

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

Twenty-eighth Monthly EM&A Report

11 March 2016

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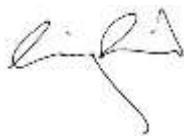



Contract No. HY/2012/07 Tuen Mun – Chek Lap Kok Link – Southern Connection Viaduct Section

**Environmental Resources
Management**

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Twenty-eighth Monthly EM&A Report

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Client: Gammon		Project No: 0215660			
Summary: This document presents the Twenty-eighth Monthly EM&A Report for Tuen Mun – Chek Lap Kok Link – Southern Connection Viaduct Section.		Date: 11 March 2016			
		Approved by: 			
		<i>Mr Craig Reid Partner</i>			
		Certified by: 			
		<i>Mr Jovy Tam ET Leader</i>			
	Twenty-eighth Monthly EM&A Report	VAR	JT	CAR	11/03/16
Revision	Description	By	Checked	Approved	Date
This report has been prepared by Environmental Resources Management the trading name of 'ERM Hong-Kong, Limited', with all reasonable skill, care and diligence within the terms of the Contract with the client, incorporating our General Terms and Conditions of Business and taking account of the resources devoted to it by agreement with the client. We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.		Distribution <input type="checkbox"/> Internal <input checked="" type="checkbox"/> Public <input type="checkbox"/> Confidential			
		 			



Ref.: HYDHZMBEEM00_0_3965L.16

14 March 2016

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

By Fax (3691 2899) and By Post

Attention: Mr. Daniel Ip

Dear 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
Monthly EM&A Report for February 2016 (EP-354/2009/D)**

Reference is made to the Monthly Environmental Monitoring and Audit (EM&A) Report (Feb. 2016) (ET's ref.: "0215660_28th Monthly EM&A 20160311.doc" dated 11 Mar. 2016) certified by the ET Leader and provided to us via e-mail on 14 Mar. 2016.

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

Internal: DY, YH, CL, ENPO Site

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EXECUTIVE SUMMARY

Under *Contract No. HY/2012/07*, Gammon Construction Limited (GCL) is commissioned by the Highways Department (HyD) to undertake the design and construction of the Southern Connection Viaduct Section of the Tuen Mun - Chek Lap Kok Link Project (TM-CLK Link Project) while AECOM Asia Company Limited was appointed by HyD as the Supervising Officer. For implementation of the environmental monitoring and audit (EM&A) programme under the Contract, ERM-Hong Kong, Limited (ERM) has been appointed as the Environmental Team (ET). 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.

Part of the Southern Landfall of TM-CLK Link lies alongside the Hong Kong - Zhuhai - Macao Bridge Hong Kong Boundary Crossing Facilities (HKBCF) where is a reclamation area constructed by *Contract HY/2010/02* under *Environmental Permit No. EP/353/2009/I*. 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/I* was subsequently handed-over to *Contract No. HY/2012/07*.

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 Twenty-eighth Monthly EM&A report presenting the EM&A works carried out during the period from 1 to 29 February 2016 for the Southern Connection Viaduct Section in accordance with the Updated EM&A Manual of the TM-CLK Link Project. As informed by the Contractor, major activities in the reporting period included:

Marine Works

- Construction and installation of pile caps;
- 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;

- Construction of land section of berth at Southern Landfall;
- 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 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

One (1) Limit Level exceedance was observed for the quarterly dolphin monitoring data between December 2015 and February 2016, whilst no unacceptable impact from the construction activities of the TM-CLKL Southern Connection Viaduct Section on Chinese White Dolphins was noticeable from general observations. Due to monthly variation in dolphin occurrence within the study area, it would be more appropriate to draw conclusion on whether any impacts on dolphins have been detected related to the construction activities of the TM-CLKL Southern Connection Viaduct Section in the quarterly EM&A reports, where comparison on distribution, group size and encounter rates of dolphins between the quarterly impact monitoring period and baseline monitoring period will be made.

Daily marine mammal exclusion zone monitoring was undertaken during the period of marine works under this Contract. No sighting of the Indo-Pacific humpback dolphin *Sousa chinensis* (i.e. Chinese White Dolphin) was recorded in February 2016 during the exclusion zone monitoring.

Environmental Complaints, Non-compliance & Summons

There was no environmental complaint, 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 March 2016 include the following:

Marine Works

- Construction and installation of pile caps;
- Uninstallation of marine piling platform;
- Pier construction;
- Construction of marine section of berth at Southern Landfall;
- Launching gantry operation; and
- Installation of deck segment and pier head segment.

Land-based Works

- Pier construction;
- Re-alignment of Cheung Tung Road;
- Construction of land section of berth at Southern Landfall;
- Installation of pier head and deck segments; and
- Slope work of Viaducts A, B & C.

Future Key Issues

Potential environmental impacts arising from the above upcoming construction activities in the next reporting month of February 2016 are mainly associated with dust, noise, marine water quality, marine ecology and waste management issues.

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.

Part of the Southern Landfall of TM-CLK Link lies alongside the Hong Kong - Zhuhai - Macao Bridge Hong Kong Boundary Crossing Facilities (HKBCF) where is a reclamation area constructed by *Contract HY/2010/02* under *Environmental Permit No. EP/353/2009/I*. 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/I* was subsequently handed-over to *Contract No. HY/2012/07*.

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 Twenty-eighth Monthly EM&A Report under the *Contract No. HY/2012/07 Tuen Mun – Chek Lap Kok Link – Southern Connection Viaduct Section*. This report presents a summary of the environmental monitoring and audit works in February 2016.

1.3 ORGANIZATION STRUCTURE

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

Table 1.1 *Contact Information of Key Personnel*

Party	Position	Name	Telephone	Fax
HyD (Highways Department)	Project Coordinator	Stanley Chan	2762 3406	3188 6614
	Senior Engineer	Steven Shum	2762 4133	3188 6614
SOR (AECOM Asia Company Limited)	Chief Resident Engineer	Daniel Ip	3553 3800	2492 2057
	Resident Engineer	Kingman Chan	3691 3950	3691 2899
ENPO / IEC (Ramboll Environ Hong Kong Ltd.)	ENPO Leader	Y.H. Hui	3547 2133	3465 2899
	IEC	Dr. F.C. Tsang	3547 2134	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

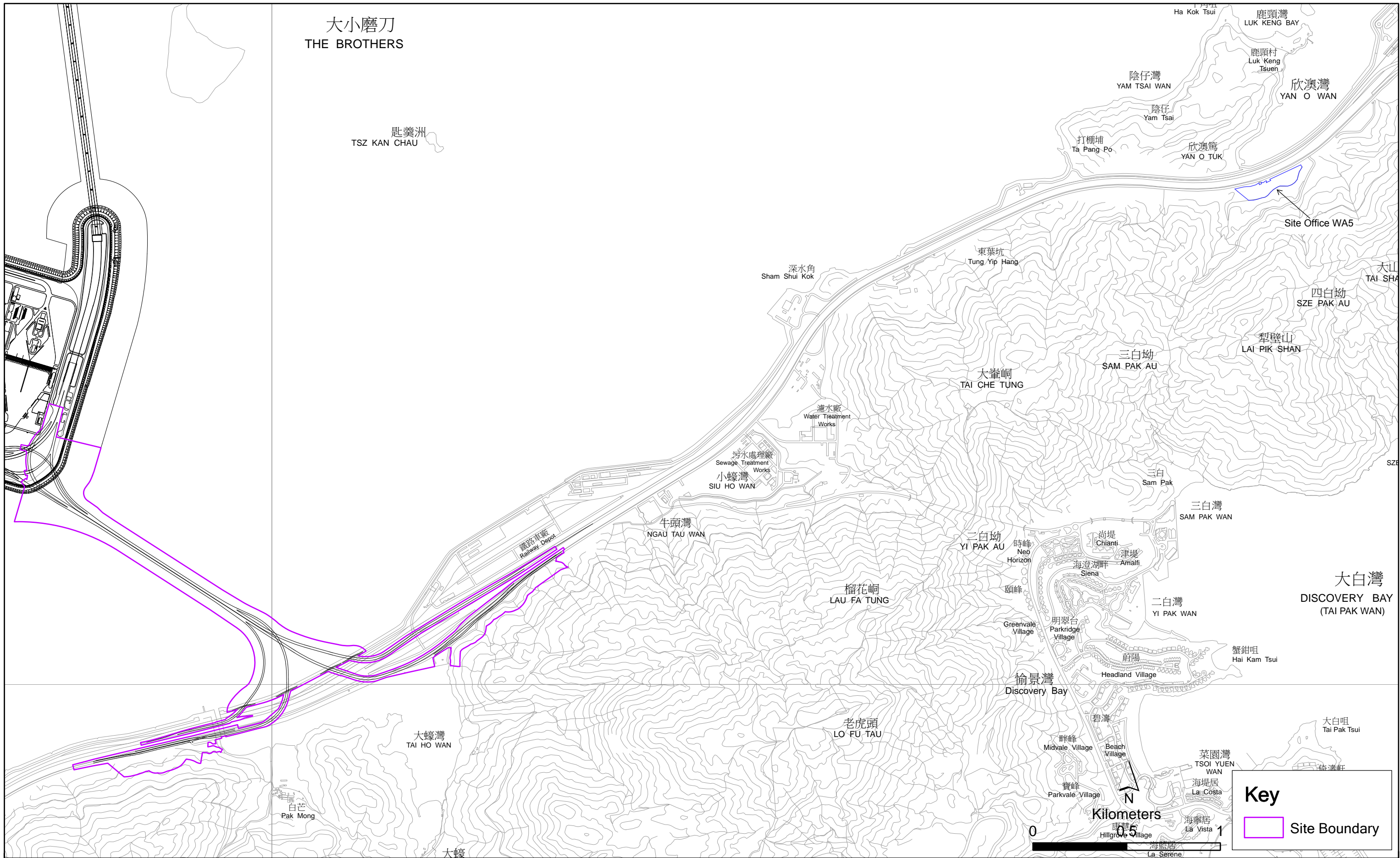


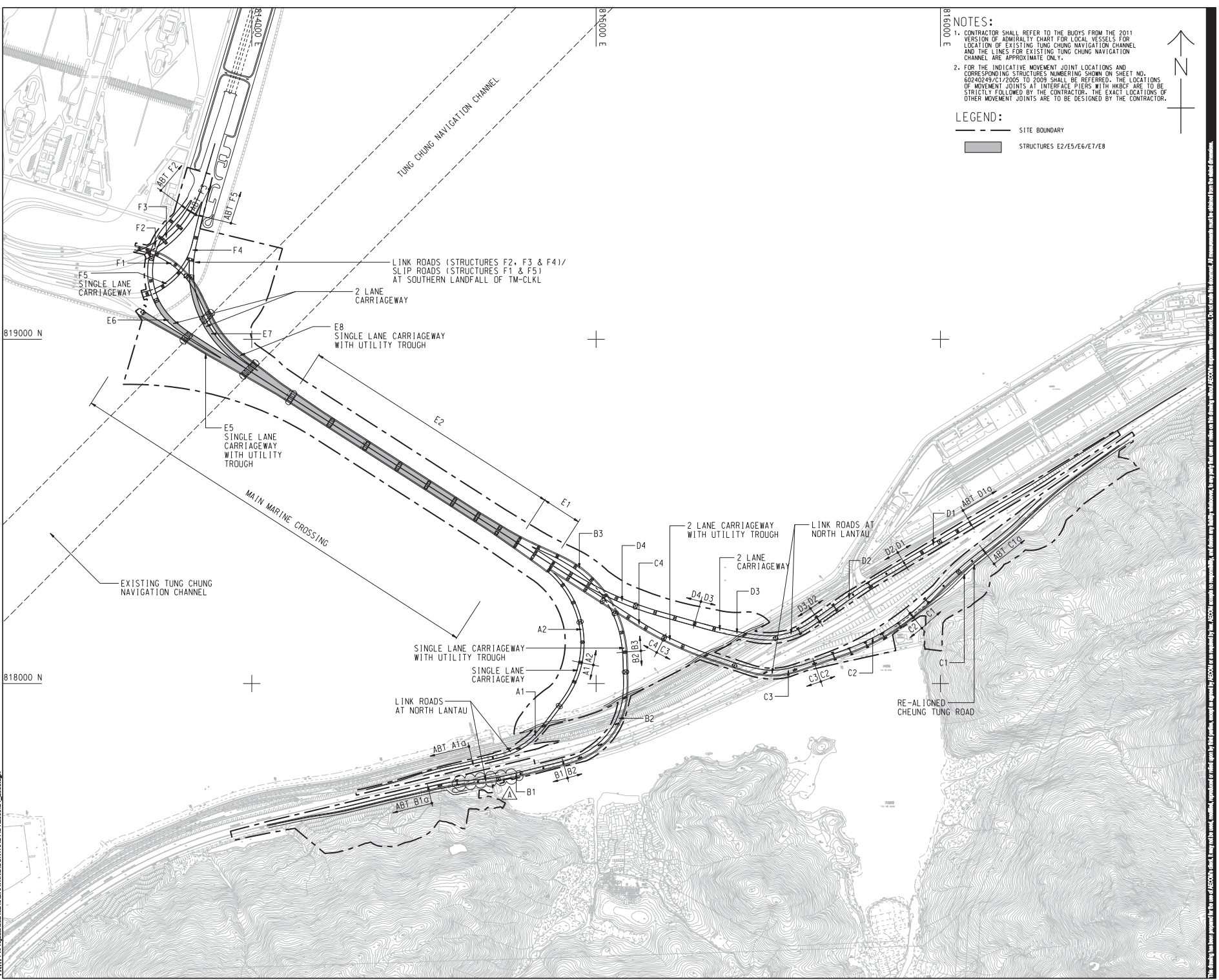
Figure 1.1

General Layout Plan of the Project

Environmental
Resources
Management



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 Path: P:\Projects\2012\02\240249\CONTRACT\1\0000\01_2000.dgn
 Designer: LHM/BA/CHK
 Project Management: HCNK
 ISO AT 9001:2015 Approved
 CEN



NOTES:

- CONTRACTOR SHALL REFER TO THE BUOYS FROM THE 2011 VERSION OF ADMIRALTY CHART FOR LOCAL VESSELS FOR LOCATION OF EXISTING TUNG CHUNG NAVIGATION CHANNEL AND THE LINES FOR EXISTING TUNG CHUNG NAVIGATION CHANNEL ARE APPROXIMATE ONLY.
- FOR THE INDICATIVE MOVEMENT JOINT LOCATIONS AND CORRESPONDING STRUCTURES NUMBERING SHOWN ON SHEET NO. 60240249/C1/2000 TO 2009 SHALL BE REFERRED. THE LOCATIONS OF MOVEMENT JOINTS AT INTERFACE PIERS WITH HKBCF ARE TO BE STRICTLY FOLLOWED BY THE CONTRACTOR. THE EXACT LOCATIONS OF OTHER MOVEMENT JOINTS ARE TO BE DESIGNED BY THE CONTRACTOR.

LEGEND:

— SITE BOUNDARY

▬ STRUCTURES E2/E5/E6/E7/E8



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
香港路政署
Hong Kong Project Management Office

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS

Figure 1.2a

ISSUE/REVISION

NO.	DATE	DESCRIPTION	CHK.

STATUS

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KEY PLAN

PROJECT NO.
60240249

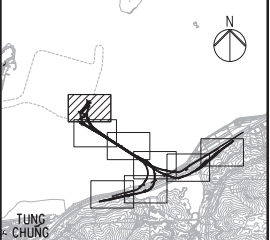
CONTRACT NO.
HY/2012/07

SHEET TITLE
SOUTHERN CONNECTION
GENERAL LAYOUT PLAN

SHEET NUMBER
60240249/C1/2000A

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- 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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B	SUBMISSION	RC	07/13				
C	SUBMISSION	RC	09/13				

Drawn	Date	Client
RL	07/13	HONG KONG GOVERNMENT HIGHWAYS DEPARTMENT
Checked	Approved	
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Supervising Officer: **AECOM**

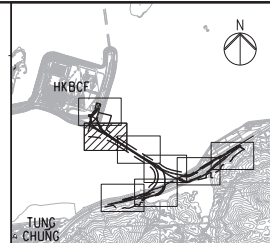
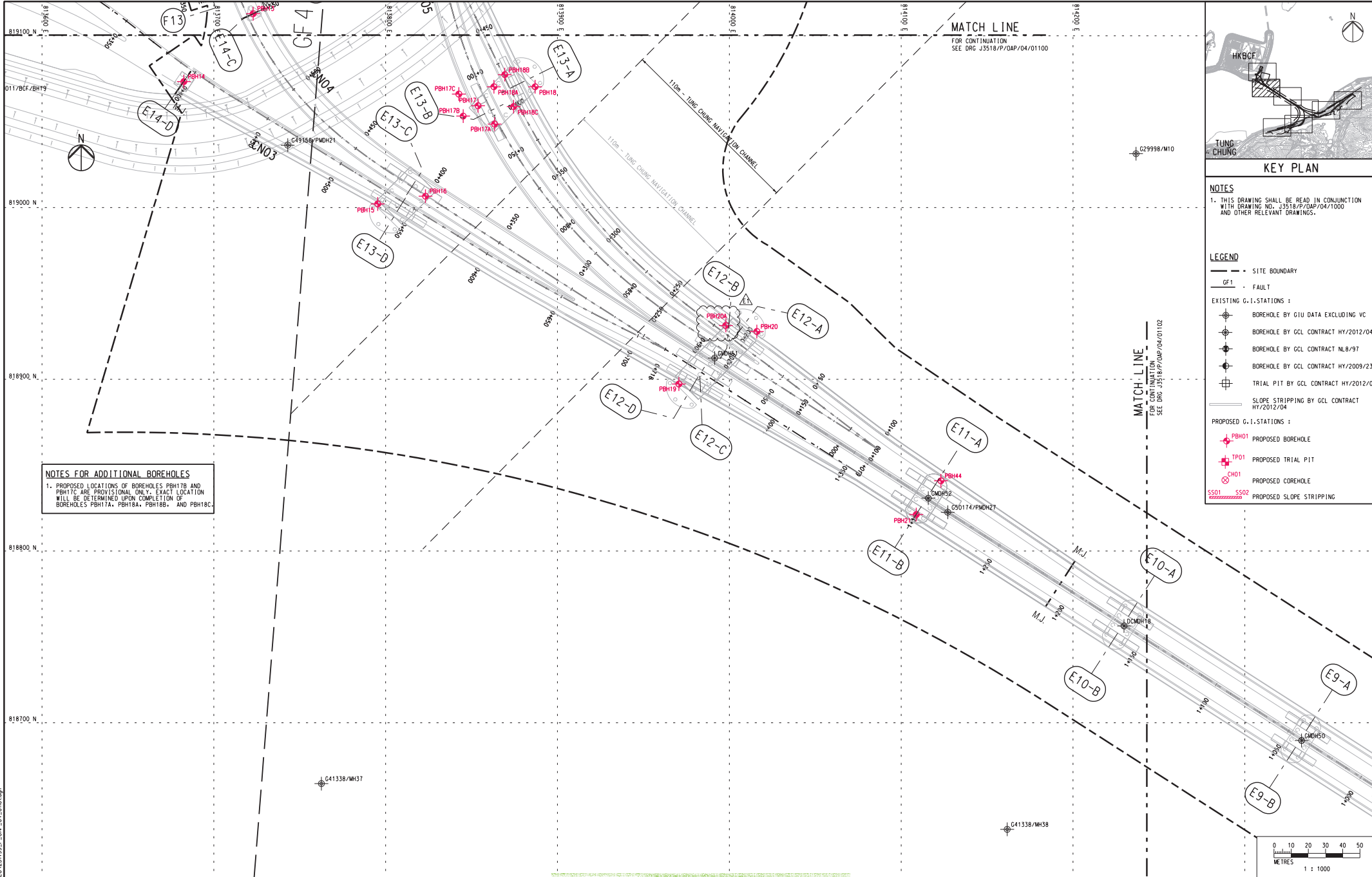
Contractor: **GAMMON**

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

Drawing title
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 - ⊕ TRIAL PIT BY GCL CONTRACT HY/2012/04
 - SLOPE STRIPPING BY GCL CONTRACT HY/2012/04
 - PROPOSED G.I. STATIONS :
 - ⊕ PBH01 PROPOSED BOREHOLE
 - ⊕ TP01 PROPOSED TRIAL PIT
 - ⊕ CH01 PROPOSED COREHOLE
 - SS01 SS02 PROPOSED SLOPE STRIPPING

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

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Drawn	Date	Client
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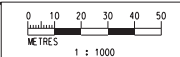
Checked	Date	Supervising Officer	Contractor
DS	DOP	AECOM	GAMMON

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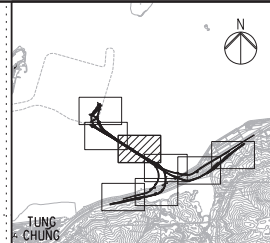
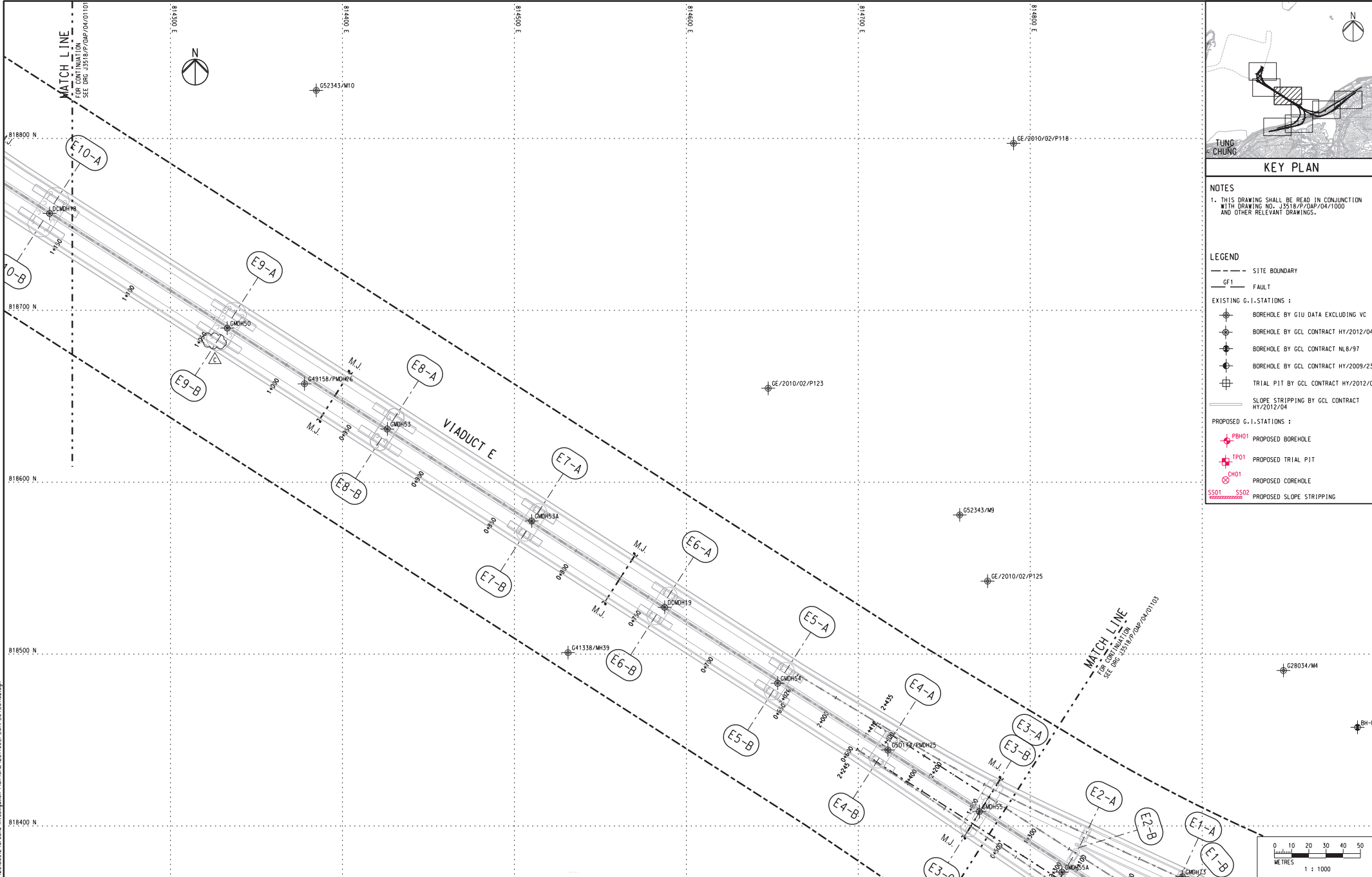
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Contract No. HY/2012/07
Tuen Mun - Chek Lap Kok Link
Southern Connection Viaduct Section

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Originator



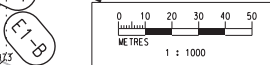
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 - ⊕ CH01 PROPOSED COREHOLE
 - SS01 SS02 PROPOSED SLOPE STRIPPING



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B	SUBMISSION	RC	07/13				
C	SUBMISSION	RC	09/13				

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DS	DOP

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Client

 路政署 HIGHWAYS DEPARTMENT
 香港港大聯合港工程管理局
 Hong Kong Project Management Office

Supervising Officer

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

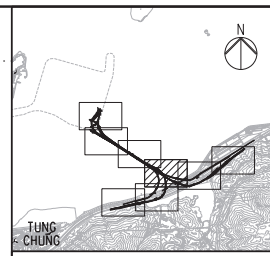
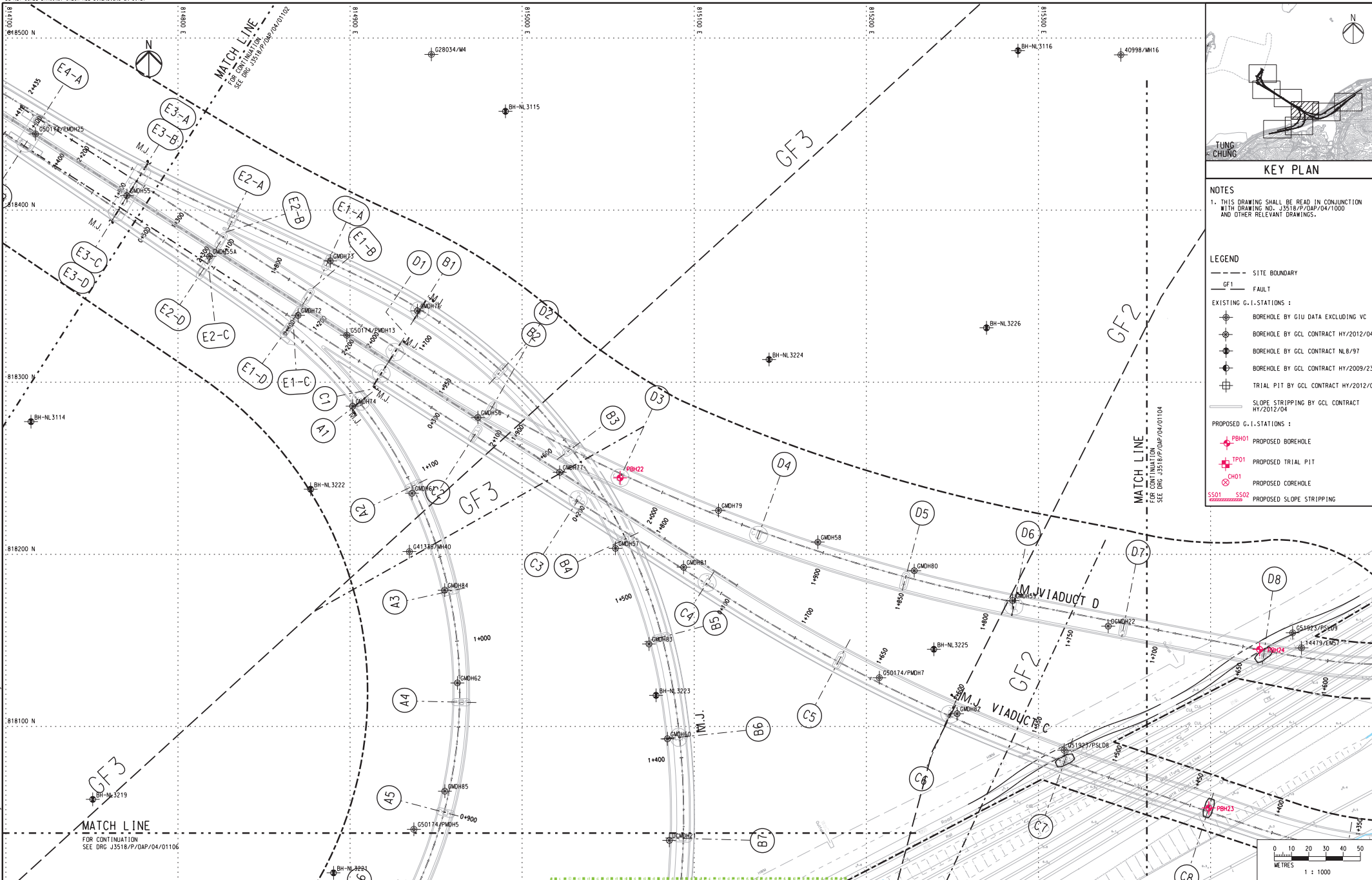
Contractor

Originator

Drawing title
Figure 1.2d

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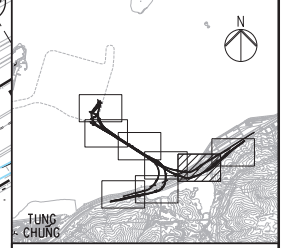
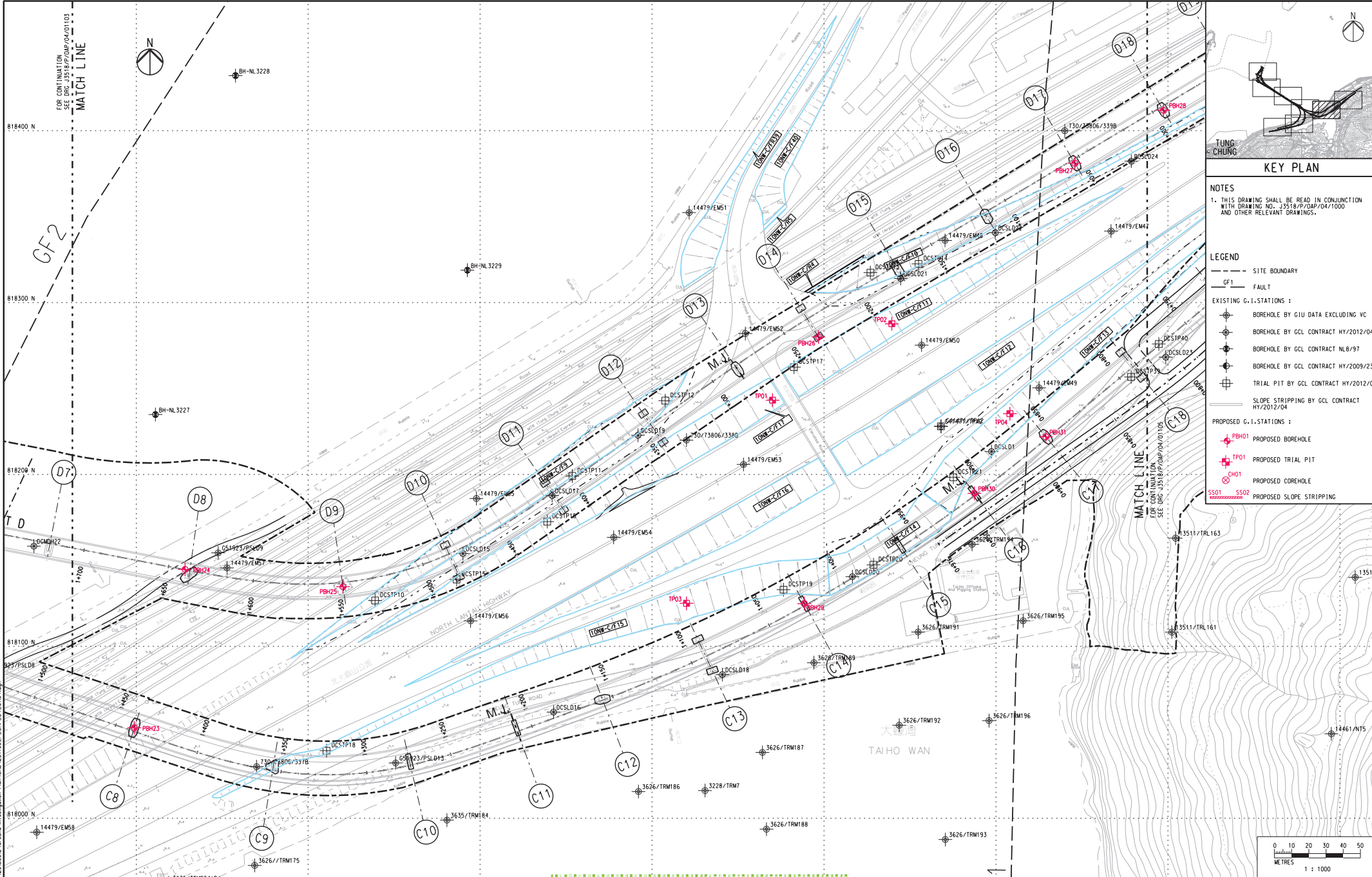
- LEGEND**
- SITE BOUNDARY
 - - - FAULT
 - EXISTING G.I.-STATIONS :
 - ⊕ BOREHOLE BY GIU DATA EXCLUDING VC
 - ⊕ BOREHOLE BY GCL CONTRACT HY/2012/04
 - ⊕ BOREHOLE BY GCL CONTRACT NL8/97
 - ⊕ BOREHOLE BY GCL CONTRACT HY/2009/23
 - ⊕ TRIAL PIT BY GCL CONTRACT HY/2012/04
 - PROPOSED G.I.-STATIONS :
 - ⊕ PBH01 PROPOSED BOREHOLE
 - ⊕ TP01 PROPOSED TRIAL PIT
 - ⊕ CH01 PROPOSED COREHOLE
 - SS01 SS02 PROPOSED SLOPE STRIPPING



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 Record : 20130927 Ground Investigation Plan CAD\23498_P_OAP_04_0103.dwg

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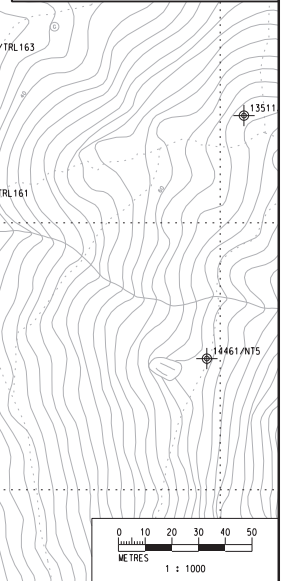
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KEY PLAN

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

- LEGEND**
- SITE BOUNDARY
 - GF1- FAULT
 - EXISTING G.I. STATIONS :
 - ⊕ BOREHOLE BY GIU DATA EXCLUDING VC
 - ⊕ BOREHOLE BY GCL CONTRACT HY/2012/04
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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					Checked	Approved
C	SUBMISSION	RC	09/13					DS	DOP
								Scale	1:1000 @ A1 / 1:2000 @ A3

Client

Supervising Officer

Project Title

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

Contractor

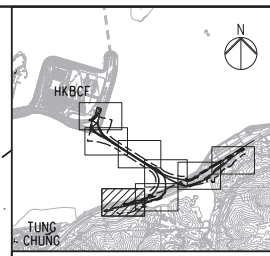
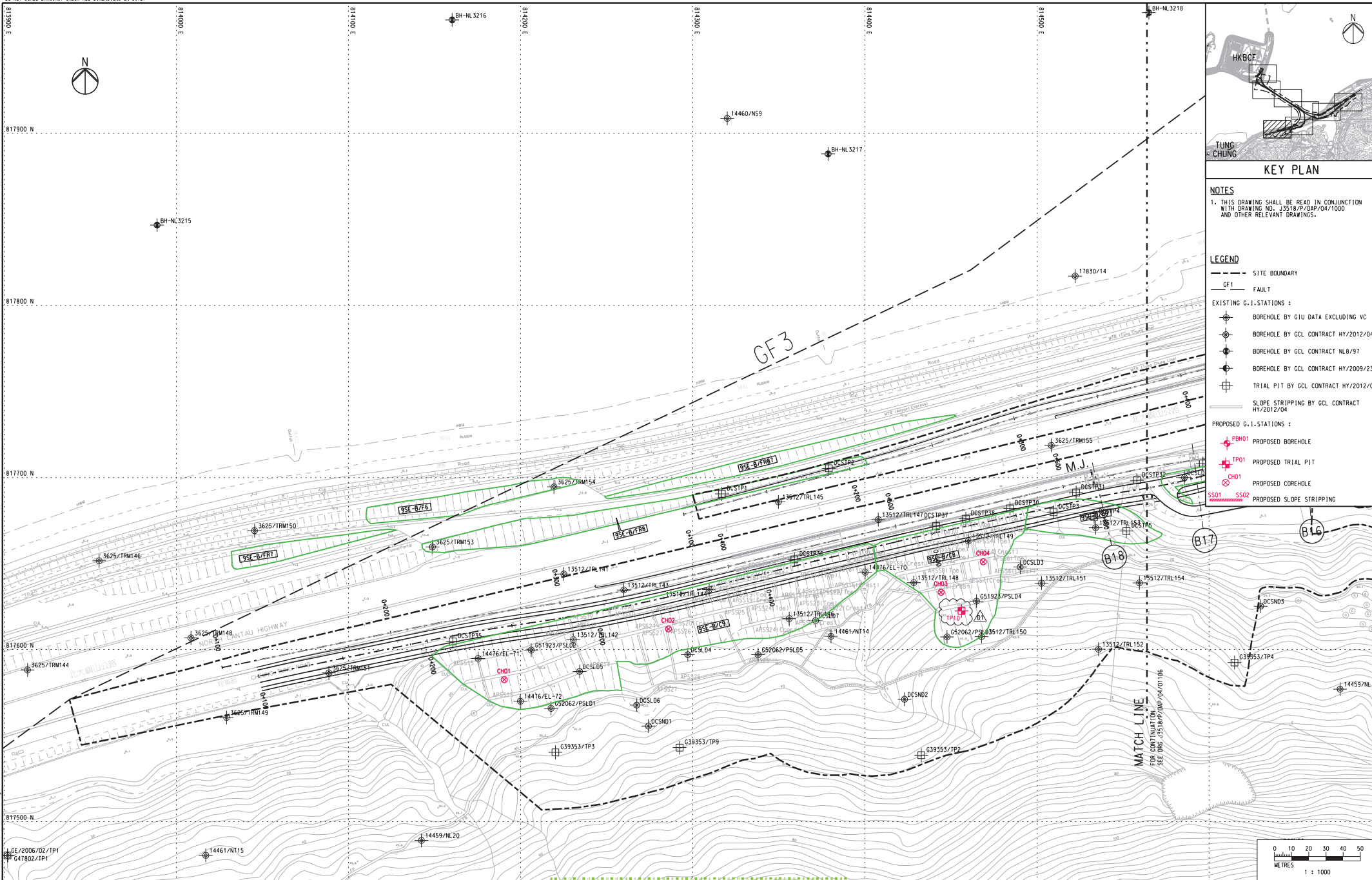
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Drawing title

Figure 1.2f

Drawing no. J3518/P/OAP/04/01104 Rev. C

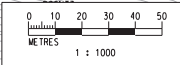
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KEY PLAN

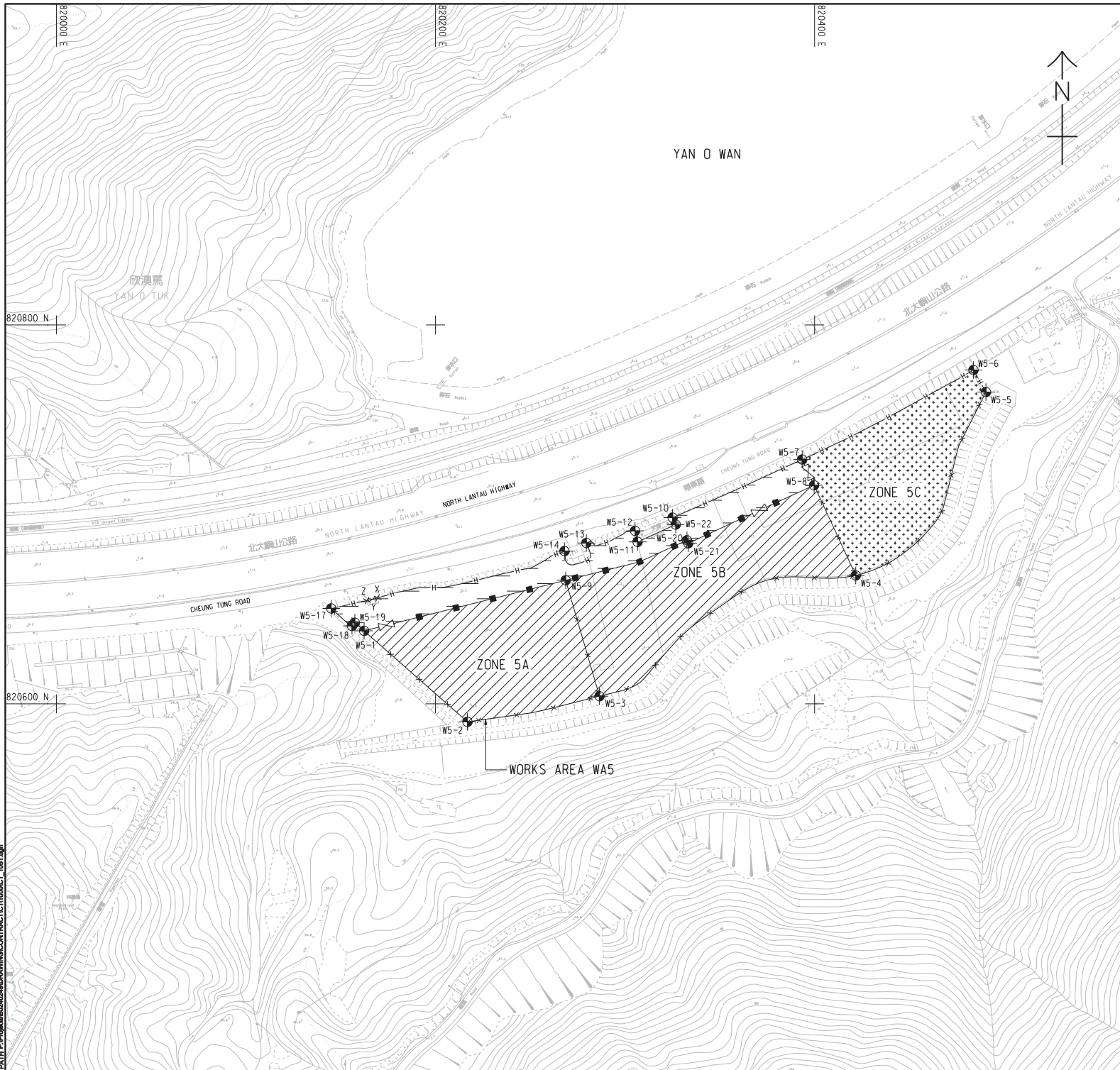
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


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





Rev	Description	By	Date	Rev	Description	By	Date	Drawn	Date	Client	Project Title	Drawing title
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B	SUBMISSION	RC	07/13				Checked	Approved				
C	SUBMISSION	RC	09/13				DS	DOP				
D1	FOR INTERNAL REVIEW	RC	11/13				Scale	1:1000 @ A1 / 1:2000 @ A3				
										Supervising Officer	Contractor	Originator
										AECOM	Gammon	ARUP
											Drawing no. J3518/P/OAP/04/01107	Rev. D1



NOTES:

- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE WORKS AREA KEY PLAN IN SHEET NO. 60240249/C1/1000.
- THE SETTING OUT INFORMATION AND WORKS AREA CONDITIONS SHOWN IN THIS DRAWING ARE FOR REFERENCE ONLY. THE WORKS AREA BOUNDARY SHALL BE IN ACCORDANCE WITH THE ENGINEERING CONDITIONS FOR TEMPORARY GOVERNMENT LAND ALLOCATION NO. T15 619. IN CASE OF DISCREPANCY BETWEEN THE BOUNDARY SHOWN ON THIS DRAWING AND THE BOUNDARY INDICATED ON THE ENGINEERING CONDITIONS, THE LATTER SHALL PREVAIL.
- DEMARCATION OF THE WORKS AREA SHALL BE DETERMINED ON SITE.
- REFER TO HIGHWAYS DEPARTMENT STANDARD DRAWING NOS. H6110 AND H6111 FOR DETAILS OF HOARDING.
- REFER TO HIGHWAYS DEPARTMENT STANDARD DRAWING NOS. H6121 AND H6122 FOR DETAILS OF CHAIN LINK FENCE.
- REFER TO HIGHWAYS DEPARTMENT STANDARD DRAWING NO. H6121 FOR DETAILS OF GATE.
- 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.
- THE LOCATION AND WIDTH OF GATE SHOWN ARE INDICATIVE ONLY AND SHALL BE CONFIRMED BY THE SUPERVISING OFFICER.
- 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.
- THE TENTATIVE OCCUPATION PERIOD SHALL BE REFERRED TO EMPLOYER'S REQUIREMENTS PART 2 AND PART 14 SECTION 1 CLAUSE 1.45A.
- THE WORKS AREAS SHOWN ON THIS DRAWING ARE TO BE SHARE-USED AMONG THE CONTRACTS OF TM-CLK RELATED CONTRACTS. THE AREAS HATCHED WITH  ARE TENTATIVELY ALLOCATED FOR THE USE OF THIS CONTRACT.
- 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.
-  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 W5

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

ISSUE/REVISION

NO.	DATE	DESCRIPTION	CHK.
1	OCT. 12	TENDER DRAWING	CWN

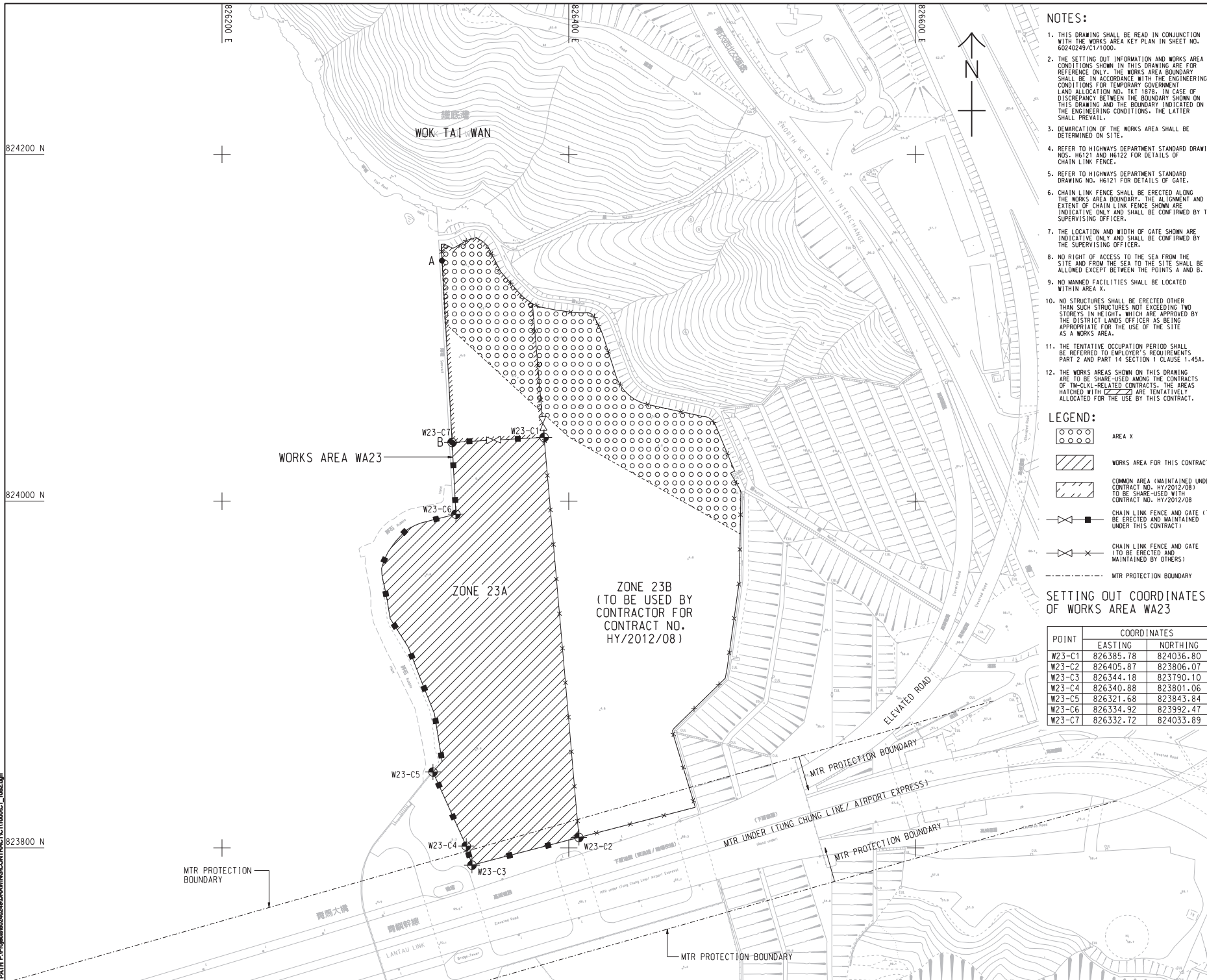
STATUS

SCALE	DIMENSION UNIT
A1:1000	METRES

KEY PLAN

Figure 1.2h

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 - 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 1879. IN CASE OF DISCREPANCY BETWEEN THE BOUNDARY SHOWN ON THIS DRAWING AND THE BOUNDARY INDICATED ON THE ENGINEERING CONDITIONS, THE LATTER SHALL PREVAIL.
 - DEMARICATION OF THE WORKS AREA SHALL BE DETERMINED ON SITE.
 - REFER TO HIGHWAYS DEPARTMENT STANDARD DRAWING NOS. H6121 AND H6122 FOR DETAILS OF CHAIN LINK FENCE.
 - REFER TO HIGHWAYS DEPARTMENT STANDARD DRAWING NO. H6121 FOR DETAILS OF GATE.
 - 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.
 - THE LOCATION AND WIDTH OF GATE SHOWN ARE INDICATIVE ONLY AND SHALL BE CONFIRMED BY THE SUPERVISING OFFICER.
 - 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.
 - NO MANNED FACILITIES SHALL BE LOCATED WITHIN AREA X.
 - 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.
 - THE TENTATIVE OCCUPATION PERIOD SHALL BE REFERRED TO EMPLOYER'S REQUIREMENTS PART 2 AND PART 14 SECTION 1 CLAUSE 1.45A.
 - THE WORKS AREAS SHOWN ON THIS DRAWING ARE TO BE SHARED AMONG THE CONTRACTS OF TM-CLKL-RELATED CONTRACTS. THE AREAS HATCHED WITH [diagonal lines] ARE TENTATIVELY ALLOCATED FOR THE USE BY THIS CONTRACT.

- LEGEND:**
- [Circle with dot] AREA X
 - [Diagonal lines] WORKS AREA FOR THIS CONTRACT
 - [Cross-hatch] COMMON AREA (MAINTAINED UNDER CONTRACT NO. HY/2012/08) TO BE SHARED WITH CONTRACT NO. HY/2012/08
 - [Chain link symbol] CHAIN LINK FENCE AND GATE (TO BE ERECTED AND MAINTAINED UNDER THIS CONTRACT)
 - [Chain link symbol with X] CHAIN LINK FENCE AND GATE (TO BE ERECTED AND MAINTAINED BY OTHERS)
 - [Dashed line] 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	826354.92	823992.47
W23-C7	826332.72	824033.89

AECOM

PROJECT NO.
60240249

CONTRACT NO.
HY/2012/07

TUEN MUN - CHEK LAP KOK LINK

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

CLIENT
路政署 HIGHWAYS DEPARTMENT
港務局 港務工程管理有限公司
Hong Kong - Zhuhai - Hainan Bridge
Hong Kong Project Management Office

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

SUB-CONSULTANTS
[Symbol] [Symbol]

ISSUE/REVISION

NO.	DATE	DESCRIPTION	CHK.
1	OCT. 12	TENDER DRAWING	CWN

STATUS

SCALE
A1:1:1000

DIMENSION UNIT
METRES

KEY PLAN

Figure 1.2i

PROJECT NO.
60240249

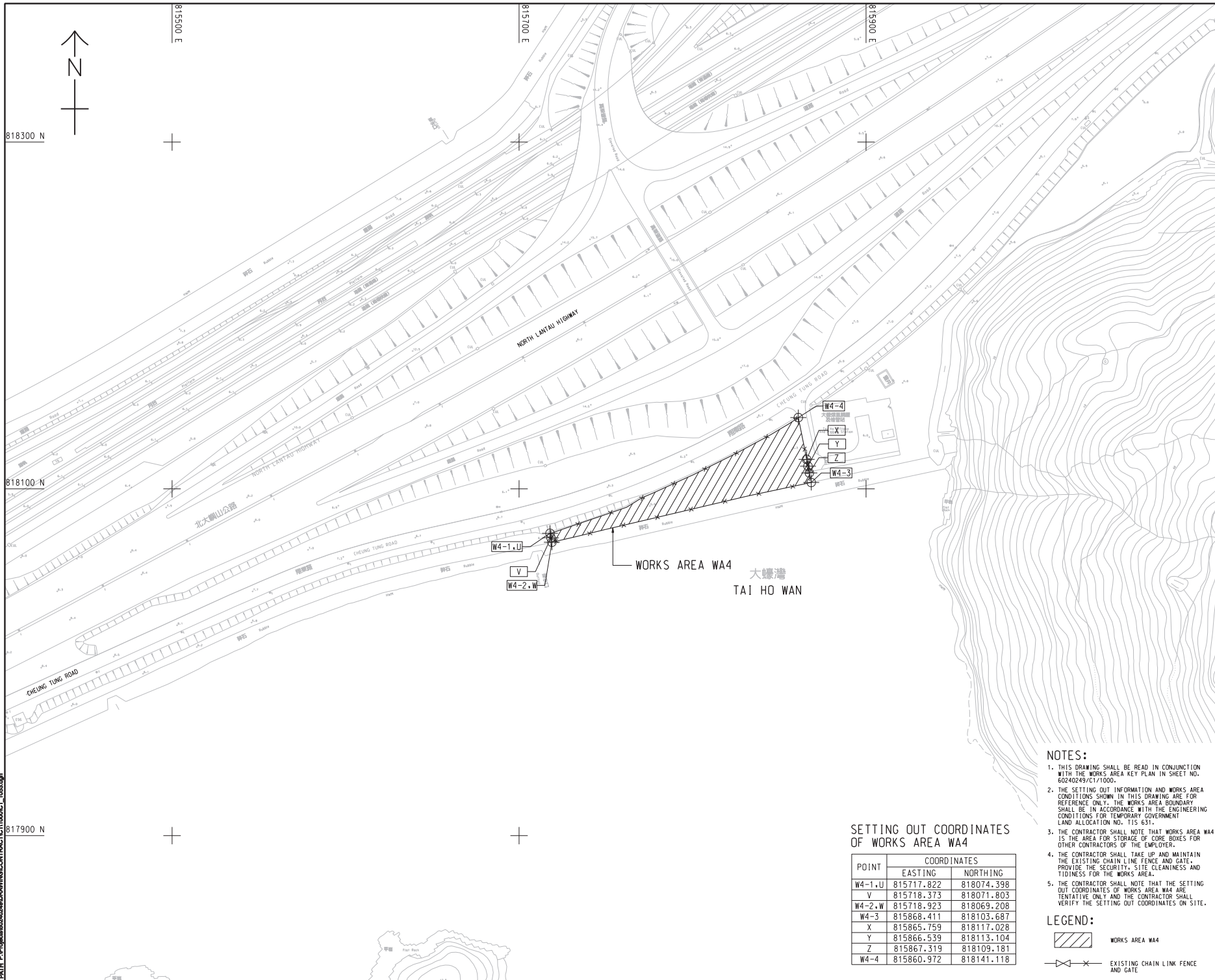
CONTRACT NO.
HY/2012/07

SHEET TITLE
WORKS AREA AND HOARDING PLAN

SHEET NUMBER
60240249/CT1/052

SHEET 2 OF 2

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WORKS AREA WA4
 大螺灣
 TAI HO WAN

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:**
- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE WORKS AREA KEY PLAN IN SHEET NO. 60240249/C1/100.
 - THE SETTING OUT INFORMATION AND WORKS AREA CONDITIONS SHOWN IN THIS DRAWING ARE FOR REFERENCE ONLY. THE WORKS AREA BOUNDARY SHALL BE IN ACCORDANCE WITH THE ENGINEERING CONDITIONS FOR TEMPORARY GOVERNMENT LAND ALLOCATION NO. T15 631.
 - THE CONTRACTOR SHALL NOTE THAT WORKS AREA WA4 IS THE AREA FOR STORAGE OF CORE BOXES FOR OTHER CONTRACTORS OF THE EMPLOYER.
 - THE CONTRACTOR SHALL TAKE UP AND MAINTAIN THE EXISTING CHAIN LINK FENCE AND GATE. PROVIDE THE SECURITY, SITE CLEANLINESS AND TIDINESS FOR THE WORKS AREA.
 - 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
 路政署 DEPARTMENT OF HIGHWAYS
 港務局 港務工程管理局
 Hong Kong + Zhuhai + Hainan Bridge
 Hong Kong Project Management Office

CONSULTANT
 AECOM Asia Company Ltd.
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SUB-CONSULTANTS

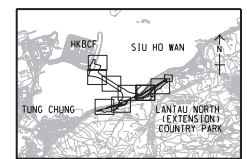
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ISSUE/REVISION

NO.	DATE	DESCRIPTION	CHK.
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PROJECT NO.
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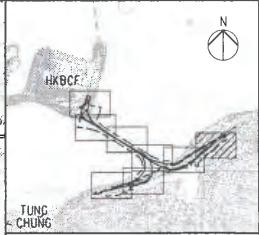
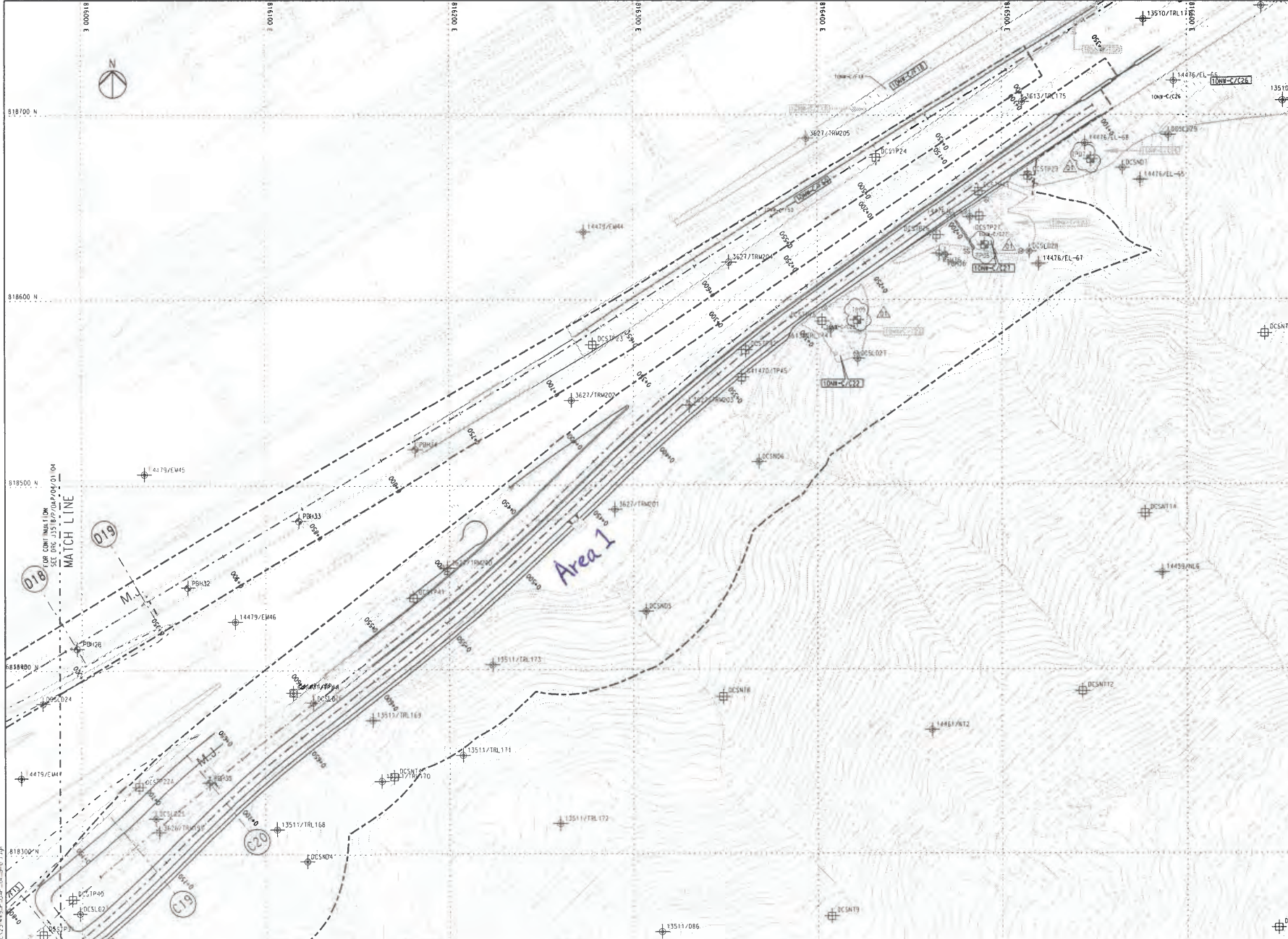
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 HY/2012/07

SHEET TITLE
 WORKS AREA WA4

SHEET NUMBER
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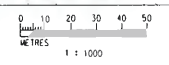
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NOTES
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 - ⊕ BOREHOLE BY GCL CONTRACT HY/2012/04
 - ⊕ BOREHOLE BY GCL CONTRACT N6.8/97
 - ⊕ BOREHOLE BY GCL CONTRACT HY/2009/23
 - ⊕ TRIAL PIT BY GCL CONTRACT HY/2012/04
 - ⊕ SLOPE STRIPPING BY GCL CONTRACT HY/2012/04
- PROPOSED G.I. STATIONS :**
- ⊕ BOREHOLE
 - ⊕ TRIAL PIT
 - ⊕ COREHOLE
 - ⊕ SLOPE STRIPPING



Rev	Description	By	Date	Rev	Description	By	Date
01	ISSUED FOR CONSTRUCTION	RL	31/03				
02	ISSUED FOR CONSTRUCTION	RL	07/13				
03	ISSUED FOR CONSTRUCTION	RL	29/13				
04	ISSUED FOR CONSTRUCTION	RL	19/12				

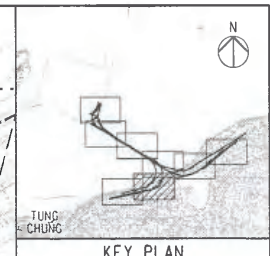
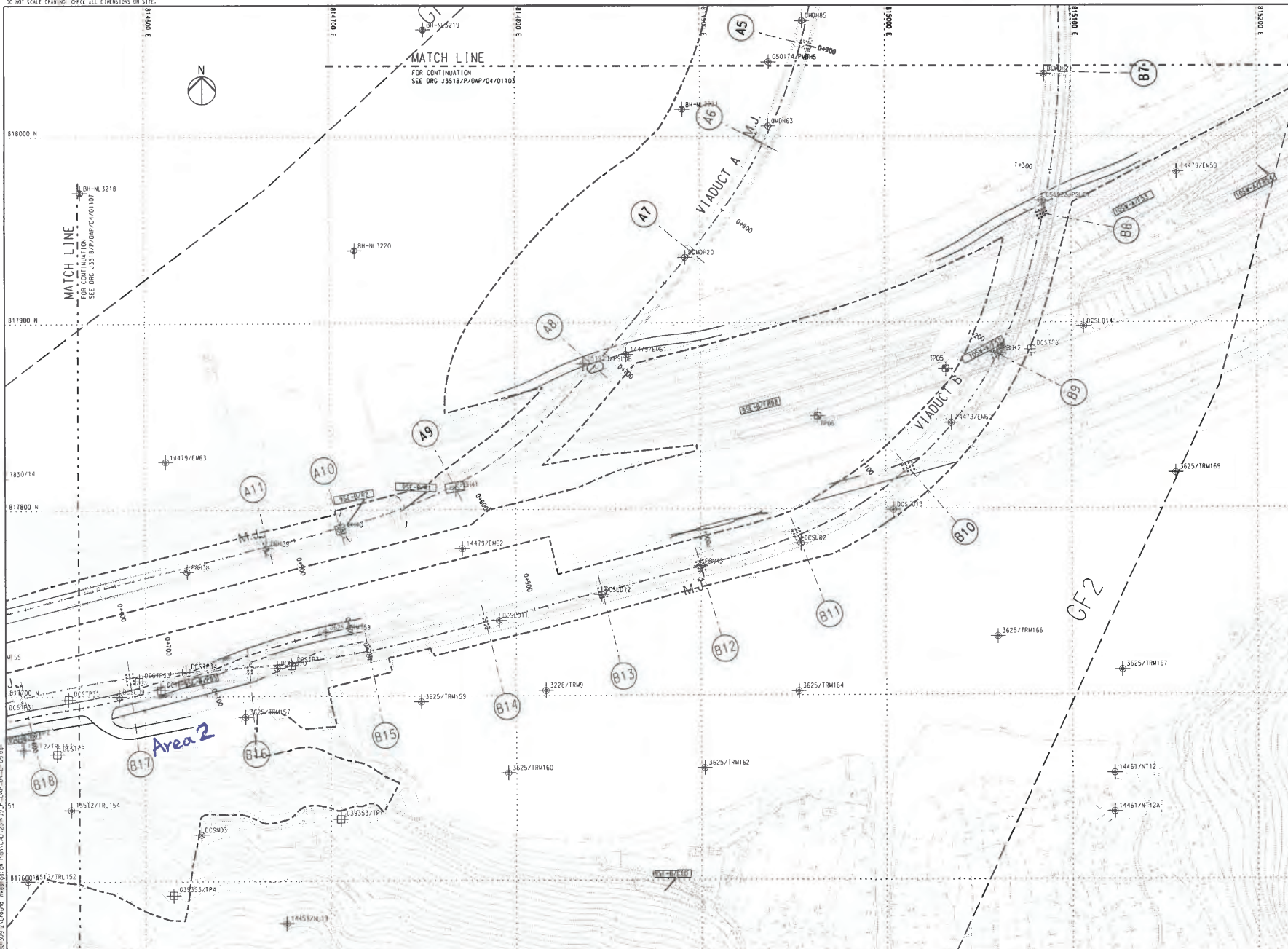
Drawn	Date	Client
RL	07/13	路政署 HIGHWAYS DEPARTMENT 港珠澳大桥香港工程指挥部 Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office
Checked	Approved	
DS	DOP	
Scale	1:1000 @ A1 / 1:2000 @ A3	

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

Drawing title
Figure 1.2k

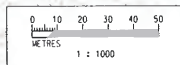
Drawing no. J3518/P/OAP/04/01105 Rev. D1

DO NOT SCALE DRAWING. CHECK ALL DIMENSIONS ON SITE.



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

- LEGEND**
- SITE BOUNDARY
 - GF1- FAULT
 - EXISTING G.I.-STATIONS :
 - ⊕ BOREHOLE BY GIU DATA EXCLUDING VC
 - ⊕ BOREHOLE BY GCL CONTRACT HY/2012/04
 - ⊕ BOREHOLE BY GCL CONTRACT NL8/97
 - ⊕ BOREHOLE BY GCL CONTRACT HY/2009/23
 - ⊕ TRIAL PIT BY GCL CONTRACT HY/2012/04
 - SLOPE STRIPPING BY GCL CONTRACT HY/2012/04
 - PROPOSED G.I.-STATIONS :
 - ⊕ PROPOSED BOREHOLE
 - ⊕ PROPOSED TRIAL PIT
 - ⊕ PROPOSED COREHOLE
 - PROPOSED SLOPE STRIPPING



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 Plot Date: 07/13

Rev	Description	By	Date	Rev	Description	By	Date
1	COMPLETION	RL	07/13				
2	COMPLETION	RL	07/13				
3	COMPLETION	RL	07/13				

Drawn RL 07/13 Checked DS DOP	Date 07/13 Approved DOP	Client 路政署 HIGHWAYS DEPARTMENT 港珠澳大橋香港工程管理有限公司 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	Drawing Title Figure 1.2I
		Supervising Officer AECOM	Contractor Gammon	Originator ARUP

SUMMARY OF CONSTRUCTION WORKS

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

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

Marine Works

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

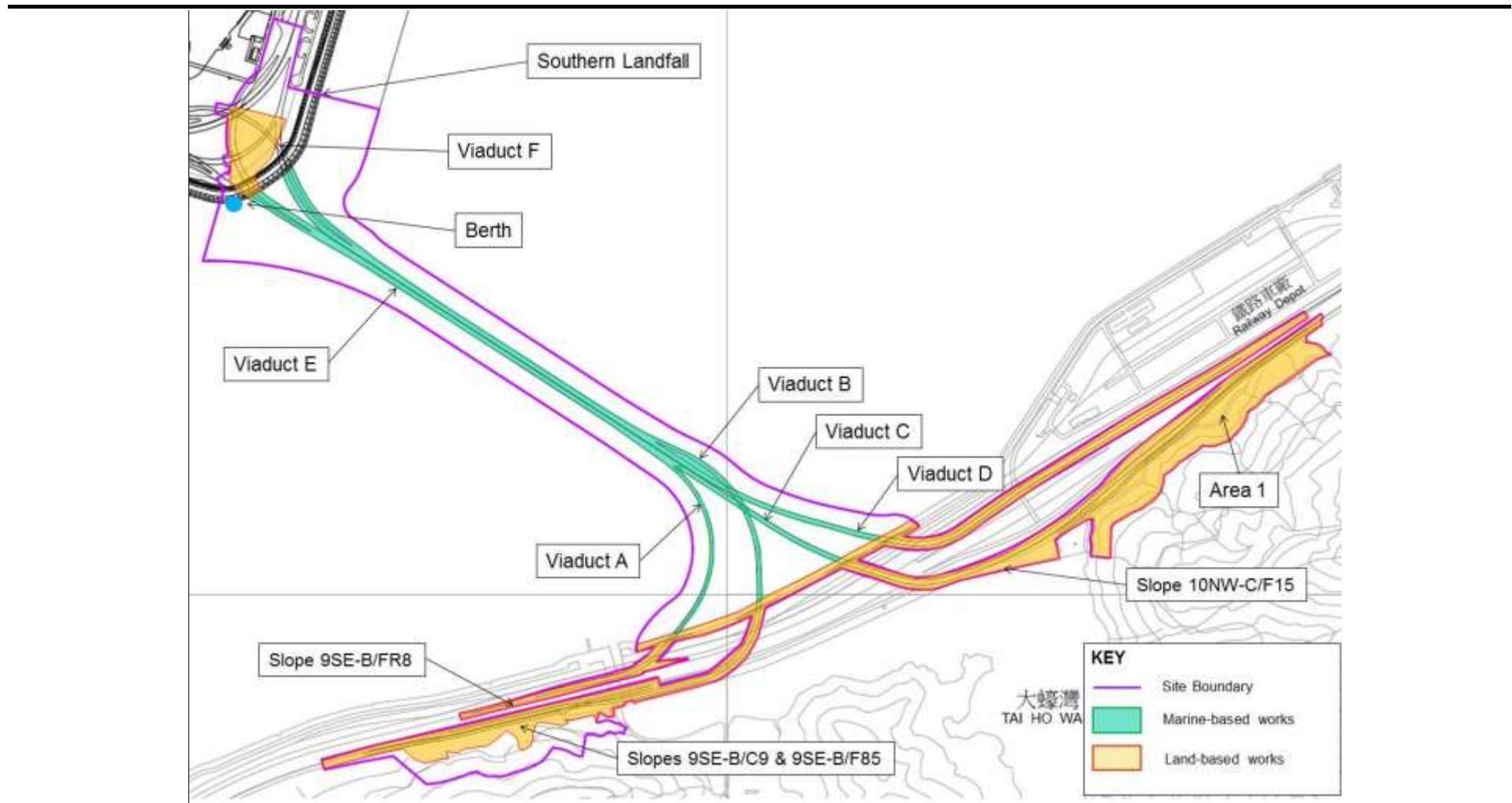
Land-based Works

- Pier construction;
- Re-alignment of Cheung Tung Road;
- Construction of land section of berth at Southern Landfall;
- 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 Construction Activities in the Reporting Month



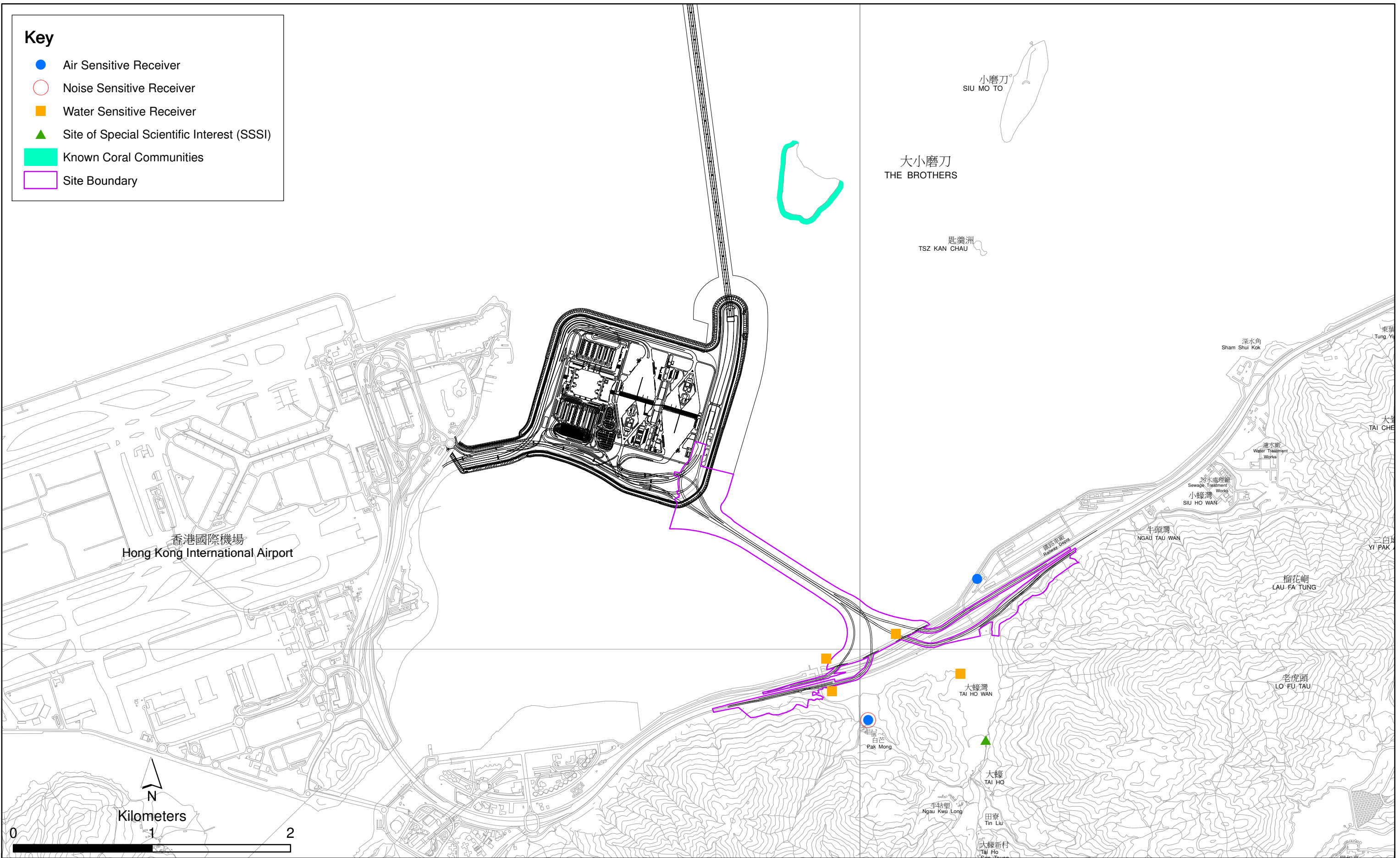


Figure 1.4

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

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	2, 5, 11, 17, 23 and 29 February 2016
ASR 8A	Area 4	On ground at the works area, Area 4	2, 5, 11, 17, 23 and 29 February 2016

High Volume Samplers (HVSs) were used for carried out 1-hour and 24-hour TSP monitoring on 2, 5, 11, 17, 23 and 29 February 2016 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*.

Key

- Alternative Air Monitoring Station
- Site Boundary

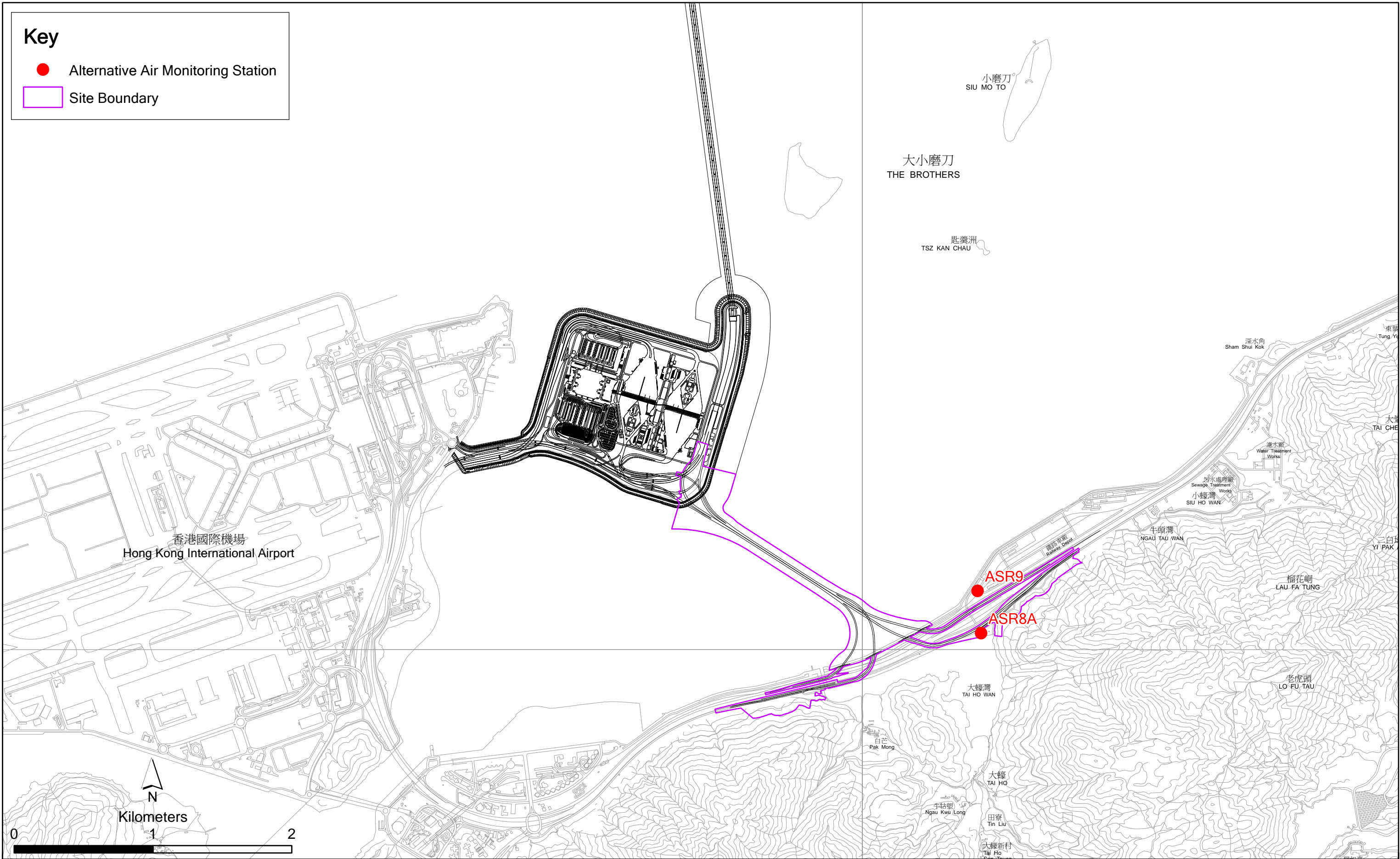


Figure 2.1

Locations of Air Quality Monitoring Stations

Table 2.2 *Air Quality Monitoring Equipment*

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

2.1.2 *Monitoring Schedule for the Reporting Month*

The schedule for air quality monitoring in February 2016 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 ($\mu\text{g}/\text{m}^3$)	Range ($\mu\text{g}/\text{m}^3$)	Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
ASR 8A	89	39 - 153	394	500
ASR 9	105	39 - 172	393	500

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

Monitoring Station	Average ($\mu\text{g}/\text{m}^3$)	Range ($\mu\text{g}/\text{m}^3$)	Action Level ($\mu\text{g}/\text{m}^3$)	Limit Level ($\mu\text{g}/\text{m}^3$)
ASR 8A	64	51 - 100	178	260
ASR 9	73	55 - 114	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 2, 5, 11, 17, 23 and 29 February 2016 by using sound level meter at the designated monitoring station NSR1A (*Figure 2.2; Table 2.5*) in accordance with the requirements stipulated in the Updated EM&A Manual. Acoustic calibrator was deployed to check the sound level meters at a known sound pressure level. Details of the deployed equipment are provided in *Table 2.6*. Copies of the calibration certificates for the equipment are presented in *Appendix E*.

Table 2.5 *Location of Impact Noise Monitoring Station*

Monitoring Station	Location	Description	Parameter	Frequency and Duration	Monitoring Dates
NSR 1A	Pak Mong Village Pavilion	On the ground at the village entrance	30-minute measurement at each monitoring station between 0700 and 1900 on normal weekdays (Monday to Saturday). L_{eq} , L_{10} and L_{90} would be recorded.	At least once per week	2, 5, 11, 17, 23 and 29 February 2016

Table 2.6 *Noise Monitoring Equipment*

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

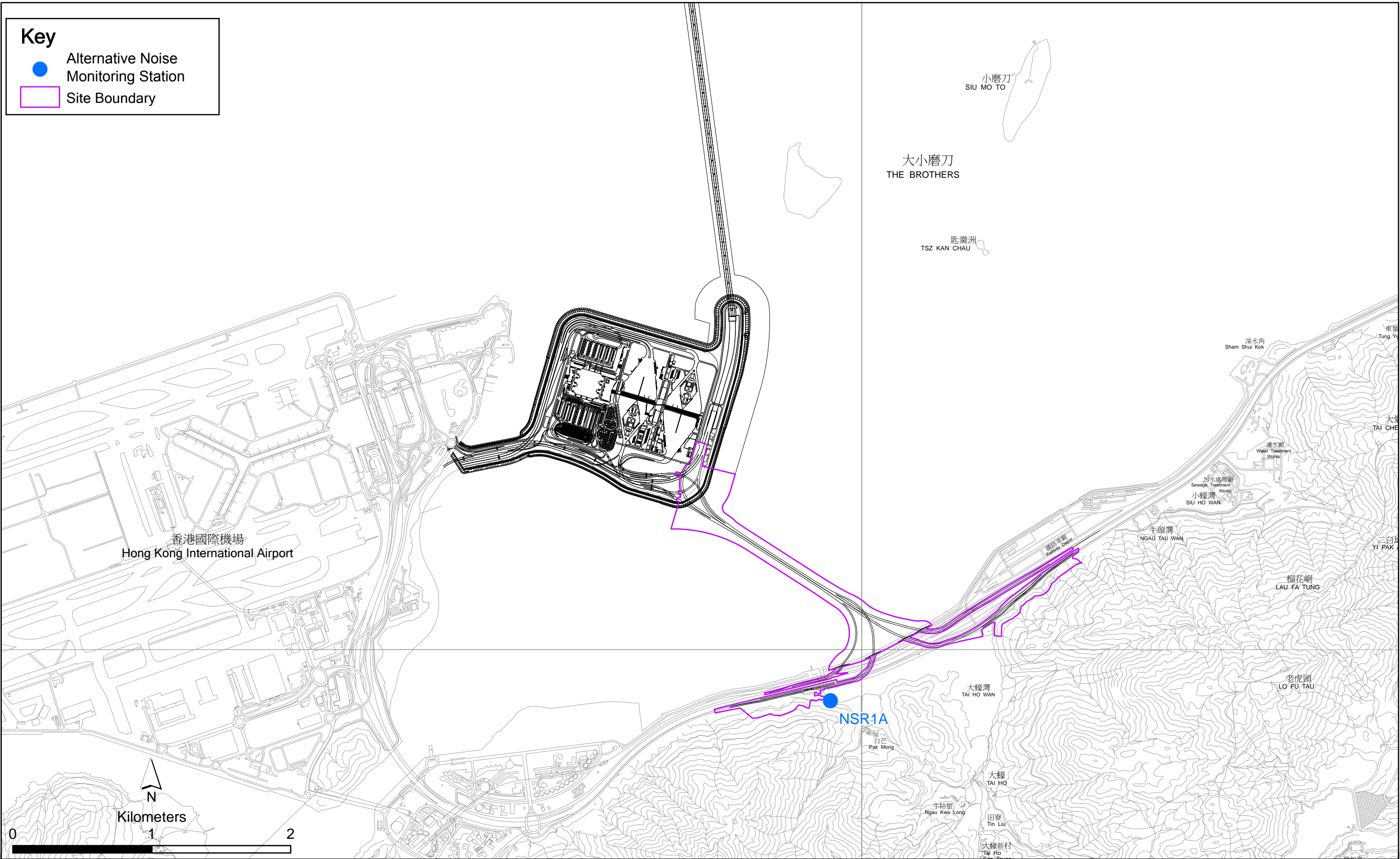


Figure 2.2

Location of Noise Monitoring Station

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), Leq (30mins)	Range, dB(A), Leq (30mins)	Limit Level, dB(A), Leq (30mins)
NSR 1A	60	58 - 63	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*

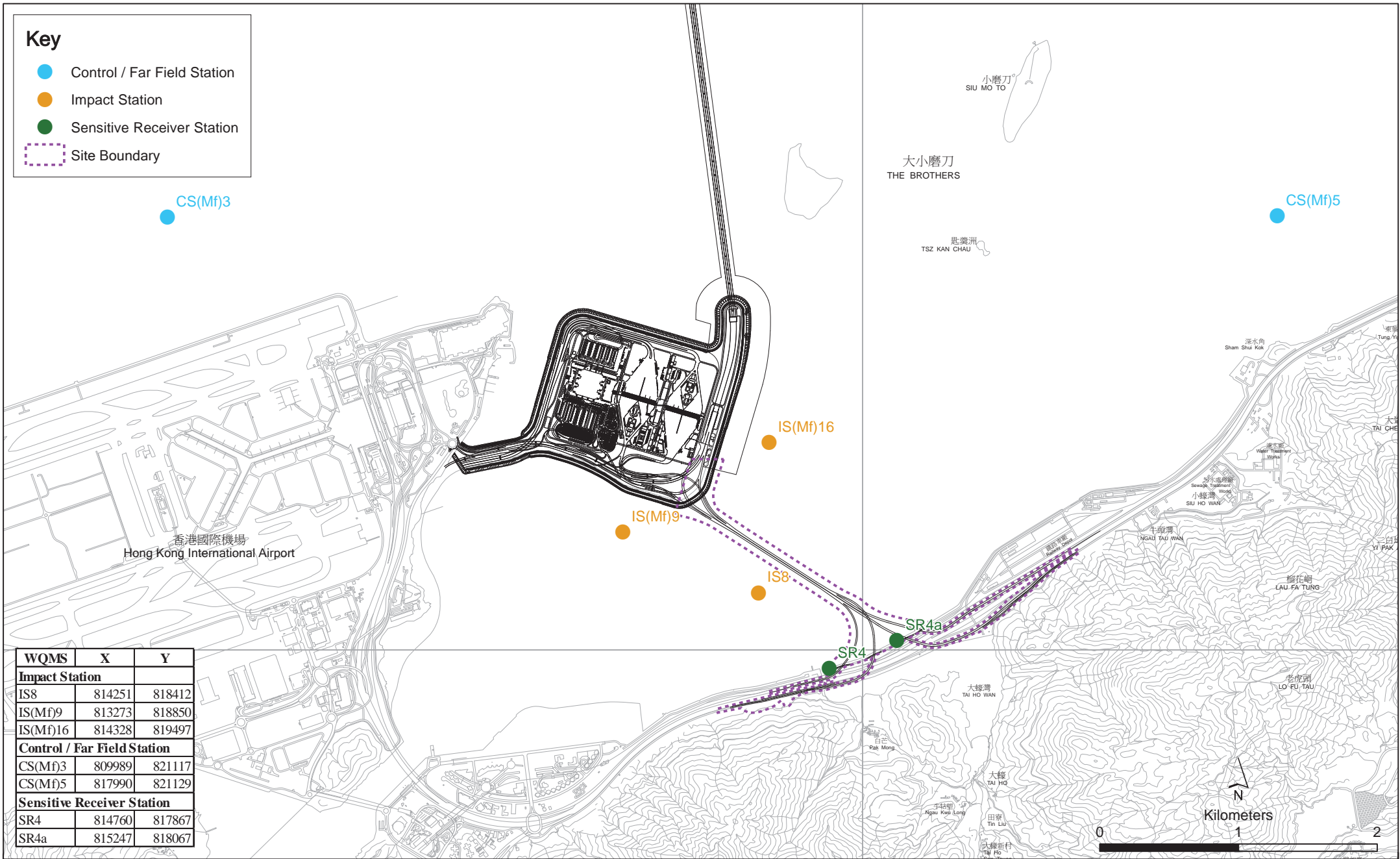
2.3.1 *Monitoring Requirements and Equipment*

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*.

Key

- Control / Far Field Station
- Impact Station
- Sensitive Receiver Station
- Site Boundary



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

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	<ul style="list-style-type: none"> • Temperature(°C) • pH (pH unit) • Turbidity (NTU) • Water depth (m) • Salinity (ppt) • DO (mg/L and % of saturation) • SS (mg/L) 	Impact monitoring: 3 days per week, at mid-flood and mid-ebb tides during the construction period of the Contract	3 water depths: 1m below sea surface, mid-depth and 1m above sea bed. If the water depth is less than 3m, mid-depth sampling only. If water depth less than 6m, mid-depth may be omitted
IS(Mf)16	Impact Station (Close to HKBCF construction site)	814328	819497			
IS8	Impact Station (Close to HKBCF construction site)	814251	818412			
SR4	Sensitive receiver (Tai Ho Inlet)	814760	817867			
SR4a	Sensitive receiver	815247	818067			
CS(Mf)3	Control Station	809989	821117			
CS(Mf)5	Control Station	817990	821129			

*Notes:

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

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

Table 2.9 *Water Quality Monitoring Equipment*

Equipment	Brand and Model
DO and Salinity	YSI Pro2030
Turbidity meter	HACH Model 2100Q
pH meter	Thermo Scientific Orion 2 Star
Positioning Equipment	Koden913MK2 with KBG-3 DGPS antenna
Water Depth Detector	Speedtech Instrument SM-5
Water Sampler	Kemmerer 1520 (1520-C25) 2.2L with messenger

2.3.2 *Monitoring Schedule for the Reporting Month*

The schedule for water quality monitoring in February 2016 is provided in *Appendix F*. WQM on 9 February 2016 was cancelled due to suspension of marine works during holiday.

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*.

There were some depth-averaged SS results recorded higher than the corresponding Action Level, but lower than 120% of upstream control station at the same tide of the same day (summarized in *Table 2.10*). Thus these results are not regarded as exceedances. 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*.

Table 2.10 *Summary of WQM Results Breaching the Action Level without Exceedance*

Date	Tide	Parameter	Station
18 February 2016	Mid-flood	SS	SR4, IS8, IS(Mf)16, IS(Mf)9
18 February 2016	Mid-ebb	SS	SR4, IS8, IS(Mf)16, IS(Mf)9,

2.4 *DOLPHIN MONITORING*

2.4.1 *Monitoring Requirements*

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

2.4.2 *Monitoring equipment*

Table 2.11 summarizes the equipment used for the impact dolphin monitoring.

Table 2.11 *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 2.12* below.

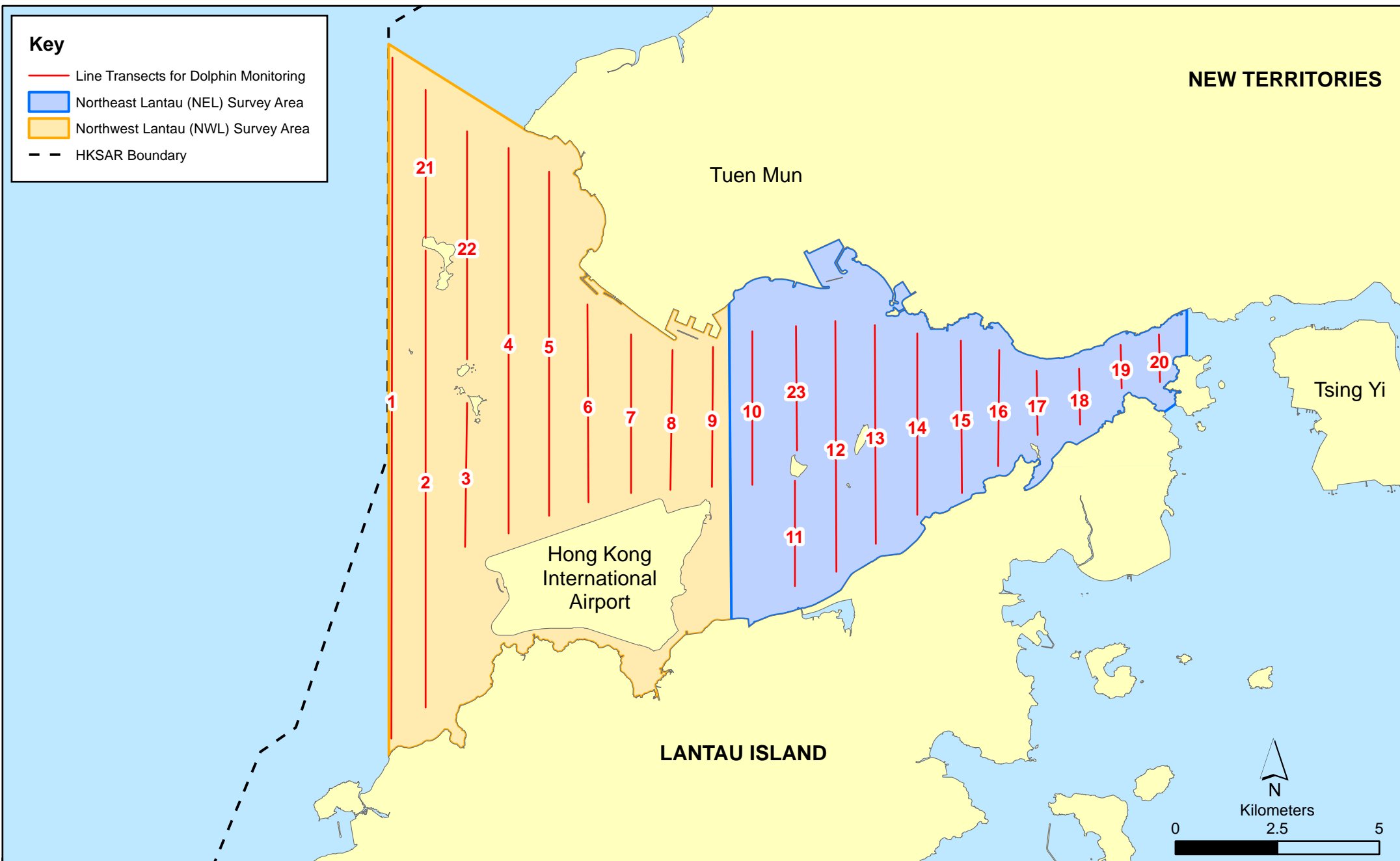


Figure 2.4

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

Table 2.12 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 2, 3, 16 and 22 February 2016 (Appendix F).

2.4.7 *Results and Observations*

A total of 303.87 km of survey effort was collected, with 97.9% 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 February 2016. Among the two areas, 116.17 km and 187.70 km of survey effort were collected from NEL and NWL survey areas respectively. The total survey effort conducted on primary and secondary lines were 219.76 km and 84.11 km respectively. The survey efforts are summarized in Appendix K.

Two (2) groups of eleven (11) Chinese White Dolphins were sighted during the two sets of monitoring surveys in February 2016. All two (2) dolphin sightings were made in NWL, while none was sighted in NEL. During the surveys in February 2016, all sightings were made on primary lines during on-effort search. None of the dolphin groups was associated with operating fishing vessel or 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 February 2016 are shown in Tables 2.13 & 2.14.

Table 2.13 *Individual Survey Event Encounter Rates*

		Encounter rate (STG) (no. of on-effort dolphin sightings per 100 km of survey effort)	Encounter rate (ANI) (no. of dolphins from all on-effort sightings per 100 km of survey effort)
		Primary Lines Only	Primary Lines Only
NEL	Set 1: Feb 2 nd / 3 rd	0.0	0.0
	Set 2: Feb 16 th / 22 nd	0.0	0.0
NWL	Set 1: Feb 2 nd / 3 rd	1.4	6.8
	Set 2: Feb 16 th / 22 nd	1.4	8.7

Note: Dolphin Encounter Rates are deduced from the two sets of surveys (two surveys in each set) in February 2016 in Northeast (NEL) and Northwest Lantau (NWL)

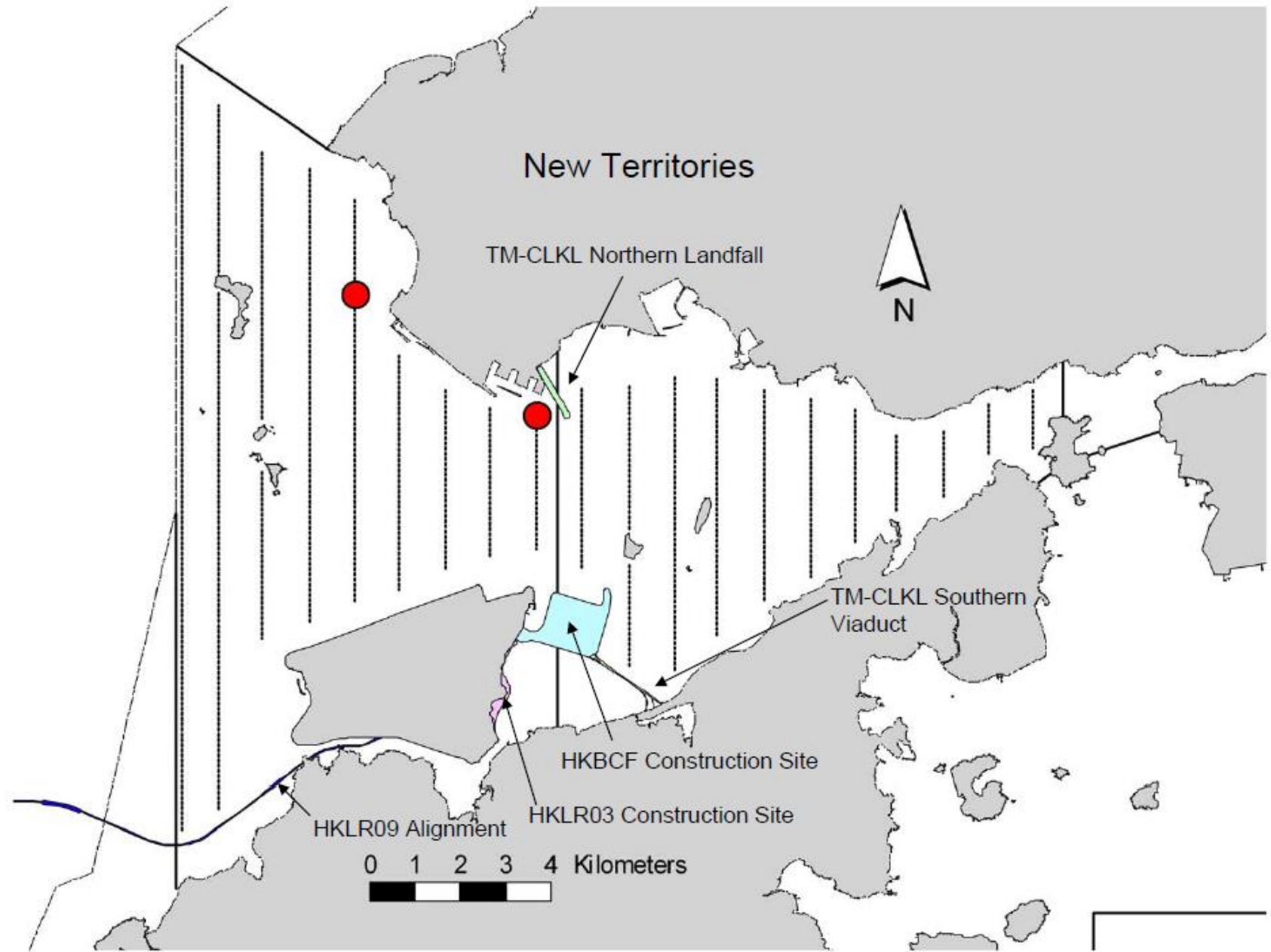


Figure 2.5

Date 4/3/2016

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 February 2016)

Environmental
 Resources
 Management



Table 2.14 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	1.4	1.1	7.7	6.1

Note: Overall dolphin encounter rates (sightings per 100 km of survey effort) from all four surveys are conducted in February 2016 on primary lines only as well as both primary lines and secondary lines in Northeast and Northwest Lantau

One (1) Limit Level Exceedance was observed for the quarterly dolphin monitoring data between December 2015 and February 2016, whilst no unacceptable impact from the construction activities of the TM-CLKL Southern Connection Viaduct Section on Chinese White Dolphins was noticeable from general observations.

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

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 Indo-Pacific humpback dolphin *Sousa chinensis* (i.e. Chinese White Dolphin) were recorded in February 2016 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, 12, 17 and 25 February 2016.

Key observations during the site inspections are summarized in *Table 2.15*.

Table 2.15 Specific Observations Identified during the Weekly Site Inspections in this Reporting Month

Inspection Date	Environmental Observations	Recommendations/ Remarks
4 February 2016	<p>Pier E4</p> <ul style="list-style-type: none"> A drip tray for generator was not plugged. Stagnant water was accumulated in a drip tray for chemical container. A generator was not well placed on decoupling pad. <p>Pier B6</p> <ul style="list-style-type: none"> Chemical containers on deck and pile cap were not placed in drip tray. 	<p>Pier E4</p> <ul style="list-style-type: none"> Drip tray should be plugged. Stagnant water should be removed regularly. Generator on marine platform should be well placed on decoupling pad. <p>Site Access 6A</p> <ul style="list-style-type: none"> Chemical containers should be placed in drip tray.
12 February 2016	<p>Pier D12</p> <ul style="list-style-type: none"> Some chemical containers were not placed in drip tray. <p>Site Access 6A</p> <ul style="list-style-type: none"> A chemical container was not placed in drip tray. <p>Pier D16</p> <ul style="list-style-type: none"> A drip tray for generator was not plugged. <p>Abutment D</p> <ul style="list-style-type: none"> The land was partially dry. 	<p>Pier D12</p> <ul style="list-style-type: none"> Chemical containers should be placed in drip tray. <p>Site Access 6A</p> <ul style="list-style-type: none"> Chemical containers should be placed in drip tray. <p>Pier D16</p> <ul style="list-style-type: none"> Drip tray for generator should be plugged. <p>Abutment D</p> <ul style="list-style-type: none"> Watering was applied immediately.
17 February 2016	<p>Pier E12</p> <ul style="list-style-type: none"> Sandbags were insufficient to avoid runoff. <p>Pier E6</p> <ul style="list-style-type: none"> A chemical container was not placed in drip tray. A drip tray for generator was not plugged. 	<p>Pier E12</p> <ul style="list-style-type: none"> Sandbags were provided immediately. <p>Pier E6</p> <ul style="list-style-type: none"> The chemical container was placed in drip tray immediately. The drip tray was plugged immediately.
25 February 2016	<p>Pier D12</p> <ul style="list-style-type: none"> The ground was partially dry. Refuse was found in drainage. <p>Pier E9</p> <ul style="list-style-type: none"> Some excessive soil was found in gutter. 	<p>Pier D12</p> <ul style="list-style-type: none"> Watering should be applied regularly Refuse in drainage should be cleaned up regularly. <p>Pier E9</p> <ul style="list-style-type: none"> Gutter should be cleaned up regularly.

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) and recyclable materials. 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 2.16*.

Table 2.16 Quantities of Different Waste Generated in the Reporting Period

Month/Year	Inert C&D Materials ^(a) (m ³)	Imported Fill (m ³)	Inert Construction Waste Re-used (m ³)	Non-inert Construction Waste ^(b) (kg)	Recyclable Materials ^(c) (kg)	Chemical Wastes (kg)	Marine Sediment (m ³)	
							Category L	Category M (M _p & M _f)
February 2016	692	0	69	85,890	112	0	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 2.17* below.

Table 2.17 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/I	17 July 2015	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 HY/2012/07 (Area 1 adjacent to Cheng Tung Road, Siu Ho Wan)
Chemical Waste Registration	5213-961-G2380-14	10 Oct 2013	N/A	GCL	Chemical waste produced in Contract HY/2012/07 (Area 2 adjacent to Cheung Tung Road, Pak Mong Village)
Chemical Waste Registration	5213-974-G2588-03	4 Nov 2013	N/A	GCL	Chemical waste produced in Contract HY/2012/07 (WA5 adjacent to Cheung Tung Road, Yam O)
Chemical Waste Registration	5213-951-G2380-17	12 Jun 2014	N/A	GCL	Viaducts A, B, C, D & E
Construction Waste Disposal Account	7017735	10 Jul 2013	N/A	GCL	-
Construction Waste Disposal Account	7019470	3 Mar 2014	N/A	GCL	Vessel CHIT Account
Waste Water Discharge License	WT00019017-2014	13 May 2014	31 May 2019	GCL	Discharge for marine portion
Waste Water Discharge License	WT00019018-2014	13 May 2014	31 May 2019	GCL	Discharge for land portion
Construction Noise Permit for night works and works in general holidays	GW-RW0045-16	27 Jan 16	25 Jul 16	GCL	General works at WA5
Construction Noise Permit for night works and works in general holidays	GW-RS1054-15	30 Sep 2015	29 Mar 2016	GCL	For Load unload at NLH near Viaduct D
Construction Noise Permit for night works and works in general holidays	GW-RS0080-16	1 Feb 2016	30 Apr 2016	GCL	For Broad Permit
Construction Noise Permit for night works and works in general holidays	GW-RS0056-16	1 Feb 2016	31 Mar 2016	GCL	Broad Permit for Segmen. Launching at Land Portion
Construction Noise Permit for night works and works in general holidays	GW-RS0109-16	5 Feb 2016	14 Aug 2016	GCL	Pre-casted pile cap shell installation at E10-E13
Construction Noise Permit for night works and works in general holidays	GW-RS0855-15	12 Aug 2015	11 Feb 2016	GCL	Pier construction at C7, D8, D9
Marine Dumping Permit	EP/MD/16-186	26 Feb 2016	31 Mar 2016	GCL	For dumping Type I (Dedicated Site) and Type II

License/ Permit	License or Permit No.	Date of Issue	Date of Expiry	License/ Permit Holder	Remarks
Marine Dumping Permit	EP/MD/16-138	10 Dec 2015	13 Jun 2016	GCL	sediment 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.

One (1) Limit Level Exceedance was observed for the quarterly dolphin monitoring data between December 2015 and February 2016, whilst no unacceptable impact from the construction activities of the TM-CLKL Southern Connection Viaduct Section on Chinese White Dolphins was noticeable from general observations.

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 no environmental complaint, notification of summons or successful prosecution recorded in the reporting period.

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

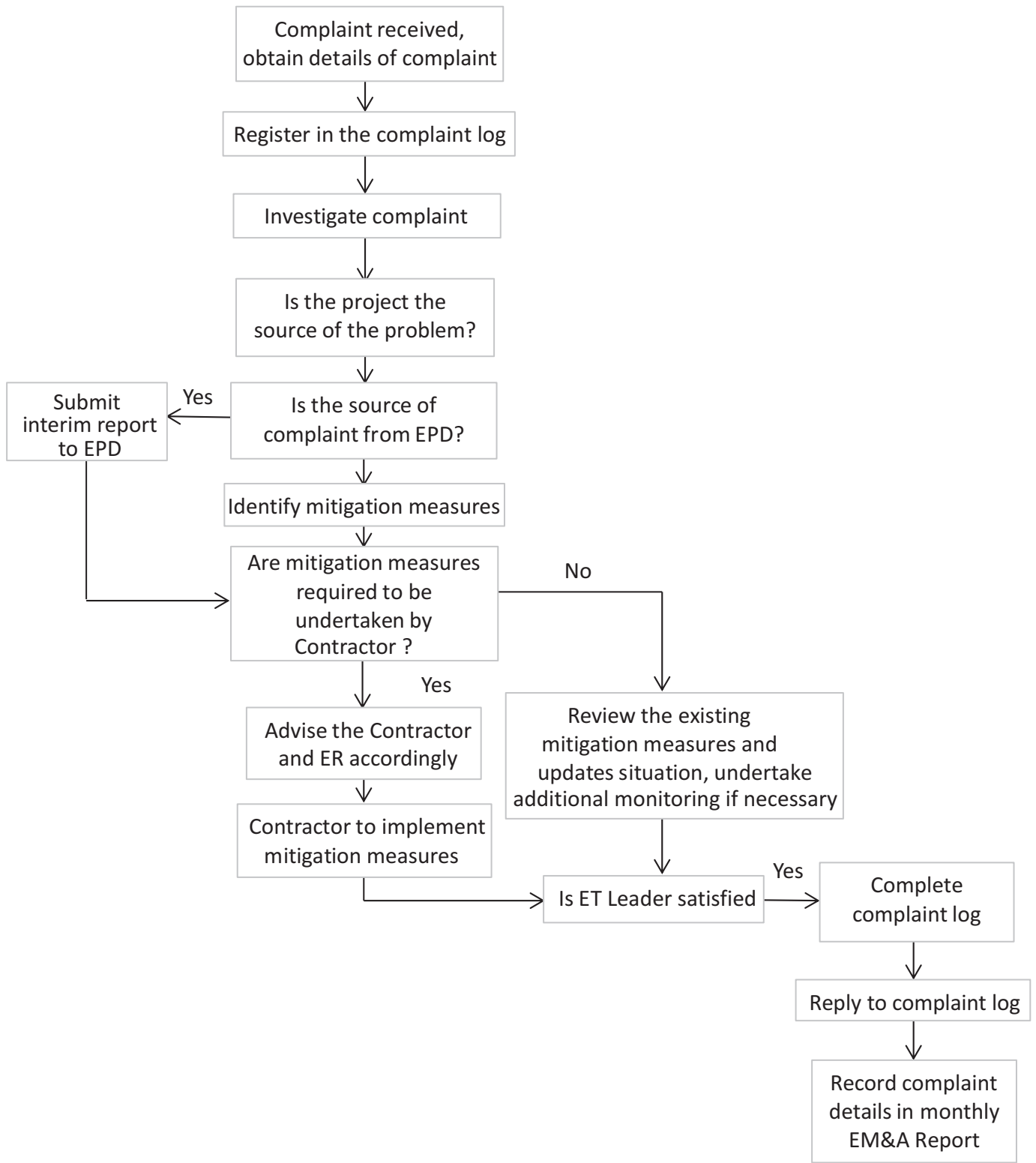


Figure 2.6

Environmental Complaint Handling Procedure

3 *FUTURE KEY ISSUES*

3.1 *CONSTRUCTION PROGRAMME FOR THE COMING MONTHS*

As informed by the Contractor, the major works for this Contract in March 2016 will be:

Marine Works

- Construction and installation of pile caps;
- Uninstallation of marine piling platform;
- Pier construction;
- Construction of marine section of berth at Southern Landfall;
- Launching gantry operation; and
- Installation of deck segment and pier head segment.

Land-based Works

- Pier construction;
- Re-alignment of Cheung Tung Road;
- Construction of land section of berth at Southern Landfall;
- 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 March 2016 are mainly associated with dust, noise, marine water quality, marine ecology and waste management issues.

3.3 *MONITORING SCHEDULE FOR THE COMING MONTH*

The tentative schedules for environmental monitoring in March 2016 are provided in *Appendix F*.

4.1 CONCLUSIONS

This Twenty-eighth Monthly EM&A Report presents the findings of the EM&A activities undertaken during the period from 1 to 29 February 2016 in accordance with the Updated EM&A Manual and the requirements of the Environmental Permits (EP-354/2009/D and EP-353/2009/I).

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.

One (1) Limit Level Exceedance was observed for the quarterly dolphin monitoring data between December 2015 and February 2016. Two (2) groups of eleven (11) Chinese White Dolphins were sighted during the two sets of monitoring surveys in February 2016. No sighting was made in the proximity of the Project's alignment. There was no unacceptable impact from the construction activities of the TM-CLKL Southern Connection Viaduct Section on Chinese White Dolphins noticeable from general observations during the dolphin monitoring in this reporting month.

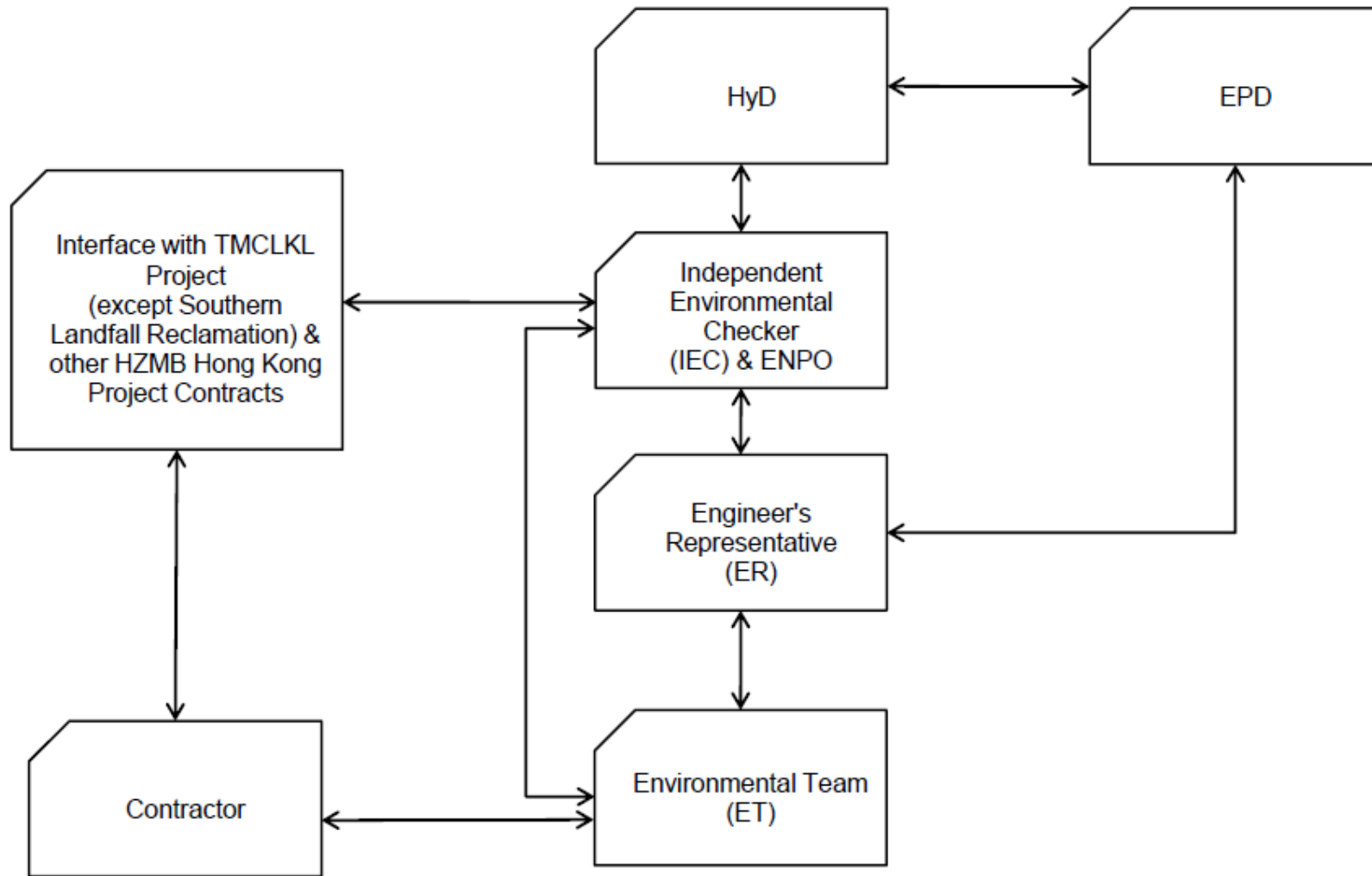
Environmental site inspection was carried out four (4) times in February 2016. Recommendations on remedial actions were given to the Contractor for the deficiencies identified during the site audits.

There was no environmental complaint, 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



↔ Line of Communication

Appendix B

Three-Month Rolling Construction Programme

Activity ID	Activity Name	Orig. Durn.	Act. Start/ FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish/ FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete	2015				2016															
												21	28	04	11	18	25	01	08	15	22	29	07	14	21	28	04	11	18	25	
HY/2012/07 - TM-CLK Link-SC [DWP rF] - Status Update 21-01-2016																															
Contract Key Dates																															
Possession Dates / Access Period																															
POS02-0	Portion A (Commencement of Works+499 days) original	0	21-Jan-16*	0%	0	03-Jun-15			-232	0	0%																				
POS02-1B	Portion A - Area 1B	0	21-Jan-16*	0%	0	14-Sep-15			-128	0	0%																				
POS02-3	Portion A - Area 3	0	21-Jan-16*	0%	0	03-Nov-15			-79	0	0%																				
POS02-6	Portion A - Area 6	0	21-Jan-16*	0%	0	03-Nov-15			-79	0	0%																				
POS03-0	Portion B (Commencement of Works+619 days) original	0	21-Jan-16*	0%	0	02-Oct-15			-111	0	0%																				
Section Completion Dates																															
Vacate Works Area																															
VAC05	Vacate Works Area WA5 (Zone 5C) (Commencement of Works+758 days)	0		0%	0	21-Jan-16*		31-Dec-15	-20	1217	0%																				
General Submissions																															
General Requirements																															
Temporary Works Design																															
PR00130	Unloading Jetty at HKBCF - Working Platform design and approval	90	02-Jun-14 A	75%	23	19-Feb-16	24-Jul-15	19-Aug-15	-148	962	75%																				
Land Works																															
PR00160	Propose/submit a performance review for piled fnds in accordance w/ ETW	101	26-May-14 A	90%	10	02-Feb-16	19-Mar-16	05-Apr-16	48	412	90%																				
Land GI Works																															
PR02204	SQR Sampling & Testing and Approval	110	14-Aug-14 A	95%	6	27-Jan-16	02-Dec-14	08-Dec-14	-335	7	95%																				
PR03110	Trial Pits along Cheung Tung Road	20	21-Oct-13 A	95%	1	21-Jan-16	08-Dec-14	08-Dec-14	-330	11	95%																				
Design Submissions																															
Detailed Design (v18.8 18-08-14)																															
General Submissions																															
ARDD0037-1	Preparation of Seismic Performance Report Viaduct A,B,C,D - AP12.01	50	21-Aug-15 A	0%	50	30-Mar-16	14-Oct-15	22-Dec-15	-71	0	0%																				
ARDD0037-2	IC/SO Approval of Seismic Performance Report Viaduct A,B,C,D - AP12.01	75	31-Mar-16	0%	75	13-Jul-16	23-Dec-15	05-Apr-16	-71	248	0%																				
ARDD0037-4	Preparation of Seismic Performance Report Viaduct E - AP12.02	50	21-Aug-15 A	0%	50	30-Mar-16	14-Oct-15	22-Dec-15	-71	0	0%																				
ARDD0037-5	IC/SO Approval of Seismic Performance Report Viaduct E - AP12.02	75	31-Mar-16	0%	75	13-Jul-16	23-Dec-15	05-Apr-16	-71	248	0%																				
ARDD0037-7	Preparation of Seismic Performance Report Viaduct F - AP12.03	160	21-Aug-15 A	0%	160	31-Aug-16	13-May-15	22-Dec-15	-181	0	0%																				
ARDD0040-1	Preparation of Operation and Maintenance Manual - AP08.00	30	01-Sep-15 A	0%	30	02-Mar-16	11-Nov-15	22-Dec-15	-51	8	0%																				
ARDD0040-2	IC/SO Approval of Operation and Maintenance Manual - AP08.00	75	14-Mar-16	0%	75	27-Jun-16	23-Dec-15	05-Apr-16	-59	261	0%																				
ARDD0042-2	IC/SO Approval of O&M Facility Provisions DDA - BP11.01	75	14-Jan-15 A	50%	38	14-Mar-16	30-Oct-15	22-Dec-15	-59	0	50%																				
Viaduct A																															
Viaduct Design																															
ARDD0435-3	Viaduct A - Coordination and Further Issue of Construction Method and Ter	60	01-Jun-15 A	50%	30	02-Mar-16	17-Mar-15	27-Apr-15	-222	18	50%																				
ARDD0435-4	Viaduct A - Preparation of Draft DDA Working Drawing Set	60	01-Jun-15 A	20%	48	28-Mar-16	19-Feb-15	27-Apr-15	-240	0	20%																				
ARDD0435-6	Viaduct A - Preparation and Coordination of Working Drawing Set	10	29-Mar-16	0%	10	11-Apr-16	28-Apr-15	11-May-15	-240	0	0%																				
ARDD0435-8	Viaduct A - IC/SO Consent of Supplemental Working Drawings Viaduct A	10	12-Apr-16	0%	10	25-Apr-16	30-Jun-15	13-Jul-15	-205	0	0%																				
Viaduct F1 & F3																															
Viaduct Design																															
ARDD0486-2	Viaduct F1 & F3 - Coordination and Further Issue of Construction Method :	60	02-Mar-15 A	10%	54	05-Apr-16	22-Jun-15	03-Sep-15	-153	0	10%																				
ARDD0486-3	Viaduct F1 & F3 - Preparation of Draft Working Drawing Set	60	02-Mar-15 A	10%	54	05-Apr-16	22-Jun-15	03-Sep-15	-153	0	10%																				
ARDD0486-5	Viaduct F1 & F3 - Preparation and Coordination of DDA/Working Drawing	10	06-Apr-16	0%	10	19-Apr-16	04-Sep-15	17-Sep-15	-153	0	0%																				
ARDD0486-7	Viaduct F1 & F3 - IC/SO Consent of Supplemental Working Drawings Viad	10	20-Apr-16	0%	10	03-May-16	18-Sep-15	01-Oct-15	-153	0	0%																				
Viaduct F2, F4 and F5																															
Viaduct Design																															
ARDD0530-2	Viaduct F2, F4 & F5 - GCL/FRE Issue of Construction Method/Temporary	0	21-Jan-16	0%	0	21-Jan-16		11-May-15	-182	0	0%																				
ARDD0530-3	Viaduct F2, F4 & F5 - Coordination and Further Issue of Construction Mett	60	21-Jan-16	0%	60	13-Apr-16	12-May-15	03-Aug-15	-182	0	0%																				
ARDD0530-4	Viaduct F2, F4 & F5 - Preparation of Draft Working Drawing Set	60	21-Jan-16	0%	60	13-Apr-16	12-May-15	03-Aug-15	-182	0	0%																				
ARDD0530-6	Viaduct F2, F4 & F5 - Preparation and Coordination of DDA/Working Draw	10	14-Apr-16	0%	10	27-Apr-16	04-Aug-15	17-Aug-15	-182	0	0%																				
ARDD0530-8	Viaduct F2, F4 & F5 - IC/SO Consent of Supplemental Drawings of Viaduc	10	21-Jan-16	0%	10	03-Feb-16	18-Sep-15	01-Oct-15	-89	60	0%																				
Associated Construction Milestones																															
ARDD0552	Viaduct F2, F4 & F5 - DDA approval ready for Commencement of Pilecaps	0	21-Jan-16	0%	0		24-Jul-15		-181	154	0%																				
Parapet and Utility Trough																															
ARDD0562-4	IC/SO Approval of DDA -DP30.01	75	31-Jul-14 A	100%	0	21-Jan-16	09-Dec-15	09-Dec-15	-30	0	100%																				
ARDD0562-5	IC/SO Approval of DDA -DP30.01	0		0%	0	21-Jan-16		09-Dec-15	-30	36	0%																				
ARDD0566	IC/SO Approval of DDA -DP31.01	75	24-Oct-14 A	80%	15	10-Feb-16	19-Nov-15	09-Dec-15	-45	0	80%																				
ARDD0566-1	IC/SO Approval of DDA -DP31.01	0		0%	0	10-Feb-16		09-Dec-15	-45	93	0%																				

	Actual Work
	Planned Bar
	Critical Bar
	Milestone

Project ID: J3518DWP rE2-M32
Layout: J3518-DWP-3MRP Submission - M32
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 24 Pages)
(Progress as of 21-Jan-16)

Date	Revision	Checked	Approved
01-Dec-15		PKN	KWY
28-Dec-15		PKN	KWY
30-Jan-16		PKN	KWY

DWG. No.:
J3518/GCL/PGM/3MRP-M32

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete	2015												2016													
												2015						2016						2015						2016							
												21	28	04	11	18	25	01	08	15	22	29	07	04	11	18	25										
Slopeworks for Viaduct B: 9SE- B/C8, B/C9, B/F9, B/F85+ 10SW-A/F52, A/F53																																					
ARDD0580-5	Preparation of Slope A/F52 Submission - CP12.03	20	10-Feb-15 A	100%	0	21-Jan-16	21-May-19	21-May-19	869	869	100%																										
ARDD0580-6	IC/SO Approval of Slope - CP12.03	75	21-Sep-15 A	60%	30	02-Mar-16	31-Jul-15	10-Sep-15	-124	0	60%																										
Slopeworks for Viaduct D: 10NW -C/R4, C/F9, C/F10, C/F11, C/F17, C/F50																																					
ARDD0603	IC/SO Approval of Slope Combined AIP/DDA -CP14.01	75	16-Dec-14 A	95%	4	26-Jan-16	02-Jun-15	05-Jun-15	-167	0	95%																										
ARDD0603-1	IC/SO Approval of Slope Combined AIP/DDA -CP14.01	0		0%	0	26-Jan-16		05-Jun-15	-167	0	0%																										
ARDD0604-2	IC/SO Approval of Slope Combined AIP/DDA -CP14.02	75	18-May-15 A	75%	19	16-Feb-16	15-Sep-15	09-Oct-15	-92	0	75%																										
ARDD0604-3	IC/SO Approval of Revised Slope Combined AIP/DDA -CP14.02	0		0%	0	16-Feb-16		09-Oct-15	-92	75	0%																										
Waterworks, Drainage & Utility Diversions																																					
ARDD0629	IC/SO Approval of Waterworks, Drainage & Utility DDA - BP20.01	75	22-Jul-14 A	95%	4	26-Jan-16	19-Oct-15	22-Oct-15	-68	0	95%																										
ARDD0629-1	IC/SO Approval of Waterworks, Drainage & Utility DDA - BP20.01	0		0%	0	26-Jan-16		22-Oct-15	-68	0	0%																										
ARDD0629-2	Gov't Approval of Submissions for Waterworks, Drainage & Utility Diversior	75	02-Jan-14 A	95%	4	26-Jan-16	19-Oct-15	22-Oct-15	-68	0	95%																										
Viaduct Approach Ramp Retaining Walls																																					
Approach Ramp B																																					
ARDD0664	Approach B - IC/SO Approval of Approach Ramp B DDA -DP21.01	75	14-Oct-14 A	80%	15	10-Feb-16	09-Feb-16	29-Feb-16	13	0	80%																										
ARDD0664-1	Approach B - IC/SO Approval of Approach Ramp B DDA -DP21.01	0		0%	0	10-Feb-16		29-Feb-16	13	114	0%																										
Approach A																																					
ARDD0670	Approach A - IC/SO Approval of Approach Ramp A DDA - DP20.01	75	03-Oct-14 A	90%	8	01-Feb-16	07-Sep-15	16-Sep-15	-98	0	90%																										
ARDD0670-1	Approach A - IC/SO Approval of Approach Ramp A DDA - DP20.01	0		0%	0	01-Feb-16		16-Sep-15	-98	0	0%																										
Approach F																																					
ARDD0676	Approach F - IC/SO Approval of Approach Ramp F DDA -DP24.01	75	23-Dec-14 A	70%	23	22-Feb-16	20-Feb-15	24-Mar-15	-239	0	70%																										
ARDD0676-1	Approach F - IC/SO Approval of Approach Ramp F DDA -DP24.01	0		0%	0	22-Feb-16		30-Dec-15	-38	197	0%																										
Landscape																																					
ARDD0701	Water Supply Application to WSD	0		0%	0	21-Jan-16		05-Jan-16	-11	0	0%																										
ARDD0702	Gov't Approval of LVIA	40	21-Jan-16	0%	40	16-Mar-16	06-Jan-16	01-Mar-16	-11	151	0%																										
Segment Target Geometry And Erection Engineering																																					
Viaduct A																																					
ARDD0716	Viaduct A - Confirmation of Erection Sequence from Freyssinet	0		0%	0	21-Jan-16		21-May-19	869	869	0%																										
ARDD0717	Viaduct A - Erection Sequence Analysis	20	21-Jan-16 A	0%	20	17-Feb-16	03-Mar-15	30-Mar-15	-232	0	0%																										
ARDD0718	Viaduct A - Target Geometry Analysis	20	18-Feb-16	0%	20	16-Mar-16	31-Mar-15	27-Apr-15	-232	0	0%																										
ARDD0719	Viaduct A - Segment Geometry Schedules	10	17-Mar-16	0%	10	30-Mar-16	28-Apr-15	11-May-15	-232	8	0%																										
ARDD0719-1	Viaduct A - Issue of Pierhead Segments Bridge A1, A2	0		0%	0	11-Apr-16		13-Jul-15	-195	10	0%																										
ARDD0719-3	Viaduct A - Issue of Casting Data and Segment Catalogue Bridge A2 (Final	0		0%	0	11-Apr-16		13-Jul-15	-195	10	0%																										
ARDD0719-4	Viaduct A - Issue of Casting Data and Segment Catalogue Bridge A1 (Final	0		0%	0	11-Apr-16		11-May-15	-240	0	0%																										
ARDD0719-5	Viaduct A - Issue Erection Manual	40	12-Apr-16	0%	40	06-Jun-16	12-May-15	06-Jul-15	-240	1	0%																										
Viaduct C																																					
ARDD0724-5	Viaduct C - Issue Erection Manual	30	21-Dec-15 A	5%	29	01-Mar-16	02-Oct-15	11-Nov-15	-79	23	5%																										
Viaduct E5 and E6																																					
ARDD0734	Viaduct E5 & E6 - Segment Geometry Schedules	10	05-May-14 A	90%	1	21-Jan-16	18-Jun-15	18-Jun-15	-155	3	90%																										
TGP0570	Viaduct E5 & E6 - Issue of Optimised Casting Data and Segment Catalogu	40	30-Apr-15 A	90%	4	26-Jan-16	15-Jun-15	18-Jun-15	-158	0	90%																										
TGP0590	Viaduct E5 & E6 - Issue Erection Manual	10	27-Jan-16	0%	10	09-Feb-16	19-Jun-15	02-Jul-15	-158	48	0%																										
Viaduct E7 & E8																																					
ARDD0739	Viaduct E7 & E8 - Segment Geometry Schedules	10	05-May-14 A	90%	1	21-Jan-16	18-Jun-15	18-Jun-15	-155	0	90%																										
TGP0760	Viaduct E7 & E8 - Issue of Optimised Casting Data and Segment Catalogu	40	31-Jul-15 A	90%	4	26-Jan-16	30-Aug-16	02-Sep-16	158	301	90%																										
TGP0790	Viaduct E7 & E8 - Issue Erection Manual	10	22-Jan-16	0%	10	04-Feb-16	19-Jun-15	02-Jul-15	-155	51	0%																										
Viaduct E2																																					
TGP0290	Viaduct E2 - Issue of Erection Manual	10	21-Jan-16	0%	10	03-Feb-16	18-Feb-15	03-Mar-15	-241	0	0%																										
Viaduct F																																					
ARDD0751	Viaduct F - Confirmation of Erection Sequence from Freyssinet	0		0%	0	21-Jan-16		11-May-15	-182	0	0%																										
ARDD0752	Viaduct F - Erection Sequence Analysis	30	21-Jan-16	0%	30	02-Mar-16	12-May-15	22-Jun-15	-182	0	0%																										
ARDD0753	Viaduct F - Target Geometry Analysis	30	03-Mar-16	0%	30	13-Apr-16	23-Jun-15	03-Aug-15	-182	0	0%																										
ARDD0754	Viaduct F - Segment Geometry Schedules	10	14-Apr-16	0%	10	27-Apr-16	04-Aug-15	17-Aug-15	-182	0	0%																										
Major Procurement																																					
Marine Permanent Navigaion Aids																																					
PR65011	Design & Approvals for Marine Navigation Aids	150	23-Oct-13 A	70%	45	16-Mar-16	29-Jul-15	19-Sep-15	-144	0	55%																										
PR65012	Procure & Deliver Marine Navigation Aids	240	17-Mar-16	0%	240	06-Jan-17	21-Sep-15	15-Jul-16	-144	0	0%																										
Deck Segment Installation Equipment																																					
Launching Gantry 2																																					
PR67043	Launching Gantry 2 Fabrication	142	16-Jun-14 A	100%	0	21-Jan-16	21-May-19	21-May-19	984	984	100%																										

■ Actual Work
■ Planned Bar
■ Critical Bar
◆ Milestone

Project ID: J3518DWP rE2-M32
 Layout: J3518-DWP-3MRP Submission - M32
 Filter: TASK filters: 3-Month Lookahead, No CC
 Milestones, No Level of Effort.

Tuen Mun - Chek Lap Kok Link - Southern Connection
3-Month Rolling Programme (Page 2 of 24 Pages)
(Progress as of 21-Jan-16)

Date	Revision	Checked	Approved
01-Dec-15		PKN	KWY
28-Dec-15		PKN	KWY
30-Jan-16		PKN	KWY

DWG. No.:
J3518/GCL/PGM/3MRP-M32

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete	2015												2016													
												2015					2016					2016					2016					2016					
												21	28	04	11	18	01	08	15	22	29	05	12	19	26	02	09	16	23	30	06	13	20	27	03	10	17
PR67044	Launching Gantry 2 Delivery	12	10-Apr-15 A	0%	12	03-Feb-16	07-May-19	21-May-19	972	972	0%	[Gantt Bar]																									
Lifting Frames																																					
Lifting Frames 3 & 4																																					
PR68017	Lifting Frame 3&4 Fabrication	85	29-Sep-14 A	67%	28	26-Feb-16	16-Mar-15	22-Apr-15	-251	0	67%	[Gantt Bar]																									
PR68018	Lifting Frame 3&4 Delivery	30	26-Feb-16	0%	30	06-Apr-16	23-Apr-15	29-May-15	-251	20	0%	[Gantt Bar]																									
Lifting Frames 5 & 6																																					
PR68019	Lifting Frame 5&6 Design	70	21-Jan-16	0%	70	19-Apr-16	20-Jan-15	18-Apr-15	-296	0	0%	[Gantt Bar]																									
PR68020	Lifting Frame 5&6 Approval	60	20-Apr-16	0%	60	02-Jul-16	20-Apr-15	02-Jul-15	-296	0	0%	[Gantt Bar]																									
Unloading Frames																																					
Type 1 (at B6 and D6)																																					
PR69110	Unloading Frame Type 1 Fabrication	80	23-Feb-15 A	28%	58	05-Apr-16	06-Oct-15	12-Dec-15	-88	0	28%	[Gantt Bar]																									
PR69120	Unloading Frame Type 1 Delivery (UF-1A & UF-1B)	24	05-Apr-16	0%	24	04-May-16	14-Dec-15	13-Jan-16	-88	0	0%	[Gantt Bar]																									
Type 2 (at Bridge E1)																																					
PR69170	Unloading Frame Type 2 Design	50	21-Jan-16	0%	50	22-Mar-16	04-Nov-15	04-Jan-16	-64	0	0%	[Gantt Bar]																									
PR69180	Unloading Frame Type 2 Fabrication	80	29-Feb-16	0%	80	07-Jun-16	09-Dec-15	17-Mar-16	-64	0	0%	[Gantt Bar]																									
Deck Segments & Precast Pile Cap Shells																																					
Preliminaries																																					
MBBE0050	Precast Segment Mould Fabrication & Erection (Viaduct A)	52	24-Dec-14 A	100%	0	21-Jan-16	13-Jul-15	13-Jul-15	-157	984	100%	[Gantt Bar]																									
MBBE0054	Precast Segment Mould Design (Viaduct F1 to F5)	42	21-Jan-16	0%	42	12-Mar-16	25-Aug-15	15-Oct-15	-121	0	0%	[Gantt Bar]																									
MBBE0056	Precast Segment Mould Fabrication & Erection (Viaduct F1 to F5)	52	02-Feb-16	0%	52	09-Apr-16	07-Sep-15	09-Nov-15	-121	51	0%	[Gantt Bar]																									
Viaduct B																																					
Precast Deck Segments																																					
MBBE130-1	B: Progressive Match Cast Segment Manufacture & Delivery remaining segments	597	24-Oct-14 A	51.09%	292	14-Jan-17	07-Jul-15	30-Jun-16	-163	20	10.48%	[Gantt Bar]																									
Viaduct E																																					
Precast Pile Caps																																					
Viaduct E2																																					
PP7260	Production of Viaduct E2 Marine Precast Pile Cap Shells	80	12-Nov-14 A	33%	54	30-Mar-16	13-Mar-19	21-May-19	930	930	33%	[Gantt Bar]																									
Viaduct E5, E6, E7 & E8																																					
PP7120	Production of Viaduct E5 & E6 Marine Precast Pile Cap Shells	151	13-Apr-15 A	59.6%	61	08-Apr-16	03-Feb-15	22-Apr-15	-284	923	0%	[Gantt Bar]																									
PP7190	Production of Viaduct E7 & E8 Marine Precast Pile Cap Shells	151	13-Apr-15 A	45.7%	82	04-May-16	10-Nov-16	18-Feb-17	238	902	0%	[Gantt Bar]																									
Precast Deck Segments																																					
MBE00014	Viaduct E2 - Pier Head Segment Casting	0	21-Jan-16	0%	0		21-May-19		984	984	0%	[Gantt Bar]																									
Viaduct E1																																					
MBEE0130-5	E1: Progressive Segment Manufacture & Delivery remaining segments (18)	456	08-Apr-15 A	60%	182	02-Sep-16	03-Oct-15	18-May-16	-90	52	60%	[Gantt Bar]																									
Viaduct E2																																					
MBEE0130-7	E2: Progressive Segment Manufacture & Delivery remaining segments (41)	376	06-May-15 A	3.6%	362	11-Apr-17	06-Mar-15	30-May-16	-260	622	3.6%	[Gantt Bar]																									
Viaduct E5, E6, E7 & E8																																					
MBEE0130-9	E5-6-7-8: Progressive Segment Manufacture & Delivery remaining segments	360	06-May-15 A	3.6%	347	23-Mar-17	06-Jul-15	03-Sep-16	-164	637	3.6%	[Gantt Bar]																									
Viaduct D																																					
Precast Deck Segments																																					
MBDE0130-7	D: Progressive Match Cast Segment Manufacture & Delivery (311 Nr)	315	05-May-15 A	22.6%	244	16-Nov-16	13-Aug-15	11-Jun-16	-131	10	22.6%	[Gantt Bar]																									
Viaduct C																																					
Precast Deck Segments																																					
MBCE0130-1	C: Progressive Segment Manufacture & Delivery remaining segments (38E)	265	19-May-15 A	14.7%	226	27-Oct-16	05-Oct-15	12-Jul-16	-89	43	14.7%	[Gantt Bar]																									
Viaduct A																																					
Precast Pile Caps																																					
MBAC0130-1	A: Progressive Pile Cap Shell Manufacture & Delivery remaining shells	274	09-Apr-15 A	57.1%	118	17-Jun-16	21-Dec-18	21-May-19	866	866	57.1%	[Gantt Bar]																									
Parapets																																					
PP6010	Procure Sub-Contractor for Precast Parapets/Barriers	40	21-Aug-15 A	0%	40	10-Mar-16	24-Oct-15	09-Dec-15	-73	80	0%	[Gantt Bar]																									
PP6011	Precast Parapets/Barriers Detail Design & Procure Moulds	120	06-Oct-15 A	0%	120	20-Jun-16	06-May-15	26-Sep-15	-213	0	0%	[Gantt Bar]																									
Materials																																					
PP7010	Procure Sub-contractor for Signs & Street Furniture	90	21-Jan-16	0%	90	13-May-16	04-Sep-15	21-Dec-15	-113	0	0%	[Gantt Bar]																									
Bearings																																					
Viaduct A																																					
PPBRA5	SO review & comment on design submission - Viaduct A	36	21-Jan-16	0%	36	05-Mar-16	18-Mar-16	04-May-16	46	0	0%	[Gantt Bar]																									
PPBRA6	Bearing Design Amendment & re-issue - Viaduct A	12	07-Mar-16	0%	12	19-Mar-16	12-May-16	26-May-16	52	6	0%	[Gantt Bar]																									
PPBRA7	Manufacture of Bearing - Viaduct A	54	21-Jan-16	0%	54	30-Mar-16	18-Mar-16	26-May-16	46	0	0%	[Gantt Bar]																									

■ Actual Work
■ Planned Bar
■ Critical Bar
◆ Milestone

Project ID: J3518DWP-E2-M32
 Layout: J3518-DWP-3MRP Submission - M32
 Filter: TASK filters: 3-Month Lookahead, No CC
 Milestones, No Level of Effort.

Tuen Mun - Chek Lap Kok Link - Southern Connection
3-Month Rolling Programme (Page 3 of 24 Pages)
(Progress as of 21-Jan-16)

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DWG. No.:
J3518/GCL/PGM/3MRP-M32

Activity ID	Activity Name	Orig. Durr.	Act. Start / FC Early Start	Duration % Complete	Rem. Durr.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete	2015												2016													
												January					February					March					April										
													21	28	04	11	18	25	01	08	15	22	29	07	14	21	28	04	11	18	25						
PPBRA8	Testing Bearing - Viaduct A	18	31-Mar-16	0%	18	21-Apr-16	27-May-16	17-Jun-16	46	0	0%																										
Viaduct C																																					
PPBRC6	Bearing Design Ammendment & re-issue - Viaduct C	12	21-Jan-16	0%	12	03-Feb-16	07-May-19	21-May-19	972	972	0%																										
PPBRC99	Site preparation Bearings for Viaduct C	6	21-Jan-16	0%	6	27-Jan-16	25-Jan-16	30-Jan-16	3	0	0%																										
Viaduct D																																					
PPBRD99	Site preparation Bearings for Viaduct D	38	21-Jan-16	0%	38	08-Mar-16	09-Oct-15	25-Nov-15	-83	0	0%																										
Viaduct E																																					
PPBRE3	Bearing design and submission - Viaduct E (E1, E2, E5, E6, E7 & E8)	12	28-Nov-13 A	100%	0	21-Jan-16	14-Nov-15	14-Nov-15	-54	0	100%																										
PPBRE4	Design check by ICE - Viaduct E (E1, E2, E5, E6, E7 & E8)	24	04-Apr-14 A	100%	0	04-Feb-16	28-Nov-15	28-Nov-15	-54	0	100%																										
PPBRE5	SO review & comment on design submission - Viaduct E (E1, E2, E5, E6, E	36	26-Sep-14 A	100%	0	22-Feb-16	12-Dec-15	12-Dec-15	-54	0	100%																										
PPBRE6	Bearing Design Amendment & re-issue - Viaduct E (E1, E2, E5, E6, E7 & E	12	22-Feb-16	0%	12	05-Mar-16	14-Dec-15	29-Dec-15	-54	0	0%																										
PPBRE7	Manufacture of Bearing - Viaduct E (E1, E2, E5, E6, E7 & E8)	54	02-Jun-14 A	100%	0	07-Mar-16	29-Dec-15	29-Dec-15	-54	0	100%																										
PPBRE8	Testing Bearing - Viaduct E (E1, E2, E5, E6, E7 & E8)	24	03-Aug-15 A	100%	0	21-Mar-16	13-Jan-16	13-Jan-16	-54	0	100%																										
Bridge E1																																					
PP7360	Site preparation Bearings for Viaduct E1	18	28-Jan-16	0%	18	22-Feb-16	04-Dec-15	24-Dec-15	-44	8	0%																										
Bridge E2																																					
PP7290	Site preparation Bearings for Viaduct E2	18	15-Feb-16	0%	18	05-Mar-16	09-Dec-15	31-Dec-15	-52	0	0%																										
Viaduct F																																					
PPBRF1	Preliminary Design of Bearings - Viaduct F	70	21-Jan-16	0%	70	19-Apr-16	31-Mar-15	27-Jun-15	-239	0	0%																										
PPBRF3	Bearing design and submission - Viaduct F	12	20-Apr-16	0%	12	04-May-16	29-Jun-15	13-Jul-15	-239	0	0%																										
Movement Joints																																					
PPMJ01	Design & Submission of MJ	138	08-Feb-14 A	30%	97	23-May-16	03-Oct-15	28-Jan-16	-90	887	30%																										
PPMJ02-1	MJ Design Approval	96	26-May-14 A	40%	58	05-Apr-16	03-Oct-15	10-Dec-15	-90	130	40%																										
PPMJ02-2	Manufacture & delivery of MJ	188	21-Jan-16	0%	188	08-Sep-16	03-Oct-15	24-May-16	-90	0	0%																										
Other Sub-Contract Procurement																																					
Pavement																																					
PP7760-2	Procure Pavement Viaduct Sub-Contractor	36	21-Jan-16	0%	36	05-Mar-16	09-Apr-16	23-May-16	61	0	0%																										
PP7760-4	Pavement Viaduct Sub-Contractor - Materials approvals & MS	90	07-Mar-16	0%	90	27-Jun-16	24-May-16	07-Sep-16	61	130	0%																										
Structural Health Monitoring System (SHMS)																																					
PP7778	SHMS - So approval of Final System Proposal	30	16-Dec-14 A	75%	8	29-Jan-16	07-Nov-14	15-Nov-14	-356	53	75%																										
PP7780	SHMS - Prepare Civil Work Provision	66	21-Jan-16	0%	66	14-Apr-16	10-Oct-14	27-Dec-14	-380	0	0%																										
PP7788	SHMS - FAT & Delivery for Bridge E5-E6-E7-E8 equipment	54	22-Feb-16	0%	54	28-Apr-16	07-Nov-14	12-Jan-15	-380	0	0%																										
Site Preparation / Mobilisations																																					
Tree Felling / Transplant																																					
Approved Trees in Contract																																					
TR00220	Tree transplant for Viaduct B - affecting Pier B18 & Abutment B	90	17-Feb-14 A	95%	5	26-Jan-16	01-Mar-16	05-Mar-16	31	923	95%																										
Unloading Jetty at HKBCF																																					
PR09060	Unloading Jetty at HKBCF - Conditional survey & temp jetty formation	15	21-Jan-16	0%	15	06-Feb-16	06-Jul-15	23-Jul-15	-156	0	0%																										
PR09070	Unloading Jetty at HKBCF - Install Unloading Frame incl. testing/commissio	52	11-Feb-16	0%	52	15-Apr-16	24-Jul-15	30-Sep-15	-156	147	0%																										
CONSTRUCTION																																					
PILING AND SUBSTRUCTURE																																					
Viaduct A																																					
Bridge A2																																					
Pier A1 (A2e)																																					
Pier Works																																					
SA2E0310	A1 (A2e) - Type 4B-MJ Pier Head Rebarwork, Formwork & Prep	10	22-Oct-15 A	100%	0	15-Jan-16 A					100%																										
SA2E0330	A1 (A2e) - Type 4B-MJ Pier Head Concreting	1	16-Jan-16 A	100%	0	16-Jan-16 A					100%																										
SA2E0340	A1 (A2e) - Type 4B-MJ Pier Head Curing/Striking of Forms/Remove Scaffc	6	17-Jan-16 A	7.99%	6	27-Jan-16	18-Jun-16	25-Jun-16	110	0	8%																										
SA2E0350	A1 (A2e) - Type 4B- Bearing Plinth	6	21-Jan-16	0%	6	27-Jan-16	18-Jun-16	25-Jun-16	110	0	0%																										
Pier Head Segments																																					
SA2E0380	A1 (A2e) - Pier Head Segment - Temporary Platform	6	28-Jan-16	0%	6	03-Feb-16	27-Jun-16	05-Jul-16	110	0	0%																										
SA2E0381	A1 (A2e) - Pier Head Segment Bearings	2	04-Feb-16	0%	2	05-Feb-16	06-Jul-16	07-Jul-16	110	0	0%																										
SA2E0382	A1 (A2e) - Pier Head Segment Lift & Temp Support (2 seg)	7	06-Feb-16	0%	7	17-Feb-16	08-Jul-16	16-Jul-16	110	235	0%																										
Pier A3 (A2c)																																					
Pile Cap Works																																					
SA2C0160	A3 (A2c) - Marine Pile Cap M2b - Curing incl. CJ Preparation	6	19-Nov-15 A	100%	0	21-Jan-16	21-May-19	21-May-19	927	927	100%																										
Pier Works																																					
SA2C0240	A3 (A2c) - Type 4B Pier Concreting, Curing & Striking, CJ prep (2nd Lift)	3	19-Dec-15 A	100%	0	22-Dec-15 A					100%																										
SA2C0300	A3 (A2c) - Type 4B Pier Head Scaffolding	4	24-Dec-15 A	100%	0	05-Jan-16 A					100%																										

■ Actual Work
■ Planned Bar
■ Critical Bar
◆ Milestone

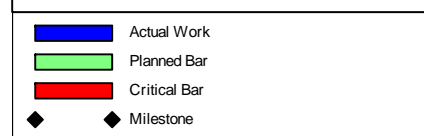
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Tuen Mun - Chek Lap Kok Link - Southern Connection
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												2015					2016															
												21	28	04	11	18	25	01	08	15	22	29	07	14	21	28	04	11	18	25		
SA2C0310	A3 (A2c) - Type 4B Pier Head Rebarwork, Formwork & Prep	10	06-Jan-16 A	80%	2	22-Jan-16	10-Jun-16	13-Jun-16	106	0	80%																					
SA2C0330	A3 (A2c) - Type 4B Pier Head Concreting	1	23-Jan-16	0%	1	23-Jan-16	13-Jun-16	14-Jun-16	106	0	0%																					
SA2C0340	A3 (A2c) - Type 4B Pier Head Curing/Striking of Forms/Remove Scaffolding	6	25-Jan-16	0%	6	30-Jan-16	14-Jun-16	24-Jun-16	106	95	0%																					
Pier A5 (A2a)																																
Pier Cap Works																																
SA2A0070	A5 (A2a) - Marine Pile Cap M2b - Inst. Floating Seal & Casing Head Steelw	7	20-Oct-15 A	100%	0	21-Dec-15 A					100%																					
SA2A0080	A5 (A2a) - Marine Pile Cap M2b - Install precast shell in position	1	12-Jan-16 A	100%	0	12-Jan-16 A					100%																					
SA2A0090	A5 (A2a) - Marine Pile Cap M2b - Inst. Access & make Watertight	3	13-Jan-16 A	60%	1	22-Jan-16	09-Mar-16	10-Mar-16	39	0	60%																					
SA2A0100	A5 (A2a) - Marine Pile Cap M2b - Weld Fin plates/Plug Rebar & Concrete	9	22-Jan-16	0%	9	02-Feb-16	10-Mar-16	21-Mar-16	39	0	0%																					
SA2A0120	A5 (A2a) - Marine Pile Cap M2b - Dewater precast shell / Remove Lifting F	2	02-Feb-16	0%	2	04-Feb-16	21-Mar-16	23-Mar-16	39	0	0%																					
SA2A0130	A5 (A2a) - Marine Pile Cap M2b - Pile cut down	8	04-Feb-16	0%	8	17-Feb-16	23-Mar-16	06-Apr-16	39	0	0%																					
SA2A0140	A5 (A2a) - Marine Pile Cap M2b - Rebar fixing, inst.inserts etc	12	17-Feb-16	0%	12	02-Mar-16	06-Apr-16	22-Apr-16	39	0	0%																					
SA2A0150	A5 (A2a) - Marine Pile Cap M2b - Concreting	1	02-Mar-16	0%	1	03-Mar-16	22-Apr-16	23-Apr-16	39	0	0%																					
SA2A0160	A5 (A2a) - Marine Pile Cap M2b - Curing incl. CJ Preparation	6	03-Mar-16	0%	6	10-Mar-16	23-Apr-16	30-Apr-16	39	0	0%																					
Pier Works																																
SA2A0170	A5 (A2a) - Type 4B Pier Temp. Support Platform & Scaffold (1st Lift)	6	03-Mar-16	0%	6	10-Mar-16	23-Apr-16	30-Apr-16	39	0	0%																					
SA2A0180	A5 (A2a) - Type 4B Pier Rebarwork, Formwork & Prep (1st Lift)	5	10-Mar-16	0%	5	16-Mar-16	30-Apr-16	07-May-16	39	0	0%																					
SA2A0200	A5 (A2a) - Type 4B Pier Concreting, Curing & Striking, CJ prep (1st Lift)	3	16-Mar-16	0%	3	19-Mar-16	07-May-16	11-May-16	39	0	0%																					
SA2A0210	A5 (A2a) - Type 4B Pier Scaffolding (2nd Lift)	2	19-Mar-16	0%	2	22-Mar-16	11-May-16	13-May-16	39	0	0%																					
SA2A0220	A5 (A2a) - Type 4B Pier Rebarwork, Formwork & Prep (2nd Lift)	6	22-Mar-16	0%	6	01-Apr-16	13-May-16	23-May-16	39	0	0%																					
SA2A0240	A5 (A2a) - Type 4B Pier Concreting, Curing & Striking, CJ prep (2nd Lift)	3	01-Apr-16	0%	3	06-Apr-16	23-May-16	27-May-16	39	0	0%																					
SA2A0250	A5 (A2a) - Type 4B Pier Scaffolding (3rd Lift)	2	06-Apr-16	0%	2	08-Apr-16	27-May-16	30-May-16	39	0	0%																					
SA2A0260	A5 (A2a) - Type 4B Pier Rebarwork, Formwork & Prep (3rd Lift)	5	08-Apr-16	0%	5	15-Apr-16	30-May-16	06-Jun-16	39	0	0%																					
SA2A0280	A5 (A2a) - Type 4B Pier Concreting, Curing & Striking, CJ prep (3rd Lift)	3	15-Apr-16	0%	3	19-Apr-16	06-Jun-16	11-Jun-16	39	0	0%																					
SA2A0300	A5 (A2a) - Type 4B Pier Head Scaffolding	4	19-Apr-16	0%	4	25-Apr-16	11-Jun-16	18-Jun-16	39	0	0%																					
Pier A4 (A2b)																																
Pier Cap Works																																
SA2B0100	A4 (A2b) - Marine Pile Cap M2b - Weld Fin plates/Plug Rebar & Concrete	9	17-Dec-15 A	100%	0	02-Jan-16 A					100%																					
SA2B0120	A4 (A2b) - Marine Pile Cap M2b - Dewater precast shell / Remove Lifting F	2	04-Jan-16 A	100%	0	07-Jan-16 A					100%																					
SA2B0130	A4 (A2b) - Marine Pile Cap M2b - Pile cut down	8	08-Jan-16 A	100%	0	21-Jan-16 A					100%																					
SA2B0140	A4 (A2b) - Marine Pile Cap M2b - Rebar fixing, inst.inserts etc	12	21-Jan-16	0%	12	03-Feb-16	11-Apr-16	27-Apr-16	63	0	0%																					
SA2B0150	A4 (A2b) - Marine Pile Cap M2b - Concreting	1	04-Feb-16	0%	1	04-Feb-16	27-Apr-16	28-Apr-16	63	0	0%																					
SA2B0160	A4 (A2b) - Marine Pile Cap M2b - Curing incl. CJ Preparation	6	05-Feb-16	0%	6	15-Feb-16	28-Apr-16	06-May-16	63	0	0%																					
Pier Works																																
SA2B0170	A4 (A2b) - Type 4B Pier Temp. Support Platform & Scaffold (1st Lift)	6	05-Feb-16	0%	6	15-Feb-16	28-Apr-16	06-May-16	63	0	0%																					
SA2B0180	A4 (A2b) - Type 4B Pier Rebarwork, Formwork & Prep (1st Lift)	5	16-Feb-16	0%	5	20-Feb-16	06-May-16	12-May-16	63	0	0%																					
SA2B0200	A4 (A2b) - Type 4B Pier Concreting, Curing & Striking, CJ prep (1st Lift)	3	22-Feb-16	0%	3	24-Feb-16	12-May-16	18-May-16	63	0	0%																					
SA2B0210	A4 (A2b) - Type 4B Pier Scaffolding (2nd Lift)	2	25-Feb-16	0%	2	26-Feb-16	18-May-16	20-May-16	63	0	0%																					
SA2B0220	A4 (A2b) - Type 4B Pier Rebarwork, Formwork & Prep (2nd Lift)	6	27-Feb-16	0%	6	04-Mar-16	20-May-16	28-May-16	63	0	0%																					
SA2B0240	A4 (A2b) - Type 4B Pier Concreting, Curing & Striking, CJ prep (2nd Lift)	3	05-Mar-16	0%	3	08-Mar-16	28-May-16	01-Jun-16	63	0	0%																					
SA2B0300	A4 (A2b) - Type 4B Pier Head Scaffolding	4	09-Mar-16	0%	4	12-Mar-16	01-Jun-16	08-Jun-16	63	0	0%																					
SA2B0310	A4 (A2b) - Type 4B Pier Head Rebarwork, Formwork & Prep	10	14-Mar-16	0%	10	24-Mar-16	08-Jun-16	24-Jun-16	63	0	0%																					
SA2B0330	A4 (A2b) - Type 4B Pier Head Concreting	1	29-Mar-16	0%	1	29-Mar-16	24-Jun-16	25-Jun-16	63	0	0%																					
SA2B0340	A4 (A2b) - Type 4B Pier Head Curing/Striking of Forms/Remove Scaffolding	6	30-Mar-16	0%	6	06-Apr-16	25-Jun-16	05-Jul-16	63	45	0%																					
Pier A2 (A2d)																																
Pier Cap Works																																
SA2D0130	A2 (A2d) - Marine Pile Cap M2b - Pile cut down	8	19-Dec-15 A	100%	0	04-Jan-16 A					100%																					
SA2D0140	A2 (A2d) - Marine Pile Cap M2b - Rebar fixing, inst.inserts etc	12	05-Jan-16 A	10%	11	02-Feb-16	21-Mar-16	06-Apr-16	48	0	10%																					
SA2D0150	A2 (A2d) - Marine Pile Cap M2b - Concreting	1	02-Feb-16	0%	1	03-Feb-16	07-Apr-16	07-Apr-16	48	0	0%																					
SA2D0160	A2 (A2d) - Marine Pile Cap M2b - Curing incl. CJ Preparation	6	03-Feb-16	0%	6	13-Feb-16	08-Apr-16	15-Apr-16	48	0	0%																					
Pier Works																																
SA2D0170	A2 (A2d) - Type 4B Pier Temp. Support Platform & Scaffold (1st Lift)	6	03-Feb-16	0%	6	13-Feb-16	08-Apr-16	15-Apr-16	48	0	0%																					
SA2D0180	A2 (A2d) - Type 4B Pier Rebarwork, Formwork & Prep (1st Lift)	5	13-Feb-16	0%	5	19-Feb-16	16-Apr-16	22-Apr-16	48	0	0%																					
SA2D0200	A2 (A2d) - Type 4B Pier Concreting, Curing & Striking, CJ prep (1st Lift)	3	19-Feb-16	0%	3	23-Feb-16	23-Apr-16	26-Apr-16	48	0	0%																					
SA2D0210	A2 (A2d) - Type 4B Pier Scaffolding (2nd Lift)	2	23-Feb-16	0%	2	25-Feb-16	27-Apr-16	28-Apr-16	48	0	0%																					
SA2D0220	A2 (A2d) - Type 4B Pier Rebarwork, Formwork & Prep (2nd Lift)	6	25-Feb-16	0%	6	03-Mar-16	29-Apr-16	06-May-16	48	0	0%																					
SA2D0240	A2 (A2d) - Type 4B Pier Concreting, Curing & Striking, CJ prep (2nd Lift)	3	05-Mar-16	0%	3	07-Mar-16	29-Apr-16	10-May-16	48	0	0%																					
SA2D0300	A2 (A2d) - Type 4B Pier Head Scaffolding	4	07-Mar-16	0%	4	11-Mar-16	11-May-16	16-May-16	48	0	0%																					
SA2D0310	A2 (A2d) - Type 4B Pier Head Rebarwork, Formwork & Prep	10	11-Mar-16	0%	10	23-Mar-16	18-May-16	30-May-16	48	0	0%																					
SA2D0330	A2 (A2d) - Type 4B Pier Head Concreting	1	23-Mar-16	0%	1	24-Mar-16	31-May-16	31-May-16	48	0	0%																					
SA2D0340	A2 (A2d) - Type 4B Pier Head Curing/Striking of Forms/Remove Scaffolding	6	24-Mar-16	0%	6	05-Apr-16	01-Jun-16	10-Jun-16	48	46	0%																					



Project ID: J3518DWPRe2-M32
 Layout: J3518-DWP-3MRP Submission - M32
 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 24 Pages)
(Progress as of 21-Jan-16)

Date	Revision	Checked	Approved
01-Dec-15		PKN	KWY
28-Dec-15		PKN	KWY
30-Jan-16		PKN	KWY

DWG. No.:
J3518/GCL/PGM/3MRP-M32

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete	Gantt Chart																		
												2015				2016				2016				2016						
												January				February				March				April						
												21	28	04	11	18	25	01	08	15	22	29	07	14	21	28	04	11	18	25
Pier Head Segments																														
SC4E0371	C1 (C4e) - Pier Head Segment Bearings	2	28-Jan-16	0%	2	29-Jan-16	01-Feb-16	02-Feb-16	3	0	0%																			
SC4E0372	C1 (C4e) - Pier Head Segment Lift & Temp Support (2 seg)	7	30-Jan-16	0%	7	06-Feb-16	03-Feb-16	15-Feb-16	4	110	0%																			
Pier C4 (C4b)																														
Pier Head Segments																														
SC4B0372	C4 (C4b) - Pier Head Segment Lift & Fix (1 seg)	2	21-Jan-16 A	100%	0	21-Jan-16 A					100%																			
SC4B0374	C4 (C4b) - Pier Head Segment Diaphragm - Rebar	12	21-Jan-16	0%	12	03-Feb-16	06-Nov-15	19-Nov-15	-62	0	0%																			
SC4B0376	C4 (C4b) - Pier Head Segment Diaphragm - Formwork & Prep for Concre	8	04-Feb-16	0%	8	16-Feb-16	20-Nov-15	28-Nov-15	-62	0	0%																			
SC4B0378	C4 (C4b) - Pier Head Segment Diaphragm - Concreting	2	17-Feb-16	0%	2	18-Feb-16	30-Nov-15	01-Dec-15	-62	0	0%																			
SC4B0380	C4 (C4b) - Pier Head Segment Diaphragm - Curing & Striking of Forms	6	19-Feb-16	0%	6	25-Feb-16	04-Mar-16	10-Mar-16	12	118	0%																			
Pier C2 (C4d)																														
Pier Head Segments																														
SC4D0372	C2 (C4d) - Pier Head Segment Lift & Fix (1 seg)	2	21-Jan-16	0%	2	22-Jan-16	14-Jan-16	15-Jan-16	-6	0	0%																			
SC4D0374	C2 (C4d) - Pier Head Segment Diaphragm - Rebar	12	23-Jan-16	0%	12	05-Feb-16	16-Jan-16	29-Jan-16	-6	0	0%																			
SC4D0376	C2 (C4d) - Pier Head Segment Diaphragm - Formwork & Prep for Concre	8	06-Feb-16	0%	8	18-Feb-16	30-Jan-16	11-Feb-16	-6	0	0%																			
SC4D0378	C2 (C4d) - Pier Head Segment Diaphragm - Concreting	2	19-Feb-16	0%	2	20-Feb-16	12-Feb-16	13-Feb-16	-6	0	0%																			
SC4D0380	C2 (C4d) - Pier Head Segment Diaphragm - Curing & Striking of Forms	6	22-Feb-16	0%	6	27-Feb-16	15-Feb-16	20-Feb-16	-6	100	0%																			
Pier C5 (C4a)																														
Pier Works																														
SC4A0310	C5 (C4a) - Type 4B Pier Head Rebarwork, Formwork & Prep	8	16-Dec-15 A	100%	0	06-Jan-16 A					100%																			
SC4A0330	C5 (C4a) - Type 4B Pier Head Concreting	1	07-Jan-16 A	100%	0	07-Jan-16 A					100%																			
SC4A0340	C5 (C4a) - Type 4B Pier Head Curing/Striking of Forms/Remove Scaffoldir	6	08-Jan-16 A	0%	6	27-Jan-16	29-Jan-16	05-Feb-16	7	945	0%																			
Pier Head Segments																														
SC4A0370	C5 (C4a) - Pier Head Segment - Temporary Platform	6	21-Jan-16	0%	6	27-Jan-16	29-Jan-16	05-Feb-16	7	0	0%																			
SC4A0372	C5 (C4a) - Pier Head Segment Lift & Fix (1 seg)	2	28-Jan-16	0%	2	29-Jan-16	05-Feb-16	11-Feb-16	7	0	0%																			
SC4A0374	C5 (C4a) - Pier Head Segment Diaphragm - Rebar	13	30-Jan-16	0%	13	17-Feb-16	11-Feb-16	25-Feb-16	7	0	0%																			
SC4A0376	C5 (C4a) - Pier Head Segment Diaphragm - Formwork & Prep for Concre	8	17-Feb-16	0%	8	26-Feb-16	26-Feb-16	05-Mar-16	7	0	0%																			
SC4A0378	C5 (C4a) - Pier Head Segment Diaphragm - Concreting	2	26-Feb-16	0%	2	29-Feb-16	07-Mar-16	08-Mar-16	7	0	0%																			
SC4A0380	C5 (C4a) - Pier Head Segment Diaphragm - Curing & Striking of Forms	6	29-Feb-16	0%	6	07-Mar-16	09-Mar-16	15-Mar-16	7	113	0%																			
Pier C3 (C4c)																														
Pier Works																														
SC4C0310	C3 (C4c) - Type 4B Pier Head Rebarwork, Formwork & Prep	10	09-Dec-15 A	100%	0	23-Dec-15 A					100%																			
SC4C0330	C3 (C4c) - Type 4B Pier Head Concreting	1	24-Dec-15 A	100%	0	24-Dec-15 A					100%																			
SC4C0340	C3 (C4c) - Type 4B Pier Head Curing/Striking of Forms/Remove Scaffoldir	6	25-Dec-15 A	100%	0	11-Jan-16 A					100%																			
Pier Head Segments																														
SC4C0370	C3 (C4c) - Pier Head Segment - Temporary Platform	6	21-Jan-16	0%	6	27-Jan-16	16-Jan-16	22-Jan-16	-4	0	0%																			
SC4C0372	C3 (C4c) - Pier Head Segment Lift & Fix (1 seg)	2	28-Jan-16	0%	2	29-Jan-16	23-Jan-16	25-Jan-16	-4	0	0%																			
SC4C0374	C3 (C4c) - Pier Head Segment Diaphragm - Rebar	12	30-Jan-16	0%	12	16-Feb-16	26-Jan-16	11-Feb-16	-4	0	0%																			
SC4C0376	C3 (C4c) - Pier Head Segment Diaphragm - Formwork & Prep for Concre	8	17-Feb-16	0%	8	25-Feb-16	12-Feb-16	20-Feb-16	-4	0	0%																			
SC4C0378	C3 (C4c) - Pier Head Segment Diaphragm - Concreting	2	26-Feb-16	0%	2	27-Feb-16	22-Feb-16	23-Feb-16	-4	0	0%																			
SC4C0380	C3 (C4c) - Pier Head Segment Diaphragm - Curing & Striking of Forms	6	29-Feb-16	0%	6	05-Mar-16	24-Feb-16	02-Mar-16	-3	103	0%																			
Pier C6 (C3f)																														
Pier Works																														
SC3F0280	C6 (C3f) - Type 4B-MJ Pier Concreting, Curing & Striking, CJ prep (3rd Lift)	3	05-Dec-15 A	100%	0	08-Jan-16 A					100%																			
SC3F0300	C6 (C3f) - Type 4B-MJ Pier Head Scaffolding	2	09-Jan-16 A	100%	0	13-Jan-16 A					100%																			
SC3F0310	C6 (C3f) - Type 4B-MJ Pier Head Rebarwork, Formwork & Prep	8	14-Jan-16 A	2.99%	8	29-Jan-16	17-Feb-16	25-Feb-16	20	0	3%																			
SC3F0330	C6 (C3f) - Type 4B-MJ Pier Head Concreting	1	29-Jan-16	0%	1	30-Jan-16	26-Feb-16	26-Feb-16	20	0	0%																			
SC3F0340	C6 (C3f) - Type 4B-MJ Pier Head Curing/Striking of Forms/Remove Scaffi	4	30-Jan-16	0%	4	04-Feb-16	01-Mar-16	04-Mar-16	22	2	0%																			
SC3F0350	C6 (C3f) - Type 4B-Bearing Plinth	6	30-Jan-16	0%	6	06-Feb-16	27-Feb-16	04-Mar-16	20	0	0%																			
Pier Head Segments																														
SC3F0370	C6 (C3f) - Pier Head Segment - Temporary Platform	6	06-Feb-16	0%	6	17-Feb-16	05-Mar-16	11-Mar-16	20	0	0%																			
SC3F0371	C6 (C3f) - Pier Head Segment Bearings	2	17-Feb-16	0%	2	19-Feb-16	12-Mar-16	14-Mar-16	20	0	0%																			
SC3F0372	C6 (C3f) - Pier Head Segment Lift & Temp Support (2 seg)	7	19-Feb-16	0%	7	27-Feb-16	15-Mar-16	22-Mar-16	20	126	0%																			
Bridge C3																														
Pier C7 (C3e)																														
Pier Works																														
SC3E0320	C7 (C3e) - Type 5B Pier Backfilling Works	4	21-Jan-16	0%	4	25-Jan-16	11-Feb-16	15-Feb-16	15	0	0%																			
Pier Head Segments																														
SC3E0370	C7 (C3e) - Pier Head Segment - Temporary Platform	6	26-Jan-16	0%	6	01-Feb-16	16-Feb-16	22-Feb-16	15	0	0%																			
SC3E0372	C7 (C3e) - Pier Head Segment Lift & Fix (1 seg)	2	02-Feb-16	0%	2	03-Feb-16	23-Feb-16	24-Feb-16	15	0	0%																			
SC3E0374	C7 (C3e) - Pier Head Segment Diaphragm - Rebar	12	04-Feb-16	0%	12	20-Feb-16	25-Feb-16	09-Mar-16	15	0	0%																			
SC3E0376	C7 (C3e) - Pier Head Segment Diaphragm - Formwork	8	22-Feb-16	0%	8	01-Mar-16	10-Mar-16	18-Mar-16	15	0	0%																			
SC3E0378	C7 (C3e) - Pier Head Segment Diaphragm - Concreting	2	02-Mar-16	0%	2	03-Mar-16	19-Mar-16	21-Mar-16	15	0	0%																			

■ Actual Work
■ Planned Bar
■ Critical Bar
◆ Milestone

Project ID: J3518DWPPrE2-M32
Layout: J3518-DWP-3MRP Submission - M32
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 7 of 24 Pages)
(Progress as of 21-Jan-16)

Date	Revision	Checked	Approved
01-Dec-15		PKN	KWY
28-Dec-15		PKN	KWY
30-Jan-16		PKN	KWY

DWG. No.:
J3518/GCL/PGM/3MRP-M32

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete	2016																												
												January							February							March							April							
												21	28	04	11	18	25	01	08	15	22	29	07	14	21	28	04	11	18	25	01	08	15	22	29	07	14	21	28	04
SC3E0380	C7 (C3e) - Pier Head Segment Diaphragm - Curing & Striking of Forms	6	04-Mar-16	0%	6	10-Mar-16	22-Mar-16	31-Mar-16	15	121	0%	[Gantt bars for SC3E0380]																												
Pier C8 (C3d)																																								
Pier Head Segments																																								
SC3D0370	C8 (C3d) - Pier Head Segment - Temporary Platform	6	21-Jan-16	0%	6	27-Jan-16	14-Mar-16	19-Mar-16	42	0	0%	[Gantt bars for SC3D0370]																												
SC3D0372	C8 (C3d) - Pier Head Segment Lift & Fix (1 seg)	2	28-Jan-16	0%	2	29-Jan-16	21-Mar-16	22-Mar-16	42	0	0%	[Gantt bars for SC3D0372]																												
SC3D0374	C8 (C3d) - Pier Head Segment Diaphragm - Rebar	12	30-Jan-16	0%	12	16-Feb-16	23-Mar-16	09-Apr-16	42	0	0%	[Gantt bars for SC3D0374]																												
SC3D0376	C8 (C3d) - Pier Head Segment Diaphragm - Formwork	8	17-Feb-16	0%	8	25-Feb-16	11-Apr-16	21-Apr-16	42	0	0%	[Gantt bars for SC3D0376]																												
SC3D0378	C8 (C3d) - Pier Head Segment Diaphragm - Concreting	2	26-Feb-16	0%	2	27-Feb-16	22-Apr-16	23-Apr-16	42	0	0%	[Gantt bars for SC3D0378]																												
SC3D0380	C8 (C3d) - Pier Head Segment Diaphragm - Curing & Striking of Forms	6	29-Feb-16	0%	6	05-Mar-16	25-Apr-16	30-Apr-16	42	148	0%	[Gantt bars for SC3D0380]																												
Pier C10 (C3b)																																								
Pier Works																																								
SC3B0320	C10 (C3b) - Type 5B Pier Backfilling Works	4	21-Jan-16	0%	4	25-Jan-16	28-Apr-16	04-May-16	75	0	0%	[Gantt bars for SC3B0320]																												
Pier Head Segments																																								
SC3B0370	C10 (C3b) - Pier Head Segment - Temporary Platform	6	26-Jan-16	0%	6	01-Feb-16	04-May-16	11-May-16	75	0	0%	[Gantt bars for SC3B0370]																												
SC3B0372	C10 (C3b) - Pier Head Segment Lift & Fix (1 seg)	2	02-Feb-16	0%	2	03-Feb-16	11-May-16	13-May-16	75	0	0%	[Gantt bars for SC3B0372]																												
SC3B0374	C10 (C3b) - Pier Head Segment Diaphragm - Rebar	14	04-Feb-16	0%	14	23-Feb-16	13-May-16	01-Jun-16	75	0	0%	[Gantt bars for SC3B0374]																												
SC3B0376	C10 (C3b) - Pier Head Segment Diaphragm - Formwork	8	23-Feb-16	0%	8	03-Mar-16	03-Jun-16	14-Jun-16	75	0	0%	[Gantt bars for SC3B0376]																												
SC3B0378	C10 (C3b) - Pier Head Segment Diaphragm - Concreting	2	03-Mar-16	0%	2	05-Mar-16	16-Jun-16	18-Jun-16	75	0	0%	[Gantt bars for SC3B0378]																												
SC3B0380	C10 (C3b) - Pier Head Segment Diaphragm - Curing & Striking of Forms	6	05-Mar-16	0%	6	12-Mar-16	20-Jun-16	27-Jun-16	75	181	0%	[Gantt bars for SC3B0380]																												
Pier C9 (C3c)																																								
Pier Works																																								
SC3C0320	C9 (C3c) - Type 5B Pier Backfilling Works	4	16-Sep-15 A	40%	2	23-Jan-16	07-Apr-16	09-Apr-16	60	0	40%	[Gantt bars for SC3C0320]																												
Pier Head Segments																																								
SC3C0370	C9 (C3c) - Pier Head Segment - Temporary Platform	6	23-Jan-16	0%	6	30-Jan-16	11-Apr-16	18-Apr-16	60	0	0%	[Gantt bars for SC3C0370]																												
SC3C0372	C9 (C3c) - Pier Head Segment Lift & Fix (1 seg)	2	30-Jan-16	0%	2	02-Feb-16	19-Apr-16	21-Apr-16	60	0	0%	[Gantt bars for SC3C0372]																												
SC3C0374	C9 (C3c) - Pier Head Segment Diaphragm - Rebar	12	02-Feb-16	0%	12	19-Feb-16	22-Apr-16	06-May-16	60	0	0%	[Gantt bars for SC3C0374]																												
SC3C0376	C9 (C3c) - Pier Head Segment Diaphragm - Formwork	8	19-Feb-16	0%	8	29-Feb-16	07-May-16	18-May-16	60	0	0%	[Gantt bars for SC3C0376]																												
SC3C0378	C9 (C3c) - Pier Head Segment Diaphragm - Concreting	2	29-Feb-16	0%	2	02-Mar-16	19-May-16	20-May-16	60	0	0%	[Gantt bars for SC3C0378]																												
SC3C0380	C9 (C3c) - Pier Head Segment Diaphragm - Curing & Striking of Forms	6	02-Mar-16	0%	6	09-Mar-16	21-May-16	28-May-16	60	16	0%	[Gantt bars for SC3C0380]																												
Pier C11 (C3a)																																								
Pier Works																																								
SC3A0320	C11 (C3a) - Type 5B-MJ Pier Head Formwork & Prep for Concreting	5	15-Dec-15 A	100%	0	21-Dec-15 A					100%	[Gantt bars for SC3A0320]																												
SC3A0330	C11 (C3a) - Type 5B-MJ Pier Head Concreting	1	22-Dec-15 A	100%	0	22-Dec-15 A					100%	[Gantt bars for SC3A0330]																												
SC3A0340	C11 (C3a) - Type 5B-MJ Pier Head Curing/Striking of Forms/Remove Scaf	6	23-Dec-15 A	100%	0	08-Jan-16 A					100%	[Gantt bars for SC3A0340]																												
SC3A0360	C11 (C3a) - Type 5B-MJ Pier Backfilling Works	4	21-Jan-16	0%	4	25-Jan-16	08-Jun-16	13-Jun-16	104	0	0%	[Gantt bars for SC3A0360]																												
SC3A0380	C11 (C3a) - Type 5B-Bearing Plinth	6	28-Dec-15 A	100%	0	28-Dec-15 A					100%	[Gantt bars for SC3A0380]																												
Pier Head Segments																																								
SC3A0370	C11 (C3a) - Pier Head Segment - Temporary Platform	6	26-Jan-16	0%	6	01-Feb-16	14-Jun-16	23-Jun-16	104	0	0%	[Gantt bars for SC3A0370]																												
SC3A0371	C11 (C3a) - Pier Head Segment Bearings	2	02-Feb-16	0%	2	03-Feb-16	24-Jun-16	25-Jun-16	104	0	0%	[Gantt bars for SC3A0371]																												
SC3A0372	C11 (C3a) - Pier Head Segment Lift & Temp Support (2 seg)	7	04-Feb-16	0%	7	15-Feb-16	27-Jun-16	06-Jul-16	104	210	0%	[Gantt bars for SC3A0372]																												
Bridge C2																																								
Pier C13 (C2e) Portal																																								
Portal																																								
SC2ER280	C13 (C2e) - Portal Beam Scaffolding	12	28-Dec-15 A	100%	0	14-Jan-16 A					100%	[Gantt bars for SC2ER280]																												
SC2ER290	C13 (C2e) - Portal Beam Scaffolding Formwork	12	15-Jan-16 A	50%	6	27-Jan-16	19-Sep-15	25-Sep-15	-98	0	50%	[Gantt bars for SC2ER290]																												
SC2ER300	C13 (C2e) - Portal Beam Rebarwork & Inserts	16	28-Jan-16	0%	16	18-Feb-16	26-Sep-15	17-Oct-15	-98	0	0%	[Gantt bars for SC2ER300]																												
SC2ER302	C13 (C2e) - Portal Beam Side Formwork & Prep for Concreting	16	19-Feb-16	0%	16	08-Mar-16	19-Oct-15	07-Nov-15	-98	0	0%	[Gantt bars for SC2ER302]																												
SC2ER310	C13 (C2e) - Portal Beam Concreting	1	09-Mar-16	0%	1	09-Mar-16	09-Nov-15	09-Nov-15	-98	0	0%	[Gantt bars for SC2ER310]																												
SC2ER320	C13 (C2e) - Pier Head Curing/Striking of Forms/Remove Scaffolding	14	10-Mar-16	0%	14	29-Mar-16	10-Nov-15	25-Nov-15	-98	0	0%	[Gantt bars for SC2ER320]																												
SC2ER325	C13 (C2e) - Pier Backfilling Works	4	23-Mar-16	0%	4	30-Mar-16	25-Aug-16	29-Aug-16	113	0	0%	[Gantt bars for SC2ER325]																												
Pier C14 (C2d)																																								
Pier Works																																								
SC2D0280	C14 (C2d) - Type 5B Pier Backfilling Works	4	21-Jan-16	0%	4	25-Jan-16	05-Dec-15	09-Dec-15	-37	26	0%	[Gantt bars for SC2D0280]																												
Pier Head Segments																																								
SC2D0370	C14 (C2d) - Pier Head Segment - Temporary Platform	6	13-Jan-16 A	100%	0	22-Jan-16 A					100%	[Gantt bars for SC2D0370]																												
SC2D0372	C14 (C2d) - Pier Head Segment Lift & Fix (1 seg)	2	21-Jan-16	0%	2	22-Jan-16	05-Nov-15	06-Nov-15	-63	0	0%	[Gantt bars for SC2D0372]																												
SC2D0374	C14 (C2d) - Pier Head Segment Diaphragm - Rebar	12	23-Jan-16	0%	12	05-Feb-16	07-Nov-15	20-Nov-15	-63	0	0%	[Gantt bars for SC2D0374]																												
SC2D0376	C14 (C2d) - Pier Head Segment Diaphragm - Formwork & Prep for Concr	8	06-Feb-16	0%	8	18-Feb-16	21-Nov-15	30-Nov-15	-63	0	0%	[Gantt bars for SC2D0376]																												
SC2D0378	C14 (C2d) - Pier Head Segment Diaphragm - Concreting	2	19-Feb-16	0%	2	20-Feb-16	01-Dec-15	02-Dec-15	-63	0	0%	[Gantt bars for SC2D0378]																												
SC2D0380	C14 (C2d) - Pier Head Segment Diaphragm - Curing & Striking of Forms	6	22-Feb-16	0%	6	27-Feb-16	03-Dec-15	09-Dec-15	-63	24	0%	[Gantt bars for SC2D0380]																												
Pier C15 (C2c)																																								
Pier Works																																								
SC2C0280	C15 (C2c) - Type 5B Pier Backfilling Works	4	21-Jan-16	0%	4	25-Jan-16	07-Nov-15	11-Nov-15	-61	0	0%	[Gantt bars for SC2C0280]																												

■ Actual Work
■ Planned Bar
■ Critical Bar
◆ Milestone

Project ID: J3518DWP-E2-M32
Layout: J3518-DWP-3MRP Submission - M32
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 8 of 24 Pages)
(Progress as of 21-Jan-16)

Date	Revision	Checked	Approved
01-Dec-15		PKN	KWY
28-Dec-15		PKN	KWY
30-Jan-16		PKN	KWY

DWG. No.:
J3518/GCL/PGM/3MRP-M32

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete	2016																		
												January			February			March			April									
												21	28	04	11	18	25	01	08	15	22	29	07	14	21	28	04	11	18	25
SC1C0250	AR-C - RE Walls - Erect fencing, Excavation/formation/ drainage filter & bo	12	22-Apr-15 A	90%	1	22-Jan-16	13-Feb-16	15-Feb-16	17	0	90%	[Gantt bar: 2015 Dec 22 to 2016 Jan 15]																		
SC1C0251	AR-C - RE Walls - Upper layers with backfill in stages	48	22-Jan-16	0%	48	22-Mar-16	15-Feb-16	16-Apr-16	17	0	0%	[Gantt bar: 2016 Jan 15 to 2016 Apr 16]																		
SC1C0252	AR-C - RC Walls - Base Slabs	49	08-Apr-15 A	50%	25	22-Mar-16	14-Mar-16	16-Apr-16	17	0	50%	[Gantt bar: 2016 Jan 15 to 2016 Apr 16]																		
SC1C0253	AR-C - RC Walls - Side Walls	48	16-Feb-16	0%	48	18-Apr-16	14-Mar-16	18-May-16	23	0	0%	[Gantt bar: 2016 Mar 14 to 2016 May 18]																		
SC1C0254	AR-C - RC Walls - Backfill	12	18-Apr-16	0%	12	04-May-16	19-May-16	03-Jun-16	23	0	0%	[Gantt bar: 2016 May 19 to 2016 Jun 03]																		

Viaduct D

Bridge D3

Pier D5 (D4b)

Pier Head Segments																							
SD4B0370	D5 (D4b) - Pier Head Segment - Temporary Platform	6	12-Dec-15 A	100%	0	22-Jan-16 A					100%	[Gantt bar: 2015 Dec 12 to 2016 Jan 22]											
SD4B0372	D5 (D4b) - Pier Head Segment Lift & Fix (1 seg)	2	21-Jan-16	0%	2	22-Jan-16	22-Oct-15	23-Oct-15	-74	0	0%	[Gantt bar: 2015 Oct 23 to 2015 Oct 23]											
SD4B0374	D5 (D4b) - Pier Head Segment Diaphragm - Rebar	12	23-Jan-16	0%	12	05-Feb-16	24-Oct-15	07-Nov-15	-74	0	0%	[Gantt bar: 2015 Nov 07 to 2015 Nov 07]											
SD4B0376	D5 (D4b) - Pier Head Segment Diaphragm - Formwork & Prep for Concre	8	06-Feb-16	0%	8	18-Feb-16	09-Nov-15	17-Nov-15	-74	0	0%	[Gantt bar: 2015 Nov 17 to 2015 Nov 17]											
SD4B0378	D5 (D4b) - Pier Head Segment Diaphragm - Concreting	2	19-Feb-16	0%	2	20-Feb-16	18-Nov-15	19-Nov-15	-74	0	0%	[Gantt bar: 2015 Nov 19 to 2015 Nov 19]											
SD4B0380	D5 (D4b) - Pier Head Segment Diaphragm - Curing & Striking of Forms	6	22-Feb-16	0%	6	27-Feb-16	20-Nov-15	26-Nov-15	-74	0	0%	[Gantt bar: 2015 Nov 26 to 2015 Nov 26]											

Pier D4 (D4c)

Pier Head Segments																							
SD4C0374	D4 (D4c) - Pier Head Segment Diaphragm - Rebar	12	30-Nov-15 A	100%	0	14-Jan-16 A					100%	[Gantt bar: 2015 Nov 14 to 2016 Jan 14]											
SD4C0376	D4 (D4c) - Pier Head Segment Diaphragm - Formwork & Prep for Concret	8	18-Dec-15 A	100%	0	20-Jan-16 A					100%	[Gantt bar: 2015 Dec 20 to 2016 Jan 20]											
SD4C0378	D4 (D4c) - Pier Head Segment Diaphragm - Concreting	2	20-Jan-16 A	100%	0	20-Jan-16 A					100%	[Gantt bar: 2016 Jan 20 to 2016 Jan 20]											
SD4C0380	D4 (D4c) - Pier Head Segment Diaphragm - Curing & Striking of Forms	6	21-Jan-16 A	0%	6	27-Jan-16	18-Nov-15	24-Nov-15	-52	0	0%	[Gantt bar: 2015 Nov 24 to 2015 Nov 24]											

Pier D1 (D4f)

Pier Head Segments																							
SD4F0370	D1 (D4f) - Pier Head Segment - Temporary Platform	6	21-Jan-16	0%	6	27-Jan-16	19-Nov-15	25-Nov-15	-51	32	0%	[Gantt bar: 2015 Nov 25 to 2015 Nov 25]											
SD4F0371	D1 (D4f) - Pier Head Segment Bearings	2	09-Mar-16	0%	2	10-Mar-16	26-Nov-15	27-Nov-15	-83	0	0%	[Gantt bar: 2015 Nov 27 to 2015 Nov 27]											
SD4F0372	D1 (D4f) - Pier Head Segment Lift & Temp Support (2 seg)	7	11-Mar-16	0%	7	18-Mar-16	28-Nov-15	05-Dec-15	-83	48	0%	[Gantt bar: 2015 Nov 28 to 2015 Dec 05]											

Pier D3 (D4d)

Pier Head Segments																							
SD4D0374	D3 (D4d) - Pier Head Segment Diaphragm - Rebar	18	13-Nov-15 A	50%	9	30-Jan-16	10-May-19	21-May-19	942	942	50%	[Gantt bar: 2015 Nov 13 to 2019 May 21]											
SD4D0376	D3 (D4d) - Pier Head Segment Diaphragm - Formwork & Prep for Concre	8	20-Nov-15 A	50%	4	25-Jan-16	17-May-19	21-May-19	947	947	50%	[Gantt bar: 2015 Nov 17 to 2019 May 21]											
SD4D0378	D3 (D4d) - Pier Head Segment Diaphragm - Concreting	2	24-Nov-15 A	50%	1	21-Jan-16	23-Mar-16	23-Mar-16	50	2	50%	[Gantt bar: 2016 Mar 23 to 2016 Mar 23]											
SD4D0380	D3 (D4d) - Pier Head Segment Diaphragm - Curing & Striking of Forms	6	25-Nov-15 A	50%	3	23-Jan-16	21-Mar-16	23-Mar-16	48	0	50%	[Gantt bar: 2016 Mar 23 to 2016 Mar 23]											

Pier D6 (D4a)

Pier Works																							
SD4A0340	D6 (D4a) - Type 4B-MJ Pier Head Curing/Striking of Forms/Remove Scaffi	6	10-Dec-15 A	60%	2	23-Jan-16	25-Nov-15	27-Nov-15	-45	4	60%	[Gantt bar: 2015 Nov 27 to 2015 Nov 27]											
SD4A372	D6 (D4a) - Type 4B-Bearing Plinth	6	21-Jan-16	0%	6	27-Jan-16	21-Nov-15	27-Nov-15	-49	0	0%	[Gantt bar: 2015 Nov 27 to 2015 Nov 27]											

Pier Head Segments																							
SD4A0370	D6 (D4a) - Pier Head Segment - Temporary Platform	6	28-Jan-16	0%	6	03-Feb-16	28-Nov-15	04-Dec-15	-49	26	0%	[Gantt bar: 2015 Nov 28 to 2015 Dec 04]											
SD4A0371	D6 (D4a) - Pier Head Segment Bearings	2	09-Mar-16	0%	2	10-Mar-16	05-Dec-15	07-Dec-15	-75	0	0%	[Gantt bar: 2015 Dec 07 to 2015 Dec 07]											
SD4A0372	D6 (D4a) - Pier Head Segment Lift & Temp Support (2 seg)	7	11-Mar-16	0%	7	18-Mar-16	08-Dec-15	15-Dec-15	-75	56	0%	[Gantt bar: 2015 Dec 15 to 2015 Dec 15]											

Pier D2 (D4e)

Pier Head Segments																							
SD4E0376	D2 (D4e) - Pier Head Segment Diaphragm - Formwork & Prep for Concre	8	10-Nov-15 A	50%	4	25-Jan-16	17-May-19	21-May-19	947	947	50%	[Gantt bar: 2015 May 17 to 2019 May 21]											
SD4E0378	D2 (D4e) - Pier Head Segment Diaphragm - Concreting	2	13-Nov-15 A	50%	1	21-Jan-16	08-Apr-16	08-Apr-16	60	2	50%	[Gantt bar: 2016 Apr 08 to 2016 Apr 08]											
SD4E0380	D2 (D4e) - Pier Head Segment Diaphragm - Curing & Striking of Forms	6	18-Nov-15 A	50%	3	23-Jan-16	06-Apr-16	08-Apr-16	58	0	50%	[Gantt bar: 2016 Apr 08 to 2016 Apr 08]											

Bridge D2

Pier D8 (D3d)

Pier Works																							
SD3D0240	D8 (D3d) - Type 5B Pier Rebarwork (3rd Lift)	3	19-Nov-15 A	100%	0	21-Jan-16	21-May-19	21-May-19	951	951	100%	[Gantt bar: 2015 May 21 to 2019 May 21]											

Pier Head Segments																							
SD3D0370	D8 (D3d) - Pier Head Segment - Temporary Platform	6	21-Jan-16	0%	6	27-Jan-16	10-Nov-15	16-Nov-15	-59	0	0%	[Gantt bar: 2015 Nov 16 to 2015 Nov 16]											
SD3D0372	D8 (D3d) - Pier Head Segment Lift & Fix (1 seg)	2	28-Jan-16	0%	2	29-Jan-16	17-Nov-15	18-Nov-15	-59	0	0%	[Gantt bar: 2015 Nov 18 to 2015 Nov 18]											
SD3D0374	D8 (D3d) - Pier Head Segment Diaphragm - Rebar	13	30-Jan-16	0%	13	17-Feb-16	19-Nov-15	03-Dec-15	-59	0	0%	[Gantt bar: 2015 Nov 19 to 2015 Dec 03]											
SD3D0376	D8 (D3d) - Pier Head Segment Diaphragm - Formwork	8	18-Feb-16	0%	8	26-Feb-16	04-Dec-15	12-Dec-15	-59	0	0%	[Gantt bar: 2015 Dec 12 to 2015 Dec 12]											
SD3D0378	D8 (D3d) - Pier Head Segment Diaphragm - Concreting	2	27-Feb-16	0%	2	29-Feb-16	14-Dec-15	15-Dec-15	-59	0	0%	[Gantt bar: 2015 Dec 15 to 2015 Dec 15]											
SD3D0380	D8 (D3d) - Pier Head Segment Diaphragm - Curing & Striking of Forms	6	01-Mar-16	0%	6	07-Mar-16	16-Dec-15	22-Dec-15	-59	72	0%	[Gantt bar: 2015 Dec 22 to 2015 Dec 22]											

Pier D7 (D3e)

Pier Head Segments																							
SD3E0370	D7 (D3e) - Pier Head Segment - Temporary Platform	6	14-Dec-15 A	100%	0	24-Dec-15 A					100%	[Gantt bar: 2015 Dec 24 to 2015 Dec 24]											
SD3E0372	D7 (D3e) - Pier Head Segment Lift & Fix (1 seg)	2	30-Dec-15 A	100%	0	30-Dec-15 A					100%	[Gantt bar: 2015 Dec 30 to 2015 Dec 30]											
SD3E0374	D7 (D3e) - Pier Head Segment Diaphragm - Rebar	12	07-Jan-16 A	50%	6	27-Jan-16	15-May-19	21-May-19	945	945	50%	[Gantt bar: 2019 May 21 to 2019 May 21]											
SD3E0376	D7 (D3e) - Pier Head Segment Diaphragm - Formwork & Prep for Concre	8	21-Jan-16 A	50%	4	25-Jan-16	26-Nov-15	30-Nov-15	-45	0	50%	[Gantt bar: 2015 Nov 30 to 2015 Nov 30]											

- [Blue Bar] Actual Work
- [Green Bar] Planned Bar
- [Red Bar] Critical Bar
- ◆ Milestone

Project ID: J3518DWPrE2-M32
 Layout: J3518-DWP-3MRP Submission - M32
 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 10 of 24 Pages)
(Progress as of 21-Jan-16)

Date	Revision	Checked	Approved
01-Dec-15		PKN	KWY
28-Dec-15		PKN	KWY
30-Jan-16		PKN	KWY

DWG. No.:
J3518/GCL/PGM/3MRP-M32

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete	2016																												
												January							February							March							April							
												21	28	04	11	18	25	01	08	15	22	29	07	14	21	28	04	11	18	25	01	08	15	22	29	07	14	21	28	04
SD3E0378	D7 (D3e) - Pier Head Segment Diaphragm - Concreting	2	26-Jan-16	0%	2	27-Jan-16	01-Dec-15	02-Dec-15	-45	0	0%																													
SD3E0380	D7 (D3e) - Pier Head Segment Diaphragm - Curing & Striking of Forms	6	28-Jan-16	0%	6	03-Feb-16	03-Dec-15	09-Dec-15	-45	86	0%																													
Pier D9 (D3c)																																								
Pier Head Segments																																								
SD3C0370	D9 (D3c) - Pier Head Segment - Temporary Platform	6	21-Jan-16	0%	6	27-Jan-16	05-Dec-15	11-Dec-15	-37	0	0%																													
SD3C0372	D9 (D3c) - Pier Head Segment Lift & Fix (1 seg)	2	28-Jan-16	0%	2	29-Jan-16	12-Dec-15	14-Dec-15	-37	0	0%																													
SD3C0374	D9 (D3c) - Pier Head Segment Diaphragm - Rebar	12	30-Jan-16	0%	12	16-Feb-16	15-Dec-15	30-Dec-15	-37	0	0%																													
SD3C0376	D9 (D3c) - Pier Head Segment Diaphragm - Formwork	8	17-Feb-16	0%	8	25-Feb-16	31-Dec-15	09-Jan-16	-37	0	0%																													
SD3C0378	D9 (D3c) - Pier Head Segment Diaphragm - Concreting	2	26-Feb-16	0%	2	27-Feb-16	11-Jan-16	12-Jan-16	-37	0	0%																													
SD3C0380	D9 (D3c) - Pier Head Segment Diaphragm - Curing & Striking of Forms	6	29-Feb-16	0%	6	05-Mar-16	13-Jan-16	19-Jan-16	-37	0	0%																													
Pier D13 (D2d)																																								
Pier Works																																								
SD2D0310	D13 (D2d) - Type 5B-MJ Pier Head Rebarwork	5	13-Jan-16 A	100%	0	21-Jan-16 A					100%																													
SD2D0320	D13 (D2d) - Type 5B-MJ Pier Head Formwork & Prep for Concreting	5	22-Jan-16 A	0%	5	26-Jan-16	18-Jan-16	22-Jan-16	-3	0	0%																													
SD2D0330	D13 (D2d) - Type 5B-MJ Pier Head Concreting	1	27-Jan-16	0%	1	27-Jan-16	23-Jan-16	23-Jan-16	-3	0	0%																													
SD2D0340	D13 (D2d) - Type 5B-MJ Pier Head Curing/Striking of Forms/Remove Scal	6	28-Jan-16	0%	6	03-Feb-16	25-Jan-16	30-Jan-16	-3	0	0%																													
SD2D0360	D13 (D2d) - Type 5B-MJ Pier Backfilling Works	4	04-Feb-16	0%	4	11-Feb-16	01-Feb-16	04-Feb-16	-3	0	0%																													
SD2D0380	D13 (D2d) - Type 5B-Bearing Plinth	6	28-Jan-16	0%	6	03-Feb-16	25-Jan-16	30-Jan-16	-3	0	0%																													
Pier Head Segments																																								
SD2D0370	D13 (D2d) - Pier Head Segment - Temporary Platform	6	12-Feb-16	0%	6	18-Feb-16	05-Feb-16	15-Feb-16	-3	0	0%																													
SD2D0371	D13 (D2d) - Pier Head Segment Bearings	2	19-Feb-16	0%	2	20-Feb-16	16-Feb-16	17-Feb-16	-3	0	0%																													
SD2D0372	D13 (D2d) - Pier Head Segment Lift & Temp Support (2 seg)	7	22-Feb-16	0%	7	29-Feb-16	18-Feb-16	25-Feb-16	-3	128	0%																													
Pier D11 (D3a)																																								
Portal																																								
SD3AR280	D11 (D3a) - Portal Beam Scaffolding	12	21-Jan-16	0%	12	03-Feb-16	18-Jan-16	30-Jan-16	-3	0	0%																													
SD3AR290	D11 (D3a) - Portal Beam Soffit Formwork	12	04-Feb-16	0%	12	20-Feb-16	01-Feb-16	17-Feb-16	-3	0	0%																													
SD3AR300	D11 (D3a) - Portal Beam Rebarwork & Inserts	16	22-Feb-16	0%	16	10-Mar-16	18-Feb-16	07-Mar-16	-3	0	0%																													
SD3AR305	D11 (D3a) - Portal Beam Side Formwork & Prep for Concreting	16	11-Mar-16	0%	16	01-Apr-16	08-Mar-16	29-Mar-16	-3	0	0%																													
SD3AR310	D11 (D3a) - Portal Beam Concreting	1	02-Apr-16	0%	1	02-Apr-16	30-Mar-16	30-Mar-16	-3	0	0%																													
SD3AR320	D11 (D3a) - Pier Head Curing/Striking of Forms/Remove Scaffolding	14	05-Apr-16	0%	14	22-Apr-16	31-Mar-16	18-Apr-16	-3	0	0%																													
SD3AR325	D11 (D3a) - Pier Backfilling Works	4	19-Apr-16	0%	4	23-Apr-16	20-May-16	24-May-16	23	0	0%																													
Pier D12 (D2e)																																								
Portal																																								
SD2ER280	D12 (D2e) - Portal Beam Scaffolding	12	11-Jan-16 A	0%	12	03-Feb-16	09-Nov-15	21-Nov-15	-60	0	0%																													
SD2ER290	D12 (D2e) - Portal Beam Soffit Formwork	12	04-Feb-16	0%	12	20-Feb-16	23-Nov-15	05-Dec-15	-60	0	0%																													
SD2ER300	D12 (D2e) - Portal Beam Rebarwork & Inserts	16	22-Feb-16	0%	16	10-Mar-16	07-Dec-15	24-Dec-15	-60	0	0%																													
SD2ER305	D12 (D2e) - Portal Beam Side Formwork & Prep for Concreting	16	11-Mar-16	0%	16	01-Apr-16	28-Dec-15	15-Jan-16	-60	0	0%																													
SD2ER310	D12 (D2e) - Portal Beam Concreting	1	02-Apr-16	0%	1	02-Apr-16	16-Jan-16	16-Jan-16	-60	0	0%																													
SD2ER320	D12 (D2e) - Pier Head Curing/Striking of Forms/Remove Scaffolding	14	05-Apr-16	0%	14	22-Apr-16	18-Jan-16	02-Feb-16	-60	4	0%																													
Pier D10 (D3b)																																								
Portal																																								
SD3BR280	D10 (D3b) - Portal Beam Scaffolding	12	19-Dec-15 A	50%	6	27-Jan-16	11-Jan-16	16-Jan-16	-9	0	50%																													
SD3BR290	D10 (D3b) - Portal Beam Soffit Formwork	12	28-Jan-16	0%	12	13-Feb-16	18-Jan-16	30-Jan-16	-9	0	0%																													
SD3BR300	D10 (D3b) - Portal Beam Rebarwork & Inserts	16	15-Feb-16	0%	16	03-Mar-16	01-Feb-16	22-Feb-16	-9	0	0%																													
SD3BR305	D10 (D3b) - Portal Beam Side Formwork & Prep for Concreting	16	04-Mar-16	0%	16	22-Mar-16	23-Feb-16	11-Mar-16	-9	0	0%																													
SD3BR310	D10 (D3b) - Portal Beam Concreting	1	23-Mar-16	0%	1	23-Mar-16	12-Mar-16	12-Mar-16	-9	0	0%																													
SD3BR320	D10 (D3b) - Pier Head Curing/Striking of Forms/Remove Scaffolding	14	24-Mar-16	0%	14	13-Apr-16	14-Mar-16	01-Apr-16	-9	0	0%																													
SD3BR325	D10 (D3b) - Pier Backfilling Works	4	11-Apr-16	0%	4	15-Apr-16	25-May-16	30-May-16	33	150	0%																													
Bridge D1																																								
Pier D14 (D2c)																																								
Portal																																								
SD2CR305	D14 (D2c) - Portal Beam Side Formwork & Prep for Concreting	16	13-Jan-16 A	80%	3	25-Jan-16	05-Jan-16	08-Jan-16	-13	0	80%																													
SD2CR310	D14 (D2c) - Portal Beam Concreting	1	25-Jan-16	0%	1	26-Jan-16	09-Jan-16	09-Jan-16	-13	0	0%																													
SD2CR320	D14 (D2c) - Pier Head Curing/Striking of Forms/Remove Scaffolding	14	26-Jan-16	0%	14	15-Feb-16	11-Jan-16	26-Jan-16	-13	0	0%																													
SD2CR325	D14 (D2c) - Pier Backfilling Works	4	15-Feb-16	0%	4	19-Feb-16	27-Jan-16	30-Jan-16	-13	46	0%																													
Pier D18 (D1c)																																								
Pier Head Segments																																								
SD1C0374	D18 (D1c) - Pier Head Segment Diaphragm - Rebar	13	19-Dec-15 A	20%	10	02-Feb-16	29-Aug-15	12-Sep-15	-112	0	20%																													
SD1C0376	D18 (D1c) - Pier Head Segment Diaphragm - Formwork	8	02-Feb-16	0%	8	15-Feb-16	14-Sep-15	23-Sep-15	-112	0	0%																													
SD1C0378	D18 (D1c) - Pier Head Segment Diaphragm - Concreting	2	15-Feb-16	0%	2	17-Feb-16	24-Sep-15	25-Sep-15	-112	0	0%																													
SD1C0380	D18 (D1c) - Pier Head Segment Diaphragm - Curing & Striking of Forms	6	17-Feb-16	0%	6	24-Feb-16	26-Sep-15	05-Oct-15	-112	0	0%																													
Pier D15 (D2b)																																								
Pier Works																																								

- Actual Work
- Planned Bar
- Critical Bar
- ◆ Milestone

Project ID: J3518DWPPrE2-M32
Layout: J3518-DWP-3MRP Submission - M32
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 11 of 24 Pages)
(Progress as of 21-Jan-16)

Date	Revision	Checked	Approved
01-Dec-15		PKN	KWY
28-Dec-15		PKN	KWY
30-Jan-16		PKN	KWY

DWG. No.:
J3518/GCL/PGM/3MRP-M32

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete	2015												2016																		
												January					February				March			April				January				February				March			April			
												21	28	04	11	18	25	01	08	15	22	29	07	14	21	28	04	11	18	25	01	08	15	22	29	07	14	21	28	04	11	18
Pier Head Segments - E2B (E1b3)																																										
SE1B3374	E2B (E1b3) - Pier Head Segment Diaphragm - Rebar	12	09-Nov-15 A	100%	0	24-Dec-15 A					100%	[Gantt bar: 09-Nov-15 to 24-Dec-15, 100% complete]																														
SE1B3376	E2B (E1b3) - Pier Head Segment Diaphragm - Formwork & Prep for Conc	10	25-Nov-15 A	100%	0	27-Dec-15 A					100%	[Gantt bar: 25-Nov-15 to 27-Dec-15, 100% complete]																														
SE1B3378	E2B (E1b3) - Pier Head Segment Diaphragm - Concreting	3	28-Nov-15 A	100%	0	28-Dec-15 A					100%	[Gantt bar: 28-Nov-15 to 28-Dec-15, 100% complete]																														
SE1B3380	E2B (E1b3) - Pier Head Segment Diaphragm - Curing & Striking of Forms	6	29-Dec-15 A	100%	0	07-Jan-16 A					100%	[Gantt bar: 29-Dec-15 to 07-Jan-16, 100% complete]																														
Pier Head Segments - E2C (E1b2)																																										
SE1B2374	E2C (E1b2) - Pier Head Segment Diaphragm - Rebar	13	11-Dec-15 A	50%	7	28-Jan-16	14-May-19	21-May-19	945	945	50%	[Gantt bar: 11-Dec-15 to 28-Jan-16, 50% complete]																														
SE1B2376	E2C (E1b2) - Pier Head Segment Diaphragm - Formwork & Prep for Conc	8	21-Dec-15 A	50%	4	25-Jan-16	17-May-19	21-May-19	947	947	50%	[Gantt bar: 21-Dec-15 to 25-Jan-16, 50% complete]																														
SE1B2378	E2C (E1b2) - Pier Head Segment Diaphragm - Concreting	2	28-Dec-15 A	50%	1	21-Jan-16	14-Jan-16	14-Jan-16	-6	0	50%	[Gantt bar: 28-Dec-15 to 21-Jan-16, 50% complete]																														
SE1B2380	E2C (E1b2) - Pier Head Segment Diaphragm - Curing & Striking of Forms	6	22-Jan-16	0%	6	28-Jan-16	15-Jan-16	22-Jan-16	-5	101	0%	[Gantt bar: 22-Jan-16 to 28-Jan-16, 0% complete]																														
Pier Head Segments - E2D (E1b1)																																										
SE1B1370	E2D (E1b1) - Pier Head Segment - Temporary Platform	2	18-Dec-15 A	100%	0	21-Dec-15 A					100%	[Gantt bar: 18-Dec-15 to 21-Dec-15, 100% complete]																														
SE1B1372	E2D (E1b1) - Pier Head Segment Lift & Fix (1 seg)	2	21-Jan-16	0%	2	22-Jan-16	10-May-16	12-May-16	85	0	0%	[Gantt bar: 21-Jan-16 to 22-Jan-16, 0% complete]																														
SE1B1374	E2D (E1b1) - Pier Head Segment Diaphragm - Rebar	12	23-Jan-16	0%	12	05-Feb-16	13-May-16	30-May-16	85	0	0%	[Gantt bar: 23-Jan-16 to 05-Feb-16, 0% complete]																														
SE1B1376	E2D (E1b1) - Pier Head Segment Diaphragm - Formwork & Prep for Conc	8	06-Feb-16	0%	8	18-Feb-16	31-May-16	11-Jun-16	85	0	0%	[Gantt bar: 06-Feb-16 to 18-Feb-16, 0% complete]																														
SE1B1378	E2D (E1b1) - Pier Head Segment Diaphragm - Concreting	2	19-Feb-16	0%	2	20-Feb-16	13-Jun-16	14-Jun-16	85	0	0%	[Gantt bar: 19-Feb-16 to 20-Feb-16, 0% complete]																														
SE1B1380	E2D (E1b1) - Pier Head Segment Diaphragm - Curing & Striking of Forms	6	22-Feb-16	0%	6	27-Feb-16	16-Jun-16	24-Jun-16	85	216	0%	[Gantt bar: 22-Feb-16 to 27-Feb-16, 0% complete]																														
Viaduct E2																																										
Bridge E2 - Piling & Substructure																																										
E3A,E3B, E3C & E3D (E2a - 1/2/3/4)																																										
Pier Head Segments - E3A,E3B, E3C & E3D																																										
Pier Head Segment - E3A (E2a4)																																										
SE2A4372	E3A (E2a4) - Pier Head Segment Lift & Temp Support (2 seg)	9	29-Dec-15 A	100%	0	02-Jan-16 A					100%	[Gantt bar: 29-Dec-15 to 02-Jan-16, 100% complete]																														
Pier Head Segment - E3C (E2a2)																																										
SE2A2371	E3C (E2a2) - Pier Head Segment Bearings	2	07-Mar-16	0%	2	08-Mar-16	02-Jan-16	04-Jan-16	-52	0	0%	[Gantt bar: 07-Mar-16 to 08-Mar-16, 0% complete]																														
SE2A2372	E3C (E2a2) - Pier Head Segment Lift & Temp Support (2 seg)	7	09-Mar-16	0%	7	16-Mar-16	05-Jan-16	15-Jan-16	-49	57	0%	[Gantt bar: 09-Mar-16 to 16-Mar-16, 0% complete]																														
Pier Head Segment - E3D (E2a1)																																										
SE2A1371	E3D (E2a1) - Pier Head Segment Bearings	2	07-Mar-16	0%	2	08-Mar-16	16-Apr-16	18-Apr-16	30	0	0%	[Gantt bar: 07-Mar-16 to 08-Mar-16, 0% complete]																														
SE2A1372	E3D (E2a1) - Pier Head Segment Lift & Temp Support (2 seg)	7	09-Mar-16	0%	7	16-Mar-16	19-Apr-16	28-Apr-16	31	162	0%	[Gantt bar: 09-Mar-16 to 16-Mar-16, 0% complete]																														
E4A & E4B (E2b - 1/2)																																										
Pier Works - E4A & E4B																																										
Pier Works - E4A (E2b2)																																										
SE2B2140	E4A (E2b2) - Seagull Pier Rebar Fixing, Formwork & Prep (3rd pour, arm)	24	17-Nov-15 A	100%	0	28-Dec-15 A					100%	[Gantt bar: 17-Nov-15 to 28-Dec-15, 100% complete]																														
SE2B2160	E4A (E2b2) - Seagull Pier Concreting, Curing & Striking, CJ Prep (3rd pour)	5	29-Dec-15 A	100%	0	09-Jan-16 A					100%	[Gantt bar: 29-Dec-15 to 09-Jan-16, 100% complete]																														
SE2B2300	E4A (E2b2) - Seagull Pier Falsework & Scaffolding (4th pour, upper diaphragm)	3	10-Jan-16 A	100%	0	17-Jan-16 A					100%	[Gantt bar: 10-Jan-16 to 17-Jan-16, 100% complete]																														
SE2B2320	E4A (E2b2) - Seagull Pier Rebar Fixing, Formwork & Prep (4th pour, upper diaphragm)	5	08-Jan-16 A	30%	4	25-Jan-16	13-Feb-15	17-Feb-15	-257	0	30%	[Gantt bar: 08-Jan-16 to 25-Jan-16, 30% complete]																														
SE2B2340	E4A (E2b2) - Seagull Pier Concreting, Curing & Striking, CJ Prep (4th pour)	6	25-Jan-16	0%	6	01-Feb-16	25-Feb-15	03-Mar-15	-254	3	0%	[Gantt bar: 25-Jan-16 to 01-Feb-16, 0% complete]																														
Pier Works - E4B (E2b1)																																										
SE2B1240	E4B (E2b1) - Seagull Pier Falsework & Scaffolding (3rd pour, arm)	6	21-Dec-15 A	50%	3	23-Jan-16	14-Feb-15	17-Feb-15	-256	1	50%	[Gantt bar: 21-Dec-15 to 23-Jan-16, 50% complete]																														
SE2B1260	E4B (E2b1) - Seagull Pier Rebar Fixing, Formwork & Prep (3rd pour, arm)	28	25-Jan-16	0%	28	01-Mar-16	18-Feb-15	25-Mar-15	-257	0	0%	[Gantt bar: 25-Jan-16 to 01-Mar-16, 0% complete]																														
SE2B1280	E4B (E2b1) - Seagull Pier Concreting, Curing & Striking, CJ Prep (3rd pour)	5	01-Mar-16	0%	5	07-Mar-16	26-Mar-15	31-Mar-15	-257	0	0%	[Gantt bar: 01-Mar-16 to 07-Mar-16, 0% complete]																														
SE2B1300	E4B (E2b1) - Seagull Pier Falsework & Scaffolding (4th pour, upper diaphragm)	6	08-Mar-16	0%	6	15-Mar-16	02-Apr-15	13-Apr-15	-257	0	0%	[Gantt bar: 08-Mar-16 to 15-Mar-16, 0% complete]																														
SE2B1320	E4B (E2b1) - Seagull Pier Rebar Fixing, Formwork & Prep (4th pour, upper diaphragm)	12	15-Mar-16	0%	12	01-Apr-16	14-Apr-15	29-Apr-15	-257	0	0%	[Gantt bar: 15-Mar-16 to 01-Apr-16, 0% complete]																														
SE2B1340	E4B (E2b1) - Seagull Pier Concreting, Curing & Striking, CJ Prep (4th pour)	4	01-Apr-16	0%	4	07-Apr-16	30-Apr-15	05-May-15	-257	0	0%	[Gantt bar: 01-Apr-16 to 07-Apr-16, 0% complete]																														
Pier Head Segments - E4A & E4B																																										
Pier head Segment - E4A (E2b2)																																										
SE2B2262	E4A (E2b2) - Pier Head Segment - Temporary Platform	2	04-Feb-16	0%	2	05-Feb-16	04-Mar-15	05-Mar-15	-256	0	0%	[Gantt bar: 04-Feb-16 to 05-Feb-16, 0% complete]																														
SE2B2264	E4A (E2b2) - Pier Head Segment Lift & Fix (4 seg)	4	06-Feb-16	0%	4	13-Feb-16	06-Mar-15	11-Mar-15	-255	0	0%	[Gantt bar: 06-Feb-16 to 13-Feb-16, 0% complete]																														
SE2B2266	E4A (E2b2) - Pier Head Segment Diaphragm Works	24	15-Feb-16	0%	24	12-Mar-16	12-Mar-15	13-Apr-15	-255	0	0%	[Gantt bar: 15-Feb-16 to 12-Mar-16, 0% complete]																														
SE2B2360	E4A (E2b2) - Precast Deck Segment Falsework Erection & Temp. Tie	12	02-Mar-16	0%	12	15-Mar-16	28-Mar-15	16-Apr-15	-255	0	0%	[Gantt bar: 02-Mar-16 to 15-Mar-16, 0% complete]																														
SE2B2370	E4A (E2b2) - Precast Deck Segment Infill Erection & Adjustment (4 seg)	12	16-Mar-16	0%	12	01-Apr-16	17-Apr-15	02-May-15	-255	0	0%	[Gantt bar: 16-Mar-16 to 01-Apr-16, 0% complete]																														
SE2B2380	E4A (E2b2) - Precast Deck Segment Insitu Stitch joints	8	02-Apr-16	0%	8	12-Apr-16	04-May-15	13-May-15	-255	0	0%	[Gantt bar: 02-Apr-16 to 12-Apr-16, 0% complete]																														
SE2B2390	E4A (E2b2) - Precast Deck Segment Stressing	4	13-Apr-16	0%	4	18-Apr-16	14-May-15	18-May-15	-255	0	0%	[Gantt bar: 13-Apr-16 to 18-Apr-16, 0% complete]																														
SE2B2400	E4A (E2b2) - Precast Deck Segment Falsework & Temp. Tie Removal	6	19-Apr-16	0%	6	26-Apr-16	19-May-15	27-May-15	-255	0	0%	[Gantt bar: 19-Apr-16 to 26-Apr-16, 0% complete]																														
Pier head Segment - E4B (E2b1)																																										
SE2B1162	E4B (E2b1) - Pier Head Segment - Temporary Platform	2	07-Apr-16	0%	2	09-Apr-16	06-May-15	07-May-15	-257	0	0%	[Gantt bar: 07-Apr-16 to 09-Apr-16, 0% complete]																														
SE2B1164	E4B (E2b1) - Pier Head Segment Lift & Fix (4 seg)	4	09-Apr-16	0%	4	15-Apr-16	08-May-15	14-May-15	-256	0	0%	[Gantt bar: 09-Apr-16 to 15-Apr-16, 0% complete]																														
SE2B1166	E4B (E2b1) - Pier Head Segment Diaphragm Works	24	15-Apr-16	0%	24	18-May-16	15-May-15	18-Jun-15	-256	0	0%	[Gantt bar: 15-Apr-16 to 18-May-16, 0% complete]																														
E5A & E5B (E2c - 1/2)																																										
Pier Works - E5A & E5B																																										
Pier Works - E5A (E2c2)																																										
SE2C202	E5A (E2c2) - Seagull Pier Falsework & Scaffolding (1st pour, Lower Stem)	3	29-Dec-15 A	100%	0	02-Jan-16 A					100%	[Gantt bar: 29-Dec-15 to 02-Jan-16, 100% complete]																														
SE2C203	E5A (E2c2) - Seagull Pier Combine Shell Installation, Rebar Fixing, Formwork	7	04-Jan-16 A	100%	0	09-Jan-16 A					100%	[Gantt bar: 04-Jan-16 to 09-Jan-16, 100% complete]																														

■ Actual Work
■ Planned Bar
■ Critical Bar
◆ Milestone

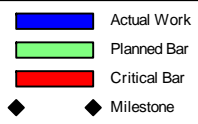
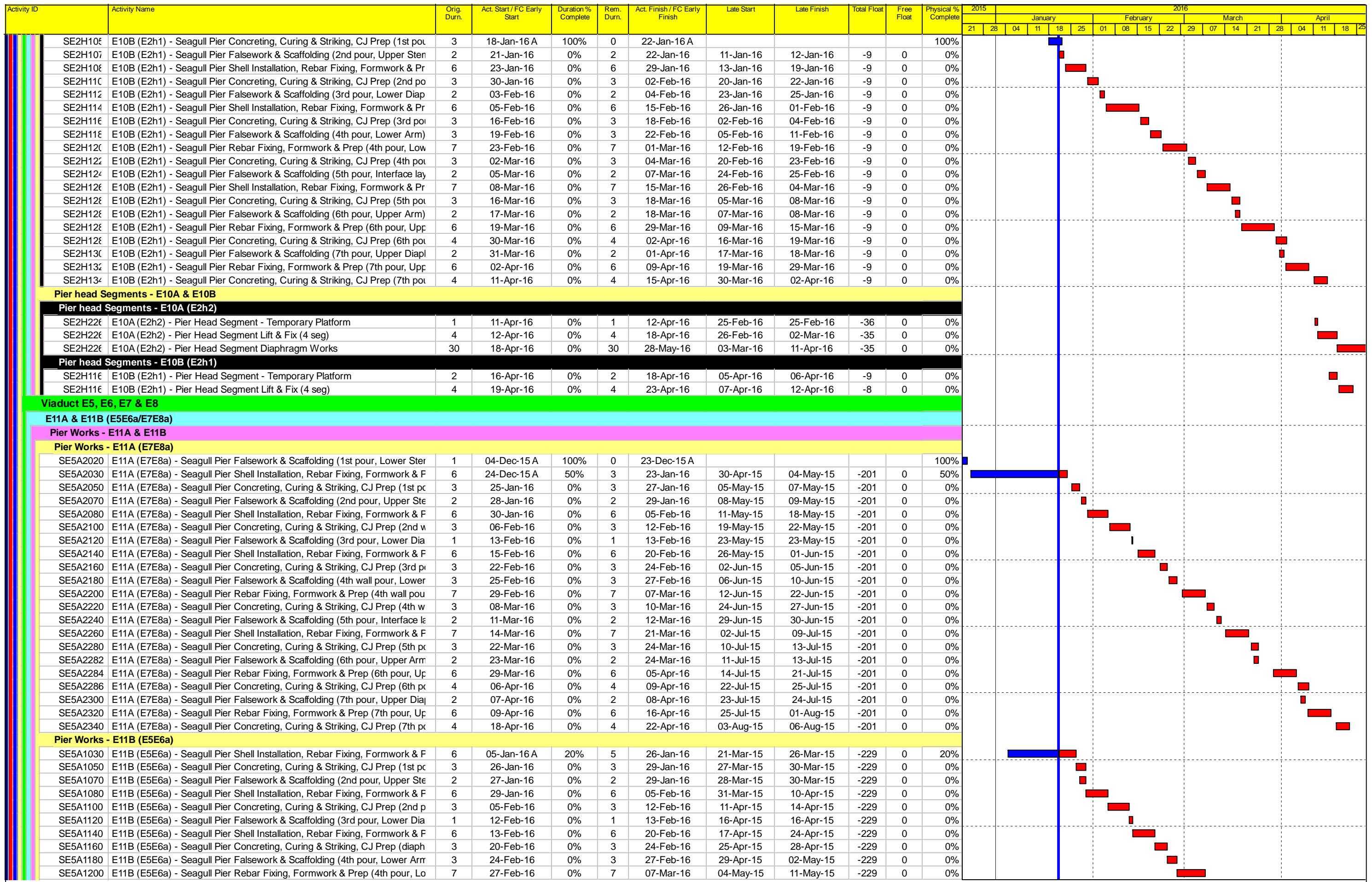
Project ID: J3518DWPPrE2-M32
Layout: J3518-DWP-3MRP Submission - M32
Filter: TASK filters: 3-Month Lookahead, No CC
Milestones, No Level of Effort.

Tuen Mun - Chek Lap Kok Link - Southern Connection
3-Month Rolling Programme (Page 13 of 24 Pages)
(Progress as of 21-Jan-16)

Date	Revision	Checked	Approved
01-Dec-15		PKN	KWY
28-Dec-15		PKN	KWY
30-Jan-16		PKN	KWY

DWG. No.:
J3518/GCL/PGM/3MRP-M32

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete	2016																											
												January			February			March			April																		
												21	28	04	11	18	25	01	08	15	22	29	07	14	21	28	04	11	18	25									
SE2C20f	E5A (E2c2) - Seagull Pier Concreting, Curing & Striking, CJ Prep (1st pour,	3	21-Jan-16	0%	3	23-Jan-16	22-Dec-15	24-Dec-15	-23	0	0%																												
SE2C207	E5A (E2c2) - Seagull Pier Falsework & Scaffolding (2nd pour, Lower Diaph	2	25-Jan-16	0%	2	26-Jan-16	28-Dec-15	29-Dec-15	-23	0	0%																												
SE2C20f	E5A (E2c2) - Seagull Pier Combine Shell Installation, Rebar Fixing, Formw	7	27-Jan-16	0%	7	03-Feb-16	30-Dec-15	07-Jan-16	-23	0	0%																												
SE2C21C	E5A (E2c2) - Seagull Pier Concreting, Curing & Striking, CJ Prep (2nd pou	3	04-Feb-16	0%	3	06-Feb-16	08-Jan-16	11-Jan-16	-23	0	0%																												
SE2C21z	E5A (E2c2) - Seagull Pier Falsework & Scaffolding (3rd pour, Lower Arm)	3	11-Feb-16	0%	3	13-Feb-16	12-Jan-16	14-Jan-16	-23	0	0%																												
SE2C214	E5A (E2c2) - Seagull Pier Rebar Fixing, Formwork & Prep (3rd pour, Lowe	7	15-Feb-16	0%	7	22-Feb-16	15-Jan-16	22-Jan-16	-23	0	0%																												
SE2C21f	E5A (E2c2) - Seagull Pier Concreting, Curing & Striking, CJ Prep (3rd pour	3	23-Feb-16	0%	3	25-Feb-16	23-Jan-16	26-Jan-16	-23	0	0%																												
SE2C22C	E5A (E2c2) - Seagull Pier Falsework & Scaffolding (4th pour, Interface laye	3	24-Feb-16	0%	3	26-Feb-16	25-Jan-16	27-Jan-16	-23	0	0%																												
SE2C22f	E5A (E2c2) - Seagull Pier Combine Shell Installation, Rebar Fixing, Formw	7	27-Feb-16	0%	7	05-Mar-16	28-Jan-16	04-Feb-16	-23	0	0%																												
SE2C22z	E5A (E2c2) - Seagull Pier Concreting, Curing & Striking, CJ Prep (4th pour	4	07-Mar-16	0%	4	10-Mar-16	05-Feb-16	12-Feb-16	-23	0	0%																												
SE2C22z	E5A (E2c2) - Seagull Pier Falsework & Scaffolding (5th pour, Upper Arm)	3	08-Mar-16	0%	3	10-Mar-16	06-Feb-16	12-Feb-16	-23	0	0%																												
SE2C22z	E5A (E2c2) - Seagull Pier Rebar Fixing, Formwork & Prep (5th pour, Uppe	7	11-Mar-16	0%	7	18-Mar-16	13-Feb-16	20-Feb-16	-23	0	0%																												
SE2C22z	E5A (E2c2) - Seagull Pier Concreting, Curing & Striking, CJ Prep (5th pour	4	19-Mar-16	0%	4	23-Mar-16	22-Feb-16	25-Feb-16	-23	0	0%																												
SE2C23C	E5A (E2c2) - Seagull Pier Falsework & Scaffolding (6th pour, Upper Diaphr	3	21-Mar-16	0%	3	23-Mar-16	23-Feb-16	25-Feb-16	-23	0	0%																												
SE2C23z	E5A (E2c2) - Seagull Pier Rebar Fixing, Formwork & Prep (6th pour, Uppe	7	24-Mar-16	0%	7	05-Apr-16	26-Feb-16	04-Mar-16	-23	0	0%																												
SE2C23z	E5A (E2c2) - Seagull Pier Concreting, Curing & Striking, CJ Prep (6th pour	4	06-Apr-16	0%	4	09-Apr-16	05-Mar-16	09-Mar-16	-23	0	0%																												
Pier Works - E5B (E2c1)																																							
SE2C10z	E5B (E2c1) - Seagull Pier Falsework & Scaffolding (1st pour, Lower Stem)	3	04-Jan-16 A	100%	0	09-Feb-16 A					100%																												
SE2C10z	E5B (E2c1) - Seagull Pier Combine Sheel Installation, Rebar Fixing, Formv	7	20-Jan-16 A	10%	6	28-Jan-16	30-Dec-15	07-Jan-16	-17	0	10%																												
SE2C10f	E5B (E2c1) - Seagull Pier Concreting, Curing & Striking, CJ Prep (1st pour	3	28-Jan-16	0%	3	01-Feb-16	08-Jan-16	11-Jan-16	-17	0	0%																												
SE2C10f	E5B (E2c1) - Seagull Pier Falsework & Scaffolding (2nd pour, Lower Diaph	2	01-Feb-16	0%	2	03-Feb-16	12-Jan-16	13-Jan-16	-17	0	0%																												
SE2C10f	E5B (E2c1) - Seagull Pier Combine Shell Installation, Rebar Fixing, Formw	7	03-Feb-16	0%	7	15-Feb-16	14-Jan-16	21-Jan-16	-17	0	0%																												
SE2C11C	E5B (E2c1) - Seagull Pier Concreting, Curing & Striking, CJ Prep (2nd pou	3	15-Feb-16	0%	3	18-Feb-16	22-Jan-16	25-Jan-16	-17	0	0%																												
SE2C11z	E5B (E2c1) - Seagull Pier Falsework & Scaffolding (3rd pour, Lower Arm)	3	18-Feb-16	0%	3	22-Feb-16	26-Jan-16	28-Jan-16	-17	0	0%																												
SE2C114	E5B (E2c1) - Seagull Pier Rebar Fixing, Formwork & Prep (3rd pour, Lowe	7	22-Feb-16	0%	7	01-Mar-16	29-Jan-16	05-Feb-16	-17	0	0%																												
SE2C11f	E5B (E2c1) - Seagull Pier Concreting, Curing & Striking, CJ Prep (3rd pour	3	23-Feb-16	0%	3	26-Feb-16	30-Jan-16	02-Feb-16	-17	0	0%																												
SE2C12C	E5B (E2c1) - Seagull Pier Falsework & Scaffolding (4th pour, Interface laye	3	26-Feb-16	0%	3	01-Mar-16	03-Feb-16	05-Feb-16	-17	0	0%																												
SE2C12f	E5B (E2c1) - Seagull Pier Combine Shell Installation, Rebar Fixing, Formw	7	01-Mar-16	0%	7	09-Mar-16	06-Feb-16	17-Feb-16	-17	0	0%																												
SE2C12z	E5B (E2c1) - Seagull Pier Concreting, Curing & Striking, CJ Prep (4th pour	4	09-Mar-16	0%	4	14-Mar-16	18-Feb-16	22-Feb-16	-17	0	0%																												
SE2C12z	E5B (E2c1) - Seagull Pier Falsework & Scaffolding (5th pour, Upper Arm)	3	10-Mar-16	0%	3	14-Mar-16	19-Feb-16	22-Feb-16	-17	0	0%																												
SE2C12z	E5B (E2c1) - Seagull Pier Rebar Fixing, Formwork & Prep (5th pour, Uppe	7	14-Mar-16	0%	7	22-Mar-16	23-Feb-16	01-Mar-16	-17	0	0%																												
SE2C12z	E5B (E2c1) - Seagull Pier Concreting, Curing & Striking, CJ Prep (5th pour	4	22-Mar-16	0%	4	30-Mar-16	02-Mar-16	05-Mar-16	-17	0	0%																												
SE2C13C	E5B (E2c1) - Seagull Pier Falsework & Scaffolding (6th pour, Upper Diaphr	3	23-Mar-16	0%	3	30-Mar-16	03-Mar-16	05-Mar-16	-17	0	0%																												
SE2C13z	E5B (E2c1) - Seagull Pier Rebar Fixing, Formwork & Prep (6th pour, Uppe	7	30-Mar-16	0%	7	08-Apr-16	07-Mar-16	14-Mar-16	-17	0	0%																												
SE2C13z	E5B (E2c1) - Seagull Pier Concreting, Curing & Striking, CJ Prep (6th pour	4	08-Apr-16	0%	4	13-Apr-16	15-Mar-16	18-Mar-16	-17	0	0%																												
Pier Head Segements - E5A & E5B																																							
Pier head Segment - E5A (E2c2)																																							
SE2C22f	E5A (E2c2) - Pier Head Segment - Temporary Platform	1	11-Apr-16	0%	1	11-Apr-16	10-Mar-16	10-Mar-16	-23	0	0%																												
SE2C22f	E5A (E2c2) - Pier Head Segment Lift & Fix (4 seg)	4	12-Apr-16	0%	4	16-Apr-16	11-Mar-16	15-Mar-16	-23	0	0%																												
SE2C22f	E5A (E2c2) - Pier Head Segment Diaphragm Works	30	18-Apr-16	0%	30	27-May-16	16-Mar-16	26-Apr-16	-23	0	0%																												
Pier head Segment - E5B (E2c1)																																							
SE2C11f	E5B (E2c1) - Pier Head Segment - Temporary Platform	2	13-Apr-16	0%	2	16-Apr-16	19-Mar-16	21-Mar-16	-17	0	0%																												
SE2C11f	E5B (E2c1) - Pier Head Segment Lift & Fix (4 seg)	4	16-Apr-16	0%	4	22-Apr-16	22-Mar-16	29-Mar-16	-17	0	0%																												
E6A & E6B (E2d - 1/2)																																							
Pier Works - E6A & E6B																																							
Pier Works - E6A (E2d2)																																							
SE2D20f	E6A (E2d2) - Seagull Pier Temp. Support Platform (Cancelled Activity)	6	07-Jan-16 A	100%	0	07-Jan-16 A					100%																												
SE2D20z	E6A (E2d2) - Seagull Pier Falsework & Scaffolding (1st pour, Lower Stem)	4	07-Jan-16 A	100%	0	11-Jan-16 A					100%																												
SE2D20z	E6A (E2d2) - Seagull Pier Combine Shell Installation, Rebar Fixing, Formw	7	21-Jan-16	0%	7	28-Jan-16	19-Feb-16	26-Feb-16	22	0	0%																												
SE2D20f	E6A (E2d2) - Seagull Pier Concreting, Curing & Striking, CJ Prep (1st pour	3	29-Jan-16	0%	3	01-Feb-16	27-Feb-16	01-Mar-16	22	0	0%																												
SE2D207	E6A (E2d2) - Seagull Pier Falsework & Scaffolding (2nd pour, Lower Diaph	3	02-Feb-16	0%	3	04-Feb-16	02-Mar-16	04-Mar-16	22	0	0%																												
SE2D20f	E6A (E2d2) - Seagull Pier Combine Shell Installation, Rebar Fixing, Formw	7	05-Feb-16	0%	7	16-Feb-16	05-Mar-16	12-Mar-16	22	0	0%																												
SE2D21C	E6A (E2d2) - Seagull Pier Concreting, Curing & Striking, CJ Prep (2nd pou	3	17-Feb-16	0%	3	19-Feb-16	14-Mar-16	16-Mar-16	22	0	0%																												
SE2D21z	E6A (E2d2) - Seagull Pier Falsework & Scaffolding (3rd pour, Lower Arm)	3	20-Feb-16	0%	3	23-Feb-16	17-Mar-16	19-Mar-16	22	0	0%																												
SE2D214	E6A (E2d2) - Seagull Pier Rebar Fixing, Formwork & Prep (3rd pour, Lowe	7	24-Feb-16	0%	7	02-Mar-16	21-Mar-16	31-Mar-16	22	0	0%																												
SE2D21f	E6A (E2d2) - Seagull Pier Concreting, Curing & Striking, CJ Prep (3rd pour	3	03-Mar-16	0%	3	05-Mar-16	01-Apr-16	05-Apr-16	22	0	0%																												



Project ID: J3518DWP rE2-M32
Layout: J3518-DWP-3MRP Submission - M32
Filter: TASK filters: 3-Month Lookahead, No CC
Milestones, No Level of Effort.

Tuen Mun - Chek Lap Kok Link - Southern Connection
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(Progress as of 21-Jan-16)

Date	Revision	Checked
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Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Duration % Complete	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Free Float	Physical % Complete	2015												2016													
												2015					2016					2016					2016										
												21	28	04	11	18	25	01	08	15	22	29	07	14	21	28	04	11	18	25							
F6 (F2d)																																					
Foundation Works																																					
GFXX561-	F6 (F2d) - Confirm Rockhead Levels	8	15-Apr-15 A	62.5%	3	23-Jan-16	20-Dec-14	23-Dec-14	-319	9	0%	[Gantt bar: 2015-12-20 to 2015-12-23]																									
GFXX565	F6 (F2d) - Bored Piles (1.80m dia. x 3 nos)	105	04-Feb-16	0%	105	16-Jun-16	24-Dec-14	07-May-15	-328	0	0%	[Gantt bar: 2016-01-24 to 2016-05-07]																									
F7 (F2e)																																					
Foundation Works																																					
GFXX561-	F7 (F2e) - Confirm Rockhead Levels	8	21-Jan-16	0%	8	29-Jan-16	26-Oct-15	03-Nov-15	-72	241	0%	[Gantt bar: 2015-10-26 to 2015-11-03]																									
F5 (F2c)																																					
Foundation Works																																					
GFXX561-8	F5 (F2c) - Confirm Rockhead Levels	8	21-Jan-16	0%	8	29-Jan-16	20-Dec-14	31-Dec-14	-319	4	0%	[Gantt bar: 2015-12-20 to 2015-12-31]																									
GFXX564	F5 (F2c) - Bored Piles (1.80m dia. x 3 nos)	98	04-Feb-16	0%	98	07-Jun-16	02-Jan-15	05-May-15	-323	0	0%	[Gantt bar: 2015-01-02 to 2015-05-05]																									
F8 (F2f) & Abutment																																					
Foundation Works																																					
GFXX561-	F8 (F2f) - Confirm Rockhead Levels	8	25-Feb-16	0%	8	04-Mar-16	12-Mar-16	21-Mar-16	14	215	0%	[Gantt bar: 2016-03-12 to 2016-03-21]																									
GFXX561-5	F8 (F2f) - Pre-drilling for Piles (2 nos)	24	25-Jan-16	0%	24	24-Feb-16	13-Feb-16	11-Mar-16	14	0	0%	[Gantt bar: 2016-02-13 to 2016-03-11]																									
Viaduct F3																																					
F9 (F3d-1/F3d-2)																																					
Foundation Works - F9 (F3d-1/F3d-2)																																					
Foundation Works																																					
GFXX571	F9 (F3d) - Confirm Rockhead Levels	8	21-Jan-16	0%	8	29-Jan-16	18-Dec-14	29-Dec-14	-321	4	0%	[Gantt bar: 2015-12-18 to 2015-12-29]																									
GFXX575	F9 (F3d) - Bored Piles (1.80m dia. x 4 nos)	112	04-Feb-16	0%	112	24-Jun-16	30-Dec-14	19-May-15	-325	0	0%	[Gantt bar: 2015-12-30 to 2016-05-19]																									
F10 (F3c-1/F3c-2)																																					
Foundation Works - Pier F10																																					
Foundation Works																																					
GFXX571	F10 (F3c) - Confirm Rockhead Levels	8	21-Jan-16	0%	8	29-Jan-16	04-Mar-15	13-Mar-15	-262	4	0%	[Gantt bar: 2015-03-04 to 2015-03-13]																									
GFXX574	F10 (F3c) - Bored Piles (1.80m dia. x 4 nos)	84	04-Feb-16	0%	84	21-May-16	13-Mar-15	27-Jun-15	-266	0	0%	[Gantt bar: 2015-03-13 to 2016-06-27]																									
F11 (F3b-1/F3b-2)																																					
Foundation Works - Pier F11 (F3b-1/F3b-2)																																					
Foundation Works																																					
GFXX571	F11 (F3b) - Confirm Rockhead Levels	8	21-Jan-16	0%	8	29-Jan-16	25-Aug-15	02-Sep-15	-121	207	0%	[Gantt bar: 2015-08-25 to 2015-09-02]																									
F12 (F3a) & Abutment																																					
Foundation Works																																					
GFXX571-	F12 (F3a) - Confirm Rockhead Levels	8	25-Feb-16	0%	8	04-Mar-16	11-Jan-16	19-Jan-16	-36	292	0%	[Gantt bar: 2016-01-11 to 2016-01-19]																									
GFXX571-4	F12 (F3a) - Pre-drilling for Piles (2 nos)	24	25-Jan-16	0%	24	24-Feb-16	10-Dec-15	09-Jan-16	-36	0	0%	[Gantt bar: 2015-12-10 to 2016-01-09]																									
Viaduct F5																																					
F13 (F5d)																																					
Foundation Works																																					
GFXX586-1	F13 (F5d) - Pre-drilling for Piles (3 nos)	24	04-Jun-15 A	100%	0	21-Jan-16	14-Apr-15	14-Apr-15	-230	0	100%	[Gantt bar: 2015-04-14 to 2015-04-14]																									
GFXX586-4	F13 (F5d) - Confirm Rockhead Levels	8	21-Jan-16	0%	8	29-Jan-16	15-Apr-15	23-Apr-15	-230	102	0%	[Gantt bar: 2015-04-15 to 2015-04-23]																									
F14 (F5c)																																					
Foundation Works																																					
GFXX586-6	F14 (F5c) - Confirm Rockhead Levels	8	21-Jan-16	0%	8	29-Jan-16	17-Jun-15	27-Jun-15	-178	88	0%	[Gantt bar: 2015-06-17 to 2015-06-27]																									
F15 (F5b)																																					
Foundation Works																																					
GFXX586-3	F15 (F5b) - Pre-drilling for Piles (3 nos)	24	23-Jun-15 A	66.67%	8	29-Jan-16	14-Sep-15	22-Sep-15	-105	0	66.7%	[Gantt bar: 2015-09-14 to 2015-09-22]																									
GFXX586-8	F15 (F5b) - Confirm Rockhead Levels	8	30-Jan-16	0%	8	11-Feb-16	23-Sep-15	03-Oct-15	-105	227	0%	[Gantt bar: 2015-09-23 to 2015-10-03]																									
Viaduct F4																																					
F16 (F4a/F5a)																																					
Foundation Works																																					
GFXX579-1	F16 (F4a/F5a) - Pre-drilling for Piles (8 nos)	24	14-May-15 A	62.5%	9	30-Jan-16	05-Aug-15	14-Aug-15	-138	0	62.5%	[Gantt bar: 2015-08-05 to 2015-08-14]																									
GFXX579-4	F16 (F4a/F5a) - Confirm Rockhead Levels	8	01-Feb-16	0%	8	12-Feb-16	31-Aug-15	09-Sep-15	-125	198	0%	[Gantt bar: 2015-08-31 to 2015-09-09]																									
F17 (F4b)																																					
Foundation Works																																					
GFXX579-2	F17 (F4b) - Pre-drilling for Piles (3 nos)	24	01-Feb-16	0%	24	02-Mar-16	15-Aug-15	12-Sep-15	-138	0	0%	[Gantt bar: 2015-08-15 to 2015-09-12]																									
GFXX579-6	F17 (F4b) - Confirm Rockhead Levels	8	03-Mar-16	0%	8	11-Mar-16	14-Sep-15	22-Sep-15	-138	177	0%	[Gantt bar: 2015-09-14 to 2015-09-22]																									
F18 (F4c) & Abutment																																					
Foundation Works																																					
GFXX579-3	F18 (F4c) - Pre-drilling for Piles (2 nos)	24	25-Jan-16	0%	24	24-Feb-16	21-Nov-15	18-Dec-15	-52	0	0%	[Gantt bar: 2015-11-21 to 2015-12-18]																									
GFXX579-7	F18 (F4c) - Confirm Rockhead Levels	8	25-Feb-16	0%	8	04-Mar-16	19-Dec-15	30-Dec-15	-52	214	0%	[Gantt bar: 2015-12-19 to 2016-01-30]																									
Approach Ramp F																																					
Approach Ramp Land Foundation - HKBCF																																					

■ Actual Work
■ Planned Bar
■ Critical Bar
◆ Milestone

Project ID: J3518DWPPrE2-M32
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 Filter: TASK filters: 3-Month Lookahead, No CC
 Milestones, No Level of Effort.

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3-Month Rolling Programme (Page 21 of 24 Pages)
(Progress as of 21-Jan-16)

Date	Revision	Checked	Approved
01-Dec-15		PKN	KWY
28-Dec-15		PKN	KWY
30-Jan-16		PKN	KWY

DWG. No.:
J3518/GCL/PGM/3MRP-M32

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-Chek Lap Kok Link - Investigation. Updated EM&A Manual for Tuen Mun-Chek Lap Kok Link)

*Contract No. HY/2012/07
Tuen Mun – Chek Lap Kok Link
Southern Connection Viaduct Section
Environmental Mitigation and Enhancement Measure Implementation Schedule*

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									
<i>General Marine Works</i>									
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		✓
<i>Temporary Staging work</i>									
	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						
<i>Land Works</i>									
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		✓
<i>Water Quality Monitoring</i>									
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 (donor 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 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 (OM4)	All areas/ detailed design/ during construction / during operation	Design Consultant/ Contractor	TMEIA	Y	Y	Y	n/a. To be implemented by HyD/LCSD

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

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	O	
12.6	8.1	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: <ul style="list-style-type: none"> - suitable for the substance to be held, resistant to corrosion, maintained in good conditions and securely closed; - Having a capacity of <450L unless the specifications have been approved by the EPD; and - Displaying a label in English and Chinese according to the instructions prescribed in Schedule 2 of the Regulations. Clearly labelled and used solely for the storage of chemical wastes; - Enclosed with at least 3 sides; - Impermeable floor and bund with capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in the area, whichever is greatest; - Adequate ventilation; 	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	
		<ul style="list-style-type: none"> - 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 paper if such volume is sufficiently large to	Site Offices/ 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	
		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.	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 $\mu\text{g}/\text{m}^3$	ASR9A/ASR8A = 178 ASR9C/ASR8/ASR9 = 178	260
1 Hour TSP Level in $\mu\text{g}/\text{m}^3$	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)	<u>Surface and Middle</u> 5.0 mg/L	<u>Surface and Middle</u> 4.2 mg/L
	<u>Bottom</u> 4.7 mg/L	<u>Bottom</u> 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 : 28/01/2016

Sampler

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

Calibration Office 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) : 1018
 Ta(K) : 289

Resistance Plate	dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1 18 holes	11.6	3.467	1.673	56	57.01
2 13 holes	9.6	3.154	1.523	50	50.90
3 10 holes	7.0	2.693	1.304	44	44.79
4 7 holes	4.6	2.183	1.060	36	36.65
5 5 holes	2.8	1.703	0.831	28	28.50

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

Sampler Calibration Relationship (Linear Regression)

Slope(m): 33.142 Intercept(b): 1.206 Correlation Coefficient(r): 0.9989

Checked by: Magnum Fan

Date: 04/02/2016

High-Volume TSP Sampler
5-Point Calibration Record

Location : ASR9
 Calibrated by : P.F.Yeung
 Date : 28/01/2016

Sampler

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

Calibration Orifice 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) : 1018
 Ta(K) : 289

Resistance Plate	dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1 18 holes	11.4	3.437	1.659	57	58.02
2 13 holes	9.2	3.088	1.492	51	51.92
3 10 holes	6.5	2.595	1.257	44	44.79
4 7 holes	4.4	2.135	1.037	36	36.65
5 5 holes	2.6	1.641	0.802	28	28.50

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

Sampler Calibration Relationship (Linear Regression)

Slope(m): 34.260 Intercept(b): 1.178 Correlation Coefficient(r): 0.9996

Checked by: Magnum Fan

Date: 04/02/2016



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ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - Mar 24, 2015 Rootmeter S/N 0438320 Ta (K) - 292
 Operator Tisch Orifice I.D. - 2454 Pa (mm) - 756.92

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	1.4460	3.2	2.00
2	NA	NA	1.00	1.0300	6.4	4.00
3	NA	NA	1.00	0.9180	7.9	5.00
4	NA	NA	1.00	0.8780	8.7	5.50
5	NA	NA	1.00	0.7240	12.6	8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)	Va	(x axis) Qa	(y axis)
1.0121	0.6999	1.4258	0.9958	0.6886	0.8784
1.0078	0.9785	2.0163	0.9916	0.9627	1.2422
1.0057	1.0955	2.2543	0.9895	1.0779	1.3888
1.0047	1.1443	2.3644	0.9885	1.1258	1.4566
0.9994	1.3805	2.8515	0.9833	1.3582	1.7568
Qstd slope (m) = 2.09532			Qa slope (m) = 1.31205		
intercept (b) = -0.03812			intercept (b) = -0.02349		
coefficient (r) = 0.99994			coefficient (r) = 0.99994		
y axis = SQRT[H2O(Pa/760) (298/Ta)]			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. : C153241

證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC15-1330)

Date of Receipt / 收件日期 : 10 June 2015

Description / 儀器名稱 : Sound Level Calibrator

Manufacturer / 製造商 : Rion

Model No. / 型號 : NC-73

Serial No. / 編號 : 10997142

Supplied By / 委託者 : Envirotech Services Co.

Shop 6, G/F., Casio Mansion, 209 Shaukeiwan Road,
Hong Kong

TEST CONDITIONS / 測試條件

Temperature / 溫度 : $(23 \pm 2)^{\circ}\text{C}$

Relative Humidity / 相對濕度 : $(55 \pm 20)\%$

Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 14 June 2015

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.

All results are within manufacturer's specification.

The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via :

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Agilent Technologies / Keysight Technologies
- Rohde & Schwarz Laboratory, Germany
- Fluke Everett Service Center, USA

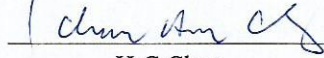
Tested By

測試


K C Lee
Project Engineer

Certified By

核證


H C Chan
Engineer

Date of Issue

簽發日期

16 June 2015

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

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗所書面批准。

Sun Creation Engineering Limited - Calibration & Testing Laboratory

c/o 4/F, Tsing Shan Wan Exchange Building, 1 Hing On Lane, Tuen Mun, New Territories, Hong Kong

輝創工程有限公司 - 校正及檢測實驗室

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

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E-mail/電郵: callab@suncreation.com

Website/網址: www.suncreation.com

Page 1 of 2

Certificate of Calibration

校正證書

Certificate No. : C153241

證書編號

1. The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours before the commencement of the test.
2. The results presented are the mean of 3 measurements at each calibration point.
3. Test equipment :

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

4. Test procedure : MA100N.

5. Results :

5.1 Sound Level Accuracy

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

5.2 Frequency Accuracy

UUT Nominal Value (kHz)	Measured Value (kHz)	Mfr's Spec.	Uncertainty of Measured Value (Hz)
1	0.986	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.



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. : C153940
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC15-1557)

Date of Receipt / 收件日期 : 13 July 2015

Description / 儀器名稱 : Sound Level Meter

Manufacturer / 製造商 : Rion

Model No. / 型號 : NL-31

Serial No. / 編號 : 00603867

Supplied By / 委託者 : Envirotech Services Co.

Shop 6, G/F., Casio Mansion, 209 Shaukeiwan Road,
Hong Kong

TEST CONDITIONS / 測試條件

Temperature / 溫度 : $(23 \pm 2)^{\circ}\text{C}$

Relative Humidity / 相對濕度 : $(55 \pm 20)\%$

Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範

Calibration check

DATE OF TEST / 測試日期 : 22 July 2015

TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.

All results are within manufacturer's specification.

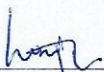
The results are detailed in the subsequent page(s).

The test equipment used for calibration are traceable to National Standards via :

- The Government of The Hong Kong Special Administrative Region Standard & Calibration Laboratory
- Agilent Technologies / Keysight Technologies
- Rohde & Schwarz Laboratory, Germany
- Fluke Everett Service Center, USA

Tested By

測試


H T Wong
Assistant Technical Officer

Certified By

核證


K Q Lee
Project Engineer

Date of Issue

簽發日期

22 July 2015

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

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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 - 校正及檢測實驗室

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. : C153940

證書編號

- 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.
- Self-calibration was performed before the test.
- The results presented are the mean of 3 measurements at each calibration point.
- Test equipment :

Equipment ID	Description	Certificate No.
CL280	40 MHz Arbitrary Waveform Generator	C150014
CL281	Multifunction Acoustic Calibrator	DC130171

- Test procedure : MA101N.

- 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	93.5	± 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	93.5 (Ref.)
				104.00		103.5
				114.00		113.5

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	93.5	Ref.
			Slow			93.5	± 0.3

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Certificate of Calibration

校正證書

Certificate No. : C153940

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	77.2	-16.1 ± 1.5
					250 Hz	84.7	-8.6 ± 1.4
					500 Hz	90.2	-3.2 ± 1.4
					1 kHz	93.5	Ref.
					2 kHz	94.7	+1.2 ± 1.6
					4 kHz	94.6	+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	93.3	-0.2 ± 1.5
					250 Hz	93.4	0.0 ± 1.4
					500 Hz	93.5	0.0 ± 1.4
					1 kHz	93.5	Ref.
					2 kHz	93.4	-0.2 ± 1.6
					4 kHz	92.8	-0.8 ± 1.6
					8 kHz	90.5	-3.0 (+2.1 ; -3.1)
					12.5 kHz	87.7	-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.

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

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Performance Check of Turbidity Meter

Equipment Ref. No. : ET/0505/013 Manufacturer : HACH

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

Date of Calibration : 30/12/2015 Due Date : 29/03/2016

Ref. No. of Turbidity Standard used (4000NTU)

005/6.1/001/8

Theoretical Value of Turbidity Standard (NTU)	Measured Value (NTU)	Difference % *
20	19.8	-1.00
100	103	3.00
800	785	-1.88

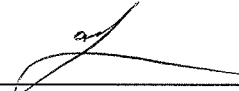
(*) Difference = (Measured Value – Theoretical Value) / Theoretical Value x 100

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 : 



Internal Calibration & Performance Check of pH Meter

Equipment Ref. No. : ET/EW007/004 Manufacturer : Thermo Scientific
 Model No. : Orion 2 Star Serial No. : B29792
 Date of Calibration : 05/02/2016 Calibration Due Da: 04/03/2016

Liquid Junction Error

003/5.2/001/30 (20°C)

Primary Standard Solution Used : Phosphate Io. of Primary Solution: 003/5.2/001/31 (31°C)
 Temperature of Solution : 25.0 / 20.0 $\Delta\text{pH}_{1/2} = +0.01 / +0.01$
 pH value of diluted buffer : 6.91 / 6.91 $\text{pH (S)} = 6.86 / 6.88$
 $\Delta\text{pH} = \text{pH(S)} - \text{pH of diluted buffer} = 0.05 / 0.03$ (Observed Deviation)
 Liquid Junction Error (ΔpH_j) = $\Delta\text{pH} - \Delta\text{pH}_{1/2} = 0.04 / 0.02$

Shift on Stirring

pH of buffer solution (with stirring), $\text{pH}_s = 6.90 / 6.91$
 Shift on stirring, $\Delta\text{pH}_s = \text{pH}_s - \text{pH(S)} - \Delta\text{pH}_j = 0.00 / 0.01$

Noise

Noise, $\Delta\text{pH}_n =$ difference between max and min reading : 0.01 / 0.01

Verification of ATC

Ref. No. of reference thermometer used: ET/0521/019
 Temperature record from the reference thermometer (T_R): 25 / 20.0 °C
 Temperature record from the ATC (T_{ATC}): 24.8 / 19.8 °C
 Temperature Difference, $|T_R - T_{ATC}|$: 0.2 / 0.2 °C
 Correction : +0.2 / +0.2 °C

Acceptance Criteria

Performance Characteristic	Acceptable Range
Liquid Junction Error ΔpH_j	≤ 0.05
Shift on Stirring ΔpH_s	≤ 0.02
Noise ΔpH_n	≤ 0.02
Verification of ATC Temperature Difference	$\leq 0.5^\circ\text{C}$

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. : <u>ET/EW/008/004</u>	Manufacturer : <u>YSI</u>
Model No. : <u>Pro 2030</u>	Serial No. : <u>10F 101978</u>
Date of Calibration : <u>30/01/2016</u> <i>25/1/16</i>	Calibration Due Date : <u>29/04/2016</u> <i>25/1/16</i>

Temperature Verification

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

Ref. No. of Water Bath : ---

		Temperature (°C)		
Reference Thermometer reading	Measured	19.9	Corrected	19.8
DO Meter reading	Measured	20.0	Difference	-0.2

Standardization of sodium thiosulphate (Na₂S₂O₃) solution

Reagent No. of Na ₂ S ₂ O ₃ titrant	CPE/012/4.5/001/13	Reagent No. of 0.025N K ₂ Cr ₂ O ₇	CPE/012/4.4/002/06
		Trial 1	Trial 2
Initial Vol. of Na ₂ S ₂ O ₃ (ml)		0.00	10.20
Final Vol. of Na ₂ S ₂ O ₃ (ml)		10.20	20.50
Vol. of Na ₂ S ₂ O ₃ used (ml)		10.20	10.30
Normality of Na ₂ S ₂ O ₃ solution (N)		0.02451	0.02427
Average Normality (N) of Na ₂ S ₂ O ₃ solution (N)		0.02439	
Acceptance criteria, Deviation		Less than ± 0.001N	

Calculation: Normality of Na₂S₂O₃, N = 0.25 / ml Na₂S₂O₃ used

Linearity Checking

Determination of dissolved oxygen content by Winkler Titration *

Purging Time (min)	2		5		10	
	1	2	1	2	1	2
Trial						
Initial Vol. of Na ₂ S ₂ O ₃ (ml)	0.00	11.10	22.00	0.00	6.90	10.40
Final Vol. of Na ₂ S ₂ O ₃ (ml)	11.10	22.00	28.80	6.90	10.40	14.20
Vol. (V) of Na ₂ S ₂ O ₃ used (ml)	11.10	10.90	6.80	6.90	3.50	3.80
Dissolved Oxygen (DO), mg/L	7.27	7.14	4.45	4.52	2.29	2.49
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	7.48	7.55	7.52	7.27	7.14	7.21	4.21
5	4.44	4.31	4.38	4.45	4.52	4.49	2.48
10	2.25	2.31	2.28	2.29	2.49	2.39	4.71
Linear regression coefficient				0.9984			



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/012/4.7/003/14	Reagent No. of NaCl (30ppt)	CPE/012/4.8/003/14
-----------------------------	--------------------	-----------------------------	--------------------

Determination of dissolved oxygen content by Winkler Titration **

Salinity (ppt)	10		30	
	1	2	1	2
Initial Vol. of Na ₂ S ₂ O ₃ (ml)	0.00	11.40	22.80	32.50
Final Vol. of Na ₂ S ₂ O ₃ (ml)	11.40	22.80	32.50	42.10
Vol. (V) of Na ₂ S ₂ O ₃ used (ml)	11.40	11.40	9.70	9.60
Dissolved Oxygen (DO), mg/L	7.46	7.46	6.35	6.29
Acceptance criteria, Deviation	Less than + 0.3mg/L		Less than + 0.3mg/L	

Calculation: $DO (mg/L) = V \times N \times 8000/298$

Salinity (ppt)	DO meter reading, mg/L			Winkler Titration result**, mg/L			Difference (%) of DO Content
	1	2	Average	1	2	Average	
10	7.28	7.25	7.27	7.46	7.46	7.46	2.58
30	6.58	6.54	6.56	6.35	6.29	6.32	3.73

Acceptance Criteria

- (1) Difference 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 : _____



Performance Check of Salinity Meter

Equipment Ref. No. : ET/EW/008/004 Manufacturer : YSI
Model No. : Pro 2030 Serial No. : 10F 101978
Date of Calibration : 30/01/2016 Due Date : 29/04/2016
26/1/16 *25/4/16*

Ref. No. of Salinity Standard used (30ppt)

S/001/5

Salinity Standard (ppt)	Measured Salinity (ppt)	Difference * (%)
30.0	29.7	-3.00

(*) 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 : *[Signature]*

Approved by : *[Signature]*

ENVIROTECH SERVICES CO.

Calibration Report of Wind Meter

Date of Calibration : 28 January 2016

Brand of Test Meter: Global Water

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

Direction Sensor: 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 Water (m/s)	Anemometer (m/s)
0.27	0.2
1.18	1.3
1.46	1.6

Wind Direction Test

Global Water (o)	Marine Compass (o)
270.88	270
0.07	0
90.81	90
181.39	180

Calibrated by: Fai
Yeung Ping Fai
(Technical Officer)

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



Certificate of Calibration 校正證書

Certificate No. : C160461
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC16-0158) Date of Receipt / 收件日期 : 19 January 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 : $(23 \pm 2)^{\circ}\text{C}$ Relative Humidity / 相對濕度 : $(55 \pm 20)\%$
Line Voltage / 電壓 : ---

TEST SPECIFICATIONS / 測試規範


Calibration check

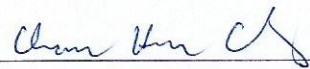
DATE OF TEST / 測試日期 : 27 January 2016

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
M T Leung
Assistant Technical Officer

Certified By : 
核證
H C Chan
Engineer

Date of Issue : 27 January 2016
簽發日期

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

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Certificate of Calibration

校正證書

Certificate No. : C160461

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 :

<u>Equipment ID</u>	<u>Description</u>	<u>Certificate No.</u>
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
4.1	3.9	+0.2	0.3	2.0
6.0	5.9	+0.1	0.3	2.0
8.0	8.0	0.0	0.3	2.0
10.0	10.2	-0.2	0.4	2.0

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

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

Note :

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

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

本證書所載校正用之測試器材均可溯源至國際標準。局部複印本證書需先獲本實驗所書面批准。

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 29 February 2016)**

Alternative Noise Monitoring at Pak Mong Village Entrance

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

**HY/2012/07 Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section
Impact Air Quality Monitoring Schedule (1 to 29 February 2016)**

Alternative Air Quality Monitoring at WA4 and MTRC Depot Entrance

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

**HY/2012/07 Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section
Impact Noise Monitoring Schedule (1 to 31 March 2016)**

Alternative Noise Monitoring at Pak Mong Village Entrance

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

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

**HY/2012/07 Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section
Impact Air Quality Monitoring Schedule (1 to 31 March 2016)**

Alternative Air Quality Monitoring at WA4 and MTRC Depot Entrance

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

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

**HY/2012/07 - Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section
Impact Marine Water Quality Monitoring (WQM) Schedule (February 2016)**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
31-Jan	01-Feb	02-Feb	03-Feb	04-Feb	05-Feb	06-Feb
		WQM Mid-Flood 13:08 (11:23 - 14:53) Mid-Ebb 20:40 (18:55 - 22:25)		WQM Mid-Ebb 10:04 (08:30 - 11:40) Mid-Flood 15:06 (13:21 - 16:51)		WQM Mid-Ebb 11:47 (10:02 - 13:32) Mid-Flood 16:55 (15:10 - 18:40)
07-Feb	08-Feb	09-Feb	10-Feb	11-Feb	12-Feb	13-Feb
		WQM is cancelled due to suspension of marine works.		WQM Mid-Flood 9:18 (07:33 - 11:03) Mid-Ebb 15:08 (13:23 - 16:53)		WQM Mid-Flood 10:28 (08:43 - 12:13) Mid-Ebb 16:42 (14:57 - 18:27)
14-Feb	15-Feb	16-Feb	17-Feb	18-Feb	19-Feb	20-Feb
		WQM Mid-Flood 13:02 (11:17 - 14:47) Mid-Ebb 20:18 (18:33 - 22:03)		WQM Mid-Ebb 10:18 (08:45 - 11:45) Mid-Flood 15:27 (13:43 - 17:12)		WQM Mid-Ebb 12:01 (10:16 - 13:46) Mid-Flood 17:18 (15:33 - 19:03)
21-Feb	22-Feb	23-Feb	24-Feb	25-Feb	26-Feb	27-Feb
		WQM Mid-Ebb 13:35 (11:50 - 15:20) Mid-Flood 19:19 (17:34 - 21:04)		WQM Mid-Flood 8:46 (07:01 - 10:31) Mid-Ebb 14:29 (12:44 - 16:14)		WQM Mid-Flood 9:34 (07:49 - 11:19) Mid-Ebb 15:35 (13:50 - 17:20)
28-Feb	29-Feb					

**HY/2012/07 - Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section
Impact Marine Water Quality Monitoring (WQM) Schedule (March 2016)**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		01-Mar	02-Mar	03-Mar	04-Mar	05-Mar
		WQM Mid-Flood 11:07 (09:22 - 12:52) Mid-Ebb 17:59 (16:14 - 19:44)		WQM Mid-Ebb 8:07 (06:22 - 09:00) Mid-Flood 12:50 (11:05 - 14:35)		WQM Mid-Ebb 10:45 (09:00 - 12:30) Mid-Flood 15:42 (13:57 - 17:27)
06-Mar	07-Mar	08-Mar	09-Mar	10-Mar	11-Mar	12-Mar
		WQM Mid-Ebb 12:46 (11:01 - 14:31) Mid-Flood 18:23 (16:38 - 20:08)		WQM Mid-Flood 8:02 (06:17 - 09:47) Mid-Ebb 14:00 (12:15 - 15:45)		WQM Mid-Flood 9:06 (07:21 - 10:51) Mid-Ebb 15:23 (13:38 - 17:08)
13-Mar	14-Mar	15-Mar	16-Mar	17-Mar	18-Mar	19-Mar
		WQM Mid-Flood 11:04 (09:19 - 12:49) Mid-Ebb 18:10 (16:25 - 19:55)		WQM Mid-Ebb 8:48 (07:40 - 10:00) Mid-Flood 13:44 (11:59 - 15:29)		WQM Mid-Ebb 11:12 (09:27 - 12:57) Mid-Flood 16:25 (14:40 - 18:10)
20-Mar	21-Mar	22-Mar	23-Mar	24-Mar	25-Mar	26-Mar
		WQM Mid-Ebb 12:43 (10:58 - 14:28) Mid-Flood 18:37 (16:52 - 20:22)		WQM Mid-Flood 7:40 (05:55 - 09:25) Mid-Ebb 13:36 (11:51 - 15:21)		WQM Mid-Flood 8:25 (06:40 - 10:10) Mid-Ebb 14:35 (12:50 - 16:20)
27-Mar	28-Mar	29-Mar	30-Mar	31-Mar		
		WQM Mid-Flood 9:44 (07:59 - 11:29) Mid-Ebb 16:25 (14:40 - 18:10)		WQM Mid-Flood 10:52 (09:07 - 12:37) Mid-Ebb 18:17 (16:32 - 20:02)		

**HY/2012/07 Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section
Impact Dolphin Monitoring Survey Schedule (1 to 29 February 2016)**

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

**HY/2012/07 Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section
Impact Dolphin Monitoring Survey Schedule (1 to 31 March 2016)**

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

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	2016-02-02	ASR8A	8:46	1-hr TSP	61	394	500		
TMCLKL	HY/2012/07	2016-02-02	ASR8A	9:48	1-hr TSP	87				
TMCLKL	HY/2012/07	2016-02-02	ASR8A	10:50	1-hr TSP	62				
TMCLKL	HY/2012/07	2016-02-05	ASR8A	9:00	1-hr TSP	80				
TMCLKL	HY/2012/07	2016-02-05	ASR8A	10:02	1-hr TSP	83				
TMCLKL	HY/2012/07	2016-02-05	ASR8A	11:04	1-hr TSP	83				
TMCLKL	HY/2012/07	2016-02-11	ASR8A	9:16	1-hr TSP	96				
TMCLKL	HY/2012/07	2016-02-11	ASR8A	10:18	1-hr TSP	121				
TMCLKL	HY/2012/07	2016-02-11	ASR8A	11:20	1-hr TSP	85				
TMCLKL	HY/2012/07	2016-02-17	ASR8A	8:34	1-hr TSP	80				
TMCLKL	HY/2012/07	2016-02-17	ASR8A	9:36	1-hr TSP	92				
TMCLKL	HY/2012/07	2016-02-17	ASR8A	10:38	1-hr TSP	83				
TMCLKL	HY/2012/07	2016-02-23	ASR8A	8:23	1-hr TSP	60				
TMCLKL	HY/2012/07	2016-02-23	ASR8A	9:25	1-hr TSP	56				
TMCLKL	HY/2012/07	2016-02-23	ASR8A	10:27	1-hr TSP	39				
TMCLKL	HY/2012/07	2016-02-29	ASR8A	9:00	1-hr TSP	153				
TMCLKL	HY/2012/07	2016-02-29	ASR8A	10:02	1-hr TSP	149				
TMCLKL	HY/2012/07	2016-02-29	ASR8A	11:04	1-hr TSP	125				
				Average		89				
				Min.		39				
				Max.		153				

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	2016-02-02	ASR9	8:57	1-hr TSP	99	393	500		
TMCLKL	HY/2012/07	2016-02-02	ASR9	9:59	1-hr TSP	67				
TMCLKL	HY/2012/07	2016-02-02	ASR9	11:01	1-hr TSP	68				
TMCLKL	HY/2012/07	2016-02-05	ASR9	9:10	1-hr TSP	128				
TMCLKL	HY/2012/07	2016-02-05	ASR9	10:12	1-hr TSP	116				
TMCLKL	HY/2012/07	2016-02-05	ASR9	11:14	1-hr TSP	164				
TMCLKL	HY/2012/07	2016-02-11	ASR9	9:29	1-hr TSP	101				
TMCLKL	HY/2012/07	2016-02-11	ASR9	10:31	1-hr TSP	136				
TMCLKL	HY/2012/07	2016-02-11	ASR9	11:33	1-hr TSP	103				
TMCLKL	HY/2012/07	2016-02-17	ASR9	8:44	1-hr TSP	86				
TMCLKL	HY/2012/07	2016-02-17	ASR9	9:46	1-hr TSP	60				
TMCLKL	HY/2012/07	2016-02-17	ASR9	10:48	1-hr TSP	56				
TMCLKL	HY/2012/07	2016-02-23	ASR9	8:33	1-hr TSP	91				
TMCLKL	HY/2012/07	2016-02-23	ASR9	9:35	1-hr TSP	99				
TMCLKL	HY/2012/07	2016-02-23	ASR9	10:37	1-hr TSP	39				
TMCLKL	HY/2012/07	2016-02-29	ASR9	9:10	1-hr TSP	144				
TMCLKL	HY/2012/07	2016-02-29	ASR9	10:12	1-hr TSP	165				
TMCLKL	HY/2012/07	2016-02-29	ASR9	11:14	1-hr TSP	172				
				Average		105				
				Min.		39				
				Max.		172				

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

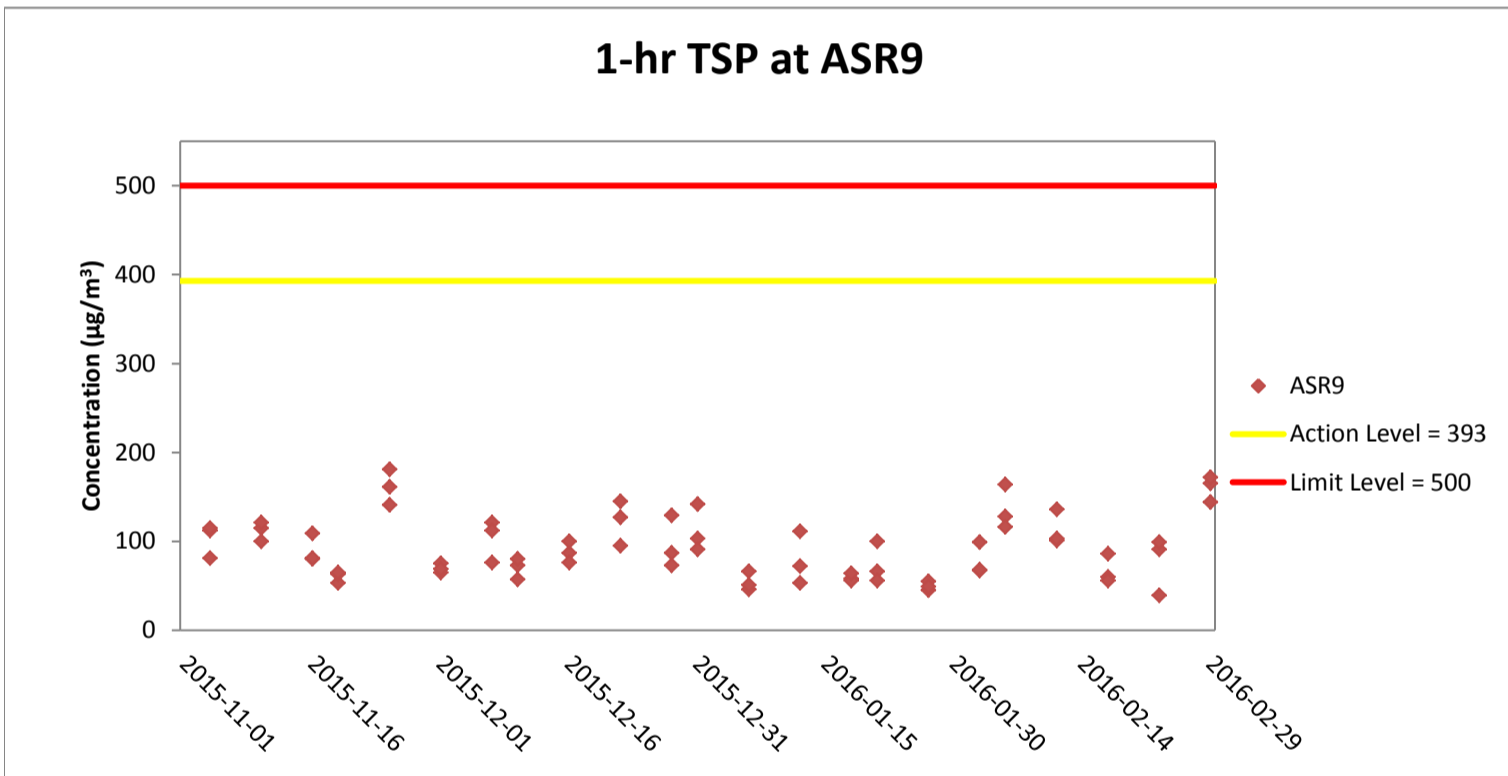
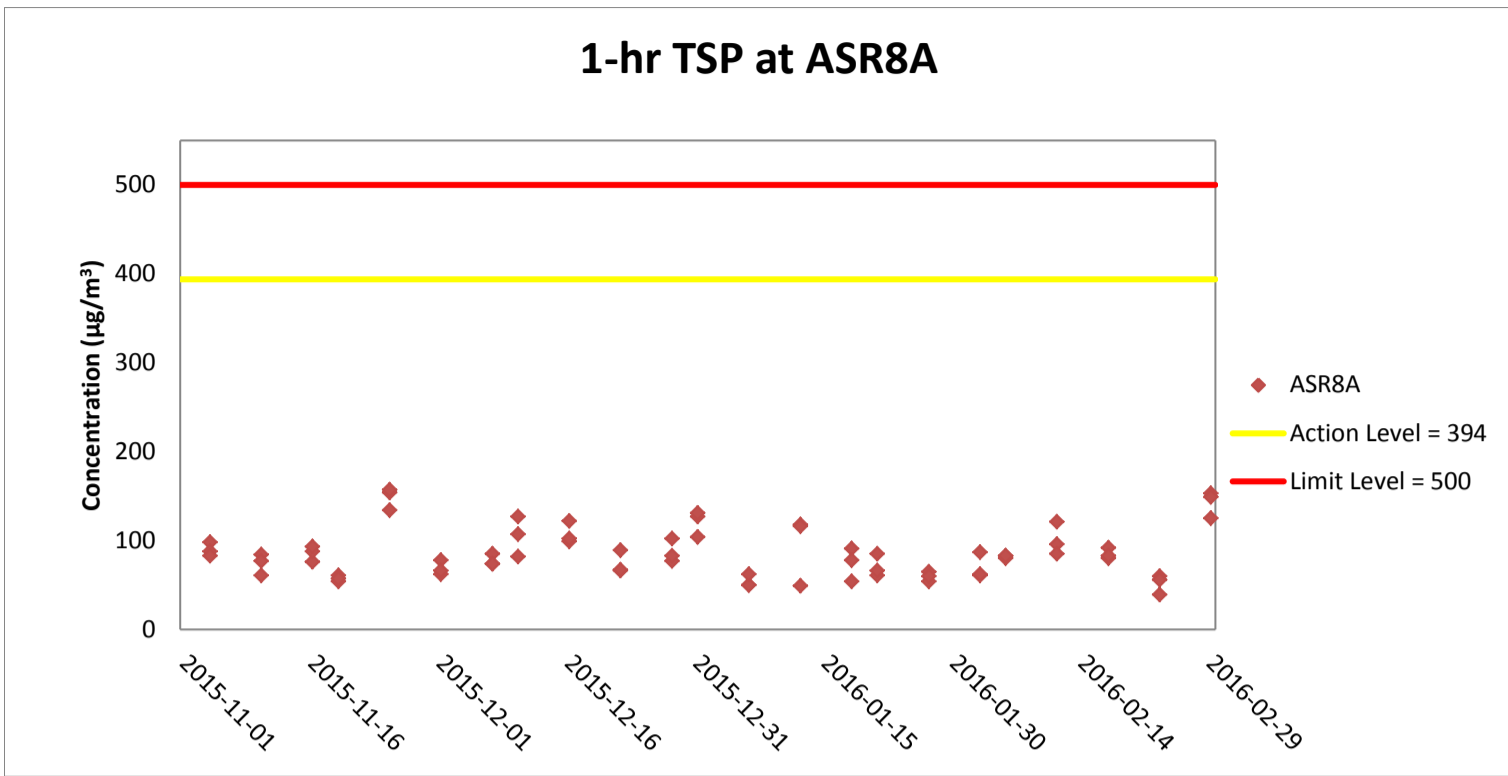
Project	Works	Date(yyyy-mm-dd)	Station	Time (hh:mm, 24hour)	Parameter	Results (ug/m3)	Action Level (ug/m3)	Limit Level (ug/m3)
TMCLKL	HY/2012/07	2016-02-02	ASR8A	11:52	24-hr TSP	51	178	260
TMCLKL	HY/2012/07	2016-02-05	ASR8A	12:06	24-hr TSP	72		
TMCLKL	HY/2012/07	2016-02-11	ASR8A	12:22	24-hr TSP	58		
TMCLKL	HY/2012/07	2016-02-17	ASR8A	11:40	24-hr TSP	52		
TMCLKL	HY/2012/07	2016-02-23	ASR8A	11:29	24-hr TSP	51		
TMCLKL	HY/2012/07	2016-02-29	ASR8A	12:06	24-hr TSP	100		
						Average	64	
						Min.	51	
						Max.	100	

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	2016-02-02	ASR9	12:03	24-hr TSP	55	178	260
TMCLKL	HY/2012/07	2016-02-05	ASR9	12:16	24-hr TSP	79		
TMCLKL	HY/2012/07	2016-02-11	ASR9	12:35	24-hr TSP	76		
TMCLKL	HY/2012/07	2016-02-17	ASR9	11:50	24-hr TSP	56		
TMCLKL	HY/2012/07	2016-02-23	ASR9	11:39	24-hr TSP	58		
TMCLKL	HY/2012/07	2016-02-29	ASR9	12:16	24-hr TSP	114		
						Average	73	
						Min.	55	
						Max.	114	

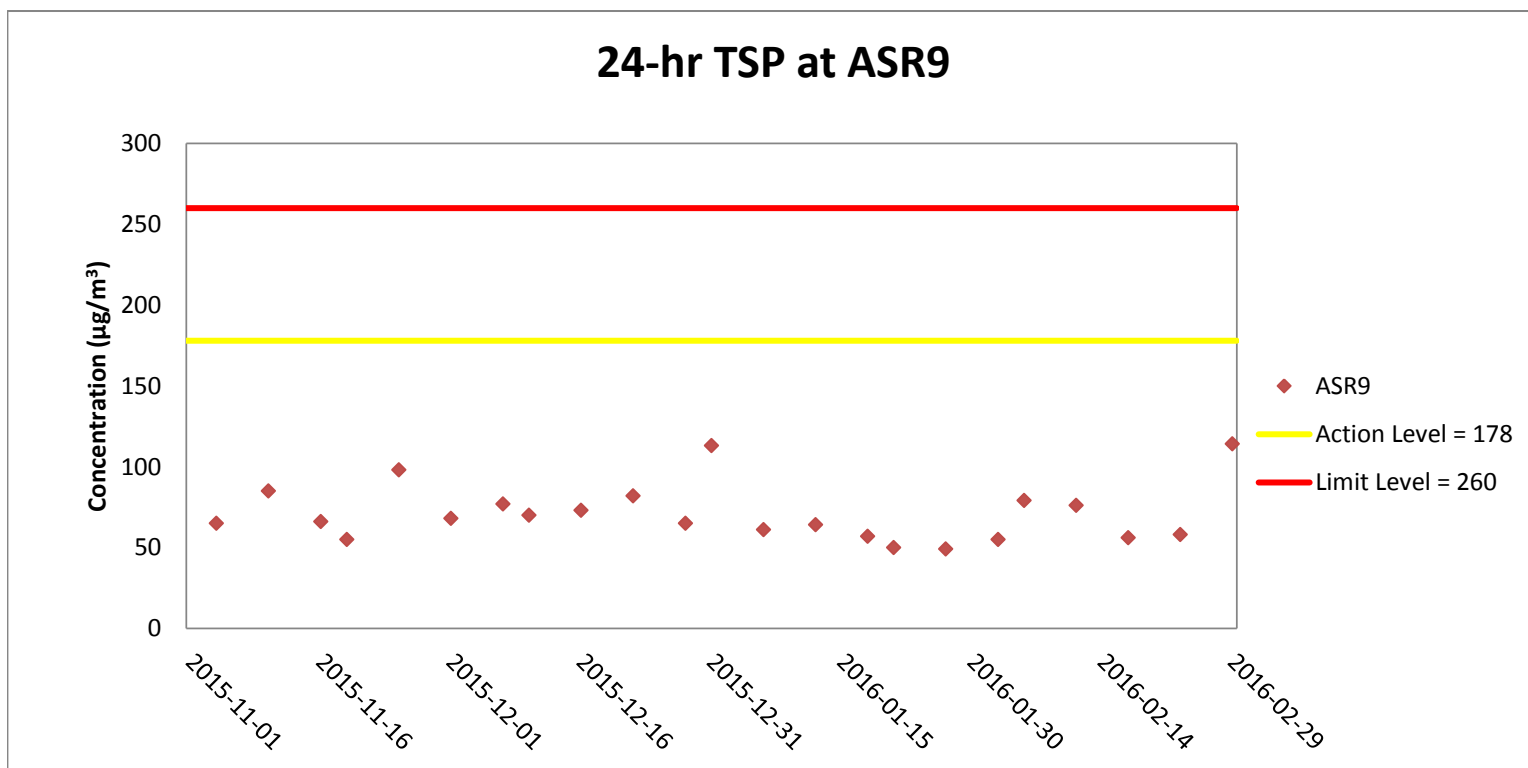
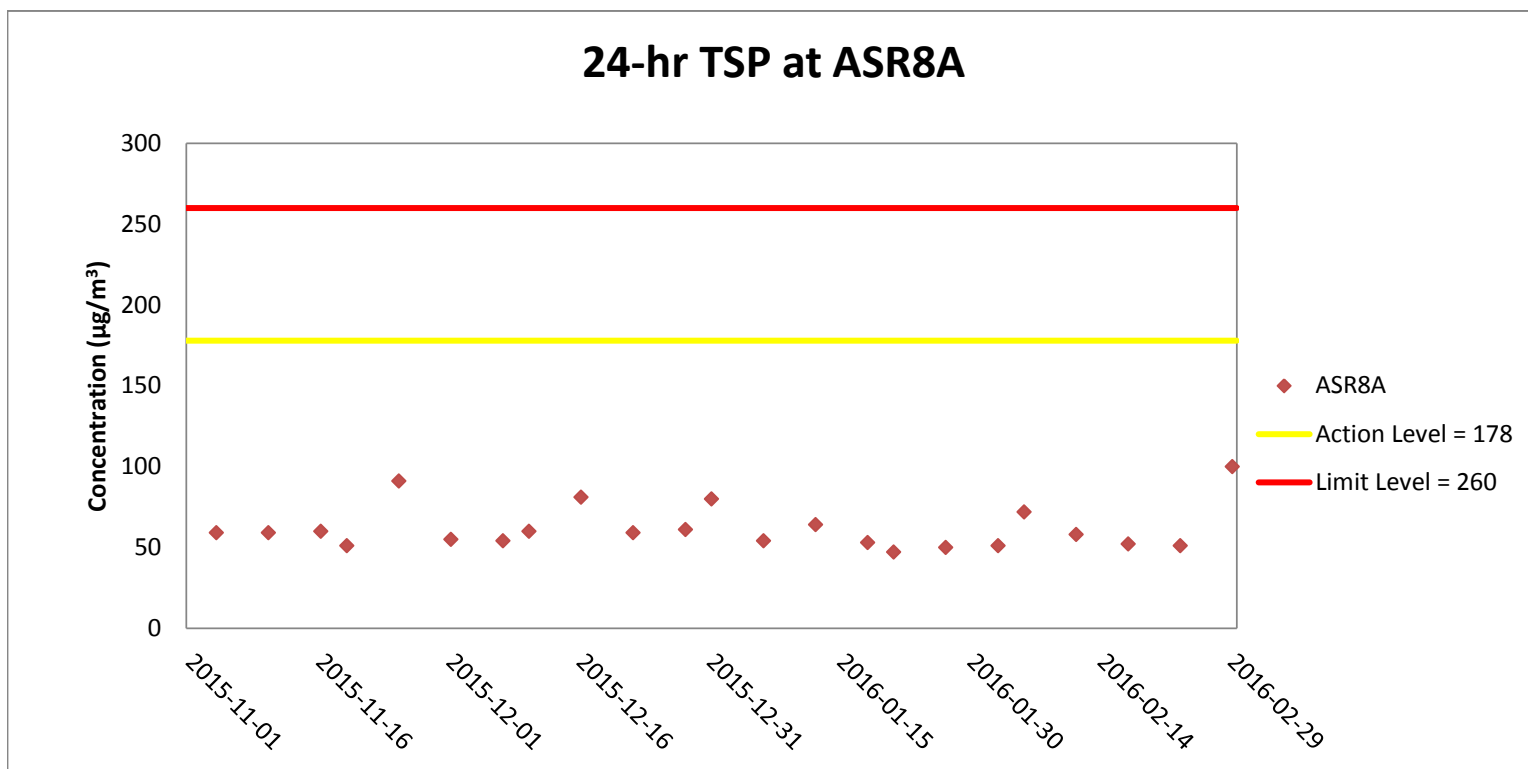
Action Level Exceedance

Limit Level Exceedance



Weather condition within the reporting period varied between sunny to rainy.

Major construction works undertaken within the reporting period include Pier construction; Re-alignment of Cheung Tung Road; Predrilling at Viaduct F; Additional land GI, trial pits & lab testing; Installation of pier head and deck segments; and Slope work of Viaducts A, B & C. Marine works within the reporting period include Pier construction; Re-alignment of Cheung Tung Road; Construction of land section of berth at Southern Landfall; Installation of pier head and deck segments; and Slope work of Viaducts A, B & C.



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; Predrilling at Viaduct F; Additional land GI, trial pits & lab testing; Installation of pier head and deck segments; and Slope work of Viaducts A, B & C.

Marine works within the reporting period include Pier construction; Re-alignment of Cheung Tung Road; Construction of land section of berth at Southern Landfall; Installation of pier head and deck segments; and Slope work of Viaducts A, B & C.

Appendix H

Meteorological Data for the Reporting Month

Date	Time (HH)	Wind speed (m/s)	Wind direction (deg)
02-02-2016	7	0.18	278
02-02-2016	8	0.09	302
02-02-2016	9	0.15	261
02-02-2016	10	0.09	268
02-02-2016	11	0.03	228
02-02-2016	12	0.12	228
02-02-2016	13	0.05	275
02-02-2016	14	0.08	337
02-02-2016	15	0.08	259
02-02-2016	16	0.05	290
02-02-2016	17	0.08	265
02-02-2016	18	0.09	233
02-02-2016	19	0.16	328
02-02-2016	20	0.05	307
02-02-2016	21	0.04	278
02-02-2016	22	0.04	120
02-02-2016	23	0.16	64
03-02-2016	0	0.02	37
03-02-2016	1	0.02	72
03-02-2016	2	0.03	245
03-02-2016	3	0.07	334
03-02-2016	4	0.03	239
03-02-2016	5	0.06	334
03-02-2016	6	0.04	244
03-02-2016	7	0.09	338
03-02-2016	8	0.05	297
03-02-2016	9	0.04	254
03-02-2016	10	0.03	203
03-02-2016	11	0.08	244
03-02-2016	12	0.07	275
05-02-2016	7	0.19	240
05-02-2016	8	0.06	261
05-02-2016	9	0.19	267
05-02-2016	10	0.11	268
05-02-2016	11	0.12	212
05-02-2016	12	0.09	196
05-02-2016	13	0.20	165
05-02-2016	14	0.32	143
05-02-2016	15	0.37	217
05-02-2016	16	0.57	177
05-02-2016	17	0.17	153
05-02-2016	18	0.17	329
05-02-2016	19	0.08	330
05-02-2016	20	0.10	135
05-02-2016	21	0.19	251
05-02-2016	22	0.14	305
05-02-2016	23	0.17	309
06-02-2016	0	0.44	266
06-02-2016	1	0.04	306
06-02-2016	2	0.27	216

Date	Time (HH)	Wind speed (m/s)	Wind direction (deg)
06-02-2016	3	0.17	251
06-02-2016	4	0.33	219
06-02-2016	5	0.19	321
06-02-2016	6	0.07	219
06-02-2016	7	0.29	264
06-02-2016	8	0.53	243
06-02-2016	9	0.36	294
06-02-2016	10	0.37	267
06-02-2016	11	0.41	262
06-02-2016	12	0.53	242
11-02-2016	7	0.03	182
11-02-2016	8	0.66	195
11-02-2016	9	1.29	188
11-02-2016	10	1.65	189
11-02-2016	11	2.45	187
11-02-2016	12	0.41	228
11-02-2016	13	0.03	266
11-02-2016	14	0.02	321
11-02-2016	15	0.13	174
11-02-2016	16	2.99	175
11-02-2016	17	3.66	164
11-02-2016	18	1.62	161
11-02-2016	19	0.35	143
11-02-2016	20	0.44	215
11-02-2016	21	2.13	157
11-02-2016	22	4.13	169
11-02-2016	23	2.91	141
12-02-2016	0	3.34	171
12-02-2016	1	3.39	157
12-02-2016	2	2.74	161
12-02-2016	3	1.88	171
12-02-2016	4	2.43	179
12-02-2016	5	3.85	170
12-02-2016	6	3.80	170
12-02-2016	7	3.93	169
12-02-2016	8	2.60	150
12-02-2016	9	2.96	158
12-02-2016	10	3.79	161
12-02-2016	11	3.97	157
12-02-2016	12	3.72	149
17-02-2016	7	0.03	168
17-02-2016	8	0.03	223
17-02-2016	9	0.03	266
17-02-2016	10	0.03	112
17-02-2016	11	0.03	268
17-02-2016	12	0.05	333
17-02-2016	13	0.05	226
17-02-2016	14	0.03	276
17-02-2016	15	0.03	105
17-02-2016	16	0.03	192

Date	Time (HH)	Wind speed (m/s)	Wind direction (deg)
17-02-2016	17	0.04	72
17-02-2016	18	0.03	202
17-02-2016	19	0.04	193
17-02-2016	20	0.05	79
17-02-2016	21	0.03	102
17-02-2016	22	0.02	132
17-02-2016	23	0.02	93
18-02-2016	0	0.02	101
18-02-2016	1	0.04	144
18-02-2016	2	0.02	72
18-02-2016	3	0.05	64
18-02-2016	4	0.03	303
18-02-2016	5	0.02	88
18-02-2016	6	0.03	131
18-02-2016	7	0.03	88
18-02-2016	8	0.03	49
18-02-2016	9	0.08	104
18-02-2016	10	0.06	297
18-02-2016	11	0.04	77
18-02-2016	12	0.08	164
23-02-2016	7	0.03	231
23-02-2016	8	0.03	258
23-02-2016	9	0.02	14
23-02-2016	10	0.04	235
23-02-2016	11	0.02	236
23-02-2016	12	0.02	145
23-02-2016	13	0.02	302
23-02-2016	14	0.04	213
23-02-2016	15	0.04	283
23-02-2016	16	0.02	290
23-02-2016	17	0.03	236
23-02-2016	18	0.03	231
23-02-2016	19	0.04	332
23-02-2016	20	0.03	197
23-02-2016	21	0.04	183
23-02-2016	22	0.03	45
23-02-2016	23	0.03	217
24-02-2016	0	0.13	281
24-02-2016	1	0.17	281
24-02-2016	2	0.09	231
24-02-2016	3	0.33	311
24-02-2016	4	0.03	227
24-02-2016	5	0.04	327
24-02-2016	6	0.11	251
24-02-2016	7	0.05	311
24-02-2016	8	0.03	151
24-02-2016	9	0.05	154
24-02-2016	10	0.15	330
24-02-2016	11	0.09	255
24-02-2016	12	0.09	220

Date	Time (HH)	Wind speed (m/s)	Wind direction (deg)
29-02-2016	7	0.03	136
29-02-2016	8	0.03	141
29-02-2016	9	0.03	205
29-02-2016	10	0.02	189
29-02-2016	11	0.05	183
29-02-2016	12	0.04	254
29-02-2016	13	0.11	271
29-02-2016	14	1.78	172
29-02-2016	15	4.07	170
29-02-2016	16	3.52	164
29-02-2016	17	3.93	166
29-02-2016	18	2.07	156
29-02-2016	19	1.62	116
29-02-2016	20	1.70	112
29-02-2016	21	2.16	145
29-02-2016	22	2.68	149
29-02-2016	23	1.92	135
01-03-2016	0	0.68	191
01-03-2016	1	2.32	185
01-03-2016	2	1.57	162
01-03-2016	3	5.28	156
01-03-2016	4	3.80	156
01-03-2016	5	2.03	170
01-03-2016	6	1.27	213
01-03-2016	7	1.44	162
01-03-2016	8	2.80	180
01-03-2016	9	2.19	153
01-03-2016	10	1.64	172
01-03-2016	11	3.53	147
01-03-2016	12	4.94	148

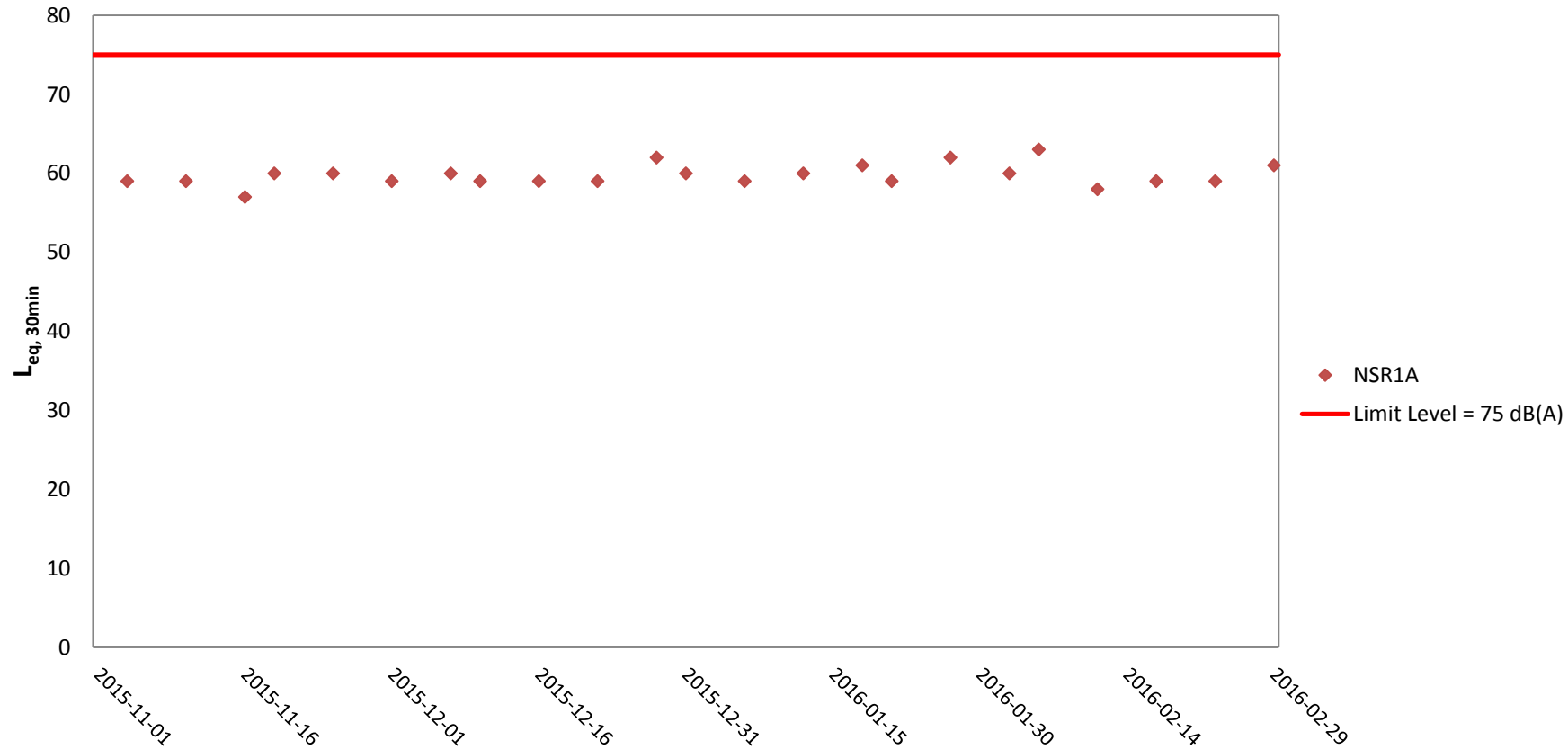
Appendix I

Impact Noise Monitoring Results and Graphical Presentation

Appendix II Noise Monitoring Results

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	2016-02-02	NSR1A	Cloudy	10:10	60	63	55	75	0.8	RION NL31 (S/N 00603867)	RION NC73 (S/N 10997142)
TMCLKL	HY/2012/07	2016-02-05	NSR1A	Sunny	9:20	63	66	56	75	0.2	RION NL31 (S/N 00603867)	RION NC73 (S/N 10997142)
TMCLKL	HY/2012/07	2016-02-11	NSR1A	Sunny	10:41	58	60	52	75	0.2	RION NL31 (S/N 00603867)	RION NC73 (S/N 10997142)
TMCLKL	HY/2012/07	2016-02-17	NSR1A	Cloudy	9:57	59	62	55	75	0.2	RION NL31 (S/N 00603867)	RION NC73 (S/N 10997142)
TMCLKL	HY/2012/07	2016-02-23	NSR1A	Cloudy	9:45	59	62	56	75	0.2	RION NL31 (S/N 00603867)	RION NC73 (S/N 10997142)
TMCLKL	HY/2012/07	2016-02-29	NSR1A	Sunny	9:21	61	62	55	75	0.2	RION NL31 (S/N 00603867)	RION NC73 (S/N 10997142)
						Min.	58					
						Max.	63					
						Average	60					

Noise Monitoring Results at NSR 1A ($L_{eq, 30min}$)



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; Predrilling at Viaduct F; Additional land GI, trial pits & lab testing; Installation of pier head and deck segments; and Slope work of Viaducts A, B & C.

Marine works within the reporting period include Pier construction; Re-alignment of Cheung Tung Road; Construction of land section of berth at Southern Landfall; Installation of pier head and deck segments; and Slope work of Viaducts A, B & C.

Appendix J

Impact Water Quality Monitoring Results and Graphical Presentation

Appendix J-1

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	CS(Mf)5	12:23	Surface	1	1	14.6	7.95	23.9	6.61	7.91	9.5
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	CS(Mf)5	12:23	Surface	1	2	14.7	7.94	24	6.62	7.96	10.3
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	CS(Mf)5	12:23	Middle	2	1	14.7	7.89	24	6.54	7.83	11
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	CS(Mf)5	12:23	Middle	2	2	14.8	7.88	24.1	6.51	7.79	11.7
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	CS(Mf)5	12:23	Bottom	3	1	14.9	7.97	24.1	6.48	8.12	9.7
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	CS(Mf)5	12:23	Bottom	3	2	15	7.98	24.2	6.45	8.19	10.6
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	SR4a	12:45	Surface	1	1	14.7	7.98	23.9	6.52	7.79	9.5
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	SR4a	12:45	Surface	1	2	14.8	7.95	24	6.5	7.8	10.9
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	SR4a	12:45	Middle	2	1						
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	SR4a	12:45	Middle	2	2						
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	SR4a	12:45	Bottom	3	1	14.8	7.91	24	6.47	7.91	11.1
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	SR4a	12:45	Bottom	3	2	14.9	7.94	24.1	6.45	8.07	10.5
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	SR4	13:07	Surface	1	1	14.8	7.95	24	6.44	7.74	11.6
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	SR4	13:07	Surface	1	2	14.9	7.99	24.1	6.4	7.78	9.3
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	SR4	13:07	Middle	2	1						
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	SR4	13:07	Middle	2	2						
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	SR4	13:07	Bottom	3	1	14.9	7.92	24.1	6.33	7.93	10.3
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	SR4	13:07	Bottom	3	2	15	7.9	24.2	6.31	8.01	12
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	IS8	13:29	Surface	1	1	14.7	7.94	24	6.38	7.83	11.7
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	IS8	13:29	Surface	1	2	14.8	7.96	24.1	6.42	7.89	9.5
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	IS8	13:29	Middle	2	1						
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	IS8	13:29	Middle	2	2						
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	IS8	13:29	Bottom	3	1	14.8	7.99	24.1	6.35	8.07	10.5
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	IS8	13:29	Bottom	3	2	14.9	7.97	24.2	6.38	8.01	9.6
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	IS(Mf)16	13:51	Surface	1	1	14.4	7.98	24	6.55	8.86	13.3
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	IS(Mf)16	13:51	Surface	1	2	14.5	7.96	24.1	6.57	8.71	11.3
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	IS(Mf)16	13:51	Middle	2	1	14.7	7.91	24.1	6.51	8.86	11.5
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	IS(Mf)16	13:51	Middle	2	2	14.7	7.93	24.2	6.48	7.79	13.2
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	IS(Mf)16	13:51	Bottom	3	1	14.7	7.89	24.4	6.43	8.94	13.4
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	IS(Mf)16	13:51	Bottom	3	2	14.8	7.92	24.3	6.41	9	13.5
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	IS(Mf)9	14:13	Surface	1	1	14.7	7.95	23.9	6.5	7.78	10.9
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	IS(Mf)9	14:13	Surface	1	2	14.8	7.98	24	6.46	7.83	9.4
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	IS(Mf)9	14:13	Middle	2	1						

Appendix J-1

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	IS(Mf)9	14:13	Middle	2	2						
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	IS(Mf)9	14:13	Bottom	3	1	14.8	7.93	24.1	6.43	8.06	10.5
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	IS(Mf)9	14:13	Bottom	3	2	14.9	7.9	24.2	6.4	8.14	9.8
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	CS(Mf)3	14:37	Surface	1	1	14.7	7.91	24	6.67	7.86	11
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	CS(Mf)3	14:37	Surface	1	2	14.8	7.84	24.1	6.64	7.81	10.2
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	CS(Mf)3	14:37	Middle	2	1	14.8	7.86	24.1	6.58	8.03	9.6
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	CS(Mf)3	14:37	Middle	2	2	14.9	7.89	24.2	6.54	8.08	11.3
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	CS(Mf)3	14:37	Bottom	3	1	14.9	7.96	24.2	6.49	8.24	10.7
TMCLKL	HY/2012/07	02-02-2016	Mid-Flood	CS(Mf)3	14:37	Bottom	3	2	15	7.99	24.3	6.47	8.17	10.6
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	CS(Mf)5	21:00	Surface	1	1	14.8	7.93	24	6.58	8.05	12.1
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	CS(Mf)5	21:00	Surface	1	2	14.9	7.98	24.1	6.54	7.98	11.2
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	CS(Mf)5	21:00	Middle	2	1	14.8	7.92	24.2	6.38	7.76	10.1
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	CS(Mf)5	21:00	Middle	2	2	14.9	7.9	24.2	6.41	7.82	10.2
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	CS(Mf)5	21:00	Bottom	3	1	14.9	7.94	24.2	6.27	8.26	10.7
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	CS(Mf)5	21:00	Bottom	3	2	15	7.97	24.3	6.23	8.34	12.5
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	SR4a	20:35	Surface	1	1	14.9	7.94	24	6.46	7.89	11
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	SR4a	20:35	Surface	1	2	14.9	7.98	24	6.42	7.96	9.6
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	SR4a	20:35	Middle	2	1						
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	SR4a	20:35	Middle	2	2						
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	SR4a	20:35	Bottom	3	1	14.9	7.88	24	6.3	8.03	11.2
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	SR4a	20:35	Bottom	3	2	14.9	7.93	24.1	6.27	8.14	13
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	SR4	20:16	Surface	1	1	14.9	7.89	24.1	6.38	7.86	11.8
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	SR4	20:16	Surface	1	2	14.9	7.91	24.1	6.34	7.95	12.7
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	SR4	20:16	Middle	2	1						
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	SR4	20:16	Middle	2	2						
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	SR4	20:16	Bottom	3	1	14.9	7.86	24.2	6.25	8.08	10.5
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	SR4	20:16	Bottom	3	2	14.8	7.88	24.2	6.22	8.16	11.4
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	IS8	19:58	Surface	1	1	14.8	7.86	24	6.36	8.06	10.5
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	IS8	19:58	Surface	1	2	14.9	7.89	24.1	6.33	7.97	10.4
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	IS8	19:58	Middle	2	1						
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	IS8	19:58	Middle	2	2						
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	IS8	19:58	Bottom	3	1	14.8	7.88	24.1	6.27	8.24	10.7
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	IS8	19:58	Bottom	3	2	14.8	7.93	24.2	6.3	8.2	11.5

Appendix J-1

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	IS(Mf)16	19:36	Surface	1	1	14.7	7.88	24.1	6.53	8.54	12
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	IS(Mf)16	19:36	Surface	1	2	14.8	7.94	24.1	6.49	8.66	12.1
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	IS(Mf)16	19:36	Middle	2	1	14.8	7.9	24.2	6.43	8.33	13.3
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	IS(Mf)16	19:36	Middle	2	2	14.8	7.93	24.2	6.4	8.37	12.6
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	IS(Mf)16	19:36	Bottom	3	1	14.8	7.82	24.4	6.29	8.8	14.1
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	IS(Mf)16	19:36	Bottom	3	2	14.9	7.85	24.5	6.25	8.71	13.1
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	IS(Mf)9	19:17	Surface	1	1	14.9	7.95	24	6.45	7.79	10.1
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	IS(Mf)9	19:17	Surface	1	2	14.9	7.98	24	6.42	7.86	11.8
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	IS(Mf)9	19:17	Middle	2	1						
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	IS(Mf)9	19:17	Middle	2	2						
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	IS(Mf)9	19:17	Bottom	3	1	14.9	7.92	24	6.31	8.15	10.6
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	IS(Mf)9	19:17	Bottom	3	2	14.9	7.94	24.1	6.28	8.23	10.7
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	CS(Mf)3	18:55	Surface	1	1	14.9	7.92	24.1	6.61	7.98	12.8
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	CS(Mf)3	18:55	Surface	1	2	14.9	7.95	24.2	6.58	7.89	11.8
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	CS(Mf)3	18:55	Middle	2	1	14.9	7.9	24.2	6.49	8.07	12.1
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	CS(Mf)3	18:55	Middle	2	2	15	7.94	24.3	6.46	8.14	9.8
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	CS(Mf)3	18:55	Bottom	3	1	15	7.84	24.5	6.33	8.3	10.8
TMCLKL	HY/2012/07	02-02-2016	Mid-Ebb	CS(Mf)3	18:55	Bottom	3	2	15.1	7.88	24.5	6.3	8.39	10.9
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	CS(Mf)5	13:21	Surface	1	1	15.4	7.79	24.4	6.86	7.24	10.9
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	CS(Mf)5	13:21	Surface	1	2	15.3	7.81	24.3	6.84	7.2	8.6
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	CS(Mf)5	13:21	Middle	2	1	15.5	7.88	24.5	6.67	7.71	10.8
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	CS(Mf)5	13:21	Middle	2	2	15.4	7.87	24.6	6.71	7.46	11.6
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	CS(Mf)5	13:21	Bottom	3	1	15.4	7.83	24.7	6.54	8.43	12.6
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	CS(Mf)5	13:21	Bottom	3	2	15.3	7.81	24.6	6.51	8.31	10.8
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	SR4a	13:47	Surface	1	1	15.3	7.84	24.3	6.62	6.34	8.2
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	SR4a	13:47	Surface	1	2	15.4	7.86	24.2	6.64	6.39	9.6
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	SR4a	13:47	Middle	2	1						
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	SR4a	13:47	Middle	2	2						
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	SR4a	13:47	Bottom	3	1	15.4	7.88	24.4	6.48	6.74	10.8
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	SR4a	13:47	Bottom	3	2	15.3	7.89	24.3	6.44	6.78	9.5
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	SR4	14:05	Surface	1	1	15.3	7.81	24.3	6.73	6.23	8.1
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	SR4	14:05	Surface	1	2	15.2	7.84	24.4	6.7	6.28	8.8
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	SR4	14:05	Middle	2	1						

Appendix J-1

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	SR4	14:05	Middle	2	2						
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	SR4	14:05	Bottom	3	1	15.4	7.88	24.5	6.63	7.22	10.1
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	SR4	14:05	Bottom	3	2	15.3	7.85	24.4	6.61	7.28	9.5
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	IS8	14:23	Surface	1	1	15.3	7.84	23.5	6.68	6.22	10
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	IS8	14:23	Surface	1	2	15.2	7.8	23.4	6.65	6.27	9.4
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	IS8	14:23	Middle	2	1						
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	IS8	14:23	Middle	2	2						
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	IS8	14:23	Bottom	3	1	15.4	7.86	23.6	6.43	8.63	11.2
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	IS8	14:23	Bottom	3	2	15.3	7.89	23.5	6.45	8.52	12.8
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	IS(Mf)16	14:39	Surface	1	1	15.4	7.81	23.3	6.57	5.98	8.4
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	IS(Mf)16	14:39	Surface	1	2	15.3	7.79	23.4	6.55	5.94	7.1
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	IS(Mf)16	14:39	Middle	2	1	15.5	7.78	23.5	6.47	6.41	10.3
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	IS(Mf)16	14:39	Middle	2	2	15.4	7.74	23.4	6.44	6.44	8.4
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	IS(Mf)16	14:39	Bottom	3	1	15.3	7.83	23.6	6.38	7.28	10.9
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	IS(Mf)16	14:39	Bottom	3	2	15.2	7.86	23.7	6.35	7.22	8.7
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	IS(Mf)9	15:01	Surface	1	1	15.4	7.8	24.2	6.62	6.11	9.2
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	IS(Mf)9	15:01	Surface	1	2	15.3	7.83	24.3	6.64	6.03	8.4
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	IS(Mf)9	15:01	Middle	2	1						
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	IS(Mf)9	15:01	Middle	2	2						
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	IS(Mf)9	15:01	Bottom	3	1	15.5	7.87	24.4	6.52	6.36	8.9
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	IS(Mf)9	15:01	Bottom	3	2	15.4	7.86	24.3	6.49	6.31	10.1
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	CS(Mf)3	15:26	Surface	1	1	15.3	7.89	24.4	6.81	6.67	10.7
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	CS(Mf)3	15:26	Surface	1	2	15.2	7.86	24.3	6.84	6.63	8.6
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	CS(Mf)3	15:26	Middle	2	1	15.4	7.83	24.5	6.72	6.74	10.1
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	CS(Mf)3	15:26	Middle	2	2	15.3	7.8	24.6	6.74	6.79	9.5
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	CS(Mf)3	15:26	Bottom	3	1	15.2	7.79	24.7	6.56	7.12	10
TMCLKL	HY/2012/07	04-02-2016	Mid-Flood	CS(Mf)3	15:26	Bottom	3	2	15.1	7.78	24.8	6.58	7.17	10.8
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	CS(Mf)5	11:27	Surface	1	1	15.1	7.73	24.2	6.72	7.09	9.2
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	CS(Mf)5	11:27	Surface	1	2	15.2	7.75	24.2	6.68	7.16	9.3
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	CS(Mf)5	11:27	Middle	2	1	15.3	7.7	24.4	6.49	7.82	11.7
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	CS(Mf)5	11:27	Middle	2	2	15.2	7.72	24.4	6.45	7.73	10.8
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	CS(Mf)5	11:27	Bottom	3	1	15.3	7.69	24.6	6.28	8.09	11.3
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	CS(Mf)5	11:27	Bottom	3	2	15.3	7.73	24.5	6.25	8.16	13.1

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Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	SR4a	11:08	Surface	1	1	15.2	7.8	24.1	6.5	6.94	9.7
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	SR4a	11:08	Surface	1	2	15.2	7.83	24.1	6.46	6.83	8.9
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	SR4a	11:08	Middle	2	1						
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	SR4a	11:08	Middle	2	2						
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	SR4a	11:08	Bottom	3	1	15.2	7.81	24.2	6.33	6.67	8.7
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	SR4a	11:08	Bottom	3	2	15.3	7.84	24.3	6.3	6.74	9.4
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	SR4	10:50	Surface	1	1	15.1	7.77	24.1	6.6	8.31	10
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	SR4	10:50	Surface	1	2	15.2	7.79	24.2	6.55	8.23	12.3
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	SR4	10:50	Middle	2	1						
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	SR4	10:50	Middle	2	2						
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	SR4	10:50	Bottom	3	1	15.2	7.71	24.3	6.41	7.16	10.7
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	SR4	10:50	Bottom	3	2	15.2	7.73	24.4	6.37	7.09	10.6
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	IS8	10:33	Surface	1	1	15.2	7.79	24.1	6.45	8.2	12.3
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	IS8	10:33	Surface	1	2	15.2	7.81	24.1	6.41	8.12	10.6
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	IS8	10:33	Middle	2	1						
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	IS8	10:33	Middle	2	2						
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	IS8	10:33	Bottom	3	1	15.1	7.73	24.2	6.36	7.44	10.4
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	IS8	10:33	Bottom	3	2	15.2	7.75	24.3	6.32	7.36	10.3
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	IS(Mf)16	10:12	Surface	1	1	15.2	7.76	24.1	6.48	8.03	11.2
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	IS(Mf)16	10:12	Surface	1	2	15.2	7.79	24.2	6.51	8.09	10.5
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	IS(Mf)16	10:12	Middle	2	1	15.2	7.73	24.3	6.42	8.24	12.4
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	IS(Mf)16	10:12	Middle	2	2	15.2	7.75	24.3	6.4	8.33	10.8
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	IS(Mf)16	10:12	Bottom	3	1	15.2	7.78	24.5	6.23	9.46	13.2
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	IS(Mf)16	10:12	Bottom	3	2	15.2	7.8	24.6	6.21	9.52	14.3
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	IS(Mf)9	9:54	Surface	1	1	15.2	7.81	24.1	6.59	8.52	11.9
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	IS(Mf)9	9:54	Surface	1	2	15.2	7.79	24	6.56	8.44	11
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	IS(Mf)9	9:54	Middle	2	1						
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	IS(Mf)9	9:54	Middle	2	2						
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	IS(Mf)9	9:54	Bottom	3	1	15.2	7.82	24.2	6.37	8.27	11.6
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	IS(Mf)9	9:54	Bottom	3	2	15.3	7.81	24.3	6.34	8.13	11.4
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	CS(Mf)3	9:30	Surface	1	1	15.2	7.83	24.1	6.74	9.05	13.6
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	CS(Mf)3	9:30	Surface	1	2	15.3	7.85	24.2	6.7	8.92	14.3
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	CS(Mf)3	9:30	Middle	2	1	15.3	7.82	24.3	6.63	8.48	11.9

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Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	CS(Mf)3	9:30	Middle	2	2	15.3	7.84	24.3	6.61	8.62	12.1
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	CS(Mf)3	9:30	Bottom	3	1	15.4	7.74	24.5	6.44	9.62	15.4
TMCLKL	HY/2012/07	04-02-2016	Mid-Ebb	CS(Mf)3	9:30	Bottom	3	2	15.5	7.76	24.6	6.42	9.76	14.6
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	CS(Mf)5	15:10	Surface	1	1	15.2	7.78	24.3	6.86	7.63	10.7
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	CS(Mf)5	15:10	Surface	1	2	15.3	7.81	24.2	6.82	7.44	9.7
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	CS(Mf)5	15:10	Middle	2	1	15.2	7.75	24.4	6.67	7.82	10.9
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	CS(Mf)5	15:10	Middle	2	2	15.2	7.73	24.5	6.63	7.76	10.1
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	CS(Mf)5	15:10	Bottom	3	1	15.2	7.7	24.6	6.43	8.06	10.5
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	CS(Mf)5	15:10	Bottom	3	2	15.1	7.74	24.7	6.41	8.13	9.8
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	SR4a	15:36	Surface	1	1	15.3	7.73	24.1	6.67	7.24	9.4
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	SR4a	15:36	Surface	1	2	15.3	7.75	24.2	6.64	7.13	11.4
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	SR4a	15:36	Middle	2	1						
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	SR4a	15:36	Middle	2	2						
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	SR4a	15:36	Bottom	3	1	15.3	7.72	24.3	6.53	7.66	12.3
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	SR4a	15:36	Bottom	3	2	15.4	7.74	24.3	6.49	7.73	10
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	SR4	15:52	Surface	1	1	15.3	7.73	24.1	6.72	6.92	9.7
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	SR4	15:52	Surface	1	2	15.2	7.7	24.1	6.69	6.88	8.9
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	SR4	15:52	Middle	2	1						
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	SR4	15:52	Middle	2	2						
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	SR4	15:52	Bottom	3	1	15.3	7.69	24.2	6.46	7.96	9.6
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	SR4	15:52	Bottom	3	2	15.3	7.71	24.3	6.43	7.84	9.4
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	IS8	16:09	Surface	1	1	15.3	7.69	24.1	6.65	7.06	9.2
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	IS8	16:09	Surface	1	2	15.4	7.7	24.2	6.61	6.92	9
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	IS8	16:09	Middle	2	1						
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	IS8	16:09	Middle	2	2						
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	IS8	16:09	Bottom	3	1	15.3	7.64	24.3	6.42	7.78	10.1
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	IS8	16:09	Bottom	3	2	15.3	7.66	24.4	6.39	7.86	10.2
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	IS(Mf)16	16:28	Surface	1	1	15.3	7.66	24.2	6.68	7.36	10.3
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	IS(Mf)16	16:28	Surface	1	2	15.3	7.69	24.2	6.64	7.44	11.2
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	IS(Mf)16	16:28	Middle	2	1	15.3	7.67	24.2	6.53	7.63	10.7
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	IS(Mf)16	16:28	Middle	2	2	15.2	7.7	24.3	6.5	7.72	11.6
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	IS(Mf)16	16:28	Bottom	3	1	15.3	7.73	24.4	6.34	7.98	10.4
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	IS(Mf)16	16:28	Bottom	3	2	15.4	7.69	24.4	6.31	8.05	11.3

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Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	IS(Mf)9	16:51	Surface	1	1	15.3	7.68	24.2	6.79	7.16	9.3
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	IS(Mf)9	16:51	Surface	1	2	15.4	7.65	24.2	6.76	7.28	10.9
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	IS(Mf)9	16:51	Middle	2	1						
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	IS(Mf)9	16:51	Middle	2	2						
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	IS(Mf)9	16:51	Bottom	3	1	15.3	7.68	24.2	6.54	7.69	10
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	IS(Mf)9	16:51	Bottom	3	2	15.3	7.7	24.3	6.5	7.77	10.1
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	CS(Mf)3	17:13	Surface	1	1	15.4	7.73	24.2	6.83	7.29	10.2
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	CS(Mf)3	17:13	Surface	1	2	15.3	7.7	24.3	6.8	7.36	9.6
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	CS(Mf)3	17:13	Middle	2	1	15.3	7.63	24.4	6.64	7.5	11.3
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	CS(Mf)3	17:13	Middle	2	2	15.3	7.65	24.5	6.6	7.59	9.1
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	CS(Mf)3	17:13	Bottom	3	1	15.4	7.68	24.6	6.42	7.93	10.3
TMCLKL	HY/2012/07	06-02-2016	Mid-Flood	CS(Mf)3	17:13	Bottom	3	2	15.4	7.7	24.6	6.38	7.86	10.2
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	CS(Mf)5	13:15	Surface	1	1	15	7.95	24.1	6.77	7.72	12.4
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	CS(Mf)5	13:15	Surface	1	2	15	7.97	24.2	6.75	7.7	11.6
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	CS(Mf)5	13:15	Middle	2	1	14.7	8.12	24.3	6.56	7.88	12.6
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	CS(Mf)5	13:15	Middle	2	2	14.6	8.14	24.3	6.58	7.9	11.9
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	CS(Mf)5	13:15	Bottom	3	1	14.5	8.01	24.4	6.41	8.12	11.4
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	CS(Mf)5	13:15	Bottom	3	2	14.5	8.03	24.4	6.43	8.1	11.3
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	SR4a	12:50	Surface	1	1	14.9	8.13	23.9	6.59	7.23	11.6
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	SR4a	12:50	Surface	1	2	14.8	8.15	24	6.61	7.25	10.2
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	SR4a	12:50	Middle	2	1						
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	SR4a	12:50	Middle	2	2						
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	SR4a	12:50	Bottom	3	1	14.7	7.92	24.1	6.35	7.35	11
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	SR4a	12:50	Bottom	3	2	14.6	7.94	24.2	6.33	7.37	9.6
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	SR4	12:28	Surface	1	1	15	7.92	24	6.61	7.03	8.4
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	SR4	12:28	Surface	1	2	14.9	7.94	24.1	6.59	7.05	9.2
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	SR4	12:28	Middle	2	1						
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	SR4	12:28	Middle	2	2						
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	SR4	12:28	Bottom	3	1	14.7	8.17	24.2	6.42	7.18	8.6
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	SR4	12:28	Bottom	3	2	14.7	8.15	24.3	6.44	7.2	10.8
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	IS8	12:05	Surface	1	1	15.1	8.13	24.1	6.58	7.12	10.7
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	IS8	12:05	Surface	1	2	15	8.15	24.2	6.56	7.14	9.3
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	IS8	12:05	Middle	2	1						

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Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	IS8	12:05	Middle	2	2						
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	IS8	12:05	Bottom	3	1	14.8	7.96	24.3	6.39	7.26	11.6
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	IS8	12:05	Bottom	3	2	14.7	7.98	24.4	6.37	7.28	9.5
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	IS(Mf)16	11:44	Surface	1	1	15	7.77	23.9	6.54	7.36	11
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	IS(Mf)16	11:44	Surface	1	2	14.9	7.75	24	6.52	7.38	10.3
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	IS(Mf)16	11:44	Middle	2	1	14.8	8.12	24.1	6.41	7.48	9.7
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	IS(Mf)16	11:44	Middle	2	2	14.7	8.14	24.2	6.39	7.5	10.5
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	IS(Mf)16	11:44	Bottom	3	1	14.6	7.93	24.3	6.27	7.63	9.9
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	IS(Mf)16	11:44	Bottom	3	2	14.5	7.95	24.4	6.29	7.61	11.4
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	IS(Mf)9	11:22	Surface	1	1	15	7.74	24.1	6.61	7.35	9.6
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	IS(Mf)9	11:22	Surface	1	2	14.9	7.76	24.2	6.59	7.37	11.1
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	IS(Mf)9	11:22	Middle	2	1						
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	IS(Mf)9	11:22	Middle	2	2						
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	IS(Mf)9	11:22	Bottom	3	1	14.8	8.13	24.3	6.43	7.44	11.9
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	IS(Mf)9	11:22	Bottom	3	2	14.8	8.11	24.4	6.45	7.46	10.4
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	CS(Mf)3	11:02	Surface	1	1	15.1	7.77	24	6.75	7.45	9.7
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	CS(Mf)3	11:02	Surface	1	2	15.1	7.79	24.1	6.77	7.47	11.2
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	CS(Mf)3	11:02	Middle	2	1	14.9	8.02	24.3	6.6	7.55	10.6
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	CS(Mf)3	11:02	Middle	2	2	14.8	8.04	24.2	6.58	7.53	9.8
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	CS(Mf)3	11:02	Bottom	3	1	14.6	8.16	24.4	6.4	7.66	10
TMCLKL	HY/2012/07	06-02-2016	Mid-Ebb	CS(Mf)3	11:02	Bottom	3	2	14.5	8.18	24.5	6.38	7.64	11.5
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	CS(Mf)5	8:33	Surface	1	1	16.1	7.77	24.3	6.82	7.57	9.8
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	CS(Mf)5	8:33	Surface	1	2	16.1	7.79	24.3	6.8	7.51	10.5
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	CS(Mf)5	8:33	Middle	2	1	15.8	7.73	24.4	6.62	7.7	11.6
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	CS(Mf)5	8:33	Middle	2	2	15.8	7.74	24.4	6.6	7.8	9.4
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	CS(Mf)5	8:33	Bottom	3	1	15.4	7.68	24.6	6.39	8.01	12
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	CS(Mf)5	8:33	Bottom	3	2	15.5	7.7	24.7	6.41	8.07	12.1
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	SR4a	8:55	Surface	1	1	16	7.76	24.2	6.6	7.01	9.8
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	SR4a	8:55	Surface	1	2	16	7.75	24.2	6.63	7.09	9.2
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	SR4a	8:55	Middle	2	1						
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	SR4a	8:55	Middle	2	2						
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	SR4a	8:55	Bottom	3	1	15.8	7.71	24.1	6.56	7.35	9.6
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	SR4a	8:55	Bottom	3	2	15.8	7.72	24	6.54	7.47	10.5

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Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	SR4	9:15	Surface	1	1	15.8	7.77	24.1	6.66	7.01	10.5
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	SR4	9:15	Surface	1	2	15.9	7.75	24.2	6.65	6.93	10.4
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	SR4	9:15	Middle	2	1						
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	SR4	9:15	Middle	2	2						
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	SR4	9:15	Bottom	3	1	15.6	7.68	24.3	6.5	7.44	11.9
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	SR4	9:15	Bottom	3	2	15.6	7.7	24.3	6.47	7.58	12.1
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	IS8	9:40	Surface	1	1	15.6	7.74	24	6.6	6.9	8.3
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	IS8	9:40	Surface	1	2	15.7	7.72	24.1	6.57	6.99	11.2
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	IS8	9:40	Middle	2	1						
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	IS8	9:40	Middle	2	2						
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	IS8	9:40	Bottom	3	1	15.4	7.69	24.3	6.47	7.27	10.9
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	IS8	9:40	Bottom	3	2	15.4	7.67	24.2	6.5	7.35	10.3
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	IS(Mf)16	10:10	Surface	1	1	15.6	7.71	24.3	6.71	7.3	10.2
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	IS(Mf)16	10:10	Surface	1	2	15.6	7.73	24.2	6.73	7.24	10.9
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	IS(Mf)16	10:10	Middle	2	1	15.4	7.7	24.4	6.65	7.53	10.5
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	IS(Mf)16	10:10	Middle	2	2	15.4	7.68	24.4	6.63	7.61	11.4
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	IS(Mf)16	10:10	Bottom	3	1	15.1	7.61	24.5	6.53	7.79	10.1
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	IS(Mf)16	10:10	Bottom	3	2	15.2	7.64	24.4	6.51	7.85	10.2
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	IS(Mf)9	10:30	Surface	1	1	15.6	7.63	24.2	6.74	7.2	10.8
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	IS(Mf)9	10:30	Surface	1	2	15.7	7.66	24.2	6.7	7.3	10.2
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	IS(Mf)9	10:30	Middle	2	1						
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	IS(Mf)9	10:30	Middle	2	2						
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	IS(Mf)9	10:30	Bottom	3	1	15.4	7.73	24.3	6.64	7.43	10.4
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	IS(Mf)9	10:30	Bottom	3	2	15.5	7.7	24.3	6.62	7.51	9.8
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	CS(Mf)3	10:50	Surface	1	1	15.6	7.76	24.3	6.78	7.31	9.5
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	CS(Mf)3	10:50	Surface	1	2	15.6	7.73	24.3	6.74	7.23	11.6
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	CS(Mf)3	10:50	Middle	2	1	15.4	7.69	24.4	6.7	7.48	12
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	CS(Mf)3	10:50	Middle	2	2	15.4	7.66	24.4	6.67	7.56	11.3
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	CS(Mf)3	10:50	Bottom	3	1	15.1	7.61	24.6	6.59	7.71	11.6
TMCLKL	HY/2012/07	11-02-2016	Mid-Flood	CS(Mf)3	10:50	Bottom	3	2	15.2	7.63	24.7	6.56	7.81	10.9
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	CS(Mf)5	15:35	Surface	1	1	16.3	7.78	24.5	6.73	7.34	9.5
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	CS(Mf)5	15:35	Surface	1	2	16.2	7.82	24.4	6.74	7.39	10.3
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	CS(Mf)5	15:35	Middle	2	1	16.1	7.86	24.6	6.59	7.44	11.2

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Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	CS(Mf)5	15:35	Middle	2	2	16	7.89	24.5	6.56	7.51	12
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	CS(Mf)5	15:35	Bottom	3	1	15.8	7.83	24.8	6.42	7.89	9.5
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	CS(Mf)5	15:35	Bottom	3	2	15.7	7.81	24.7	6.43	7.83	10.2
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	SR4a	15:10	Surface	1	1	16.2	7.79	24.3	6.54	7.12	10
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	SR4a	15:10	Surface	1	2	16.1	7.74	24.4	6.57	7.16	9.3
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	SR4a	15:10	Middle	2	1						
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	SR4a	15:10	Middle	2	2						
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	SR4a	15:10	Bottom	3	1	16.1	7.81	24.5	6.47	7.49	10.5
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	SR4a	15:10	Bottom	3	2	16	7.84	24.5	6.48	7.52	9.8
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	SR4	14:51	Surface	1	1	16.1	7.83	24.4	6.52	7.11	10
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	SR4	14:51	Surface	1	2	16	7.8	24.3	6.55	7.17	10
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	SR4	14:51	Middle	2	1						
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	SR4	14:51	Middle	2	2						
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	SR4	14:51	Bottom	3	1	15.8	7.88	24.5	6.43	7.54	10.6
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	SR4	14:51	Bottom	3	2	15.9	7.85	24.4	6.45	7.58	9.9
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	IS8	14:32	Surface	1	1	16	7.79	24.3	6.58	7.18	10.8
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	IS8	14:32	Surface	1	2	15.9	7.81	24.2	6.55	7.12	10.7
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	IS8	14:32	Middle	2	1						
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	IS8	14:32	Middle	2	2						
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	IS8	14:32	Bottom	3	1	15.8	7.86	24.4	6.41	7.33	9.5
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	IS8	14:32	Bottom	3	2	15.9	7.82	24.4	6.42	7.39	10.3
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	IS(Mf)16	14:10	Surface	1	1	16.1	7.74	24.4	6.63	7.21	9.4
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	IS(Mf)16	14:10	Surface	1	2	16	7.78	24.3	6.61	7.26	9.4
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	IS(Mf)16	14:10	Middle	2	1	15.8	7.81	24.5	6.53	7.48	10.5
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	IS(Mf)16	14:10	Middle	2	2	15.9	7.83	24.4	6.55	7.41	11.9
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	IS(Mf)16	14:10	Bottom	3	1	15.7	7.74	24.7	6.42	7.65	9.2
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	IS(Mf)16	14:10	Bottom	3	2	15.6	7.71	24.6	6.46	7.72	10
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	IS(Mf)9	13:51	Surface	1	1	16	7.72	24.4	6.72	7.32	8.8
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	IS(Mf)9	13:51	Surface	1	2	15.9	7.7	25.3	6.74	7.27	9.5
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	IS(Mf)9	13:51	Middle	2	1						
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	IS(Mf)9	13:51	Middle	2	2						
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	IS(Mf)9	13:51	Bottom	3	1	15.9	7.74	24.5	6.65	7.58	10.6
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	IS(Mf)9	13:51	Bottom	3	2	15.9	7.76	24.4	6.68	7.54	9.8

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Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	CS(Mf)3	13:23	Surface	1	1	16.1	7.73	24.3	6.65	7.32	9.5
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	CS(Mf)3	13:23	Surface	1	2	16	7.7	24.2	6.67	7.39	11.8
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	CS(Mf)3	13:23	Middle	2	1	15.8	7.78	24.4	6.54	7.65	9.9
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	CS(Mf)3	13:23	Middle	2	2	15.9	7.83	24.4	6.5	7.62	9.9
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	CS(Mf)3	13:23	Bottom	3	1	15.7	7.78	24.6	6.31	7.94	11.1
TMCLKL	HY/2012/07	11-02-2016	Mid-Ebb	CS(Mf)3	13:23	Bottom	3	2	15.8	7.75	24.5	6.34	8.01	11.2
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	CS(Mf)5	9:43	Surface	1	1	16.1	7.83	24.3	6.88	7.48	9.7
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	CS(Mf)5	9:43	Surface	1	2	16.2	7.85	24.4	6.86	7.42	9.6
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	CS(Mf)5	9:43	Middle	2	1	15.8	7.79	24.4	6.68	7.61	11.4
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	CS(Mf)5	9:43	Middle	2	2	15.9	7.8	24.5	6.66	7.69	10.8
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	CS(Mf)5	9:43	Bottom	3	1	15.5	7.74	24.7	6.45	7.92	11.9
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	CS(Mf)5	9:43	Bottom	3	2	15.6	7.76	24.8	6.47	7.98	10.4
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	SR4a	10:05	Surface	1	1	16	7.82	24.2	6.66	6.92	10.4
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	SR4a	10:05	Surface	1	2	16.1	7.81	24.3	6.69	7	9.1
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	SR4a	10:05	Middle	2	1						
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	SR4a	10:05	Middle	2	2						
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	SR4a	10:05	Bottom	3	1	15.8	7.77	24.2	6.62	7.26	10.2
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	SR4a	10:05	Bottom	3	2	15.9	7.78	24.1	6.6	7.38	9.6
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	SR4	10:27	Surface	1	1	15.9	7.83	24.2	6.72	6.92	9.7
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	SR4	10:27	Surface	1	2	16	7.81	24.3	6.71	6.84	10.3
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	SR4	10:27	Middle	2	1						
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	SR4	10:27	Middle	2	2						
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	SR4	10:27	Bottom	3	1	15.6	7.74	24.3	6.56	7.35	11
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	SR4	10:27	Bottom	3	2	15.7	7.76	24.4	6.53	7.49	9.7
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	IS8	10:49	Surface	1	1	15.7	7.8	24.1	6.66	6.81	9.5
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	IS8	10:49	Surface	1	2	15.8	7.78	24.2	6.63	6.9	8.3
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	IS8	10:49	Middle	2	1						
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	IS8	10:49	Middle	2	2						
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	IS8	10:49	Bottom	3	1	15.4	7.75	24.3	6.53	7.18	9.3
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	IS8	10:49	Bottom	3	2	15.5	7.73	24.4	6.56	7.26	11.6
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	IS(Mf)16	11:11	Surface	1	1	15.7	7.77	24.3	6.77	7.21	10.1
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	IS(Mf)16	11:11	Surface	1	2	15.6	7.79	24.4	6.79	7.15	11.4
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	IS(Mf)16	11:11	Middle	2	1	15.5	7.76	24.4	6.71	7.44	9.7

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Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	IS(Mf)16	11:11	Middle	2	2	15.6	7.74	24.5	6.69	7.52	10.5
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	IS(Mf)16	11:11	Bottom	3	1	15.3	7.67	24.5	6.59	7.7	11.6
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	IS(Mf)16	11:11	Bottom	3	2	15.3	7.7	24.6	6.57	7.76	9.3
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	IS(Mf)9	11:33	Surface	1	1	15.7	7.69	24.2	6.8	7.11	9.2
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	IS(Mf)9	11:33	Surface	1	2	15.8	7.72	24.3	6.76	7.19	10.1
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	IS(Mf)9	11:33	Middle	2	1						
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	IS(Mf)9	11:33	Middle	2	2						
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	IS(Mf)9	11:33	Bottom	3	1	15.5	7.79	24.3	6.7	7.34	9.5
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	IS(Mf)9	11:33	Bottom	3	2	15.6	7.76	24.4	6.68	7.42	11.1
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	CS(Mf)3	11:57	Surface	1	1	15.6	7.82	24.3	6.84	7.22	10.8
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	CS(Mf)3	11:57	Surface	1	2	15.7	7.79	24.4	6.8	7.14	9.3
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	CS(Mf)3	11:57	Middle	2	1	15.4	7.75	24.4	6.76	7.39	10.3
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	CS(Mf)3	11:57	Middle	2	2	15.5	7.72	24.5	6.73	7.47	11.2
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	CS(Mf)3	11:57	Bottom	3	1	15.2	7.67	24.7	6.65	7.62	10.7
TMCLKL	HY/2012/07	13-02-2016	Mid-Flood	CS(Mf)3	11:57	Bottom	3	2	15.3	7.69	24.8	6.62	7.72	11.6
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	CS(Mf)5	16:55	Surface	1	1	16.8	7.86	24.6	6.82	7.42	9.6
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	CS(Mf)5	16:55	Surface	1	2	16.9	7.82	24.7	6.86	7.4	8.9
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	CS(Mf)5	16:55	Middle	2	1	16.7	7.77	24.5	6.67	7.57	11.4
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	CS(Mf)5	16:55	Middle	2	2	16.8	7.72	24.7	6.65	7.62	11.4
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	CS(Mf)5	16:55	Bottom	3	1	16.5	7.76	24.7	6.42	7.88	9.5
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	CS(Mf)5	16:55	Bottom	3	2	16.5	7.77	24.6	6.4	7.91	10.3
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	SR4a	16:38	Surface	1	1	16.6	7.84	24.5	6.62	6.95	9
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	SR4a	16:38	Surface	1	2	16.9	7.82	24.7	6.66	6.98	10.5
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	SR4a	16:38	Middle	2	1						
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	SR4a	16:38	Middle	2	2						
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	SR4a	16:38	Bottom	3	1	16.7	7.84	24.7	6.58	7.27	10.9
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	SR4a	16:38	Bottom	3	2	16.4	7.86	24.6	6.6	7.29	9.5
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	SR4	16:21	Surface	1	1	16.6	7.92	24.4	6.68	6.91	9
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	SR4	16:21	Surface	1	2	16.9	7.96	24.7	6.66	6.87	8.9
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	SR4	16:21	Middle	2	1						
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	SR4	16:21	Middle	2	2						
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	SR4	16:21	Bottom	3	1	16.2	7.97	24.7	6.51	7.31	10.2
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	SR4	16:21	Bottom	3	2	16.5	7.97	24.6	6.53	7.34	11

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Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	IS8	16:04	Surface	1	1	16.7	7.94	24.7	6.61	6.78	8.8
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	IS8	16:04	Surface	1	2	16.8	7.92	24.5	6.62	6.82	9.5
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	IS8	16:04	Middle	2	1						
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	IS8	16:04	Middle	2	2						
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	IS8	16:04	Bottom	3	1	16.2	7.87	24.6	6.46	7.19	11.5
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	IS8	16:04	Bottom	3	2	16.4	7.88	24.2	6.5	7.22	9.4
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	IS(Mf)16	15:42	Surface	1	1	16.7	7.84	24.6	6.72	7.18	10.8
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	IS(Mf)16	15:42	Surface	1	2	16.6	7.87	24.5	6.75	7.22	10.8
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	IS(Mf)16	15:42	Middle	2	1	16.7	7.87	24.6	6.7	7.36	10.3
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	IS(Mf)16	15:42	Middle	2	2	16.4	7.91	24.4	6.66	7.4	11.8
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	IS(Mf)16	15:42	Bottom	3	1	16.3	7.92	24.3	6.52	7.57	9.8
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	IS(Mf)16	15:42	Bottom	3	2	16.2	7.9	24.4	6.56	7.62	9.9
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	IS(Mf)9	15:20	Surface	1	1	16.7	7.68	24.5	6.76	7.1	10.7
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	IS(Mf)9	15:20	Surface	1	2	16.8	7.71	24.6	6.72	7.06	11.3
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	IS(Mf)9	15:20	Middle	2	1						
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	IS(Mf)9	15:20	Middle	2	2						
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	IS(Mf)9	15:20	Bottom	3	1	16.4	7.67	24.4	6.56	7.27	10.9
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	IS(Mf)9	15:20	Bottom	3	2	16.3	7.7	24.5	6.57	7.3	11
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	CS(Mf)3	14:51	Surface	1	1	16.7	7.69	24.5	6.76	7.23	9.4
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	CS(Mf)3	14:51	Surface	1	2	16.9	7.66	24.3	6.77	7.21	9.4
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	CS(Mf)3	14:51	Middle	2	1	16.7	7.67	24.4	6.72	7.37	11.1
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	CS(Mf)3	14:51	Middle	2	2	16.6	7.69	24.5	6.7	7.4	10.4
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	CS(Mf)3	14:51	Bottom	3	1	16.2	7.71	24.5	6.61	7.64	12.2
TMCLKL	HY/2012/07	13-02-2016	Mid-Ebb	CS(Mf)3	14:51	Bottom	3	2	16.4	7.7	24.6	6.66	7.6	10.6
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	CS(Mf)5	12:45	Surface	1	1	16.5	7.78	24.4	6.94	7.48	10.5
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	CS(Mf)5	12:45	Surface	1	2	16.4	7.83	24.3	6.9	7.42	11.9
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	CS(Mf)5	12:45	Middle	2	1	16.3	7.74	24.6	6.73	7.69	10.8
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	CS(Mf)5	12:45	Middle	2	2	16.2	7.7	24.5	6.76	7.74	12.4
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	CS(Mf)5	12:45	Bottom	3	1	16.1	7.76	24.7	6.58	7.96	10.3
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	CS(Mf)5	12:45	Bottom	3	2	16.2	7.79	24.7	6.56	8.03	12.8
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	SR4a	13:09	Surface	1	1	16.3	7.76	24.5	6.86	7.27	9.5
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	SR4a	13:09	Surface	1	2	16.4	7.71	24.4	6.82	7.34	9.5
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	SR4a	13:09	Middle	2	1						

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Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	SR4a	13:09	Middle	2	2						
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	SR4a	13:09	Bottom	3	1	16.3	7.79	24.6	6.62	7.51	10.5
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	SR4a	13:09	Bottom	3	2	16.2	7.78	24.5	6.6	7.48	10.5
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	SR4	13:23	Surface	1	1	16.3	7.72	24.3	6.72	7.08	11.3
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	SR4	13:23	Surface	1	2	16.4	7.74	24.2	6.74	7.01	11.2
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	SR4	13:23	Middle	2	1						
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	SR4	13:23	Middle	2	2						
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	SR4	13:23	Bottom	3	1	16.3	7.79	24.4	6.61	7.36	11
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	SR4	13:23	Bottom	3	2	16.2	7.76	24.3	6.58	7.42	9.6
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	IS8	13:36	Surface	1	1	16.4	7.76	24.4	6.64	6.89	9.6
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	IS8	13:36	Surface	1	2	16.3	7.79	24.3	6.61	6.93	8.3
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	IS8	13:36	Middle	2	1						
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	IS8	13:36	Middle	2	2						
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	IS8	13:36	Bottom	3	1	16.2	7.73	24.5	6.42	7.28	10.9
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	IS8	13:36	Bottom	3	2	16.3	7.72	24.4	6.45	7.35	11.8
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	IS(Mf)16	13:49	Surface	1	1	16.2	7.76	24.3	6.77	7.16	9.3
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	IS(Mf)16	13:49	Surface	1	2	16.3	7.79	24.2	6.74	7.22	9.4
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	IS(Mf)16	13:49	Middle	2	1	16.4	7.82	24.4	6.52	7.42	10.4
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	IS(Mf)16	13:49	Middle	2	2	16.3	7.8	24.5	6.54	7.48	12
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	IS(Mf)16	13:49	Bottom	3	1	16.2	7.73	24.6	6.48	7.87	10.2
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	IS(Mf)16	13:49	Bottom	3	2	16.1	7.72	24.7	6.44	7.95	12.7
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	IS(Mf)9	14:03	Surface	1	1	16.2	7.71	24.3	6.82	7.23	11.6
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	IS(Mf)9	14:03	Surface	1	2	16.3	7.74	24.4	6.84	7.28	9.5
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	IS(Mf)9	14:03	Middle	2	1						
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	IS(Mf)9	14:03	Middle	2	2						
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	IS(Mf)9	14:03	Bottom	3	1	16.1	7.75	24.5	6.57	7.62	10.7
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	IS(Mf)9	14:03	Bottom	3	2	16.2	7.79	24.5	6.59	7.57	9.8
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	CS(Mf)3	14:22	Surface	1	1	16.3	7.76	24.2	6.73	7.31	11
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	CS(Mf)3	14:22	Surface	1	2	16.4	7.74	24.3	6.7	7.26	10.9
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	CS(Mf)3	14:22	Middle	2	1	16.2	7.79	24.5	6.64	7.43	11.1
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	CS(Mf)3	14:22	Middle	2	2	16.3	7.82	24.4	6.65	7.49	11.2
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	CS(Mf)3	14:22	Bottom	3	1	16.1	7.72	24.6	6.47	7.84	9.4
TMCLKL	HY/2012/07	16-02-2016	Mid-Flood	CS(Mf)3	14:22	Bottom	3	2	16.2	7.74	24.7	6.44	7.92	10.3

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Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	CS(Mf)5	20:39	Surface	1	1	16.2	7.88	24.5	6.83	7.32	11
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	CS(Mf)5	20:39	Surface	1	2	16.3	7.87	24.5	6.8	7.34	11.7
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	CS(Mf)5	20:39	Middle	2	1	16.3	7.76	24.6	6.67	7.52	9.8
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	CS(Mf)5	20:39	Middle	2	2	16.3	7.74	24.6	6.69	7.54	9
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	CS(Mf)5	20:39	Bottom	3	1	16.2	7.76	24.8	6.5	7.86	10.2
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	CS(Mf)5	20:39	Bottom	3	2	16.1	7.74	24.7	6.48	7.82	11.7
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	SR4a	20:15	Surface	1	1	16.2	7.74	24.6	6.56	7.36	9.6
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	SR4a	20:15	Surface	1	2	16.1	7.76	24.7	6.54	7.32	9.5
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	SR4a	20:15	Middle	2	1						
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	SR4a	20:15	Middle	2	2						
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	SR4a	20:15	Bottom	3	1	16.1	7.8	24.8	6.49	7.62	11.4
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	SR4a	20:15	Bottom	3	2	16.2	7.82	24.8	6.52	7.66	10
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	SR4	19:56	Surface	1	1	16.1	7.7	24.4	6.64	7.13	10.7
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	SR4	19:56	Surface	1	2	16.2	7.69	24.4	6.62	7.16	10
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	SR4	19:56	Middle	2	1						
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	SR4	19:56	Middle	2	2						
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	SR4	19:56	Bottom	3	1	16.2	7.76	24.5	6.53	7.28	9.5
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	SR4	19:56	Bottom	3	2	16.3	7.77	24.5	6.5	7.32	9.5
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	IS8	19:37	Surface	1	1	16.1	7.72	24.5	6.54	6.94	8.3
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	IS8	19:37	Surface	1	2	16.2	7.74	24.5	6.55	6.96	9
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	IS8	19:37	Middle	2	1						
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	IS8	19:37	Middle	2	2						
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	IS8	19:37	Bottom	3	1	16.1	7.74	24.6	6.34	7.44	11.9
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	IS8	19:37	Bottom	3	2	16	7.75	24.5	6.36	7.47	11.2
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	IS(Mf)16	19:16	Surface	1	1	16.2	7.78	24.4	6.63	7.24	8.7
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	IS(Mf)16	19:16	Surface	1	2	16.1	7.79	24.4	6.66	7.26	8.7
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	IS(Mf)16	19:16	Middle	2	1	16.3	7.83	24.5	6.5	7.54	10.6
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	IS(Mf)16	19:16	Middle	2	2	16.3	7.84	24.5	6.52	7.5	9.8
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	IS(Mf)16	19:16	Bottom	3	1	16.2	7.75	24.6	6.44	7.8	10.1
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	IS(Mf)16	19:16	Bottom	3	2	16.2	7.77	24.6	6.4	7.83	11.7
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	IS(Mf)9	18:56	Surface	1	1	16.1	7.7	24.4	6.74	7.29	10.9
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	IS(Mf)9	18:56	Surface	1	2	16.1	7.68	24.4	6.76	7.32	10.2
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	IS(Mf)9	18:56	Middle	2	1						

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Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	IS(Mf)9	18:56	Middle	2	2						
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	IS(Mf)9	18:56	Bottom	3	1	16	7.72	24.5	6.49	7.54	9.8
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	IS(Mf)9	18:56	Bottom	3	2	16	7.73	24.5	6.52	7.56	11.3
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	CS(Mf)3	18:33	Surface	1	1	16.2	7.74	24.4	6.68	7.22	9.4
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	CS(Mf)3	18:33	Surface	1	2	16.2	7.75	24.4	6.66	7.2	9.4
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	CS(Mf)3	18:33	Middle	2	1	16.1	7.8	24.5	6.58	7.33	9.5
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	CS(Mf)3	18:33	Middle	2	2	16	7.8	24.5	6.55	7.36	9.6
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	CS(Mf)3	18:33	Bottom	3	1	16.1	7.73	24.7	6.42	7.44	8.9
TMCLKL	HY/2012/07	16-02-2016	Mid-Ebb	CS(Mf)3	18:33	Bottom	3	2	16	7.74	24.7	6.4	7.47	11.2
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	CS(Mf)5	13:43	Surface	1	1	15.2	7.83	25.4	6.74	14	19.6
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	CS(Mf)5	13:43	Surface	1	2	15.1	7.87	25.5	6.7	13.3	18.6
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	CS(Mf)5	13:43	Middle	2	1	15.1	7.81	25.7	6.59	16.7	21.7
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	CS(Mf)5	13:43	Middle	2	2	15.1	7.83	25.8	6.55	17.5	24.5
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	CS(Mf)5	13:43	Bottom	3	1	15	7.79	25.9	6.34	20.4	24.5
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	CS(Mf)5	13:43	Bottom	3	2	15.1	7.82	26	6.31	19.8	29.7
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	SR4a	14:10	Surface	1	1	15.2	7.88	25.5	6.67	10.6	14.8
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	SR4a	14:10	Surface	1	2	15.2	7.9	25.4	6.63	12.5	18.8
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	SR4a	14:10	Middle	2	1						
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	SR4a	14:10	Middle	2	2						
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	SR4a	14:10	Bottom	3	1	15.2	7.79	25.6	6.52	15.8	20.5
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	SR4a	14:10	Bottom	3	2	15.1	7.82	25.7	6.5	16.6	23.2
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	SR4	14:25	Surface	1	1	15.2	7.78	25.5	6.61	17	23.8
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	SR4	14:25	Surface	1	2	15.1	7.81	25.6	6.58	17.9	23.3
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	SR4	14:25	Middle	2	1						
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	SR4	14:25	Middle	2	2						
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	SR4	14:25	Bottom	3	1	15.1	7.8	25.7	6.39	19.5	29.6
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	SR4	14:25	Bottom	3	2	15.1	7.84	25.7	6.34	18.3	29.3
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	IS8	14:38	Surface	1	1	15.1	7.8	25.5	6.54	18.4	25.8
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	IS8	14:38	Surface	1	2	15.1	7.83	25.5	6.51	17.2	27.5
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	IS8	14:38	Middle	2	1						
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	IS8	14:38	Middle	2	2						
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	IS8	14:38	Bottom	3	1	15.1	7.82	25.6	6.33	20.6	30.9
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	IS8	14:38	Bottom	3	2	15.1	7.83	25.7	6.3	19.7	25.6

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Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	IS(Mf)16	14:57	Surface	1	1	15.1	7.84	25.4	6.48	19.3	27
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	IS(Mf)16	14:57	Surface	1	2	15	7.88	25.5	6.45	18.6	26
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	IS(Mf)16	14:57	Middle	2	1	15.1	7.82	25.5	6.39	17.7	28.3
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	IS(Mf)16	14:57	Middle	2	2	15.1	7.85	25.6	6.35	18.4	23.9
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	IS(Mf)16	14:57	Bottom	3	1	15.1	7.8	25.7	6.21	21.2	27.6
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	IS(Mf)16	14:57	Bottom	3	2	15	7.84	25.8	6.17	20.7	31.1
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	IS(Mf)9	15:21	Surface	1	1	15.1	7.87	25.5	6.43	16.9	27
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	IS(Mf)9	15:21	Surface	1	2	15.1	7.9	25.6	6.41	17.6	26.4
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	IS(Mf)9	15:21	Middle	2	1						
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	IS(Mf)9	15:21	Middle	2	2						
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	IS(Mf)9	15:21	Bottom	3	1	15.1	7.86	25.7	6.27	18.8	24.4
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	IS(Mf)9	15:21	Bottom	3	2	15	7.89	25.6	6.23	19.5	29.3
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	CS(Mf)3	15:40	Surface	1	1	15.1	7.88	25.5	6.59	19.5	27.3
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	CS(Mf)3	15:40	Surface	1	2	15	7.92	25.4	6.55	20.1	30.2
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	CS(Mf)3	15:40	Middle	2	1	15	7.86	25.6	6.39	17.8	21.4
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	CS(Mf)3	15:40	Middle	2	2	15	7.89	25.7	6.36	18.6	24.2
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	CS(Mf)3	15:40	Bottom	3	1	15	7.83	25.8	6.22	21.4	30
TMCLKL	HY/2012/07	18-02-2016	Mid-Flood	CS(Mf)3	15:40	Bottom	3	2	14.9	7.88	25.8	6.17	20.8	29.1
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	CS(Mf)5	11:27	Surface	1	1	15.4	7.84	25.7	6.72	14.3	18.6
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	CS(Mf)5	11:27	Surface	1	2	15.3	7.82	25.6	6.73	14.7	17.6
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	CS(Mf)5	11:27	Middle	2	1	15.2	7.81	25.8	6.56	16.9	25.4
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	CS(Mf)5	11:27	Middle	2	2	15.4	7.83	25.7	6.52	16.4	23
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	CS(Mf)5	11:27	Bottom	3	1	15.1	7.84	25.5	6.32	19.7	25.6
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	CS(Mf)5	11:27	Bottom	3	2	15	7.81	25.6	6.33	20.2	30.3
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	SR4a	11:11	Surface	1	1	15.4	7.84	25.6	6.64	10.9	14.2
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	SR4a	11:11	Surface	1	2	15.2	7.82	25.7	6.66	11.2	17.9
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	SR4a	11:11	Middle	2	1						
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	SR4a	11:11	Middle	2	2						
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	SR4a	11:11	Bottom	3	1	15.1	7.84	25.7	6.48	15.7	20.4
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	SR4a	11:11	Bottom	3	2	15.2	7.81	25.5	6.51	15.2	22.8
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	SR4	10:55	Surface	1	1	15.1	7.76	25.6	6.59	17.2	25.8
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	SR4	10:55	Surface	1	2	15.1	7.72	25.7	6.62	17.6	24.6
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	SR4	10:55	Middle	2	1						

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Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	SR4	10:55	Middle	2	2						
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	SR4	10:55	Bottom	3	1	15	7.74	25.8	6.34	19.3	29
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	SR4	10:55	Bottom	3	2	15.1	7.78	25.7	6.37	19.7	29.6
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	IS8	10:40	Surface	1	1	15.2	7.79	25.6	6.52	18.3	27.5
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	IS8	10:40	Surface	1	2	15.3	7.82	25.7	6.5	17.9	26.9
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	IS8	10:40	Middle	2	1						
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	IS8	10:40	Middle	2	2						
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	IS8	10:40	Bottom	3	1	15.1	7.81	25.8	6.28	19.7	29.6
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	IS8	10:40	Bottom	3	2	15.2	7.79	25.6	6.31	20.2	28.3
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	IS(Mf)16	10:19	Surface	1	1	15.1	7.83	25.6	6.43	19.5	25.4
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	IS(Mf)16	10:19	Surface	1	2	15.3	7.86	25.8	6.46	18.8	22.6
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	IS(Mf)16	10:19	Middle	2	1	15.2	7.84	25.5	6.29	17.6	24.6
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	IS(Mf)16	10:19	Middle	2	2	15	7.82	25.6	6.34	18.1	23.5
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	IS(Mf)16	10:19	Bottom	3	1	15.1	7.83	25.6	6.18	20.7	31.1
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	IS(Mf)16	10:19	Bottom	3	2	15	7.86	25.5	6.17	20.6	33
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	IS(Mf)9	10:04	Surface	1	1	15.2	7.86	24.6	6.41	16.4	23
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	IS(Mf)9	10:04	Surface	1	2	15.1	7.89	25.8	6.39	16.9	23.7
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	IS(Mf)9	10:04	Middle	2	1						
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	IS(Mf)9	10:04	Middle	2	2						
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	IS(Mf)9	10:04	Bottom	3	1	15	7.89	25.6	6.22	18.7	26.2
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	IS(Mf)9	10:04	Bottom	3	2	14.9	7.84	25.9	6.25	19.4	27.2
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	CS(Mf)3	9:45	Surface	1	1	15.2	7.87	25.8	6.56	19.3	23.2
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	CS(Mf)3	9:45	Surface	1	2	15.1	7.89	25.7	6.58	19.9	25.9
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	CS(Mf)3	9:45	Middle	2	1	15.1	7.86	25.6	6.37	17.2	24.1
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	CS(Mf)3	9:45	Middle	2	2	15.1	7.87	25.7	6.34	17.7	26.6
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	CS(Mf)3	9:45	Bottom	3	1	14.8	7.89	25.9	6.21	20.9	27.2
TMCLKL	HY/2012/07	18-02-2016	Mid-Ebb	CS(Mf)3	9:45	Bottom	3	2	14.9	7.86	25.8	6.17	21.3	29.8
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	CS(Mf)5	15:33	Surface	1	1	15.5	7.74	25.5	6.68	11.8	15.3
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	CS(Mf)5	15:33	Surface	1	2	15.6	7.77	25.6	6.65	12.4	17.4
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	CS(Mf)5	15:33	Middle	2	1	15.5	7.72	25.8	6.53	14.6	21.9
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	CS(Mf)5	15:33	Middle	2	2	15.5	7.74	25.8	6.5	15.7	25.1
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	CS(Mf)5	15:33	Bottom	3	1	15.4	7.78	25.9	6.33	18.3	23.8
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	CS(Mf)5	15:33	Bottom	3	2	15.4	7.75	26	6.29	19.6	23.5

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Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	SR4a	16:01	Surface	1	1	15.6	7.79	25.4	6.49	10.7	12.8
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	SR4a	16:01	Surface	1	2	15.5	7.83	25.5	6.51	10.1	15.2
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	SR4a	16:01	Middle	2	1						
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	SR4a	16:01	Middle	2	2						
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	SR4a	16:01	Bottom	3	1	15.6	7.73	25.6	6.37	16.4	26.2
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	SR4a	16:01	Bottom	3	2	15.6	7.75	25.6	6.34	15.5	21.7
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	SR4	16:18	Surface	1	1	15.6	7.83	25.6	6.44	13.7	21.9
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	SR4	16:18	Surface	1	2	15.6	7.88	25.7	6.47	12.4	19.8
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	SR4	16:18	Middle	2	1						
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	SR4	16:18	Middle	2	2						
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	SR4	16:18	Bottom	3	1	15.6	7.79	25.8	6.3	16.6	21.6
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	SR4	16:18	Bottom	3	2	15.5	7.82	25.8	6.27	17.2	20.6
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	IS8	16:35	Surface	1	1	15.6	7.79	25.7	6.42	11.8	18.9
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	IS8	16:35	Surface	1	2	15.7	7.82	25.7	6.39	12.2	17.1
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	IS8	16:35	Middle	2	1						
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	IS8	16:35	Middle	2	2						
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	IS8	16:35	Bottom	3	1	15.6	7.68	25.8	6.24	15.8	20.5
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	IS8	16:35	Bottom	3	2	15.6	7.73	25.8	6.2	16.4	23
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	IS(Mf)16	16:55	Surface	1	1	15.7	7.72	25.7	6.36	13.3	18.6
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	IS(Mf)16	16:55	Surface	1	2	15.6	7.75	25.7	6.33	14.1	16.9
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	IS(Mf)16	16:55	Middle	2	1	15.6	7.68	25.8	6.25	15.3	24.5
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	IS(Mf)16	16:55	Middle	2	2	15.6	7.71	25.9	6.22	14.7	23.5
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	IS(Mf)16	16:55	Bottom	3	1	15.5	7.7	26	6.16	17.2	20.6
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	IS(Mf)16	16:55	Bottom	3	2	15.5	7.73	26	6.13	17.9	25.1
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	IS(Mf)9	17:18	Surface	1	1	15.5	7.81	25.4	6.46	12.8	16.6
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	IS(Mf)9	17:18	Surface	1	2	15.5	7.84	25.4	6.42	12.1	16.9
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	IS(Mf)9	17:18	Middle	2	1						
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	IS(Mf)9	17:18	Middle	2	2						
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	IS(Mf)9	17:18	Bottom	3	1	15.5	7.8	25.6	6.28	14.8	17.8
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	IS(Mf)9	17:18	Bottom	3	2	15.5	7.82	25.7	6.24	15.5	18.6
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	CS(Mf)3	17:37	Surface	1	1	15.5	7.76	25.3	6.61	12.9	16.8
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	CS(Mf)3	17:37	Surface	1	2	15.4	7.79	25.4	6.57	13.4	20.1
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	CS(Mf)3	17:37	Middle	2	1	15.5	7.69	25.5	6.49	14.4	23

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Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	CS(Mf)3	17:37	Middle	2	2	15.5	7.73	25.5	6.44	15.2	22.8
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	CS(Mf)3	17:37	Bottom	3	1	15.5	7.74	25.7	6.28	17.3	24.2
TMCLKL	HY/2012/07	20-02-2016	Mid-Flood	CS(Mf)3	17:37	Bottom	3	2	15.6	7.7	25.8	6.25	18.1	21.7
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	CS(Mf)5	12:50	Surface	1	1	15.8	7.77	25.6	6.62	11.2	14.6
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	CS(Mf)5	12:50	Surface	1	2	16	7.81	25.7	6.65	11.6	17.4
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	CS(Mf)5	12:50	Middle	2	1	15.9	7.76	25.7	6.51	14.3	22.9
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	CS(Mf)5	12:50	Middle	2	2	15.8	7.79	25.8	6.54	14.5	18.9
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	CS(Mf)5	12:50	Bottom	3	1	15.8	7.79	25.8	6.27	18.7	28.1
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	CS(Mf)5	12:50	Bottom	3	2	15.9	7.8	25.7	6.3	18.2	23.7
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	SR4a	12:33	Surface	1	1	15.9	7.78	25.6	6.46	10.6	12
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	SR4a	12:33	Surface	1	2	16	7.79	25.7	6.48	10.9	15.3
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	SR4a	12:33	Middle	2	1						
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	SR4a	12:33	Middle	2	2						
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	SR4a	12:33	Bottom	3	1	15.8	7.76	25.7	6.37	16.3	24.5
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	SR4a	12:33	Bottom	3	2	15.9	7.78	25.8	6.34	16	20.8
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	SR4	12:16	Surface	1	1	15.7	7.83	25.7	6.47	13.2	18.5
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	SR4	12:16	Surface	1	2	15.9	7.86	25.8	6.49	13.5	20.3
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	SR4	12:16	Middle	2	1						
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	SR4	12:16	Middle	2	2						
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	SR4	12:16	Bottom	3	1	15.6	7.72	25.9	6.25	16.3	22.8
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	SR4	12:16	Bottom	3	2	15.7	7.76	25.8	6.22	16.5	21.5
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	IS8	12:00	Surface	1	1	15.9	7.78	25.6	6.4	11.9	16.7
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	IS8	12:00	Surface	1	2	15.6	7.76	25.8	6.37	11.6	15.1
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	IS8	12:00	Middle	2	1						
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	IS8	12:00	Middle	2	2						
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	IS8	12:00	Bottom	3	1	15.2	7.71	25.8	6.21	15.2	19.8
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	IS8	12:00	Bottom	3	2	15.6	7.68	25.6	6.19	15.6	21.8
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	IS(Mf)16	11:41	Surface	1	1	15.7	7.74	25.9	6.32	13.2	19.8
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	IS(Mf)16	11:41	Surface	1	2	15.9	7.77	25.8	6.34	13	18.2
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	IS(Mf)16	11:41	Middle	2	1	15.6	7.71	25.7	6.21	14.8	23.7
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	IS(Mf)16	11:41	Middle	2	2	15.8	7.69	25.8	6.23	15.1	22.7
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	IS(Mf)16	11:41	Bottom	3	1	15.7	7.72	25.9	6.13	17.3	24.2
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	IS(Mf)16	11:41	Bottom	3	2	15.4	7.7	25.8	6.14	17.4	20.9

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Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	IS(Mf)9	11:26	Surface	1	1	15.6	7.8	25.6	6.4	12.5	17.5
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	IS(Mf)9	11:26	Surface	1	2	15.7	7.79	25.7	6.42	12.3	18.5
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	IS(Mf)9	11:26	Middle	2	1						
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	IS(Mf)9	11:26	Middle	2	2						
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	IS(Mf)9	11:26	Bottom	3	1	15.4	7.8	25.8	6.25	14.3	20
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	IS(Mf)9	11:26	Bottom	3	2	15.5	7.82	25.6	6.24	14.7	17.6
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	CS(Mf)3	11:06	Surface	1	1	15.6	7.79	25.5	6.59	12.6	17.6
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	CS(Mf)3	11:06	Surface	1	2	15.7	7.78	25.6	6.56	12.8	15.4
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	CS(Mf)3	11:06	Middle	2	1	15.7	7.8	25.7	6.46	14.3	20
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	CS(Mf)3	11:06	Middle	2	2	15.7	7.8	25.6	6.42	14.7	23.5
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	CS(Mf)3	11:06	Bottom	3	1	15.6	7.79	25.5	6.23	17.4	26.1
TMCLKL	HY/2012/07	20-02-2016	Mid-Ebb	CS(Mf)3	11:06	Bottom	3	2	15.5	7.78	25.6	6.26	17.7	26.6
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	CS(Mf)5	17:34	Surface	1	1	15.6	7.76	25.7	6.97	12.2	15.9
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	CS(Mf)5	17:34	Surface	1	2	15.5	7.79	25.6	6.94	11.7	17.6
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	CS(Mf)5	17:34	Middle	2	1	15.4	7.83	25.9	6.82	10.2	14.3
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	CS(Mf)5	17:34	Middle	2	2	15.3	7.84	25.8	6.85	10.6	15.9
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	CS(Mf)5	17:34	Bottom	3	1	15.2	7.81	26.1	6.62	12.8	20.5
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	CS(Mf)5	17:34	Bottom	3	2	15.3	7.77	26	6.65	13.1	21
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	SR4a	18:01	Surface	1	1	15.5	7.82	25.6	6.82	10.8	15.1
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	SR4a	18:01	Surface	1	2	15.4	7.8	25.6	6.86	9.98	12
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	SR4a	18:01	Middle	2	1						
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	SR4a	18:01	Middle	2	2						
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	SR4a	18:01	Bottom	3	1	15.3	7.76	25.7	6.74	11.2	15.7
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	SR4a	18:01	Bottom	3	2	15.2	7.72	25.6	6.77	11.8	18.9
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	SR4	18:18	Surface	1	1	15.6	7.73	25.6	6.98	10.2	13.3
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	SR4	18:18	Surface	1	2	15.5	7.76	25.7	6.97	10.5	15.8
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	SR4	18:18	Middle	2	1						
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	SR4	18:18	Middle	2	2						
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	SR4	18:18	Bottom	3	1	15.5	7.78	25.8	6.84	11.8	15.3
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	SR4	18:18	Bottom	3	2	15.4	7.83	25.7	6.8	12.3	16
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	IS8	18:36	Surface	1	1	15.4	7.79	25.5	7.03	9.92	13.9
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	IS8	18:36	Surface	1	2	15.5	7.76	25.6	7.06	10.1	13.1
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	IS8	18:36	Middle	2	1						

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Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	IS8	18:36	Middle	2	2						
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	IS8	18:36	Bottom	3	1	15.3	7.84	25.7	6.87	10.6	15.9
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	IS8	18:36	Bottom	3	2	15.2	7.85	25.6	6.89	11.1	14.4
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	IS(Mf)16	18:55	Surface	1	1	15.5	7.81	25.4	6.83	10.3	14.4
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	IS(Mf)16	18:55	Surface	1	2	15.6	7.78	25.5	6.86	10.7	15
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	IS(Mf)16	18:55	Middle	2	1	15.5	7.73	25.6	6.78	11.2	16.8
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	IS(Mf)16	18:55	Middle	2	2	15.5	7.76	25.5	6.75	12.1	16.9
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	IS(Mf)16	18:55	Bottom	3	1	15.3	7.72	25.8	6.64	12.8	17.9
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	IS(Mf)16	18:55	Bottom	3	2	15.2	7.74	25.7	6.61	12.3	14.8
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	IS(Mf)9	19:16	Surface	1	1	15.4	7.72	25.4	7.04	9.86	14.8
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	IS(Mf)9	19:16	Surface	1	2	15.3	7.76	25.5	7.08	9.92	15.9
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	IS(Mf)9	19:16	Middle	2	1						
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	IS(Mf)9	19:16	Middle	2	2						
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	IS(Mf)9	19:16	Bottom	3	1	15.3	7.83	25.7	6.92	10.8	15.1
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	IS(Mf)9	19:16	Bottom	3	2	15.3	7.86	25.6	6.94	11.4	14.8
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	CS(Mf)3	19:39	Surface	1	1	15.5	7.78	25.6	7.11	10.3	13.4
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	CS(Mf)3	19:39	Surface	1	2	15.6	7.72	25.5	7.09	9.93	13.9
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	CS(Mf)3	19:39	Middle	2	1	15.4	7.79	25.8	6.84	11.4	16
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	CS(Mf)3	19:39	Middle	2	2	15.3	7.74	25.7	6.88	10.9	17.4
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	CS(Mf)3	19:39	Bottom	3	1	15.2	7.82	26	6.71	12.6	16.4
TMCLKL	HY/2012/07	23-02-2016	Mid-Flood	CS(Mf)3	19:39	Bottom	3	2	15.1	7.84	25.9	6.67	13	18.2
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	CS(Mf)5	14:47	Surface	1	1	15.8	7.69	25.4	6.85	12.4	17.4
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	CS(Mf)5	14:47	Surface	1	2	15.9	7.73	25.4	6.81	11.6	17.4
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	CS(Mf)5	14:47	Middle	2	1	15.7	7.72	25.6	6.76	13.5	21.6
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	CS(Mf)5	14:47	Middle	2	2	15.7	7.75	25.6	6.73	14.2	21.3
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	CS(Mf)5	14:47	Bottom	3	1	15.7	7.7	25.7	6.54	15.6	23.4
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	CS(Mf)5	14:47	Bottom	3	2	15.6	7.74	25.8	6.5	16.3	21.2
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	SR4a	14:23	Surface	1	1	15.8	7.78	25.2	6.75	12.3	17.2
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	SR4a	14:23	Surface	1	2	15.8	7.81	25.3	6.71	12.9	16.8
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	SR4a	14:23	Middle	2	1						
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	SR4a	14:23	Middle	2	2						
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	SR4a	14:23	Bottom	3	1	15.8	7.74	25.3	6.64	14	18.2
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	SR4a	14:23	Bottom	3	2	15.7	7.77	25.4	6.6	14.8	20.7

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Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	SR4	14:05	Surface	1	1	15.9	7.76	25.2	6.83	11.2	15
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	SR4	14:05	Surface	1	2	15.8	7.79	25.3	6.79	11.8	15
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	SR4	14:05	Middle	2	1						
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	SR4	14:05	Middle	2	2						
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	SR4	14:05	Bottom	3	1	15.8	7.77	25.5	6.68	13.2	20.6
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	SR4	14:05	Bottom	3	2	15.7	7.8	25.4	6.65	14	20.2
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	IS8	13:46	Surface	1	1	15.9	7.7	25.2	6.92	11.4	14
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	IS8	13:46	Surface	1	2	15.9	7.73	25.1	6.89	10.7	13.1
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	IS8	13:46	Middle	2	1						
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	IS8	13:46	Middle	2	2						
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	IS8	13:46	Bottom	3	1	15.8	7.74	25.4	6.79	12.8	17.3
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	IS8	13:46	Bottom	3	2	15.8	7.71	25.4	6.75	13.3	17.6
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	IS(Mf)16	13:22	Surface	1	1	15.9	7.74	25.2	6.84	12.3	18.2
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	IS(Mf)16	13:22	Surface	1	2	15.8	7.77	25.2	6.81	11.6	19.1
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	IS(Mf)16	13:22	Middle	2	1	15.8	7.7	25.3	6.77	10.8	14.6
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	IS(Mf)16	13:22	Middle	2	2	15.8	7.73	25.4	6.73	11.4	15.3
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	IS(Mf)16	13:22	Bottom	3	1	15.7	7.74	25.6	6.63	14.2	18.5
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	IS(Mf)16	13:22	Bottom	3	2	15.6	7.76	25.6	6.6	14.9	19.6
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	IS(Mf)9	13:03	Surface	1	1	15.8	7.76	25.2	6.87	10.7	17.1
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	IS(Mf)9	13:03	Surface	1	2	15.8	7.8	25.3	6.83	10	13.9
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	IS(Mf)9	13:03	Middle	2	1						
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	IS(Mf)9	13:03	Middle	2	2						
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	IS(Mf)9	13:03	Bottom	3	1	15.7	7.75	25.5	6.71	13.7	16.6
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	IS(Mf)9	13:03	Bottom	3	2	15.7	7.78	25.4	6.74	14.4	17.3
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	CS(Mf)3	12:40	Surface	1	1	15.8	7.81	25.2	6.93	11.7	16
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	CS(Mf)3	12:40	Surface	1	2	15.9	7.84	25.1	6.9	10.9	16.2
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	CS(Mf)3	12:40	Middle	2	1	15.7	7.79	25.5	6.78	13.3	15.1
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	CS(Mf)3	12:40	Middle	2	2	15.6	7.82	25.6	6.75	12.6	17.1
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	CS(Mf)3	12:40	Bottom	3	1	15.6	7.77	25.8	6.55	15.2	21.3
TMCLKL	HY/2012/07	23-02-2016	Mid-Ebb	CS(Mf)3	12:40	Bottom	3	2	15.5	7.74	25.9	6.52	15.9	20.9
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	CS(Mf)5	8:30	Surface	1	1	15.7	7.82	24.9	6.76	11.4	14.8
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	CS(Mf)5	8:30	Surface	1	2	15.6	7.81	25	6.78	11.2	16.8
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	CS(Mf)5	8:30	Middle	2	1	15.8	7.84	25.7	6.6	12.2	14.6

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Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	CS(Mf)5	8:30	Middle	2	2	15.9	7.85	25.8	6.64	12.3	18.5
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	CS(Mf)5	8:30	Bottom	3	1	15.9	7.79	25.8	6.44	13.4	21.4
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	CS(Mf)5	8:30	Bottom	3	2	16	7.8	25.9	6.47	13.2	18.5
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	SR4a	8:50	Surface	1	1	15.7	7.83	25	6.49	11.9	14.3
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	SR4a	8:50	Surface	1	2	15.7	7.84	25.1	6.46	11.6	15.1
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	SR4a	8:50	Middle	2	1						
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	SR4a	8:50	Middle	2	2						
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	SR4a	8:50	Bottom	3	1	15.8	7.84	25.3	6.31	12.4	14.9
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	SR4a	8:50	Bottom	3	2	15.8	7.84	25.3	6.35	12.2	18.3
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	SR4	9:10	Surface	1	1	15.8	7.78	25	6.56	12.3	18.5
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	SR4	9:10	Surface	1	2	15.7	7.77	25.1	6.59	12.3	18.5
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	SR4	9:10	Middle	2	1						
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	SR4	9:10	Middle	2	2						
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	SR4	9:10	Bottom	3	1	15.9	7.82	25.6	6.29	12.8	17.9
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	SR4	9:10	Bottom	3	2	15.8	7.8	25.5	6.25	12.5	18.8
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	IS8	9:25	Surface	1	1	15.8	7.79	25.1	6.61	11.7	16.4
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	IS8	9:25	Surface	1	2	15.8	7.8	25.1	6.58	11.8	15.3
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	IS8	9:25	Middle	2	1						
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	IS8	9:25	Middle	2	2						
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	IS8	9:25	Bottom	3	1	15.8	7.84	25.4	6.23	12.6	16.4
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	IS8	9:25	Bottom	3	2	15.9	7.85	25.4	6.27	12.4	18.6
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	IS(Mf)16	9:40	Surface	1	1	15.7	7.77	25.3	6.74	12.1	19.4
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	IS(Mf)16	9:40	Surface	1	2	15.8	7.78	25.2	6.7	12	18
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	IS(Mf)16	9:40	Middle	2	1	15.9	7.84	25.8	6.42	13.4	20.1
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	IS(Mf)16	9:40	Middle	2	2	15.9	7.84	25.7	6.39	13.3	18.6
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	IS(Mf)16	9:40	Bottom	3	1	16	7.86	25.9	6.33	13.3	19
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	IS(Mf)16	9:40	Bottom	3	2	16	7.85	25.9	6.36	13.3	16.9
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	IS(Mf)9	10:00	Surface	1	1	15.8	7.82	25	6.57	11.2	13.4
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	IS(Mf)9	10:00	Surface	1	2	15.8	7.82	25	6.54	11.4	14.8
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	IS(Mf)9	10:00	Middle	2	1						
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	IS(Mf)9	10:00	Middle	2	2						
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	IS(Mf)9	10:00	Bottom	3	1	15.9	7.8	25.2	6.28	12.4	16.1
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	IS(Mf)9	10:00	Bottom	3	2	15.8	7.81	25.3	6.25	12.3	18.5

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Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	CS(Mf)3	10:15	Surface	1	1	15.8	7.85	25.5	6.79	12.3	18.5
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	CS(Mf)3	10:15	Surface	1	2	15.7	7.84	25.4	6.76	12.1	16.9
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	CS(Mf)3	10:15	Middle	2	1	15.9	7.86	25.8	6.54	12.8	15.4
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	CS(Mf)3	10:15	Middle	2	2	16	7.86	25.9	6.57	12.5	16.3
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	CS(Mf)3	10:15	Bottom	3	1	16	7.85	25.9	6.21	13.1	19.7
TMCLKL	HY/2012/07	25-02-2016	Mid-Flood	CS(Mf)3	10:15	Bottom	3	2	16	7.87	25.9	6.18	13.2	21.1
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	CS(Mf)5	14:42	Surface	1	1	15.5	7.86	24.6	6.59	11.8	17.7
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	CS(Mf)5	14:42	Surface	1	2	15.4	7.89	24.7	6.57	12.3	18.5
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	CS(Mf)5	14:42	Middle	2	1	15.4	7.83	24.9	6.52	13.8	17.9
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	CS(Mf)5	14:42	Middle	2	2	15.3	7.8	24.8	6.5	13.4	21.4
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	CS(Mf)5	14:42	Bottom	3	1	15.6	7.74	25.3	6.42	13.7	17.8
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	CS(Mf)5	14:42	Bottom	3	2	15.5	7.76	25.2	6.38	14.6	19
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	SR4a	14:18	Surface	1	1	15.6	7.85	24.8	6.37	11.3	17
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	SR4a	14:18	Surface	1	2	15.5	7.87	24.7	6.4	11.8	17.7
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	SR4a	14:18	Middle	2	1						
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	SR4a	14:18	Middle	2	2						
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	SR4a	14:18	Bottom	3	1	15.5	7.82	24.9	6.25	12.9	16.8
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	SR4a	14:18	Bottom	3	2	15.4	7.81	24.8	6.23	12.3	17.2
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	SR4	14:01	Surface	1	1	15.6	7.73	24.7	6.43	11.2	15.7
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	SR4	14:01	Surface	1	2	15.5	7.76	24.8	6.46	11.5	15
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	SR4	14:01	Middle	2	1						
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	SR4	14:01	Middle	2	2						
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	SR4	14:01	Bottom	3	1	15.7	7.71	25	6.32	13.9	19.5
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	SR4	14:01	Bottom	3	2	15.6	7.7	24.9	6.34	13.4	21.4
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	IS8	13:46	Surface	1	1	15.5	7.79	24.6	6.51	11.3	14.7
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	IS8	13:46	Surface	1	2	15.4	7.83	24.7	6.54	11.5	17.3
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	IS8	13:46	Middle	2	1						
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	IS8	13:46	Middle	2	2						
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	IS8	13:46	Bottom	3	1	15.4	7.73	24.9	6.36	13.1	19.7
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	IS8	13:46	Bottom	3	2	15.3	7.75	24.8	6.38	12.7	19.1
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	IS(Mf)16	13:26	Surface	1	1	15.5	7.74	24.8	6.62	9.34	14
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	IS(Mf)16	13:26	Surface	1	2	15.6	7.79	24.7	6.65	9.46	14.2
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	IS(Mf)16	13:26	Middle	2	1	15.4	7.86	25	6.53	12.7	15.2

Appendix J-1

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	IS(Mf)16	13:26	Middle	2	2	15.5	7.82	25.1	6.5	12.1	18.2
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	IS(Mf)16	13:26	Bottom	3	1	15.7	7.83	25.4	6.47	14.3	22.9
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	IS(Mf)16	13:26	Bottom	3	2	15.8	7.86	25.3	6.43	13.8	17.9
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	IS(Mf)9	13:09	Surface	1	1	15.4	7.87	24.8	6.42	13	18.2
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	IS(Mf)9	13:09	Surface	1	2	15.5	7.83	24.7	6.44	13.6	17.7
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	IS(Mf)9	13:09	Middle	2	1						
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	IS(Mf)9	13:09	Middle	2	2						
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	IS(Mf)9	13:09	Bottom	3	1	15.6	7.76	24.9	6.35	14.1	22.6
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	IS(Mf)9	13:09	Bottom	3	2	15.5	7.79	24.9	6.39	13.7	20.6
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	CS(Mf)3	12:44	Surface	1	1	15.7	7.87	24.9	6.68	13.4	18.8
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	CS(Mf)3	12:44	Surface	1	2	15.6	7.83	24.8	6.65	12.7	19.1
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	CS(Mf)3	12:44	Middle	2	1	15.8	7.81	25.1	6.52	13.9	19.5
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	CS(Mf)3	12:44	Middle	2	2	15.7	7.84	25	6.55	13.2	21.1
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	CS(Mf)3	12:44	Bottom	3	1	15.5	7.79	25.2	6.39	15.2	24.3
TMCLKL	HY/2012/07	25-02-2016	Mid-Ebb	CS(Mf)3	12:44	Bottom	3	2	15.4	7.75	25.3	6.37	14.6	21.9
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	CS(Mf)5	8:49	Surface	1	1	15.2	7.56	25.9	7.04	14.2	19.9
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	CS(Mf)5	8:49	Surface	1	2	15.3	7.58	26	7.01	15.1	22.7
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	CS(Mf)5	8:49	Middle	2	1	15.5	7.53	26.2	6.88	12.3	17.2
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	CS(Mf)5	8:49	Middle	2	2	15.4	7.55	26.3	6.84	12.9	19.4
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	CS(Mf)5	8:49	Bottom	3	1	15.5	7.54	26.5	6.66	16.4	24.6
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	CS(Mf)5	8:49	Bottom	3	2	15.6	7.59	26.7	6.62	17.2	22.4
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	SR4a	9:15	Surface	1	1	15.2	7.63	26	6.87	15.5	20.2
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	SR4a	9:15	Surface	1	2	15.2	7.66	26	6.84	16.3	24.5
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	SR4a	9:15	Middle	2	1						
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	SR4a	9:15	Middle	2	2						
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	SR4a	9:15	Bottom	3	1	15.2	7.6	26	6.73	13.4	20.1
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	SR4a	9:15	Bottom	3	2	15.3	7.64	26.1	6.7	14.2	18.5
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	SR4	9:33	Surface	1	1	15.2	7.68	26.1	6.82	13.4	18.8
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	SR4	9:33	Surface	1	2	15.3	7.64	26	6.79	14.1	21.2
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	SR4	9:33	Middle	2	1						
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	SR4	9:33	Middle	2	2						
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	SR4	9:33	Bottom	3	1	15.3	7.62	26.1	6.68	14.8	23.7
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	SR4	9:33	Bottom	3	2	15.3	7.66	26.1	6.65	15.6	23.4

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Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	IS8	9:51	Surface	1	1	15.3	7.62	26.1	6.91	12.6	17.6
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	IS8	9:51	Surface	1	2	15.3	7.66	26.1	6.89	13.3	18.6
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	IS8	9:51	Middle	2	1						
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	IS8	9:51	Middle	2	2						
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	IS8	9:51	Bottom	3	1	15.3	7.68	26.1	6.74	14.2	17
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	IS8	9:51	Bottom	3	2	15.4	7.65	26.2	6.7	15.1	1.1
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	IS(Mf)16	10:09	Surface	1	1	15.2	7.68	26.1	6.76	13.7	19.2
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	IS(Mf)16	10:09	Surface	1	2	15.2	7.73	26.2	6.72	14.6	20.4
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	IS(Mf)16	10:09	Middle	2	1	15.3	7.76	26.3	6.65	11.8	16.5
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	IS(Mf)16	10:09	Middle	2	2	15.3	7.72	26.3	6.61	12.4	18.6
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	IS(Mf)16	10:09	Bottom	3	1	15.4	7.64	26.5	6.45	16.2	21.1
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	IS(Mf)16	10:09	Bottom	3	2	15.5	7.71	26.5	6.42	15.6	25
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	IS(Mf)9	10:33	Surface	1	1	15.3	7.74	26.1	6.78	14.4	17.3
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	IS(Mf)9	10:33	Surface	1	2	15.4	7.77	26.1	6.81	15.3	19.9
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	IS(Mf)9	10:33	Middle	2	1						
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	IS(Mf)9	10:33	Middle	2	2						
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	IS(Mf)9	10:33	Bottom	3	1	15.4	7.7	26.3	6.64	16.6	24.9
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	IS(Mf)9	10:33	Bottom	3	2	15.5	7.73	26.3	6.6	17.1	27.4
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	CS(Mf)3	10:53	Surface	1	1	15.4	7.57	26	6.98	15.8	22.1
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	CS(Mf)3	10:53	Surface	1	2	15.4	7.61	26.1	6.95	16.6	23.2
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	CS(Mf)3	10:53	Middle	2	1	15.4	7.58	26.3	6.8	14	19.6
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	CS(Mf)3	10:53	Middle	2	2	15.5	7.63	26.3	6.77	14.9	19.4
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	CS(Mf)3	10:53	Bottom	3	1	15.6	7.6	26.5	6.58	17.2	22.4
TMCLKL	HY/2012/07	27-02-2016	Mid-Flood	CS(Mf)3	10:53	Bottom	3	2	15.6	7.66	26.4	6.54	17.9	25.1
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	CS(Mf)5	16:04	Surface	1	1	15.3	7.62	26	6.95	14.8	19.2
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	CS(Mf)5	16:04	Surface	1	2	15.4	7.64	26.1	6.92	15.7	22
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	CS(Mf)5	16:04	Middle	2	1	15.5	7.59	26.3	6.79	12.9	18.1
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	CS(Mf)5	16:04	Middle	2	2	15.6	7.61	26.4	6.75	13.5	18.9
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	CS(Mf)5	16:04	Bottom	3	1	15.7	7.6	26.6	6.57	17	23.8
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	CS(Mf)5	16:04	Bottom	3	2	15.7	7.65	26.7	6.53	17.8	24.9
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	SR4a	15:40	Surface	1	1	15.2	7.69	26	6.78	16.3	21.2
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	SR4a	15:40	Surface	1	2	15.3	7.72	26.1	6.75	16.9	23.7
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	SR4a	15:40	Middle	2	1						

Appendix J-1

Project	Works	Date (yyyy-mm-dd)	Tide	Stat	Start Time	Level	Lev_Cod	Replicate	Temp_v	pH_v	Sal_v	DO_v	Turb_v	SS_v
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	SR4a	15:40	Middle	2	2						
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	SR4a	15:40	Bottom	3	1	15.3	7.66	26.1	6.64	14	18.2
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	SR4a	15:40	Bottom	3	2	15.4	7.7	26.2	6.61	14.8	20.7
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	SR4	15:18	Surface	1	1	15.3	7.74	26.1	6.73	14	16.8
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	SR4	15:18	Surface	1	2	15.4	7.7	26.2	6.7	14.7	19.1
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	SR4	15:18	Middle	2	1						
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	SR4	15:18	Middle	2	2						
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	SR4	15:18	Bottom	3	1	15.4	7.68	26.2	6.59	15.7	23.6
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	SR4	15:18	Bottom	3	2	15.5	7.72	26.3	6.56	16.2	21.1
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	IS8	14:56	Surface	1	1	15.4	7.68	26.1	6.82	13.2	18.5
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	IS8	14:56	Surface	1	2	15.3	7.72	26.2	6.8	13.9	16.7
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	IS8	14:56	Middle	2	1						
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	IS8	14:56	Middle	2	2						
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	IS8	14:56	Bottom	3	1	15.4	7.74	26.2	6.65	14.8	23.7
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	IS8	14:56	Bottom	3	2	15.4	7.71	26.1	6.6	15.7	23.6
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	IS(Mf)16	14:34	Surface	1	1	15.3	7.74	26.2	6.67	14.3	20
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	IS(Mf)16	14:34	Surface	1	2	15.2	7.79	26.3	6.63	15.2	18.2
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	IS(Mf)16	14:34	Middle	2	1	15.3	7.82	26.4	6.56	12.4	18.6
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	IS(Mf)16	14:34	Middle	2	2	15.4	7.78	26.3	6.52	13	19.5
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	IS(Mf)16	14:34	Bottom	3	1	15.5	7.7	26.4	6.36	16.8	23.5
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	IS(Mf)16	14:34	Bottom	3	2	15.4	7.77	26.5	6.33	16.2	19.4
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	IS(Mf)9	14:12	Surface	1	1	15.4	7.8	26.1	6.69	15	18
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	IS(Mf)9	14:12	Surface	1	2	15.5	7.83	26.2	6.72	15.9	19.1
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	IS(Mf)9	14:12	Middle	2	1						
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	IS(Mf)9	14:12	Middle	2	2						
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	IS(Mf)9	14:12	Bottom	3	1	15.5	7.76	26.3	6.55	17.2	20.6
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	IS(Mf)9	14:12	Bottom	3	2	15.6	7.79	26.4	6.51	17.7	23
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	CS(Mf)3	13:50	Surface	1	1	15.4	7.63	26.1	6.89	16.4	23
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	CS(Mf)3	13:50	Surface	1	2	15.5	7.67	26.2	6.86	17.2	25.8
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	CS(Mf)3	13:50	Middle	2	1	15.5	7.64	26.3	6.71	14.6	21.9
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	CS(Mf)3	13:50	Middle	2	2	15.6	7.69	26.4	6.68	15.5	20.2
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	CS(Mf)3	13:50	Bottom	3	1	15.6	7.66	26.5	6.49	17.8	2.9
TMCLKL	HY/2012/07	27-02-2016	Mid-Ebb	CS(Mf)3	13:50	Bottom	3	2	15.7	7.72	26.6	6.45	18.5	27.8

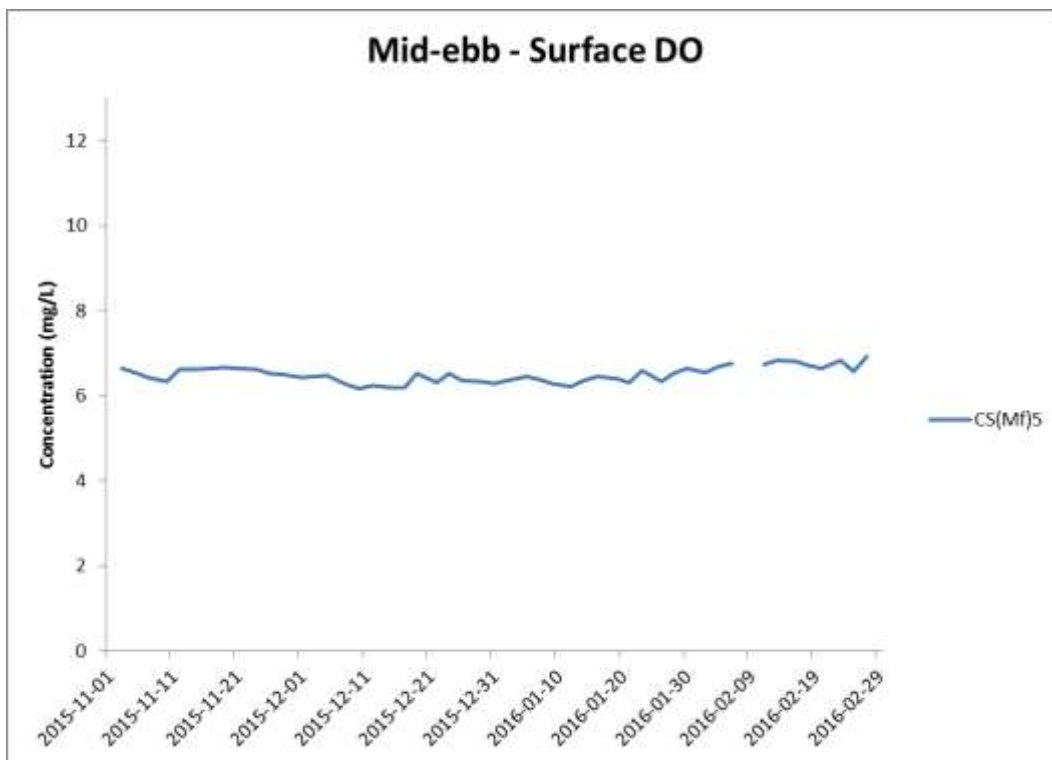
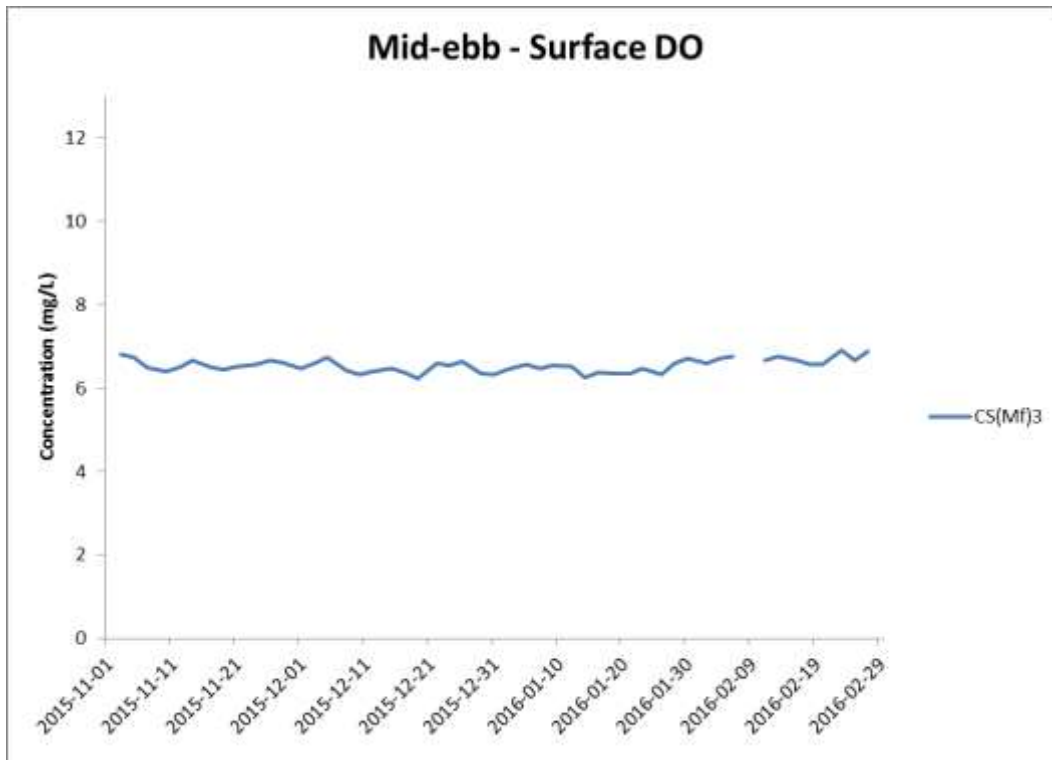


Figure J1 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-ebb tide between 1 November 2015 and 29 February 2016 at CS(Mf)3 and CS(Mf)5.

WQM was cancelled on 9 February 2016 due to suspension of marine works. (Weather condition varied between sunny to rainy within the reporting period.) 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.

**Environmental
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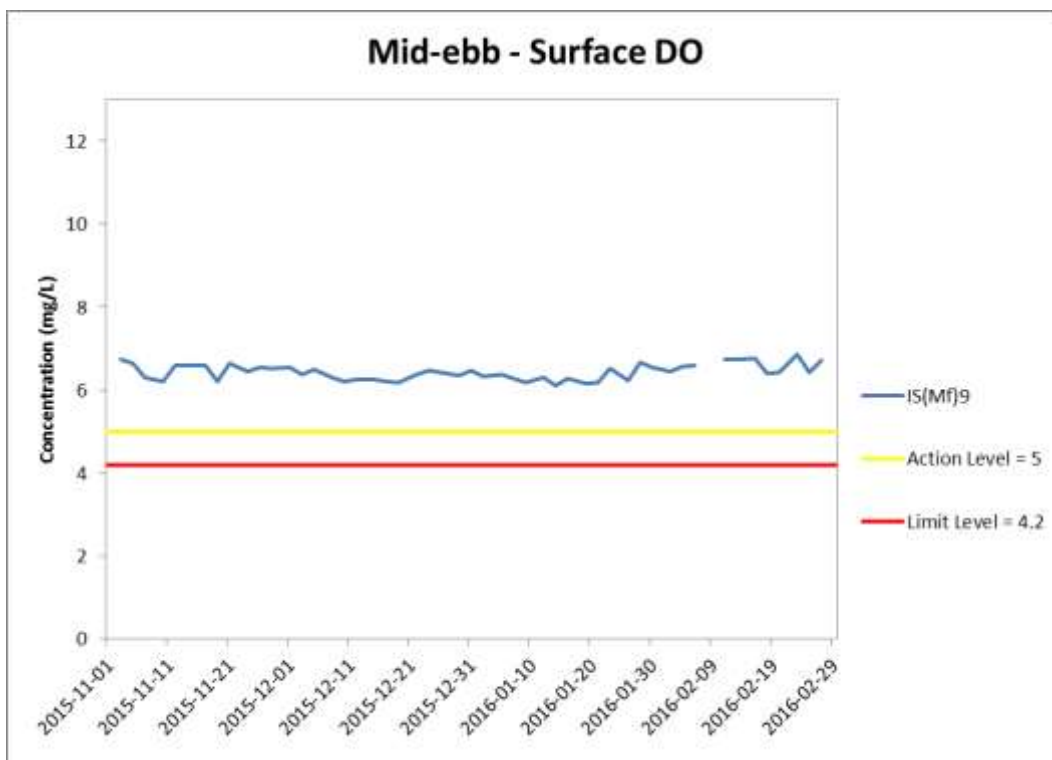
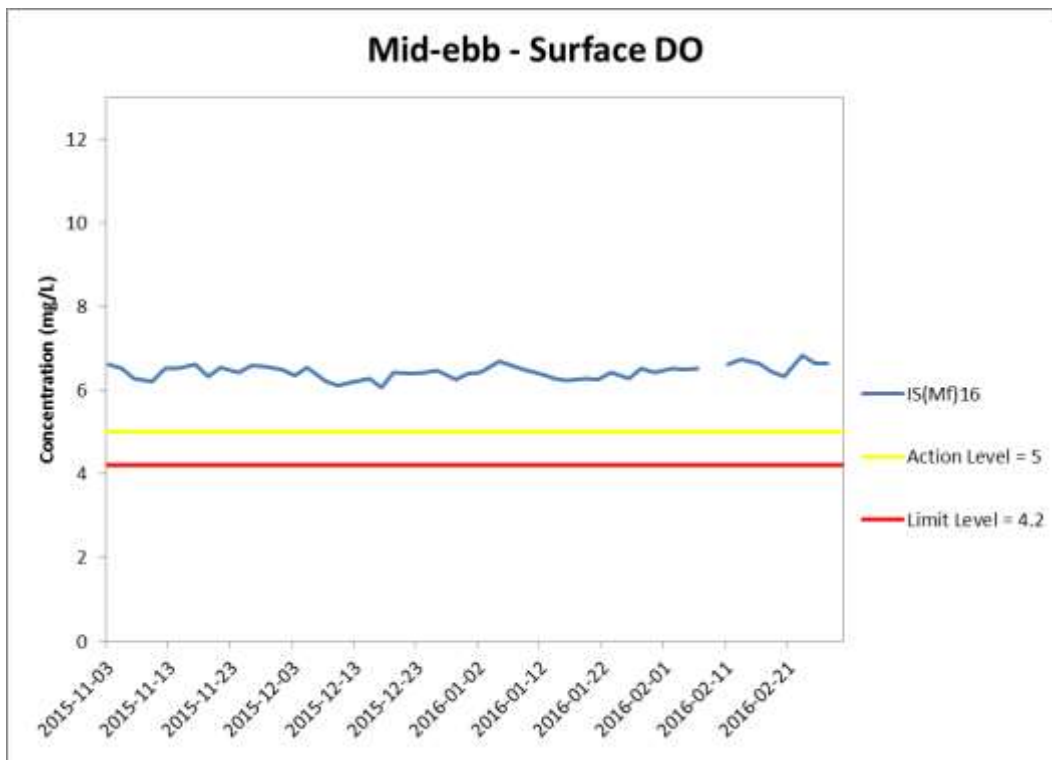


Figure J2 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-ebb tide between 1 November 2015 and 29 February 2016 at IS(Mf)16 and IS(Mf)9.

WQM was cancelled on 9 February 2016 due to suspension of marine works. (Weather condition varied between sunny to rainy within the reporting period.) 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.

**Environmental
Resources
Management**



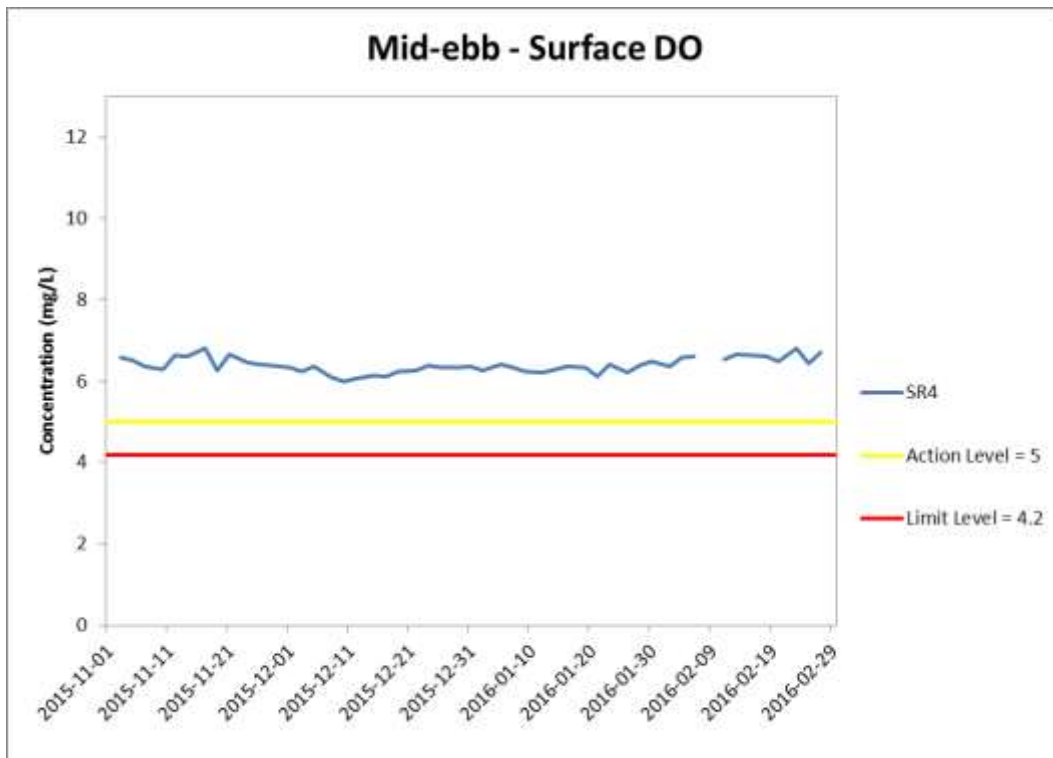
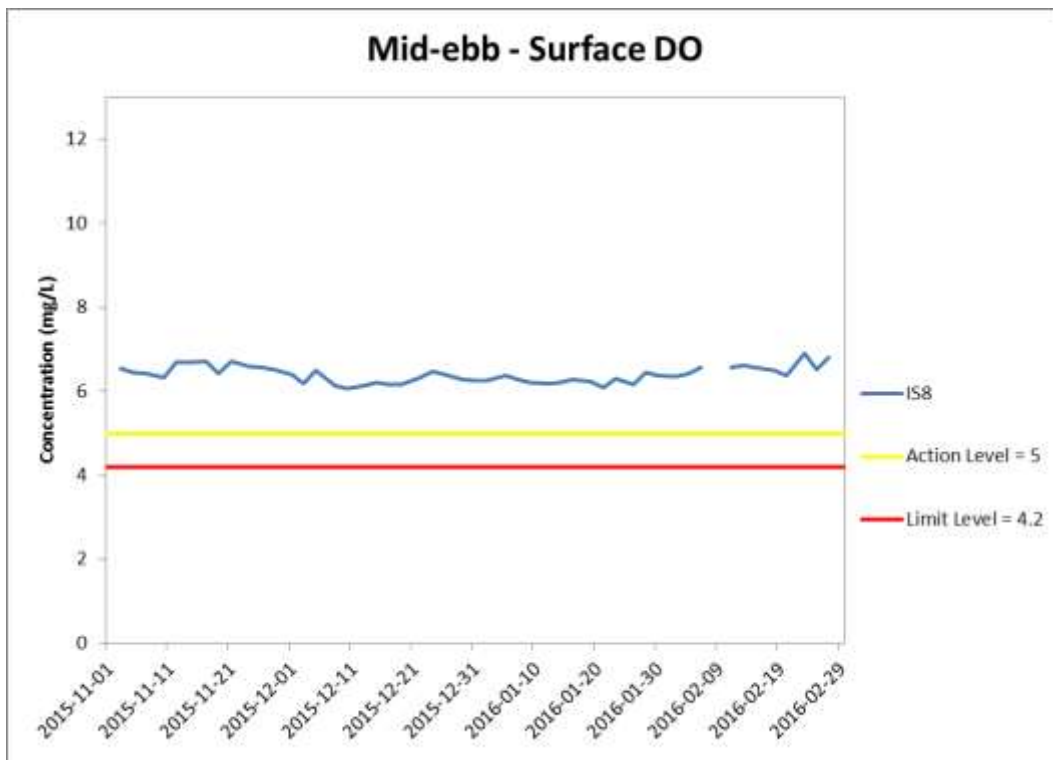


Figure J3 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-ebb tide between 1 November 2015 and 29 February 2016 at IS8 and SR4.

WQM was cancelled on 9 February 2016 due to suspension of marine works. (Weather condition varied between sunny to rainy within the reporting period.) 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.

**Environmental
Resources
Management**



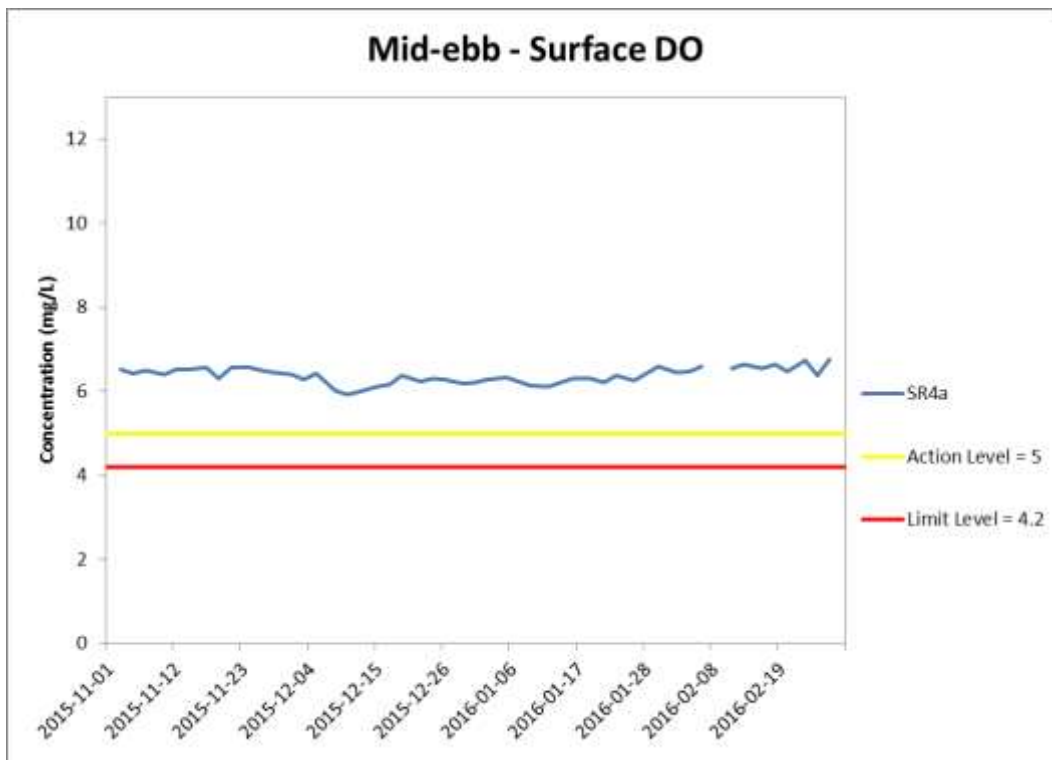


Figure J4 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-ebb tide between 1 November 2015 and 29 February 2016 at SR4a.

WQM was cancelled on 9 February 2016 due to suspension of marine works. (Weather condition varied between sunny to rainy within the reporting period.) 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.

**Environmental
Resources
Management**



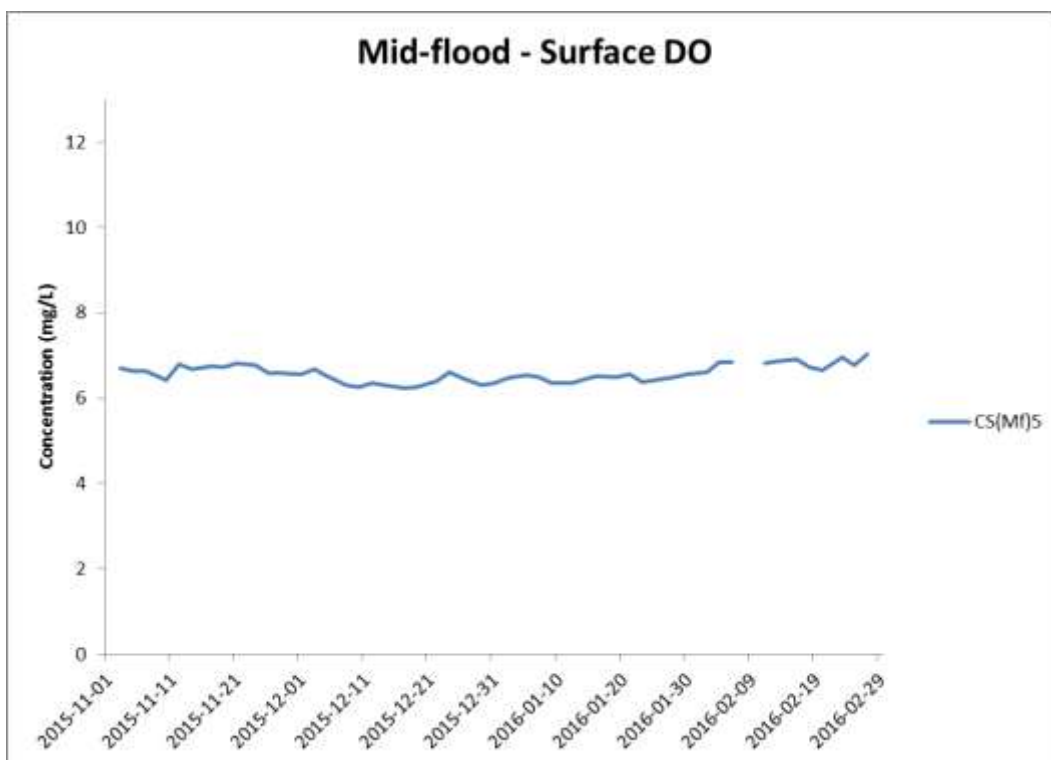
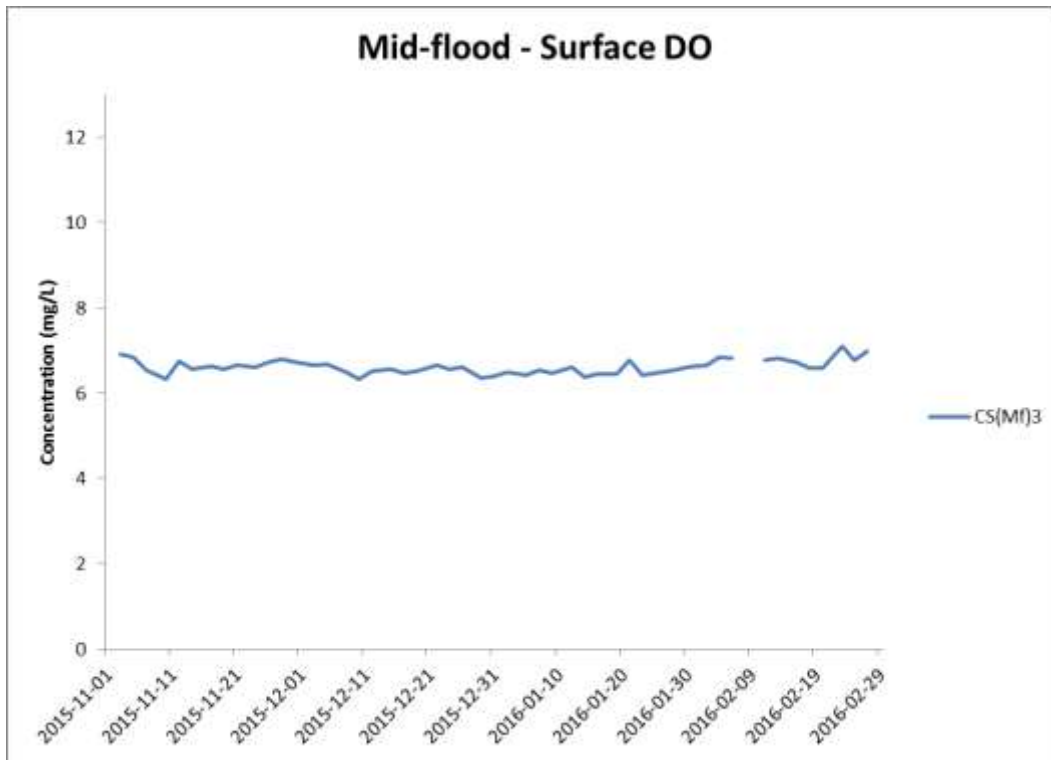


Figure J5 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-flood tide between 1 November 2015 and 29 February 2016 at CS(Mf)3 and CS(Mf)5.

WQM was cancelled on 9 February 2016 due to suspension of marine works. (Weather condition varied between sunny to rainy within the reporting period.) 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.

Environmental Resources Management



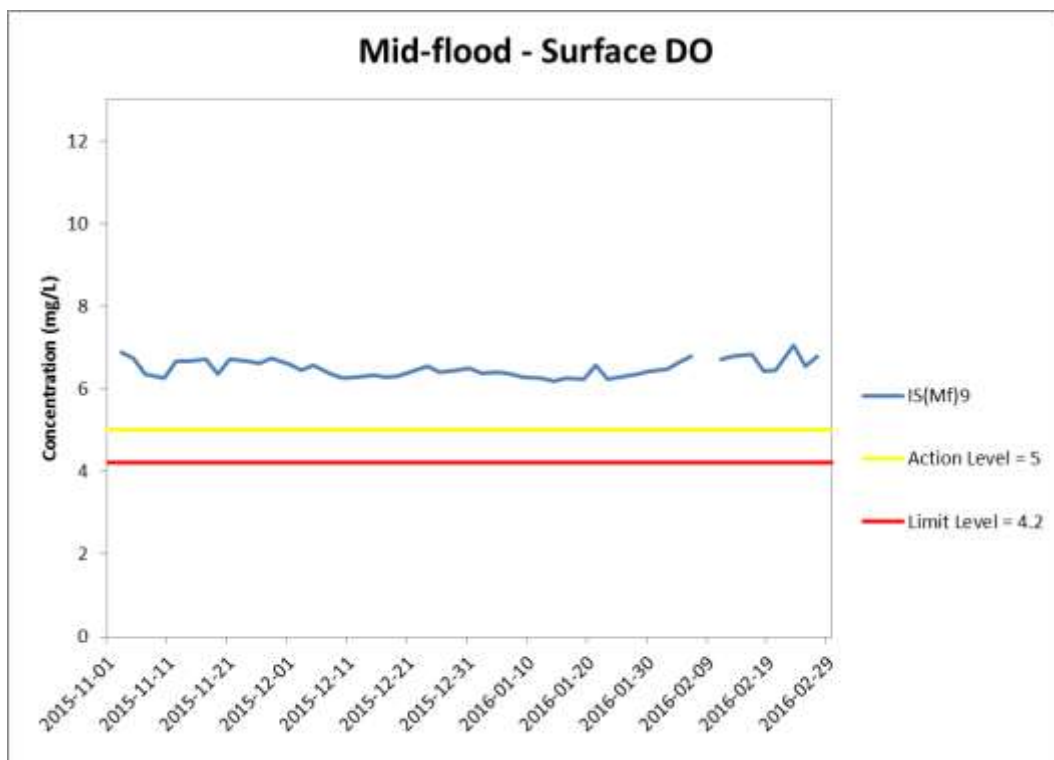
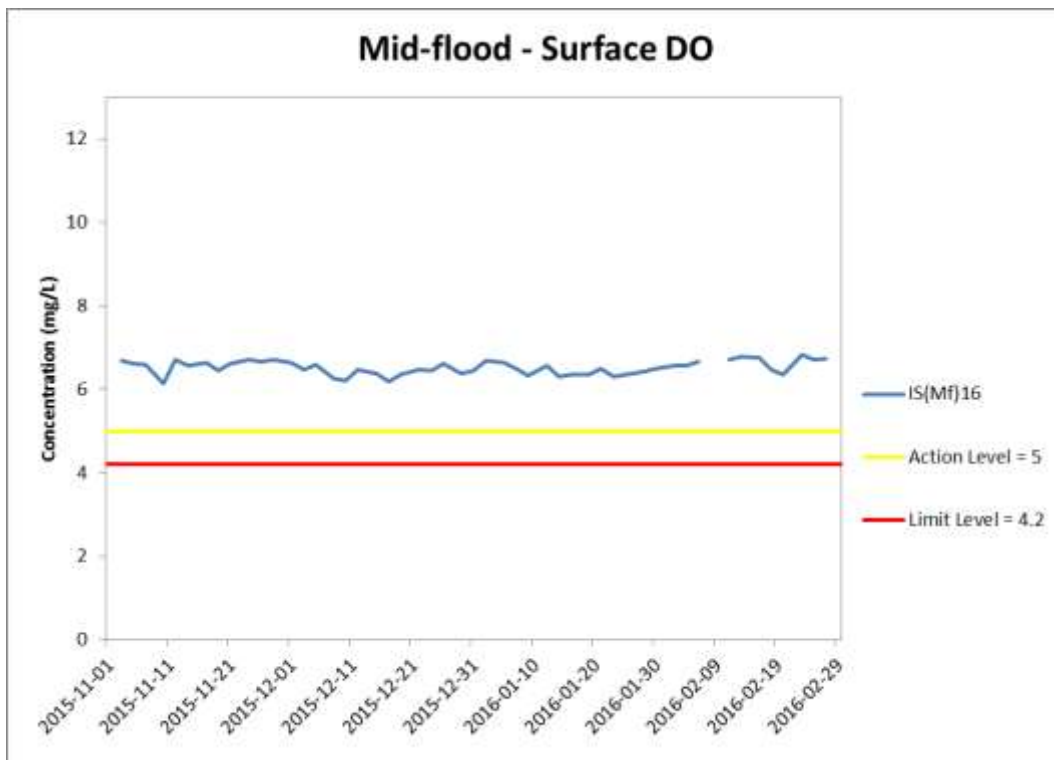


Figure J6 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-flood tide between 1 November 2015 and 29 February 2016 at IS(Mf)16 and IS(Mf)9.

WQM was cancelled on 9 February 2016 due to suspension of marine works. (Weather condition varied between sunny to rainy within the reporting period.) 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.

**Environmental
Resources
Management**



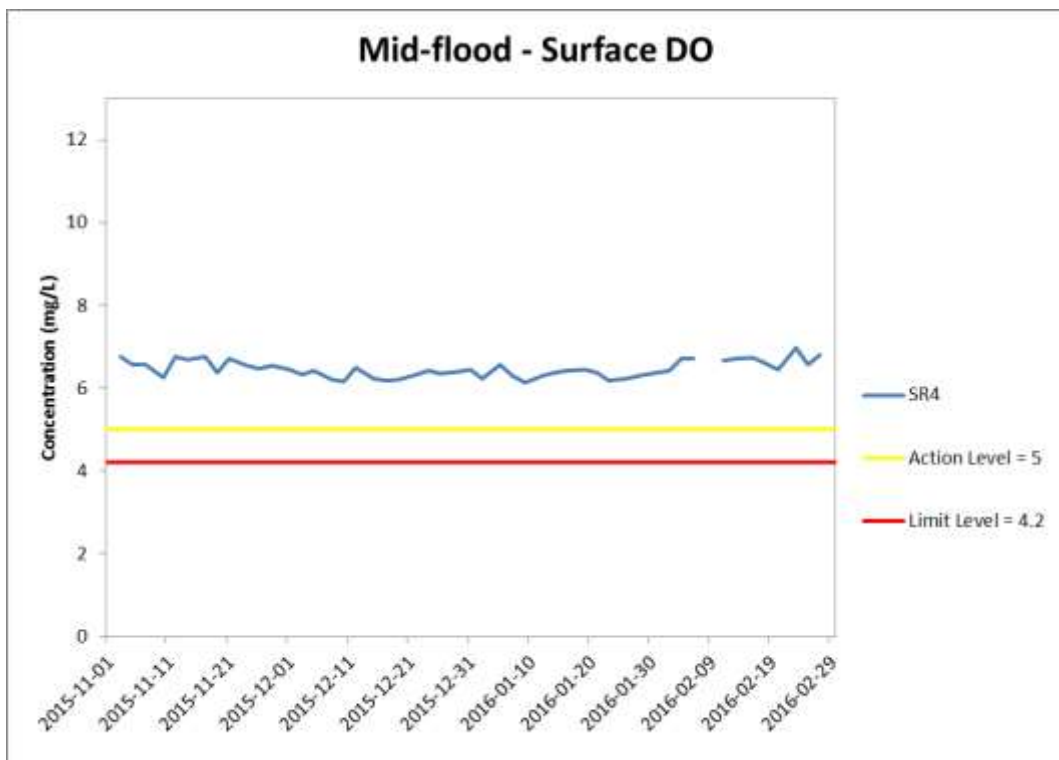
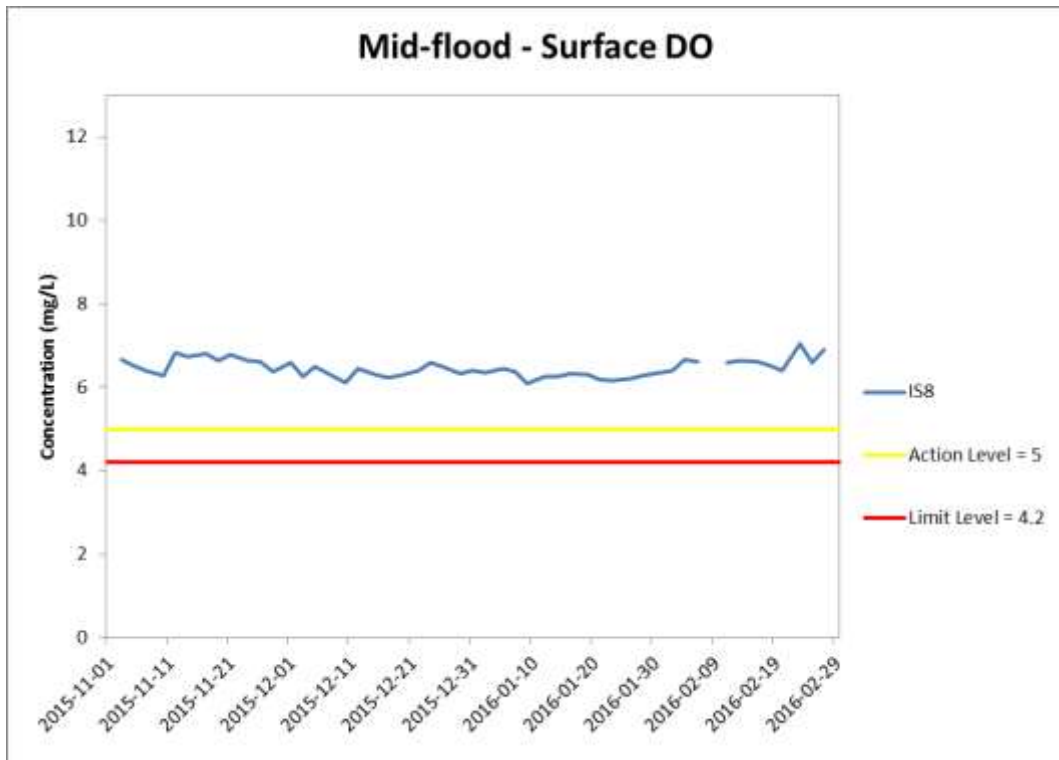


Figure J7 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-flood tide between 1 November 2015 and 29 February 2016 at IS8 and SR4.

WQM was cancelled on 9 February 2016 due to suspension of marine works. (Weather condition varied between sunny to rainy within the reporting period.) 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.

**Environmental
Resources
Management**



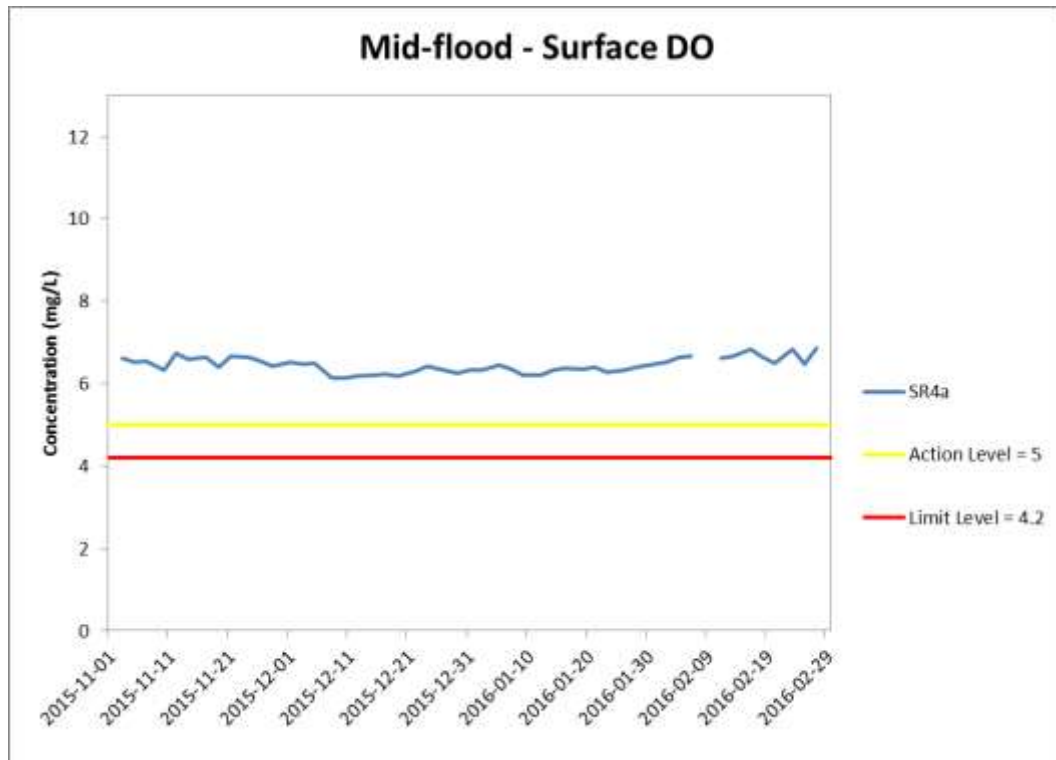


Figure J8 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-flood tide between 1 November 2015 and 29 February 2016 at SR4a.

WQM was cancelled on 9 February 2016 due to suspension of marine works. (Weather condition varied between sunny to rainy within the reporting period.) 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.

**Environmental
Resources
Management**



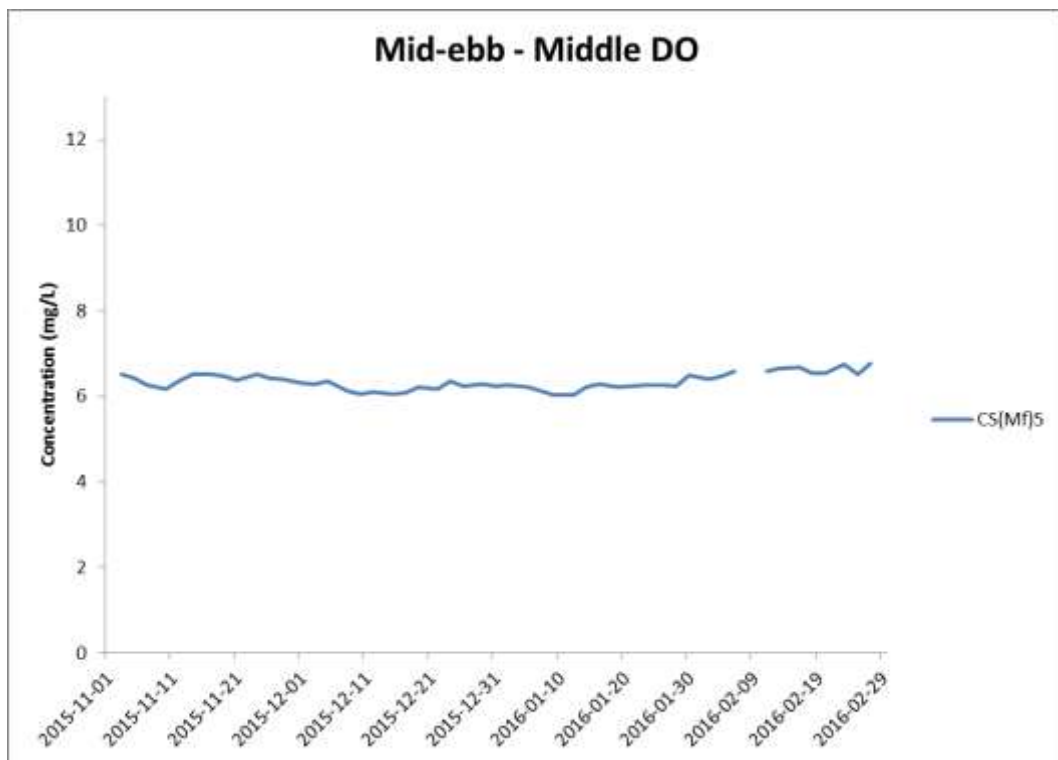
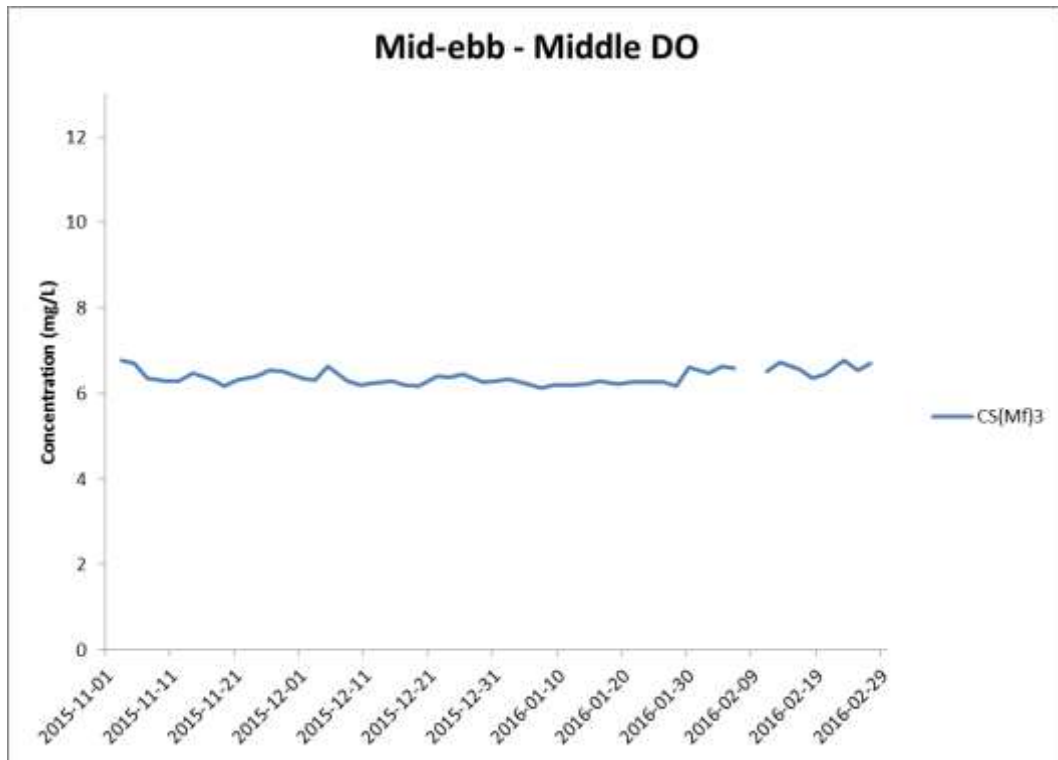


Figure J9 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters during mid-ebb tide between 1 November 2015 and 29 February 2016 at CS(Mf)3 and CS(Mf)5.

WQM was cancelled on 9 February 2016 due to suspension of marine works. (Weather condition varied between sunny to rainy within the reporting period.) 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.

**Environmental
Resources
Management**



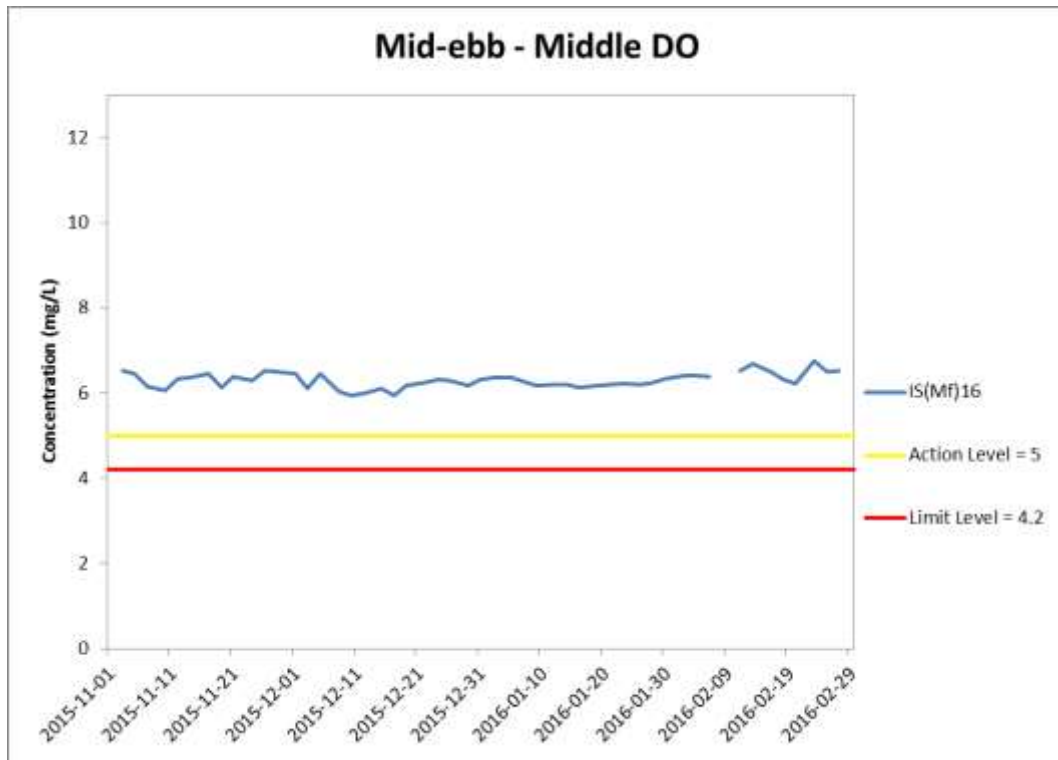


Figure J10 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters during mid-ebb tide between 1 November 2015 and 29 February 2016 at IS(Mf)16.

WQM was cancelled on 9 February 2016 due to suspension of marine works. (Weather condition varied between sunny to rainy within the reporting period.) 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.

**Environmental
Resources
Management**



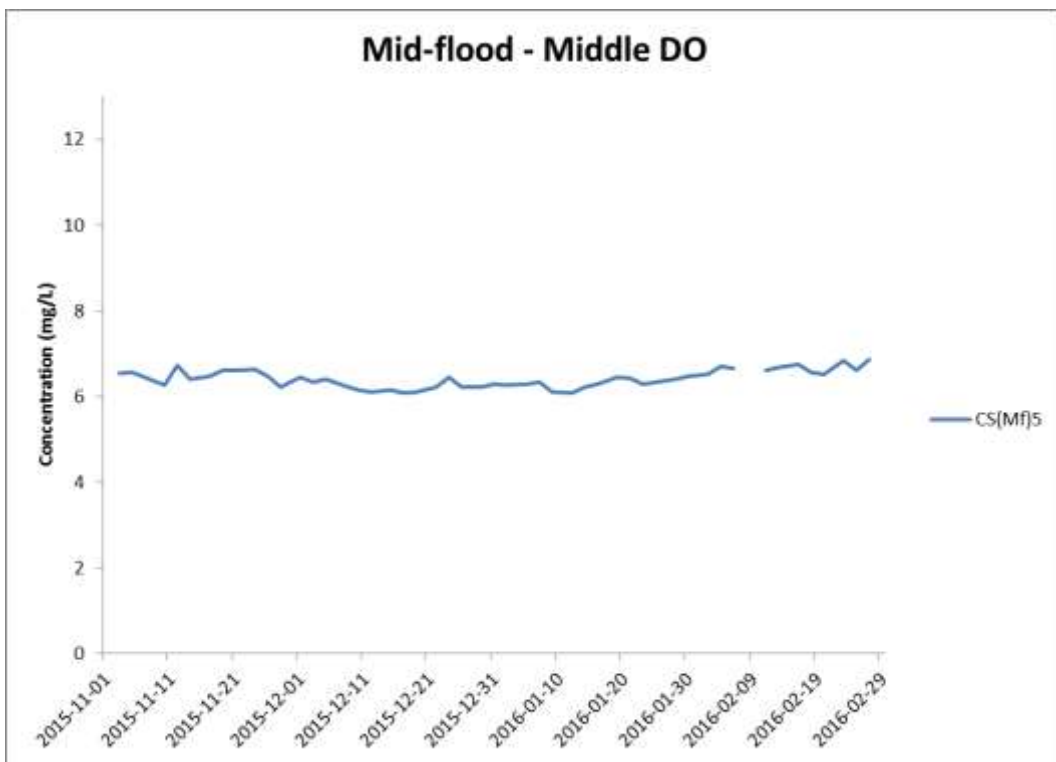
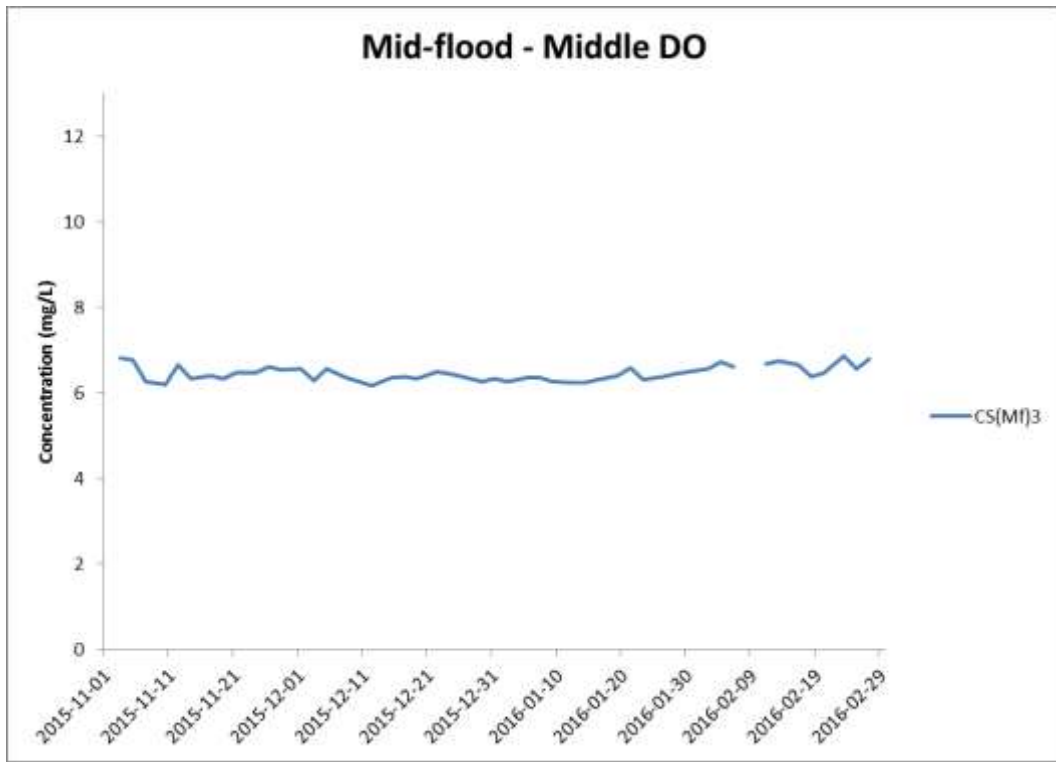


Figure J11 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters during mid-flood tide between 1 November 2015 and 29 February 2016 at CS(Mf)3 and CS(Mf)5.

WQM was cancelled on 9 February 2016 due to suspension of marine works. (Weather condition varied between sunny to rainy within the reporting period.) 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.

**Environmental
Resources
Management**



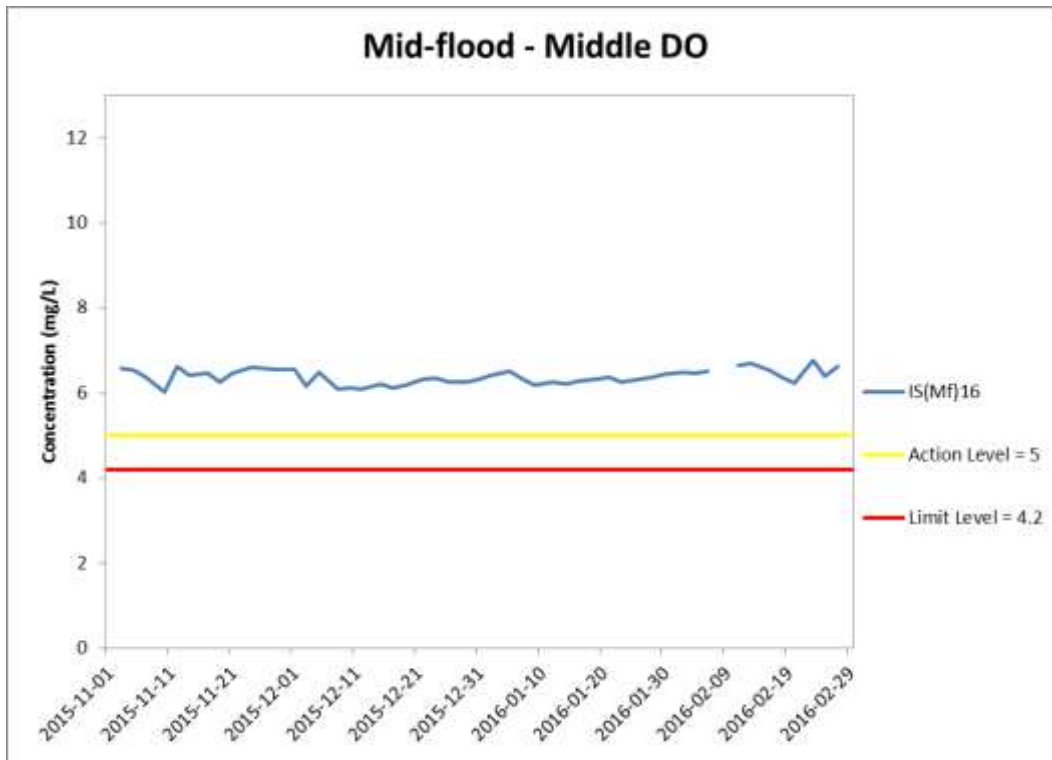


Figure J12 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters during mid-flood tide between 1 November 2015 and 29 February 2016 at IS(Mf)16.

WQM was cancelled on 9 February 2016 due to suspension of marine works. (Weather condition varied between sunny to rainy within the reporting period.) 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.

**Environmental
Resources
Management**



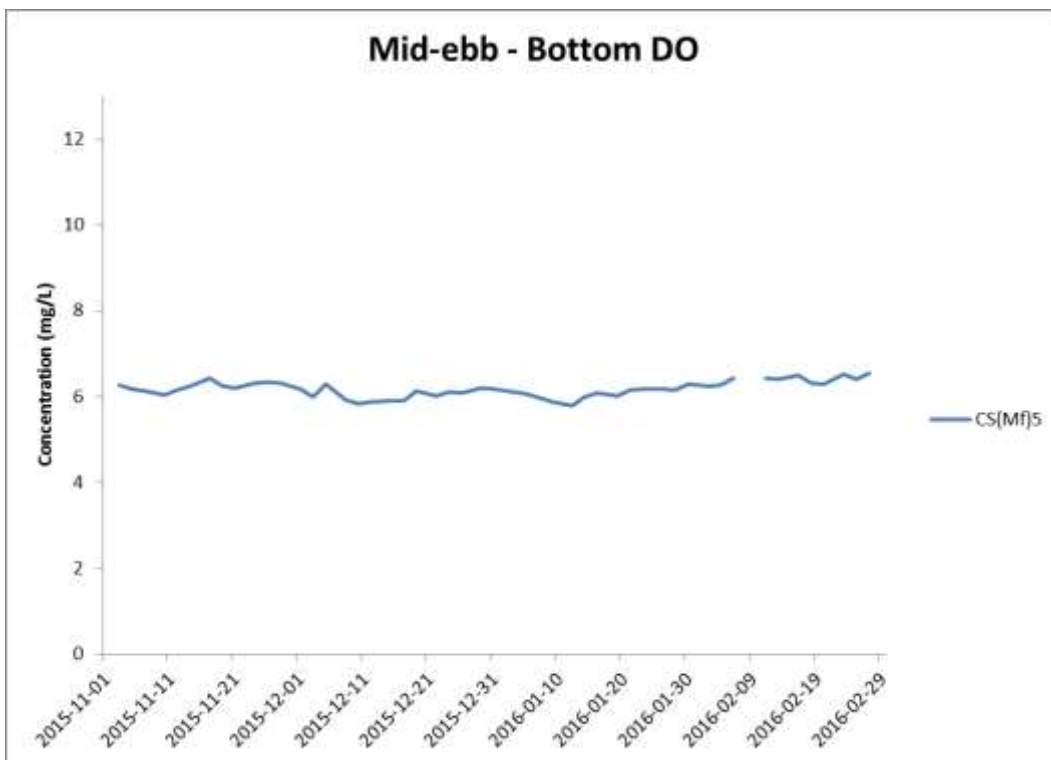
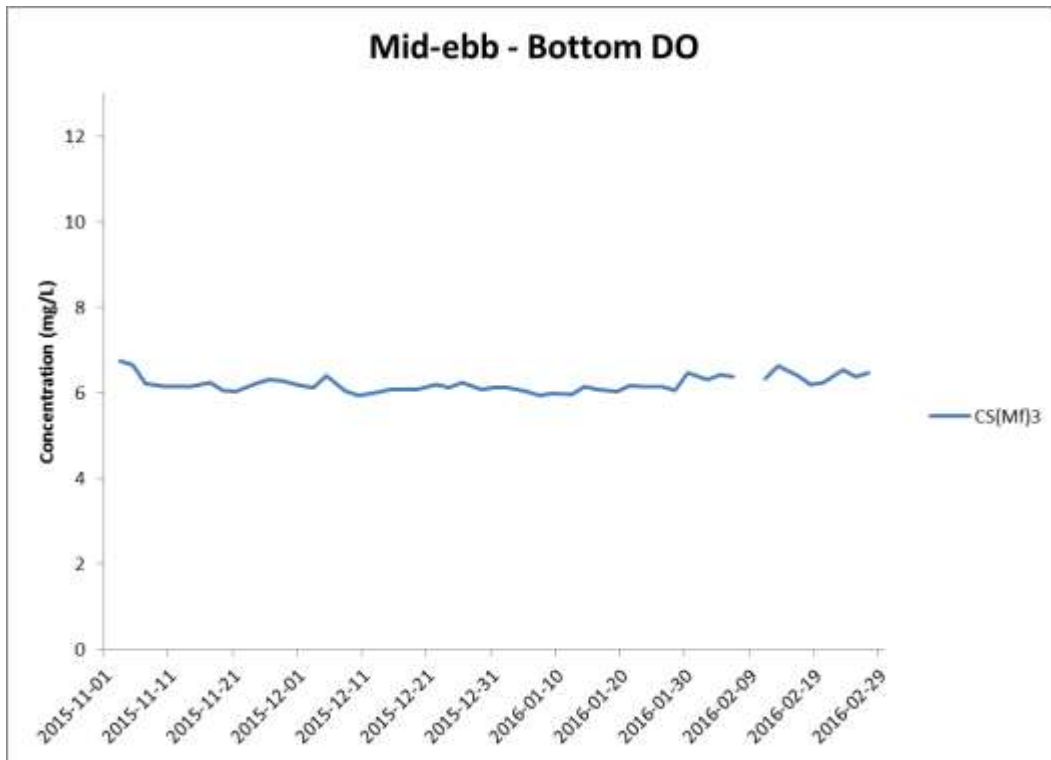


Figure J13 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-ebb tide between 1 November 2015 and 29 February 2016 at CS(Mf)3 and CS(Mf)5.

WQM was cancelled on 9 February 2016 due to suspension of marine works. (Weather condition varied between sunny to rainy within the reporting period.) 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.

**Environmental
Resources
Management**



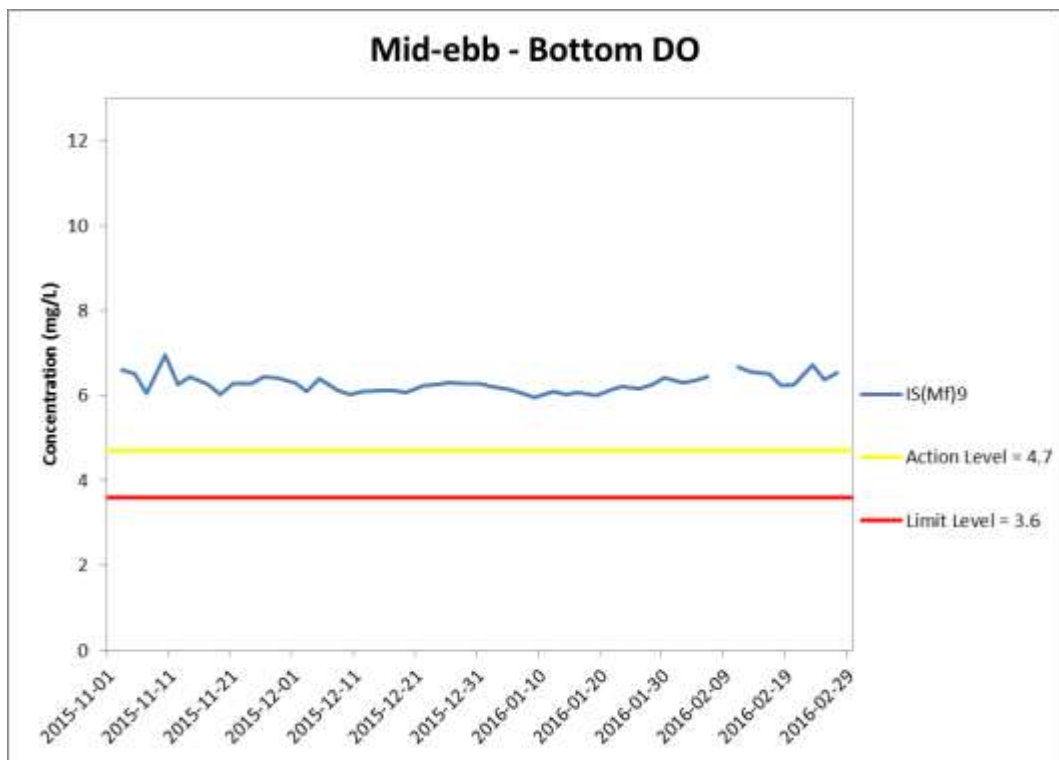
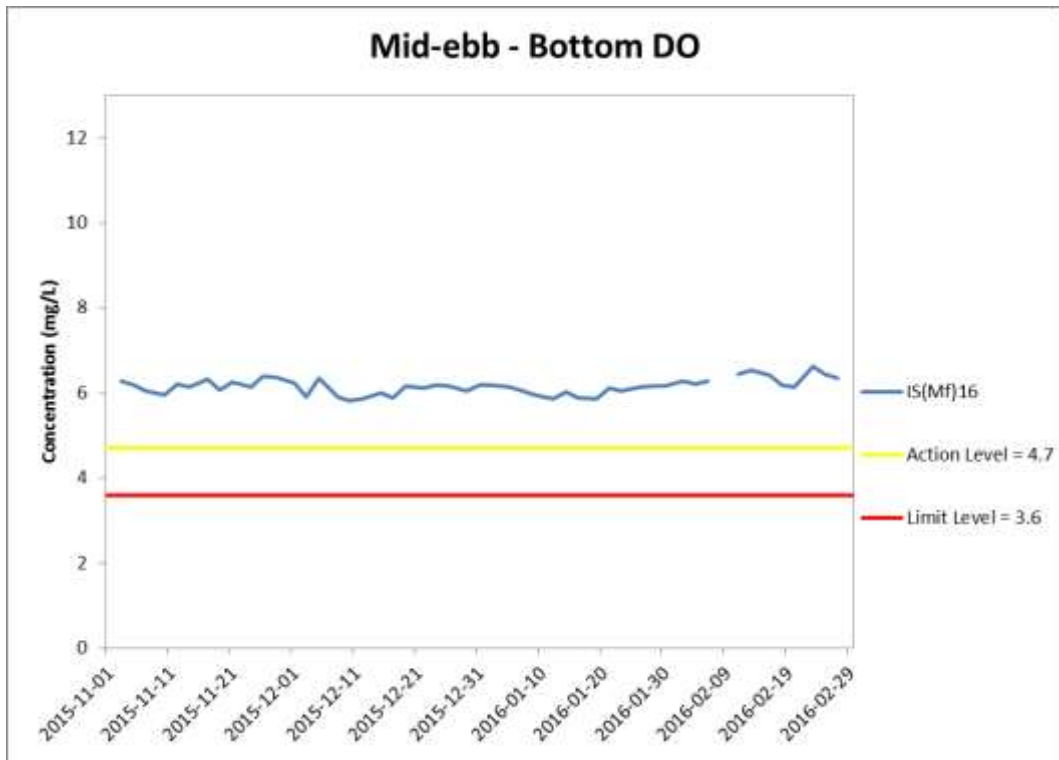


Figure J14 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-ebb tide between 1 November 2015 and 29 February 2016 at IS(Mf)16 and IS(Mf)9.

WQM was cancelled on 9 February 2016 due to suspension of marine works. (Weather condition varied between sunny to rainy within the reporting period.) 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.

**Environmental
Resources
Management**



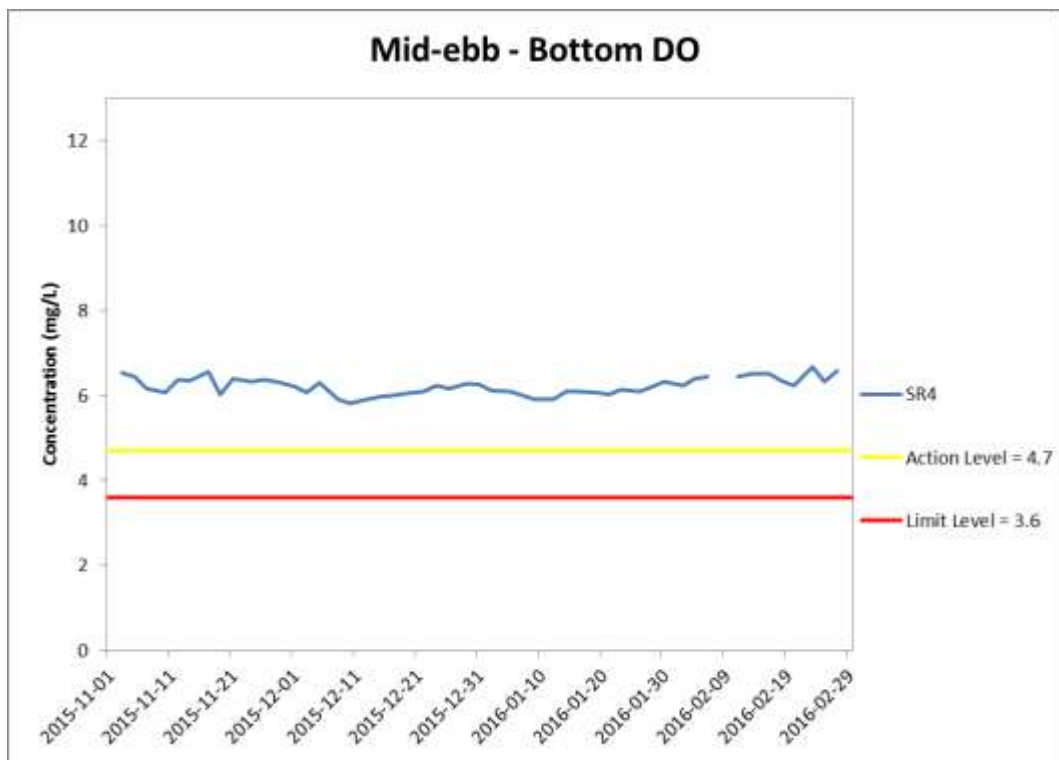
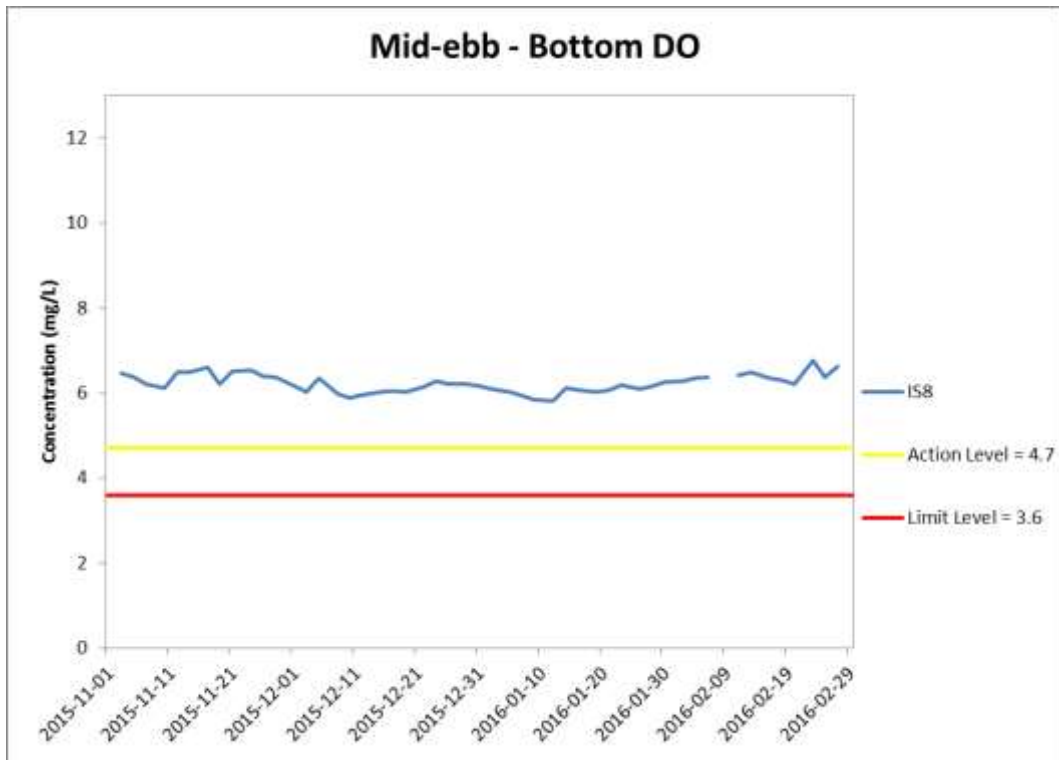


Figure J15 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-ebb tide between 1 November 2015 and 29 February 2016 at IS8 and SR4.

WQM was cancelled on 9 February 2016 due to suspension of marine works. (Weather condition varied between sunny to rainy within the reporting period.) 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.

**Environmental
Resources
Management**



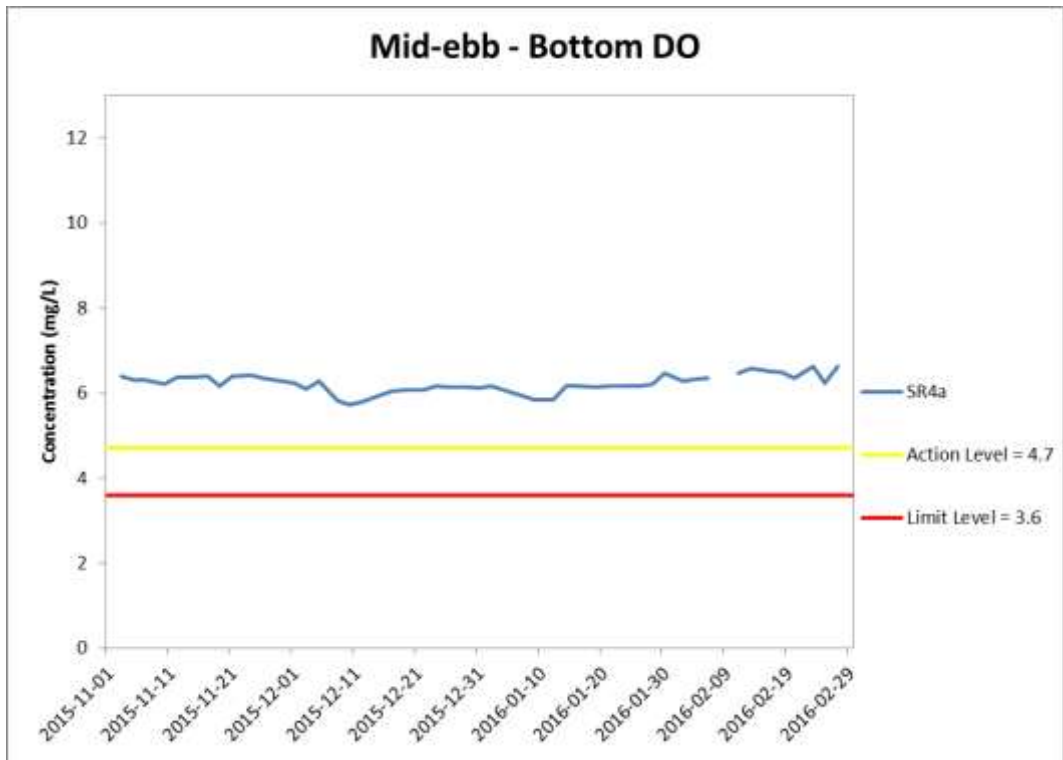


Figure J16 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-ebb tide between 1 November 2015 and 29 February 2016 at SR4a.

WQM was cancelled on 9 February 2016 due to suspension of marine works. (Weather condition varied between sunny to rainy within the reporting period.) 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.

**Environmental
Resources
Management**



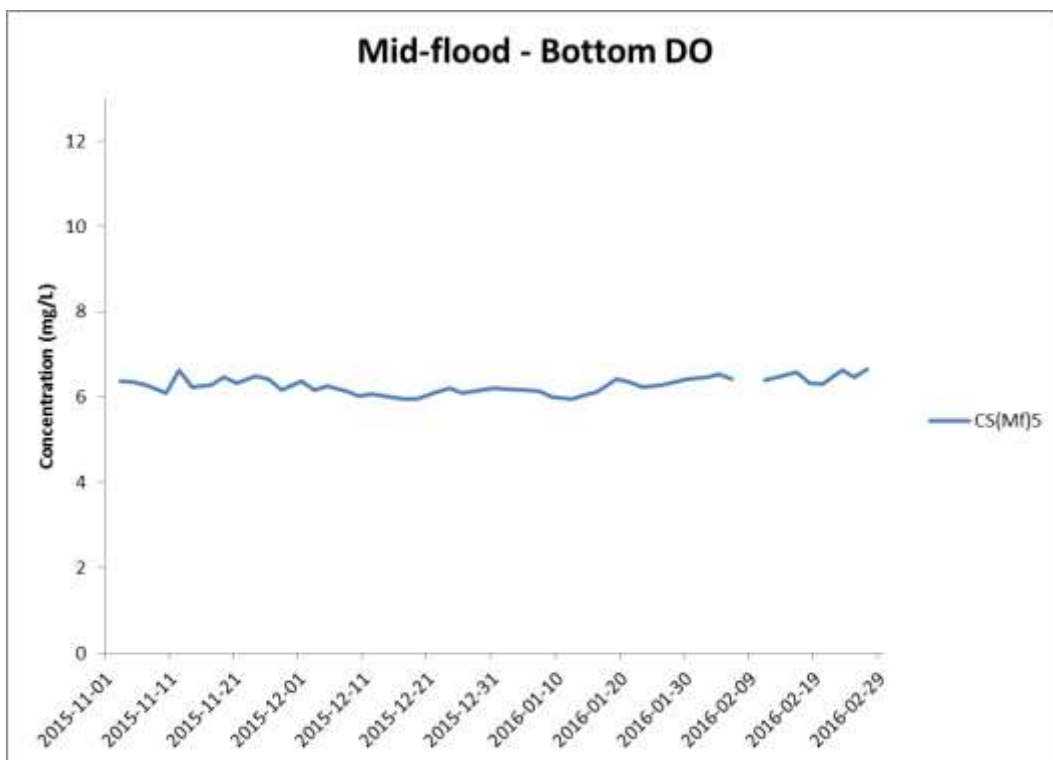
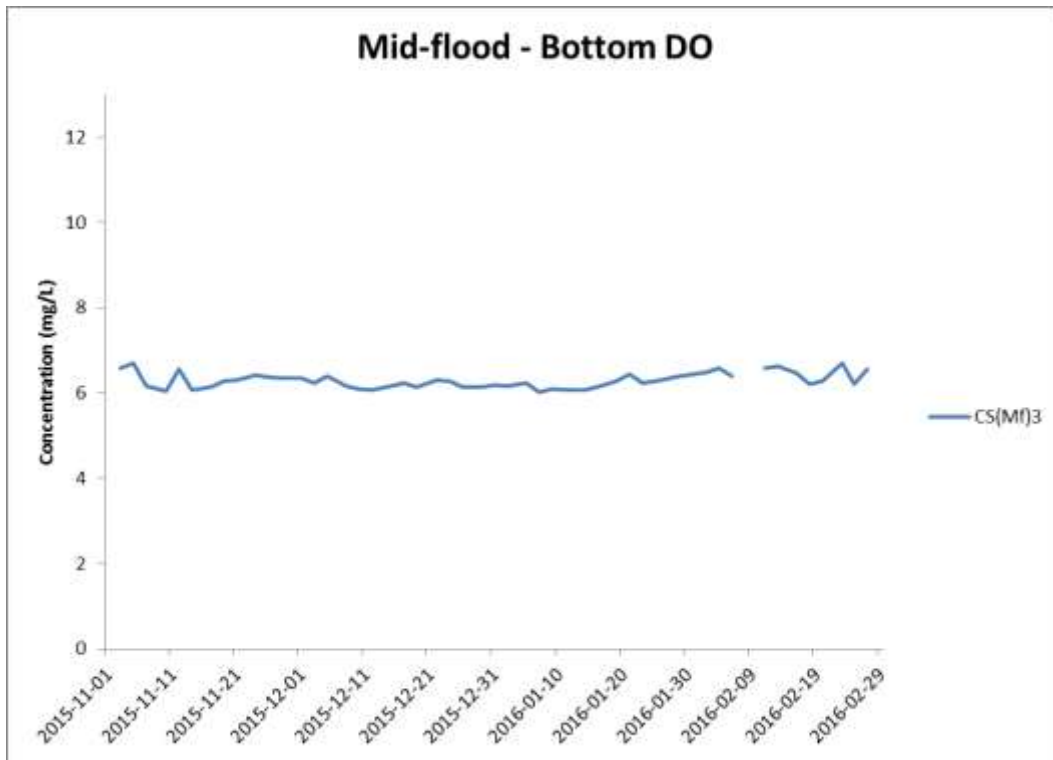


Figure J17 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-flood tide between 1 November 2015 and 29 February 2016 at CS(Mf)3 and CS(Mf)5.

WQM was cancelled on 9 February 2016 due to suspension of marine works. (Weather condition varied between sunny to rainy within the reporting period.) 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.

**Environmental
Resources
Management**



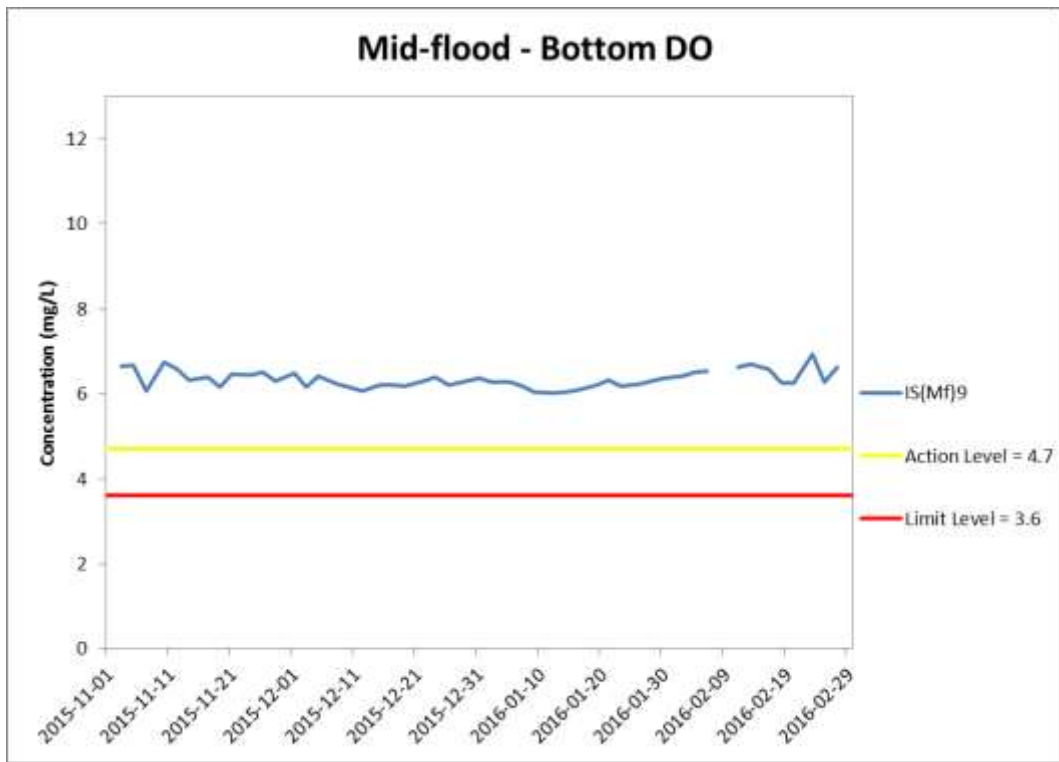
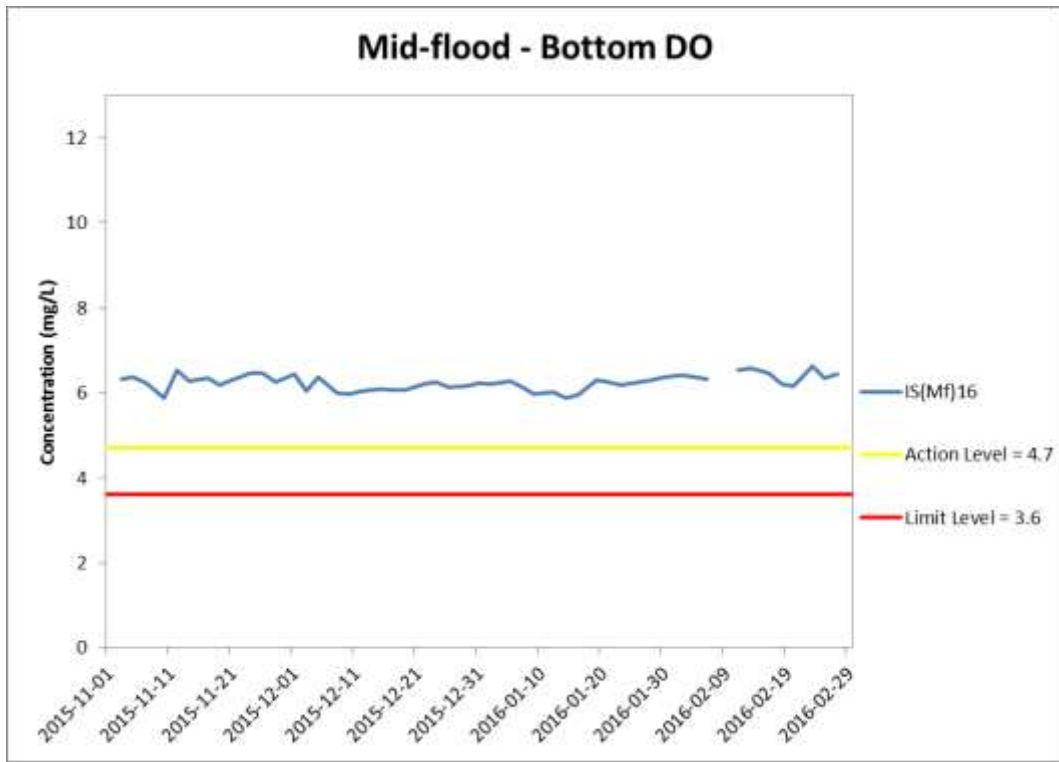


Figure J18 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-flood tide between 1 November 2015 and 29 February 2016 at IS(Mf)16 and IS(Mf)9.

WQM was cancelled on 9 February 2016 due to suspension of marine works. (Weather condition varied between sunny to rainy within the reporting period.) 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.

**Environmental
Resources
Management**



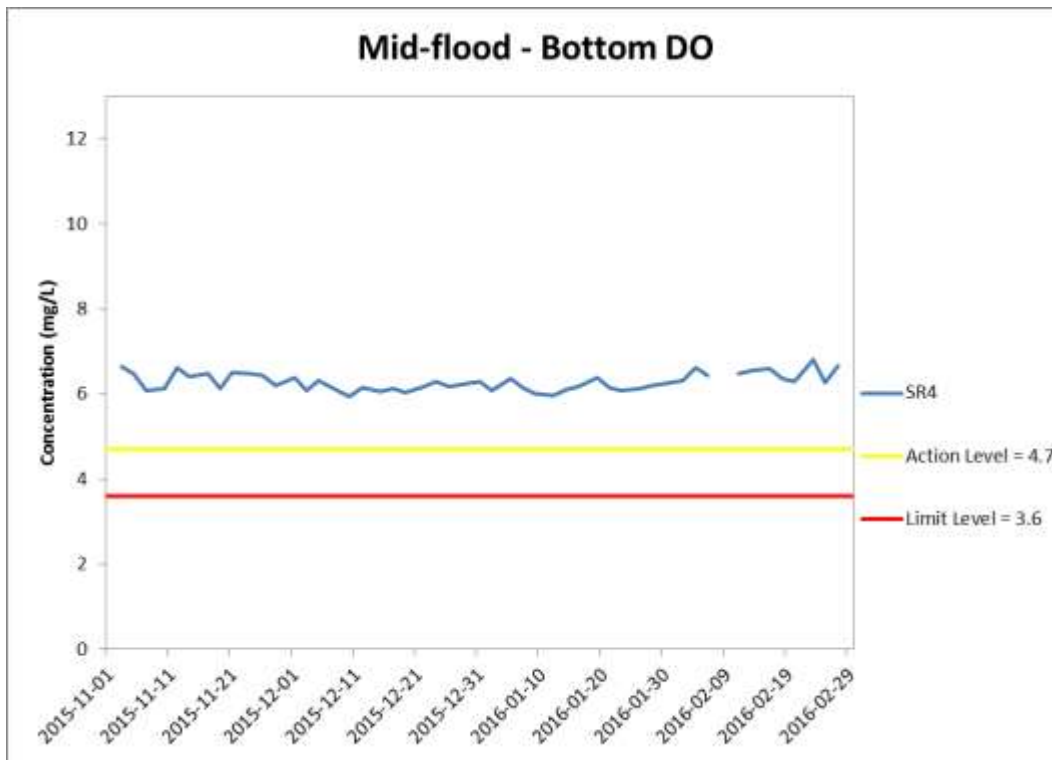
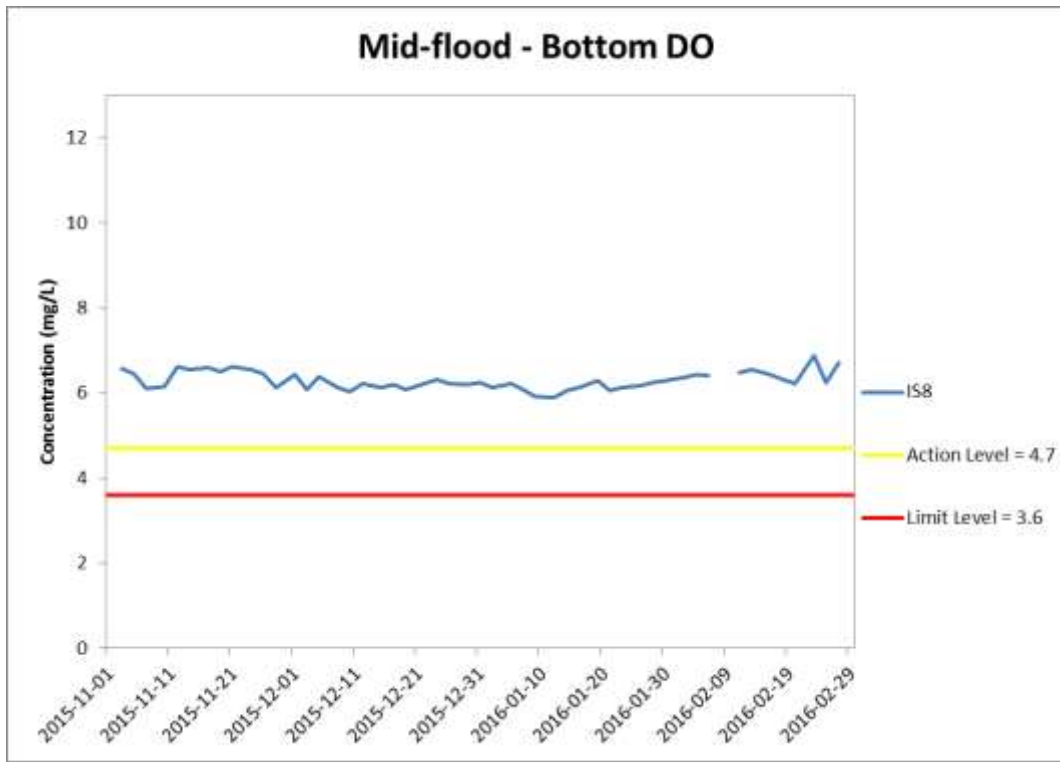


Figure J19 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-flood tide between 1 November 2015 and 29 February 2016 at IS8 and SR4.

WQM was cancelled on 9 February 2016 due to suspension of marine works. (Weather condition varied between sunny to rainy within the reporting period.) 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.

**Environmental
Resources
Management**



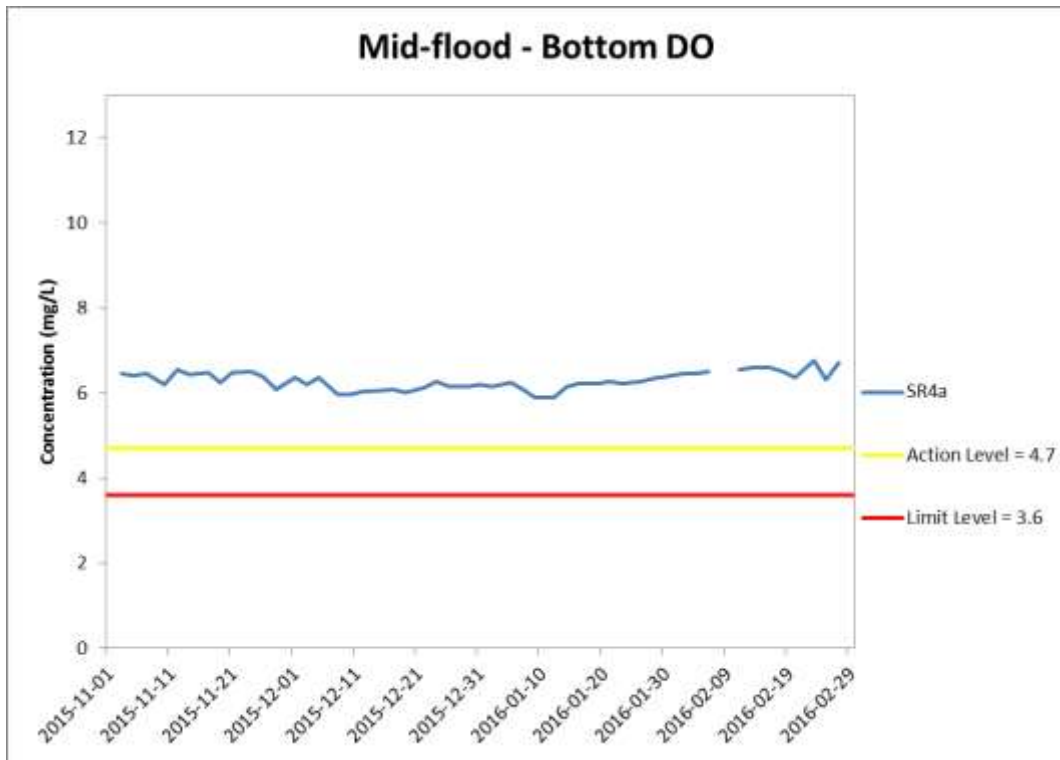


Figure J20 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-flood tide between 1 November 2015 and 29 February 2016 at SR4a.

WQM was cancelled on 9 February 2016 due to suspension of marine works. (Weather condition varied between sunny to rainy within the reporting period.) 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.

**Environmental
Resources
Management**



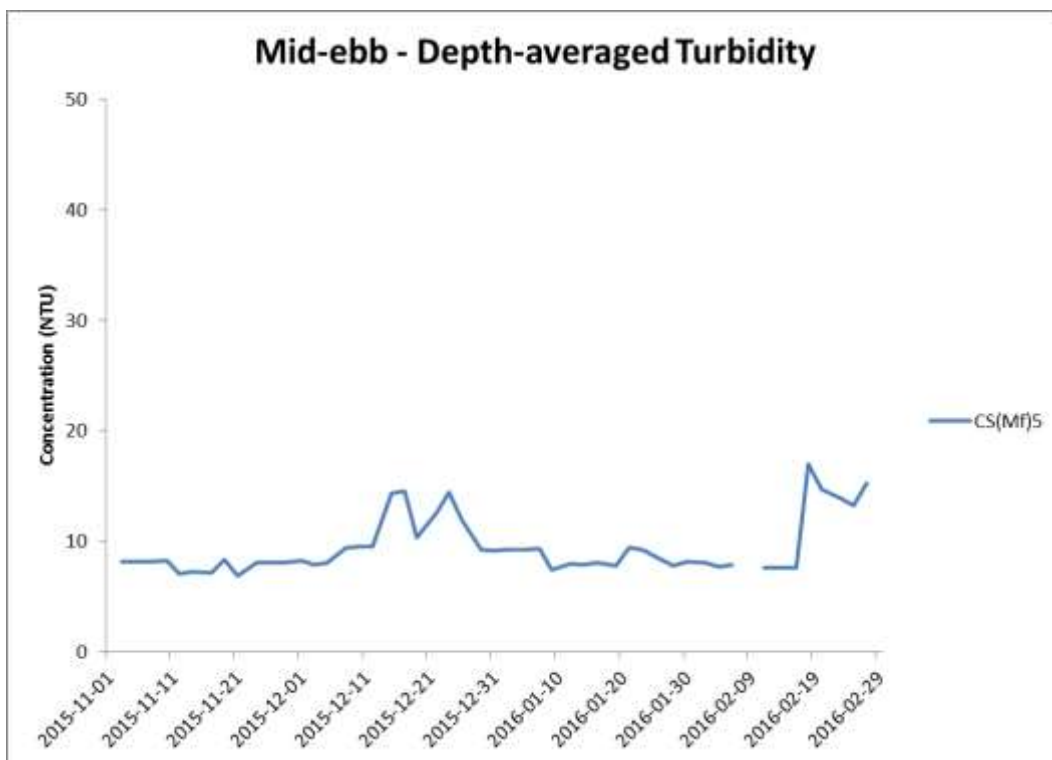
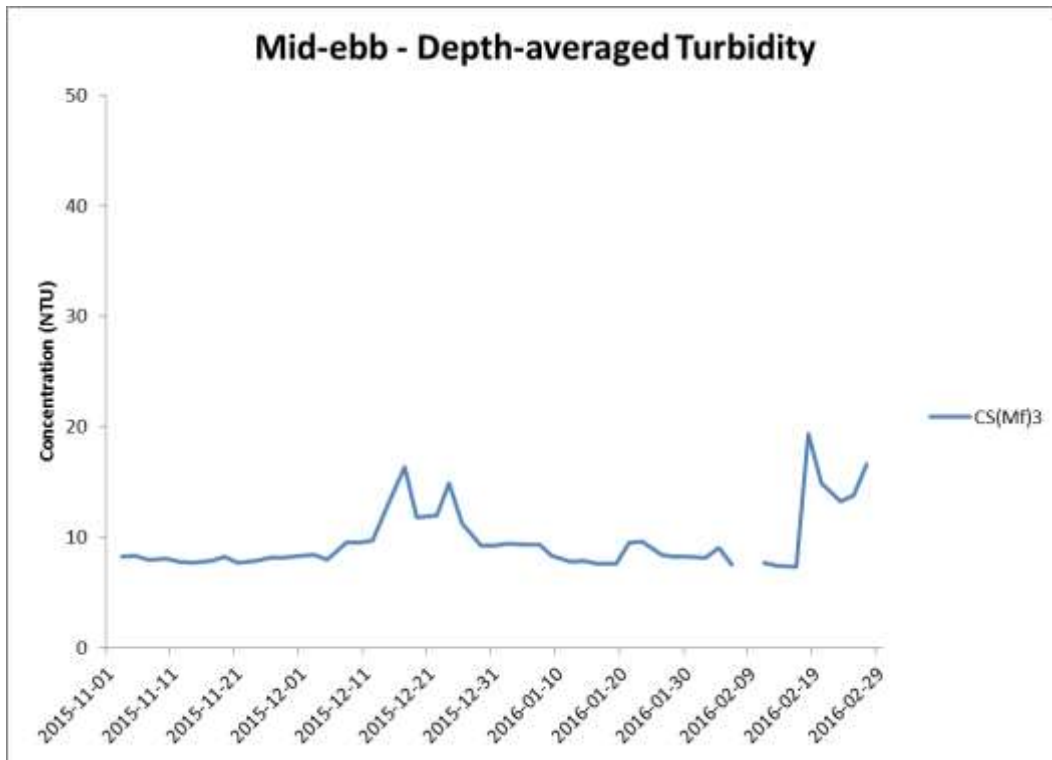


Figure J21 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-ebb tide between 1 November 2015 and 29 February 2016 at CS(Mf)3 and CS(Mf)5.

WQM was cancelled on 9 February 2016 due to suspension of marine works. (Weather condition varied between sunny to rainy within the reporting period.) 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.

**Environmental
Resources
Management**



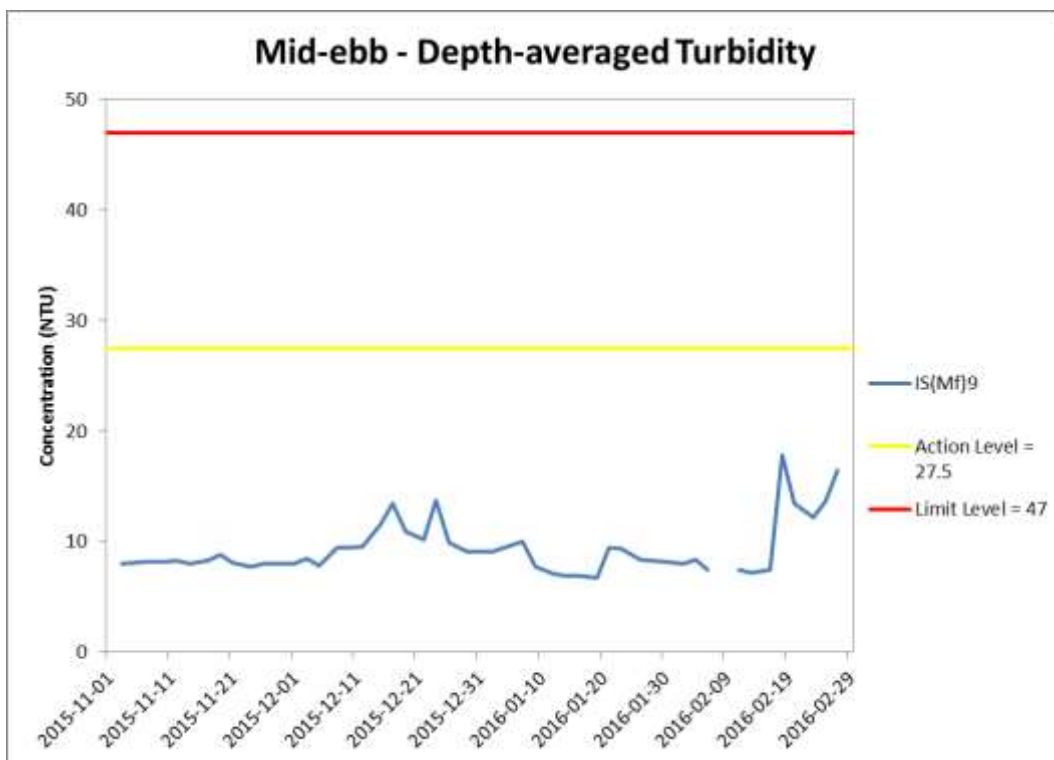
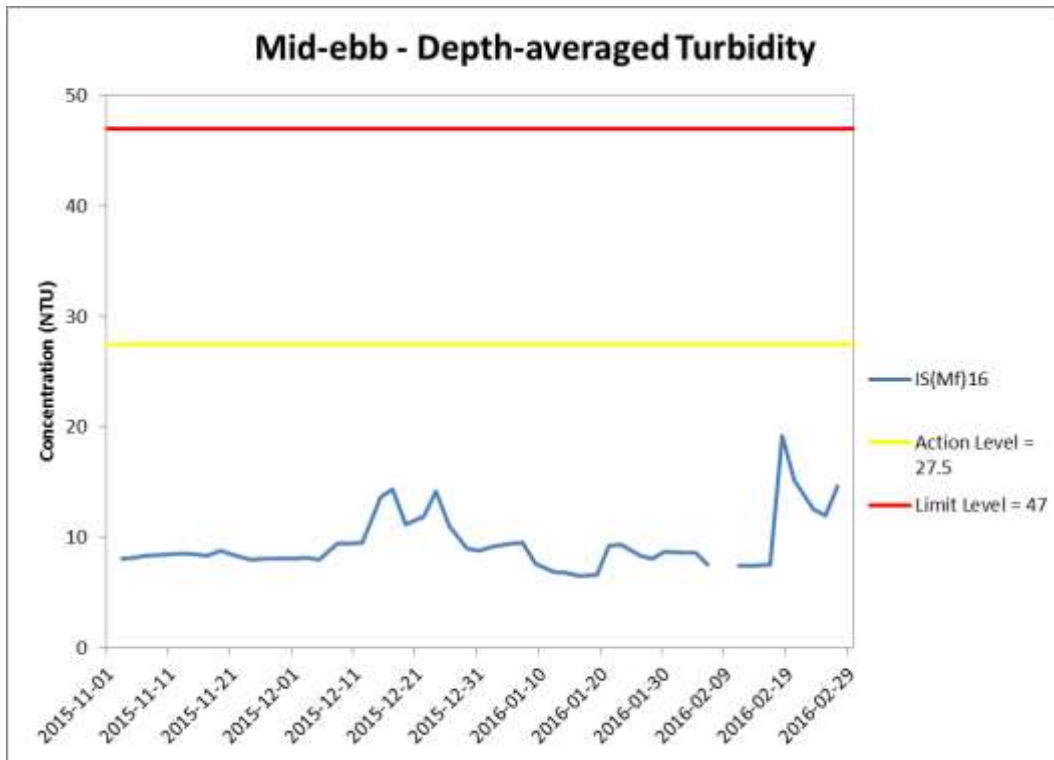


Figure J22 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-ebb tide between 1 November 2015 and 29 February 2016 at IS(Mf)16 and IS(Mf)9.

WQM was cancelled on 9 February 2016 due to suspension of marine works. (Weather condition varied between sunny to rainy within the reporting period.) 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.

**Environmental
Resources
Management**



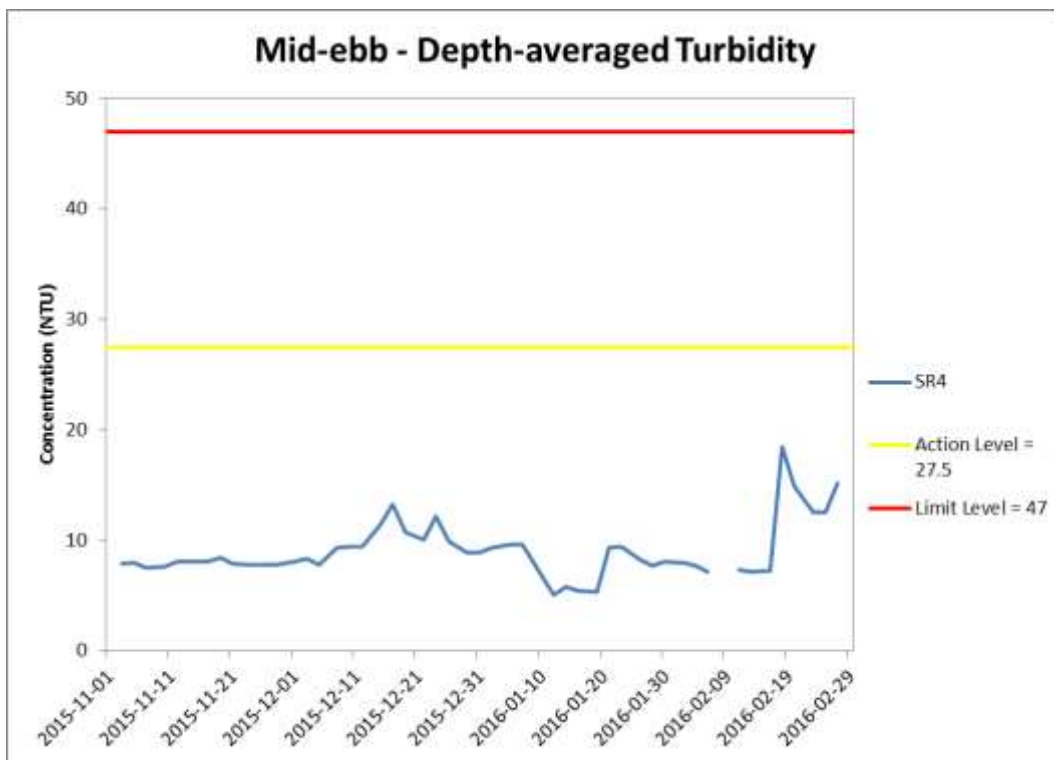
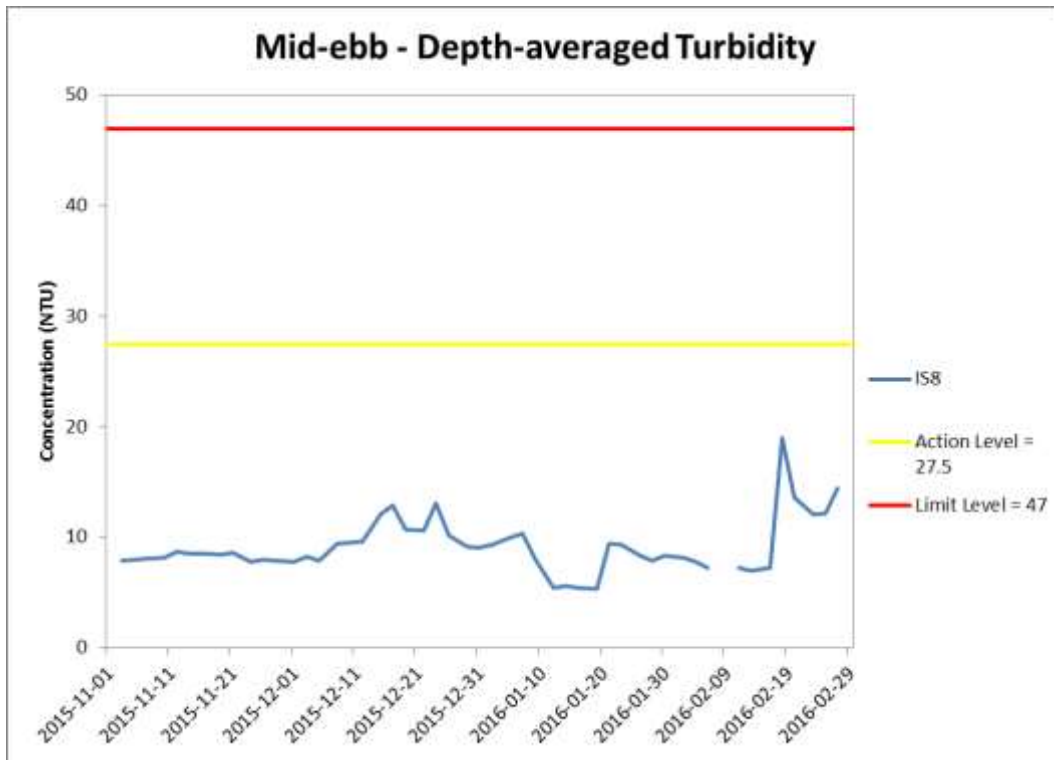


Figure J23 Impact Monitoring - Mean Level of depth-averaged Turbidity (NTU) during mid-ebb tide between 1 November 2015 and 29 February 2016 at IS8 and SR4.

WQM was cancelled on 9 February 2016 due to suspension of marine works. (Weather condition varied between sunny to rainy within the reporting period.) 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.

**Environmental
Resources
Management**



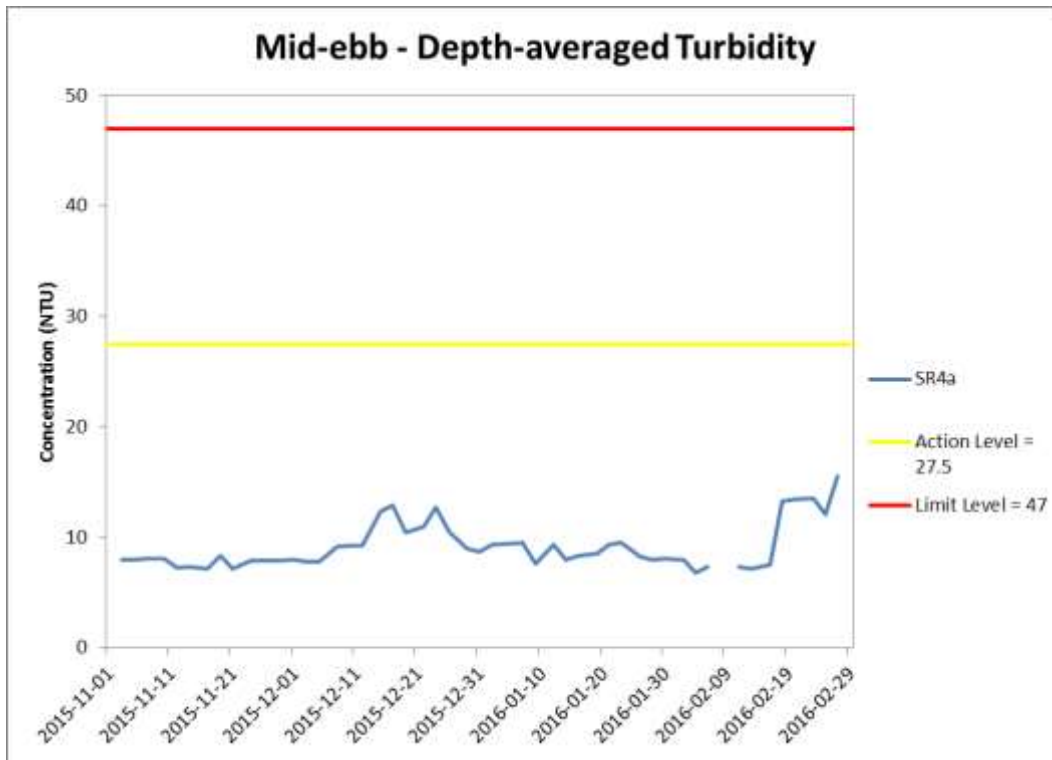


Figure J24 Impact Monitoring - Mean Level of depth-averaged Turbidity (NTU) during mid-ebb tide between 1 November 2015 and 29 February 2016 at SR4a.

WQM was cancelled on 9 February 2016 due to suspension of marine works. (Weather condition varied between sunny to rainy within the reporting period.) 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.

**Environmental
Resources
Management**



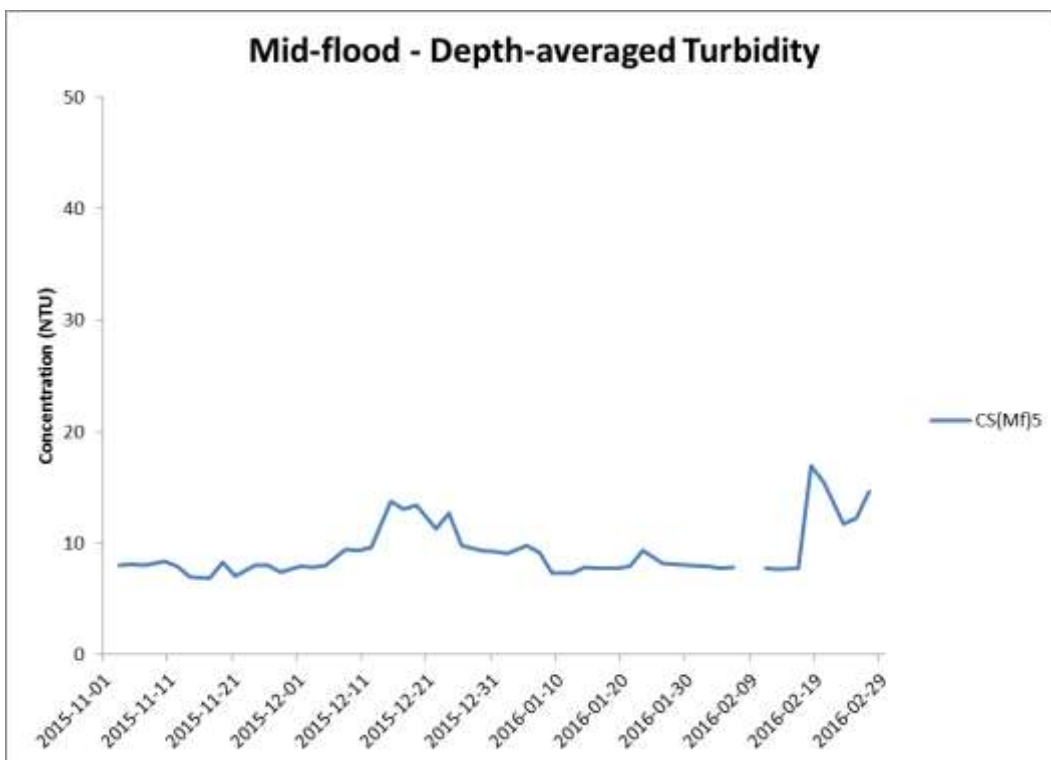
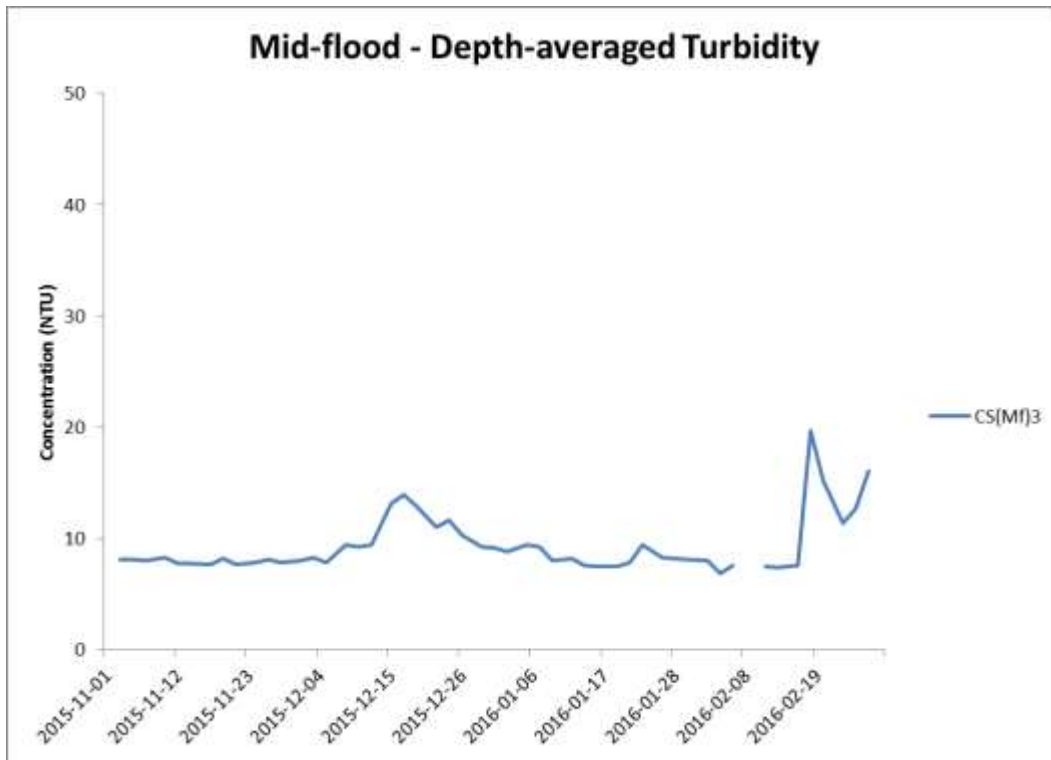


Figure J25 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-flood tide between 1 November 2015 and 29 February 2016 at CS(Mf)3 and CS(MF)5.

WQM was cancelled on 9 February 2016 due to suspension of marine works. (Weather condition varied between sunny to rainy within the reporting period.) 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.

**Environmental
Resources
Management**



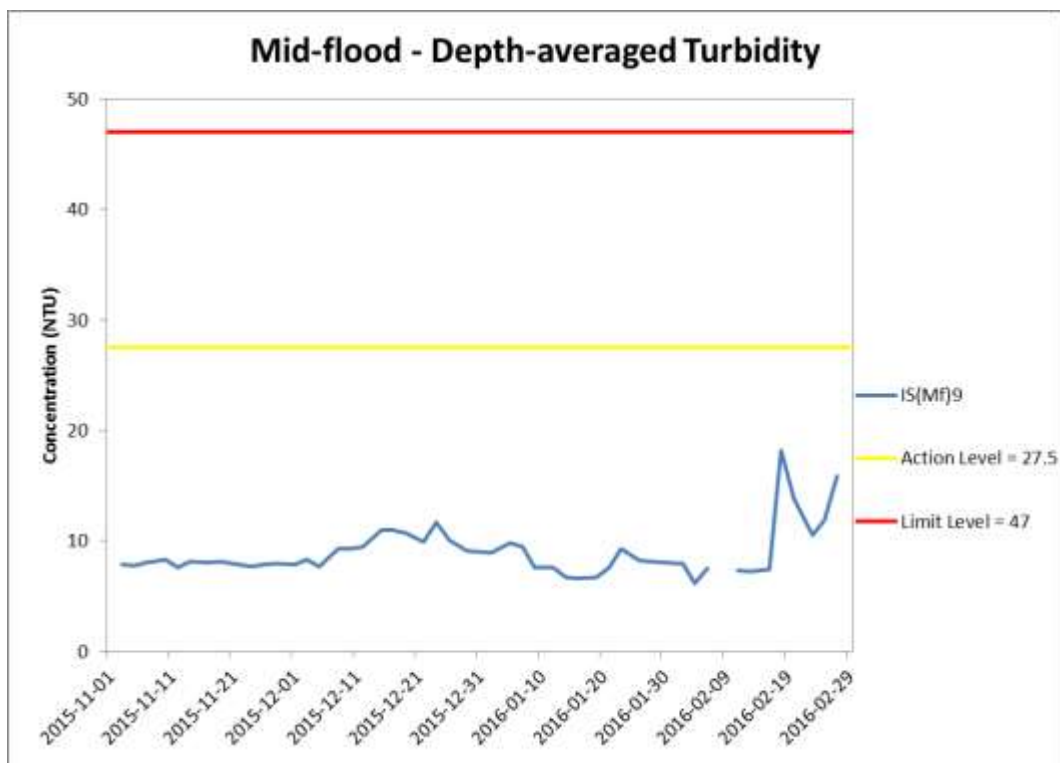
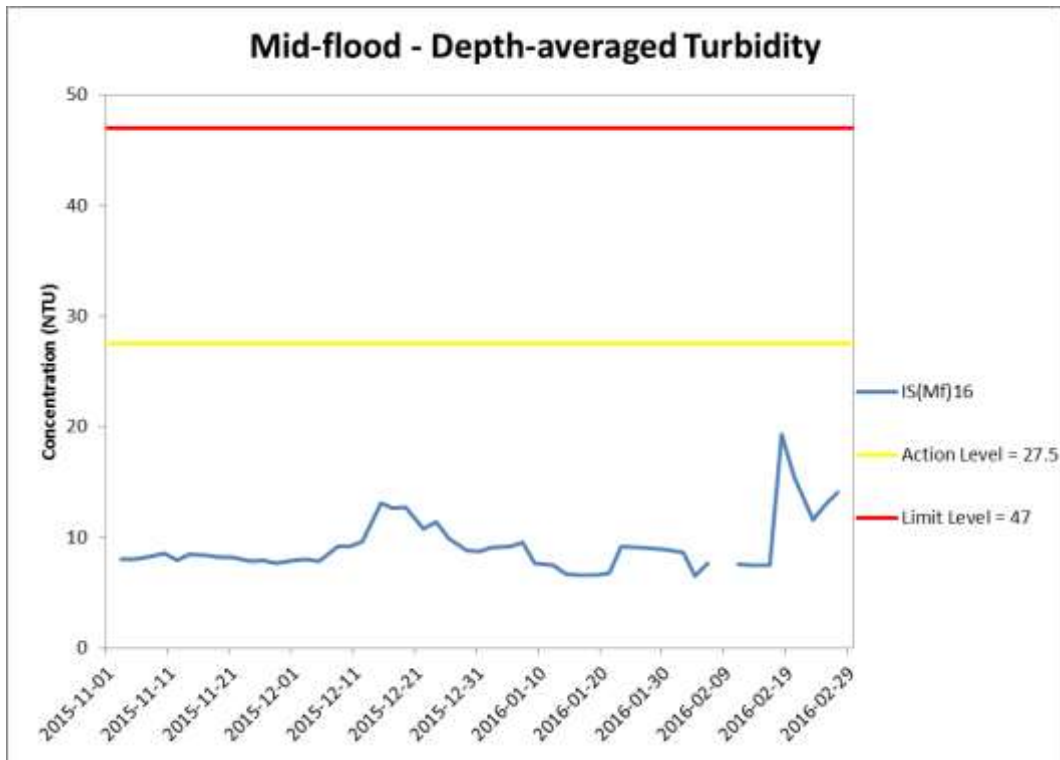


Figure J26 Impact Monitoring - Mean Level of depth-averaged Turbidity (NTU) during mid-flood tide between 1 November 2015 and 29 February 2016 at IS(Mf)16 and IS(Mf)9.

WQM was cancelled on 9 February 2016 due to suspension of marine works. (Weather condition varied between sunny to rainy within the reporting period.) 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.

Environmental Resources Management



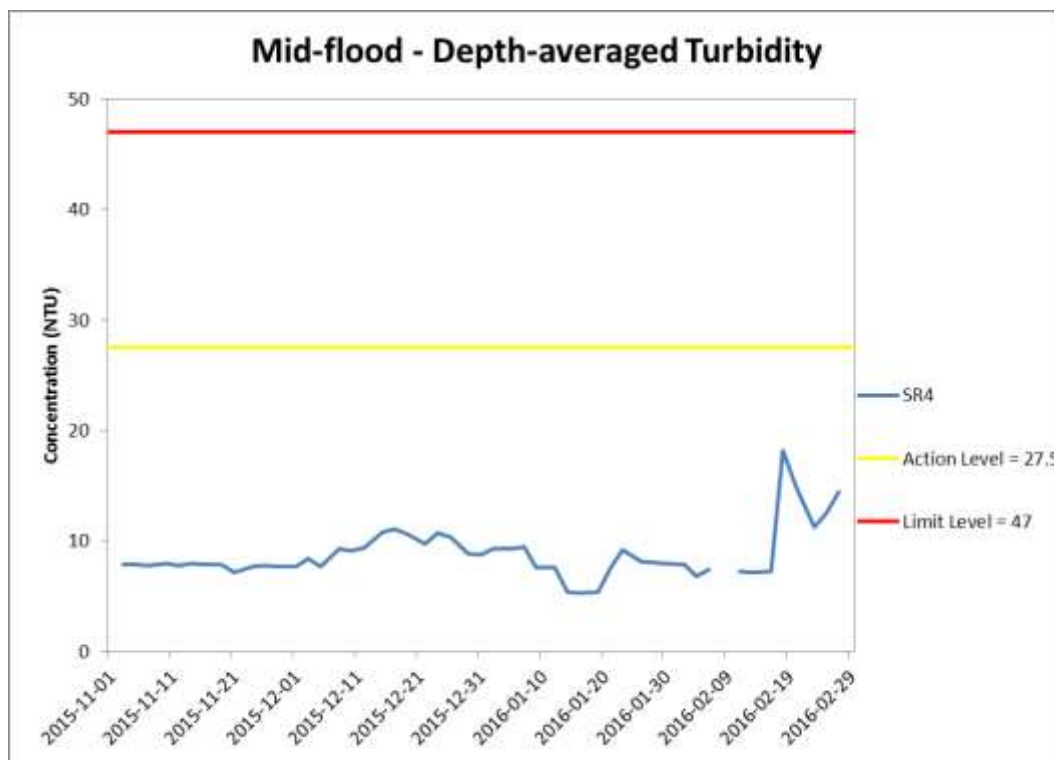
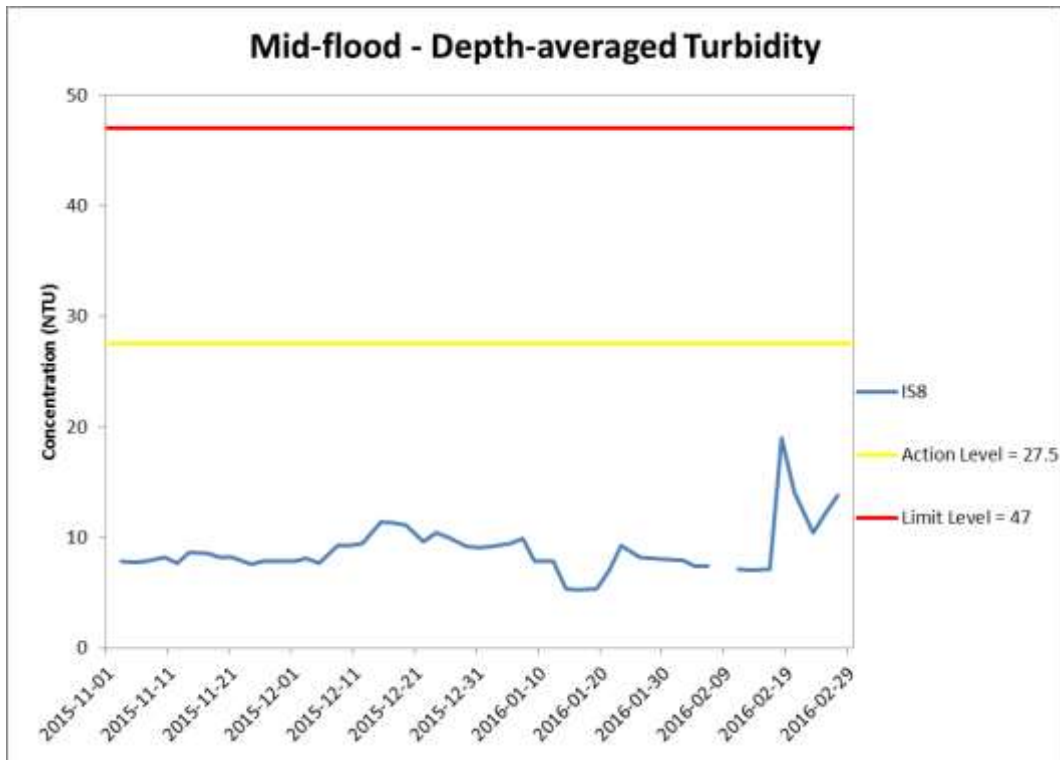


Figure J27 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-flood tide between 1 November 2015 and 29 February 2016 at IS8 and SR4.

WQM was cancelled on 9 February 2016 due to suspension of marine works. (Weather condition varied between sunny to rainy within the reporting period.) 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.

**Environmental
Resources
Management**



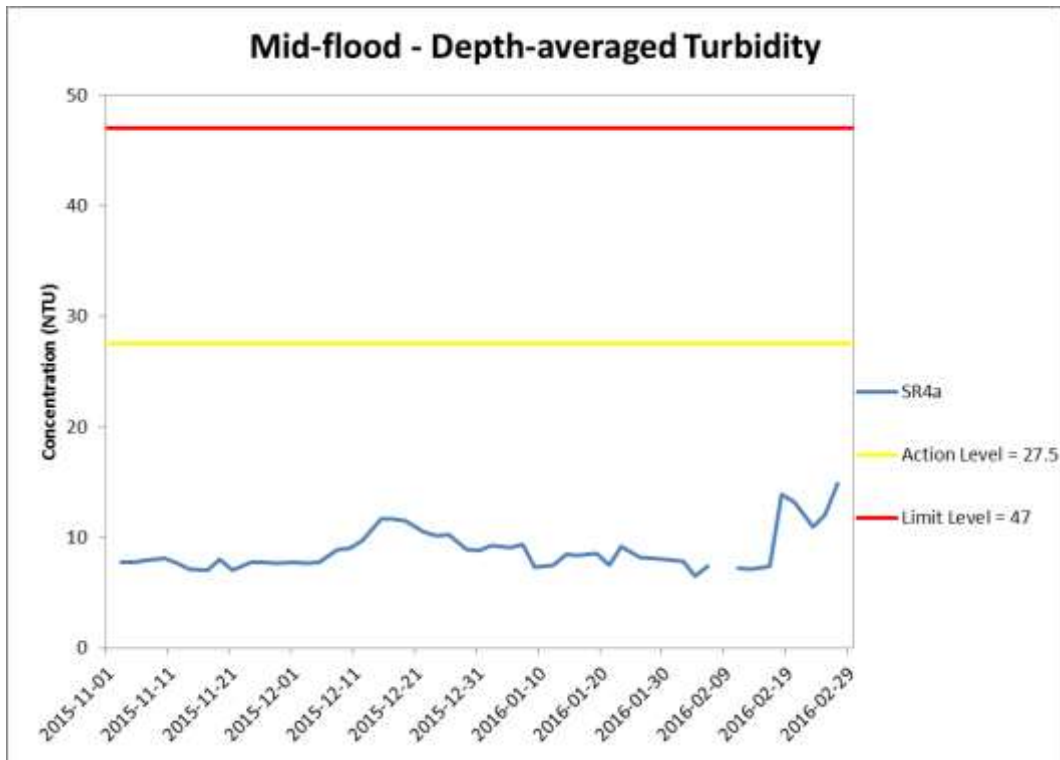


Figure J28 Impact Monitoring - Mean Level of depth-averaged Turbidity (NTU) during mid-flood tide between 1 November 2015 and 29 February 2016 at SR4a.

WQM was cancelled on 9 February 2016 due to suspension of marine works. (Weather condition varied between sunny to rainy within the reporting period.) 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.

**Environmental
Resources
Management**



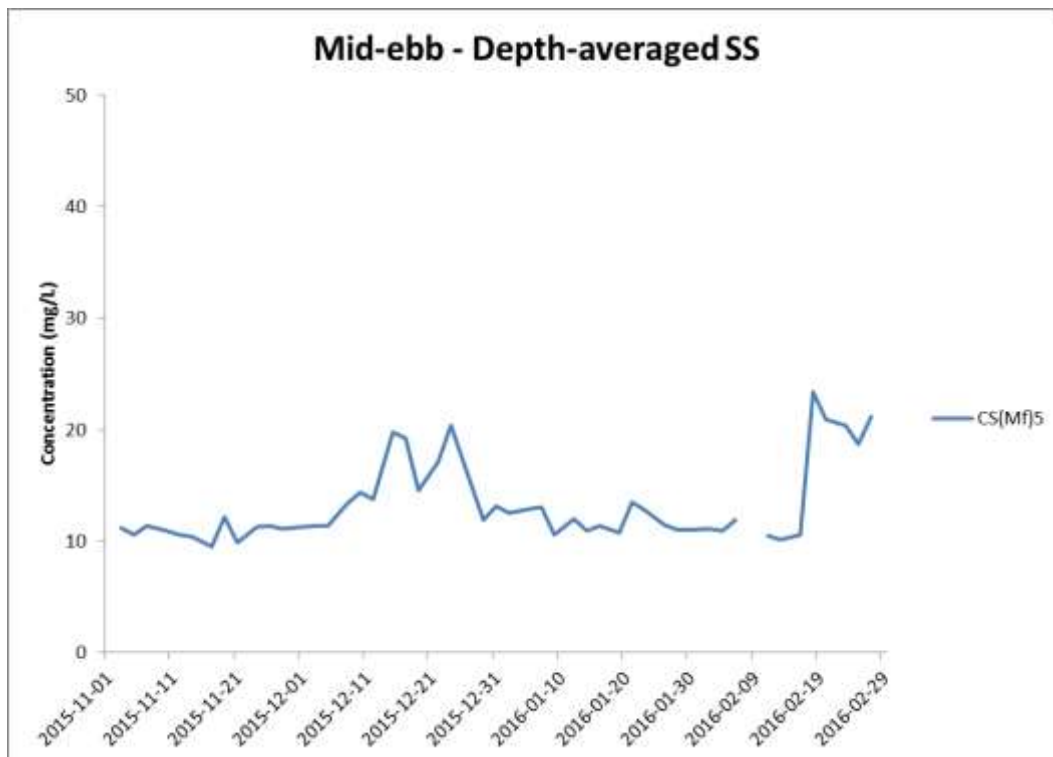
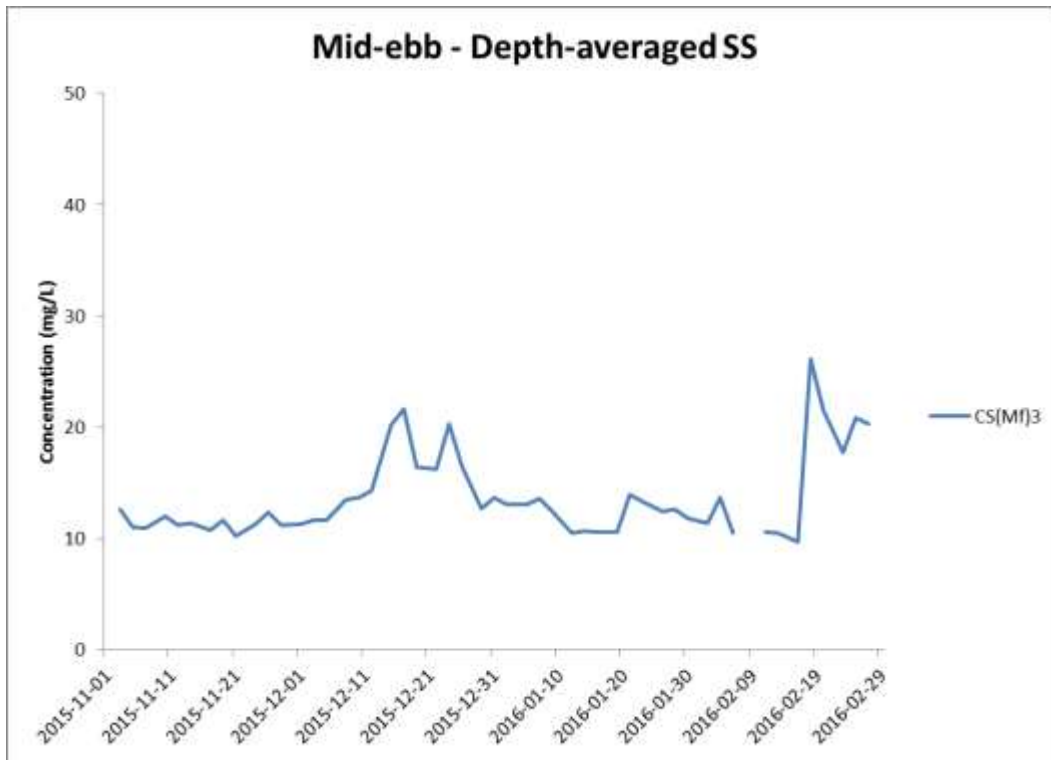


Figure J29 Impact Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-ebb tide between 1 November 2015 and 29 February 2016 at CS(Mf)3 and CS(Mf)5.

WQM was cancelled on 9 February 2016 due to suspension of marine works. (Weather condition varied between sunny to rainy within the reporting period.) 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.

**Environmental
Resources
Management**



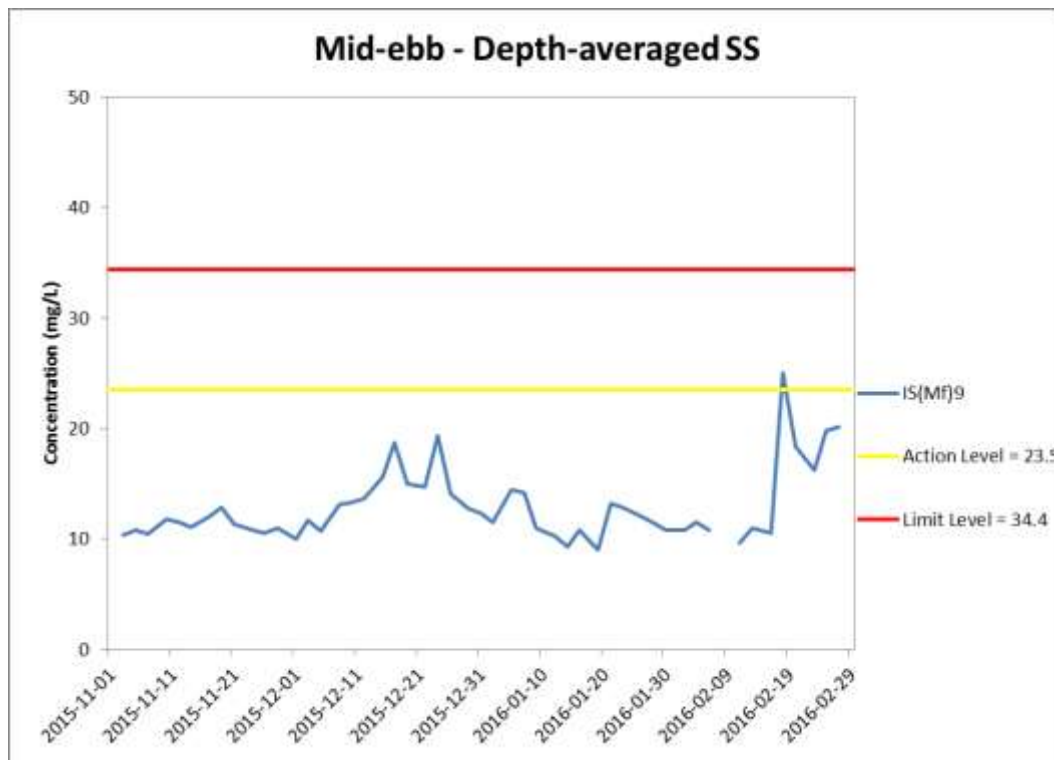
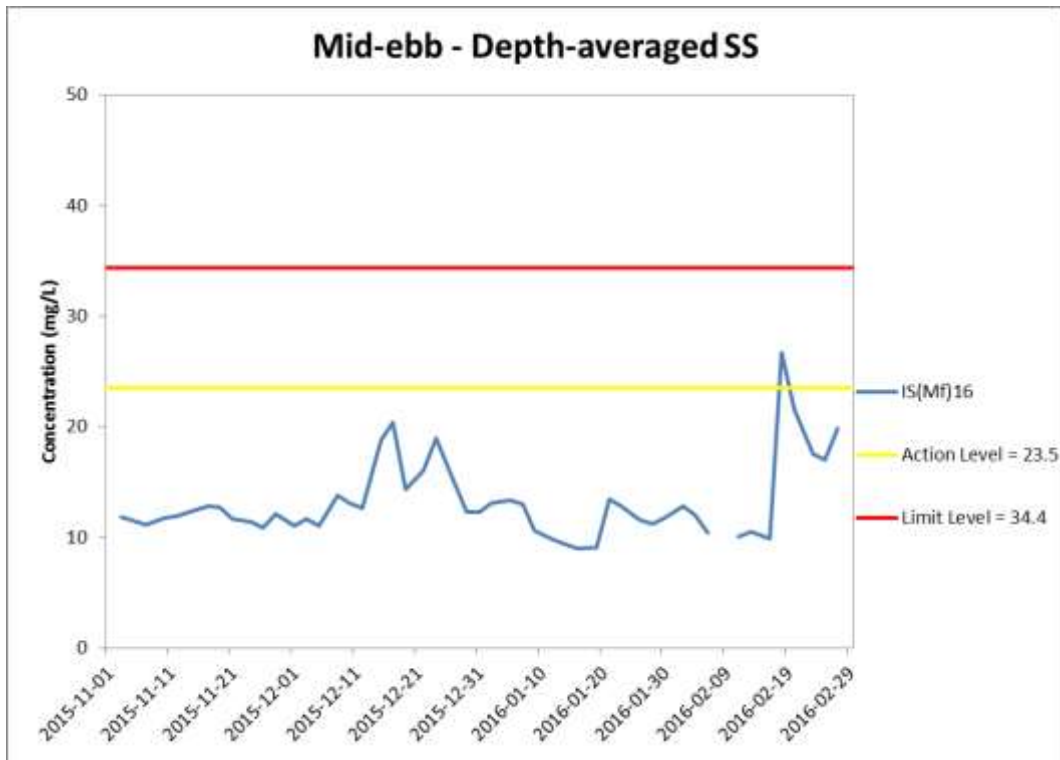


Figure J30 Impact Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-ebb tide between 1 November 2015 and 29 February 2016 at IS(Mf)16 and IS(Mf)9.

WQM was cancelled on 9 February 2016 due to suspension of marine works. Results higher than Action Level but lower than 120% of upstream control station at the same tide on the same day are not regarded as exceedance. (Weather condition varied between sunny to rainy within the reporting period.)

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.

**Environmental
Resources
Management**



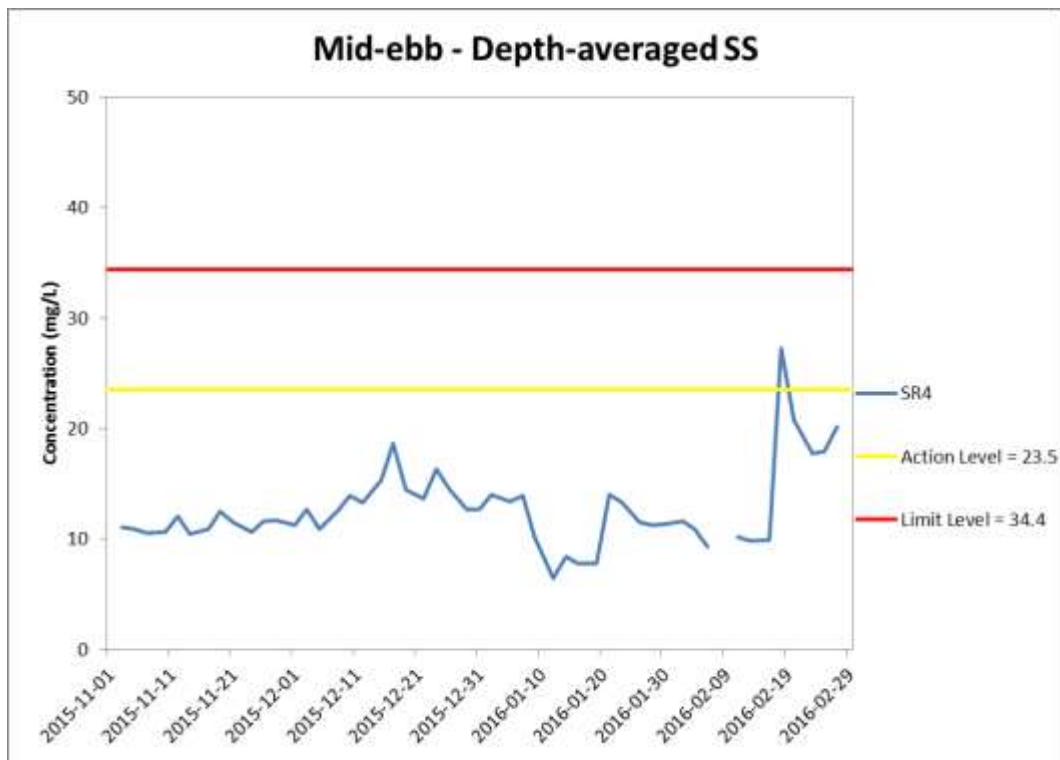
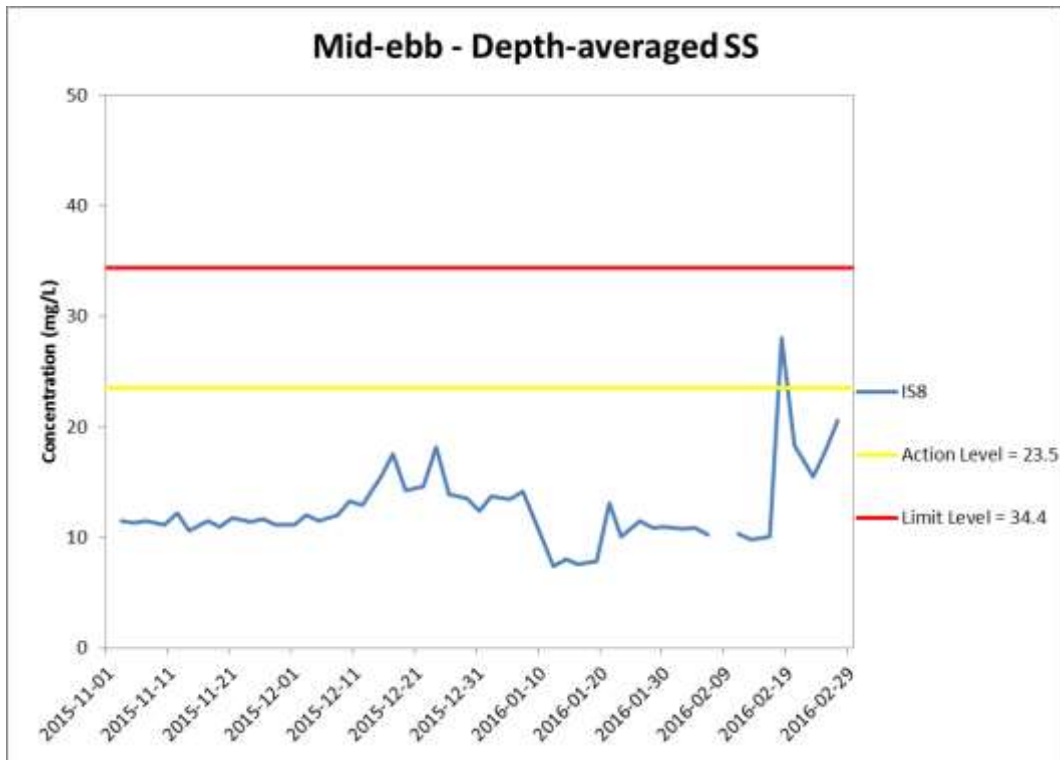


Figure J31 Impact Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-ebb tide between 1 November 2015 and 29 February 2016 at IS8 and SR4.

WQM was cancelled on 9 February 2016 due to suspension of marine works. Results higher than Action Level but lower than 120% of upstream control station at the same tide on the same day are not regarded as exceedance. (Weather condition varied between sunny to rainy within the reporting period.)

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.

Environmental Resources Management



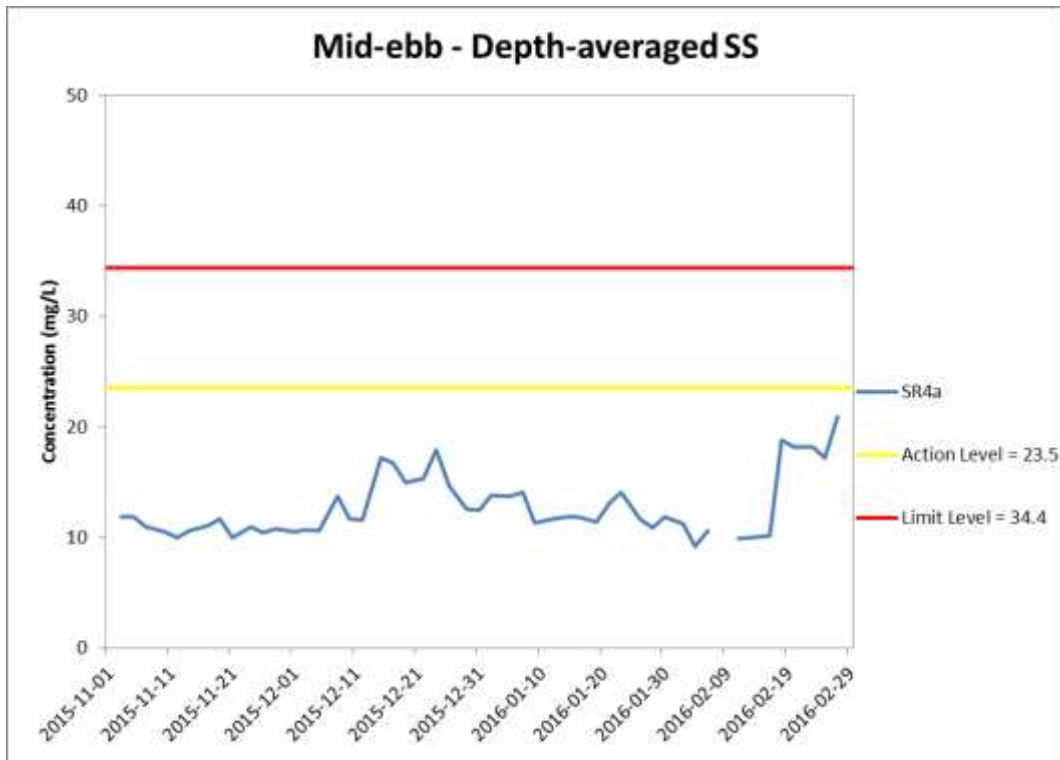


Figure J32 Impact Monitoring - Mean depth-averaged level of Suspended Solids (mg/L) during mid-ebb tide between 1 November 2015 and 29 February 2016 at SR4a.

WQM was cancelled on 9 February 2016 due to suspension of marine works. (Weather condition varied between sunny to rainy within the reporting period.) 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.

**Environmental
Resources
Management**



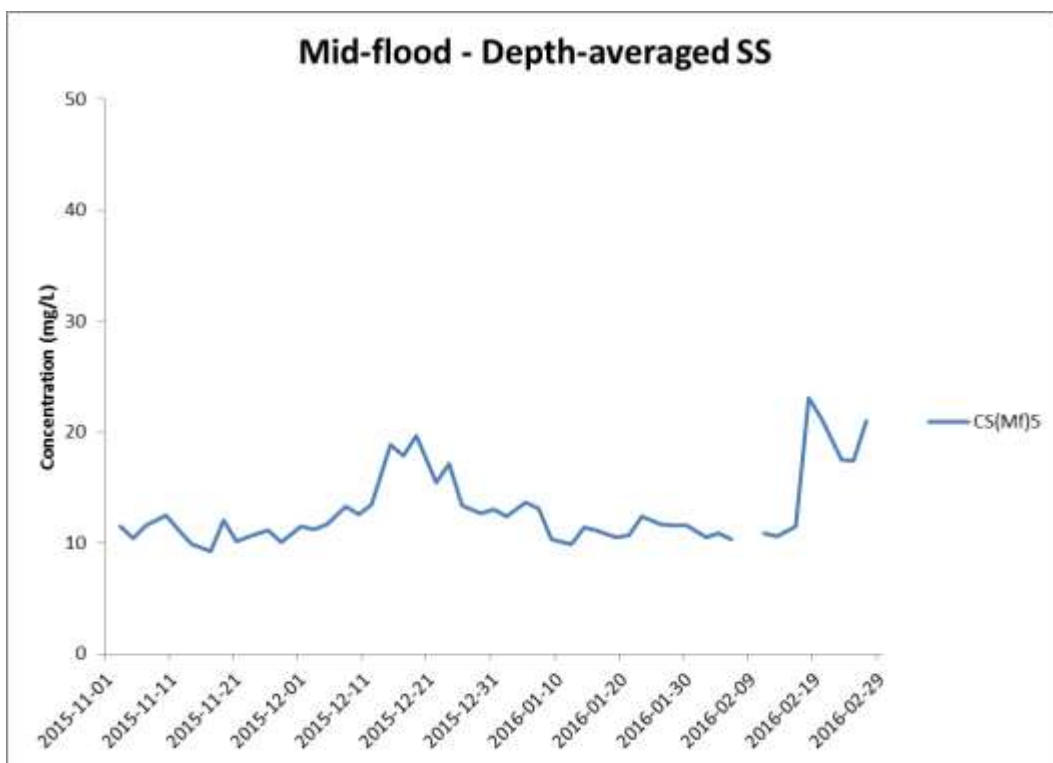
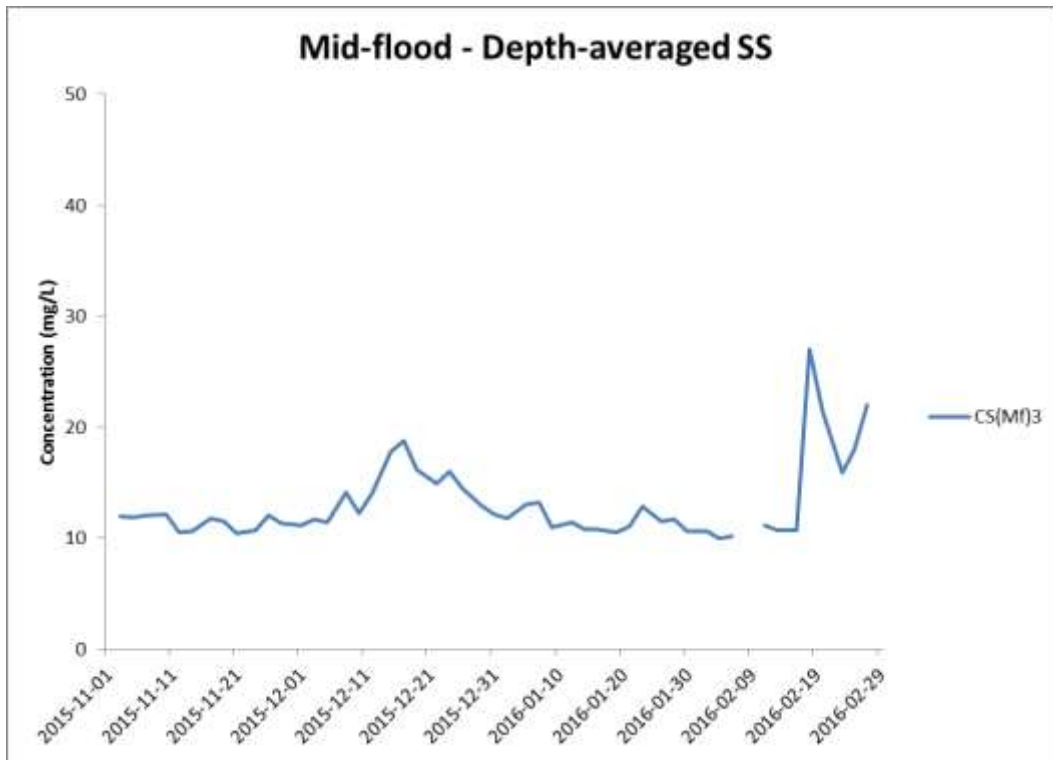


Figure J33 Impact Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-flood tide between 1 November 2015 and 29 February 2016 at CS(Mf)3 and CS(Mf)5.

WQM was cancelled on 9 February 2016 due to suspension of marine works. (Weather condition varied between sunny to rainy within the reporting period.) 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.

**Environmental
Resources
Management**



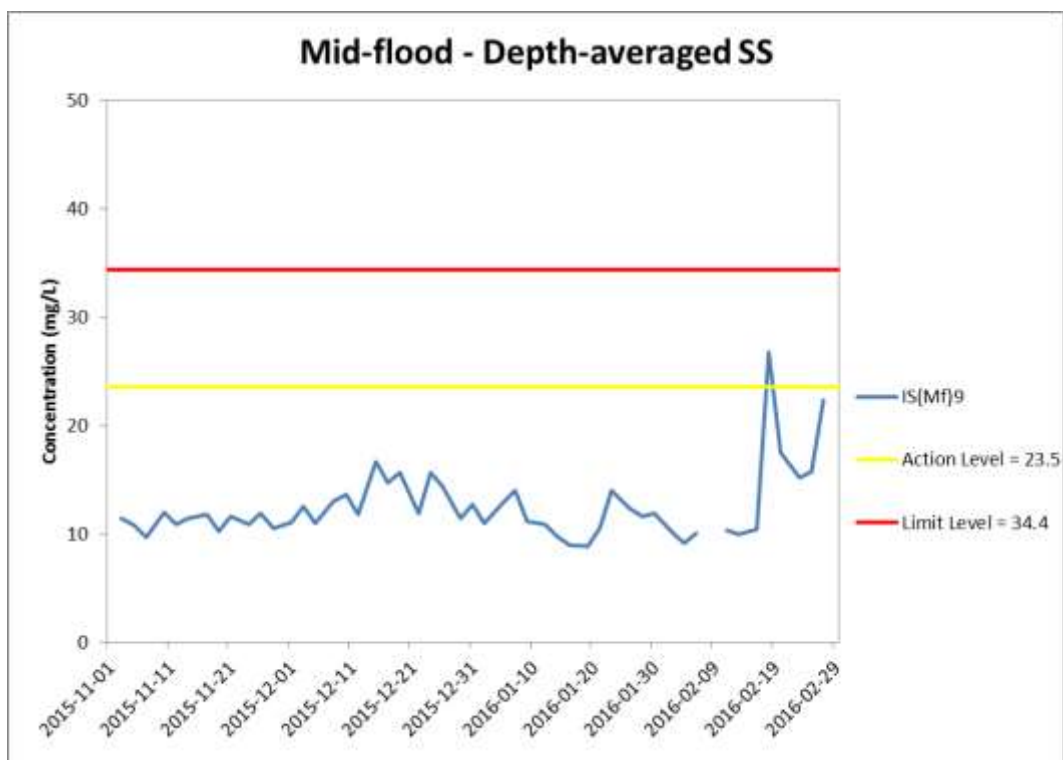
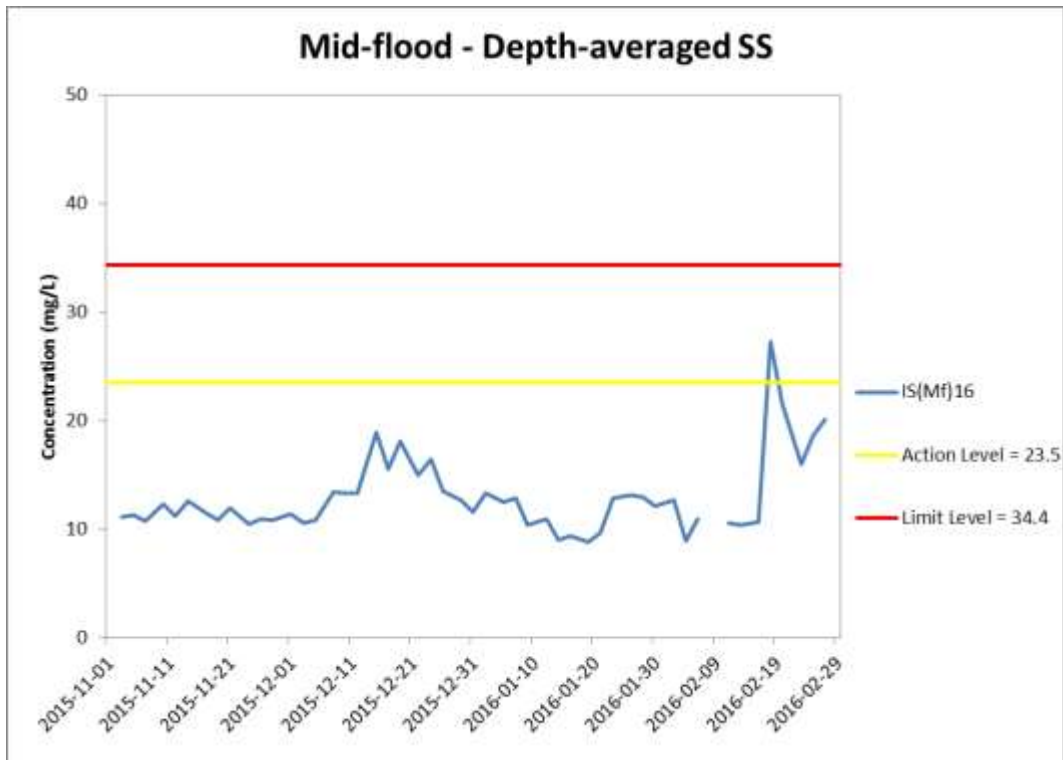


Figure J34 Impact Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-flood tide between 1 November 2015 and 29 February 2016 at IS(Mf)16 and IS(Mf)9.

WQM was cancelled on 9 February 2016 due to suspension of marine works. Results higher than Action Level but lower than 120% of upstream control station at the same tide on the same day are not regarded as exceedance. (Weather condition varied between sunny to rainy within the reporting period.)

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.

Environmental Resources Management



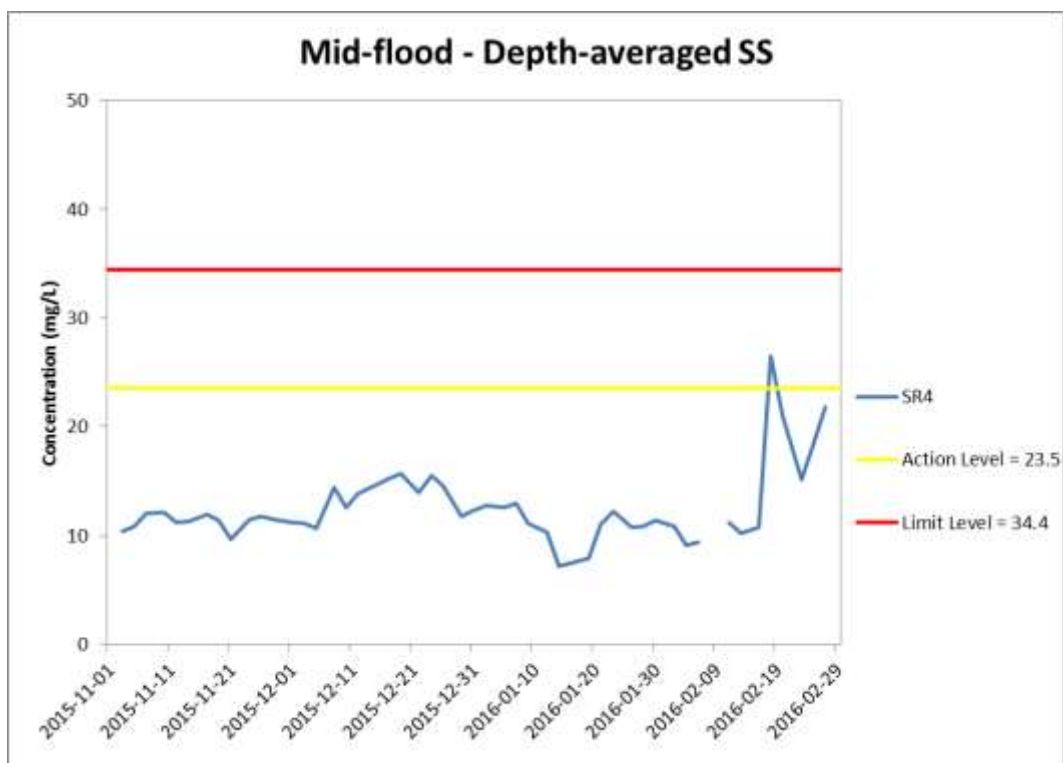
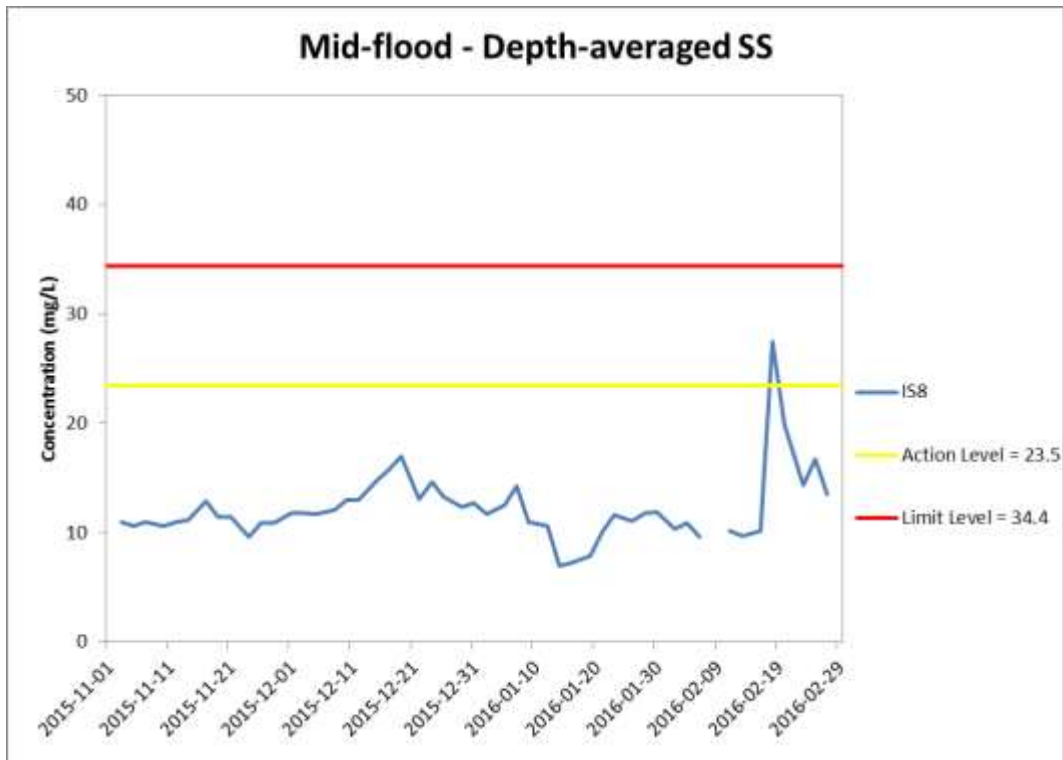


Figure J35 Impact Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-flood tide between 1 November 2015 and 29 February 2016 at IS8 and SR4.

WQM was cancelled on 9 February 2016 due to suspension of marine works. Results higher than Action Level but lower than 120% of upstream control station at the same tide on the same day are not regarded as exceedance. (Weather condition varied between sunny to rainy within the reporting period.)

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.

**Environmental
Resources
Management**



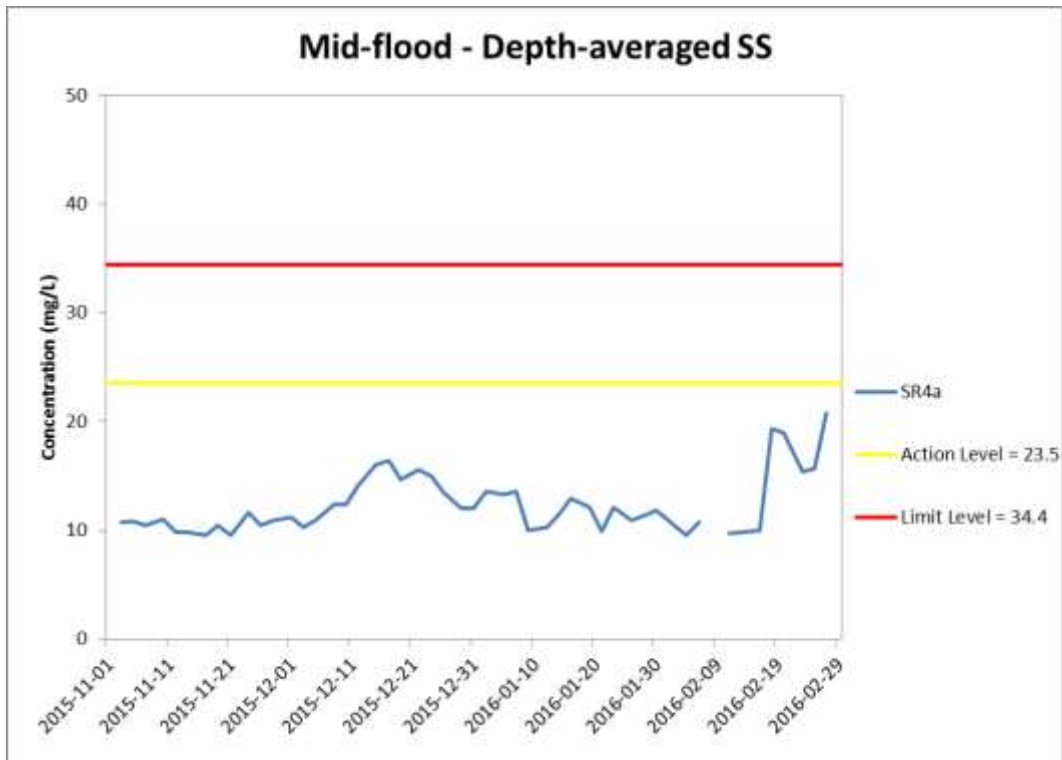


Figure J36 Impact Monitoring - Mean depth-averaged level of Suspended Solids (mg/L) during mid-flood tide between 1 November 2015 and 29 February 2016 at SR4a.

WQM was cancelled on 9 February 2016 due to suspension of marine works. (Weather condition varied between sunny to rainy within the reporting period.) 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.

**Environmental
Resources
Management**



Appendix K

Impact Dolphin Monitoring Survey Results

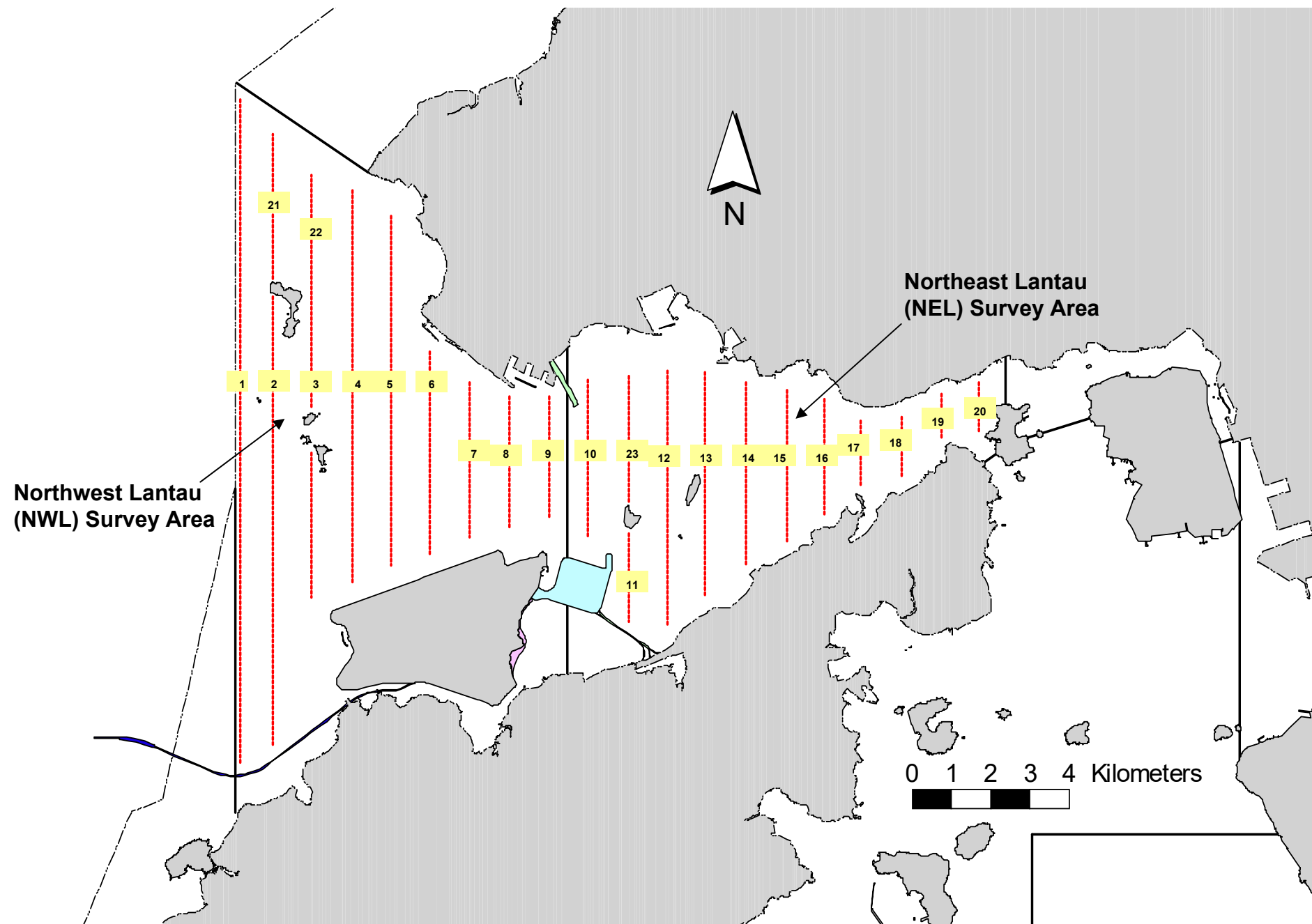


Figure 1. Transect Line Layout in Northwest and Northeast Lantau Survey Areas

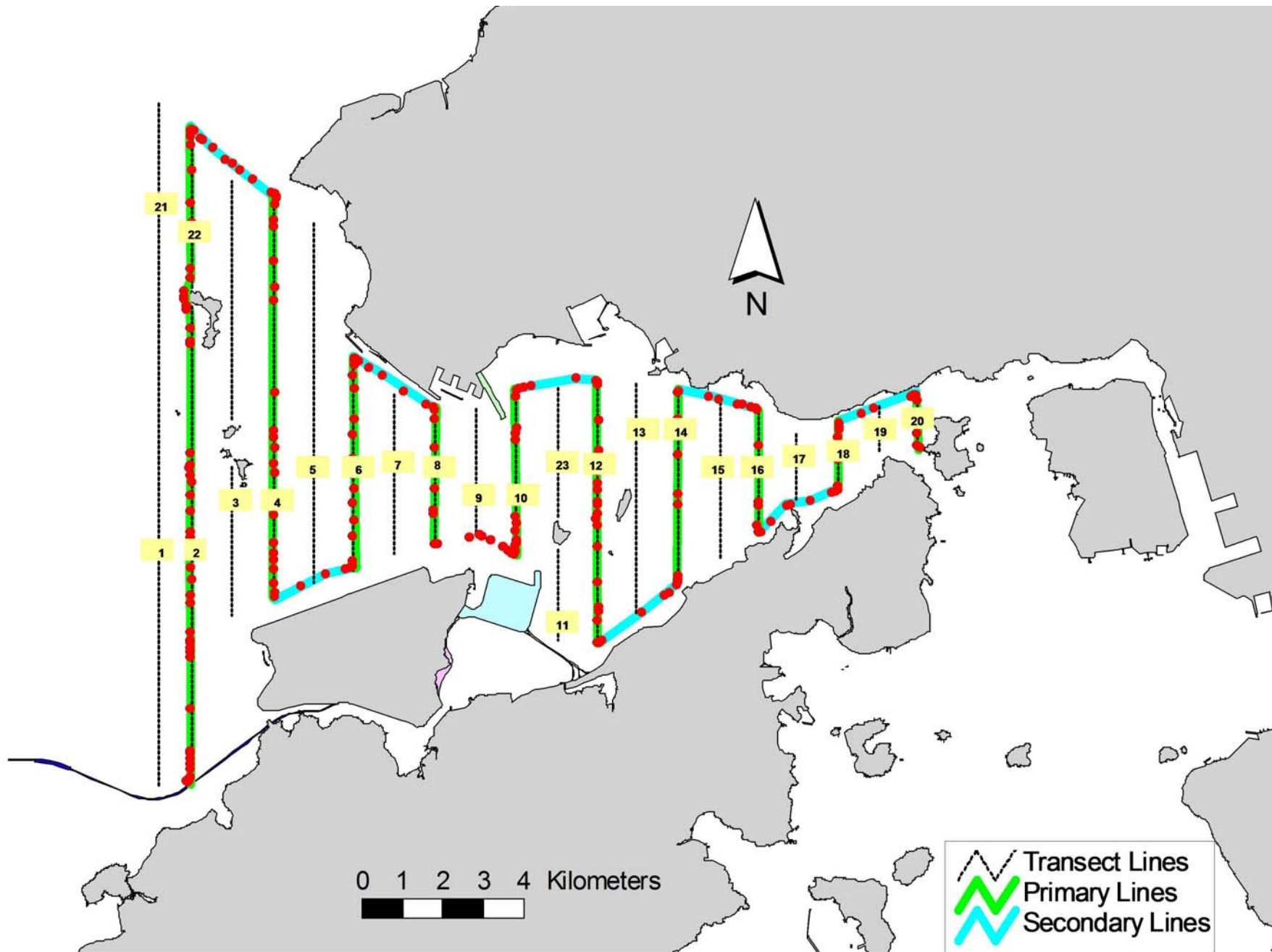


Figure 2. Survey Route on February 2nd, 2016 (from HKLR03 project)

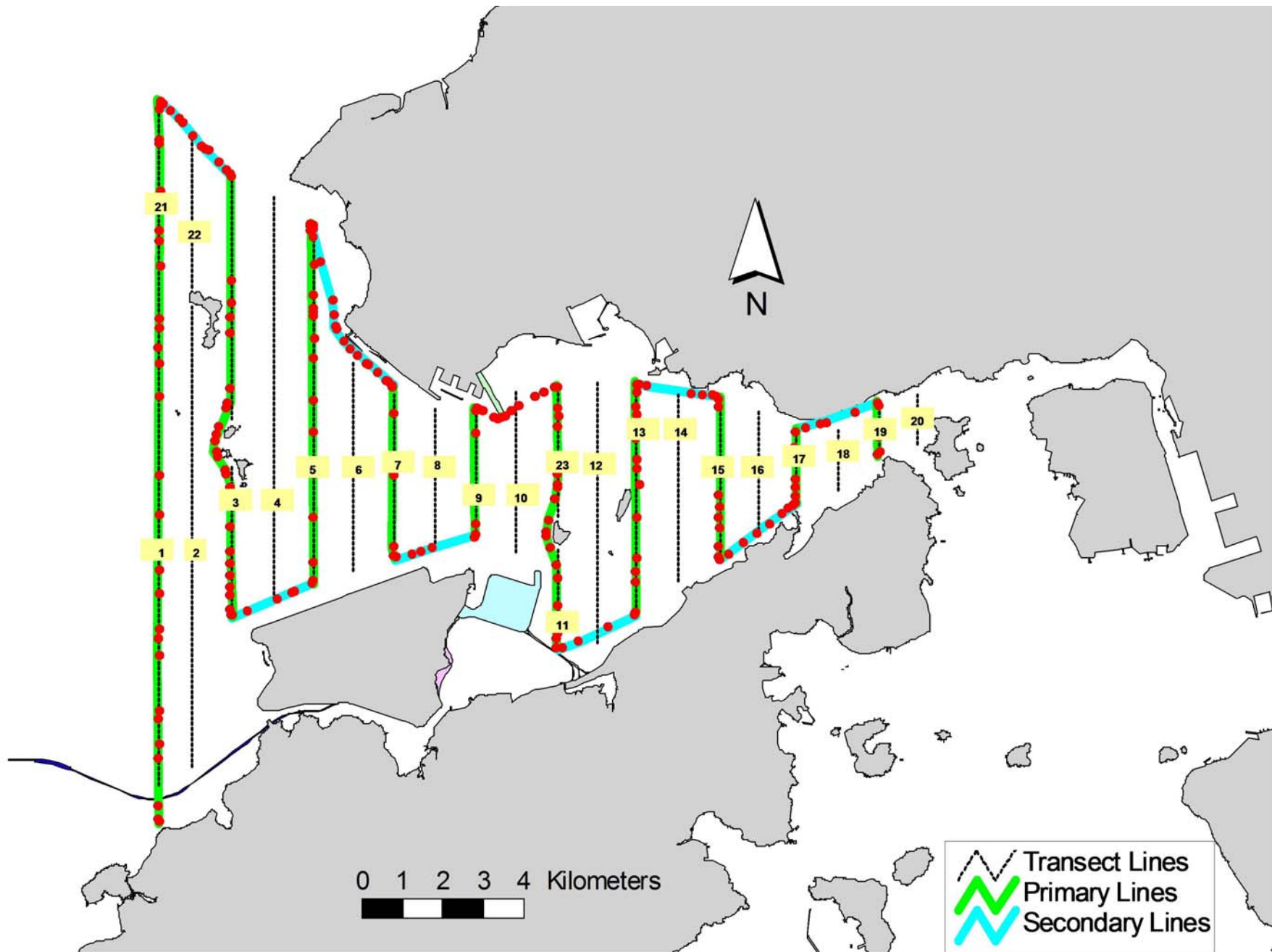


Figure 3. Survey Route on February 3rd, 2016 (from HKLR03 project)

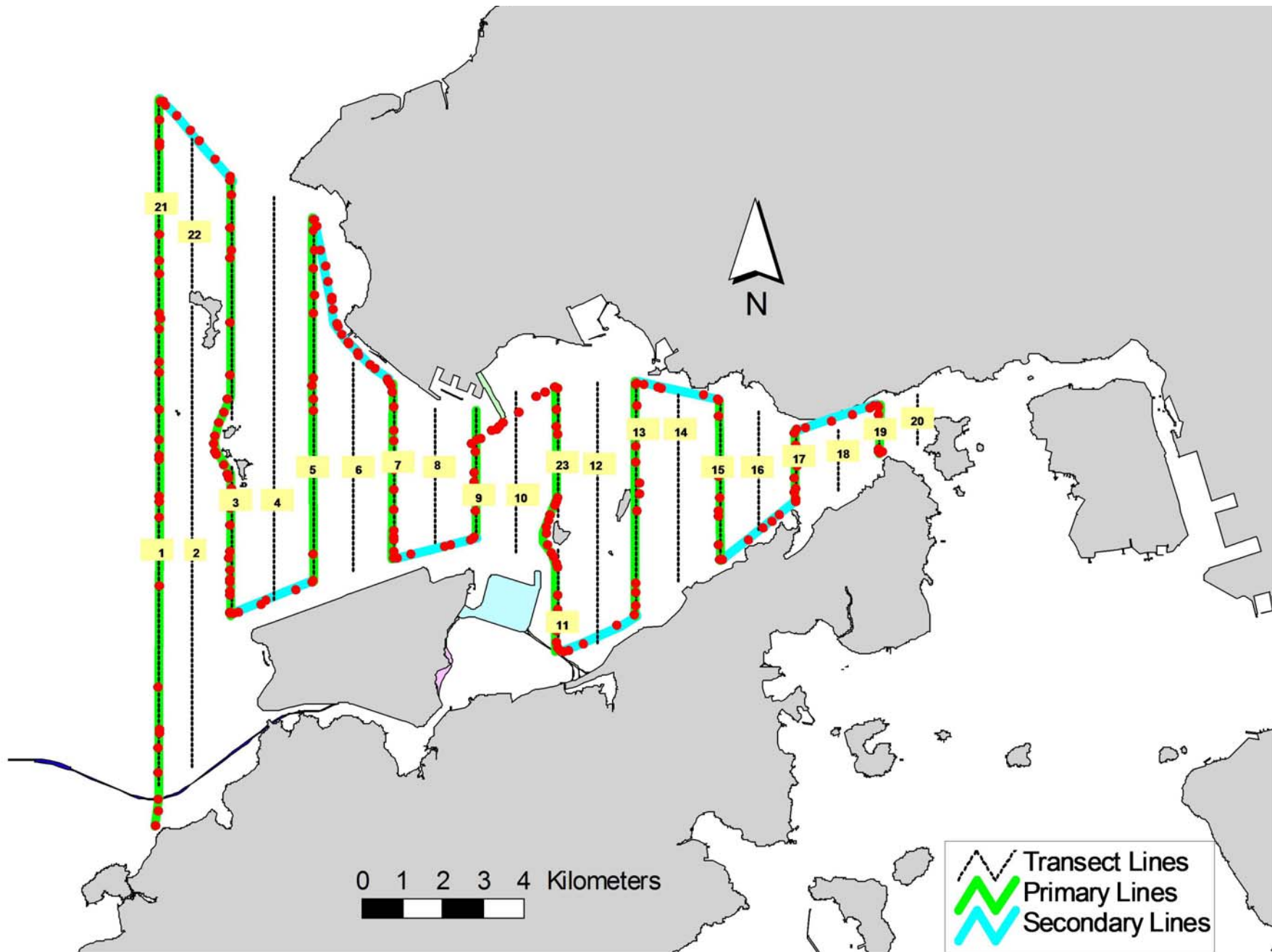


Figure 4. Survey Route on February 16th, 2016 (from HKLR03 project)

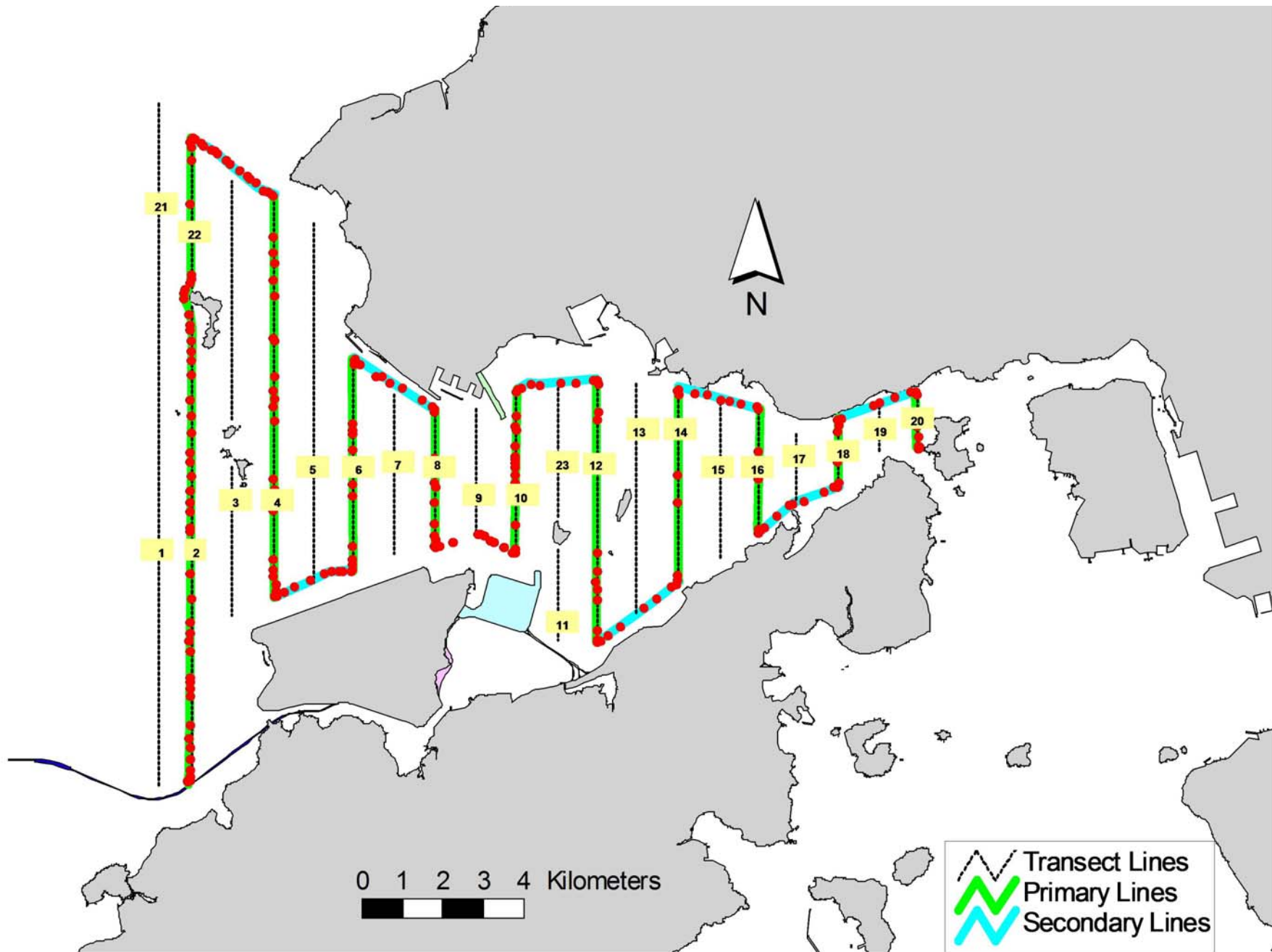


Figure 5. Survey Route on February 22nd, 2016 (from HKLR03 project)

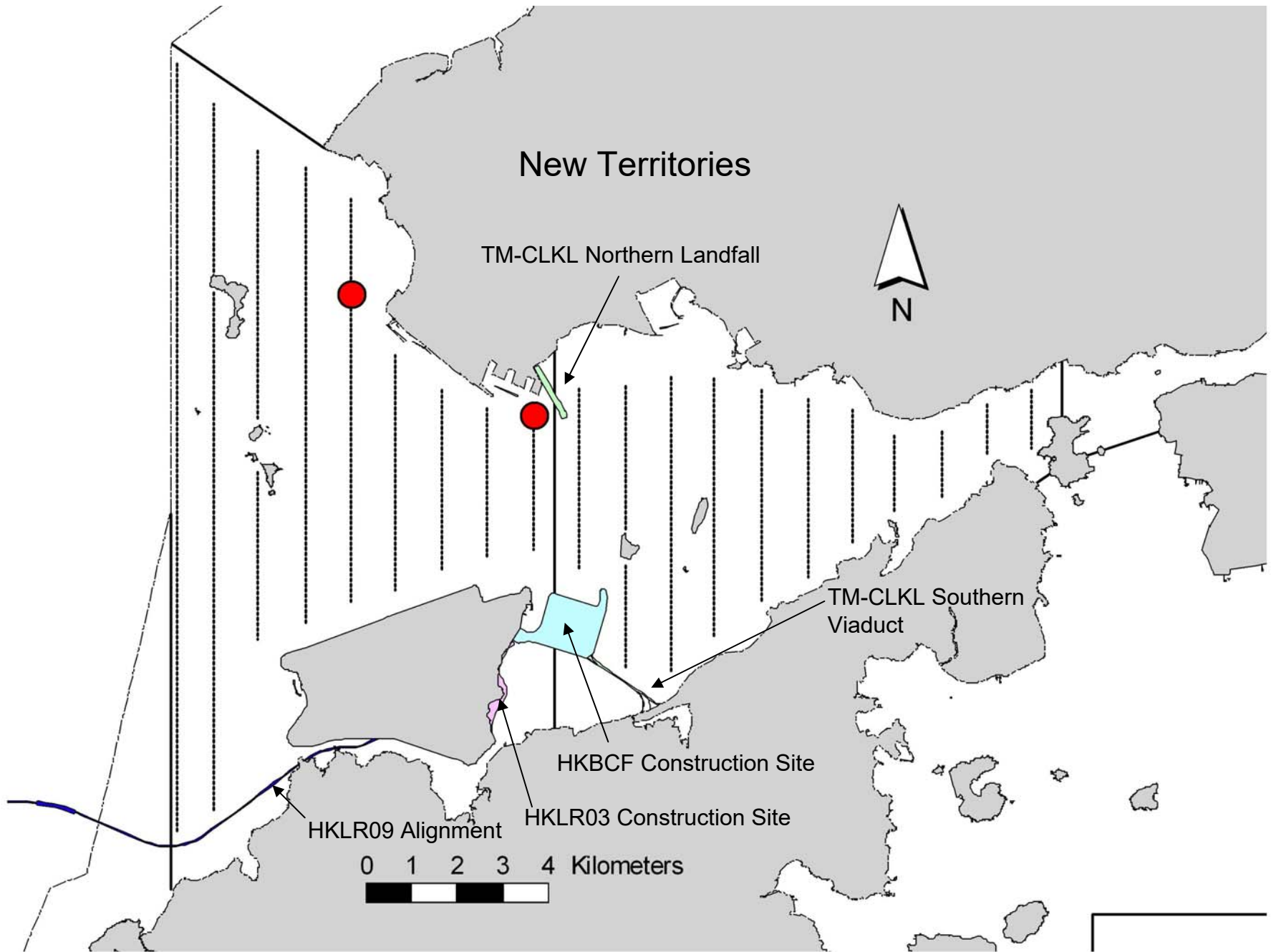


Figure 6. Distribution of Chinese White Dolphin Sightings During February 2016 HKLR03 Monitoring Surveys

Appendix I. HKLR03 Survey Effort Database (February 2016)

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

DATE	AREA	BEAU	EFFORT	SEASON	VESSEL	TYPE	P/S
2-Feb-16	NE LANTAU	2	20.46	WINTER	STANDARD31516	HKLR	P
2-Feb-16	NE LANTAU	2	6.05	WINTER	STANDARD31516	HKLR	S
2-Feb-16	NE LANTAU	3	4.59	WINTER	STANDARD31516	HKLR	S
2-Feb-16	NW LANTAU	2	6.80	WINTER	STANDARD31516	HKLR	P
2-Feb-16	NW LANTAU	3	26.28	WINTER	STANDARD31516	HKLR	P
2-Feb-16	NW LANTAU	2	2.32	WINTER	STANDARD31516	HKLR	S
2-Feb-16	NW LANTAU	3	4.50	WINTER	STANDARD31516	HKLR	S
3-Feb-16	NW LANTAU	2	21.30	WINTER	STANDARD31516	HKLR	P
3-Feb-16	NW LANTAU	3	19.74	WINTER	STANDARD31516	HKLR	P
3-Feb-16	NW LANTAU	2	10.82	WINTER	STANDARD31516	HKLR	S
3-Feb-16	NW LANTAU	3	2.24	WINTER	STANDARD31516	HKLR	S
3-Feb-16	NE LANTAU	1	1.82	WINTER	STANDARD31516	HKLR	P
3-Feb-16	NE LANTAU	2	14.48	WINTER	STANDARD31516	HKLR	P
3-Feb-16	NE LANTAU	1	2.49	WINTER	STANDARD31516	HKLR	S
3-Feb-16	NE LANTAU	2	8.08	WINTER	STANDARD31516	HKLR	S
16-Feb-16	NW LANTAU	2	6.05	WINTER	STANDARD31516	HKLR	P
16-Feb-16	NW LANTAU	3	31.35	WINTER	STANDARD31516	HKLR	P
16-Feb-16	NW LANTAU	4	3.00	WINTER	STANDARD31516	HKLR	P
16-Feb-16	NW LANTAU	2	5.70	WINTER	STANDARD31516	HKLR	S
16-Feb-16	NW LANTAU	3	4.80	WINTER	STANDARD31516	HKLR	S
16-Feb-16	NW LANTAU	4	3.10	WINTER	STANDARD31516	HKLR	S
16-Feb-16	NE LANTAU	1	1.10	WINTER	STANDARD31516	HKLR	P
16-Feb-16	NE LANTAU	2	15.25	WINTER	STANDARD31516	HKLR	P
16-Feb-16	NE LANTAU	1	1.40	WINTER	STANDARD31516	HKLR	S
16-Feb-16	NE LANTAU	2	8.16	WINTER	STANDARD31516	HKLR	S
16-Feb-16	NE LANTAU	3	1.09	WINTER	STANDARD31516	HKLR	S
22-Feb-16	NE LANTAU	2	20.26	WINTER	STANDARD31516	HKLR	P
22-Feb-16	NE LANTAU	2	9.08	WINTER	STANDARD31516	HKLR	S
22-Feb-16	NE LANTAU	3	1.86	WINTER	STANDARD31516	HKLR	S
22-Feb-16	NW LANTAU	2	14.88	WINTER	STANDARD31516	HKLR	P
22-Feb-16	NW LANTAU	3	16.99	WINTER	STANDARD31516	HKLR	P
22-Feb-16	NW LANTAU	2	2.43	WINTER	STANDARD31516	HKLR	S
22-Feb-16	NW LANTAU	3	5.10	WINTER	STANDARD31516	HKLR	S
22-Feb-16	NW LANTAU	4	0.30	WINTER	STANDARD31516	HKLR	S

Appendix II. HKLR03 Chinese White Dolphin Sighting Database (February 2016)

(Abbreviations: 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 Line)

DATE	STG #	TIME	HRD SZ	AREA	BEAU	PSD	EFFORT	TYPE	NORTHING	EASTING	SEASON	BOAT ASSOC.	P/S
3-Feb-16	1	1318	5	NW LANTAU	3	28	ON	HKLR	826580	808505	WINTER	NONE	P
16-Feb-16	1	1414	6	NW LANTAU	3	145	ON	HKLR	824082	812518	WINTER	NONE	P

Appendix III. Individual dolphins identified during HKLR03 monitoring surveys in February 2016

ID#	DATE	STG#	AREA
NL48	03/02/16	1	NW LANTAU
	16/02/16	1	NW LANTAU
NL136	16/02/16	1	NW LANTAU
NL182	16/02/16	1	NW LANTAU
NL210	03/02/16	1	NW LANTAU
NL261	03/02/16	1	NW LANTAU
NL284	16/02/16	1	NW LANTAU
NL285	03/02/16	1	NW LANTAU
	16/02/16	1	NW LANTAU
NL320	03/02/16	1	NW LANTAU
WL17	16/02/16	1	NW LANTAU



Appendix IV. Photographs of Identified Individual Dolphins in February 2016 (HKLR03)



Appendix IV. (cont'd)

Appendix L

Event Action Plan

Appendix L1 Event/ Action Plan for Air Quality

EVENT	ET ⁽¹⁾	ACTION		
		IEC ⁽¹⁾	SOR ⁽¹⁾	Contractor
Action Level				
1. Exceedance for one sample	<ol style="list-style-type: none"> 1. Identify the source. 2. Inform the IEC and the SOR. 3. Repeat measurement to confirm finding. 4. Increase monitoring frequency to daily. 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by the ET. 2. Check Contractor's working method. 	<ol style="list-style-type: none"> 1. Notify Contractor. 	<ol style="list-style-type: none"> 1. Rectify any unacceptable practice 2. Amend working methods if appropriate
2. Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing. 2. Notify the Contractor. 3. Ensure remedial measures properly implemented. 	<ol style="list-style-type: none"> 1. Submit proposals for remedial actions to IEC within 3 working days of notification 2. Implement the agreed proposals 3. Amend proposal if appropriate

EVENT	ET ⁽¹⁾	ACTION		
		IEC ⁽¹⁾	SOR ⁽¹⁾	Contractor
Limit Level				
1. Exceedance for one sample	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing. 2. Notify the Contractor. 3. Ensure remedial measures are properly implemented. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance 2. Submit proposals for remedial actions to IEC within 3 working days of notification 3. Implement the agreed proposals 4. Amend proposal if appropriate
2. Exceedance for two or more consecutive samples	<ol style="list-style-type: none"> 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 	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance. 2. Submit proposals for remedial actions to IEC within 3 working days of notification. 3. Implement the agreed proposals. 4. Resubmit proposals if problem still not under control. 5. Stop the relevant 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	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 1. Review the analysed results submitted by the ET. 2. Review the proposed remedial measures by the Contractor and advise the SOR accordingly. 3. Supervise the implementation of remedial measures. 	<ol style="list-style-type: none"> 1. Confirm receipt of notification of failure in writing. 2. Notify the Contractor. 3. Require the Contractor to propose remedial measures for the analysed noise problem. 4. Ensure remedial measures are properly implemented. 	<ol style="list-style-type: none"> 1. Submit noise mitigation proposals to IEC 2. Implement noise mitigation proposals 	
Limit Level	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 1. Take immediate action to avoid further exceedance 2. Submit proposals for remedial actions to IEC within 3 working days of notification 3. Implement the agreed proposals 4. Resubmit proposals if problem still not under control 5. Stop the relevant 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	<ol style="list-style-type: none"> Repeat in situ measurement on next day of exceedance to confirm findings; Identify source(s) of impact; Inform IEC, contractor and SOR; Check monitoring data, all plant, equipment and Contractor's working methods. 	<ol style="list-style-type: none"> Check monitoring data submitted by ET and Contractor's working methods. 	<ol style="list-style-type: none"> Confirm receipt of notification of non-compliance in writing; Notify Contractor. 	<ol style="list-style-type: none"> Inform the SOR and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Amend working methods if appropriate.
Action level being exceeded by two or more consecutive sampling days	<ol style="list-style-type: none"> Repeat measurement on next day of exceedance to confirm findings; Identify source(s) of impact; Inform IEC, contractor, SOR and EPD; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measures with IEC, SOR and Contractor; Ensure mitigation measures are implemented; Increase the monitoring frequency to daily until no exceedance of Action level; 	<ol style="list-style-type: none"> Check monitoring data submitted by ET and Contractor's working method; Discuss with ET and Contractor on possible remedial actions; Review the proposed mitigation measures submitted by Contractor and advise the SOR accordingly; Supervise the implementation of mitigation measures. 	<ol style="list-style-type: none"> Discuss with IEC on the proposed mitigation measures; Ensure mitigation measures are properly implemented; Assess the effectiveness of the implemented mitigation measures. 	<ol style="list-style-type: none"> Inform the Supervising Officer and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment and consider changes of working methods; Submit proposal of additional mitigation measures to SOR within 3 working days of notification and discuss with ET, IEC and SOR; Implement the agreed mitigation measures.
Limit level being exceeded by one sampling day	<ol style="list-style-type: none"> Repeat measurement on next day of exceedance to confirm findings; 	<ol style="list-style-type: none"> Check monitoring data submitted by ET and Contractor's working method; 	<ol style="list-style-type: none"> Confirm receipt of notification of failure in writing; 	<ol style="list-style-type: none"> Inform the SOR and confirm notification of the non-compliance in writing;

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

Appendix L4 Implementation of Event-Action Plan for Dolphin Monitoring

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

Appendix L5 Event and Action Plan on Dolphin Acoustic Behaviour

EVENT	ACTION			
	ET Leader	IEC	SO	Contractor
<p><u>Action Level</u></p> <p>With the numerical values presented in <i>Table 5.7 of Baseline Monitoring Report</i>, 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 <i>Table 5.8 of Baseline Monitoring Report</i>), 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</p>	<ol style="list-style-type: none"> 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 	<ol style="list-style-type: none"> 1. Check monitoring data submitted by ET and Contractor; 2. Discuss monitoring with the ET and the Contractor; 	<ol style="list-style-type: none"> 1. Discuss with the IEC the repeat monitoring and any other measures proposed by the ET; 2. Make agreement on measures to be implemented. 	<ol style="list-style-type: none"> 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
<p><u>Limit Level</u></p> <p>With the numerical values presented in Table 5.7 of <i>Baseline Monitoring Report</i>, 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 <i>Baseline Monitoring Report</i>), 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</p>	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 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. 	<ol style="list-style-type: none"> 1. Discuss with the IEC the repeat monitoring and any other measures proposed by the ET; 2. Make agreement on measures to be implemented. 	<ol style="list-style-type: none"> 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 2016 (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	1.941	0.263	0.606	-	1.334	-	-	-	-	-	69.400	-	-	0.105	-	-
Feb	0.760	0.162	0.069	-	0.692	-	-	-	-	-	85.890	-	-	0.112	-	-
Mar																
Apr																
May																
Jun																
SUB-TOTAL	2.701	0.425	0.675	-	2.026	0.000	-	-	-	-	155.290	-	0.000	0.217	-	-
Jul																
Aug																
Sep																
Oct																
Nov																
Dec																
TOTAL	2.701	0.425	0.675	-	2.026	-	-	-	-	-	155.290	-	-	0.217	-	-

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 and Reused in the Contract include 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	1	4

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

Reporting Period	Cumulative Statistics		
	Complaints	Notifications of Summons	Successful Prosecutions
This Reporting Month (February 2016)	0	0	0
Total No. received since project commencement	4	0	0