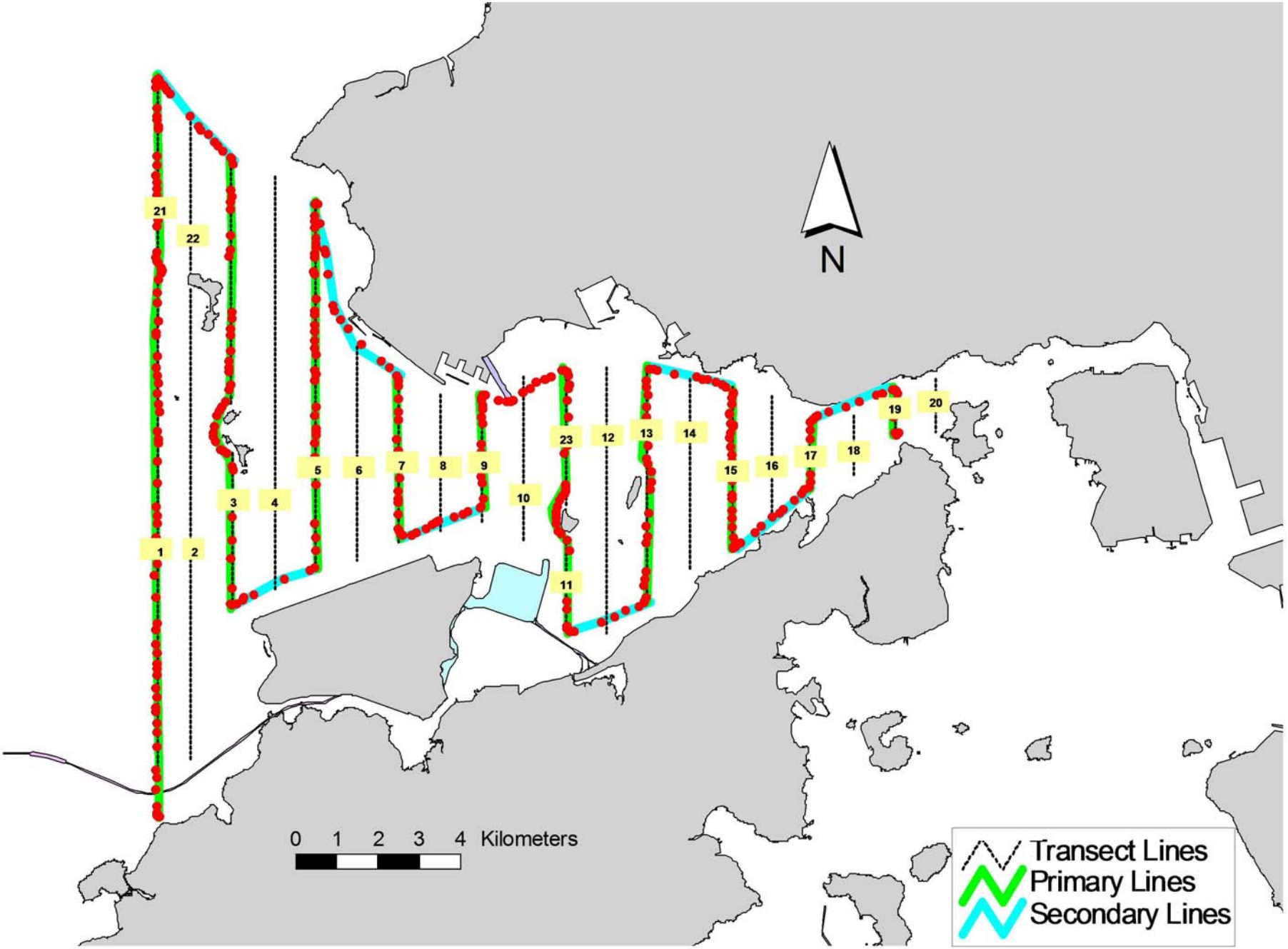


Figure 3. Survey Route on January 12th, 2017 (from HKLR03 project)

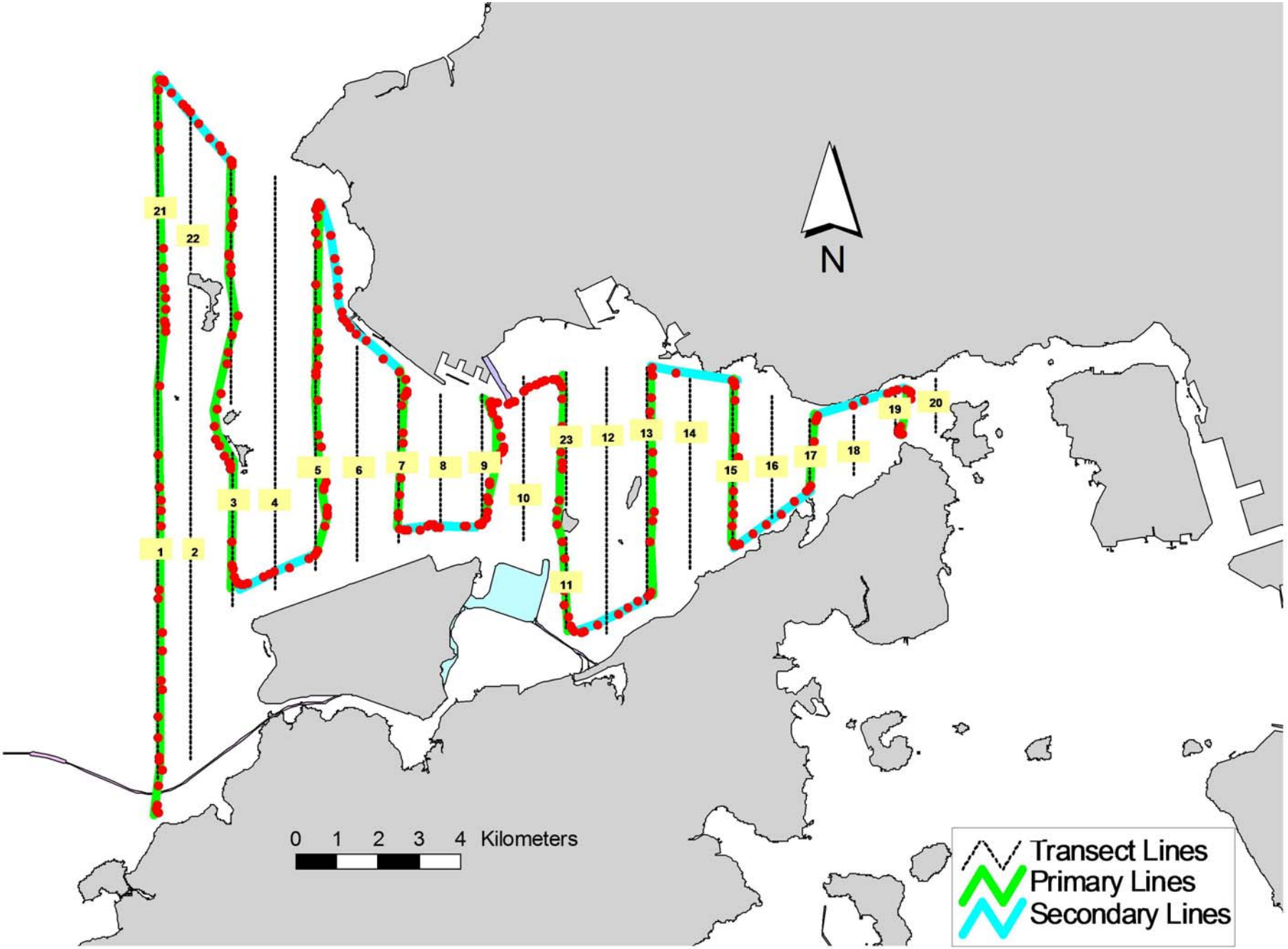


Figure 4. Survey Route on January 16th, 2017 (from HKLR03 project)

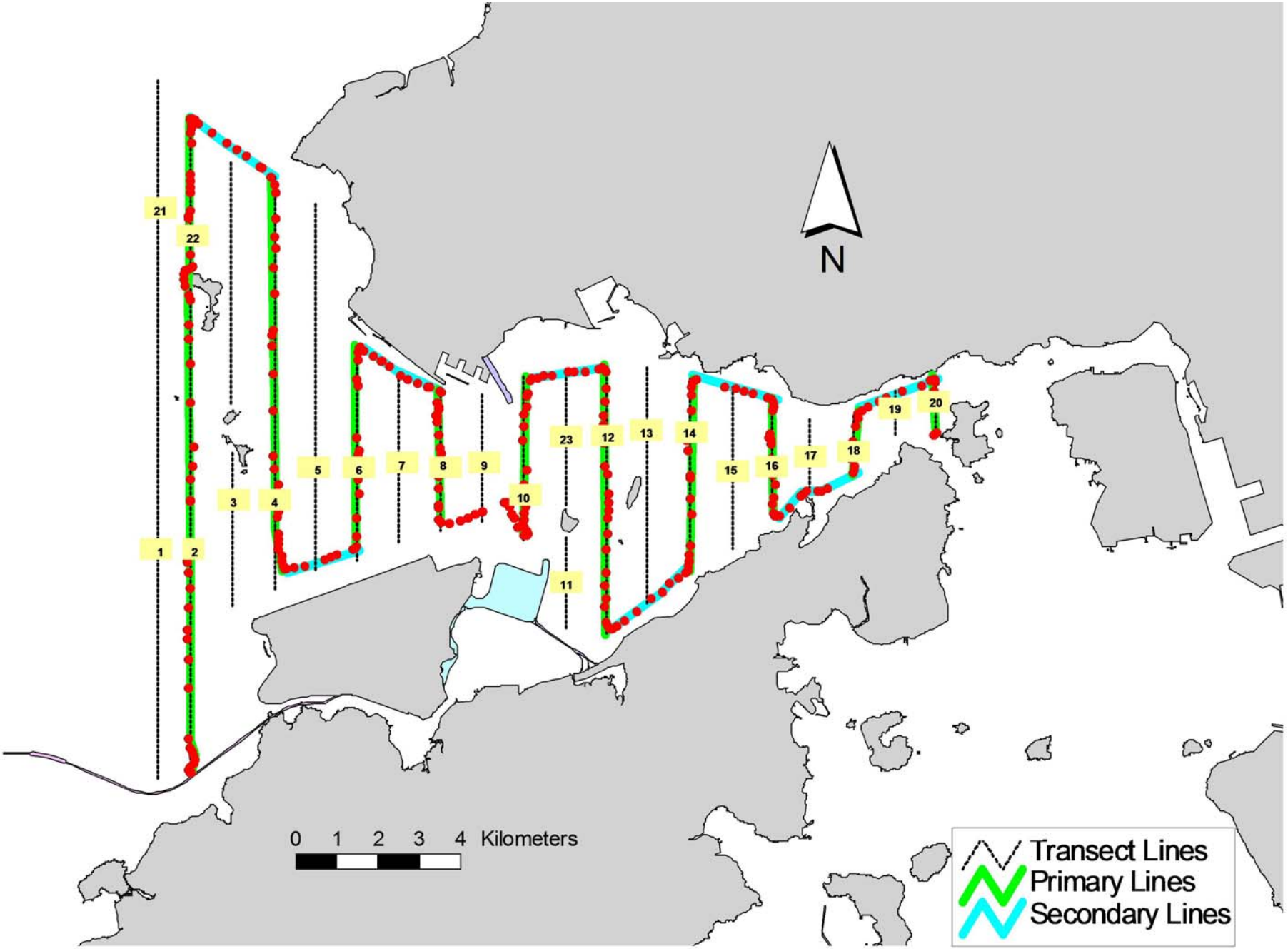


Figure 5. Survey Route on January 20th, 2017 (from HKLR03 project)

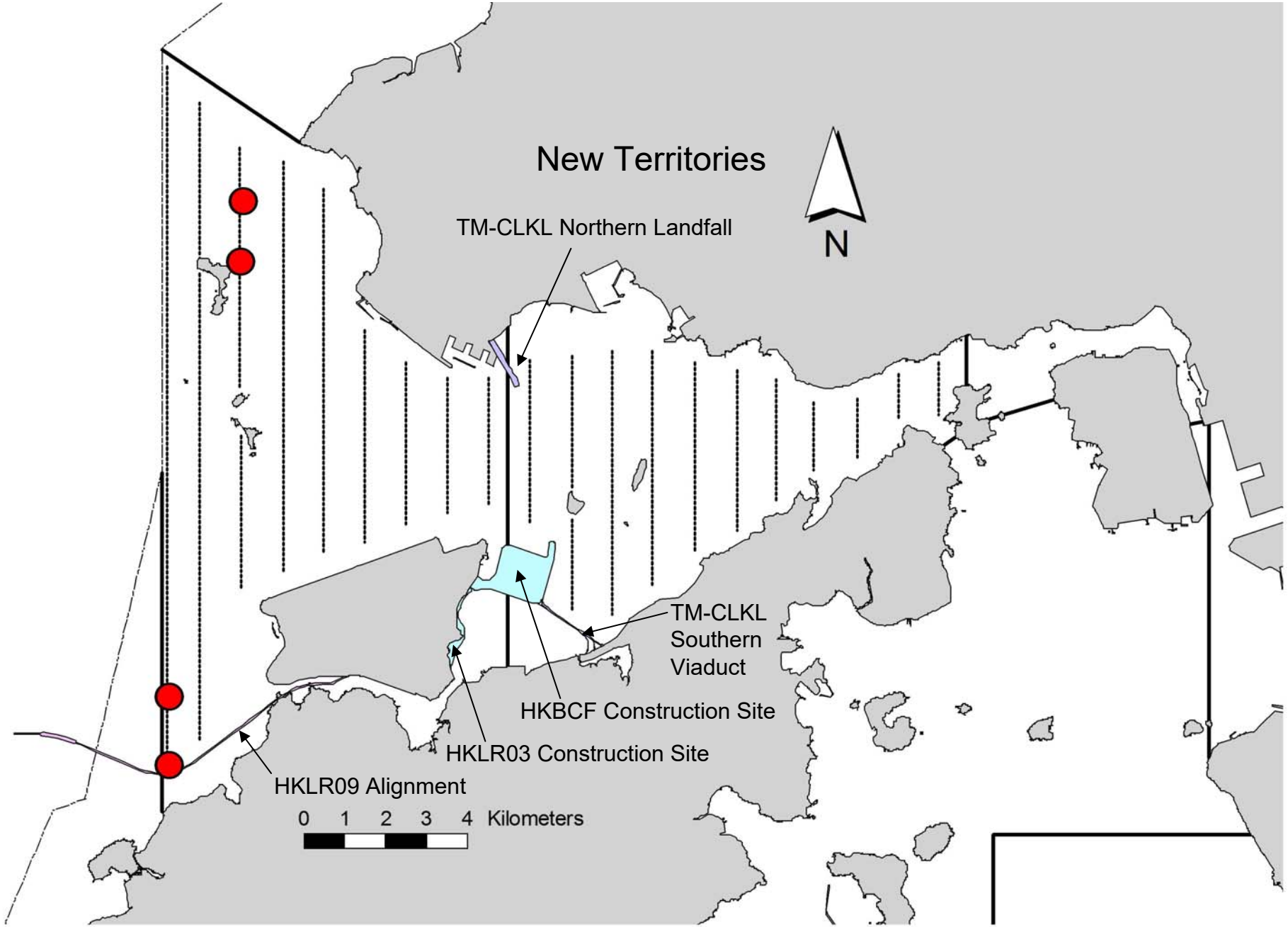


Figure 6. Distribution of Chinese White Dolphin Sightings during January 2017 HKLR03 Monitoring Surveys

Appendix I. HKLR03 Survey Effort Database (January 2017)

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

DATE	AREA	BEAU	EFFORT	SEASON	VESSEL	TYPE	P/S
10-Jan-17	NE LANTAU	2	4.00	WINTER	STANDARD36826	HKLR	P
10-Jan-17	NE LANTAU	3	14.60	WINTER	STANDARD36826	HKLR	P
10-Jan-17	NE LANTAU	2	8.90	WINTER	STANDARD36826	HKLR	S
10-Jan-17	NE LANTAU	3	2.10	WINTER	STANDARD36826	HKLR	S
10-Jan-17	NW LANTAU	2	0.70	WINTER	STANDARD36826	HKLR	P
10-Jan-17	NW LANTAU	3	28.52	WINTER	STANDARD36826	HKLR	P
10-Jan-17	NW LANTAU	4	2.10	WINTER	STANDARD36826	HKLR	P
10-Jan-17	NW LANTAU	2	2.10	WINTER	STANDARD36826	HKLR	S
10-Jan-17	NW LANTAU	3	5.88	WINTER	STANDARD36826	HKLR	S
12-Jan-17	NW LANTAU	2	11.90	WINTER	STANDARD31516	HKLR	P
12-Jan-17	NW LANTAU	3	28.60	WINTER	STANDARD31516	HKLR	P
12-Jan-17	NW LANTAU	2	11.00	WINTER	STANDARD31516	HKLR	S
12-Jan-17	NW LANTAU	3	2.30	WINTER	STANDARD31516	HKLR	S
12-Jan-17	NE LANTAU	2	16.82	WINTER	STANDARD31516	HKLR	P
12-Jan-17	NE LANTAU	2	8.97	WINTER	STANDARD31516	HKLR	S
12-Jan-17	NE LANTAU	3	1.00	WINTER	STANDARD31516	HKLR	S
16-Jan-17	NW LANTAU	2	17.83	WINTER	STANDARD36826	HKLR	P
16-Jan-17	NW LANTAU	3	19.51	WINTER	STANDARD36826	HKLR	P
16-Jan-17	NW LANTAU	2	10.47	WINTER	STANDARD36826	HKLR	S
16-Jan-17	NW LANTAU	3	2.70	WINTER	STANDARD36826	HKLR	S
16-Jan-17	NE LANTAU	2	10.30	WINTER	STANDARD36826	HKLR	P
16-Jan-17	NE LANTAU	3	6.40	WINTER	STANDARD36826	HKLR	P
16-Jan-17	NE LANTAU	2	9.60	WINTER	STANDARD36826	HKLR	S
20-Jan-17	NW LANTAU	2	0.70	WINTER	STANDARD31516	HKLR	P
20-Jan-17	NW LANTAU	3	25.76	WINTER	STANDARD31516	HKLR	P
20-Jan-17	NW LANTAU	4	4.64	WINTER	STANDARD31516	HKLR	P
20-Jan-17	NW LANTAU	2	1.20	WINTER	STANDARD31516	HKLR	S
20-Jan-17	NW LANTAU	3	6.20	WINTER	STANDARD31516	HKLR	S
20-Jan-17	NE LANTAU	2	13.65	WINTER	STANDARD31516	HKLR	P
20-Jan-17	NE LANTAU	3	5.69	WINTER	STANDARD31516	HKLR	P
20-Jan-17	NE LANTAU	2	10.46	WINTER	STANDARD31516	HKLR	S

Appendix II. HKLR03 Chinese White Dolphin Sighting Database (January 2017)

(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
16-Jan-17	1	1027	1	NW LANTAU	2	84	ON	HKLR	815336	804713	WINTER	NONE	P
16-Jan-17	2	1041	5	NW LANTAU	3	22	ON	HKLR	816920	804716	WINTER	NONE	P
16-Jan-17	3	1211	3	NW LANTAU	3	121	ON	HKLR	828289	806500	WINTER	NONE	P
16-Jan-17	4	1226	4	NW LANTAU	2	200	ON	HKLR	826916	806446	WINTER	NONE	P

Appendix III. Individual dolphins identified during HKLR03 monitoring surveys in January 2017

ID#	DATE	STG#	AREA
NL46	16/01/17	3	NW LANTAU
NL136	16/01/17	3	NW LANTAU
NL202	16/01/17	4	NW LANTAU
NL210	16/01/17	4	NW LANTAU
NL269	16/01/17	2	NW LANTAU
NL286	16/01/17	4	NW LANTAU
WL28	16/01/17	2	NW LANTAU
WL145	16/01/17	2	NW LANTAU
WL234	16/01/17	3	NW LANTAU

Appendix IV. Photographs of Identified Individual Dolphins in January 2017 (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 2017 (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	Marine Sediment, Cat. H	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)	('000m^3)	('000Kg)	('000Kg)	('000Kg)	('000Kg)	('000Kg)	('000Kg)
Jan	4.591	0.702	0.474	-	4.118	-	-	-	-	-	3.400	99.840	-	-	0.140	-
Feb	-	0.000	-	-	-	-	-	-	-	-			-	-		-
Mar	-	0.000	-	-	-	-	-	-	-	-			-	-		-
Apr	-	0.000	-	-	-	-	-	-	-	-			-			-
May	-	0.000	-	-	-	-	-	-	-	-			-	-		-
Jun	-	0.000	-	-	-	-	-	-	-	-			-	-		-
SUB-TOTAL	**4.591**	**0.702**	**0.474**	**-**	**4.118**	**0.000**	**-**	**-**	**-**	**-**	**3.400**	**99.840**	**-**	**0.000**	**0.140**	**-**
Jul	-	0.000	-	-	-	-	-	-	-	-			-			-
Aug	-	0.000	-	-	-	-	-	-	-	-			-			-
Sep	-	0.000	-	-	-	-	-	-	-	-			-	-		-
Oct	-	0.000	-	-	-	-	-	-	-	-			-	-		-
Nov	-	0.000	-	-	-	-		-	-	-			-	-		-
Dec	-	0.000	-	-	-	-		-	-	-			-	-		-
TOTAL	**4.591**	**0.702**	**0.474**	**-**	**4.118**	**-**	**-**	**-**	**-**	**-**	**3.400**	**99.840**	**-**	**-**	**0.140**	**-**

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	2
	Limit	0	0
Impact Dolphin Monitoring	Action	0	9
	Limit	0	7

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 (January 2017)	1	0	0
Total No. received since project commencement	8	0	0

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

ENVIRONMENTAL COMPLAINT/ ENQUIRY FORM

Complaint/ ~~Enquiry~~ Received*
Date: 13 January 2017 Time: Undisclosed From: Agriculture, Fisheries and Conservation Department (AFCD) Via: Email
Complainant/ ~~**Enquirer***~~: Name: Undisclosed Tel: Undisclosed Address: Undisclosed Media: ~~Dust~~ ~~Noise~~ ~~Water Quality~~ Other Description: On 12 January 2017, a complaint was made by the AFCD to HyD regarding constructional vessels and silt curtain found within the boundary of Brothers Marine Park (BMP) on 4 and 5 January 2017. Two observations were reported by AFCD, 1) Twenty-two barges/tug boats were observed anchored inside the BMP (see *Figure 1*) and 2) A section of silt curtain enclosing the Hong Kong Boundary Crossing Facilities (HKBCF) project site was found inside the BMP or in close vicinity of the boundary of BMP. The Contractor received the complaint notification on 13 January 2017.

Investigation Report & Response

Record of constructional vessels and operation records were reviewed immediately upon receiving the complaint. None of the construction vessels in the list provided by AFCD was employed under this Contract. Major marine works under this Contract carried out this month were mainly installation of deck segments and pier head segments, pier construction and launching gantry operations. All Contract related construction vessels were found working inside the project site boundary under this Contract. According to ET's weekly site inspection on 4 January 2017, barges/tug boats were observed located at the south of HKBCF, mainly near Viaduct A and Viaduct D within the project site boundary. None of them were observed operating or anchoring outside the project site boundary under this Contract (*Figure 2*).

In addition, silt curtain enclosing the HKBCF was not deployed under this Contract. Therefore, the observation on silt curtain found inside the BMP or in close vicinity of the boundary of BMP was considered not related to this Contract.

Based on the above, it is reasonable to consider that the complaint was not related to the Contract.

Mitigation Measures and Follow-Up Actions Recommended to Contractor

The complaint is considered not related to this Contract and thus no further action is required. The ET will keep checking on the operation of construction vessels.

Date of File Closed : 13 January 2017

Approved and Filed by:

(Jovy Tam, ET Leader)
Date: 13 January 2017

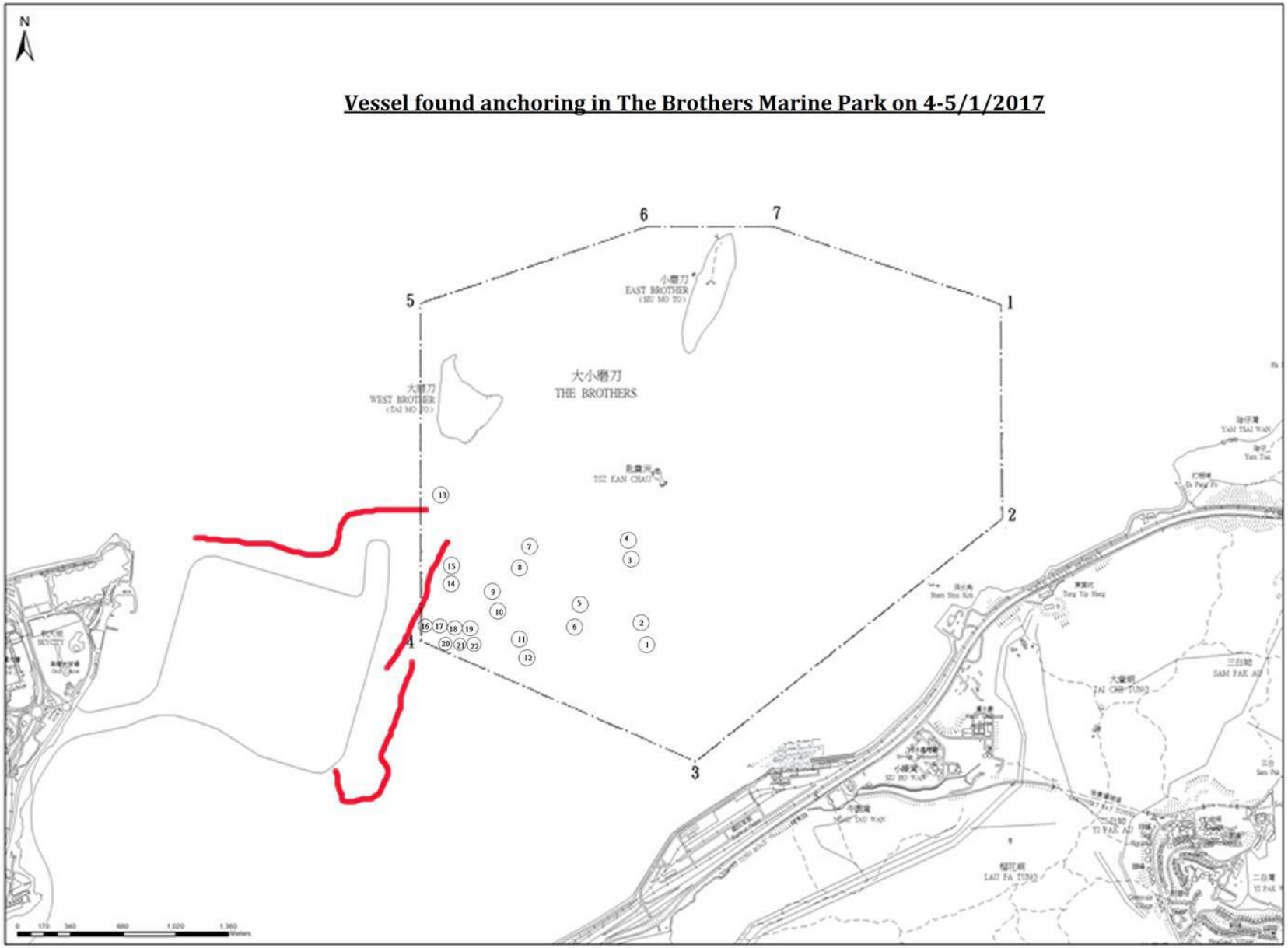


Figure 1 – Observed barges/tug boats inside Brothers Marine Park on 4-5/1/2017

Environmental Resources Management

ERM

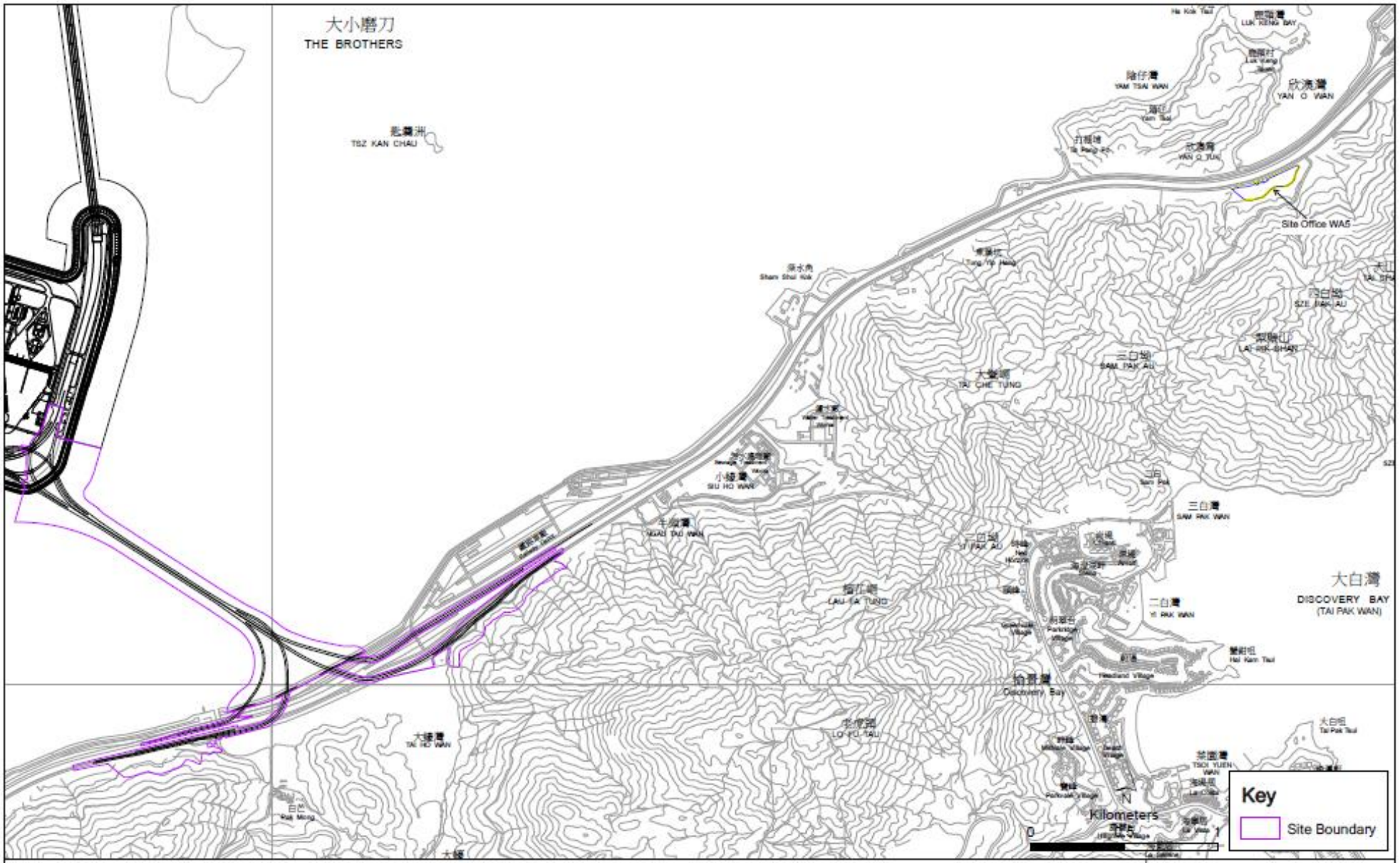


Figure 2 – Project site boundary under this Contract

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