

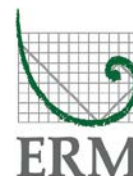
**Contract No. HY/2012/07
Tuen Mun – Chek Lap Kok Link –
Southern Connection Viaduct Section**

Forty-Eighth Monthly EM&A Report

9 November 2017

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

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Contract No. HY/2012/07


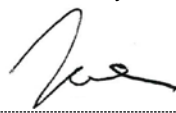


Tuen Mun – Chek Lap Kok Link – Southern Connection Viaduct Section

Environmental Resources Management

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Forty-Eighth Monthly EM&A Report

Document Code: 0215660_48th Monthly EM&A_20171109.doc

Client: Gammon		Project No: 0215660			
Summary: This document presents the Forty-Eighth Monthly EM&A Report for Tuen Mun – Chek Lap Kok Link – Southern Connection Viaduct Section.		Date: 9 November 2017			
		Approved by: 			
		Mr Craig Reid Partner			
		Certified by: 			
		Mr Jovy Tam ET Leader			
	Forty-Eighth Monthly EM&A Report	VAR	JT	CAR	9/11/17
Revision	Description	By	Checked	Approved	Date
<p>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.</p> <p>We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.</p>		<p>Distribution</p> <p><input type="checkbox"/> Internal</p> <p><input checked="" type="checkbox"/> Public</p> <p><input type="checkbox"/> Confidential</p>			
		 			



Ref.: HYDHZMBEEM00_0_5981L.17

10 November 2017

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**

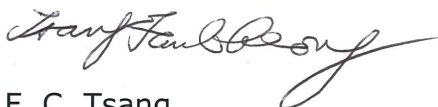
**Contract No. HY/2012/07 TM-CLKL Southern Connection Viaduct
Section
48th Monthly EM&A Report for October 2017 (EP-354/2009/D)**

Reference is made to the Monthly Environmental Monitoring and Audit (EM&A) Report (Oct. 2017) (ET's ref.: "0215660_48th Monthly EM&A_20171109.doc" dated 9 Nov. 2017) certified by the ET Leader and provided to us via e-mail on 10 Nov. 2017.

Please be informed that we have no adverse comments on the captioned Report. We write to verify the captioned submission in accordance with Condition 4.4 of EP-354/2009/D. Please be reminded that our verification of this report does not release any obligations of the ET to comply with the EM&A Manual or the approved monitoring methodologies.

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

Yours sincerely,



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

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

Internal: DY, YH, ENPO Site

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- Appendix G Impact Air Quality Monitoring Results and Graphical Presentation
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- Appendix M Monthly Summary of Waste Flow Table
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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.

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

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

This is the Forty-eighth Monthly EM&A report presenting the EM&A works carried out during the period from 1 to 31 October 2017 for the Southern Connection Viaduct Section in accordance with the Updated EM&A Manual of the TM-CLK Link Project. As informed by the Contractor, major activities in the reporting period included:

Land-based Works

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

- Launching gantry operation
- 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
Water Quality Monitoring	13 sessions
Noise Monitoring	6 sessions
Impact Dolphin Monitoring	2 sessions
Joint Environmental Site Inspection	5 sessions

Breaches of Action and Limit Levels for Air Quality

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

Breaches of Action and Limit Levels for Noise

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

Breaches of Action and Limit Levels for Water Quality

Five (5) Action Level of Dissolved Oxygen (DO) exceedances were recorded for water quality impact monitoring in the reporting month.

Impact Dolphin Monitoring

During this month of dolphin monitoring, no unacceptable impact from the construction activities of the TM-CLKL Southern Connection Viaduct Section on Indo-Pacific humpback dolphin *Sousa chinensis* (i.e. Chinese White Dolphin) was noticeable from general observations. Due to monthly variation in dolphin occurrence within the Study Area, it would be more appropriate to draw conclusion on whether any impacts on dolphins have been detected related to the construction activities of the TM-CLKL Southern Connection Viaduct Section in the quarterly EM&A reports, in which comparison on distribution, group size and encounter rates of dolphins between the quarterly impact monitoring period and baseline monitoring period will be made.

Daily marine mammal exclusion zone monitoring was undertaken during the period of marine works under this Contract. No sighting of the Chinese

White Dolphin was recorded in October 2017 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 November 2017 include the following:

Land-based Works

- Pier construction;
- Re-alignment of Cheung Tung Road;
- Road works along North Lantau Highway;
- Launching gantry operation
- 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 November 2017 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.

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

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

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

1.2 SCOPE OF REPORT

This is the Forty-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 October 2017.

1.3 ORGANIZATION STRUCTURE

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

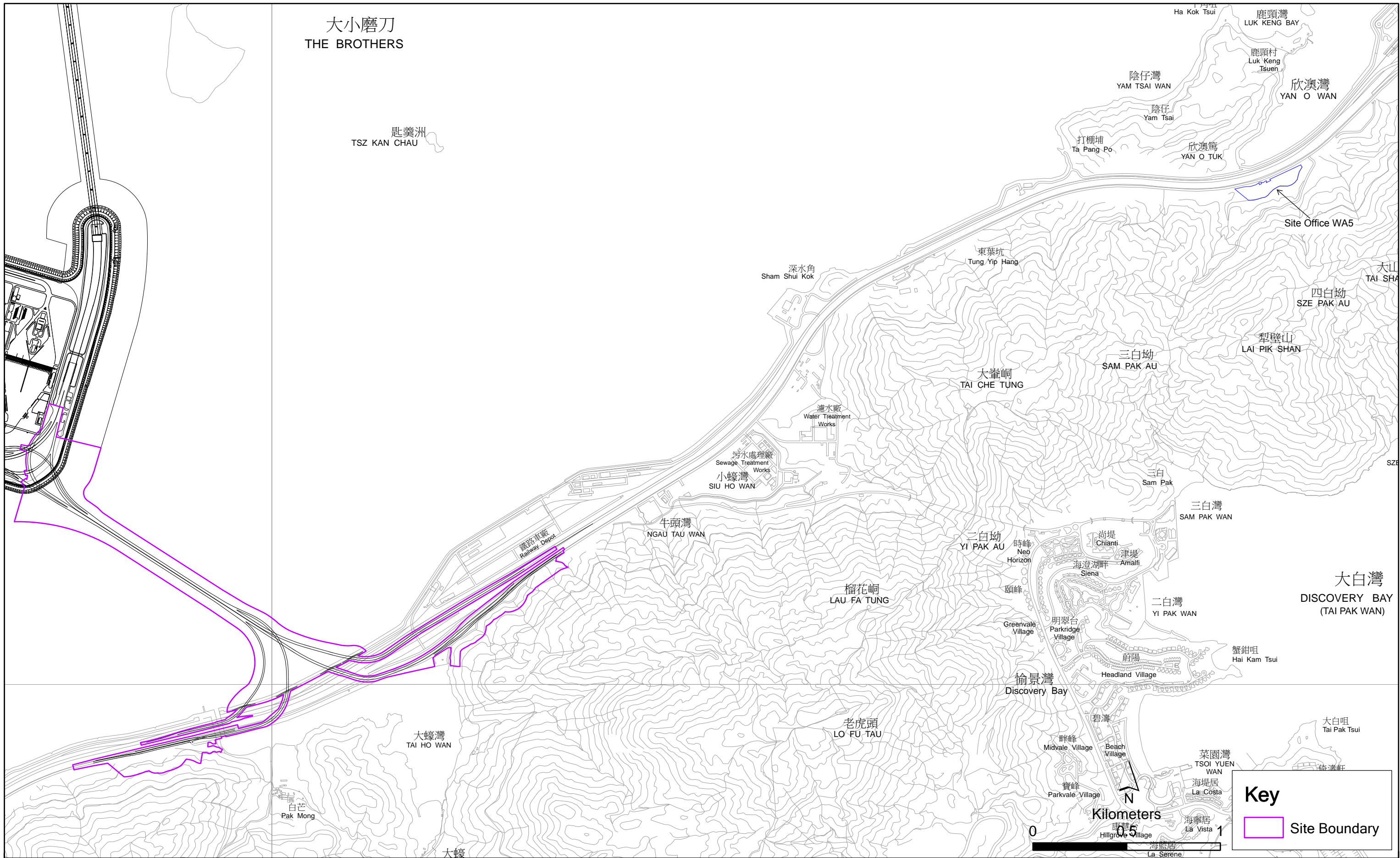
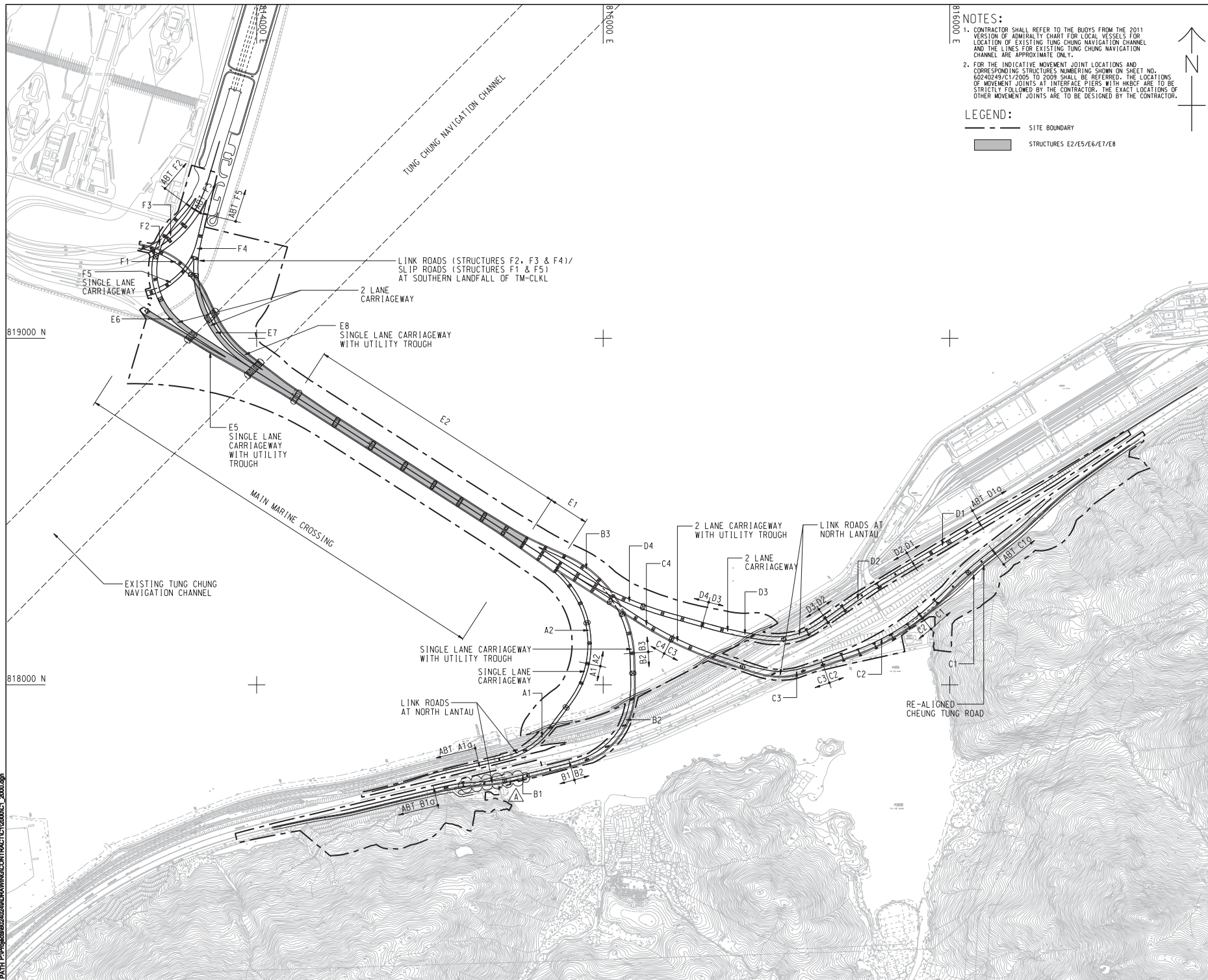


Figure 1.1

General Layout Plan of the Project



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/C1/2005 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
 港務局
 港務局工程處
 Hong Kong - Zhuhai - Hainan Bridge
 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

SCALE	DIMENSION UNIT
A1 : 6000	METRES

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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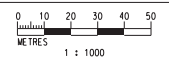


KEY PLAN

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- LEGEND**
- SITE BOUNDARY
 - GF1 FAULT
 - EXISTING G.I.-STATIONS :
 - ⊕ BOREHOLE BY GIU DATA EXCLUDING VC
 - ⊕ BOREHOLE BY GCL CONTRACT HY/2012/04
 - ⊕ BOREHOLE BY GCL CONTRACT NL8/97
 - ⊕ BOREHOLE BY GCL CONTRACT HY/2009/23
 - ⊕ TRIAL PIT BY GCL CONTRACT HY/2012/04
 - SLOPE STRIPPING BY GCL CONTRACT HY/2012/04
 - PROPOSED G.I.-STATIONS :
 - ⊕ PBH01 PROPOSED BOREHOLE
 - ⊕ TP01 PROPOSED TRIAL PIT
 - ⊕ CH01 PROPOSED COREHOLE
 - SS01 SS02 PROPOSED SLOPE STRIPPING

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



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

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Checked	DS	Approved	DOP
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Client: **路政署 HIGHWAYS DEPARTMENT**
 路政署 香港特別行政區運輸局
 Hong Kong - Zhuhai - Macao Bridge
 Hong Kong Project Management Office

Supervising Officer: **AECOM**
 Contractor: **Gammon**

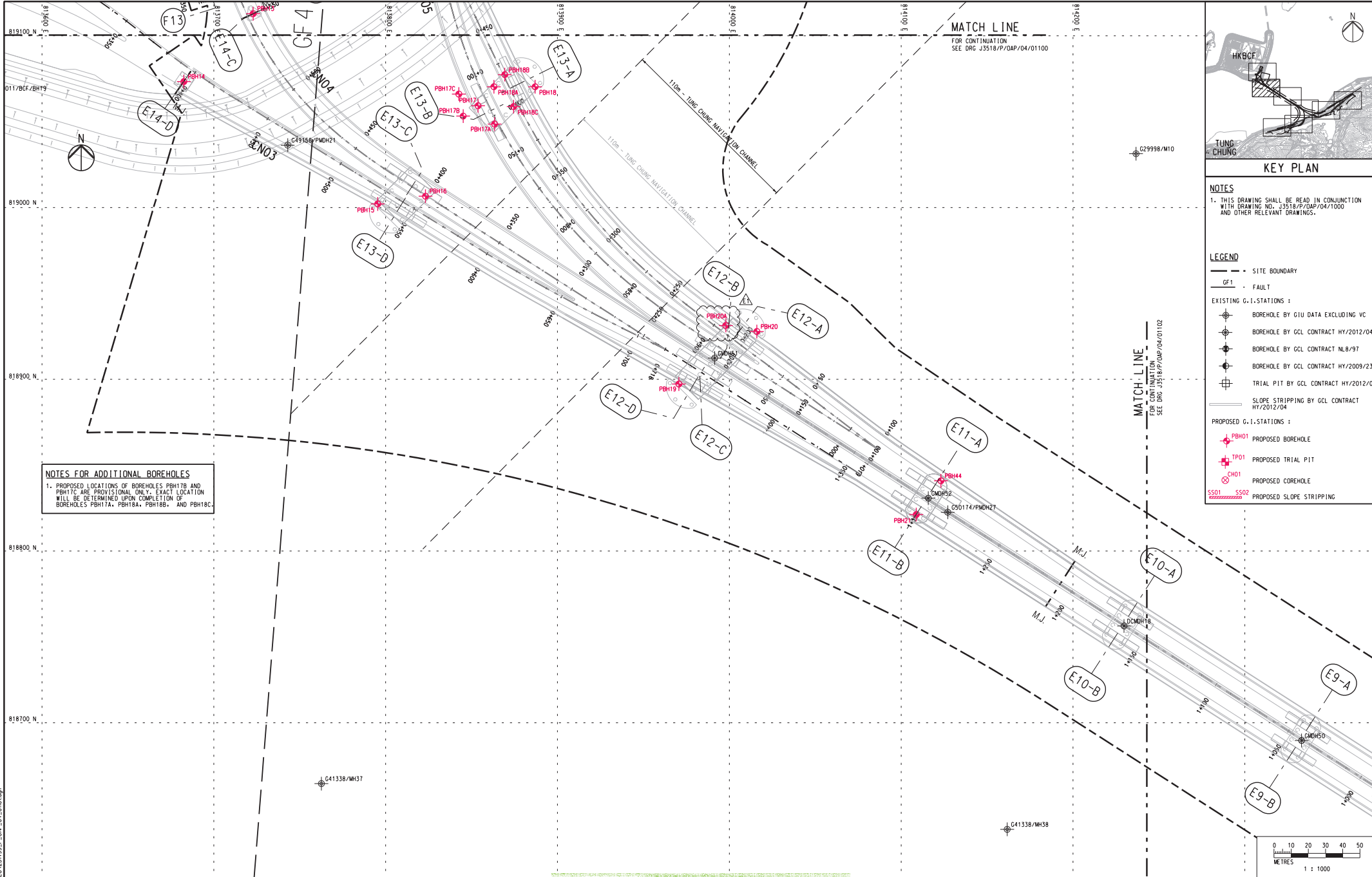
Project Title
Contract No. HY/2012/07
Tuen Mun - Chek Lap Kok Link
Southern Connection Viaduct Section

Originator: **ARUP**

Drawing title
Figure 1.2b

Drawing no. **J3518/P/OAP/04/01100** Rev. **C**

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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.

NOTES
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 - ⊕ BOREHOLE BY GCL CONTRACT NLB/97
 - ⊕ BOREHOLE BY GCL CONTRACT HY/2009/23
 - ⊕ TRIAL PIT BY GCL CONTRACT HY/2012/04
 - SLOPE STRIPPING BY GCL CONTRACT HY/2012/04
 - PROPOSED G.I. STATIONS:
 - ★ PBH01 PROPOSED BOREHOLE
 - ⊕ TP01 PROPOSED TRIAL PIT
 - ⊕ CH01 PROPOSED COREHOLE
 - SS01 SS02 PROPOSED SLOPE STRIPPING

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

Drawn	RL	Date	07/13
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Client: **路政署 HIGHWAYS DEPARTMENT**
 香港渠務處 香港工程處 港務局
 Hong Kong - Zhuhai - Macao Bridge
 Hong Kong Project Management Office

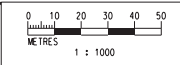
Supervising Officer: **AECOM**
 Contractor: **Gammon**

Project Title
Contract No. HY/2012/07
Tuen Mun - Chek Lap Kok Link
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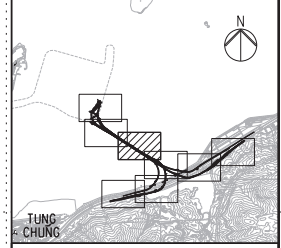
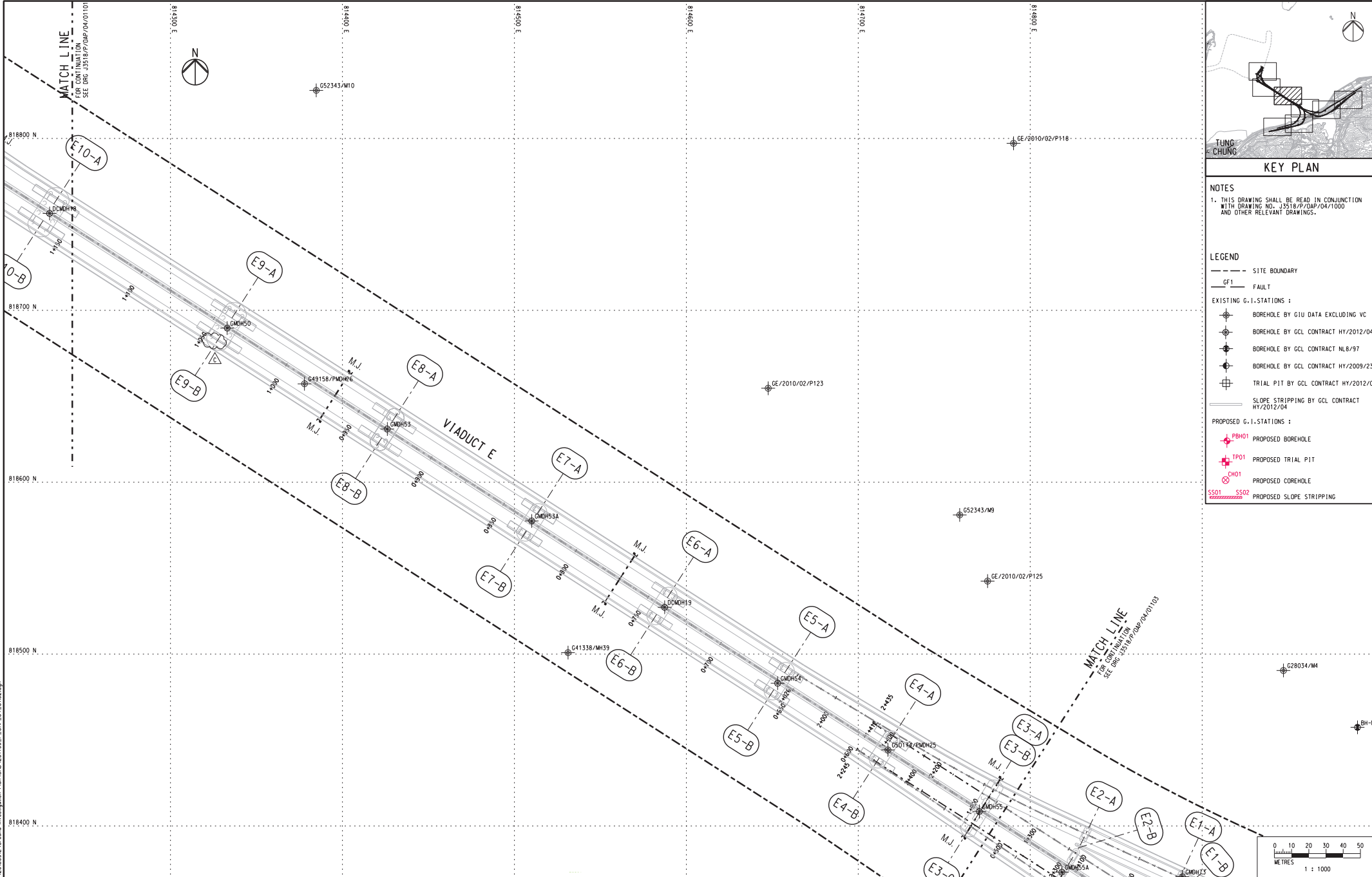
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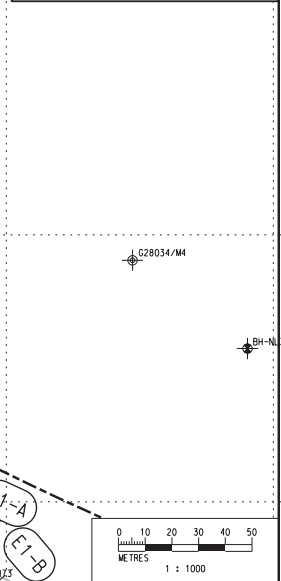
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B	SUBMISSION	RC	07/13				
C	SUBMISSION	RC	09/13				

Client: 路政署 HIGHWAYS DEPARTMENT
 香港港大橋香港工程管理有限公司
 Hong Kong Southern Cross Harbour Bridge
 Hong Kong Project Management Office

Supervising Officer: AECOM
 Contractor: Gammon
 Originator: ARUP

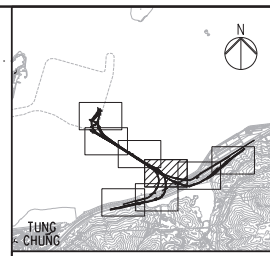
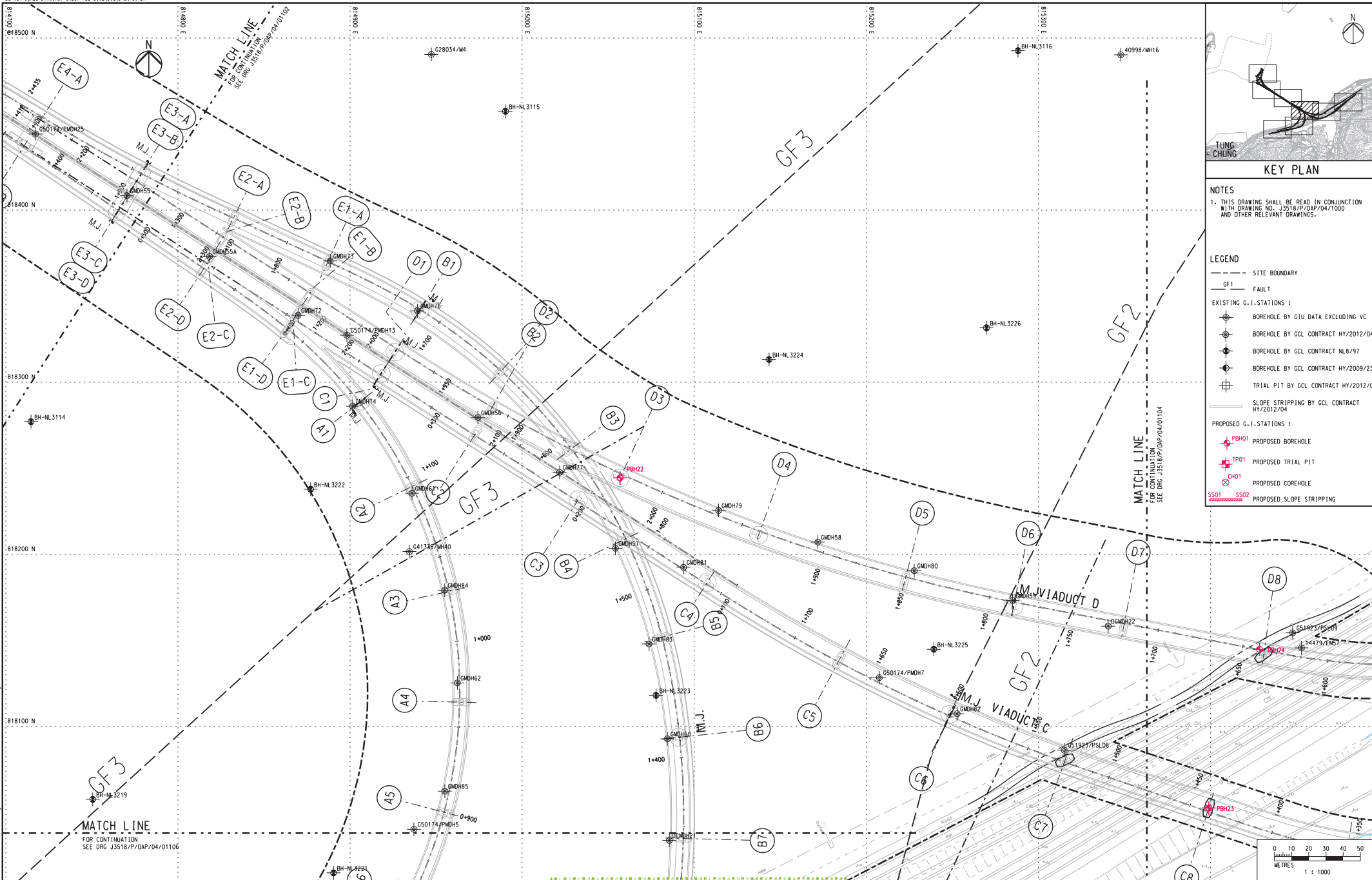
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 Tuen Mun - Chek Lap Kok Link
 Southern Connection Viaduct Section

Drawing title: **Figure 1.2d**

Drawing no. J3518/P/OAP/04/01102 Rev. C

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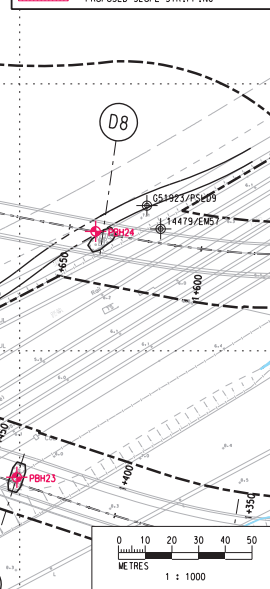


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- PROPOSED G.I.-STATIONS :
 - ⊕ PBH01 PROPOSED BOREHOLE
 - ⊕ TP01 PROPOSED TRIAL PIT
 - ⊕ CH01 PROPOSED COREHOLE
 - SS01 SS02 PROPOSED SLOPE STRIPPING



Printed by : 13/9/2013
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 Record : 20130927 Ground Investigation Plan CAD\23498_P_OAP_04_0103.dwg

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

Checked	Approved
DS	DOP

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

Client

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

Project Title

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

Supervising Officer

Contractor

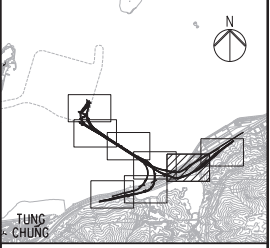
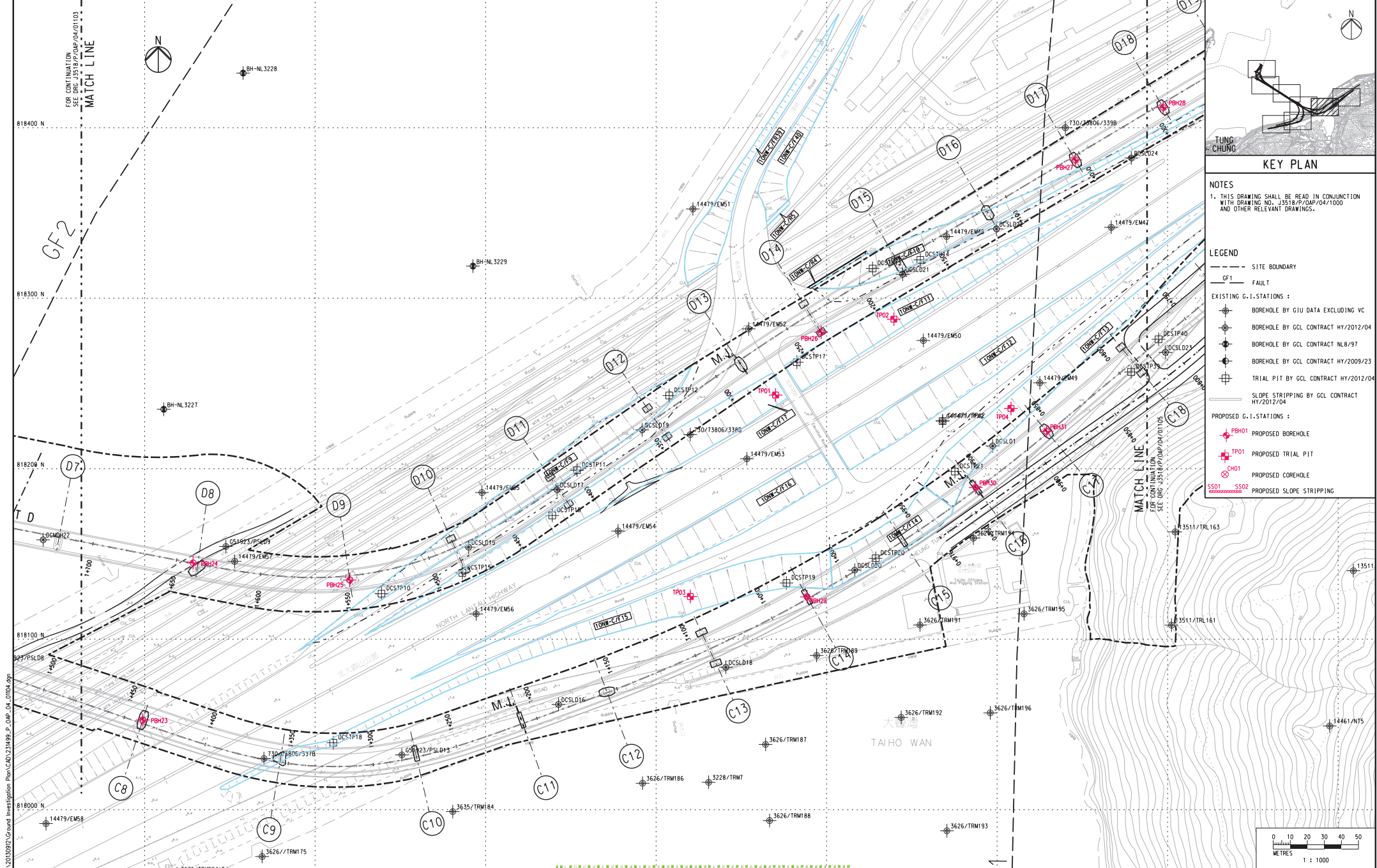
Originator

Drawing title

Figure 1.2e

Drawing no. J3518/P/OAP/04/01103 Rev. C

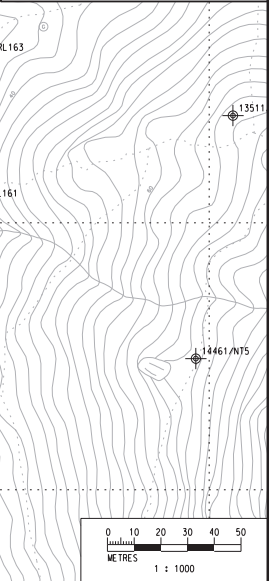
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KEY PLAN

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

- LEGEND**
- - - SITE BOUNDARY
 - GF1 FAULT
 - EXISTING G.I. STATIONS :
 - ⊕ BOREHOLE BY GIU DATA EXCLUDING VC
 - ⊕ BOREHOLE BY GCL CONTRACT HY/2012/04
 - ⊕ BOREHOLE BY GCL CONTRACT NL6/97
 - ⊕ 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



Printed by : 12/09/2013
 File name : J:\3518\99\RECORD\20120927\Ground Investigation Plan\CAD\231498_P_OAP_04_01100.dwg

Rev	Description	By	Date	Rev	Description	By	Date	Drawn	Date
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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

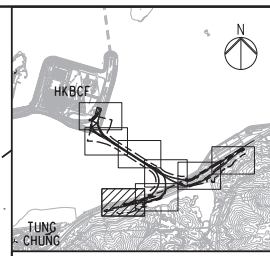
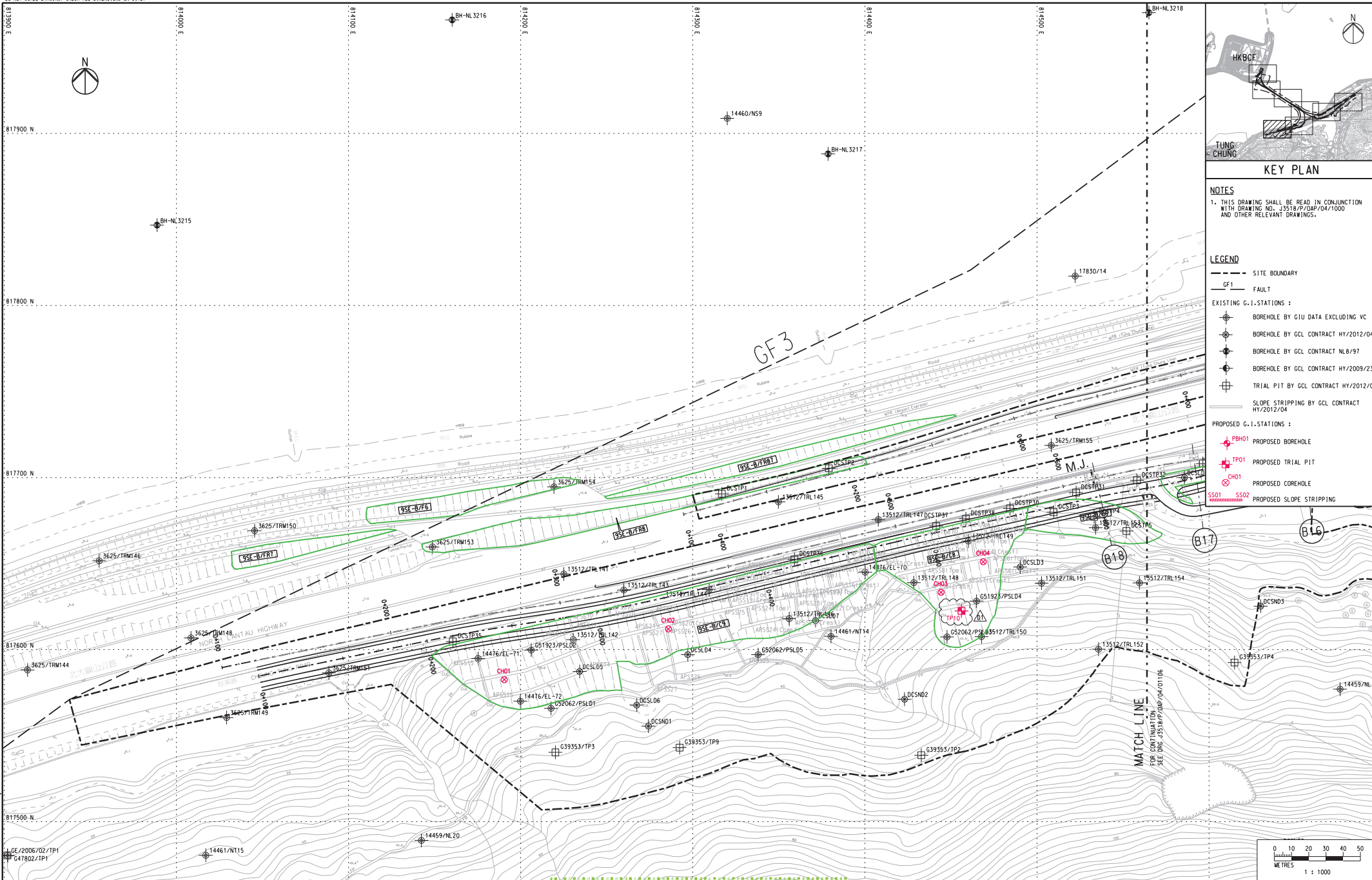
Originator

Drawing title

Figure 1.2f

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

DO NOT SCALE DRAWING. CHECK ALL DIMENSIONS ON SITE.



KEY PLAN

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

- LEGEND**
- SITE BOUNDARY
 - GF1 FAULT
 - EXISTING G.I. STATIONS :
 - ⊕ BOREHOLE BY GIU DATA EXCLUDING VC
 - ⊕ BOREHOLE BY GCL CONTRACT HY/2012/04
 - ⊕ BOREHOLE BY GCL CONTRACT NL6/97
 - ⊕ 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

Printed by : 07/11/2013
 File name : J:\3518\p\oap\04\1000\dwg

1. 2006/02/1P1
 2. 2006/02/1P1

Rev	Description	By	Date	Rev	Description	By	Date	Drawn	Date	Client
A	SUBMISSION	RC	07/13					RL	07/13	路政署 HIGHWAYS DEPARTMENT 港珠澳大桥香港工程管理局 Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office
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	

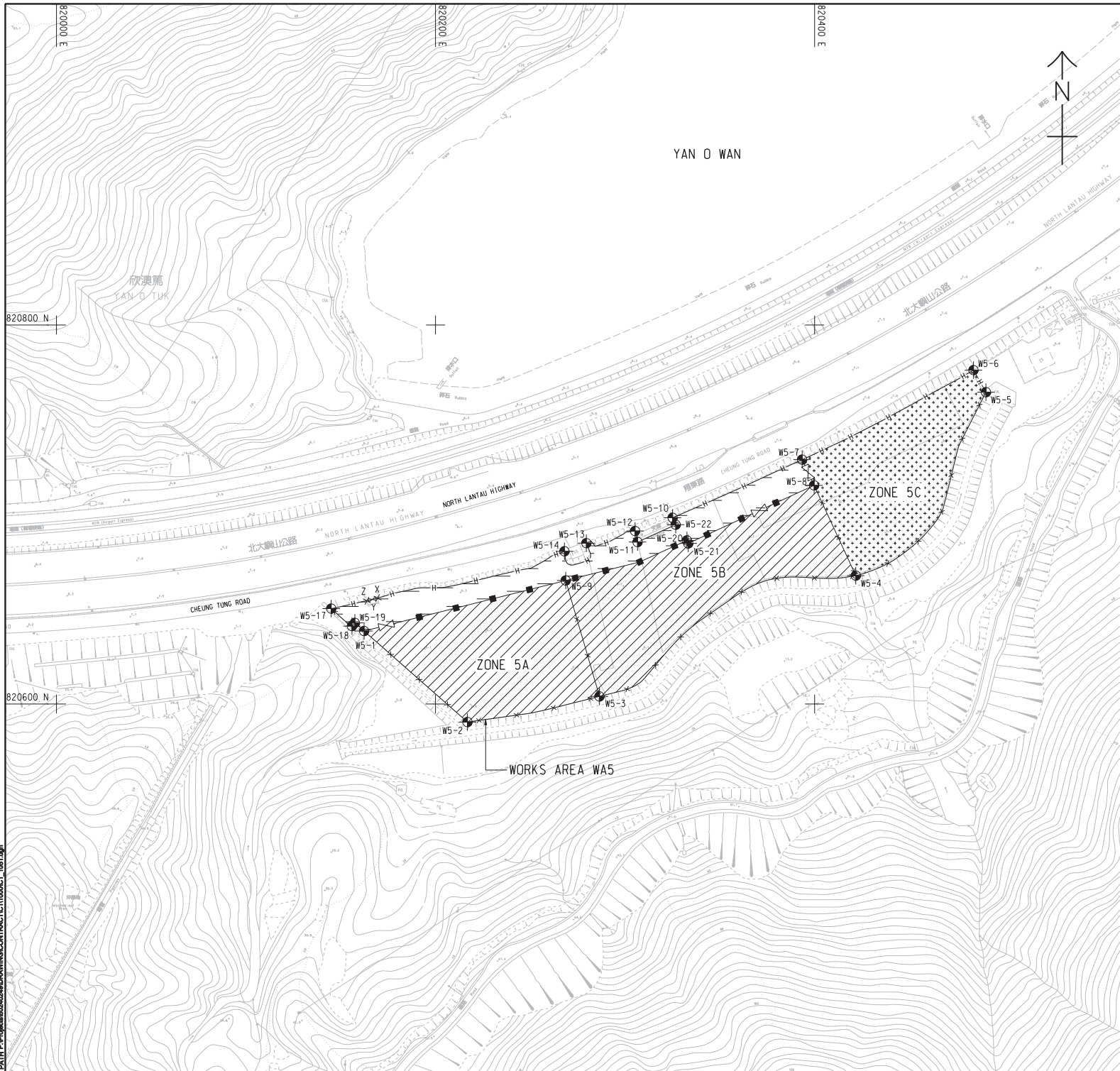
路政署
HIGHWAYS DEPARTMENT
 港珠澳大桥香港工程管理局
 Hong Kong - Zhuhai - Macao Bridge
 Hong Kong Project Management Office

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

Drawing title
Figure 1.2g

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

Supervising Officer **AECOM** Contractor **Gammon** Originator **ARUP**



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

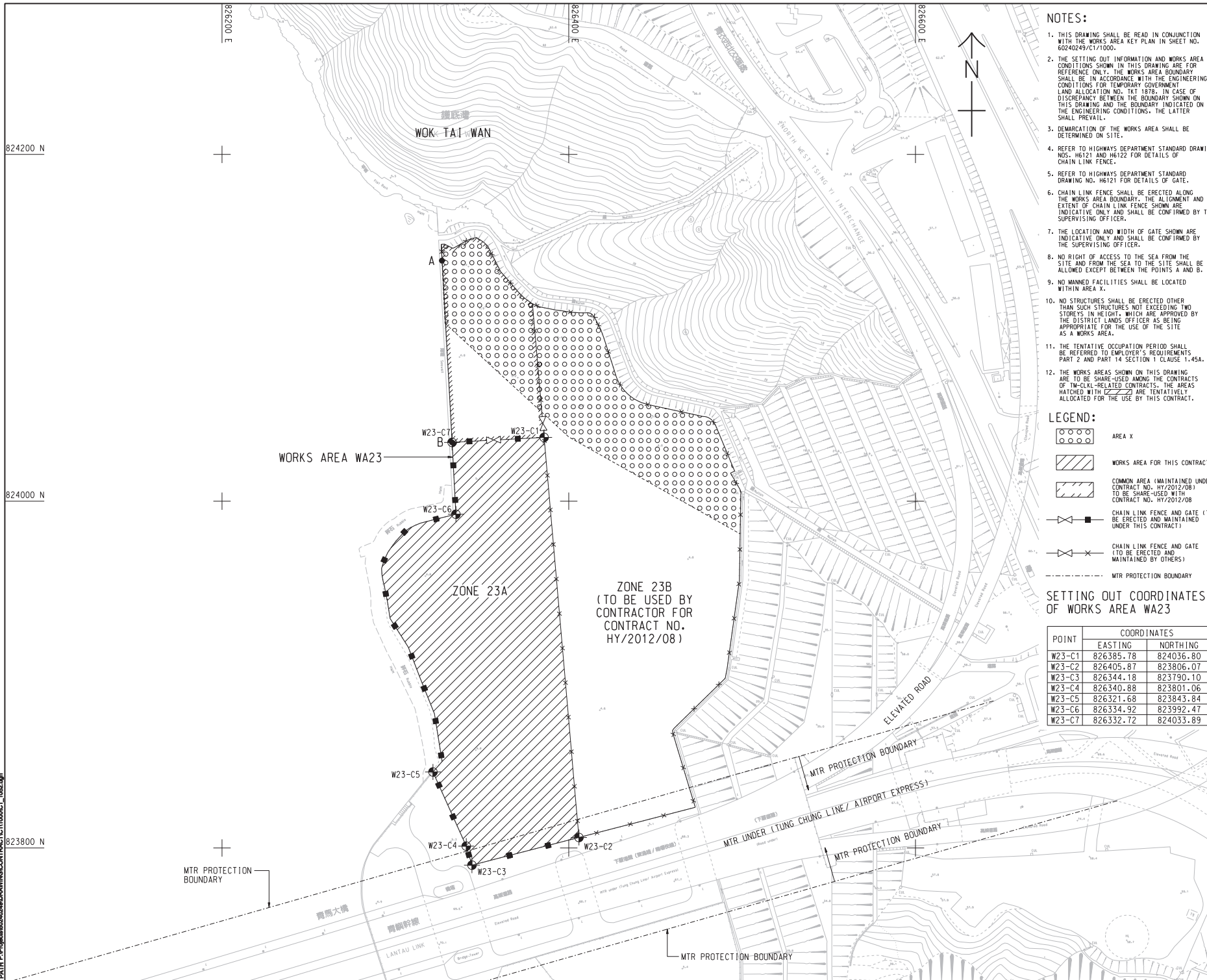
STATUS

SCALE	DIMENSION UNIT
A1:1000	METRES

KEY PLAN

Figure 1.2h

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NOTES:

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE WORKS AREA KEY PLAN IN SHEET NO. 60240249/CT1/0001.
2. THE SETTING OUT INFORMATION AND WORKS AREA CONDITIONS SHOWN IN THIS DRAWING ARE FOR REFERENCE ONLY. THE WORKS AREA BOUNDARY SHALL BE IN ACCORDANCE WITH THE ENGINEERING CONDITIONS FOR TEMPORARY GOVERNMENT LAND ALLOCATION NO. TKT 1879. IN CASE OF DISCREPANCY BETWEEN THE BOUNDARY SHOWN ON THIS DRAWING AND THE BOUNDARY INDICATED ON THE ENGINEERING CONDITIONS, THE LATTER SHALL PREVAIL.
3. DEMARCATION OF THE WORKS AREA SHALL BE DETERMINED ON SITE.
4. REFER TO HIGHWAYS DEPARTMENT STANDARD DRAWING NOS. H6121 AND H6122 FOR DETAILS OF CHAIN LINK FENCE.
5. REFER TO HIGHWAYS DEPARTMENT STANDARD DRAWING NO. H6121 FOR DETAILS OF GATE.
6. CHAIN LINK FENCE SHALL BE ERECTED ALONG THE WORKS AREA BOUNDARY. THE ALIGNMENT AND EXTENT OF CHAIN LINK FENCE SHOWN ARE INDICATIVE ONLY AND SHALL BE CONFIRMED BY THE SUPERVISING OFFICER.
7. THE LOCATION AND WIDTH OF GATE SHOWN ARE INDICATIVE ONLY AND SHALL BE CONFIRMED BY THE SUPERVISING OFFICER.
8. NO RIGHT OF ACCESS TO THE SEA FROM THE SITE AND FROM THE SEA TO THE SITE SHALL BE ALLOWED EXCEPT BETWEEN THE POINTS A AND B.
9. NO MANNED FACILITIES SHALL BE LOCATED WITHIN AREA X.
10. NO STRUCTURES SHALL BE ERECTED OTHER THAN SUCH STRUCTURES NOT EXCEEDING TWO STOREYS IN HEIGHT, WHICH ARE APPROVED BY THE DISTRICT LANDS OFFICER AS BEING APPROPRIATE FOR THE USE OF THE SITE AS A WORKS AREA.
11. THE TENTATIVE OCCUPATION PERIOD SHALL BE REFERRED TO EMPLOYER'S REQUIREMENTS PART 2 AND PART 14 SECTION 1 CLAUSE 1.45A.
12. THE WORKS AREAS SHOWN ON THIS DRAWING ARE TO BE 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 symbol] AREA X
- [Diagonal hatching symbol] WORKS AREA FOR THIS CONTRACT
- [Cross-hatching symbol] 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 with gate symbol] CHAIN LINK FENCE AND GATE (TO BE SHARED AND MAINTAINED BY OTHERS)
- [Dashed line symbol] 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

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]

ISSUE/REVISION

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

STATUS

SCALE
A1:1:1000

DIMENSION UNIT
METRES

KEY PLAN

PROJECT NO.
60240249

CONTRACT NO.
HY/2012/07

SHEET TITLE
WORKS AREA AND HOARDING PLAN

SHEET NUMBER
60240249/CT1/052

SHEET 2 OF 2

Figure 1.2i



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.
 www.aecom.com

SUB-CONSULTANTS
 2/11/2012/16

Figure 1.2j

ISSUE/REVISION

NO.	DATE	DESCRIPTION	CHK.
1	NOV. 12	TENDER ADDENDUM NO. 1	C/W

SCALE
 A1 : 1000

DIMENSION UNIT
 METRES

KEY PLAN

PROJECT NO.
 60240249

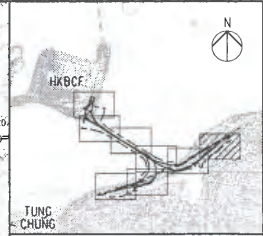
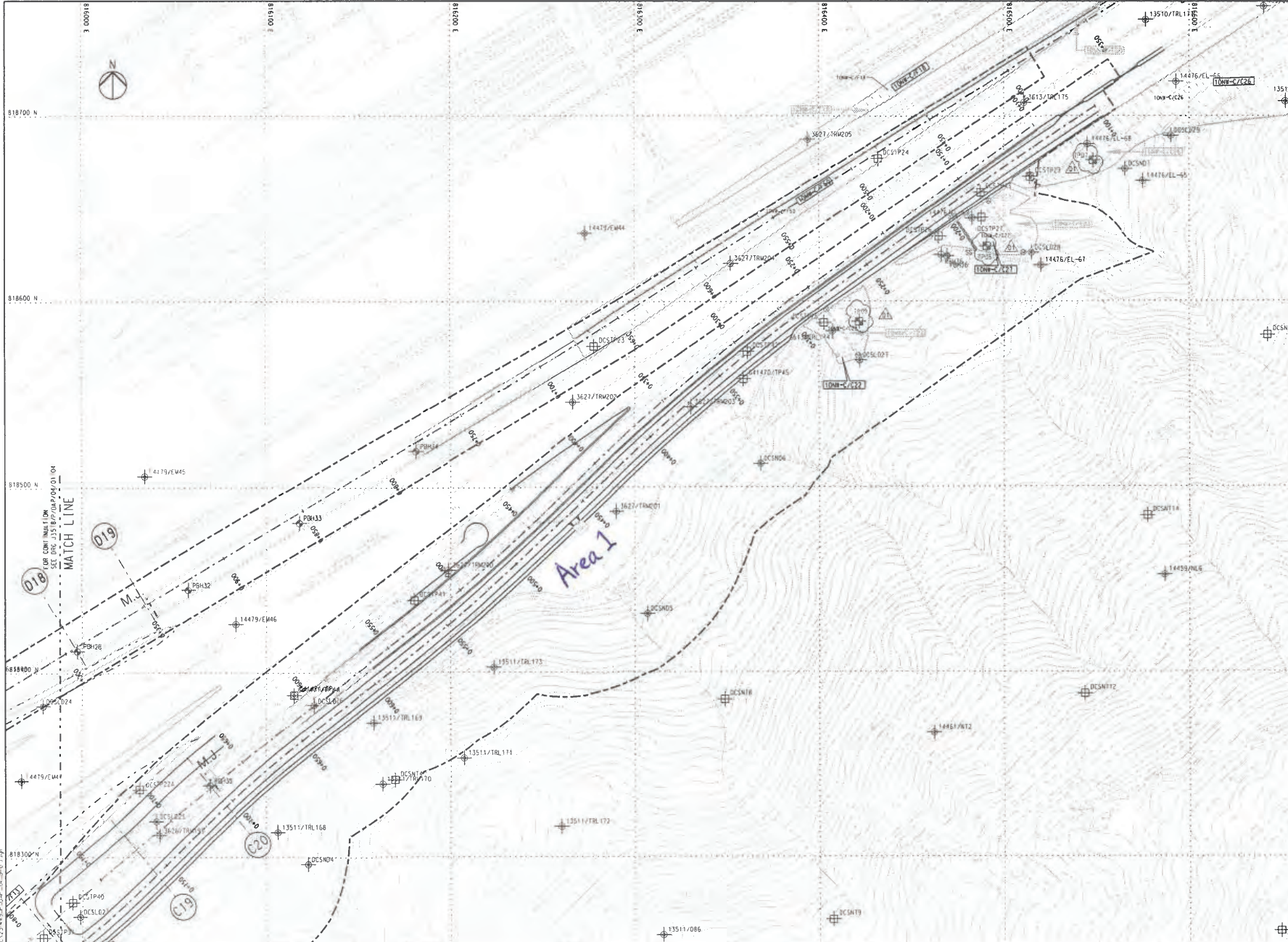
CONTRACT NO.
 HY/2012/07

SHEET TITLE
 WORKS AREA WA4

SHEET NUMBER
 60240249/C1/1053

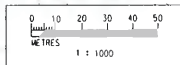
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NOTES
 THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NO. J3518/P/OAP/04/1000 AND OTHER RELEVANT DRAWINGS.

- 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 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 :
- ⊕ B-0 PROPOSED BOREHOLE
 - ⊕ T-0 PROPOSED TRIAL PIT
 - ⊕ C-01 PROPOSED COREHOLE
 - ⊕ S502 PROPOSED SLOPE STRIPPING



Rev	Description	By	Date	Rev	Description	By	Date
01	FOR CONSTRUCTION	RL	31/7/13				
02	FOR CONSTRUCTION	RL	27/7/13				
03	FOR CONSTRUCTION	RL	29/7/13				
04	FOR INTERNAL REVIEW	RL	19/7/12				

Drawn	Date	Client
RL	07/13	路政署 HIGHWAYS DEPARTMENT
Checked	Approved	Supervising Officer
DS	DOP	AZCOM
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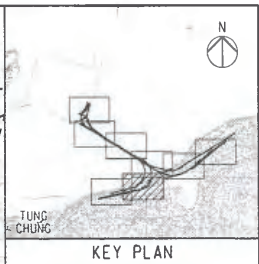
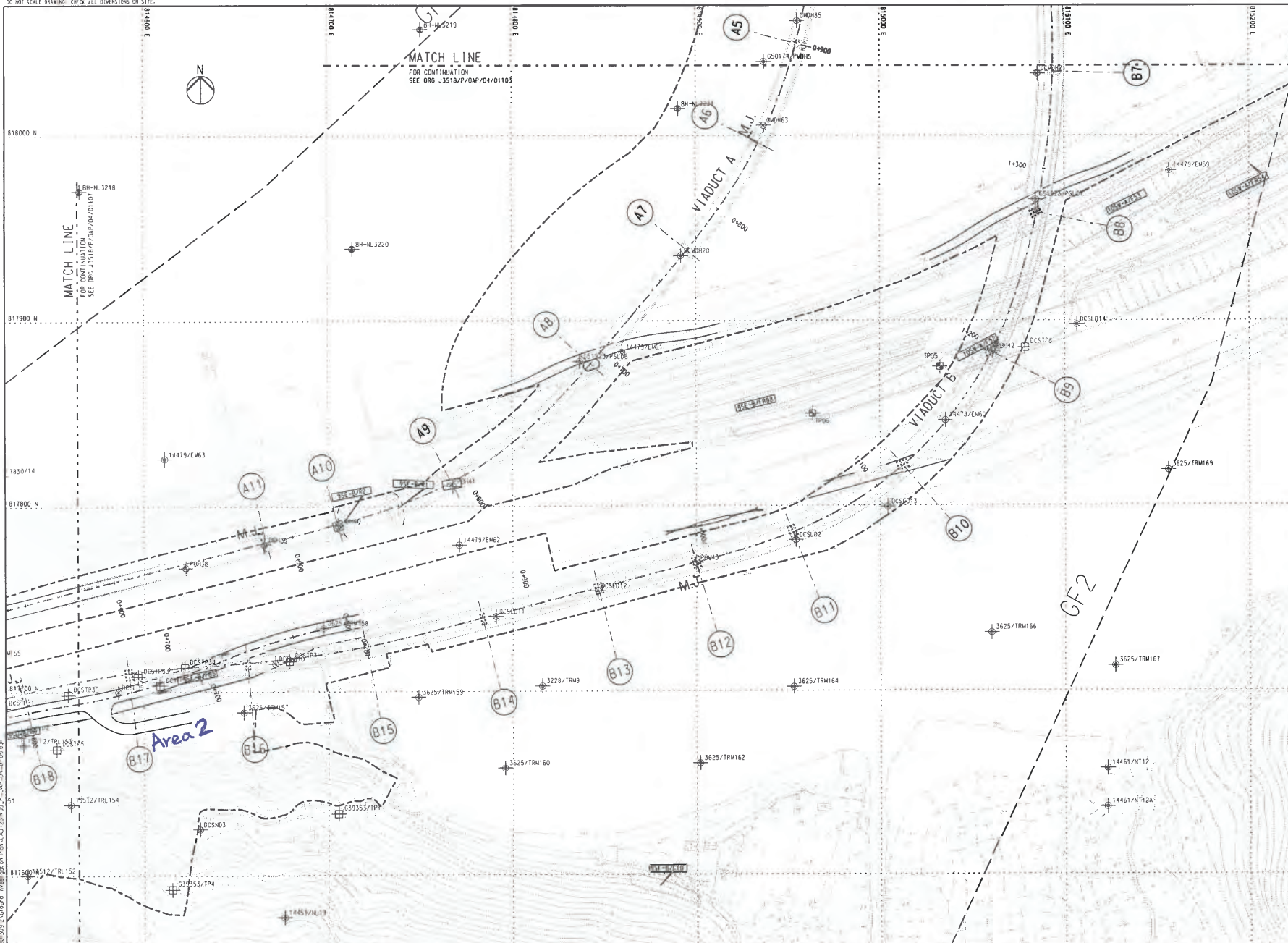
	Contract No. HY/2012/07 Tuen Mun - Chek Lap Kok Link Southern Connection Viaduct Section
	Contractor
Originator 	

Drawing title
Figure 1.2k

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

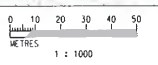
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DO NOT SCALE DRAWING. CHECK ALL DIMENSIONS ON SITE.



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
 - ⊕ E-401 PROPOSED COREHOLE
 - ▭ PROPOSED SLOPE STRIPPING



Plotted by: [Name] P:\[Project Path]

Rev	Description	By	Date	Rev	Description	By	Date
1	COMPLETION	RL	07/13				
2	SUBMISSION	RL	07/13				
3	SUBMISSION	RL	09/13				

Drawn	Date	Client
RL	07/13	路政署 HIGHWAYS DEPARTMENT
Checked	Approved	澳門澳大橋香港工程管理有限公司 Hong Kong - Zhuhai - Macao Bridge Hong Kong Project Management Office
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 1.2I
 Drawing no. J3518/P/OAP/04/01106 Rev c

Table 1.1 **Contact Information of Key Personnel**

Party	Position	Name	Telephone	Fax
HyD (Highways Department)	Project Coordinator	Stanley Chan	2762 3406	3188 6614
	Senior Engineer	Steven Shum	2762 4133	3188 6614
SOR (AECOM Asia Company Limited)	Chief Resident Engineer	Daniel Ip	3553 3800	2492 2057
	Resident Engineer	Kingman Chan	3691 3950	3691 2899
ENPO / IEC (Ramboll Environ Hong Kong Ltd.)	ENPO Leader	Y.H. Hui	3465 2850	3465 2899
	IEC	Dr. F.C. Tsang	3465 2851	3465 2899
Contractor (Gammon Construction Limited)	Environmental Manager	Brian Kam	3520 0387	3520 0486
	Environmental Officer	Roy Leung	3520 0387	3520 0486
	24-hour Complaint Hotline		9738 4332	
ET (ERM-HK)	ET Leader	Jovy Tam	2271 3113	2723 5660

1.4 **SUMMARY OF CONSTRUCTION WORKS**

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

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

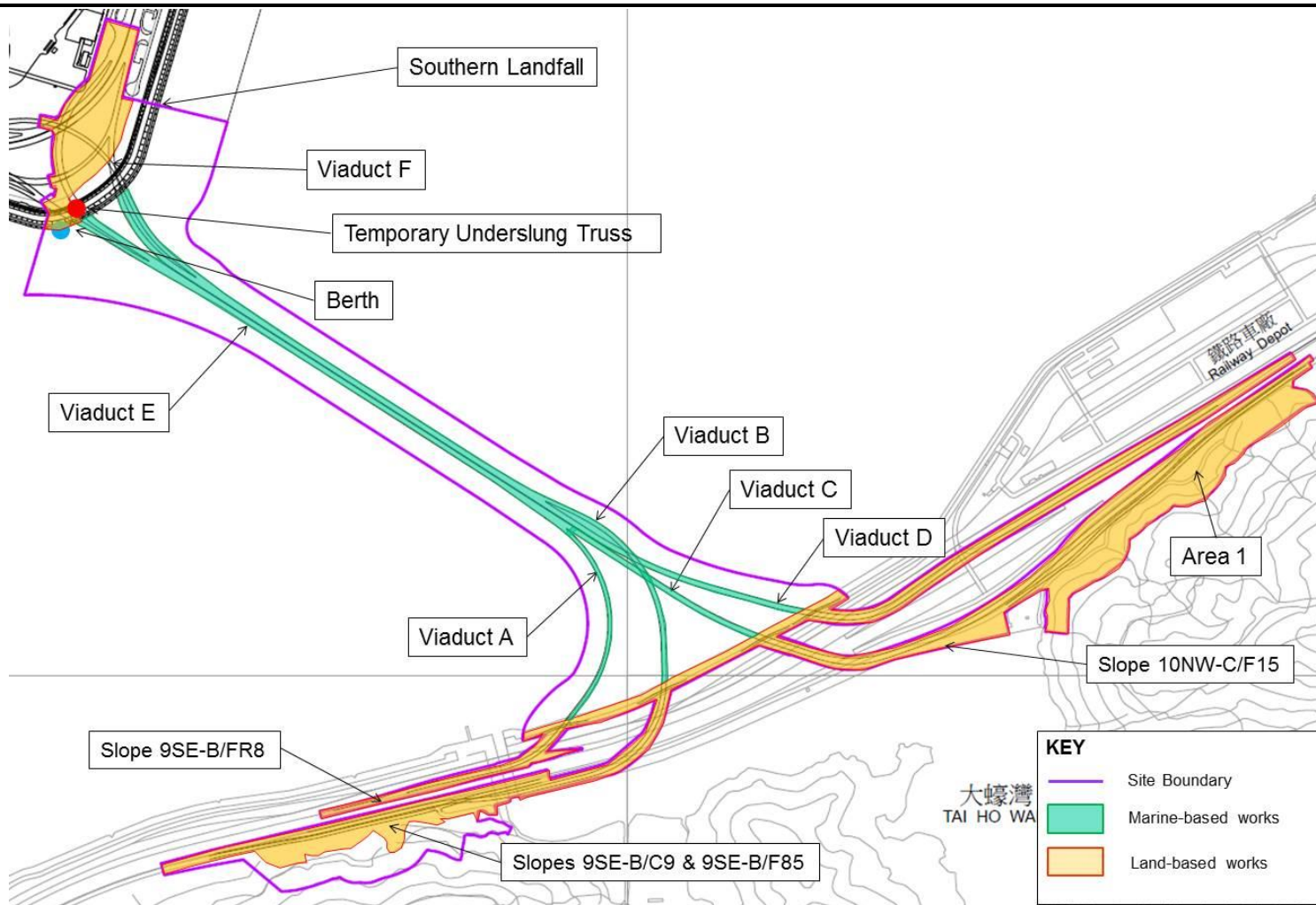
Land-based Works

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

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

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

Figure 1.3 Locations of Major Construction Activities in the Reporting Month



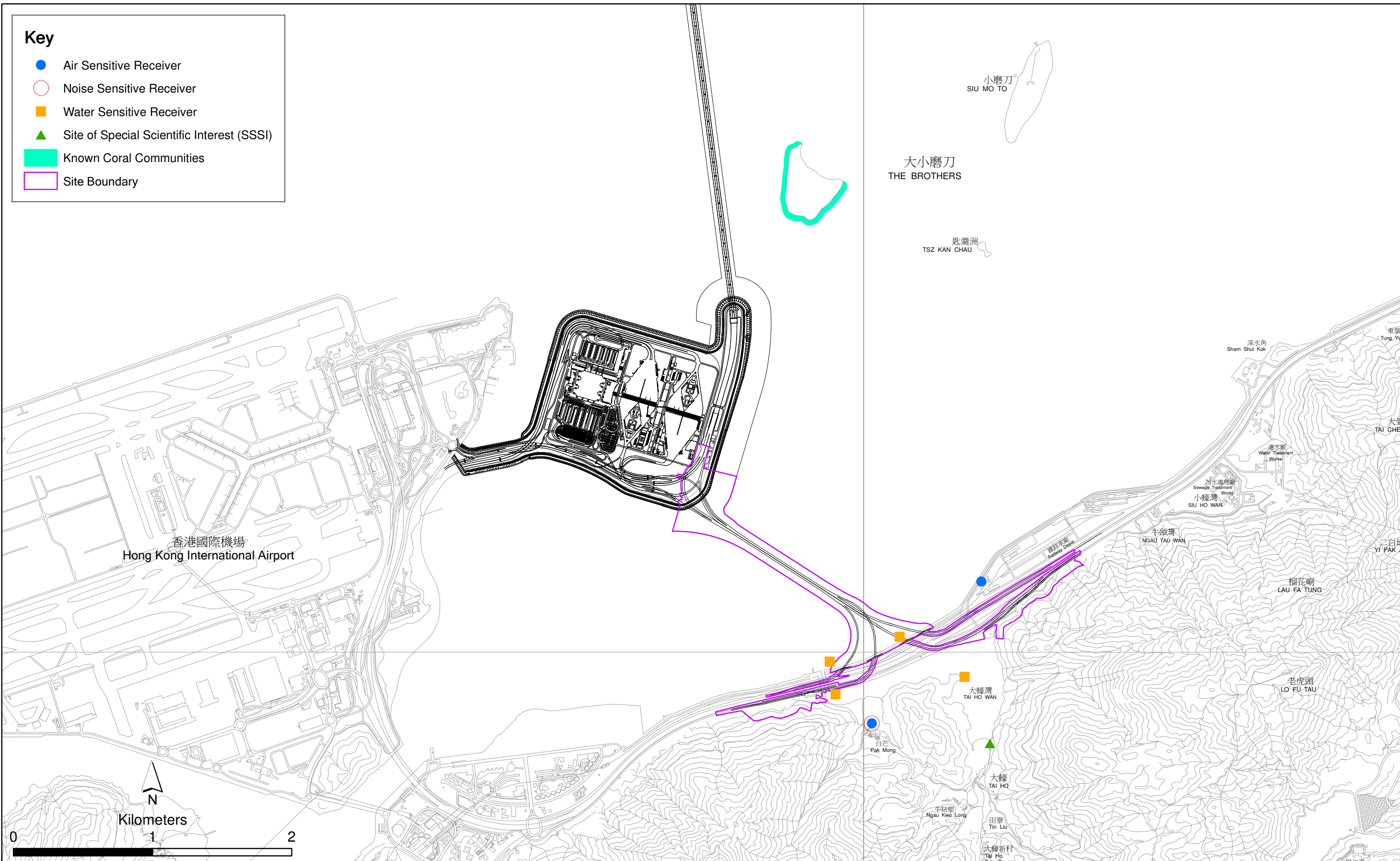


Figure 1.4

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

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

2.1 AIR QUALITY

2.1.1 Monitoring Requirements and Equipment

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

Table 2.1 *Locations of Impact Air Quality Monitoring Stations*

Monitoring Station	Location	Description	Monitoring Dates
ASR 9	MTR Depot	On the ground nearby MTR Depot Entrance	3, 9, 12, 18, 24 and 30 October 2017
ASR 8A	Area 4	On ground at the works area, Area 4	3, 9, 12, 18, 24 and 30 October 2017

High Volume Samplers (HVSs) were used for 1-hour TSP and 24-hour TSP monitoring 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 meter 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

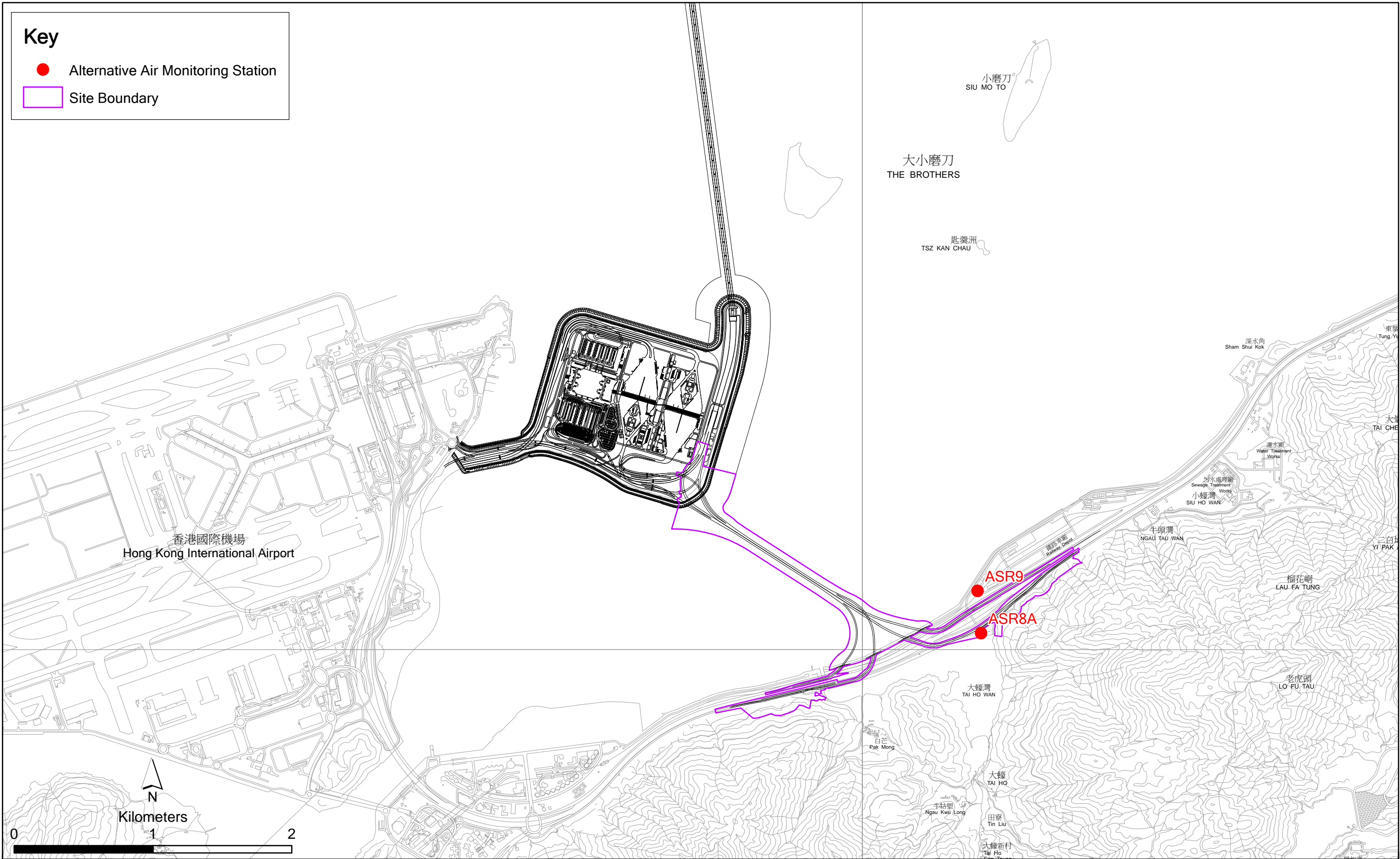


Figure 2.1

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 October 2017 is provided in *Appendix F*.

2.1.3 Results and Observations

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

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

Monitoring Station	Average ($\mu\text{g}/\text{m}^3$)	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	69	22-156	394	500
ASR 9	77	28-140	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	60	21-102	178	260
ASR 9	59	28-93	178	260

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

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

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

2.2 NOISE MONITORING

2.2.1 Monitoring Requirements and Equipment

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

Noise monitoring was performed on 3, 9, 12, 18, 24 and 30 October 2017 using sound level meter at the designated monitoring station NSR1A (*Figure 2.2; Table 2.5*) in accordance with the requirements stipulated in the Updated EM&A Manual. Acoustic calibrator was deployed to check the sound level meters at a known sound pressure level. Details of the deployed equipment are provided in *Table 2.6*. Copies of the calibration certificates for the equipment are presented in *Appendix E*.

Table 2.5 *Location of Impact Noise Monitoring Station*

Monitoring Station	Location	Description	Parameter	Frequency and Duration	Monitoring Dates
NSR 1A	Pak Mong Village Pavilion	On the ground at the village entrance	30-minute measurement at each monitoring station between 0700 and 1900 on normal weekdays (Monday to Saturday). L_{eq} , L_{10} and L_{90} would be recorded.	At least once per week	3, 9, 12, 18, 24 and 30 October 2017

Table 2.6 *Noise Monitoring Equipment*

Equipment	Brand and Model
Integrated Sound Level Meter	Rion NL-52
Acoustic Calibrator	Rion NC-73

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*.



Figure 2.2

Location of Noise Monitoring Station

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	63	62-64	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*.

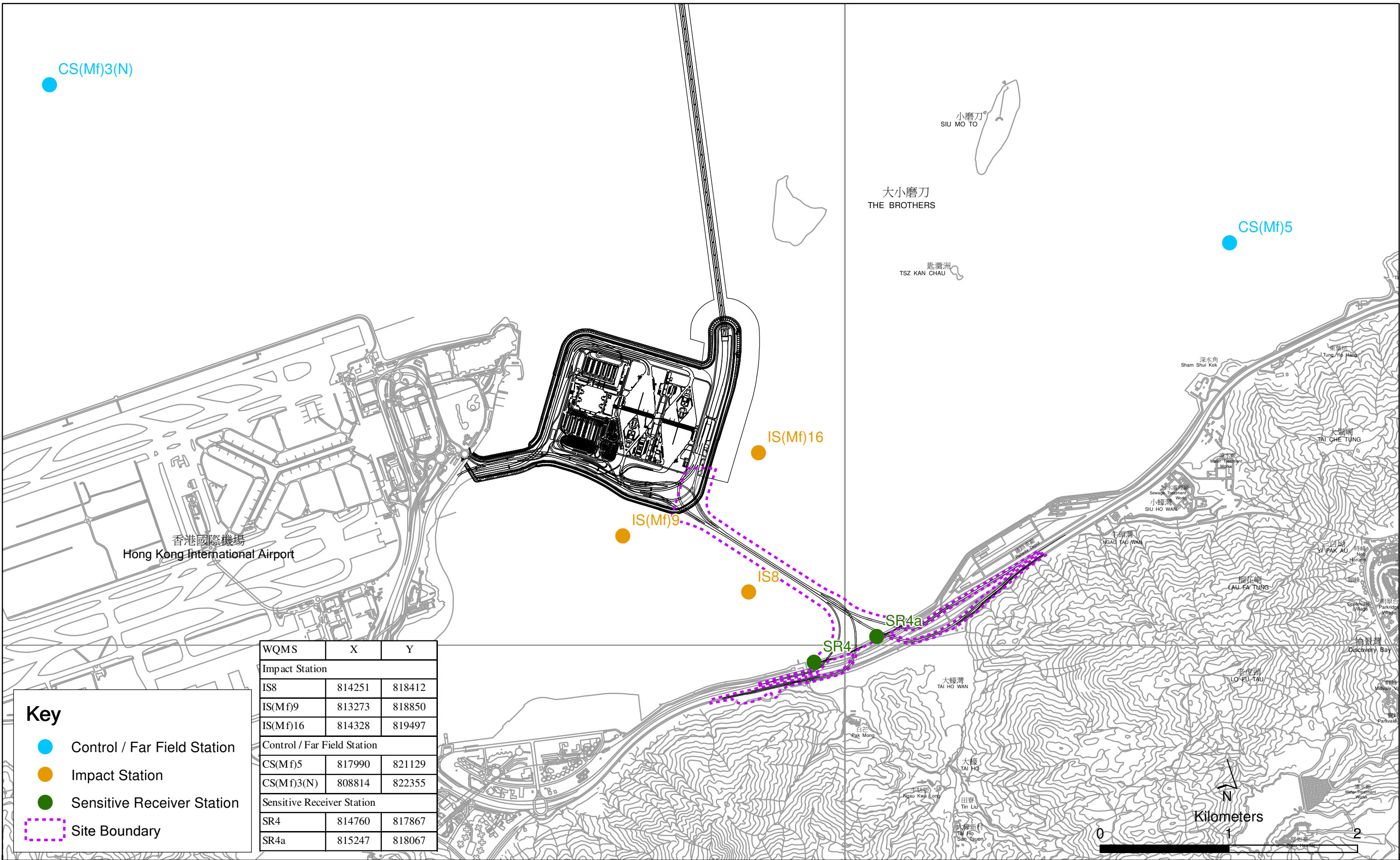
Major noise sources during the noise monitoring included noise from crane operation, rock breaking, hammering, nearby traffic noise and aircraft noise.

2.3 WATER QUALITY MONITORING

2.3.1 Monitoring Requirements and Equipment

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

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



WQMS	X	Y
Impact Station		
IS8	814251	818412
IS(Mf)9	813273	818850
IS(Mf)16	814328	819497
Control / Far Field Station		
CS(Mf)5	817990	821129
CS(Mf)3(N)	808814	822355
Sensitive Receiver Station		
SR4	814760	817867
SR4a	815247	818067

Key

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

Figure 2.3

Locations of Water Quality Monitoring Stations

File: T:\GIS\CONTRACT\0215660\Mxd\0215660_WQMS.mxd
Date: 28/4/2017

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

Station ID	Type	Coordinates		*Parameters, unit	Frequency	Depth
		Easting	Northing			
IS(Mf)9	Impact Station (Close to HKBCF construction site)	813273	818850	<ul style="list-style-type: none"> • Temperature(°C) • pH (pH unit) • Turbidity (NTU) 	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	<ul style="list-style-type: none"> • Suspended Solid (SS) (mg/L) 		
SR4a	Sensitive receiver	815247	818067			
CS(Mf)3(N)	Control Station	808814	822355			
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.

Water Quality Monitoring Station CS(Mf)3 was relocated to CS(Mf)3(N) since 2 May 2017.

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
Multi-parameters (Dissolved Oxygen, Salinity, Turbidity, Temperature, pH)	YSI ProDSS / YSI 6920 V2 Sonde
Positioning Equipment	Furuno GP-170
Water Depth Detector	Lowrance Mark 5x / Garmin Striker 4
Water Sampler	WildCo Vertical Alpha Bottles 1120-2.2L / 1120-3.2L Aquatic Research Instrument Vertical/Horizontal Point Water Sampler 2.2L / 3.0L

2.3.2 *Monitoring Schedule for the Reporting Month*

The schedule for water quality monitoring in October 2017 is provided in *Appendix F*.

2.3.3 *Results and Observations*

In total of 13 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*.

Five (5) Action Level of Dissolved Oxygen (DO) exceedances were recorded for water quality impact monitoring in the reporting month. Actions were taken in accordance with the Event Action Plan as presented in *Appendix L*.

2.4 *DOLPHIN MONITORING*

2.4.1 *Monitoring Requirements*

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

2.4.2 *Monitoring Equipment*

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

Table 2.10 *Dolphin Monitoring Equipment*

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

2.4.3 *Monitoring Parameter, Frequencies and Duration*

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

2.4.4 *Monitoring Location*

The impact dolphin monitoring was carried out in the NEL and NWL along the line transect as depicted in *Figure 2.4*. The co-ordinates of all transect lines are shown in *Table 2.11* below ⁽¹⁾.

⁽¹⁾ Proposal on the changes of transect lines for dolphin monitoring was approved by EPD on 28 July 2017 (Reference number: (19) in EP2/G/A/129 Pt. 8).

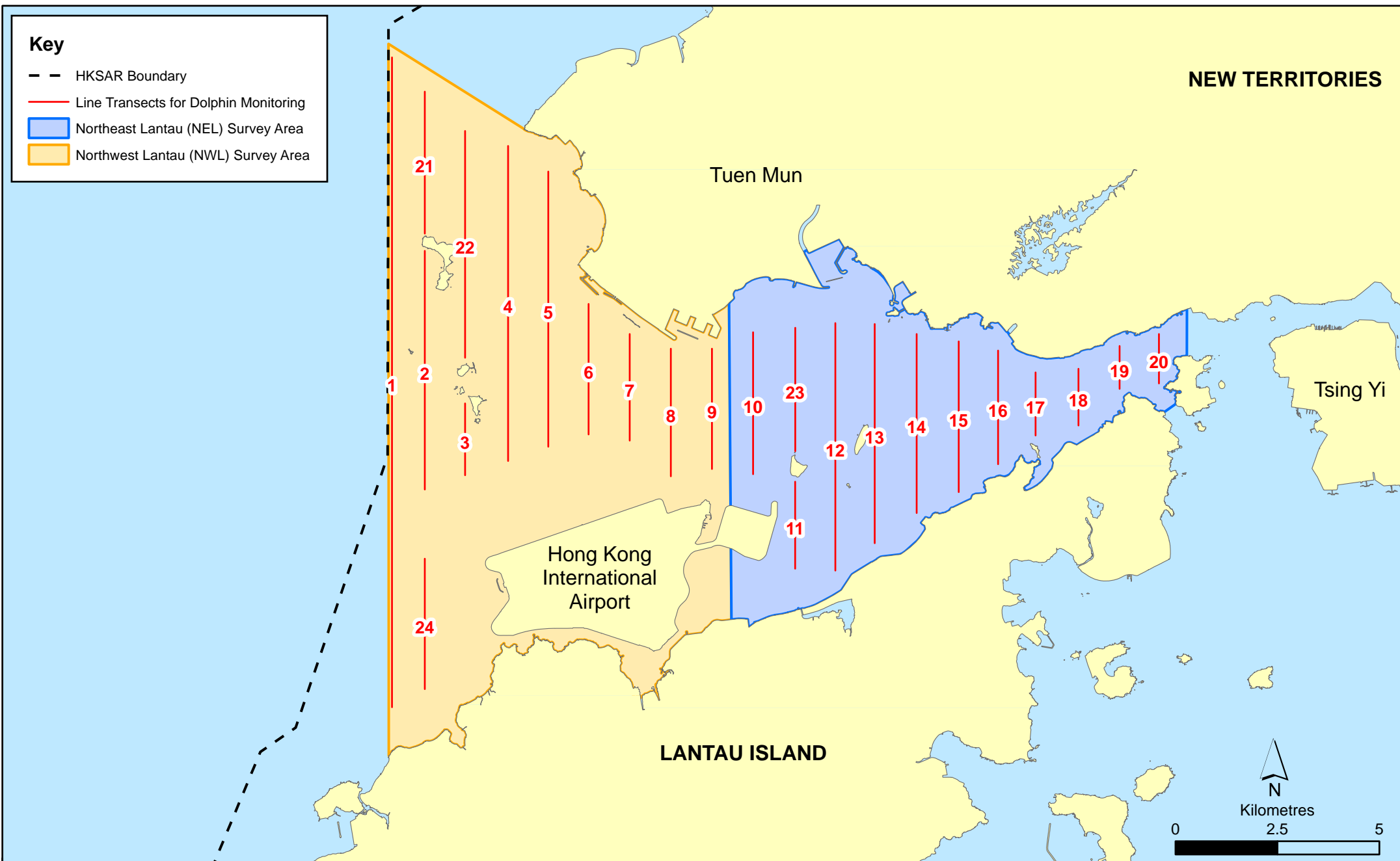


Figure 2.4

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

Table 2.11 Impact Dolphin Monitoring Line Transect Co-ordinates

Line No.		Easting	Northing	Line No.		Easting	Northing
1	Start Point	804671	815456	13	Start Point	816506	819480
1	End Point	804671	831404	13	End Point	816506	824859
2	Start Point	805476	820800	14	Start Point	817537	820220
2	End Point	805476	826654	14	End Point	817537	824613
3	Start Point	806464	821150	15	Start Point	818568	820735
3	End Point	806464	822911	15	End Point	818568	824433
4	Start Point	807518	821500	16	Start Point	819532	821420
4	End Point	807518	829230	16	End Point	819532	824209
5	Start Point	808504	821850	17	Start Point	820451	822125
5	End Point	808504	828602	17	End Point	820451	823671
6	Start Point	809490	822150	18	Start Point	821504	822371
6	End Point	809490	825352	18	End Point	821504	823761
7	Start Point	810499	822000*	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	821176	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	24	Start Point	805476	815900
12	End Point	815542	824882	24	End Point	805476	819100

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 4, 9, 18 and 26 October 2017 (*Appendix F*).

2.4.7 *Results and Observations*

A total of 274.33 km of survey effort was collected, with 90.3% 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 October 2017. Among the two areas, 105.80 km and 168.53 km of survey effort were collected from NEL and NWL survey areas, respectively. The total survey effort conducted on primary and secondary lines were 191.69 km and 82.64 km, respectively. The survey efforts are summarized in *Appendix K*.

Four (4) groups of 8 Chinese White Dolphins were sighted during the two sets of monitoring surveys in October 2017. All dolphin sightings were made in NWL, while none was sighted in NEL. During the surveys in October 2017, all sightings were made during on-effort search, while all on-effort sighting were made on primary lines. One of the dolphin groups was associated with operating fishing vessel but was not 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 October 2017 are shown in *Tables 2.12 & 2.13*.

Table 2.12 *Individual Survey Event Encounter Rates*

		Encounter rate (STG) (no. of on-effort dolphin sightings per 100 km of survey effort)	Encounter rate (ANI) (no. of dolphins from all on-effort sightings per 100 km of survey effort)
		Primary Lines Only	Primary Lines Only
NEL	Set 1: Oct 4 th / 9 th	0.0	0.0
	Set 2: Oct 18 th / 26 th	0.0	0.0
NWL	Set 1: Oct 4 th / 9 th	1.9	9.3
	Set 2: Oct 18 th / 26 th	4.9	4.9

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

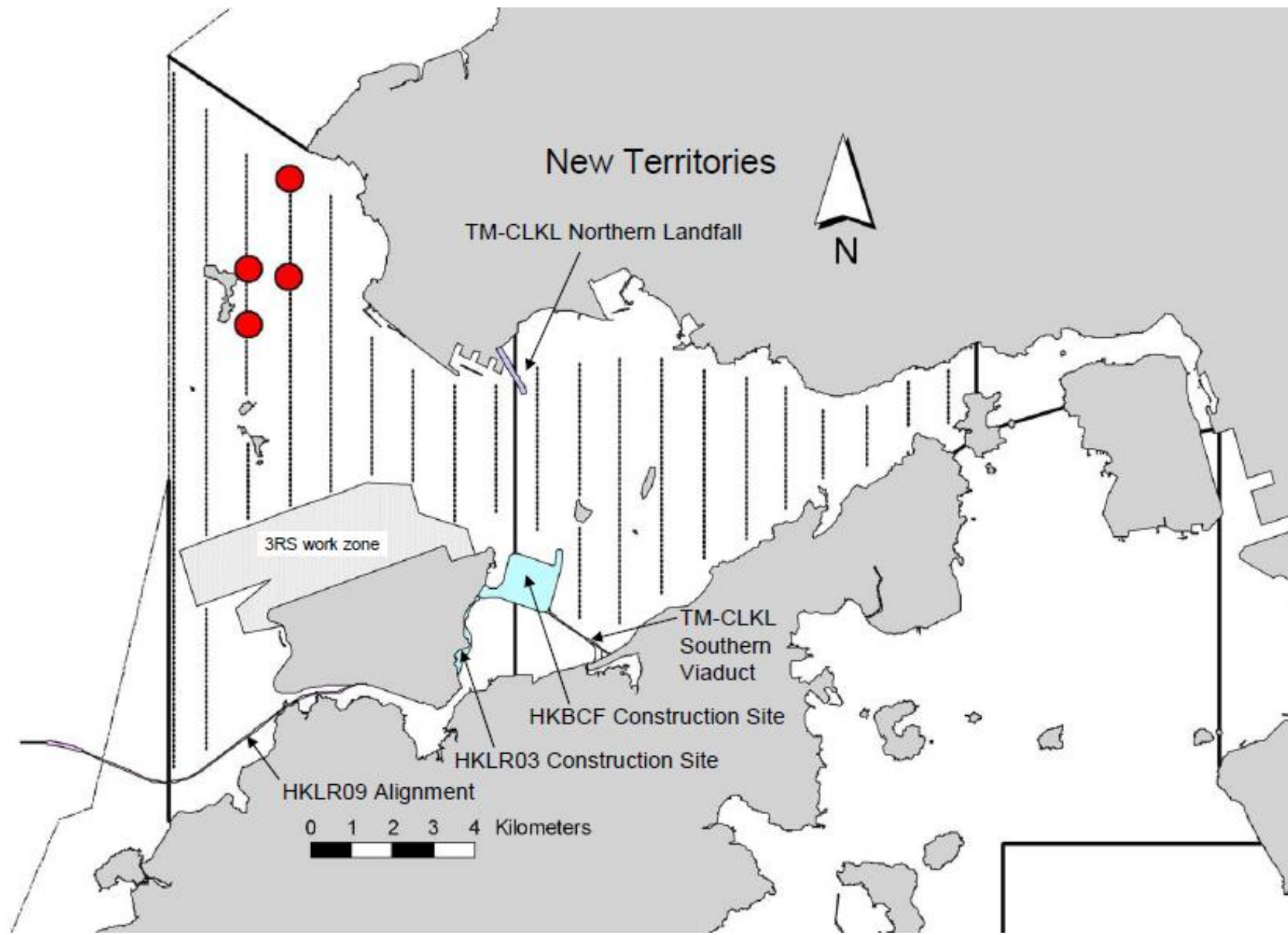


Figure 2.5

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 October 2017)

Date 7/11/2017

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Table 2.13 Monthly Average Encounter Rates

	Encounter rate (STG) (no. of on-effort dolphin sightings per 100 km of survey effort)		Encounter rate (ANI) (no. of dolphins from all on-effort sightings per 100 km of survey effort)	
	Primary Lines Only	Both Primary and Secondary Lines	Primary Lines Only	Both Primary and Secondary Lines
Northeast Lantau	0.0	0.0	0.0	0.0
Northwest Lantau	3.5	2.6	7.0	5.2

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

During this month of dolphin monitoring, no unacceptable impact from the construction activities of the TM-CLKL Southern Connection Viaduct Section on Indo-Pacific humpback dolphin *Sousa chinensis* (i.e. Chinese White Dolphin) was noticeable from general observations. Due to monthly variation in dolphin occurrence within the Study Area, it would be more appropriate to draw conclusion on whether any impacts on dolphins have been detected related to the construction activities of the TM-CLKL Southern Connection Viaduct Section in the quarterly EM&A reports, in which comparison on distribution, group size and encounter rates of dolphins between the quarterly impact monitoring period and baseline monitoring period will be made.

2.4.8 Marine Mammal Exclusion Zone Monitoring

Daily 250 m marine mammal exclusion zone monitoring was undertaken during the period of daytime marine works activities. No sighting of Chinese White Dolphin was recorded in October 2017 during the exclusion zone monitoring.

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

2.5 EM&A SITE INSPECTION

Site inspections were carried out on a weekly basis to monitor the implementation of proper environmental pollution control and mitigation measures under the Contract. In the reporting month, five (5) site inspections were carried out on 4, 11, 18, 26 and 31 October 2017.

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

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

Inspection Date	Environmental Observations	Recommendations/ Remarks
4 October 2017	Viaduct E (Pier E12) <ul style="list-style-type: none"> Oil stain was observed near the generator. 	Viaduct B (Pier B17) <ul style="list-style-type: none"> The Contractor was reminded to clear the oil as chemical waste.
11 October 2017	Viaduct B (Pier B18) <ul style="list-style-type: none"> Chemical container was observed not placed in drip tray. EP should be replaced near the site entrance. 	Viaduct B (Pier B18) <ul style="list-style-type: none"> The Contractor was reminded to place chemical container in drip tray. The Contractor was reminded to replace the missing pages of EP near the site entrance.
18 October 2017	Viaduct E (Pier E13AB) <ul style="list-style-type: none"> Oil stain was observed near the drip tray. Drip tray was observed not properly plugged. 	Viaduct B (Pier B18) <ul style="list-style-type: none"> The Contractor was reminded to clear oil stain near to drip tray. The Contractor was reminded to plug the drip tray properly.
26 October 2017	Viaduct A (Pier A10) <ul style="list-style-type: none"> Chemical waste should be handled with care and disposed of at designated area. Viaduct A (Ramp A) (Area A) <ul style="list-style-type: none"> Chemical containers were observed not placed in drip tray. General refuse should be cleared. NRMM label was observed not provided on the excavator. Viaduct E (Pier E8) <ul style="list-style-type: none"> Drip tray was observed not properly plugged. 	Viaduct A (Pier A10) <ul style="list-style-type: none"> The Contractor was reminded to handle chemical waste with care and disposed them of at designated area. Viaduct A (Ramp A) (Area A) <ul style="list-style-type: none"> The Contractor was reminded to place chemical container in drip tray. The Contractor was reminded to clear general refuse. The Contractor was reminded to provide NRMM label on the excavator. Viaduct E (Pier E8) <ul style="list-style-type: none"> The Contractor was reminded to plug the drip tray.
31 October 2017	Viaduct B (Pier B16) <ul style="list-style-type: none"> General refuse near the skip should be cleared. Chemical container was observed not placed in drip tray. 	Viaduct E (Pier E13CD) <ul style="list-style-type: none"> The Contractor was reminded to clear general refuse near the skip. The Contractor was reminded to place chemical container in drip tray.

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 2.15*.

Table 2.15 Quantities of Different Waste Generated in the Reporting Period

Month/ Year	Inert C&D Materials ^(a) (m ³)	Imported Fill (m ³)	Inert Constructio n Waste Re- used (m ³)	Non-inert Constructio n Waste ^(b) (kg)	Recyclable Materials ^(c) (kg)	Chemical Wastes (kg)	Marine Sediment (m ³)		
							Category L	Category M (M _p & M _f)	Category H
October 2017	3,005	0	0	172,690	63	0	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 2.16* below.

Table 2.16 Summary of Environmental Licensing and Permit Status

License/ Permit	License or Permit No.	Date of Issue	Date of Expiry	License/ Permit Holder	Remarks
Environmental Permit	EP-354/2009/D	13 Mar 2015	N/A	HyD	Tuen Mun- Chek Lap Kok Link
Environmental Permit	EP-353/2009/K	11 Apr 2016	N/A	HyD	Hong Kong Boundary Crossing Facilities
Construction Dust Notification	361571	5 Jul 2013	N/A	GCL	
Construction Dust Notification	362093	17 Jul 2013	N/A	GCL	For Area 23
Chemical Waste Registration	5213-961-G2380-13	10 Oct 2013	N/A	GCL	Chemical waste produced in Contract No. HY/2012/07 (Area 1 adjacent to Cheng Tung Road, Siu Ho Wan)
Chemical Waste Registration	5213-961-G2380-14	10 Oct 2013	N/A	GCL	Chemical waste produced in Contract No. HY/2012/07 (Area 2 adjacent to Cheung Tung Road, Pak Mong Village)
Chemical Waste Registration	5213-974-G2588-03	4 Nov 2013	N/A	GCL	Chemical waste produced in Contract No. HY/2012/07 (WA5 adjacent to Cheung Tung Road, Yam O)
Chemical Waste Registration	5213-951-G2380-17	12 Jun 2014	N/A	GCL	Viaducts A, B, C, D & E
Construction Waste Disposal Account	7017735	10 Jul 2013	N/A	GCL	-
Construction Waste Disposal Account	7019470	3 Mar 2014	N/A	GCL	Vessel CHIT Account
Waste Water Discharge License	WT00019017-2014	13 May 2014	31 May 2019	GCL	Discharge for marine portion
Waste Water Discharge License	WT00019018-2014	13 May 2014	31 May 2019	GCL	Discharge for land portion
Construction Noise Permit for night works and works in general holidays	GW-RW0294-17	19 Jun 2017	18 Dec 2017	GCL	General works at WA5
Construction Noise Permit for night works and works in general holidays	GW-RS0540-17	20 Jun 2017	15 Dec 2017	GCL	Broad Permit for Whole Site Areas
Construction Noise Permit for night works and works in general holidays	GW-RS0829-17	29 Sep 2017	30 Nov 2017	GCL	Broad Permit for Segment Launching at Land Portion
Construction Noise Permit for night works and works in general holidays	GW-RS0668-17	7 Aug 2017	6 Feb 2018	GCL	Pre-casted pile cap shell installation at E8-E13
Marine Dumping Permit	EP/MD/18-031	1 Jul 2017	31 Dec 2017	GCL	For dumping Type I sediment
Marine Dumping Permit	EP/MD/18-061	16 Sep 2017	15 Oct 2017	GCL	For dumping Type I and Type II sediment

2.8 **IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES**

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

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

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

Five (5) Action Level of Dissolved Oxygen (DO) exceedances were recorded for water quality impact monitoring in the reporting month. The exceedances were considered not related to this Contract upon further investigation and the investigation report is presented in *Appendix N*.

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*.

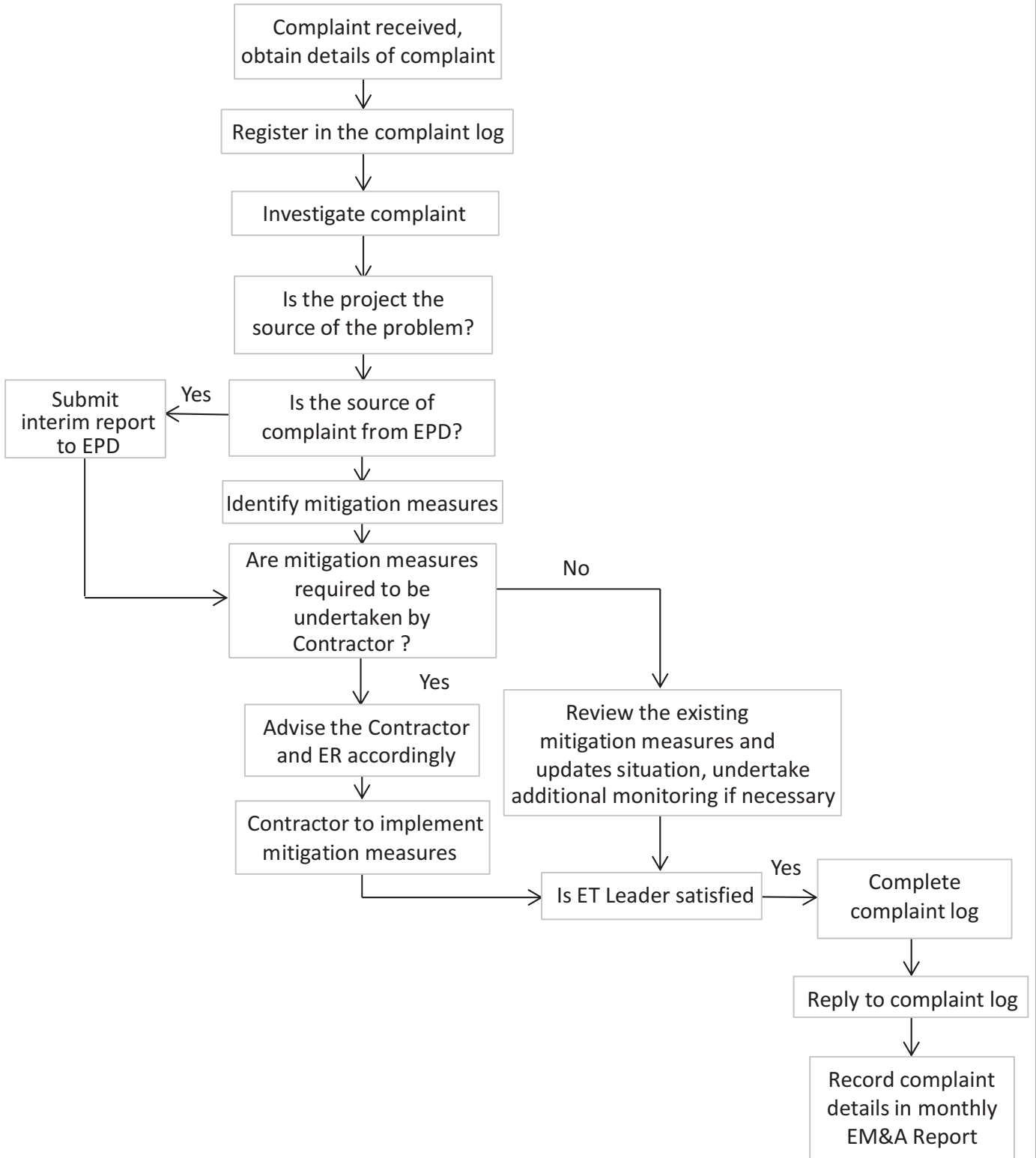


Figure 2.6

Environmental Complaint Handling Procedure

3 *FUTURE KEY ISSUES*

3.1 *CONSTRUCTION PROGRAMME FOR THE COMING MONTH*

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

Land-based Works

- Pier construction;
- Re-alignment of Cheung Tung Road;
- Road works along North Lantau Highway;
- Launching gantry operation;
- 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 November 2017 are mainly associated with dust, noise, marine water quality, marine ecology and waste management issues.

3.3 *MONITORING SCHEDULE FOR THE COMING MONTH*

The tentative schedules for environmental monitoring in November 2017 are provided in *Appendix F*.

4.1 CONCLUSIONS

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

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

Five (5) Action Level of Dissolved Oxygen (DO) exceedances were recorded for water quality impact monitoring in the reporting month. Investigation findings suggested the observed water quality exceedances were not related to the works under this Contract.

Four (4) groups of 8 Chinese White Dolphins were sighted during the two sets of monitoring surveys in October 2017. During this month of dolphin monitoring, no unacceptable impact from the construction activities of the TM-CLKL Southern Connection Viaduct Section on Indo-Pacific humpback dolphin *Sousa chinensis* (i.e. Chinese White Dolphin) was noticeable from general observations.

Environmental site inspection was carried out five (5) times in October 2017. 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	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Physical % Complete	2017												2018						
										October					November				December			January						
										8	25	02	09	16	23	30	06	13	20	27	04	11	18	25	01	08	15	22
Contract Milestones																												
Key Dates for Completion																												
Stage of the Works																												
Completion Date																												
General																												
KD03	KD3 - Stage 3: TCSS Along NLH Near Viaduct C, D (EoT 8-Apr-16)		0		0	21-Oct-17*	08-Apr-16	-560	0%																			
Portion Handover Dates																												
Possession of the Works Area																												
Access Dates																												
General																												
POS02-6B	Portion A - Area 6B (To be confirmed)		0	21-Oct-17*	0		06-Aug-20	1021	0%																			
Design																												
Detailed Design																												
Slope Works Near Viaduct A																												
Feature 9SE-B/FR8, B/R1, B/R2																												
Slope Works Design																												
ARDD0596-1	IC/SO Approval of Slope Combined AIP/DDA - CP11.01		60	13-Jun-17 A	40	07-Dec-17	31-May-16	18-Jul-16	-415	50%																		
Slope Works Near Viaduct C																												
Feature 10NW-C/G22, C/G26, C/G27, C/F13, C/F14, C/F15																												
Slope Works Design																												
ARDD0589-2	IC/SO Approval of Combined AIP/DDA - CP13.01		28	01-Jun-17 A	20	14-Nov-17	26-Jul-16	17-Aug-16	-369	90%																		
Segment Target Geometry & Erection Engineering																												
Viaduct F																												
Design																												
ARDD0754-5	Viaduct F - Issue Erection Manual		30	26-Jun-17 A	30	25-Nov-17	11-Nov-16	15-Dec-16	-279	80%																		
Procurement																												
Precast Deck Segments																												
Viaduct F - Bridge F1-F5																												
Segment Manufacture																												
General																												
MBFE0130-1	F: Progressive Segment Manufacture (300 Nr)		252	27-Oct-16 A	0	11-Oct-17 A			100%																			
Precast Parapets & Barriers																												
Viaduct A to F																												
Precast Parapet Manufacture																												
General																												
PP6011-01	Viaduct A - Precast Parapets/Barriers Production		90	01-Sep-16 A	90	07-Feb-18	12-Sep-16	30-Dec-16	-328	55%																		
PP6011-02	Viaduct B - Precast Parapets/Barriers Production		120	03-May-16 A	30	25-Nov-17	20-Sep-16	26-Oct-16	-322	80%																		
PP6011-03	Viaduct C - Precast Parapets/Barriers Production		120	01-Apr-16 A	24	18-Nov-17	10-Jul-20	06-Aug-20	802	90%																		
PP6011-04	Viaduct D - Precast Parapets/Barriers Production		120	01-Mar-16 A	20	14-Nov-17	15-Jul-20	06-Aug-20	806	90%																		
PP6011-05	Viaduct E - Precast Parapets/Barriers Production		180	02-Jul-16 A	156	04-May-18	16-May-16	18-Nov-16	-428	40%																		
PP6011-06	Viaduct F - Precast Parapets/Barriers Production		198	21-Oct-17*	198	25-Jun-18	18-Feb-17	18-Oct-17	-200	0%																		
Bearings																												
Viaduct F																												
Bearing Design & Manufacture																												
General																												
PPBRF9	Bearing Delivery - Viaduct F		34	18-Jul-17 A	66	10-Jan-18	16-Mar-17	08-Jun-17	-178	30%																		
Movement Joints																												
Viaduct A to F																												
MJ Design & Manufacture																												
General																												
PP6MJ02-2	Manufacture & delivery of MJ		180	01-Apr-17 A	126	24-Mar-18	21-Mar-16	23-Aug-16	-470	80%																		

■ Actual Work
■ Planned Bar
■ Critical Bar
◆ Milestone

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Tuen Mun - Chek Lap Kok Link - Southern Connection
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J3518/GCL/PGM/3MRP-M53

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										October					November				December			January															
										08	25	02	09	16	23	30	06	13	20	27	04	11	18	25	01	08	15	22									
Construction																																					
Foundation & Substructure Works																																					
Ramp A																																					
Abutment & Approach Ramp A																																					
Ramp Structure																																					
ARA-C6142	Ramp A - Remaining RC Wall (Bay Wa2-Wa5 & Bay 9-12) with Backfill	120	04-Aug-17 A	0	20-Oct-17 A				100%																												
ARA-C6150	Ramp A - Backfill to Walls	111	04-Sep-17 A	12	04-Nov-17	05-Oct-16	19-Oct-16	-310	0%																												
Ramp Finishes, E&M & Roadworks																																					
ARA-C7710	Ramp A - Parapet Panels	30	06-Nov-17	30	09-Dec-17	20-Oct-16	23-Nov-16	-310	0%																												
ARA-C7720	Ramp A - Ducting, Gantry & TCSS Provisions (KD5)	30	20-Nov-17	30	23-Dec-17	03-Nov-16	07-Dec-16	-310	0%																												
ARA-C7810	Ramp A - Drainage, Fire Main & E&M Services	42	11-Dec-17	42	31-Jan-18	23-Dec-16	16-Feb-17	-285	0%																												
ARA-C7820	Ramp A - Railings, Light Poles, Signs & Street Furniture	24	27-Dec-17	24	24-Jan-18	10-Feb-17	09-Mar-17	-261	0%																												
Viaduct B - Bridge B1																																					
Pier B17 (B1c)																																					
Pier Head Segment																																					
B17-C5420	B17 - PHS Diaphragm - Curing & Striking of Forms	3	18-Sep-17 A	1	21-Oct-17	06-Aug-20	06-Aug-20	825	0%																												
Pier B18 (B1b)																																					
Pier Head Segment																																					
B18-C5310	B18 - PHS Lift & Temp Support (1 seg)	2	26-Sep-17 A	0	26-Sep-17 A				100%																												
Ramp B																																					
Abutment & Approach Ramp B																																					
Ramp Structure																																					
ARB-C6130	Ramp B - RE Wall - Panel Installation from 3rd Row to 6th Row	66	30-Aug-17 A	28	23-Nov-17	06-Jun-16	09-Jul-16	-410	0%																												
ARB-C6135	Ramp B - RE Wall - Panel installation from 7th Row to 11th Row	72	24-Nov-17	72	22-Feb-18	11-Jul-16	04-Oct-16	-410	0%																												
ARB-C6140	Ramp B - RC Wall - Base Slab	92	21-Oct-17	92	09-Feb-18	04-Jun-16	22-Sep-16	-411	0%																												
ARB-C6150	Ramp B - RC Wall - Side Wall	92	06-Nov-17	92	27-Feb-18	20-Jun-16	07-Oct-16	-411	0%																												
Ramp C																																					
Abutment & Approach Ramp C																																					
Ramp Finishes, E&M & Roadworks																																					
ARC-C7715	Ramp C - Parapet Panels (Remaining)	24	25-Apr-17 A	26	21-Nov-17	03-Jun-16	05-Jul-16	-412	95%																												
ARC-C7720	Ramp C - Ducting, Gantry & TCSS Provisions (KD4)	36	22-Nov-17	36	05-Jan-18	06-Jul-16	16-Aug-16	-412	0%																												
ARC-C7810	Ramp C - Drainage, Fire Main & E&M Services	54	13-Dec-17	54	20-Feb-18	27-Jul-16	28-Sep-16	-412	0%																												
ARC-C7820	Ramp C - Railings, Light Poles, Signs & Street Furniture	30	29-Dec-17	30	02-Feb-18	10-Aug-16	13-Sep-16	-412	0%																												
Ramp D																																					
Abutment & Approach Ramp D																																					
Ramp Finishes, E&M & Roadworks																																					
ARD-C7720	Ramp D - Ducting, Gantry & TCSS Provisions (KD4)	36	21-Oct-17	36	02-Dec-17	02-Feb-16	17-Mar-16	-508	0%																												
ARD-C7810	Ramp D - Drainage, Fire Main & E&M Services	54	13-Nov-17	54	17-Jan-18	26-Feb-16	04-May-16	-508	0%																												
ARD-C7820	Ramp D - Railings, Light Poles, Signs & Street Furniture	30	04-Dec-17	30	10-Jan-18	18-Mar-16	26-Apr-16	-508	0%																												
ARD-C7830	Ramp D - Deck Paving & Roadmarking (KD14)	18	11-Jan-18	18	31-Jan-18	27-Apr-16	19-May-16	-508	0%																												
Viaduct E - Bridge E5, E6, E7, E8																																					
Pier E12A (E8b)																																					
Pile Cap Dolphin																																					
E12A-C3130	E12A - Dolphin - Marine Pile Cap - Fixings, Dewatering & Trim Pile	11	26-Sep-17 A	0	11-Oct-17 A				100%																												
E12A-C3150	E12A - Dolphin - Marine Pile Cap - Rebar, Concreting	5	11-Oct-17 A	0	17-Oct-17 A				100%																												
E12A-C3160	E12A - Dolphin - Marine Pile Cap - CJ preparation & Curing	3	17-Oct-17 A	0	20-Oct-17 A				100%																												
Pier E12D (E5b)																																					
Pile Cap Dolphin																																					
E12D-C3070	E12D Dolphin - Marine Pile Cap - Collar frame to perm. casing of pile	3	21-Oct-17*	3	24-Oct-17	12-Oct-17	14-Oct-17	-8	0%																												
E12D-C3080	E12D Dolphin - Marine Pile Cap - Install precast shell in position	24	25-Oct-17	24	22-Nov-17	16-Oct-17	13-Nov-17	-8	0%																												
E12D-C3130	E12D Dolphin - Marine Pile Cap - Fixings, Dewatering & Trim Pile	11	23-Nov-17	11	05-Dec-17	14-Nov-17	25-Nov-17	-8	0%																												
E12D-C3150	E12D Dolphin - Marine Pile Cap - Rebar, Concreting	5	06-Dec-17	5	11-Dec-17	27-Nov-17	01-Dec-17	-8	0%																												
E12D-C3160	E12D Dolphin - Marine Pile Cap - CJ preparation & Curing	3	12-Dec-17	3	14-Dec-17	02-Dec-17	05-Dec-17	-8	0%																												
Pier Head Segment / Infill Segment																																					
E12D-C5150	E12D - IFS Stitch & Remove Equipment	12	20-Sep-17 A	0	04-Oct-17 A				100%																												
Pier E13A (E8c)																																					

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										October				November				December				January																	
										08	25	02	09	16	23	30	06	13	20	27	04	11	18	25	01	08	15	22											
Pile Cap Dolphin																																							
E13A-C3070	E13A Dolphin - Marine Pile Cap - Floating Seal & Casing Head Steelwork	3	15-Dec-17	3	18-Dec-17	06-Dec-17	08-Dec-17	-8	0%																														
E13A-C3080	E13A Dolphin - Marine Pile Cap - Install precast shell in position	24	19-Dec-17	24	18-Jan-18	09-Dec-17	09-Jan-18	-8	0%																														
E13A-C3130	E13A Dolphin - Marine Pile Cap - Fixings, Dewatering & Trim Pile	11	19-Jan-18	11	31-Jan-18	10-Jan-18	22-Jan-18	-8	0%																														
Pier Head Segment / Infill Segment																																							
E13A-C5140	E13A - Remove Rail Beams, Spreader Beams, Brackets, Crane	30	14-Aug-17 A	0	07-Oct-17 A				100%																														
E13A-C5145	E13A - Install Infill Segments (6 nr) - THB	28	09-Oct-17 A	7	30-Oct-17	01-Jun-17	08-Jun-17	-119	0%																														
E13A-C5150	E13A - IFS Stitch & Remove Equipment	12	31-Oct-17	12	13-Nov-17	09-Jun-17	22-Jun-17	-119	0%																														
Pier E13B (E7c)																																							
Pier Head Segment / Infill Segment																																							
E13B-C5145	E13B - Install Infill Segments (6 nr) - THB	42	06-Sep-17 A	0	02-Oct-17 A				100%																														
E13B-C5150	E13B - IFS Stitch & Remove Equipment	12	03-Oct-17 A	0	14-Oct-17 A				100%																														
Pier E13C (E6c)																																							
Pier Head Segment / Infill Segment																																							
E13C-C5145	E13C - Install Infill Segments (6 nr) - THB	42	09-Sep-17 A	0	16-Oct-17 A				100%																														
E13C-C5150	E13C - IFS Stitch & Remove Equipment	12	17-Oct-17 A	2	23-Oct-17	03-Feb-17	04-Feb-17	-213	0%																														
Pier E13D (E5c)																																							
Pier Head Segment / Infill Segment																																							
E13D-C5145	E13D - Install Infill Segments (6 nr) - THB	28	21-Sep-17 A	2	23-Oct-17	21-Jan-17	23-Jan-17	-221	0%																														
E13D-C5150	E13D - IFS Stitch & Remove Equipment	12	24-Oct-17	12	07-Nov-17	24-Jan-17	09-Feb-17	-221	0%																														
Pier E14A (E8d)																																							
Pier Head Segment																																							
E14A-C5110	E14A Pier Head - Scaffold, Temp Works	17	16-Sep-17 A	0	27-Sep-17 A				100%																														
E14A-C5210	E14A Pier Head - Erect PH Segment (2 nr)	4	28-Sep-17 A	0	29-Sep-17 A				100%																														
E14A-C5310	E14A Pier Head - Construct Diaphragm (2nd Cast) in PHS	65	30-Sep-17 A	50	19-Dec-17	11-Nov-16	11-Jan-17	-279	0%																														
E14A-C5410	E14A Pier Head - Curing, Stitching, Remove Temp Works	17	20-Dec-17	17	11-Jan-18	12-Jan-17	03-Feb-17	-279	0%																														
Pier E14B (E7d)																																							
Pier Head Segment																																							
E14B-C5410	E14B Pier Head - Curing, Stitching, Remove Temp Works	17	19-Sep-17 A	0	20-Oct-17 A				100%																														
Pier E14C (E6d)																																							
Pier																																							
E14C-C4410	E14C Pier - Scaffold, Rebar, Formwork, Concrete (4th Lift)	18	27-Jun-17 A	0	03-Oct-17 A				100%																														
E14C-C4510	E14C Pier - Curing, Remove Formwork	5	04-Oct-17 A	0	10-Oct-17 A				100%																														
Pier Head Segment																																							
E14C-C5110	E14C Pier Head - Scaffold, Temp Works	17	20-Dec-17 A	17	10-Nov-17	16-Mar-17	05-Apr-17	-178	0%																														
E14C-C5210	E14C Pier Head - Erect PH Segment (2 nr)	4	11-Nov-17	4	15-Nov-17	06-Apr-17	10-Apr-17	-178	0%																														
E14C-C5310	E14C Pier Head - Construct Diaphragm (2nd Cast) in PHS	65	16-Nov-17	65	02-Feb-18	11-Apr-17	03-Jul-17	-178	0%																														
Pier E14D (E5d)																																							
Pier																																							
E14D-C4310	E14D Pier - Scaffold, Rebar, Formwork, Concrete (3rd Lift)	16	18-Jul-17 A	0	23-Sep-17 A				100%																														
E14D-C4410	E14D Pier - Scaffold, Rebar, Formwork, Concrete (4th Lift)	16	24-Sep-17 A	0	27-Sep-17 A				100%																														
E14D-C4510	E14D Pier - Curing, Remove Formwork	5	28-Sep-17 A	0	04-Oct-17 A				100%																														
Pier Head Segment																																							
E14D-C5110	E14D Pier Head - Erect Steel Temp Tower on E14D	26	09-Oct-17 A	0	20-Oct-17 A				100%																														
E14D-C5210	E14D Pier Head - Erect PH Segment (1 nr)	2	11-Jan-18	2	12-Jan-18	24-Jan-17	25-Jan-17	-285	0%																														
E14D-C5310	E14D Pier Head - Construct Diaphragm (2nd Cast) in PHS	50	13-Jan-18	50	15-Mar-18	26-Jan-17	28-Mar-17	-285	0%																														
Temporary Tower Between Pier E14D & E13D																																							
E14D-C5740	E14D-E13D Temp Tower - Erect Steel Tower	28	22-Aug-17 A	0	30-Sep-17 A				100%																														
Viaduct F - Bridge F1																																							
Pier F1 (F1b)																																							
Pier Head Segment																																							
F01-C5310	F1 Pier Head - Construct Diaphragm (2nd Cast) in PHS	41	06-Oct-17 A	0	06-Oct-17 A				100%																														
F01-C5410	F1 Pier Head - Curing, Remove Temp Works	5	06-Oct-17 A	0	06-Oct-17 A				100%																														
Pier F2 (F1c)																																							
Pier																																							
F02-C4410	F2 Pier - Scaffold, Rebar, Formwork, Concrete (4th Lift)	18	14-Sep-17 A	0	27-Sep-17 A				100%																														
F02-C4510	F2 Pier - Scaffold, Rebar, Formwork, Concrete (5th Lift)	18	28-Sep-17 A	4	25-Oct-17	06-Dec-16	09-Dec-16	-258	0%																														
F02-C4610	F2 Pier - Curing, Remove Formwork	5	25-Oct-17	5	01-Nov-17	10-Dec-16	15-Dec-16	-258	0%																														

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										08	25	02	09	16	23	30	06	13	20	27	04	11	18	25	01	08	15	22							
Pier F13 (F5d)																																			
Pier																																			
F13-C4210	F13 Pier - Scaffold, Rebar, Formwork, Concrete (2nd Lift)	18	10-Aug-17 A	6	27-Oct-17	03-Mar-17	09-Mar-17	-189	50%																										
F13-C4310	F13 Pier - Curing, Remove Formwork	5	30-Oct-17	5	03-Nov-17	10-Mar-17	15-Mar-17	-189	0%																										
Pier Head Segment																																			
F13-C5110	F13 Pier Head - Scaffold, Temp Works	17	04-Nov-17	17	23-Nov-17	16-Mar-17	05-Apr-17	-189	0%																										
F13-C5210	F13 Pier Head - Erect PH Segment (1 nr)	2	24-Nov-17	2	25-Nov-17	06-Apr-17	07-Apr-17	-189	0%																										
F13-C5310	F13 Pier Head - Construct Diaphragm (2nd Cast) in PHS	41	27-Nov-17	41	16-Jan-18	08-Apr-17	01-Jun-17	-189	0%																										
F13-C5410	F13 Pier Head - Curing, Remove Temp Works	5	17-Jan-18	5	22-Jan-18	02-Jun-17	07-Jun-17	-189	0%																										
Pier F14 (F5c)																																			
Pier																																			
F14-C4210	F14 Pier - Scaffold, Rebar, Formwork, Concrete (2nd Lift)	18	01-Sep-17 A	0	10-Oct-17 A				100%																										
F14-C4310	F14 Pier - Scaffold, Rebar, Formwork, Concrete (3rd Lift)	18	10-Oct-17 A	0	10-Oct-17 A				100%																										
F14-C4410	F14 Pier - Curing, Remove Formwork	5	11-Oct-17 A	0	14-Oct-17 A				100%																										
Pier Head Segment																																			
F14-C5110	F14 Pier Head - Scaffold, Temp Works	17	27-Nov-17	17	15-Dec-17	29-Nov-17	18-Dec-17	2	0%																										
F14-C5210	F14 Pier Head - Erect PH Segment (1 nr)	2	16-Dec-17	2	18-Dec-17	19-Dec-17	20-Dec-17	2	0%																										
F14-C5310	F14 Pier Head - Construct Diaphragm (2nd Cast) in PHS	41	19-Dec-17	41	07-Feb-18	21-Dec-17	09-Feb-18	2	0%																										
Pier F15 (F5b)																																			
Pile Cap																																			
F15-C3110	F15 Pile Cap - Excavate, Break Pile Head	15	21-Oct-17*	15	08-Nov-17	31-Aug-17	16-Sep-17	-42	0%																										
F15-C3210	F15 Pile Cap - Blinding, Formwork, Rebar, Concrete	19	09-Nov-17	19	30-Nov-17	18-Sep-17	11-Oct-17	-42	0%																										
F15-C3310	F15 Pile Cap - Curing, Remove Formwork, Backfill	12	01-Dec-17	12	14-Dec-17	12-Oct-17	25-Oct-17	-42	0%																										
Pier																																			
F15-C4110	F15 Pier - Scaffold, Rebar, Formwork, Concrete (1st Lift)	13	15-Dec-17*	13	02-Jan-18	26-Oct-17	10-Nov-17	-42	0%																										
F15-C4210	F15 Pier - Scaffold, Rebar, Formwork, Concrete (2nd Lift)	18	03-Jan-18	18	23-Jan-18	11-Nov-17	01-Dec-17	-42	0%																										
Ramp F																																			
Abutment & Approach Ramp F																																			
Foundation - Bored Piles																																			
ARF-C2120	Ramp F Fr Pile - Sleeve, Casing, Excavate, Rebar, Concrete (20 nr)	126	19-May-17 A	0	14-Oct-17 A				100%																										
ARF-C2210	Ramp F Fr Pile - Curing & Sonic Test	18	15-Oct-17 A	14	07-Nov-17	15-May-17	31-May-17	-133	0%																										
Ramp Structure																																			
ARF-C6110	Ramp F - Strip Beams	24	07-Nov-17	24	05-Dec-17	01-Jun-17	28-Jun-17	-133	0%																										
ARF-C6120	Ramp F - Ground Beams	54	05-Dec-17	54	09-Feb-18	29-Jun-17	31-Aug-17	-133	0%																										
ARF-C6130	Ramp F - RC Columns	54	19-Jan-18	54	27-Mar-18	11-Aug-17	14-Oct-17	-133	0%																										
Superstructure & Associated Works																																			
Viaduct A																																			
Bridge A2																																			
Deck Span Segment																																			
VA2-C6510	Viaduct A2 - Final Stitch & Stressing to Span	24	21-Oct-17	24	18-Nov-17	15-Aug-16	10-Sep-16	-352	0%																										
Deck Finishes, E&M and Roadworks																																			
VA2-C7710	Viaduct A2 - Parapet Panels	48	20-Nov-17	48	17-Jan-18	12-Sep-16	09-Nov-16	-352	0%																										
VA2-C7720	Viaduct A2 - Gantry & TCSS Provisions (KD5)	36	04-Jan-18	36	14-Feb-18	27-Oct-16	07-Dec-16	-352	0%																										
VA2-C7810	Viaduct A2 - Drainage, Fire Main & E&M Services	60	18-Jan-18	60	04-Apr-18	10-Jan-17	23-Mar-17	-303	0%																										
Bridge A1																																			
Deck Span Segment																																			
A06-C6320	A6 - End Span to A7 (8 nr) - THB	34	24-Feb-17 A	10	02-Nov-17	03-Aug-16	13-Aug-16	-362	75%																										
A09-C6510	A9 - Cantilever Span (Remaining 20 nr) (MTR) - KF	32	21-Aug-17 A	0	11-Oct-17 A				100%																										
A10-C6310	A10 - Cantilever Span (Initial 5 nr) - Crane	10	18-Oct-17 A	4	26-Oct-17	11-Jul-16	14-Jul-16	-383	0%																										
A10-C6410	A10 - Relocate & Install KF	9	21-Oct-17	9	01-Nov-17	09-Jul-16	19-Jul-16	-383	0%																										
A10-C6510	A10 - Cantilever Span (Remaining 7 nr) - KF	14	02-Nov-17	14	17-Nov-17	20-Jul-16	04-Aug-16	-383	0%																										
A11-C6210	A11 - Falsework for End Span to A10	24	21-Oct-17	24	18-Nov-17	08-Jul-16	04-Aug-16	-384	0%																										
A11-C6310	A11 - End Span to A10 (4 nr) - Crane	8	20-Nov-17	8	28-Nov-17	05-Aug-16	13-Aug-16	-384	0%																										
VA1-C6510	Viaduct A1 - Final Stitch & Stressing to Span	24	29-Nov-17	24	28-Dec-17	15-Aug-16	10-Sep-16	-384	0%																										
Deck Finishes, E&M and Roadworks																																			
VA1-C7710	Viaduct A1 - Parapet Panels	60	29-Dec-17	60	13-Mar-18	12-Sep-16	23-Nov-16	-384	0%																										
Viaduct B																																			
Bridge B3																																			

■ Actual Work
■ Planned Bar
■ Critical Bar
◆ Milestone

Project ID: TMCLK-DWPI-1-M53
 Layout: J3518-DWP-3MRP Submission - M53
 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 6 of 10 Pages)
(Progress as of 21-Oct-17)

Date	Revision	Checked	Approved
29-Aug-17		PKN	HF
29-Sep-17		PKN	HF
30-Oct-17		PKN	HF

DWG. No.:
J3518/GCL/PGM/3MRP-M53

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Physical % Complete	2017												2018							
										October						November				December				January					
										8	25	02	09	16	23	30	06	13	20	27	04	11	18	25	01	08	15	22	
Bridge D1																													
Deck Finales, E&M and Roadworks																													
VD1-C7710	Viaduct D1 - Parapet Panels	48	01-Jun-17 A	12	04-Nov-17	28-Jun-16	12-Jul-16	-392	0%	[Gantt Bar]																			
VD1-C7720	Viaduct D1 - Gantry & TCSS Provisions (KD4)	36	21-Oct-17	36	02-Dec-17	28-Jun-16	09-Aug-16	-392	0%	[Gantt Bar]																			
VD1-C7810	Viaduct D1 - Drainage, Fire Main & E&M Services	60	06-Nov-17	60	17-Jan-18	13-Jul-16	21-Sep-16	-392	0%	[Gantt Bar]																			
VD1-C7820	Viaduct D1 - Railings, Light Poles, Signs & Street Furniture	30	04-Dec-17	30	10-Jan-18	10-Aug-16	13-Sep-16	-392	0%	[Gantt Bar]																			
VD1-C7830	Viaduct D1 - Deck Paving & Roadmarking (KD14)	18	11-Jan-18	18	31-Jan-18	14-Sep-16	06-Oct-16	-392	0%	[Gantt Bar]																			
Viaduct E																													
Bridge E1																													
Deck Span Segment																													
VE1-C6510	Viaduct E1 - E3A/E4A, E3B/E4A & E3C/E4B Stitches	12	21-Sep-17 A	0	06-Oct-17 A				100%	[Gantt Bar]																			
Deck Finales, E&M and Roadworks																													
VE1AB-C7710	Viaduct E1A/B - Parapet Panels	48	21-Oct-17	48	16-Dec-17	16-May-16	12-Jul-16	-428	0%	[Gantt Bar]																			
VE1AB-C7720	Viaduct E1A/B - Gantry & TCSS Provisions (KD4)	36	04-Dec-17	36	17-Jan-18	28-Jun-16	09-Aug-16	-428	0%	[Gantt Bar]																			
VE1AB-C7810	Viaduct E1A/B - Drainage, Fire Main & E&M Services	60	18-Dec-17	60	03-Mar-18	13-Jul-16	21-Sep-16	-428	0%	[Gantt Bar]																			
VE1AB-C7820	Viaduct E1A/B - Railings, Light Poles, Signs & Street Furniture	30	18-Jan-18	30	24-Feb-18	10-Aug-16	13-Sep-16	-428	0%	[Gantt Bar]																			
VE1CD-C7710	Viaduct E1C/D - Parapet Panels	48	07-Nov-17	48	04-Jan-18	16-May-16	12-Jul-16	-441	0%	[Gantt Bar]																			
VE1CD-C7720	Viaduct E1C/D - Gantry & TCSS Provisions (KD4)	36	19-Dec-17	36	01-Feb-18	28-Jun-16	09-Aug-16	-441	0%	[Gantt Bar]																			
VE1CD-C7810	Viaduct E1C/D - Drainage, Fire Main & E&M Services	60	05-Jan-18	60	19-Mar-18	13-Jul-16	21-Sep-16	-441	0%	[Gantt Bar]																			
Bridge E2																													
Deck Span Segment																													
E03A-C6410	E3A - Launch LG1 from E3B to E3A - *LG1	3	25-Sep-17 A	0	27-Sep-17 A				100%	[Gantt Bar]																			
E03A-C6510	E3A - End Span to E4A (7 nr) - *LG1	7	28-Sep-17 A	0	30-Sep-17 A				100%	[Gantt Bar]																			
E03A-C6610	E3A/B - Stitch between E3A/B and E4A	12	02-Oct-17 A	0	06-Oct-17 A				100%	[Gantt Bar]																			
E03A-C6710	E3A - Launch LG1 from E3A to E4/E5 for Dismantling	6	16-Sep-17 A	0	14-Oct-17 A				100%	[Gantt Bar]																			
E03B-C6410	E3B - Launch LG1 from E2B to E3B - *LG1	3	16-Sep-17 A	0	14-Oct-17 A				100%	[Gantt Bar]																			
E06A-C6410	E6A - Drop in (E6A-E5A) - THB	30	13-Jul-17 A	0	30-Sep-17 A				100%	[Gantt Bar]																			
E06A-C6510	E6A & E6B - Quarter Span (E6-E7) - TLB	30	04-Jul-17 A	12	02-Nov-17	09-Jul-17	20-Jul-17	-101	50%	[Gantt Bar]																			
E06A-C6520	E6A & E6B - E5A/E6A & E5B/E6B Stitches	8	03-Nov-17	8	10-Nov-17	21-Jul-17	28-Jul-17	-101	0%	[Gantt Bar]																			
E06A-C6530	E7A & E7B - E6A/E7A & E6B/E7B Stitches	8	13-Nov-17	8	20-Nov-17	31-Jul-17	07-Aug-17	-101	0%	[Gantt Bar]																			
E06A-C6610	E6A/E7A: Install Bearing & Stress Continuity Tendons	12	21-Nov-17	12	04-Dec-17	08-Aug-17	21-Aug-17	-87	0%	[Gantt Bar]																			
E06A-C6620	E6B/E7B: Install Bearing & Stress Continuity Tendons	12	21-Nov-17	12	04-Dec-17	08-Aug-17	21-Aug-17	-87	0%	[Gantt Bar]																			
E06B-C6510	E6B - Drop in (E6B-E5B) - THB	30	30-Sep-17 A	7	27-Oct-17	15-Jul-17	21-Jul-17	-95	0%	[Gantt Bar]																			
E08A-C6410	E8A - Drop in (E8A-E7A) - THB	30	30-Sep-17 A	18	08-Nov-17	17-Jul-20	06-Aug-20	904	0%	[Gantt Bar]																			
E08A-C6510	E8A & E8B - Quarter Span (E8-E9) - TLB	30	16-Sep-17 A	30	20-Nov-17	16-Aug-17	14-Sep-17	-63	0%	[Gantt Bar]																			
E08A-C6520	E8A & E8B - E7A/E8A & E7B/E8B Stitches	8	21-Nov-17	8	28-Nov-17	15-Sep-17	22-Sep-17	-63	0%	[Gantt Bar]																			
E08A-C6530	E9A & E9B - E8A/E9A & E8B/E9B Stitches	8	02-Dec-17	8	09-Dec-17	26-Sep-17	06-Oct-17	-63	0%	[Gantt Bar]																			
E08A-C6610	E8A/E9A: Install Bearing & Stress Continuity Tendons	12	10-Dec-17	12	21-Dec-17	07-Oct-17	18-Oct-17	-63	0%	[Gantt Bar]																			
E08A-C6620	E8B/E9B: Install Bearing & Stress Continuity Tendons	12	10-Dec-17	12	21-Dec-17	07-Oct-17	18-Oct-17	-63	0%	[Gantt Bar]																			
E08B-C6510	E8B - Drop in (E8B-E7B) - THB	30	11-Oct-17 A	20	10-Nov-17	26-Aug-17	14-Sep-17	-53	0%	[Gantt Bar]																			
E10A-C6410	E10A - Drop in (E10A-E9A) - THB	30	09-Sep-17 A	77	08-Jan-18	31-Jul-17	18-Oct-17	-79	0%	[Gantt Bar]																			
E11B-C6410	E11B - Bifurcation Span to E10B (12 nr) with 1st Stitch - THB	48	24-Jul-17 A	0	28-Sep-17 A				100%	[Gantt Bar]																			
E11B-C6510	E10A & E10B - Quarter span (E10-E11) - TLB	30	30-Aug-17 A	140	16-Mar-18	26-Apr-17	15-Sep-17	-172	0%	[Gantt Bar]																			
VE2-C6610	Viaduct E2 - Dismantle LG1	48	07-Nov-17	48	04-Jan-18	11-Jul-17	04-Sep-17	-99	0%	[Gantt Bar]																			
VE2-C6620	Viaduct E2 - Dismantle LG2	48	21-Oct-17	48	16-Dec-17	26-Jun-17	21-Aug-17	-98	0%	[Gantt Bar]																			
Deck Finales, E&M and Roadworks																													
VE21-C7710	Viaduct E2-1 (E3-E6) - Parapet Panels	48	19-Dec-17	48	15-Feb-18	22-Aug-17	18-Oct-17	-99	0%	[Gantt Bar]																			
Bridge E5																													
Deck Span Segment																													
E11B-C6310	E11B Deck - Bifurcation Span to E12B (18 nr) with 1st Stitch - THB	48	27-Jul-17 A	0	28-Sep-17 A				100%	[Gantt Bar]																			
E12D-C6110	E12D Deck - Install THB	8	05-Oct-17 A	0	05-Oct-17 A				100%	[Gantt Bar]																			
E12D-C6210	E12D Deck - Cantilever Span (16 seg) with 2 stitches - THB	45	05-Oct-17 A	60	20-Dec-17	30-Dec-16	05-Mar-17	-282	0%	[Gantt Bar]																			
E12D-C6220	E12D Deck - Install WLF	7	21-Dec-17	7	28-Dec-17	06-Mar-17	12-Mar-17	-282	0%	[Gantt Bar]																			
E12D-C6230	E12D Deck - Cantilever span (26 seg) with 1 stitch - WLF	53	31-Dec-17	53	26-Feb-18	15-Mar-17	08-May-17	-282	0%	[Gantt Bar]																			
E13D-C6110	E13D Deck - Install KF and THB	6	08-Nov-17	6	13-Nov-17	10-Feb-17	15-Feb-17	-263	0%	[Gantt Bar]																			
E13D-C6210	E13D Deck - Cantilever Span (22 seg) with 2 stitches - KF and THB	49	14-Nov-17	49	03-Jan-18	16-Feb-17	06-Apr-17	-263	0%	[Gantt Bar]																			
E13D-C6220	E13D Deck - Cantilever span (20 seg) with 1 stitch - KF and THB	43	04-Jan-18	43	15-Feb-18	07-Apr-17	20-May-17	-263	0%	[Gantt Bar]																			
E14D-C6110	E14D Deck - Preparation Works & Deliver Underslung Truss to Site	18	21-Oct-17	18	11-Nov-17	04-Nov-16	24-Nov-16	-285	0%	[Gantt Bar]																			
E14D-C6115	E14D Deck - Install Truss/Fixings & Initial ICE Check	15	13-Nov-17	15	29-Nov-17	25-Nov-16	12-Dec-16	-285	0%	[Gantt Bar]																			
E14D-C6120	E14D Deck - Install Sliding System, T&C & Final ICE Check	15	30-Nov-17	15	16-Dec-17	13-Dec-16	31-Dec-16	-285	0%	[Gantt Bar]																			
E14D-C6210	E14D Deck - End Span to E13D Segment '7' to '2' (6 nr) - Crane	18	18-Dec-17	18	10-Jan-18	03-Jan-17	23-Jan-17	-285	0%	[Gantt Bar]																			

■ Actual Work
■ Planned Bar
■ Critical Bar
◆ Milestone

Project ID: TMCLK-DWPI-1-M53
 Layout: J3518-DWP-3MRP Submission - M53
 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 10 Pages)
(Progress as of 21-Oct-17)

Date	Revision	Checked	Approved
29-Aug-17		PKN	HF
29-Sep-17		PKN	HF
30-Oct-17		PKN	HF

DWG. No.:
J3518/GCL/PGM/3MRP-M53

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Physical % Complete	2017												2018			
										October					November				December			January			
										8	25	02	09	16	23	30	06	13	20	27	04	11	18	25	01
Bridge E6																									
Deck Span Segment																									
E12C-C6210	E12C Deck - Cantilever Span (42 seg) with 2 stitches - THB	67	10-Sep-17 A	67	28-Dec-17	15-Jun-17	21-Aug-17	-124	5%	[Gantt bar: 15-Jun-17 to 21-Aug-17]															
E13C-C6110	E13C Deck - Install KF and THB	6	24-Oct-17*	6	30-Oct-17	06-Feb-17	11-Feb-17	-253	0%	[Gantt bar: 06-Feb-17 to 11-Feb-17]															
E13C-C6210	E13C Deck - Cantilever Span (18 seg) with 1 stitch - KF and THB	36	31-Oct-17	36	05-Dec-17	12-Feb-17	19-Mar-17	-253	0%	[Gantt bar: 12-Feb-17 to 19-Mar-17]															
E13C-C6220	E13C Deck - Install TLB with T&C	19	04-Dec-17	19	22-Dec-17	18-Mar-17	06-Apr-17	-253	0%	[Gantt bar: 18-Mar-17 to 06-Apr-17]															
E13C-C6230	E13C Deck - Cantilever span (26 seg) with 1 stitch - KF and THB	51	23-Dec-17	51	13-Feb-18	14-Jul-17	02-Sep-17	-158	0%	[Gantt bar: 14-Jul-17 to 02-Sep-17]															
Bridge E7																									
Deck Span Segment																									
E12B-C6210	E12B Deck - Cantilever Span (40 seg) with 3 stitches - WLF	66	04-Sep-17 A	60	20-Dec-17	27-Apr-17	27-Jun-17	-171	5%	[Gantt bar: 27-Apr-17 to 27-Jun-17]															
E13B-C6110	E13B Deck - Install KF	7	21-Nov-17*	7	27-Nov-17	13-Jan-17	19-Jan-17	-300	0%	[Gantt bar: 13-Jan-17 to 19-Jan-17]															
E13B-C6210	E13B Deck - Cantilever Span (44 seg) with 3 stitches - KF	82	28-Nov-17	82	23-Feb-18	20-Jan-17	16-Apr-17	-300	0%	[Gantt bar: 20-Jan-17 to 16-Apr-17]															
Bridge E8																									
Deck Span Segment																									
E12A-C6210	E12A Deck - Install THB	8	23-Sep-17 A	0	30-Sep-17 A				100%	[Gantt bar: 23-Sep-17 to 30-Sep-17]															
E12A-C6410	E12A Deck - Cantilever Span (22 nr) with 1st stitch - THB	45	01-Oct-17 A	30	20-Nov-17	09-Dec-16	12-Jan-17	-300	0%	[Gantt bar: 09-Dec-16 to 12-Jan-17]															
E12A-C6420	E12A deck - Install WLF & install (18nr) - WLF	52	23-Dec-17	52	14-Feb-18	30-Jun-17	21-Aug-17	-171	0%	[Gantt bar: 30-Jun-17 to 21-Aug-17]															
E13A-C6210	E13A Deck - Install KF	7	21-Dec-17	7	28-Dec-17	23-Jun-17	29-Jun-17	-176	0%	[Gantt bar: 23-Jun-17 to 29-Jun-17]															
E13A-C6410	E13A Deck - Cantilever Span(32 nr) with 3 stitches - KF	72	29-Dec-17	72	15-Mar-18	30-Jun-17	10-Sep-17	-176	0%	[Gantt bar: 30-Jun-17 to 10-Sep-17]															
E14A-C6510	E14A Deck - End Span to E13A (1 nr) with 1st Pair - Crane	9	12-Jan-18	9	22-Jan-18	31-Jul-17	09-Aug-17	-136	0%	[Gantt bar: 31-Jul-17 to 09-Aug-17]															
Viaduct F																									
Bridge F1																									
Deck Span Segment																									
E14A-C6110	E14A Deck - End Span to F1 (1 nr) with 1st Pair -THB	9	12-Jan-18	9	22-Jan-18	04-Feb-17	14-Feb-17	-279	0%	[Gantt bar: 04-Feb-17 to 14-Feb-17]															
F01-C6210	F1 Deck - Install THB	3	07-Oct-17 A	0	11-Oct-17 A				100%	[Gantt bar: 07-Oct-17 to 11-Oct-17]															
F01-C6310	F1 Deck - Cantilever Span (10 nr) - THB (Props at 5th Pair)	42	12-Oct-17 A	7	30-Oct-17	01-Mar-17	08-Mar-17	-191	0%	[Gantt bar: 01-Mar-17 to 08-Mar-17]															
Bridge F2																									
Deck Span Segment																									
F05-C6210	F5 Deck - Install THB	3	06-Jan-18	3	09-Jan-18	12-Jan-17	14-Jan-17	-291	0%	[Gantt bar: 12-Jan-17 to 14-Jan-17]															
F05-C6220	F5 Deck - Cantilever Span (10 nr) - THB (Props at 5th Pair)	42	10-Jan-18	42	02-Mar-18	16-Jan-17	08-Mar-17	-291	0%	[Gantt bar: 16-Jan-17 to 08-Mar-17]															
CEDD Access Track Re-Provisioning Works																									
Viaduct A to D																									
Access Tracks																									
General																									
PR30060	Construct perm. realignment of CEDD access track at Pier A8	42	29-Nov-17	42	19-Jan-18	02-Dec-16	23-Jan-17	-293	0%	[Gantt bar: 02-Dec-16 to 23-Jan-17]															
PR30070	Construct perm. realignment of CEDD access track at Pier B8	42	22-Dec-17	42	12-Feb-18	28-Dec-16	18-Feb-17	-293	0%	[Gantt bar: 28-Dec-16 to 18-Feb-17]															
PR30080	Construct perm. realignment of CEDD access track at Pier C7	42	18-Jan-18	42	10-Mar-18	21-Jan-17	14-Mar-17	-293	0%	[Gantt bar: 21-Jan-17 to 14-Mar-17]															
At-Grade Works & Miscellaneous Works																									
At-Grade Works Along North Lantau Highway																									
Slope Works Near Viaduct D																									
Slope 10NW-C/F9																									
M201200	10NW-C/F9 - Slope works (incl. L-Shape Ret. Walls)	110	21-Oct-17	110	06-Mar-18	19-Sep-16	02-Feb-17	-323	0%	[Gantt bar: 19-Sep-16 to 02-Feb-17]															
Slope 10NW-C/F10																									
M201160	10NW-C/F10 - Slope works (incl. L-Shape Ret. Walls)	110	09-Sep-17 A	80	26-Jan-18	06-Aug-16	10-Nov-16	-359	10%	[Gantt bar: 06-Aug-16 to 10-Nov-16]															
Slope 10NW-C/R4																									
M201170	10NW-C/R4 - Slope works	80	21-Oct-17	80	26-Jan-18	06-Aug-16	10-Nov-16	-359	0%	[Gantt bar: 06-Aug-16 to 10-Nov-16]															
Slope 10NW-C/F50																									
M201150	10NW-C/F50 - Slope works	165	11-Jan-17 A	62	05-Jan-18	27-Aug-16	10-Nov-16	-341	5%	[Gantt bar: 27-Aug-16 to 10-Nov-16]															
Road Works Along NLH Westbound																									
General																									
RW10020	NLH W/B (Viaduct C) - Road Drainage Works for tie-in	104	26-Jun-17 A	56	28-Dec-17	01-Feb-17	07-Apr-17	-215	15%	[Gantt bar: 01-Feb-17 to 07-Apr-17]															
Road Works Along NLH Eastbound																									
General																									
RW20080-1	Ch650 - 800 Portion 4 (viaduct D area): Roadwork	81	11-Jan-17 A	12	04-Nov-17	24-Mar-17	07-Apr-17	-171	90%	[Gantt bar: 24-Mar-17 to 07-Apr-17]															
RW20080-2	Ch475 - 650 Portion 5 (viaduct D area): Roadwork	81	11-Jan-17 A	12	04-Nov-17	24-Mar-17	07-Apr-17	-171	87%	[Gantt bar: 24-Mar-17 to 07-Apr-17]															
RW20080-3	Ch275 - 475 Portion 6 (viaduct D area): Roadwork	162	11-Jan-17 A	59	02-Jan-18	25-Jan-17	07-Apr-17	-218	75%	[Gantt bar: 25-Jan-17 to 07-Apr-17]															
RW20080-4	Ch157 - 275 Portion 7 (Viaduct D area): Roadwork	98	11-Jan-17 A	24	18-Nov-17	10-Mar-17	07-Apr-17	-183	77%	[Gantt bar: 10-Mar-17 to 07-Apr-17]															

■ Actual Work
■ Planned Bar
■ Critical Bar
◆ Milestone

Project ID: TMCLK-DWPI-1-M53
 Layout: J3518-DWP-3MRP Submission - M53
 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 9 of 10 Pages)
(Progress as of 21-Oct-17)

Date	Revision	Checked	Approved
29-Aug-17		PKN	HF
29-Sep-17		PKN	HF
30-Oct-17		PKN	HF

DWG. No.:
J3518/GCL/PGM/3MRP-M53

Activity ID	Activity Name	Orig. Durn.	Act. Start / FC Early Start	Rem. Durn.	Act. Finish / FC Early Finish	Late Start	Late Finish	Total Float	Physical % Complete	2017												2018			
										October					November				December			January			
										08	25	02	09	16	23	30	06	13	20	27	04	11	18	25	01
RW20084	NLH E/B Viaduct A - Ch200-388 Roadwork (SL & HS) & Reinstale NLH	127	17-Dec-16 A	24	18-Nov-17	10-Mar-17	07-Apr-17	-183	75%																
At-Grade Works Along Cheung Tung Road																									
Slope Works Near Viaduct B																									
Slope 9SE-B/F85																									
SWVB4020	9SE-B/F85 - Filling & forming slope	36	02-Jan-18	36	12-Feb-18	16-Aug-18	27-Sep-18	183	0%																
Slope Works Near Viaduct C																									
Slope 10NW-C/C26																									
SWVC1995	TTA for closure of NLH HS	2	13-Nov-17	2	14-Nov-17	16-Aug-16	17-Aug-16	-369	0%																
SWVC2000	10NW-C/C26 - Slope works	166	15-Nov-17	166	09-Jun-18	18-Aug-16	09-Mar-17	-369	0%																
Slope PF1 & PF2																									
SWVC7000	PF1 & PF2 slope works	18	21-Oct-17	18	11-Nov-17	26-Jul-16	15-Aug-16	-369	0%																
Slope 10NW-C/F13																									
SWVC4000	10NW-C/F13 - Slope works	100	01-Sep-17 A	86	02-Feb-18	30-Jul-16	10-Nov-16	-365	0%																
Slope 10NW-C/F14																									
SWVC5000	10NW-C/F14 - Slope works	100	01-Sep-17 A	95	13-Feb-18	14-Jun-16	05-Oct-16	-404	0%																
Slope 10NW-C/F15																									
SWVC6000	10NW-C/F15 - Slope works	108	01-Sep-17 A	100	22-Feb-18	07-Jun-16	05-Oct-16	-409	0%																
Re-alignment of CTR Along Viaduct B																									
General																									
RP00074-3	Ch100-300: Road Drainage	38	06-May-17 A	7	30-Oct-17	30-Jul-20	06-Aug-20	819	85%																
RP00076	Ch100-300: Lay Telecom Cable	10	22-May-17 A	120	17-Mar-18	11-Mar-20	06-Aug-20	706	85%																
RP00077	Ch100-300: Street Lighting & Draw Pit	13	27-Jun-17 A	120	17-Mar-18	11-Mar-20	06-Aug-20	706	25%																
RP00078	Ch100-300: Relocation of Vent Pipe	18	13-May-17 A	120	17-Mar-18	11-Mar-20	06-Aug-20	706	55%																
RP00083	Ch100-300: Drainage & Roadwork for New CTR	52	13-May-17 A	52	21-Dec-17	22-Oct-16	21-Dec-16	-296	30%																
RP00084	Ch100-300: TTA to New CTR	1	22-Dec-17	1	22-Dec-17	22-Dec-16	22-Dec-16	-296	0%																
Re-alignment of CTR Along Viaduct C																									
East Portion																									
RW60060	CTR East (stage 3) TTA 090-6 : Roadwork	66	14-Jul-17 A	48	16-Dec-17	01-Dec-16	01-Feb-17	-262	0%																
RW60070	CTR East (stage 4) : Roadwork	55	18-Dec-17	55	26-Feb-18	02-Feb-17	07-Apr-17	-262	0%																
RW60080	CTR Tie in Works	116	18-May-17 A	60	03-Jan-18	24-Jan-17	07-Apr-17	-219	20%																
Emergency Gates G6 & G7																									
RP10100	Open re-aligned CTR & activate new gates G6 & G7	0	01-Dec-17	0		10-Mar-17		-217	0%																
RP10110	Remove old gates G6 & G7 and reprovision Expressway Fence	24	01-Dec-17	24	30-Dec-17	10-Mar-17	07-Apr-17	-217	0%																
At-Grade Works at Southern Landfall																									
HKBCF Area																									
General																									
RW30005	South Landfall - Initial record survey	12	28-Dec-17	12	12-Jan-18	19-Oct-17	02-Nov-17	-57	0%																
RW30010	South Landfall - Mobilisation for Portion B Works	24	12-Jan-18	24	09-Feb-18	03-Nov-17	30-Nov-17	-57	0%																
RW30028-2	Construct FMH2046 and Lay Pipe Work	14	27-Jun-17 A	0	03-Oct-17 A				100%																
RW30028-3	Construct FMH2047 and Lay Pipe Work	14	27-Jun-17 A	0	03-Oct-17 A				100%																
RW30028-4	Construct FMH2048 and Lay Pipe Work	14	07-Oct-17 A	2	23-Oct-17	26-Jun-17	27-Jun-17	-98	0%																
RW30028-5	Construct FMH2049 and Lay Pipe Work	14	24-Oct-17	14	09-Nov-17	28-Jun-17	14-Jul-17	-98	0%																
Watermain from Tung Chung to Southern Landfall																									
Watermain Works																									
General																									
WM00120	Lay DN450 Fresh Water Main at Re-aligned CTR (approx. 500m)	48	22-Apr-15 A	12	04-Nov-17	29-Nov-17	12-Dec-17	32	90%																
WM00210	Viaduct B3 - Lay DN450 Fresh Water Main	36	18-Jan-18	36	03-Mar-18	13-Dec-17	26-Jan-18	-28	0%																

Actual Work
 Planned Bar
 Critical Bar
 Milestone

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Tuen Mun - Chek Lap Kok Link - Southern Connection
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Appendix C

Environmental Mitigation and Enhancement Measure Implementation Schedules

(In reference to CINOTECH (2011) Agreement No.
CE35/2011 EP Baseline Environmental Monitoring for
Hong Kong-Zhuhai-Macao 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 suitable for recycle
10.9	7.6	Compensatory tree planting shall be provided to the satisfaction of relevant Government departments. Required numbers and locations of compensatory trees shall be determined and agreed separately with Government during the Tree Felling Application process under ETWBTC 3/2006 (CM10).	All areas/ detailed design/ during construction	Design Consultant/ Contractor	TMEIA	Y	Y		✓
10.9	7.6	Re-vegetation of affected woodland/shrubland with native species (OM1)	All areas/ detailed design/ during construction/ during operation	Design Consultant/ Contractor	TMEIA	Y	Y	Y	n/a. To be implemented by AFCD/HyD/ L CSD
10.9	7.6	Tall buffer screen tree / shrub / climber planting should be incorporated to soften hard engineering structures and facilities (OM2)	All areas/ detailed design/ during construction/ during operation	Design Consultant/ Contractor	TMEIA	Y	Y	Y	n/a To be implemented by HyD/LCSD
10.9	7.6	Streetscape elements (e.g. paving, signage, street furniture, lighting etc.) shall be sensitively designed in a manner that responds to the local context, and minimises potential negative landscape and visual impacts. Lighting units should be directional and minimise unnecessary light spill (OM3)	All areas/ detailed design/ during construction / during operation	Design Consultant/ Contractor	TMEIA	Y	Y	Y	n/a. To be implemented by HyD/LCSD
10.9	7.6	Structure, ornamental tree / shrub / climber planting should be provided along roadside amenity strips, central dividers and newly formed slopes to enhance the townscape quality and further greenery enhancement	All areas/ detailed design/ during construction / during operation	Design Consultant/ Contractor	TMEIA	Y	Y	Y	n/a. To be implemented by

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	O	
		(OM4)							HyD/LCSD
10.9	7.6	Aesthetically pleasing design (visually unobtrusive and non-reflective) as regard to the form, material and finishes	All areas/ detailed design/ during construction / during operation	Design Consultant/ Contractor	TMEIA	Y	Y	Y	n/a. To be implemented by HyD
WASTE									
12.6		The Contractor shall identify a coordinator for the management of waste.	Contract mobilisation	Contractor	TMEIA		Y		✓
12.6		The Contractor shall prepare and implement a Waste Management Plan which specifies procedures such as a ticketing system, to facilitate tracking of loads and to ensure that illegal disposal of wastes does not occur, and protocols for the maintenance of records of the quantities of wastes generated, recycled and disposed. A recording system for the amount of waste generated, recycled and disposed (locations) should be established.	Contract mobilisation	Contractor	TMEIA, Works Branch Technical Circular No. 5/99 for the Trip-ticket System for Disposal of Construction and Demolition Material		Y		✓
12.6		The Contractor shall apply for and obtain the appropriate licenses for the disposal of public fill, chemical waste and effluent discharges.	Contract mobilisation	Contractor	TMEIA, Land (Miscellaneous Provisions) Ordinance (Cap 28); Waste Disposal Ordinance (Cap 354); Dumping at Sea Ordinance (Cap 466); Water Pollution Control Ordinance.		Y		✓
12.6	8.1	Training shall be provided to workers about the concepts of site cleanliness and appropriate waste management procedures including waste reduction, reuse and recycling.	Contract Mobilisation	Contractor	TMEIA		Y		✓
12.6	8.1	The extent of cutting operation should be optimised	All areas / throughout	Contractor	TMEIA		Y		✓

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

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Stages			Status
						D	C	O	
		materials should avoid over-ordering and wastage.							
12.6	8.1	The Contractor should recycle as many C&D materials (this is a waste section) as possible on-site. The public fill and C&D waste should be segregated and stored in separate containers or skips to facilitate the reuse or recycling of materials and proper disposal. Where practicable, the concrete and masonry should be crushed and used as fill materials. Steel reinforcement bar should be collected for use by scrap steel mills. Different areas of the sites should be considered for segregation and storage activities.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	All falsework will be steel instead of wood.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	Chemical waste producers should register with the EPD. Chemical waste should be handled in accordance with the Code of Practice on the Packaging, Handling and Storage of Chemical Wastes as follows: <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; 	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"> - Adequate ventilation; - Sufficiently covered to prevent rainfall entering (water collected within the bund must be tested and disposed of as chemical waste, if necessary); and - Incompatible materials are adequately separated. 							
12.6	8.1	Waste oils, chemicals or solvents shall not be disposed of to drain,	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	Adequate numbers of portable toilets should be provided for on-site workers. Portable toilets should be maintained in reasonable states, which will not deter the workers from utilising them.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	Night soil should be regularly collected by licensed collectors.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	General refuse arising on-site should be stored in enclosed bins or compaction units separately from C&D and chemical wastes. Sufficient dustbins shall be provided for storage of waste as required under the Public Cleansing and Prevention of Nuisances By-laws. In addition, general refuse shall be cleared daily and shall be disposed of to the nearest licensed landfill or refuse transfer station. Burning of refuse on construction sites is prohibited.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	All waste containers shall be in a secure area on hard standing;	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	Training shall be provided to workers about the concepts of site cleanliness and appropriate waste management procedure, including waste reduction, reuse and recycling.	All areas / throughout construction period	Contractor	TMEIA		Y		✓
12.6	8.1	Office wastes can be reduced by recycling of	Site Offices/	Contractor	TMEIA		Y		✓

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

Notes:

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

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

Status:

- ✓ Compliance of Mitigation Measures
- <> Compliance of Mitigation but need improvement
- x Non-compliance of Mitigation Measures
- ▲ Non-compliance of Mitigation Measures but rectified by Contractor
- Δ Deficiency of Mitigation Measures but rectified by Contractor
- n/a Not Applicable in Reporting Period

Appendix D

Summary of Action and Limit Levels

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

Parameters	Action	Limit
24 Hour TSP Level in $\mu\text{g}/\text{m}^3$	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 : 28/09/2017

Sampler

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

Calibration Orifice and Standard Calibration Relationship

Serial Number : 2454
 Service Date : 20 Mar 2017
 Slope (m) : 2.08464
 Intercept (b) : -0.03684
 Correlation Coefficient(r) : 0.99994

Standard Condition

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

Calibration Condition

Pa (hpa) : 1009
 Ta(K) : 305

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	11.2	3.301	1.601	56	55.24
2	13 holes	9.2	2.992	1.453	50	49.33
3	10 holes	6.5	2.515	1.224	44	43.41
4	7 holes	4.4	2.069	1.010	36	35.51
5	5 holes	2.6	1.591	0.781	27	26.64

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): 34.074 Intercept(b): 0.662 Correlation Coefficient(r): 0.9976

Checked by: Magnum Fan

Date: 05/10/2017

High-Volume TSP Sampler
5-Point Calibration Record

Location : ASR9
 Calibrated by : P.F. Yeung
 Date : 28/09/2017

Sampler

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

Calibration Orifice and Standard Calibration Relationship

Serial Number : 2454
 Service Date : 20 Mar 2017
 Slope (m) : 2.08464
 Intercept (b) : -0.03684
 Correlation Coefficient(r) : 0.99994

Standard Condition

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

Calibration Condition

Pa (hpa) : 1009
 Ta(K) : 305

Resistance Plate		dH [green liquid] (inch water)	Z	X=Qstd (cubic meter/min)	IC (chart)	Y (corrected)
1	18 holes	11.6	3.360	1.629	54	53.27
2	13 holes	9.2	2.992	1.453	48	47.35
3	10 holes	6.8	2.572	1.252	43	42.42
4	7 holes	4.5	2.093	1.022	35	34.53
5	5 holes	2.5	1.560	0.766	26	25.65

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): 31.621 Intercept(b): 1.930 Correlation Coefficient(r): 0.9984

Checked by: Magnum Fan

Date: 05/10/2017



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

ORIFICE TRANSFER STANDARD CERTIFICATION WORKSHEET TE-5025A

Date - Mar 20, 2017 Rootsmeter S/N 0438320 Ta (K) - 293
 Operator Tisch Orifice I.D. - 2454 Pa (mm) - 759.46

PLATE OR Run #	VOLUME START (m3)	VOLUME STOP (m3)	DIFF VOLUME (m3)	DIFF TIME (min)	METER	ORFICE
					DIFF Hg (mm)	DIFF H2O (in.)
1	NA	NA	1.00	1.4390	3.2	2.00
2	NA	NA	1.00	1.0240	6.4	4.00
3	NA	NA	1.00	0.9170	7.9	5.00
4	NA	NA	1.00	0.8730	8.8	5.50
5	NA	NA	1.00	0.7200	12.8	8.00

DATA TABULATION

Vstd	(x axis) Qstd	(y axis)	Va	(x axis) Qa	(y axis)
1.0120	0.7033	1.4257	0.9958	0.6920	0.8784
1.0078	0.9842	2.0163	0.9916	0.9683	1.2423
1.0057	1.0967	2.2543	0.9895	1.0791	1.3889
1.0045	1.1507	2.3643	0.9884	1.1322	1.4567
0.9992	1.3878	2.8514	0.9831	1.3654	1.7568
Qstd slope (m) = 2.08464			Qa slope (m) = 1.30537		
intercept (b) = -0.03684			intercept (b) = -0.02270		
coefficient (r) = 0.99994			coefficient (r) = 0.99994		
y axis = SQRT[H2O(Pa/760) (298/Ta)]			y axis = SQRT[H2O(Ta/Pa)]		

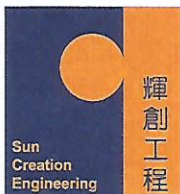
CALCULATIONS

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}



Certificate of Calibration 校正證書

Certificate No. : C171447
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC17-0633) Date of Receipt / 收件日期 : 16 March 2017

Description / 儀器名稱 : Sound Level Calibrator
Manufacturer / 製造商 : Rion
Model No. / 型號 : NC-73
Serial No. / 編號 : 10486660
Supplied By / 委託者 : Envirotech Services Co.
Room 113, 1/F, My Loft, 9 Hoi Wing Road, Tuen Mun,
New Territories, Hong Kong

TEST CONDITIONS / 測試條件

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

TEST SPECIFICATIONS / 測試規範

Calibration check

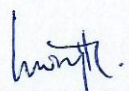
DATE OF TEST / 測試日期 : 17 March 2017


TEST RESULTS / 測試結果

The results apply to the particular unit-under-test only.
The results do not exceed manufacturer's specification.
The results are detailed in the subsequent page(s).

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

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

Tested By : 
測試 : _____
H T Wong
Technical Officer

Certified By : 
核證 : _____
K C Lee
Project Engineer

Date of Issue : 23 March 2017
簽發日期

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

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



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. : C171447

證書編號

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

Equipment ID	Description	Certificate No.
CL130	Universal Counter	C163709
CL281	Multifunction Acoustic Calibrator	PA160023
TST150A	Measuring Amplifier	C161175

- Test procedure : MA100N.

- 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	93.6	± 0.5	± 0.2

5.2 Frequency Accuracy

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

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

Note :

Only the original copy or the laboratory's certified true copy is valid.

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

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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

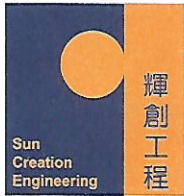
c/o 香港新界屯門興安里一號青山灣機樓四樓

Tel/電話: 2927 2606

Fax/傳真: 2744 8986

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Sun Creation Engineering Limited

Calibration and Testing Laboratory

Certificate of Calibration

校正證書

Certificate No. : C171100
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC17-0482) Date of Receipt / 收件日期 : 28 February 2017

Description / 儀器名稱 : Sound Level Meter

Manufacturer / 製造商 : Rion

Model No. / 型號 : NL-52

Serial No. / 編號 : 01010406

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

DATE OF TEST / 測試日期 : 2 March 2017

TEST RESULTS / 測試結果

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

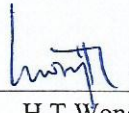
The results do not exceed manufacturer's specification. (after adjustment)

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

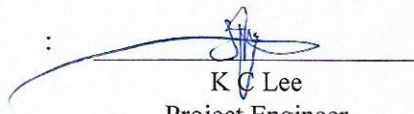
The test equipment used for calibration are traceable to National Standards via :

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

Tested By
測試


H T Wong
Technical Officer

Certified By
核證


K C Lee
Project Engineer

Date of Issue
簽發日期

3 March 2017

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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

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c/o 香港新界屯門興安里一號青山灣機樓四樓

Tel/電話: 2927 2606

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Page 1 of 4

Certificate of Calibration

校正證書

Certificate No. : C171100

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 using the internal standard (After Adjustment) was performed before the test 6.1.1.2 to 6.3.2.
- 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	C170048
CL281	Multifunction Acoustic Calibrator	PA160023

- Test procedure : MA101N.

- Results :

6.1 Sound Pressure Level

6.1.1 Reference Sound Pressure Level

6.1.1.1 Before Adjustment

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
30 - 130	L _A	A	Fast	94.00	1	* 96.4	± 1.1

* Out of IEC 61672 Class 1 Spec.

6.1.1.2 After Adjustment

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
30 - 130	L _A	A	Fast	94.00	1	94.0	± 1.1

6.1.2 Linearity

UUT Setting				Applied Value		UUT Reading (dB)
Range (dB)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)	
30 - 130	L _A	A	Fast	94.00	1	94.0 (Ref.)
				104.00		104.0
				114.00		114.0

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

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室書面批准。

Certificate of Calibration

校正證書

Certificate No. : C171100

證書編號

6.2 Time Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq. (kHz)		
30 - 130	L _A	A	Fast	94.00	1	94.0	Ref.
			Slow			94.0	± 0.3

6.3 Frequency Weighting

6.3.1 A-Weighting

UUT Setting				Applied Value		UUT Reading (dB)	IEC 61672 Class 1 Spec. (dB)
Range (dB)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
30 - 130	L _A	A	Fast	94.00	63 Hz	67.7	-26.2 ± 1.5
					125 Hz	77.8	-16.1 ± 1.5
					250 Hz	85.3	-8.6 ± 1.4
					500 Hz	90.7	-3.2 ± 1.4
					1 kHz	94.0	Ref.
					2 kHz	95.2	+1.2 ± 1.6
					4 kHz	95.0	+1.0 ± 1.6
					8 kHz	92.9	-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)	Function	Frequency Weighting	Time Weighting	Level (dB)	Freq.		
30 - 130	L _C	C	Fast	94.00	63 Hz	93.1	-0.8 ± 1.5
					125 Hz	93.8	-0.2 ± 1.5
					250 Hz	94.0	0.0 ± 1.4
					500 Hz	94.0	0.0 ± 1.4
					1 kHz	94.0	Ref.
					2 kHz	93.8	-0.2 ± 1.6
					4 kHz	93.2	-0.8 ± 1.6
					8 kHz	91.0	-3.0 (+2.1 ; -3.1)
					12.5 kHz	87.6	-6.2 (+3.0 ; -6.0)

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

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Certificate of Calibration

校正證書

Certificate No. : C171100
證書編號

Remarks : - UUT Microphone Model No. : UC-59 & S/N : 04870

- 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 :

Only the original copy or the laboratory's certified true copy is valid.

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

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

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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

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專業化驗有限公司
QUALITY PRO TEST-CONSULT LIMITED

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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AG090069
Date of Issue : September 13, 2017
Page No. : 1 of 2

PART A – CUSTOMER INFORMATION

Enovative Environmental Service Ltd.
Rm 811, Hin Pui House,
Hin Keng Estate, Tai Wai
New Territories, Hong Kong
Attn: Mr. Thomas WONG

PART B – DESCRIPTION

Name of Equipment : YSI ProDSS (Multi-Parameters)
Manufacturer : YSI (a xylem brand)
Serial Number : 16J101716
Date of Received : Sep 12, 2017
Date of Calibration : Sep 12, 2017
Date of Next Calibration^(a) : Dec 12, 2017

PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Parameter	Reference Method
pH at 25°C	APHA 21e 4500-H ⁺ B
Dissolved Oxygen	APHA 21e 4500-O G
Conductivity at 25°C	APHA 21e 2510 B
Salinity	APHA 21e 2520 B
Turbidity	APHA 21e 2130 B
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

PART D – CALIBRATION RESULTS^(b,c)

(1) pH at 25°C

Target (pH unit)	Displayed Reading ^(d) (pH Unit)	Tolerance ^(e) (pH Unit)	Results
4.00	4.04	+0.04	Satisfactory
7.42	7.37	-0.05	Satisfactory
10.01	10.04	+0.03	Satisfactory

Tolerance of pH should be less than ±0.10 (pH unit)

(2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
16.5	17.2	+0.7	Satisfactory
25.0	25.3	+0.3	Satisfactory
37.0	36.7	-0.3	Satisfactory

Tolerance limit of temperature should be less than ±2.0 (°C)

~ CONTINUED ON NEXT PAGE ~

Remark(s): -

- ^(a) The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted from relevant international standards.
^(b) The results relate only to the calibrated equipment as received
^(c) The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.
^(d) "Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.
^(e) The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by QPT or quoted from relevant international standards.

APPROVED SIGNATORY :


FUNG Yuen-ching Aries
Laboratory Manager



專業化驗有限公司

QUALITY PRO TEST-CONSULT LIMITED

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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AG090069
Date of Issue : September 13, 2017
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PART D – CALIBRATION RESULTS (Cont'd)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
8.04	7.98	-0.06	Satisfactory
3.63	3.72	+0.09	Satisfactory
0.01	0.06	+0.05	Satisfactory

Tolerance limit of dissolved oxygen should be less than ± 0.20 (mg/L)

(4) Conductivity at 25°C

Expected Reading ($\mu\text{S}/\text{cm}$)	Displayed Reading ($\mu\text{S}/\text{cm}$)	Tolerance (%)	Results
146.9	140.4	-4.4	Satisfactory
1412	1322	-6.4	Satisfactory
12890	12064	-6.4	Satisfactory
58670	57032	-2.8	Satisfactory
111900	107344	-4.1	Satisfactory

Tolerance limit of conductivity should be less than ± 10.0 (%)

(5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	10.17	+1.7	Satisfactory
20	20.20	+1.0	Satisfactory
30	30.07	+2.3	Satisfactory

Tolerance limit of salinity should be less than ± 10.0 (%)

(6) Turbidity

Expected Reading (NTU)	Displayed Reading ⁽¹⁾ (NTU)	Tolerance ⁽²⁾ (%)	Results
10	9.7	-3.0	Satisfactory
20	19.0	-5.0	Satisfactory
100	101.1	+1.1	Satisfactory
800	814.6	+1.8	Satisfactory

Tolerance limit of turbidity should be less than ± 10.0 (%)

~ END OF REPORT ~

Remark(s): -

⁽¹⁾ "Displayed Reading" presents the figures shown on item under calibration/ checking regardless of equipment precision or significant figures.

⁽²⁾ The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by Quality Pro Test-Consult Ltd. or quoted from relevant international standards.



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REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AG090067
Date of Issue : 13 September 2017
Page No. : 1 of 2

PART A – CUSTOMER INFORMATION

Enovative Environmental Service Ltd.
Rm 811, Hin Pui House,
Hin Keng Estate, Tai Wai
New Territories, Hong Kong
Attn: Mr. Thomas WONG

PART B – DESCRIPTION

Name of Equipment : YSI ProDSS (Multi-Parameters)
Manufacturer : YSI (a xylem brand)
Serial Number : 17E102521
Date of Received : Sep 12, 2017
Date of Calibration : Sep 12, 2017
Date of Next Calibration^(a) : Dec 12, 2017

PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Parameter	Reference Method
pH at 25°C	APHA 21e 4500-H ⁺ B
Dissolved Oxygen	APHA 21e 4500-O G
Conductivity at 25°C	APHA 21e 2510 B
Salinity	APHA 21e 2520 B
Turbidity	APHA 21e 2130 B
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

PART D – CALIBRATION RESULTS^(b,c)

(1) pH at 25°C

Target (pH unit)	Displayed Reading ^(d) (pH Unit)	Tolerance ^(e) (pH Unit)	Results
4.00	4.09	+0.09	Satisfactory
7.42	7.38	-0.04	Satisfactory
10.01	9.94	-0.07	Satisfactory

Tolerance of pH should be less than ±0.10 (pH unit)

(2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
16.5	16.9	+0.4	Satisfactory
25.0	25.2	+0.2	Satisfactory
37.0	36.4	-0.6	Satisfactory

Tolerance limit of temperature should be less than ±2.0 (°C)

~ CONTINUED ON NEXT PAGE ~

Remark(s): -

- ^(a) The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted from relevant international standards.
^(b) The results relate only to the calibrated equipment as received
^(c) The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.
^(d) "Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.
^(e) The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by QPT or quoted from relevant international standards.

APPROVED SIGNATORY :

FUNG Yuen-ching Aries
Laboratory Manager



專業化驗有限公司

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CALIBRATION REPORT

Report No. : AG090067
Date of Issue : 13 September 2017
Page No. : 2 of 2

PART D – CALIBRATION RESULTS (Cont'd)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
8.03	7.95	-0.08	Satisfactory
3.76	3.84	+0.08	Satisfactory
0.02	0.12	+0.10	Satisfactory

Tolerance limit of dissolved oxygen should be less than ± 0.20 (mg/L)

(4) Conductivity at 25°C

Conc. of KCl (M)	Expected Reading ($\mu\text{S/cm}$)	Displayed Reading ($\mu\text{S/cm}$)	Tolerance (%)	Results
0.001	146.9	151.6	+3.2	Satisfactory
0.01	1,412	1,340	-5.1	Satisfactory
0.1	12,890	12,006	-6.9	Satisfactory
0.5	58,670	57,088	-2.7	Satisfactory
1.0	111,900	105,890	-5.4	Satisfactory

Tolerance limit of conductivity should be less than ± 10.0 (%)

(5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	9.95	-0.5	Satisfactory
20	20.30	+1.5	Satisfactory
30	30.31	+1.0	Satisfactory

Tolerance limit of salinity should be less than ± 10.0 (%)

(6) Turbidity

Expected Reading (NTU)	Displayed Reading ^(f) (NTU)	Tolerance ^(g) (%)	Results
10	9.6	-4.0	Satisfactory
20	19.3	-3.5	Satisfactory
100	98.7	-1.3	Satisfactory
800	781.2	+2.3	Satisfactory

Tolerance limit of turbidity should be less than ± 10.0 (%)

~ END OF REPORT ~

Remark(s): -

^(f) "Displayed Reading" presents the figures shown on item under calibration/ checking regardless of equipment precision or significant figures.

^(g) The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by Quality Pro Test-Consult Ltd. or quoted from relevant international standards.



REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AG090072
Date of Issue : 14 September 2017
Page No. : 1 of 2

PART A – CUSTOMER INFORMATION

Enovative Environmental Service Ltd.
Rm 811, Hin Pui House,
Hin Keng Estate, Tai Wai
New Territories, Hong Kong
Attn: Mr. Thomas WONG

PART B – DESCRIPTION

Name of Equipment : YSI 6920 V2 Sonde (Multi-Parameters)
Manufacturer : YSI (a xylem brand)
Serial Number : 000109DF
Date of Received : Sep 12, 2017
Date of Calibration : Sep 12, 2017 to Sep 14, 2017
Date of Next Calibration^(a) : Dec 12, 2017

PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

Parameter	Reference Method
pH at 25°C	APHA 21e 4500-H ⁺ B
Dissolved Oxygen	APHA 21e 4500-O G
Conductivity at 25°C	APHA 21e 2510 B
Salinity	APHA 21e 2520 B
Turbidity	APHA 21e 2130 B
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

PART D – CALIBRATION RESULTS^(b,c)

(1) pH at 25°C

Target (pH unit)	Displayed Reading ^(d) (pH Unit)	Tolerance ^(e) (pH Unit)	Results
4.00	4.04	+0.04	Satisfactory
7.42	7.45	+0.03	Satisfactory
10.01	10.07	+0.06	Satisfactory

Tolerance of pH should be less than ±0.10 (pH unit)

(2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
16.5	17.0	+0.5	Satisfactory
25.0	25.5	+0.5	Satisfactory
37.0	36.6	-0.4	Satisfactory


Tolerance limit of temperature should be less than ±2.0 (°C)

~ CONTINUED ON NEXT PAGE ~

Remark(s): -

- ^(a) The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted from relevant international standards.
- ^(b) The results relate only to the calibrated equipment as received
- ^(c) The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.
- ^(d) "Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.
- ^(e) The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by QPT or quoted from relevant international standards.

APPROVED SIGNATORY :


FUNG Yuen-ching Aries
Laboratory Manager



REPORT OF EQUIPMENT PERFORMANCE CHECK/ CALIBRATION

Report No. : AG090072
Date of Issue : 14 September 2017
Page No. : 2 of 2

PART D – CALIBRATION RESULTS (Cont'd)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
8.05	8.11	+0.06	Satisfactory
3.96	4.04	+0.08	Satisfactory
0.03	0.18	+0.15	Satisfactory

Tolerance limit of dissolved oxygen should be less than ± 0.20 (mg/L)

(4) Conductivity at 25°C

Conc. of KCl (M)	Expected Reading ($\mu\text{S/cm}$)	Displayed Reading ($\mu\text{S/cm}$)	Tolerance (%)	Results
0.001	146.9	152.4	+3.7	Satisfactory
0.01	1,412	1346	-4.7	Satisfactory
0.1	12,890	13382	+3.8	Satisfactory
0.5	58,670	59964	+2.2	Satisfactory
1.0	111,900	108242	-3.3	Satisfactory

Tolerance limit of conductivity should be less than ± 10.0 (%)

(5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	9.92	-0.8	Satisfactory
20	19.88	-0.6	Satisfactory
30	29.79	-0.7	Satisfactory

Tolerance limit of salinity should be less than ± 10.0 (%)

(6) Turbidity^(f)

Expected Reading (NTU)	Displayed Reading ^(g) (NTU)	Tolerance ^(h) (%)	Results
10	10.2	+2.0	Satisfactory
20	20.8	+4.0	Satisfactory
100	108.4	+8.4	Satisfactory
800	822.0	+2.8	Satisfactory

Tolerance limit of turbidity should be less than ± 10.0 (%)

~ END OF REPORT ~

Remark(s): -

^(f) Recalibration of specified parameter was conducted on 14 September 2017.

^(g) "Displayed Reading" presents the figures shown on item under calibration/ checking regardless of equipment precision or significant figures.

^(h) The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by Quality Pro Test-Consult Ltd. or quoted from relevant international standards.



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REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

Report No. : AG090070
Date of Issue : 13 September, 2017
Page No. : 1 of 2

PART A – CUSTOMER INFORMATION

Enovative Environmental Service Ltd.
Rm 811, Hin Pui House,
Hin Keng Estate, Tai Wai
New Territories, Hong Kong
Attn: Mr. Thomas WONG

PART B – DESCRIPTION

Name of Equipment : YSI 6920 V2 Sonde (Multi-Parameters)
Manufacturer : YSI (a xylem brand)
Serial Number : 00019CB2
Date of Received : Sep 12, 2017
Date of Calibration : Sep 12, 2017
Date of Next Calibration^(a) : Dec 12, 2017

PART C – REFERENCE METHODS/ DOCUMENTS FOR THE CALIBRATION

<u>Parameter</u>	<u>Reference Method</u>
pH at 25°C	APHA 21e 4500-H ⁺ B
Dissolved Oxygen	APHA 21e 4500-O G
Conductivity at 25°C	APHA 21e 2510 B
Salinity	APHA 21e 2520 B
Turbidity	APHA 21e 2130 B
Temperature	Section 6 of international Accreditation New Zealand Technical Guide no. 3 Second edition March 2008: Working Thermometer Calibration Procedure.

PART D – CALIBRATION RESULTS^(b,c)

(1) pH at 25°C

Target (pH unit)	Displayed Reading ^(d) (pH Unit)	Tolerance ^(e) (pH Unit)	Results
4.00	3.94	-0.06	Satisfactory
7.42	7.37	-0.05	Satisfactory
10.01	9.98	-0.03	Satisfactory


Tolerance of pH should be less than ± 0.10 (pH unit)

~ CONTINUED ON NEXT PAGE ~

Remark(s): -

- ^(a) The "Date of Next Calibration" is recommended according to best practice principals as practiced by QPT or quoted from relevant international standards.
^(b) The results relate only to the calibrated equipment as received
^(c) The performance of the equipment stated in this report is checked with independent reference material and results compared against a calibrated secondary source.
^(d) "Displayed Reading" denotes the figure shown on item under calibration/ checking regardless of equipment precision or significant figures.
^(e) The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by QPT or quoted from relevant international standards.

APPROVED SIGNATORY :


FUNG Yuen-ching Aries
Laboratory Manager



專業化驗有限公司
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REPORT OF EQUIPMENT PERFORMANCE CHECK/CALIBRATION

Report No. : AG090070
Date of Issue : 13 September, 2017
Page No. : 2 of 2

PART D – CALIBRATION RESULTS (Cont'd)

(2) Temperature

Reading of Ref. thermometer (°C)	Displayed Reading (°C)	Tolerance (°C)	Results
16.5	17.2	+0.7	Satisfactory
25.0	25.3	+0.3	Satisfactory
37.0	36.4	-0.6	Satisfactory

Tolerance limit of temperature should be less than ± 2.0 (°C)

(3) Dissolved Oxygen

Expected Reading (mg/L)	Displayed Reading (mg/L)	Tolerance (mg/L)	Results
8.03	8.09	+0.06	Satisfactory
3.89	3.99	+0.10	Satisfactory
0.02	0.11	+0.09	Satisfactory

Tolerance limit of dissolved oxygen should be less than ± 0.20 (mg/L)

(4) Conductivity at 25°C

Conc. of KCl (M)	Expected Reading ($\mu\text{S}/\text{cm}$)	Displayed Reading ($\mu\text{S}/\text{cm}$)	Tolerance (%)	Results
0.001	146.9	152.4	+3.7	Satisfactory
0.01	1,412	1,530	+8.4	Satisfactory
0.1	12,890	13,648	+5.9	Satisfactory
0.5	58,670	59,342	+1.1	Satisfactory
1.0	111,900	103,422	-7.6	Satisfactory

Tolerance limit of conductivity should be less than ± 10.0 (%)

(5) Salinity

Expected Reading (g/L)	Displayed Reading (g/L)	Tolerance (%)	Results
10	9.95	-0.5	Satisfactory
20	19.91	-0.4	Satisfactory
30	29.77	-0.8	Satisfactory

Tolerance limit of salinity should be less than ± 10.0 (%)

(6) Turbidity

Expected Reading (NTU)	Displayed Reading ^(f) (NTU)	Tolerance ^(g) (%)	Results
10	10.9	+9.0	Satisfactory
20	20.1	+0.5	Satisfactory
100	108.3	+8.3	Satisfactory
800	819.4	+2.4	Satisfactory

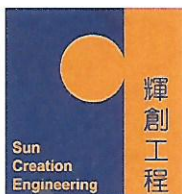
Tolerance limit of turbidity should be less than ± 10.0 (%)

~ END OF REPORT ~

Remark(s): -

^(f) "Displayed Reading" presents the figures shown on item under calibration/ checking regardless of equipment precision or significant figures.

^(g) The "Tolerance Limit" mentioned is the acceptance criteria applicable for similar equipment used by Quality Pro Test-Consult Ltd. or quoted from relevant international standards.



Certificate of Calibration 校正證書

Certificate No. : C165934
證書編號

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

Description / 儀器名稱 : Anemometer
Manufacturer / 製造商 : Lutron
Model No. / 型號 : AM-4201
Serial No. / 編號 : AF.27513
Supplied By / 委託者 : Envirotech Services Co.
Room 113, 1/F, My Loft, 9 Hoi Wing Road, Tuen Mun,
New Territories, Hong Kong

TEST CONDITIONS / 測試條件

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

TEST SPECIFICATIONS / 測試規範


Calibration check

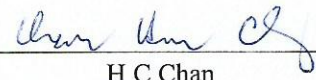
DATE OF TEST / 測試日期 : 27 October 2016

TEST RESULTS / 測試結果

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

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

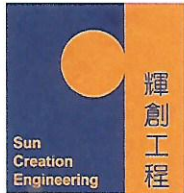
Tested By : 
測試 : _____
T L Shek
Assistant Engineer

Certified By : 
核證 : _____
H C Chan
Engineer

Date of Issue : 28 October 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.

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。



輝創工程有限公司

Sun Creation Engineering Limited

Calibration and Testing Laboratory

Certificate of Calibration 校正證書

Certificate No. : C165934
證書編號

- The unit-under-test (UUT) was allowed to stabilize in the laboratory for over 12 hours before the commencement of the test.
- The results presented are the mean of 10 measurements at each calibration point.
- Test equipment :

<u>Equipment ID</u>	<u>Description</u>	<u>Certificate No.</u>
CL386	Multi-function Measuring Instrument	S12109

- Test procedure : MA130N.
- Results :

Air Velocity

Applied Value (m/s)	UUT Reading (m/s)	Measured Correction		
		Value (m/s)	Measurement Uncertainty	
			Expanded Uncertainty (m/s)	Coverage Factor
2.0	1.8	+0.2	0.2	2.0
4.0	3.8	+0.2	0.2	2.0
6.0	5.8	+0.2	0.3	2.0
8.1	8.0	+0.1	0.3	2.0
10.0	10.0	0.0	0.4	2.0

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

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

Note :

Only the original copy or the laboratory's certified true copy is valid.

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

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



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. : C175727
證書編號

ITEM TESTED / 送檢項目 (Job No. / 序引編號 : IC17-2277) Date of Receipt / 收件日期 : 3 October 2017

Description / 儀器名稱 : Anemometer
Manufacturer / 製造商 : Lutron
Model No. / 型號 : AM-4201
Serial No. / 編號 : AF.27513
Supplied By / 委託者 : Envirotech Services Co.
Room 113, 1/F, My Loft, 9 Hoi Wing Road, Tuen Mun,
New Territories, Hong Kong

TEST CONDITIONS / 測試條件

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

TEST SPECIFICATIONS / 測試規範


Calibration check

DATE OF TEST / 測試日期 : 13 October 2017

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 H C Chan
Engineer

Certified By : 
核證 K C Lee
Engineer

Date of Issue : 16 October 2017
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. : C175727

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	S16493

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
1.9	1.7	+0.2	0.2	2.0
4.0	3.8	+0.2	0.2	2.0
6.0	5.9	+0.1	0.3	2.0
8.0	8.0	0.0	0.3	2.0
10.0	10.1	-0.1	0.4	2.0

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

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

Note :

Only the original copy or the laboratory's certified true copy is valid.

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

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。局部深印本證書需先獲本實驗室書面批准。

Sun Creation Engineering Limited Calibration & Testing Laboratory

c/o 4F, 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

ENVIROTECH SERVICES CO.

Calibration Report of Wind Meter

Date of Calibration : 18 April 2017

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 Wate (m/s)	Anemometer (m/s)
1.65	1.8
1.11	1.3
0.71	0.6

Wind Direction Test

Global Wate (o)	Marine Compass (o)
271.05	270
0.05	0
90.31	90
181.07	180

Calibrated by: Ho
Yeung Ping Fai
(Technical Officer)

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

ENVIROTECH SERVICES CO.

Calibration Report of Wind Meter

Date of Calibration : 18 October 2017

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)
2.29	2.5
1.42	1.6
0.47	0.5

Wind Direction Test

Global Water (o)	Marine Compass (o)
270.09	270
0.03	0
90.05	90
181.03	180

Calibrated by: Ao
Yeung Ping Fai
(Technical Officer)

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

Appendix F

EM&A Monitoring Schedules

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

Alternative Noise Monitoring at Pak Mong Village Entrance

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

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

Alternative Air Quality Monitoring at WA4 and MTRC Depot Entrance

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
01-Oct	02-Oct	03-Oct	04-Oct	05-Oct	06-Oct	07-Oct
		1-hr TSP Monitoring 24-hr TSP Monitoring				
08-Oct	09-Oct	10-Oct	11-Oct	12-Oct	13-Oct	14-Oct
	1-hr TSP Monitoring 24-hr TSP Monitoring			1-hr TSP Monitoring 24-hr TSP Monitoring		
15-Oct	16-Oct	17-Oct	18-Oct	19-Oct	20-Oct	21-Oct
			1-hr TSP Monitoring 24-hr TSP Monitoring			
22-Oct	23-Oct	24-Oct	25-Oct	26-Oct	27-Oct	28-Oct
		1-hr TSP Monitoring 24-hr TSP Monitoring				
29-Oct	30-Oct	31-Oct				
	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 30 November 2017)**

Alternative Noise Monitoring at Pak Mong Village Entrance

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1-Nov	2-Nov	3-Nov	4-Nov
				Noise Impact Monitoring		
5-Nov	6-Nov	7-Nov	8-Nov	9-Nov	10-Nov	11-Nov
			Noise Impact Monitoring			
12-Nov	13-Nov	14-Nov	15-Nov	16-Nov	17-Nov	18-Nov
		Noise Impact Monitoring				
19-Nov	20-Nov	21-Nov	22-Nov	23-Nov	24-Nov	25-Nov
	Noise Impact Monitoring			Noise Impact Monitoring		
26-Nov	27-Nov	28-Nov	29-Nov	30-Nov		
			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. Additional weekly noise impact monitoring for construction works undertaken between 19:00-07:00 will be supplemented after confirmation of construction schedule.

**HY/2012/07 Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section
Impact Air Quality Monitoring Schedule (1 to 30 November 2017)**

Alternative Air Quality Monitoring at WA4 and MTRC Depot Entrance

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1-Nov	2-Nov	3-Nov	4-Nov
				1-hr TSP Monitoring 24-hr TSP Monitoring		
5-Nov	6-Nov	7-Nov	8-Nov	9-Nov	10-Nov	11-Nov
			1-hr TSP Monitoring 24-hr TSP Monitoring			
12-Nov	13-Nov	14-Nov	15-Nov	16-Nov	17-Nov	18-Nov
		1-hr TSP Monitoring 24-hr TSP Monitoring				
19-Nov	20-Nov	21-Nov	22-Nov	23-Nov	24-Nov	25-Nov
	1-hr TSP Monitoring 24-hr TSP Monitoring			1-hr TSP Monitoring 24-hr TSP Monitoring		
26-Nov	27-Nov	28-Nov	29-Nov	30-Nov		
			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 (October 2017)**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1/Oct	2/Oct	3/Oct	4/Oct	5/Oct	6/Oct	7/Oct
	ebb tide 8:50 - 12:20 flood tide 15:59 - 19:29		ebb tide 10:11 - 13:41 flood tide 16:46 - 20:16		ebb tide 11:27 - 14:57 flood tide 5:18 - 8:48	
8/Oct	9/Oct	10/Oct	11/Oct	12/Oct	13/Oct	14/Oct
	ebb tide 13:33 - 17:03 flood tide 7:46 - 11:16		ebb tide 15:22 - 18:52 flood tide 10:00 - 13:30		ebb tide 4:48 - 8:18 flood tide 13:10 - 16:40	
15/Oct	16/Oct	17/Oct	18/Oct	19/Oct	20/Oct	21/Oct
	ebb tide 8:48 - 12:18 flood tide 15:41 - 19:11		ebb tide 10:20 - 13:50 flood tide 16:36 - 20:06		ebb tide 11:36 - 15:06 flood tide 5:34 - 9:04	
22/Oct	23/Oct	24/Oct	25/Oct	26/Oct	27/Oct	28/Oct
	ebb tide 13:18 - 16:48 flood tide 7:36 - 11:06		ebb tide 14:36 - 18:06 flood tide 9:14 - 12:44		ebb tide 3:24 - 6:54 flood tide 15:49 - 19:19	
29/Oct	30/Oct	31/Oct				
	ebb tide 6:58 - 10:28 flood tide 14:36 - 18:06					

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

Sundav	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1/Nov	2/Nov	3/Nov	4/Nov
			ebb tide 8:50 - 12:20 flood tide 15:31 - 19:01		ebb tide 10:19 - 13:49 flood tide 4:21 - 7:51	
5/Nov	6/Nov	7/Nov	8/Nov	9/Nov	10/Nov	11/Nov
	ebb tide 12:36 - 16:06 flood tide 6:55 - 10:25		ebb tide 14:18 - 17:48 flood tide 8:54 - 12:24		ebb tide 16:45 - 19:47 flood tide 11:17 - 14:47	
12/Nov	13/Nov	14/Nov	15/Nov	16/Nov	17/Nov	18/Nov
	ebb tide 7:21 - 10:51 flood tide 14:26 - 17:56		ebb tide 9:13 - 12:43 flood tide 15:27 - 18:57		ebb tide 10:38 - 14:08 flood tide 4:51 - 8:21	
19/Nov	20/Nov	21/Nov	22/Nov	23/Nov	24/Nov	25/Nov
	ebb tide 12:26 - 15:56 flood tide 6:56 - 10:26		ebb tide 13:35 - 17:05 flood tide 8:15 - 11:45		ebb tide 15:16 - 17:59 flood tide 9:52 - 13:22	
26/Nov	27/Nov	28/Nov	29/Nov	30/Nov		
	ebb tide 4:33 - 8:03 flood tide 12:58 - 16:28		ebb tide 7:03 - 10:33 flood tide 14:07 - 17:37			

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

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

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

**HY/2012/07 Tuen Mun - Chek Lap Kok Link - Southern Connection Viaduct Section
Impact Dolphin Monitoring Survey Schedule (1 to 30 November 2017)**

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

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

Appendix G

Impact Air Quality
Monitoring Results and
Graphical Presentation

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

Project	Works	Date(yyyy-mm-dd)	Station	Time (hh:mm, 24hour)	Parameter	Results (ug/m3)	Action Level (ug/m3)	Limit Level (ug/m3)		
TMCLKL	HY/2012/07	2017-10-03	ASR8A	8:30	1-hr TSP	40	394	500		
TMCLKL	HY/2012/07	2017-10-03	ASR8A	9:32	1-hr TSP	22				
TMCLKL	HY/2012/07	2017-10-03	ASR8A	10:36	1-hr TSP	26				
TMCLKL	HY/2012/07	2017-10-09	ASR8A	8:26	1-hr TSP	51				
TMCLKL	HY/2012/07	2017-10-09	ASR8A	9:30	1-hr TSP	30				
TMCLKL	HY/2012/07	2017-10-09	ASR8A	10:40	1-hr TSP	48				
TMCLKL	HY/2012/07	2017-10-12	ASR8A	8:30	1-hr TSP	65				
TMCLKL	HY/2012/07	2017-10-12	ASR8A	9:32	1-hr TSP	73				
TMCLKL	HY/2012/07	2017-10-12	ASR8A	10:50	1-hr TSP	47				
TMCLKL	HY/2012/07	2017-10-18	ASR8A	8:30	1-hr TSP	30				
TMCLKL	HY/2012/07	2017-10-18	ASR8A	9:32	1-hr TSP	47				
TMCLKL	HY/2012/07	2017-10-18	ASR8A	10:40	1-hr TSP	74				
TMCLKL	HY/2012/07	2017-10-24	ASR8A	8:30	1-hr TSP	121				
TMCLKL	HY/2012/07	2017-10-24	ASR8A	9:32	1-hr TSP	79				
TMCLKL	HY/2012/07	2017-10-24	ASR8A	10:35	1-hr TSP	83				
TMCLKL	HY/2012/07	2017-10-30	ASR8A	8:25	1-hr TSP	147				
TMCLKL	HY/2012/07	2017-10-30	ASR8A	9:30	1-hr TSP	156				
TMCLKL	HY/2012/07	2017-10-30	ASR8A	10:35	1-hr TSP	110				
				Average		69				
				Min.		22				
				Max.		156				

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

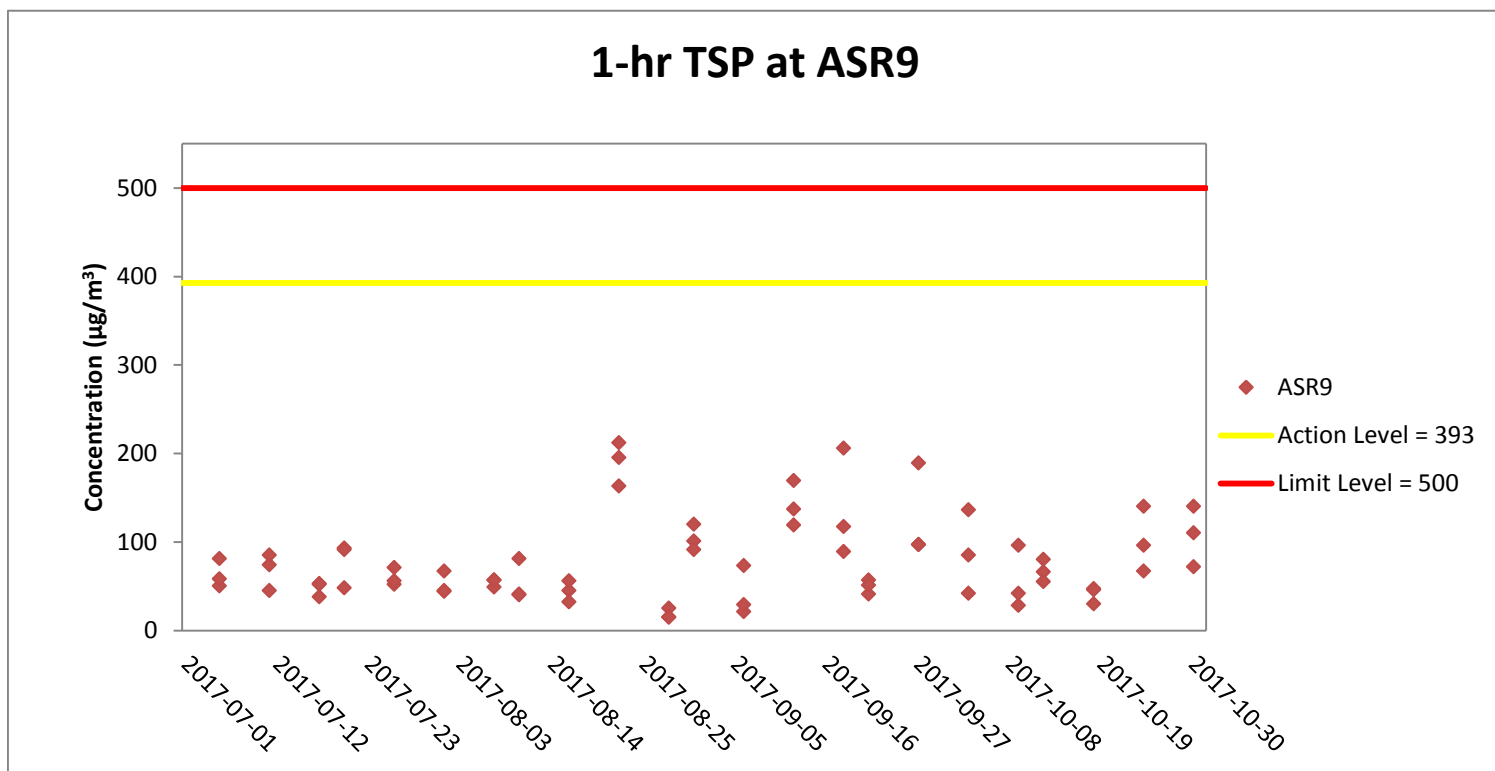
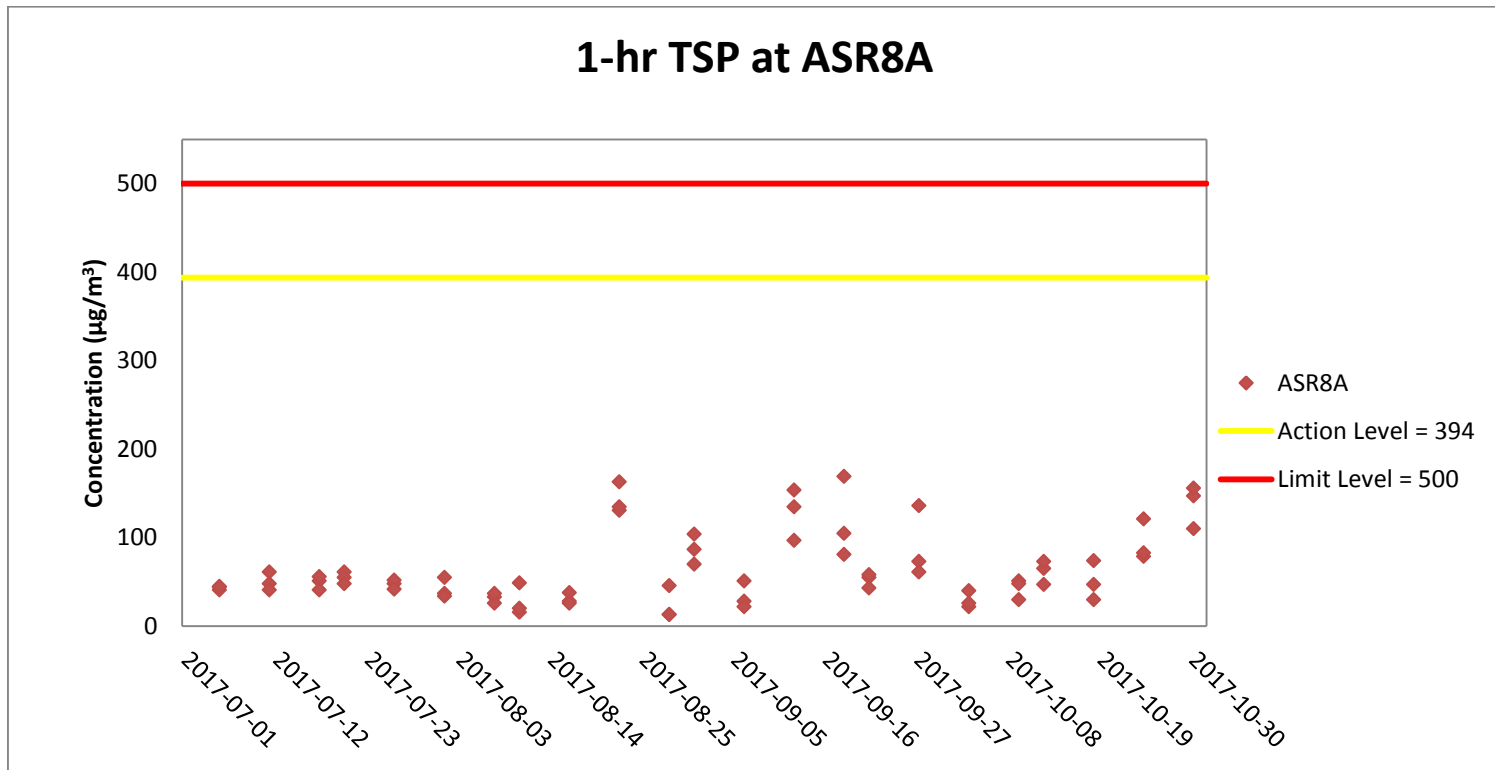
Project	Works	Date(yyyy-mm-dd)	Station	Time (hh:mm, 24hour)	Parameter	Results (ug/m3)	Action Level (ug/m3)	Limit Level (ug/m3)		
TMCLKL	HY/2012/07	2017-10-03	ASR9	8:40	1-hr TSP	85	393	500		
TMCLKL	HY/2012/07	2017-10-03	ASR9	9:42	1-hr TSP	42				
TMCLKL	HY/2012/07	2017-10-03	ASR9	10:47	1-hr TSP	136				
TMCLKL	HY/2012/07	2017-10-09	ASR9	8:38	1-hr TSP	96				
TMCLKL	HY/2012/07	2017-10-09	ASR9	9:42	1-hr TSP	28				
TMCLKL	HY/2012/07	2017-10-09	ASR9	10:50	1-hr TSP	42				
TMCLKL	HY/2012/07	2017-10-12	ASR9	8:40	1-hr TSP	80				
TMCLKL	HY/2012/07	2017-10-12	ASR9	9:42	1-hr TSP	66				
TMCLKL	HY/2012/07	2017-10-12	ASR9	11:00	1-hr TSP	55				
TMCLKL	HY/2012/07	2017-10-18	ASR9	8:40	1-hr TSP	30				
TMCLKL	HY/2012/07	2017-10-18	ASR9	9:42	1-hr TSP	47				
TMCLKL	HY/2012/07	2017-10-18	ASR9	10:52	1-hr TSP	46				
TMCLKL	HY/2012/07	2017-10-24	ASR9	8:40	1-hr TSP	140				
TMCLKL	HY/2012/07	2017-10-24	ASR9	9:42	1-hr TSP	67				
TMCLKL	HY/2012/07	2017-10-24	ASR9	10:46	1-hr TSP	96				
TMCLKL	HY/2012/07	2017-10-30	ASR9	8:36	1-hr TSP	140				
TMCLKL	HY/2012/07	2017-10-30	ASR9	9:40	1-hr TSP	72				
TMCLKL	HY/2012/07	2017-10-30	ASR9	10:47	1-hr TSP	110				
				Average		77				
				Min.		28				
				Max.		140				

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

Project	Works	Date(yyyy-mm-dd)	Station	Time (hh:mm, 24hour)	Parameter	Results (ug/m3)	Action Level (ug/m3)	Limit Level (ug/m3)
TMCLKL	HY/2012/07	2017-10-03	ASR8A	11:38	24-hr TSP	21	178	260
TMCLKL	HY/2012/07	2017-10-09	ASR8A	11:42	24-hr TSP	42		
TMCLKL	HY/2012/07	2017-10-12	ASR8A	11:52	24-hr TSP	67		
TMCLKL	HY/2012/07	2017-10-18	ASR8A	11:42	24-hr TSP	45		
TMCLKL	HY/2012/07	2017-10-24	ASR8A	11:37	24-hr TSP	84		
TMCLKL	HY/2012/07	2017-10-30	ASR8A	11:37	24-hr TSP	102		
					Average	60		
					Min.	21		
					Max.	102		

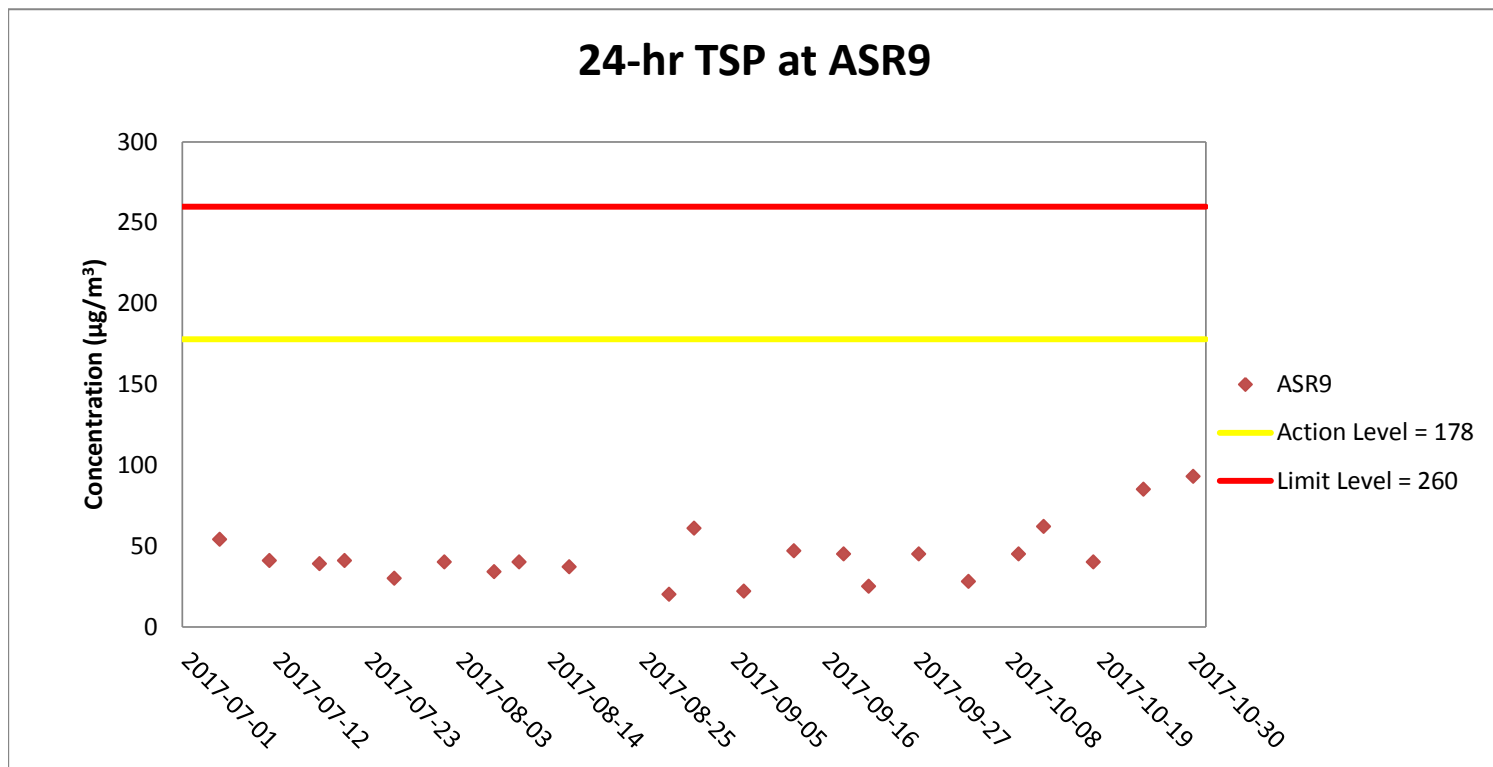
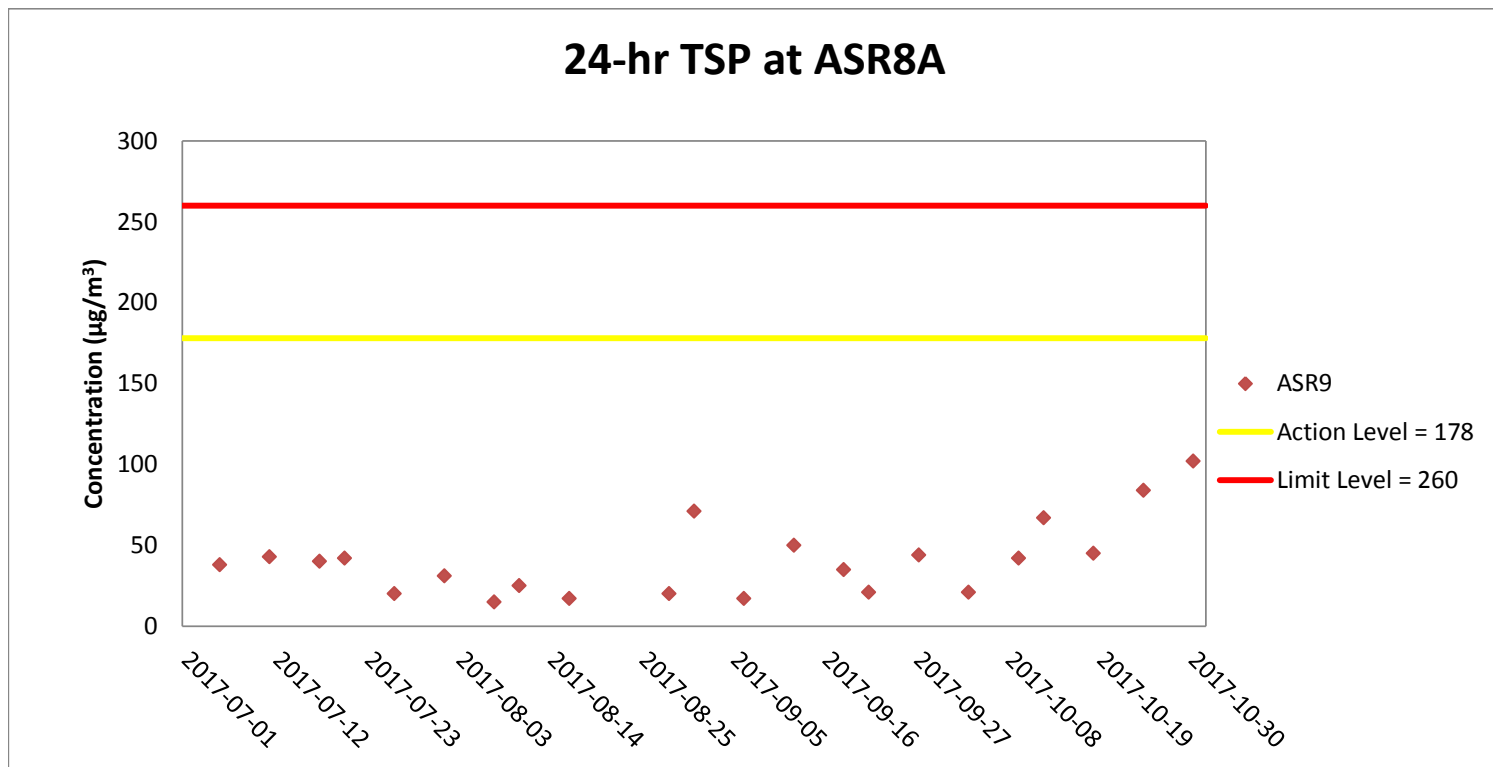
24-hour TSP Monitoring Results at Air Quality Monitoring Station ASR9

Project	Works	Date(yyyy-mm-dd)	Station	Time (hh:mm, 24hour)	Parameter	Results (ug/m3)	Action Level (ug/m3)	Limit Level (ug/m3)
TMCLKL	HY/2012/07	2017-10-03	ASR9	11:49	24-hr TSP	28	178	260
TMCLKL	HY/2012/07	2017-10-09	ASR9	11:52	24-hr TSP	45		
TMCLKL	HY/2012/07	2017-10-12	ASR9	12:02	24-hr TSP	62		
TMCLKL	HY/2012/07	2017-10-18	ASR9	11:54	24-hr TSP	40		
TMCLKL	HY/2012/07	2017-10-24	ASR9	11:48	24-hr TSP	85		
TMCLKL	HY/2012/07	2017-10-30	ASR9	11:49	24-hr TSP	93		
					Average	59		
					Min.	28		
					Max.	93		



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

Major construction works undertaken within the reporting period include Pier construction; Re-alignment of Cheung Tung Road; Road works along North Lantau Highway; Launching gantry operation;; 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; Road works along North Lantau Highway; Launching gantry operation; 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)
2017/10/3	0	0.02	120
2017/10/3	1	0.02	127
2017/10/3	2	0.02	109
2017/10/3	3	0.02	191
2017/10/3	4	0.02	191
2017/10/3	5	0.07	181
2017/10/3	6	0.02	171
2017/10/3	7	0.02	103
2017/10/3	8	0.19	132
2017/10/3	9	0.18	137
2017/10/3	10	0.76	174
2017/10/3	11	0.51	148
2017/10/3	12	0.97	180
2017/10/3	13	2.41	178
2017/10/3	14	2.37	177
2017/10/3	15	1.99	185
2017/10/3	16	2.13	182
2017/10/3	17	1.37	176
2017/10/3	18	1.01	161
2017/10/3	19	1.52	168
2017/10/3	20	1.20	166
2017/10/3	21	0.62	160
2017/10/3	22	0.29	135
2017/10/3	23	0.02	84
2017/10/4	0	0.02	106
2017/10/4	1	0.14	110
2017/10/4	2	0.06	110
2017/10/4	3	0.05	99
2017/10/4	4	0.02	139
2017/10/4	5	0.03	143
2017/10/4	6	0.05	84
2017/10/4	7	0.09	110
2017/10/4	8	0.90	163
2017/10/4	9	0.91	158
2017/10/4	10	1.40	141
2017/10/4	11	1.73	152
2017/10/4	12	2.25	115
2017/10/4	13	1.42	171
2017/10/4	14	0.28	99
2017/10/4	15	0.38	113
2017/10/4	16	0.30	98
2017/10/4	17	0.02	105
2017/10/4	18	0.06	78
2017/10/4	19	0.12	103
2017/10/4	20	0.02	114
2017/10/4	21	0.41	149
2017/10/4	22	0.09	127
2017/10/4	23	0.06	96
2017/10/9	0	0.09	93
2017/10/9	1	0.08	125
2017/10/9	2	0.12	117
2017/10/9	3	0.20	64
2017/10/9	4	0.05	168
2017/10/9	5	0.02	186
2017/10/9	6	0.03	169
2017/10/9	7	0.03	127
2017/10/9	8	0.02	171
2017/10/9	9	0.02	135
2017/10/9	10	0.18	117
2017/10/9	11	0.28	151
2017/10/9	12	0.80	89
2017/10/9	13	0.28	130
2017/10/9	14	0.32	117
2017/10/9	15	0.60	159
2017/10/9	16	0.14	164
2017/10/9	17	0.17	180
2017/10/9	18	0.36	193
2017/10/9	19	0.19	149
2017/10/9	20	0.34	167
2017/10/9	21	0.08	127
2017/10/9	22	0.53	119
2017/10/9	23	0.09	136

Date	Time (HH)	Wind speed (m/s)	Wind direction (deg)
2017/10/10	0	0.13	127
2017/10/10	1	0.23	154
2017/10/10	2	0.15	145
2017/10/10	3	0.04	125
2017/10/10	4	0.19	96
2017/10/10	5	0.08	100
2017/10/10	6	0.08	106
2017/10/10	7	0.05	113
2017/10/10	8	0.12	125
2017/10/10	9	0.19	182
2017/10/10	10	0.32	87
2017/10/10	11	0.47	162
2017/10/10	12	0.95	99
2017/10/10	13	0.56	112
2017/10/10	14	0.23	125
2017/10/10	15	0.89	158
2017/10/10	16	0.31	189
2017/10/10	17	0.22	153
2017/10/10	18	1.06	146
2017/10/10	19	2.38	164
2017/10/10	20	1.92	161
2017/10/10	21	2.50	168
2017/10/10	22	2.81	155
2017/10/10	23	2.35	177
2017/10/12	0	0.02	88
2017/10/12	1	0.02	55
2017/10/12	2	0.02	45
2017/10/12	3	0.02	70
2017/10/12	4	0.02	119
2017/10/12	5	0.06	220
2017/10/12	6	0.03	187
2017/10/12	7	0.02	157
2017/10/12	8	0.03	214
2017/10/12	9	0.00	276
2017/10/12	10	0.19	199
2017/10/12	11	0.14	194
2017/10/12	12	0.06	251
2017/10/12	13	0.05	207
2017/10/12	14	0.08	190
2017/10/12	15	0.57	193
2017/10/12	16	0.45	213
2017/10/12	17	0.85	200
2017/10/12	18	0.79	137
2017/10/12	19	0.05	219
2017/10/12	20	0.05	327
2017/10/12	21	0.09	324
2017/10/12	22	0.11	327
2017/10/12	23	0.24	296
2017/10/13	0	0.21	297
2017/10/13	1	0.12	262
2017/10/13	2	0.23	324
2017/10/13	3	0.08	321
2017/10/13	4	0.06	332
2017/10/13	5	0.05	200
2017/10/13	6	0.11	211
2017/10/13	7	0.27	255
2017/10/13	8	0.24	256
2017/10/13	9	0.09	305
2017/10/13	10	0.25	231
2017/10/13	11	0.22	252
2017/10/13	12	0.14	298
2017/10/13	13	0.15	287
2017/10/13	14	0.30	278
2017/10/13	15	0.13	304
2017/10/13	16	0.12	272
2017/10/13	17	0.15	309
2017/10/13	18	0.17	303
2017/10/13	19	0.32	314
2017/10/13	20	0.45	273
2017/10/13	21	0.15	313
2017/10/13	22	0.09	298
2017/10/13	23	0.05	272

Date	Time (HH)	Wind speed (m/s)	Wind direction (deg)
2017/10/18	0	0.02	175
2017/10/18	1	0.05	118
2017/10/18	2	0.04	63
2017/10/18	3	0.06	66
2017/10/18	4	0.05	57
2017/10/18	5	0.04	72
2017/10/18	6	0.04	53
2017/10/18	7	0.05	124
2017/10/18	8	0.02	272
2017/10/18	9	0.01	212
2017/10/18	10	0.09	187
2017/10/18	11	0.03	144
2017/10/18	12	0.01	194
2017/10/18	13	0.00	214
2017/10/18	14	0.00	297
2017/10/18	15	0.35	313
2017/10/18	16	0.07	128
2017/10/18	17	0.02	104
2017/10/18	18	0.03	125
2017/10/18	19	0.07	195
2017/10/18	20	0.05	176
2017/10/18	21	0.02	119
2017/10/18	22	0.02	246
2017/10/18	23	0.15	111
2017/10/19	0	0.24	57
2017/10/19	1	0.03	306
2017/10/19	2	0.08	236
2017/10/19	3	0.09	270
2017/10/19	4	0.03	334
2017/10/19	5	0.14	171
2017/10/19	6	0.03	286
2017/10/19	7	0.02	349
2017/10/19	8	0.02	93
2017/10/19	9	0.05	256
2017/10/19	10	0.03	313
2017/10/19	11	0.05	299
2017/10/19	12	0.01	167
2017/10/19	13	0.01	286
2017/10/19	14	0.03	200
2017/10/19	15	0.01	258
2017/10/19	16	0.04	178
2017/10/19	17	0.03	255
2017/10/19	18	0.02	244
2017/10/19	19	0.08	267
2017/10/19	20	0.02	83
2017/10/19	21	0.06	157
2017/10/19	22	0.12	296
2017/10/19	23	0.07	335
2017/10/24	0	0.20	193
2017/10/24	1	0.20	196
2017/10/24	2	0.09	179
2017/10/24	3	0.05	166
2017/10/24	4	0.07	151
2017/10/24	5	0.04	102
2017/10/24	6	0.02	106
2017/10/24	7	0.03	116
2017/10/24	8	0.14	111
2017/10/24	9	0.51	114
2017/10/24	10	0.93	206
2017/10/24	11	0.02	208
2017/10/24	12	0.01	127
2017/10/24	13	0.08	101
2017/10/24	14	0.02	173
2017/10/24	15	0.43	207
2017/10/24	16	0.58	186
2017/10/24	17	0.81	168
2017/10/24	18	0.40	161
2017/10/24	19	0.26	138
2017/10/24	20	0.72	164
2017/10/24	21	0.26	159
2017/10/24	22	0.18	152
2017/10/24	23	0.05	133

Date	Time (HH)	Wind speed (m/s)	Wind direction (deg)
2017/10/25	0	0.09	72
2017/10/25	1	0.07	68
2017/10/25	2	0.02	71
2017/10/25	3	0.07	102
2017/10/25	4	0.16	100
2017/10/25	5	0.12	112
2017/10/25	6	0.09	80
2017/10/25	7	0.13	58
2017/10/25	8	0.09	98
2017/10/25	9	1.77	125
2017/10/25	10	2.04	166
2017/10/25	11	1.46	158
2017/10/25	12	1.45	185
2017/10/25	13	1.83	165
2017/10/25	14	2.39	185
2017/10/25	15	2.12	180
2017/10/25	16	1.60	182
2017/10/25	17	1.06	166
2017/10/25	18	0.49	132
2017/10/25	19	0.95	163
2017/10/25	20	0.70	182
2017/10/25	21	0.56	179
2017/10/25	22	0.85	147
2017/10/25	23	1.07	166
2017/10/30	0	0.06	160
2017/10/30	1	0.09	169
2017/10/30	2	0.05	96
2017/10/30	3	0.02	82
2017/10/30	4	0.10	89
2017/10/30	5	0.08	126
2017/10/30	6	0.13	194
2017/10/30	7	0.15	260
2017/10/30	8	0.14	283
2017/10/30	9	0.14	287
2017/10/30	10	0.16	288
2017/10/30	11	0.16	242
2017/10/30	12	0.17	163
2017/10/30	13	0.27	244
2017/10/30	14	0.11	319
2017/10/30	15	0.07	238
2017/10/30	16	0.14	190
2017/10/30	17	0.74	188
2017/10/30	18	0.82	193
2017/10/30	19	0.58	198
2017/10/30	20	0.10	188
2017/10/30	21	0.05	155
2017/10/30	22	0.30	179
2017/10/30	23	0.02	134
2017/10/31	0	0.12	103
2017/10/31	1	0.09	139
2017/10/31	2	0.21	171
2017/10/31	3	0.10	179
2017/10/31	4	0.06	110
2017/10/31	5	0.02	131
2017/10/31	6	0.08	83
2017/10/31	7	0.10	114
2017/10/31	8	0.13	164
2017/10/31	9	0.02	221
2017/10/31	10	0.04	254
2017/10/31	11	0.01	138
2017/10/31	12	0.04	142
2017/10/31	13	0.11	162
2017/10/31	14	0.03	193
2017/10/31	15	0.14	222
2017/10/31	16	1.69	190
2017/10/31	17	1.67	171
2017/10/31	18	1.31	140
2017/10/31	19	0.58	124
2017/10/31	20	0.37	116
2017/10/31	21	0.17	129
2017/10/31	22	0.24	185
2017/10/31	23	0.25	177

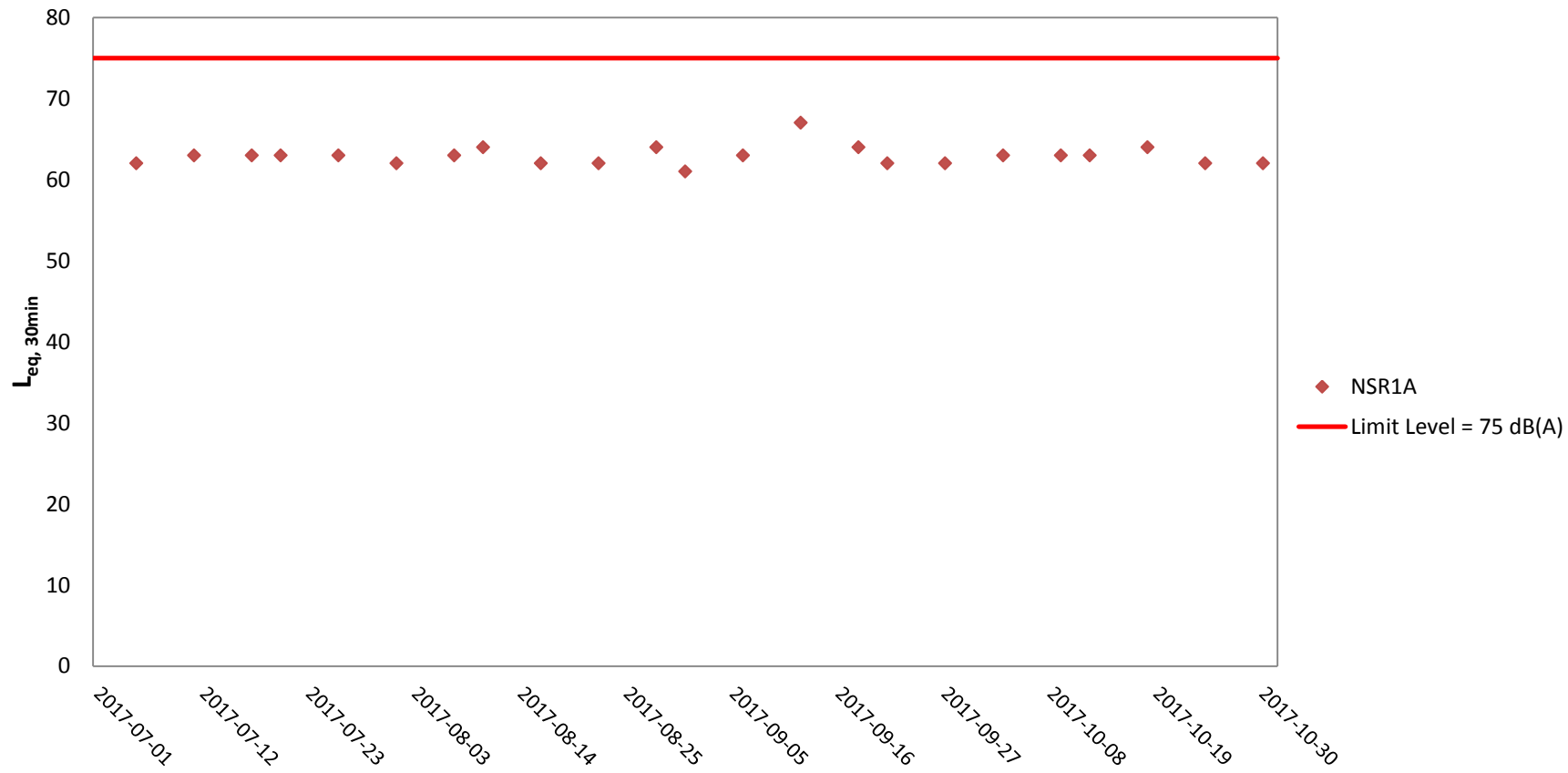
Appendix I

Impact Noise Monitoring
Results and Graphical
Presentation

Appendix I-1 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	2017-10-03	NSR1A	Sunny	9:59	63	64	59	75	0.5	RION NL52 (S/N 01010406)	RION NC73 (S/N 10486660)
TMCLKL	HY/2012/07	2017-10-09	NSR1A	Sunny	10:02	63	64	59	75	0.6	RION NL52 (S/N 01010406)	RION NC73 (S/N 10486660)
TMCLKL	HY/2012/07	2017-10-12	NSR1A	Sunny	10:11	63	64	59	75	0.9	RION NL52 (S/N 01010406)	RION NC73 (S/N 10486660)
TMCLKL	HY/2012/07	2017-10-18	NSR1A	Sunny	10:00	64	65	61	75	0.3	RION NL52 (S/N 01010406)	RION NC73 (S/N 10486660)
TMCLKL	HY/2012/07	2017-10-24	NSR1A	Sunny	9:56	62	63	59	75	0.3	RION NL52 (S/N 01010406)	RION NC73 (S/N 10486660)
TMCLKL	HY/2012/07	2017-10-30	NSR1A	Sunny	9:57	62	64	59	75	0.3	RION NL52 (S/N 01010406)	RION NC73 (S/N 10486660)
						Min.	62					
						Max.	64					
						Average	63					

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; Road works along North Lantau Highway; Launching gantry operation; 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

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Depth (m)	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	CS(Mf)5	9:56	12.4	Surface	1	1	29.9	8.0	23.5	6.0	5.3	3.8	4.7	6.0	6.3
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	CS(Mf)5	9:56	12.4	Surface	1	2	29.6	8.0	23.7	5.9		3.8		4.9	
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	CS(Mf)5	9:56	12.4	Middle	2	1	29.5	7.9	27.6	4.7	4.5	5.6			
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	CS(Mf)5	9:56	12.4	Middle	2	2	29.3	8.0	27.9	4.7	3.6	5.3			
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	CS(Mf)5	9:56	12.4	Bottom	3	1	29.4	7.9	28.5	4.5	6.7	8.4			
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	CS(Mf)5	9:56	12.4	Bottom	3	2	29.1	8.0	28.8	4.5	5.9	7.8			
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	CS(Mf)3(N)	11:07	6.8	Surface	1	1	30.3	7.9	20.2	6.1	5.6	2.8	5.7	3.6	4.8
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	CS(Mf)3(N)	11:07	6.8	Surface	1	2	30.1	7.9	20.1	6.0		2.5		4.8	
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	CS(Mf)3(N)	11:07	6.8	Middle	2	1	29.9	7.9	23.7	5.2	6.1	3.9			
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	CS(Mf)3(N)	11:07	6.8	Middle	2	2	29.7	7.9	23.5	5.1	6.0	5.4			
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	CS(Mf)3(N)	11:07	6.8	Bottom	3	1	29.8	7.9	24.6	5.2	8.9	4.7			
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	CS(Mf)3(N)	11:07	6.8	Bottom	3	2	29.5	7.9	24.4	5.1	7.9	6.3			
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	IS(Mf)16	10:35	5.2	Surface	1	1	30.0	8.2	23.4	8.5	8.5	6.0	4.7	7.4	7.9
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	IS(Mf)16	10:35	5.2	Surface	1	2	29.7	8.2	23.7	8.4		5.1		8.0	
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	IS(Mf)16		5.2	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	IS(Mf)16		5.2	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	IS(Mf)16	10:35	5.2	Bottom	3	1	29.6	7.9	26.7	5.1	3.8	7.9			
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	IS(Mf)16	10:35	5.2	Bottom	3	2	29.3	8.0	27.0	5.2	3.7	8.1			
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	SR4a	10:45	4.6	Surface	1	1	29.8	8.1	23.2	7.2	7.2	6.3	6.2	8.3	10.0
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	SR4a	10:45	4.6	Surface	1	2	29.6	8.1	23.5	7.2		5.3		9.1	
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	SR4a		4.6	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	SR4a		4.6	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	SR4a	10:45	4.6	Bottom	3	1	29.8	8.1	23.3	7.0	6.9	11.9			
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	SR4a	10:45	4.6	Bottom	3	2	29.6	8.1	23.6	6.9	6.1	10.7			
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	SR4	10:50	4.2	Surface	1	1	29.9	8.0	23.0	6.9	6.9	6.2	9.2	8.9	8.5
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	SR4	10:50	4.2	Surface	1	2	29.7	8.1	23.3	6.9		5.7		7.3	
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	SR4		4.2	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	SR4		4.2	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	SR4	10:50	4.2	Bottom	3	1	29.9	8.0	23.8	6.3	12.5	9.5			
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	SR4	10:50	4.2	Bottom	3	2	29.6	8.1	24.0	6.3	12.5	8.1			
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	IS8	11:05	3.9	Surface	1	1	30.0	8.2	23.2	8.8	8.8	4.2	5.9	7.0	8.0
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	IS8	11:05	3.9	Surface	1	2	29.8	8.3	23.4	8.8		4.3		6.1	
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	IS8		3.9	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	IS8		3.9	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	IS8	11:05	3.9	Bottom	3	1	29.9	8.1	23.7	7.1	7.5	9.1			
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	IS8	11:05	3.9	Bottom	3	2	29.6	8.2	24.0	7.2	7.4	9.7			
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	IS(Mf)9	11:16	3.4	Surface	1	1	30.0	8.3	23.2	9.1	9.1	4.9	5.1	6.4	6.0
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	IS(Mf)9	11:16	3.4	Surface	1	2	29.8	8.3	23.4	9.1		4.9		6.2	
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	IS(Mf)9		3.4	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	IS(Mf)9		3.4	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	IS(Mf)9	11:16	3.4	Bottom	3	1	29.9	8.1	23.5	7.9	5.6	5.4			
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	IS(Mf)9	11:16	3.4	Bottom	3	2	29.6	8.2	23.8	7.8	4.8	5.8			

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Depth (m)	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	CS(Mf)5	18:00	12.5	Surface	1	1	30.0	8.0	24.8	6.1	5.5	3.2	6.4	6.1	6.2
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	CS(Mf)5	18:00	12.5	Surface	1	2	29.7	8.0	25.0	6.0		2.6		7.2	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	CS(Mf)5	18:00	12.5	Middle	2	1	29.6	7.9	27.2	4.9		5.6		6.6	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	CS(Mf)5	18:00	12.5	Middle	2	2	29.3	8.0	27.5	4.9		5.3		6.1	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	CS(Mf)5	18:00	12.5	Bottom	3	1	29.5	7.9	28.0	4.5	4.5	10.9	5.0	5.2	3.1
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	CS(Mf)5	18:00	12.5	Bottom	3	2	29.2	8.0	28.3	4.5		10.5		6.0	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	CS(Mf)3(N)	16:23	6.9	Surface	1	1	30.7	7.7	17.6	5.8	5.7	5.0	5.0	2.3	9.4
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	CS(Mf)3(N)	16:23	6.9	Surface	1	2	30.4	7.7	17.4	5.7		4.5		2.7	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	CS(Mf)3(N)	16:23	6.9	Middle	2	1	30.4	7.8	19.7	5.7		5.2		4.4	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	CS(Mf)3(N)	16:23	6.9	Middle	2	2	30.2	7.8	19.6	5.6		4.8		3.9	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	CS(Mf)3(N)	16:23	6.9	Bottom	3	1	30.3	7.8	20.8	5.5	5.5	5.4	5.2	3.2	7.4
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	CS(Mf)3(N)	16:23	6.9	Bottom	3	2	30.0	7.8	20.8	5.4		5.0		2.3	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	IS(Mf)16	17:26	5.3	Surface	1	1	30.5	8.1	22.1	8.8	8.8	2.9	5.2	6.1	9.4
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	IS(Mf)16	17:26	5.3	Surface	1	2	30.3	8.2	22.4	8.8		2.4		5.6	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	IS(Mf)16		5.3	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	IS(Mf)16		5.3	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	IS(Mf)16	17:26	5.3	Bottom	3	1	30.2	8.1	23.5	7.4	7.4	7.8	9.9	13.7	6.8
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	IS(Mf)16	17:26	5.3	Bottom	3	2	29.9	8.1	23.8	7.4		7.5		12.2	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	SR4a	17:11	4.6	Surface	1	1	30.6	8.1	22.2	8.0	8.1	6.4	7.2	5.6	7.4
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	SR4a	17:11	4.6	Surface	1	2	30.3	8.1	22.4	8.1		5.9		6.3	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	SR4a		4.6	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	SR4a		4.6	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	SR4a	17:11	4.6	Bottom	3	1	30.5	8.1	22.5	7.7	7.8	8.7	9.9	8.6	6.8
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	SR4a	17:11	4.6	Bottom	3	2	30.2	8.1	22.7	7.8		7.8		8.9	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	SR4	17:06	3.5	Surface	1	1	30.7	8.1	22.1	8.1	8.1	5.0	11.6	6.5	8.5
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	SR4	17:06	3.5	Surface	1	2	30.4	8.1	22.3	8.1		4.5		6.2	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	SR4		3.5	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	SR4		3.5	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	SR4	17:06	3.5	Bottom	3	1	30.3	8.0	23.8	7.0	7.0	15.4	11.6	7.3	8.5
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	SR4	17:06	3.5	Bottom	3	2	30.0	8.1	24.0	7.0		14.5		7.2	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	IS8	16:55	3.3	Surface	1	1	30.5	8.1	22.5	8.6	8.6	7.1	11.6	6.5	8.5
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	IS8	16:55	3.3	Surface	1	2	30.2	8.2	22.7	8.5		6.2		5.8	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	IS8		3.3	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	IS8		3.3	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	IS8	16:55	3.3	Bottom	3	1	30.1	8.1	24.0	7.2	7.2	16.9	11.6	10.8	9.6
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	IS8	16:55	3.3	Bottom	3	2	29.8	8.1	24.2	7.2		16.1		10.9	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	IS(Mf)9	16:44	3.0	Surface	1	1	30.7	8.2	23.3	9.7	9.7	8.2	11.2	8.5	9.6
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	IS(Mf)9	16:44	3.0	Surface	1	2	30.4	8.3	23.5	9.6		7.6		8.5	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	IS(Mf)9		3.0	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	IS(Mf)9		3.0	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	IS(Mf)9	16:44	3.0	Bottom	3	1	30.4	8.2	23.9	8.6	8.6	14.5	11.2	10.4	9.6
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	IS(Mf)9	16:44	3.0	Bottom	3	2	30.1	8.2	24.1	8.5		14.4		11.1	

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Depth (m)	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	CS(Mf)5	11:32	12.4	Surface	1	1	30.2	8.0	23.9	5.8	5.3	5.7	8.3	5.0	6.2
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	CS(Mf)5	11:32	12.4	Surface	1	2	30.0	8.0	24.2	5.7		4.6		5.9	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	CS(Mf)5	11:32	12.4	Middle	2	1	29.9	8.0	25.7	4.8		8.7		4.8	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	CS(Mf)5	11:32	12.4	Middle	2	2	29.6	8.0	26.0	4.8		7.9		5.0	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	CS(Mf)5	11:32	12.4	Bottom	3	1	29.6	7.9	27.7	4.3	4.3	11.9	14.4	9.0	4.1
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	CS(Mf)5	11:32	12.4	Bottom	3	2	29.3	8.0	28.0	4.3		10.8		7.2	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	CS(Mf)3(N)	13:03	7.2	Surface	1	1	30.3	7.8	21.5	5.8	5.9	7.8	14.4	2.6	4.1
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	CS(Mf)3(N)	13:03	7.2	Surface	1	2	30.1	7.9	21.6	6.1		7.3		3.8	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	CS(Mf)3(N)	13:03	7.2	Middle	2	1	30.2	7.9	23.7	5.9		13.5		3.8	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	CS(Mf)3(N)	13:03	7.2	Middle	2	2	30.0	7.9	22.3	5.9		13.7		4.1	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	CS(Mf)3(N)	13:03	7.2	Bottom	3	1	30.1	7.9	25.2	5.6	5.7	21.8	14.4	5.1	4.1
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	CS(Mf)3(N)	13:03	7.2	Bottom	3	2	29.8	7.9	25.3	5.8		22.1		4.9	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	IS(Mf)16	12:05	5.8	Surface	1	1	30.2	8.0	23.7	6.4	6.4	7.4	9.6	7.9	7.7
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	IS(Mf)16	12:05	5.8	Surface	1	2	29.9	8.1	24.0	6.4		6.5		6.7	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	IS(Mf)16		5.8	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	IS(Mf)16		5.8	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	IS(Mf)16	12:05	5.8	Bottom	3	1	30.0	8.0	24.9	5.2	5.3	12.9	15.1	7.7	12.1
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	IS(Mf)16	12:05	5.8	Bottom	3	2	29.7	8.0	25.2	5.3		11.5		8.5	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	SR4a	12:16	4.9	Surface	1	1	30.2	8.0	23.7	5.9	5.9	12.5	15.1	12.3	12.1
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	SR4a	12:16	4.9	Surface	1	2	29.9	8.0	24.0	5.9		11.2		12.5	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	SR4a		4.9	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	SR4a		4.9	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	SR4a	12:16	4.9	Bottom	3	1	30.2	8.0	23.9	5.8	5.8	18.5	15.1	11.9	12.1
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	SR4a	12:16	4.9	Bottom	3	2	29.9	8.0	24.1	5.7		18.2		11.5	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	SR4	12:20	3.5	Surface	1	1	30.3	8.0	23.4	6.1	6.1	8.6	8.0	8.3	8.4
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	SR4	12:20	3.5	Surface	1	2	30.0	8.0	23.6	6.1		7.5		8.5	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	SR4		3.5	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	SR4		3.5	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	SR4	12:20	3.5	Bottom	3	1	30.3	8.0	23.4	6.1	6.1	8.3	8.0	8.0	8.4
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	SR4	12:20	3.5	Bottom	3	2	30.0	8.0	23.7	6.1		7.4		8.9	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	IS8	12:31	3.8	Surface	1	1	30.5	8.1	23.8	6.6	6.6	10.3	11.2	10.8	11.5
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	IS8	12:31	3.8	Surface	1	2	30.2	8.1	24.1	6.6		8.9		12.4	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	IS8		3.8	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	IS8		3.8	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	IS8	12:31	3.8	Bottom	3	1	30.4	8.0	23.8	6.3	6.3	13.4	11.2	11.5	11.5
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	IS8	12:31	3.8	Bottom	3	2	30.1	8.1	24.1	6.3		12.1		11.3	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	IS(Mf)9	12:41	3.1	Surface	1	1	30.4	8.1	23.7	7.1	7.1	8.2	8.1	7.6	8.2
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	IS(Mf)9	12:41	3.1	Surface	1	2	30.2	8.1	24.0	7.1		7.0		9.5	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	IS(Mf)9		3.1	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	IS(Mf)9		3.1	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	IS(Mf)9	12:41	3.1	Bottom	3	1	30.4	8.1	23.7	6.9	6.9	9.3	8.1	7.8	8.2
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	IS(Mf)9	12:41	3.1	Bottom	3	2	30.1	8.1	24.0	6.9		7.8		7.8	

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Depth (m)	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	CS(Mf)5	18:26	12.5	Surface	1	1	29.8	8.0	25.0	5.3	4.9	4.1	14.6	6.1	15.7
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	CS(Mf)5	18:26	12.5	Surface	1	2	30.0	7.9	24.8	5.3		4.1		4.5	
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	CS(Mf)5	18:26	12.5	Middle	2	1	29.4	8.0	27.6	4.4		13.5		10.2	
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	CS(Mf)5	18:26	12.5	Middle	2	2	29.7	7.9	27.3	4.5		13.8		9.9	
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	CS(Mf)5	18:26	12.5	Bottom	3	1	29.4	8.0	27.8	4.3	4.4	23.9	7.0	30.4	4.3
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	CS(Mf)5	18:26	12.5	Bottom	3	2	29.6	7.9	27.5	4.4		28.4		33.0	
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	CS(Mf)3(N)	17:10	7.3	Surface	1	1	30.4	7.8	21.0	5.6	5.7	6.2	7.0	3.7	4.3
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	CS(Mf)3(N)	17:10	7.3	Surface	1	2	30.2	7.8	21.3	5.6		6.0		3.9	
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	CS(Mf)3(N)	17:10	7.3	Middle	2	1	30.4	7.8	21.0	5.8		5.7		4.7	
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	CS(Mf)3(N)	17:10	7.3	Middle	2	2	30.2	7.8	21.3	5.7		6.0		3.2	
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	CS(Mf)3(N)	17:10	7.3	Bottom	3	1	30.2	7.8	23.3	5.4	5.4	9.6	7.0	5.6	6.4
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	CS(Mf)3(N)	17:10	7.3	Bottom	3	2	30.0	7.8	23.5	5.3		8.3		4.7	
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	IS(Mf)16	17:53	5.8	Surface	1	1	29.9	8.0	24.0	5.8	5.8	5.7	7.0	5.9	6.4
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	IS(Mf)16	17:53	5.8	Surface	1	2	30.1	8.0	23.7	5.8		5.6		5.9	
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	IS(Mf)16		5.8	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	IS(Mf)16		5.8	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	IS(Mf)16	17:53	5.8	Bottom	3	1	29.8	8.0	24.6	5.6	5.6	8.6	9.0	7.2	7.8
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	IS(Mf)16	17:53	5.8	Bottom	3	2	30.1	8.0	24.3	5.6		8.2		6.4	
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	SR4a	17:41	4.6	Surface	1	1	29.9	8.0	24.0	5.8	5.8	7.4	8.3	7.8	8.4
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	SR4a	17:41	4.6	Surface	1	2	30.1	8.0	23.7	5.8		8.8		7.9	
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	SR4a		4.6	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	SR4a		4.6	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	SR4a	17:41	4.6	Bottom	3	1	29.8	8.0	24.5	5.6	5.6	9.6	8.3	7.9	8.4
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	SR4a	17:41	4.6	Bottom	3	2	30.1	8.0	24.3	5.6		10.1		7.4	
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	SR4	17:36	3.7	Surface	1	1	29.9	8.0	24.1	5.8	5.8	7.9	8.3	8.0	8.4
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	SR4	17:36	3.7	Surface	1	2	30.1	8.0	23.9	5.8		7.7		7.2	
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	SR4		3.7	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	SR4		3.7	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	SR4	17:36	3.7	Bottom	3	1	29.8	8.0	24.6	5.7	5.7	8.9	8.3	9.9	8.4
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	SR4	17:36	3.7	Bottom	3	2	30.1	8.0	24.3	5.7		8.8		8.6	
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	IS8	17:28	3.8	Surface	1	1	29.8	8.0	24.2	5.9	5.9	10.6	11.6	9.6	9.7
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	IS8	17:28	3.8	Surface	1	2	30.1	8.0	23.9	5.9		10.5		8.5	
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	IS8		3.8	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	IS8		3.8	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	IS8	17:28	3.8	Bottom	3	1	29.8	8.0	24.3	5.8	5.9	12.4	11.6	9.8	9.7
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	IS8	17:28	3.8	Bottom	3	2	30.1	8.0	24.1	5.9		12.7		10.9	
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	IS(Mf)9		2.8	Surface	1	1					6.7		8.5		8.0
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	IS(Mf)9		2.8	Surface	1	2									
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	IS(Mf)9	17:19	2.8	Middle	2	1	30.0	8.1	24.2	6.6		8.5		8.5	
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	IS(Mf)9	17:19	2.8	Middle	2	2	30.2	8.0	23.9	6.7		8.5		7.5	
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	IS(Mf)9		2.8	Bottom	3	1					6.7		8.5		8.0
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	IS(Mf)9		2.8	Bottom	3	2									

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Depth (m)	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	CS(Mf)5	12:55	11.3	Surface	1	1	30.0	7.9	26.1	5.2	5.0	7.6	7.8	7.2	7.2
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	CS(Mf)5	12:55	11.3	Surface	1	2	29.8	8.0	26.4	5.2		7.6		6.9	
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	CS(Mf)5	12:55	11.3	Middle	2	1	29.7	7.9	26.7	4.8	8.2	7.6			
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	CS(Mf)5	12:55	11.3	Middle	2	2	29.4	8.0	27.0	4.8	7.9	6.6			
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	CS(Mf)5	12:55	11.3	Bottom	3	1	29.7	7.9	26.9	4.8	4.8	7.6		7.6	
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	CS(Mf)5	12:55	11.3	Bottom	3	2	29.4	8.0	27.2	4.8	4.8	7.7		7.4	
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	CS(Mf)3(N)	11:45	7.0	Surface	1	1	30.0	7.9	24.5	5.6	5.6	10.3	17.6	7.0	8.7
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	CS(Mf)3(N)	11:45	7.0	Surface	1	2	29.8	7.9	24.5	5.5		9.5		6.8	
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	CS(Mf)3(N)	11:45	7.0	Middle	2	1	29.9	8.0	27.1	5.7	15.5	8.1			
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	CS(Mf)3(N)	11:45	7.0	Middle	2	2	29.6	8.0	27.1	5.7	14.0	8.1			
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	CS(Mf)3(N)	11:45	7.0	Bottom	3	1	29.8	8.0	28.1	5.7	5.7	29.2		11.3	
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	CS(Mf)3(N)	11:45	7.0	Bottom	3	2	29.5	8.0	28.0	5.7	5.7	27.3		11.1	
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	IS(Mf)16	12:28	6.4	Surface	1	1	29.8	7.9	25.5	5.5	5.2	10.6	11.5	5.2	8.2
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	IS(Mf)16	12:28	6.4	Surface	1	2	29.6	8.0	25.7	5.3		11.2		4.9	
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	IS(Mf)16	12:28	6.4	Middle	2	1	29.7	7.9	25.7	5.1	13.6	8.7			
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	IS(Mf)16	12:28	6.4	Middle	2	2	29.4	8.0	26.0	5.0	12.7	9.3			
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	IS(Mf)16	12:28	6.4	Bottom	3	1	29.7	7.9	26.1	5.0	5.0	10.1		10.4	
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	IS(Mf)16	12:28	6.4	Bottom	3	2	29.4	8.0	26.4	5.0	5.0	10.6		10.9	
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	SR4a	12:17	5.4	Surface	1	1	29.9	7.9	25.6	5.4	5.4	6.2	6.9	5.8	6.7
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	SR4a	12:17	5.4	Surface	1	2	29.6	8.0	25.9	5.4		6.6		6.4	
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	SR4a		5.4	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	SR4a		5.4	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	SR4a	12:17	5.4	Bottom	3	1	29.8	7.9	25.7	5.3	5.3	7.5		6.8	
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	SR4a	12:17	5.4	Bottom	3	2	29.5	8.0	25.9	5.3	5.3	7.3		7.6	
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	SR4	12:13	5.6	Surface	1	1	29.7	7.9	25.3	5.1	5.1	9.0	10.5	4.1	6.7
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	SR4	12:13	5.6	Surface	1	2	29.5	7.9	25.6	5.1		9.4		4.4	
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	SR4		5.6	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	SR4		5.6	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	SR4	12:13	5.6	Bottom	3	1	29.7	7.9	25.5	5.1	5.1	11.8		9.5	
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	SR4	12:13	5.6	Bottom	3	2	29.5	7.9	25.7	5.1	5.1	11.8		8.7	
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	IS8	12:05	5.0	Surface	1	1	29.8	8.0	25.3	5.5	5.5	7.6	7.3	6.4	7.1
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	IS8	12:05	5.0	Surface	1	2	29.6	8.0	25.6	5.5		7.6		6.8	
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	IS8		5.0	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	IS8		5.0	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	IS8	12:05	5.0	Bottom	3	1	29.8	8.0	25.4	5.5	5.5	7.0		7.8	
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	IS8	12:05	5.0	Bottom	3	2	29.5	8.0	25.6	5.5	5.5	7.1		7.5	
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	IS(Mf)9	11:56	4.3	Surface	1	1	29.8	8.0	25.3	5.7	5.7	6.6	5.9	6.2	6.7
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	IS(Mf)9	11:56	4.3	Surface	1	2	29.5	8.0	25.6	5.6		6.3		6.8	
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	IS(Mf)9		4.3	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	IS(Mf)9		4.3	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	IS(Mf)9	11:56	4.3	Bottom	3	1	29.8	8.0	25.3	5.7	5.7	5.1		7.0	
TMCLKL	HY/2012/07	2017-10-06	Mid-Ebb	IS(Mf)9	11:56	4.3	Bottom	3	2	29.5	8.0	25.6	5.7	5.7	5.4		6.6	

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Depth (m)	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	CS(Mf)5	6:27	10.0	Surface	1	1	29.6	7.9	25.9	5.2	5.0	7.2	9.1	7.4	8.1
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	CS(Mf)5	6:27	10.0	Surface	1	2	29.4	8.0	26.2	5.1		7.4		7.6	
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	CS(Mf)5	6:27	10.0	Middle	2	1	29.7	7.9	26.1	4.9		8.8		7.8	
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	CS(Mf)5	6:27	10.0	Middle	2	2	29.5	8.0	26.4	4.9		9.1		6.9	
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	CS(Mf)5	6:27	10.0	Bottom	3	1	29.7	7.9	27.1	4.7	4.7	10.8	16.7	8.7	10.0
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	CS(Mf)5	6:27	10.0	Bottom	3	2	29.4	8.0	27.3	4.7		11.0		10.4	
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	CS(Mf)3(N)	7:40	7.1	Surface	1	1	29.6	7.8	23.0	5.3	5.3	12.8	7.5	9.6	7.0
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	CS(Mf)3(N)	7:40	7.1	Surface	1	2	29.9	7.8	23.0	5.4		12.5		9.7	
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	CS(Mf)3(N)	7:40	7.1	Middle	2	1	29.6	7.8	23.2	5.3		16.9		9.0	
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	CS(Mf)3(N)	7:40	7.1	Middle	2	2	29.9	7.8	23.2	5.3		17.6		9.8	
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	CS(Mf)3(N)	7:40	7.1	Bottom	3	1	29.6	7.9	23.6	5.3	5.3	19.4	10.8	10.7	10.7
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	CS(Mf)3(N)	7:40	7.1	Bottom	3	2	29.9	7.8	23.6	5.3		21.1		11.4	
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	IS(Mf)16	6:55	6.4	Surface	1	1	29.7	7.9	25.0	5.4	5.3	6.3	7.5	7.8	7.0
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	IS(Mf)16	6:55	6.4	Surface	1	2	29.4	8.0	25.3	5.4		6.6		6.4	
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	IS(Mf)16	6:55	6.4	Middle	2	1	29.7	7.9	25.3	5.3		6.8		6.6	
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	IS(Mf)16	6:55	6.4	Middle	2	2	29.4	8.0	25.6	5.2		6.9		6.9	
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	IS(Mf)16	6:55	6.4	Bottom	3	1	29.7	7.9	26.0	5.0	5.0	9.2	10.8	7.4	10.7
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	IS(Mf)16	6:55	6.4	Bottom	3	2	29.4	8.0	26.2	5.0		9.0		6.7	
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	SR4a	7:06	5.0	Surface	1	1	29.6	7.9	25.5	5.2	5.2	10.4	9.6	10.4	9.7
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	SR4a	7:06	5.0	Surface	1	2	29.3	8.0	25.8	5.2		10.5		10.4	
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	SR4a		5.0	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	SR4a		5.0	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	SR4a	7:06	5.0	Bottom	3	1	29.6	7.9	25.6	5.2	5.2	11.1	8.0	11.3	6.1
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	SR4a	7:06	5.0	Bottom	3	2	29.3	8.0	25.8	5.2		11.1		10.7	
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	SR4	7:10	4.8	Surface	1	1	29.6	7.9	25.9	5.0	5.0	7.9	9.6	9.3	9.7
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	SR4	7:10	4.8	Surface	1	2	29.3	8.0	26.1	5.0		8.4		10.3	
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	SR4		4.8	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	SR4		4.8	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	SR4	7:10	4.8	Bottom	3	1	29.6	7.9	26.0	4.8	4.8	10.9	8.0	9.6	6.1
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	SR4	7:10	4.8	Bottom	3	2	29.4	8.0	26.3	4.8		11.1		9.4	
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	IS8	7:21	5.0	Surface	1	1	29.6	7.9	25.3	5.3	5.3	6.7	10.9	5.9	9.6
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	IS8	7:21	5.0	Surface	1	2	29.3	8.0	25.6	5.2		6.8		6.0	
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	IS8		5.0	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	IS8		5.0	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	IS8	7:21	5.0	Bottom	3	1	29.6	7.9	25.8	5.1	5.1	9.2	8.0	6.2	6.1
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	IS8	7:21	5.0	Bottom	3	2	29.3	8.0	26.0	5.1		9.3		6.2	
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	IS(Mf)9	7:28	4.2	Surface	1	1	29.5	7.9	25.4	5.2	5.2	7.6	10.9	8.2	9.6
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	IS(Mf)9	7:28	4.2	Surface	1	2	29.2	8.0	25.7	5.2		7.6		9.2	
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	IS(Mf)9		4.2	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	IS(Mf)9		4.2	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	IS(Mf)9	7:28	4.2	Bottom	3	1	29.6	7.9	25.7	5.0	5.2	13.8	10.9	10.4	9.6
TMCLKL	HY/2012/07	2017-10-06	Mid-Flood	IS(Mf)9	7:28	4.2	Bottom	3	2	29.4	8.0	26.0	5.0		14.4		10.4	

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Depth (m)	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	CS(Mf)5	15:13	11.3	Surface	1	1	29.5	8.0	27.1	5.6	5.4	4.7	7.7	4.3	7.2
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	CS(Mf)5	15:13	11.3	Surface	1	2	29.7	8.0	26.8	5.7		4.4		5.3	
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	CS(Mf)5	15:13	11.3	Middle	2	1	29.4	8.0	28.0	5.1		6.1		6.9	
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	CS(Mf)5	15:13	11.3	Middle	2	2	29.7	8.0	27.7	5.0		5.9		9.1	
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	CS(Mf)5	15:13	11.3	Bottom	3	1	29.3	8.0	28.7	4.8	4.8	12.3	12.5	8.9	11.2
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	CS(Mf)5	15:13	11.3	Bottom	3	2	29.5	8.0	28.4	4.8		12.8		8.8	
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	CS(Mf)3(N)	14:02	7.0	Surface	1	1	29.8	7.9	25.9	5.9	5.8	11.0	12.5	10.5	11.2
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	CS(Mf)3(N)	14:02	7.0	Surface	1	2	29.6	8.0	25.9	5.8		10.8		9.6	
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	CS(Mf)3(N)	14:02	7.0	Middle	2	1	29.8	7.9	26.5	5.8		12.5		9.5	
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	CS(Mf)3(N)	14:02	7.0	Middle	2	2	29.5	8.0	26.5	5.8	5.9	12.2	12.5	9.6	11.2
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	CS(Mf)3(N)	14:02	7.0	Bottom	3	1	29.7	7.9	27.5	5.9		14.6		13.1	
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	CS(Mf)3(N)	14:02	7.0	Bottom	3	2	29.4	7.9	27.2	5.9		14.1		14.6	
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	IS(Mf)16	14:41	6.4	Surface	1	1	29.4	8.0	26.6	5.7	5.7	8.7	10.0	9.0	11.9
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	IS(Mf)16	14:41	6.4	Surface	1	2	29.7	8.0	26.3	5.7		8.6		10.5	
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	IS(Mf)16	14:41	6.4	Middle	2	1	29.4	8.0	26.6	5.6		9.1		11.5	
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	IS(Mf)16	14:41	6.4	Middle	2	2	29.7	8.0	26.3	5.6		9.0		10.1	
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	IS(Mf)16	14:41	6.4	Bottom	3	1	29.4	8.0	26.7	5.5	5.5	12.1	10.0	14.8	11.9
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	IS(Mf)16	14:41	6.4	Bottom	3	2	29.6	8.0	26.5	5.5		12.6		15.3	
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	SR4a	14:29	5.4	Surface	1	1	29.5	8.0	26.7	5.7	5.7	6.3	6.6	8.8	8.9
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	SR4a	14:29	5.4	Surface	1	2	29.7	8.0	26.4	5.7		6.0		8.2	
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	SR4a		5.4	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	SR4a		5.4	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	SR4a	14:29	5.4	Bottom	3	1	29.4	8.0	26.7	5.7	5.7	7.1	9.6	8.5	8.3
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	SR4a	14:29	5.4	Bottom	3	2	29.7	8.0	26.4	5.7		7.0		9.9	
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	SR4	14:23	4.6	Surface	1	1	29.4	8.0	26.6	5.5	5.6	7.6	9.6	9.2	8.3
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	SR4	14:23	4.6	Surface	1	2	29.7	8.0	26.3	5.6		7.4		8.5	
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	SR4		4.6	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	SR4		4.6	Middle	2	2					5.5		10.8	7.9	11.4
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	SR4	14:23	4.6	Bottom	3	1	29.3	8.0	26.8	5.5		11.7		7.6	
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	SR4	14:23	4.6	Bottom	3	2	29.6	8.0	26.5	5.5	5.8	10.2	10.8	11.1	11.4
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	IS8	14:15	4.6	Surface	1	1	29.4	8.0	26.6	5.7		10.3		12.0	
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	IS8		4.6	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	IS8		4.6	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	IS8	14:15	4.6	Bottom	3	1	29.3	8.0	26.6	5.6	5.7	11.1	10.8	11.2	11.4
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	IS8	14:15	4.6	Bottom	3	2	29.6	8.0	26.4	5.7		11.6		11.4	
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	IS(Mf)9	14:06	4.2	Surface	1	1	29.4	8.0	26.7	5.7	5.8	9.5	9.8	8.1	7.8
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	IS(Mf)9	14:06	4.2	Surface	1	2	29.7	8.0	26.4	5.8		9.4		7.9	
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	IS(Mf)9		4.2	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	IS(Mf)9		4.2	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	IS(Mf)9	14:06	4.2	Bottom	3	1	29.4	8.0	26.7	5.7	5.7	10.2	9.8	7.8	7.8
TMCLKL	HY/2012/07	2017-10-09	Mid-Ebb	IS(Mf)9	14:06	4.2	Bottom	3	2	29.7	8.0	26.4	5.7		9.9		7.4	

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Depth (m)	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	CS(Mf)5	8:42	9.6	Surface	1	1	29.4	8.0	27.0	5.3	5.2	6.4	10.8	7.2	8.8
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	CS(Mf)5	8:42	9.6	Surface	1	2	29.6	8.0	26.7	5.3		6.1		6.5	
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	CS(Mf)5	8:42	9.6	Middle	2	1	29.4	8.0	27.1	5.1		8.1		7.7	
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	CS(Mf)5	8:42	9.6	Middle	2	2	29.6	8.0	26.9	5.1		8.1		8.1	
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	CS(Mf)5	8:42	9.6	Bottom	3	1	29.4	8.0	28.1	4.9	5.0	18.6		11.2	
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	CS(Mf)5	8:42	9.6	Bottom	3	2	29.6	8.0	27.8	5.0		17.7		11.8	
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	CS(Mf)3(N)	10:03	7.2	Surface	1	1	29.9	7.9	22.9	5.4	5.4	7.7	9.3	7.3	9.8
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	CS(Mf)3(N)	10:03	7.2	Surface	1	2	29.6	8.0	23.0	5.3		7.6		6.4	
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	CS(Mf)3(N)	10:03	7.2	Middle	2	1	29.8	7.8	23.6	5.4		9.5		11.7	
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	CS(Mf)3(N)	10:03	7.2	Middle	2	2	29.5	7.9	23.7	5.3	5.3	9.4		10.7	
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	CS(Mf)3(N)	10:03	7.2	Bottom	3	1	29.8	7.8	23.9	5.3		11.0		10.8	
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	CS(Mf)3(N)	10:03	7.2	Bottom	3	2	29.5	7.8	24.1	5.3		10.4		11.9	
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	IS(Mf)16	9:11	6.6	Surface	1	1	29.3	8.0	26.1	5.5	5.3	4.9	8.9	4.5	6.8
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	IS(Mf)16	9:11	6.6	Surface	1	2	29.5	8.0	26.4	5.3		5.1		6.0	
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	IS(Mf)16	9:11	6.6	Middle	2	1	29.3	8.0	26.6	5.3		7.6		4.9	
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	IS(Mf)16	9:11	6.6	Middle	2	2	29.5	8.0	26.7	5.2		7.5		4.7	
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	IS(Mf)16	9:11	6.6	Bottom	3	1	29.3	8.0	27.0	5.2	5.4	14.4		9.6	
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	IS(Mf)16	9:11	6.6	Bottom	3	2	29.6	8.0	25.9	5.5		14.1		10.8	
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	SR4a	9:22	5.1	Surface	1	1	29.3	8.0	26.4	5.5	5.5	9.0	9.7	8.6	10.0
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	SR4a	9:22	5.1	Surface	1	2	29.5	8.0	26.2	5.5		8.9		8.3	
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	SR4a		5.1	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	SR4a		5.1	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	SR4a	9:22	5.1	Bottom	3	1	29.3	8.0	26.5	5.5	5.5	10.3		11.3	
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	SR4a	9:22	5.1	Bottom	3	2	29.5	8.0	26.2	5.5		10.5		11.9	
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	SR4	9:26	4.4	Surface	1	1	29.3	8.0	26.8	5.2	5.2	12.5	14.3	12.8	11.9
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	SR4	9:26	4.4	Surface	1	2	29.5	8.0	26.6	5.2		13.6		11.4	
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	SR4		4.4	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	SR4		4.4	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	SR4	9:26	4.4	Bottom	3	1	29.2	8.0	26.9	5.2	5.2	15.3		11.5	
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	SR4	9:26	4.4	Bottom	3	2	29.5	8.0	26.6	5.2		15.8		11.8	
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	IS8	9:38	4.6	Surface	1	1	29.3	8.0	26.8	5.3	5.4	10.9	15.3	11.7	11.8
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	IS8	9:38	4.6	Surface	1	2	29.5	8.0	26.5	5.4		11.0		12.1	
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	IS8		4.6	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	IS8		4.6	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	IS8	9:38	4.6	Bottom	3	1	29.2	8.0	26.8	5.3	5.3	20.8		11.3	
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	IS8	9:38	4.6	Bottom	3	2	29.5	8.0	26.6	5.3		18.6		11.9	
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	IS(Mf)9	9:45	4.2	Surface	1	1	29.2	8.0	26.7	5.4	5.5	8.7	10.1	11.2	11.7
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	IS(Mf)9	9:45	4.2	Surface	1	2	29.5	8.0	26.4	5.5		7.8		12.7	
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	IS(Mf)9		4.2	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	IS(Mf)9		4.2	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	IS(Mf)9	9:45	4.2	Bottom	3	1	29.1	8.0	26.7	5.4		12.1		11.4	
TMCLKL	HY/2012/07	2017-10-09	Mid-Flood	IS(Mf)9	9:45	4.2	Bottom	3	2	29.4	8.0	26.4	5.4		11.7		11.5	

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Depth (m)	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	CS(Mf)5	17:22	14.7	Surface	1	1	29.6	8.0	27.2	6.0	5.6	3.7	5.5	3.2	4.1
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	CS(Mf)5	17:22	14.7	Surface	1	2	29.9	8.0	26.9	6.0		4.4		3.8	
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	CS(Mf)5	17:22	14.7	Middle	2	1	29.2	8.0	28.9	5.1		5.8		3.9	
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	CS(Mf)5	17:22	14.7	Middle	2	2	29.5	8.0	28.6	5.2		6.6		4.1	
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	CS(Mf)5	17:22	14.7	Bottom	3	1	29.2	8.0	29.1	5.1	5.2	5.8	16.7	4.0	5.9
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	CS(Mf)5	17:22	14.7	Bottom	3	2	29.5	8.0	28.7	5.2		6.5		5.5	
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	CS(Mf)3(N)	15:41	7.1	Surface	1	1	29.8	7.9	24.3	6.1	6.1	7.6	16.7	5.3	5.9
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	CS(Mf)3(N)	15:41	7.1	Surface	1	2	30.1	7.9	24.0	6.1		7.7		4.4	
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	CS(Mf)3(N)	15:41	7.1	Middle	2	1	29.6	7.9	25.9	6.1		12.6		4.6	
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	CS(Mf)3(N)	15:41	7.1	Middle	2	2	29.9	7.9	25.7	6.0	5.9	13.6	16.7	5.6	5.9
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	CS(Mf)3(N)	15:41	7.1	Bottom	3	1	29.3	7.9	27.2	5.9		28.3		8.2	
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	CS(Mf)3(N)	15:41	7.1	Bottom	3	2	29.6	7.9	27.0	5.9		30.2		7.4	
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	IS(Mf)16	16:50	7.4	Surface	1	1	29.4	8.0	27.1	5.6	5.6	6.1	6.3	5.4	5.4
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	IS(Mf)16	16:50	7.4	Surface	1	2	29.6	8.0	26.9	5.7		6.7		4.6	
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	IS(Mf)16	16:50	7.4	Middle	2	1	29.3	8.0	27.5	5.4		5.4		4.8	
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	IS(Mf)16	16:50	7.4	Middle	2	2	29.6	8.0	27.2	5.5		6.2		5.6	
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	IS(Mf)16	16:50	7.4	Bottom	3	1	29.3	8.0	28.0	5.3	5.4	6.2	16.7	6.1	23.5
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	IS(Mf)16	16:50	7.4	Bottom	3	2	29.5	8.0	27.7	5.4		6.9		5.9	
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	SR4a	16:35	5.8	Surface	1	1	29.6	8.0	26.7	6.0	6.1	18.0	21.7	22.7	23.5
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	SR4a	16:35	5.8	Surface	1	2	29.9	8.0	26.5	6.1		19.6		21.3	
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	SR4a		5.8	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	SR4a		5.8	Middle	2	2					5.9		16.7		23.5
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	SR4a	16:35	5.8	Bottom	3	1	29.5	8.0	26.9	5.8		24.2		24.7	
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	SR4a	16:35	5.8	Bottom	3	2	29.8	8.0	26.6	5.9		25.0	25.2		
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	SR4	16:30	5.0	Surface	1	1	29.8	8.0	26.7	6.3	6.4	5.6	8.7	2.6	4.9
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	SR4	16:30	5.0	Surface	1	2	30.0	8.0	26.4	6.4		6.4		3.4	
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	SR4		5.0	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	SR4		5.0	Middle	2	2					5.9		16.7		4.9
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	SR4	16:30	5.0	Bottom	3	1	29.3	8.0	27.2	5.8		11.0		7.0	
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	SR4	16:30	5.0	Bottom	3	2	29.6	8.0	26.9	5.9		11.7	6.4		
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	IS8	16:18	5.4	Surface	1	1	29.7	8.0	26.7	6.2	6.2	11.5	16.5	12.1	12.6
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	IS8	16:18	5.4	Surface	1	2	29.9	8.0	26.4	6.2		12.5		12.7	
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	IS8		5.4	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	IS8		5.4	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	IS8	16:18	5.4	Bottom	3	1	29.6	8.0	26.8	6.0	6.1	22.0	16.5	12.6	12.6
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	IS8	16:18	5.4	Bottom	3	2	29.9	8.0	26.5	6.1		19.8		12.8	
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	IS(Mf)9	16:06	4.6	Surface	1	1	29.8	8.0	26.9	6.4	6.5	3.9	7.4	3.4	3.2
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	IS(Mf)9	16:06	4.6	Surface	1	2	30.1	8.0	26.6	6.5		4.5		2.6	
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	IS(Mf)9		4.6	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	IS(Mf)9		4.6	Middle	2	2					6.2		7.4		3.2
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	IS(Mf)9	16:06	4.6	Bottom	3	1	29.6	8.0	27.2	6.1		10.0		3.7	
TMCLKL	HY/2012/07	2017-10-11	Mid-Ebb	IS(Mf)9	16:06	4.6	Bottom	3	2	29.9	8.0	26.9	6.2		11.0	3.1		

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Depth (m)	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	CS(Mf)5	10:52	10.5	Surface	1	1	29.4	8.0	27.2	5.8	5.7	4.2	5.7	3.1	5.1
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	CS(Mf)5	10:52	10.5	Surface	1	2	29.7	8.1	26.9	5.8		4.0		3.3	
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	CS(Mf)5	10:52	10.5	Middle	2	1	29.2	8.0	27.5	5.5		6.0		3.8	
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	CS(Mf)5	10:52	10.5	Middle	2	2	29.5	8.1	27.2	5.6		5.6		2.4	
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	CS(Mf)5	10:52	10.5	Bottom	3	1	29.2	8.0	28.0	5.2	5.3	6.9	5.3	8.5	
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	CS(Mf)5	10:52	10.5	Bottom	3	2	29.5	8.0	27.8	5.3		7.3		9.3	
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	CS(Mf)3(N)	12:15	7.0	Surface	1	1	29.8	7.8	22.6	5.9	5.9	6.0	10.9	4.7	4.4
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	CS(Mf)3(N)	12:15	7.0	Surface	1	2	30.0	7.8	22.6	5.8		6.9		3.8	
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	CS(Mf)3(N)	12:15	7.0	Middle	2	1	29.7	7.8	23.2	5.9		9.6		4.1	
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	CS(Mf)3(N)	12:15	7.0	Middle	2	2	30.0	7.8	23.2	5.8		9.0		4.1	
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	CS(Mf)3(N)	12:15	7.0	Bottom	3	1	29.6	7.8	24.1	5.7	5.7	16.4	5.7	4.8	
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	CS(Mf)3(N)	12:15	7.0	Bottom	3	2	29.9	7.8	24.2	5.7		17.3		4.8	
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	IS(Mf)16	11:23	6.0	Surface	1	1	29.4	8.0	26.5	5.8	5.8	4.9	6.3	3.4	3.7
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	IS(Mf)16	11:23	6.0	Surface	1	2	29.6	8.0	26.3	5.8		5.0		2.3	
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	IS(Mf)16	11:23	6.0	Middle	2	1	29.3	8.0	26.8	5.8		5.7		3.1	
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	IS(Mf)16	11:23	6.0	Middle	2	2	29.5	8.0	26.5	5.8		5.6		4.0	
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	IS(Mf)16	11:23	6.0	Bottom	3	1	29.2	8.0	27.0	5.8	5.9	7.9	5.9	4.3	
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	IS(Mf)16	11:23	6.0	Bottom	3	2	29.4	8.0	26.7	5.9		8.4		5.0	
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	SR4a	11:33	5.0	Surface	1	1	29.4	8.0	26.5	5.8	5.9	7.2	8.0	6.4	6.2
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	SR4a	11:33	5.0	Surface	1	2	29.6	8.0	26.2	5.9		7.3		5.8	
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	SR4a		5.0	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	SR4a		5.0	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	SR4a	11:33	5.0	Bottom	3	1	29.4	8.0	26.6	5.8	5.8	8.6	5.8	6.0	
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	SR4a	11:33	5.0	Bottom	3	2	29.6	8.0	26.3	5.8		8.7		6.6	
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	SR4	11:37	3.6	Surface	1	1	29.5	8.0	26.6	5.9	5.9	4.9	5.4	3.9	4.6
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	SR4	11:37	3.6	Surface	1	2	29.7	8.0	26.3	5.9		5.0		4.4	
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	SR4		3.6	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	SR4		3.6	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	SR4	11:37	3.6	Bottom	3	1	29.4	8.0	26.7	5.8	5.8	5.8	5.8	4.9	
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	SR4	11:37	3.6	Bottom	3	2	29.7	8.0	26.4	5.8		5.8		5.0	
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	IS8	11:50	3.7	Surface	1	1	29.6	8.0	26.4	6.0	6.0	4.9	8.7	2.9	3.8
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	IS8	11:50	3.7	Surface	1	2	29.8	8.0	26.1	6.0		4.7		3.8	
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	IS8		3.7	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	IS8		3.7	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	IS8	11:50	3.7	Bottom	3	1	29.3	8.0	26.8	5.8	5.8	12.6	5.8	4.4	
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	IS8	11:50	3.7	Bottom	3	2	29.6	8.0	26.5	5.8		12.6		4.0	
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	IS(Mf)9	12:01	3.4	Surface	1	1	29.4	8.0	27.1	5.9	5.9	7.0	7.1	7.6	7.0
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	IS(Mf)9	12:01	3.4	Surface	1	2	29.6	8.0	26.8	5.9		6.8		7.1	
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	IS(Mf)9		3.4	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	IS(Mf)9		3.4	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	IS(Mf)9	12:01	3.4	Bottom	3	1	29.3	8.0	27.2	5.9	5.9	7.2	5.9	6.8	
TMCLKL	HY/2012/07	2017-10-11	Mid-Flood	IS(Mf)9	12:01	3.4	Bottom	3	2	29.5	8.0	26.9	5.9		7.2		6.3	

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Depth (m)	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	CS(Mf)5	5:44	12.6	Surface	1	1	28.8	8.0	27.4	5.8	5.6	2.1	2.6	1.7	1.6
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	CS(Mf)5	5:44	12.6	Surface	1	2	29.1	8.1	27.2	5.8		2.1		1.2	
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	CS(Mf)5	5:44	12.6	Middle	2	1	29.3	8.0	28.7	5.3	2.8	1.6			
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	CS(Mf)5	5:44	12.6	Middle	2	2	29.5	8.1	28.4	5.4	2.8	1.7			
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	CS(Mf)5	5:44	12.6	Bottom	3	1	29.1	8.0	30.4	5.3	5.3	3.0		1.3	
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	CS(Mf)5	5:44	12.6	Bottom	3	2	29.4	8.1	30.1	5.3		2.9		1.8	
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	CS(Mf)3(N)	6:51	6.9	Surface	1	1	29.0	7.9	25.4	6.3	6.3	4.0	4.6	3.0	3.3
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	CS(Mf)3(N)	6:51	6.9	Surface	1	2	28.8	7.9	25.5	6.3		3.6		2.7	
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	CS(Mf)3(N)	6:51	6.9	Middle	2	1	29.0	7.9	26.0	6.3	4.0	2.9			
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	CS(Mf)3(N)	6:51	6.9	Middle	2	2	28.8	7.9	25.5	6.3	3.9	3.5			
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	CS(Mf)3(N)	6:51	6.9	Bottom	3	1	29.2	7.9	27.2	6.0	6.0	6.5		4.1	
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	CS(Mf)3(N)	6:51	6.9	Bottom	3	2	28.9	8.0	27.3	6.0		5.6		3.7	
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	IS(Mf)16	6:13	4.9	Surface	1	1	28.7	8.0	26.2	5.9	6.0	4.7	5.3	4.5	4.2
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	IS(Mf)16	6:13	4.9	Surface	1	2	29.0	8.0	26.0	6.0		4.7		4.9	
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	IS(Mf)16		4.9	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	IS(Mf)16		4.9	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	IS(Mf)16	6:13	4.9	Bottom	3	1	28.9	8.0	26.7	5.8	5.9	5.9		3.5	
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	IS(Mf)16	6:13	4.9	Bottom	3	2	29.2	8.0	26.4	5.9		5.8		3.8	
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	SR4a	6:22	5.1	Surface	1	1	28.8	8.0	25.9	6.0	5.9	4.0	6.2	3.2	3.0
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	SR4a	6:22	5.1	Surface	1	2	29.0	8.0	25.6	5.8		3.8		2.8	
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	SR4a		5.1	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	SR4a		5.1	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	SR4a	6:22	5.1	Bottom	3	1	29.5	8.0	26.9	5.5	5.5	8.5		2.6	
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	SR4a	6:22	5.1	Bottom	3	2	29.8	8.0	26.6	5.5		8.5		3.3	
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	SR4	6:27	4.3	Surface	1	1	28.9	8.0	26.0	5.6	5.6	4.6	5.4	3.6	3.8
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	SR4	6:27	4.3	Surface	1	2	29.2	8.0	25.8	5.6		4.9		2.6	
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	SR4		4.3	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	SR4		4.3	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	SR4	6:27	4.3	Bottom	3	1	29.4	7.9	26.5	5.5	5.5	6.0		4.2	
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	SR4	6:27	4.3	Bottom	3	2	29.6	8.0	26.2	5.5		6.0		4.6	
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	IS8	6:39	3.8	Surface	1	1	28.8	8.0	25.9	5.9	6.0	4.8	6.5	2.7	3.5
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	IS8	6:39	3.8	Surface	1	2	29.0	8.0	25.7	6.0		4.8		3.7	
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	IS8		3.8	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	IS8		3.8	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	IS8	6:39	3.8	Bottom	3	1	29.4	8.0	26.9	5.9	5.9	8.3		3.7	
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	IS8	6:39	3.8	Bottom	3	2	29.7	8.0	26.6	5.9		8.2		3.9	
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	IS(Mf)9	6:47	3.7	Surface	1	1	28.8	8.0	26.5	6.0	6.0	6.5	6.4	5.2	5.4
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	IS(Mf)9	6:47	3.7	Surface	1	2	29.1	8.0	26.3	6.0		6.3		3.8	
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	IS(Mf)9		3.7	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	IS(Mf)9		3.7	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	IS(Mf)9	6:47	3.7	Bottom	3	1	28.8	8.0	26.6	6.0	6.0	6.4		6.1	
TMCLKL	HY/2012/07	2017-10-13	Mid-Ebb	IS(Mf)9	6:47	3.7	Bottom	3	2	29.1	8.0	26.3	6.0		6.4		6.4	

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Depth (m)	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	CS(Mf)5	14:53	12.3	Surface	1	1	29.0	8.0	28.3	5.8	5.6	2.3	6.9	1.9	1.9
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	CS(Mf)5	14:53	12.3	Surface	1	2	29.3	8.0	28.0	5.8		2.1		1.8	
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	CS(Mf)5	14:53	12.3	Middle	2	1	29.0	8.0	30.5	5.3		6.5		1.8	
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	CS(Mf)5	14:53	12.3	Middle	2	2	29.3	8.0	30.2	5.3		6.4		1.4	
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	CS(Mf)5	14:53	12.3	Bottom	3	1	29.0	8.0	30.6	5.4	5.4	12.0	5.1	2.3	4.5
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	CS(Mf)5	14:53	12.3	Bottom	3	2	29.3	8.0	30.3	5.3		12.0		2.2	
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	CS(Mf)3(N)	13:38	6.7	Surface	1	1	29.5	7.9	27.0	5.9	5.9	4.5	5.1	5.1	4.5
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	CS(Mf)3(N)	13:38	6.7	Surface	1	2	29.8	7.9	26.8	5.9		4.5		4.4	
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	CS(Mf)3(N)	13:38	6.7	Middle	2	1	29.5	7.9	27.0	5.9		4.8		3.9	
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	CS(Mf)3(N)	13:38	6.7	Middle	2	2	29.8	7.9	26.8	5.9		4.7		4.6	
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	CS(Mf)3(N)	13:38	6.7	Bottom	3	1	29.5	7.9	27.0	5.8	5.8	5.7	6.3	4.4	4.9
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	CS(Mf)3(N)	13:38	6.7	Bottom	3	2	29.7	7.9	26.8	5.8		6.3		4.5	
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	IS(Mf)16	14:23	5.6	Surface	1	1	29.2	8.0	26.9	6.2	6.2	5.3	6.3	5.1	4.9
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	IS(Mf)16	14:23	5.6	Surface	1	2	29.5	8.0	26.6	6.2		5.3		5.0	
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	IS(Mf)16		5.6	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	IS(Mf)16		5.6	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	IS(Mf)16	14:23	5.6	Bottom	3	1	29.1	8.0	27.3	5.9	5.9	7.3	8.5	5.0	7.5
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	IS(Mf)16	14:23	5.6	Bottom	3	2	29.4	8.0	27.1	5.9		7.2		4.6	
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	SR4a	14:10	3.4	Surface	1	1	29.2	8.0	26.6	6.2	6.2	8.2	11.3	7.9	8.8
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	SR4a	14:10	3.4	Surface	1	2	29.4	8.0	26.4	6.2		8.0		8.1	
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	SR4a		3.4	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	SR4a		3.4	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	SR4a	14:10	3.4	Bottom	3	1	29.2	8.0	26.6	6.3	6.3	8.8	9.5	7.2	5.6
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	SR4a	14:10	3.4	Bottom	3	2	29.4	8.0	26.4	6.2		8.8		6.7	
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	SR4	14:05	3.7	Surface	1	1	29.2	8.0	26.5	5.9	6.0	10.4	14.0	8.0	11.0
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	SR4	14:05	3.7	Surface	1	2	29.4	8.0	26.2	6.0		10.2		8.7	
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	SR4		3.7	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	SR4		3.7	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	SR4	14:05	3.7	Bottom	3	1	29.0	8.0	26.7	5.9	5.9	12.3	9.5	8.9	5.6
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	SR4	14:05	3.7	Bottom	3	2	29.3	8.0	26.4	5.9		12.3		9.7	
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	IS8	13:57	3.8	Surface	1	1	29.2	8.0	26.7	6.1	6.2	6.4	14.0	5.5	11.0
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	IS8	13:57	3.8	Surface	1	2	29.4	8.1	26.4	6.2		6.2		5.3	
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	IS8		3.8	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	IS8		3.8	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	IS8	13:57	3.8	Bottom	3	1	29.1	8.0	26.8	6.0	6.0	12.7	9.5	6.0	5.6
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	IS8	13:57	3.8	Bottom	3	2	29.4	8.0	26.5	6.0		12.8		5.6	
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	IS(Mf)9	13:47	3.2	Surface	1	1	29.3	8.0	26.5	6.1	6.2	9.8	14.0	10.3	11.0
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	IS(Mf)9	13:47	3.2	Surface	1	2	29.5	8.0	26.3	6.2		9.9		11.5	
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	IS(Mf)9		3.2	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	IS(Mf)9		3.2	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	IS(Mf)9	13:47	3.2	Bottom	3	1	29.1	8.0	26.9	5.9	5.9	18.1	14.0	11.7	11.0
TMCLKL	HY/2012/07	2017-10-13	Mid-Flood	IS(Mf)9	13:47	3.2	Bottom	3	2	29.4	8.0	26.7	5.9		18.1		10.3	

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Depth (m)	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	CS(Mf)5	9:41	10.5	Surface	1	1	27.9	8.1	32.4	5.8	5.8	4.0	4.3	3.6	4.4
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	CS(Mf)5	9:41	10.5	Surface	1	2	28.1	8.1	32.0	5.9		3.6		4.1	
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	CS(Mf)5	9:41	10.5	Middle	2	1	27.9	8.1	32.4	5.8	4.5	4.9			
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	CS(Mf)5	9:41	10.5	Middle	2	2	28.1	8.1	32.1	5.8	4.3	4.3			
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	CS(Mf)5	9:41	10.5	Bottom	3	1	27.9	8.1	32.4	5.8	5.8	4.8		5.1	
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	CS(Mf)5	9:41	10.5	Bottom	3	2	28.1	8.1	32.1	5.8		4.7		4.6	
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	CS(Mf)3(N)	11:01	7.4	Surface	1	1	27.4	8.0	31.9	6.3	6.3	9.1	9.5	7.7	8.5
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	CS(Mf)3(N)	11:01	7.4	Surface	1	2	27.1	8.0	31.8	6.3		8.1		8.2	
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	CS(Mf)3(N)	11:01	7.4	Middle	2	1	27.4	8.0	31.9	6.3	9.5	7.3			
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	CS(Mf)3(N)	11:01	7.4	Middle	2	2	27.1	8.0	31.8	6.3	9.0	7.3			
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	CS(Mf)3(N)	11:01	7.4	Bottom	3	1	27.3	8.0	32.0	6.3	6.3	11.4		10.0	
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	CS(Mf)3(N)	11:01	7.4	Bottom	3	2	27.1	8.0	31.9	6.3		9.8		10.4	
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	IS(Mf)16	10:14	6.1	Surface	1	1	27.3	8.1	30.4	5.9	5.9	5.5	5.9	6.0	5.4
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	IS(Mf)16	10:14	6.1	Surface	1	2	27.5	8.1	30.1	6.0		5.6		5.4	
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	IS(Mf)16	10:14	6.1	Middle	2	1	27.5	8.1	31.5	5.8	5.2	5.9			
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	IS(Mf)16	10:14	6.1	Middle	2	2	27.7	8.1	31.2	5.9	4.9	4.1			
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	IS(Mf)16	10:14	6.1	Bottom	3	1	27.6	8.1	31.9	5.8	5.8	6.9		5.4	
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	IS(Mf)16	10:14	6.1	Bottom	3	2	27.8	8.1	31.6	5.8		7.2		5.5	
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	SR4a	10:24	4.9	Surface	1	1	27.3	8.0	30.6	5.6	5.6	6.9	7.3	7.0	7.2
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	SR4a	10:24	4.9	Surface	1	2	27.5	8.1	30.3	5.6		7.2		6.2	
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	SR4a		4.9	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	SR4a		4.9	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	SR4a	10:24	4.9	Bottom	3	1	27.4	8.0	30.8	5.6	5.6	7.6		7.7	
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	SR4a	10:24	4.9	Bottom	3	2	27.6	8.1	30.5	5.6		7.6		7.7	
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	SR4	10:28	4.4	Surface	1	1	27.3	8.0	30.0	5.5	5.5	8.0	9.3	8.0	8.9
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	SR4	10:28	4.4	Surface	1	2	27.5	8.0	29.8	5.5		8.5		8.5	
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	SR4		4.4	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	SR4		4.4	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	SR4	10:28	4.4	Bottom	3	1	27.5	8.0	31.2	5.5	5.5	10.2		9.5	
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	SR4	10:28	4.4	Bottom	3	2	27.8	8.1	30.9	5.5		10.3		9.4	
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	IS8	10:40	3.9	Surface	1	1	27.2	8.0	29.8	5.9	6.0	9.6	10.4	5.9	6.5
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	IS8	10:40	3.9	Surface	1	2	27.4	8.1	29.5	6.0		9.0		6.3	
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	IS8		3.9	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	IS8		3.9	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	IS8	10:40	3.9	Bottom	3	1	27.2	8.0	29.9	6.0	6.0	11.1		7.1	
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	IS8	10:40	3.9	Bottom	3	2	27.4	8.1	29.6	6.0		12.0		6.6	
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	IS(Mf)9	10:49	3.6	Surface	1	1	27.0	8.0	29.4	6.0	6.0	8.5	11.0	10.0	11.2
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	IS(Mf)9	10:49	3.6	Surface	1	2	27.3	8.0	29.1	6.0		8.9		9.2	
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	IS(Mf)9		3.6	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	IS(Mf)9		3.6	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	IS(Mf)9	10:49	3.6	Bottom	3	1	27.0	8.0	29.4	6.0	6.0	12.7		12.2	
TMCLKL	HY/2012/07	2017-10-16	Mid-Ebb	IS(Mf)9	10:49	3.6	Bottom	3	2	27.3	8.0	29.2	6.0		13.7		13.4	

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Depth (m)	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	CS(Mf)5	17:26	10.0	Surface	1	1	27.9	8.1	32.4	5.7	5.8	10.6	14.0	11.4	12.3
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	CS(Mf)5	17:26	10.0	Surface	1	2	28.1	8.1	32.1	5.8		11.0		12.5	
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	CS(Mf)5	17:26	10.0	Middle	2	1	27.9	8.1	32.4	5.7	5.8	15.8		11.5	
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	CS(Mf)5	17:26	10.0	Middle	2	2	28.1	8.1	32.1	5.8		15.6		11.9	
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	CS(Mf)5	17:26	10.0	Bottom	3	1	27.9	8.1	32.4	5.7	5.8	14.9		13.3	
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	CS(Mf)5	17:26	10.0	Bottom	3	2	28.1	8.1	32.1	5.8		15.8		13.2	
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	CS(Mf)3(N)	16:12	7.3	Surface	1	1	27.5	8.0	31.3	6.2	6.3	18.0	19.7	13.3	17.1
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	CS(Mf)3(N)	16:12	7.3	Surface	1	2	27.3	8.0	31.4	6.3		16.9		13.5	
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	CS(Mf)3(N)	16:12	7.3	Middle	2	1	27.5	8.0	31.3	6.2	6.3	20.6		15.8	
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	CS(Mf)3(N)	16:12	7.3	Middle	2	2	27.3	8.0	31.5	6.3		19.4		16.5	
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	CS(Mf)3(N)	16:12	7.3	Bottom	3	1	27.5	8.0	31.3	6.2	6.3	23.4		21.0	
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	CS(Mf)3(N)	16:12	7.3	Bottom	3	2	27.2	8.0	31.5	6.3		19.9		22.3	
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	IS(Mf)16	16:54	5.9	Surface	1	1	27.4	8.1	31.7	5.9	6.0	9.8	10.6	11.2	11.0
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	IS(Mf)16	16:54	5.9	Surface	1	2	27.7	8.1	31.4	6.0		10.2		10.2	
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	IS(Mf)16		5.9	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	IS(Mf)16		5.9	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	IS(Mf)16	16:54	5.9	Bottom	3	1	27.5	8.1	31.8	5.9	5.9	11.1		11.0	
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	IS(Mf)16	16:54	5.9	Bottom	3	2	27.7	8.1	31.5	5.9		11.1		11.6	
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	SR4a	16:43	4.7	Surface	1	1	27.7	8.1	31.7	5.8	5.9	9.7	9.9	7.8	8.6
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	SR4a	16:43	4.7	Surface	1	2	28.0	8.1	31.4	5.9		9.8		7.8	
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	SR4a		4.7	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	SR4a		4.7	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	SR4a	16:43	4.7	Bottom	3	1	27.8	8.1	31.8	5.9	5.9	9.9		9.4	
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	SR4a	16:43	4.7	Bottom	3	2	28.0	8.1	31.5	5.9		10.0		9.2	
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	SR4	16:39	4.5	Surface	1	1	27.8	8.1	31.8	5.7	5.7	7.9	8.2	10.0	10.5
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	SR4	16:39	4.5	Surface	1	2	28.1	8.1	31.5	5.7		7.7		10.0	
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	SR4		4.5	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	SR4		4.5	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	SR4	16:39	4.5	Bottom	3	1	27.8	8.1	31.8	5.7	5.8	8.6		11.1	
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	SR4	16:39	4.5	Bottom	3	2	28.1	8.1	31.5	5.8		8.7		10.9	
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	IS8	16:30	3.8	Surface	1	1	27.7	8.1	31.8	5.9	6.0	13.2	13.6	12.0	13.5
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	IS8	16:30	3.8	Surface	1	2	27.9	8.1	31.5	6.0		13.3		11.0	
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	IS8		3.8	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	IS8		3.8	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	IS8	16:30	3.8	Bottom	3	1	27.7	8.1	31.8	5.9	6.0	14.3		15.4	
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	IS8	16:30	3.8	Bottom	3	2	27.9	8.1	31.5	6.0		13.7		15.7	
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	IS(Mf)9		2.9	Surface	1	1					5.9		6.5		4.3
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	IS(Mf)9		2.9	Surface	1	2									
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	IS(Mf)9	16:20	2.9	Middle	2	1	27.7	8.1	31.2	5.9	5.9	6.7		4.7	
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	IS(Mf)9	16:20	2.9	Middle	2	2	28.0	8.1	31.0	5.9		6.2		3.9	
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	IS(Mf)9		2.9	Bottom	3	1									
TMCLKL	HY/2012/07	2017-10-16	Mid-Flood	IS(Mf)9		2.9	Bottom	3	2									

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Depth (m)	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS	
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	CS(Mf)5	11:18	11.0	Surface	1	1	28.4	8.1	32.0	5.6	5.5	3.4	3.8	3.8	5.2	
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	CS(Mf)5	11:18	11.0	Surface	1	2	28.2	8.1	32.3	5.5		3.1				4.7
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	CS(Mf)5	11:18	11.0	Middle	2	1	28.1	8.1	32.1	5.5		4.1				5.5
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	CS(Mf)5	11:18	11.0	Middle	2	2	27.8	8.1	32.4	5.5		3.9				4.7
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	CS(Mf)5	11:18	11.0	Bottom	3	1	28.0	8.1	32.0	5.5	5.5	4.4	21.8	6.4	6.1	
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	CS(Mf)5	11:18	11.0	Bottom	3	2	27.8	8.1	32.4	5.5		4.0				6.1
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	CS(Mf)3(N)	12:33	7.1	Surface	1	1	27.4	8.0	31.6	6.3	6.3	9.6	6.0	8.9	11.5	
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	CS(Mf)3(N)	12:33	7.1	Surface	1	2	27.7	8.0	31.7	6.3		9.3				8.4
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	CS(Mf)3(N)	12:33	7.1	Middle	2	1	27.1	8.0	32.0	6.2		22.4				9.6
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	CS(Mf)3(N)	12:33	7.1	Middle	2	2	27.3	8.0	32.1	6.2	6.2	24.5	6.1	16.7	17.2	
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	CS(Mf)3(N)	12:33	7.1	Bottom	3	1	27.1	8.0	32.2	6.2		32.1				16.7
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	CS(Mf)3(N)	12:33	7.1	Bottom	3	2	27.3	8.0	32.3	6.2	5.9	32.8	6.0	6.1	6.9	
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	IS(Mf)16	11:49	6.4	Surface	1	1	27.6	8.1	31.1	5.9		5.2				6.1
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	IS(Mf)16	11:49	6.4	Surface	1	2	27.4	8.1	31.5	5.8		5.1				5.8
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	IS(Mf)16	11:49	6.4	Middle	2	1	27.5	8.1	31.4	5.9		6.7				5.8
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	IS(Mf)16	11:49	6.4	Middle	2	2	27.2	8.1	31.7	5.9	5.9	6.2	6.1	9.1	9.3	
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	IS(Mf)16	11:49	6.4	Bottom	3	1	27.5	8.1	31.5	5.9		6.2				9.1
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	IS(Mf)16	11:49	6.4	Bottom	3	2	27.2	8.1	31.8	5.8	5.7	6.4	6.1	6.3	6.7	
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	SR4a	12:00	4.8	Surface	1	1	27.7	8.1	30.6	5.7		5.7				7.0
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	SR4a	12:00	4.8	Surface	1	2	27.5	8.0	30.9	5.7		5.7				6.6
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	SR4a		4.8	Middle	2	1										
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	SR4a		4.8	Middle	2	2					5.7		6.9	6.9	7.2	
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	SR4a	12:00	4.8	Bottom	3	1	27.6	8.1	30.9	5.7		6.6				6.3
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	SR4a	12:00	4.8	Bottom	3	2	27.4	8.0	31.2	5.7	6.4	6.7				
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	SR4	12:04	4.6	Surface	1	1	27.6	8.1	31.0	5.7	5.7	7.0	6.9	6.9	7.6	
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	SR4	12:04	4.6	Surface	1	2	27.4	8.1	31.4	5.7		6.7				6.9
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	SR4		4.6	Middle	2	1										
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	SR4		4.6	Middle	2	2					5.7		10.0	5.9	5.5	
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	SR4	12:04	4.6	Bottom	3	1	27.6	8.1	31.1	5.7		7.0				7.6
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	SR4	12:04	4.6	Bottom	3	2	27.4	8.0	31.4	5.7	6.7	7.5				
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	IS8	12:17	3.8	Surface	1	1	27.6	8.1	30.4	5.9	5.9	4.9	6.9	4.6	5.5	
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	IS8	12:17	3.8	Surface	1	2	27.4	8.0	30.7	5.9		5.0				5.5
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	IS8		3.8	Middle	2	1										
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	IS8		3.8	Middle	2	2										
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	IS8	12:17	3.8	Bottom	3	1	27.5	8.1	31.1	5.7	5.7	14.7	5.1	5.9	5.8	
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	IS8	12:17	3.8	Bottom	3	2	27.3	8.1	31.4	5.7		15.2				5.8
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	IS(Mf)9	12:26	4.1	Surface	1	1	27.4	8.1	30.3	6.0	6.0	4.2	5.1	4.6	5.2	
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	IS(Mf)9	12:26	4.1	Surface	1	2	27.2	8.0	30.6	5.9		3.9				4.0
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	IS(Mf)9		4.1	Middle	2	1										
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	IS(Mf)9		4.1	Middle	2	2					5.8		5.1	6.7	5.5	
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	IS(Mf)9	12:26	4.1	Bottom	3	1	27.4	8.1	30.8	5.8		6.1				6.7
TMCLKL	HY/2012/07	2017-10-18	Mid-Ebb	IS(Mf)9	12:26	4.1	Bottom	3	2	27.2	8.0	31.1	5.8	6.1	6.1				

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Depth (m)	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	CS(Mf)5	18:23	10.5	Surface	1	1	28.0	8.1	32.0	5.6	5.6	14.5	13.2	12.7	19.9
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	CS(Mf)5	18:23	10.5	Surface	1	2	27.8	8.1	32.3	5.6		14.1		12.9	
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	CS(Mf)5	18:23	10.5	Middle	2	1	28.0	8.1	32.0	5.6	13.5	21.2			
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	CS(Mf)5	18:23	10.5	Middle	2	2	27.8	8.1	32.3	5.6	12.5	22.9			
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	CS(Mf)5	18:23	10.5	Bottom	3	1	28.0	8.1	32.0	5.6	12.0	25.3			
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	CS(Mf)5	18:23	10.5	Bottom	3	2	27.8	8.1	32.3	5.6	12.4	24.2			
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	CS(Mf)3(N)	16:55	7.0	Surface	1	1	27.5	8.0	31.1	6.2	6.2	7.4	11.6	9.2	11.6
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	CS(Mf)3(N)	16:55	7.0	Surface	1	2	27.8	7.9	31.2	6.2		7.4		9.4	
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	CS(Mf)3(N)	16:55	7.0	Middle	2	1	27.5	8.0	31.2	6.2	12.4	9.6			
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	CS(Mf)3(N)	16:55	7.0	Middle	2	2	27.8	7.9	31.2	6.1	12.6	8.1			
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	CS(Mf)3(N)	16:55	7.0	Bottom	3	1	27.4	8.0	31.2	6.1	14.1	17.2			
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	CS(Mf)3(N)	16:55	7.0	Bottom	3	2	27.7	7.9	31.3	6.1	15.6	15.8			
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	IS(Mf)16	17:50	5.8	Surface	1	1	27.8	8.1	31.5	5.8	5.8	12.6	12.5	13.9	14.9
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	IS(Mf)16	17:50	5.8	Surface	1	2	27.6	8.1	31.8	5.8		12.0		14.2	
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	IS(Mf)16		5.8	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	IS(Mf)16		5.8	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	IS(Mf)16	17:50	5.8	Bottom	3	1	27.8	8.1	31.5	5.8	12.7	15.3			
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	IS(Mf)16	17:50	5.8	Bottom	3	2	27.6	8.1	31.8	5.8	12.5	16.0			
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	SR4a	17:38	4.8	Surface	1	1	28.1	8.1	31.4	5.9	5.9	9.9	10.1	9.1	11.3
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	SR4a	17:38	4.8	Surface	1	2	27.9	8.1	31.7	5.9		9.8		10.8	
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	SR4a		4.8	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	SR4a		4.8	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	SR4a	17:38	4.8	Bottom	3	1	28.1	8.1	31.4	5.9	11.0	12.8			
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	SR4a	17:38	4.8	Bottom	3	2	27.9	8.1	31.7	5.9	9.7	12.5			
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	SR4	17:33	4.2	Surface	1	1	28.3	8.1	31.0	6.0	6.0	11.7	13.9	13.0	14.6
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	SR4	17:33	4.2	Surface	1	2	28.0	8.1	31.3	6.0		11.6		14.6	
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	SR4		4.2	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	SR4		4.2	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	SR4	17:33	4.2	Bottom	3	1	28.1	8.1	31.0	6.0	16.6	15.4			
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	SR4	17:33	4.2	Bottom	3	2	27.9	8.1	31.3	5.9	15.6	15.4			
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	IS8	17:24	3.5	Surface	1	1	28.1	8.1	30.9	6.2	6.2	9.3	10.4	8.7	10.7
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	IS8	17:24	3.5	Surface	1	2	27.9	8.1	31.2	6.2		8.8		8.5	
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	IS8		3.5	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	IS8		3.5	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	IS8	17:24	3.5	Bottom	3	1	28.0	8.1	30.9	6.1	11.8	12.8			
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	IS8	17:24	3.5	Bottom	3	2	27.8	8.1	31.2	6.1	11.7	12.8			
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	IS(Mf)9	17:15	3.2	Surface	1	1	27.6	8.1	31.1	5.9	5.9	9.7	11.5	7.7	9.1
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	IS(Mf)9	17:15	3.2	Surface	1	2	27.4	8.1	31.4	5.9		9.5		7.6	
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	IS(Mf)9		3.2	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	IS(Mf)9		3.2	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	IS(Mf)9	17:15	3.2	Bottom	3	1	27.6	8.1	31.2	5.9	13.7	10.0			
TMCLKL	HY/2012/07	2017-10-18	Mid-Flood	IS(Mf)9	17:15	3.2	Bottom	3	2	27.3	8.1	31.5	5.8	13.2	11.1			

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Depth (m)	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	CS(Mf)5	13:11	9.5	Surface	1	1	27.7	8.1	32.3	5.5	5.5	3.7	5.6	6.7	7.5
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	CS(Mf)5	13:11	9.5	Surface	1	2	28.0	8.0	32.0	5.6		4.3		7.2	
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	CS(Mf)5	13:11	9.5	Middle	2	1	27.5	8.1	32.3	5.4	5.2	6.7			
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	CS(Mf)5	13:11	9.5	Middle	2	2	27.8	8.0	32.0	5.5	5.8	6.3			
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	CS(Mf)5	13:11	9.5	Bottom	3	1	27.5	8.1	32.3	5.4	7.0	9.2			
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	CS(Mf)5	13:11	9.5	Bottom	3	2	27.7	8.0	32.0	5.5	7.8	8.7			
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	CS(Mf)3(N)	11:57	6.9	Surface	1	1	26.8	8.0	32.1	6.3	6.3	16.7	23.4	18.9	21.1
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	CS(Mf)3(N)	11:57	6.9	Surface	1	2	27.0	8.0	32.2	6.3		17.3		19.8	
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	CS(Mf)3(N)	11:57	6.9	Middle	2	1	26.7	8.0	32.1	6.3	19.7	20.5			
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	CS(Mf)3(N)	11:57	6.9	Middle	2	2	26.9	8.0	32.2	6.3	19.5	21.1			
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	CS(Mf)3(N)	11:57	6.9	Bottom	3	1	26.7	8.0	32.2	6.2	32.3	22.6			
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	CS(Mf)3(N)	11:57	6.9	Bottom	3	2	26.9	8.0	32.3	6.3	34.9	23.8			
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	IS(Mf)16	12:44	6.4	Surface	1	1	27.2	8.1	32.0	5.8	5.8	6.3	9.5	9.3	9.4
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	IS(Mf)16	12:44	6.4	Surface	1	2	27.4	8.1	31.7	5.9		7.1		9.5	
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	IS(Mf)16	12:44	6.4	Middle	2	1	27.1	8.1	32.1	5.7	7.8	8.9			
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	IS(Mf)16	12:44	6.4	Middle	2	2	27.3	8.1	31.8	5.8	8.8	8.6			
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	IS(Mf)16	12:44	6.4	Bottom	3	1	27.1	8.1	32.1	5.7	12.8	10.0			
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	IS(Mf)16	12:44	6.4	Bottom	3	2	27.3	8.1	31.8	5.7	14.4	9.8			
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	SR4a	12:32	5.2	Surface	1	1	27.1	8.1	31.7	6.0	6.1	4.5	5.4	8.2	7.6
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	SR4a	12:32	5.2	Surface	1	2	27.4	8.1	31.4	6.1		5.1		7.4	
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	SR4a		5.2	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	SR4a		5.2	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	SR4a	12:32	5.2	Bottom	3	1	27.0	8.1	31.9	6.0	5.8	7.1			
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	SR4a	12:32	5.2	Bottom	3	2	27.2	8.1	31.6	6.0	6.3	7.8			
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	SR4	12:28	4.1	Surface	1	1	27.2	8.1	31.7	5.8	5.9	6.3	7.9	8.5	8.1
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	SR4	12:28	4.1	Surface	1	2	27.5	8.0	31.3	5.9		6.0		7.2	
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	SR4		4.1	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	SR4		4.1	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	SR4	12:28	4.1	Bottom	3	1	27.0	8.1	32.0	5.8	9.2	8.5			
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	SR4	12:28	4.1	Bottom	3	2	27.2	8.1	31.7	5.8	10.2	8.3			
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	IS8	12:19	4.5	Surface	1	1	27.1	8.1	31.6	6.0	6.0	5.8	10.0	7.0	9.2
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	IS8	12:19	4.5	Surface	1	2	27.3	8.1	31.4	6.0		6.2		7.2	
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	IS8		4.5	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	IS8		4.5	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	IS8	12:19	4.5	Bottom	3	1	27.0	8.1	32.0	5.8	13.4	11.5			
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	IS8	12:19	4.5	Bottom	3	2	27.2	8.1	31.7	5.8	14.7	10.9			
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	IS(Mf)9	12:09	4.0	Surface	1	1	27.0	8.1	31.7	6.0	6.1	4.9	5.6	10.3	10.4
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	IS(Mf)9	12:09	4.0	Surface	1	2	27.2	8.1	31.4	6.1		5.5		10.5	
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	IS(Mf)9		4.0	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	IS(Mf)9		4.0	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	IS(Mf)9	12:09	4.0	Bottom	3	1	27.0	8.1	31.9	6.0	5.8	10.9			
TMCLKL	HY/2012/07	2017-10-20	Mid-Ebb	IS(Mf)9	12:09	4.0	Bottom	3	2	27.2	8.1	31.6	6.1	6.1	10.0			

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Depth (m)	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	CS(Mf)5	6:30	9.0	Surface	1	1	27.2	8.1	32.2	5.6	5.6	9.2	10.9	11.6	13.7
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	CS(Mf)5	6:30	9.0	Surface	1	2	27.4	8.1	31.9	5.6		9.7		11.9	
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	CS(Mf)5	6:30	9.0	Middle	2	1	27.2	8.1	32.2	5.6	11.1	12.7			
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	CS(Mf)5	6:30	9.0	Middle	2	2	27.5	8.1	31.9	5.6	11.7	14.2			
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	CS(Mf)5	6:30	9.0	Bottom	3	1	27.2	8.1	32.2	5.6	11.3	15.1			
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	CS(Mf)5	6:30	9.0	Bottom	3	2	27.5	8.1	31.9	5.6	12.1	16.4			
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	CS(Mf)3(N)	7:47	7.0	Surface	1	1	27.0	8.0	31.8	6.2	6.2	20.2	26.2	26.6	26.6
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	CS(Mf)3(N)	7:47	7.0	Surface	1	2	26.7	8.0	31.7	6.2		23.3		25.0	
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	CS(Mf)3(N)	7:47	7.0	Middle	2	1	27.0	8.0	31.7	6.1	24.5	24.6			
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	CS(Mf)3(N)	7:47	7.0	Middle	2	2	26.7	8.0	31.7	6.1	24.9	25.3			
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	CS(Mf)3(N)	7:47	7.0	Bottom	3	1	27.0	8.0	31.7	6.1	33.4	28.6			
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	CS(Mf)3(N)	7:47	7.0	Bottom	3	2	26.8	8.0	31.7	6.1	30.7	29.2			
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	IS(Mf)16	6:58	5.8	Surface	1	1	27.0	8.1	32.0	5.7	5.8	13.7	15.6	19.2	20.8
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	IS(Mf)16	6:58	5.8	Surface	1	2	27.3	8.1	31.7	5.8		14.6		17.6	
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	IS(Mf)16		5.8	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	IS(Mf)16		5.8	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	IS(Mf)16	6:58	5.8	Bottom	3	1	27.1	8.1	32.0	5.7	16.9	23.8			
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	IS(Mf)16	6:58	5.8	Bottom	3	2	27.3	8.1	31.7	5.8	17.3	22.7			
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	SR4a	7:06	4.8	Surface	1	1	26.9	8.1	32.0	5.7	5.7	9.7	10.4	14.0	14.8
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	SR4a	7:06	4.8	Surface	1	2	27.1	8.1	31.7	5.7		10.5		15.8	
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	SR4a		4.8	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	SR4a		4.8	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	SR4a	7:06	4.8	Bottom	3	1	27.0	8.1	32.1	5.7	10.4	14.8			
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	SR4a	7:06	4.8	Bottom	3	2	27.2	8.1	31.8	5.8	10.9	14.7			
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	SR4	7:11	3.6	Surface	1	1	26.8	8.1	31.9	5.7	5.7	9.0	11.6	10.1	11.9
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	SR4	7:11	3.6	Surface	1	2	27.0	8.1	31.6	5.7		9.9		8.9	
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	SR4		3.6	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	SR4		3.6	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	SR4	7:11	3.6	Bottom	3	1	26.9	8.1	32.0	5.7	13.5	14.6			
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	SR4	7:11	3.6	Bottom	3	2	27.1	8.1	31.7	5.8	14.1	14.0			
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	IS8	7:21	3.6	Surface	1	1	27.0	8.1	32.1	5.7	5.8	13.3	13.9	15.6	17.3
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	IS8	7:21	3.6	Surface	1	2	27.2	8.1	31.8	5.8		13.7		15.8	
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	IS8		3.6	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	IS8		3.6	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	IS8	7:21	3.6	Bottom	3	1	27.0	8.1	32.1	5.7	14.1	18.3			
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	IS8	7:21	3.6	Bottom	3	2	27.2	8.1	31.8	5.8	14.3	19.3			
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	IS(Mf)9	7:30	3.5	Surface	1	1	26.9	8.1	31.9	5.8	5.8	9.2	10.8	9.4	10.6
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	IS(Mf)9	7:30	3.5	Surface	1	2	27.1	8.1	31.6	5.8		9.9		8.8	
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	IS(Mf)9		3.5	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	IS(Mf)9		3.5	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	IS(Mf)9	7:30	3.5	Bottom	3	1	26.9	8.1	31.9	5.8	11.9	12.9			
TMCLKL	HY/2012/07	2017-10-20	Mid-Flood	IS(Mf)9	7:30	3.5	Bottom	3	2	27.1	8.1	31.6	5.8	12.3	11.3			

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Depth (m)	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	CS(Mf)5	15:11	13.9	Surface	1	1	27.2	7.8	32.2	5.7	5.6	3.5	4.4	4.7	4.8
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	CS(Mf)5	15:11	13.9	Surface	1	2	27.0	8.0	32.5	5.7		3.3		3.8	
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	CS(Mf)5	15:11	13.9	Middle	2	1	27.0	7.8	32.3	5.5	3.5	3.7			
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	CS(Mf)5	15:11	13.9	Middle	2	2	26.8	8.0	32.6	5.5	3.1	3.7			
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	CS(Mf)5	15:11	13.9	Bottom	3	1	27.0	7.8	32.3	5.5	7.0	6.8			
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	CS(Mf)5	15:11	13.9	Bottom	3	2	26.8	8.0	32.6	5.6	6.2	6.2			
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	CS(Mf)3(N)	13:41	7.1	Surface	1	1	26.1	8.1	32.3	6.5	6.5	8.9	9.8	10.7	10.1
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	CS(Mf)3(N)	13:41	7.1	Surface	1	2	26.3	8.1	32.3	6.5		9.6		10.0	
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	CS(Mf)3(N)	13:41	7.1	Middle	2	1	26.0	8.1	32.4	6.5	9.6	9.9			
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	CS(Mf)3(N)	13:41	7.1	Middle	2	2	26.2	8.1	32.3	6.5	10.1	9.0			
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	CS(Mf)3(N)	13:41	7.1	Bottom	3	1	25.9	8.1	32.5	6.5	9.8	10.0			
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	CS(Mf)3(N)	13:41	7.1	Bottom	3	2	26.1	8.0	32.4	6.5	10.5	10.8			
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	IS(Mf)16	14:38	7.1	Surface	1	1	27.2	7.9	32.1	6.2	6.2	4.6	5.9	5.2	5.3
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	IS(Mf)16	14:38	7.1	Surface	1	2	26.9	8.0	32.4	6.2		4.0		4.2	
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	IS(Mf)16	14:38	7.1	Middle	2	1	26.9	7.9	32.1	6.1	4.4	5.2			
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	IS(Mf)16	14:38	7.1	Middle	2	2	26.7	8.0	32.4	6.1	3.9	4.9			
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	IS(Mf)16	14:38	7.1	Bottom	3	1	26.5	7.9	32.1	5.9	9.4	6.5			
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	IS(Mf)16	14:38	7.1	Bottom	3	2	26.3	8.0	32.4	5.9	8.9	6.0			
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	SR4a	14:25	5.9	Surface	1	1	27.1	7.9	31.9	6.3	6.4	6.4	6.5	5.3	5.9
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	SR4a	14:25	5.9	Surface	1	2	26.9	8.0	32.2	6.4		5.6		4.8	
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	SR4a		5.9	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	SR4a		5.9	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	SR4a	14:25	5.9	Bottom	3	1	26.9	7.9	32.0	6.2	7.3	7.2			
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	SR4a	14:25	5.9	Bottom	3	2	26.7	8.0	32.3	6.3	6.8	6.1			
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	SR4	14:20	4.5	Surface	1	1	26.9	7.9	31.9	6.1	6.2	7.9	8.8	6.0	7.9
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	SR4	14:20	4.5	Surface	1	2	26.7	8.0	32.2	6.2		7.1		6.8	
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	SR4		4.5	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	SR4		4.5	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	SR4	14:20	4.5	Bottom	3	1	26.7	7.9	32.0	6.0	10.3	9.5			
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	SR4	14:20	4.5	Bottom	3	2	26.5	8.0	32.3	6.1	9.8	9.2			
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	IS8	14:10	4.9	Surface	1	1	26.6	7.9	31.8	6.5	6.5	16.5	16.1	16.5	16.0
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	IS8	14:10	4.9	Surface	1	2	26.4	8.0	32.1	6.5		19.6		15.5	
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	IS8		4.9	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	IS8		4.9	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	IS8	14:10	4.9	Bottom	3	1	26.4	7.9	31.9	6.0	14.6	15.4			
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	IS8	14:10	4.9	Bottom	3	2	26.1	8.0	32.2	6.1	13.5	16.7			
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	IS(Mf)9	13:57	4.4	Surface	1	1	27.1	7.9	31.9	6.7	6.7	4.5	5.3	5.0	5.6
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	IS(Mf)9	13:57	4.4	Surface	1	2	26.8	8.0	32.2	6.7		4.0		5.1	
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	IS(Mf)9		4.4	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	IS(Mf)9		4.4	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	IS(Mf)9	13:57	4.4	Bottom	3	1	26.4	7.9	31.9	6.4	6.7	6.8			
TMCLKL	HY/2012/07	2017-10-23	Mid-Ebb	IS(Mf)9	13:57	4.4	Bottom	3	2	26.2	8.0	32.2	6.4	6.1	5.5			

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Depth (m)	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS	
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	CS(Mf)5	8:34	9.9	Surface	1	1	26.8	8.1	32.2	5.7	5.7	7.7	10.5	6.6	7.3	
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	CS(Mf)5	8:34	9.9	Surface	1	2	26.6	8.1	32.4	5.7		6.8		6.8		
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	CS(Mf)5	8:34	9.9	Middle	2	1	26.8	8.1	32.2	5.7	11.4	6.9				
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	CS(Mf)5	8:34	9.9	Middle	2	2	26.6	8.1	32.4	5.7	10.1	6.1				
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	CS(Mf)5	8:34	9.9	Bottom	3	1	26.8	8.1	32.2	5.7	13.8	8.1				
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	CS(Mf)5	8:34	9.9	Bottom	3	2	26.6	8.1	32.4	5.6	13.3	9.5				
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	CS(Mf)3(N)	9:30	7.5	Surface	1	1	26.0	8.0	32.1	6.2	6.2	12.1	16.9	11.5	13.4	
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	CS(Mf)3(N)	9:30	7.5	Surface	1	2	26.3	8.0	32.1	6.2		12.7		10.6		
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	CS(Mf)3(N)	9:30	7.5	Middle	2	1	26.0	8.0	32.1	6.2	13.7	12.2				
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	CS(Mf)3(N)	9:30	7.5	Middle	2	2	26.3	8.0	32.1	6.2	14.4	13.3				
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	CS(Mf)3(N)	9:30	7.5	Bottom	3	1	26.0	8.0	32.1	6.2	23.8	15.5				
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	CS(Mf)3(N)	9:30	7.5	Bottom	3	2	26.2	8.0	32.0	6.2	24.5	17.2				
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	IS(Mf)16	9:02	5.7	Surface	1	1	26.7	8.1	32.1	5.9	5.9	7.1	7.7	9.6	9.2	
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	IS(Mf)16	9:02	5.7	Surface	1	2	26.5	8.1	32.4	5.8		6.5		9.2		
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	IS(Mf)16		5.7	Middle	2	1										
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	IS(Mf)16		5.7	Middle	2	2										
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	IS(Mf)16	9:02	5.7	Bottom	3	1	26.5	8.1	32.1	5.9	5.9	9.1		8.7		
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	IS(Mf)16	9:02	5.7	Bottom	3	2	26.3	8.1	32.4	5.8	5.9	8.2		9.4		
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	SR4a	9:10	4.7	Surface	1	1	26.4	8.1	32.0	5.9	5.9	18.0	16.7	22.9	22.5	
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	SR4a	9:10	4.7	Surface	1	2	26.2	8.1	32.3	5.9		16.9		22.0		
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	SR4a		4.7	Middle	2	1										
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	SR4a		4.7	Middle	2	2										
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	SR4a	9:10	4.7	Bottom	3	1	26.4	8.1	32.0	5.9	5.9	15.9		22.6		
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	SR4a	9:10	4.7	Bottom	3	2	26.2	8.1	32.3	5.9	5.9	16.0		22.4		
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	SR4	9:15	4.1	Surface	1	1	26.3	8.1	32.0	5.9	5.9	9.5	10.0	10.5	10.8	
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	SR4	9:15	4.1	Surface	1	2	26.1	8.1	32.3	5.9		9.1		11.5		
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	SR4		4.1	Middle	2	1										
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	SR4		4.1	Middle	2	2										
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	SR4	9:15	4.1	Bottom	3	1	26.3	8.1	32.0	5.9	5.9	10.9		10.4		
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	SR4	9:15	4.1	Bottom	3	2	26.0	8.1	32.3	5.9	5.9	10.6		10.8		
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	IS8	9:26	4.1	Surface	1	1	26.3	8.1	31.9	6.1	6.1	7.8	8.3	6.6	7.7	
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	IS8	9:26	4.1	Surface	1	2	26.1	8.1	32.2	6.0		7.2		7.0		
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	IS8		4.1	Middle	2	1										
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	IS8		4.1	Middle	2	2										
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	IS8	9:26	4.1	Bottom	3	1	26.3	8.1	32.0	6.0	6.0	9.2		9.2		
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	IS8	9:26	4.1	Bottom	3	2	26.0	8.1	32.2	6.0	6.0	9.1		7.9		
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	IS(Mf)9	9:35	3.4	Surface	1	1	26.2	8.1	31.8	6.2	6.2	8.9	8.9	7.3	8.8	
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	IS(Mf)9	9:35	3.4	Surface	1	2	26.0	8.1	32.1	6.1		7.8		7.9		
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	IS(Mf)9		3.4	Middle	2	1										
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	IS(Mf)9		3.4	Middle	2	2										
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	IS(Mf)9	9:35	3.4	Bottom	3	1	26.2	8.1	31.8	6.2	6.2	9.7		9.5		
TMCLKL	HY/2012/07	2017-10-23	Mid-Flood	IS(Mf)9	9:35	3.4	Bottom	3	2	26.0	8.1	32.1	6.1	6.2	9.3		10.3		

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Depth (m)	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	CS(Mf)5	16:09	11.1	Surface	1	1	26.8	7.9	32.2	5.9	5.8	2.8	3.2	5.7	4.9
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	CS(Mf)5	16:09	11.1	Surface	1	2	26.6	8.0	32.5	5.9		2.6		4.3	
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	CS(Mf)5	16:09	11.1	Middle	2	1	26.8	7.8	32.3	5.6		3.4		4.7	
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	CS(Mf)5	16:09	11.1	Middle	2	2	26.6	8.0	32.5	5.7		3.3		4.6	
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	CS(Mf)5	16:09	11.1	Bottom	3	1	26.8	7.9	32.3	5.6	5.7	3.8	6.6	4.6	5.4
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	CS(Mf)5	16:09	11.1	Bottom	3	2	26.6	8.0	32.5	5.8		3.4		5.2	
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	CS(Mf)3(N)	14:56	7.0	Surface	1	1	26.4	8.0	30.5	6.6	6.6	5.4	6.6	4.9	5.4
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	CS(Mf)3(N)	14:56	7.0	Surface	1	2	26.2	8.0	30.6	6.6		5.2		3.9	
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	CS(Mf)3(N)	14:56	7.0	Middle	2	1	26.2	8.0	31.4	6.5		6.8		6.0	
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	CS(Mf)3(N)	14:56	7.0	Middle	2	2	26.0	8.0	31.5	6.5		7.1		6.2	
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	CS(Mf)3(N)	14:56	7.0	Bottom	3	1	26.2	8.0	31.7	6.5	6.5	7.3	6.6	5.7	3.8
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	CS(Mf)3(N)	14:56	7.0	Bottom	3	2	25.9	8.0	31.8	6.5		7.5		5.8	
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	IS(Mf)16	15:44	6.1	Surface	1	1	26.6	7.9	32.0	6.6	6.6	3.2	3.1	3.5	4.7
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	IS(Mf)16	15:44	6.1	Surface	1	2	26.4	8.0	32.3	6.6		3.0		2.4	
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	IS(Mf)16	15:44	6.1	Middle	2	1	26.6	7.9	32.0	6.6		3.3		4.7	
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	IS(Mf)16	15:44	6.1	Middle	2	2	26.4	8.0	32.3	6.6		2.9		4.7	
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	IS(Mf)16	15:44	6.1	Bottom	3	1	26.6	7.9	32.0	6.6	6.6	3.4	6.6	4.2	4.7
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	IS(Mf)16	15:44	6.1	Bottom	3	2	26.4	8.0	32.3	6.6		3.0		3.5	
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	SR4a	15:31	5.3	Surface	1	1	26.5	7.9	32.1	6.5	6.5	4.9	4.9	4.0	4.7
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	SR4a	15:31	5.3	Surface	1	2	26.3	8.0	32.3	6.5		4.7		4.7	
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	SR4a		5.3	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	SR4a		5.3	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	SR4a	15:31	5.3	Bottom	3	1	26.4	7.9	32.1	6.5	6.5	5.3	6.6	5.5	6.2
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	SR4a	15:31	5.3	Bottom	3	2	26.2	8.0	32.4	6.5		4.8		4.4	
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	SR4	15:26	5.0	Surface	1	1	26.6	7.9	32.0	6.8	6.8	6.9	8.2	5.8	8.2
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	SR4	15:26	5.0	Surface	1	2	26.4	8.0	32.3	6.8		6.6		4.5	
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	SR4		5.0	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	SR4		5.0	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	SR4	15:26	5.0	Bottom	3	1	26.4	7.9	32.1	6.4	6.5	10.1	6.6	7.4	8.2
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	SR4	15:26	5.0	Bottom	3	2	26.2	8.0	32.4	6.5		9.0		7.0	
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	IS8	15:15	4.2	Surface	1	1	26.7	8.0	32.0	7.7	7.7	7.5	10.6	8.2	8.2
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	IS8	15:15	4.2	Surface	1	2	26.5	8.1	32.2	7.7		7.4		8.5	
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	IS8		4.2	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	IS8		4.2	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	IS8	15:15	4.2	Bottom	3	1	26.6	8.0	32.0	7.2	7.3	14.0	6.6	8.3	8.6
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	IS8	15:15	4.2	Bottom	3	2	26.4	8.1	32.3	7.3		13.4		7.6	
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	IS(Mf)9	15:06	3.7	Surface	1	1	26.6	8.0	32.0	7.4	7.4	8.1	7.9	8.1	8.6
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	IS(Mf)9	15:06	3.7	Surface	1	2	26.4	8.1	32.3	7.4		7.5		8.1	
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	IS(Mf)9		3.7	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	IS(Mf)9		3.7	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	IS(Mf)9	15:06	3.7	Bottom	3	1	26.5	8.0	31.9	7.4	7.4	8.4	6.6	8.8	8.6
TMCLKL	HY/2012/07	2017-10-25	Mid-Ebb	IS(Mf)9	15:06	3.7	Bottom	3	2	26.3	8.1	32.3	7.4		7.7		9.5	

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Depth (m)	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	CS(Mf)5	9:57	10.9	Surface	1	1	26.5	7.9	32.1	5.8	5.8	6.9	10.8	7.8	9.6
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	CS(Mf)5	9:57	10.9	Surface	1	2	26.3	8.0	32.4	5.8		6.6		8.5	
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	CS(Mf)5	9:57	10.9	Middle	2	1	26.6	7.9	32.2	5.8	10.3	10.5			
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	CS(Mf)5	9:57	10.9	Middle	2	2	26.4	8.0	32.4	5.8	9.7	9.4			
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	CS(Mf)5	9:57	10.9	Bottom	3	1	26.6	7.9	32.2	5.7	16.2	10.6			
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	CS(Mf)5	9:57	10.9	Bottom	3	2	26.4	8.0	32.5	5.8	15.1	10.5			
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	CS(Mf)3(N)	10:50	7.3	Surface	1	1	26.2	7.9	30.0	6.4	6.4	4.8	5.6	3.0	18.8
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	CS(Mf)3(N)	10:50	7.3	Surface	1	2	26.0	8.0	30.1	6.4		4.6		4.0	
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	CS(Mf)3(N)	10:50	7.3	Middle	2	1	26.2	7.9	30.5	6.3	5.4	25.6			
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	CS(Mf)3(N)	10:50	7.3	Middle	2	2	25.9	8.0	30.6	6.3	6.2	25.9			
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	CS(Mf)3(N)	10:50	7.3	Bottom	3	1	26.2	7.9	30.6	6.3	6.1	26.4			
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	CS(Mf)3(N)	10:50	7.3	Bottom	3	2	25.9	8.0	30.8	6.3	6.2	27.8			
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	IS(Mf)16	10:24	5.7	Surface	1	1	26.3	7.9	32.1	6.2	6.2	14.6	15.1	18.7	17.8
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	IS(Mf)16	10:24	5.7	Surface	1	2	26.1	8.0	32.4	6.2		13.7		18.3	
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	IS(Mf)16		5.7	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	IS(Mf)16		5.7	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	IS(Mf)16	10:24	5.7	Bottom	3	1	26.2	7.9	32.1	6.1	6.2	16.6		17.0	
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	IS(Mf)16	10:24	5.7	Bottom	3	2	26.0	8.0	32.4	6.2	6.2	15.5		17.3	
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	SR4a	10:33	5.2	Surface	1	1	26.3	7.9	32.1	6.1	6.1	7.5	7.1	8.9	8.9
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	SR4a	10:33	5.2	Surface	1	2	26.1	8.0	32.4	6.1		6.9		8.6	
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	SR4a		5.2	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	SR4a		5.2	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	SR4a	10:33	5.2	Bottom	3	1	26.3	7.9	32.1	6.1	6.1	7.2		8.8	
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	SR4a	10:33	5.2	Bottom	3	2	26.1	8.0	32.4	6.1	6.1	6.8		9.2	
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	SR4	10:39	4.8	Surface	1	1	26.3	7.9	32.1	6.1	6.2	9.2	10.4	7.5	9.1
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	SR4	10:39	4.8	Surface	1	2	26.1	8.0	32.4	6.2		9.2		7.5	
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	SR4		4.8	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	SR4		4.8	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	SR4	10:39	4.8	Bottom	3	1	26.3	7.9	32.1	6.1	6.1	11.7		11.2	
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	SR4	10:39	4.8	Bottom	3	2	26.1	8.0	32.4	6.1	6.1	11.4		10.3	
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	IS8	10:53	3.6	Surface	1	1	26.4	7.9	32.0	6.4	6.4	16.7	18.5	15.7	15.2
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	IS8	10:53	3.6	Surface	1	2	26.2	8.0	32.3	6.4		16.6		14.8	
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	IS8		3.6	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	IS8		3.6	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	IS8	10:53	3.6	Bottom	3	1	26.3	7.9	32.1	6.3	6.4	20.6		15.2	
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	IS8	10:53	3.6	Bottom	3	2	26.1	8.0	32.3	6.4	6.4	20.0		15.1	
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	IS(Mf)9	11:02	3.4	Surface	1	1	25.9	7.9	31.9	6.8	6.9	10.6	10.4	10.3	10.2
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	IS(Mf)9	11:02	3.4	Surface	1	2	25.7	8.0	32.2	6.9		10.1		10.1	
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	IS(Mf)9		3.4	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	IS(Mf)9		3.4	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	IS(Mf)9	11:02	3.4	Bottom	3	1	25.9	7.9	31.9	6.8	6.9	10.7		10.0	
TMCLKL	HY/2012/07	2017-10-25	Mid-Flood	IS(Mf)9	11:02	3.4	Bottom	3	2	25.7	8.0	32.2	6.9	6.9	10.0		10.4	

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Depth (m)	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	CS(Mf)5	4:33	9.2	Surface	1	1	26.1	7.9	30.0	6.5	6.5	1.9	1.9	2.4	2.6
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	CS(Mf)5	4:33	9.2	Surface	1	2	25.9	8.0	30.2	6.5		1.6		2.2	
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	CS(Mf)5	4:33	9.2	Middle	2	1	26.3	8.0	31.2	6.4		2.0		2.6	
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	CS(Mf)5	4:33	9.2	Middle	2	2	26.1	8.0	31.4	6.4		1.8		2.2	
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	CS(Mf)5	4:33	9.2	Bottom	3	1	26.4	7.9	31.4	6.4	6.4	2.1	3.7	3.8	4.5
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	CS(Mf)5	4:33	9.2	Bottom	3	2	26.2	8.0	31.7	6.4		2.0		2.6	
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	CS(Mf)3(N)	5:32	7.0	Surface	1	1	25.8	8.0	28.4	6.7	6.7	2.7	3.7	3.1	4.5
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	CS(Mf)3(N)	5:32	7.0	Surface	1	2	25.6	8.0	28.4	6.7		2.9		3.3	
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	CS(Mf)3(N)	5:32	7.0	Middle	2	1	26.2	8.0	29.9	6.6		3.6		5.6	
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	CS(Mf)3(N)	5:32	7.0	Middle	2	2	25.9	8.0	29.9	6.6		3.8		4.1	
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	CS(Mf)3(N)	5:32	7.0	Bottom	3	1	26.2	8.0	31.1	6.6	6.6	4.4	6.6	5.6	4.4
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	CS(Mf)3(N)	5:32	7.0	Bottom	3	2	25.9	8.0	31.2	6.6		4.5		5.0	
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	IS(Mf)16	5:04	6.0	Surface	1	1	25.9	8.0	30.6	6.8	6.9	2.7	6.6	3.2	4.4
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	IS(Mf)16	5:04	6.0	Surface	1	2	25.7	8.0	30.9	6.9		2.7		3.1	
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	IS(Mf)16	5:04	6.0	Middle	2	1	26.2	8.0	31.4	6.9		7.2		3.7	
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	IS(Mf)16	5:04	6.0	Middle	2	2	26.0	8.0	31.6	7.0		6.5		3.7	
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	IS(Mf)16	5:04	6.0	Bottom	3	1	26.3	8.0	31.7	7.0	7.0	10.2	6.6	6.2	4.4
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	IS(Mf)16	5:04	6.0	Bottom	3	2	26.1	8.0	32.0	7.0		10.1		6.7	
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	SR4a	5:14	4.8	Surface	1	1	26.3	7.9	31.3	6.8	6.9	2.7	3.7	2.9	3.7
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	SR4a	5:14	4.8	Surface	1	2	26.1	8.0	31.6	6.9		2.6		3.0	
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	SR4a		4.8	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	SR4a		4.8	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	SR4a	5:14	4.8	Bottom	3	1	26.4	7.9	31.9	6.9	6.9	4.8	6.6	4.8	4.4
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	SR4a	5:14	4.8	Bottom	3	2	26.2	8.0	32.1	6.9		4.5		4.1	
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	SR4	5:19	3.8	Surface	1	1	26.3	7.9	31.7	7.0	7.0	5.1	4.9	4.4	5.4
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	SR4	5:19	3.8	Surface	1	2	26.1	8.0	31.9	7.0		4.9		5.3	
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	SR4		3.8	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	SR4		3.8	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	SR4	5:19	3.8	Bottom	3	1	26.3	7.9	31.8	7.0	7.1	4.9	6.6	6.8	4.4
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	SR4	5:19	3.8	Bottom	3	2	26.1	8.0	32.0	7.1		4.8		5.1	
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	IS8	5:30	3.9	Surface	1	1	26.2	8.0	31.8	7.4	7.4	5.5	5.5	2.8	4.8
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	IS8	5:30	3.9	Surface	1	2	26.0	8.1	32.0	7.4		4.9		2.5	
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	IS8		3.9	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	IS8		3.9	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	IS8	5:30	3.9	Bottom	3	1	26.3	8.0	31.9	7.4	7.4	5.8	6.6	7.3	4.4
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	IS8	5:30	3.9	Bottom	3	2	26.1	8.1	32.1	7.4		5.8		6.4	
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	IS(Mf)9	5:41	3.0	Surface	1	1	25.7	7.9	31.0	7.1	7.1	2.8	3.3	2.6	3.5
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	IS(Mf)9	5:41	3.0	Surface	1	2	25.5	8.1	31.2	7.1		3.1		3.9	
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	IS(Mf)9		3.0	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	IS(Mf)9		3.0	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	IS(Mf)9	5:41	3.0	Bottom	3	1	26.3	7.9	31.6	7.2	7.2	3.8	6.6	3.9	3.5
TMCLKL	HY/2012/07	2017-10-27	Mid-Ebb	IS(Mf)9	5:41	3.0	Bottom	3	2	26.1	8.1	31.9	7.2		3.3		3.6	

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Depth (m)	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	CS(Mf)5	17:20	10.7	Surface	1	1	26.4	8.0	31.5	6.3	6.0	1.9	2.2	1.8	1.8
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	CS(Mf)5	17:20	10.7	Surface	1	2	26.6	7.9	31.3	6.3		1.9		1.9	
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	CS(Mf)5	17:20	10.7	Middle	2	1	26.4	8.0	32.1	5.8		1.8		1.8	
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	CS(Mf)5	17:20	10.7	Middle	2	2	26.6	7.9	31.8	5.7		2.1		1.6	
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	CS(Mf)5	17:20	10.7	Bottom	3	1	26.4	8.0	32.1	5.8	5.8	2.6	5.2	1.9	3.3
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	CS(Mf)5	17:20	10.7	Bottom	3	2	26.6	7.9	31.8	5.8		2.7		1.9	
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	CS(Mf)3(N)	16:40	7.1	Surface	1	1	26.6	8.0	26.8	6.8	6.8	3.6	5.2	3.1	3.3
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	CS(Mf)3(N)	16:40	7.1	Surface	1	2	26.3	8.0	27.0	6.9		3.9		3.6	
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	CS(Mf)3(N)	16:40	7.1	Middle	2	1	26.4	7.9	28.9	6.7		5.6		3.0	
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	CS(Mf)3(N)	16:40	7.1	Middle	2	2	26.2	8.0	29.1	6.6		5.5		3.7	
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	CS(Mf)3(N)	16:40	7.1	Bottom	3	1	26.4	7.9	29.5	6.8	6.8	6.3	5.2	2.6	3.3
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	CS(Mf)3(N)	16:40	7.1	Bottom	3	2	26.1	8.0	29.7	6.8		6.4		3.7	
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	IS(Mf)16	16:53	5.8	Surface	1	1	26.2	8.1	30.5	7.5	7.5	2.8	4.1	1.8	2.5
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	IS(Mf)16	16:53	5.8	Surface	1	2	26.3	7.9	30.3	7.4		3.3		1.7	
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	IS(Mf)16		5.8	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	IS(Mf)16		5.8	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	IS(Mf)16	16:53	5.8	Bottom	3	1	26.1	8.0	31.2	6.6	6.6	5.0	5.2	3.1	2.9
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	IS(Mf)16	16:53	5.8	Bottom	3	2	26.3	7.9	30.9	6.6		5.4		3.4	
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	SR4a	16:40	5.3	Surface	1	1	26.2	8.1	30.4	7.3	7.3	6.6	6.8	3.2	4.6
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	SR4a	16:40	5.3	Surface	1	2	26.4	8.0	30.2	7.3		6.3		3.7	
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	SR4a		5.3	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	SR4a		5.3	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	SR4a	16:40	5.3	Bottom	3	1	26.2	8.0	30.7	7.1	7.1	6.8	5.4	6.3	2.9
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	SR4a	16:40	5.3	Bottom	3	2	26.4	8.0	30.6	7.1		7.5		5.2	
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	SR4	16:37	4.1	Surface	1	1	26.3	8.1	30.1	7.9	7.9	3.8	5.4	2.3	2.9
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	SR4	16:37	4.1	Surface	1	2	26.4	8.0	29.8	7.8		4.3		2.2	
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	SR4		4.1	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	SR4		4.1	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	SR4	16:37	4.1	Bottom	3	1	26.2	8.1	30.6	7.6	7.6	6.7	6.5	3.3	7.0
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	SR4	16:37	4.1	Bottom	3	2	26.4	8.0	30.4	7.6		6.9		3.8	
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	IS8	16:28	4.4	Surface	1	1	26.3	8.1	30.3	7.8	7.8	5.9	6.5	7.3	7.0
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	IS8	16:28	4.4	Surface	1	2	26.5	8.0	30.0	7.7		5.9		6.9	
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	IS8		4.4	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	IS8		4.4	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	IS8	16:28	4.4	Bottom	3	1	26.2	8.1	30.4	7.6	7.6	6.9	6.5	7.6	7.0
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	IS8	16:28	4.4	Bottom	3	2	26.4	8.0	30.1	7.6		7.2		6.0	
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	IS(Mf)9	16:18	3.7	Surface	1	1	26.3	8.1	30.6	8.0	8.0	3.7	3.8	3.0	4.2
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	IS(Mf)9	16:18	3.7	Surface	1	2	26.5	8.0	30.4	8.0		3.9		3.3	
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	IS(Mf)9		3.7	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	IS(Mf)9		3.7	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	IS(Mf)9	16:18	3.7	Bottom	3	1	26.7	8.1	31.6	8.0	8.0	3.6	3.8	5.5	4.2
TMCLKL	HY/2012/07	2017-10-27	Mid-Flood	IS(Mf)9	16:18	3.7	Bottom	3	2	26.9	8.0	31.4	8.0		3.9		5.1	

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Depth (m)	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	CS(Mf)5	8:05	11.5	Surface	1	1	26.1	8.0	32.6	5.7	5.7	2.0	2.1	3.1	3.2
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	CS(Mf)5	8:05	11.5	Surface	1	2	26.3	7.9	32.3	5.7		2.2		2.8	
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	CS(Mf)5	8:05	11.5	Middle	2	1	26.1	8.0	32.6	5.7		2.1		2.6	
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	CS(Mf)5	8:05	11.5	Middle	2	2	26.3	7.9	32.3	5.7		2.2		2.7	
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	CS(Mf)5	8:05	11.5	Bottom	3	1	26.1	8.0	32.6	5.7	5.7	2.1	6.5	4.4	7.7
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	CS(Mf)5	8:05	11.5	Bottom	3	2	26.3	7.9	32.3	5.6		2.2		3.8	
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	CS(Mf)3(N)	8:59	7.2	Surface	1	1	25.3	8.1	31.5	7.4	7.4	6.0	6.5	6.3	7.7
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	CS(Mf)3(N)	8:59	7.2	Surface	1	2	25.5	8.1	31.3	7.4		5.4		7.2	
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	CS(Mf)3(N)	8:59	7.2	Middle	2	1	25.3	8.1	31.6	7.3		6.3		8.5	
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	CS(Mf)3(N)	8:59	7.2	Middle	2	2	25.5	8.1	31.4	7.3	7.2	6.1	6.5	7.3	7.7
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	CS(Mf)3(N)	8:59	7.2	Bottom	3	1	25.3	8.1	31.9	7.2		7.7		8.9	
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	CS(Mf)3(N)	8:59	7.2	Bottom	3	2	25.6	8.1	31.8	7.2		7.4		8.0	
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	IS(Mf)16	8:33	6.3	Surface	1	1	25.1	8.2	31.0	7.8	7.7	4.8	5.0	5.6	6.6
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	IS(Mf)16	8:33	6.3	Surface	1	2	25.3	8.1	30.8	7.7		4.5		6.7	
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	IS(Mf)16	8:33	6.3	Middle	2	1	25.1	8.1	31.0	7.6		5.0		5.4	
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	IS(Mf)16	8:33	6.3	Middle	2	2	25.3	8.0	30.8	7.6		4.8		5.2	
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	IS(Mf)16	8:33	6.3	Bottom	3	1	25.2	8.1	31.1	7.5	7.5	5.8	6.5	8.4	7.0
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	IS(Mf)16	8:33	6.3	Bottom	3	2	25.4	8.0	30.8	7.4		5.3		8.5	
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	SR4a	8:42	5.3	Surface	1	1	25.1	8.2	30.5	8.3	8.3	4.6	4.5	5.6	7.0
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	SR4a	8:42	5.3	Surface	1	2	25.3	8.1	30.2	8.3		4.5		6.3	
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	SR4a		5.3	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	SR4a		5.3	Middle	2	2					8.2		6.5		7.0
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	SR4a	8:42	5.3	Bottom	3	1	25.2	8.2	30.5	8.2		4.6		8.8	
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	SR4a	8:42	5.3	Bottom	3	2	25.3	8.1	30.2	8.2		4.4	7.4		
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	SR4	8:47	5.4	Surface	1	1	24.9	8.1	30.1	7.6	7.7	4.5	7.1	5.0	6.1
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	SR4	8:47	5.4	Surface	1	2	25.1	8.0	29.8	7.7		4.4		4.6	
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	SR4		5.4	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	SR4		5.4	Middle	2	2					7.0		6.5		7.0
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	SR4	8:47	5.4	Bottom	3	1	25.6	8.1	30.9	6.8		9.8		7.4	
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	SR4	8:47	5.4	Bottom	3	2	25.7	8.0	30.7	7.1		9.6	7.4		
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	IS8	9:00	4.3	Surface	1	1	25.1	8.2	30.7	8.3	8.3	7.6	9.7	6.0	7.5
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	IS8	9:00	4.3	Surface	1	2	25.3	8.1	30.5	8.3		7.9		6.7	
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	IS8		4.3	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	IS8		4.3	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	IS8	9:00	4.3	Bottom	3	1	25.1	8.2	30.7	8.2	8.2	11.3	6.5	8.5	7.0
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	IS8	9:00	4.3	Bottom	3	2	25.3	8.1	30.5	8.2		11.8		8.6	
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	IS(Mf)9	9:09	4.2	Surface	1	1	25.1	8.2	30.6	8.9	8.9	6.6	6.3	8.7	9.0
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	IS(Mf)9	9:09	4.2	Surface	1	2	25.3	8.1	30.4	8.8		6.2		9.8	
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	IS(Mf)9		4.2	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	IS(Mf)9		4.2	Middle	2	2					8.8		6.3		9.0
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	IS(Mf)9	9:09	4.2	Bottom	3	1	25.1	8.2	30.6	8.8		5.9		8.0	
TMCLKL	HY/2012/07	2017-10-30	Mid-Ebb	IS(Mf)9	9:09	4.2	Bottom	3	2	25.3	8.1	30.4	8.8		6.3	9.5		

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Depth (m)	Level	Level Code	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	CS(Mf)5	16:23	10.6	Surface	1	1	26.3	7.9	32.3	6.0	6.0	3.2	3.1	2.6	3.4
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	CS(Mf)5	16:23	10.6	Surface	1	2	26.1	8.0	32.6	6.0		3.3		2.3	
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	CS(Mf)5	16:23	10.6	Middle	2	1	26.3	7.9	32.3	6.0		3.3		3.3	
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	CS(Mf)5	16:23	10.6	Middle	2	2	26.1	8.0	32.6	6.1		3.3		3.0	
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	CS(Mf)5	16:23	10.6	Bottom	3	1	26.4	7.9	32.3	6.1	6.1	2.9	3.3	4.8	3.4
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	CS(Mf)5	16:23	10.6	Bottom	3	2	26.2	8.0	32.6	6.1		2.8		4.2	
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	CS(Mf)3(N)	14:58	7.0	Surface	1	1	25.5	8.2	31.5	9.4	9.3	2.5	3.3	4.4	5.5
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	CS(Mf)3(N)	14:58	7.0	Surface	1	2	25.7	8.1	31.6	9.3		2.2		5.0	
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	CS(Mf)3(N)	14:58	7.0	Middle	2	1	25.5	8.2	31.5	9.2		3.1		5.3	
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	CS(Mf)3(N)	14:58	7.0	Middle	2	2	25.7	8.1	31.6	9.2		3.0		6.7	
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	CS(Mf)3(N)	14:58	7.0	Bottom	3	1	25.4	8.2	31.5	8.8	8.9	4.5	3.3	5.5	5.5
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	CS(Mf)3(N)	14:58	7.0	Bottom	3	2	25.7	8.1	31.6	8.9		4.3		5.9	
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	IS(Mf)16	15:51	5.7	Surface	1	1	25.7	8.3	30.7	11.0	11.1	3.8	5.0	6.5	6.5
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	IS(Mf)16	15:51	5.7	Surface	1	2	25.5	8.3	31.0	11.1		3.7		6.3	
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	IS(Mf)16		5.7	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	IS(Mf)16		5.7	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	IS(Mf)16	15:51	5.7	Bottom	3	1	26.1	8.0	31.7	7.8	7.9	6.4	5.0	6.0	6.5
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	IS(Mf)16	15:51	5.7	Bottom	3	2	25.9	8.1	31.9	8.0		6.0		7.2	
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	SR4a	15:38	4.7	Surface	1	1	25.9	8.0	31.3	7.7	7.7	12.9	13.0	13.4	16.8
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	SR4a	15:38	4.7	Surface	1	2	25.7	8.1	31.6	7.7		12.7		14.7	
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	SR4a		4.7	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	SR4a		4.7	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	SR4a	15:38	4.7	Bottom	3	1	25.9	8.0	31.3	7.7	7.7	13.4	13.0	19.4	10.9
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	SR4a	15:38	4.7	Bottom	3	2	25.7	8.1	31.6	7.7		13.0		19.5	
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	SR4	15:32	4.1	Surface	1	1	25.8	8.2	30.6	9.6	9.7	11.0	10.3	10.5	10.9
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	SR4	15:32	4.1	Surface	1	2	25.6	8.2	30.9	9.7		12.6		9.9	
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	SR4		4.1	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	SR4		4.1	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	SR4	15:32	4.1	Bottom	3	1	25.8	8.2	30.7	9.6	9.6	8.2	10.3	11.5	10.9
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	SR4	15:32	4.1	Bottom	3	2	25.6	8.2	30.9	9.6		9.3		11.5	
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	IS8	15:23	3.2	Surface	1	1	25.7	8.2	30.5	10.0	10.1	11.3	11.1	13.6	13.7
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	IS8	15:23	3.2	Surface	1	2	25.6	8.3	30.7	10.1		11.6		12.5	
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	IS8		3.2	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	IS8		3.2	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	IS8	15:23	3.2	Bottom	3	1	25.7	8.2	30.5	10.0	10.1	11.1	11.1	14.1	13.7
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	IS8	15:23	3.2	Bottom	3	2	25.6	8.3	30.7	10.1		10.5		14.7	
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	IS(Mf)9	15:14	3.1	Surface	1	1	25.7	8.2	30.5	10.2	10.3	6.9	7.5	10.0	11.2
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	IS(Mf)9	15:14	3.1	Surface	1	2	25.5	8.3	30.7	10.4		7.0		9.4	
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	IS(Mf)9		3.1	Middle	2	1									
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	IS(Mf)9		3.1	Middle	2	2									
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	IS(Mf)9	15:14	3.1	Bottom	3	1	25.7	8.2	30.5	9.9	10.1	7.8	7.5	12.2	11.2
TMCLKL	HY/2012/07	2017-10-30	Mid-Flood	IS(Mf)9	15:14	3.1	Bottom	3	2	25.5	8.3	30.7	10.2		8.1		13.1	

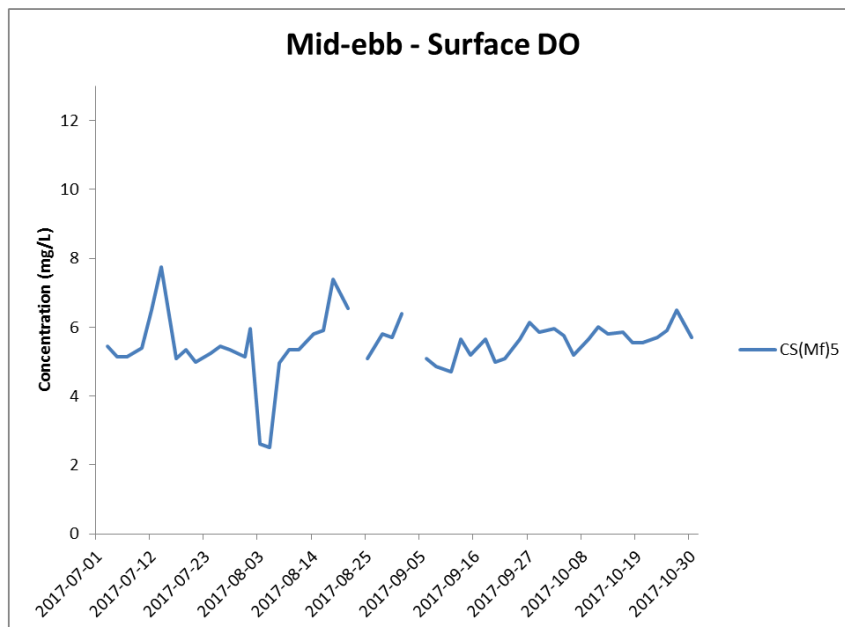
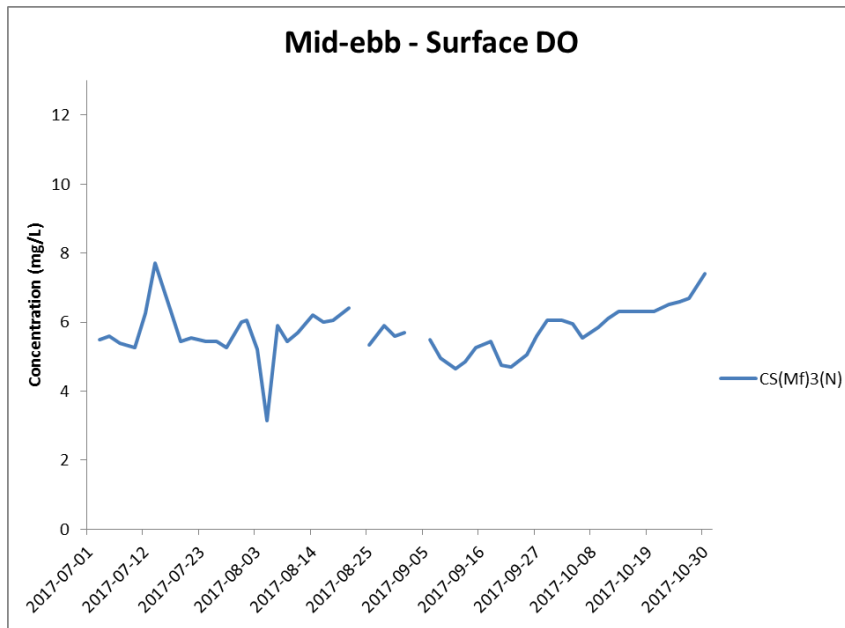


Figure J1 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-ebb tide between 1 July 2017 and 31 October 2017 at CS(Mf)3(N) and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period.) Results of WQM between 1 June 2017 and 31 July 2017 are sourced from the published EM&A data and published EM&A reports of Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities - Reclamation Works. In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 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.

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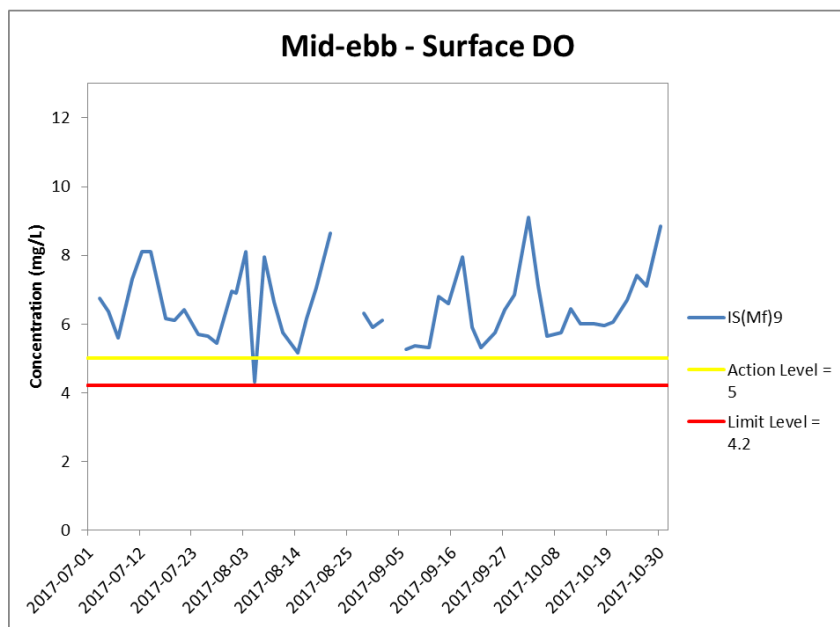
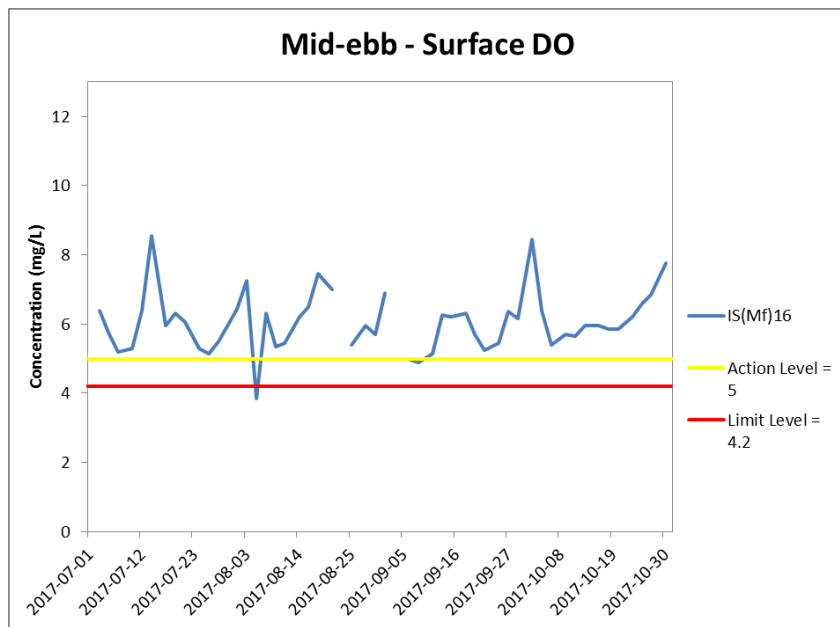


Figure J2 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-ebb tide between 1 July 2017 and 31 October 2017 at IS(Mf)16 and IS(Mf)9.

(Weather condition varied between sunny to rainy within the reporting period.)
 Results of WQM between 1 June 2017 and 31 July 2017 are sourced from the published EM&A data and published EM&A reports of Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities - Reclamation Works. In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 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.

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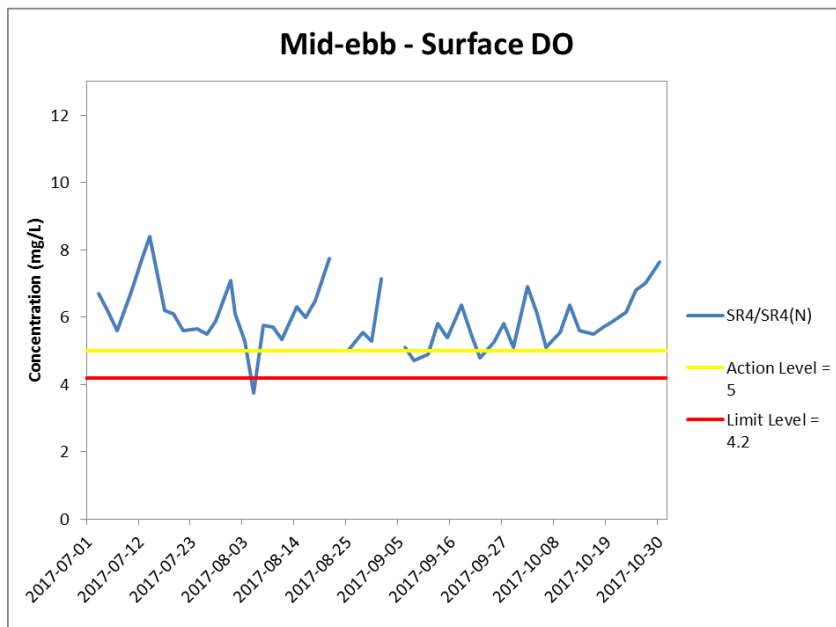
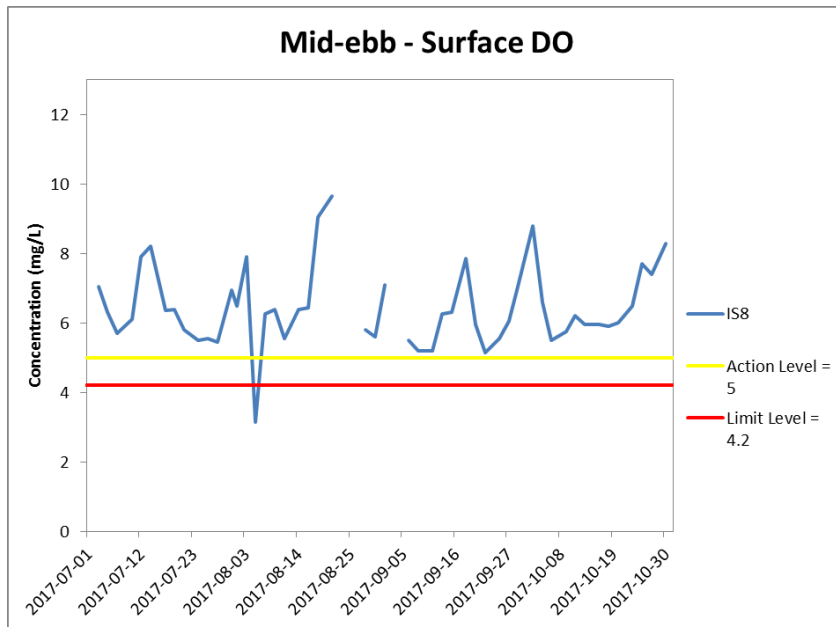


Figure J3 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-ebb tide between 1 July 2017 and 31 October 2017 at IS8 and SR4.

(Weather condition varied between sunny to rainy within the reporting period.)
 Results of WQM between 1 June 2017 and 31 July 2017 are sourced from the published EM&A data and published EM&A reports of Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities - Reclamation Works. In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 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.

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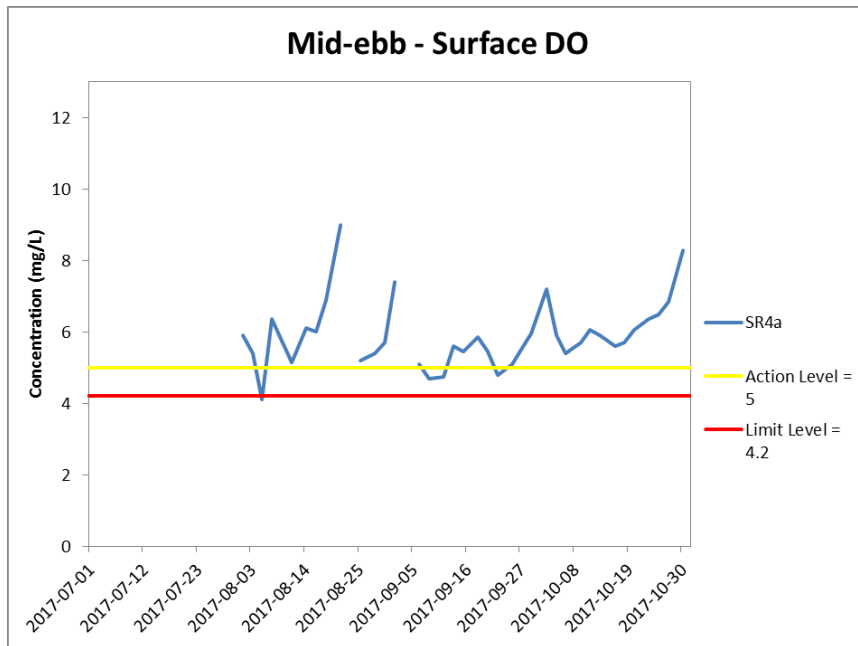


Figure J4 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-ebb tide between 1 July 2017 and 31 October 2017 at SR4a.

(Weather condition varied between sunny to rainy within the reporting period.) Station SR4a is not covered between 1 June 2017 and 31 July 2017 in the published EM&A data and published EM&A reports of Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Reclamation Works. In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 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.

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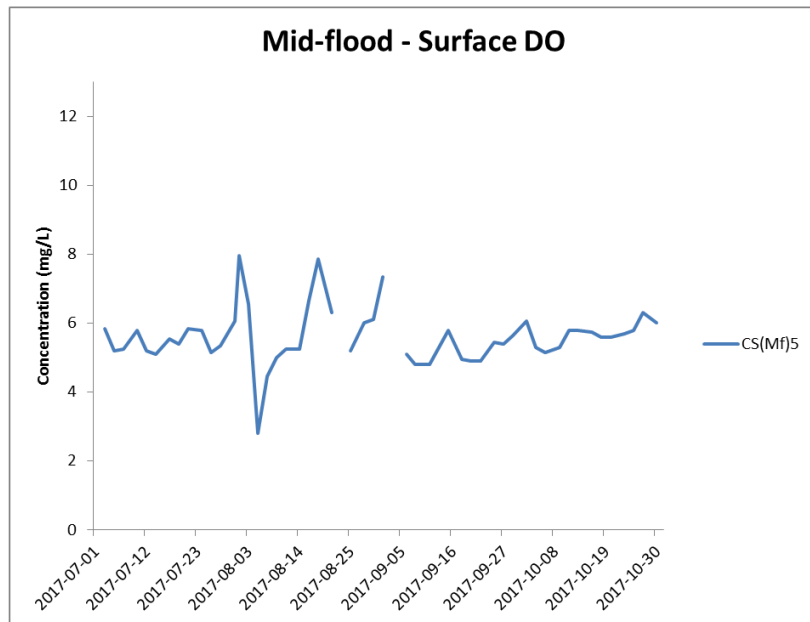
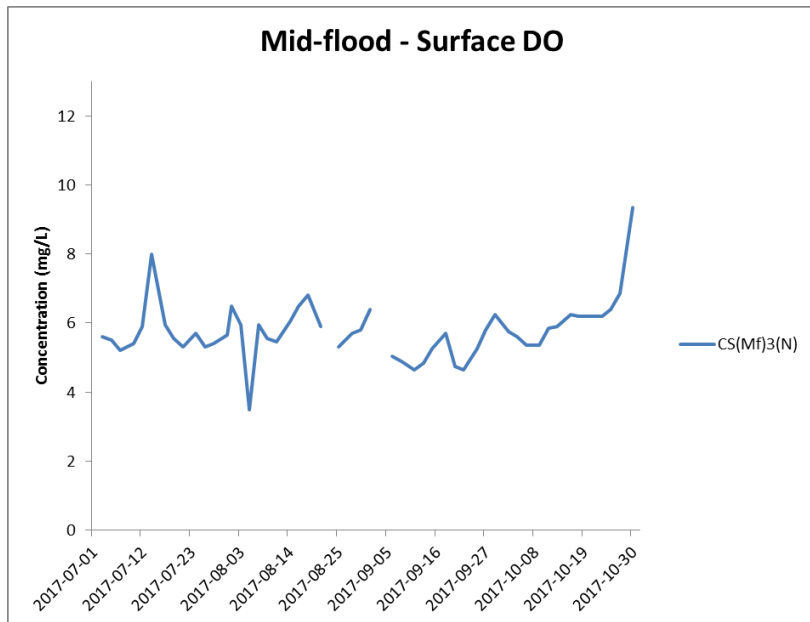


Figure J5 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-flood tide between 1 July 2017 and 31 October 2017 at CS(Mf)3(N) and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period.)
 Results of WQM between 1 June 2017 and 31 July 2017 are sourced from the published EM&A data and published EM&A reports of Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities - Reclamation Works. In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 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.

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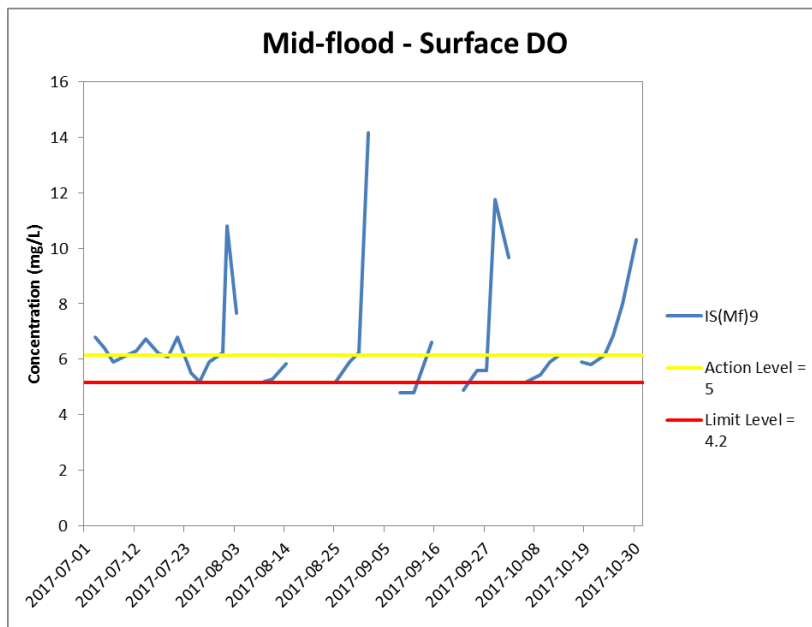
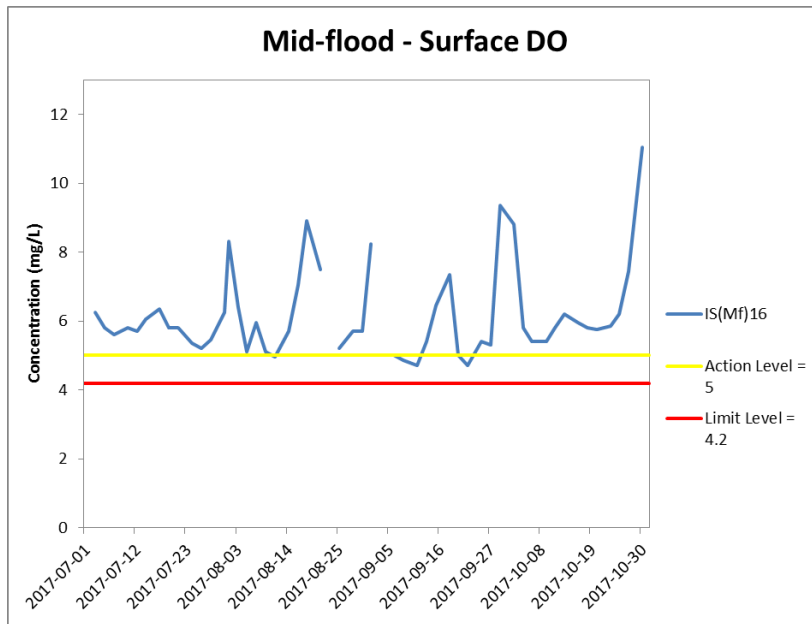


Figure J6 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-flood tide between 1 July 2017 and 31 October 2017 at IS(Mf)16 and IS(Mf)9.

(Weather condition varied between sunny to rainy within the reporting period.) Results of WQM between 1 June 2017 and 31 July 2017 are sourced from the published EM&A data and published EM&A reports of Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities - Reclamation Works. In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 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.

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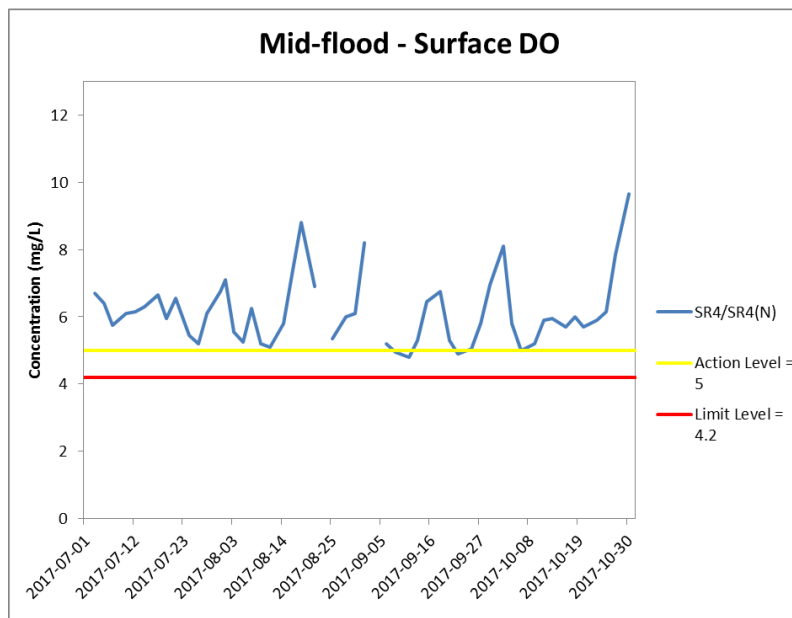
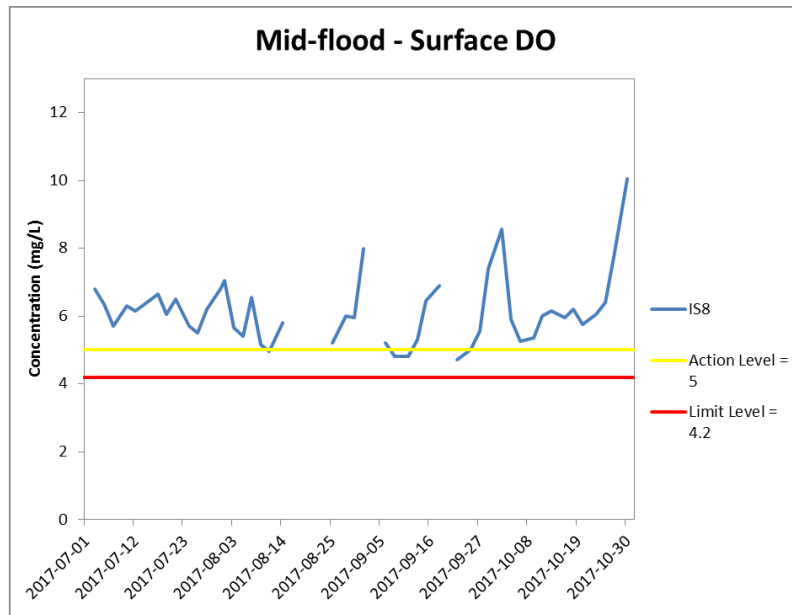


Figure J7 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-flood tide between 1 July 2017 and 31 October 2017 at IS8 and SR4.

(Weather condition varied between sunny to rainy within the reporting period.) Results of WQM between 1 June 2017 and 31 July 2017 are sourced from the published EM&A data and published EM&A reports of Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Reclamation Works. In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 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.

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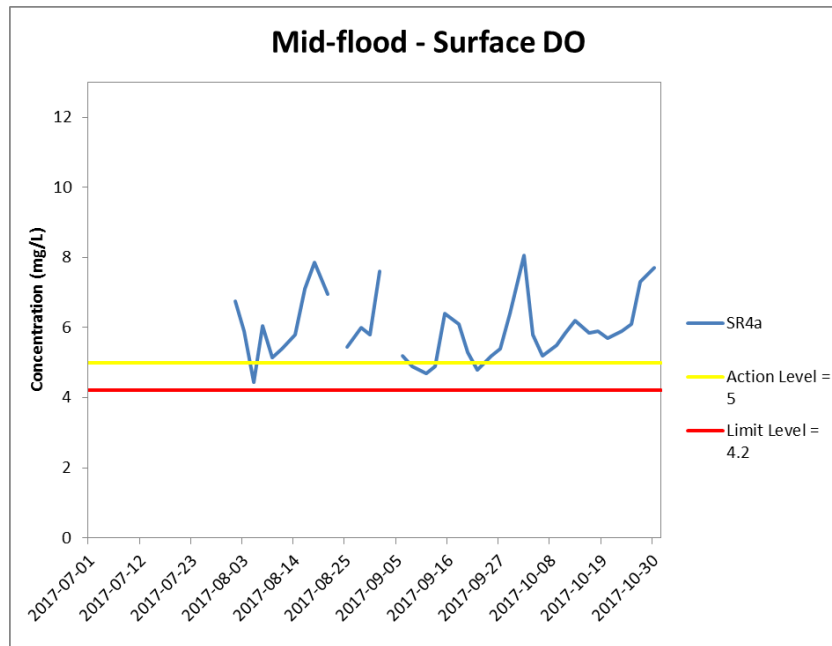


Figure J8 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in surface waters during mid-flood tide between 1 July 2017 and 31 October 2017 at SR4a.

(Weather condition varied between sunny to rainy within the reporting period.) Station SR4a is not covered between 1 June 2017 and 31 July 2017 in the published EM&A data and published EM&A reports of Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Reclamation Works. In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 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.

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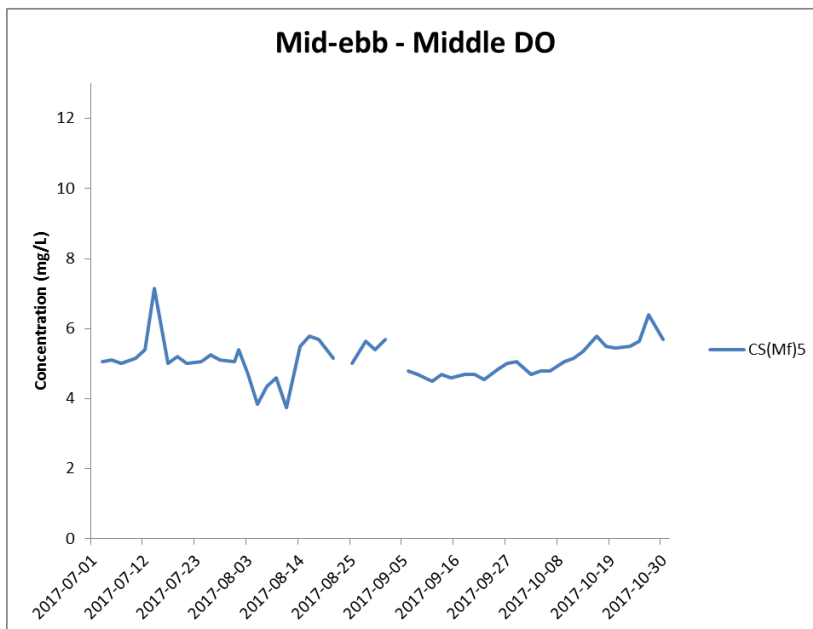
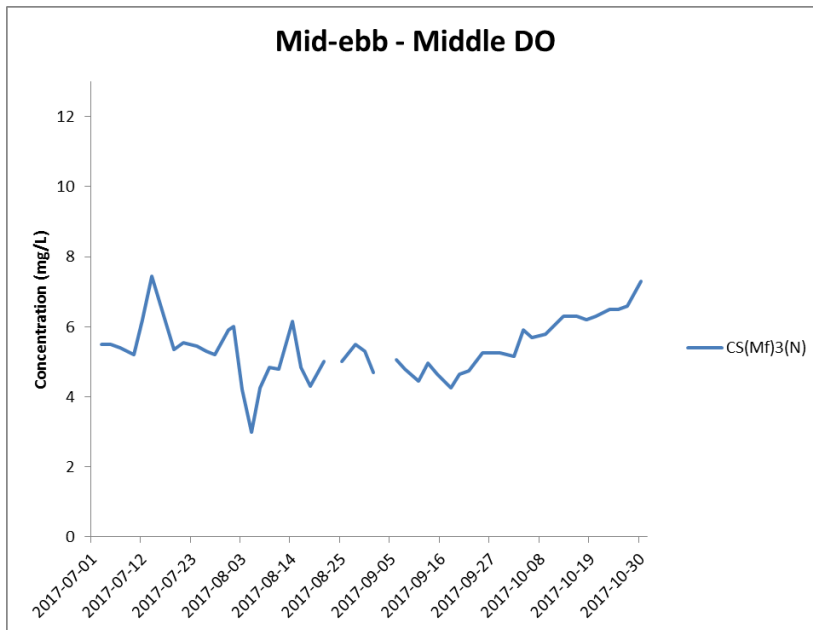


Figure J9 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters during mid-ebb tide between 1 July 2017 and 31 October 2017 at CS(Mf)3(N) and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period.) Results of WQM between 1 June 2017 and 31 July 2017 are sourced from the published EM&A data and published EM&A reports of Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities - Reclamation Works. In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 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.

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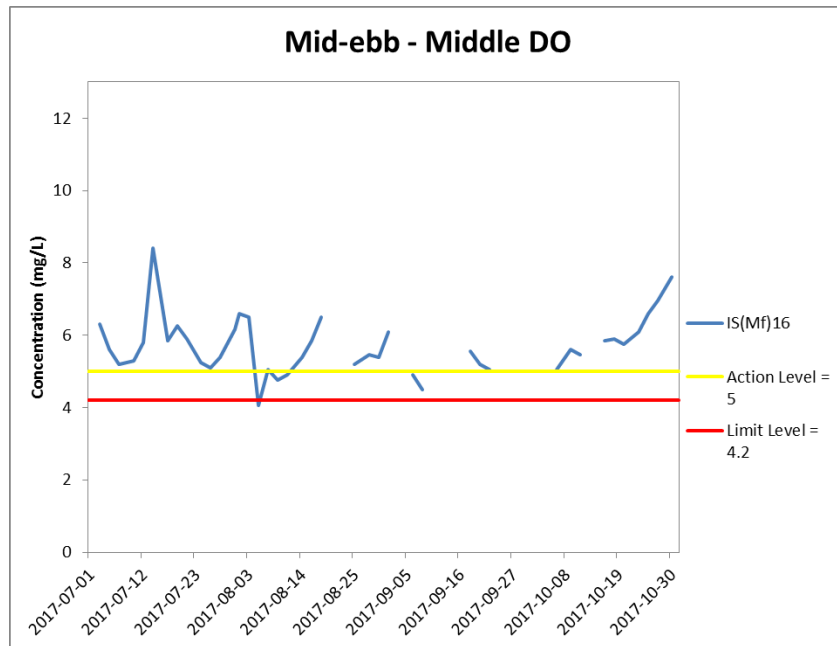


Figure J10 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters during mid-ebb tide between 1 July 2017 and 31 October 2017 at IS(Mf)16.

(Weather condition varied between sunny to rainy within the reporting period.) Results of WQM between 1 June 2017 and 31 July 2017 are sourced from the published EM&A data and published EM&A reports of Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Reclamation Works. In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 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.

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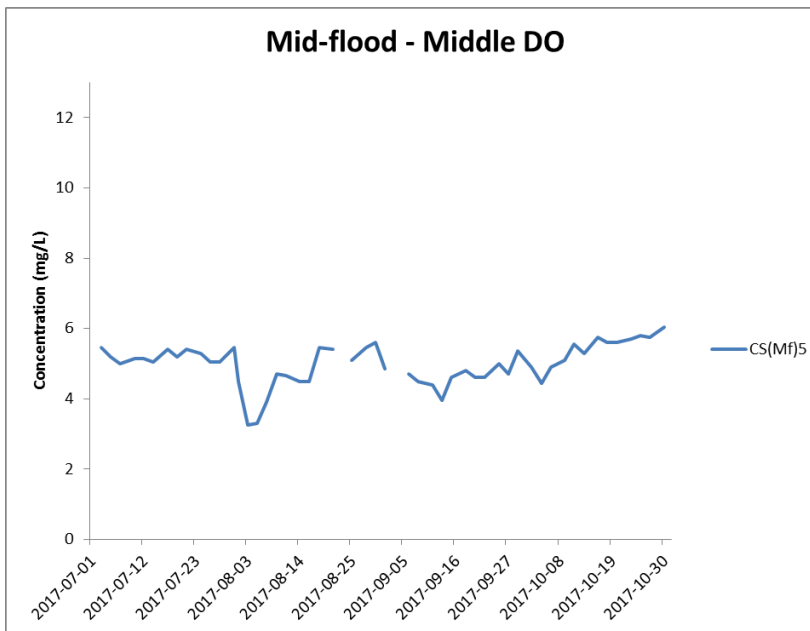
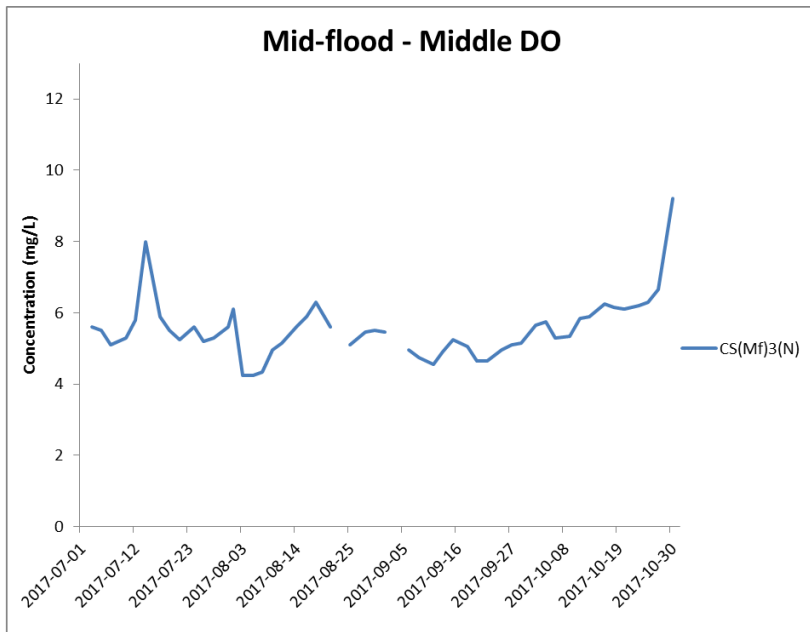


Figure J11 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters during mid-flood tide between 1 July 2017 and 31 October 2017 at CS(Mf)3(N) and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period.) Results of WQM between 1 June 2017 and 31 July 2017 are sourced from the published EM&A data and published EM&A reports of Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities - Reclamation Works. In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 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.

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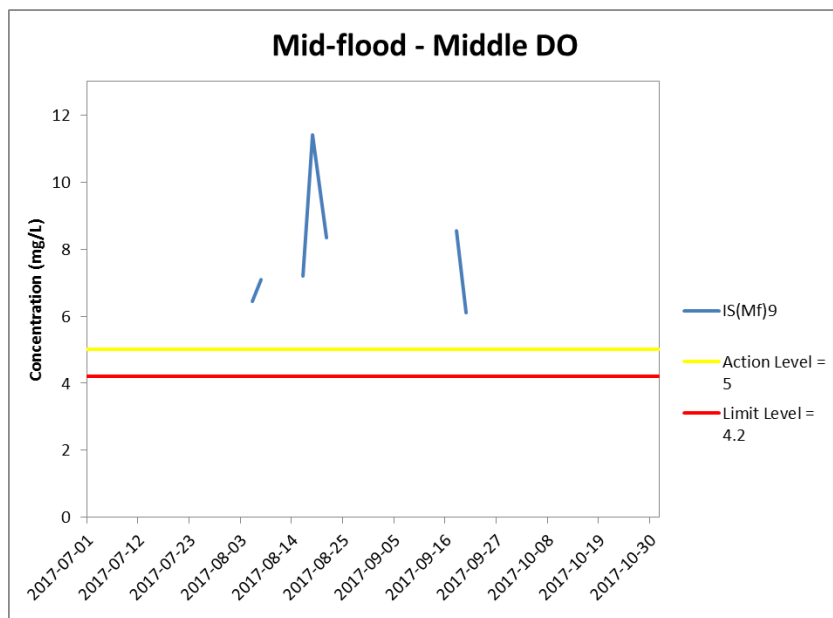
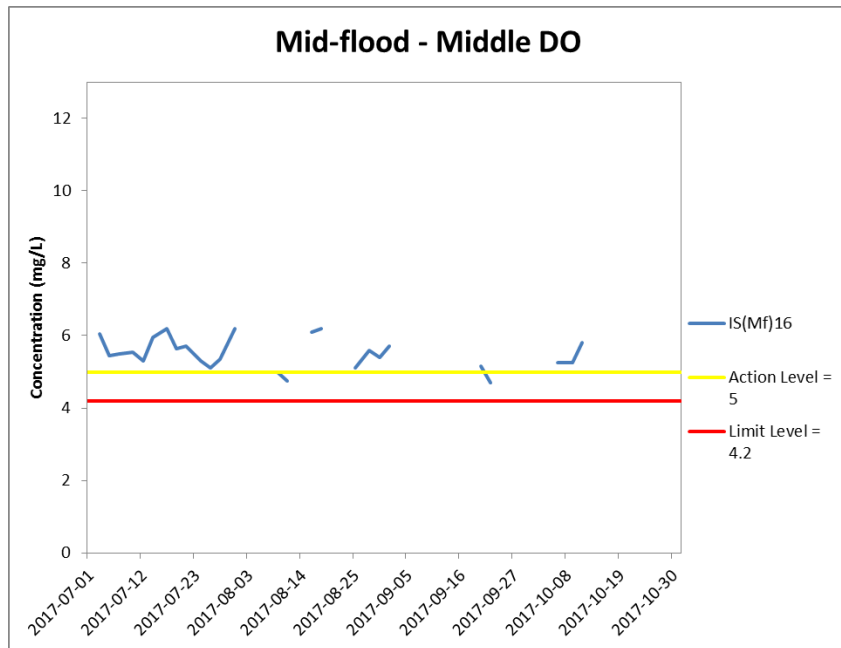


Figure J12 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in mid-depth waters during mid-flood tide between 1 July 2017 and 31 October 2017 at IS(Mf)16 and IS(Mf)9.

(Weather condition varied between sunny to rainy within the reporting period.) Results of WQM between 1 June 2017 and 31 July 2017 are sourced from the published EM&A data and published EM&A reports of Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Reclamation Works. In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 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.

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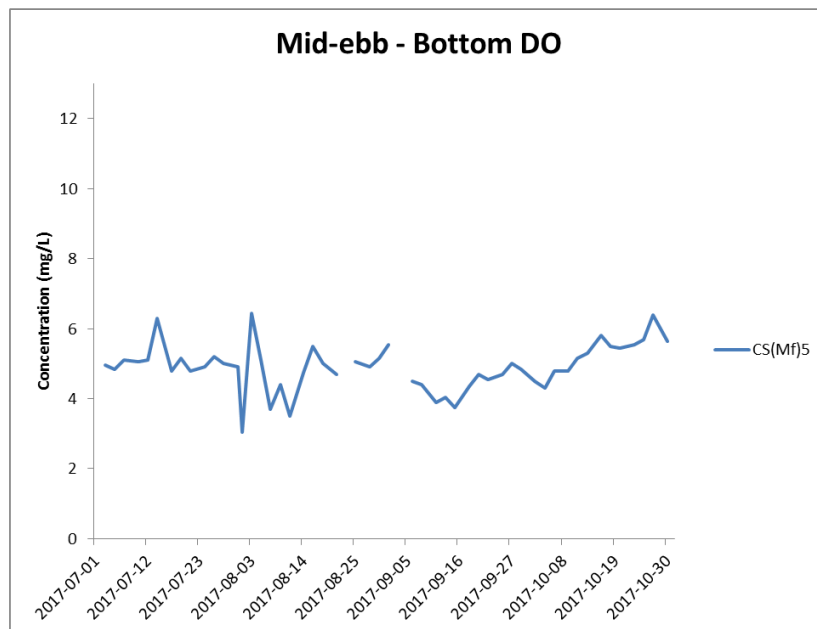
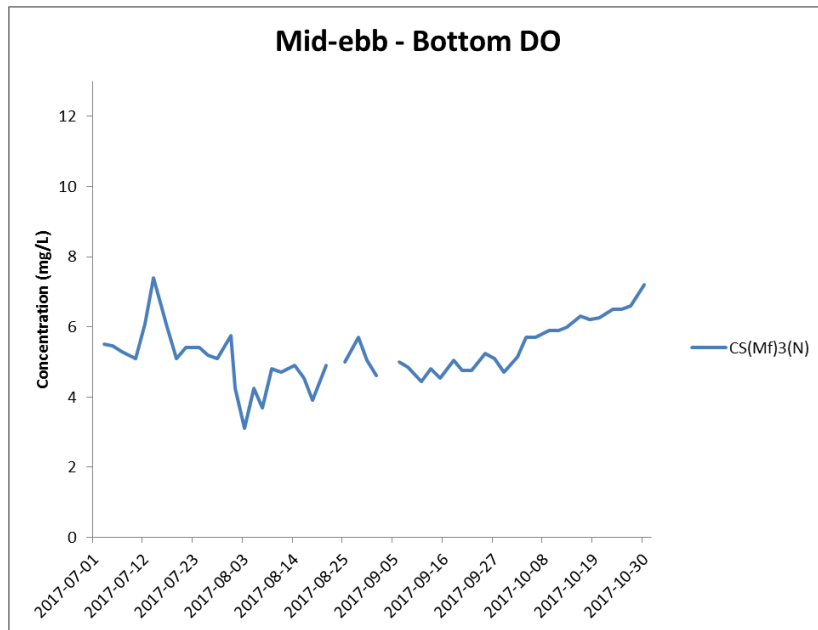


Figure J13 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-ebb tide between 1 July 2017 and 31 October 2017 at CS(Mf)3(N) and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period.) Results of WQM between 1 June 2017 and 31 July 2017 are sourced from the published EM&A data and published EM&A reports of Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities - Reclamation Works. In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 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.

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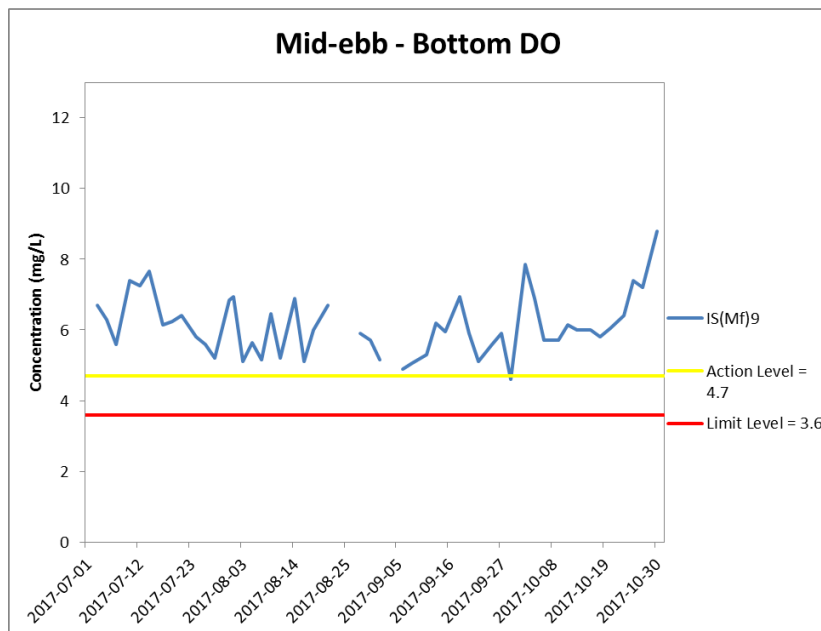
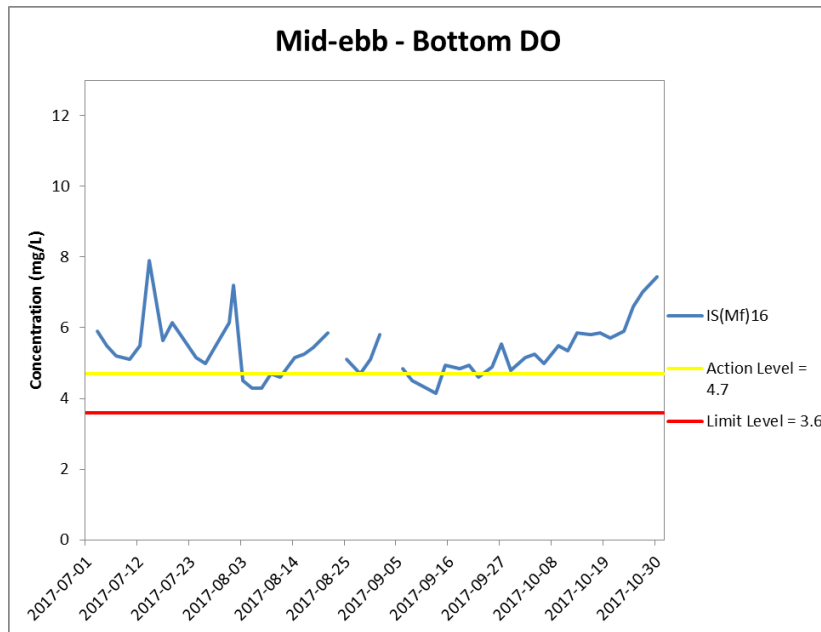


Figure J14 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-ebb tide between 1 July 2017 and 31 October 2017 at IS(Mf)16 and IS(Mf)9.

(Weather condition varied between sunny to rainy within the reporting period.) Results of WQM between 1 June 2017 and 31 July 2017 are sourced from the published EM&A data and published EM&A reports of Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities - Reclamation Works. In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 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.

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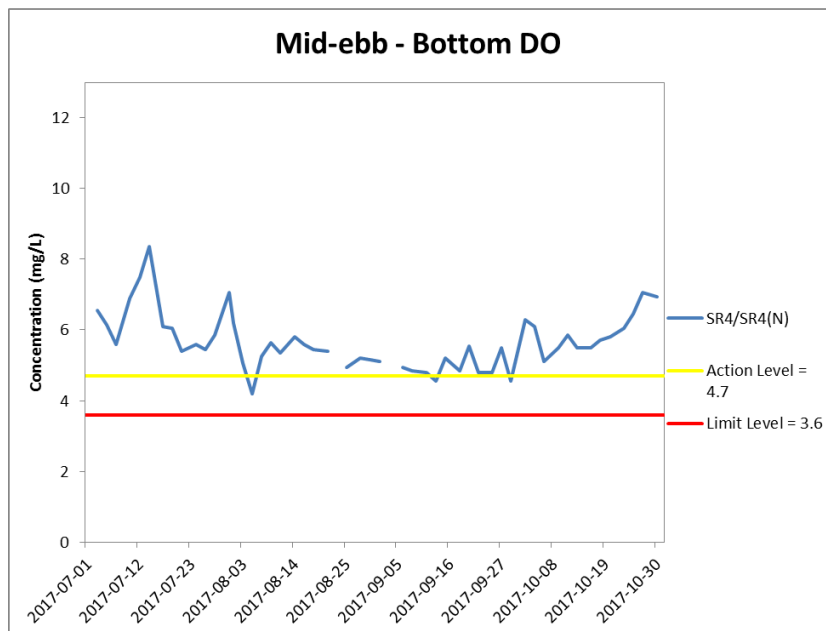
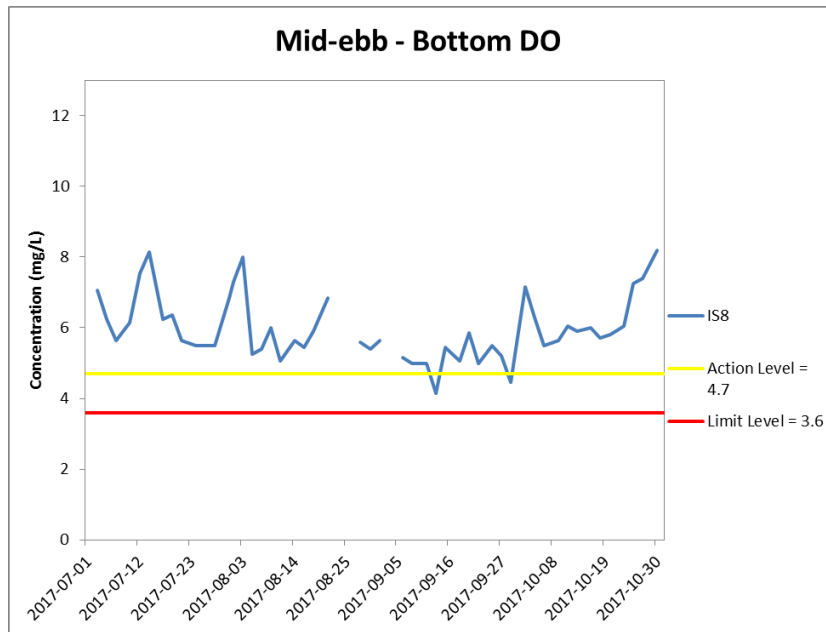


Figure J15 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-ebb tide between 1 July 2017 and 31 October 2017 at IS8 and SR4.

(Weather condition varied between sunny to rainy within the reporting period.) Results of WQM between 1 June 2017 and 31 July 2017 are sourced from the published EM&A data and published EM&A reports of Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities - Reclamation Works. In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 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.

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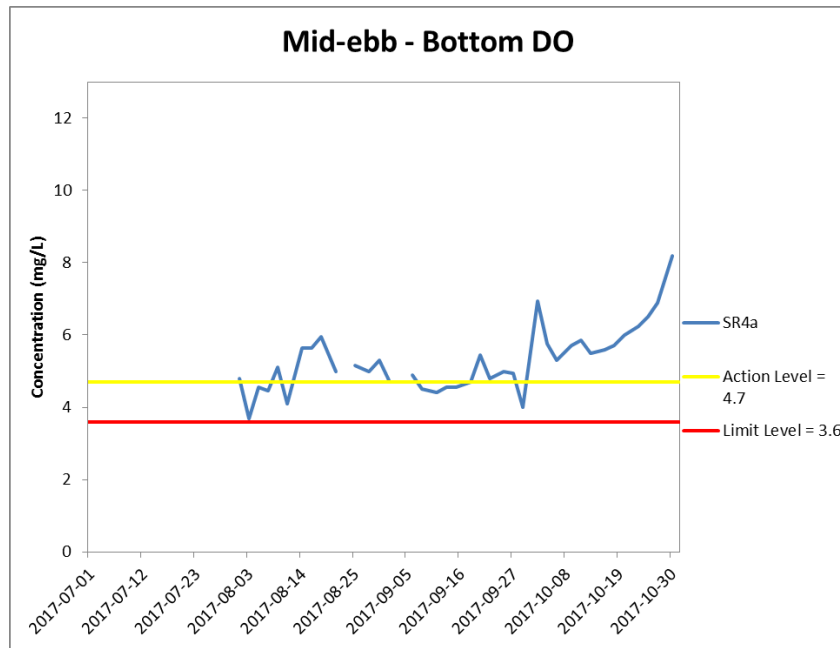


Figure J16 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-ebb tide between 1 July 2017 and 31 October 2017 at SR4a.

(Weather condition varied between sunny to rainy within the reporting period.) Station SR4a is not covered between 1 June 2017 and 31 July 2017 in the published EM&A data and published EM&A reports of Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities - Reclamation Works. In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 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.

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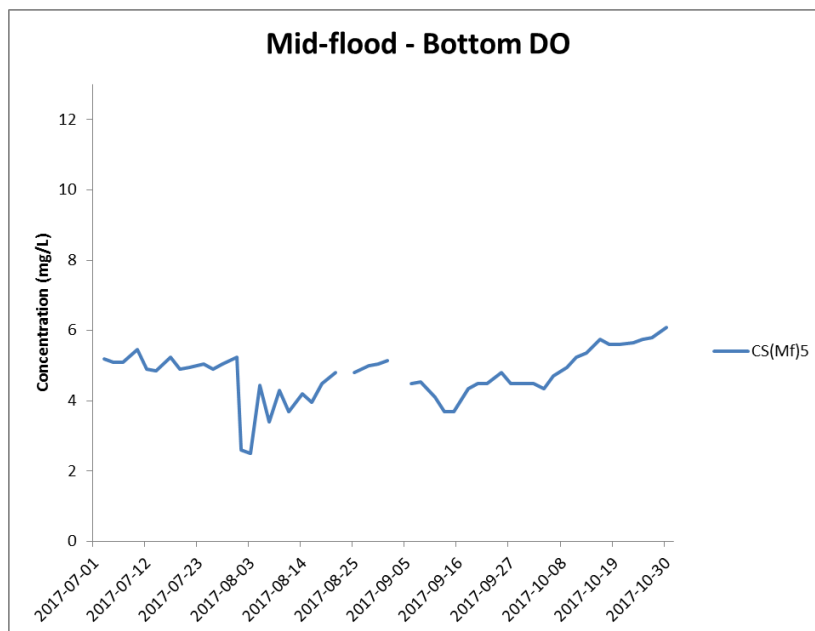
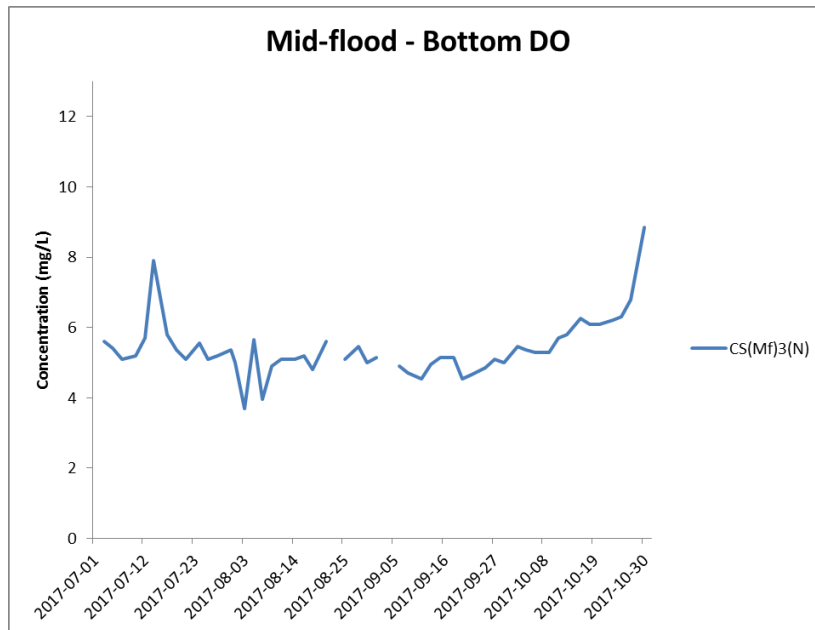


Figure J17 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-flood tide between 1 July 2017 and 31 October 2017 at CS(Mf)3(N) and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period.) Results of WQM between 1 June 2017 and 31 July 2017 are sourced from the published EM&A data and published EM&A reports of Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities - Reclamation Works. In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 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.

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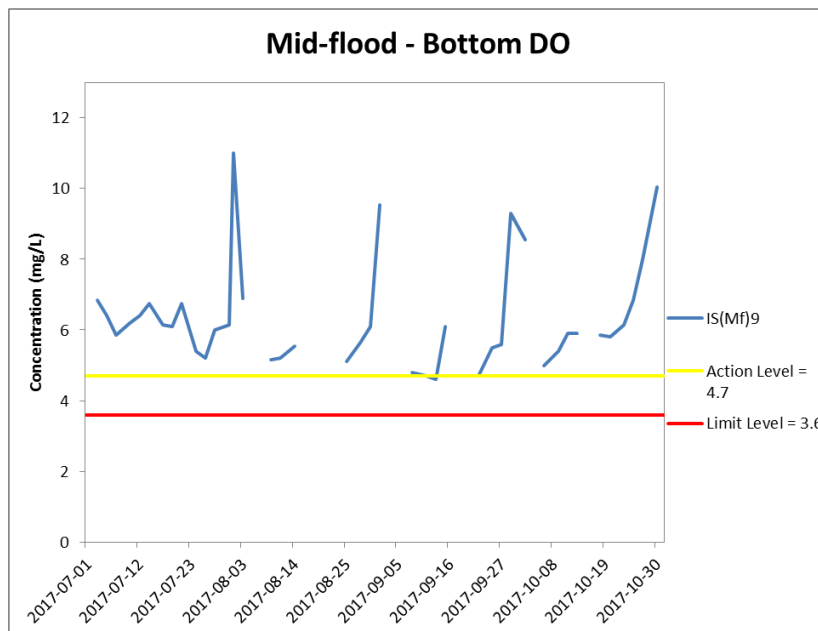
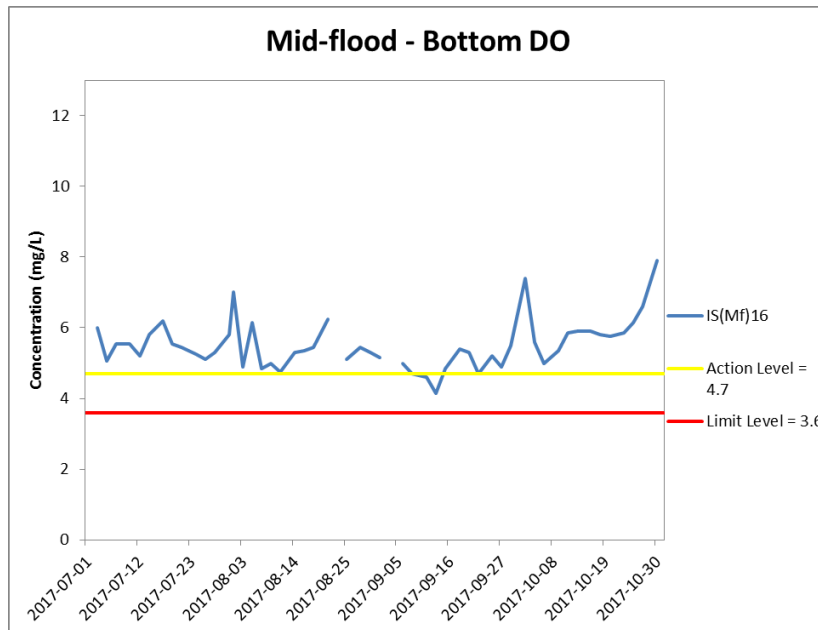
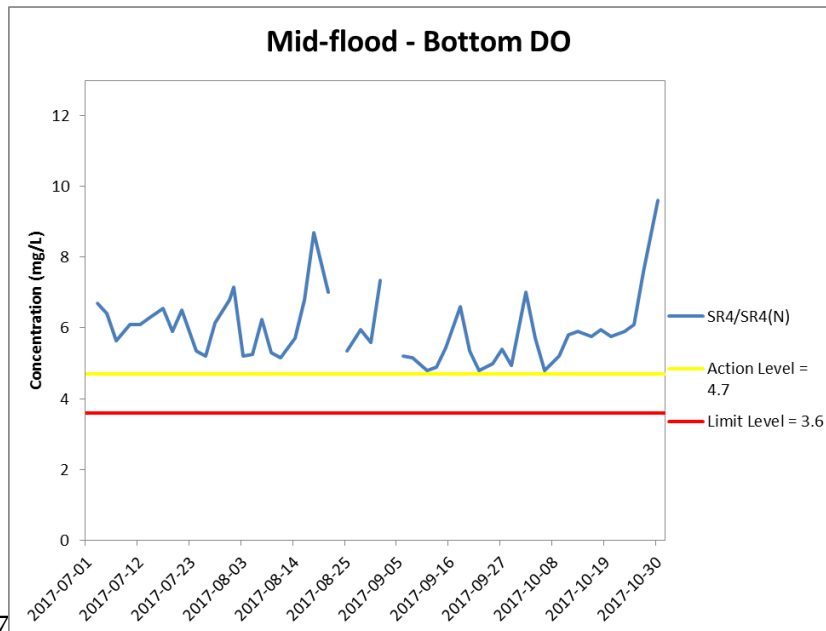
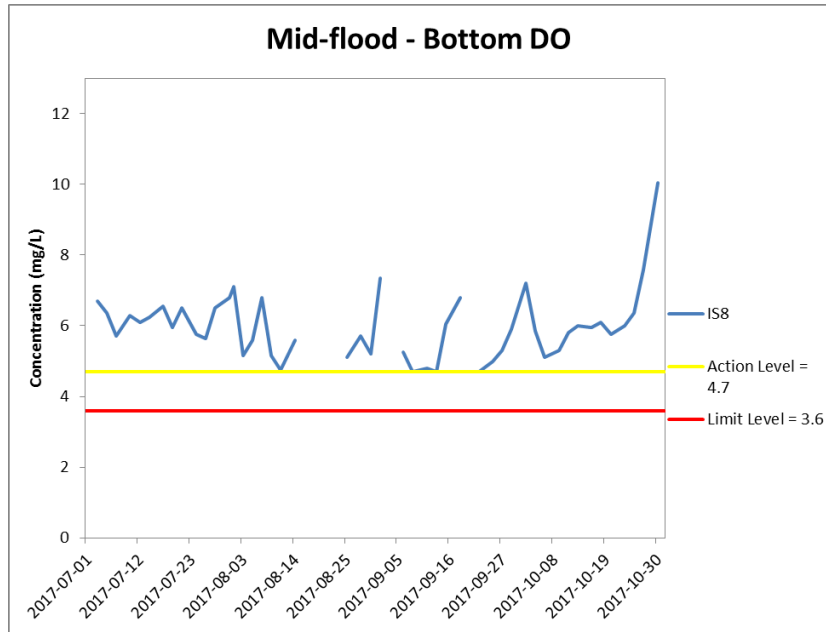


Figure J18 Impact Monitoring - Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-flood tide between 1 July 2017 and 31 October 2017 at IS(Mf)16 and IS(Mf)9.

(Weather condition varied between sunny to rainy within the reporting period.) Results of WQM between 1 June 2017 and 31 July 2017 are sourced from the published EM&A data and published EM&A reports of Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities - Reclamation Works. In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 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.

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

(Weather condition varied between sunny to rainy within the reporting period.) Results of WQM between 1 June 2017 and 31 July 2017 are sourced from the published EM&A data and published EM&A reports of Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities - Reclamation Works. In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 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.

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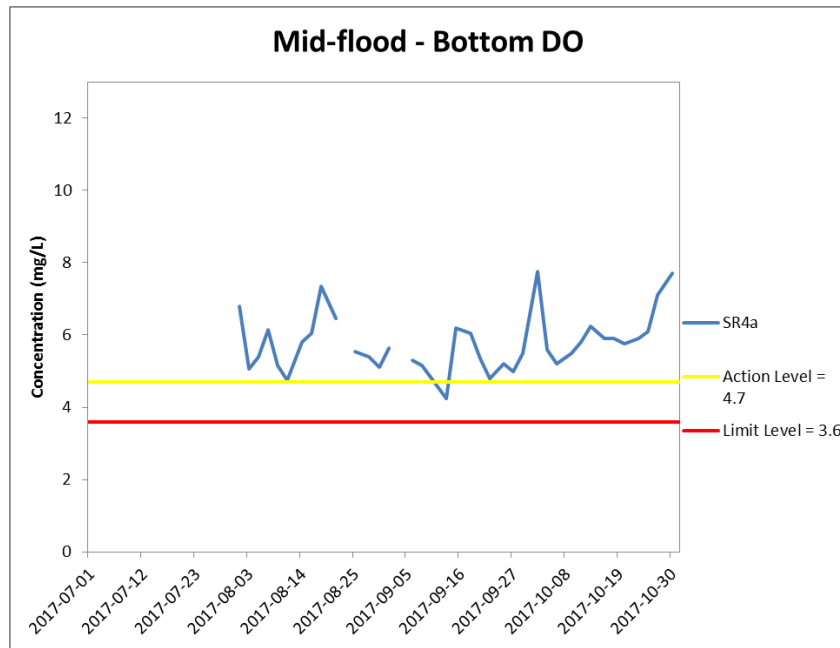


Figure J20 Impact Monitoring – Mean Level of Dissolved Oxygen (mg/L) in bottom waters during mid-flood tide between 1 July 2017 and 31 October 2017 at SR4a.

*(Weather condition varied between sunny to rainy within the reporting period.)
 Station SR4a is not covered between 1 June 2017 and 31 July 2017 in the published EM&A data and published EM&A reports of Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Reclamation Works. In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 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. 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.*

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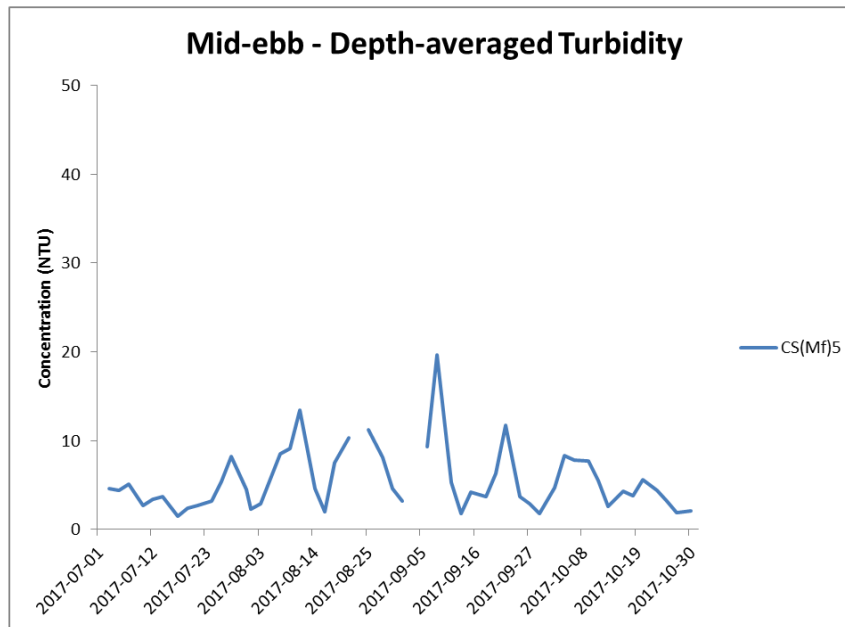
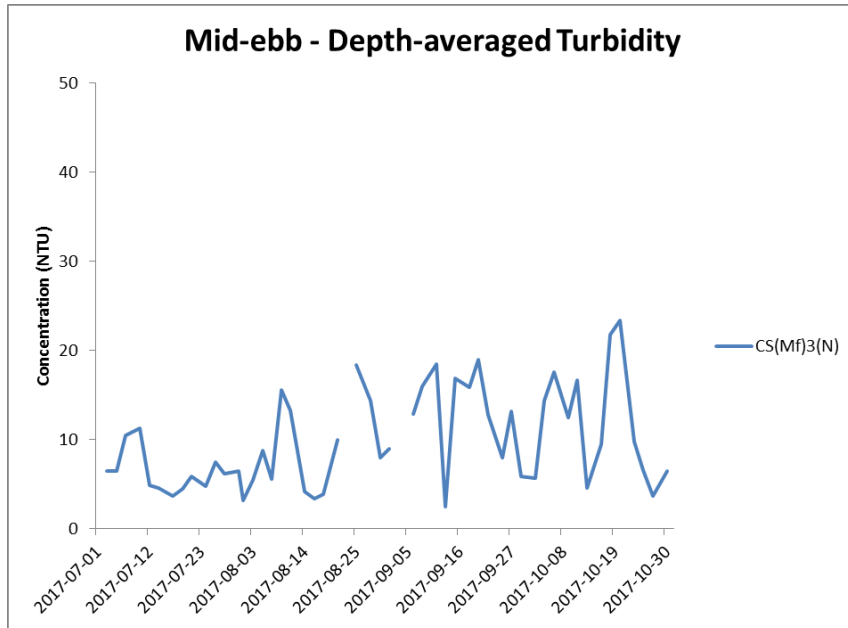


Figure J21 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-ebb tide between 1 July 2017 and 31 October 2017 at CS(Mf)3(N) and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period.) Results of WQM between 1 June 2017 and 31 July 2017 are sourced from the published EM&A data and published EM&A reports of Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Reclamation Works. In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 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.

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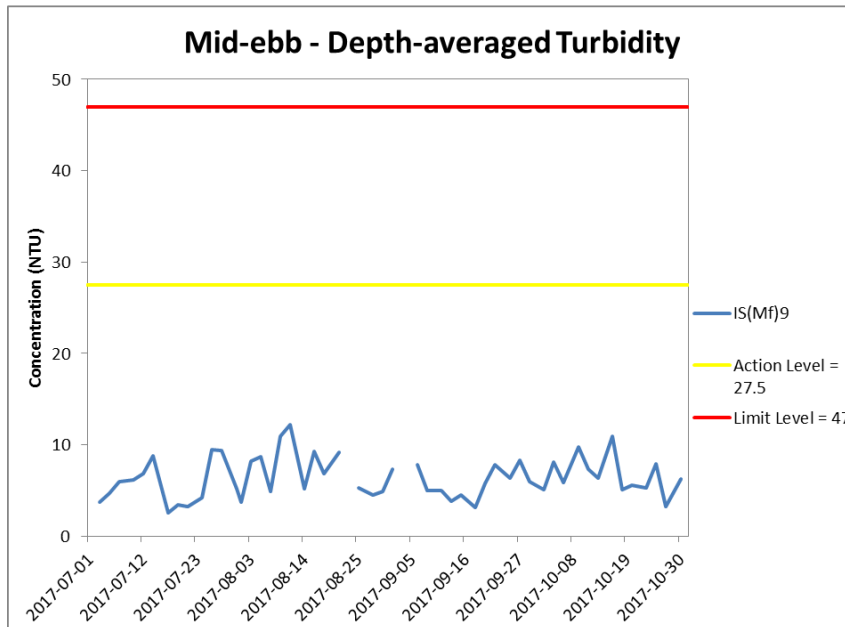
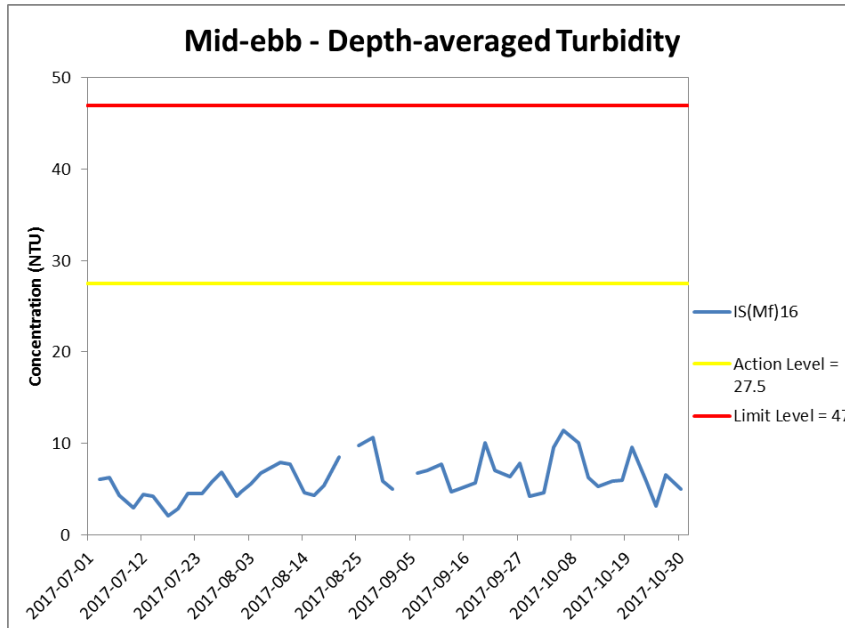


Figure J22 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-ebb tide between 1 July 2017 and 31 October 2017 at IS(Mf)16 and IS(Mf)9.

(Weather condition varied between sunny to rainy within the reporting period.) Results of WQM between 1 June 2017 and 31 July 2017 are sourced from the published EM&A data and published EM&A reports of Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Reclamation Works. In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 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.

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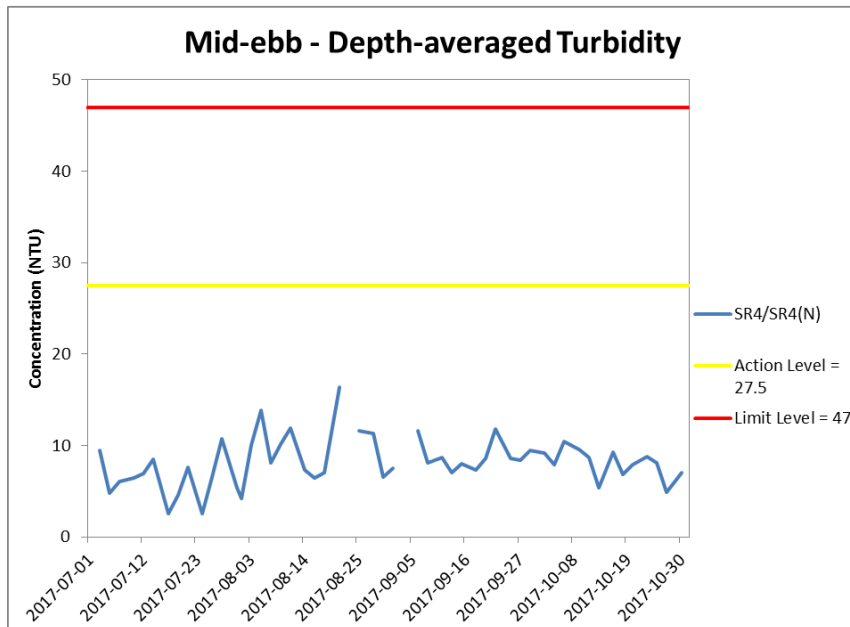
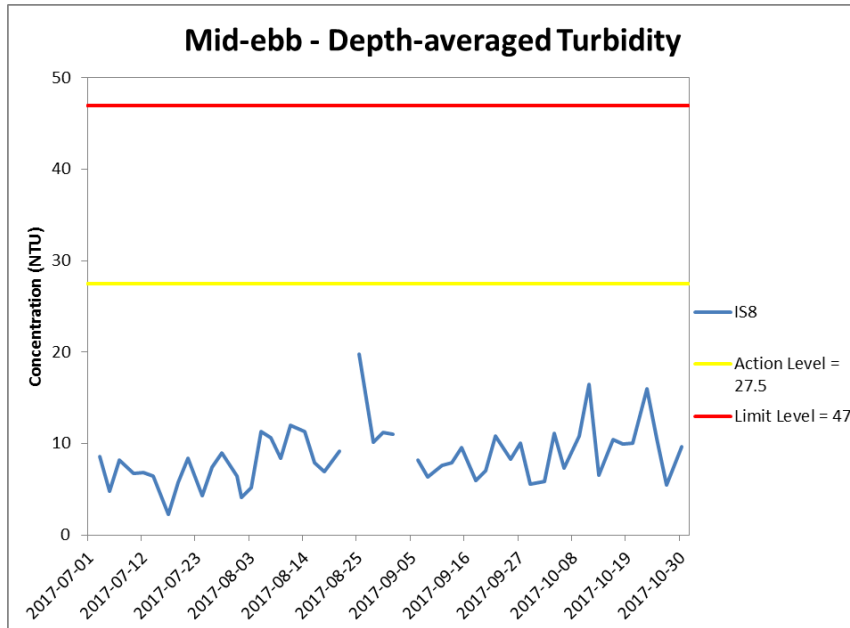


Figure J23 Impact Monitoring - Mean Level of depth-averaged Turbidity (NTU) during mid-ebb tide between 1 July 2017 and 31 October 2017 at IS8 and SR4.

(Weather condition varied between sunny to rainy within the reporting period.) Results of WQM between 1 June 2017 and 31 July 2017 are sourced from the published EM&A data and published EM&A reports of Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities - Reclamation Works. In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 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.

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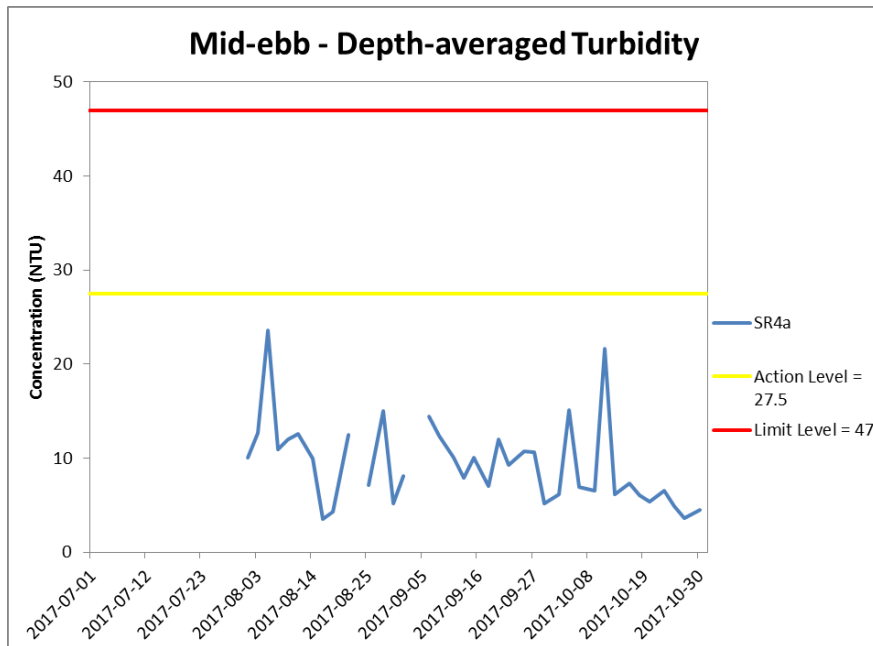


Figure J24 Impact Monitoring - Mean Level of depth-averaged Turbidity (NTU) during mid-ebb tide between 1 July 2017 and 31 October 2017 at SR4a.

(Weather condition varied between sunny to rainy within the reporting period.) Station SR4a is not covered between 1 June 2017 and 31 July 2017 in the published EM&A data and published EM&A reports of Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities - Reclamation Works. In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 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.

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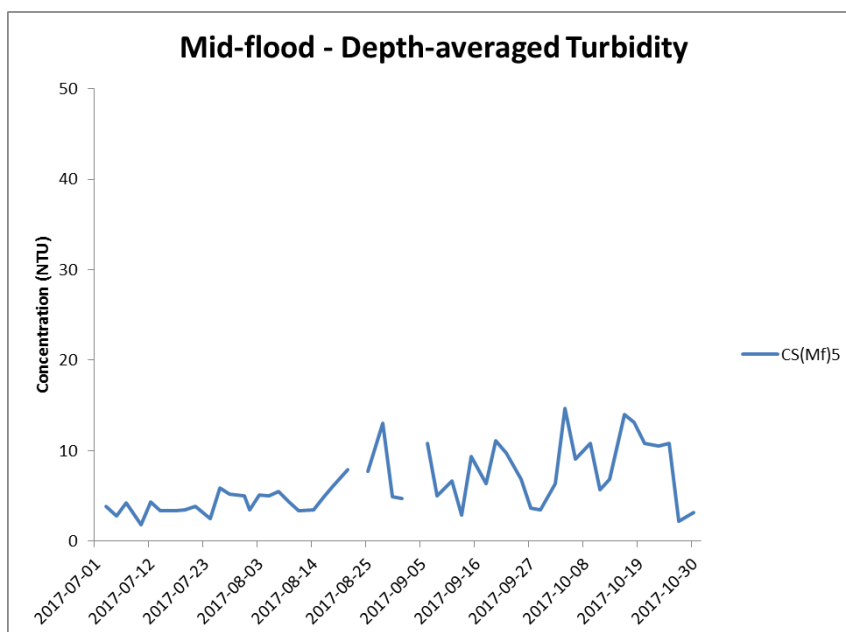
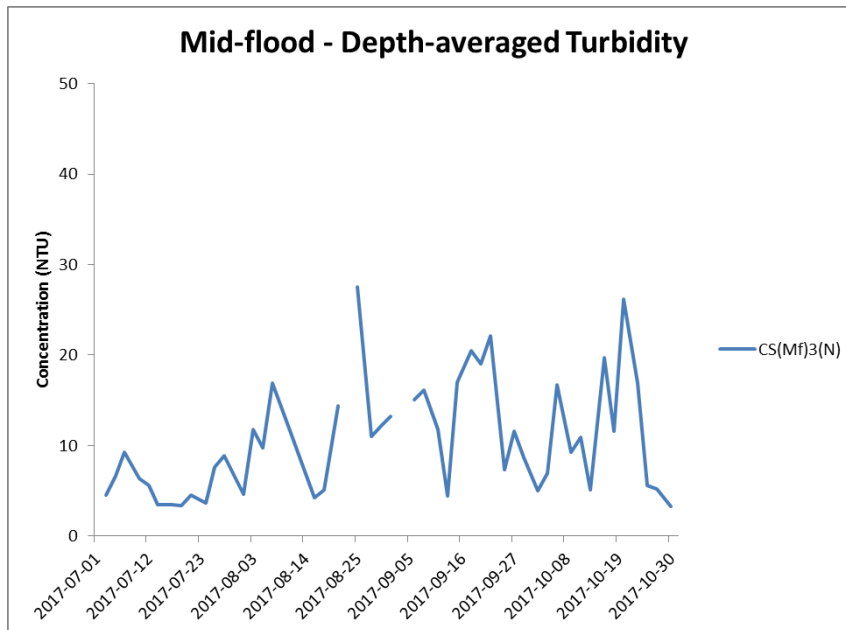


Figure J25 Impact Monitoring - Mean Level of depth-averaged Turbidity (NTU) during mid-flood tide between 1 July 2017 and 31 October 2017 at CS(Mf)3(N) and CS(MF)5.

(Weather condition varied between sunny to rainy within the reporting period.) Results of WQM between 1 June 2017 and 31 July 2017 are sourced from the published EM&A data and published EM&A reports of Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities - Reclamation Works. In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 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.

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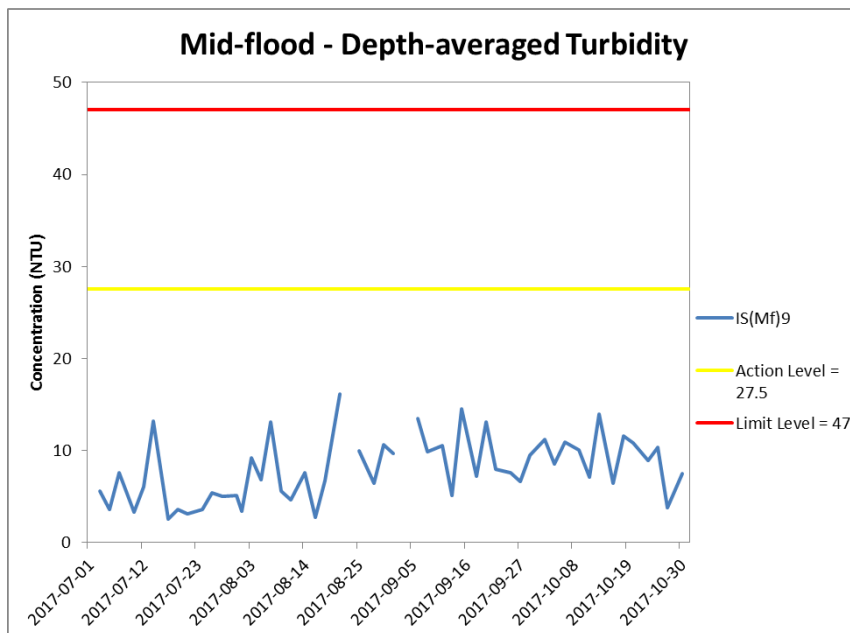
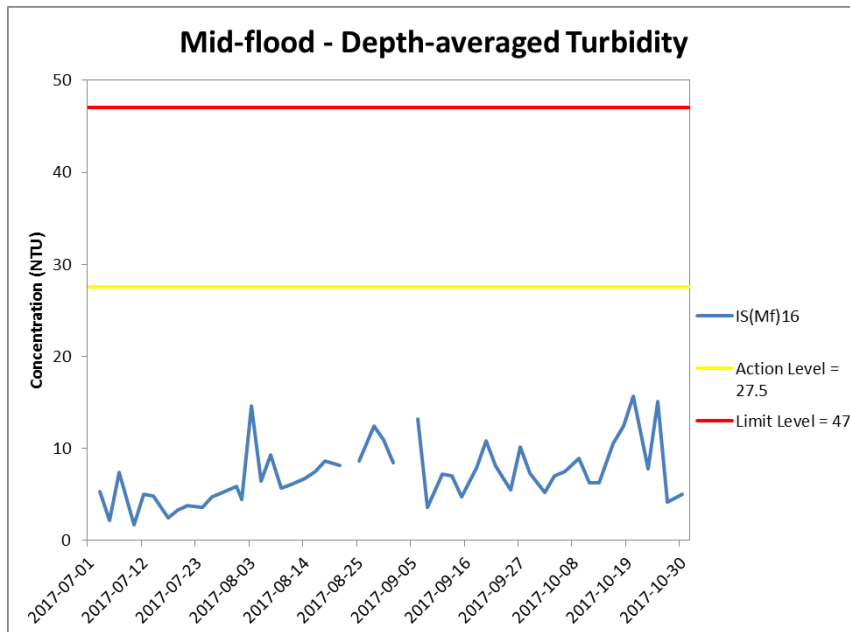


Figure J26 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-flood tide between 1 July 2017 and 31 October 2017 at IS(Mf)16 and IS(Mf)9.

(Weather condition varied between sunny to rainy within the reporting period.) Results of WQM between 1 June 2017 and 31 July 2017 are sourced from the published EM&A data and published EM&A reports of Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Reclamation Works. In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 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.

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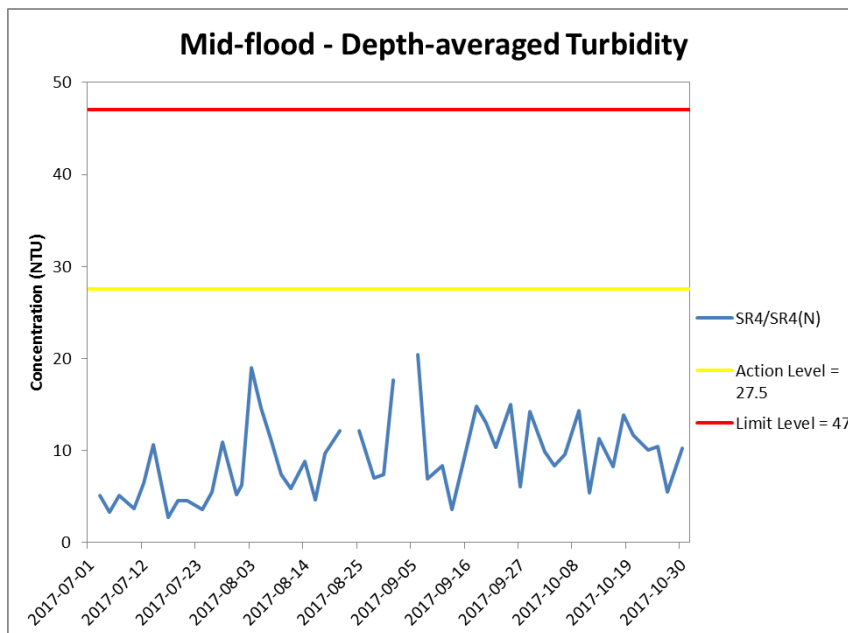
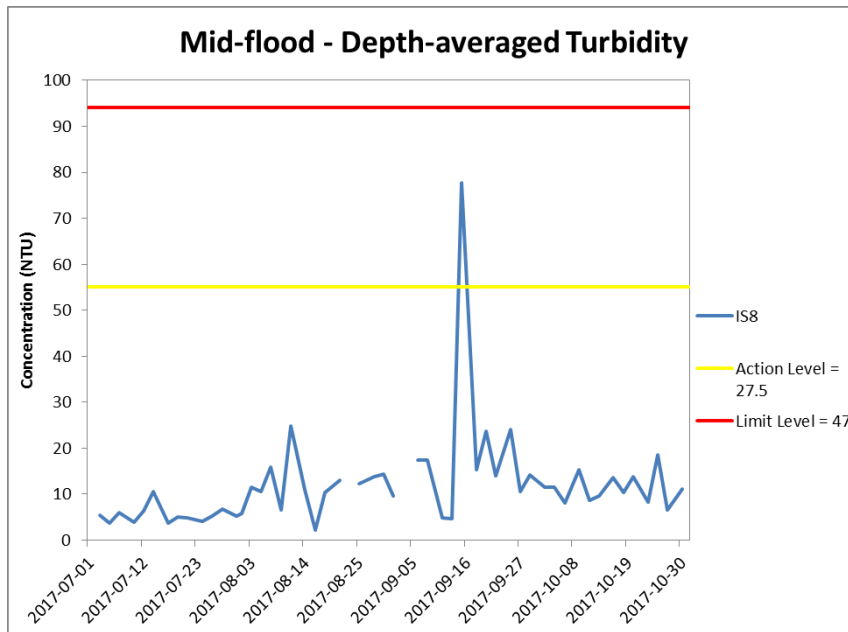


Figure J27 Impact Monitoring – Mean Level of depth-averaged Turbidity (NTU) during mid-flood tide between 1 July 2017 and 31 October 2017 at IS8 and SR4.

(Weather condition varied between sunny to rainy within the reporting period.) Results of WQM between 1 June 2017 and 31 July 2017 are sourced from the published EM&A data and published EM&A reports of Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Reclamation Works. In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 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.

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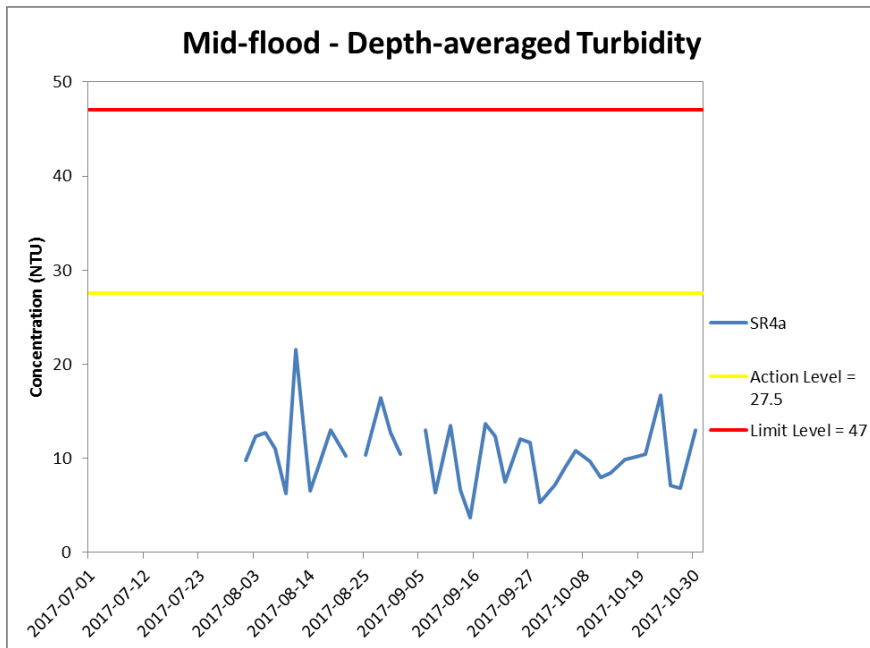


Figure J28 Impact Monitoring - Mean Level of depth-averaged Turbidity (NTU) during mid-flood tide between 1 July 2017 and 31 October 2017 at SR4a.

(Weather condition varied between sunny to rainy within the reporting period.) Station SR4a is not covered between 1 June 2017 and 31 July 2017 in the published EM&A data and published EM&A reports of Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities - Reclamation Works. In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 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.

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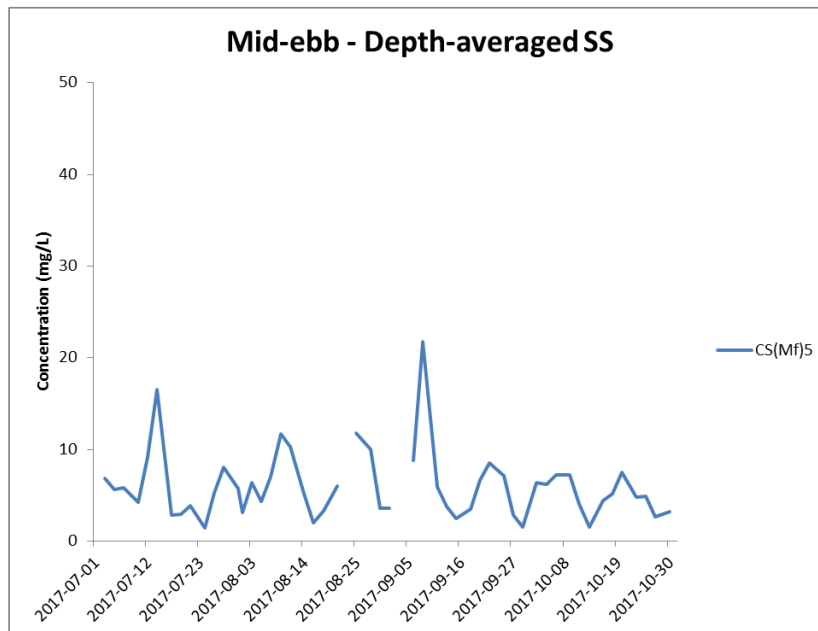
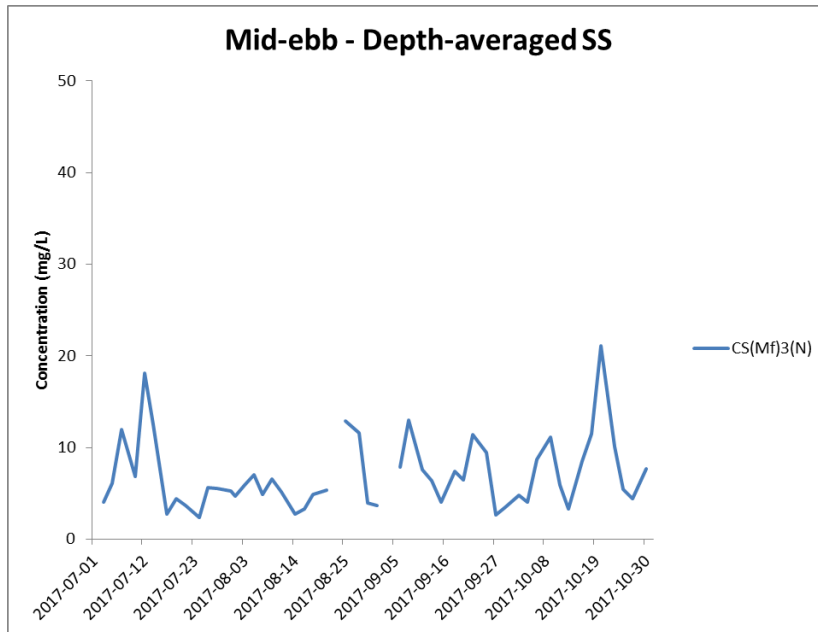


Figure J29 Impact Monitoring - Mean depth-averaged level of Suspended Solids (mg/L) during mid-ebb tide between 1 July 2017 and 31 October 2017 at CS(Mf)3(N) and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period.) Results of WQM between 1 June 2017 and 31 July 2017 are sourced from the published EM&A data and published EM&A reports of Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities - Reclamation Works. In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 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.

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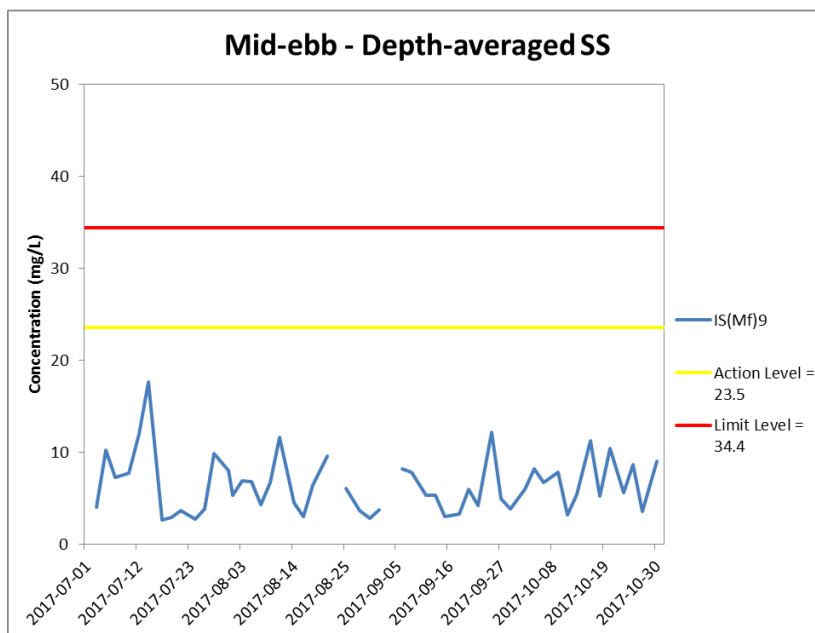
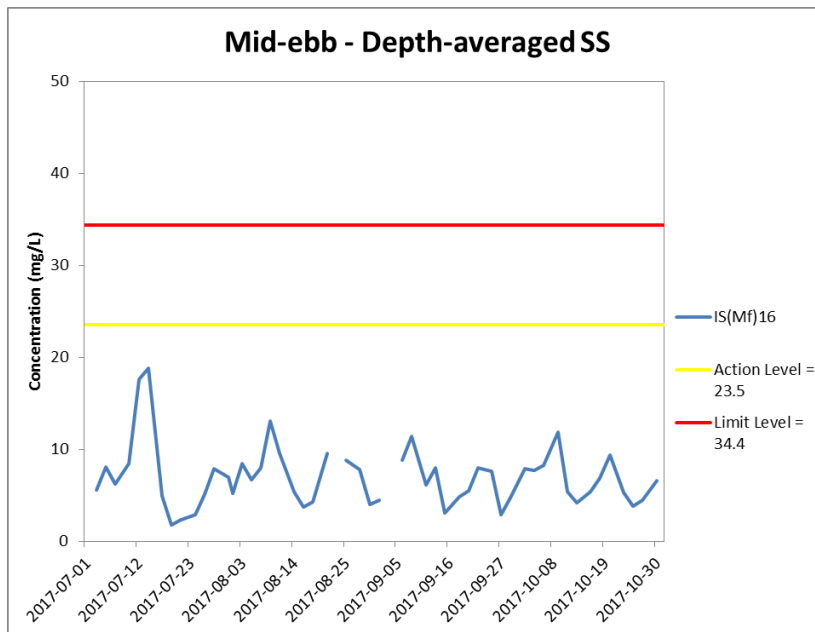


Figure J30 Impact Monitoring - Mean depth-averaged level of Suspended Solids (mg/L) during mid-ebb tide between 1 July 2017 and 31 October 2017 at IS(Mf)16 and IS(Mf)9.

(Weather condition varied between sunny to rainy within the reporting period.) Results of WQM between 1 June 2017 and 31 July 2017 are sourced from the published EM&A data and published EM&A reports of Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities - Reclamation Works. In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 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.

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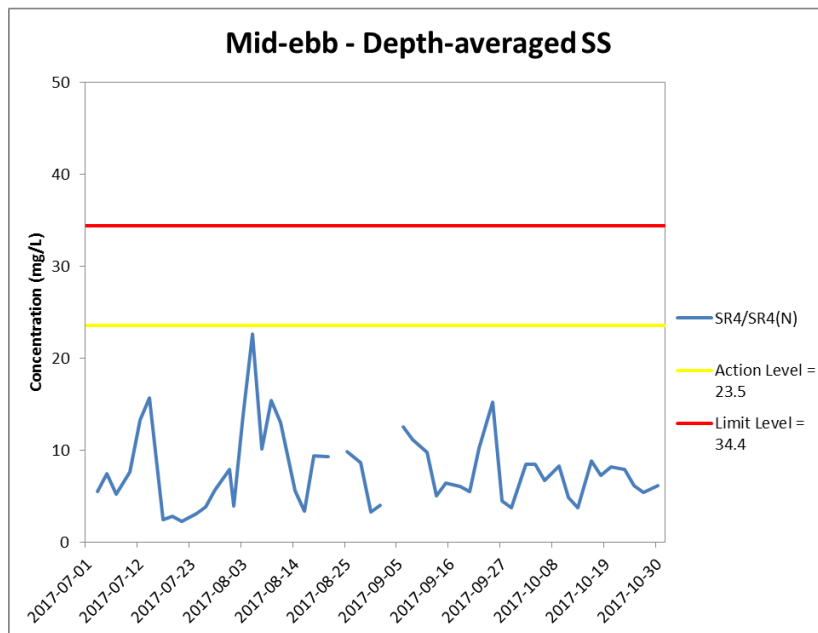
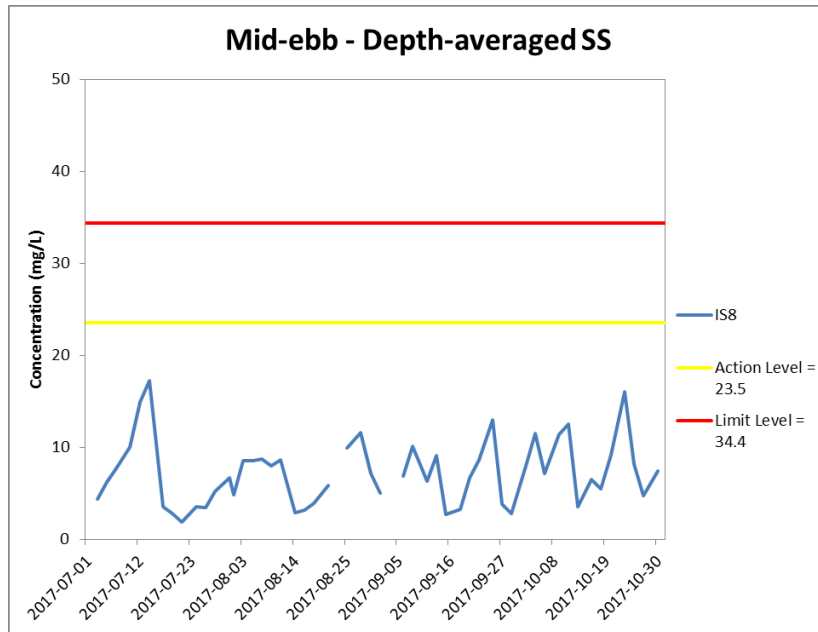


Figure J31 Impact Monitoring - Mean depth-averaged level of Suspended Solids (mg/L) during mid-ebb tide between 1 July 2017 and 31 October 2017 at IS8 and SR4.

(Weather condition varied between sunny to rainy within the reporting period.) Results of WQM between 1 June 2017 and 31 July 2017 are sourced from the published EM&A data and published EM&A reports of Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities - Reclamation Works. In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 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.

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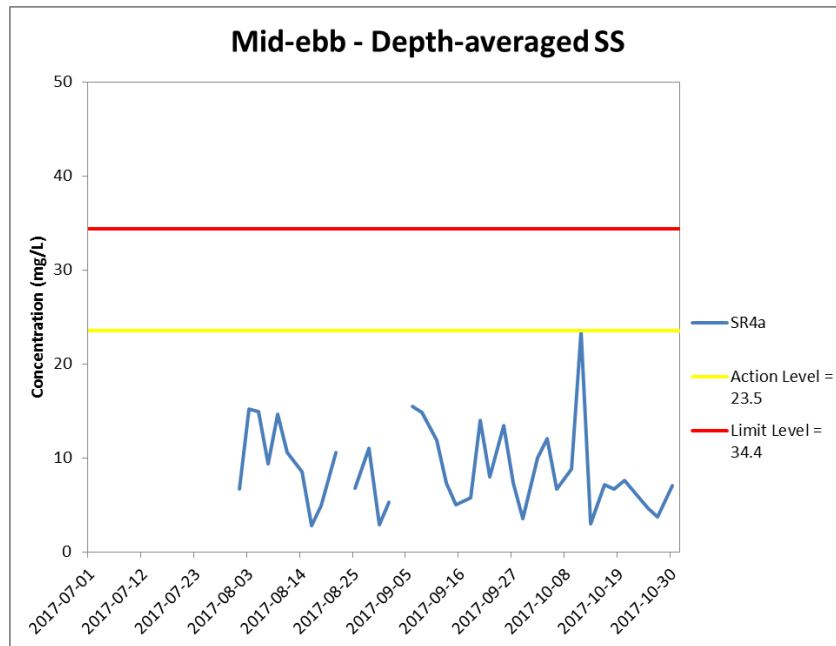


Figure J32 Impact Monitoring - Mean depth-averaged level of Suspended Solids (mg/L) during mid-ebb tide between 1 July 2017 and 31 October 2017 at SR4a.

(Weather condition varied between sunny to rainy within the reporting period.) Station SR4a is not covered between 1 June 2017 and 31 July 2017 in the published EM&A data and published EM&A reports of Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities - Reclamation Works. In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 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.

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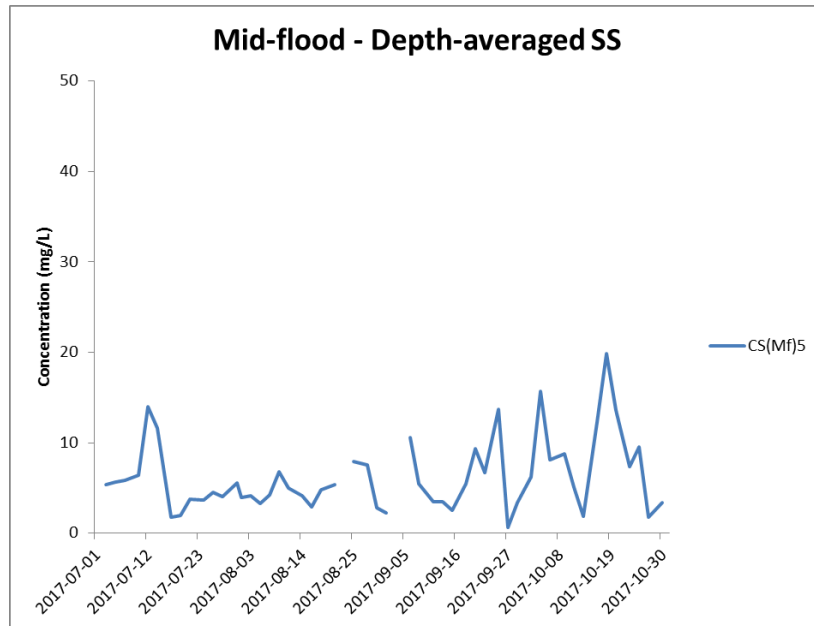
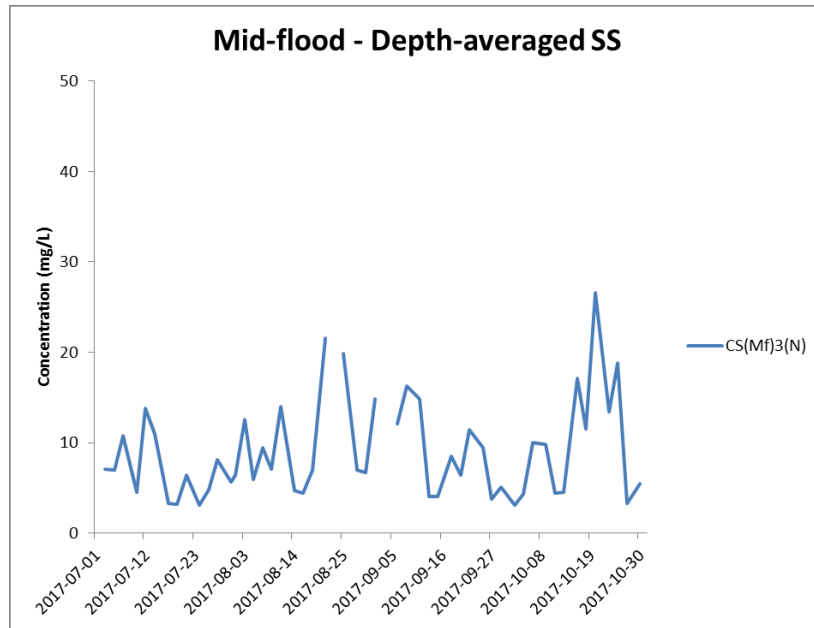


Figure J33 Impact Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-flood tide between 1 July 2017 and 31 October 2017 at CS(Mf)3(N) and CS(Mf)5.

(Weather condition varied between sunny to rainy within the reporting period.) Results of WQM between 1 June 2017 and 31 July 2017 are sourced from the published EM&A data and published EM&A reports of Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Reclamation Works. In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 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.

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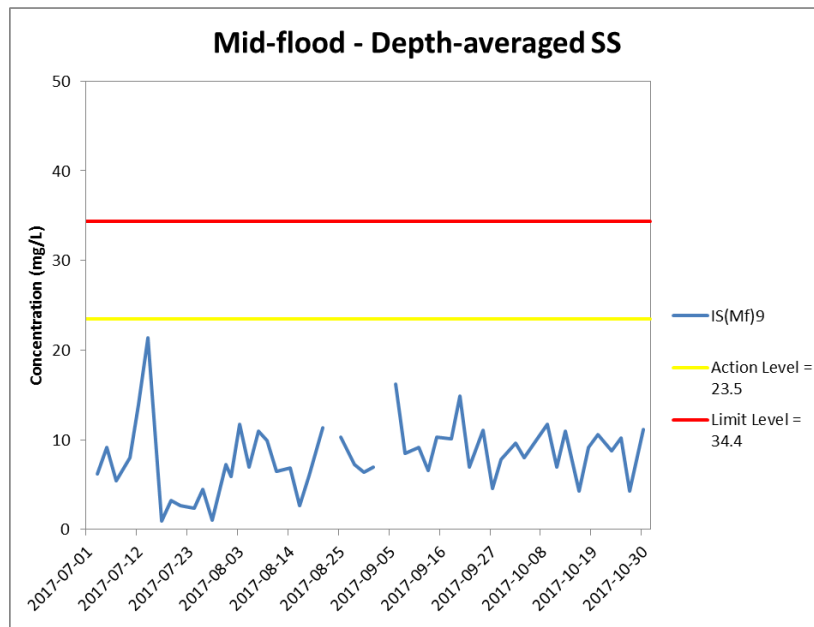
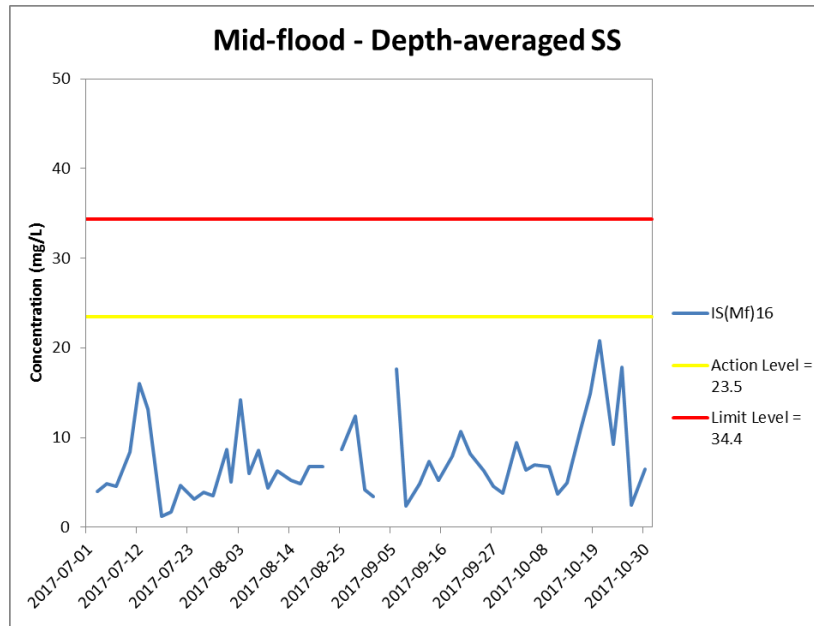


Figure J34 Impact Monitoring – Mean depth-averaged level of Suspended Solids (mg/L) during mid-flood tide between 1 July 2017 and 31 October 2017 at IS(Mf)16 and IS(Mf)9.

(Weather condition varied between sunny to rainy within the reporting period.) Results of WQM between 1 June 2017 and 31 July 2017 are sourced from the published EM&A data and published EM&A reports of Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities – Reclamation Works. In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 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.

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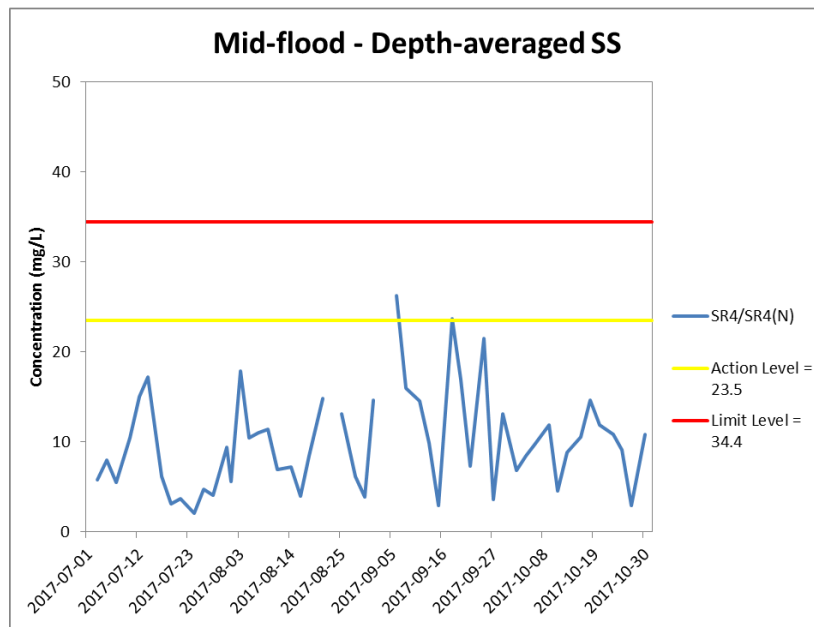
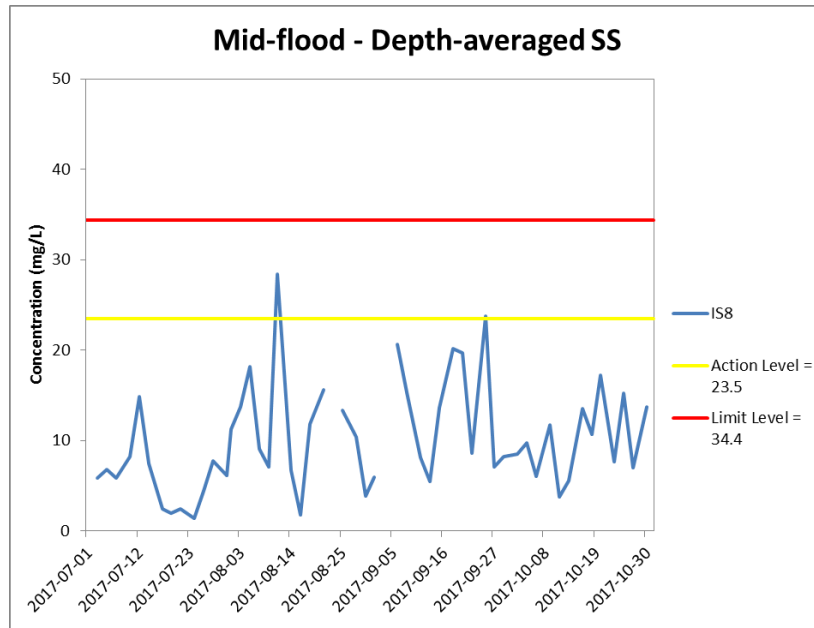


Figure J35 Impact Monitoring - Mean depth-averaged level of Suspended Solids (mg/L) during mid-flood tide between 1 July 2017 and 31 October 2017 at IS8 and SR4.

(Weather condition varied between sunny to rainy within the reporting period.) Results of WQM between 1 June 2017 and 31 July 2017 are sourced from the published EM&A data and published EM&A reports of Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities - Reclamation Works. In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 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.

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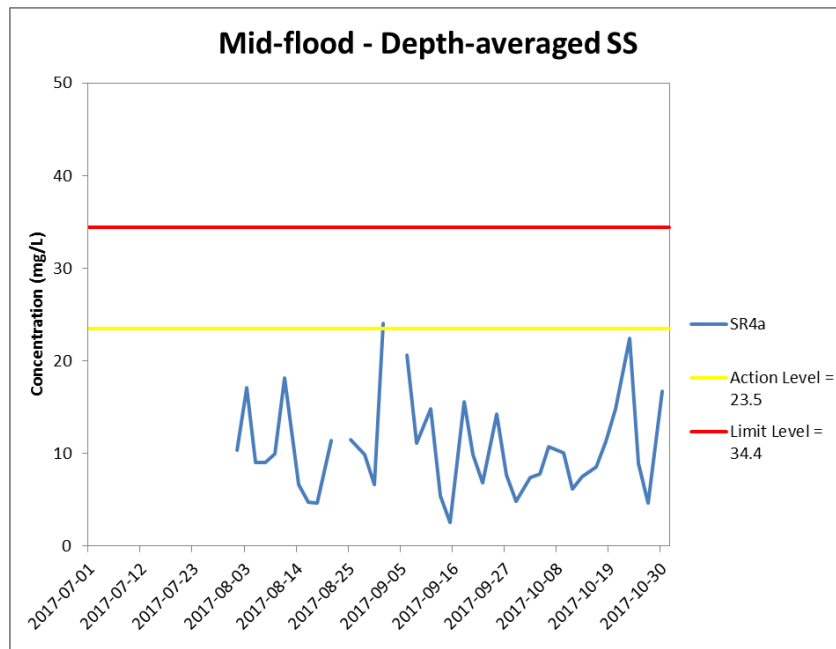


Figure J36 Impact Monitoring - Mean depth-averaged level of Suspended Solids (mg/L) during mid-flood tide between 1 July 2017 and 31 October 2017 at SR4a.

(Weather condition varied between sunny to rainy within the reporting period.) Station SR4a is not covered between 1 June 2017 and 31 July 2017 in the published EM&A data and published EM&A reports of Contract No. HY/2010/02 Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities - Reclamation Works. In-situ monitoring is taken according to the requirement specified in the EM&A Manual, i.e. 3 water depth namely 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.

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Appendix K

Impact Dolphin Monitoring Survey Results

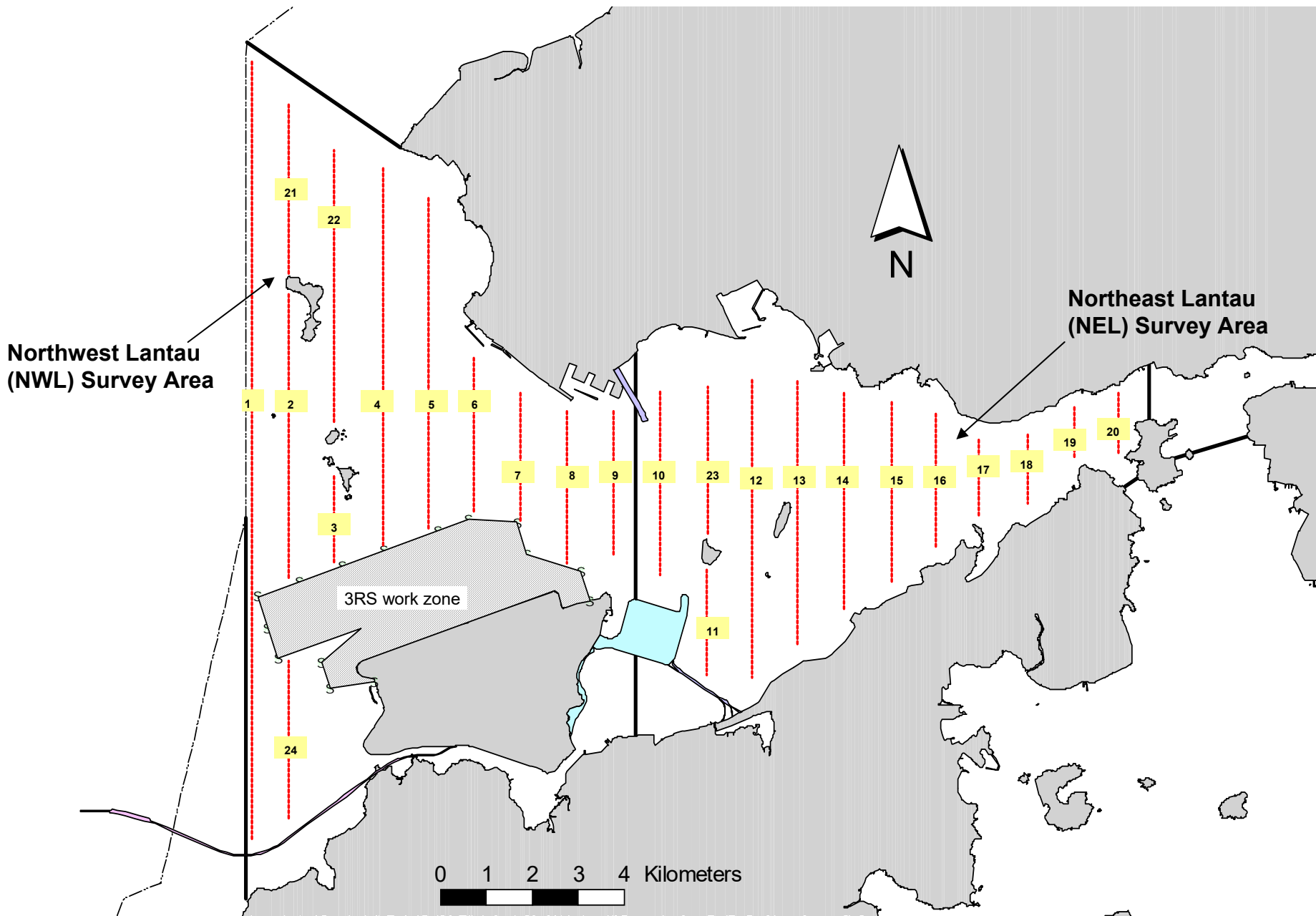


Figure 1. Transect Line Layout in Northwest and Northeast Lantau Survey Areas

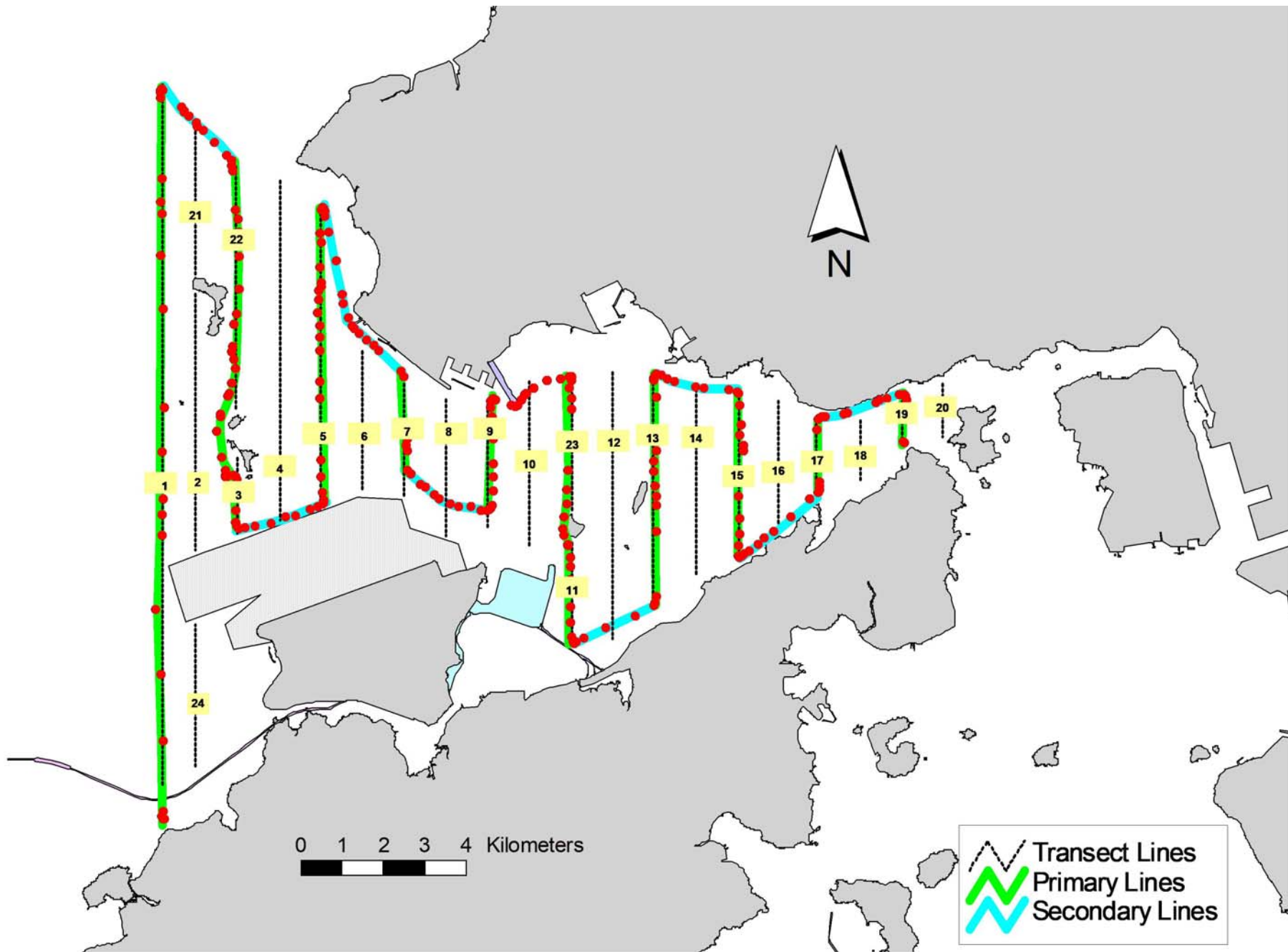


Figure 3. Survey Route on October 9th, 2017 (from HKLR03 project)

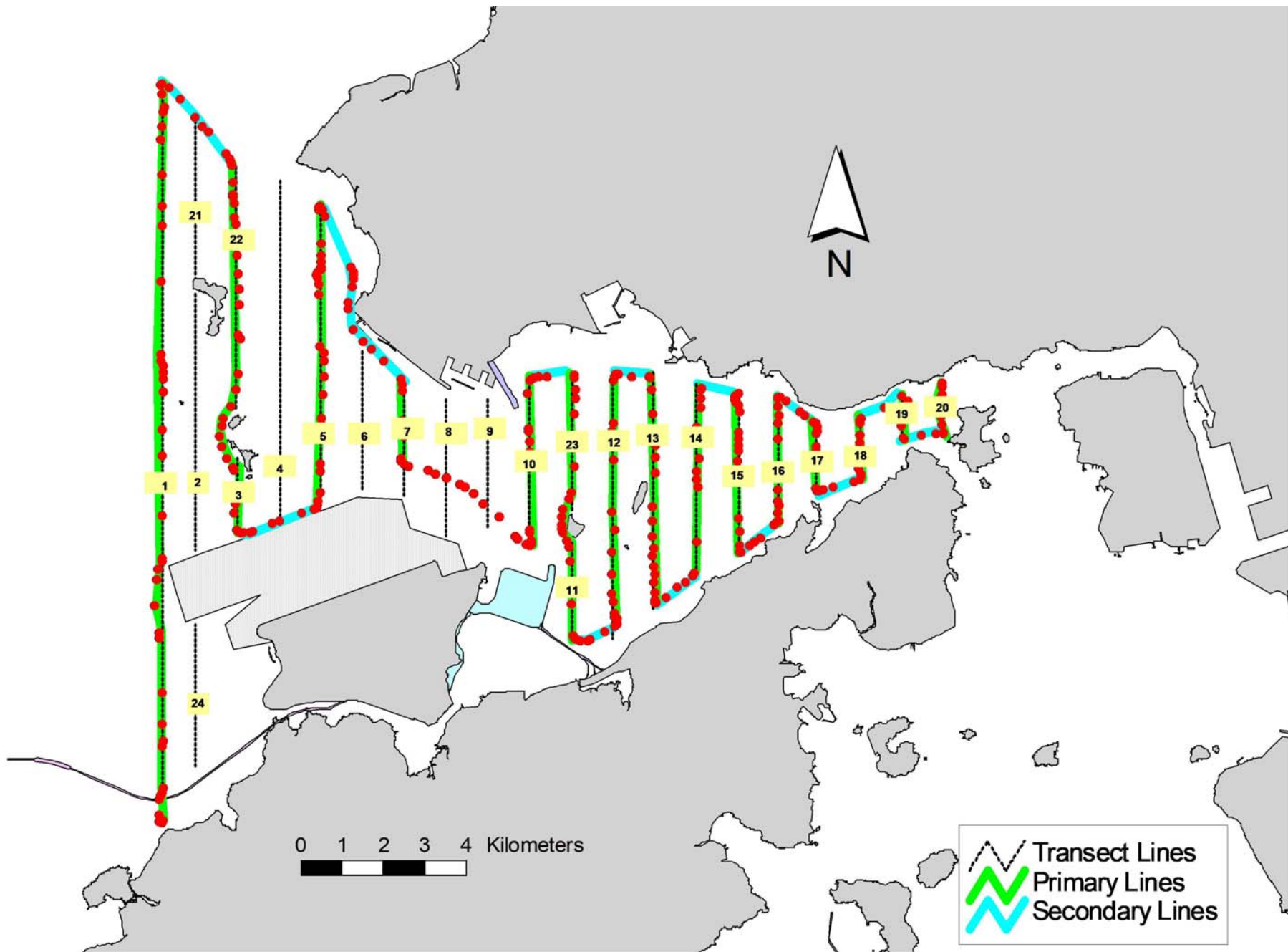


Figure 4. Survey Route on October 18th, 2017 (from HKLR03 project)

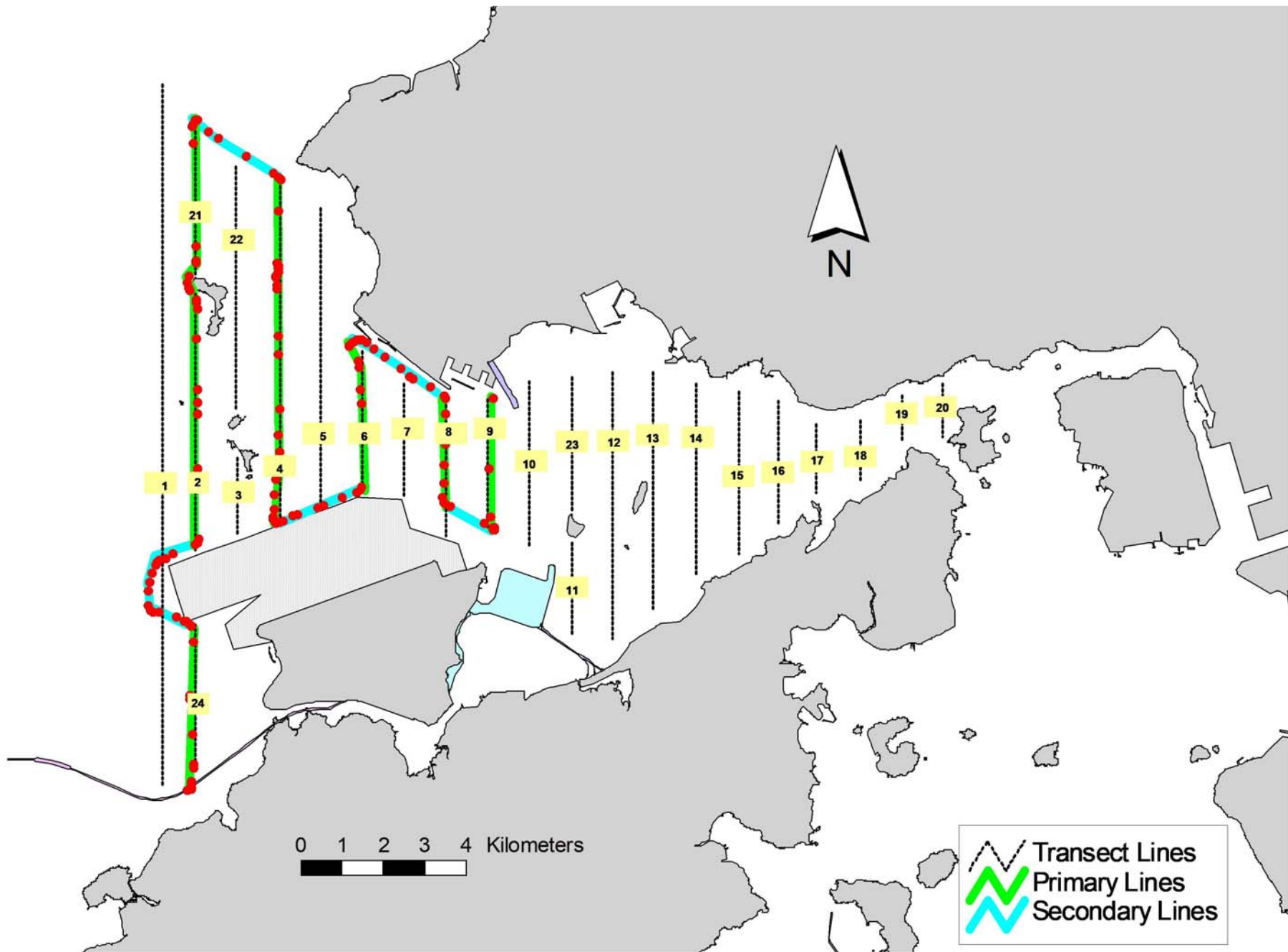


Figure 5. Survey Route on October 26th, 2017 (from HKLR03 project)

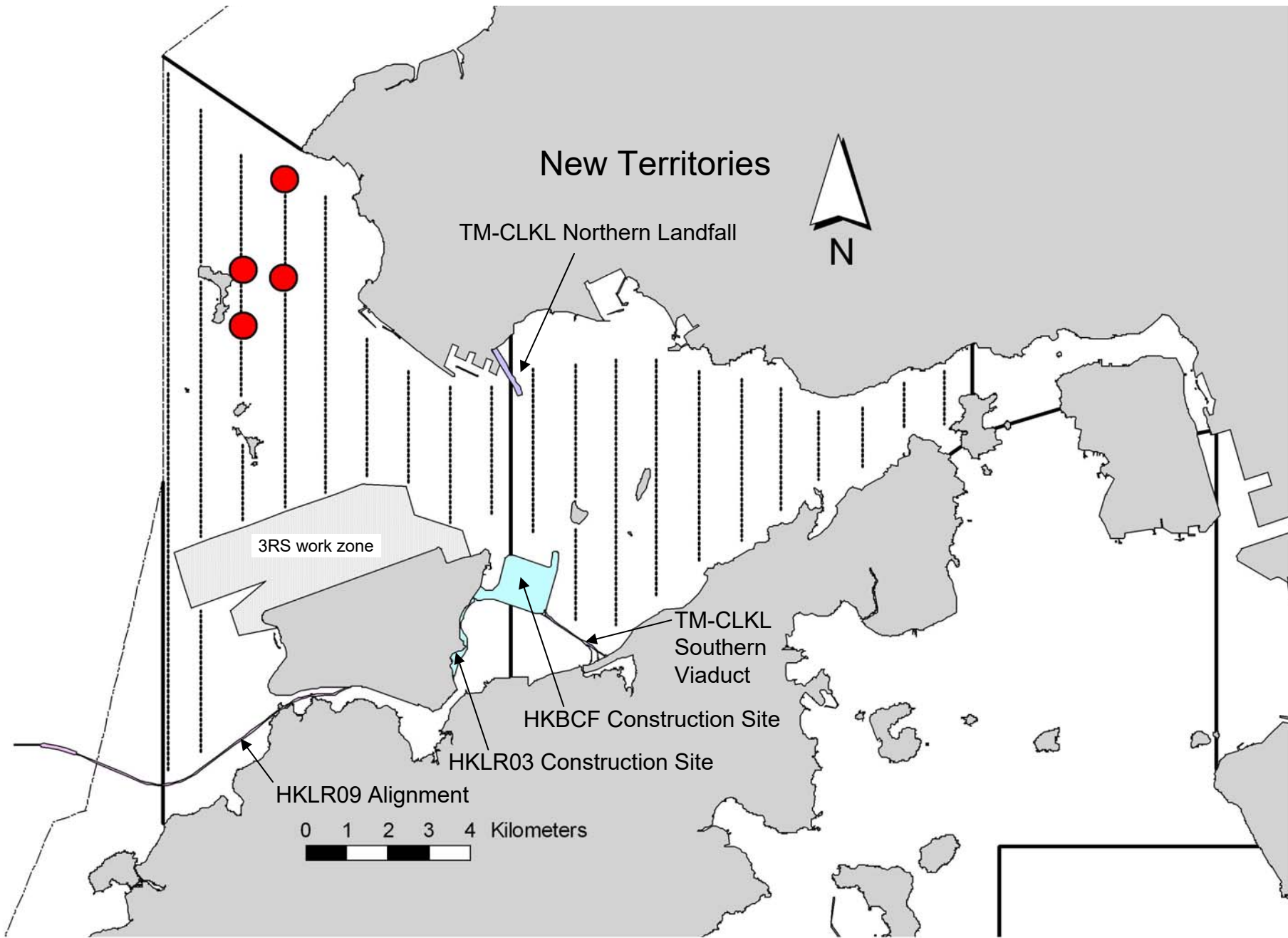


Figure 6. Distribution of Chinese White Dolphin Sightings during October 2017 HKLR03 Monitoring Surveys

Appendix I. HKLR03 Survey Effort Database (October 2017)

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

DATE	AREA	BEAU	EFFORT	SEASON	VESSEL	TYPE	P/S
4-Oct-17	NW LANTAU	2	0.88	AUTUMN	STANDARD36826	HKLR	P
4-Oct-17	NW LANTAU	3	20.90	AUTUMN	STANDARD36826	HKLR	P
4-Oct-17	NW LANTAU	4	2.00	AUTUMN	STANDARD36826	HKLR	P
4-Oct-17	NW LANTAU	2	3.80	AUTUMN	STANDARD36826	HKLR	S
4-Oct-17	NW LANTAU	3	5.02	AUTUMN	STANDARD36826	HKLR	S
4-Oct-17	NW LANTAU	4	2.40	AUTUMN	STANDARD36826	HKLR	S
4-Oct-17	NE LANTAU	2	8.22	AUTUMN	STANDARD36826	HKLR	P
4-Oct-17	NE LANTAU	3	11.59	AUTUMN	STANDARD36826	HKLR	P
4-Oct-17	NE LANTAU	2	9.49	AUTUMN	STANDARD36826	HKLR	S
4-Oct-17	NE LANTAU	3	1.30	AUTUMN	STANDARD36826	HKLR	S
9-Oct-17	NW LANTAU	2	1.68	AUTUMN	STANDARD36826	HKLR	P
9-Oct-17	NW LANTAU	3	30.32	AUTUMN	STANDARD36826	HKLR	P
9-Oct-17	NW LANTAU	4	2.50	AUTUMN	STANDARD36826	HKLR	P
9-Oct-17	NW LANTAU	2	2.30	AUTUMN	STANDARD36826	HKLR	S
9-Oct-17	NW LANTAU	3	4.90	AUTUMN	STANDARD36826	HKLR	S
9-Oct-17	NW LANTAU	4	6.70	AUTUMN	STANDARD36826	HKLR	S
9-Oct-17	NE LANTAU	3	6.99	AUTUMN	STANDARD36826	HKLR	P
9-Oct-17	NE LANTAU	4	9.93	AUTUMN	STANDARD36826	HKLR	P
9-Oct-17	NE LANTAU	3	6.79	AUTUMN	STANDARD36826	HKLR	S
9-Oct-17	NE LANTAU	4	3.09	AUTUMN	STANDARD36826	HKLR	S
18-Oct-17	NW LANTAU	2	11.46	AUTUMN	STANDARD36826	HKLR	P
18-Oct-17	NW LANTAU	3	20.72	AUTUMN	STANDARD36826	HKLR	P
18-Oct-17	NW LANTAU	2	8.55	AUTUMN	STANDARD36826	HKLR	S
18-Oct-17	NW LANTAU	3	2.50	AUTUMN	STANDARD36826	HKLR	S
18-Oct-17	NE LANTAU	1	2.44	AUTUMN	STANDARD36826	HKLR	P
18-Oct-17	NE LANTAU	2	27.42	AUTUMN	STANDARD36826	HKLR	P
18-Oct-17	NE LANTAU	3	5.50	AUTUMN	STANDARD36826	HKLR	P
18-Oct-17	NE LANTAU	1	1.70	AUTUMN	STANDARD36826	HKLR	S
18-Oct-17	NE LANTAU	2	11.34	AUTUMN	STANDARD36826	HKLR	S
26-Oct-17	NW LANTAU	2	24.70	AUTUMN	STANDARD36826	HKLR	P
26-Oct-17	NW LANTAU	3	4.44	AUTUMN	STANDARD36826	HKLR	P
26-Oct-17	NW LANTAU	2	11.91	AUTUMN	STANDARD36826	HKLR	S
26-Oct-17	NW LANTAU	3	0.85	AUTUMN	STANDARD36826	HKLR	S

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

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

DATE	STG #	TIME	HRD SZ	AREA	BEAU	PSD	EFFORT	TYPE	NORTHING	EASTING	SEASON	BOAT ASSOC.	P/S
4-Oct-17	1	1143	5	NW LANTAU	3	52	ON	HKLR	828985	807490	AUTUMN	NONE	P
18-Oct-17	1	1149	1	NW LANTAU	2	65	ON	HKLR	826905	806487	AUTUMN	NONE	P
18-Oct-17	2	1159	1	NW LANTAU	2	264	ON	HKLR	825632	806485	AUTUMN	PURSE-SEINE	P
26-Oct-17	1	1135	1	NW LANTAU	2	34	ON	HKLR	826737	807455	AUTUMN	NONE	P

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

ID#	DATE	STG#	AREA
NL12	04/10/17	1	NW LANTAU
NL104	04/10/17	1	NW LANTAU
NL136	04/10/17	1	NW LANTAU
	18/10/17	2	NW LANTAU
NL182	04/10/17	1	NW LANTAU
	18/10/17	1	NW LANTAU
NL321	04/10/17	1	NW LANTAU

NL12_20171004_1



NL104_20171004_1



NL136_20171004_1



NL182_20171004_1



NL321_20171004_1



NL182_20171018_1



NL136_20171018_2



Appendix IV. Photographs of Identified Individual Dolphins in October 2017 (HKLR03)

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. Discuss with ET and Contractor on possible remedial actions;	2. Request Contractor to critically review the working methods;	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;	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;	3. Implement the agreed mitigation measures;
	4. Check monitoring data, all plant, equipment and Contractor's working methods;	4. Supervise the implementation of mitigation measures.	4.	4. Resubmit proposals of mitigation measures if problem still not under control;
	5. Discuss mitigation measures with IEC, SOR and Contractor;		5. Ensure mitigation measures are properly implemented;	
	6. Ensure mitigation measures are implemented;		6.	
	7. Increase the monitoring frequency to daily until no exceedance of Limit level for two consecutive days;		7. Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the construction activities until no exceedance of Limit level.	5. As directed by the Supervising Officer, to slow down or to stop all or part of the construction activities until no exceedance of Limit level.

Appendix L4 Implementation of Event-Action Plan for Dolphin Monitoring

Event	ET Leader	IEC	SOR	Contractor
Action Level	<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
<u>Action Level</u>				
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	<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 2017 (Year)

Month/Material	Actual Quantities of Inert C&D Materials Generation						Actual Quantities of C&D wastes Generation						Actual Quantities of Recyclables Generation			
	Total Quantity Generated	Hard Rock and Large Broken Concrete	Reused in the Contract	Reused in other Projects	Disposed as Public Fills	Imported Fill	Marine Sediment, Cat. L	Marine Sediment, Cat. Mp	Marine Sediment, Cat. Mf	Marine Sediment, Cat. H	Chemical Waste	General Refuse	Metals	Felled trees	Paper/ cardboard packaging	Plastics
Unit	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000m ³)	('000Kg)	('000Kg)	('000Kg)	('000Kg)	('000Kg)	('000Kg)
Jan	4.591	0.717	0.474	-	4.118	-	-	-	-	3.521	99.840	-	-	0.140	-	-
Feb	5.034	1.585	0.166	-	4.869	-	0.857	-	-	-	127.720	-	-	0.091	-	-
Mar	6.575	0.937	0.498	-	6.077	-	0.771	-	-	6.000	87.910	-	-	0.077	-	-
Apr	5.467	0.791	1.058	-	4.409	-	-	-	-	-	130.680	-	5.170	0.063	-	-
May	4.960	0.537	0.826	-	4.134	-	0.672	-	-	-	171.870	-	-	0.056	-	-
Jun	4.491	0.567	0.098	-	4.394	-	-	-	-	-	148.600	-	-	0.063	-	-
SUB-TOTAL	31.118	5.133	3.118	-	28.000	0.000	2.300	-	-	9.521	766.620	-	5.170	0.490	-	-
Jul	5.618	0.426	0.696	0.002	4.921	-	1.056	-	-	0.800	159.980	-	-	0.091	-	-
Aug	3.897	0.232	-	-	3.897	-	-	-	-	-	159.230	-	-	0.056	-	-
Sep	3.142	0.676	-	-	3.142	-	1.517	1.047	-	0.127	185.420	-	18.030	0.070	-	-
Oct	3.005	0.385	0.325	-	2.680	-	-	-	-	-	172.690	-	-	0.063	-	-
Nov	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dec	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	46.780	6.853	4.139	0.002	42.639	-	4.873	1.047	-	0.127	1,443.940	-	23.200	0.770	-	-

Notes :

- 1 - The waste flow table shall also include C&D materials that are specified in the Contract to be imported for use at the Site.
- 2 - Plastics refer to plastic bottles/containers, plastic sheets/foam from packaging material.
- 3 - Broken concrete for recycling into aggregates.
- 4 - Assumed 5 kg per damaged water-filled barrier.
- 5 - Disposed as Public Fills includes Hard Rock and Large Broken Concrete.

Appendix N

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

Appendix N1 Cumulative Statistics on Exceedances

		Total No. recorded in this reporting month	Total No. recorded since project commencement
1-Hr TSP	Action	0	0
	Limit	0	0
24-Hr TSP	Action	0	2
	Limit	0	0
Noise	Action	0	0
	Limit	0	0
Water Quality	Action	5	128
	Limit	0	15
Impact Dolphin Monitoring	Action	0	9
	Limit	0	10

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 (October 2017)	0	0	0
Total No. received since project commencement	10	0	0

Email
message

Environmental
Resources
Management

To Ramboll Environ – Hong Kong, Limited (ENPO)

16/F Berkshire House,
25 Westlands Road
Quarry Bay, Hong Kong
Telephone: (852) 2271 3113
Facsimile: (852) 2723 5660
E-mail: jovy.tam@erm.com

From ERM- Hong Kong, Limited

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

Subject Notification of Exceedance for Marine Water
Quality Impact Monitoring



ERM

Date 2 October 2017

Dear Sir/ Madam,

Please find attached the Notification of Exceedance (NOE) of the following
Log no.:

Action Level Exceedance

0215660_2 October 2017_ Bottom-depth DO_E_Station CS(Mf)5

0215660_2 October 2017_ Bottom-depth DO_F_Station CS(Mf)5

A total of two exceedances were recorded on 2 October 2017.

Regards,

A handwritten signature in black ink, appearing to read 'Jovy Tam', is written over a white background.

Mr Jovy Tam
Environmental Team Leader

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ERM-Hong Kong, Limited

CONTRACT NO. HY/2012/07

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

Marine Water Quality Impact Monitoring

Notification of Exceedance

Log No.	<p><u>Action Level Exceedance</u></p> <p>0215660_2 October 2017_ Bottom-depth DO_E_Station CS(Mf)5 0215660_2 October 2017_ Bottom-depth DO_F_Station CS(Mf)5</p> <p>[Total No. of Exceedances = 2]</p>	
Date	<p>2 October 2017 (Measured) 2 October 2017 (<i>In situ</i> results received by ERM) 12 October 2017 (Laboratory results received by ERM)</p>	
Monitoring Station	CS(Mf)5, SR4a, SR4, IS8, IS(Mf)16, IS(Mf)9, CS(Mf)3(N)	
Parameter(s) with Exceedance(s)	Bottom-depth Dissolved Oxygen (DO)	
Action Levels for DO	Bottom-depth DO	4.7 mg/L
Limit Levels for DO	Bottom-depth DO	3.6 mg/L
Measured Levels	<p><u>Action Level Exceedance</u></p> <p>1. Mid-ebb at CS(Mf)5 (Bottom-depth DO = 4.5mg/L); 2. Mid-flood at CS(Mf)5 (Bottom-depth DO = 4.5mg/L).</p>	
Works Undertaken (at the time of monitoring event)	No major marine works was undertaken under this Contract on 2 October 2017.	
Possible Reason for Action or Limit Level Exceedance(s)	<p>The exceedances of bottom-depth DO are unlikely to be due to the Project, in view of the following:</p> <ul style="list-style-type: none"> • No marine works was undertaken under this Contract on 2 October 2017. • All monitored parameters, except DO, at all monitoring stations were in compliance with the Action and Limit Levels during both mid-ebb and mid-flood tides on the same day. • CS(Mf)5 are distant (>3km respectively) from the marine works area under this Contract, thus the observed exceedances should not be affected by the marine works under this Contract and they are considered to be natural fluctuation in water quality. 	
Actions Taken/ To Be Taken	No immediate action is considered necessary. The ET will monitor for future trends in exceedances.	
Remarks	The monitoring results on 2 October 2017 and locations of water quality monitoring stations are attached. Site photo record on 2 October 2017 is attached.	

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Level	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO (mg/L)	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	CS(Mf)5	9:56	Surface	1	29.9	8.0	23.5	6.0	5.3	3.8	4.7	6.0	6.3
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	CS(Mf)5	9:56	Surface	2	29.6	8.0	23.7	5.9		3.8		4.9	
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	CS(Mf)5	9:56	Middle	1	29.5	7.9	27.6	4.7		4.5		5.6	
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	CS(Mf)5	9:56	Middle	2	29.3	8.0	27.9	4.7		3.6		5.3	
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	CS(Mf)5	9:56	Bottom	1	29.4	7.9	28.5	4.5		6.7		8.4	
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	CS(Mf)5	9:56	Bottom	2	29.1	8.0	28.8	4.5		5.9		7.8	
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	CS(Mf)3(N)	11:07	Surface	1	30.3	7.9	20.2	6.1	5.6	2.8	5.7	3.6	4.8
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	CS(Mf)3(N)	11:07	Surface	2	30.1	7.9	20.1	6.0		2.5		4.8	
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	CS(Mf)3(N)	11:07	Middle	1	29.9	7.9	23.7	5.2		6.1		3.9	
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	CS(Mf)3(N)	11:07	Middle	2	29.7	7.9	23.5	5.1		6.0		5.4	
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	CS(Mf)3(N)	11:07	Bottom	1	29.8	7.9	24.6	5.2		8.9		4.7	
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	CS(Mf)3(N)	11:07	Bottom	2	29.5	7.9	24.4	5.1		7.9		6.3	
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	IS(Mf)16	10:35	Surface	1	30.0	8.2	23.4	8.5	8.5	6.0	4.7	7.4	7.9
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	IS(Mf)16	10:35	Surface	2	29.7	8.2	23.7	8.4		5.1		8.0	
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	IS(Mf)16		Middle	1									
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	IS(Mf)16		Middle	2									
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	IS(Mf)16	10:35	Bottom	1	29.6	7.9	26.7	5.1		3.8		7.9	
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	IS(Mf)16	10:35	Bottom	2	29.3	8.0	27.0	5.2		3.7		8.1	
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	SR4a	10:45	Surface	1	29.8	8.1	23.2	7.2	7.2	6.3	6.2	8.3	10.0
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	SR4a	10:45	Surface	2	29.6	8.1	23.5	7.2		5.3		9.1	
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	SR4a		Middle	1									
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	SR4a		Middle	2									
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	SR4a	10:45	Bottom	1	29.8	8.1	23.3	7.0		6.9		11.9	
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	SR4a	10:45	Bottom	2	29.6	8.1	23.6	6.9		6.1		10.7	
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	SR4	10:50	Surface	1	29.9	8.0	23.0	6.9	6.9	6.2	9.2	8.9	8.5
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	SR4	10:50	Surface	2	29.7	8.1	23.3	6.9		5.7		7.3	
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	SR4		Middle	1									
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	SR4		Middle	2									
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	SR4	10:50	Bottom	1	29.9	8.0	23.8	6.3		12.5		9.5	
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	SR4	10:50	Bottom	2	29.6	8.1	24.0	6.3		12.5		8.1	
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	IS8	11:05	Surface	1	30.0	8.2	23.2	8.8	8.8	4.2	5.9	7.0	8.0
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	IS8	11:05	Surface	2	29.8	8.3	23.4	8.8		4.3		6.1	
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	IS8		Middle	1									
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	IS8		Middle	2									
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	IS8	11:05	Bottom	1	29.9	8.1	23.7	7.1		7.5		9.1	
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	IS8	11:05	Bottom	2	29.6	8.2	24.0	7.2		7.4		9.7	
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	IS(Mf)9	11:16	Surface	1	30.0	8.3	23.2	9.1	9.1	4.9	5.1	6.4	6.0
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	IS(Mf)9	11:16	Surface	2	29.8	8.3	23.4	9.1		4.9		6.2	
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	IS(Mf)9		Middle	1									
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	IS(Mf)9		Middle	2									
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	IS(Mf)9	11:16	Bottom	1	29.9	8.1	23.5	7.9		5.6		5.4	
TMCLKL	HY/2012/07	2017-10-02	Mid-Ebb	IS(Mf)9	11:16	Bottom	2	29.6	8.2	23.8	7.8		4.8		5.8	

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Level	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO (mg/L)	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	CS(Mf)5	18:00	Surface	1	30.0	8.0	24.8	6.1	5.5	3.2	6.4	6.1	6.2
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	CS(Mf)5	18:00	Surface	2	29.7	8.0	25.0	6.0		2.6		7.2	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	CS(Mf)5	18:00	Middle	1	29.6	7.9	27.2	4.9		5.6		6.6	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	CS(Mf)5	18:00	Middle	2	29.3	8.0	27.5	4.9		5.3		6.1	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	CS(Mf)5	18:00	Bottom	1	29.5	7.9	28.0	4.5		10.9		5.2	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	CS(Mf)5	18:00	Bottom	2	29.2	8.0	28.3	4.5		10.5		6.0	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	CS(Mf)3(N)	16:23	Surface	1	30.7	7.7	17.6	5.8	5.7	5.0	5.0	2.3	3.1
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	CS(Mf)3(N)	16:23	Surface	2	30.4	7.7	17.4	5.7		4.5		2.7	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	CS(Mf)3(N)	16:23	Middle	1	30.4	7.8	19.7	5.7		5.2		4.4	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	CS(Mf)3(N)	16:23	Middle	2	30.2	7.8	19.6	5.6		4.8		3.9	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	CS(Mf)3(N)	16:23	Bottom	1	30.3	7.8	20.8	5.5		5.4		3.2	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	CS(Mf)3(N)	16:23	Bottom	2	30.0	7.8	20.8	5.4		5.0		2.3	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	IS(Mf)16	17:26	Surface	1	30.5	8.1	22.1	8.8	8.8	2.9	5.2	6.1	9.4
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	IS(Mf)16	17:26	Surface	2	30.3	8.2	22.4	8.8		2.4		5.6	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	IS(Mf)16		Middle	1									
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	IS(Mf)16		Middle	2									
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	IS(Mf)16	17:26	Bottom	1	30.2	8.1	23.5	7.4		7.8		13.7	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	IS(Mf)16	17:26	Bottom	2	29.9	8.1	23.8	7.4		7.5		12.2	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	SR4a	17:11	Surface	1	30.6	8.1	22.2	8.0	8.1	6.4	7.2	5.6	7.4
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	SR4a	17:11	Surface	2	30.3	8.1	22.4	8.1		5.9		6.3	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	SR4a		Middle	1									
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	SR4a		Middle	2									
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	SR4a	17:11	Bottom	1	30.5	8.1	22.5	7.7		8.7		8.6	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	SR4a	17:11	Bottom	2	30.2	8.1	22.7	7.8		7.8		8.9	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	SR4	17:06	Surface	1	30.7	8.1	22.1	8.1	8.1	5.0	9.9	6.5	6.8
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	SR4	17:06	Surface	2	30.4	8.1	22.3	8.1		4.5		6.2	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	SR4		Middle	1									
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	SR4		Middle	2									
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	SR4	17:06	Bottom	1	30.3	8.0	23.8	7.0		15.4		7.3	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	SR4	17:06	Bottom	2	30.0	8.1	24.0	7.0		14.5		7.2	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	IS8	16:55	Surface	1	30.5	8.1	22.5	8.6	8.6	7.1	11.6	6.5	8.5
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	IS8	16:55	Surface	2	30.2	8.2	22.7	8.5		6.2		5.8	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	IS8		Middle	1									
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	IS8		Middle	2									
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	IS8	16:55	Bottom	1	30.1	8.1	24.0	7.2		16.9		10.8	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	IS8	16:55	Bottom	2	29.8	8.1	24.2	7.2		16.1		10.9	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	IS(Mf)9	16:44	Surface	1	30.7	8.2	23.3	9.7	9.7	8.2	11.2	8.5	9.6
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	IS(Mf)9	16:44	Surface	2	30.4	8.3	23.5	9.6		7.6		8.5	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	IS(Mf)9		Middle	1									
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	IS(Mf)9		Middle	2									
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	IS(Mf)9	16:44	Bottom	1	30.4	8.2	23.9	8.6		14.5		10.4	
TMCLKL	HY/2012/07	2017-10-02	Mid-Flood	IS(Mf)9	16:44	Bottom	2	30.1	8.2	24.1	8.5		14.4		11.1	

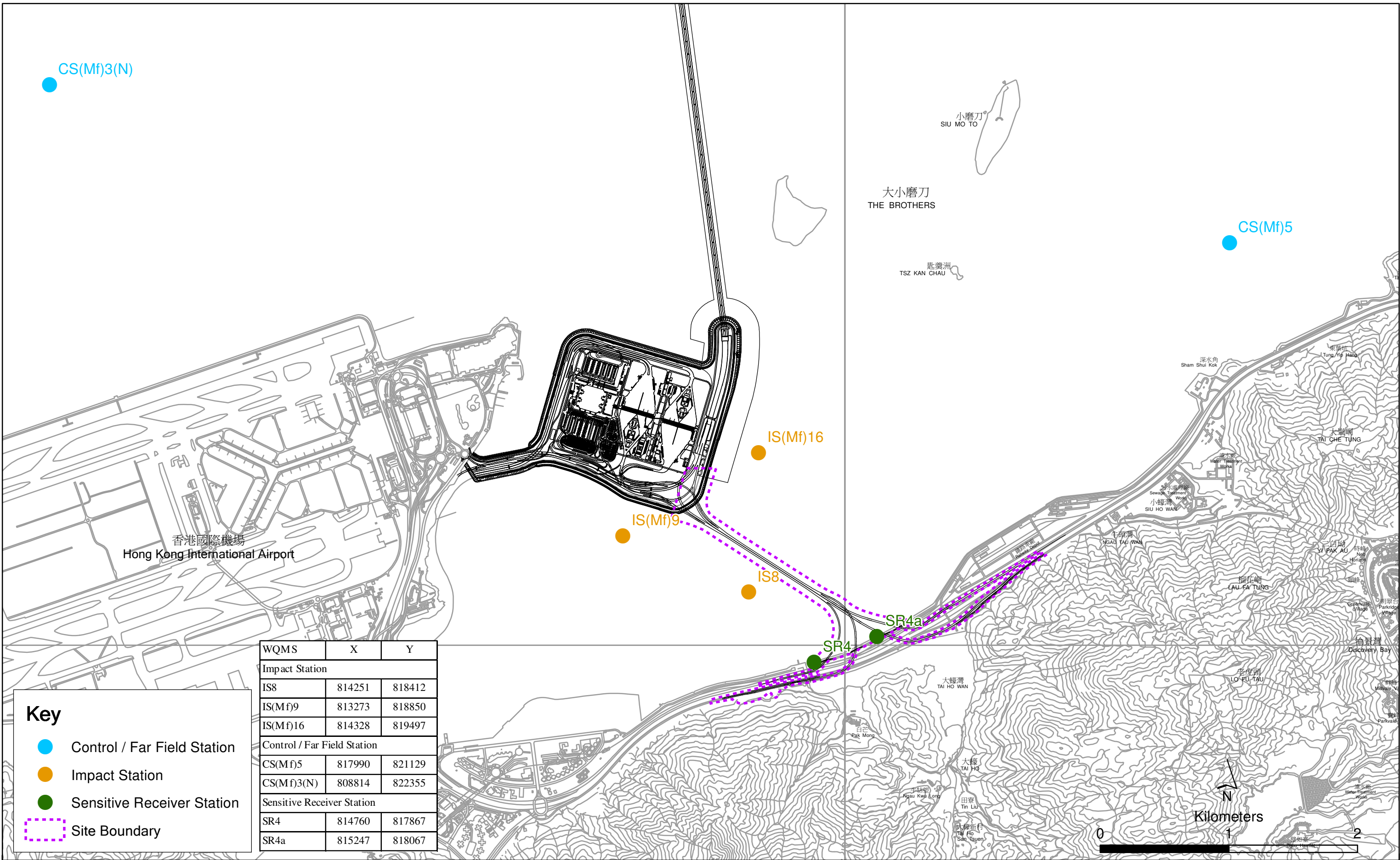
Note: Indicates Exceedance of Action Level
Indicates Exceedance of Limit Level

Photo 1 - Mid-Ebb at CS(Mf)5 on 2 October 2017



Photo 2 - Mid-Flood at CS(Mf)5 on 2 October 2017





WQMS	X	Y
Impact Station		
IS8	814251	818412
IS(Mf)9	813273	818850
IS(Mf)16	814328	819497
Control / Far Field Station		
CS(Mf)5	817990	821129
CS(Mf)3(N)	808814	822355
Sensitive Receiver Station		
SR4	814760	817867
SR4a	815247	818067

Key

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

Locations of Water Quality Monitoring Stations

Email
message

Environmental
Resources
Management

To Ramboll Environ – Hong Kong, Limited (ENPO)

16/F Berkshire House,
25 Westlands Road
Quarry Bay, Hong Kong
Telephone: (852) 2271 3113
Facsimile: (852) 2723 5660
E-mail: jovy.tam@erm.com

From ERM- Hong Kong, Limited

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

Subject Notification of Exceedance for Marine Water
Quality Impact Monitoring



ERM

Date 6 October 2017

Dear Sir/ Madam,

Please find attached the Notification of Exceedance (NOE) of the following
Log no.:

Action Level Exceedance

0215660_4 October 2017_Bottom-depth DO_E_Station CS(Mf)5

0215660_4 October 2017_Surface and Middle-depth DO_F_Station CS(Mf)5

0215660_4 October 2017_Bottom-depth DO_F_Station CS(Mf)5

A total of three exceedances were recorded on 4 October 2017.

Regards,

A handwritten signature in black ink, appearing to read 'Jovy Tam', is written over a white background.

Mr Jovy Tam
Environmental Team Leader

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ERM-Hong Kong, Limited

CONTRACT NO. HY/2012/07

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

Marine Water Quality Impact Monitoring

Notification of Exceedance

Log No.	<p><u>Action Level Exceedance</u></p> <p>0215660_4 October 2017_Bottom-depth DO_E_Station CS(Mf)5 0215660_4 October 2017_Surface and Middle-depth DO_F_Station CS(Mf)5 0215660_4 October 2017_Bottom-depth DO_F_Station CS(Mf)5</p> <p>[Total No. of Exceedances = 3]</p>	
Date	<p>4 October 2017 (Measured) 5 October 2017 (<i>In situ</i> results received by ERM) 17 October 2017 (Laboratory results received by ERM)</p>	
Monitoring Station	CS(Mf)5, SR4a, SR4, IS8, IS(Mf)16, IS(Mf)9, CS(Mf)3(N)	
Parameter(s) with Exceedance(s)	Surface and Middle-depth DO, Bottom-depth Dissolved Oxygen (DO)	
Action Levels for DO	Surface and Middle-depth DO	5.0 mg/L
	Bottom-depth DO	4.7 mg/L
Limit Levels for DO	Surface and Middle-depth DO	4.2 mg/L
	Bottom-depth DO	3.6 mg/L
Measured Levels	<p><u>Action Level Exceedance</u></p> <p>1. Mid-ebb at CS(Mf)5 (Bottom-depth DO = 4.3mg/L); 2. Mid-flood at CS(Mf)5 (Surface and Middle-depth DO = 4.9mg/L); 3. Mid-flood at CS(Mf)5 (Bottom-depth DO = 4.4mg/L).</p>	
Works Undertaken (at the time of monitoring event)	No major marine works was undertaken under this Contract on 4 October 2017.	
Possible Reason for Action or Limit Level Exceedance(s)	<p>The exceedances of surface and middle and bottom-depth DO are unlikely to be due to the Project, in view of the following:</p> <ul style="list-style-type: none"> • No marine works was undertaken under this Contract on 4 October 2017. • All monitored parameters, except DO, at all monitoring stations were in compliance with the Action and Limit Levels during both mid-ebb and mid-flood tides on the same day. • CS(Mf)5 are distant (>3km respectively) from the marine works area under this Contract, thus the observed exceedances should not be affected by the marine works under this Contract and they are considered to be natural fluctuation in water quality. 	
Actions Taken/ To Be Taken	No immediate action is considered necessary. The ET will monitor for future trends in exceedances.	
Remarks	The monitoring results on 4 October 2017 and locations of water quality monitoring stations are attached. Site photo record on 4 October 2017 is attached.	

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Level	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO (mg/L)	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	CS(Mf)5	11:32	Surface	1	30.2	8.0	23.9	5.8	5.3	5.7	8.3	5.0	6.2
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	CS(Mf)5	11:32	Surface	2	30.0	8.0	24.2	5.7		4.6		5.9	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	CS(Mf)5	11:32	Middle	1	29.9	8.0	25.7	4.8		8.7		4.8	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	CS(Mf)5	11:32	Middle	2	29.6	8.0	26.0	4.8		7.9		5.0	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	CS(Mf)5	11:32	Bottom	1	29.6	7.9	27.7	4.3		11.9		9.0	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	CS(Mf)5	11:32	Bottom	2	29.3	8.0	28.0	4.3		10.8		7.2	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	CS(Mf)3(N)	13:03	Surface	1	30.3	7.8	21.5	5.8	5.9	7.8	14.4	2.6	4.1
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	CS(Mf)3(N)	13:03	Surface	2	30.1	7.9	21.6	6.1		7.3		3.8	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	CS(Mf)3(N)	13:03	Middle	1	30.2	7.9	23.7	5.9		13.5		3.8	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	CS(Mf)3(N)	13:03	Middle	2	30.0	7.9	22.3	5.9		13.7		4.1	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	CS(Mf)3(N)	13:03	Bottom	1	30.1	7.9	25.2	5.6		21.8		5.1	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	CS(Mf)3(N)	13:03	Bottom	2	29.8	7.9	25.3	5.8		22.1		4.9	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	IS(Mf)16	12:05	Surface	1	30.2	8.0	23.7	6.4	6.4	7.4	9.6	7.9	7.7
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	IS(Mf)16	12:05	Surface	2	29.9	8.1	24.0	6.4		6.5		6.7	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	IS(Mf)16	12:05	Middle	1									
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	IS(Mf)16	12:05	Middle	2									
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	IS(Mf)16	12:05	Bottom	1	30.0	8.0	24.9	5.2		12.9		7.7	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	IS(Mf)16	12:05	Bottom	2	29.7	8.0	25.2	5.3		11.5		8.5	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	SR4a	12:16	Surface	1	30.2	8.0	23.7	5.9	5.9	12.5	15.1	12.3	12.1
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	SR4a	12:16	Surface	2	29.9	8.0	24.0	5.9		11.2		12.5	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	SR4a	12:16	Middle	1									
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	SR4a	12:16	Middle	2									
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	SR4a	12:16	Bottom	1	30.2	8.0	23.9	5.8		18.5		11.9	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	SR4a	12:16	Bottom	2	29.9	8.0	24.1	5.7		18.2		11.5	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	SR4	12:20	Surface	1	30.3	8.0	23.4	6.1	6.1	8.6	8.0	8.3	8.4
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	SR4	12:20	Surface	2	30.0	8.0	23.6	6.1		7.5		8.5	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	SR4	12:20	Middle	1									
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	SR4	12:20	Middle	2									
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	SR4	12:20	Bottom	1	30.3	8.0	23.4	6.1		8.3		8.0	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	SR4	12:20	Bottom	2	30.0	8.0	23.7	6.1		7.4		8.9	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	IS8	12:31	Surface	1	30.5	8.1	23.8	6.6	6.6	10.3	11.2	10.8	11.5
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	IS8	12:31	Surface	2	30.2	8.1	24.1	6.6		8.9		12.4	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	IS8	12:31	Middle	1									
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	IS8	12:31	Middle	2									
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	IS8	12:31	Bottom	1	30.4	8.0	23.8	6.3		13.4		11.5	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	IS8	12:31	Bottom	2	30.1	8.1	24.1	6.3		12.1		11.3	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	IS(Mf)9	12:41	Surface	1	30.4	8.1	23.7	7.1	7.1	8.2	8.1	7.6	8.2
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	IS(Mf)9	12:41	Surface	2	30.2	8.1	24.0	7.1		7.0		9.5	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	IS(Mf)9	12:41	Middle	1									
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	IS(Mf)9	12:41	Middle	2									
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	IS(Mf)9	12:41	Bottom	1	30.4	8.1	23.7	6.9		9.3		7.8	
TMCLKL	HY/2012/07	2017-10-04	Mid-Ebb	IS(Mf)9	12:41	Bottom	2	30.1	8.1	24.0	6.9		7.8		7.8	

Project	Works	Date (yyyy-mm-dd)	Tide	Station	Start Time	Level	Replicate	Temperature (°C)	pH	Salinity (ppt)	DO (mg/L)	Average DO (mg/L)	Turbidity (NTU)	Depth-Averaged Turbidity	SS (mg/L)	Depth-Averaged SS
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	CS(Mf)5	18:26	Surface	1	29.8	8.0	25.0	5.3	4.9	4.1	14.6	6.1	15.7
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	CS(Mf)5	18:26	Surface	2	30.0	7.9	24.8	5.3		4.1		4.5	
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	CS(Mf)5	18:26	Middle	1	29.4	8.0	27.6	4.4	13.5	10.2			
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	CS(Mf)5	18:26	Middle	2	29.7	7.9	27.3	4.5	13.8	9.9			
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	CS(Mf)5	18:26	Bottom	1	29.4	8.0	27.8	4.3	23.9	30.4			
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	CS(Mf)5	18:26	Bottom	2	29.6	7.9	27.5	4.4	28.4	33.0			
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	CS(Mf)3(N)	17:10	Surface	1	30.4	7.8	21.0	5.6	5.7	6.2	7.0	3.7	4.3
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	CS(Mf)3(N)	17:10	Surface	2	30.2	7.8	21.3	5.6		6.0		3.9	
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	CS(Mf)3(N)	17:10	Middle	1	30.4	7.8	21.0	5.8	5.7	4.7			
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	CS(Mf)3(N)	17:10	Middle	2	30.2	7.8	21.3	5.7	6.0	3.2			
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	CS(Mf)3(N)	17:10	Bottom	1	30.2	7.8	23.3	5.4	9.6	5.6			
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	CS(Mf)3(N)	17:10	Bottom	2	30.0	7.8	23.5	5.3	8.3	4.7			
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	IS(Mf)16	17:53	Surface	1	29.9	8.0	24.0	5.8	5.8	5.7	7.0	5.9	6.4
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	IS(Mf)16	17:53	Surface	2	30.1	8.0	23.7	5.8		5.6		5.9	
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	IS(Mf)16	17:53	Middle	1									
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	IS(Mf)16	17:53	Middle	2									
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	IS(Mf)16	17:53	Bottom	1	29.8	8.0	24.6	5.6	8.6	7.2			
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	IS(Mf)16	17:53	Bottom	2	30.1	8.0	24.3	5.6	8.2	6.4			
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	SR4a	17:41	Surface	1	29.9	8.0	24.0	5.8	5.8	7.4	9.0	7.8	7.8
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	SR4a	17:41	Surface	2	30.1	8.0	23.7	5.8		8.8		7.9	
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	SR4a	17:41	Middle	1									
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	SR4a	17:41	Middle	2									
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	SR4a	17:41	Bottom	1	29.8	8.0	24.5	5.6	9.6	7.9			
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	SR4a	17:41	Bottom	2	30.1	8.0	24.3	5.6	10.1	7.4			
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	SR4	17:36	Surface	1	29.9	8.0	24.1	5.8	5.8	7.9	8.3	8.0	8.4
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	SR4	17:36	Surface	2	30.1	8.0	23.9	5.8		7.7		7.2	
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	SR4	17:36	Middle	1									
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	SR4	17:36	Middle	2									
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	SR4	17:36	Bottom	1	29.8	8.0	24.6	5.7	8.9	9.9			
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	SR4	17:36	Bottom	2	30.1	8.0	24.3	5.7	8.8	8.6			
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	IS8	17:28	Surface	1	29.8	8.0	24.2	5.9	5.9	10.6	11.6	9.6	9.7
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	IS8	17:28	Surface	2	30.1	8.0	23.9	5.9		10.5		8.5	
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	IS8	17:28	Middle	1									
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	IS8	17:28	Middle	2									
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	IS8	17:28	Bottom	1	29.8	8.0	24.3	5.8	12.4	9.8			
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	IS8	17:28	Bottom	2	30.1	8.0	24.1	5.9	12.7	10.9			
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	IS(Mf)9	17:19	Surface	1					6.7		8.5		8.0
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	IS(Mf)9	17:19	Surface	2									
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	IS(Mf)9	17:19	Middle	1	30.0	8.1	24.2	6.6	8.5	8.5			
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	IS(Mf)9	17:19	Middle	2	30.2	8.0	23.9	6.7	8.5	7.5			
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	IS(Mf)9	17:19	Bottom	1									
TMCLKL	HY/2012/07	2017-10-04	Mid-Flood	IS(Mf)9	17:19	Bottom	2									

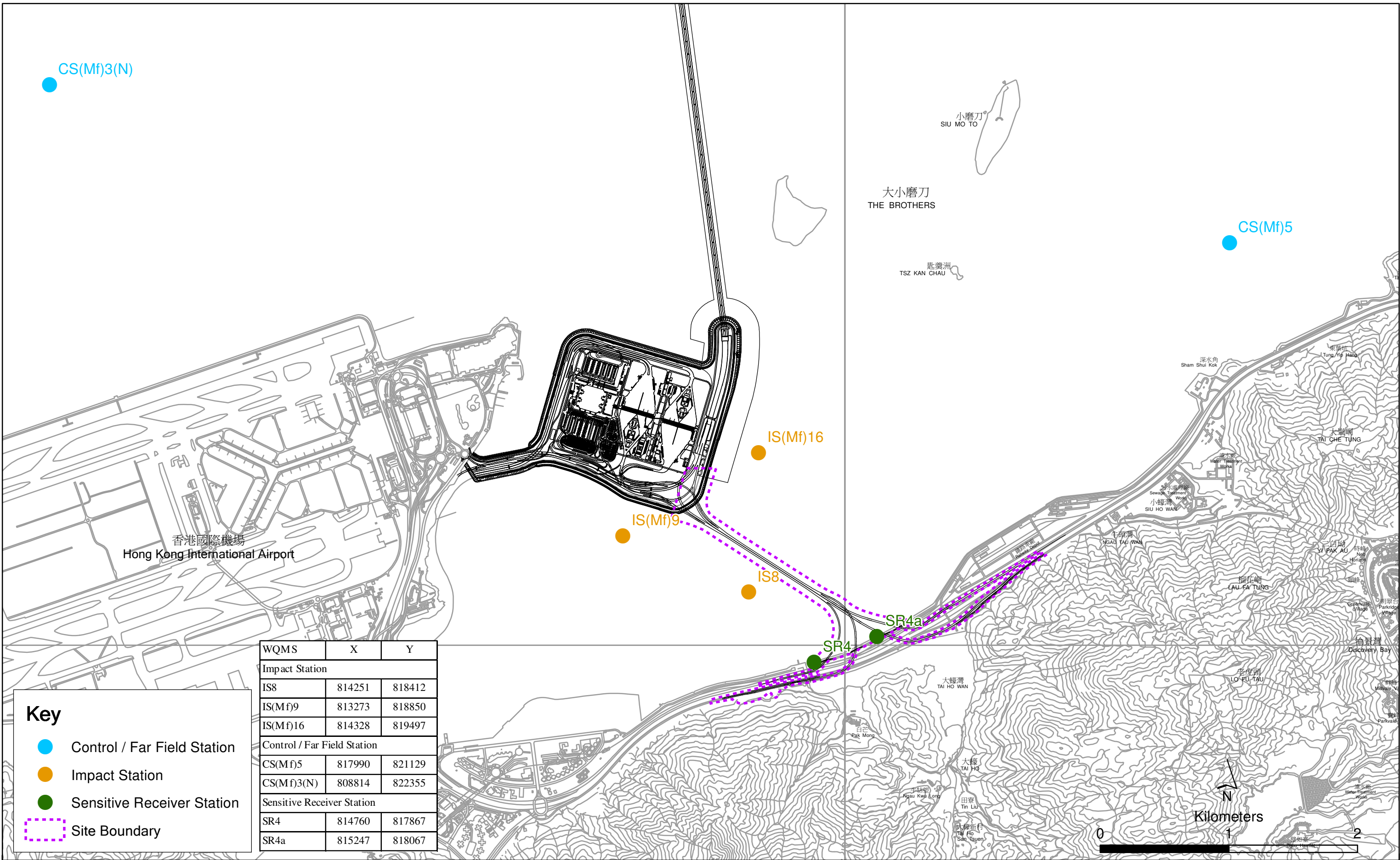
Note: Indicates Exceedance of Action Level
Indicates Exceedance of Limit Level

Photo 1 - Mid-Ebb at CS(Mf)5 on 4 October 2017



Photo 2 - Mid-Flood at CS(Mf)5 on 4 October 2017





WQMS	X	Y
Impact Station		
IS8	814251	818412
IS(Mf)9	813273	818850
IS(Mf)16	814328	819497
Control / Far Field Station		
CS(Mf)5	817990	821129
CS(Mf)3(N)	808814	822355
Sensitive Receiver Station		
SR4	814760	817867
SR4a	815247	818067

Key

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

Locations of Water Quality Monitoring Stations